

**LEGISLATIVE  
COMMITTEE MEETING  
May 18, 2012**

# **PRELIMINARY AGENDA**

## **FLORIDA INLAND NAVIGATION DISTRICT's Legislative Committee Meeting**

**Following the Board Meeting, Friday, May 18, 2012**

**Miami Marriot Biscayne Bay Hotel  
1633 North Bayshore Drive  
Miami, Miami-Dade County, Florida**

### **Committee Members**

**Nancy Freeman, Chair**

**Commissioners Tyler Chappell, Don Cuzzo, Spencer Crowley & Jon Netts.**

#### **Item 1.      Call to Order.**

Chair Freeman will call the meeting to order.

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#### **Item 2.      Roll Call.**

Assistant Executive Director Mark Crosley will call the roll.

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#### **Item 3.      Additions or Deletions.**

Any additions or deletions to the meeting agenda will be announced.

RECOMMEND - Approval of a final agenda.

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#### **Item 4.      Regulatory Plan for Rule Adoption.**

Florida statutes now require that the District prepare a regulatory plan for rule adoption for a 12 month period beginning on July 1, 2012 and ending on June 30, 2013. Staff has prepared a review pursuant to this statute. The report must be submitted prior to July 1st.

(see back up pages 3 - 7)

RECOMMEND      Approval of a recommendation to the full Board for approval of the regulatory plan for rule adoption for a 12 month period beginning on July 1, 2012 and ending on June 30, 2013.

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**Item 5.        Prioritization of federal Funding Decisions for Waterway Operation and Maintenance.**

The Board has asked the Committee to review and make recommendations regarding ways to change the prioritization of federal funding decisions for waterway operation and maintenance. Staff has prepared a draft background and analysis of the issue along with some recommendations. Input is also being sought from the District's Washington representative and the District Engineer. This input will be provided at the meeting.

(see back up pages 8 – 211)

RECOMMEND        Approval of a recommendation to the full Board on ways to change the prioritization of federal funding decisions for waterway operation and maintenance.

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**Item 6.        Additional Staff Comments and Additional Agenda Items.**

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**Item 7.        Commissioners Comments.**

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**Item 8.        Adjournment.**

DATE: July 1, 2012				
Section 120.74(3) requires that the Board of Commissioners of the Florida Inland Navigation District publish a regulatory plan identifying and describing each rule the agency proposes to adopt for the 12-month period beginning on the July 1 reporting date and ending on the subsequent June 30, excluding emergency rules.				
Following are the results of the Board of Commissioner's review, effective July 1, 2012.				
1: Agency name	2: Rule Number	2a: Rule Title	2b: FAC Number	Regulatory Action Anticipated
FIND	66B-2	Waterways Assistance Program-Purpose	66B-2.001	No change
FIND	66B-2	Waterways Assistance Program-Forms	66B-2.002	Change forms because of additional information requirements
FIND	66B-2	Waterways Assistance Program-Definitions	66B-2.003	No change
FIND	66B-2	Waterways Assistance Program-Policy	66B-2.004	Change policy to improve program
FIND	66B-2	Waterways Assistance Program-Funds Allocation	66B-2.005	Change numeric references
FIND	66B-2	Waterways Assistance Program-Application Process	66B-2.006	Change policy to improve program
FIND	66B-2	Waterways Assistance Program-Disaster Relief Applications	66B-2.0061	No change
FIND	66B-2	Waterways Assistance Program-Project Eligibility	66B-2.008	Change eligibility rules to reflect current District priorities
FIND	66B-2	Waterways Assistance Program-Project Administration	66B-2.009	No change
FIND	66B-2	Waterways Assistance Program-Reimbursement	66B-2.011	No change



Column 1		Column 2		
1: Agency name	2: Rule Number	2a: Rule Title	2b: FAC Number	
FIND	66B-2	Waterways Assistance Program-Accountability	66B-2.012	No change
FIND	66B-2	Waterways Assistance Program-Acknowledgement	66B-2.013	No change
FIND	66B-2	Waterways Assistance Program-Small Scale Spoil Island Restoration and Enhancement Projects	66B-2.014	Change in kind eligibility
FIND	66B-2	Waterways Assistance Program-Small Scale Derelict vessel removal Projects	66B-2.015	No change
FIND	66B-2	Waterways Assistance Program-Waterways Cleanup Events	66B-2.016	Change in kind match and match eligibility
FIND	66B-1	Cooperative Assistance Program-Purpose	66B-1.001	No change
FIND	66B-1	Cooperative Assistance Program-Forms	66B-1.002	Change forms because of additional information requirements
FIND	66B-1	Cooperative Assistance Program-Definitions	66B-1.003	Add a definition of beach renourishment
FIND	66B-1	Cooperative Assistance Program-Policy	66B-1.004	Change policy to improve program
FIND	66B-1	Cooperative Assistance Program-Funds Allocation	66B-1.005	Change numeric references

Column 1		Column 2		
1: Agency name	2: Rule Number	2a: Rule Title	2b: FAC Number	
FIND	66B-1	Cooperative Assistance Program-Application Process	66B-1.006	Change policy to improve program
FIND	66B-1	Cooperative Assistance Program-Project Eligibility	66B-1.008	Change eligibility rules to reflect current District priorities
FIND	66B-1	Cooperative Assistance Program-Project Administration	66B-1.009	No change
FIND	66B-1	Cooperative Assistance Program-Reimbursement	66B-1.011	No change
FIND	66B-1	Cooperative Assistance Program-Accountability	66B-1.012	No change
FIND	66B-1	Cooperative Assistance Program-Acknowledgement	66B-1.013	No change
FIND	66B-1	Cooperative Assistance Program-Small Scale Spoil Island Restoration and Enhancement Projects	66B-1.014	Change in kind eligibility
FIND	66B-1	Cooperative Assistance Program-Small Scale Derelict Vessel Removal Projects	66B-1.015	No change
FIND	66B-1	Cooperative Assistance Program-Waterways Cleanup Events	66B-1.016	Change in kind match and match eligibility

Column 1		Column 2		
1: Agency name	2: Rule Number	2a: Rule Title	2b: FAC Number	
FIND	66B-3	Land Acquisition Procedures-Purpose	66B-3.001	No change
FIND	66B-3	Land Acquisition Procedures-Definitions	66B-3.002	No change
FIND	66B-3	Land Acquisition Procedures-Notocing requirements	66B-3.003	No change
FIND	66B-3	Land Acquisition Procedures-General requirements	66B-3.004	No change
FIND	66B-3	Land Acquisition Procedures-Title reports	66B-3.005	No change
FIND	66B-3	Land Acquisition Procedures-Appraisal Map or Survey	66B-3.006	No change
FIND	66B-3	Land Acquisition Procedures-Appraisal Procedures	66B-3.007	No change
FIND	66B-3	Land Acquisition Procedures-Determining the Maximum Amount	66B-3.008	No change
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FIND	66B-3	Land Acquisition Procedures-Negotiations	66B-3.010	No change
FIND	66B-3	Land Acquisition Procedures-Purchase Instruments	66B-3.011	No change
FIND	66B-3	Land Acquisition Procedures-Closing	66B-3.012	No change

Column 1		Column 2		
1: Agency name	2: Rule Number	2a: Rule Title	2b: FAC Number	
FIND	66B-3	Land Acquisition Procedures-Multi-Party Acquisitions	66B-3.013	No change
FIND	66B-3	Land Acquisition Procedures-Property Exchanges	66B-3.014	No change
FIND	66B-3	Land Acquisition Procedures-Property Donations	66B-3.015	No change
FIND	66B-3	Land Acquisition Procedures-Acquisition through Condemnation	66B-3.016	No change

## **Prioritization of Federal Funding Decisions for Waterway Operation and Maintenance**

Currently the Atlantic Intracoastal, the Intracoastal, and the Okeechobee Waterway Projects in Florida (the Waterways) do not receive adequate operation and maintenance (O&M) funding from Congress to meet the Federal partner's responsibilities for these projects. With the current prohibition on earmarks our Florida Congressional delegation is unable to secure any additional funding over what the Administration inserts in their proposed budget. The Administration budget for Waterways is constrained by the inability to fund the needs of so many waterways projects and the budget has become prioritized by the Administration's Office of Management and Budget (OMB) using primarily tonnage data.

The Florida Inland Navigation District believes that the Waterways provide for intrastate transportation of commerce, national economic development output, substantial statewide economic output, and significant regional economic output totaling in the billions and tens of thousands of jobs. Because of the significant economic role of the Waterways, the District's Board requested that staff look into how to go about changing the way the Administration, Congress, and the Corps analyzes and prioritizes waterway operation and maintenance projects to award federal funding.

### **Are the Prioritization Criteria Law or Policy?**

There is no federal law that requires that tonnage or any other metric be used for O&M project prioritization or funding analysis. OMB made a request to the Corps for a methodology to set funding priorities and the Corps came up with a project analyses that includes economic factors similar to what the Corps uses in their planning analyses for new construction projects. This project analyses for budget requests for all Corps Civil Works Projects including O&M is contained in an annual budget development guidance document called the Corps Civil Works Direct Program, Program Development Guidance Engineering Circular (excerpted version attached). Corps staff uses the guideline to prepare budget request packages for each project or project element. These budget packages then move up through the Corps chain of command getting reviewed and ranked all the way up.

Appendix V of the guideline sets forth the analyses of Navigation projects which focuses on risk informed and performance based funding decisions. Table V-7 sets forth the

economic impact criteria based upon ton-miles. The Intracoastal Waterway in Florida in 2009 carried less than 50 million ton miles of cargo which puts the Waterway in Consequence Category 5. This results in the waterway being classified as a Low-Use Navigation Project.

Section V-14 of the guidance then provides additional criteria to evaluate these types of channels. One of the criteria is multi-purpose value. It is also important to note that the Waterway will be sub-divided into segments to analyze its value. This means that something shipped in north Florida on the Waterway won't count towards a maintenance project in south Florida.

The Corps is supposed to work with the Local Sponsor on budget development in accordance with (3)d.(2) of the guidance. This has been done through our 5 year dredging and DMMA plan and sporadically by our review of the actual budget request worksheets. If the District was routinely consulted on these budget request worksheets we could assist in helping to identify high value shipping, military uses, and other waterway activities that would assist in the consideration for funding. Recreational economics could also be provided although the Corps may not actually count them.

### **Corps Economic Analyses**

The Corps has been using economic output analysis for many years in their planning process to determine whether it is economically viable to construct waterway projects. This analysis uses a National Economic Development benefit (NED) as the standard to look at the savings in transportation costs or the creation of new economic output to the nation. The NED is an important measure because the Corps wants to create a benefit to the nation as a whole and not just shift economies from one state to another. So the export of grain to another country is an NED benefit as is a cost savings of shipping the grain via barge rather than by train or truck which is more expensive.

Recreational uses generally fall into a Regional Economic Benefit instead of an NED benefit. This is because if a boater cannot use the Intracoastal Waterway in Florida he will generally take the funds that he would spend on that boating and either boat on another waterway, or in another state, or maybe he will buy an RV and gives up boating. The bottom line is that for the most part the boater will spend his recreational dollar in the U.S. so no economy is lost.

The NED analysis is primarily applied to new projects, i.e. new construction, not O&M projects. Once a project has been authorized for construction, it has not been the tradition of the Corps to perform further economic analyses on constructed projects other than collecting the tonnage data of the users.

### **Corps Data Collection**

The tonnage data collected by the Corps has become the measuring stick for waterways. The Corps collects data on waterway commerce from self reporting shippers. The data is reported in tonnage and they do not collect cargo value data. Attached is the latest excerpted report from 2009. Unfortunately, tonnage on the waterway has declined significantly, see page 3-26.

Value data is more difficult to determine and collect. The Corps has also never wanted to use local sponsor's data because not all sponsors collect it and the local's data does not typically follow the Corps data collection or analyses standards.

### **Administration Budget Prioritization**

In the 1990's, the Office of Management and Budget requested that the Corps provide some method of prioritizing their funding requests for O&M projects. This request was made because of the shortfall of funding available as well as OMB wanting a methodology to understand the return on investment for O&M projects. The first iteration of the Corps prioritization just used the tonnage data. That has become expanded over the years by the consideration of risk and reliability as well as some use considerations such as multipurpose use, subsistence harbors, caretaker activities, and critical harbors of refuge safe being the main considerations. The current Administration is using this analyses performed by the Corps to determine their budget.

### **Congress Budget Prioritization and Review**

Historically, Congress has reviewed the Administration's budget and generally added through earmarks funding for projects that were not included or funded at a low level. This was done by a members request and Corps concurrence that they could do the work.

Today with earmarks banned, the members are starting to look at how the Corps and the Administration prioritizes projects in the Administration's budget and are proposing their own prioritization criteria in their budget bills. The Senate Energy and Water Appropriations Committee have included language in their appropriations bill for the last two years that would direct the Corps to consider regional economics. The language did

not pass the first time it was proposed. It typically takes a couple years for directive language like this to remain in the bill.

## **Conclusions**

There is not currently a federal law that requires the Corps to consider the economics or tonnage of a waterway in support of funding for Operation and Maintenance. The Administration's Office of Management and Budget has strongly requested this data to aid in their decision making regarding the Presidents' proposed budget. Therefore, the Corps annually has developed guidance for their staff in developing budget request in the Engineering Circular-Corps Civil Works Direct Program, Program Development Guidance. This guidance takes into account many issues but is primarily driven by the tonnage numbers from their Waterway Data Collection Center. The guidance allows the Local Sponsor to participate in the budget development. Congress has also started to provide guidance on how to prioritize projects.

## **Recommendations**

Below are some recommendations on immediate things that the District can accomplish to change the prioritization of the Waterways.

1. The District should support the Senate Energy and Water Appropriations Committee language with a letter to our Senators.
2. The District should work with our Project Manager at the Jacksonville District to make sure that the Corps is aware of all economic and other pertinent waterway use factors in a dredging segment being considered for a Federal funding recommendation.
3. The District should attempt to collect more data on the waterway uses that may assist in federal funding like military and commercial movements including their values.



CECW-ID

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

EC 11-2-199

Circular  
No. 11-2-199

31 March 2010

Army Programs  
CORPS OF ENGINEERS CIVIL WORKS DIRECT PROGRAM  
PROGRAM DEVELOPMENT GUIDANCE  
FISCAL YEAR 2012

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CECW-IN

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

EC 11-2-199

Circular  
No. 11-2-199

31 Mar 2010

EXPIRES 31 MARCH 2011  
Army Programs  
CORPS OF ENGINEERS CIVIL WORKS DIRECT PROGRAM  
PROGRAM DEVELOPMENT GUIDANCE  
FISCAL YEAR 2012

1. **Purpose.** This Engineer Circular (EC) provides guidance for development and submission of the Corps of Engineers direct Civil Works Program for Fiscal Year 2012(FY12).

a. This guidance is consistent with previous guidance in that we will continue developing our program by eight business lines:

- (1) Emergency Management (EM);
- (2) Environnement (EN);
- (3) Flood Risk Management (FRM);
- (4) Hydropower (H);
- (5) Navigation (N);
- (6) Recreation (RC);
- (7) Regulatory (RG); and
- (8) Water Supply (WS),

b. Three functions:

- (1) Expenses (E);
- (2) Revolving Fund (RF) (Plant Replacement and Improvement Program (PRIP)); and
- (3) Automation Program (AP).

c. Specifically excluded from coverage are mandatory program activities, such as those funded by Permanent Appropriations (PA) and the Coastal Wetlands Restoration Trust Fund (CWRTF).

d. Appendices I - VIII provide guidance for program development by each of the eight business lines within the Civil Works Program. Annexes A - C provide generic guidance on I (Investigations); C (Construction); and O&M Program matters, cutting across all business lines, as applicable. Annexes D - G provide guidance for program development for each of the three functional programs.

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This EC supersedes EC 11-2-194 dated 1 Apr 2009

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2. **Applicability.** This EC applies to all headquarters elements, major subordinate commands (MSCs), districts, and field support activities having Civil Works Program responsibilities.

### 3. References.

#### a. Public Laws:

- (1) PL 84-99 Flood Control and Coastal Emergencies
- (2) PL 85-500 Water Supply Act of 1958
- (3) PL 91-190 National Environmental Policy Act of 1969
- (4) PL 92-500 Federal Water Pollution Control Act Amendments of 1972
- (5) PL 93-251 Water Resources Development Act of 1974
- (6) PL 97-348 Coastal Barrier Resources Act
- (7) PL 99-662 Water Resources Development Act of 1986
- (8) PL 100-676 Water Resources Development Act of 1988
- (9) PL 101-508 Revenue Reconciliation Act of 1990
- (10) PL 101-591 Coastal Barrier Improvement Act of 1990
- (11) PL 101-601 Native American Graves Protection and Repatriation Act
- (12) PL 101-640 Water Resources Development Act of 1990
- (13) PL 102-580 Water Resources Development Act of 1992
- (14) PL 103-62 Government Performance and Results Act of 1993
- (15) PL 104-303 Water Resources Development Act of 1996
- (16) PL 105-33 Balanced Budget Act of 1997
- (17) PL 106-53 Water Resources Development Act of 1999
- (18) PL 106-541 Water Resources Development Act of 2000
- (19) PL 108-137 Energy and Water Development Appropriation Act, 2004
- (20) PL 108-447 Consolidated Appropriations Act, 2005
- (21) PL 109-58 Energy Policy Act, 2005
- (22) PL 109-103 Energy and Water Development Act, 2006
- (23) PL 109-209 Continuing Appropriations Resolution 2007
- (24) PL 110-114 Water Resources Development Act 2007
- (25) PL 110-140 Energy Independence and Security Act, 2007
- (26) PL 110-161 Consolidated Appropriations Act, 2008

#### b. Executive Orders:

- (1) EO 11514 Protection and Enhancement of Environmental Quality
- (2) EO 12088 Federal Compliance with Pollution Control Standards, 1978
- (3) EO 12512 Federal Real Property Management, 1985
- (4) EO 12893 Principles for Federal Infrastructure Investment
- (5) EO 12906 Coordinating Geographic Data Acquisition and Access: The National Spatial Data Infrastructure

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- (6) EO 13423      Strengthening Federal Environmental, Energy and Transportation Management, 2007
- (7) EO 13514      Federal Leadership in Environmental, Energy and Economic Performance, 2009

**c. Office of Management and Budget (OMB) documents:**

- (1) Budget of the United States Government, Fiscal Year 2011, Analytical Perspectives
- (2) Budget of the United States Government, Fiscal Year 2011, Appendix
- (3) OMB Circular A-11 Preparation, Submission and Execution of the of Budget

**d. Department of the Army regulations:**

- (1) AR 11-2      Managers' Internal Control Program
- (2) AR 385-10      The Army Safety Program

**e. Corps of Engineers Engineer Circulars, Manuals, Pamphlets, Regulations, and policy announcements and letters**

- (1) EM 1110-1-2909      Geospatial Data and Systems
- (2) EP 1130-2-500      Partners and Support (Work Management Guidance and Procedures)
- (3) ER 5-1-11      USACE Business Process
- (4) ER 11-1-320      Civil Works Emergency Management Programs
- (5) ER 11-2-220      Civil Works Activities General Investigation
- (6) ER 11-2-240      Civil Works Activities - Construction & Design
- (7) ER 11-2-290      Civil Works Activities, General Expenses
- (8) ER 37-2-10      Accounting and Reporting Civil Works Activities
- (9) ER 200-1-4      FUSRAP Policy
- (10) ER 200-2-3      Environmental Compliance Policies
- (11) ER 1105-2-100      Planning Guidance Notebook
- (12) ER 1110-1-8156      Policies, Guidance, and Requirements for Geospatial Data and Systems
- (13) ER 1110-2-100      Engineering and Design Periodic Inspection and Continuing Evaluation of Completed Civil Works Structures
- (14) ER 1110-2-1302      Civil Works Cost Engineering
- (15) ER 1130-2-500      Partners and Support (Work Management Policies)
- (16) ER 1130-2-510      Hydroelectric Power Operations and Maintenance Policies
- (17) ER 1130-2-540      Environmental Stewardship Operations and Maintenance Guidance and Procedures
- (18) ER 1165-2-119      Modifications to Completed Projects
- (19) ER 1165-2-131      Local Cooperation Agreements for New Start Construction Projects

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- (20) ER 1165-2-400 Recreational Planning, Development, and Management Policies
- (21) Policy Announcement - Chief of Engineers announcement, 26 Mar 02, subject: USACE Environmental Operating Principles
- (22) Policy Letter - Policy Guidance Letter 61, 27 Jan 99, subject: "Application of Watershed Perspective to the Corps of Engineers Civil Works Program and Activities"

4. **Distribution.** This information is approved for public release. Distribution is unlimited.

5. **Conventions.** The following designations are used for selected one-year periods:

CCY = current calendar year  
 CFY = current fiscal year (extending from 1 October CCY to 30 September CCY+1 before 1 January, latest, and 1 October CCY-1 to 30 September CCY thereafter)  
 PY = program year (CFY+2 before 1 October, next, and CFY+1 thereafter) = FY11  
 PY - 1 = one year before PY = FY10  
 PY - 2 = two years before PY (CFY before 1 October, next, and CFY-1 thereafter) = FY09  
 PY - 3 = three years before PY (CFY-1 before 1 October, next, and CFY-2 thereafter) = FY08  
 PY + N = program year plus N fiscal years.

Note that 1 October of PY-1 is 1 October of CCY, until 1 January, next, when it becomes 1 October of CCY-1.

## 6. Program Development.

### a. Government Performance and Results Act Guidance.

(1) **Guidance Development Status.** The "Government Performance and Results Act of 1993" (GPRA), PL 103-62 is the foundation for present-day program development within the federal government. GPRA requires that agencies develop strategic plans and annual performance plans for serving the nation, and reports on how effective and efficient performance actually was for any period just completed. This has led to establishment of results-oriented performance planning, measurement, and reporting throughout the Federal government. The current Civil Works Strategic Plan will be released, with the understanding that Army and OMB would continue to work on performance measures and targets tied to the strategic goals and objectives. A summary of the current Civil Works strategic goals are as follows:

- (a) Enable and assist in the development of safe and resilient communities and infrastructure.
- (b) Promote sustainable water resources, marine transportation systems, and healthy aquatic Ecosystems.
- (c) Implement effective, reliable, and adaptive life-cycle project performance.

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(d) Build and sustain a competent team.

(2) **Initial Guidance.** The Operation and Maintenance, Program successfully established results-oriented business program development procedures for six business programs in 1996 as a Pilot GPRA Project for OMB. The business programs include EM, EN, FRM, H, N, and RC. The development procedures were further evolved into today's procedures - models - and served as examples for development of models for the two other business lines - RG and WS. The program development procedures are presented in Appendices I - VIII.

**b. Presidential Policy.**

(1) **Presentation of Programming Results.** Congress established its appropriation accounts by program function, such as investigations, construction, and operation and maintenance. Consistently, OMB provides funds by program function. To this end, it maintains out year planning estimates, or ceiling, for each appropriation account of the Civil Works Program. The ceilings reflect long-term effects of the President's policies for the various programs, projects, and activities (PPAs) funded by each account, and serve as benchmarks for use in evaluating Congressional actions. The 5 to 10-year period accommodates adequate definition of long-term resource requirements. These ceilings are presented, for all accounts, in OMB's MAX database.

(2) **Economic Assumptions.** Economic assumptions underlying Presidential policy of reference C-3.c.(1), Budget of the United States Government, Fiscal Year 2011, Analytical Perspectives, are reflected in Table 1. These assumptions, along with related factors presented in the Federal Personnel Guide of Key Communications Group (KCG), Inc., and Civil Service Retirement System (CSRS) - to - Federal Employees Retirement System (FERS) workforce conversion data of HQUSACE Human Resources Office, are shown for PY-3 through PY+19. The assumptions and related data cover base rates for federal civilian permanent workers, reflecting pay and burden factors; pay raises for these workers applicable to both changing and fixed base rates; and inflation for "goods and services" of federal civilian temporary and nonfederal workers, and nonpay items.

(a) **Pay and Burden Rates.** Base rates (against which pay raises apply) reflect assumed pre-raise pay and burden rates. Pre-raise pay rates are 1.000, by definition, for regular pay, and assumed to be 0.02 for awards. Assumed burden rates reflect assumed government contributions for worker benefits. The rates comprise two parts - one part for government contributions under the CSRS; the other, under the FERS. The first part (including contributions for retirement, health insurance, Medicare, and life insurance) is shrinking, while the second part (including contributions for regular, "Thrift Savings," and Old Age Survivors Disability Insurance (OASDI) retirement; health insurance; Medicare; and life insurance) is growing. This results from permanent force "attrition" and subsequent "turnover" through the hiring of more workers under FERS. With an annual permanent force attrition of 7 % and associated turnover initially representing a considerable share of that, the CSRS part is expected to become

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negligible by FY21. Class 1 "updating factors" reflect the year-over-year change in base (resulting from change in burden), the associated year-over-year raises, and whatever raise absorption may pertain.

(b) **Pay Raise Assumptions.** Pay raise assumptions for federal civilian permanent workers are shown in reference 3.c.(1), Table 11-1, "Economic Assumptions." Assumed pay raise rates include base and locality components. (The base component is different from the base rate, discussed above, against which the base component applies.) Base components, reflecting the Employment Cost Index (ECI), apply nationally. Locality components, reflecting conditions of local markets, apply locally. Allocation of pay raise rates to base and locality components is based on the number and distribution of workers eligible for locality pay. For PY-2, the national allocation to these components was 0.029 and 0.023, or 55 % and 44 % of the 47% total raise rate. The national allocation for PY-1 has yet to be determined, therefore, the composite raise rate is used without refinement. Class 1 rates in Table 1 are based on composite raises for all years.

(c) **Inflation Rates.** Inflation rates reflect assumed price increases for "goods and services" of temporary federal and nonfederal workers, and for nonpay items. The "Balanced Budget Act of 1997," PL 105-33, requires that the Gross Domestic Product (GDP) percent change, year-over-year chained price index (1996 = 100) rates be used to develop "baseline estimates" reflecting, instead of Presidential policy, continued operations under current law and current year appropriations. The baseline program based on these estimates is discussed in OMB's Circular A-11, "Preparation and Submission of Budget Estimates." At the recommendation of OMB, these rates were used as Class 2 rates of Table 1. Class 2 "updating factors" reflect the year-over-year inflation and whatever inflation absorption may pertain.

(3) **Performance Improvement Officer (PIO).** Working with the Administration each agency has set Performance Goals and designated a PIO. Four High Priority Performance Goals have been set for USACE Civil Works, specifically:

- (a) Aquatic Ecosystem Protection and Restoration
- (b) Flood Risk Management
- (c) Inland Navigation
- (d) Hydropower Program

(4) **Performance Goals.** The four High Priority Performance Goals are to be outcome-focused and have clear measurable targets with a completion data. They are also to be ambitious but capable of achievement within current resources and authorization. The goals will be used to improve the performance of the Federal Government by using the information to provide lessons



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learned, communicate priorities, and strengthen problem -solving networks. The progress attending the goals will be monitored by OMB.

(5) **Executive Order 13514 Federal Leadership in Environmental, Energy, and Economic Performance.** EO 13514, signed by President Obama on 5 Oct 2009, establishes new sustainability requirements and reemphasizes those established in EO 13423 (2007), the Energy Policy Act, 2005 (EPAAct) and the Energy Independence and Security Act, 2007 (EISA). These requirements are related to greenhouse gases (GHG), energy/fuel efficiency, renewable energy, green buildings, local and regional planning, water efficiency, pollution prevention, sustainable acquisition, electronic stewardship and data centers, and USACE sustainability innovations. Funding for items required to begin moving toward these goals should be recommended for inclusion in the budget. USACE will report sustainability status through federal reporting systems and the OMB scorecard process similar to that used previously for the President's Management Objectives.

### c. Army Policy.

(1) **Performance-based Program Development.** Performance-based program development is development of only those programs, and only those parts of those programs, that can be justified by the results produced, or expected to be produced. Results may be in the form of outputs or outcomes. Performance-based program development is designed not only to ensure prosecution of only clearly justified programs, but also, to ensure that business lines increments are added such that the first-added increment provides the best results or returns, the second-added increment provides the second-best results or returns, etc. The increments are added in order of priority, both within and across business lines, to build total programs of whatever size, depending on available funding.

(2) **Business Lines Programming.** In response to GPRA, the Corps established its business lines by program purpose, such as navigation, environment, and flood risk management, rather than by function (e. g. investigations, construction, operation and maintenance, etc.). Consistently, the Corps programs by program purpose, and, once Army finishes program development, assists Army in cross-walking results to appropriation accounts, set up by function, for use by OMB in developing the President's program. Business lines include navigation, environment, flood risk management, hydropower, recreation, regulatory, emergency management, and water supply. Each of these business lines is fully addressed in its own appendix.

### (3) Performance.

(a) **Measures.** Performance measures are written criteria by which to gauge progress in accomplishment of any particular performance objectives, goals, and missions. For the Civil Works Program, the Corps has a number of performance measures for each business line. They are used, not only as standards by which to judge performance based on project or program

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results, but also, to project performance contributions of investment increments, discussed later, for consideration in prioritization of increments to be added in program development.

(b) **Results.** Performance results are products of operation of the PPAs. They are determined through collection of data, by performance measure, describing the extent to which performance objectives, goals, or missions, were met through operation of the PPA. They are used, not only to evaluate program performance and judge program worthiness after the fact, but also, to evaluate the reasonableness of performance measures.

(4) **FC,MR&T Project.** Programs for the FC,MR&T Project will be developed in accordance with guidance provided for comparable functions of other programs.

(5) **Specifically Authorized Studies and Projects.** For specifically authorized studies and projects the emphasis is on maintaining continuity in the workflow once a new start decision has been made. In general, there are two main new start decision points for all Army proposed cost-shared projects - initiation of the reconnaissance phase study and project construction. Preconstruction Engineering and Design (PED) studies may not be budgeted before review and approval of the Feasibility Report by ASA(CCW). If any feasibility study (other than for inland waterways) was not subject to efficiencies and controls of cost-sharing, a new start review and approval would be needed for PED. Likewise, a new start decision would be needed for a feasibility study being initiated after, say, an O&M-funded appraisal without an intervening reconnaissance new start decision.

#### d. Corps Policy.

(1) **General.** In response to GPRA, the Corps established its business lines by program purpose, such as emergency management, environment, flood risk management, rather than by function. Consistently, the Corps programs by program purpose, and, once Army finishes program development, assists Army in translating results to program function for use by OMB in developing the President' program.

(2) **Local Sponsor.** Districts should collaborate with Local Sponsors on the budget development. Please follow the guidance for Disclosure of Budgetary information. The President's Budget, after presentation to Congress contains the only releasable budgetary information. This budgetary or process information must be kept confidential until officially released to the public. Such information includes funding account, study, project, and state. Instructions on policies and procedures for disclosing budgetary information are contained in OMB guidance circular and are issued annually by CECW-ID.

(3) **Environmental Operating Principles.** By reference 3.e. (21), 26 Mar 02, the Chief of Engineers announced the USACE Environmental Operating Principles. These principles apply across all business programs and accounts. They are:

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(a) strive to achieve environmental accountability, in order to maintain the environment in a healthy, diverse, and sustainable condition necessary to support life;

(b) recognize the interdependence of life and the physical environment, proactively considering environmental consequences of Corps programs and acting accordingly in all appropriate circumstances;

(c) seek balance and synergy among human development activities and natural systems by designing economic and environmental solutions that support and reinforce one another;

(d) continue to accept responsibility and accountability under the law for activities and decisions under our control that impact human health and welfare and the continued viability of natural systems;

(e) seek ways and means to assess and mitigate cumulative impacts to the environment, bringing systems approaches to the full life cycle of our processes and work;

(f) build and share an integrated scientific, economic, and social knowledge base that supports a greater understanding of the environment and impacts of our work; and

(g) respect the views of individuals and groups interested in Corps activities, listen to them actively, and learn from their perspective in the search to find innovative win-win solutions to the nation's problems that also protect and enhance the environment.

(4) **Geospatial Data and Systems.** Key to successful implementation of the Watershed Perspective will be the sharing of data internally and with others. To ensure that data and information technology are consistent and compatible throughout the Corps, each District shall develop an Enterprise Geospatial Information System (eGIS) initiative that fits into the Division's Enterprise GIS Program Management Plan and the Corp's Geospatial Enterprise Architecture (CeA), as outlined in Engineer Manual 1110-1-2909, Geospatial Data and Systems. As part of the eGIS initiative, each MSC shall establish, and maintain for easy access, its own geospatial database repository into which its districts shall input their project data and other data essential to multi-purpose water and related land resources management within their watersheds. Such other data might include data on water and land use regulation, water control, and environmental and emergency management. Furthermore, to the fullest extent practicable, all districts will prioritize historical program and project data and input it into the E-GIS databases. Finally, each District shall review and update project information annually through the CorpsMap web portal - <https://corpsmap.usace.army.mil> to ensure project information is accurate and current.

(5) **Watershed Principles.** Watershed studies are planning initiatives that have a multi-purpose and multi-objective scope and accommodate flexibility and collaboration in the planning process. Possible areas of investigation include flood risk management activities, ecosystem

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restoration, navigations, water supply and recreations. The watershed principles require team thinking about water resources development and management in the context of multiple purposes rather than single purposes, and thus, facilitates the search for comprehensive and integrated solutions; improve opportunities for public and private groups to identify and achieve common goals by unifying on-going efforts and leveraging resources; identify a combination of recommended actions (a Watershed Management Plan) to be undertaken by various partners and stakeholders in order to achieve local, tribal, regional, and national water resources management goals identified in the study and may or may not identify further budgetable Corps studies or implementation projects; leverage resources, including cost shared collaboration, and integrates programs and activities within and among Civil Works programs, and with other Federal, tribal state and non-governmental organizations, to improve consistency and cost effectiveness. Watershed principles may be applied to Watershed Assessments (leading to Watershed Management Plans) in accordance with Section 729 or feasibility studies accomplished in a watershed context (leading to Corps implementation). See Annex A (Investigations) and Business Line Appendices.

(6) **Plant Replacement and Improvement Program.** Submission of documents to support new Plant Replace and Improvement Program (PRIP) projects are contained in Annex E along with referenced materials. Both large and small projects are reviewed by the HQ Prioritization Group which makes recommendations to the Senior Program Budget Advisory Committee on the disposition with respect to inclusion in the program. Good planning dictates that justification, economic analysis, estimates, and other submission materials are prepared well in advance of this budget review, since it is only one year away from project execution. Submissions of projects outside of the normal budget cycle are discouraged except for situations dictated by extraordinary circumstances.

(7) **Construction Contracts** guidance is referenced in Annex B and in the current Execution of the Annual Civil Works Program EC.

(8) **Initial Program.** The initial program is the first business line increment for each business line. Criteria for initial levels are presented, as applicable, in Appendices I - VIII. For each business line and account program, HQUSACE must develop a realistic, multiyear initial program reflecting PY-2 work allowances and projected current year appropriations and meeting further requirements for program formulation presented in the appendices and/or annexes covering the programs. (Note that this is not the same program represented by "baseline estimates" required by reference 3.a.(9), PL 101-508, and discussed in reference 3.c.(3) OMB's Circular A-11).

(9) **Capability Program.** When developing capabilities, District should fully fund all contracts \$20 million or less; for contracts greater than \$20 million, treat them as incrementally funded (i.e. continuing contract, base bid + option, multiple year contract); when stating capabilities, in addition to the optimally funded capabilities, provide one or two logical increments less than the optimal capability with a brief explanation of what can be accomplished

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at each funding increment. The recommended program to OMB, the President's FY12 budget, and the associated 5, 10, and 20 year budget plans will be derived in part from the Capability Program. Future or known work should be identified in the capability program.

**7. Systems.** The National Academy of Public Administration (Prioritizing America's Water Resources Investments) released their February 2007 report which was chartered by the House Appropriations Energy and Water Subcommittee. The report validates the direction the Corps has been heading in the implementation of performance based budgets, system/watershed perspectives, long range asset planning reflected on the near term through the Five Year Funding Streams and the Five Year Infrastructure Management Plans providing a near term horizon.

**a. Infrastructure Management Plan.** The Infrastructure Management Plan will be consistent with the 5 year funding stream and represent the O&M component of the 5 year funding stream. The Infrastructure Management Plan will be based on sub-plans developed by Business Line Managers for six primary missions (Flood Risk Management, Navigation, Environmental Stewardship, Water Supply, Hydropower, and Recreation). The Infrastructure Management Plan should be jointly developed and improved within the Operation & Maintenance Community of Practice. The Infrastructure Management Plan must reflect sound engineering, construction, operation and maintenance state of practice (reliability centered maintenance, condition assessments, equipment mortality studies, predictive maintenance, etc) and continually honed to achieve the lowest sustainable O&M investment level. Accelerated replacement cycles within the 5 year funding stream may affect O&M needs within the Infrastructure Management Plan (i.e. replacement versus continuing high outage and repairs on failing equipment). The O&M budget submission should be consistent with the 5 year funding stream and the Infrastructure Management Plan. The 5 year funding stream and Infrastructure Management Plan both reflect planned investments for a long range five year period.

**b. Systems and Basins.** A systems approach or watershed approach is needed to ensure that investments are integrated into a whole that preserves or enhances performance and sustainability at the system level. System data for PY budget items requested (studies, construction, and O&M) will include the USGS Hydrologic Unit Code (HUC) sub-region (4 digits) codes. These codes can be found at [http://water.usgs.gov/GIS/huc\\_name.html](http://water.usgs.gov/GIS/huc_name.html). A list of 52 Systems has been developed for O&M (see Table C-5.1).

## **8. Operation and Maintenance Increments and Integration.**

**a. Increments.** O&M Increment 1 is defined as critical routine and critical cyclical activities. O&M Increment 2 is defined as critical non-routine activities (see individual business line appendices for further details). Increments 1 and 2 for O&M can not exceed 75 percent of each MSC's O&M total average for all business lines together of the prior 5 year budgets.

**b. Integration.** Districts will input data and their priorities and MSC's will develop a complete, single, O&M program representing the MSC's desired integrated program. All

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business line O&M activities must be integrated, which means across all business lines, and then prioritized into one O&M program. This will facilitate consistency in HQUSACE formulation of the Civil Works Budget across all MSC's as well as business lines, appropriations and Districts.

#### 9. Multiyear Funding Programs for Civil Works Programs.

a. Introduction. OMB ceilings reflect intent of the President's 5 to 10 year program from a national perspective. However, Army may recommend the distribution of funding within the ceiling for Civil Works and may elect to recommend alternative funding levels. To this end, it can select alternative work mixes and associated funding levels, by functional account, that best meet scheduled commitments, program priorities, and capabilities. Emphasis or de-emphasis of programs, projects, and activities should always provide for the most efficient and productive use of funds.

b. General. Multi-year funding programs identify the long-term resource requirements for the Civil Works Program. Ten- and Twenty-year databases have been established in P2 to allow MSCs to input out-year funding data. Specific data and submission requirements are described below. See EC budget appendices for additional information.

(1) Five-Year Funding Stream. The five-year funding stream (PY through PY+4), is a subset of the 10 year funding stream described below and is the basis for the Five-Year Development Plan (FYDP). The FYDP is a stand alone document prepared by HQ which provides a five-year funding stream for each Corps business line. These funding streams must contribute to achievement of the strategic goals and objectives contained in the Civil Works Strategic Plan. The FYDP is submitted to the Office of Management and Budget (OMB) and the Congress along with the PY budget submission.

(2) Ten-Year Funding Stream. The purpose of the Civil Works Ten-Year Development Plan is to present the funding required for the Civil Works program for analysis over a 10 year period. The 10-year period (PY through PY+9) approximates the implementation life of projects from start to finish and establishes long-term resource requirements. The focus is to undertake projects and activities that provide the highest net economic and environmental returns on the Nation's investment as well as reducing risks to life. As in the FYDP, these funding streams must contribute to achievement of the strategic goals and objectives contained in the Civil Works Strategic Plan. MSCs shall provide the data required by the Ten-year funding stream in P2 as required by paragraph d. below.

(3) Twenty-Year Funding Stream. This funding stream provides an alternative long-term view of the Civil Works Program. Twenty-year funding streams build on the ten-year database. PY+10 through PY+19 have been added to the ten-year funding stream for this purpose. This data will allow the HQ to assess the twenty-year investment requirements for the Civil Works Program for additional long-term analysis. MSCs shall provide the data required by the Twenty-year funding stream in P2 as required by paragraph d. below.

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c. **Submission Requirements.** MSCs shall complete data input to multi-year funding streams in accordance with Table 2 of the budget EC entitled: Summary of Submission Requirements. MSCs shall update the ten-year program following OMB Passback to support the President's final submission to Congress in February PY-1. MSCs must incorporate all post Passback adjustments as well as the PY-1 appropriations if passed by Congress by February PY-1.

d. **Data Requirements.** The ten- and twenty-year databases have been modified to require only CAPABILITY funding for PEDs, construction projects and O&M projects that require justification to support funding (e.g. Major Maintenance). Only FEDERAL dollars (including IWTF dollars) should be shown. DO NOT include non-Federal dollars such as required cash contributions in the capability funding data. There is NO requirement for including O&M projects in the ten- and twenty-year databases EXCEPT for those O&M projects that require justification to support funding (e.g. Major Maintenance).

e. **Business Line Increments.** Business line increments are defined in each applicable business line. They are prioritized by MSCs for each of their business lines, then, reviewed and modified or approved by HQUSACE and, ultimately, ASA(CW). They are added to the "initial" program in order of priority within each business line. Their priorities are based on their relative efficiencies and effectiveness in accomplishing approved performance objectives, goals, and missions. The objectives, goals, and missions include serving specific water and related land resource management purposes, meeting statutory requirements, and promoting national health and safety. Justification statements present the relationships between investment increments, incremental contributions to achieving objectives, goals, and missions, and incremental funding. Making these relationships clear to all parties within the Corps, OMB, Congress, and the public is important to gaining support for recommended programs.

f. **Programs Developed by Army.** Based on HQUSACE recommendations, OASA(CW) will develop a "ceiling program," based on Presidential policy, by adding the highest-return business line increments nationwide to HQUSACE's initial program. Additional increments will be added to develop an above-ceiling "recommended" program.

## 10. Cost Estimates.

a. **Economic Assumptions.** As explained above, the Administration's economic assumptions address inflation and adjustments through PY-1. Table 1 provides cost estimate updating rates based on these assumptions, extrapolated through PY+19. These rates may be extended beyond PY+19 using the procedures described in Footnote 16 of the table. They are used, as explained below, to update all study and project cost estimates.

b. **Updating.** As shown in Table 1, all costs of Corps work are grouped into just two "classes" - Class 1 and Class 2. Class 1 includes only costs of Corps civilian permanent workers. Class 2 includes all other costs, including costs of Corps civilian temporary workers.

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Each class has its own set of rates for cost estimate updating. Nevertheless, each set is used in the very same way - through execution of the "algorithm" described in the table. The two cost classes and their rates are discussed next.

(1) **Corps Civilian Permanent Worker Cost.** The Class 1 rates in Table 1 are applicable to the PY-1 pay raise base. They derive from "updating factors" incorporating effects of then-year pay raises and a changing pay raise base. The pay raises reflect standard nationwide pay raises and locality pay increments. The breakdown between the two is based on local pay gaps and must be determined each year. Use these rates to update Corps civilian permanent worker cost estimates for all programmed work of all studies, projects, and activities.

(2) **Corps Civilian Temporary and NonCorps Worker and Nonpay Cost.** The Class 2 rates of Table 1 are applicable to the PY-1 base of all costs other than those for Corps civilian permanent workers, ranging from costs of Corps civilian temporary workers, and consultants and Architect Engineers used in the various preconstruction planning and construction stages of work, to real estate costs. They derive from "updating factors" reflecting standard nationwide inflation. Use these rates to update Corps civilian temporary and nonCorps worker and nonpay cost estimates for all programmed work of all studies, projects, and activities.

c. **Micro-computer Assisted Cost Estimating System (M-CACES).** A complete and reliable Micro-computer Assisted Cost Estimating System (M-CACES) baseline cost estimate and realistic workflow and funding schedule are essential in preparing out-year programs. Projections of work and funding requirements will be consistent with the President's PY-1 budget, as modified by any Congressional action in the meantime. However, the funding schedules should be reviewed and adjusted continuously to reflect the sponsor's financial capability and project progress.

## 11. Project Economics.

a. **Discount Rates.** A discount rate of 4 3/8% will be used to determine the "current" economics of any project. For projects funded for construction, the "applicable" rate is the one in effect when construction funds were first appropriated. For projects never funded for construction, the applicable rate is the "current" rate, unless the project qualifies for the 3 1/4% rate under the "grandfather" clause in Section 80 of the Water Resource Development Act of 1974, PL 93-251. Even if "grandfathered" for budgetary purposes the actual current rate should be also used and results shown. In addition, as noted in paragraph 12 below, costs and benefits, and remaining costs and benefits must be computed and displayed at a 7 percent discount rate for consistent evaluation.

### b. Evaluation.

(1) **Benefit/Cost Ratios.** As required, in support of funding requests, benefit-cost ratios will be evaluated based on the benefits in the latest approved official document, such as Feasibility



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Report, Chief of Engineers Report, Limited or General Reevaluation Report (LRR or GRR), Engineering Documentation Report (EDR), or other report. If the date of the last approved report is more than 3 years old, then an economic update will be required and approved by the appropriate MSCs' except for projects under construction. An economic update will be required for projects under construction when the date of the economic analysis is more than 5 years old.

**(2) New Construction Projects.** For any project or element proposed as a new construction, the fiscal year of the approval date of the latest economic analysis must not precede the fiscal year of the MSC program submission by more than 3 years. For example, for any new construction project or element in your initial submission, the approval date of the document containing the most recent economic analysis can be no earlier than 1 October CCY-4 - the first day of PY-5. This point in time precedes the start of the fiscal year in which you are making your submission by 3 years. If the fiscal year of the approval date is more than 3 years ago, you must perform a reevaluation to show that the project remains justified. Such reevaluation will be the first item of work upon receipt of funds and will be documented in an LRR to be submitted in support of any request for follow-on funding. The reevaluation will involve no major new analysis. It will be limited to reviewing and updating previous assumptions and limited surveying, sampling, and application of other techniques to develop a reasonable estimate of project benefits. If the limited reevaluation uncovers major changes that could affect project formulation or sizing, then additional PED rather than construction funds must be requested to undertake a complete GRR.

**(3) Continuing Construction Projects.** Continuing construction data from the P2 data base will be used in formulation of the President's PY Budget. For continuing construction projects, the fiscal year of the approval date of the latest economic analysis must not precede the fiscal year of the MSC program submission by more than 5 years. For example, for any continuing construction project recommended in your June submission, the price level of the economic analysis can be no earlier than 1 October CCY-6 - the first day of PY-7. This point in time precedes the start of the fiscal year in which you are making your submission by 5 years. If the fiscal year of the price level is more than 5 years ago, you must perform an economic update to show that BCR and RBRCR criteria used for performance based budgeting is current. The economic update will involve no major new analysis. It will be limited to reviewing and updating previous assumptions and limited surveying, sampling, and application of other techniques to develop a reasonable estimate of project benefits. For any continuing construction project, in order to assure currency of economic analysis, the price level of the economic analysis, or update, must not precede the fiscal year of the MSC submission by more than 5 years. Economic updates should be performed in accordance with the update plan in the feasibility report and/or the Project Management Plan, MSCs may approve them.

**(4) Approval of Post-authorization Documents.** MSCs have approval authority for post-authorization documents that are certified as being in accordance with law and policy for projects not requiring a Washington-level decision or additional congressional authorization. Decision documents for projects not in accordance with policy or those requiring action by the Chief or

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ASA(CW), or requiring additional congressional authorization, must be submitted to headquarters, U. S. Army Corps of Engineers (HQUSACE).

**12. Report to Congress of Benefit/Cost Ratios.** Executive Order 12893, "Principles for Federal Infrastructure Investment," requires that benefits, costs, and benefit-cost ratios for new infrastructure investments of all federal agencies be evaluated at a discount rate of 7% to facilitate comparison and decision making. The total benefit/cost ratios (BCR) and remaining benefit / remaining cost ratios (RBRCs) for all continuing and new construction projects, each based on a 7% discount rate, will be input into P2. **RBRC's are required when updating Justification Sheets.** Specifics on computing RBRCs are included in Annex B, Construction.

**13. Manpower.** No manpower data is required by this EC. CERM-M will use current resourcing guidance, the Corps of Engineers Manpower Requirements Systems (CEMRS), and PY-2 through PY workload data to develop PY manpower requirements by appropriation account for the OMB program submission. In early CCY+1, once the President's Program has been resolved for PY, then budget and manpower data compatible with the program will be updated in P2 Primavera Project Manager. This data will be imported to CEMRS for use in the development of the PY manpower allocations in accordance with the then current EC (to be published in January of CCY+1).

#### **14. Submissions.**

**a. Summary.** MSC's role is for quality assurance, to verify consistency and adhere to guidance in this document. Required MSC submissions, recipients, means of input, numbers of copies, and due dates are discussed at length in the appendices and summarized in Table 2. Due dates are designed to manage the budget development workload. They must be met.

**b. Input Instructions.** Input instructions are provided by various means, including, in addition to this EC, User's Manuals, system websites, and e-mail messages.

**c. Databases.** Data is input to databases of up to four automated information systems. These include P2, Information Technology Investment Portfolio System (ITIPS), Recreation Budget Evaluation System (Rec-BEST) and Environmental-Stewardship Budget Evaluation System (E-S BEST). These databases are open; they will close on the various dates shown in Table 2.

#### **(1) P2.**

**(a) Instructions.** In addition to the guidance below, detailed documentation and instructions concerning use of P2 for submission of the FY12 program can be found in a document named "PBS Training Workbook". This document can be obtained from a link on the P2 OFA-CW start-up screen. Note that the dates shown in the "Data Sources and Process Flow" section of the PBS Functional Design document are notional dates. Refer to Table 2 in this EC for a

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summary of official due dates. Additional instructions concerning use of all P2 tools are available on the PMBP Portal at <https://pmbp.usace.army.mil>.

(b) **General Provisions.** P2 will be used by all MSC/Districts for I, C, O&M, MR&T, FCCE FUSRAP, and RG program submissions. "Remaining Items" in these accounts will be handled separately by HQUSACE. Refer to the "Data Sources and Process Flow" section of the PBS Training Workbook document for a detailed discussion of the process flow. In summary, the concept is as follows: MSC/Districts will use P2 Primavera Project Manager (PM) to schedule their projects and identify unconstrained (capability level) resource requirements. Every night during the budget submission timeframe, selected data fields in PM will be automatically loaded into the PBS module of P2 Oracle Financial Analyzer (OFA) at a defined level of detail. The MSC/District will then use OFA to enter performance indicators, budget request amounts, and District and MSC rankings within each business line for all budget items across appropriation accounts. Upon completion of the submission by MSC/Districts, the P2 data in OFA will be utilized by each HQUSACE business line manager for development of the nationwide program. HQUSACE business line managers may work directly in OFA or may use Excel extracts of OFA data. Excel extracts revised by HQUSACE business line managers will be periodically uploaded back into OFA by HQUSACE.

(c) **P2 Primavera Project Manager (PM).** The current unconstrained (capability-level) project schedule, activities, and resource requirements identified in PM for the PY should provide the starting point upon which the budget submission is built in OFA. The PM data will also be used to provide additional details to a business line, account, or program manager who wants to see what specifically is included in an aggregated OFA budget item. Outyear schedule and resource data in PM on projects in the Construction phase will be queried to provide activity-level (contract) information for current and future years as needed. Thus it is necessary to schedule and resource budgeted Construction projects in PM through project completion. For instructions concerning PM data entry, refer to the PBS Training Workbook document sections entitled "Data Quality Considerations/User Action Checklist" and "PBS Business Process Procedures (Update PY Schedules in Project Management)".

(d) **Recreation and Environmental Stewardship.** Budget packages and performance measure data for Recreation and the Environmental Stewardship part of the EN program will be updated and submitted through use of Rec-BEST and E-S BEST, respectively. The performance measure information must be updated in the BEST programs by **21 May 10**. This performance data will be extracted from Rec-BEST and E-S BEST and then merged into OFA along with budget data extracted from PM. When entering budget information into PM, make sure the corresponding BEST ID's are entered for all resourced activities to ensure that the proper performance measures can be matched in OFA. In OFA the Budget Item ID data field will contain the BEST ID. For most projects, the preliminary budget information and the matching BEST\_ID's can be carried over from last year's data entry in PM or can be taken from the existing Rec-BEST and E-S BEST database. The information needed for P2 data entry is available on the P2 summary page in the BEST programs. Extracts of Rec-BEST and E-S BEST

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will be loaded into OFA on a nightly basis once the projects have submitted data input in Rec-BEST and E-S BEST and the budget items have been created in P2-OFA, to allow Districts and MSCs to review and evaluate their budget comprehensively, across business lines.

(e) **Business Line.** P2 provides a project level code to identify the project's primary business line. This code may be over-ridden in PM at the activity level for specific activities which differ from the project's overall primary business line. Several Business Line choices available in P2's list of values are not applicable for this budget submission, including "OTH" - Other, "SOTH" - Support for Others, and "RE" - Real Estate. The business line choice "ENV" - Environment should not be used. Instead, use "ENV-Ecosystem", "ENV-Steward", or "ENV-FUSRAP". The "JOINT" business line should not be used for a project's primary business line classification, but may be used as the business line over-ride activity code on applicable activities in PM.

(f) **Increments.** An activity code named "CW Funding Increment" will be used in PM to categorize a discrete amount of work identified by an activity or a set of activities. The valid values for this data element are defined in the Definitions/Glossary section of this EC. If the activity code is blank, the corresponding data will be placed in a CW Funding Increment called "Unassigned" in OFA. Budget items with an "Unassigned" increment will not be considered for funding in FY12.

(g) **Phase Code.** An activity code named "CW Budget Phase" will be used in PM to categorize each resourced activity. The valid values for this data element are identified in Table 3 of the EC. If the activity code is blank, the corresponding data will be placed in a CW Phase called "Unassigned" in OFA. Budget items with an "Unassigned" CW Phase will not be considered for funding in FY12. O&M multipurpose hydropower projects (CW Type of Funds 96 3123 300) which are assigned a Phase code of "OJ" (Operation Joint Activities) or "MJ" (Maintenance Joint Activities) will appear in OFA under the Hydropower business line.

(h) **CW Type of Funds.** Every resourced activity in PM needs to have a valid Type of Funds (Approp Dept / Approp Symbol / Category-Class-Subclass (CCS)) code assigned at either the WBS or activity (override) levels for interfacing to CEFMS and proper OFA functionality and reporting. Do not assign a CW Type of Funds value which only identifies the Appropriation Dept and Symbol, but only choose values which include the CCS as well.

(i) **OFA Performance Measure Data Entry Forms.** The PBS module of OFA provides Performance Measure data entry forms which allow for submission of budget data. There is a separate data entry form for each business line. The data requirements for each business line are detailed in the business line appendices. For each budget item (row) in OFA, the PY Federal Corps (and PY Inland Waterway Trust Fund, if applicable) funding request amount will need to be entered, along with performance indicators applicable to the business line, as well as the MSC rank for the budget item. MSC ranking is required across business lines. Each budget item should receive a unique ranking, beginning with rank '1', and incrementing by 1. For detailed

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documentation and instructions on the use of these forms, refer to the “Update PY Budget and Enter Performance Measures in OFA” and “OFA Nightly Update Process” sections in the PBS Training Workbook document. Note that budget items brought into OFA from PM may be revised as needed, including deletion and insertion of budget items. These revisions may be accomplished directly within OFA or by pasting from Excel into the OFA data entry forms. Data entered in OFA will not be overwritten by the PM-to-OFA nightly load process.

(j) **Level of Detail and Budget-Item-ID.** Each record (or row) of budget and performance measure data in the OFA data entry forms will be identified in detail by seven key fields - Business Line, EROC, Type of Funds, P2 Project, Funding Increment, Phase, and Budget Item ID. The Budget Item ID field is used to break-out budget items to an appropriate level of detail. Refer to the business line appendices to determine at what level of detail to enter the individual budget items for each project and study. An activity code named “CW Budget Aggregation Override” is available in PM which can be used to force an activity in PM to load into OFA as an individual item without aggregation by setting the activity code to “Yes”. Setting this activity code to “Yes” is optional, and only needs to be done to override the default aggregation rules detailed below. By default, the PM-to-OFA nightly load process derives Budget Item ID’s based on the following business rules:

- **EM, EN Restoration, FRM, Navigation, FUSRAP, and CAP** - If the Resource Type is CONSTSVCS (Construction Contract), or if the “CW Budget Aggregation Override” activity code is “Yes”, then the Budget Item ID will represent the Activity Number. In all other cases, the Budget Item ID will be “NCS” (Non-Construction Services).
- **EN Stewardship and Recreation** - The Budget Item ID will represent the Best ID assigned at the resourced activity level in PM. If there is not a BEST ID assigned, the Budget Item ID will be “UNK” (Unknown).
- **Hydropower (Increments 1, 2, and 2.5)** – If the Resource Type is CONSTSVCS, or if the “CW Budget Aggregation Override” activity code is “Yes”, the Budget Item ID will represent the Activity Number. Otherwise, the Budget Item ID will represent the Work Category Code assigned at the resourced activity level in PM. If there is not a Work Category Code assigned, the Budget Item ID will be “NCS”.
- **Hydropower (Increment 5)** – If the “CW Budget Aggregation Override” activity code is “Yes”, the Budget Item ID will represent the Activity Number. Otherwise, the Budget Item ID will represent the Work Category Code assigned at the resourced activity level in PM. If there is not a Work Category Code assigned, the Budget Item ID will be “NCS”.
- **Hydropower (Increments other than 1, 2, 2.5, and 5) and Water Supply** – The Budget Item ID will represent the Activity Number. Thus, each activity is brought into OFA individually.

(k) The sum of all PY requested amounts in OFA for all budget items within a project should represent the project's obligation capability.

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(l) **Activity Rankings.** Each activity in PM may have a rank number assigned to it, and duplicate ranks are allowed. Activity rankings will be used to determine the relative priority of activities within a project, district, and MSC. However, the MSC rank that is added in OFA will be the primary ordering rank used within the budget. Therefore, the activity ranks in PM are optional and will not transfer into OFA.

(m) **Joint Activities.** Refer to paragraph C-2.3.b in Annex C for instructions concerning “JOINT” activities.

(n) **Program Codes.** The Program Code identifies the AMSCO/CWIS/PWI associated with a P2 project. A Program Code must be assigned to every CW P2 project for which funds are requested. The Program Code is a project level code which is entered in Oracle Projects (OP). Refer to Appendix N in the most recent Execution EC for further guidance concerning Program Codes.

(o) **Multi-Year Funding Streams.** OFA also provides a data entry form named “PBS Multi-Year Funding Stream DEF” which is used to enter funding streams by FY, Project, Business Line, Type of Funds, Work/Financial Category (Federal, Inland Waterway Trust Fund), Phase, and Funding Level. Refer to the “Prepare Multi-Year Funding Streams in OFA” section of the PBS Training Workbook document for detailed instructions on using the data entry form. Also refer to paragraphs 9 and 15 of this EC for further information on data requirements.

(2) **ITIPS.** Instructions for input to the ITIPS database were provided by CECI-TR in the latest ITIPS User's Manual, accessible at:  
<https://kme.usace.army.mil/ci/CIOrganization/IMITPortfolioProgram/Pages/ITIPS.aspx>  
These instructions cover input of automation requirements, discussed in Annex F. This database remains open; but input is required by the date shown under “Automation Program” in Table 2.

(3) **Rec-BEST.** A web-based tool has been developed for field use in calculating Recreation performance measures for O&M activities. Rec-BEST **MUST** be used to develop performance measures for Recreation O&M and MR&T budget packages for PY. Rec-BEST may be accessed at:  
<http://corpslakes.usace.army.mil/employees/recbest/recbest.html> along with directions for its use. See Appendix VI for further information concerning Rec-BEST.

(4) **E-S BEST.** A web-based tool has been developed for field use in calculating Environmental Stewardship performance measures for O&M activities. E-S BEST **MUST** be used to rank PY Environmental Stewardship O&M and MR&T budget packages. E-S BEST maybe accessed at <http://corpslakes.usace.army.mil/employees/esbest/esbest.html>. See Appendix II for further information concerning E-S BEST.

d. **E-mail and FTP Data.**

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(1) **Justification Statements and Books.**

(a) **General.** Complete your updates of illustrations A-2.1 through A-2.4, B-4.2, C-2.1, C-5.3a through 5.3b of Annexes A – C by dates specified in Table 2.

(b) Use 10-point regular Arial font, automatic line height, line spacing of 1, and margins of 1" top and bottom, and 0.5" both sides. (In "File," "Page Setup," "Margins," set bottom margin at 1.5" and footer margin at 1.0" from bottom edge of page. This provides a 0.5" footer height for printing the footer and page number.) Do not number pages.

(c) Develop project completion schedules consistent with the President's budget funding amounts. The PM data will be queried to obtain schedules for the report formerly provided by the PB-2As. These schedules will be provided to the Appropriations Committees for the record. Do not show future advanced appropriations in the summarized financial data on your justification sheets. Prepare the summarized financial data in accordance with the examples in Illustration B-2.4 of Annex B.

(d) Submit justification statements, as completed, via e-mail to your RIT, as appropriate, for review. Coordinate e-mailing logistics with your RIT, beforehand.

(e) **Justification Materials for Studies, PED, and Construction Projects Submission.** Draft justification materials are to be provided for all studies, PEDs, projects that were not in PY-1 (FY10) budget and are proposed for inclusion in the Army's recommendations to OMB. See Table 2 for the due date for these draft materials. Justification materials for new work are due earlier than justification material for other work.

(f) **Revised Submission.** Between the times of the initial and Congressional submissions, revised submissions may be required for various reasons, including changes in funding for PY-1 affected by appropriations. Submit these as specifically requested.

(g) **Congressional Submission.** The ultimate product of the justification development process is the justification book for Congress - one volume of justification material for each MSC. Each division is responsible for developing its own data using whatever software it chooses, such as computer-aided design (CAD), and Microsoft Word and Excel software. However, ultimately, each division must convert its book to an Adobe Acrobat file for efficient electronic transmission and publication. In order to ensure that your book will "present" in the Adobe Acrobat file as it does in the development software file, you must select the Adobe Acrobat printer in the development software before finalizing your product in that software. For example, to ensure that what you see in Word is what you get in Adobe Acrobat, you must select "File," "Print," "Printer," "Acrobat PDFWriter" in Word before finalizing in Word. Doing this first of all will spare you untold lost time and frustration. Of course, if you want to print your finalized file at a local printer, simply select the printer and print, but do not modify the file while the local printer is selected.

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(h) Prepare a table of contents list studies and projects alphabetically by Business Line by Account. Include page numbers. On each page of the document and maps, show the date of Army's press conference (to be provided later) centered in the bottom margin, 1" from its bottom edge. Preparation of status maps format and instructions are referenced in ER -11-2-240, Appendix C (Project Status Maps). Maps format must be in accordance with the regulation.

(i) Justification documents for Replacement projects are required for C projects, including justification statements and status maps. Justification documents for Rehabilitation are required for O&M. For rehabilitation of inland waterways locks and dams and associated structures, show half of funding from the Inland Waterway Trust Fund.

(j) For other O&M projects, show funding for "operations" and "maintenance" work separately. Copy PY funding for these parts from guidance to be provided later, ensuring that the total of amounts copied matches your division's total. Update individual project amounts to reflect your latest projection of PY-1 obligations. Round all funding amounts to the nearest \$K. Add the following statement (less quotation marks) after the introductory paragraph for each category, as applicable:

"For recreation areas, part of the requested amount will be offset by a transfer from the Special Recreation Use Fees Special Fund (SRUF)"

(k) Include rehabilitation requirements for projects as part of single line item entries on the justification of estimate statements with the following remark (less quotation marks) under "Reason for Change and Major Maintenance Items:"

"Includes Rehabilitation at \$XXX. See justification following this table."

(l) Identify States for each of the following items: Scheduling Reservoir Operations, Inspection of Completed Works, Project Condition Surveys, and Surveillance of Northern Boundary Waters. Refer to Annex C.

(m) Submit these as specifically requested later. Submit final versions, printed front to back and collated into a single book (with a cover like last year's, including the disclosure statement, and paginated and dated table of contents, budget summary, and status maps, as applicable) in a single Adobe Acrobat file.

(2) **Other.** The Continuing Authority Program is assigned to Annex G. The Homeland Security/ Emergency Management Business Line Manager (BLM) will provide instructions to cover FC&CE activities of former Annex D, requiring input by e-mail or FTP directly to that office by dates specified in Table 2.

(a) **Hardcopy Data.** Provide hardcopy items required (e. g., certifications, etc.) by dates specified in Table 2.



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(b) **Document Marking.** All submissions required by this EC are not to be released outside the Department of the Army. See reference 3.e.(7), ER 11-2-240, "Civil Works Activities - Construction & Design," for instructions regarding the marking of documents for restricted distribution.

**15. Balance-to-Complete Report.** Districts will utilize the OFA "PBS Multi-Year Funding Stream" data entry form to ensure that the funding required beyond the PY to complete all active, inactive, and deferred PED and construction projects is accurately entered by the date shown under "Main Part" in Table 2. Records for all PED and construction projects must include total estimated federal costs. Give special attention to active status PED and construction projects, as they are the subject of periodic Congressional questions on project balances-to-complete.

**16. Certifications of Compliance.** You must submit, to CECW-ID, at least two, and possibly four, certifications that your program submission complies with laws and an Executive Order. The two certifications always required include one by district commanders regarding compliance with an Executive Order on data sharing, and one by the MSC directors of programs management regarding compliance with law on use of management controls. The other two possibly required are both by district commanders - both regarding compliance with coastal barrier laws. Each certification is discussed below.

a. **Executive Order on Geospatial Data.** Reference 3.e.(12), ER 1110-1-8156, "Policies, Guidance, and Requirements for Geospatial Data and Systems," and EM 1110-1-2909, "Geospatial Data and Systems," assist USACE in protecting its investment in geospatial data and systems and in complying with Executive Order 12906, "Coordinating Geographic Data Acquisition and Access - The National Spatial Data Infrastructure." USACE collects a variety of geospatial data to produce products such as river and harbor maps, charts, and drawings; real estate maps; environmental and economic studies; and engineering studies and drawings. Paragraph 7.g(4) of the ER explains that, beginning with the FY97 Civil Works program cycle, each district commander will submit a certification, modeled after Illustration 2, certifying that his command has documented new geospatial data that it has created and made this documentation (metadata) available via the National Geospatial Data Clearinghouse on the Internet. The certification is due by the date shown under "Main Part" in Table 2.

b. **Coastal Barrier Laws.** OMB's Circular A-11, Section 12.5(s) states that estimates must not include any new federal expenditures or financial assistance prohibited by the "Coastal Barrier Resources Act" (CBRA), PL 97-348. In addition, the "Coastal Barrier Improvement Act of 1990," PL 101-591, amending CBRA, requires that the Corps certify annually to Congress and the Secretary of Interior that it was in compliance with the provisions of CBRA, as amended, during the previous fiscal year. Therefore, each District Commander whose district includes areas covered by the Coastal Barrier Resources System will submit two certifications - one modeled after each Illustration 3A and 3B certifying, respectively, that his program request is in compliance with these laws and that no funds were obligated in the past fiscal year (PY-2) for

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purposes prohibited by them. Note that PL 101-591 added new units to the Coastal Barrier Resources System. The certifications are due by dates shown under Main Part in Table 2.

**c. Management Control Law.** Federal agencies are required by law to establish "management controls" for the activities they manage, and to provide assessments of their effectiveness to the President and Congress, annually. To this end, functional proponents identify requirements for compliance with law, including safeguarding assets, ensuring adequate records, and promoting efficiency and effectiveness of program accomplishment, and reflect them in checklists. Army's management control effort, implemented by AR 11-2, "Management Control," specifically includes the Civil Works Program. The new management control checklist for Civil Works Program Development is provided as Illustration 4. This is for use by programs management organizations in MSCs and districts, as explained below:

(1) Use the checklist during development of your program submission. District commands will use it first; then MSCs, when reviewing and modifying district submissions.

(2) A "no" response to a checklist question suggests a potential management weakness. However, if it is the result of a special case or specific exception, then probably there is no management weakness. You are the judge. If you determine that a weakness exists, you must correct it as quickly as resources and essential mission priorities permit. No upward reporting is required.

(3) If a management weakness requires the attention or awareness of the next higher level of management, it is a "*material weakness*." This is a judgment call on the relative seriousness of the problem. It is made at each progressive echelon, based on each manager's professional judgment. Material weaknesses discovered by districts are reported to the MSCs, which determine whether to report them to CECW-BD. The reports must specify corrective actions taken or planned. The highest echelon receiving the report will evaluate the corrective actions, provide assistance, if needed, and track progress. Consult AR 11-2 for help in determining whether a weakness is "material."

(4) Do not send checklists to HQUSACE. Each MSC director of programs management will submit a certification, modeled after Illustration 5, certifying that the checklist was used by the districts, as applicable, and MSC. The certification is due by the date shown in Table 2, and should be submitted to CECW-IN.

**17. Coordination.** The CECW staff will work closely with MSC office staffs throughout the program development process to assure that the CECW recommended program, as well as alternative programs, are thoroughly coordinated. Coordination will continue after receipt of

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OMB's passback and during development of Army's proposed appeal. The out-year program will be revised, as necessary, to reflect resolution of the passback appeal and final President's Program.

FOR THE COMMANDER:

A handwritten signature in black ink, appearing to read 'SL Stockton', written over a faint circular stamp.

STEVEN L. STOCKTON, P.E.  
Director of Civil Works

8 Appendices (See Table of Contents)  
7 Annexes (See Table of Contents)

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## DEFINITIONS/GLOSSARY SECTION

### INCREMENTS:

**Work Increment:** A work increment is a discrete amount of work identified by an activity or a set of activities with specific resource requirements and a schedule.

**Activity:** A component of work performed during the course of a project. An activity could be a process (e.g. collection of data) or lead to a deliverable (write a report). Activities are the building blocks of the P2 system – they have assigned durations, resources, and relationships.

### Investigation Increments (for studies, and pre-construction engineering and design of specifically authorized and MR&T investigations):

**Increment 1:** This increment will include only the minimum continuing and new study activities and the total request is limited to the budget amount for PY-1, by study. Do not include new PED or study phases. If a study is ready for changing phases or is no longer likely to produce a high performing project, then the Increment 1 level for that study will be zero. Increment must be performance based and integral with a study/project with high outputs and consistent with ranking.

**Increment 2:** New phases of studies previously budgeted may be initiated in this increment. Studies that do not have an Increment 1 may reflect the study activities in Increment 2. Studies that have a high probability of recommending a project with high value output may include additional activities in this increment that will provide improvement to the study completion compared to the items submitted in increment 1. Increment must be performance based and integral with a study/project with high outputs and consistent with ranking.

**Increment 3:** This increment will include the activities needed to sustain (not fall behind/not accelerate) the study schedule included in the PMP. New starts and resumptions may be included. Increment must be performance based and integral with a study/project with high outputs and consistent with ranking.

**Increment 4:** This increment includes additional capability activities that can be supported by cost sharing sponsor and Corps resources. This increment can be viewed as enhancing (or advancing) the study schedule at a faster pace than shown in the PMP. Increment must be performance based and integral with a study/project with high outputs and consistent with ranking.

**Increments 5-8:** Not used.

**Increment 9:** Place unbudgetable studies.

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**Construction Increments.** All contracts will be fully funded if the estimated contract total (total of both federal and non-federal shares) is \$20M or less. For all contracts that are proposed for full funding, the total estimated amount for EDC and S&A will be included with the contract. Each contract included in any increment must be shown separately to allow individual funding decisions based on the performance metrics and must be shown in priority order by District and MSC Rank. This section includes: specifically authorized projects, MR&T construction, dam safety projects, deficiency corrections projects and dam safety, seepage, static instability studies.

**Increment 1:** This increment will include only the minimum project activities budgeted in, and continuing from, PY-1. Only true continuing contract needs, and the Engineering and Design during Construction (EDC) and Supervision and Administration (S&A) of contracts fully funded in PY-1 and before may be included in this increment. Do not include any continuing incrementally funded contract requirements. Do not include new contracts, options, or funding for the engineering and design activities for new contracts. Only mandatory real estate activities for required project lands, easements and right-of-ways may be included. Increment must be performance based and integral with a study/project with high outputs and consistent with ranking.

**Increment 2:** This increment will include continuing incrementally funded contract requirements for ongoing projects, new contracts, engineering and design for future contracts or other activities (show each separately), and EDC and S&A for new contracts awarded in PY. Real estate activities for required project lands, easements and right-of-ways may be included. Increment must be performance based and integral with a study/project with high outputs and consistent with ranking.

**Increment 3:** This increment will include activities and contracts needed to sustain (not fall behind but not accelerate) the efficient project schedule based on the PMP. This increment may include projects that do not qualify for increment 2, and may include continuing incrementally funded contract requirements, new contracts, engineering and design for future contracts or other activities (show each significant activity separately), and EDC and S&A for new contracts awarded in PY. Real estate activities for required project lands, easements and right-of-ways may be included. New starts and resumptions may be included. Increment must be performance based and integral with a study/project with high outputs and consistent with ranking.

**Increment 4:** This increment will include additional capability activities that can be supported by the cost sharing sponsor and Corps resources and will advance the project schedule at a faster pace than shown in the PMP. Increment must be performance based and integral with a study/project with high outputs and consistent with ranking.

**Increments 5-7:** Not used.

**Increment 8:** This increment will include projects that are consistent with Administration policy but are unbudgetable due to the decision document not yet being cleared by the Administration.

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**Increment 9:** This increment will include unbudgetable projects that are inconsistent with Administration policy, such as environmental infrastructure.

**Continuing Authority Program Increments:**

**Increment 1:** This increment includes: continuing or new items for phases that were budgeted in PY-1; Excluded are: new phases and items requiring initiation of new phases; items for projects that have been terminated, completed, funded for completion, or which are no longer likely to produce an eligible project; and unbudgetable activities. Increment must be performance based and integral with a study/project with high outputs and consistent with ranking.

**Increment 2:** This increment includes: items for previously funded phases; Excluded are: new phases and items requiring initiation of new phases and unbudgetable items. Increment must be performance based and integral with a study/project with high outputs and consistent with ranking.

**Increment 3:** This increment include item for continuing or new phases to sustain the efficient PMP project schedule. Excluded are items which advance the efficient project schedule and unbudgetable activities. Increment must be performance based and integral with a study/project with high outputs and consistent with ranking.

**Increments 4-8:** This increment includes additional capability for continuing or new phases to enhance or advance the PMP project schedule. Excluded are unbudgetable activities. Increment must be performance based and integral with a study/project with high outputs and consistent with ranking.

**Increment 9:** This increment includes unbudgetable activities. Excluded are budgetable activities. Remarks should provide a clear explanation of why the item is not budgetable.

**Operation and Maintenance Increments (includes O&M General and MR&T O&M):**

The philosophy is to use increment 1 as the minimum level to account for critical routine operation and maintenance activities and to use increment 2 to account for critical non-routine activities on projects. The total of Increment 1 plus Increment 2 represents the minimal program and is limited to the amount in Table C-2-3 by MSC based on 75% of prior five fiscal year Budgets.

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The total of Increments 1, 2 and 3 represents no more than 100% of the amount in **Table C 2.2** by MSC.

New starts are not applicable to the O&M Program.

**Increment 1:** Only critical routine activities can be included in this increment. Critical cyclical routine activities may be included in Increment 1. Routine activities are those that have been conducted every year for at least the last five years, for example the operation of a powerhouse or are required to meet legal mandates, environmental (ESA/Biological Opinion) requirements, authorized mitigation requirements, and historic preservation. Cyclic activities are those that are required on a regular basis, but not each year. An example of a cyclic routine activity would be projects where dredging is needed on a regular recurring basis, but not every year, e.g. dredging is needed only every two years. Increment must be performance based and integral with a study/project with high outputs and consistent with ranking.

**Increment 2:** Only critical non-routine activities may be included in this increment. Critical non-routine activities are those that must be accomplished to insure project safety, and critical maintenance actions that are required to keep the project operating and delivering benefits. Non-routine activities are actions that are “project like” in that they are a unique action with a specific beginning and end. Examples of non-routine actions would be the replacement of a potable water well, or paving a project access road. This increment **includes** major maintenance and rehabilitation. Each non-routine activity must be shown separately to allow individual funding decisions based on the performance metrics and must be shown in priority order by District and MSC Rank. Increment must be performance based and integral with a study/project with high outputs and consistent with ranking.

**Increment 3:** This increment includes critical operation and maintenance activities, both routine and non-routine, for the 25% above the minimal program level, that are defined by the state of the practice and are needed to sustain the expected future benefits of the project. Preparation of reports for Major maintenance (MM) and rehabilitation (MR) can be included in this increment. MM and MR activities must have approved reports before they can be included for implementation. Increment must be performance based and integral with a study/project with high outputs and consistent with ranking.

**Increment 4:** This increment includes operation and maintenance activities, both routine and non-routine, above the 100% level of the Table C 2.2 level by MSC, that are defined by the state of the practice and are needed to sustain the expected future benefits of the project. In most cases, activities in this increment will support continuing the level of service that customers, stakeholders, and others have come to expect and depend-on for sustaining public safety and economic, environmental and social benefits. Multiple Increment 4 activities should be submitted that reflect the logical pieces of routine or non-routine activities beyond the 5 year

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average limit. Increment must be performance based and integral with a study/project with high outputs and consistent with ranking.

**Increment 5:** Activities that have a high expected return on investment that enable greater levels of performance in future years should be included in this enhanced or capability Increment. Increment must be performance based and integral with a study/project with high outputs and consistent with ranking.

#### **FUSRAP Increments:**

##### **Investigations/Study Increments:**

**Increment 1:** This increment will include only the minimum continuing study activities, which include all CERCLA study processes. The total request is limited to the budget amount for PY-1, by study. Do not include new studies. Increment must be performance based with high outputs and consistent with ranking. Increment must be performance based and integral with a study/project with high outputs and consistent with ranking.

**Increment 2:** This increment will include the activities needed to sustain (not fall behind/not accelerate) the study schedule included in the PMP. The total of the activities included in this level is not limited by the PY-1 budget. New starts may not be included. Increment must be performance based and integral with a study/project with high outputs and consistent with ranking.

**Increment 3:** This increment includes additional capability activities that can be supported by Corps resources. This increment can be viewed as enhancing the project schedule. Increment must be performance based with high outputs and consistent with ranking. Increment must be performance based and integral with a study/project with high outputs and consistent with ranking.

**Increment 4:** Place new start studies in Increment 4, for example a new Site Inspection at a new site. Increment must be performance based with high outputs and consistent with ranking. Increment must be performance based and integral with a study/project with high outputs and consistent with ranking.

**Increments 5 – 8:** Not used.

**Increment 9:** Place unbudgetable studies for potential sites in Increment 9.

#### **Implementation (Construction) phase Increments:**

**Increment 1:** This increment will include only the minimum implementation processes continuing from PY-1 and is limited to no more than the budget amount for PY-1, by project.



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Engineering and Design during Construction (EDC) and Supervision and Administration (S&A), of contracts fully funded in PY-1 and before may be included in this increment. Real estate activities for required project lands, easements and right-of-ways may be included. Increment must be performance based and integral with a study/project with high outputs and consistent with ranking.

**Increment 2:** This increment will include the activities needed to sustain (not fall behind/not accelerate) the efficient project schedule based on the PMP. The total of the activities included in this level is not limited by the PY-1 budget. Multiple contracts should be submitted as separate increment requests and shown in priority order by District and MSC Rank. New starts may not be included. Increment must be performance based and integral with a study/project with high outputs and consistent with ranking.

**Increment 3:** This increment includes additional capability activities that can be supported by Corps resources. This increment can be viewed as enhancing the project schedule. Increment must be performance based and integral with a study/project with high outputs and consistent with ranking.

**Increment 4:** Place new start projects with decision documents (such as, a signed ROD) cleared by the HQUSACE in Increment 4. Increment must be performance based and integral with a study/project with high outputs and consistent with ranking.

**Increments 5-9:** Not used.

## **CONTRACTS**

**Continuing Contracts:** For all contracts using a continuing contract clause or an incrementally funded contract clause, the amount estimated for PY-2 (FY10) contractor activities and reserved to the contract must not exceed the amount provided for the project in PY-2 appropriations, plus any carryover for that project, and any amounts approved for reprogramming to the project. All funds to be reserved must be available for the project prior to bid opening.

**Incremental Contracts:** The use of incremental contracts (i.e., contracts using the incrementally funded clause (EFARS 52.232-5004 or DFARS 252.232-7007), must be done carefully and judiciously as part of the acquisition planning process.. The incremental funding clause may be used for projects that do not have funding in the budget for the out years. The incrementally funded contract scope of work to be funded with PY-2 (FY10) funds must produce a useful increment of work (i.e. increment of work that produces benefits or outputs, and will remain in a safe condition) or navigation reach that will not rely upon additional out year funding to implement. So long as the scope of work to be funded in with PY-2 funds will complete a useful increment of work or navigation reach that does not rely upon additional out year funds to implement, use of the incremental funding clause can be approved by the District Commander. However, the ASA(CW) must approve the use of any incrementally funded contract that does

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not complete a useful increment of work or navigation reach with funds available to the contract in PY-2 in advance of solicitation.

**Major Maintenance:** Any Operation and Maintenance work item costing \$3M or more that is not an element of rehabilitation.

**Programmed:** Any part of project that is not unprogrammed.

**Project Partnership Agreement/Partnership Agreement:** Reference WRDA 2007 H.R. 110-280 WRDA 2007 Conference Report, Section 2003 "REFERENCES TO COOPERATION AGREEMENTS". - Any reference in a law, regulation, document, or other paper of the United States to a "cooperation agreement" or "project cooperation agreement" shall be deemed to be a reference to a "partnership agreement" or a project partnership agreement," (PPA), respectively.

**Ranking:** Activity rankings will be used to determine the relative priority of activities within a project, district, and MSC.

**Rounding:** All cost estimates shall be rounded to the nearest one thousand dollar (\$1000).

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**COMMON DATA FIELD IN ALL Business Lines**

1. BUSINESS LINE = Abbreviation for Business Line, such as ENR.
2. EROC = Two character code for district, such as B1 for Memphis District.
3. MSC = Three letter abbreviation for the MSC, such as MVD. This is a display-only field which is auto-populated based on the EROC. Data entry is not required.
4. DISTRICT = Three letter abbreviation for district, such as NWK. This is a display-only field which is auto-populated based on the EROC. Data entry is not required.
5. APPROP ABBREV = An abbreviation for the Appropriation Account. The abbreviations are: I (Investigations), C (Construction), OM (O&M), MRT-I (MR&T Investigations), MRT-C (MR&T Construction), MRT-OM (MR&T O&M), FCCE, and FUSRAP. This is a display-only field which is auto-populated based on the CW TYPE OF FUNDS. Data entry is not required.
6. CW TYPE OF FUNDS = An 11 character code that combines the numeric Appropriation Account codes with the numeric Category-Class-Subclass (CCS) codes. Appropriation Account codes (characters 1-7) are Investigations (96 3121), Construction (96 3122), Operations and Maintenance (96 3123), Mississippi River and Tributaries (96 3112), FCCE (96 3125), and FUSRAP (96 3130). These are followed by a space (character 8) and then the three digit CCS code (characters 9-11) which can be found in Table 3.
7. PROGRAM CODE = A code which identifies the AMSCO/CWIS/PWI associated with a P2 project. A Program Code must be assigned to every CW P2 project for which funds are requested. The Program Code is a project level code which is entered in Oracle Projects (OP). Refer to Appendix N in the most recent Execution EC for further guidance concerning Program Codes.
8. PRIMARY FEATURE CODE – Required for all Operation & Maintenance work packages associated with real property assets (buildings, structures and land). The Feature Code is as it relates to the predominant asset category as defined below. A Feature Code number in 8.b. below will be selected and entered into OFA.

8a. Feature Code Defined – “Features” are the permanent project constructed features and their “Codes” are the two digit account numbers found in Appendix A, Chapter 14 of ER 37-1-30, “Financial Administration: Accounting and Reporting.” (NOTE: Chapter 14 of the current version of the ER is focused on “Financial Reporting and Accounting Treatment for Multiple - Purpose Projects with Power” and is not all inclusive of valid asset category permanent features representative of all Corps water resource projects. Therefore, for asset management purposes, the Feature Codes in ER 37-1-30 have been supplemented as noted in this change document below in italics. They are derived from previous versions of the Finance and Accounting regulation, specifically ER 37-2-10.)

8b. Applicable Feature Codes (enter two-digit number only)

- 01 – Land
- 02 – N/A
- 03 - Reservoirs
- 04 - Dams
- 05 - Locks
- 06 - Fish and Wildlife
- 07 - Power Plants

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- 08 - Roads, Railroads and Bridges
- 09 - Channels and Canals
- 10 - Breakwaters and Seawalls
- 11 -- Levees and Floodwalls
- 12 - Navigation Ports and Harbors
- 13 - Pumping Plants
- 14 - Recreation
- 15 - Floodway Control and Diversion Structures
- 16 - Bank Stabilization
- 17 - Beach Replenishment
- 18 - Cultural Resource Preservation
- 19 - Buildings, grounds and utilities
- 20 - Permanent Operating Equipment

8c. Narrative definitions of Feature Code asset categories -- The current ER lists "sub-features" (or "plant items") associated with each Feature and is not all inclusive as mentioned above. For ease of understanding for the purposes of this EC, the narratives from the prior ER (ER 37-2-10 [<http://140.194.76.129/publications/eng-regs/er37-2-10/ch08.pdf>]) are provided below:

**01. Land.** While the referenced ER is focused on the "acquisition" of land, for the purposes of Asset Management and this requirement that definition to limiting. Land will be defined as "any work to be performed on the land." This addition for FY12 completes the entire portfolio of assets: buildings, structures and now land.

**03. Reservoirs.** This feature includes clearing lands in reservoirs of debris, brush, trees, improvements and structures. Also includes the sale of salvage obtained by sale or disposal of material in clearing operations. Also includes bank stabilization, shoreline improvement, fire breaks, fencing, boundary line surveys and improvement, fencing, boundary line surveys and marking of land which has been acquired or is to be acquired, rehabilitation of natural resource, erosion control, drainage and rim grouting and mine sealing etc., to prevent leakage.

**04. Dams and Other Water Collecting Facilities.** This feature includes the cost of all dams and other water collecting facilities, whether man made or natural, together with appurtenant water diversion, regulation, and delivery facilities.

**05. Locks** This feature includes facilities to provide for passage of waterborne traffic, including gates, valves, operating mechanisms, cribs, fills, lock walls, guide and guard walls, and operating buildings.

**06. Fish and Wildlife Facilities.** This feature includes items such as ladders, elevators, locks and related facilities for passage of fish at dams and navigation locks and maintenance of fish runs; and provision for wildlife preservation.

**07. Power Plant.** This feature includes those facilities specifically required for the production of power other than those included in the feature "Dams," and consists of the following: powerhouse, turbines, and governors, generators, accessory electrical equipment, miscellaneous power plant equipment, switchyard, and tailrace improvement for power. In the case where the powerhouse is an integral part of the power intake dam, the cost of the power intake dam is included in this feature. Where the structure of a dam also forms the foundation of the powerhouse, such foundation is considered a part of the dam. The cost of a cofferdam or the

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appropriate part thereof is charged to this feature. Units for production of power for the operation

only of navigation, flood control, or other purpose projects (excluding those projects with power as a feature) are included in other features as appropriate.

**08. Roads, Railroads and Bridges.** This feature includes permanent roads, railroads, and bridges required for access and other purposes in connection with the construction and operation of the project. This feature does not include access roads to recreation facilities and areas, which will be charged to the feature "Recreation Facilities," and service roads and service railroads on structures, which will be charged to the appropriate feature for the structure.

**09. Channels and Canals.** This feature includes all forms of excavation (including dredging, preparation of spoil disposal areas, and attendant facilities) necessary for the development and construction of channels, or improving existing watercourses for flood control and major drainage. Excavation of natural watercourses to provide adequate depths for navigation is Included. Excavation for specific structures, such as dams and locks used in the development of waterways and conservation of water resources, is Included with such structures. The removal of trees, brush, accumulated snags, drift, debris, water hyacinths and other aquatic growths from canals, harbors, and channels in navigable streams and tributaries thereof for navigation is included in this feature. Excavation, clearing and removal of accumulated snags, drifts, debris, and vegetable growth from streams for flood control and major drainage purposes also is included. Included in this feature are revetments, linings, dikes, and bulkheads constructed as channel improvement works for flood control or navigation, as against such items constructed for bank stabilization only. Also included are jetties constructed in connection with flood control channel improvements.

**10. Breakwaters and Seawalls.** This feature includes breakwaters, seawalls, piers, and like improvements constructed in connection with the protection of beaches, harbors, shores, and port facilities against the force of waves and encroachment of seas or lakes by direct wave action. Jetties, groins, and like structures provided in seas, lakes, tidewater reaches of rivers and canals, and harbors to control water flow and current, to maintain depth of channels, and to provide protection are included in this feature.

**11. Levees and Floodwalls and Floodproofing.** This feature includes embankments and walls constructed to protect areas from inundation by overflow from creeks, rivers, lakes, canals, and other bodies of water. This feature consists of such items as: service roads on levee crown or landside berms, road ramps, closure structures, seepage control measures, erosion protection measures on levee slopes and on berms and bank slopes when an integral part of the levees or floodwalls; and drainage facilities, constructed to provide means for the passage of accumulated drainage and seepage water and sewage from the protected area over or through levees and floodwalls, comprising such items as interceptor and collection sewers and ditches, and pressurized sewers and drainage structures, including outfalls through levees or floodwalls. Levees locally called dikes are included in this feature. Floodproofing includes construction activities associated with raising the buildings in the flood zone. Pumping plants are included in the feature "Pumping Plants."

**12. Navigation Ports and Harbors.** (no description available, derived from previous F&A ER)  
 12100 BULKHEADS, JETTIES, PIERS, DOCKS, SPOIL DISPOSAL AREA  
 ATTENDANT FACILITIES, ETC.  
 12200 REVETMENTS AND LININGS  
 12300 EXCAVATION/DREDGING OF NAVIGATION PORTS AND HARBORS  
 12400 REMOVAL OF TREES, BRUSH, ACCUMULATED SNAGS, DRIFT,

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AQUATIC AND VEGETABLE GROWTHS AND DEBRIS  
12900 ALL OTHER

**13. Pumping Plants.** This feature includes pumping plants constructed to pass accumulated drainage and seepage water and sewage from the protected area over or through levees and floodwalls.

**14. Recreation Facilities.** This feature includes access roads; parking areas; public camping and picnicking areas, including tables and fireplaces; water supply; sanitary facilities; boat launching ramps; directional signs; and other facilities constructed primarily for public recreational use, including essential safety measures in connection therewith. The latter includes, as appropriate, sheltered anchorage areas for small craft, bathing areas readily accessible and reasonably safe, and safety provisions for visitors and fishermen in the project area.

**15. Floodway Control and Diversion Structures.** This feature included floodway control and diversion structures to provide for the release of flood waters from streams where discharges exceed flood capacity of the stream, including such items as diversion dams, gated or ungated discharge structures, training walls, stilling basin, and those adjacent embankment sections forming part of the control structure. Construction of channels and levees not forming part of the main control structure, but necessary for operation of such structures is included in the appropriate feature "Channels and Canals" or "Levees and Floodwalls."

**16. Bank Stabilization.** This feature includes revetments, linings, training dikes, and bulkheads for stabilization of banks and watercourse to prevent erosion, sloughing, or meandering. Bank stabilization constructed in navigation channels or in connection with flood control channel improvement is included in the feature "Channels and Canals."

**17. Beach Replenishment.** This feature includes replacement of eroded beaches, for purposes of recreation and shore protection, by direct deposit of materials obtained by dredging or land excavation.

**18. Cultural Resources Preservation.** This feature pertains to the preservation, recovery, or other mitigation of significant scientific, prehistorical, historical, or archaeological data, buildings, sites, districts, structures, or objects. This feature covers costs during construction and includes excavation, preparation of areas, recovery of data, movement of artifacts, relics and objects of antiquity, analysis of data and preparation of reports thereon, and construction of cultural facilities.

**19. Buildings, Grounds and Utilities.** This feature includes permanent facilities such as operators quarters, administration and shop buildings, storage buildings and areas, garage buildings and areas, community buildings, local streets and sidewalks, landscaping, and electric, gas, water, and sewage facilities. Where space in a dam, powerhouse, or other basic structure is used in lieu of construction of any of the above-mentioned buildings, such allocated space is not separated from the basic structure.

**20. Permanent Operating Equipment.** This feature includes all project-owned operation and maintenance tools and equipment, such as laboratory, shop, warehousing, communications, and transportation equipment, and office furniture and equipment.

8.d. Source(s) -- The current Feature Codes and list of "plant Items" associated with each Feature Code are identified in Chapter 14 of ER 37-1-30 which may be found on the HQ Resource

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Management Sharepoint site at:

<https://kme.usace.army.mil/CoPs/ResourceManagement/FAPolicy/>

-> Documents

-> Finance and Accounting Policy Shared Documents

-> Finance and Accounting Regulations

-> ER 37-1-30 Financial Administration, Accounting and Reporting

-> Chapter 14, Accounting Treatment for Multiple Purpose Projects

Or direct link at:

<https://kme.usace.army.mil/CoPs/ResourceManagement/FAPolicy/Shared%20Documents/Forms/AllItems.aspx?RootFolder=%2fCoPs%2fResourceManagement%2fFAPolicy%2fShared%20Documents%2fFinance%20and%20Accounting%20Regulations&FolderCTID=%2f7b616308f6%2d8c68%2d4bd7%2d9ee1%2dc19b6105c213%7d>

Specific information on the supplemental Feature Codes (in *italics* above) are found in ER 37-2-10 [<http://140.194.76.129/publications/eng-regs/er37-2-10/ch08.pdf>] which was superseded by the previously referenced ER 37-1-30.

9. **ADDITIONAL FEATURE CODE** – Required for all Operation and Maintenance work packages associated with real property assets. List all of the additional Feature Code(s) that are secondarily supporting other feature code asset categories. As an example, a budget work package to construct a new “storage building” would have a “Primary” Feature Code of 19 but also have an “Additional” Feature Code of 14 if it is associated with a recreation area. Note, not all work packages will have an “additional” Feature Code, in fact the vast majority will not. A Feature Code number in 8.b. above will be selected and entered into OFA.

10. **P2 PROJECT NUMBER** = A six digit numeric code which identifies a project in P2. This code is system-generated when a project is initiated in Oracle Projects. In OFA it is a display-only data field.

11. **BUDGET ITEM ID** = A code to uniquely identify multiple entries within the same EROC, P2 Project, CW Type of Funds (Approp/CCS), Business Line, Increment, and Phase. See paragraph 14c.(1)(j) in the main EC for more information concerning Budget Item ID.

12. **INCREMENT** = Enter the appropriate number in accordance with the guidance in the Definitions/Glossary section in the main EC. Enter a “1” if the budget item meets the requirements for inclusion in the Initial increment as defined. Enter a “2” if the budgetable item should be considered for the second Increment, etc. Every project may not necessarily have a budget item in the first two Increments. A project may have multiple budget items in an increment.

13. **DIST RANK** = The budget item’s rank in the district’s request.

14. **MSC RANK** = The budget item’s rank in the MSC request.

15. **HQ RANK** = The budget item’s rank in the HQ request. HQ will complete this item. It is not available for District or MSC entry.

16. **ARMY RANK** = The budget item’s rank in the Army request. HQ will complete this item. It is not available for District or MSC entry.

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17. **PRESIDENT'S BUDGET RANK** = The budget item's rank in the President's Budget Rank, will be entered by HQ after OMB Passback. It is not available for District or MSC entry.
18. **PHASE** = A letter code will be used to indicate phase. See Table 3 for a list of valid values. Note that Joint activities on multi-purpose hydropower projects (Cat-Class 300) will have a phase code of OJ or MJ as appropriate.
19. **PHASE STATUS** = Status of the Phase listed in column 16 will be indicated with a letter code. NP = New Phase; CN=Continuing; LY= Last year of phase. Only use LY if FY2012 is the last year for which funding will be requested for the phase (not for a contract). For Reconnaissance and Construction initiation, a new start should be coded as a New Phase in this column. If a study or a project is completing one phase and starting a new one in the PY (e.g. finish Feasibility and start PED), each should be a separate entry (one LY and one NP). If there are multiple budget items for one phase of a project (especially construction) this code may vary. Perhaps the first entry would be NP and the second one CN and the last one if funded would complete the phase and be LY.
20. **PHASE COMPL** = Required for all items in all accounts. Enter the fiscal year the phase for which funds are being requested is scheduled to complete. This is a 4-digit numeric field. The Reconnaissance phase ends with execution of a Feasibility Cost Sharing Agreement, or a report recommending no Federal action. For budget development, use the date of the Division Engineer's Transmittal of the report to HQ as the end of the Feasibility phase. The PED phase ends with completion of the first set of plans and specifications and execution of the PCA/PPA (project partnership agreement). Construction completion is defined as physical completion with the project turned over to the non-Federal sponsor to operate and maintain. For items in the O&M account, enter the PY unless the requested funds are scheduled to be carried over.
21. **PROGRAM NAME** = Name associated with the Program Code which is entered in Oracle Projects. In OFA it is a display-only data field.
22. **P2 PROJECT NAME** = Name of the P2 project. The project name is entered in Oracle Projects. In OFA it is a display-only data field.
23. **SYSTEMS CODE** = The System Code is used to identify the primary system in which the project or study (Program Code) is located. See Table C-5.1 for a list of valid system codes. Required entry for all items.
24. **BASIN CODE** = The USGS Hydrologic Unit Codes (HUC) will be used to identify systems/watersheds. The four-digit code for the appropriate sub-region as defined by USGS will be entered for every budget item. These codes may be found at [http://water.usgs.gov/GIS/huc\\_name.html](http://water.usgs.gov/GIS/huc_name.html). Some programmatic elements may cover more than one sub-region. If there are separable elements enter the code that is appropriate for the separable element. If there are no separable elements enter the code applicable to most of the project or area where funding will be applied. Required entry for all items.
25. **STATE** = Enter the two letter abbreviation for the primary state in which the study or project (Program Code) is located.
26. **CONTRACT TYPE** = Required for all contract items in Construction and any contract with a remaining amount over \$20,000,000 in any phase. Enter one of the following: CC for continuing contract; CF for fully funded contract; CB for base contract with options; or CI for incrementally funded contract.



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27. CURRENT BUD - FED = This is a display-only field which is auto-populated from the project's current schedule in Primavera / Oracle Projects. It displays the PY 'At Completion Cost' Federal (Corps) amount for the budget item.

28. CURRENT INFLATION ADJUSTED BUD - FED = No longer in use

29. BUDGET REQUEST - FED = The Federal (Corps) amount requested for the work proposed to be accomplished with this budget item in FY11. Enter the amount in whole dollars, rounded to the nearest thousand. Example: Five million four hundred thirty two thousand dollars should be entered as 5,432,000.

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TABLE 1

Cost Estimate Updating Table



Table 1 Cost  
Estimate Update Rate

TABLE 2

Summary of Submission Requirements



Table 2 MAIN  
REPORT FINAL .xls

TABLE 3

Codes



Table 3 Codes  
FINAL.doc

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ILLUSTRATION 1

DATE: \_\_\_\_\_

CERTIFICATION OF COMPLIANCE WITH SECTION 3(D) OF EXECUTIVE ORDER

12906

and SECTION 8.j of ER 1110-1-8156

I hereby certify that the PY program for the \_\_\_\_\_ (district, division, or laboratory name) Civil Works Program does not include an implicit or explicit request for funds to collect, produce, or acquire Geospatial data that is available through the National Geospatial Data Clearinghouse and that all possible data collection partnerships identified through the Clearinghouse were investigated. The \_\_\_\_\_ (district, division, or laboratory name) has also contributed metadata to the National Geospatial Data Clearinghouse in accordance with ER 1110-1-8156.

Colonel, Corps of Engineers

Commanding

FOR ILLUSTRATION PURPOSES ONLY

(TO BE TYPED AS NECESSARY)

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ILLUSTRATION 2A

DATE: \_\_\_\_\_

CERTIFICATION OF COMPLIANCE WITH COASTAL BARRIER RESOURCES ACT

I hereby certify that the PY program for the \_\_\_\_\_ (district name)  
District Civil Works Program does not include a request for funds which would result in any new  
federal expenditures or financial assistance prohibited by the Coastal Barrier Resources  
Act (PL 97-348), as amended by the Coastal Barrier Improvement Act of 1990 (PL 101-591).

Colonel, Corps of Engineers  
Commanding

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(TO BE TYPED AS NECESSARY)

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ILLUSTRATION 2B

DATE: \_\_\_\_\_

CERTIFICATION OF COMPLIANCE WITH COASTAL BARRIER RESOURCES ACT

I hereby certify that no Civil Works Program funds were obligated in PY-2 by the  
\_\_\_\_\_ (district name) District for any new federal expenditures or  
financial assistance prohibited by the Coastal Barrier Resources Act (PL 97-348), as amended by  
the Coastal Barrier Improvement Act of 1990 (PL 101-591).

Colonel, Corps of Engineers  
Commanding

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### ILLUSTRATION 3

#### MANAGEMENT CONTROL EVALUATION CHECKLIST

**FUNCTION.** The function covered by this checklist is Civil Works Program Development.

**PURPOSE.** The purpose of this checklist is to assist programs management organizations in USACE major subordinate commands (MSC) and districts in evaluating key management controls in development of their annual program requests. It is not intended to cover all controls.

**INSTRUCTIONS.** Become thoroughly familiar with the contents of the Program EC and read paragraph 16 before completing the checklist. Answers must be based on the **actual testing** of key management controls (such as **document analysis, direct observation, sampling, simulation, other**). Answers which indicate deficiencies must be explained and corrective actions indicated in support documentation.

#### TEST QUESTIONS:

1. Are funding schedules continuously reviewed and adjusted to reflect Congressional actions, the local sponsors' financial capability, and project progress?

**Tested by:**

**Response:** YES \_\_\_\_\_ NO \_\_\_\_\_ NA \_\_\_\_\_

**Remarks:**

2. Does development of the multi-year programs follow the guidance included in the applicable appendices of the Program EC?

**Tested by:**

**Response:** YES \_\_\_\_\_ NO \_\_\_\_\_ NA \_\_\_\_\_

**Remarks:**

3. Are alternative multi-year program proposals fully documented?

**Tested by:**

**Response:** YES \_\_\_\_\_ NO \_\_\_\_\_ NA \_\_\_\_\_

**Remarks:**

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MANAGEMENT CONTROL EVALUATION CHECKLIST

4. Is the multi-year Capability program independent of the other programs, yet consistent with Army policy and approved project cooperation agreements?

Tested by:

Response: YES \_\_\_\_\_ NO \_\_\_\_\_ NA \_\_\_\_\_

Remarks:

5. Have the "Class 1" rates of Table 1, "PY Program, Cost Estimate Updating," been applied to the pay-related costs for Civilian employees when preparing PB3a's and PB6's?

Tested by:

Response: YES \_\_\_\_\_ NO \_\_\_\_\_ NA \_\_\_\_\_

Remarks:

6. Have the "Class 2" rates of Table 1, "PY Program, Cost Estimate Updating," been used to update costs for consultants and AEs used in the various preconstruction planning and construction stages of work when preparing PB3a's and PB6's?

Tested by:

Response: YES \_\_\_\_\_ NO \_\_\_\_\_ NA \_\_\_\_\_

Remarks:

7. Have the "Class 1" and "Class 2" rates of Table 1, "PY Program, Cost Estimate Updating," been used for the period PY-1 through PY+19 for all activities when preparing PB3a's and PB6's?

Tested by:

Response: YES \_\_\_\_\_ NO \_\_\_\_\_ NA \_\_\_\_\_

Remarks:

8. Has the procedure in Footnote 8 of Table 1, "PY Program, Cost Estimate Updating," been used to determine rates for use in updating cost estimates beyond PY+19?

Tested by:

Response: YES \_\_\_\_\_ NO \_\_\_\_\_ NA \_\_\_\_\_

Remarks:

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### ILLUSTRATION 3 (Continued)

#### MANAGEMENT CONTROL EVALUATION CHECKLIST

9. Are the appropriate discount rates being used to compute the benefit-cost ratios of projects?

**Tested by:**

**Response:** YES \_\_\_\_\_ NO \_\_\_\_\_ NA \_\_\_\_\_

**Remarks:**

10. Is the fiscal year of the approval date of the current economic analysis?

a. For new and continuing PED, not more than three years older than the fiscal year of the submission date of the program request to HQUSACE?

**Tested by:**

**Response:** YES \_\_\_\_\_ NO \_\_\_\_\_ NA \_\_\_\_\_

**Remarks:**

b. For new construction starts, not more than three years older than the fiscal year of the assumed program decision date by the Administration and Congress?

**Tested by:**

**Response:** YES \_\_\_\_\_ NO \_\_\_\_\_ NA \_\_\_\_\_

**Remarks:**

11. Were benefit-cost ratio computations based on benefits in the latest approved economic analyses and current project costs deflated to the price levels of such benefits?

**Tested by:**

**Response:** YES \_\_\_\_\_ NO \_\_\_\_\_ NA \_\_\_\_\_

**Remarks:**

12. Are new start recommendations justified based on NED benefits, or responsive to restoration and protection of environmental resources, including fish and wildlife habitat, i. e., inland and coastal wetlands, other aquatic and riparian habitat?

**Tested by:**

**Response:** YES \_\_\_\_\_ NO \_\_\_\_\_ NA \_\_\_\_\_

**Remarks:**



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### ILLUSTRATION 3 (Continued)

#### MANAGEMENT CONTROL EVALUATION CHECKLIST

13. Do recommended new construction starts have firm M-CACES baseline cost estimates?

**Tested by:**

**Response:** YES \_\_\_\_\_ NO \_\_\_\_\_ NA \_\_\_\_\_

**Remarks:**

14. Have new start recommendations been screened according to the criteria established in the Program EC?

**Tested by:**

**Response:** YES \_\_\_\_\_ NO \_\_\_\_\_ NA \_\_\_\_\_

**Remarks:**

15. Are data in the Construction and Investigations illustrations compatible, showing that:

a. Construction capability is shown for the fiscal year following PED completion?

**Tested by:**

**Response:** YES \_\_\_\_\_ NO \_\_\_\_\_ NA \_\_\_\_\_

**Remarks:**

b. Project cost estimates are identical?

**Tested by:**

**Response:** YES \_\_\_\_\_ NO \_\_\_\_\_ NA \_\_\_\_\_

**Remarks:**

[NOTE: Help make this a better tool for evaluating management controls. Submit suggestions for improvement to HQUSACE (CECW-ID), Washington, D. C. 20314-1000.]

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ILLUSTRATION 4

DATE: \_\_\_\_\_

CERTIFICATION OF USE OF MANAGEMENT CONTROL EVALUATION CHECKLIST

I hereby certify that the PY \_\_\_\_\_ (major subordinate command name) Division Civil Works Program was developed making full use of the Management Control Evaluation Checklist.

Director of Programs Management

FOR ILLUSTRATION PURPOSES ONLY  
(TO BE TYPED AS NECESSARY)

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## APPENDIX V

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## APPENDIX V

## Navigation

**V-1. Background.** The Corps has had the navigation mission since 1824. Today we plan, design, operate and maintain projects that support 2.48 billion tons of commerce annually. Many of the projects provide other outputs such as Flood Risk Management, Hydropower, Water Supply, Ecosystem Restoration and Recreation. The Corps operates and maintains 926 navigation projects ranging from shallow draft harbors; coastal, inland, and intracoastal navigation systems with 241 locks at 196 sites, to major deep draft ports.

**V-2. Purpose.** The Corps' Navigation goal is to provide safe, reliable, efficient, effective and environmentally sustainable waterborne transportation systems for movement of commerce, national security needs, and recreation. The purpose of this effort is to develop a risk informed, performance based budget for carrying out the Navigation mission.

**V-3. Civil Works Program Objectives.** Table V-1 displays the Navigation program objectives and Performance Measures related to the current Civil Works Strategic Plan. The CW Strategic Plan was developed with an explicit assumption of an unconstrained resource environment to encourage an unconstrained assessment of the nation's water resources needs and potential Corps response. Preparation of the Program Year (PY) Budget Request requires the recognition of a constrained budget environment and the ongoing effort to evolve better budget linked performance measures. Table V-2 displays the program objectives, performance measures and/or performance ranking and rating criteria which support and/or supplement Table V-1 program objectives and performance measures to reflect the near term realities of a constrained PY budget environment.

TABLE V-1	
Navigation Objectives and Performance Measures	
Program Objectives	Performance Measures
Invest in navigation infrastructure when the benefits exceed the costs.	<ul style="list-style-type: none"> <li>- BCR (project specific measure)</li> <li>- Annual net benefits</li> </ul>
Support sustainable regional, basin-wide, or watershed planning and activities in partnership with others.	<ul style="list-style-type: none"> <li>- Percent of projects recommended in Chief's reports that apply watershed principles</li> </ul>
Enhance Life-Cycle Infrastructure Management. Improve the reliability of water resources infrastructure using a risk informed asset management strategy.	<ul style="list-style-type: none"> <li>- Percent of navigation asset inventory with recent structural/operational risk assessments, including SPRA assessments.</li> <li>- Percent of navigation asset inventory risk assessments that reveal a significant level of risk (including DSAC Class I, II and III projects).</li> <li>- Number of funded actions underway that address assets where there is a significant level of risk.</li> </ul>
Operate and manage the navigation infrastructure so as to maintain justified levels of service in terms of the availability to commercial traffic of high use navigation infrastructure (waterways, harbors, channels).	<ul style="list-style-type: none"> <li>- Risk and Reliability: Facility Condition Assessment and Impacts</li> </ul>

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#### **V-4. Navigation Performance Measures.**

a. Competition for Federal funds is very keen and getting tighter each year. In recent years, we have had to make very hard choices in distributing scarce Federal dollars. In a constrained funding environment, we must prioritize the many worthwhile investment opportunities and ongoing maintenance needs across the entire spectrum of projects. This means that we have to concentrate available resources on the highest priority projects in terms of reducing risk and providing optimal reliability to maximize benefits. In the Navigation program, we are directing funds primarily to those harbors and waterways systems and segments that provide the highest return from commercial navigation. The Corps' Navigation program is well established and valued, however our ability to continue to provide safe, efficient, and reliable navigation to our ports, waterways and harbors to meet the needs of current and future generations is dependent upon adequate investments. Such investments provide the necessary investigations of problems, development of solutions, timely implementation of authorized projects, reliable operation and availability of our infrastructure, preventative maintenance, facility modernization or improvement, and adequate data management information systems, which are all directed at increasing operational capabilities and efficiencies. The purpose of this budget guidance is to ensure the development of convincing rationale and justification of the budget request.

b. Accordingly, a nationwide perspective must be maintained to assure that available funding provides the greatest public benefit for the investment. The safety, security, and reliability of our existing, high performing infrastructure must be maintained; new investigations to assure high yield navigation investments are advanced; and projects that are under construction must be brought on line quickly so that benefits may be achieved as soon as possible. Coastal ports and harbors and inland and intracoastal navigation have been and continue to be significant contributors to the national and international movement of commodities. A cursory review of the Corps navigation assets reveals that on a nationwide basis: Over half of all inland navigation projects have exceeded their original 50-year service life; our top 59 coastal ports have full project depth on average only 30 – 35 percent of the time, and only for one-half of the middle channel width; a substantial portion of the bridge inventory is approaching or has exceeded its service life; and our coastal jetties and breakwaters are deteriorating. In response, the Corps must pursue an on-going program to rehabilitate, modernize, or replace structures and components, and maintain channels exhibiting a deteriorating ability to meet system demands.

c. To achieve the Navigation objectives in Table V-1, the following budget strategies and performance measures are established for the PY budget development. Each of the budget strategies and measures are designed to demonstrate that each budget item makes sense and contributes to the Navigation goals and supporting objectives.

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TABLE V-2 Navigation Budget Performance Measures	
Budget Strategy	Ranking Criteria
Keep ongoing studies or PEDs going if likely to produce recommendation for project (I) or start new phase of studies or PED (I)	Date of Agreement – executed or expected Commercial tonnage increase % reduction in delay costs Years to complete Watershed study –y/n Benefit to Cost Ratio (BCR) – Feasibility & PED only
Complete ongoing construction to start getting benefits of high performing navigation projects (each contract should be separate line item) (C)	BCR Other Business Line purpose outputs
Initiate and complete replacements and rehabilitations (each contract should be separate line item) (C)	Inland Waterways Users Board priority Relative risk of failure (OCA & DSAC) BCR Years to complete
Initiate and complete dam safety assurance/seepage control/static instability correction projects (C)	Relative risk of failure – risk compared to other Corps dams (portfolio risk assessment if available in PY) Critical loss of pool and /or navigation Other Business Line purpose outputs
Operations - Assure that projects perform as designed (O&M)	Cumulative benefits Cumulative O&M costs for above benefits (over set time period)
Maintenance - Make sure projects are safe to operate (managing risk) (O&M)	Navigation channel availability Lock closures exceeding 24 hours and one week duration due to mechanical failure – scheduled and unscheduled Condition assessment and consequences/impact Cumulative benefits Cumulative O&M costs for above benefits (over set time period)
Fund adequate data collection (Remaining Items, I, C, O&M)	Consequence of inadequate data

#### V-5. Budget Screening Criteria.

- a. New Start Definition – See paragraph II-2.8, of EC.
- b. New Phase Definition - See paragraph II-2.8, of EC.

#### V-6. Rating and Ranking Criteria for PY Budget Development.

a. Stakeholders' Perspectives for Funding Needs and Development of Five-Year Management Plans. From the National Navigation Performance Metrics workshops and regional stakeholders' conferences, contributions from the Stakeholders and Corps leadership were derived to help frame the Navigation program performance-based budgeting concept. The key

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Stakeholders' themes were reliability improvements, risk reduction, linking investments to underpinning the national economy, durability of Navigation systems, Navigation systems responsiveness to International trade growth, and justified efficiency improvements in Navigation. Stakeholders' perspectives must be considered, and the legitimate input should be incorporated into the Navigation budgetary process. Accordingly, each MSC, district, project manager or project management team will work with appropriate local/regional partners and stakeholders to develop a Five-Year Management Plan for their respective projects. The plans will incorporate performance based budgeting concepts and develop the future direction based on the current restricted funding environment. The plans should be comprehensive and address anticipated study, construction, and operation and maintenance requirements.

b. In order to achieve the objectives shown in Table V-2, we are establishing budget increments to assure uniformity across the country in building annual budgets from the same point. Budget increments reflect the eligibility criteria described in the following paragraphs. Increments 1 and 2 will receive priority consideration for budget development. These budget increments in conjunction with the objectives and ranking criteria will go a long way to making informed and wise budgetary decisions to support our program goal.

c. Systems Approach. The system relationship of each project/segment will be considered when developing the Civil Works program. A systems approach is needed to ensure that investments are integrated into a whole that preserves or enhances performance at the system level. This approach will help to implement the goals of the Strategic Plan. Analytical perspectives should be developed for each system to help determine the mix in the PY of investments in maintenance, operations improvements, replacements and rehabilitations, new construction, planning, and design that will maximize system efficiency, safety, and reliability over time. A list of systems was refined for the FY 10 Budget and will continue to be used in the PY. See Annex C (O&M) for the list of systems. These systems will be cross-referenced to USGS Sub-Region Hydrologic Unit Codes (HUC) for budget presentation purposes.

#### **V-7. Increments.**

a. **Increment 1** definitions. For definitions of increments for the Investigations and Construction accounts see Definition/Glossary section in the main EC.

(1) Investigations (for studies and preconstruction, engineering, and design).  
Remaining Items (R&D, data collection, PAS, etc.) – initial level will be established by HQ.

(2) Construction (Includes: specifically authorized projects, replacement projects, major rehabilitation projects, dam safety assurance/seepage control/static instability correction projects, dredged material disposal facilities, sand mitigation, beneficial use, and CAP projects).

(3) Operation and Maintenance (O&M).

(a) Navigation Segments. Inland waterway operation and maintenance costs should be broken out by major waterway segment.

(b) The first increment will seek to provide the greatest benefit for the investment consistent with performance measures and sufficient to meet minimum legal responsibilities for operation, environmental compliance and safety. Subsequent increments will provide additional benefits as measured by the performance measures. All increments must document performance according to the appropriate Business Lines criteria. The last increment for each project is the capability level. Operation increments will be submitted separately from maintenance increments. This



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means that for some projects there will be an operation line item and a maintenance line item in the initial level and subsequent levels.

(c) For each MSC combined amount among all Business Lines for operation and maintenance for Increments 1 and 2, see Table C-2.2. This initial amount is for all the MSC's O&M requirements as prioritized below. Simple pro-rata allocations by district and/or project will not result in the expected performance based budget and should not be done.

(d) The philosophy is to use Increment 1 as the minimum level to account for critical routine operation and maintenance activities and to use Increment 2 to account for critical non-routine activities on projects. The total of Increment 1 plus Increment 2 represents the minimal program and is limited to 75% of the MSC five-year average amount shown in Table C 2.2 by MSC. The total of Increments 1, 2, and 3 represents no more than 100% of the MSC five-year average.

(e) Additional O&M criteria. (Definition of terms will follow)

- Sufficient to meet minimum legal responsibilities for operation, safety and environmental compliance, such as:

Subsistence Harbors

Caretaker activities

Critical Harbors of Refuge

Project Condition Surveys

Environmental Compliance requirements

- Multipurpose projects when those projects are included in the minimum programs of other business lines and not a separable element

- Work required by treaties

- Removal of Aquatic Growth

(Note: Items for Surveillance of Northern Boundary Waters previously included in the Navigation Business Line is now included in the Flood Risk Management Business Line.)

b. **Initial Increment 1.** Only critical routine and critical cyclical activities can be included in this increment. These activities are required to minimally operate or maintain the project and may not provide a full service operation. Routine activities are those that must be performed every year for example the operation of a lock, or are required to meet legal mandates, environmental (ESA/Biological Opinion) requirements, authorized mitigation requirements, and historic preservation. Cyclical activities are those that are required on a regular basis, but not each year. An example of a cyclical routine activity would be projects where dredging is needed on a regular recurring basis, but not every year, e.g. dredging is needed only every two years. Work packages in Increment 1 must be performance based and integral with a study/project with high outputs and consistent with ranking. **What is included and what is not:**

(1) Bare Bones lock Operations: May not be full 24-hour or 7-day operation.

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- (2) Bare Bones routine lock maintenance: Would not be all maintenance needs.
- (3) Critical routine minimal level of dredging for high and moderate use segments of commercial deep draft, shallow draft and inland projects: No advanced maintenance dredging.
- (4) Minimal level of dredging for Subsistence Harbors: Does not include point of origin harbor.
- (5) Minimal level of dredging for Critical Harbors of Refuge: Does not include all Harbors of Refuge.
- (6) Caretaker funding for projects or segments not expected to be funded.
- (7) Critical routine maintenance of dredged material placement sites for Item 3 above: Does not include non-routine maintenance of dredged material placement sites.
- (8) Water/Environmental Certification for critical maintenance dredging for Item 3 above: Does not include all certification needs.
- (9) Bare Bones Project Condition Surveys (PCS) including low use: Does not include all anticipated PCS needs.
- (10) Critical studies for high risk coastal structures: Does not include studies of all structures.
- (11) Bare bones debris/drift removal/obstruction removal at high use ports: Does not include all anticipated removal needs.
- (12) Critical routine minimal level Removal of Aquatic Growth (RAG) for high use projects: Does not include all Removal of Aquatic Growth.
- (13) Critical minimum routine dam safety activities to ensure USACE meets fundamental safety standards. Includes inspections, data collection, surveys, drain cleaning, relief well maintenance, updating Emergency Action Plans, and Dam Safety training. Does not include all dam safety activities.
- (14) Critical inspections, studies and routine repair for high level bridges. Does not include all bridges.

c. **O&M Increment 2.** Only critical non-routine activities may be included in this increment. Critical non-routine activities are those that must be accomplished to ensure project safety, and critical maintenance actions that are required to keep the project operating and delivering benefits. Non-routine activities are actions that are "project like" in that they are a unique action with a specific beginning and end. Examples of non-routine actions would be the replacement of wire ropes or valves, or the repair of failing lock, dam, or bridge components. This increment includes major maintenance (MM), as will fit, when combined with Increment 1 activities, within the overall limit of the 75% constraint. Each non-routine activity must be shown separately to allow individual funding decisions based on the performance metrics and must be shown in priority order by District and MSC Rank. Increment must be performance based and integral with a study/project with high outputs and consistent with ranking.

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- (1) Critical on-going non-routine maintenance.
- (2) On-going major maintenance of high use projects or segments: could include new major maintenance.
- (3) Critical non-routine maintenance of dredged material placement sites at high use commercial deep draft, shallow draft and inland projects or high use segments of projects.
- (4) Construction of Dredged Material Disposal Facilities (DMDFs) for high and moderate use segments of commercial deep draft, shallow draft and inland projects are no longer included in O&M and should be budgeted under Construction.
- (5) Critical studies to complete Dredged Material Management Plans (DMMP) for construction of dredged material placement sites for high and moderate use segments of commercial deep draft, shallow draft and inland projects.
- (6) On-going major rehabilitation studies of high and moderate use projects, which could include new major rehabilitation studies.
- (7) Critical non-routine repair for high level bridges. Does not include all bridges.
- (8) Critical non-routine dam safety maintenance and repairs to reduce the highest risk contributors for DSAC I and II projects.

d. **O&M Increment 3.** This increment includes only critical operation and maintenance activities, both routine and non-routine, for the up to 25% above the minimal program level, that are defined by the state of the practice and are needed to sustain public safety and the expected future benefits of the project. This will generally include critical activities that qualified for Increments 1 or 2, but exceeded the 75% limit. This still may not represent full service levels. Dam Safety work items identified as DSAC 3 can be included in this increment. Preparation of reports for MM and MR can be included in this increment. MM and MR activities must have approved reports before they can be included for implementation. Each Increment 3 activity must be shown separately to allow funding decisions based on the performance metrics, and must be shown in priority order by the District and MSC Rank. Increment must be performance based and integral with a study/project with high outputs and consistent with ranking. This may include:

- (1) Critical Advanced Maintenance dredging on high and moderate use projects. Does not include all advanced maintenance.
- (2) Critical minimal level of dredging and operations of low-use projects that have commerce, commercial fishery, multi-agency requirements, and/or public transportation.
- (3) Removal of Aquatic Growth for other high and moderate use projects.
- (4) Other Project Condition Surveys (PCS) including low use beyond Bare Bones annual routine level.
- (5) Additional critical dredging, debris removal, lock operation and maintenance, and bridge maintenance.

e. **O&M Increment 4.** This increment includes critical and non-critical operation and maintenance activities, both routine and non-routine, above critical work in Increments 1 through

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3, that are defined by the state of the practice and are needed to sustain the expected future benefits of the project. In most cases, activities in this increment will support continuing the level of service that customers, stakeholders, and others have come to expect and depend on for sustaining public safety and economic, environmental and social benefits. Multiple Increment 4 activities should be submitted that reflect the logical pieces of routine or non-routine activities beyond the 5-year average level shown in Table C 2.2. Each Increment 4 activity must be shown separately to allow funding decisions based on the performance metrics, and must be shown in priority order by the District and MSC Rank. Increment must be performance based and integral with a study/project with high outputs and consistent with ranking.

f. **O&M Increment 5.** Activities that have a high expected return on investment that enable greater levels of performance in future years should be included in this enhanced or capability Increment. Each Increment 5 activity must be shown separately to allow funding decisions based on the performance metrics, and must be shown in priority order by the District and MSC Rank. Increment must be performance based and integral with a study/project with high outputs and consistent with ranking.

**V-8. Performance Based Budget Increment(s).** Add additional budget items for logical, needed increments that contribute to the program goals. Ranking will be based on ranking criteria shown in the spreadsheet Table V-5 and listed below. The basis for adding increments in terms of budget request for a project will be based on the demonstrable beneficial impact on increasing average annual net benefits by accelerating project completion, or improved performance, additional outputs or increased reliability in the PY. There are three key performance measures that will be considered: (1) reduction in years to completion, (2) increase in annual net benefits, and (3) BCR for PEDs, construction, and rehabilitations.

**V-9. Risk Assessment of Navigation Assets.** The PY budget continues to improve on USACE asset management efforts with the Navigation, Hydropower and Flood Risk Management business lines using a common format to address risk. For PY, the Relative Risk Rankings will change from the 25 through 1 and 5 through 1 rating scales, where 25 and 5 represented the most critical needs, to 1 through 25 and 1 through 5 rating scales, where 1 is the most critical need, to coincide with the DSAC and LSAC rating scales of 1 through 5. Navigation assets are established under 4 groups: (1) Inland Navigation, (2) Coastal Navigation, (3) Navigation Structures including jetties, breakwaters, bank stabilization and training works and (4) Bridges. There will be five levels of Probability/Condition and five levels of Consequences/Economic Impact associated with each of the Navigation asset groups. These will be used to develop a Relative Risk Ranking Matrix shown in Table V-3. The Relative Risk Ranking Matrix values will be applied to each budget work package and will be generated automatically in OFA. In addition to the Relative Risk Ranking 1 through 25, for consistency across Business Lines OMB has requested uniform rankings. Therefore, the Relative Risk Rankings in Table V-3 will be converted to 1 through 5 rankings as shown in Table V-4. The 1 through 5 Ranking will be automatically generated in OFA from the 1 through 25 Rankings.

a. A risk assessment involves identifying sources of potential conditions, assessing the likelihood or confidence level that they will occur and the consequences if it does occur. Operational Condition Assessments (OCA) must be performed on all inland and intracoastal navigation infrastructure during FY 10. If an OCA has been completed for a project, that OCA should be used to determine the Probability/Condition rating for the project. All inland projects will use OCAs for the FY 13 budget preparation. Project condition classifications for budget requests shall be developed for each project/maintenance budget item in accordance with the Tables V-6, V-8, V-10, or V-12, which ever is applicable. These classifications will provide for the initial basis for capturing the true state of the infrastructure or component thereof. In addition,

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these classifications provide the foundation for managing USACE infrastructure uniformly and consistently using asset management principles, systems and risk-based condition indices for operating and maintaining projects while embracing the concept of high performance priority goals. It is critical that an honest, defensible assessment and evaluation of each project be made for the ranking process in order to accurately provide a snapshot of where scarce resources need to be allocated. Therefore OCAs should be used when possible.



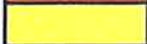

b. Activities, components, and projects will be evaluated for the consequences and economic impacts of failure and ranked in accordance with Tables V-7, V-9, V-11, or V-13, which ever is applicable.

c. Tables V-6 and V-7; Tables V-8 and V-9; Tables V-10 and V-11; and Tables V-12 and V-13, together form the basis of the "Relative Risk" based methodology which supports the Corps risk-based direction for making investments decisions and provide the information to populate Table V-3, Navigation Relative Risk Ranking Matrix. The "Relative Risk Ranking" values are determined from Table V-3 using both the "Probability/Condition" classification and the "Consequence/Economic Impact" category values established for each project or budget item. These values will be auto-populated by P2 OFA. Note that more than one project/item can populate a box. Matrix values will be used in making informed and wise investments, minimizing risk and providing maximized benefits to the public. Ranking within each box (if required) will be determined as appropriate and based on supporting justification from the MSC for projects that appear to be "out of place" in their matrix table.

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<div> <div>Condition</div> <div>Consequence</div> </div>		TABLE V-3 Navigation 1-25 Relative Risk Values Matrix				
		Condition Classification				
		F	D	C	B	A
		Failed	Inadequate	Probably Inadequate	Probably Adequate	Adequate
Consequence/Economic Impact	I	1	2	4	7	11
	II	3	5	8	12	16
	III	6	9	13	17	20
	IV	10	14	18	21	23
	V	15	19	22	24	25

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	High Relative Risk
	Med-High Relative Risk
	Medium Relative Risk
	Low Relative Risk
	Minimal Relative Risk

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<div> <div>Condition</div> <div>Consequence</div> </div>		TABLE V-4 Navigation 1-5 Relative Risk Index Matrix				
		Condition Classification				
		F Failed	D Inadequate	C Probably Inadequate	B Probably Adequate	A Adequate
Consequence/Economic Impact	I	1	1	2	2	3
	II	1	2	2	3	4
	III	2	2	3	4	4
	IV	2	3	4	4	5
	V	3	4	4	5	5

d. **Inland Navigation** Consists of Navigation Locks and channels that combine to determine system availability for movement of commercial goods.



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- (1) **Navigation Lock Components.** This will be based on the FEM Hierarchy currently being developed. An example is:

Lock  
  Lock Chamber  
    Air System  
    Gates  
    Infrastructure  
    Tow Haulage  
    Valves

TABLE V-5  
Component/Activity Hierarchy

Designator	Component/Activity	Component /Activity Rank	Critical or Non Critical
Z	Backup Electrical Power system	45	NC
Q	Buildings	20	NC
AQ	Communication/IT Equip	22	NC
AF	Compressed Air generation & distr	62	NC
P	Culvert Intakes	89	NC
AL	Dam closure hoisting machinery, crane & lifting beam	74	C
X	Dam gate controls & position indicators	77	C
AH	Dam gate emerg closure & bulkheads	85	C
AI	Dam gate maint closures & bulkheads	30	NC
W	Dam gate oper equip	84	C
V	Dam gate struc & seals	125	C
R	Dam Piers/Walls	114	C
BF	Dewaterings	116	NC
B	Dredging	116	C
AS	Elevators	5	NC
AT	Fixed Cranes	7	NC
AE	HVAC	13	NC
AB	Hydraulic pumping & distr	116	C
AK	Lock closure hoisting machinery, crane & lifting beam	37	C
D	Lock Gates	111	C
C	Lock Wall	147	C
BC	Lock/Dam/Other Misc (Lighting, Esplanade, Railings, Drainage, etc...)	20	NC
A	Minimum Acceptable Operations Service Level	195	C
BE	Misc Ops	13	NC
AN	Mooring bits	66	NC
F	Mooring Cells	39	NC
BB	New Real Estate Outgrants/Disposals/Actions	10	NC
Y	Primary elec serv & distr	160	C

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BD	Recreation Dredging	13	NC
T	Service Bridge	18	NC
AM	Service Bridge Crane	27	NC
S	Spillway & downstream dam features	67	C
AO	Tow Haulage System	65	NC
AG	US & DS Lock maint lock closures/bulkheads (7 items)	32	NC
E	Utility Cross-overs	67	NC
AJ	Valve Culvert maint closures & bulkheads	24	NC
L	Valves	101	C
AD	Water & sewage svc, treatment & distr	15	NC
BA	Waterway Safety Critical Signs	20	NC

(2) **Condition Assessment.** Begins with a determination of which components are critical (potential to halt navigation) and which are non-critical (limited potential to halt navigation). Predicted component conditions should be determined by completed Operational Condition Assessments (OCA). If OCAs are not available, predicted component conditions should be assessed by a review of multi-disciplined inspection reports, on-site reviews, rating criteria, and/or FEM operation and maintenance records (when available) and projected to the end the PY-1. The predicted condition of the component is a critical factor in determining the risk of unscheduled closures. Output of the process is shown in Table V-6 below.

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TABLE V-6 Inland Navigation Condition Classification		
Condition Classification		Condition Description
GOOD	A	ADEQUATE (Failure unlikely within budget cycle)
MODERATE	B	PROBABLY ADEQUATE (Less than 50% probability of failure within budget cycle)
POOR	C	PROBABLY INADEQUATE (Failure could occur within budget cycle)
FAILING	D	INADEQUATE (High probability for failure within budget cycle)
FAILED	F	FAILED (Already failed or failure will occur within budget cycle)

(3) **Consequences of diminished Navigation feature performance** are computed for each budget line item that could result in an unscheduled closure or diminished channel depth and/or width.

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TABLE V-7 Inland Navigation Consequence/Economic Impact Category	
Consequence Category	Consequence Rating Criteria
1	Maximum risk to mission Highest economic loss; Over 5 billion ton-miles. <i>Economic level thresholds are in development.</i> Probable life safety impact Minimum Acceptable Operations Service Level (see definitions) Court Decree Mandated Action Shutdown of energy generation or distribution facilities for national public use with no alternative modes of transportation (e.g. power plants and oil distribution facilities)
2	High risk to mission No life safety impact High economic loss; Between 3 billion and 5 billion ton-miles. <i>Economic level thresholds are in development.</i> Diminished cost efficiency of energy generation or distribution facilities for national public use with higher cost alternative modes of transportation (e.g. power plants and oil distribution facilities)
3	Moderate risk to mission No life safety impact Moderate economic loss; Between 1 billion and 3 billion ton-miles. <i>Economic level thresholds are in development.</i>
4	Low risk to mission No life safety impact Low economic impact; Between 500 million and 1 billion ton-miles. <i>Economic level thresholds are in development.</i>
5	Negligible risk to mission No life safety impact Least economic; Under 500 million ton-miles. <i>Economic level thresholds are in development.</i>

e. **Coastal Navigation** Consists of Navigation channels and the availability of the maintained depth for movement of commercial goods. The 59 coastal ports with over 10 million tons of cargo per year operated at an average middle half width channel availability of 30% to 35%. This restriction results in tidal delays for import/exports and missed opportunities. A concentrated effort to improve the channel half-width availability will commence with a deliberate tracking program implemented to illustrate successful investment.

(1) **Condition Assessment.** Asset Management principles provide a uniform condition assessment of each component. The predicted condition of the component is a critical factor in determining the risk of unscheduled closures. Channel condition is determined from the latest hydrographic surveys or published hydrographic survey reports and projected to the end of PY-1

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based on historical information. The condition level is determined from Table V-8 below. The percentage listed under the probability/condition listed below refers to the middle half channel availability that would occur just prior to the PY without the requested funding increment.

TABLE V-8		
Navigation Channels and Harbors Condition Classification		
Condition Classification		Condition Description
GOOD	A	95% at Half Channel Availability at maintained Depth
MODERATE	B	75% at Half Channel Availability at maintained Depth
POOR	C	50% at Half Channel Availability at maintained Depth
FAILING	D	25% at Half Channel Availability at maintained Depth
FAILED	F	0% at Half Channel Availability at maintained Depth

(2) **Consequences of diminished Navigation feature performance.** These are computed for each budget line item that could result in diminished channel depth and/or width. Each consequence or economic impact listed below is independent of each other. For a work package to qualify for a particular consequence level it only has to satisfy only one of the listed consequences. For work packages that fit into more than one consequence level, choose the consequence level that most closely fits the work package. The consequence level is determined by Table V-9 below.

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<p style="text-align: center;"><b>TABLE V-9</b></p> <p style="text-align: center;"><b>Navigation Channels and Harbors</b> <b>Consequence/Economic Impact Category</b></p>	
<b>Consequence Category</b>	<b>Consequence Rating Criteria</b>
1	Demonstrated <sup>1</sup> highest economic impact or >10 million Tons Imminent life safety impact Court Decree Mandated Action (to include environmental) DoD Strategic Ports Shut down of Energy Distribution Facilities with no alternate modes of transportation
2	Demonstrated <sup>1</sup> high economic impact or 5 - 10 million Tons Probable life safety impact Alternate modes of transportation exist for Energy Distribution Facilities, but at a higher cost than water borne transportation
3	Demonstrated <sup>1</sup> moderate economic impact or 1 - 5 million Tons Possible life safety impact
4	Low economic impact <sup>1</sup> or <1 million Tons No life safety impact
5	Negligible economics (Recreation Harbors, No commercial Activity) No life safety impact.

<sup>1</sup> Thresholds and basis for economic impact are under development. One measure of economic impact can be demonstrated using rate savings benefits, transportation cost savings, or damages avoided.

(3) **Risk Matrix** (follows the 5x5 matrix established above)

(4) **Definitions.**

(a) **Channel Availability Percentage** - Determined by the amount of time the channel is available/needed at maintained depths. Does not include channel availability due to tidal fluctuations.

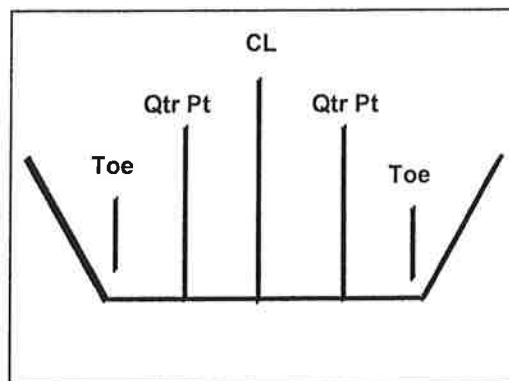
(b) **Energy Distribution** - Includes impacts to harbors which serve as principal import/export ports of coal, natural gas, and other products required to produce energy.

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(c) Middle Half Channel availability - Channel availability between quarter points, see figure 1 below.

FIGURE V-1

Channel Availability



(d) Harbor of Refuge - Section 175.400 of Title 46 (Shipping), Chapter I (Coast Guard) of the Code of Federal Regulations defines a Harbor of Refuge as "Harbor of safe refuge means a port, inlet or other body of water normally sheltered from heavy seas by land and in which a vessel can navigate and safely moor."

(e) Life Safety Impacts - Includes impacts to subsistence harbors and critical harbors of refuge.

(f) Subsistence Harbor - Communities dependent for survival on harbors that provide principal means of receiving essential goods and services for which alternative means of delivery are not practical.

#### f. Structures

(1) **Components:** This will be based on the FEM Hierarchy currently being developed,

(2) **Condition Assessment:** Asset Management principles provide a uniform condition assessment of each component. The predicted component condition is a critical factor in determining the risk of jetty, breakwater, and other structure failures resulting in channel closure.

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TABLE V-10		
Navigation Structures Condition Classification		
Condition Classification		Condition Description
GOOD	A	Failure to the point navigation will be measurably impacted is unlikely within budget cycle Project fully accomplishing its intended purpose
MODERATE	B	Low risk of failure to the point navigation will be measurably impacted within budget cycle
POOR	C	Medium risk of failure to the point navigation will be measurably impacted within budget cycle
FAILING	D	High risk of failure to the point navigation will be measurably impacted within budget cycle
FAILED	F	Condition severely restricts or halts navigation within budget cycle

(3) Consequences of diminished Structure performance are computed for each structure or major component.



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TABLE V-11 Navigation Structures Consequence/Economic Impact Category	
Consequence Category	Consequence Rating Criteria
1	Demonstrated highest economic impact <sup>1</sup> <b>Imminent</b> life safety impact Critical to safe navigation by commercial vessels at High Use Navigation Project (>10 million tons) Critical to safe navigation at DoD Strategic Ports
2	Demonstrated High economic impact <sup>1</sup> <b>Probable</b> life safety impact. <b>Probable impacts to subsistence harbors/critical harbors of refuge.</b> High economic loss (5 - 10 million Tons) Alternate modes of transportation exist for Energy Distribution Facilities, but at a higher cost than waterborne transportation
3	Demonstrated Moderate economic impact <sup>1</sup> <b>Possible</b> life safety impact. <b>Possible impacts to subsistence harbors/critical harbors of refuge.</b> Moderate economic loss (1 - 5 million Tons)
4	<b>Low economic impact<sup>1</sup>. Little impacts to subsistence harbors/critical harbors of refuge.</b> Low economic impact (<1 million Tons) No life safety impact
5	<b>Negligible economic impact. No impacts to subsistence harbors/harbors of refuge.</b> Negligible economics (Recreation Harbors, No commercial Activity) No life safety impact.

<sup>1</sup> Thresholds and basis for economic impact are under development. One measure of economic impact can be demonstrated using rate savings benefit, transportation cost savings, or damages avoided.

**(4) Risk Matrix** (follows the 5x5 matrix established above)

**g. Bridges.** A substantial portion of the Corps bridge inventory is approaching or has exceeded its design life.

**(1) Components:** This will be based on the FEM Hierarchy currently being developed, using info from CEBIS, the USACE bridge database and input from the Districts. An example is:

Bridge

Decks  
Superstructure  
Substructure  
Infrastructure

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Channel Culverts  
Scour Ratings

(2) **Condition Assessment:** Asset Management principles provide a uniform condition assessment of each component. The predicted component condition is a critical factor in determining the risk of bridge closures. Bridge condition is determined from data in the Corps of Engineers Bridge Information System (CEBIS).

TABLE V-12		
Bridges Condition Classification		
Condition Classification		Condition Description
GOOD	A	Fully operational at design loading and capacity Bridge Condition Rating greater than 80 pts
MODERATE	B	Bridge Condition Rating greater than 65 pts
POOR	C	Operational at reduced capacity or load Bridge Condition Rating greater than 50 pts
FAILING	D	Bridge is posted for load restrictions Bridge Condition Rating greater than 35 pts
FAILED	F	Not operational Bridge Condition Rating less than 35 pts

(3) **Consequences of diminished Bridge performance** are computed for each bridge (or major component).

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TABLE V-13	
Bridges Consequence/Economic Impact Category	
Consequence Category	Consequence Rating Criteria
1	Potential for loss of life on: High Use Bridges Lifeline Bridges Important Bridges ADT > 5000 Results in USACE mission failure Life Safety Concern – Potential for loss of life should the member(s) fail or not function as intended Economic Impact (?)
2	Probable life safety impact on Bridges with ADT between 2500-5000 Ability to carry traffic to maintain the required use of the route and serve the Nation's needs (commerce, defense, lifeline). Significant impact to the ability to conduct USACE missions
3	Possible life safety impact on Bridges with ADT between 1000-2500 public access bridge Minimal life safety impact Moderate impact to the ability to conduct USACE missions
4	Possible life safety impact on Bridges with ADT between 0-1000 No life safety impact Minimal impact to the ability to conduct USACE missions
5	Routine maintenance that extends the life of the bridge. Repairs that delay replacement Negligible economic impact No life safety impact.

(4) **Risk Matrix** (follows the 5x5 matrix established above)

(5) **Definitions.**

(a) Bridge Use, Average Daily Traffic (ADT); Bridges with ADT > 5000 vehicles will be considered high use. Bridges will be ranked in descending order of ADT.

(b) Lifeline Bridges; Lifeline bridges will be considered high risk. In lieu of more definitive data, bridges with detour lengths greater than 10 miles will be considered lifeline routes.

(c) Important Bridges; Bridges with multiple importance (commerce, national defense, and impacts to navigation) will be considered high risk with higher ranking given to those bridges with a greater number of importance factors.

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**NOTE: BRIDGE CONDITION ASSESSMENT TRIAGE:** a qualitative assessment will be made to identify those conditions where an in-depth analysis may yield favorable results, either in reduced scope and cost of repair and/or delay in repairs. Identify conditions where in-depth analysis will likely be of benefit; e.g., the analysis shows that the members are adequate for the given conditions and that repairs can be delayed, reduced, or eliminated. The costs of the analysis should be offset by reduction or elimination of repair costs.

**V-10. Asset Based Budget.** In order to further development of the USACE asset management program, the PY Budget will link operation and maintenance costs to major assets using the constructed asset's Feature Codes. Two columns were added for the FY 11 Budget submission to the Business Line spreadsheets to link the work packages with constructed assets. Column 8, Primary Feature Code, should be populated with the Feature Code for the major constructed asset that the budget work package supports. Column 9, Additional Feature Codes, would list additional Feature Codes associated with other real property assets that the work package will address. These will typically be associated with operations and "little m" maintenance.

**V-11. Special Considerations or Special Rating Criteria.**

- a. Funding for minimum fleet dredges follows the dredge. If the requirements for the minimum fleet dredge do not materialize, the funds programmed for the dredge will be reprogrammed to other minimum fleet dredging requirements.
- b. Replacement and Rehabilitation Construction will be included as unique line items, not hidden under the parent project. For example, the rehabilitation items for Markland Locks and Dam will not be included in the Ohio River project items. These items migrated to O&M from Construction in the FY07 cycle and migrated from O&M back to Construction for FY10 and need to remain identifiable. Rehabilitations are characterized as repairs to restore capability and are to be included in Construction.
- c. Rehabilitation or replacement studies will be included as unique line items, not hidden in a general Operation line item for the parent project, marked with the appropriate Phase code.
- d. Dredged Material Disposal Facilities (DMDFs) will be included as unique line items in Construction, with the appropriate Phase and Category/Class/Subclass (CCS) codes. These items migrated to O&M from Construction in the FY07 cycle and migrated from O&M back to Construction for FY11 and need to remain identifiable.
- e. Sand Mitigation Projects will be included as unique line items in Construction, with appropriate Phase and CCS codes. These items migrated to O&M from Construction in the FY07 cycle and migrated from O&M back to Construction for FY11 and need to remain identifiable.
- f. Ecosystem Restoration projects in part or in whole previously budgeted in the Ecosystem Restoration Business Line for Construction were moved to O&M in FY07. These projects migrated back to Construction for FY11 and will be budgeted in the Ecosystem Restoration Construction Account for the FY12 cycle.

**V-12. Ten Year Development Plans.**

- a. Each year the navigation asset condition assessments will be reviewed and updated to reflect work accomplished and changes to condition and therefore priority. For inland river systems a prioritized maintenance list will be developed. Based on funding assumptions such as if only Increments 1 and 2 are funded, Districts, MSC's and HQ will be able to establish O&M

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program glide paths. See Paragraph 9 of the Main EC. Similar process will be developed for the coastal ports and harbors and will be better defined when channel condition assessment criteria are finalized for use in the PY (FY12) budget development process. Setting long-term performance targets to be provided.

b. End State Performance target: For all navigation channels the goal is to attain and maintain channel availability at the justified level of service for the target years. For inland navigation the goal is to halt the trend of increasing navigation lock outages and maintain lock availability at the FY01-02 baseline level on a national basis.

c. Ongoing Construction funded efforts will be a consideration in overall funding, however a similar backlog of work in this program is anticipated beyond the FY16 5-year horizon.

**V-13. Definitions.** The following definitions refer to the O&M criteria.

a. High-Use Projects – those deep and shallow draft navigation projects with 10 million tons or greater, and those waterways with three billion ton-miles or greater.

b. Moderate-Use Projects – those deep and shallow draft navigation projects with one to 10 million tons, and those waterways with one to three billion ton-miles.

c. Project Condition Surveys (PCS) – those hydrographic surveys needed to determine the program year conditions of projects in caretaker status or that are not funded separately in the PY. This work does not include testing, sampling or any other activity that should be included in a specific project funded budget package. The PCS items will be by state and will indicate the total number of projects that could be surveyed and the number of projects that will be performed as part of the line item. All PCS will not be included in a single line item.

d. Water/Environmental Certification – those activities needed to acquire certification in the PY to allow dredging to proceed that are not funded separately in the PY. This work does not include any activity that should be included in a specific project funded budget package. The Certification items will be by state and will indicate the total number of projects that could be certified and the number of certifications that will be performed as part of the line item. This will be handled like the PCS line items. All Certifications will not be included in a single line item.

e. Subsistence Harbors – those harbors that are dependent upon the navigation project as there principal means of receiving goods and services, and for which alternative means of delivery are not practicable. An example would be Tangier Island off the coast of Virginia or the Channel Islands off the California coast. This does not include point of origin harbors.

f. Critical Harbors of Refuge – those harbors that offer safe haven to boaters that represent the sole site for protection based on a public safety based regional distance criteria. Authorization as a Harbor of Refuge does not automatically make a harbor critical.

g. Caretaker Activities – There are navigation systems and projects that will not be funded. Some minimal level of funding will be required to place these projects in a caretaker mode. We should address concern for the public's health and safety, environmental impacts resulting from full cessation of operations and how best to address them, review legal requirements placed on that project and ensure that litigation issues are addressed in a caretaker plan, review any unintended consequences on other waterways, and establish a communication plan to include messages, FAQ, roll out strategy, web site information, and draft media release. Caretaker status is an extremely low level of funding for minimal effort.

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#### V-14. Low-Use Navigation Projects.

a. There are two performance indicators that flag work as Low-Use navigation features. These are: (1) Waterway project has less than one billion ton-miles of commercial cargo annually and (2) harbor projects have less than one million tons of commercial cargo annually. Activities meeting criterion (1) will be included as a low-use waterway segment, and activities meeting criterion (2) will be included as a low-use harbor channel. Use the additional performance criteria provided in Table V-14 for assisting in the evaluation of activities and projects.

TABLE V-14

Low-Use Channels and Waterways Screens and Indicators

	SCREEN	SCREEN	Indicators	Indicators	Indicators	Indicators	Indicators
	Minimum						
Low-Use Nav channels	<1 million tons	5-Year Avg cost per ton	Supports Public Transportation	Public Health and Safety	BCR, caretaker	Results of investment	Commercial fishery outputs
Low-Use Waterway segments	< 1 billion ton-miles	5-Year Avg cost per ton	Multipurpose Values	Public Health and Safety	BCR, Caretaker	Investment Issues	

#### Low-Use Harbor Channels Minimum:

Supports public transportation (ferries, tour boats);  
Ensures boater safety (inlet dredging to reduce breaking wave hazards);  
Project costs yield outputs/benefits exceeding costs;  
Purpose should reflect results of investment (the "So what?").  
Supports some commercial fishery output;

#### Low-Use Waterway Segments Minimum:

Compute BCR based on transportation savings (average tons per year table);  
Supports other business line purposes (Flood Risk Management, Hydropower, Recreation, Environmental, Water Supply, etc.);  
Port investment status (recent or planned port expansion/investments);  
Commercial tonnage trends upward;  
Ensures basic public health and safety;  
Caretaker costs for non-budgeted segments.

**b. Navigation System Funding Needs.** See the discussion for O&M Systems in Annex C (O&M). Operation and Maintenance projects including Navigation projects will be combined in systems. For example, the South Oregon Coast Ports will be combined as appropriate in the Pacific Northwest System (PNW). The linkage of individual projects in a systems evaluation must be done in a rational way. This is not a gambit to get additional funds for projects that do not merit it.

**V-15. Joint Costs.** See Annex C, Paragraph C-2.3.b. for Joint Activities - Joint Costs. All Joint costs will be budgeted under the Hydropower Business Line. The appropriate share of Joint Cost work packages will be distributed to the appropriate business lines once the budget submission is uploaded for HQUSACE review and prioritization.

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V-16. **Watershed Studies.** Watershed studies are multi-objective/multipurpose and encompass a relatively large geographic area. As a minimum, the study area must encompass the region of an 8 digit HUC. Following the reconnaissance study, a study may proceed as a watershed assessment using 75-25 cost-sharing (leading to a watershed management plan) in accordance with Sec.729 or as a feasibility study accomplished in a watershed context in accordance with the standard feasibility study process and 50-50 cost-sharing when implementation of a Corps project is anticipated.

The key attributes of a watershed assessment, leading to a watershed management plan are as follows.

- a. The study results in the identification of a combination of recommended actions (a Watershed Management Plan) to be undertaken by various partners and stakeholders in order to achieve local, tribal, regional, and national water resources management goals identified in the study and may or may not identify further budgetable Corps studies or implementation projects. The plans will be multi-objective and multi-purpose.
- b. Team thinking about water resources development and management in the context of multiple purposes rather than single purposes is required. This facilitates the search for comprehensive and integrated solutions to a variety of issues.
- c. The study provides a means for improving opportunities for public and private groups to identify and achieve common goals by unifying on-going and future efforts.
- d. Leveraging resources, including cost shared collaboration, and integrating programs and activities within and among Civil Works programs, and with other Federal, tribal state and non-governmental organizations, are critical factors.

V-17. **Navigation Criteria Matrix.** ADDRESS THE RISK MATRIX RESULT Below are the data elements and definitions for the embedded Navigation Criteria Matrix (Excel worksheet).

- a. Note that dollars amounts should be in thousands (\$000), EXCEPT columns 29, BUDGET REQUEST - FED and 32, BUDGET REQUEST - IWTF. Waterborne Commerce data should also be in thousands, but this data are already rounded to thousands in OMBIL and Waterborne Commerce data sources.
- b. Unique Entries. Fields marked with an \* are expected to be different for each increment amount. It would be expected that additional funds would show improvement in appropriate performance indicators. Other items would be the same for the same CWIS numbers *and hopefully will populate automatically.*

- c. Criteria Matrix Data Elements and Definitions.

**Col #. Column Title: Definition.**

(1) **BUSINESS PROGRAM:** Common data field for P2 OFA. NHS=Shallow Draft Channel, NHD=Deep Draft Channel, NIL=Low Use Inland Waterway, NIH=High Use Inland Waterway, and NOTH=Navigation Other. These codes should be consistent with the assigned codes for HW Type in Column 60.

- (2) **EROC:** Common data field for P2 OFA.

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- (3) **MSC:** Common data field for P2 OFA.
- (4) **DISTRICT:** Common data field for P2 OFA.
- (5) **APPROP ABBREV:** Common data field for P2 OFA.
- (6) **CW TYPE OF FUNDING:** Common data field for P2 OFA.
- (7) **PROGRAM CODE:** Common data field for P2 OFA. Refer to Definition/Glossary section.
- (8) **PRIMARY FEATURE CODE:** Common data field for P2 OFA. Required for all PED, Construction and Operation and Maintenance work packages associated with real property assets. The "Primary" Feature Code will be the major constructed asset that the budget work package supports.
- (9) **ADDITIONAL FEATURE CODE(S):** Common data field for P2 OFA. Required for all PED, Construction and Operation & Maintenance work packages associated with real property assets. List all Feature Codes associated with other real property assets that the work package will address.
- (10) **P2 PROJECT NUMBER:** Common data field for P2 OFA.
- (11) **BUDGET ITEM ID\*:** Common data field for P2 OFA.
- (12) **FUNDING INCREMENT\*:** Common data field for P2 OFA.
- (13) **DIS RANK\*:** Common data field for P2 OFA.
- (14) **MSC RANK\*:** Common data field for P2 OFA.
- (15) **HQ RANK\*:** Common data field for P2 OFA. Will be completed by HQ.
- (16) **ARMY RANK\*:** Common data field for P2 OFA. Will be completed by HQ.
- (17) **PRESIDENT BUDGET RANK\*:** Common data field for P2 OFA. Will be completed by HQ.
- (18) **PHASE\*:** Common data field for P2 OFA. Refer to **Table 3** contained in the main EC.
- (19) **PHASE STATUS\*:** Common data field for P2 OFA.
- (20) **PHASE COMPL\*:** Required for all items in all accounts. The fiscal year the phase for which funds are being requested is scheduled to complete. The Reconnaissance phase ends with execution of a Feasibility Cost Sharing Agreement, or a report recommending no Federal action. For the PY, use the date of the Division Engineer's Transmittal of the report to HQ as the end of the Feasibility phase. The PED phase ends with completion of first set of plans and specifications and execution of the Project Cooperation Agreement/Project Partnership Agreement (PCA/PPA). Construction completion is defined as physical completion of the project and would not include follow-on post-construction monitoring. The date entered for each of multiple entries for a project/separable element should be determined based on the assumption



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that no subsequent work packages for the project/separable element will be funded. For items in the O&M account, enter the PY unless the requested funds are scheduled to be carried over.

- (21) **PROGRAM NAME:** Common data field for P2 OFA.
- (22) **P2 PROJECT NAME:** Common data field for P2 OFA.
- (23) **SYSTEM CODE:** Common data field for P2 OFA. See Annex C (O&M) for list of designated systems and codes.
- (24) **BASIN CODE:** Common data field for P2 OFA. Enter the 4 digit USGS HUC sub-basin code for the increment request - <http://water.usgs.gov/nawqa/sparrow/wrr97/geograp/geograp.html>.
- (25) **STATE:** Common data field for P2 OFA.
- (26) **CONTRACT TYPE:** Common data field for P2 OFA.
- (27) **CURRENT BUDGET – FEDERAL:** Common data field for P2 OFA.
- (28) **CURRENT BUDGET INF ADJ – FEDERAL:** Common data field for P2 OFA.
- (29) **FEDERAL (CORPS) BUDGET REQUEST\*:** Common data field for P2 OFA. Amount should be full dollar amount rounded to nearest thousand.
- (30) **CURRENT BUDGET – IWTF:** IWTF amount.
- (31) **CURRENT BUDGET INF ADJ – IWTF:** IWTF amount inflation adjusted.
- (32) **BUDGET REQUEST - IWTF\*:** The Inland Waterways Trust Fund amount requested for this increment; for C the sum of all Federal (Corps) and IWTF increments for this CWIS will be its capability. Each increment should provide measurable positive contributions to the applicable business line performance measures. Amount should be full dollar amount rounded to nearest thousand.
- (33) **COMPONENT/ACTIVITY DESIGNATOR\*:** Component/activity designator from FEM hierarchy (see Table V-5 in the Navigation Appendix Para. V-9). Required only for navigation locks and dams.
- (34) **CRITICAL/NON-CRITICAL\*:** "C" for "Critical"/"NC" for "Non-Critical" (see Table V-5 in the Navigation Appendix Para. V-9). Required only for navigation locks and dams.
- (35) **COMPONENT/ACTIVITY RANK\*:** Relative importance of the component or activity to the functioning of the project (see Table V-5 in the Navigation Appendix Para. V-9). Required only for navigation locks and dams.
- (36) **PRIOR - CONDITION ASSESSMENT CLASS\*:** The condition assessment (A, B, C, D or F) of the budget item, based on risk assessment analysis, at the time of or just prior to PY budget year. Reference the Relative Risk Index Matrix and Condition Classification Guidelines in the business line budget EC Appendix, see applicable Tables in Para. V-9.

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(37) **PRIOR – CONSEQUENCE CATEGORY\***: The consequence assessment (I, II, III, IV or V) of the budget item, based on risk assessment analysis, at the time of or just prior to PY budget year. Reference the Relative Risk Index Matrix and the Consequence/Economic Impact Rating Criteria in the business line budget EC Appendix, see applicable Tables in Para. V-9).

(38) **PRIOR - RELATIVE RISK VALUE (1-25)\***: The value (1-25) obtained from the Relative Risk Values table in the business line budget EC Appendix after applying the prior Condition Classification and Consequence/Economic Impact assessment values. This value will be generated automatically in OFA. See Para. V-9.

(39) **PRIOR – RELATIVE RISK MATRIX INDEX (1-5)\***: The value (1-5) obtained from the Relative Risk Matrix in the business line budget EC Appendix after applying the prior Condition Classification and Consequence/Economic Impact assessment values. This value will be generated automatically in OFA. See Para V-9.

(40) **WITH PY REQUEST – CONDITION ASSESSMENT CLASS\***: The condition assessment (A, B, C, D or F) that is anticipated or estimated for the budget item assuming the PY budget work package is funded. Reference the Condition Classification Guidelines in the business line budget EC Appendix, see applicable Tables in Para. V-9.

(41) **WITH PY REQUEST – CONSEQUENCE CATEGORY\***: The consequence assessment (I, II, III, IV or V) that is anticipated or estimated for the budget item assuming the PY budget work package is funded. Reference the Consequence/Economic Impact Rating Criteria in the business line budget EC Appendix, see applicable Tables in Para. V-9.

(42) **WITH PY REQUEST – RELATIVE RISK VALUE (1-25)\***: The value (1-25) obtained from the Relative Risk Values table in the business line budget EC Appendix after assuming the PY budget work package is funded and the anticipated or estimated Condition Classification and Consequence/Economic Impact assessment values are applied. This value will be generated automatically in OFA. See Para. V-9.

(43) **WITH PY REQUEST – RELATIVE RISK MATRIX INDEX (1-5)\***: The value (1-5) obtained from the Relative Risk Matrix in the business line budget EC Appendix after assuming the PY budget request is funded and the anticipated or estimated Condition Classification and Consequence/Economic Impact assessment values are applied. This value will be generated automatically in OFA. See Para. V-9.

(44) **AMOUNT NEXT CONTRACT\***: Required for all items in Construction. Provide the total amount of the next new contract. Enter the total value of the contract in thousands

(45) **CONTINUING CONTRACT EARNING\***: Required for all continuing contracts, including both "true" and "special" continuing contracts. Provide the PY earnings for all continuing contracts continuing from the previous year. This number will change as additional items are included in the budget request for an individual continuing contract. Enter NA if this line item is not a Continuing Contract.

(46) **CONTINUING CONTRACT VALUE**: Required for all continuing contracts including both "true" and "special" continuing contracts. Enter the total value of the contract in thousands. Enter NA if this line item is not a Continuing Contract.

(47) **CONTINUING CONTRACT AMOUNT APPLIED THROUGH PY-1**: Required for all continuing contracts including both "true" and "special" continuing contracts. Enter the amount in

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thousands. This should be zero for a continuing contract initiating in the PY (FY12). Enter NA if this line item is not a Continuing Contract.

(48) **LAST YEAR BUDGETED:** Enter the last fiscal year this study or project had funds included in the President's Budget. Funds must have been in the final President's Budget, not just the District's request.

(49) **LAST AMOUNT BUDGETED:** Enter the amount included for this study or project in the President's Budget indicated in "LAST YEAR BUDGETED" entry.

(50) **LAST YEAR APPROPRIATED:** Enter the last fiscal year this study or project was appropriated funds (conference report).

(51) **LAST AMOUNT APPROPRIATED:** Enter the appropriated amount (conference report amount) for this study or project contained in the appropriation indicated in "LAST YEAR FUNDS APPROPRIATED" entry.

(52) **TOT STUDY COST:** The Total Study Cost (TSC) includes the Federal and non-Federal costs of the particular Investigation phase: the total cost of each phase while in that phase for the Reconnaissance, Feasibility and PED Phases. This is also required for study activities included in Operation and Maintenance, such as Major Rehabilitation reports, DMMPs, Section 216 studies, etc.

(53) **BALANCE TO COMPLETE STUDY\*:** The PY+1 Federal share fully funded balance to complete (BTC) the study (if in reconnaissance or feasibility) or PED. This number should vary with each work package in the budget for each specific study (the balance to complete will decrease with each successive work package). This is also required for study activities included in Operation and Maintenance, such as Major Rehabilitation reports, DMMPs, Section 216 studies, etc.

(54) **TOT PROJ COST:** The Total Project Cost (TPC) includes the Federal and non-Federal costs of PED and Construction. During the Reconnaissance and Feasibility Phases use the estimate being developed for use in the appropriate report (needed for order of magnitude evaluations). Subsequently, the figure is to include all Federal and non-Federal costs for PED and Construction. The cost should be consistent with the Total Project Cost.

(55) **BALANCE TO COMPLETE\*:** The PY+1 Federal share fully funded balance to complete (BTC) the study (if in reconnaissance or feasibility), construction project or separable element, Major Maintenance or Major Rehabilitation, diked disposal facility, sand mitigation, or beneficial use project. BTC should be consistent with the Total Project Cost. This number should vary with each work package in the budget for each specific project (the balance to complete will decrease with each successive work package).

(56) **LAST YEAR CONTRUCTION FUNDS WILL BE REQUESTED\*:** Last year funds (other than O&M) will be required. This includes authorized monitoring/adaptive management funded in the construction account.

(57) **FCSA Date:** The actual or scheduled date of the FCSA. If increment request is to accelerate phase, this date should change from initial one.

(58) **PED Date:** The actual or scheduled date of the PED Agreement. If increment request is to accelerate phase, this date should change from initial one.

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(59) **PCA/PPA Date:** The actual or scheduled date of the PCA/PPA. If increment request is to accelerate phase, this date should change from initial one.

(60) **HW TYPE:** Navigation Activity, Harbor or Waterway Type. HSD=High Use Shallow Draft Harbor; MSD=Moderate Use Shallow Draft Harbor; LSD=Low Use Shallow Draft Harbor; HDD=High Use Deep Draft Harbor; MDD=Moderate Use Deep Draft Harbor; LDD=Low Use Deep Draft Harbor; HWW=High Use Waterway; MWW=Moderate Use Waterway, LWW=Low Use Waterway; PCS=Project Condition Surveys; RAG=Removal of Aquatic Growth; RSM=Regional Sediment Management.

(61) **HMTF (Y/N):** For all navigation projects, indicate if navigation costs for this project are eligible for reimbursement from the HMTF, Yes or No. Data will be entered automatically from OMBIL

(62) **HW TYPE USE CODE – CARETAKER (Y/N):** Use Code for Navigation Activity, Harbor or Waterway Type. Required for all projects/items that are High, Moderate or Low Use. Indicate Yes or No for Caretaker. A brief explanation should be provided in the Remarks Column.

(63) **HW TYPE USE CODE – SUBSISTENCE HBR (Y/N):** Use Code for Navigation Activity, Harbor or Waterway Type. Required for all projects/items that are High, Moderate or Low Use. Indicate Yes or No for Subsistence Harbor. A brief explanation should be provided in the Remarks Column.

(64) **HW TYPE USE CODE – CRITICAL HBR OF REFUGE:** Use Code for Navigation Activity, Harbor or Waterway Type. Required for all projects/items that are High, Moderate or Low Use. Indicate Yes or No for Critical Harbor of Refuge. A brief explanation should be provided in the Remarks Column.

(65) **HW TYPE USE CODE – SAFETY (Y/N):** Use Code for Navigation Activity, Harbor or Waterway Type. Required for all projects/items that are High, Moderate or Low Use. Indicate Yes or No for Safety (Search & Rescue, USCG Station, etc.). A brief explanation should be provided in the Remarks Column.

(66) **HW TYPE USE CODE – NATIONAL SECURITY (Y/N):** Use Code for Navigation Activity, Harbor or Waterway Type. Required for all projects/items that are High, Moderate or Low Use. Indicate Yes or No for National Security. A brief explanation should be provided in the Remarks Column.

(67) **HW TYPE USE CODE – PUBLIC TRANSPOR (Y/N):** Use Code for Navigation Activity, Harbor or Waterway Type. Required for all projects/items that are High, Moderate or Low Use. Indicate Yes or No for Ferry (Public) Transportation. A brief explanation should be provided in the Remarks Column.

(68) **DSAC CLASSIFICATION:** Each dam safety project, assurance study or group of similar studies for the same project should be identified with the appropriate phase code and the Dam Safety Action Classification code (DSAC = 1, 2, 3, 4, or 5)

(69) **DAM SAFETY IMPACTS:** For dam safety/seepage project - what other purposes (by Business Line) would be impacted if there was a failure. Maximum of 160 characters.

(70) **LEGAL MANDATE:** Special legal mandates – Y or N and then describe in remarks.

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- (71) **SAFETY ISSUES:** Safety issues – Y or N and then describe in remarks.
- (72) **LATEST COM TON:** The commercial tons for the latest available year from OMBIL (Waterborne Commerce data). Data will be entered automatically from OMBIL.
- (73) **5-YR AVG COM TON:** The last five-year average annual commercial tons from OMBIL (Waterborne Commerce data). Data will be entered automatically from OMBIL.
- (74) **LATEST SYS TON MILES:** The system or trip ton-miles for the latest available year from OMBIL (Waterborne Commerce data). Data will be entered automatically from OMBIL.
- (75) **5-YR AVG SYS TON MILES:** The last five-year average annual system or trip ton-miles from OMBIL (Waterborne Commerce data). Data will be entered automatically from OMBIL.
- (76) **LATEST TON MILES:** The ton-miles for the latest available year from OMBIL (Waterborne Commerce data). Data will be entered automatically from OMBIL.
- (77) **5-YR AVG TON MILES:** The last five-year average annual ton-miles from OMBIL (Waterborne Commerce data). Data will be entered automatically from OMBIL.
- (78) **5-YR AVG O&M \$/TON:** Five-year average total O&M costs divided by five-year average annual commercial tons for the same period from OMBIL for Waterborne Commerce and O&M financial data. Data will be entered automatically from OMBIL.
- (79) **TOTAL VALUE OF FOREIGN CARGO:** Total dollar value of the foreign cargo for the project at current price levels. Available from Waterborne Commerce data. Data will be entered automatically from OMBIL.
- (80) **VALUE OF EXPORT CARGO:** Dollar value of the export cargo for the project at current price levels. Available from Waterborne Commerce data. Data will be entered automatically from OMBIL.
- (81) **% TIME AVAIL\*:** Percentage of time project is available to perform as designed with limits from deferred maintenance, dam safety issues, etc. It would be expected that additional increment requests would show improvement in appropriate performance indicators. Explain in Remarks.
- (82) **BCR AT 7% RATE:** The project's benefit cost ratio at 7% and current price levels.
- (83) **RBR CR AT 7% RATE:** The project's remaining benefits - remaining costs ratio at 7% and current price levels. See Annex B for discussion.
- (84) **BCR – Applicable:** The project's benefit cost ratio at the applicable interest rate.
- (85) **RBR CR – Applicable:** The project's remaining benefits - remaining costs ratio at applicable rate.
- (86) **APPLICABLE RATE:** The applicable interest rate - See main EC paragraph 10.
- (87) **BCR – Current:** The project's benefit cost ratio at the current interest rate. See main EC paragraph 10.

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(88) **RBR CR – Current:** The project's remaining benefits - remaining costs ratio at current rate. See main EC paragraph 10.

(89) **PROJECT DESCRIPTION:** Main features/Navigation segment, 50 words or less. Complete sentences are not required. Maximum of 250 characters.

(90) **BUDGET ITEM JUSTIFICATION\*:** State proposed use of the increment amount (be as specific as possible) and what the increment amount accomplishes (what are we getting for this amount of \$). Key points to be able to distinguish from other increment or other projects. For dam safety items (inspections and studies), the "Purpose" field should include what is being studied, the expected report completion date, if not completing in the PY, the additional \$ needed to complete, and estimated cost (magnitude) of the construction cost. It would be expected that additional increment requests would show improvement in appropriate performance indicators. Maximum of 160 characters.

(91) **CONSEQUENCES\*:** What is penalty (consequence) if not funded this PY - increment amount needed to comply with safety, settlements, loss of service, structural failure, etc. It would be expected that additional increment requests would show improvement in appropriate performance indicators. Maximum of 160 characters.

(92) **REMARKS\*:** Additional critical information to support increment amount that is not in the other fields and what is called for from other fields. Use to explain District & Division ranks, lack of data in required fields, special legal or other requirements, safety issues, etc. Provide rationale to support funding of O&M Major Maintenance Items under C. Document infrastructure at significant risk to justify budget requests. It would be expected that additional increment requests would show improvement in appropriate performance indicators. For projects with an N/A in any field, such as BCR and RBR CR, explain why they are not required. Maximum of 600 characters.

(93) **REMARKS (CONTD)\*:** Additional critical information to support increment amount that does not fit in REMARKS column.

(94) **OTHER PURPOSES:** The other outputs provided by the project. N=Navigation; F=Flood Risk Management; H=Hydropower; E=Environmental; R=Recreation; W=Water Supply.

(95) **FUNDING OF OTHER PURPOSES:** Displays the budget request amounts entered for other business lines for the project. System generated, no entry required.

(96) **EXTERNAL PEER REVIEW:** Enter the amount in thousands included in the Budget Request – Fed that is required to fund the Federal cost of external peer review in accordance to WRDA 2007, Section 2034.

(97) **WATERSHED:** Is this a watershed study or project? Y or N based on criteria in EC.

(98) **WATERSHED DOCUMENTATION:** If Watershed Study column is "Y", then provide a narrative documentation of why the study is a Watershed Study (400 characters). The Phase Code in Column 18 should be "WA".

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TABLE V-15

Navigation Budget Ranking Criteria - Submission Matrix



Table V-15 FINAL.xls

*"Empty cells go to the bottom"*

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## APPENDIX VI

## Recreation

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## SUB-ANNEX C-4

## Work Category Codes

## C-4-1. O&amp;M Work Category Codes- Numerically Ordered.

TABLE C-4-1	
WORK CATEGORY CODES - NUMERICALLY ORDERED (See footnotes at end of Table)	
WORK CATEGORY CODE	DESCRIPTION
601-- <sup>1/</sup>	Operation for Navigation Functions
60110 **	Operation of Locks, Dams, Reservoirs, Service Facilities, Permanent Operating Equipment, Etc. for Navigation
60120 <sup>1/</sup>	Studies and Surveys for Navigation
60121*	Studies and Surveys
60122	Major Rehabilitation Evaluation Reports
60123	Environmental Studies and Monitoring for Dredging Purposes
60130 <sup>1/</sup>	Dam Safety for Navigation
60131**	Instrumentation, Data Collection and Analysis
60132*	Formal Periodic Inspections and Reports
60133	Dam Safety Assurance Studies
60140 <sup>1/</sup>	Water Management (Control and Quality) Activities for Navigation
60141	Water Management (Control and Quality) Activities - Analysis and Studies for Navigation
60142	Water Management (Control and Quality) Activities - Operation of Water Control Data Systems for Navigation
60150*	Real Estate Management for Navigation
60160	Environmental Compliance Management for Navigation
60190 <sup>1/</sup>	Facility Security for Navigation
60191	Facility Security Assessments for Navigation
60192	Facility Security Guards, Monitoring Activities for Navigation
602-- <sup>1/</sup>	Operation for Flood Risk Management Functions
60210**	Operation of Locks, Dams, Reservoirs, Service Facilities, Permanent Operating Equipment, Etc. for Flood Risk Management
60220 <sup>1/</sup>	Studies and Surveys for Flood Risk Management
60221	Studies and Surveys
60222	Major Rehabilitation Evaluation Reports
60223*	Inspections of Completed Works - Local Protection Projects
60230 <sup>1/</sup>	Dam Safety for Flood Risk Management
60231**	Instrumentation, Data Collection and Analysis

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TABLE C-4-1	
WORK CATEGORY CODES - NUMERICALLY ORDERED (See footnotes at end of Table)	
WORK CATEGORY CODE	DESCRIPTION
60232*	Formal Periodic Inspections and Reports
60233	Dam Safety Assurance Studies
60240 <sup>1/</sup>	Water Management (Control and Quality) Activities for Flood Risk Management
60241	Water Management (Control and Quality) Activities - Analysis and Studies for Flood Risk Management
60242	Water Management (Control and Quality) Activities - Operation of Water Control Data Systems for Flood Risk Management
60250*	Real Estate Management for Flood Risk Management
60260	Environmental Compliance Management for Flood Risk Management
60290 <sup>1/</sup>	Facility Security for Flood Risk Management
60291	Facility Security Assessments for Flood Risk Management
60292	Facility Security Guards, Monitoring Activities for Flood Risk Management
603-- <sup>1/</sup>	Operation for Hydropower Functions
60310 <sup>1/</sup>	Operation of Dams, Power Plants, Reservoirs, Service Facilities, Permanent Operating Equipment, Etc. for Hydropower
60311**	Operations - Supervision and Engineering
60312**	Hydraulic Expenses
60313**	Electric Expenses
60314**	Miscellaneous Hydraulic Power Generation Expenses
60320 <sup>1/</sup>	Studies and Surveys for Hydropower
60321	Studies and Surveys - Supervision and Engineering
60322	Studies and Surveys - Hydraulic Expenses
60323	Studies and Surveys - Electric Expenses
60324	Studies and Surveys - Miscellaneous Hydraulic Power Generation Expenses
60325	Major Rehabilitation Evaluation Reports
60330 <sup>1/</sup>	Dam Safety for Hydropower
60331**	Instrumentation, Data Collection and Analysis
60332*	Formal Periodic Inspections and Reports
60333	Dam Safety Assurance Studies
60340 <sup>1/</sup>	Water Management (Control and Quality) Activities for Hydropower
60341	Water Management (Control and Quality) Activities - Analysis and Studies for Hydropower

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TABLE C-4-1	
WORK CATEGORY CODES - NUMERICALLY ORDERED (See footnotes at end of Table)	
WORK CATEGORY CODE	DESCRIPTION
60342	Water Management (Control and Quality) Activities - Operation of Water Control Data Systems for Hydropower
60350*	Real Estate Management for Hydropower
60360	Environmental Compliance Management for Hydropower
60390 <sup>1/</sup>	Facility Security for Hydropower
60391	Facility Security Assessments for Hydropower
60392	Facility Security Guards, Monitoring Activities for Hydropower
604-- <sup>1/</sup>	Operation for Environmental Stewardship Functions
60410 <sup>1/</sup>	Operation for Environmental Stewardship
60411	Management of Natural Resources for Environmental Stewardship
60412	Management and Curation of Archeological and Cultural Resources
60413	Management of Natural Resources Mitigation Features
60414	Fisheries Management - Operation of Fish Hatcheries
60415	Fisheries Management – Fish Hauling Activities and Fish Passage Structures
60416	Comprehensive Master Plans
60417	Shoreline Management
60418	Management of Special Status Species for Environmental Stewardship
60419	Pest Management for Environmental Stewardship
60420 <sup>1/</sup>	Studies, Surveys and Inventories for Environmental Stewardship
60421	Studies, Surveys and Inventories for Environmental Stewardship
60422	Inspection of Ecosystem Restoration Projects
60430	Reserved
60440 <sup>1/</sup>	Water Management (Control and Quality) Activities for Environmental Stewardship
60441	Water Management (Control and Quality) Activities - Analysis and Studies for Environmental Stewardship
60442	Water Management (Control and Quality) Activities - Operation of Water Control Data Systems for Environmental Stewardship
60450*	Real Estate Management for Environmental Stewardship
60460	Environmental Compliance Management for Environmental Stewardship
60490 <sup>1/</sup>	Facility Security for Environmental Stewardship
60491	Facility Security Assessments for Environmental Stewardship

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TABLE C-4-1	
WORK CATEGORY CODES - NUMERICALLY ORDERED (See footnotes at end of Table)	
WORK CATEGORY CODE	DESCRIPTION
60492	Facility Security Guards, Monitoring Activities for Environmental Stewardship
605-- <sup>1/</sup>	Operation for Recreation Functions
60510 <sup>1/</sup>	Operation for Recreation
60511**	Operation/management of Recreation Areas/facilities, Reservoirs, Service Facilities and Equipment, Etc. for Recreation
60513	Law Enforcement - Costs and Supervision of Law Enforcement Agreements
60514	Operation/management of Visitor Centers
60520	Studies and Surveys for Recreation
60530	Reserved
60540 <sup>1/</sup>	Water Management (Control and Quality) Activities for Recreation
60541	Water Management (Control and Quality) Activities - Analysis and Studies for Recreation
60542	Water Management (Control and Quality) Activities - Operation of Water Control Data Systems for Recreation
60550*	Real Estate Management for Recreation
60560	Environmental Compliance Management for Recreation
60590 <sup>1/</sup>	Facility Security for Recreation
60591	Facility Security Assessments for Recreation
60592	Facility Security Guards, Monitoring for Recreation
606-- <sup>1/</sup>	Joint Activities for Operations (Cat/Class 300 Multipurpose Hydropower Projects ONLY)
60610**	Joint Costs for Operations Activities
60620 <sup>1/</sup>	Joint Costs for Studies and Surveys
60621*	Joint Costs for Studies and Surveys
60622	Joint Costs for Major Rehabilitation Evaluation Reports
60630 <sup>1/</sup>	Joint Costs for Dam Safety Activities
60631**	Joint Costs for Instrumentation, Data Collection and Analysis
60632*	Joint Costs for Formal Periodic Inspections and Reports
60633	Joint Costs for Dam Safety Assurance Studies
60640 <sup>1/</sup>	Joint Costs for Water Management (Control and Quality) Activities
60641	Joint Costs for Water Management (Control and Quality) Activities – Analysis and Studies
60642	Joint Costs for Water Management (Control and Quality) Activities –

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TABLE C-4-1	
WORK CATEGORY CODES - NUMERICALLY ORDERED (See footnotes at end of Table)	
WORK CATEGORY CODE	DESCRIPTION
	Operation of Water Control Data Systems
60650*	Joint Costs for Real Estate Management Activities
60660	Joint Costs for Environmental Compliance Management Activities
60690 <sup>1/</sup>	Joint Costs for Facility Security Activities
60691	Joint Costs for Facility Security Assessments
60692	Joint Costs for Facility Security Guards, Monitoring Activities
60710 <sup>1/</sup>	National Emergency Preparedness Program (NEPP)
60711	NEPP Continuity of Operations
60712	NEPP National Preparedness Planning
60713	NEPP Support of Emergency Ops Ctrs
60714	NEPP Emergency Water Program
60715	NEPP Continuity of Government
60716	NEPP Training and Exercises
608-- <sup>1/</sup>	Operation for Water Supply Functions
60810 <sup>1/</sup>	Operation for Water Supply
60811	Operation of Project Gates, Specific Water Supply Conduits, Permanent Operating Equipment, Etc. for Water Supply
60812	Water Supply Agreements
60820	Studies and Surveys for Water Supply
611-- <sup>1/</sup>	Maintenance for Navigation Functions
61110	Maintenance of Locks, Dams, Reservoirs, Levees, Other Structures, Service Facilities, Permanent Operating Equipment, Etc. for Navigation
61120 <sup>1/</sup>	Dredging for Navigation
61121	Dredging Activities for Navigation
61122	Construction and Maintenance of Dredged Material Disposal Facilities for Navigation
61130	Dam Safety Remediation of Deficiencies for Navigation
61140	Purchase/maintenance of Water Management (Control and Quality) Equipment for Navigation
61150 <sup>1/</sup>	Real Estate for Navigation
61151	Land Acquisition and Disposal Management Activities, Settlement of Claims, and Audits for Navigation
61152	Resolution of Real Estate Encroachments for Navigation
61153	Boundary Monumentation and Rectification for Navigation

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TABLE C-4-1	
WORK CATEGORY CODES - NUMERICALLY ORDERED (See footnotes at end of Table)	
WORK CATEGORY CODE	DESCRIPTION
61160	Environmental Compliance (Remedial Actions) for Navigation
61170	Remaining O&M Funded Major Rehabilitation (Comprehensive Replacement) Projects for Navigation
61190 <sup>1/</sup>	Facility Security Physical Improvements, Modifications, Maintenance and Replacement for Navigation
61191	Facility Security Maintenance and Replacement for Navigation
61192	Facility Security Physical Improvements and Modifications for Navigation
612— <sup>1/</sup>	Maintenance for Flood Risk Management Functions
61210 <sup>1/</sup>	Maintenance for Flood Risk Management
61211	Maintenance of Dams, Reservoirs, Other Structures, Service Facilities, permanent Operating Equipment, Etc. for Flood Risk Management
61212	Maintenance of Dikes, Revetments, Breakwaters and Similar Structures for the Mississippi River and Tributaries (MR&T)
61220 <sup>1/</sup>	Dredging for Flood Risk Management
61221	Dredging Activities for Flood Risk Management
61222	Construction and Maintenance of Dredged Material Disposal Facilities for Flood Risk Management
61230	Dam Safety Remediation of Deficiencies for Flood Risk Management
61240	Purchase/maintenance of Water Management (Control and Quality) Equipment for Flood Risk Management
61250 <sup>1/</sup>	Real Estate for Flood Risk Management
61251	Land Acquisition and Disposal Management Activities, Settlement of Claims, and Audits for Flood Risk Management
61252	Resolution of Real Estate Encroachments for Flood Risk Management
61253	Boundary Monumentation and Rectification for Flood Risk Management
61260	Environmental Compliance (Remedial Actions) for Flood Risk Management
61290 <sup>1/</sup>	Facility Security Physical Improvements, Modifications, Maintenance and Replacement for Flood Risk Management
61291	Facility Security Maintenance and Replacement for Flood Risk Management
61292	Facility Security Physical Improvements and Modifications for Flood

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TABLE C-4-1	
WORK CATEGORY CODES - NUMERICALLY ORDERED (See footnotes at end of Table)	
WORK CATEGORY CODE	DESCRIPTION
	Risk Management
613— <sup>1/</sup>	Maintenance for Hydropower Functions
61310 <sup>1/</sup>	Maintenance of Power Plants, Dams, Reservoirs, Service Facilities, Permanent Operating Equipment, Etc. for Hydropower
61311	Maintenance Supervision for Hydropower
61312	Maintenance of Hydraulic Structures for Hydropower
61313	Maintenance of Electric Plant for Hydropower
61314	Maintenance of Miscellaneous Hydraulic Plant for Hydropower
61320	Dredging Activities for Hydropower
61330	Dam Safety Remediation of Deficiencies for Hydropower
61340	Purchase/maintenance of Water Management (Control and Quality) Equipment for Hydropower
61350 <sup>1/</sup>	Real Estate for Hydropower
61351	Land Acquisition and Disposal Management Activities, Settlement of Claims, and Audits for Hydropower
61352	Resolution of Real Estate Encroachments for Hydropower
61353	Boundary Monumentation and Rectification for Hydropower
61360	Environmental Compliance (Remedial Actions) for Hydropower
61370 <sup>1/</sup>	Remaining O&M Funded Major Rehabilitation (Comprehensive Replacement) Projects for Hydropower
61371	Comprehensive Replacement Supervision
61372	Comprehensive Replacement of Structures
61373	Comprehensive Replacement of Electric Plant
61374	Comprehensive Replacement of Miscellaneous Hydraulic Plant
61390 <sup>1/</sup>	Facility Security Physical Improvements, Modifications, Maintenance and Replacement for Hydropower
61391	Facility Security Maintenance and Replacement for Hydropower
61392	Facility Security Physical Improvements and Modifications for Hydropower
614— <sup>1/</sup>	Maintenance for Environmental Stewardship Functions
61410 <sup>1/</sup>	Maintenance for Environmental Stewardship
61411	Maintenance of Natural Resources Facilities for Environmental Stewardship
61412	Mitigation of Archeological and Cultural Resources
61413	Maintenance of Natural Resources Mitigation Features for

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TABLE C-4-1	
WORK CATEGORY CODES - NUMERICALLY ORDERED (See footnotes at end of Table)	
WORK CATEGORY CODE	DESCRIPTION
	Environmental Stewardship
61414	Maintenance of Fisheries, Fish Haulage Activities and Fish Passage Structures
61418	Maintenance for Special Status Species for Environmental Stewardship
61420 <sup>1/</sup>	Dredging for Environmental Stewardship
61421	Dredging Activities for Environmental Stewardship
61422	Construction and Maintenance of Dredged Material Disposal Facilities for Environmental Stewardship
61430	Reserved
61440	Purchase/maintenance of Water Management Equipment (Control and Quality) for Environmental Stewardship
61450 <sup>1/</sup>	Real Estate for Environmental Stewardship
61451	Land Acquisition and Disposal Management Activities, Settlement of Claims, and Audits for Environmental Stewardship
61452	Resolution of Real Estate Encroachments for Environmental Stewardship
61453	Boundary Monumentation and Rectification for Environmental Stewardship
61460	Environmental Compliance (Remedial Actions) for Environmental Stewardship Features
61490 <sup>1/</sup>	Facility Security Physical Improvements, Modifications, Maintenance and Replacement for Environmental Stewardship
61491	Facility Security Maintenance and Replacement for Environmental Stewardship
61492	Facility Security Physical Improvements and Modifications for Environmental Stewardship
615— <sup>1/</sup>	Maintenance for Recreation Functions
61510 <sup>1/</sup>	Maintenance for Recreation
61511	Maintenance of Recreation Facilities, Other Operating Equipment, Etc.
61513	Cost Shared Recreation Developments
61514	Maintenance of Visitor Centers
61515	Modernization of Recreation Features
61520	Dredging Activities for Recreation
61530	Reserved
61540	Purchase/maintenance of Water Management Equipment (Control



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TABLE C-4-1	
WORK CATEGORY CODES - NUMERICALLY ORDERED (See footnotes at end of Table)	
WORK CATEGORY CODE	DESCRIPTION
	and Quality) for Recreation
61550 <sup>1/</sup>	Real Estate for Recreation
61551	Land Acquisition and Disposal Management Activities, Settlement of Claims, and Audits for Recreation
61552	Resolution of Real Estate Encroachments for Recreation
61553	Boundary Monumentation and Rectification for Recreation
61560	Environmental Compliance (Remedial Actions) for Recreation
61590 <sup>1/</sup>	Facility Security Physical Improvements, Modifications, Maintenance and Replacement for Recreation
61591	Facility Security Maintenance and Replacement for Recreation
61592	Facility Security Physical Improvements and Modifications for Recreation
616— <sup>1/</sup>	Joint Activities for Maintenance (Cat/Class 300 Multipurpose Hydropower Projects ONLY)
61610	Joint Costs for Maintenance Activities Excluding Dredging
61620 <sup>1/</sup>	Joint Costs for Dredging
61621	Joint Costs for Dredging Activities
61622	Joint Costs for Construction and Maintenance of Dredged Material Disposal Facilities
61630	Joint Costs for Dam Safety Remediation of Deficiencies
61640	Joint Costs for Water Management Equipment Activities
61650 <sup>1/</sup>	Joint Costs for Real Estate Activities
61651	Joint Costs for Land Acquisition and Disposal Management Activities, Settlement of Claims, and Audits
61652	Joint Costs for Resolution of Real Estate Encroachments
61653	Joint Costs for Boundary Monumentation and Rectification
61660	Joint Costs for Environmental Compliance (Remedial Actions) Activities
61690 <sup>1/</sup>	Joint Costs for Facility Security Physical Improvements, Modifications, Maintenance and Replacement
61691	Joint Costs for Facility Security Maintenance and Replacement
61692	Joint Costs for Facility Security Physical Improvements and Modifications
618-- <sup>1/</sup>	Maintenance for Water Supply Functions
61810	Maintenance of Project Gates, Specific Water Supply Conduits, Permanent Operating Equipment, Etc. for Water Supply

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Footnotes:

1/ SUMMARY COST ACCOUNT/WORK CATEGORY CODE - Costs may not be charged directly to these accounts.

NOTE: PERIODIC INSPECTIONS AND REPORTS, AND INSTRUMENTATION, DATA COLLECTION AND ANALYSIS are to be included in the minimum program for the project to meet minimum legal responsibilities for operations and safety. This footnote applies to the work category codes 60131, 60132, 60231, 60232, and 60331, 60332, 60631 and 60632.

\*Work Category Codes marked with an asterisk require added data in project work description, justification statement, or output measures.

\*\*Although Work Category Codes marked with double asterisk require no description or funding argument, requested resources will be in consonance with the funding increment and prior year experience.

**C-4-2. O&M Work Category Codes- Alphabetically Ordered.**

TABLE C-4-2 WORK CATEGORY CODES - ALPHABETICALLY ORDERED	
DESCRIPTION	WORK CATEGORY CODE
Boundary Monumentation and Rectification for Environmental Stewardship	61453
Boundary Monumentation and Rectification for Flood Risk Management	61253
Boundary Monumentation and Rectification for Hydropower	61353
Boundary Monumentation and Rectification for Navigation	61153
Boundary Monumentation and Rectification for Recreation	61553
Comprehensive Master Plans	60416
Comprehensive Replacement of Electric Plant	61373
Comprehensive Replacement of Miscellaneous Hydraulic Plant	61374
Comprehensive Replacement of Structures	61372
Comprehensive Replacement Supervision	61371
Construction and Maintenance of Dredged Material Disposal Facilities for Flood Risk Management	61222
Construction and Maintenance of Dredged Material Disposal Facilities for Environmental Stewardship	61422
Construction and Maintenance of Dredged Material Disposal Facilities for Navigation	61122
Cost Shared Recreation Developments	61513
Dam Safety Assurance Studies	60333
Dam Safety Assurance Studies	60133
Dam Safety Assurance Studies	60233
Dam Safety for Flood Risk Management	60230 <sup>1/</sup>

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TABLE C-4-2	
WORK CATEGORY CODES - ALPHABETICALLY ORDERED	
DESCRIPTION	WORK CATEGORY CODE
Dam Safety for Hydropower	60330 <sup>1/</sup>
Dam Safety for Navigation	60130 <sup>1/</sup>
Dam Safety Remediation of Deficiencies for Flood Risk Management	61230
Dam Safety Remediation of Deficiencies for Hydropower	61330
Dam Safety Remediation of Deficiencies for Navigation	61130
Dredging Activities for Environmental Stewardship	61421
Dredging Activities for Flood Risk Management	61221
Dredging Activities for Hydropower	61320
Dredging Activities for Navigation	61121
Dredging Activities for Recreation	61520
Dredging for Environmental Stewardship	61420 <sup>1/</sup>
Dredging for Flood Risk Management	61220 <sup>1/</sup>
Dredging for Navigation	61120 <sup>1/</sup>
Electric Expenses	60313**
Environmental Compliance (Remedial Actions) for Environmental Stewardship Features	61460
Environmental Compliance (Remedial Actions) for Flood Risk Management	61260
Environmental Compliance (Remedial Actions) for Hydropower	61360
Environmental Compliance (Remedial Actions) for Navigation	61160
Environmental Compliance (Remedial Actions) for Recreation	61560
Environmental Compliance Management for Environmental Stewardship	60460
Environmental Compliance Management for Flood Risk Management	60260
Environmental Compliance Management for Hydropower	60360
Environmental Compliance Management for Navigation	60160
Environmental Compliance Management for Recreation	60560
Environmental Studies and Monitoring for Dredging Purposes	60123
Facility Security Assessments for Environmental Stewardship	60491
Facility Security Assessments for Flood Risk Management	60291
Facility Security Assessments for Hydropower	60391
Facility Security Assessments for Navigation	60191
Facility Security Assessments for Recreation	60591
Facility Security for Environmental Stewardship	60490 <sup>1/</sup>
Facility Security for Flood Risk Management	60290 <sup>1/</sup>

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TABLE C-4-2	
WORK CATEGORY CODES - ALPHABETICALLY ORDERED	
DESCRIPTION	WORK CATEGORY CODE
Facility Security for Hydropower	60390 <sup>1/</sup>
Facility Security for Navigation	60190 <sup>1/</sup>
Facility Security for Recreation	60590 <sup>1/</sup>
Facility Security Guards, Monitoring Activities for Environmental Stewardship	60492
Facility Security Guards, Monitoring Activities for Flood Risk Management	60292
Facility Security Guards, Monitoring Activities for Hydropower	60392
Facility Security Guards, Monitoring Activities for Navigation	60192
Facility Security Guards, Monitoring Activities for Recreation	60592
Facility Security Maintenance and Replacement for Navigation	61191
Facility Security Physical Improvements and Modifications for Navigation	61192
Facility Security Physical Improvements, Modifications, Maintenance and Replacement for Navigation	61190 <sup>1/</sup>
Facility Security Maintenance and Replacement for Flood Risk Management	61291
Facility Security Physical Improvements and Modifications for Flood Risk Management	61292
Facility Security Physical Improvements, Modifications, Maintenance and Replacement for Flood Risk Management	61290 <sup>1/</sup>
Facility Security Maintenance and Replacement for Hydropower	61391
Facility Security Physical Improvements and Modifications for Hydropower	61392
Facility Security Physical Improvements, Modifications, Maintenance and Replacement for Hydropower	61390 <sup>1/</sup>
Facility Security Maintenance and Replacement for Environmental Stewardship	61491
Facility Security Physical Improvements and Modifications for Environmental Stewardship	61492
Facility Security Physical Improvements, Modifications, Maintenance and Replacement for Environmental Stewardship	61490 <sup>1/</sup>
Facility Security Maintenance and Replacement for Recreation	61591
Facility Security Physical Improvements and Modifications for Recreation	61592
Facility Security Physical Improvements, Modifications, Maintenance and Replacement for Recreation	61590 <sup>1/</sup>
Fisheries Management – Fish Hauling Activities and Fish Passage Structures	60415
Fisheries Management - Operation of Fish Hatcheries	60414
Formal Periodic Inspections and Reports	60232*

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TABLE C-4-2	
WORK CATEGORY CODES - ALPHABETICALLY ORDERED	
DESCRIPTION	WORK CATEGORY CODE
Formal Periodic Inspections and Reports	60332*
Formal Periodic Inspections and Reports	60132*
Hydraulic Expenses	60312**
Inspection of Ecosystem Restoration Projects	60422
Inspections of Completed Works - Local Protection Projects	60223*
Instrumentation, Data Collection and Analysis	60131**
Instrumentation, Data Collection and Analysis	60231**
Instrumentation, Data Collection and Analysis	60331**
Joint Activities for Maintenance	616— <sup>1/</sup>
Joint Activities for Operations (Cat/Class 300 Multipurpose Hydropower Projects ONLY)	606— <sup>1/</sup>
Joint Costs for Boundary Monumentation and Rectification	61653
Joint Costs for Construction and Maintenance of Dredged Material Disposal Facilities	61622
Joint Costs for Dam Safety Activities	60630 <sup>1/</sup>
Joint Costs for Dam Safety Assurance Studies	60633
Joint Costs for Dam Safety Remediation of Deficiencies	61630
Joint Costs for Dredging	61620 <sup>1/</sup>
Joint Costs for Dredging Activities	61621
Joint Costs for Environmental Compliance (Remedial Actions) Activities	61660
Joint Costs for Environmental Compliance Management Activities	60660
Joint Costs for Facility Security	60690 <sup>1/</sup>
Joint Costs for Facility Security Assessments	60691
Joint Costs for Facility Security Guards, Monitoring Activities	60692
Joint Costs for Facility Security Physical Improvements, Modifications, Maintenance and Replacement	61690 <sup>1/</sup>
Joint Costs for Facility Security Maintenance and Replacement	61691
Joint Costs for Facility Security Physical Improvements and Modifications	61692
Joint Costs for Formal Periodic Inspections and Reports	60632*
Joint Costs for Instrumentation, Data Collection and Analysis	60631**
Joint Costs for Land Acquisition and Disposal Management Activities, Settlement of Claims, and Audits	61651
Joint Costs for Maintenance Activities Excluding Dredging	61610
Joint Costs for Major Rehabilitation Evaluation Reports	60622

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TABLE C-4-2	
WORK CATEGORY CODES - ALPHABETICALLY ORDERED	
DESCRIPTION	WORK CATEGORY CODE
Joint Costs for Operations Activities	60610**
Joint Costs for Real Estate Activities	61650 <sup>1/</sup>
Joint Costs for Real Estate Management Activities	60650*
Joint Costs for Resolution of Real Estate Encroachments	61652
Joint Costs for Studies and Surveys	60621*
Joint Costs for Studies and Surveys	60620 <sup>1/</sup>
Joint Costs for Water Management (Control and Quality) Activities - Operation of Water Control Data Systems	60642
Joint Costs for Water Management (Control and Quality) Activities - Analysis and Studies	60641
Joint Costs for Water Management (Control and Quality) Activities	60640 <sup>1/</sup>
Joint Costs for Water Management Equipment Activities	61640
Land Acquisition and Disposal Management Activities, Settlement of Claims, and Audits for Flood Risk Management	61251
Land Acquisition and Disposal Management Activities, Settlement of Claims, and Audits for Environmental Stewardship	61451
Land Acquisition and Disposal Management Activities, Settlement of Claims, and Audits for Navigation	61151
Land Acquisition and Disposal Management Activities, Settlement of Claims, and Audits for Recreation	61551
Land Acquisition and Disposal Management Activities, Settlement of Claims, and Audits for Hydropower	61351
Law Enforcement – Costs and Supervision of Law Enforcement Agreements	60513
Maintenance for Environmental Stewardship	61410 <sup>1/</sup>
Maintenance for Environmental Stewardship Functions	614— <sup>1/</sup>
Maintenance for Flood Risk Management	61210 <sup>1/</sup>
Maintenance for Flood Risk Management Functions	612— <sup>1/</sup>
Maintenance for Hydropower Functions	613— <sup>1/</sup>
Maintenance for Navigation Functions	611— <sup>1/</sup>
Maintenance for Recreation	61510 <sup>1/</sup>
Maintenance for Recreation Functions	615— <sup>1/</sup>
Maintenance for Water Supply Functions	608— <sup>1/</sup>
Maintenance of Dams, Reservoirs, Other Structures, Service Facilities, Permanent Operating Equipment, Etc. for Flood Risk Management	61211
Maintenance of Dikes, Revetments, Breakwaters and Similar Structures for	61212

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TABLE C-4-2	
WORK CATEGORY CODES - ALPHABETICALLY ORDERED	
DESCRIPTION	WORK CATEGORY CODE
the Mississippi River and Tributaries (MR&T)	
Maintenance of Electric Plant for Hydropower	61313
Maintenance of Electric Plant for Hydropower	6131_
Maintenance of Fisheries, Fish Haulage Activities and Fish Passage Structures	61414
Maintenance of Hydraulic Structures for Hydropower	61312
Maintenance of Locks, Dams, Reservoirs, Levees, Other Structures, Service Facilities, Permanent Operating Equipment, Etc. for Navigation	61110
Maintenance of Miscellaneous Hydraulic Plant for Hydropower	61314
Maintenance of Miscellaneous Hydraulic Plant for Hydropower	61314
Maintenance of Natural Resources Facilities for Environmental Stewardship	61411
Maintenance of Power Plants, Dams, Reservoirs, Service Facilities, Permanent Operating Equipment, Etc. for Hydropower	61310 <sup>1/</sup>
Maintenance of Power Plants, Dams, Reservoirs, Service Facilities, Permanent Operating Equipment, Etc. for Hydropower	61310 <sup>1/</sup>
Maintenance of Project Gates, Specific Water Supply Conduits, Permanent Operating Equipment, Etc. for Water Supply	61810
Maintenance of Recreation Facilities, Other Operating Equipment, Etc.	61511
Maintenance of Special Status Species for Environmental Stewardship	61418
Maintenance of Visitor Centers	61514
Maintenance of Natural Resources Mitigation Features for Environmental Stewardship	61413
Maintenance Supervision for Hydropower	61311
Major Rehabilitation Evaluation Reports	60122
Major Rehabilitation Evaluation Reports	60325
Major Rehabilitation Evaluation Reports	60222
Management and Curation of Archeological and Cultural Resources	60412
Management of Natural Resources for Environmental Stewardship	60411
Management of Special Status Species for Environmental Stewardship	60418
Management of Natural Resources Mitigation Features	60413
Miscellaneous Hydraulic Power Generation Expenses	60314**
Mitigation of Archeological and Cultural Resources	61412
Modernization of recreation Features	61515
National Emergency Preparedness Program (NEPP)	60710 <sup>1/</sup>
NEPP Management and Operations	60711

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TABLE C-4-2	
WORK CATEGORY CODES - ALPHABETICALLY ORDERED	
DESCRIPTION	WORK CATEGORY CODE
NEPP Requirements Analysis and Studies	60712
NEPP Support of Emergency Ops Ctr	60713
NEPP Training and Exercises	60716
Operation for Environmental Stewardship	60410 <sup>1/</sup>
Operation for Environmental Stewardship Functions	604— <sup>1/</sup>
Operation for Flood Risk Management Functions	602— <sup>1/</sup>
Operation for Hydropower Functions	603— <sup>1/</sup>
Operation for Navigation Functions	601— <sup>1/</sup>
Operation for Recreation	60510 <sup>1/</sup>
Operation for Recreation Functions	605— <sup>1/</sup>
Operation for Water Supply	60810 <sup>1/</sup>
Operation for Water Supply Functions	608— <sup>1/</sup>
Operation of Dams, Power Plants, Reservoirs, Service Facilities, Permanent Operating Equipment, Etc. for Hydropower	60310 <sup>1/</sup>
Operation of Locks, Dams, Reservoirs, Service Facilities, Permanent Operating Equipment, Etc. for Flood Risk Management	60210**
Operation of Locks, Dams, Reservoirs, Service Facilities, Permanent Operating Equipment, Etc. for Navigation	60110 **
Operation of Project Gates, Specific Water Supply Conduits, Permanent Operating Equipment, Etc. for Water Supply	60811
Operation/management of Recreation Areas/facilities, Reservoirs, Service Facilities and Equipment, Etc. for Recreation	60511**
Operation/management of Visitor Centers	60514
Operations - Supervision and Engineering	60311**
Pest Management for Environmental Stewardship	60419
Purchase/maintenance of Water Management (Control and Quality) Equipment for Navigation	61140
Purchase/maintenance of Water Management (Control and Quality) Equipment for Flood Risk Management	61240
Purchase/maintenance of Water Management (Control and Quality) Equipment for Hydropower	61340
Purchase/maintenance of Water Management Equipment (Control and Quality) for Environmental Stewardship	61440
Purchase/maintenance of Water Management Equipment (Control and Quality) for Recreation	61540
Real Estate for Environmental Stewardship	61450 <sup>1/</sup>



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TABLE C-4-2	
WORK CATEGORY CODES - ALPHABETICALLY ORDERED	
DESCRIPTION	WORK CATEGORY CODE
Real Estate for Flood Risk Management	61250 <sup>1/</sup>
Real Estate for Hydropower	61350 <sup>1/</sup>
Real Estate for Navigation	61150 <sup>1/</sup>
Real Estate for Recreation	61550 <sup>1/</sup>
Real Estate Management for Environmental Stewardship	60450*
Real Estate Management for Flood Risk Management	60250*
Real Estate Management for Hydropower	60350*
Real Estate Management for Navigation	60150*
Real Estate Management for Recreation	60550*
Remaining O&M Funded Major Rehabilitation (Comprehensive Replacement) Projects for Hydropower	61370 <sup>1/</sup>
Remaining O&M Funded Major Rehabilitation (Comprehensive Replacement) Projects for Navigation	61170
Reserved	60530
Reserved	61530
Reserved	60430
Reserved	61430
Resolution of Real Estate Encroachments for Environmental Stewardship	61452
Resolution of Real Estate Encroachments for Flood Risk Management	61252
Resolution of Real Estate Encroachments for Hydropower	61352
Resolution of Real Estate Encroachments for Navigation	61152
Resolution of Real Estate Encroachments for Recreation	61552
Shoreline Management	60417
Studies and Surveys	60121*
Studies and Surveys	60221
Studies and Surveys - Electric Expenses	60323
Studies and Surveys - Hydraulic Expenses	60322
Studies and Surveys - Miscellaneous Hydraulic Power Generation Expenses	60324
Studies and Surveys - Supervision and Engineering	60321
Studies and Surveys for Flood Risk Management	60220 <sup>1/</sup>
Studies and Surveys for Hydropower	60320 <sup>1/</sup>
Studies and Surveys for Navigation	60120 <sup>1/</sup>
Studies and Surveys for Recreation	60520
Studies and Surveys for Water Supply	60820

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TABLE C-4-2	
WORK CATEGORY CODES - ALPHABETICALLY ORDERED	
DESCRIPTION	WORK CATEGORY CODE
Studies, Surveys and Inventories for Environmental Stewardship	60421
Studies, Surveys and Inventories for Environmental Stewardship	60420 <sup>1/</sup>
Water Management (Control and Quality) Activities - Analysis and Studies for Flood Risk Management	60241
Water Management (Control and Quality) Activities - Analysis and Studies for Environmental Stewardship	60441
Water Management (Control and Quality) Activities - Analysis and Studies for Recreation	60541
Water Management (Control and Quality) Activities - Analysis and Studies for Navigation	60141
Water Management (Control and Quality) Activities - Analysis and Studies for Hydropower	60341
Water Management (Control and Quality) Activities - Operation of Water Control Data Systems for Environmental Stewardship	60442
Water Management (Control and Quality) Activities - Operation of Water Control Data Systems for Flood Risk Management	60242
Water Management (Control and Quality) Activities - Operation of Water Control Data Systems for Recreation	60542
Water Management (Control and Quality) Activities - Operation of Water Control Data Systems for Navigation	60142
Water Management (Control and Quality) Activities - Operation of Water Control Data Systems for Hydropower	60342
Water Management (Control and Quality) Activities for Environmental Stewardship	60440 <sup>1/</sup>
Water Management (Control and Quality) Activities for Flood Risk Management	60240 <sup>1/</sup>
Water Management (Control and Quality) Activities for Hydropower	60340 <sup>1/</sup>
Water Management (Control and Quality) Activities for Navigation	60140 <sup>1/</sup>
Water Management (Control and Quality) Activities for Recreation	60540 <sup>1/</sup>
Water Supply Agreements	60812

Footnotes:

1/ SUMMARY COST ACCOUNT/WORK CATEGORY CODE - Costs may not be charged directly to these accounts.

2/ PERIODIC INSPECTIONS AND REPORTS, AND INSTRUMENTATION, DATA COLLECTION, AND ANALYSIS are to be included in the minimum program for the project to meet minimum legal responsibilities for operations and safety. this footnote applies to the work category codes 60131, 60132, 60231, 60232, and 60331, 60332, 60631 and 60632.

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\*Work Category Codes marked with an asterisk require added data in project work description, justification statement, or output measures.

\*\*Although Work Category Codes marked with double asterisk require no description or funding argument, requested resources will be in consonance with the funding increment and prior year experience.

### C-4-3. O&M Work Category Codes - Matrixes and Definitions.

a. Operation Work Category Code Matrix by Business Line. See Table 4-3.a.

b. Maintenance Work Category Code Matrix by Business Line. See Table 4-3.b.

**Note:** Table 4-3a and Table 4-3.b. Maintenance Work Category Code Matrix (by Business Line). See embedded excel file below.

#### TABLES C-4-3a and C-4-3b

##### Maintenance Work Category Matrix



Table C-4-3a-3b  
FINAL.xls

c. **Work Category Codes and Definitions – O&M Operations Account.** The Operation functions are broken down into Work Category Codes, together with a description of work to be performed. See Table C-4-4 below.

#### TABLE C-4-4

##### Work Category Codes and Definitions Operations Accounts By Business Program:

Navigation (601--)  
Flood Risk Management (602--)  
Hydropower (603--)  
Environmental Stewardship (604--)  
Recreation (605--)  
Joint Activities (606--)  
NEPP (607--)  
Water Supply (608--)

A Breakdown of Work Category Codes (WCCs) and descriptions under these functions is on the following pages:

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WORK CATEGORY CODE: **60110** – Operations for Navigation

WORK CATEGORY DESCRIPTION: Operations of Locks, Dams, Reservoirs, Service Facilities (Buildings, Grounds, Utilities, and Roads, Railroads and Bridges), Permanent Operating Equipment, etc. for navigation features.

Includes all costs for the operation; necessary materials, supplies, equipment and transportation costs associated with operations; associated hired labor and contract support; routine materials and supplies; and other costs:

of lock gates and/or associated equipment; maintaining lock records; removing debris, ice and snow, cleanup of lock facilities; routine adjusting of meters, relays, instruments, radios and regular equipment; lubrication of equipment;

of dam structures and appurtenant equipment such as spillway gates, intake and outlet works, and sluiceways for reservoir regulation; removing and disposing of ice, snow, trash, and debris on or in the vicinity of the dam or dam structures; cleanup of dam structures and facilities; routine testing and adjustment of gauges, meters, instruments, and relays in dam structures; disposal and control of weeds, brush, trees, and aquatic growth in the vicinity of dam structures; and grass cutting on earth-fill dams. Includes all costs for dam safety/failure training of project personnel, preparation of flood emergency plans, dam contingency plans, dam surveillance plans, and provision for technical assistance to local interests concerning dam failure. When this account includes municipal or industrial water delivery activities, a separate sub-element should be established in CEFMS to record appropriate costs for each such facility for cost allocation purposes;

to perform reservoir inspections and patrols, removal and control of trash and debris (major periodic or one-time removal of growth and debris from the reservoir should be recorded in Work Category Code 61110); minor bank erosion control; minor cleaning of reservoir area for weeds, brush, trees, and aquatic growth; boundary surveillance and routine, recurring maintenance of boundary monumentation at projects without natural resource activities; insect control and elimination of health and safety hazards; of project-owned permanent facilities such as administration and shop buildings, storage and garage buildings and areas, community buildings, local streets and sidewalks, landscaping, utility facilities such as electric, gas, water, and sewage, all security and protective measures, and permanent roads, including the road across the top of the dam, and parking areas near the dam, railroads, and bridges required for access and other purposes in connection with the operation of a project. It also includes bridges provided as a project feature for the passage of highway and railway traffic over improved channels. Direct costs included are snow and ice removal from project roads, parking areas and walkways; sanding and salting project roads, parking areas and walkways; minor patching, signs, ditch cleaning, culvert cleaning and similar duties; bridge operation; cleanup of project roads, railroads, and bridges. Buildings which house operating machinery and serve other purposes as well are included in this activity, but the costs to operate the machinery are charged to the appropriate Work Categories. Buildings which house specific operating machinery, spare parts, equipment, etc., will be charged to the appropriate Work Categories. This activity includes costs of buildings, grounds and utilities related to the operation of the Los Angeles-Long Beach and San Francisco Bay hydraulic models located in South Pacific Division and it does not include costs associated with recreation facilities and areas which will be included in Work Category Code 60511; of all tools and equipment, including laboratory, shop, warehousing, communications, surveys, and transportation equipment, office furniture and equipment. Project-owned sedimentation and degradation measuring facilities, rainfall and stream-gauging devices, fixed sand bypassing systems, and like equipment are also included. Includes direct costs of automotive and other equipment. Vehicle accounts will be maintained by group classifications as provided for Revolving Fund vehicles; for prevention of obstructive and injurious deposits at NAD projects as authorized by the Act approved 29 June 1888, as amended, including all costs for surveillance at harbors, channels, waterfront construction

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sites, and at overboard ocean dumping sites, costs to administer outstanding enforcement actions on prior noted violations of Federal statutes, and any costs required for ground or aerial surveillance.

**WORK CATEGORY CODE:** 60121 – Studies and Surveys for the Navigation Function

**WORK CATEGORY DESCRIPTION:** Studies and Surveys including project condition surveys, dredging studies, etc. for navigation features.

Includes all costs to perform surveys for the purpose of determining elevation, grade and sedimentation conditions in navigation projects, investigation of sunken vessels, and to prepare dredging studies. For program management purposes, all projects with funding requirements (dredging or otherwise) under the Non-deferrable levels should have any needed surveys programmed under the project name. All other surveys should be programmed in aggregation under PWID 14600: Project Condition Surveys. Funding for PWID 14600: Project Condition Surveys, will be adjusted after overall dredging program levels are determined.

**WORK CATEGORY CODE:** 60122 - Studies and Surveys for Navigation - Major Rehabilitation Evaluation Reports

**WORK CATEGORY DESCRIPTION:** Major Rehabilitation Evaluation Reports for navigation features.

Includes all costs to initiate new, or continue ongoing, major rehabilitation evaluation reports. Operation and Maintenance (O&M) funds are to be used only until Construction (C) funds are allocated to the project.

**WORK CATEGORY CODE:** 60123 - Studies and Surveys for Navigation - Environmental Studies and Monitoring for Dredging Purposes

**WORK CATEGORY DESCRIPTION:** Environmental Studies and Monitoring for Dredging Purposes.

Includes all costs for environmental studies and monitoring for dredging purposes including all costs of study and analysis activities associated with long range environmental activities related to waterways. These activities are needed to ensure that appropriate information and requirements are fulfilled so that E&D for dredging can be completed on a timely basis. Dredged Material Management Plans (DMMPs) are included in this Work Category. Environmental requirements to perform maintenance dredging of Federal channels (e.g. water quality certification, bio-assays, water quality testing, Environmental Impact Statements, and environmental assessments) should also be included in this Work Category.

**WORK CATEGORY CODE:** 60131 - Instrumentation, Data Collection and Analysis for Dam Safety related to the Navigation Function

**WORK CATEGORY DESCRIPTION:** Instrumentation for Engineering Analysis and Continuing Evaluation Data Gathering Inspections, and Data Analysis for Dam Safety related to navigation features.

Includes all costs for the operation of instruments in existing dam structures for safety evaluation and all costs of obtaining, analyzing and reporting instrumentation data for purposes consistent with an approved plan. This includes instrumentation for measuring horizontal and vertical movement, stresses and strains, pore pressure, phreatic surfaces, seismic effects, and seepage clarity and quality.

**WORK CATEGORY CODE:** 60132 - Formal Periodic Inspections and Reports for Dam Safety related to the Navigation Function

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**WORK CATEGORY DESCRIPTION:** Formal Periodic Inspections and Reports for Dam Safety related to navigation features.

Includes all costs related to the scheduled periodic inspections and reporting of projects and bridges needed to meet inspection frequency requirements of ER 1110-2-100 as follows:

- (a) Dams, locks and dams, initial and second inspections if funded under O&M General, and high hazard structures.
- (b) Public Bridges.
- (c) Structures whose failure would be a major loss to the national infrastructure or cause severe economic distress.
- (d) Other projects where known conditions warrant inspections at a frequency more often than normal including revetments, dikes, groins, breakwaters, jetties, seawalls, piers and other similar structures provided in seas, lakes, rivers, canals, exposed tidal waters and harbors.

**WORK CATEGORY CODE:** **60133** - Dam Safety Assurance Studies related to the Navigation Function

**WORK CATEGORY DESCRIPTION:** Dam Safety Assurance Studies for Dam Safety related to navigation features.

Includes all costs of reconnaissance studies and special engineering investigations for known or suspected dam safety deficiencies, e.g. seismic evaluations, seepage studies, erosion studies, etc.

**WORK CATEGORY CODE:** **60141** - Water Management (Control and Quality) Activities for Navigation - Analysis and Studies

**WORK CATEGORY DESCRIPTION:** Water Management (Control and Quality) Activities - Analysis, Studies and Regulation Instructions for navigation features.

Includes all costs for personnel and space to manage the hydrologic, hydraulic and meteorological data required for water control and quality activities in accordance with the current water control/quality plan; all costs to prepare routine regulation instructions and runoff forecasts, coordinate with other agencies and entities, prepare water control manuals, disseminate water control information, training, travel and other associated costs required to make sound water control management decisions; all costs for reservoir and river analyses to improve the quality of water within and downstream from the reservoirs; and all costs related to studies of the means to mitigate water quality problems and studies to determine present and future water quality needs. Also includes all costs for water management studies to improve efficiency or mitigate constraints on approved plans of regulation, annual updating of notification lists, and funds transferred to other agencies and any similar items needed to accomplish this activity. This includes development of the water quality component of water control manuals and daily decisions on multi-level releases and pro-rata share of office and computer facilities and other related costs associated with water management. Included also are costs to calibrate and make operational the forecasting and decision support models within the new Corps Water Management System (CWMS). Costs for data collection are included in Work Category Code 60142.

**WORK CATEGORY CODE:** **60142** - Water Management (Control and Quality) Activities for Navigation - Operation of Water Control Data Systems

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**WORK CATEGORY DESCRIPTION:** Water Management (Control and Quality) Activities - Operation of Water Control Data Systems including Data Collection for navigation features. Includes all costs for the operation of equipment, personnel and space to collect and process the hydrologic, hydraulic and meteorological data required for water control and quality activities in accordance with the current plan, data collection, and pro-rata share of office and computer facilities and other related costs associated with operations of water management data systems including the new Corps Water Management System (CWMS). Includes all costs to coordinate with other agencies and entities, training, travel, funds transferred to other agencies, and other associated costs required for operation of water management data systems. Costs for purchase and maintenance of new water control data systems equipment are included in Work Category Code 61140.

**WORK CATEGORY CODE:** **60150** - Real Estate Management for the Navigation Function

**WORK CATEGORY DESCRIPTION:** Real Estate Management including Compliance, and Utilization Inspections for navigation features.

Includes all costs, including contractual services, incident to granting to others the use of and performing inspections of property for purposes such as commercial concessions, industrial uses, public park and recreation, quasi-public and group camp use, fish and wildlife habitat management, selected agricultural and grazing uses and reconveyance clauses (restrictions) in deeds. Also includes granting use of and performing inspections of property granted and reserved to others for purposes such as road, street, waterline, powerline, and communication rights-of-way, as well as requests to drill for oil or gas on Government owned property where no oil or gas lease is required, and other uses covered by easements, licenses, and permits. Includes report preparation, determination of compliance after vacation of property subsequent to expiration or revocation of grant, and corrective measures where non-compliance is noted. Also includes appraisals, surveys, mapping, negotiations, preparation and execution of outgrants, renewal, extension, cancellation/termination documents, responses to request for use of real or related personal property, Executive Order surveys and public land withdrawals (applies to the 11 western states). Includes costs of utilization inspections of real property under the control of or subject to a service agreement with the Corps or the Government, and real property accountability, including real property inventory updates and preparation of annual civil-owned property reports (GSA 1166).

**WORK CATEGORY CODE:** **60160** - Environmental Compliance Management for the Navigation Function

**WORK CATEGORY DESCRIPTION:** Environmental Compliance Management for navigation features.

Includes all Navigation operational costs to comply with applicable Federal environmental laws and regulations, including the National Environmental Policy Act (NEPA), Safe Drinking Water Act, Resource Conservation and Recovery Act (RCRA), Clean Air Act, Hazardous Materials Transportation Act, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), EO 13148, and applicable state and local regulations. Includes cost to complete annual environmental compliance assessment (external or internal). Federal, DOD and Corps of Engineers requirements are described in the ERGO/TEAM environmental assessment manuals. Includes all costs associated with management and oversight of environmental compliance operational activities related to the Navigation function. Includes costs associated with the following activities: environmental compliance activities for maintenance shops supporting Navigation; environmental baseline inspection of outgrants and right-of-ways on lands allocated for operations; required personnel environmental training; development and update of required environmental plans for spill prevention, hazard communication, pollution prevention, hazardous material management; storage and handling of petroleum-oil & lubricants and preparation of pesticide reports and corresponding documentation. Includes costs associated with implementation and maintaining an Environmental Management System (EMS) which may be cost shared with other

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functions. Costs include salaries, training, materials, supplies, regulatory fees, drinking water and waste analysis, inspection of waste collection and disposal facilities. Costs associated with medical surveillance and other employee health and safety requirements are not included.

**WORK CATEGORY CODE: 60170**

**WORK CATEGORY DESCRIPTION:** Reserved.

**WORK CATEGORY CODE: 60180**

**WORK CATEGORY DESCRIPTION:** Reserved.

**WORK CATEGORY CODE: 60191 – Facility Security Assessments for Navigation**

**WORK CATEGORY DESCRIPTION:** Facility Security – Assessments, reviews, studies and analyses for navigation features.

Includes all costs to conduct and prepare security risk assessments, reviews, evaluations, studies and analyses for facility security related to criminal and terrorist activities. Includes costs to evaluate threats, consequences and security system effectiveness for navigation features. Also includes costs to prepare or revise Emergency Action Plans and plans to address facility protection and security, training and appropriate coordination with other agencies as they relate to criminal and terrorist activities. Costs for guards and surveillance activities are included in Work Category Code 60192, and costs to acquire, install and maintain structural and physical improvements for security are included in Work Category Code 61190.

**WORK CATEGORY CODE: 60192 – Facility Security Guards, Monitoring Activities for Navigation**

**WORK CATEGORY DESCRIPTION:** Facility Security – Guards and Monitoring Activities for navigation features.

Includes all costs for guards and security system monitoring activities including training of personnel for facility security related to criminal and terrorist activities. Costs for assessments are included in Work Category Code 60191, and costs to acquire, install and maintain structural and physical improvements for security are included in Work Category Code 61190.

**WORK CATEGORY CODE: 60210 - Operations for Flood Risk Management**

**WORK CATEGORY DESCRIPTION:** Operations of Dams, Reservoirs, Levees, Hurricane Barrier Gates, and Other Flood Risk Management Non-Dam Structures, Pumping Plants, Service Facilities (Buildings, Grounds, Utilities, and Roads, Railroads and Bridges), Permanent Operating Equipment, etc. for flood risk management features.

Includes all costs for the operation; necessary materials, supplies, equipment and transportation costs associated with operations; associated hired labor and contract support; routine materials and supplies; and other costs:

of dam structures and appurtenant equipment such as spillway gates, intake and outlet works, and sluiceways for reservoir regulation; removing and disposing of ice, snow, trash, and debris on or in the vicinity of the dam or dam structures; cleanup of dam structures and facilities; routine testing and adjustment of gauges, meters, instruments, and relays in dam structures; disposal and control of weeds, brush, trees, and aquatic growth in the vicinity of dam structures; and grass cutting on earth-fill dams. Includes all costs for dam safety/failure training of project personnel,



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preparation of flood emergency plans, dam contingency plans, dam surveillance plans, and provision for technical assistance to local interests concerning dam failure. When this account includes municipal or industrial water delivery activities, a separate sub-element should be established in CEFMS to record appropriate costs for each such facility for cost allocation purposes;

to perform reservoir inspections and patrols, removal and control of trash and debris (major periodic or one-time removal of growth and debris from the reservoir should be recorded under Work Category Code 61210); minor bank erosion control; minor cleaning of reservoir area for weeds, brush, trees, and aquatic growth; boundary surveillance and routine, recurring maintenance of boundary monumentation at projects without natural resource activities, insect control and elimination of health and safety hazards; of levees, hurricane barrier gates, and other gated non-dam flood risk management structures; vegetation control on flood risk management structures; removal of snow and ice from structures;

of pumping plants, pumps and associated equipment; collecting and maintaining operational records; routine replacement, purification and testing of insulating, lubricating and hydraulic oils; lubricants and lubricating equipment; minor maintenance of electrical equipment, cleaning, testing, and adjustment of motor starters, relays, meters, and similar equipment; minor maintenance and repair of pumps, motors, engines, trash raking equipment, gate hoists, gates, fire fighting, and other equipment required for operation; minor maintenance of buildings, roads, and grounds; removal of debris, ice, and snow;

of project-owned permanent facilities such as administration and shop buildings, storage and garage buildings and areas, community buildings, local streets and sidewalks, landscaping, utility facilities such as electric, gas, water, and sewage, all security and protective measures, and permanent roads, including the road across the top of the dam, and parking areas near the dam, railroads, and bridges required for access and other purposes in connection with the operation of a project. It also includes bridges provided as a project feature for the passage of highway and railway traffic over improved channels. Direct costs included are snow and ice removal from project roads, parking areas and walkways; sanding and salting project roads, parking areas and walkways; minor patching, signs, ditch cleaning, culvert cleaning and similar duties; bridge operation; cleanup of project roads, railroads, and bridges. Buildings which house operating machinery and serve other purposes as well are included in this activity, but the costs to operate the machinery are charged to the appropriate Work Categories. Buildings which house specific operating machinery, spare parts, equipment, etc., will be charged to the appropriate Work Categories. This activity does not include costs associated with recreation facilities and areas which will be included in Work Category Code 60511;

of all tools and equipment, including laboratory, shop, warehousing, communications, surveys, and transportation equipment, office furniture and equipment. Project-owned sedimentation and degradation measuring facilities, rainfall and stream-gauging devices, fixed sand bypassing systems, and like equipment are also included. Includes direct costs of automotive and other equipment. Vehicle accounts will be maintained by group classifications as provided for Revolving Fund vehicles.

Does not include specific Water Supply activities as in the past. Water Supply activities including that required by water supply contracts, collections including delinquencies and the renegotiation of existing water supply contracts are now included in WCCs 60811 and 60812.

WORK CATEGORY CODE: **60221** - Studies and Surveys for the Flood Risk Management Function

WORK CATEGORY DESCRIPTION: Non-Navigation Project Condition Studies, including Dredging

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Studies, for flood risk management features.

Includes all costs to prepare reconnaissance reports or studies related to the maintenance and rehabilitation of Civil Works projects such as foundation reports, embankment criteria, O&M manuals, sediment surveys at flood risk management projects, surveillance of northern boundary waters, and hydraulic model analyses prior to the engineering and design phase. Does not include Water Supply reallocation study costs as in the past. Water Supply reallocation study costs are now included in WCC 60820.

**WORK CATEGORY CODE:**     **60222** - Studies and Surveys for Flood Risk Management - Major Rehabilitation Evaluation Reports

**WORK CATEGORY DESCRIPTION:** Major Rehabilitation Evaluation Reports for flood risk management features.

Includes all costs to initiate new, or continue ongoing, major rehabilitation evaluation reports. Operation and Maintenance (O&M) funds are to be used only until Construction (C) funds are allocated to the project.

**WORK CATEGORY CODE:**     **60223** – Studies, Surveys and Inspections of Completed Works - Local Protection Projects

**WORK CATEGORY DESCRIPTION:** Studies, Surveys and Inspections of Local Protection Projects for flood risk management features.

Includes all costs related to the inspection of Federally constructed, locally operated and maintained projects to ensure compliance with local cooperative agreements. This Work Category does not include costs for projects covered by PL 84-99. Includes all costs for technical review and approval of sponsor-proposed alterations, improvements, excavation or construction within the limits of the project right-of-way; advice given to sponsors related to the effects of such activities on the function/operation of the project and information on acceptable construction methods; all costs to update O&M Manuals; initial funding of reconnaissance or evaluation reports; and PED for major rehabilitation, dam safety assurance, deficiency correction and reconstruction as applicable until Construction (C) funds are allocated.

**WORK CATEGORY CODE:**     **60231** - Instrumentation, Data Collection and Analysis for Dam Safety related to the Flood Risk Management Function

**WORK CATEGORY DESCRIPTION:** Instrumentation for Engineering Analysis and Continuing Evaluation Data Gathering Inspections, and Data Analysis for Dam Safety related to flood risk management features.

Includes all costs for the operation of instruments in existing dam structures for safety evaluation and all costs of obtaining, analyzing and reporting instrumentation data for purposes consistent with an approved plan. This includes instrumentation for measuring horizontal and vertical movement, stresses and strains, pore pressure, phreatic surfaces, seismic effects, and seepage clarity and quality.

**WORK CATEGORY CODE:**     **60232** - Formal Periodic Inspections and Reports for Dam Safety related to the Flood Risk Management Function

**WORK CATEGORY DESCRIPTION:** Formal Periodic Inspections and Reports for Dam Safety related to flood risk management features.

Includes all costs related to the scheduled periodic inspections and reporting of projects and bridges needed to meet inspection frequency requirements of ER 1110-2-100 as follows:

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(a) Dams, locks and dams, initial and second inspections if funded under O&M General, and high hazard structures.

(b) Public Bridges.

(c) Structures whose failure would be a major loss to the national infrastructure or cause severe economic distress.

(d) Other projects where known conditions warrant inspections at a frequency more often than normal.

**WORK CATEGORY CODE:**     **60233** - Dam Safety Assurance Studies related to the Flood Risk Management Function

**WORK CATEGORY DESCRIPTION:** Dam Safety Assurance Studies for Dam Safety related to flood risk management features.

Includes all costs of reconnaissance studies and special engineering investigations for known or suspected dam safety deficiencies, e.g. seismic evaluations, seepage studies, erosion studies, etc.

**WORK CATEGORY CODE:**     **60241** - Water Management (Control and Quality) Activities for Flood Risk Management - Analysis and Studies

**60241** - Water Management (Control and Quality) Activities for Flood Risk Management - Analysis and Studies

Includes all costs for personnel and space to manage the hydrologic, hydraulic and meteorological data required for water control and quality activities in accordance with the current water control/quality plan; all costs to prepare routine regulation instructions and runoff forecasts, coordinate with other agencies and entities, prepare water control manuals, disseminate water control information, training, travel and other associated costs required to make sound water control management decisions; all costs for reservoir and river analyses to improve the quality of water within and downstream from the reservoirs; and all costs related to studies of the means to mitigate water quality problems and studies to determine present and future water quality needs. Also includes all costs for water management studies to improve efficiency or mitigate constraints on approved plans of regulation, annual updating of notification lists, and funds transferred to other agencies and any similar items needed to accomplish this activity. This includes development of the water quality component of water control manuals and daily decisions on multi-level releases and pro-rata share of office and computer facilities and other related costs associated with water management. Included also are costs to calibrate and make operational the forecasting and decision support models within the new Corps Water Management System (CWMS). Costs for data collection are included in Work Category Code 60242.

**WORK CATEGORY CODE:**     **60242** - Water Management (Control and Quality) Activities for Flood Risk Management - Operation of Water Control Data Systems

**WORK CATEGORY DESCRIPTION:** Water Management (Control and Quality) Activities - Operation of Water Control Data Systems including Data Collection for flood risk management features.

Includes all costs for the operation of equipment, personnel and space to collect and process the hydrologic, hydraulic and meteorological data required for water control and quality activities in accordance with the current plan, data collection, and pro-rata share of office and computer facilities and

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other related costs associated with operations of water management data systems including the new Corps Water Management System (CWMS). Includes all costs to coordinate with other agencies and entities, training, travel, funds transferred to other agencies, and other associated costs required for operation of water management data systems. Costs for purchase and maintenance of new water control data systems equipment are included in Work Category Code 61240.

**WORK CATEGORY CODE:**     **60250** - Real Estate Management for the Flood Risk Management Function

**WORK CATEGORY DESCRIPTION:** Real Estate Management including Compliance, and Utilization Inspections for flood risk management features.

Includes all costs, including contractual services, incident to granting to others the use of and performing inspections of property for purposes such as commercial concessions, industrial uses, public park and recreation, quasi-public and group camp use, fish and wildlife habitat management, selected agricultural and grazing uses and reconveyance clauses (restrictions) in deeds. Also includes granting use of, and performing inspections of property granted and reserved to others for purposes such as road, street, waterline, powerline, and communication rights-of-way, as well as requests to drill for oil or gas on Government owned property where no oil or gas lease is required, and other uses covered by easements, licenses, and permits. Includes report preparation, determination of compliance after vacation of property subsequent to expiration or revocation of grant, and corrective measures where non-compliance is noted. Also includes appraisals, surveys, mapping, negotiations, preparation and execution of outgrants, renewal, extension, cancellation/termination documents, responses to request for use of real or related personal property, Executive Order surveys and public land withdrawals (applies to the 11 western states). Includes costs of utilization inspections of real property under the control of or subject to a service agreement with the Corps or the Government. Includes reconciliation of financial records with flood risk management land and mineral lease receipts, and real property accountability, including real property inventory updates and preparation of annual civil-owned property reports (GSA 1166).

**WORK CATEGORY CODE:**     **60260** - Environmental Compliance Management for the Flood Damage Reduction Function

**WORK CATEGORY DESCRIPTION:** Environmental Compliance Management for flood risk management features.

Includes all Flood Risk Management operational costs to comply with applicable Federal environmental laws and regulations, including the National Environmental Policy Act (NEPA), Safe Drinking Water Act, Resource Conservation and Recovery Act (RCRA), Clean Air Act, Hazardous Materials Transportation Act, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), EO 13148, and applicable state and local regulations. Includes cost to complete annual environmental compliance assessment, external and internal. Federal, DOD and Corps of Engineers requirements are described in the ERGO/TEAM environmental assessment manuals. Includes all costs associated with management and oversight of environmental compliance operational activities related to the Flood Risk Management Function. Includes costs associated with the following activities: environmental compliance activities for maintenance shops supporting Flood Risk Management; environmental baseline inspection of outgrants and right-of-ways on lands allocated for operations; required personnel environmental training; development and update of required environmental plans for spill prevention, hazard communication, pollution prevention, hazardous material management; underground storage tanks, storage and handling of pesticides and petroleum-oil & lubricants. Includes costs associated with implementation and maintaining an Environmental Management System (EMS) which may be cost shared with other business lines. Includes costs associated with implementation and maintaining an Environmental Management System (EMS) which may be cost shared with other functions. Costs include salaries, training, materials,

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supplies, regulatory fees, drinking water and waste analysis, inspection of waste collection and disposal facilities, and internal and external environmental compliance assessments. Costs associated with medical surveillance and other employee health and safety requirements are not included. This Work Category also includes all costs for the management and curation of Orphan Collections and archeological materials collected from early local protection projects and subsequently turned over to local sponsors for operation and maintenance. All other costs for management and curation of archeological resources are included in Work Category Code 60412.

**WORK CATEGORY CODE: 60270**

**WORK CATEGORY DESCRIPTION:** Reserved.

**WORK CATEGORY CODE: 60280**

**WORK CATEGORY DESCRIPTION:** Reserved.

**WORK CATEGORY CODE: 60291 – Facility Security Assessments for Flood Risk Management**

**WORK CATEGORY DESCRIPTION:** Facility Security – Assessments, reviews, studies and analyses for flood risk management features.

Includes all costs to conduct and prepare security risk assessments, reviews, evaluations, studies and analyses for facility security related to criminal and terrorist activities. Includes costs to evaluate threats, consequences and security system effectiveness for flood risk management features. Also includes costs to prepare or revise Emergency Action Plans and plans to address facility protection and security, training and appropriate coordination with other agencies as they relate to criminal and terrorist activities. Costs for guards and surveillance activities are included in Work Category Code 60292, and costs to acquire, install and maintain structural and physical improvements for security are included in Work Category Code 61290.

**WORK CATEGORY CODE: 60292 – Facility Security Guards, Monitoring Activities for Flood Risk Management**

**WORK CATEGORY DESCRIPTION:** Facility Security – Guards and Monitoring Activities for flood risk management features.

Includes all costs for guards and security system monitoring activities including training of personnel for facility security related to criminal and terrorist activities. Costs for assessments are included in Work Category Code 60291, and costs to acquire, install and maintain structural and physical improvements for security are included in Work Category Code 61290.

**WORK CATEGORY CODE: 60310 (60311-60314) - Hydropower Operations.** Costs for this function will be sub-divided as follows:

**60311 - Hydropower Operations - Supervision and Engineering, FERC #535.** Costs for labor, materials and other expenses incurred in the general supervision of the operation of hydraulic generating stations. Direct supervision of specific activities will be charged to the appropriate accounts;

**60312 - Hydropower Operations - Hydraulic Expenses, FERC #537.** Costs for labor, materials and other expenses incurred in operating power intake works whether or not the powerhouse is an integral part of the intake dam;

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**60313** - Hydropower Operations - Electric Expenses, FERC #538. Costs for labor, materials and other expenses incurred in operating turbines, generators, auxiliary apparatus, switchgear and other electric equipment to the point where electricity leaves for transmission by the marketing agency or other project. Keeping plant logs and records, and preparing reports of operation are included herein;

**60314** - Hydropower Operations - Miscellaneous Hydraulic Power Generation Expenses, FERC #539. Costs for labor, materials and other expenses not specifically provided for in other power plant operation accounts. Includes costs for custodial and other administrative services.

**WORK CATEGORY DESCRIPTION:** Operations of Power Plants.

Includes specific costs for the general supervision and engineering associated with the operation; routine materials, supplies, equipment and transportation costs; associated hired labor and contract support; and other costs: :

of power plants including hydraulic generating stations, and their associated power intake structures, turbines, generators, auxiliary apparatus, switchgear, and other electrical or electronic equipment to the point where electricity leaves for transmission by the marketing agency or project. Includes miscellaneous costs such as custodial, administrative services and training power plant trainees including labor. Costs not specific to hydropower will be included in Work Category Code 60610.

**WORK CATEGORY CODE:** **60320 (60321-60324)** - Studies and Surveys for the Hydropower  
Function Costs for this function will be sub-divided as follows:

**60321** - Studies and Surveys - Supervision and Engineering, FERC #535. Costs for labor, materials and other expenses incurred in the general supervision of the operation of hydraulic generating stations. Direct supervision of specific activities will be charged to the appropriate accounts;

**60322** - Studies and Surveys - Hydraulic Expenses, FERC #537. Costs for labor, materials and other expenses incurred in operating power intake works whether or not the powerhouse is an integral part of the intake dam;

**60323** - Studies and Surveys - Electric Expenses, FERC #538. Costs for labor, materials and other expenses incurred in operating turbines, generators, auxiliary apparatus, switchgear and other electric equipment to the point where electricity leaves for transmission by the marketing agency or other project;

**60324** - Studies and Surveys - Miscellaneous Hydraulic Power Generation Expenses, FERC #539. Costs for labor, materials and other expenses not specifically provided for in other power plant operation accounts.

**WORK CATEGORY DESCRIPTION:** Studies and Surveys for hydropower features.

Includes all costs to prepare reconnaissance reports or studies related to the maintenance and rehabilitation of hydropower projects such as foundation reports, embankment criteria, O&M manuals, sediment surveys and hydraulic model analyses prior to the engineering and design phase.

**WORK CATEGORY CODE:** **60325** - Studies and Surveys for Hydropower - Major Rehabilitation  
Evaluation Reports

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**WORK CATEGORY DESCRIPTION:** Major Rehabilitation Evaluation Reports for hydropower features.

Includes all costs for specific hydropower purposes to initiate new, or continue ongoing, major rehabilitation evaluation reports. Operation and Maintenance (O&M) funds are to be used only until Construction (C) funds are allocated to the project.

**WORK CATEGORY CODE:** **60331** - Instrumentation, Data Collection and Analysis for Dam Safety related to the Hydropower Function, FERC #537

**WORK CATEGORY DESCRIPTION:** Instrumentation for Engineering Analysis and Continuing Evaluation Data Gathering Inspections, and Data Analysis for Dam Safety related to hydropower features.

Includes all specific costs for the operation of instruments in existing dam structures for safety evaluation and all costs of obtaining, analyzing and reporting instrumentation data for purposes consistent with an approved plan. This includes instrumentation for measuring horizontal and vertical movement, stresses and strains, pore pressure, phreatic surfaces, seismic effects, and seepage clarity and quality.

**WORK CATEGORY CODE:** **60332** - Formal Periodic Inspections and Reports for Dam Safety related to Hydropower Activities, FERC #537

**WORK CATEGORY DESCRIPTION:** Formal Periodic Inspections and Reports for Dam Safety related to hydropower features.

Includes all specific costs related to the scheduled periodic inspections and reporting of projects and bridges needed to meet inspection frequency requirements of ER 1110-2-100 as follows:

(a) Dams, locks and dams, initial and second inspections if funded under O&M General, and high hazard structures.

(b) Public Bridges.

(c) Structures whose failure would be a major loss to the national infrastructure or cause severe economic distress.

(d) Other projects where known conditions warrant inspections at a frequency more often than normal.

**WORK CATEGORY CODE:** **60333** - Dam Safety Assurance Studies related to the Hydropower Function, FERC #537

**WORK CATEGORY DESCRIPTION:** Dam Safety Assurance Studies for Dam Safety activities related to hydropower features.

Includes all specific costs of reconnaissance studies and special engineering investigations for known or suspected dam safety deficiencies, e.g. seismic evaluations, seepage studies, erosion studies, etc.

**WORK CATEGORY CODE:** **60341** - Water Management (Control and Quality) Activities for Hydropower - Analysis and Studies, FERC #537

**WORK CATEGORY DESCRIPTION:** Water Management (Control and Quality) Activities - Analysis, Studies and Regulation Instructions for hydropower features.

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Includes all costs for personnel and space to manage the hydrologic, hydraulic and meteorological data required for water control and quality activities in accordance with the current water control/quality plan; all costs to prepare routine regulation instructions and runoff forecasts, coordinate with other agencies and entities, prepare water control manuals, disseminate water control information, training, travel and other associated costs required to make sound water control management decisions; all costs for reservoir and river analyses to improve the quality of water within and downstream from the reservoirs; and all costs related to studies of the means to mitigate water quality problems and studies to determine present and future water quality needs. Also includes all costs for water management studies to improve efficiency or mitigate constraints on approved plans of regulation, annual updating of notification lists, and funds transferred to other agencies and any similar items needed to accomplish this activity. This includes development of the water quality component of water control manuals and daily decisions on multi-level releases and pro-rata share of office and computer facilities and other related costs associated with water management. Included also are costs to calibrate and make operational the forecasting and decision support models within the new Corps Water Management System (CWMS). Costs for data collection are included in Work Category Code 60342.

**WORK CATEGORY CODE:**     **60342** - Water Management (Control and Quality) Activities for Hydropower - Operation of Water Control Data Systems, FERC #537

**WORK CATEGORY DESCRIPTION:** Water Management (Control and Quality) Activities - Operation of Water Control Data Systems including Data Collection for hydropower features.

Includes all costs for the operation of equipment, personnel and space to collect and process the hydrologic, hydraulic and meteorological data required for water control and quality activities in accordance with the current plan, data collection, and pro-rata share of office and computer facilities and other related costs associated with operations of water management data systems including the new Corps Water Management System (CWMS). Includes all costs to coordinate with other agencies and entities, training, travel, funds transferred to other agencies and other associated costs required for operation of water management data systems. Costs for purchase and maintenance of new water control data systems equipment are included in Work Category Code 61340.

**WORK CATEGORY CODE:**     **60350** - Real Estate Management for the Hydropower Function, FERC #537

**WORK CATEGORY DESCRIPTION:** Real Estate Management including Compliance, and Utilization Inspections for hydropower features.

Includes all costs, including contractual services, incident to granting to others the use of and performing inspections of property for purposes such as commercial concessions, industrial uses, public park and recreation, quasi-public and group camp use, fish and wildlife habitat management, selected agricultural and grazing uses and reconveyance clauses (restrictions) in deeds. Also includes granting use of and performing inspections of property granted and reserved to others for purposes such as road, street, waterline, powerline, and communication rights-of-way, as well as requests to drill for oil or gas on Government owned property where no oil or gas lease is required, and other uses covered by easements, licenses, and permits. Includes report preparation, determination of compliance after vacation of property subsequent to expiration or revocation of grant, and corrective measures where non-compliance is noted. Also includes appraisals, surveys, mapping, negotiations, preparation and execution of outgrants, renewal, extension, cancellation/termination documents, responses to request for use of real or related personal property, Executive Order surveys and public land withdrawals (applies to the 11 western states). Includes costs of utilization inspections of real property under the control of or subject to a service agreement with the Corps or the Government, and real property accountability, including real property inventory updates and preparation of annual civil-owned property reports (GSA 1166).



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**WORK CATEGORY CODE:**     **60360** - Environmental Compliance Management for the Hydropower Function, FERC #539

**WORK CATEGORY DESCRIPTION:** Environmental Compliance Management for hydropower features.

Includes all Hydropower operational costs to comply with applicable Federal environmental laws and regulations, including the National Environmental Policy Act (NEPA) Safe Drinking Water Act, Resource Conservation and Recovery Act (RCRA), Clean Air Act, Hazardous Materials Transportation Act, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), EO 13148, and applicable state and local regulations. Includes cost to complete annual environmental compliance assessment, external and internal. Federal, DOD and Corps of Engineers requirements are described in the ERGO/TEAM environmental assessment manuals. Includes all costs associated with management and oversight of environmental compliance operational activities. related to the Hydropower function. Includes costs associated with implementation and maintaining and Environmental Management System (EMS). Costs include salaries, training, materials, supplies, regulatory fees, drinking water and waste analysis, inspection of waste collection and disposal facilities, and internal and external environmental compliance assessments. Costs associated with medical surveillance and other employee health and safety requirements are not included.

**WORK CATEGORY CODE:**     **60370**

**WORK CATEGORY DESCRIPTION:** Reserved.

**WORK CATEGORY CODE:**     **60380**

**WORK CATEGORY DESCRIPTION:** Reserved.

**WORK CATEGORY CODE:**     **60391** – Facility Security Assessments for Hydropower

**WORK CATEGORY DESCRIPTION:** Facility Security – Assessments, reviews, studies and analyses for hydropower features.

Includes all costs to conduct and prepare security risk assessments, reviews, evaluations, studies and analyses for facility security related to criminal and terrorist activities. Includes costs to evaluate threats, consequences and security system effectiveness for hydropower features. Also includes costs to prepare or revise Emergency Action Plans and plans to address facility protection and security, training and appropriate coordination with other agencies as they relate to criminal and terrorist activities. Costs for guards and surveillance activities are included in Work Category Code 60392, and costs to acquire, install and maintain structural and physical improvements for security are included in Work Category Code 61390.

**WORK CATEGORY CODE:**     **60392** – Facility Security Guards, Monitoring Activities for Hydropower

**WORK CATEGORY DESCRIPTION:** Facility Security – Guards and Monitoring Activities for hydropower features.

Includes all costs for guards and security system monitoring activities including training of personnel for facility security related to criminal and terrorist activities. Costs for assessments are included in Work

Category Code 60391, and costs to acquire, install and maintain structural and physical improvements for security are included in Work Category Code 61390.

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**WORK CATEGORY CODE:**     **60411 - Management of Natural Resources for Environmental Stewardship**

**WORK CATEGORY DESCRIPTION:** Management of Natural Resources and Operational Management Plans.

Includes all costs for the management and operations; of natural resources to foster healthy and sustainable lands and waters, including the conservation and protection of soil, water, wetland, forest, vegetation, waterfowl, fish and wildlife, grasslands and range, and other resources essential to the total management of specific projects; salaries, equipment, supplies; managing areas under license or outlease, spawning beds, fish shelters, fish and waterfowl impoundments; forest/woodland management activities, timber salvage (NOTE: Do not include commodity (e.g. timber, crops, sand) sales cost or other natural resources management activity costs that are expected to be funded by the proceeds from the sale of project commodities), timber trespass surveillance, timber cruising, stand improvement, development and maintenance of fire lines, forest fire suppression, prescribed burning and haul road maintenance; conducting vegetation plantings, fertilization, maintain riparian vegetation, establishing wildlife food plots, manipulating vegetation; conducting wildlife habitat preservation management or improvement activities; range management; erosion control; conducting citation authority programs outside developed recreation areas that involve the protection of natural resources; conducting interpretive programs for the stewardship of natural resources; and boundary surveillance and routine, recurring maintenance of boundary monumentation required for protection of managed stewardship lands or environmentally sensitive areas. This Work Category excludes costs associated with fish hatcheries and fish passage. Natural resources activities conducted for the enhancement of recreation areas, e.g. management or control of nuisance wildlife including geese, nutria, woodchucks, and swallows in recreation areas, will be charged to Work Category Code 60511; of Operational Management Plans, including all costs for salaries, supplies and materials, and equipment related to the preparation and updating of Operational Management Plans and supplements. Charges may include field units that perform data collection and analysis.

**WORK CATEGORY CODE:**     **60412 - Management and Curation of Archeological and Cultural Resources**

**WORK CATEGORY DESCRIPTION:** Management and Curation of Archeological and Cultural Resources.

Includes all costs for the management of, and annual maintenance curation costs for, archeological and cultural resources including identification, surveillance, studies, literature searches, reconnaissance surveys, inventory, subsurface testing, development and update of management plans and agreements for historical, archaeological and cultural resources, archeological and cultural resources outreach and educational programs, coordination with Tribal interests, operations activities associated with identified historical, archaeological and cultural resources, and enforcement of Title 36 Code of Federal Regulations, the National Historic Preservation Act of 1966, the Archeological Resources Protection Act of 1979 and other applicable laws and regulations. (Do not include funding requirements for activities to ensure compliance with Section 5-7 of the Native American Graves Protection and Repatriation Act (NAGPRA). These costs will be budgeted as a Remaining Items Activity. See para. C-2.13 of this Annex.). Costs for Orphan Collections are included in Work Category Code 60260.

**WORK CATEGORY CODE:**     **60413 - Management of Natural Resources Mitigation Features**

**WORK CATEGORY DESCRIPTION:** Management of Natural Resources Mitigation Features.

Includes all costs for the management and operations of authorized mitigation activities including costs to comply with mitigation requirements specified in Federal law, Congressional legislation, or in HQ

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approved project authorization decision document, to offset unavoidable natural resources and ecological losses caused by the construction of the project or by project operation activities. This Work Category does not include acquisition costs.

**WORK CATEGORY CODE:** 60414 - Fisheries Management - Operation of Fish Hatcheries

**WORK CATEGORY DESCRIPTION:** Fisheries Management – Operation of Fish Hatcheries.

Includes all costs for salaries, equipment, supplies and all costs associated with the operation, of fish hatcheries, egg collecting stations and related facilities for provision of fish propagation. It excludes fisheries development activities included in Work Category Code 60411.

**WORK CATEGORY CODE:** 60415 - Fisheries Management - Fish Hauling Activities and Fish Passage Structures

**WORK CATEGORY DESCRIPTION:** Fisheries Management - Fish Hauling Activities and Fish Passage Structures.

Includes all costs associated with operation of facilities and equipment for collecting, trapping, transportation and passage of fish at dams and navigation facilities. Facilities include ladders, nets, elevators and locks. It excludes fisheries development activities included in Work Category Code 60411.

**WORK CATEGORY CODE:** 60416 - Comprehensive Master Plans

**WORK CATEGORY DESCRIPTION:** Preparation and Updating of Comprehensive Master Plans and Master Plan Supplementals.

Includes all costs to initiate new, or continue ongoing, comprehensive Master Plans, including all costs for salaries, supplies and materials, and equipment related to the preparation and updating of Master Plans and Master Plan Supplements. Charges may include field units that perform data collection and analysis.

**WORK CATEGORY CODE:** 60417 – Shoreline Management

**WORK CATEGORY DESCRIPTION:** Shoreline Management  
Includes all costs associated with managing permits issued under authority of Title 36 CFR, the Shoreline management Program. Includes costs for salaries, contracts, supplies, materials and equipment.

**WORK CATEGORY CODE:** 60418 – Management of Special Status Species for Environmental Stewardship Function

**WORK CATEGORY DESCRIPTION:** Management of Special Status Species for Environmental Stewardship

Includes all environmental stewardship program function costs for management and operations to support special status species. Includes costs for salaries, contracts, supplies, materials, and equipment to manage the conservation and recovery of special status species such as Federally or state listed endangered, threatened, rare or sensitive species, including activities in areas under license, lease or outgrant. Includes activities to determine and document the state or condition of a resource or population (e.g. surveys, inventories); activities to increase understanding and appreciation of special status species such as interpretive programs, signs, surveillance activities, GPS/GIS mapping, marking populations boundaries and exclusion zones. Also includes costs to prepare or update Management Plans for Special Status Species, such as data collection and analysis, plan development, review and coordination.

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**WORK CATEGORY CODE: 60419 – Pest Management for Environmental Stewardship**

**WORK CATEGORY DESCRIPTION: Pest Management**

Includes all costs for management and operations to support integrated pest management activities for the health and sustainability of natural resources. Includes costs of salaries, contracts, supplies, materials, and equipment to control pests, control invasive exotic species, control noxious weeds and animals. Includes activities undertaken to determine the state or condition of a resource, or to determine population densities to assess the likelihood of resources damage by pests, and activities to increase understanding and appreciation of pest management activities.

**WORK CATEGORY CODE: 60421 – Studies, Surveys and Inventories for the Environmental Stewardship Function**

**WORK CATEGORY DESCRIPTION: Natural Resources Studies, Surveys and Inventories for environmental stewardship features, including Fisheries and Wildlife Development Activities.**

Includes all costs of fish and wildlife studies, including fish hauling and passage analyses to support long-range development and modification of existing structures, applicable to a specific project and pro rata share of basin-wide fish and wildlife studies; inventorying the natural resources base through Level One and Level Two Natural Resources Inventories; includes all costs to conduct surveys of fish and wildlife; and all costs to perform population dynamics and other studies.

**WORK CATEGORY CODE: 60422 – Studies, Surveys and Inspections of Completed Works – Ecosystem Restoration**

**WORK CATEGORY DESCRIPTION: Studies, Surveys and Inspections of Ecosystem Restoration Features at Completed Projects Operated by Others.**

Includes all costs related to the inspection of Federally constructed, locally operated and maintained projects to ensure compliance with Project Cooperative Agreements. Includes inspection of ecosystem restoration features, observations regarding compliance with any access or easement restrictions, and minimal documentation of the condition of the ecosystem. Includes all costs for technical review and approval of sponsor-proposed alterations, improvements, excavation or construction within the project boundaries; advice given to sponsors related to the effects of such activities on the function/operation of the project and information on acceptable construction methods; all costs to update O&M Manuals; initial funding of reconnaissance or evaluation reports; PED for deficiency correction and reconstruction as applicable until Construction (C) funds are allocated.

**WORK CATEGORY CODE: 60430**

**WORK CATEGORY DESCRIPTION: Reserved.**

**WORK CATEGORY CODE: 60441 - Water Management (Control and Quality) Activities for Environmental Stewardship - Analysis and Studies**

**WORK CATEGORY DESCRIPTION: Water Management (Control and Quality) Activities - Analysis, Studies and Regulation Instructions for environmental stewardship features.**

Includes all water management activity costs related to the conservation, protection, or enhancement of environmental stewardship features, e.g. natural aquatic communities, wetlands, including associated costs for personnel and space to manage the hydrologic, hydraulic and meteorological data required for

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water control and quality activities in accordance with the current water control/quality plan. Also includes all costs for water management studies to improve efficiency or mitigate constraints on approved plans of regulation, annual updating of notification lists, and funds transferred to other agencies and any similar items needed to accomplish this activity. This includes development of the water quality component of water control manuals and daily decisions on multi-level releases and pro-rata share of office and computer facilities and other related costs associated with water management. Included also are costs to calibrate and make operational the forecasting and decision support models within the new Corps Water Management System (CWMS). Costs for data collection are included in Work Category Code 60442.

**WORK CATEGORY CODE:**     **60442** - Water Management (Control and Quality) Activities for Environmental Stewardship - Operation of Water Control Data Systems

**WORK CATEGORY DESCRIPTION:** Water Management (Control and Quality) Activities - Operation of Water Control Data Systems including Data Collection for environmental stewardship features.

Includes all costs for the operation of equipment, personnel and space to collect and process the hydrologic, hydraulic and meteorological data required for water control and quality activities in accordance with the current plan, data collection, and pro-rata share of office and computer facilities and other related costs associated with operations of water management data systems including the new Corps Water Management System (CWMS). Includes all costs to coordinate with other agencies and entities, training, travel, funds transferred to other agencies and other associated costs required for operation of water management data systems. Costs for purchase and maintenance of new water control data systems equipment are included in Work Category Code 61440.

**WORK CATEGORY CODE:**     **60450** - Real Estate Management for the Environmental Stewardship Function

**WORK CATEGORY DESCRIPTION:** Real Estate Management including Compliance, and Utilization Inspections for environmental stewardship features.

Includes all costs, including contractual services, incident to granting to others the use of and performing inspections of property for environmental stewardship program purposes such as fish and wildlife habitat management, disposal of timber (NOTE: Do not include commodity (e.g. timber, crops, sand) sales costs that are expected to be funded by the proceeds from the sale of project commodities) and selected agricultural and grazing uses and reconveyance clauses (restrictions) in deeds. Includes report preparation, determination of compliance after vacation of property subsequent to expiration or revocation of grant, and corrective measures where non-compliance is noted. Also includes appraisals, surveys, mapping, negotiations, preparation and execution of outgrants, renewal, extension, cancellation/termination documents, responses to request for use of real or related personal property, as they relate to natural resources utilization or lands managed for natural resources. The general granting of land use to others and performing inspections of property granted and reserved to others for purposes such as road, street, waterline, powerline, and communication rights-of-way, as well as requests to drill for oil or gas on Government owned property where no oil or gas lease is required, and other uses covered by easements, licenses, and permits not supporting the environmental stewardship mission shall, in most instances, be charged to the grantee as administrative costs, including NEPA documentation costs. In cases where it is in the public interest for the Corps to absorb the costs, those costs should be charged to the primary mission of the project such as flood risk management or navigation. Also includes the preparation of Report of Availability (ROAs); Environmental Baseline Surveys (EBSs); Finding of Suitability to Lease (FOSLs) or Finding of Suitability to Transfer (FOSTs) for real estate transactions when such action primarily concerns the stewardship of natural resources and fish and wildlife activities.

**WORK CATEGORY CODE:**     **60460** - Environmental Compliance Management for the Environmental Stewardship Function

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**WORK CATEGORY DESCRIPTION:** Environmental Compliance Management for environmental stewardship features.

Includes all Environment Stewardship operational costs to comply with applicable Federal laws and regulations as they relate to the management of natural resources, including the National Environmental Policy Act (NEPA) Safe Drinking Water Act, Resource Conservation and Recovery Act (RCRA), Clean Air Act, Hazardous Materials Transportation Act, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), EO 13148, and applicable state and local regulations. [Environment Stewardship program costs to comply with requirements of the Endangered Species Act (ESA) should be charged to WCC 60418.] Includes cost to complete portions of annual external or internal environmental compliance assessment that are related to natural features or lands managed for fish and wildlife in accordance with Federal, DOD and Corps of Engineers requirements as described in the ERGO/TEAM environmental assessment manuals. Environmental compliance and inspections associated with Recreation such as concession inspections, visitor center inspections, maintenance shops that service recreation areas, marina inspections shall be charged to 60560. Cost associated with compliance and inspections for facilities associated with dam operations, levee works, pump station or maintenance areas that serve these functions shall be charged to 60560. Costs associated with medical surveillance and other employee health and safety requirements are not included.

**WORK CATEGORY CODE:**     **60470**

**WORK CATEGORY DESCRIPTION:** Reserved.

**WORK CATEGORY CODE:**     **60480**

**WORK CATEGORY DESCRIPTION:** Reserved.

**WORK CATEGORY CODE:**     **60491 – Facility Security Assessments for Environmental Stewardship**

**WORK CATEGORY DESCRIPTION:** Facility Security – Assessments, reviews, studies and analyses for environmental stewardship features.

Includes all costs to conduct and prepare security risk assessments, reviews, evaluations, studies and analyses for facility security related to criminal and terrorist activities. Includes costs to evaluate threats, consequences and security system effectiveness for environmental stewardship features. Also includes costs to prepare or revise Emergency Action Plans and plans to address facility protection and security, training and appropriate coordination with other agencies as they relate to criminal and terrorist activities. Costs for guards and surveillance activities are included in Work Category Code 60492, and costs to acquire, install and maintain structural and physical improvements for security are included in Work Category Code 61490.

**WORK CATEGORY CODE:**     **60492 – Facility Security Guards, Monitoring Activities for Environmental Stewardship**

**WORK CATEGORY DESCRIPTION:** Facility Security – Guards and Monitoring Activities for environmental stewardship features.

Includes all costs for guards and security system monitoring activities including training of personnel for facility security related to criminal and terrorist activities. Costs for assessments are included in Work Category Code 60491, and costs to acquire, install and maintain structural and physical improvements for security are included in Work Category Code 61490.

**WORK CATEGORY CODE:**     **60511 - Operations for the Recreation Function**

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**WORK CATEGORY DESCRIPTION:** Operations and Management of Recreation Areas and Facilities, Service Facilities (Buildings, Grounds, Utilities, and Roads, Railroads and Bridges), Permanent Operating Equipment, etc. for recreation features.

Includes all costs for the management and operation; necessary materials, supplies, equipment, transportation and rental costs associated with operations; associated hired labor and contract support; routine materials and supplies; and other costs:

of recreation areas and facilities including all costs for salaries, per diem, travel, signs collecting and administering user fees, brochures, maps, participation in public and special events and exhibitions, costs of trash removal, cleanup, mowing, and gate or park attendants. Also includes operations costs for buildings, grounds, landscaping, removal of hazardous trees, control of vegetation, roads, bridges, parking areas, grills, tables, trails, playgrounds and permanent operating equipment utilized for recreation purposes;

to perform reservoir inspections and patrols for recreation purposes;

of project-owned permanent facilities for recreation purposes;

of all tools and permanent operating equipment including direct costs of automotive and other equipment assigned to the recreation function. Vehicle accounts will be maintained by group classifications as provided for Revolving Fund vehicles.

Costs previously included in 60512, Operations and Management for the Recreation Function using Special Recreation Users Fee (SRUF) Funds, should be included here.

Costs previously included here for Visitor Centers operations and management should now be included in Work Category Code 60514.

**WORK CATEGORY CODE:**

60513 - Operations for the Recreation Function - Law Enforcement Agreements

**WORK CATEGORY DESCRIPTION:** Operations for recreation features - Costs and Supervision of Law Enforcement Agreements.

Includes all costs for cooperative agreements for law enforcement with states and their political subdivisions under PL 94-587, and all costs for technical and administrative charges, including project and district costs for administration of law enforcement agreements and activities.

**WORK CATEGORY CODE:** 60514 – Operation/management of Visitor Centers

**WORK CATEGORY DESCRIPTION:** Operations and Management of Visitors Centers.

Includes all costs for the management and operation; necessary materials, supplies, equipment, transportation and rental costs associated with operations; associated hired labor and contract support; routine materials and supplies; and other costs of visitor centers. Includes all costs associated with visitor center operations, such as all personnel costs, custodial duties, supporting costs of cooperating associations, snow, ice and debris removal, lawn and shrubbery maintenance, landscaping, utilities, exhibits, grounds, heating and cooling systems, audio visual programs, building material, and equipment costs. These costs were formerly included in WCC 60511

**WORK CATEGORY CODE:** 60520 - Studies and Surveys for the Recreation Function

**WORK CATEGORY DESCRIPTION:** Studies and Surveys for recreation features.

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Includes all costs to prepare visitor surveys, reports or studies related to the operation, maintenance and rehabilitation of recreation facilities.

WORK CATEGORY CODE: **60530**

WORK CATEGORY DESCRIPTION: Reserved.

WORK CATEGORY CODE: **60541** - Water Management (Control and Quality) Activities for Recreation - Analysis and Studies

WORK CATEGORY DESCRIPTION: Water Management (Control and Quality) Activities - Analysis, Studies and Regulation Instructions for recreation features.

Includes all costs for personnel and space to manage the hydrologic, hydraulic and meteorological data required for water control and quality activities in accordance with the current water control/quality plan; all costs to prepare routine regulation instructions and runoff forecasts, coordinate with other agencies and entities, prepare water control manuals, disseminate water control information, training, travel and other associated costs required to make sound water control management decisions; all costs for reservoir and river analyses to improve the quality of water within and downstream from the reservoirs; and all costs related to studies of the means to mitigate water quality problems and studies to determine present and future water quality needs. Also includes all costs for water management studies to improve efficiency or mitigate constraints on approved plans of regulation, annual updating of notification lists, and funds transferred to other agencies and any similar items needed to accomplish this activity. This includes development of the water quality component of water control manuals and daily decisions on multi-level releases and pro-rata share of office and computer facilities and other related costs associated with water management. Included also are costs to calibrate and make operational the forecasting and decision support models within the new Corps Water Management System (CWMS). Costs for data collection are included in Work Category Code 60542.

WORK CATEGORY CODE: **60542** - Water Management (Control and Quality) Activities for Recreation - Operation of Water Control Data Systems

WORK CATEGORY DESCRIPTION: Water Management (Control and Quality) Activities - Operation of Water Control Data Systems including Data Collection for recreation features.

Includes all costs for the operation of equipment, personnel and space to collect and process the hydrologic, hydraulic and meteorological data required for water control and quality activities in accordance with the current plan, data collection, and pro-rata share of office and computer facilities and other related costs associated with operations of water management data systems including the new Corps Water Management System (CWMS). Includes all costs to coordinate with other agencies and entities, training, travel, funds transferred to other agencies and other associated costs required for operation of water management data systems. Costs for purchase and maintenance of new water control data systems equipment are included in Work Category Code 61540.

WORK CATEGORY CODE: **60550** - Real Estate Management for the Recreation Function

WORK CATEGORY DESCRIPTION: Real Estate Management including Compliance, and Utilization Inspections for recreation features.

Includes all costs, including contractual services, incident to granting to others the use of and performing inspections of property used for recreational purposes such as commercial concessions, public park and



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recreation, quasi-public and group camps. Also includes granting use of and performing inspections of property granted and reserved to others for purposes such as road, street, waterline, power line, and communication rights-of-way and other uses covered by easement, licenses, and permits that impact the recreational features of a project. Includes report preparation, determination of compliance after vacation of property subsequent to expiration or revocation of grant, and corrective measures where non-compliance is noted. Also includes appraisals, surveys, mapping, negotiations, preparation and execution of outgrant's, renewal, extension, cancellation/termination documents, responses to request for use of real or related personal property, Executive Order surveys and public land withdrawals (applies to the 11 western states) on lands that support the recreational features of a project. Includes costs of utilization inspections of real property used for recreation under the control of or subject to a service agreement with the Corps of the Government and real property accountability, including real property inventory updates and preparation of annual civil-owned property reports (GSA 1166) for lands that support the recreation program of a project.

**WORK CATEGORY CODE:** 60550 - Real Estate Management for the Recreation Function

**WORK CATEGORY DESCRIPTION:** Real Estate Management including Compliance, and Utilization Inspections for recreation features.

Includes all costs, including contractual services, incident to granting to others the use of and performing inspections of property for purposes such as commercial concessions, industrial uses, public park and recreation, quasi-public and group camp use, fish and wildlife habitat management, selected agricultural and grazing uses and reconveyance clauses (restrictions) in deeds. Also includes granting use of and performing inspections of property granted and reserved to others for purposes such as road, street, waterline, powerline, and communication rights-of-way, as well as requests to drill for oil or gas on Government owned property where no oil or gas lease is required, and other uses covered by easements, licenses, and permits. Includes report preparation, determination of compliance after vacation of property subsequent to expiration or revocation of grant, and corrective measures where non-compliance is noted. Also includes appraisals, surveys, mapping, negotiations, preparation and execution of outgrants, renewal, extension, cancellation/termination documents, responses to request for use of real or related personal property, Executive Order surveys and public land withdrawals (applies to the 11 western states). Includes costs of utilization inspections of real property under the control of or subject to a service agreement with the Corps or the Government and real property accountability, including real property inventory updates and preparation of annual civil-owned property reports (GSA 1166).

**WORK CATEGORY CODE:** 60560 - Environmental Compliance Management for the Recreation Function

**WORK CATEGORY DESCRIPTION:** Environmental Compliance Management for recreation features.

**WORK CATEGORY DESCRIPTION:** Environmental Compliance Management for Recreation features. Includes all Recreational operational costs to comply with applicable Federal laws and regulations, including the Safe Drinking Water Act, Resource Conservation and Recovery Act (RCRA), Clean Air Act, Hazardous Materials Transportation Act, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), EO 13148, and applicable state and local regulations for recreation facilities and visitor centers. Includes cost to complete annual environmental compliance assessment, external and internal as inspections and findings related to recreational activities and in accordance with Federal, DOD and Corps of Engineers requirements are described in the ERGO/TEAM environmental assessment manuals. Includes all costs associated with management and oversight of environmental compliance for recreation operations activities such as maintenance shops that support recreation, inspection of outgrants and concessions such as marinas, personnel training and management plans in spill prevention, hazard communication, pollution prevention, hazardous material,

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water resources, storage and handling of oil and pesticide management that support recreational activities. Includes costs associated with implementing and maintaining an Environmental Management System (EMS) for the recreational activities and support facilities (may be cost shared with other functions). Costs include salaries, training, materials, supplies, regulatory fees, drinking water and waste analysis, inspection of waste collection and disposal facilities, and internal and external environmental compliance assessments. Costs associated with medical surveillance and other employee health and safety requirements are not included.

WORK CATEGORY CODE: **60570**

WORK CATEGORY DESCRIPTION: Reserved.

WORK CATEGORY CODE: **60580**

WORK CATEGORY DESCRIPTION: Reserved.

WORK CATEGORY CODE: **60591** – Facility Security Assessments for Recreation

WORK CATEGORY DESCRIPTION: Facility Security – Assessments, reviews, studies and analyses for recreation features.

Includes all costs to conduct and prepare security risk assessments, reviews, evaluations, studies and analyses for facility security related to criminal and terrorist activities. Includes costs to evaluate threats, consequences and security system effectiveness for recreation features. Also includes costs to prepare or revise Emergency Action Plans and plans to address facility protection and security, training and appropriate coordination with other agencies as they relate to criminal and terrorist activities. Costs for guards and surveillance activities are included in Work Category Code 60592, and costs to acquire, install and maintain structural and physical improvements for security are included in Work Category Code 61590.

WORK CATEGORY CODE: **60592** – Facility Security Guards, Monitoring Activities for Recreation

WORK CATEGORY DESCRIPTION: Facility Security – Guards and Monitoring Activities for recreation features.

Includes all costs for guards and security system monitoring activities including training of personnel for facility security related to criminal and terrorist activities. Costs for assessments are included in Work Category Code 60591, and costs to acquire, install and maintain structural and physical improvements for security are included in Work Category Code 61590.

WORK CATEGORY CODE: **60610** - Joint Activities for Operations, FERC #535, #537, #538 and #539

WORK CATEGORY DESCRIPTION: Joint costs for Operations activities NOT specific to Navigation, Flood Risk Management, Hydropower, Environmental Stewardship, Recreation and Water Supply. These activities may include the operation of Dams, Reservoirs, Levees, Other Non-Dam Multi-purpose Structures, Pumping Plants, Service Facilities (Buildings, Grounds, Utilities, and Roads, Railroads and Bridges), gates, conduits, Permanent Operating Equipment, etc.

Includes all joint costs for the operation routine materials, supplies, equipment and transportation costs; hired labor and contract support associated with operations; and other costs:

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of dam structures and appurtenant equipment such as spillway gates, intake and outlet works, and sluiceways for reservoir regulation; removing and disposing of ice, snow, trash, and debris on or in the vicinity of the dam or dam structures; cleanup of dam structures and facilities; routine testing and adjustment of gauges, meters, instruments, and relays in dam structures; disposal and control of weeds, brush, trees, and aquatic growth in the vicinity of dam structures; and grass cutting on earth-fill dams. Includes costs for dam safety/failure training of project personnel, preparation of flood emergency plans, dam contingency plans, dam surveillance plans, and provision for technical assistance to local interests concerning dam failure. When this account includes municipal or industrial water delivery activities, a separate sub-element should be established in CEFMS to record appropriate costs for each such facility for cost allocation purposes;

to perform reservoir inspections and patrols, removal and control of trash and debris (excluding major periodic or one-time removal of growth and debris from the reservoir which should be included in maintenance accounts); minor bank erosion control; minor cleaning of reservoir area for weeds, brush, trees, and aquatic growth; boundary surveillance and routine, recurring maintenance of boundary monumentation at projects without natural resource activities, insect control and elimination of health and safety hazards;

of levees and other non-dam multi-purpose structures; vegetation control, removal of snow and ice from multi-purpose structures;

of pumping plants, pumps and associated equipment; collecting and maintaining operational records; routine replacement, purification and testing of insulating, lubricating and hydraulic oils; lubricants and lubricating equipment; minor maintenance of electrical equipment, cleaning, testing, and adjustment of motor starters, relays, meters, and similar equipment; minor maintenance of pumps, motors, engines, trash raking equipment, gate hoists, gates, fire fighting, and other equipment required for operation; minor maintenance of buildings, roads, and grounds; removal of debris, ice, and snow;

of project-owned permanent facilities such as administration and shop buildings, storage and garage buildings and areas, community buildings, local streets and sidewalks, landscaping, utility facilities such as electric, gas, water, and sewage, all security and protective measures, and permanent roads, including the road across the top of the dam, and parking areas near the dam, railroads, and bridges required for access and other purposes in connection with the operation of a project. It also includes bridges provided as a project feature for the passage of highway and railway traffic over improved channels. Direct costs included are snow and ice removal from project roads, parking areas and walkways; sanding and salting project roads, parking areas and walkways; minor patching, signs, ditch cleaning, culvert cleaning and similar duties; bridge operation; cleanup of project roads, railroads, and bridges. Where space in other basic structures, such as a dam or powerhouse, is used in lieu of any above mentioned facilities, such allocated space is not separated from the basic structure. Buildings which house operating machinery and serve other purposes as well are included in this activity, but the costs to operate the machinery is charged to the appropriate Work Categories. Buildings which house specific operating machinery, spare parts, equipment, etc., will be charged to the appropriate Work Categories of all tools and equipment, including laboratory, shop, warehousing, communications, surveys, and transportation equipment, office furniture and equipment. Project owned sedimentation and degradation measuring facilities, rainfall and stream-gauging devices, fixed sand bypassing systems, and like equipment are also included. Includes direct costs of automotive and other equipment not assigned to specific features. Vehicle accounts will be maintained by group classifications as provided for Revolving Fund vehicles. Operating costs of permanent equipment assigned to specific functions will be charged to those functions.

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**WORK CATEGORY CODE:**     **60621** - Joint Activities for Studies and Surveys, FERC #535, #537, #538 and #539

**WORK CATEGORY DESCRIPTION:** Joint costs for Studies and Surveys including project condition surveys, dredging studies, etc. NOT specific to Navigation, Flood Risk Management, Hydropower, Environmental Stewardship, Recreation and Water Supply.

Includes all joint costs to perform studies or surveys for multi-purpose projects including sedimentation conditions and dredging studies.

**WORK CATEGORY CODE:**     **60622** - Joint Activities for Studies and Surveys - Major Rehabilitation Evaluation Reports, FERC #537

**WORK CATEGORY DESCRIPTION:** Joint costs for Studies and Surveys - Major Rehabilitation Evaluation Reports NOT specific to Navigation, Flood Risk Management, Hydropower, Environmental Stewardship, Recreation and Water Supply.

Includes all joint costs for major rehabilitation evaluation reports. Operation and Maintenance (O&M) funds are to be used only until Construction (C) funds are allocated to the project.

**WORK CATEGORY CODE:**     **60631** - Joint Activities for Instrumentation, Data Collection and Analysis for Dam Safety, FERC #537

**WORK CATEGORY DESCRIPTION:** Joint costs of Instrumentation for Engineering Analysis and Continuing Evaluation Data Gathering Inspections, and Data Analysis for Dam Safety NOT specific to Navigation, Flood Risk Management, Hydropower, Environmental Stewardship, Recreation and Water Supply.

Includes all joint costs for the operation of instruments in existing dam structures for safety evaluation and all costs of obtaining, analyzing and reporting instrumentation data for purposes consistent with an approved plan. This includes instrumentation for measuring horizontal and vertical movement, stresses and strains, pore pressure, phreatic surfaces, seismic effects, and seepage clarity and quality.

**WORK CATEGORY CODE:**     **60632** - Joint Activities for Formal Periodic Inspections and Reports for Dam Safety, FERC #537

**WORK CATEGORY DESCRIPTION:** Joint costs for Formal Periodic Inspections and Reports for Dam Safety NOT specific to Navigation, Flood Risk Management, Hydropower, Environmental Stewardship, Recreation and Water Supply.

Includes all joint costs related to the scheduled periodic inspections and reporting of projects and bridges needed to meet inspection frequency requirements of ER 1110-2-100 as follows:

(a) Dams, locks and dams, initial and second inspections if funded under O&M General, and high hazard structures.

(b) Public Bridges.

(c) Structures whose failure would be a major loss to the national infrastructure or cause severe economic distress.

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(d) Other projects where known conditions warrant inspections at a frequency more often than normal.

WORK CATEGORY CODE: **60633** - Joint Activities for Dam Safety Assurance Studies, FERC #537

WORK CATEGORY DESCRIPTION: Joint costs for Dam Safety Assurance Studies NOT specific to Navigation, Flood Risk Management, Hydropower, Environmental Stewardship, Recreation and Water Supply.

Includes all joint costs of reconnaissance studies and special engineering investigations for known or suspected dam safety deficiencies, e.g. seismic evaluations, seepage studies, erosion studies, etc.

WORK CATEGORY CODE: **60641** - Joint Activities for Water Management (Control and Quality) - Analysis and Studies, FERC #537

WORK CATEGORY DESCRIPTION: Joint costs for Water Management (Control and Quality) Activities - Analysis, Studies and Regulation Instructions NOT specific to Navigation, Flood Risk Management, Hydropower, Environmental Stewardship, Recreation and Water Supply.

Includes all joint costs for personnel and space to manage the hydrologic, hydraulic and meteorological data required for water control and quality activities in accordance with the current water control/quality plan; costs to prepare routine regulation instructions and runoff forecasts, coordinate with other agencies and entities, prepare water control manuals, disseminate water control information, training, travel and other associated costs required to make sound water control management decisions; costs for reservoir and river analyses to improve the quality of water within and downstream from the reservoirs; and costs related to studies of the means to mitigate water quality problems and studies to determine present and future water quality needs. Also includes costs for water management studies to improve efficiency or mitigate constraints on approved plans of regulation, annual updating of notification lists, and funds transferred to other agencies and any similar items needed to accomplish this activity. This includes development of the water quality component of water control manuals and daily decisions on multi-level releases and pro-rata share of office and computer facilities and other related costs associated with water management. Included also are costs to calibrate and make operational the forecasting and decision support models within the new Corps Water Management System (CWMS). Joint costs for data collection are included in Work Category Code 60642.

WORK CATEGORY CODE: **60642** - Joint Activities for Water Management (Control and Quality) - Operation of Water Control Data Systems, FERC #537

WORK CATEGORY DESCRIPTION: Joint costs for Water Management (Control and Quality) Activities - Operation of Water Control Data Systems NOT specific to Navigation, Flood Risk Management, Hydropower, Environmental Stewardship, Recreation and Water Supply.

Includes all joint costs for the operation of equipment, personnel and space to collect and process the hydrologic, hydraulic and meteorological data required for water control and quality activities in accordance with the current plan, data collection, and pro-rata share of office and computer facilities and other related costs associated with operations of water management data systems including the new Corps Water Management System (CWMS). Includes costs to coordinate with other agencies and entities, training, travel, funds transferred to other agencies and other associated costs required for operation of water management data systems. Costs for purchase and maintenance of new water control data systems equipment are included in Work Category Code 61640.

WORK CATEGORY CODE: **60650** - Joint Activities for Real Estate Management, FERC #539

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**WORK CATEGORY DESCRIPTION:** Joint costs for Real Estate Management including Compliance, and Utilization Inspections NOT specific to Navigation, Flood Risk Management, Hydropower, Environmental Stewardship, Recreation and Water Supply.

Includes all joint costs, including contractual services, incident to granting to others the use of and performing inspections of property for purposes such as commercial concessions, industrial uses, public park and recreation, quasi-public and group camp use, fish and wildlife habitat management, selected agricultural and grazing uses and reconveyance clauses (restrictions) in deeds. Also includes granting use of and performing inspections of property granted and reserved to others for purposes such as road, street, waterline, powerline, and communication rights-of-way, as well as requests to drill for oil or gas on Government owned property where no oil or gas lease is required, and other uses covered by easements, licenses, and permits. Includes report preparation, determination of compliance after vacation of property subsequent to expiration or revocation of grant, and corrective measures where non-compliance is noted. Also includes appraisals, surveys, mapping, negotiations, preparation and execution of outgrants, renewal, extension, cancellation/termination documents, responses to request for use of real or related personal property, Executive Order surveys and public land withdrawals (applies to the 11 western states). Includes costs of utilization inspections of real property under the control of or subject to a service agreement with the Corps or the Government. Includes reconciliation of financial records with flood risk management land and mineral lease receipts, and real property accountability, including real property inventory updates and preparation of annual civil-owned property reports (GSA 1166).

**WORK CATEGORY CODE:**     **60660** - Joint Activities for Environmental Compliance Management, FERC #539

**WORK CATEGORY DESCRIPTION:** Joint costs for Environmental Compliance Management activities NOT specific to Navigation, Flood risk management, Hydropower, Environmental Stewardship, Recreation and Water Supply.

Includes all joint operational costs to comply with applicable Federal laws and regulations, including the Safe Drinking Water Act, Resource Conservation and Recovery Act (RCRA), Clean Air Act, Hazardous Materials Transportation Act, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), EO 13148, and applicable state and local regulations. Includes cost to complete annual environmental compliance assessment, external or internal. Federal, DOD and Corps of Engineers requirements are described in the ERGO/TEAM environmental assessment manuals. Includes all costs associated with management and oversight of environmental compliance for operations activities. Includes costs associated with implementing and maintaining an Environmental Management System (EMS). Costs include salaries, training, materials, supplies, regulatory fees, drinking water and waste analysis, inspection of waste collection and disposal facilities, and internal and external environmental compliance assessments. Costs associated with medical surveillance and other employee health and safety requirements are not included.

**WORK CATEGORY CODE:**     **60670**

**WORK CATEGORY DESCRIPTION:** Reserved.

**WORK CATEGORY CODE:**     **60680**

**WORK CATEGORY DESCRIPTION:** Reserved.

**WORK CATEGORY CODE:**     **60691** – Joint Activities for Facility Security Assessments

**WORK CATEGORY DESCRIPTION:** Joint Costs for Facility Security – Assessments, reviews, studies

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and analyses NOT specific to Navigation, Flood Risk Management, Hydropower, Environmental Stewardship, Recreation and Water Supply.

Includes all joint costs to conduct and prepare security risk assessments, reviews, evaluations, studies and analyses for facility security related to criminal and terrorist activities. Includes costs to evaluate threats, consequences and security system effectiveness. Also includes costs to prepare or revise Emergency Action Plans and plans to address facility protection and security, training and appropriate coordination with other agencies as they relate to criminal and terrorist activities. Joint costs for guards and surveillance activities are included in Work Category Code 60692, and joint costs to acquire, install and maintain structural and physical improvements for security are included in Work Category Code 61690.

**WORK CATEGORY CODE:**     **60692** – Joint Activities for Facility Security Guards, Monitoring Activities

**WORK CATEGORY DESCRIPTION:** Joint Costs for Facility Security – Guards and Monitoring Activities NOT specific to Navigation, Flood Risk Management, Hydropower, Environmental Stewardship, Recreation and Water Supply.

Includes all joint costs for guards and security system monitoring activities including training of personnel for facility security related to criminal and terrorist activities. Joint costs for assessments are included in Work Category Code 60691, and joint costs to acquire, install and maintain structural and physical improvements for security are included in Work Category Code 61690.

**WORK CATEGORY CODE:**     **60711** - National Emergency Preparedness Program (NEPP) - Continuity of Operations

**WORK CATEGORY DESCRIPTION:** National Emergency Preparedness Program (NEPP) - Continuity of Operations activities.

Includes all costs required to develop, maintain and exercise Continuity of Operations Plans (COOP). Includes personnel and contracting costs for development of plans and Standard Operating Procedures (SOPs), training, participation in exercises and program management associated with USACE relocation and reconstitution missions as a result of either a natural or manmade (caused) disaster or emergency.

**WORK CATEGORY CODE:**     **60712** - National Emergency Preparedness Program (NEPP) - National Preparedness Planning

**WORK CATEGORY DESCRIPTION:** National Emergency Preparedness Program (NEPP) - National Preparedness Planning activities.

Includes all costs associated with, or in support of, deliberate planning for assigned catastrophic disaster response plans which ensure that Corps MSCs and districts can support the Nation during national emergency events. Includes personnel and contracting costs for deliberate planning, development of Standard Operating Procedures (SOPs), training, exercises, program management and coordination with related Federal, State, and local entities. Also includes costs associated with preparedness planning for Port Readiness and Military Assistance to Civil Disturbances.

**WORK CATEGORY CODE:**     **60713** - National Emergency Preparedness Program (NEPP) - Support of Emergency Operations Centers (EOCs)

**WORK CATEGORY DESCRIPTION:** National Emergency Preparedness Program (NEPP) - Support of Emergency Operations Centers (EOCs)

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WORK CATEGORY CODE: **60714** - National Emergency Preparedness Program (NEPP) -  
Emergency Water Program

WORK CATEGORY DESCRIPTION: National Emergency Preparedness Program (NEPP) - Emergency  
Water Program.

Includes all personnel and contracting costs for those activities required to execute E.O. 12656 related to  
the Emergency Water Program. (For HQUSACE use only.)

WORK CATEGORY CODE: **60715** - National Emergency Preparedness Program (NEPP) - Continuity  
of Government

WORK CATEGORY DESCRIPTION: National Emergency Preparedness Program (NEPP) - Continuity of  
Government.

Includes all personnel and contracting costs for those activities associated with Continuity of Government,  
including plans to support the Federal Emergency Management Agency (FEMA) and other Federal, State  
and local agencies in their efforts to reestablish civil authority lost as a result of natural or manmade  
(caused) disaster or an attack on the United States. (For HQUSACE use only as directed.)

WORK CATEGORY CODE: **60716** - National Emergency Preparedness Program (NEPP) - Training  
and Exercises

WORK CATEGORY DESCRIPTION: National Emergency Preparedness Program (NEPP) - Training and  
Exercises.

Includes all costs for the development of and the participation in catastrophic disaster training and  
exercises in the inter- and intra-agency arena.

WORK CATEGORY CODE: **60811** - Operations for Water Supply

WORK CATEGORY DESCRIPTION: Operations of Project Gates, Specific Water Supply Conduits,  
Permanent Operating Equipment, etc. for water supply features.

Includes all costs for the operation; necessary materials, supplies, equipment and transportation costs  
associated with operations; associated hired labor and contract support; routine materials and supplies;  
and other costs: of project gates, specific water supply conduits and permanent operating equipment  
specifically for water supply. Prior to FY07, these costs have been included in WCC 60210.

WORK CATEGORY CODE: **60812** - Water Supply Agreements

WORK CATEGORY DESCRIPTION: Development and Renegotiation of Water Supply Agreements.

Includes all labor and associated costs involved in the development of new water supply agreements and  
for costs required for existing water supply agreements such as billings and collections including  
delinquencies, lawsuits and modifications and renegotiations of such agreements. Prior to FY07, these  
costs have been included in WCC 60210.

WORK CATEGORY CODE: **60820** - Studies and Surveys for the Water Supply Function



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WORK CATEGORY DESCRIPTION: Studies and Surveys for water supply features.

Includes all costs to prepare new or continuing reports associated with the reallocation of an existing project purpose to water supply. Prior to FY07, these costs have been included in WCC 60221.

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d. **Work Category Codes and Definitions – O&M Maintenance Accounts.** The Maintenance functions are broken down into Work Category Codes, together with a description of work to be performed. See Table C-4-5 below

TABLE C-4-5

Work Category Codes and Definitions  
Maintenance Accounts By Business Line:

Navigation (611--)  
Flood Risk Management (612--)  
Hydropower (613--)  
Environmental Stewardship (614--)  
Recreation (615--)  
Joint Activities (616--)  
Reserved (617--)  
Water Supply (618--)

A Breakdown of Work Category Codes (WCCs) and descriptions under these functions is on the following pages:

**WORK CATEGORY CODE:**

61110 - Maintenance for the Navigation Function

**WORK CATEGORY DESCRIPTION:** Maintenance of Locks, Dams, Reservoirs, Dikes, Revetments, Breakwaters, Jetties, Seawalls, Piers, Levees and Similar Structures, Service Facilities, Permanent Operating Equipment, etc. excluding dredging activities for navigation features.

Includes all direct costs for the maintenance and repair, replacement, additions and efficiency improvements to, or retirement of; related costs for spare parts, replacements, additions, special tools, miscellaneous supplies and materials; government plant and hired labor for project maintenance and contract support, transportation costs and other costs required to perform this maintenance function; purchase of permanent operating equipment for non-Water Management activities:

of lock and salt water control structures and facilities for passage of waterborne traffic, including gates, valve operating machinery, lock walls, and guide and guard-walls including dolphins within the lock approaches for tie up, guard, or guide purposes;

of facilities and equipment for dams, spillways, outlet works and auxiliary dams;

of reservoirs and facilities including floating trash booms, trash racks, erosion control, drainage, major periodic or one time removal of debris or aquatic growth to ensure proper functioning of the reservoir (minor and routine removal of growth and debris in the vicinity of dam structures and from reservoirs should be charged to Work Category Code 60110); rim grouting or mine sealing, etc., to prevent leakage;

of revetments, dikes, groins, breakwaters, jetties, seawalls, piers, levees and similar structures provided in seas, lakes, rivers, canals, exposed tidal waters, and harbors;

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of non-dredging navigation channel maintenance including snagging, clearing, aquatic plant removal, removal of sunken vessels, drift removal, rock and other debris removal;

of buildings, grounds, utilities, and roads, railroads and bridges, such as administration and shop buildings, storage and garage buildings and areas, other non-leased or rented project buildings, local streets and sidewalks, project access roads, including the road across dams, parking areas, bridges, railroads, and walkways. Also includes direct costs for project utilities including electrical, gas, water, and sewer systems;

of permanent operating equipment;

of buildings, grounds and utilities that are part of the hydraulic models in South Pacific Division;

and for instrumentation on lock facilities and dam structures including all costs for the installation and maintenance of instruments in existing structures for safety evaluation purposes consistent with an approved plan. This includes instrumentation for measuring horizontal and vertical movement, stresses and strains, pore pressure, phreatic surfaces, seismic effects, and seepage clarity and quality.

**WORK CATEGORY CODE: 61121 - Dredging Activities for the Navigation Function**

**WORK CATEGORY DESCRIPTION:** Dredging of Channels and Canals for navigation activities including all disposal activities. Disposal activities include, but are not limited to, confined, open water, beach, wetland creation, aquatic habitat creation, etc.

Includes all costs for maintenance dredging and disposal activities of navigation channels and canals, except project condition sediment survey costs which are included in Work Category Code 60121. Includes costs for before, during and after dredging surveys, required real estate activities, E&D, S&A, etc. Also included are costs to obtain environmental clearances to perform the associated dredging. Costs for long-range environmental requirements are included in Work Category Code 60123. This Work Category also includes all costs associated with the disposal of dredged materials in confined disposal facilities; open water; sand on beaches; creation or restoration of wetlands or other aquatic habitat using dredged material; creation of land using dredged material. Also includes related costs for spare parts, special tools, miscellaneous materials and supplies, transportation, disposal, and equipment.

**NOTE:** Line item submissions for Corps-owned hopper dredges should be separate from line item submissions for any other dredges.

**WORK CATEGORY CODE: 61122 - Dredging - Construction and Maintenance of Dredged Material Disposal Facilities for the Navigation Function**

**WORK CATEGORY DESCRIPTION:** Construction and Maintenance of Disposal Facilities for Dredged Materials for navigation features.

Includes all costs for the construction and the maintenance of dredged material disposal facilities including confined disposal facilities, and costs for required real estate activities. Also includes related costs for spare parts, replacements, special tools, miscellaneous materials and supplies, transportation, and equipment usage. **This does not include cost to prepare Dredge Material Management Plans (DMMP). DMMP costs should be allocated to WCC 60123**

**WORK CATEGORY CODE: 61130 – Dam Safety Remediation of Deficiencies for the Navigation Function**

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**WORK CATEGORY DESCRIPTION:** Remediation of Safety Deficiencies for Dams, Levees and Other Structures as appropriate for navigation features.

Includes all direct costs for the non-routine repair, replacement and corrections to all dams included in the National Inventory of Dams plus any levees, diversion structures and related appurtenances maintained at Federal expense to remediate dam safety deficiencies. Includes related costs for contracts, parts, replacements, special tools, supplies and materials, government plant, hired labor to include contract support, transportation costs and other costs required to perform this work. Specifically, this includes non-routine maintenance and/or repair work for dams and pertinent structures and levees that have either been identified by any means as having a Dam Safety Deficiency or has been concurred to be deficient by the District Commander, his appointed Dam Safety Officer or District Dam Safety Program Manager. Dam Safety maintenance or repair work may be identified by any means such as a study, criteria review, or any scheduled or unscheduled inspection. Dam safety related work such as inspections, inspection reports, rehabilitation reports, studies, surveys, and instrumentation will be categorized under the existing Work Category Codes in accordance with current practice. Only the actual work to include the associated plans and specifications (P&S), engineering and design (E&D) for the repairs or remedial corrections will be included in this Work Category Code as appropriate. For those business programs that do not specifically have a Work Category Code for Dam Safety (61130, 61230 and 61330) yet may encounter dam safety related work, the costs should be included in the primary business program for that project. In previous years these costs were included in WCC 61110. Costs are only included in this Work Category Code if they meet the above definition for Dam Safety. Costs for regular, recurring maintenance activities will not be included in this WCC.

**WORK CATEGORY CODE:**     **61140** - Water Management (Control and Quality) Equipment for the Navigation Function

**WORK CATEGORY DESCRIPTION:** Purchase and Maintenance of Water Management (Control and Quality) Equipment for navigation features.

Includes all costs for the purchase of new or replacement hardware, software, and equipment (upgrades, betterments, or expansion) and the maintenance of existing equipment used to acquire, process, display, and distribute data associated with project water management and regulation (water control and quality). This includes only those costs related to equipment justified in approved Division water management Master plans. Purchase of multi-project equipment will be included in the Revolving Fund (PRIP). This includes PRIP payback for equipment purchase, software development, and system betterment for the new Corps Water Management System (CWMS). This also includes costs for maintenance and support of CWMS.

**WORK CATEGORY CODE:**     **61151** - Real Estate - Land Acquisition and Disposal Management Activities, Settlement of Claims, and Audits for the Navigation Function

**WORK CATEGORY DESCRIPTIONS:** Real Estate - Land Acquisition and Disposal Management Activities, Settlement of Claims, and Audits for navigation features.

Includes all costs for planning, appraisal, negotiation, condemnation, relocation assistance, mapping, surveying, title evidence, inspections, closings, audits and temporary permits necessary to acquire or dispose of lands and interests. Also includes real estate payments for acquisition of real property and interests therein. Costs to take necessary actions to settle claims, including damage payments arising from claims over the use and occupancy of land, real property and timber in which fee, easements, or lesser interests were not acquired. Includes all administrative costs incurred in connection with timber disposal in support of forest management activities, such as contract administration, and inspection, but excludes the staff supervision of timber management, which is included in Work Category Code 60411.

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**WORK CATEGORY CODE:**     **61152 - Real Estate - Resolution of Real Estate Encroachments for the Navigation Function**

**WORK CATEGORY DESCRIPTIONS:** Real Estate - Resolution of Real Estate Encroachments for navigation features.

Includes all costs for the resolution of all encroachments on project lands, and degradation of public lands and encroachments adversely affecting the intended uses of potentially high use areas; including investigation, acquisition, disposal, and out-granting. The costs for boundary line surveys and remarking are included in Work Category Code 61153.

**WORK CATEGORY CODE:**     **61153 - Real Estate - Boundary Monumentation and Rectification for the Navigation Function**

**WORK CATEGORY DESCRIPTIONS:** Real Estate - Boundary Monumentation and Rectification for navigation features.

Includes all costs to survey and mark boundary lines in support of acquisition; to resurvey or remark boundary lines and place monuments in support of Executive Order actions and disposal actions, and costs to survey and mark boundary lines where not previously completed. Under normal circumstances there will be no work items in the Baseline funding level for this Work Category.

**WORK CATEGORY CODE:**     **61160 - Environmental Compliance (Remedial Actions) for the Navigation Function**

**WORK CATEGORY DESCRIPTION:** Environmental Compliance (remedial actions) for Locks, Dams, Reservoirs, Breakwaters, Jetties, Seawalls, Piers, Levees, Other Control Structures, Pumping Plants, Other Facilities, Channels and Canals for navigation features.

Includes all maintenance, repair and remediation costs to comply with applicable Federal environmental laws and regulations, including the Safe Drinking Water Act, Resource Conservation and Recovery Act (RCRA), Clean Air Act, Hazardous Materials Transportation Act, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), EO 13148, and applicable state and local regulations for locks, dams, reservoirs, breakwaters, jetties, seawalls, piers, levees, other control structures, pumping plants, other facilities, channels and canals. Includes cost for corrective actions related to environmental compliance assessment findings related to the Navigation function. Costs include salaries, contaminant detection, waste analysis, site investigations, site remediation, treatment system installation, repair, renovation, modification, and other costs associated with compliance. Costs associated with medical surveillance and other employee health and safety requirements are not included.

**WORK CATEGORY CODE:**     **61170 - O&M Major Rehabilitation Projects for the Navigation Function**

**WORK CATEGORY DESCRIPTION:** Remaining O&M Funded Major Rehabilitation projects for navigation features.

Includes all major rehabilitation costs such as repair, replacement, additions and efficiency improvements to lock structures and facilities for passage of waterborne traffic, and all costs for facilities and equipment for dams, spillways, outlet works and auxiliary dams including gates, valve operating machinery, lock walls, and guide and guard-walls including dolphins within the lock approaches for tie up, guard, or guide purposes.

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NOTE: Major rehabilitation, deficiency correction, and reconstruction projects are programmed for initial Construction (C) appropriation and Inland Waterways Trust Fund moneys, as appropriate, only after applicable reconnaissance and/or evaluation reports have been approved. Work items for Major

Rehabilitation Evaluation Reports are included in Work Category Code 60122. This Work Category will be used only until O&M funded Major Rehabilitation projects are completed.

WORK CATEGORY CODE: **61180**

WORK CATEGORY DESCRIPTION: Reserved.

WORK CATEGORY CODE: **61191** – Facility Security Maintenance and Replacement for Navigation

WORK CATEGORY DESCRIPTION: Facility Security – Maintenance and Replacement for navigation features.

Includes all costs to maintain and replace structural improvements for facility protection and security related to criminal and terrorist activities. Includes costs to maintain, repair or replace permanent or temporary barriers, fencing, traffic signs, lighting, communications equipment, intrusion detection systems such as video surveillance equipment and cameras, and access control. Costs for assessments are included in Work Category Code (WCC) 60191, and costs for guards and surveillance activities are included in WCC 60192. Costs for improvements and modifications are included in WCC 61192. Includes some costs formerly included in WCC 61190.

WORK CATEGORY CODE: **61192** – Facility Security Physical Improvements and Modifications for Navigation

WORK CATEGORY DESCRIPTION: Facility Security – Physical Improvements and Modifications for navigation features.

Includes all costs for engineering and design, and to acquire and install structural improvements, modifications and physical improvements for facility protection and security related to criminal and terrorist activities. Includes costs for permanent or temporary barriers, fencing, traffic signs, lighting, communications equipment, intrusion detection systems such as video surveillance equipment and cameras, and access control. Includes some costs formerly included in WCC 61190.

WORK CATEGORY CODE: **61211** - Maintenance for the Flood Risk Management Function

WORK CATEGORY DESCRIPTION: Maintenance of Dams, Reservoirs, Levees, Floodwalls, Hurricane Barriers, and Other Flood Risk Management Structures; Snagging, Clearing, Aquatic Plant Removal, Rock and Other Debris Removal, and Other Non-Dredging Flood Risk Management Channel Maintenance; Pumping Plants, Other Service Facilities (Buildings, Grounds, Utilities, and Roads, Railroads and Bridges), Maintenance and Purchase of Permanent Operating Equipment for Non-Water Control Management Activities; etc. excluding dredging for flood risk management features.

Includes all direct costs for the maintenance and repair, replacement, additions and efficiency improvements to, or retirement of; related costs for spare parts, replacements, additions, special tools, miscellaneous supplies and materials; government plant and hired labor for project maintenance and contract support, transportation costs and other costs required to perform this maintenance function; purchase of permanent operating equipment for non-Water Management activities:

of facilities and equipment for dams, spillways, outlet works and auxiliary dams;

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of reservoirs and facilities including floating trash booms, trash racks, erosion control, drainage, major periodic or one-time removal of debris or aquatic growth to ensure proper functioning of the reservoir (minor and routine removal of growth and debris in the vicinity of dam structures and from reservoirs should be charged to Work Category Code 60210); and rim grouting or mine sealing, etc., to prevent leakage;

of levees, floodwalls, hurricane barriers, embankments, walls, in-channel structures, and other flood risk management structures to protect areas from inundation; and snagging, clearing, debris removal, and non-dredging flood risk management channel maintenance. This includes direct costs for removal of trees, brush, accumulated snags, drifts, and debris from canals and waterways for flood risk management and major drainage purposes; and channel improvement structures and revetments, linings, dikes, jetties, bulkheads, and buildings (when provided for flood risk management);

of pumping plants including such items as buildings, pumps, and prime movers including power supplies, controls, piping, and all other associated facilities;

of buildings, grounds, utilities, and roads, railroads and bridges, such as administration and shop buildings, storage and garage buildings and areas, other non-leased or rented project buildings, local streets and sidewalks, project access roads, including the road across dams, parking areas, bridges, railroads, and walkways. Also includes direct costs for project utilities including electrical, gas, water, and sewer systems; of permanent operating equipment;

and for instrumentation on dam structures and levees, floodwalls, hurricane barriers, and other flood risk management structures including all costs for the installation and maintenance of instruments in existing structures for safety evaluation purposes consistent with an approved plan. This includes instrumentation for measuring horizontal and vertical movement, stresses and strains, pore pressure, phreatic surfaces, seismic effects, and seepage clarity and quality.

Costs for Water Supply activities formerly charged to this Work Category Code should now be charged to Work Category Code 61810.

**WORK CATEGORY CODE:**     **61212** - Maintenance of Dikes, Revetments, Breakwaters and Similar Structures for Mississippi River and Tributaries (MR&T) Flood Risk Management

**WORK CATEGORY DESCRIPTION:** Maintenance of Dikes, Revetments, Groins, Breakwaters, Jetties, Seawalls and Similar Structures for MR&T flood risk management purposes.

Includes all costs for the maintenance and repair, replacement, additions and efficiency improvements to, or retirement of revetments, dikes, groins, breakwaters, seawalls, piers, linings, training dikes, bulkheads and similar structures. Also includes related costs for spare parts, replacements, additions, special tools, miscellaneous materials and supplies, transportation costs, equipment usage, associated government plant and hired labor for project maintenance, contract support, and other costs.

**WORK CATEGORY CODE:**     **61221** - Dredging Activities for the Flood Risk Management Function

**WORK CATEGORY DESCRIPTION:** Dredging of Channels and Canals for flood risk management activities including all disposal activities. Disposal activities include, but are not limited to, confined, open water, beach, wetland creation, aquatic habitat creation, etc.

Includes all costs for dredging, excavation and disposal activities for the maintenance and efficiency

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improvements of channels and canals for flood risk management purposes, except project condition sediment survey costs which are included in Work Category Code 60221. Includes the costs for before, during and after dredging surveys, required real estate activities, E&D, S&A, etc. Also included are costs to obtain environmental clearances to perform the associated dredging. This Work Category also includes all costs associated with the disposal of dredged materials in confined disposal facilities; open water; sand on beaches; creation or restoration of wetlands or other aquatic habitat using dredged material; and creation of land using dredged material. Also includes related costs for spare parts, special tools, miscellaneous materials and supplies, transportation, disposal, and equipment.

**WORK CATEGORY CODE:**     **61222** - Dredging - Construction and Maintenance of Disposal Facilities for the Flood Risk Management Function

**WORK CATEGORY DESCRIPTION:** Construction and Maintenance of Disposal Facilities for Dredged Materials for flood risk management features.

Includes all costs for the construction and the maintenance of dredged material disposal facilities including confined disposal facilities, and required real estate activities. Also includes related costs for spare parts, replacements, special tools, miscellaneous materials and supplies, transportation and equipment usage.

**WORK CATEGORY CODE:**     **61230** - Dam Safety Remediation of Deficiencies for the Flood Risk Management Function

**WORK CATEGORY DESCRIPTION:** Remediation of Safety Deficiencies for Dams, Levees and Other Structures as appropriate for navigation features.

Includes all direct costs for the non-routine repair, replacement and corrections to all dams included in the National Inventory of Dams plus any levees, diversion structures and related appurtenances maintained at Federal expense to remediate dam safety deficiencies. Includes related costs for contracts, parts, replacements, special tools, supplies and materials, government plant, hired labor to include contract support, transportation costs and other costs required to perform this work. Specifically, this includes non-routine maintenance and/or repair work for dams and pertinent structures and levees that have either been identified by any means as having a Dam Safety Deficiency or has been concurred to be deficient by the District Commander, his appointed Dam Safety Officer or District Dam Safety Program Manager. Dam Safety maintenance or repair work may be identified by any means such as a study, criteria review, or any scheduled or unscheduled inspection. Dam safety related work such as inspections, inspection reports, rehabilitation reports, studies, surveys, and instrumentation will be categorized under the existing Work Category Codes in accordance with current practice. Only the actual work to include the associated plans and specifications (P&S), engineering and design (E&D) for the repairs or remedial corrections will be included in this Work Category Code as appropriate. For those business programs that do not specifically have a Work Category Code for Dam Safety (61130, 61230 and 61330) yet may encounter dam safety related work, the costs should be included in the primary business program for that project. In previous years these costs were included in WCC 61110. Costs are only included in this Work Category Code if they meet the above definition for Dam Safety. Costs for regular, recurring maintenance activities will not be included in this WCC.

**WORK CATEGORY CODE:**     **61240** - Water Management (Control and Quality) Equipment for the Flood Risk Management Function

**WORK CATEGORY DESCRIPTION:** Purchase and Maintenance of Water Management (Control and Quality) Equipment for flood risk management features.



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Includes all costs for the purchase of new or replacement hardware, software, and equipment (upgrades, betterments, or expansion) and the maintenance of existing equipment used to acquire, process, display, and distribute data associated with project water management and regulation (water control and quality). This includes only those costs related to equipment justified in approved Division water management Master plans. Purchase of multi-project equipment will be included in the Revolving Fund (PRIP). This includes PRIP payback for equipment purchase, software development, and system betterment for the new Corps Water Management System (CWMS). This also includes costs for maintenance and support of CWMS.

**WORK CATEGORY CODE:** **61251** - Real Estate - Land Acquisition and Disposal Management Activities, Settlement of Claims, and Audits for the Flood Risk Management Function

**WORK CATEGORY DESCRIPTIONS:** Real Estate - Land Acquisition and Disposal Management Activities, Settlement of Claims, and Audits for flood risk management features.

Includes all costs for planning, appraisal, negotiation, condemnation, relocation assistance, mapping, surveying, title evidence, inspections, closings, audits and temporary permits necessary to acquire or dispose of lands and interests. Also includes real estate payments for acquisition of real property and interests therein. Costs to take necessary actions to settle claims, including damage payments arising from claims over the use and occupancy of land, real property and timber in which fee, easements, or lesser interests were not acquired. Includes all administrative costs incurred in connection with timber disposal in support of forest management activities, such as contract administration, and inspection, but excludes the staff supervision of timber management, which is included in Work Category Code 60411.

**WORK CATEGORY CODE:** **61252** - Real Estate - Resolution of Real Estate Encroachments for the Flood Risk Management Function

**WORK CATEGORY DESCRIPTIONS:** Real Estate - Resolution of Real Estate Encroachments for flood risk management features.

Includes all costs for the resolution of all encroachments on project lands, and degradation of public lands and encroachments adversely affecting the intended uses of potentially high use areas; including investigation, acquisition, disposal, and out-granting. Costs for boundary line surveys and remarking are included in Work Category Code 61253.

**WORK CATEGORY CODE:** **61253** - Real Estate - Boundary Monumentation and Rectification for the Flood Risk Management Function

**WORK CATEGORY DESCRIPTIONS:** Real Estate - Boundary Monumentation and Rectification for flood risk management features.

Includes all costs to survey and mark boundary lines in support of acquisition; to resurvey or remark boundary lines and place monuments in support of Executive Order actions and disposal actions, and costs to survey and mark boundary lines where not previously completed. Under normal circumstances there will be no work items in the Baseline funding level for this Work Category.

**WORK CATEGORY CODE:** **61260** - Environmental Compliance (Remedial Actions) for the Flood Risk Management Function

**WORK CATEGORY DESCRIPTION:** Environmental Compliance (remedial actions) for Dams, Breakwaters, Jetties, Seawalls, Levees, Floodwalls, Hurricane Barriers, Other Flood Risk Management

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Structures, Pumping Plants, Other Facilities, Channels and Canals for flood risk management features.

Includes all maintenance, repair and remediation costs to comply with applicable Federal environmental laws and regulations, including the Safe Drinking Water Act, Resource Conservation and Recovery Act (RCRA), Clean Air Act, Hazardous Materials Transportation Act, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), EO 13148, and applicable state and local regulations for dams, breakwaters, jetties, seawalls, levees, floodwalls, hurricane barriers, other flood risk management structures, pumping plants, other facilities, channels and canals. Includes cost for corrective actions related to environmental compliance assessment findings related to flood risk management activities. Costs include salaries of environmental compliance coordinators and administration, contaminant detection, waste analysis, site investigations, site remediation of recent and past releases or contamination resulting from Flood Risk Management activities; treatment system installation, repair or renovation, erosion protection of structures or pool, responding to spills from FDR facilities, disposal of unclaimed barrels or containers, and responding or clean-up of pesticide or chemical releases that flood risk management activities on Corps or outgranted lands. Costs associated with medical surveillance and other employee health and safety requirements are not included.

WORK CATEGORY CODE: **61270**

WORK CATEGORY DESCRIPTION: Reserved.

WORK CATEGORY CODE: **61280**

WORK CATEGORY DESCRIPTION: Reserved.

WORK CATEGORY CODE: **61291 – Facility Security Maintenance and Replacement for Flood Risk Management**

WORK CATEGORY DESCRIPTION: Facility Security – Maintenance and Replacement for flood risk management features.

Includes all costs to maintain and replace structural improvements for facility protection and security related to criminal and terrorist activities. Includes costs to maintain, repair or replace permanent or temporary barriers, fencing, traffic signs, lighting, communications equipment, intrusion detection systems such as video surveillance equipment and cameras, and access control. Costs for assessments are included in Work Category Code (WCC) 60291, and costs for guards and surveillance activities are included in WCC 60292. Costs for improvements and modifications are included in WCC 61292. Includes some costs formerly included in WCC 61290.

WORK CATEGORY CODE: **61292 – Facility Security Physical Improvements and Modifications for Flood Risk Management**

WORK CATEGORY DESCRIPTION: Facility Security – Physical Improvements and Modifications for flood risk management features.

Includes all costs for engineering and design, and to acquire and install structural improvements, modifications and physical improvements for facility protection and security related to criminal and terrorist activities. Includes costs for permanent or temporary barriers, fencing, traffic signs, lighting, communications equipment, intrusion detection systems such as video surveillance equipment and cameras, and access control. Includes some costs formerly included in WCC 61290.

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**WORK CATEGORY CODE: 61310 (61311-61314)** Maintenance for the Hydropower Function Costs for this function will be sub-divided as follows:

**61311** Maintenance Supervision, FERC #541. Costs for labor, materials and expenses incurred in the general supervision of maintenance of hydraulic power generating stations. Direct supervision of specific jobs is charged to the appropriate maintenance feature;

**61312** Maintenance of Hydraulic Structures, FERC #542. Costs for labor, materials and expenses incurred in the maintenance, repair, replacement, additions and efficiency improvements to, and retirement of the powerhouse, and power intake works whether or not the powerhouse is an integral part of the intake dam;

**61313** Maintenance of Electric Plant, FERC #544. Costs for labor, materials and expenses incurred in the maintenance, repair, replacement, additions and efficiency improvements to, and retirement of the power plant generating and accessory electrical and mechanical equipment, and switchyard electrical and mechanical equipment;

**61314** - Maintenance of Miscellaneous Hydraulic Plant, FERC #545. Costs for labor, materials and expenses incurred in the maintenance, repair, replacement, additions and efficiency improvements to, and retirement of the power plant and switchyard hydraulic plant.

**WORK CATEGORY DESCRIPTION:** Maintenance of Power Plants, excluding dredging for hydropower features.

Includes all costs for power plant maintenance and repair, replacements, additions and efficiency improvements to, and retirement of all power plant structures; of facilities and equipment required for production, transmission, and distribution of electrical power, including but not limited to the power plant, spillway, low flow bypass systems, storage facilities, turbines, motors, pumps, generators, and governors; of all accessory electrical or electronic equipment and control systems; of all water, air, and oil systems; of all intake structures with electrical and mechanical equipment; of the tailrace, switchyard, transformer yard, elevators, trash racks; and of lighting and interior power distribution systems, cable tunnels and conduit runs; and installation of instrumentation. Includes spare parts, special and regular tools, supplies and equipment, scaffolding, and rental of specialized equipment. Includes labor and materials, and incidental expenses incurred to maintain maintenance records; expenses incurred by the power plant management and support staff in the general supervision of the maintenance of the hydraulic generating station; and transportation and per diem costs required to perform power plant maintenance functions. Dredging is included in Work Category Code 61320.

**WORK CATEGORY CODE: 61320** - Dredging Activities for the Hydropower Function, FERC #543

**WORK CATEGORY DESCRIPTION:** Dredging for hydropower activities including all disposal activities.

Includes all costs for maintenance dredging and disposal activities, except project condition sediment survey costs which are included in Work Category Code 60321. It also includes the costs for before, during and after dredging surveys, required real estate activities, E&D, S&A, etc. Also included are costs to obtain environmental clearances to perform the associated dredging. This Work Category also includes related costs for spare parts, special tools, miscellaneous materials and supplies, transportation, disposal, and equipment.

**WORK CATEGORY CODE: 61330** – Dam Safety Remediation of Deficiencies for the Hydropower Function

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**WORK CATEGORY DESCRIPTION:** Remediation of Safety Deficiencies for Dams, Levees and Other Structures as appropriate for hydropower features.

Includes all direct costs for the non-routine repair, replacement and corrections to all dams included in the National Inventory of Dams plus any levees, diversion structures and related appurtenances maintained at Federal expense to remediate dam safety deficiencies. Includes related costs for contracts, parts, replacements, special tools, supplies and materials, government plant, hired labor to include contract support, transportation costs and other costs required to perform this work. Specifically, this includes non-routine maintenance and/or repair work for dams and pertinent structures and levees that have either been identified by any means as having a Dam Safety Deficiency or has been concurred to be deficient by the District Commander, his appointed Dam Safety Officer or District Dam Safety Program Manager. Dam Safety maintenance or repair work may be identified by any means such as a study, criteria review, or any scheduled or unscheduled inspection. Dam safety related work such as inspections, inspection reports, rehabilitation reports, studies, surveys, and instrumentation will be categorized under the existing Work Category Codes in accordance with current practice. Only the actual work to include the associated plans and specifications (P&S), engineering and design (E&D) for the repairs or remedial corrections will be included in this Work Category Code as appropriate. For those business programs that do not specifically have a Work Category Code for Dam Safety (61130, 61230 and 61330) yet may encounter dam safety related work, the costs should be included in the primary business program for that project. In previous years these costs were included in WCCs 61311-61314. Costs are only included in this Work Category Code if they meet the above definition for Dam Safety. Costs for regular, recurring maintenance activities will not be included in this WCC.

**WORK CATEGORY CODE:** **61340** - Water Management (Control and Quality) Equipment for the Hydropower Function, FERC #542

**WORK CATEGORY DESCRIPTION:** Purchase and Maintenance of Water Management (Control and Quality) Equipment for hydropower features.

Includes all costs for the purchase of new or replacement hardware, software, and equipment (upgrades, betterments, or expansion) and the maintenance of existing equipment used to acquire, process, display, and distribute data associated with project water management and regulation (water control and quality). This includes only those costs related to equipment justified in approved Division water management Master plans. Purchase of multi-project equipment will be included in the Revolving Fund (PRIP). This includes PRIP payback for equipment purchase, software development, and system betterment for the new Corps Water Management System (CWMS). This also includes costs for maintenance and support of CWMS.

**WORK CATEGORY CODE:** **61351** - Real Estate - Land Acquisition and Disposal Management Activities, Settlement of Claims, and Audits for the Hydropower Function, FERC #545

**WORK CATEGORY DESCRIPTION:** Real Estate - Land Acquisition and Disposal Management Activities, Settlement of Claims, and Audits for hydropower features.

Includes all costs for planning, appraisal, negotiation, condemnation, relocation assistance, mapping, surveying, title evidence, inspections, closings, audits and temporary permits necessary to acquire or dispose of lands and interests. Also includes real estate payments for acquisition of real property and interests therein. Costs to take necessary actions to settle claims, including damage payments arising from claims over the use and occupancy of land, real property and timber in which fee, easements, or lesser interests were not acquired. Includes all administrative costs incurred in connection with timber disposal in support of forest management activities, such as contract administration, and inspection, but excludes the staff supervision of timber management, which is included in Work Category Code 60411.

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**WORK CATEGORY CODE:** **61352** - Real Estate - Resolution of Real Estate Encroachments for the Hydropower Function, FERC #545

**WORK CATEGORY DESCRIPTION:** Real Estate - Resolution of Real Estate Encroachments for hydropower features.

Includes all costs for the resolution of all encroachments on project lands, and degradation of public lands and encroachments adversely affecting the intended uses of potentially high use areas; including investigation, acquisition, disposal, and out-granting. The costs for boundary line surveys and remarking are not included in this Work Category.

**WORK CATEGORY CODE:** **61353** - Real Estate - Boundary Monumentation and Rectification for the Hydropower Function, FERC #545

**WORK CATEGORY DESCRIPTION:** Real Estate - Boundary Monumentation and Rectification for hydropower features.

Includes all costs to survey and mark boundary lines in support of acquisition; to resurvey or remark boundary lines and place monuments in support of Executive Order actions and disposal actions, and costs to survey and mark boundary lines where not previously completed. Under normal circumstances there will be no work items in the Baseline funding level for this Work Category.

**WORK CATEGORY CODE:** **61360** - Environmental Compliance (Remedial Actions) for the Hydropower Function, FERC #545

**WORK CATEGORY DESCRIPTION:** Environmental Compliance (remedial actions) for Dams, Levees, Other Control Structures, Power Plants, Pumping Plants, and Other Facilities for hydropower features.

Includes all maintenance, repair and remediation costs to comply with applicable Federal environmental laws and regulations, including the Safe Drinking Water Act, Resource Conservation and Recovery Act (RCRA), Clean Air Act, Hazardous Materials Transportation Act, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and applicable state and local regulations for dams, levees, other control structures, power plants, pumping plants, and other facilities. Costs include salaries, contaminant detection, waste analysis, site investigations, site remediation, treatment system installation, repair, renovation, modification, and other costs associated with compliance. Costs associated with medical surveillance and other employee health and safety requirements are not included. Includes cost for corrective actions related to environmental compliance assessment findings related to the Hydropower function

**WORK CATEGORY CODE:** **61370 (61371-61374)** - O&M Major Rehabilitation Projects for the Hydropower Function Costs for this function will be further subdivided as follows:

**61371** - Comprehensive Replacement Supervision, FERC #541. Costs for labor, materials and expenses incurred in the supervision of the comprehensive replacement of hydraulic power generating stations. Direct supervision of specific jobs is charged to the appropriate maintenance feature;

**61372** - Comprehensive Replacement of Structures, FERC #542. Costs for labor, materials and expenses incurred in the comprehensive replacement of the powerhouse, switchyard, and power intake works whether or not the powerhouse is an integral part of the intake dam;

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**61373** - Comprehensive Replacement of Electric Plant, FERC #544. Costs for labor, materials and expenses incurred in the comprehensive replacement of the power plant generating and

accessory electrical and mechanical equipment, and switchyard electrical and mechanical equipment;

**61374** - Comprehensive Replacement of Miscellaneous Hydraulic Plant, FERC # 545. Costs for labor, materials and expenses incurred in the comprehensive replacement of the power plant and switchyard hydraulic plant.

**WORK CATEGORY DESCRIPTION:** Remaining O&M Funded Major Rehabilitation (Comprehensive Replacement) projects for hydropower features.

Includes all costs for comprehensive major rehabilitation, replacement, repair, additions and efficiency improvements, including supervision, of all power plant structures, electric plant, miscellaneous hydraulic plant, power plant intake works; of facilities and equipment required for production, transmission, and distribution of electrical power, including but not limited to the power plant, spillway, low flow bypass systems, storage facilities, turbines, motors, pumps, generators, and governors; of all accessory electrical or electronic equipment and control systems; of all water, air, and oil systems; of all intake structures with electrical and mechanical equipment; of the tailrace, switchyard, transformer yard, elevators, trash racks; and of lighting and interior power distribution systems, cable tunnels and conduit runs. Includes labor and materials, special and regular tools, supplies and equipment, scaffolding, and rental of specialized equipment. See Work Category Codes 61310 (61311-61314) and 613N0 (613N1-613N4).

**NOTE:** Major Rehabilitation work is now funded under the Construction (C) appropriation. Work items for Major Rehabilitation Evaluation Reports are included in Work Category Code 60325. This Work Category will be used only until current O&M funded Major Rehabilitation projects are completed.

**WORK CATEGORY CODE:**     **61380**

**WORK CATEGORY DESCRIPTION:** Reserved.

**WORK CATEGORY CODE:**     **61391** – Facility Security Maintenance and Replacement for Hydropower

**WORK CATEGORY DESCRIPTION:** Facility Security – Maintenance and Replacement for hydropower features.

Includes all costs to maintain and replace structural improvements for facility protection and security related to criminal and terrorist activities. Includes costs to maintain, repair or replace permanent or temporary barriers, fencing, traffic signs, lighting, communications equipment, intrusion detection systems such as video surveillance equipment and cameras, and access control. Costs for assessments are included in Work Category Code (WCC) 60391, and costs for guards and surveillance activities are included in WCC 60392. Costs for improvements and modifications are included in WCC 61392. Includes some costs formerly included in WCC 61390.

**WORK CATEGORY CODE:**     **61392** – Facility Security Physical Improvements and Modifications for Hydropower

**WORK CATEGORY DESCRIPTION:** Facility Security – Physical Improvements and Modifications for hydropower features.

Includes all costs for engineering and design, and to acquire and install structural improvements, modifications and physical improvements for facility protection and security related to criminal and

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terrorist activities. Includes costs for permanent or temporary barriers, fencing, traffic signs, lighting, communications equipment, intrusion detection systems such as video surveillance equipment and cameras, and access control. Includes some costs formerly included in WCC 61390.

**WORK CATEGORY CODE:** **61411** - Maintenance of Natural Resource Facilities for Environmental Stewardship function

**WORK CATEGORY DESCRIPTION:** Maintenance of Natural Resource Facilities.

Includes all costs to perform maintenance needed to foster healthy and sustainable lands and waters, and to conserve and protect natural resources and associated facilities located on project lands. This Work Category only includes costs during the conservation or protection effort.

**WORK CATEGORY CODE:** **61412** - Mitigation of Archeological and Cultural Resources

**WORK CATEGORY DESCRIPTION:** Mitigation of Archeological and Cultural Resources such as Sites, Structures, and Objects.

Includes all costs to manage, curate, maintain and rehabilitate identified archeological collections and associated documentation and long term collections management. Also includes cultural resources mitigation costs to protect, recover, preserve or otherwise mitigate significant archaeological, historical, and cultural buildings, sites, structures or objects. This Work Category only includes costs during the recovery, preservation, or mitigation effort.

**WORK CATEGORY CODE:** **61413** - Maintenance of Natural Resources Mitigation Features for Environmental Stewardship

**WORK CATEGORY DESCRIPTION:** Maintenance of Natural Resources Mitigation Features for Environmental Stewardship.

Includes all costs for the maintenance and repair of natural resources mitigation features to comply with mitigation requirements specified in Federal law, Congressional legislation, or in HQ approved project authorization decision document, to offset unavoidable natural resources and ecological losses caused by the construction of a project or by project operation activities. This Work Category only includes costs during the mitigation effort.

**WORK CATEGORY CODE:** **61414** - Maintenance of Fisheries, Fish Haulage Activities and Fish Passage Structures

**WORK CATEGORY DESCRIPTION:** Maintenance of Fisheries, Fish Haulage Activities and Fish Passage Structures for environmental stewardship features.

Includes all costs for maintenance and repair of fish hatcheries, egg collection stations, transportation equipment, and fish passage facilities.

**WORK CATEGORY CODE:** **61418** - Maintenance of Special Status Species for Environmental Stewardship Function

**WORK CATEGORY DESCRIPTION:** Maintenance of Special Status Species for environmental stewardship features.

Includes all costs for maintenance of resources and features supporting special status species. Includes costs of salaries, contracts, equipment, supplies and materials to protect and maintain species of special

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concern such as Federal or state listed endangered, threatened, rare or sensitive species, including activities in areas under license, lease, or outgrant. Includes activities undertaken to maintain a resource, population, habitat or management feature, such as vegetation manipulation, timber management, prescribed burning, and activities to protect populations and individual specimens (e.g. citation authority program, surveillance activities, identifying and monitoring exclusion zones). The cost of special status species maintenance that is a function of activities of another business line, e.g. navigation, shall be funded by that business line as a cost of doing business, using work category codes associated with the appropriate business line.

**WORK CATEGORY CODE: 61421 - Dredging Activities for the Environmental Stewardship Function**

**WORK CATEGORY DESCRIPTION:** Dredging of Channels and Canals for environmental stewardship activities including all disposal activities. Disposal activities include, but are not limited to, confined, open water, beach, wetland creation, aquatic habitat creation, etc.

Includes all costs for maintenance dredging of project channels and canals, and disposal activities, except project condition sediment survey costs which are included in Work Category Code 60420. It also includes the costs for before, during and after dredging surveys, required real estate activities, E&D, S&A, etc. Also included are costs to obtain environmental clearances to perform the associated dredging. This Work Category also includes all costs associated with the disposal of dredged materials in confined disposal facilities; open water; sand on beaches; creation or restoration of wetlands or other aquatic habitat using dredged material; and creation of land using dredged material. Also includes related costs for spare parts, special tools, miscellaneous materials and supplies, transportation, disposal, and equipment.

**WORK CATEGORY CODE: 61422 - Dredging - Construction and Maintenance of Disposal Facilities for the Environmental Stewardship Function**

**WORK CATEGORY DESCRIPTION:** Construction and Maintenance of Disposal Facilities for Dredged Materials for environmental stewardship features.

Includes all costs for the construction and the maintenance of disposal facilities including confined disposal facilities, and required real estate activities. Also includes related costs for spare parts, replacements, special tools, miscellaneous materials and supplies, transportation and equipment usage.

**WORK CATEGORY CODE: 61430**

**WORK CATEGORY DESCRIPTION:** Reserved.

**WORK CATEGORY CODE: 61440 - Water Management (Control and Quality) Equipment for the Environmental Stewardship Function**

**WORK CATEGORY DESCRIPTION:** Purchase and Maintenance of Water Management (Control and Quality) Equipment for environmental stewardship features.

Includes all costs for the purchase of new or replacement hardware, software, and equipment (upgrades, betterments, or expansion) and the maintenance of existing equipment used to acquire, process, display, and distribute data associated with project water management and regulation (water control and quality). This includes only those costs related to equipment justified in approved Division water management Master plans. Purchase of multi-project equipment will be included in the Revolving Fund (PRIP). This includes PRIP payback for equipment purchase, software development, and system betterment for the



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new Corps Water Management System (CWMS). This also includes costs for maintenance and support of CWMS.

**WORK CATEGORY CODE:**     **61451** - Real Estate - Land Acquisition and Disposal Management Activities, Settlement of Claims, and Audits for the Environmental Stewardship Function

**WORK CATEGORY DESCRIPTION:** Real Estate - Land Acquisition and Disposal Management Activities, Settlement of Claims, and Audits for environmental stewardship features.

Includes all costs for planning, appraisal, negotiation, condemnation, relocation assistance, mapping, surveying, title evidence, inspections, closings, audits and temporary permits necessary to acquire or dispose of lands and interests. Also includes real estate payments for acquisition of real property and interests therein. Costs to take necessary actions to settle claims, including damage payments arising from claims over the use and occupancy of land, real property and timber in which fee, easements, or lesser interests were not acquired. (NOTE: Includes administrative costs incurred in connection with timber disposal in support of forest management activities, such as contract administration, and inspection. However, do not include those commodity (e.g. timber, crops, sand) sales costs that are expected to be funded by the proceeds from the sale of project commodities. Staff supervision of timber management should be included in Work Category Code 60411).

**WORK CATEGORY CODE:**     **61452** - Real Estate - Resolution of Real Estate Encroachments for the Environmental Stewardship Function

**WORK CATEGORY DESCRIPTION:** Real Estate - Resolution of Real Estate Encroachments for environmental stewardship features.

Includes all costs for the resolution of all encroachments on project lands, and degradation of public lands and encroachments adversely affecting the intended uses of potentially high use areas; including investigation, acquisition, disposal, and out-granting. Costs for boundary line surveys and remarking are included in Work Category Code 61453.

**WORK CATEGORY CODE:**     **61453** - Real Estate - Boundary Monumentation and Rectification for the Environmental Stewardship Function

**WORK CATEGORY DESCRIPTION:** Real Estate - Boundary Monumentation and Rectification for environmental stewardship features.

Includes all costs to survey and mark boundary lines in support of acquisition; to resurvey or remark boundary lines and place monuments in support of Executive Order actions and disposal actions, and costs to survey and mark boundary lines where not previously completed. Under normal circumstances there will be no work items in the Baseline funding level for this Work Category.

**WORK CATEGORY CODE:**     **61460** - Environmental Compliance (Remedial Actions) for the Environmental Stewardship Function

**WORK CATEGORY DESCRIPTION:** Environmental Compliance (remedial actions) of Natural Resources including Other Service Facilities for environmental stewardship features.

Includes all maintenance, repair and remediation costs to comply with applicable Federal laws and regulations, including the Safe Drinking Water Act, Resource Conservation and Recovery Act (RCRA), Clean Air Act, Hazardous Materials Transportation Act, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), EO 13148, and applicable state and local regulations for

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natural resources and other environmental stewardship features. Costs include salaries, contaminant detection, waste analysis, site investigations, site remediation, treatment system installation, repair, renovation, modification, and other costs associated with compliance. Costs associated with medical surveillance and other employee health and safety requirements are not included.

WORK CATEGORY CODE: **61470**

WORK CATEGORY DESCRIPTION: Reserved.

WORK CATEGORY CODE: **61480**

WORK CATEGORY DESCRIPTION: Reserved.

WORK CATEGORY CODE: **61491** – Facility Security Maintenance and Replacement for Environmental Stewardship

WORK CATEGORY DESCRIPTION: Facility Security – Maintenance and Replacement for environmental stewardship features.

Includes all costs to maintain and replace structural improvements for facility protection and security related to criminal and terrorist activities. Includes costs to maintain, repair or replace permanent or temporary barriers, fencing, traffic signs, lighting, communications equipment, intrusion detection systems such as video surveillance equipment and cameras, and access control. Costs for assessments are included in Work Category Code (WCC) 60491, and costs for guards and surveillance activities are included in WCC 60492. Costs for improvements and modifications are included in WCC 61492. Includes some costs formerly included in WCC 61490.

WORK CATEGORY CODE: **61492** – Facility Security Physical Improvements and Modifications for Environmental Stewardship

WORK CATEGORY DESCRIPTION: Facility Security – Physical Improvements and Modifications for environmental stewardship features.

Includes all costs for engineering and design, and to acquire and install structural improvements, modifications and physical improvements for facility protection and security related to criminal and terrorist activities. Includes costs for permanent or temporary barriers, fencing, traffic signs, lighting, communications equipment, intrusion detection systems such as video surveillance equipment and cameras, and access control. Includes some costs formerly included in WCC 61490.

WORK CATEGORY CODE: **61511** - Maintenance of Recreation Features

WORK CATEGORY DESCRIPTION: Maintenance of Recreation areas and Facilities, Service Facilities – (Buildings, Grounds, Utilities, Roads and Bridges), Erosion Control in Recreation Areas, and Maintenance and Purchase of Permanent Operating Equipment for recreation features.

Includes all costs for the maintenance and repair, replacement, additions and efficiency improvements to, or retirement of, recreation facilities and structures such as grills, tables, playgrounds, trails, campgrounds, picnic areas, restrooms, showers, boat ramps, parking areas, roads, grounds, utilities associated with recreation use, buildings used for recreation purposes or the collection of fees and other structures used to support the recreation function. Also included are the costs for realignment, overlay, grading, and widening, of roads, parking areas, bridges and walkways associated with recreational development, and all costs for control of erosion endangering recreational areas or facilities, including seeding, sodding, riprap, gabions, vegetation, retaining walls and other measures. Also includes the costs for permanent operating equipment such as backhoe, trencher, bucket truck, tractor loader,

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vehicles, communications equipment, and computers used to support the recreation function of the project. This Work Category also includes costs for spare parts, replacements, additions, special tools, miscellaneous materials and supplies, transportation costs and equipment usage, and costs to bring facilities up to modern design standards and to provide accessibility for persons with disabilities as required. Includes costs for new recreation facilities, if the goal of providing quality public recreation experiences with the most cost efficient management of water resources development projects can be met.

This Work Category Code includes costs previously included in Work Category Code 61512, Maintenance of Recreation Facilities using SRUF funds (see paragraph C-2.15 SRUF).

SRUF costs previously included under Work Category Code 61512 should now be included under Work Category Code 61511.

**WORK CATEGORY CODE:**     **61513** - Maintenance of Recreation Features - Cost Shared Recreation Developments

**WORK CATEGORY DESCRIPTION:** Cost Shared Recreation Developments - Contracts and Negotiations.

Includes all recreation cost share agreements and contract costs; costs to reimburse local sponsors; and costs for monitoring and negotiating agreements related to cost sharing.

**WORK CATEGORY CODE:**     **61514** – Maintenance of Visitor Centers

**WORK CATEGORY DESCRIPTION:** Maintenance of Visitor Centers for recreation features.

Includes all costs for the maintenance and repair, replacement, additions and efficiency improvements to, or retirement of, visitor center buildings, displays, audiovisual systems, heating and cooling systems, landscaping, grounds, exhibits and utilities. Also includes costs for spare parts, replacements, additions, special tools, miscellaneous materials and supplies, transportation costs and equipment usage. These costs were formerly included in WCC 61511.

**WORK CATEGORY CODE:**     **61515** – Modernization of Recreation Features

**WORK CATEGORY DESCRIPTION:** Modernization of recreation features.

Includes all costs for the modernization, replacement or additions for modernization to recreation facilities and structures such as trails, campgrounds, picnic areas, restrooms, showers, boat ramps, parking areas, roads, grounds, utilities associated with recreation use, buildings used for recreation purposes or the collection of fees and other structures used to support the recreation function. Also includes costs for spare parts, replacements, additions, special tools, miscellaneous materials and supplies, transportation costs and equipment usage, and costs to bring facilities up to modern design standards and to provide accessibility for persons with disabilities as required. Also, includes costs for E&D and P&S for the Recreation Modernization Program. Work should be included in this Work Category Code (WCC) rather than WCC 61511 if the primary reason for the work is to update existing facilities to meet current guidelines and user needs, as well as modifying facilities and services to improve efficiency and effectiveness. If the primary reason to do work is non-operational maintenance, it should be included in WCC 61511, even if some modernization will be accomplished in conjunction with the work. These costs were formerly included in WCC 61511.

**WORK CATEGORY CODE:**     **61520** - Dredging Activities for the Recreation Function

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**WORK CATEGORY DESCRIPTION:** Dredging for recreation activities including all disposal activities.

Includes all costs for maintenance dredging and disposal activities for the recreation function, except project condition sediment survey costs which are included in Work Category Code 60520. It also includes the costs for before, during and after dredging surveys, required real estate activities, E&D, S&A, etc. Also included are costs to obtain environmental clearances to perform the associated dredging. Also includes all costs associated with the disposal of dredged materials as sand on beaches, and related costs for spare parts, special tools, miscellaneous materials and supplies, transportation, disposal, and equipment.

**WORK CATEGORY CODE:** **61530**

**WORK CATEGORY DESCRIPTION:** Reserved.

**WORK CATEGORY CODE:** **61540 - Water Management (Control and Quality) Equipment for the Recreation Function**

**WORK CATEGORY DESCRIPTION:** Purchase and Maintenance of Water Management (Control and Quality) Equipment for recreation features.

Includes all costs for the purchase of new or replacement hardware, software, and equipment (upgrades, betterments or expansion) and the maintenance of existing equipment used to acquire, process, display, and distribute data associated with project water management and regulation (water control and quality) for the recreation function. This includes only those costs related to equipment justified in approved Division water management Master plans. Purchase of multi-project equipment will be included in the Revolving Fund (PRIP). This includes PRIP payback for equipment purchase, software development, and system betterment for the Corps new Water Management System (SWMS). This also includes costs for maintenance and support of CWMS.

**WORK CATEGORY CODE:** **61551 - Real Estate - Land Acquisition and Disposal Management Activities, Settlement of Claims, and Audits for the Recreation Function**

**WORK CATEGORY DESCRIPTION:** Real Estate - Land Acquisition and Disposal Management Activities, Settlement of Claims, and Audits for recreation features.

Includes all costs for planning, appraisal, negotiation, condemnation, relocation assistance, mapping surveying, title evidence, inspection, closing, audits and temporary permits necessary to acquire or dispose of lands and interests that support the recreational features of a project.

**WORK CATEGORY CODE:** **61552 - Real Estate - Resolution of Real Estate Encroachments for the Recreation Function**

**WORK CATEGORY DESCRIPTION:** Real Estate - Resolution of Real Estate Encroachments for recreation features.

Includes all costs for the resolution of all encroachments on projects lands classified for recreational use and degradation of public lands and encroachments adversely affecting the recreational use of the project; including investigation, acquisition, disposal, and out-granting. Costs for boundary line surveys and remarking should be included in Work Category Code 61553.

**WORK CATEGORY CODE:** **61553 - Real Estate - Boundary Monumentation and Rectification for the Recreation Function**

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**WORK CATEGORY DESCRIPTION:** Real Estate - Boundary Monumentation and Rectification for recreation features.

Includes all costs to survey and mark boundary lines in support of acquisition; to resurvey or remark boundary lines and place monuments in support of Executive Order actions and disposal actions, and costs to survey and mark boundary lines where not previously completed on lands classified for recreational use at a project.

**WORK CATEGORY CODE:** **61560** - Environmental Compliance (Remedial Actions) for the Recreation Function

**WORK CATEGORY DESCRIPTION:** Environmental Compliance (remedial actions) for recreation features.

Includes all maintenance, repair and remediation costs to comply with applicable Federal environmental laws and regulations, including the Safe Drinking Water Act, Resource Conservation and Recovery Act (RCRA), Clean Air Act, Hazardous Materials Transportation Act, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), EO 13148, and applicable state and local regulations for recreation facilities and visitor centers. Costs include salaries, contaminant detection, waste analysis, site investigations, site remediation, treatment system installation, repair, renovation, and modification. Other costs associated with compliance include activities such as responding to marinas spills, updating hazard communication, disposal of unclaimed barrels or containers, and responding or clean-up of pesticide or chemical releases that support recreational activities on Corps owned land. Costs associated with medical surveillance and other employee health and safety requirements are not included.

**WORK CATEGORY CODE:** **61570**

**WORK CATEGORY DESCRIPTION:** Reserved.

**WORK CATEGORY CODE:** **61580**

**WORK CATEGORY DESCRIPTION:** Reserved.

**WORK CATEGORY CODE:** **61591** – Facility Security Maintenance and Replacement for Recreation

**WORK CATEGORY DESCRIPTION:** Facility Security – Maintenance and Replacement for recreation features.

Includes all costs to maintain and replace structural improvements for facility protection and security related to criminal and terrorist activities. Includes costs to maintain, repair or replace permanent or temporary barriers, fencing, traffic signs, lighting, communications equipment, intrusion detection systems such as video surveillance equipment and cameras, and access control. Costs for assessments are included in Work Category Code (WCC) 60591, and costs for guards and surveillance activities are included in WCC 60592. Costs for improvements and modifications are included in WCC 61592. Includes some costs formerly included in WCC 61590.

**WORK CATEGORY CODE:** **61592** – Facility Security Physical Improvements and Modifications for Recreation

**WORK CATEGORY DESCRIPTION:** Facility Security – Physical Improvements and Modifications for recreation features.

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Includes all costs for engineering and design, and to acquire and install structural improvements, modifications and physical improvements for facility protection and security related to criminal and terrorist activities. Includes costs for permanent or temporary barriers, fencing, traffic signs, lighting, communications equipment, intrusion detection systems such as video surveillance equipment and cameras, and access control. Includes some costs formerly included in WCC 61590.

**WORK CATEGORY CODE:** 61610 - Joint Activities for Maintenance excluding Dredging, FERC #541, #542, #543, #544 and #545

**WORK CATEGORY DESCRIPTION:** Joint costs for Maintenance activities NOT specific to Navigation, Flood Risk Management, Hydropower, Environmental Stewardship, Recreation and Water Supply. These activities include maintenance of Dams, Reservoirs, Levees, Floodwalls, Hurricane Barriers, and Other Control Structures; Snagging, Clearing, Aquatic Plant Removal, Rock and Other Debris Removal, and Other Non-Dredging Channel Maintenance; Pumping Plants, Other Service Facilities (Buildings, Grounds, Utilities, and Roads, Railroads and Bridges), Gates, Conduits, Maintenance and Purchase of Permanent Operating Equipment, etc. excluding dredging.

Includes all joint costs for the maintenance and repair, replacement, additions and efficiency improvements to, or retirement of; related joint costs for spare parts, replacements, additions, special tools, miscellaneous supplies and materials; government plant and hired labor for project maintenance and contract support, transportation costs and other costs required to perform this maintenance function; purchase of permanent operating equipment:

of joint use facilities and equipment for dams, spillways, outlet works and auxiliary dams;

of reservoirs and facilities including floating trash booms, trash racks, erosion control, drainage, major periodic or one time removal of debris or aquatic growth to ensure proper functioning of the reservoir (minor and routine removal of growth and debris in the vicinity of dam structures and from reservoirs should be charged to Work Category Code 60610); and rim grouting or mine sealing, etc., to prevent leakage;

of levees, floodwalls, hurricane barriers, embankments, walls, in-channel structures, and other control structures to protect areas from inundation; snagging, clearing, debris removal; and non-dredging channel maintenance. This includes costs for removal of trees, brush, accumulated snags, drifts, and debris from canals and waterways; and channel improvement structures, revetments, linings, dikes, jetties, bulkheads, and buildings;

of pumping plants including such items as buildings, pumps, and prime movers including power supplies, controls, piping, and all other associated facilities;

of non-dredging channel maintenance including snagging, clearing, aquatic plant removal, removal of sunken vessels, drift removal, rock and other debris removal;

of buildings, grounds, utilities, and roads, railroads and bridges, such as administration and shop buildings, storage and garage buildings and areas, other non-leased or rented project buildings, local streets and sidewalks, project access roads, including the road across dams, parking areas, bridges, railroads, and walkways. Also includes costs for project utilities including electrical, gas, water, and sewer systems;

of permanent operating equipment;

and for instrumentation on dam structures, levees, floodwalls, hurricane barriers, and other control structures including costs related to installation and maintenance of instruments in existing

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structures for safety evaluation purposes consistent with an approved plan. This includes instrumentation for measuring horizontal and vertical movement, stresses and strains, pore pressure, phreatic surfaces, seismic effects, and seepage clarity and quality.

**WORK CATEGORY CODE: 61621 - Joint Activities for Dredging, FERC #543**

**WORK CATEGORY DESCRIPTION:** Joint costs for Dredging of Channels and Canals NOT specific to Navigation, Flood Risk Management, Hydropower, Environmental Stewardship, Recreation and Water Supply. These activities include all disposal activities such as confined, open water, beach, wetland creation, aquatic habitat creation, etc.

Includes all joint costs for maintenance dredging of project channels and canals, and disposal activities, except for project condition sediment survey costs which are included in Work Category Code 60621. Also included are joint costs to obtain environmental clearances to perform the associated dredging. Long-range environmental requirements and costs for initial project condition surveys are included in related operations accounts. Also includes joint costs associated with the disposal of dredged materials in confined disposal facilities; open water; sand on beaches; the creation or restoration of wetlands or other aquatic habitat using dredged material; and the creation of land using dredged material. Also includes related joint costs for spare parts, replacements, special tools, miscellaneous materials and supplies, transportation and equipment usage.

**WORK CATEGORY CODE: 61622 - Joint Activities for Dredging - Construction and Maintenance of Dredged Material Disposal Facilities, FERC #543**

**WORK CATEGORY DESCRIPTION:** Joint costs for the Construction and Maintenance of Disposal Facilities for Dredged Materials NOT specific to Navigation, Flood Risk Management, Hydropower, Environmental Stewardship, Recreation and Water Supply.

Includes all joint costs for the construction and the maintenance of disposal facilities, including confined disposal facilities, for dredged materials. Also includes related joint costs for spare parts, replacements, special tools, miscellaneous materials and supplies, transportation and equipment usage.

**WORK CATEGORY CODE: 61630 - Joint Activities for Dam Safety Remediation of Deficiencies**

**WORK CATEGORY DESCRIPTION:** Joint costs for Remediation of Safety Deficiencies for Dams, Levees and Other Structures as appropriate NOT specific to Navigation, Flood Risk Management, Hydropower, Environmental Stewardship, Recreation and Water Supply.

Includes all direct costs for the non-routine repair, replacement and corrections to all dams included in the National Inventory of Dams plus any levees, diversion structures and related appurtenances maintained at Federal expense to remediate dam safety deficiencies. Includes related costs for contracts, parts, replacements, special tools, supplies and materials, government plant, hired labor to include contract support, transportation costs and other costs required to perform this work. Specifically, this includes non-routine maintenance and/or repair work for dams and pertinent structures and levees that have either been identified by any means as having a Dam Safety Deficiency or has been concurred to be deficient by the District Commander, his appointed Dam Safety Officer or District Dam Safety Program Manager. Dam Safety maintenance or repair work may be identified by any means such as a study, criteria review, or any scheduled or unscheduled inspection. Dam safety related work such as inspections, inspection reports, rehabilitation reports, studies, surveys, and instrumentation will be categorized under the existing Work Category Codes in accordance with current practice. Only the actual work to include the associated plans and specifications (P&S), engineering and design (E&D) for the repairs or remedial corrections will be included in this Work Category Code as appropriate. For those business programs that do not specifically have a Work Category Code for Dam Safety (61130, 61230 and 61330) yet may encounter

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dam safety related work, the costs should be included in the primary business program for that project. Costs are only included in this Work Category Code if they meet the above definition for Dam Safety. Costs for regular, recurring maintenance activities will not be included in this WCC.

**WORK CATEGORY CODE: 61640 - Joint Activities for Water Management Equipment, FERC #542**

**WORK CATEGORY DESCRIPTION:** Joint costs for the Purchase and Maintenance of Water Management (Control and Quality) Equipment NOT specific to Navigation, Flood Risk Management, Hydropower, Environmental Stewardship, Recreation and Water Supply.

Includes all joint costs for the purchase of new or replacement hardware, software, and equipment (upgrades, betterments or expansion) and the maintenance of existing equipment used to acquire, process, display, and distribute data associated with project water management and regulation (water control and quality). This includes only those costs related to equipment justified in approved Division water management Master plans. Purchase of multi-project equipment will be included in the Revolving Fund (PRIP). This includes PRIP payback for equipment purchase, software development, and system betterment for the Corps new Water Management System (SWMS). This also includes costs for maintenance and support of CWMS.

**WORK CATEGORY CODE: 61651 - Joint Activities for Real Estate - Land Acquisition and Disposal Management Activities, Settlement of Claims, and Audits, FERC #545**

**WORK CATEGORY DESCRIPTION:** Joint costs for Real Estate activities - Land Acquisition and Disposal Management Activities, Settlement of Claims, and Audits NOT specific to Navigation, Flood Risk Management, Hydropower, Environmental Stewardship, Recreation and Water Supply.

Includes all joint costs for planning, appraisal, negotiation, condemnation, relocation assistance, mapping, surveying, title evidence, inspections, closings, audits and temporary permits necessary to acquire or dispose of lands and interests, real estate payments for acquisition of real property and interests therein, and costs to take necessary actions to settle claims, including damage payments arising from claims over the use and occupancy of land, real property and timber in which fee, easements, or lesser interests were not acquired.

**WORK CATEGORY CODE: 61652 - Joint Activities for Real Estate - Resolution of Real Estate Encroachments, FERC #545**

**WORK CATEGORY DESCRIPTION:** Joint costs for Real Estate activities - Resolution of Real Estate Encroachments NOT specific to Navigation, Flood Risk Management, Hydropower, Environmental Stewardship, Recreation and Water Supply.

Includes all joint costs for the resolution of all encroachments on project lands, and degradation of public lands and encroachments adversely affecting the intended uses of potentially high use areas; including investigation, acquisition, disposal, and out-granting.

**WORK CATEGORY CODE: 61653 - Joint Activities for Real Estate - Boundary Monumentation and Rectification, FERC #545**

**WORK CATEGORY DESCRIPTION:** Joint costs for Real Estate activities - Boundary Monumentation and Rectification NOT specific to Navigation, Flood Risk Management, Hydropower, Environmental Stewardship, Recreation and Water Supply.



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Includes all joint costs to survey and mark boundary lines in support of acquisition; to resurvey or remark boundary lines and place monuments in support of Executive Order actions and disposal actions; and costs to survey and mark boundary lines where not previously completed.

WORK CATEGORY CODE: **61660** - Joint Activities for Environmental Compliance (Remedial Actions), FERC #545

WORK CATEGORY DESCRIPTION: Joint costs for Environmental Compliance (remedial actions) NOT specific to Navigation, Flood Risk Management, Hydropower, Environmental Stewardship, Recreation and Water Supply. These activities include actions for Dams, Levees, Other Control Structures, Pumping Plants and Other Project Facilities.

Includes all joint costs maintenance, repair and remediation costs to comply with applicable Federal laws and regulations, including the Safe Drinking Water Act, Resource Conservation and Recovery Act (RCRA), Clean Air Act, Hazardous Materials Transportation Act, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), EO 13148, and applicable state and local regulations for dams, reservoirs, levees, other control structures, pumping plants and other joint use project facilities. Costs include salaries, contaminant detection, waste analysis, site investigations, site remediation, treatment system installation, repair, renovation, modification, and other costs associated with compliance. Costs associated with medical surveillance and other employee health and safety requirements are not included.

WORK CATEGORY CODE: **61670**

WORK CATEGORY DESCRIPTION: Reserved.

WORK CATEGORY CODE: **61680**

WORK CATEGORY DESCRIPTION: Reserved.

WORK CATEGORY CODE: **61691** – Joint Activities for Facility Security Maintenance and Replacement

WORK CATEGORY DESCRIPTION: Joint Costs for Facility Security – Maintenance and Replacement NOT specific to Navigation, Flood Risk Management, Hydropower, Environmental Stewardship, Recreation and Water Supply.

Includes all joint costs to maintain and replace structural improvements for facility protection and security related to criminal and terrorist activities. Includes joint costs to maintain, repair or replace permanent or temporary barriers, fencing, traffic signs, lighting, communications equipment, intrusion detection systems such as video surveillance equipment and cameras, and access control. Joint costs for assessments are included in Work Category Code 60691, and costs for guards and surveillance activities are included in Work Category Code 60692.

WORK CATEGORY CODE: **61692** – Joint Activities for Facility Security Physical Improvements and Modifications

WORK CATEGORY DESCRIPTION: Joint Costs for Facility Security – Physical Improvements and Modifications NOT specific to Navigation, Flood Risk Management, Hydropower, Environmental Stewardship, Recreation and Water Supply.

Includes all joint costs for engineering and design, and to acquire and install structural improvements, modifications and physical improvements for facility protection and security related to criminal and

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terrorist activities. Includes joint costs for permanent or temporary barriers, fencing, traffic signs, lighting, communications equipment, intrusion detection systems such as video surveillance equipment and cameras, and access control. Joint costs for assessments are included in Work Category Code 60691, and costs for guards and surveillance activities are included in Work Category Code 60692.

WORK CATEGORY CODE: **61810** - Maintenance for the Water Supply Function

WORK CATEGORY DESCRIPTION: Maintenance of Project Gates, Water Supply Conduits, Permanent Operating Equipment, etc. excluding dredging activities for water supply features.

Includes all direct costs for the maintenance and repair, replacement, additions and efficiency improvements to, or retirement of; related costs for spare parts, replacements, additions, special tools, miscellaneous supplies and materials; government plant and hired labor for project maintenance and contract support, transportation costs and other costs required to perform this maintenance function; purchase of permanent operating equipment for non-Water Management activities: of project gates and specific water supply conduits; and permanent operating equipment. Prior to FY07, these costs were included in WCC 61211.

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## SUB-ANNEX C-5

## Systems and Justification of Estimates

**C-5-1. Operations and Maintenance Systems and Regions.** The PY O&M budget will be formulated based on performance goals and objectives and risk-based indices (details can be found in the business line Appendices). Also basin codes will continue to be attached to projects on a system basis although the budget will be presented on a project by project basis. The systems were developed, using HUC sub-regions as established by the US Geological Survey.

**C-5-2. Narrative and Supporting Data.**

a. **Justification Sheets for O&M for Congressional Submission.** Each MSC shall prepare and submit Justification sheets for each O&M project, using the format and template provided. The tone of statements must reflect a full support of the President's Program request with no hints that amounts may not be adequate. Justification sheets must be submitted as Microsoft Word documents over the Corps Outlook Electronic Mail. ASCII format is not acceptable because it deletes control codes for formatting. To avoid allocation problems associated with roll-ups, projects spanning more than one district should be entered separately with titles showing the district name, for example:

OHIO RIVER LOCKS AND DAMS, PA (Pittsburgh Dist.)  
OHIO RIVER LOCKS AND DAMS, WV (Huntington Dist.)  
OHIO RIVER LOCKS AND DAMS, KY, IL, IN, OH, & WV (Louisville Dist.)

(Other projects include Ohio River Open Channel Work, McClellan-Kerr, Missouri River and the Upper Mississippi River.)

Justification sheets for National programs or, activities such as Inspection of Completed Works, Scheduling Reservoir Activities, and Project Condition Surveys will be prepared by HQUSACE.

b. **State Designation for Inspection of Completed Works (ICW),** Project Condition Surveys (PCS), Scheduling Reservoir Operations (SRO), Surveillance of Northern Boundary Waters (SNBW) and Inspection of Ecosystem Restoration Projects.

Each of these programs will have a budget activity per state per funding increment. In those cases where these programs are performed in more than one state, the district will have a budget activity for each state. The budget activities do not necessarily have to be in the same funding increment. For example, Little Rock District (SWL) has projects in Missouri and Arkansas therefore SWL should have at least two IWC budget activities, one for Missouri and one for Arkansas. Some SWL projects cross state lines such as Table Rock Lake. All the ICW for this project should be included for its primary state, which is Missouri. The justification/Remarks will indicate how many surveys, inspections, actions, etc. of that districts total will be performed for the respective Business Program funding increment. For example the Business Line initial increment ICW budget activity for SWL for Missouri would state five critical inspections would be conducted out of a total of 10 in the PY. Additional ICW budget activity(s) would be included in next-added Business Line increments as justified by increased performance or benefits.

**C-5-3. Definitions.** R=Reconnaissance; F=Feasibility; P=PED; C=Construction; CR=Replacement; O=Operations; M=Maintenance (regular, not major or rehab); MM=Major Maintenance; MR=Rehabilitation; OJ=Operation Joint Activities; MJ=Maintenance Joint Activities;

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TABLE C-5-1

Systems



Table C-5-1 FINAL  
Bub O&M Systems for



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The work is accomplished in the following water resource System as delineated by water boundaries (HUC sub regions):

#### GLOSSARY OF DISTRICT ACRONYMS

LRB	Buffalo District	NAD	North Atlantic Division	SAJ	Jacksonville District
LRC	Chicago District	NAE	New England District	SAM	Mobile District
LRD	Great Lakes & Ohio River Division	NAN	New York District	SAS	Savannah District
LRE	Detroit District	NAO	Norfolk District	SAW	Wilmington District
LRH	Huntington District	NAP	Philadelphia District	SPA	Albuquerque District
LRL	Louisville District	NWD	Northwestern Division	SPD	South Pacific Division
LRN	Nashville District	NWK	Kansas City District	SPL	Los Angeles District
LRP	Pittsburgh District	NWO	Omaha District	SPK	Sacramento District
MVD	Mississippi Valley Division	NWP	Portland District	SPN	San Francisco District
MVK	Vicksburg District	NWS	Seattle District	SWD	Southwestern Division
MVM	Memphis District	NWW	Walla Walla District	SWF	Fort Worth District
MVN	New Orleans District	POA	Alaska District	SWG	Galveston District
MVP	St. Paul District	POD	Pacific Ocean Division	SWL	Little Rock District
MVR	Rock Island District	POH	Honolulu District	SWT	Tulsa District
MVS	St. Louis District	SAC	Charleston District		
NAB	Baltimore District	SAD	South Atlantic Division		

ILLUSTRATION C-5-2

Major Subordinate Command (MSC)  
Supplemental Justification Sheet  
Major Maintenance

1. **DESCRIPTION OF WORK:** (Describe specific items of work to be included in the overall package.)
2. **JUSTIFICATION:** (Provide justification for the total work to be accomplished, including economic evaluation. Quantify benefits when possible. In last paragraph of justification, provide arguments on why the work should be started in the program year, either design or construction; and the impact of not starting the work in the program year. For ongoing work, include the impacts of not continuing the work in the program year. These paragraphs must be in sufficient detail to permit a decision to be made on the investment.)
3. **ESTIMATED COST AND SCHEDULE:** (Provide the basis of the estimated cost, i.e., based on cost of XYZ PROJECT IN FY90 indexed to current price levels, reconnaissance level estimate, e.g. *Design Memorandum D-28 approved 22 January 1993, etc*; and include the amount of contingencies included in the estimate. The cost estimate should be broken down to reflect individual DDRs, procurements, contracts, installations, etc. Schedule dates should be shown only to the month and year, e.g., 1/1/01, and all dollar amounts in even thousands, i.e., \$10,000 to be shown as 10. The estimate and schedule should include required fund requirements for engineering and design during construction and other related costs for completion of a total package. If contributed funds are required for Corps construction activities, include in cost estimate and add a line to the schedule with minus entries; so that the total line will reflect Total Federal fund requirements by year.)

NOTE: This illustration is included to show the additional information required for major maintenance activities. This information will be provided in the format shown in the expanded funding argument field.

C-5-5

ILLUSTRATION C-5-3

Major Subordinate Command  
O&M Justification Sheet Template



III C-5-3 FINAL O&M  
J-SHEET.TEMPLATE.c



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# **WATERBORNE COMMERCE OF THE UNITED STATES**

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Calendar Year 2009

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Part 5—  
National Summaries

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Compiled under the supervision of  
the Institute for Water Resources  
U.S. Army Corps of Engineers  
Alexandria, Virginia



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## Introduction

### General

*Waterborne Commerce of the United States, WCUS, Part 5* is one of a series of publications which provides statistics on the foreign and domestic waterborne commerce moved on the United States waters. **WCUS, Parts 1-4** present detailed data on the movements of vessels and commodities at the ports and harbors and on the waterways and canals of the United States, and its territories. **WCUS, Part 5** provides a condensation of this detailed information thereby providing the decision makers a broad perspective of commerce served by the U.S. waterways and ports.

**WCUS, Part 5** provides extensive graphic and tabular displays of both current waterborne traffic and historic levels. Statistics are aggregated by region, state, port and waterway for comparative purposes.

Beginning with the calendar year 2007 publications, **WCUS, Parts 1-4** are provided in HTML format on the Navigation Data Center (NDC) website:

<http://www.iwr.usace.army.mil/ndc/wcsc/wcsc.htm>

**WCUS, Part 5** is available in hardcopy and in PDF format on the NDC website.

Data on foreign commerce are supplied to the U.S. Army Corps of Engineers by the U.S. Bureau of the Census, U.S. Customs and Border Protection, and purchased from UBM Global Trade, Inc., Port Import Export Reporting Service.

The publication numbers and the geographical areas covered in **WCUS, Parts 1-5** are detailed below:

**WCUS, Part 1 Atlantic Coast**

**WCUS, Part 2 Gulf Coast, Mississippi River System and Antilles**

**WCUS, Part 3 Great Lakes**

**WCUS, Part 4 Pacific Coast, Alaska and Hawaii**

**WCUS, Part 5 National Summaries**

### Legal Authority

The legal authority for the collection, compilation and publication of waterborne commerce statistics by the U.S. Army Corps of Engineers is

Section 11 of the Rivers and Harbors Appropriations Act of 1922 (42 Stat. 1043), as amended, and codified in 33 U.S.C. 555 and provides the following:

Owners, agents, masters, and clerks of vessels and other craft plying upon the navigable waters of the United States, and all individuals and corporations engaged in transporting their own goods upon the navigable waters of the United States, shall furnish such statements relative to vessels, passengers, freight, and tonnage as may be required by the Secretary of the Army: Provided, That this provision shall not apply to those rafting logs except upon a direct request upon the owner to furnish specific information.

Every person or persons offending against the provisions of this section shall, for each and every offense, be liable to a fine of not more than \$5,000 or imprisonment not exceeding two months, to be enforced in any district court of the United States within whose territorial jurisdiction such offense may have been committed. In addition, the Secretary may assess a civil penalty of up to \$2,500 per violation, against any person or entity that fails to provide timely, accurate statements required to be submitted pursuant to this section by the Secretary.

The vessel and commodity movement information collected and compiled is designed to meet the data requirements of the Department of the Army in connection with the duties assigned by Congress. These data also provide valuable information for other governmental departments, commercial and shipping concerns and others interested in the U.S. transportation industry.

## INTRODUCTION

**Domestic Commerce**

Contiguous and non-contiguous states and territories constitute the geographical space upon which domestic commerce may be transported. This includes Hawaii, Alaska, the 48 contiguous states, Puerto Rico and the Virgin Islands, Guam, American Samoa, Wake Island and the U.S. Trust Territories.

The waterborne traffic movements are reported to the U.S. Army Corps of Engineers by all vessel operators of record on ENG Forms 3925 and 3925b (or equivalent) approved by the Office of Management and Budget under the Paperwork Reduction Act (44 U.S.C. 3510(a)). The reports are generally submitted on the basis of individual vessel movements completed. For movements with cargo, the point of loading and the point of unloading of each individual commodity must be delineated. Cargo moved for the military agencies in commercial vessels is reported as ordinary commercial cargo; military cargo movements in Department of Defense vessels are not collected.

In summarizing the domestic commerce certain movements are excluded: Cargo carried on general ferries; coal and petroleum products loaded from shore facilities directly into bunkers of vessels for fuel; and insignificant amounts of government materials (less than 100 tons) moved on government owned equipment in support of Corps projects.

Beginning in 1996, fish are excluded from internal and intraport domestic traffic. The fish landing data in Tables 4-3 and 5-3 are furnished by the National Marine Fisheries Service.

In tables containing domestic tonnage totals for the U.S., the commodity "Waterway Improvement Materials" is not included. "Waterway Improvement Materials" tonnage is included in domestic ports, waterways and waterway systems. This is the same procedure that has been used in years prior to 1990; therefore, the tonnages for years 1990 and later are comparable to tonnages in years prior to 1990.

**Foreign Commerce**

Foreign commerce is waterborne import, export and in-transit traffic between the United States, Puerto Rico and the Virgin Islands and any foreign country. These statistics do not include traffic between any foreign country and the United States Territories and Possessions (American Samoa, Guam, North Mariana Islands and U.S. Outlying Islands).

Beginning with the calendar year 2000 publication, foreign waterborne import, export and in-transit cargo statistics are derived primarily from data purchased from UBM Global Trade, Inc., Port Import Export Reporting Service, and supplemented by data furnished to the U.S. Army Corps of Engineers by the U.S. Bureau of the Census and the U.S. Customs and Border Protection. Foreign cargo is matched to the vessel moves to improve geographic specificity.

The Republic of Panama is considered a foreign country. However, individual vessel movements with origin and destination at United States ports traveling via the Panama Canal are considered domestic traffic. Alaskan crude oil (origin at Valdez, AK) shipped via the Panama pipeline (west to east) and destined for gulf and east coast ports is also considered domestic commerce.

Import and export shipments for use of the United States Armed Forces abroad are not reported to the Waterborne Commerce Statistics Center (WCSC). Beginning with calendar year 1989 shipments under the military assistance program of the Department of Defense are included in the statistics under the appropriate commodity code. In prior years these cargoes were given as commodity code 9999.

**Commodity Descriptions**

The first two digits of the WCSC publication codes correspond with the Lock Performance Monitoring System (LPMS) commodity codes. Both LPMS AND WCSC codes were standardized to reflect the hierarchical structure of the Standard International Trade Classification (SITC) Revision 3 commodity codes. SITC, REV. 3 commodity codes conform to the Harmonized Commodity Description and Coding System (HS). Using SITC, Rev. 3 allows direct comparisons with U.S. imports, exports, and in-transits, as well as, with commodity movements of other countries.

**Tonnage**

The tonnage figures provided throughout the **WCUS, Parts 1-5** represent short tons (2000 pounds). In **WCUS, Part 5** only, where noted, tonnage figures are rounded to the nearest million or thousand. If tonnage figures are rounded to the nearest million, then a zero represents less than 500,000 tons but more than zero. If tonnage figures are rounded to the nearest thousand, then a zero represents less than 500 tons but more than zero. A dash

means no tonnage. Columns and rows may not add up exactly to totals and subtotals due to rounding.

**Ton-Miles**

Ton-miles shown in Part 5 are national totals. For domestic movements, ton-miles equal the cargo tonnage times the distance between the point of loading on the water and the point of

unloading on the water. For U.S. - Canada movements on the Great Lakes, ton-miles equal the tonnage times the distance between the U.S. and Canadian locations. For overseas imports and exports, foreign ton-miles are computed by multiplying the cargo tonnage by the miles carried on U.S. waterways and channels. Ton-miles are rounded to the nearest million ton-miles.

## Terminology

### Types of Traffic

#### *Foreign*

**Inbound:** Includes waterborne imports and inbound in-transit merchandise.

#### **Imports**

**Overseas:** Inbound merchandise originating in foreign countries other than Canada and arriving by marine vessel for direct U.S. consumption and entries into custom bonded storage and manufacturing warehouses.

**Canadian:** Inbound merchandise originating in Canada and arriving by marine vessel for direct U.S. consumption and entries into custom bonded storage and manufacturing warehouses.

**Inbound In-transits:** Merchandise coming into the United States by marine vessel from a foreign country and shipped to a foreign country without having been entered as an import. In-transit merchandise is treated as inbound when unloaded from a marine vessel.

**Outbound:** Includes waterborne exports and outbound in-transit merchandise.

#### **Exports**

**Overseas:** Outbound domestic merchandise and re-export of foreign merchandise from a U.S. foreign trade zone shipped by marine vessel to foreign countries other than Canada.

**Canadian:** Outbound domestic merchandise and re-export of foreign merchandise from a U.S. foreign trade zone shipped by marine vessel to Canada.

**Outbound In-transits:** Merchandise coming into the United States from a foreign country and shipped by marine vessel to a foreign country without having been entered as an import. In-transit merchandise is treated as outbound when loaded onto a marine vessel.

#### *Domestic*

**Coastwise:** Domestic traffic receiving a carriage over the ocean, or the Gulf of Mexico, (e.g. New Orleans to Baltimore, New York to Puerto Rico, San Francisco to Hawaii, Alaska to Hawaii). Traffic between Great Lakes ports and seacoast ports, when having a carriage over the ocean, is also termed **Coastwise**.

**Lakewise:** Waterborne traffic between the United States ports on the Great Lakes System. The Great Lakes System is treated as a separate waterway system rather than as a part of the inland waterway system. In comparing historical data for the Great Lakes System, one should note that prior to calendar year 1990, marine products, sand and gravel being moved from the Great Lakes to Great Lake destinations were classified as local traffic. From 1990 on, these activities are classified as lakewise traffic.

**Internal:** Vessel movements (origin and destination) which take place solely on inland waterways. An inland waterway is one geographically located within the boundaries of the contiguous 48 states or within the boundaries of the State of Alaska.

The term "internal traffic" is also applied to these vessel movements: those which involve carriage on both inland waterways and the Great Lakes; those occurring between offshore areas and inland waterways (e.g., oil rig supplies and fish); and those taking place within Delaware Bay, Chesapeake Bay, Puget Sound, and the San Francisco Bay, which are considered internal bodies of water rather than arms of the ocean.



**Intraport:** Movement of freight within the confines of a port whether the port has one or several arms or channels included in the port definition. This traffic type will not include car-ferries and general ferries moving within a port.

**Through:** Movements transiting a waterway, or stretch thereof, as defined in the project description of individual tables, and having origins and destinations outside of the defined area.

**Intra-waterway:** Shipments and receipts within the limits of a river, waterway or canal. This traffic will not include car-ferries and general ferries moving within a waterway or Corps project.

**Intra-territory:** Traffic between ports in Puerto Rico and the Virgin Islands, which are considered a single unit.

### Traffic Direction

#### Waterways

**Upbound:** Traffic that moves in an upstream direction. For waterways without a characteristic monodirectional flow (e.g. the Gulf Intracoastal Waterway), "upbound" means in a northerly or easterly direction.

**Downbound:** Traffic that moves in a downstream direction. For waterways without a characteristic monodirectional flow, "downbound" means in a southerly or westwardly direction.

**Inbound:** Traffic moving from one waterway into another where the destination is on the subject waterway.

**Outbound:** Traffic moving from one waterway into another where the origin is on the subject waterway.

#### Ports

**Receipts:** Traffic moving from one location to another where the destination is within the limits of the subject port.

**Shipments:** Traffic moving from one location to another where the origin is within the limits of the subject port.

**Commodity Descriptions:** The first two digits of the Waterborne Commerce Statistics Center (WCSC) publication codes correspond with the Lock Performance Monitoring System, (LPMS), commodity codes. Both LPMS and WCSC codes were standardized to reflect the hierarchical structure of the Standard International Trade Classification (SITC) Revision 3 commodity codes. SITC, Rev. 3 commodity codes conform to the Harmonized Commodity Description and Coding System (HS). Using SITC, Rev. 3 allows direct comparisons with U.S. imports and exports, as well as with commodity movements of other countries.

**Tons:** The tonnage figures provided throughout the *Waterborne Commerce of the United States, WCUS, Parts 1-5* represent short tons (2000 pounds).

In WCUS, Part 5 only, where noted, tonnage figures are rounded to the nearest million or thousand. If tonnage figures are rounded to the nearest million, then a zero represents less than 500,000 tons, but more than zero. If tonnage figures are rounded to the nearest thousand, then a zero represents less than 500 tons, but more than zero. A dash means no tonnage. Columns and rows may not add up exactly to totals and subtotals due to rounding.

TERMINOLOGY

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**Ton-miles:** Ton-miles in Part 5 are national totals. Water carriage ton-miles were first compiled and published in calendar year 1962. The distances used are statute miles.

Domestic ton-miles are calculated by multiplying the tons of commerce being moved by the number of miles actually moved on the water from the point of loading onto the vessel to the point of unloading off of the vessel. Coastwise ton-miles includes the distance across open ocean and the Gulf of Mexico.

For rivers, inland waterways and coastal routes the distances were computed from waterway survey maps, NOAA charts and records of the Corps of Engineers.

For the Great Lakes system the ton-miles are computed for movements of cargo west of the international boundary of St. Regis, Quebec, Canada to head of Lake Superior at Duluth, MN and Superior, WI.

For lakewise domestic movements, ton-miles equal the cargo tonnage times the distance between the U.S. Great Lakes ports.

For Canadian imports and exports, and in-transits across the Great Lakes foreign ton-miles are computed as the tonnage times the distance between the U.S. and Canadian ports.

For overseas imports and exports, and in-transits foreign ton-miles are computed by multiplying the cargo tonnage by the miles carried on U.S. waterways and channels. Distances across the oceans are not included in the computation of the overseas foreign ton-miles.

Ton-miles are rounded to the nearest million.

**Trip Ton-miles:** Trip ton-miles is a measure of a single waterway's contribution to the whole waterway system. Trip ton-miles are computed by identifying every commercial cargo-carrying vessel that has plied a particular inland waterway and summing the products of the tons times the total trip-miles for each vessel trip. "Trip-miles" is the total distance from origin (loading) to destination (unloading). For example, a barge carrying 1,200 tons of wheat might only travel 30 miles on the Illinois River but its total trip to New Orleans might be 1,000 miles. This trip would contribute 1,200,000 trip ton-miles to the Illinois River. Small rivers often contribute to the traffic on larger rivers. Published trip ton-miles do not include coastal and Great Lakes vessel movements.

**Trans-Shipments:** Ports and offshore anchorages where cargo is moved from one vessel to another. These are: St. Lucia, Virgin Islands; Heald Bank off the Louisiana and Texas coasts; Chirqui Grande, Panama; Puerto Armuelles, Panama; and Hondo Platform-Pacific Ocean.

## Commodity Classification List

<u>Major Grouping</u>	<u>Minor Grouping</u>	<u>Pub Group</u>	<u>Pub Name</u>	<u>Major Grouping</u>	<u>Minor Grouping</u>	<u>Pub Group</u>	<u>Pub Name</u>
00	Units	0200	Vehicles			3281	Radioactive Material
		0300	Passengers			3282	Pigments & Paints
10	Coal	1100	Coal & Lignite			3283	Coloring Mat. NEC
		1200	Coal Coke			3284	Medicines
20	Petroleum & Petroleum Products					3285	Perfumes & Cleansers
	21	Crude Petroleum				3286	Plastics
		2100	Crude Petroleum			3291	Pesticides
	22-29	Petroleum Products				3292	Starches,Gluten,Glue
		2211	Gasoline			3293	Explosives
		2221	Kerosene			3297	Chemical Additives
		2330	Distillate Fuel Oil			3298	Wood & Resin Chem.
		2340	Residual Fuel Oil			3299	Chem. Products NEC
		2350	Lube Oil & Greases	40	Crude Materials, Inedible Except Fuels		
		2410	Petro. Jelly & Waxes		41	Forest Products, Wood and Chips	
		2429	Naphtha & Solvents			4110	Rubber & Gums
		2430	Asphalt, Tar & Pitch			4150	Fuel Wood
		2540	Petroleum Coke			4161	Wood Chips
		2640	Liquid Natural Gas			4170	Wood in the Rough
		2990	Petro. Products NEC			4189	Lumber
						4190	Forest Products NEC
30	Chemicals and Related Products			42	Pulp and Waste Paper		
	31	Fertilizers			4225	Pulp & Waste Paper	
		3110	Nitrogenous Fert.	43	Soil, Sand, Gravel, Rock and Stone		
		3120	Phosphatic Fert.			4310	Building Stone
		3130	Potassic Fert.			4322	Limestone
		3190	Fert. & Mixes NEC			4323	Gypsum
	32	Other Chemicals and Related Products				4327	Phosphate Rock
		3211	Acyclic Hydrocarbons			4331	Sand & Gravel
		3212	Benzene & Toluene			4333	Dredged Material
		3219	Other Hydrocarbons			4335	Waterway Improv. Mat
		3220	Alcohols			4338	Soil & Fill Dirt
		3230	Carboxylic Acids	44	Iron Ore and Scrap		
		3240	Nitrogen Func. Comp.			4410	Iron Ore
		3250	Organo-Inorganic Comp.			4420	Iron & Steel Scrap
		3260	Organic Comp. NEC	45	Marine Shells		
		3271	Sulphur (Liquid)			4515	Marine Shells
		3272	Sulphuric Acid	46	Non-Ferrous Ores and Scrap		
		3273	Ammonia			4630	Copper Ore
		3274	Sodium Hydroxide			4650	Aluminum Ore
		3275	Inorg. Elem.,Oxides, & Halogen Salts			4670	Manganese Ore
		3276	Metallic Salts			4680	Non-Ferrous Scrap
		3279	Inorganic Chem. NEC			4690	Non-Ferrous Ores NEC
				47	Sulphur, Clay and Salt		
						4741	Sulphur, (Dry)
						4782	Clay & Refrac. Mat.
						4783	Salt
				48	Slag		
						4860	Slag

## COMMODITY CLASSIFICATION LIST

**Commodity Classification List (continued)**Major GroupingMinor GroupingPub Group Pub Name

- 49 Other Non-Metal. Min.
  - 4900 Non-Metal. Min. NEC
- 50 Primary Manufactured Goods
  - 51 Paper Products
    - 5110 Newsprint
    - 5120 Paper & Paperboard
    - 5190 Paper Products NEC
  - 52 Lime, Cement and Glass
    - 5210 Lime
    - 5220 Cement & Concrete
    - 5240 Glass & Glass Prod.
    - 5290 Misc. Mineral Prod.
  - 53 Primary Iron and Steel Products
    - 5312 Pig Iron
    - 5315 Ferro Alloys
    - 5320 I&S Primary Forms
    - 5330 I&S Plates & Sheets
    - 5360 I&S Bars & Shapes
    - 5370 I&S Pipe & Tube
    - 5390 Primary I&S NEC
  - 54 Primary Non-Ferrous Metal Products
    - 5421 Copper
    - 5422 Aluminum
    - 5429 Smelted Prod. NEC
    - 5480 Fab. Metal Products
  - 55 Primary Wood Products; Veneer
    - 5540 Primary Wood Prod.
- 60 Food and Farm Products
  - 61 Fish
    - 6134 Fish (Not Shellfish)
    - 6136 Shellfish
  - 62-64 Grain
    - 6241 Wheat
    - 6344 Corn
    - 6442 Rice
    - 6443 Barley & Rye
    - 6445 Oats
    - 6447 Sorghum Grains
  - 65 Oilseeds
    - 6521 Peanuts
    - 6522 Soybeans
    - 6534 Flaxseed
    - 6590 Oilseeds NEC
  - 66 Vegetable Products
    - 6653 Vegetable Oils
    - 6654 Vegetables & Prod.
  - 67 Processed Grain and Animal Feed
    - 6746 Wheat Flour
    - 6747 Grain Mill Products

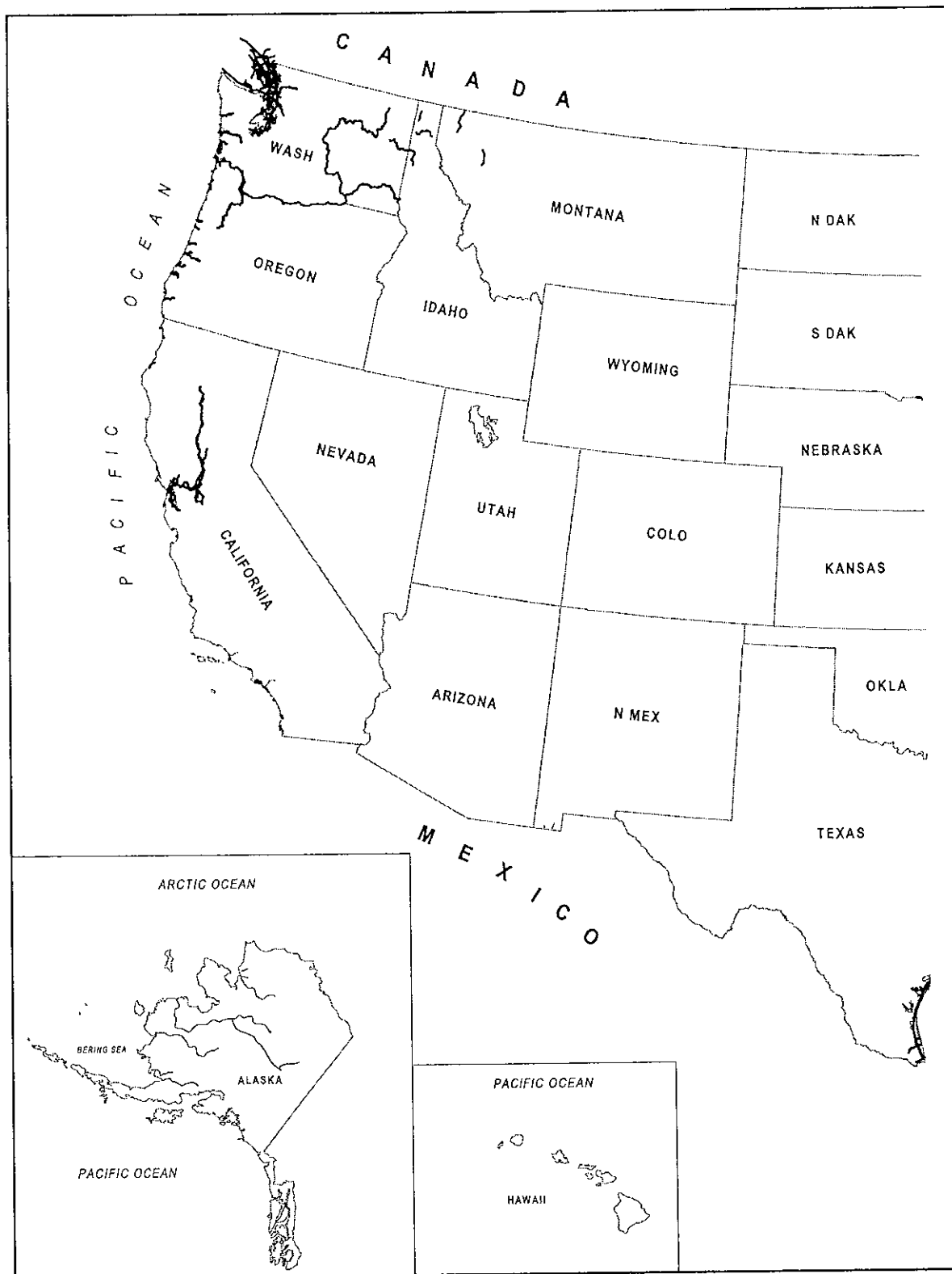
Major GroupingMinor GroupingPub Group Pub Name

- 6781 Hay & Fodder
- 6782 Animal Feed, Prep.
- 68 Other Agricultural Products
  - 6811 Meat, Fresh, Frozen
  - 6817 Meat, Prepared
  - 6822 Dairy Products
  - 6835 Fish, Prepared
  - 6838 Tallow, Animal Oils
  - 6839 Animals & Prod. NEC
  - 6856 Bananas & Plantains
  - 6857 Fruit & Nuts NEC
  - 6858 Fruit Juices
  - 6861 Sugar
  - 6865 Molasses
  - 6871 Coffee
  - 6872 Cocoa Beans
  - 6885 Alcoholic Beverages
  - 6887 Groceries
  - 6888 Water & Ice
  - 6889 Food Products NEC
  - 6891 Tobacco & Products
  - 6893 Cotton
  - 6894 Natural Fibers NEC
  - 6899 Farm Products NEC
- 70 All Manufactured Equipment, Machinery and Products
  - 7110 Machinery (Not Elec)
  - 7120 Electrical Machinery
  - 7210 Vehicles & Parts
  - 7220 Aircraft & Parts
  - 7230 Ships & Boats
  - 7300 Ordnance & Access.
  - 7400 Manufac. Wood Prod.
  - 7500 Textile Products
  - 7600 Rubber & Plastic Pr.
  - 7800 Empty Containers
  - 7900 Manufac. Prod. NEC
- 80 Waste and Scrap NEC
  - 8900 Waste and Scrap NEC
- 90 Unknown or Not Elsewhere Classified
  - 99 Unknown or Not Elsewhere Clsfd
  - 9900 Unknown or NEC

## Section 1

### National Summaries

Figure 1-1: MAJOR WATERWAYS



OF THE UNITED STATES

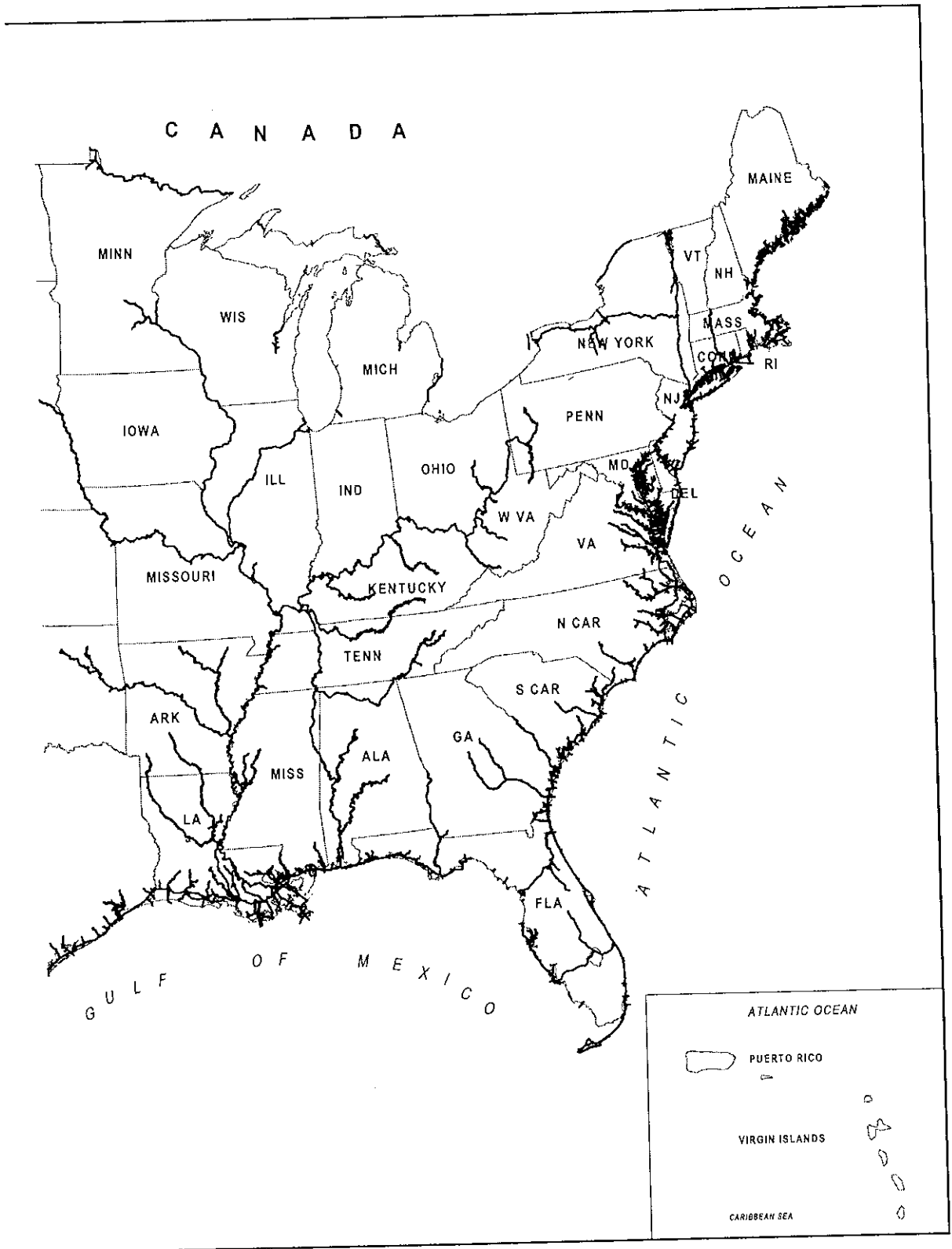


Figure 1-2  
TOTAL WATERBORNE COMMERCE OF THE U.S., 1970-2009  
(million short tons)

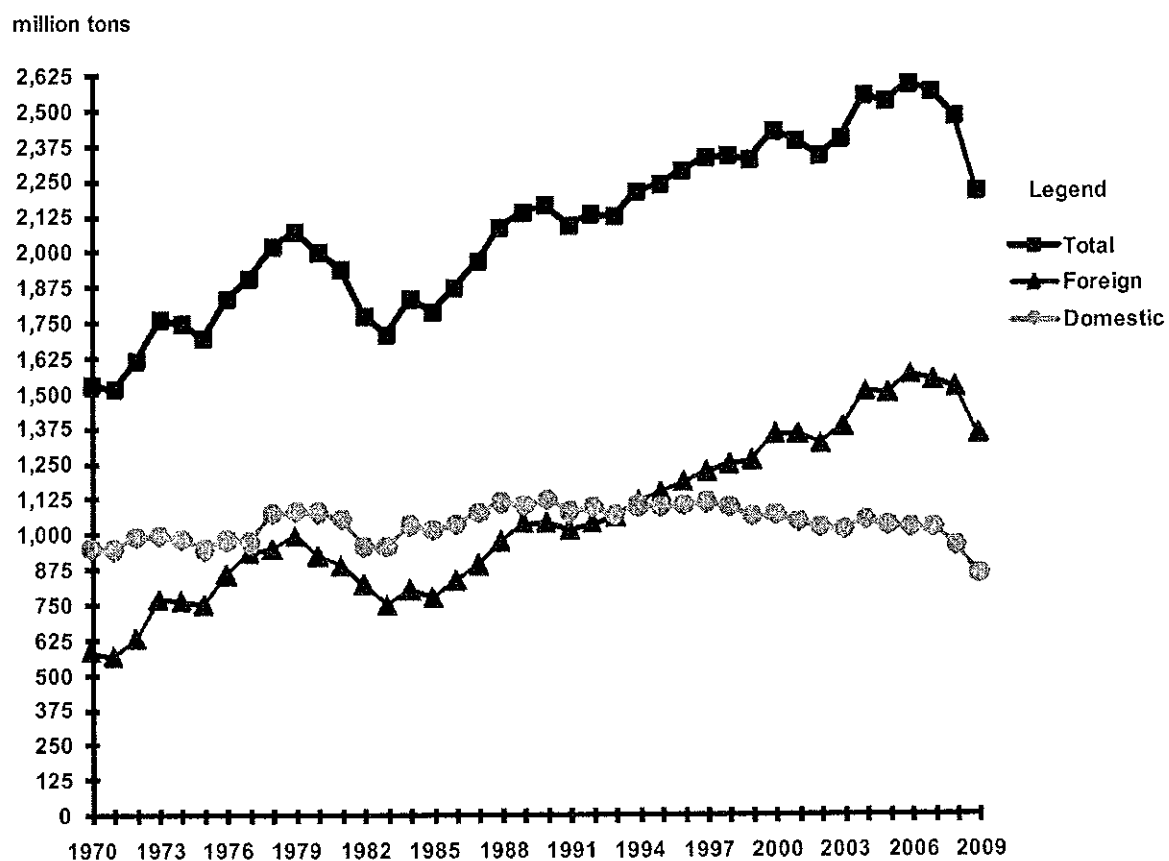




Table 1-1: TOTAL WATERBORNE COMMERCE OF THE U.S., 1970-2009  
(in short tons of 2000 pounds)

Year	Total	Foreign	Domestic
1970	1,531,696,507	580,969,133	950,727,374
1971	1,512,583,690	565,985,584	946,598,106
1972	1,616,792,605	629,980,844	986,811,761
1973	1,761,552,010	767,393,903	994,158,107
1974	1,746,788,544	764,088,905	982,699,639
1975	1,695,034,366	748,707,407	946,326,959
1976	1,835,006,819	855,963,909	979,042,910
1977	1,908,223,619	935,256,813	972,966,806
1978	2,021,349,754	946,057,889	1,075,291,865
1979	2,073,757,628	993,444,963	1,080,312,665
1980	1,998,887,402	921,404,000	1,077,483,402
1981	1,941,558,947	887,102,150	1,054,456,797
1982	1,776,740,579	819,730,983	957,009,596
1983	1,707,661,011	751,140,194	956,520,817
1984	1,836,020,619	803,338,133	1,032,682,486
1985	1,788,434,822	774,323,283	1,014,111,539
1986	1,874,416,280	837,223,503	1,037,192,777
1987	1,967,458,261	890,980,045	1,076,478,216
1988	2,087,993,484	976,220,985	1,111,772,499
1989	2,140,442,372	1,037,910,213	1,102,532,159
1990	2,163,854,373	1,041,555,740	1,122,298,633
1991	2,092,108,462	1,013,557,036	1,078,551,426
1992	2,132,095,154	1,037,466,130	1,094,629,024
1993	2,128,221,188	1,060,041,217	1,068,179,971
1994	2,214,754,086	1,115,742,828	1,099,011,258
1995	2,240,393,059	1,147,357,782	1,093,035,277
1996	2,284,065,249	1,183,386,621	*1,100,678,628
1997	2,333,142,046	1,220,615,132	1,112,526,914
1998	2,339,500,081	1,245,388,049	1,094,112,032
1999	2,322,557,251	1,260,770,656	1,061,786,595
2000	2,424,588,877	1,354,790,984	1,069,804,693
2001	2,393,298,249	1,350,826,076	1,042,472,173
2002	2,340,291,913	1,319,290,931	1,021,000,982
2003	2,394,251,814	1,378,115,758	1,016,136,056
2004	2,551,939,029	1,504,851,381	1,047,087,648
2005	2,527,622,229	1,498,711,806	1,028,910,423
2006	2,588,440,451	1,564,944,286	1,023,496,165
2007	2,563,971,539	1,542,452,190	1,021,519,349
2008	2,477,094,228	1,520,758,974	956,335,255
2009	2,210,751,710	1,353,667,060	857,084,650

\* Beginning in 1996, fish was excluded for internal and intraport domestic traffic.

Table 1-4: TOTAL WATERBORNE COMMERCE, 1990-2009  
TON-MILES, SHORT TONS AND AVERAGE HAUL \*\*\* BY TYPE OF TRAFFIC

Year	Grand Total	Foreign			Domestic				
		Total	Great Lakes	Coastal	Total	Coastwise	Lakewise	Internal	Intraport
Ton-Miles*** (millions)									
1990	+932,151.4	+98,607.6	*24,330.8	***74,276.9	833,543.8	479,133.6	60,929.9	292,393.3	1,087.0
1991	+938,671.3	+90,272.3	*17,102.6	***73,169.7	848,399.0	502,133.0	55,339.1	289,959.0	968.0
1992	+949,344.7	+92,660.1	*21,027.6	***71,632.5	856,684.6	502,311.0	55,784.6	297,638.7	950.3
1993	+882,605.8	+92,947.9	*26,106.8	***66,841.1	789,657.9	448,404.2	56,438.1	283,893.6	921.9
1994	909,405.0	94,485.8	*28,299.6	**66,186.2	814,919.2	457,600.7	58,263.4	297,762.4	1,292.7
1995	914,362.5	106,634.9	*31,656.5	**74,978.4	807,727.7	440,345.1	59,703.8	306,329.1	1,349.6
1996	870,193.4	105,506.9	*34,259.9	**71,247.0	764,686.5	408,086.1	58,335.3	296,790.6	1,474.5
1997	813,800.1	106,390.2	*32,535.9	**73,854.3	707,409.9	349,843.0	62,165.9	294,023.0	1,378.1
1998	780,449.8	107,704.5	*34,136.7	**73,567.8	672,795.3	314,863.9	61,654.3	294,896.4	1,380.7
1999	764,447.5	108,585.9	*34,846.7	**73,739.2	655,861.5	292,730.0	57,045.2	304,724.1	1,362.2
2000	763,421.1	117,621.8	*38,623.3	**78,998.5	645,799.3	283,871.6	57,879.1	302,558.4	1,490.2
2001	736,930.0	115,243.8	*36,580.1	**78,663.8	621,686.2	274,558.8	50,853.5	294,860.9	1,413.0
2002	721,421.7	109,341.1	*34,921.3	**74,419.9	612,080.5	263,688.2	53,652.9	293,410.3	1,329.0
2003	714,440.4	108,294.1	*32,921.5	**75,372.7	606,146.3	278,918.7	47,539.4	278,352.3	1,335.9
2004	743,536.4	122,366.3	*37,581.8	**84,784.5	621,170.1	279,857.1	55,733.0	284,096.0	1,484.0
2005	705,176.0	113,899.2	*37,799.3	**76,099.9	591,276.8	263,464.1	51,924.3	274,367.2	1,521.3
2006	681,988.0	120,359.1	*40,677.4	**79,681.7	561,628.9	227,155.3	53,105.1	279,777.7	1,590.8
2007	670,030.0	116,879.2	*36,783.0	**80,096.9	553,150.8	228,052.0	51,892.5	271,617.2	1,589.1
2008	633,823.9	113,403.4	*33,769.2	**79,634.2	520,520.5	207,877.4	50,263.0	260,959.6	1,420.5
2009	571,299.3	94,177.8	*23,573.9	**70,603.8	477,121.5	196,290.3	33,509.4	244,994.6	2,327.2
Tons (millions)									
1990	2,159.3	1,041.6	50.5	991.1	1,117.8	298.6	110.2	622.5	86.4
1991	2,087.6	1,013.6	41.8	971.8	1,074.0	294.5	103.4	600.4	75.6
1992	2,127.9	1,037.5	45.5	992.0	1,090.4	285.1	107.4	621.0	76.8
1993	2,123.3	1,060.0	43.6	1,016.4	1,063.2	271.7	109.8	607.3	74.4
1994	2,208.8	1,115.7	50.1	1,065.6	1,093.1	277.0	114.8	618.4	82.9
1995	2,233.5	1,147.4	51.9	1,095.5	1,086.2	266.6	116.1	620.3	83.1
1996	2,276.7	1,183.4	56.4	1,127.0	1,093.4	267.4	114.9	++622.1	++89.0
1997	2,326.9	1,220.6	57.7	1,162.9	1,106.3	263.1	122.7	630.6	89.8
1998	2,332.3	1,245.4	62.4	1,183.0	1,086.9	249.6	122.2	625.0	90.1
1999	2,316.7	1,260.8	62.4	1,198.3	1,055.9	228.8	113.9	624.6	88.60
2000	2,419.1	1,354.8	64.0	1,290.7	1,064.3	226.9	114.4	628.4	94.6
2001	2,387.4	1,350.8	62.5	1,288.3	1,036.6	223.6	100.0	619.8	93.2
2002	2,335.2	1,319.3	59.6	1,259.7	1,015.9	216.4	101.5	608.0	90.0
2003	2,387.9	1,378.1	56.3	1,321.8	1,009.7	223.5	89.8	609.6	86.9
2004	2,546.5	1,504.9	62.2	1,442.7	1,041.6	220.6	103.5	626.2	91.3
2005	2,522.8	1,498.7	61.4	1,437.3	1,024.0	213.7	96.2	624.0	90.2
2006	2,582.7	1,564.9	63.2	1,501.8	1,017.7	201.8	96.9	627.6	91.4
2007	2,558.8	1,542.5	54.2	1,488.2	1,016.4	205.8	95.6	621.9	93.1
2008	2,472.9	1,520.8	52.2	1,468.5	952.1	186.3	90.4	588.5	86.9
2009	2,206.1	1,353.7	37.1	1,316.5	852.4	167.7	63.2	522.5	99.0

\* Based on distance transported on Great Lakes and St. Lawrence River to International Boundary at St. Regis, Quebec, Canada

\*\* Based on distance transported on United States Waterways from entrance channels to ports and waterways.

\*\*\* Excludes intra-territory traffic for which ton-miles were not compiled.

+ An error in the routing network caused the coastal port foreign ton-mile totals to be slightly inflated for calendar years 1990-1993. The corrections are reflected in these revised totals. Ton-miles for individual ports were not affected.

++ Beginning in 1996, fish was excluded.

+++ "Average Haul" is the average distance a ton of cargo travels by water. It is computed by dividing the number of ton-miles by the number of tons.

Table 1-4: TOTAL WATERBORNE COMMERCE, 1990-2009  
TON-MILES, SHORT TONS AND AVERAGE HAUL+++ BY TYPE OF TRAFFIC  
(continued)

Year	Grand Total	Foreign			Domestic				
		Total	Great Lakes	Coastal	Total	Coastwise	Lakewise	Internal	Intraport
Average Haul*** (miles)									
1990	+431.7	+94.7	482.2	+74.9	745.7	1,604.4	553.1	469.7	12.6
1991	+449.6	+89.1	409.2	+75.3	789.9	1,704.8	535.0	483.0	12.8
1992	+446.1	+89.3	462.2	+72.2	785.7	1,761.7	519.4	479.3	12.4
1993	+415.7	+87.7	598.2	+65.8	742.7	1,650.3	513.8	467.5	12.4
1994	411.7	84.7	564.5	62.1	745.5	1,651.8	507.6	481.5	15.6
1995	409.4	92.9	610.4	68.4	743.6	1,651.6	514.1	493.8	16.2
1996	382.2	89.2	607.9	63.2	699.4	1,526.2	507.8	477.1	16.6
1997	349.7	87.2	563.5	63.5	639.5	1,329.5	506.5	466.3	15.3
1998	334.7	86.5	546.8	62.2	619.0	1,261.3	504.7	471.8	15.3
1999	330.0	86.1	558.2	61.5	621.1	1,279.4	500.9	487.9	15.4
2000	315.6	86.8	603.0	61.2	606.8	1,250.9	506.1	481.4	15.8
2001	308.7	85.3	584.9	61.1	599.7	1,227.9	508.5	475.7	15.2
2002	308.9	82.9	585.8	59.1	602.5	1,218.5	528.8	482.6	14.8
2003	299.2	78.6	585.0	57.0	600.3	1,248.2	529.5	456.6	15.4
2004	292.0	81.3	604.4	58.8	596.4	1,268.9	538.4	453.6	16.3
2005	279.5	76.0	615.6	52.9	577.4	1,233.1	539.6	439.7	16.9
2006	264.1	76.9	643.8	53.1	548.7	1,125.6	548.1	445.8	17.4
2007	261.9	75.8	678.6	53.8	544.2	1,108.3	542.6	436.8	17.1
2008	256.4	74.6	646.6	5.4	546.7	1,115.9	556.0	443.4	16.3
2009	259.0	69.6	634.7	0.1	559.7	1,170.2	530.1	468.9	23.5

\*\*\* Excludes intra-territory traffic for which ton-miles were not compiled.

+ An error in the routing network caused the coastal port foreign ton-mile totals to be slightly inflated for calendar years 1990-1993. The corrections are reflected in these revised totals. Ton-miles for individual ports were not affected.

+++ "Average Haul" is the average distance a ton of cargo travels by water. It is computed by dividing the number of ton-miles by the number of tons.

Figure 1-3  
TOTAL WATERBORNE COMMERCE, 1990-2009  
BY COMMODITY GROUP  
(million short tons)

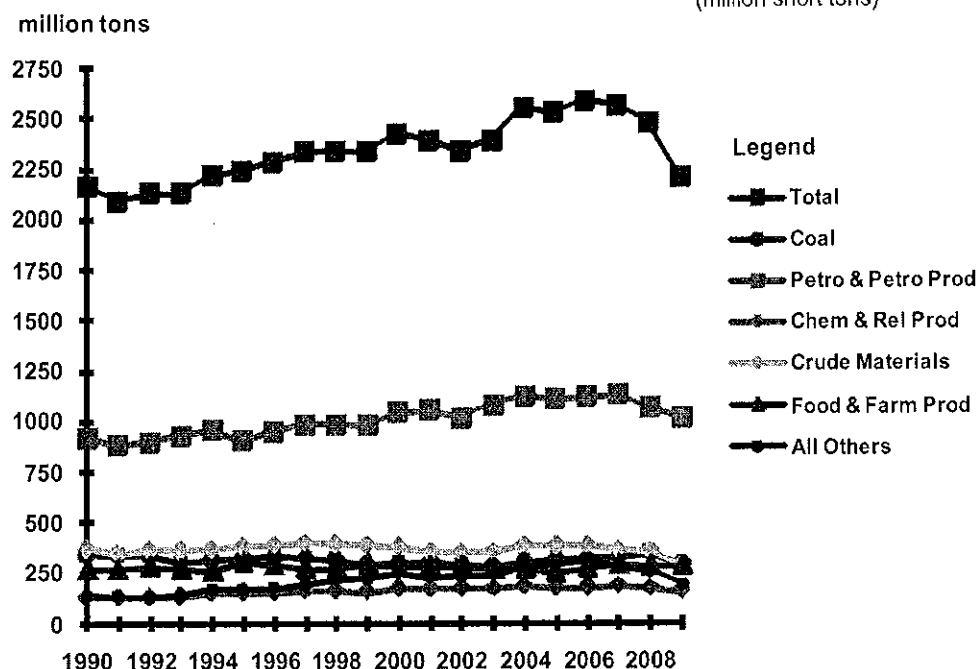


Table 1-5: TOTAL WATERBORNE COMMERCE, 1990-2009  
BY COMMODITY GROUP  
(million short tons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<b>Total</b>	<b>2,163.9</b>	<b>2,092.1</b>	<b>2,132.1</b>	<b>2,128.2</b>	<b>2,214.8</b>	<b>2,240.4</b>	<b>2,284.1</b>	<b>2,333.1</b>	<b>2,339.5</b>	<b>2,322.6</b>
Coal	339.9	336.8	332.2	300.4	314.1	324.5	328.7	326.0	316.1	289.2
Petro & Petro Prod	923.5	886.0	899.6	930.6	961.3	907.1	954.4	988.2	987.4	979.1
Chem & Rel Prod	123.8	125.1	128.7	131.6	146.9	152.9	152.3	156.6	156.5	155.7
Crude Materials	374.9	348.9	364.0	360.6	369.3	381.7	388.7	400.9	394.3	386.6
Primary Manuf Goods	76.0	71.8	70.1	76.8	105.0	106.3	108.9	117.0	141.0	147.4
Food & Farm Prod	267.5	263.9	280.4	269.3	225.8	303.2	*284.9	271.7	265.7	287.9
All Manuf Equip	42.2	43.6	49.0	51.1	54.9	57.8	59.0	66.1	71.8	71.5
Other	16.5	16.0	8.0	7.9	7.3	6.9	7.2	6.6	6.6	5.2

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>Total</b>	<b>2,424.6</b>	<b>2,393.3</b>	<b>2,340.3</b>	<b>2,394.3</b>	<b>2,551.9</b>	<b>2,527.6</b>	<b>2,588.4</b>	<b>2,564.0</b>	<b>2,477.1</b>	<b>2,210.8</b>
Coal	297.0	303.3	286.9	281.2	306.1	316.6	318.1	326.1	348.0	291.0
Petro & Petro Prod	1,043.9	1,055.3	1,017.9	1,080.5	1,127.1	1,111.4	1,122.2	1,133.0	1,068.3	1,016.4
Chem & Rel Prod	172.4	169.7	167.6	171.3	180.1	174.9	176.1	178.2	168.7	154.9
Crude Materials	380.3	354.0	352.0	358.0	390.3	386.0	384.0	362.4	358.3	280.9
Primary Manuf Goods	153.0	137.1	140.8	134.7	159.6	166.4	189.2	154.2	134.6	89.6
Food & Farm Prod	283.3	281.9	280.0	265.7	271.3	251.3	271.3	285.1	277.9	279.0
All Manuf Equip	83.6	80.3	81.9	90.0	102.7	110.3	117.0	113.7	109.7	89.6
Other	11.1	11.7	13.2	12.8	14.6	10.6	10.6	11.3	11.7	9.3

\* Beginning in 1996, fish was excluded for internal and intraport domestic traffic.

Figure 1-6  
DOMESTIC WATERBORNE COMMERCE, 1990-2009  
BY TYPE OF TRAFFIC  
(million short tons)

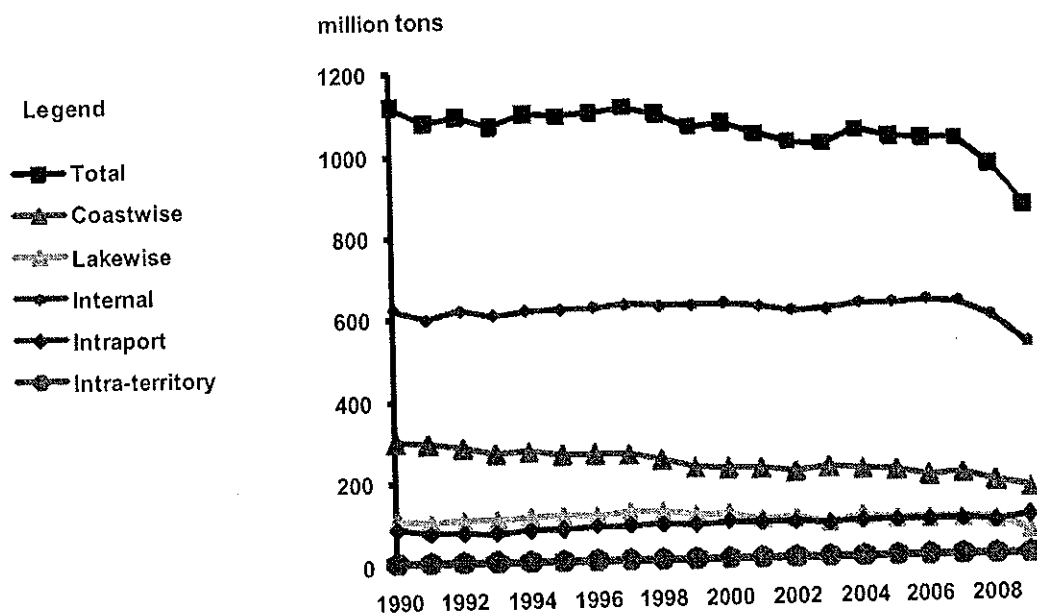


Table 1-8: DOMESTIC WATERBORNE COMMERCE, 1990-2009  
BY TYPE OF TRAFFIC  
(million short tons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<b>Total</b>	<b>1,122.3</b>	<b>1,078.6</b>	<b>1,094.6</b>	<b>1,068.2</b>	<b>1,099.0</b>	<b>1,093.0</b>	<b>1,100.7</b>	<b>1,112.5</b>	<b>1,094.1</b>	<b>1,061.8</b>
Coastwise	298.6	294.5	285.1	271.7	277.0	266.6	267.4	263.1	249.6	228.8
Lakewise	110.2	103.4	107.4	109.9	114.8	116.1	114.9	122.7	122.2	113.9
Internal	622.6	600.4	621.0	607.3	618.4	620.3	*622.1	630.6	625.0	624.6
Intraport	86.4	75.6	76.8	74.4	82.9	83.1	*89.0	89.8	90.1	88.7
Intra-territory	4.5	4.6	4.2	5.0	5.9	6.9	7.3	6.3	7.2	5.9

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>Total</b>	<b>1,069.8</b>	<b>1,042.5</b>	<b>1,021.0</b>	<b>1,016.1</b>	<b>1,047.1</b>	<b>1,028.9</b>	<b>1023.5</b>	<b>1021.5</b>	<b>956.3</b>	<b>857.1</b>
Coastwise	226.9	223.6	216.4	223.5	220.6	213.7	201.8	205.8	186.3	167.7
Lakewise	114.4	100.0	101.5	89.8	103.5	96.2	96.9	95.6	90.4	63.2
Internal	628.4	619.8	608.0	609.6	626.2	624.0	627.6	621.9	588.5	522.5
Intraport	94.6	93.2	90.0	86.9	91.3	90.2	91.4	93.1	86.9	99.0
Intra-territory	5.5	5.9	5.1	6.4	5.5	4.9	5.8	5.1	4.2	4.7

\* Beginning in 1996, fish was excluded for internal and intraport domestic traffic.

Figure 1-7  
DOMESTIC WATERBORNE COMMERCE, 1990-2009  
TON-MILES BY TYPE OF TRAFFIC  
(billion short ton-miles)

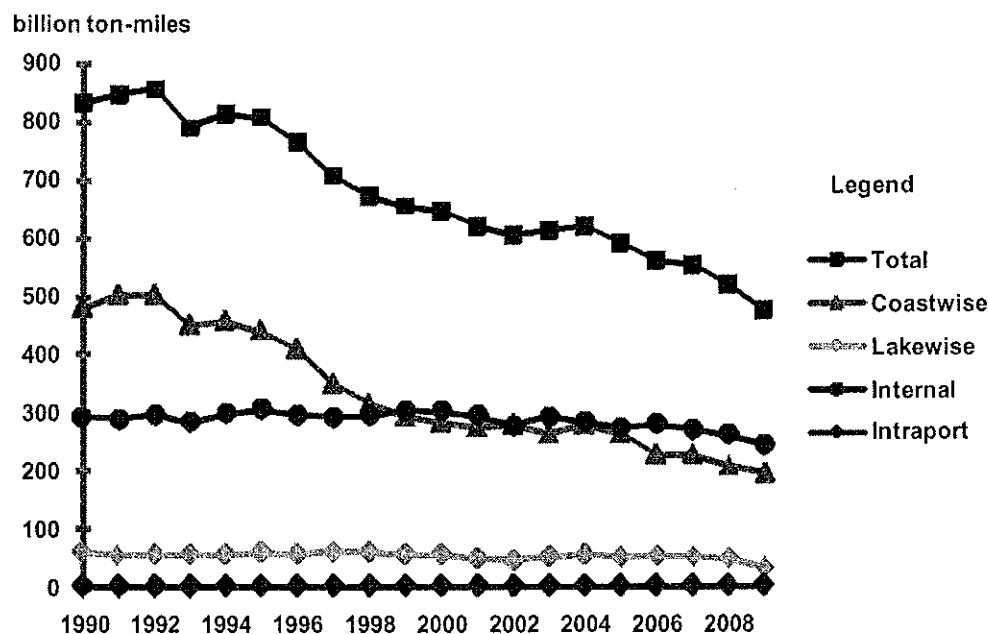


Table 1-9: DOMESTIC WATERBORNE COMMERCE, 1990-2009  
TON-MILES BY TYPE OF TRAFFIC  
(billion short ton-miles)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<b>Total</b>	<b>833.5</b>	<b>848.4</b>	<b>856.7</b>	<b>789.7</b>	<b>814.9</b>	<b>807.7</b>	<b>764.7</b>	<b>707.4</b>	<b>672.8</b>	<b>655.9</b>
Coastwise	479.1	502.1	502.3	448.4	457.6	440.3	408.1	349.8	314.9	292.7
Lakewise	60.9	55.3	55.8	56.4	58.3	59.7	58.3	62.2	61.7	57.0
Internal	292.4	290.0	297.6	283.9	297.8	306.3	296.8	294.0	294.9	304.7
Intraport	1.1	1.0	1.0	0.9	1.3	1.3	1.5	1.4	1.4	1.4

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>Total</b>	<b>645.8</b>	<b>621.7</b>	<b>612.1</b>	<b>606.1</b>	<b>621.2</b>	<b>591.3</b>	<b>561.6</b>	<b>553.2</b>	<b>520.5</b>	<b>477.1</b>
Coastwise	283.9	274.6	263.7	278.9	279.9	263.5	227.2	228.1	207.9	196.3
Lakewise	57.9	50.9	53.7	47.5	55.7	51.9	53.1	51.9	50.3	33.5
Internal	302.6	294.9	293.4	278.4	284.1	274.4	279.8	271.6	261.0	245.0
Intraport	1.5	1.4	1.3	1.3	1.5	1.5	1.6	1.6	1.4	2.3

Figure 1-8  
DOMESTIC WATERBORNE COMMERCE, 1990-2009  
AVERAGE HAUL BY TYPE OF TRAFFIC  
(miles per short ton)

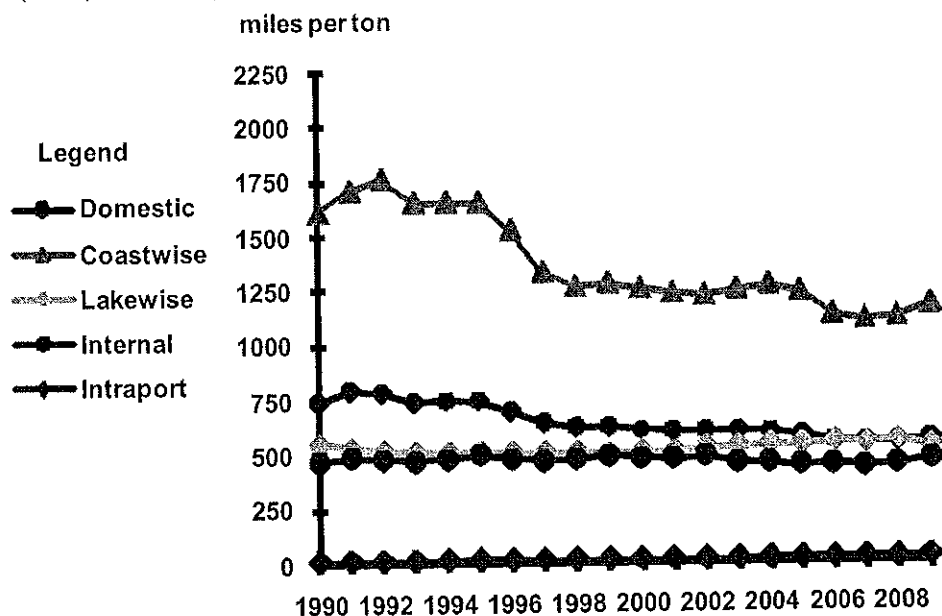


Table 1-10: DOMESTIC WATERBORNE COMMERCE, 1990-2009  
AVERAGE HAUL BY TYPE OF TRAFFIC  
(miles per short ton)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Domestic	745.7	789.9	785.7	742.7	745.5	743.6	699.4	639.5	619.0	621.1
Coastwise	1,604.4	1,704.8	1,761.7	1,650.4	1,651.8	1,651.6	1,526.2	1,329.5	1,261.3	1,279.4
Lakewise	553.1	535.0	519.4	514.0	507.6	514.1	507.8	506.5	504.7	500.9
Internal	469.6	483.0	479.3	467.5	481.5	493.8	477.1	466.3	471.8	487.9
Intraport	12.6	12.8	12.4	12.4	15.6	16.2	16.6	15.3	15.3	15.4

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Domestic	606.8	599.7	602.5	600.3	596.4	577.4	548.7	544.2	546.7	559.7
Coastwise	1,250.9	1,227.9	1,218.5	1,248.2	1,268.9	1,233.1	1,125.6	1,108.3	1,115.9	1,170.2
Lakewise	506.1	508.5	528.8	529.5	538.4	539.6	548.1	542.6	556.0	530.1
Internal	481.4	475.7	482.6	456.6	453.6	439.7	445.8	436.8	443.4	468.9
Intraport	15.8	15.2	14.8	15.4	16.3	16.9	17.4	17.1	16.3	23.5

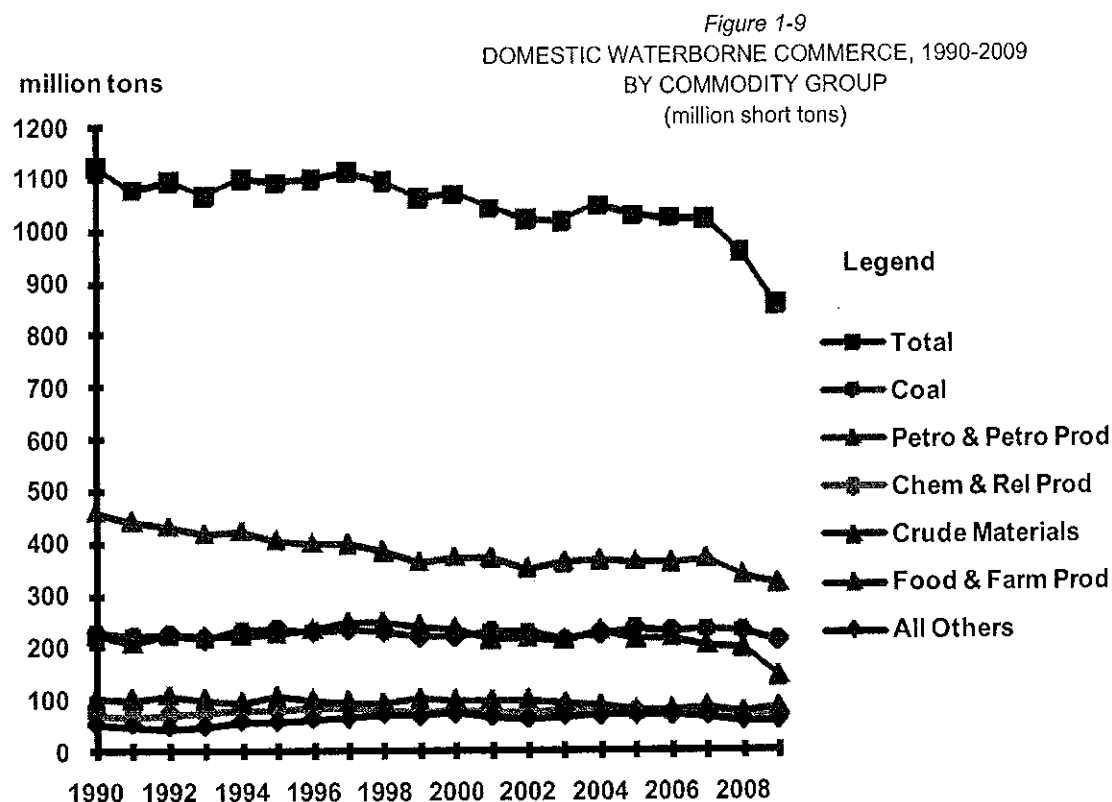


Table 1-11: DOMESTIC WATERBORNE COMMERCE, 1990-2009  
BY COMMODITY GROUP  
(million short tons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<b>Total</b>	<b>1,122.3</b>	<b>1,078.6</b>	<b>1,094.6</b>	<b>1,068.2</b>	<b>1,099.0</b>	<b>1,093.0</b>	<b>1,100.7</b>	<b>1,112.5</b>	<b>1,094.1</b>	<b>1,061.8</b>
Coal	227.1	219.8	223.5	214.7	231.3	223.5	229.9	232.3	229.4	218.9
Petro & Petro Prod	457.7	440.7	429.4	416.9	420.8	403.6	398.5	396.7	382.5	361.5
Chem & Rel Prod	67.4	65.4	70.1	72.8	78.5	79.4	80.2	81.0	77.7	75.3
Crude Materials	222.4	206.7	223.0	218.6	220.9	226.4	233.2	246.5	245.7	239.3
Primary Manuf Goods	25.5	25.4	25.8	28.5	35.7	36.8	37.7	37.2	41.2	45.0
Food & Farm Prod	98.6	98.2	105.3	98.3	93.3	103.4	*98.0	93.7	91.5	100.0
All Manuf Equip	8.1	8.1	10.6	11.6	12.5	14.6	17.2	19.5	20.8	17.8
Other	15.5	14.4	6.9	6.8	5.8	5.5	6.0	5.6	5.3	3.9

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>Total</b>	<b>1,069.8</b>	<b>1,042.5</b>	<b>1,021.0</b>	<b>1,016.1</b>	<b>1,047.1</b>	<b>1,028.9</b>	<b>1,023.5</b>	<b>1,021.5</b>	<b>956.3</b>	<b>857.1</b>
Coal	220.7	227.7	227.0	213.5	222.9	235.3	229.8	231.8	229.9	210.7
Petro & Petro Prod	370.6	369.7	348.7	360.8	365.4	362.7	359.8	367.5	335.6	319.7
Chem & Rel Prod	76.0	71.1	73.1	75.7	75.8	72.7	69.4	71.1	65.5	62.2
Crude Materials	234.2	213.7	214.7	211.6	229.4	213.4	215.7	201.9	194.7	143.0
Primary Manuf Goods	45.8	40.3	42.4	41.7	43.0	44.9	47.0	44.0	38.2	24.2
Food & Farm Prod	96.9	96.5	97.6	90.9	86.9	77.7	79.6	84.4	73.4	81.2
All Manuf Equip	21.2	19.9	14.6	18.7	20.6	20.2	19.9	19.1	17.0	14.1
Other	4.3	3.5	3.0	3.2	3.1	2.0	2.4	1.8	1.9	1.9

\*Beginning in 1996, fish was excluded for internal and intraport domestic traffic



## Section 2 Commodities

Table 2-2: SUMMARY OF DOMESTIC WATERBORNE COMMERCE, TON-MILES  
BY TYPE OF TRAFFIC AND COMMODITY

Comparative Statement of Traffic (million short ton-miles)

Year	Total	Year	Total	Year	Total	Year	Total
2000	645,799	2003	606,146	2006	561,629	2009	477,122
2001	621,686	2004	621,170	2007	553,151		
2002	612,081	2005	591,277	2008	520,521		

Freight Traffic, 2009 (million short ton-miles)

Commodity	Grand Total	Coastwise	Lakewise	Internal	Intraport
<b>Total, all commodities</b>	<b>477,122</b>	<b>196,290</b>	<b>33,509</b>	<b>244,995</b>	<b>2,327</b>
<b>Total coal</b>	<b>77,971</b>	<b>5,639</b>	<b>10,884</b>	<b>60,307</b>	<b>1,141</b>
1100 coal & lignite	76,110	5,639	10,620	58,723	1,127
1200 coal coke	1,861	—	264	1,584	14
<b>Total petroleum and petroleum products</b>	<b>186,813</b>	<b>149,005</b>	<b>216</b>	<b>37,076</b>	<b>516</b>
<b>Subtotal crude petroleum</b>	<b>65,069</b>	<b>60,907</b>	<b>—</b>	<b>4,147</b>	<b>16</b>
2100 crude petroleum	65,069	60,907	—	4,147	16
<b>Subtotal petroleum products</b>	<b>121,744</b>	<b>88,098</b>	<b>216</b>	<b>32,929</b>	<b>500</b>
2211 gasoline	37,717	32,564	41	5,013	99
2221 kerosene	2,180	2,127	—	48	5
2330 distillate fuel oil	38,493	28,797	32	9,505	159
2340 residual fuel oil	22,214	17,189	19	4,817	189
2350 lube oil & greases	3,947	1,067	—	2,877	3
2410 petro. jelly & waxes	64	0	—	64	0
2429 naphtha & solvents	3,847	1,306	—	2,525	16
2430 asphalt, tar & pitch	4,297	1,666	116	2,499	16
2540 petroleum coke	5,611	1,665	8	3,928	10
2640 hydrocarbon & petrol gases, liquefied and gaseous	639	107	0	532	0
2990 petro. products nec	2,735	1,609	—	1,122	3
<b>Total chemicals and related products</b>	<b>36,316</b>	<b>10,426</b>	<b>3</b>	<b>25,757</b>	<b>129</b>
<b>Subtotal fertilizers</b>	<b>10,061</b>	<b>825</b>	<b>—</b>	<b>9,231</b>	<b>4</b>
3110 nitrogenous fert.	6,598	544	—	6,053	2
3120 phosphatic fert.	106	0	—	105	0
3130 potassic fert.	687	0	—	686	1
3190 fert. & mixes nec	2,669	281	—	2,387	1
<b>Subtotal other chemicals and related products</b>	<b>26,256</b>	<b>9,602</b>	<b>3</b>	<b>16,526</b>	<b>125</b>
3211 acyclic hydrocarbons	890	192	—	697	1
3212 benzene & toluene	2,287	799	—	1,452	36
3219 other hydrocarbons	5,841	1,362	—	4,463	16
3220 alcohols	6,307	2,266	—	4,011	30
3230 carboxylic acids	451	92	—	353	6
3240 nitrogen func. comp.	504	14	—	490	—
3250 organo - inorg. comp.	2	2	—	0	0
3260 organic comp. nec	713	249	—	462	2
3271 sulphur (liquid)	331	74	—	77	5
3272 sulphuric acid	2,542	2,460	—	248	9
3273 ammonia	331	74	—	1,020	3
3274 sodium hydroxide	1,023	0	—	2,074	9
3275 inorg. elem., oxides, & halogen salts	3,548	1,465	—	744	5
3276 metallic salts	774	24	—	237	1
3279 inorganic chem. nec	246	4	3	61	—
3282 pigments & paints	62	1	—	1	0
3283 coloring mat. nec	85	84	—	—	—
3284 medicines	0	0	—	—	—
3285 perfumes & cleansers	6	6	—	0	—
3286 plastics	78	78	—	7	0
3291 pesticides	48	41	—	—	—
3292 starches, gluten, glue	4	4	—	—	—
3293 explosives	4	4	—	—	—
3297 chemical additives	1	0	—	1	0
3298 wood & resin chem.	27	18	—	6	3
3299 chem. products nec	0	0	—	0	0
<b>Total crude materials, inedible except fuels*</b>	<b>64,646</b>	<b>5,168</b>	<b>21,013</b>	<b>38,024</b>	<b>441</b>
<b>Subtotal forest products, wood and chips</b>	<b>2,108</b>	<b>1,187</b>	<b>0</b>	<b>915</b>	<b>6</b>
4110 rubber & gums	11	—	—	11	—
4150 fuel wood	41	0	—	41	0
4161 wood chips	896	132	—	759	5

\* Ton-miles not computed for 6.5 million short tons of waterway improvement material.

Table 2-2: SUMMARY OF WATERBORNE COMMERCE TON-MILES  
BY TYPE OF TRAFFIC AND COMMODITY  
Freight Traffic, 2009 - continued

Commodity	Grand Total	Coastwise	Lakewise	Internal	Intraport
4170 wood in the rough	140	55	0	85	1
4189 lumber	990	984	0	6	0
4190 forest products nec	30	15	0	15	0
Subtotal pulp and waste paper	1	1	—	0	—
4225 pulp & waste paper	1	1	—	0	—
Subtotal soil, sand, gravel, rock and stone*	24,579	3,250	5,325	15,596	408
4310 building stone	0	0	0	0	—
4322 limestone	15,020	664	5,123	8,955	278
4323 gypsum	670	3	44	614	10
4327 phosphate rock	2,121	2,121	—	—	—
4331 sand & gravel	6,766	462	157	6,026	120
4338 soil & fill dirt	2	1	0	1	—
Subtotal iron ore and scrap	19,878	115	15,184	4,561	19
4410 iron ore	16,183	0	15,182	1,000	1
4420 iron & steel scrap	3,695	115	2	3,561	17
Subtotal marine shells	7	0	—	7	—
4515 marine shells	7	0	—	7	—
Subtotal non-ferrous ores and scrap	4,647	449	—	4,199	0
4630 copper ore	4	4	—	0	—
4650 aluminum ore	3,297	444	—	2,853	0
4670 manganese ore	624	0	—	624	0
4680 non-ferrous scrap	4	0	—	4	—
4690 non-ferrous ores nec	717	—	—	717	—
Subtotal sulphur, clay and salt	323	1	—	322	0
4741 sulphur, (dry)	0	0	—	—	—
4782 clay & refrac. mat.	323	1	—	322	0
Subtotal slag	945	15	81	842	7
4860 slag	945	15	81	842	7
Subtotal other non-metal. min.	12,158	150	424	11,583	1
4900 non-metal. min. nec	12,158	150	424	11,583	1
Total primary manufactured goods	13,965	2,616	1,088	10,209	52
Subtotal paper products	354	344	—	10	0
5110 newsprint	6	5	—	0	—
5120 paper & paperboard	12	10	—	2	—
5190 paper products nec	336	329	—	7	0
Subtotal lime, cement and glass	5,291	879	1,076	3,286	50
5210 lime	716	44	18	649	5
5220 cement & concrete	4,259	577	1,058	2,580	44
5240 glass & glass prod.	22	12	—	10	0
5290 misc. mineral prod.	294	246	0	47	0
Subtotal primary iron and steel products	6,277	138	3	6,134	1
5312 pig iron	2,654	8	3	2,642	0
5315 ferro alloys	860	—	—	860	—
5320 i&s primary forms	127	—	—	127	—
5330 i&s plates & sheets	1,253	2	0	1,251	0
5360 i&s bars & shapes	505	87	—	417	0
5370 i&s pipe & tube	479	40	0	440	0
5390 primary i&s nec	400	1	0	397	1
Subtotal primary non-ferrous metal products	1,883	1,098	8	775	1
5421 copper	0	0	—	0	—
5422 aluminum	176	1	—	175	—
5429 smelted prod. nec	22	—	—	22	—
5480 fab. metal products	1,684	1,096	8	579	1
Subtotal primary wood products	161	157	—	4	0
5540 primary wood prod.	161	157	—	4	0
Total food and farm products**	82,488	9,512	303	72,639	33
Subtotal fish**	230	230	0	—	—
6134 fish (not shellfish)	211	211	0	—	—
6136 shellfish	19	19	—	—	—
Subtotal grain	43,086	373	303	42,402	7
6241 wheat	5,009	204	64	4,740	2
6344 corn	36,317	1	0	36,311	5
6442 rice	1,157	168	—	988	0
6443 barley & rye	52	—	—	52	—
6445 oats	0	—	—	0	—
6447 sorghum grains	550	—	239	310	0
Subtotal oilseeds	24,701	6	—	24,672	23
6522 soybeans	21,310	0	—	21,287	22
6590 oilseeds nec	3,392	6	—	3,385	1
Subtotal vegetable products	1,272	431	—	839	1
6653 vegetable oils	810	21	—	787	1

\* Ton-miles not computed for 6.5 million short tons of waterway improvement material.

\*\* Ton-miles not computed for fish landings.

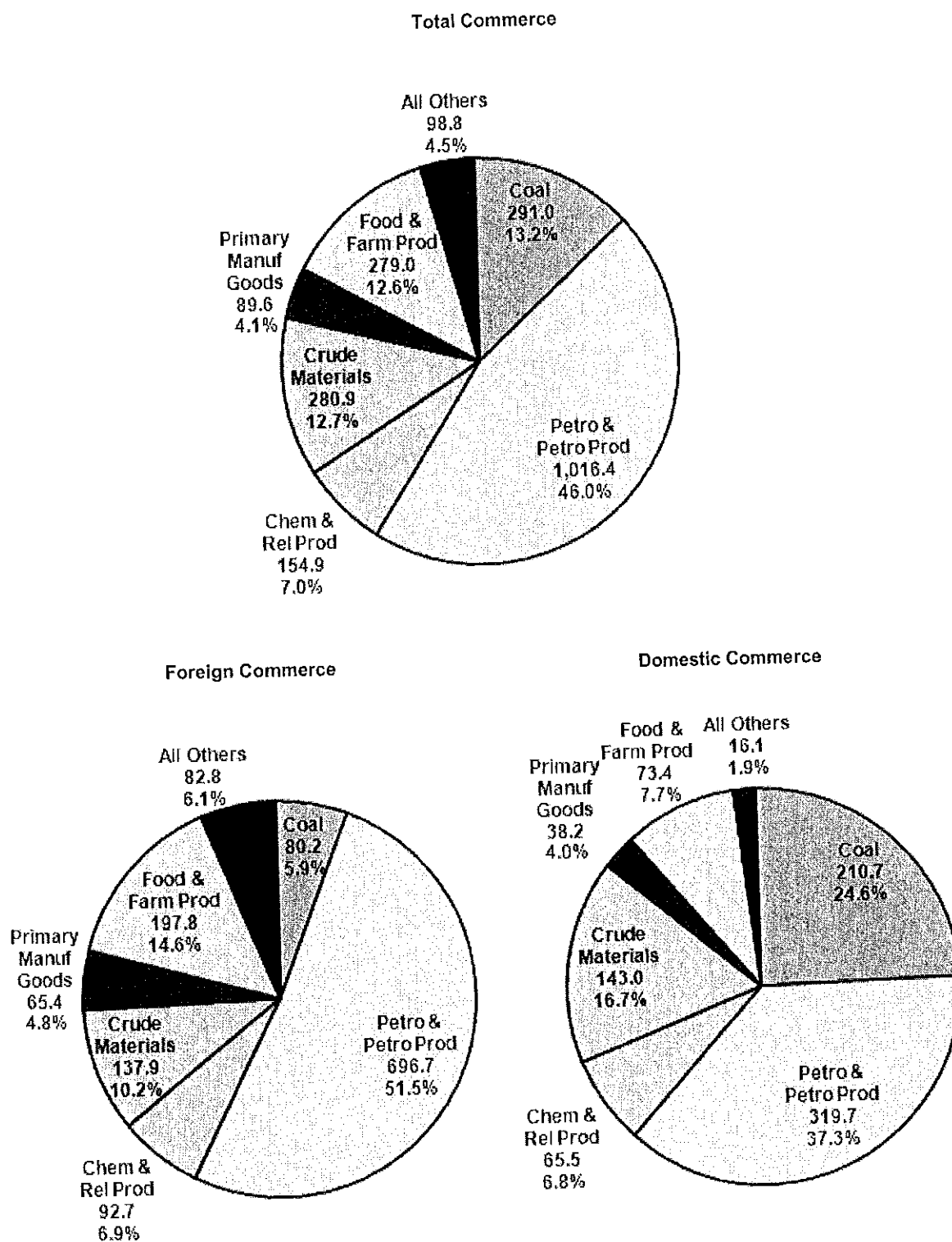
Table 2-2: SUMMARY OF WATERBORNE COMMERCE TON-MILES  
BY TYPE OF TRAFFIC AND COMMODITY  
Freight Traffic, 2009 - continued

Commodity	Grand Total	Coastwise	Lakewise	Internal	Intraport
6654 vegetables & prod.	462	410	—	52	0
Subtotal processed grain and animal feed	5,347	1,394	—	3,952	1
6746 wheat flour	5	5	—	—	—
6747 grain mill products	1,326	1,152	—	175	—
6781 hay & fodder	9	4	—	5	—
6782 animal feed, prep.	4,006	233	—	3,772	1
Subtotal other agricultural products	7,852	7,077	0	774	1
6811 meat, fresh, frozen	350	350	—	—	—
6817 meat, prepared	5	5	—	—	—
6822 dairy products	10	10	—	—	—
6835 fish, prepared	939	909	—	30	—
6838 tallow, animal oils	10	7	—	3	0
6839 animals & prod. nec	34	34	—	—	—
6856 bananas & plantains	5	5	—	—	—
6857 fruit & nuts nec	37	37	—	—	—
6858 fruit juices	48	48	—	—	—
6861 sugar	1,092	808	—	283	—
6865 molasses	349	82	—	267	0
6871 coffee	11	11	—	—	—
6872 cocoa beans	0	—	—	0	—
6885 alcoholic beverages	678	586	—	92	0
6887 groceries	1,227	1,176	0	51	0
6888 water & ice	11	5	—	5	1
6889 food products nec	2,961	2,919	0	42	0
6891 tobacco & products	5	5	—	—	—
6893 cotton	0	0	—	—	—
6899 farm products nec	80	80	—	0	—
Total all manufactured equipment, machinery and products	14,449	13,648	0	795	7
7110 machinery (not elec)	500	386	0	114	0
7120 electrical machinery	241	137	—	104	0
7210 vehicles & parts	898	879	0	19	0
7220 aircraft & parts	0	0	—	0	0
7230 ships & boats	8	6	0	2	0
7300 ordnance & access.	163	163	—	0	—
7400 manufac. wood prod.	1,152	1,139	0	13	0
7500 textile products	23	9	0	14	0
7600 rubber & plastic pr.	71	42	—	29	0
7900 manufac. prod. nec	11,393	10,886	0	501	6
Total waste and scrap nec	203	7	0	187	9
8900 waste and scrap nec	203	7	0	187	9
Total unknown or not elsewhere classified	270	269	1	0	—
9900 unknown or nec	270	269	1	0	—
Ton-miles (x1000)	477,122	196,290	33,509	244,995	2,327

Table 2-4: PRINCIPAL COMMODITIES IN WATERBORNE COMMERCE, 2008-2009  
(million short tons)

	2008	2009	%Change
<b>Total Commerce</b>	<b>2,477.1</b>	<b>2,210.8</b>	<b>-10.8</b>
Coal	348.0	291.0	-16.4
Petro & Petro Prod	1,068.3	1,016.4	-4.9
Chem & Rel Prod	168.7	154.9	-8.2
Crude Materials	358.3	280.9	-21.6
Primary Manuf Goods	134.6	89.6	-33.4
Food and Farm Prod	277.9	279.0	0.4
All Manuf Equip	109.7	89.6	-18.3
Other	11.7	9.3	-20.9
<b>Foreign Commerce</b>	<b>1,520.8</b>	<b>1,353.7</b>	<b>-11.0</b>
Coal	118.1	80.2	-32.0
Petro & Petro Prod	732.7	696.7	-4.9
Chem & Rel Prod	103.2	92.7	-10.2
Crude Materials	163.5	137.9	-15.6
Primary Manuf Goods	96.3	65.4	-32.1
Food and Farm Prod	204.5	197.8	-3.3
All Manuf Equip	92.7	75.4	-18.6
Other	9.8	7.4	-24.7
<b>Domestic Commerce</b>	<b>956.3</b>	<b>857.1</b>	<b>-10.4</b>
Coal	229.9	210.7	-8.3
Petro & Petro Prod	335.6	319.7	-4.7
Chem & Rel Prod	65.5	62.2	-5.0
Crude Materials	194.7	143.0	-26.6
Primary Manuf Goods	38.2	24.2	-36.7
Food and Farm Prod	73.4	81.2	10.7
All Manuf Equip	17.0	14.1	-16.7
Other	1.9	1.9	-2.0

Figure 2-2  
 PRINCIPAL COMMODITY GROUPS CARRIED BY WATER, 2009  
 (million short tons and percentage of short tons)



## Section 3 Waterways

Table 3-21: DOMESTIC TRAFFIC FOR SELECTED U.S. INLAND WATERWAYS IN 2009  
(million short tons, billions of ton-miles<sup>1</sup> and percent change from 2008)

Waterway	Length (miles)	Tons		Ton-Miles		Trip <sup>2</sup> Ton-Miles	
		2009	%	2009	%	2009	%
Atlantic Coast							
Atlantic Intracoastal Waterway VA-FL	793	2.5	-15.2	0.2	-14.1	0.3	-28.0
Intracoastal Wtwy Jacksonville to Miami FL	349	0.1	-28.1	**	-38.3	**	-69.7
Gulf Coast							
Bayou Teche LA	107	1.1	14.9	**	18.0	0.5	21.3
Black Warrior and Tombigbee rivers AL	449	15.7	-21.1	2.7	-22.8	5.1	-18.9
Chocolate Bayou TX	13	1.0	-66.9	**	-66.9	0.4	-35.1
Gulf Intracoastal Waterway TX-FL	1,109	108.1	-6.7	16.6	-9.5	47.7	-11.1
GIWW: Morgan City-Port Allen LA	64	16.4	-29.9	1.0	-34.7	14.8	-31.8
Petit Anse Tigre Carlin bayous LA	16	2.2	-17.4	**	-16.1	3.1	-19.3
Tennessee-Tombigbee Waterway AL and MS	234	5.8	-10.9	1.0	-6.2	3.7	-9.5
Mississippi River System							
Allegheny River PA	72	2.0	-19.7	**	-9.8	0.4	-41.0
Atchafalaya River LA	121	7.8	-18.3	0.8	20.3	5.9	-9.3
Big Sandy River KY and WV	27	11.1	-35.9	**	-37.5	5.2	-27.7
Cumberland River KY and TN	381	20.8	-10.7	2.1	-12.7	9.8	-3.0
Green and Barren rivers KY	109	11.1	21.6	0.7	23.8	3.8	11.3
Illinois Waterway IL	357	36.4	-2.3	6.5	-2.3	34.1	1.2
J. Bennett Johnston Waterway LA	218	9.9	34.4	0.4	28.6	7.9	32.7
Kanawha River WV	91	18.5	-8.4	1.2	-12.9	7.3	-31.3
McClellan-Kerr Arkansas R. Nav. Sys. AR/OK	462	10.8	-2.3	2.4	3.0	6.4	2.3
Mississippi River Mpls MN to Mouth of Passes	1,814	279.8	-5.2	150.9	-1.6	195.1	-5.6
Minneapolis MN to Mouth of Missouri River	663	62.2	2.5	11.5	17.2	69.0	9.0
Mouth of Missouri R. to Mouth of Ohio R.	195	104.3	5.7	17.0	7.5	104.5	8.5
Mouth of Ohio River up to Baton Rouge LA	720	166.3	-5.7	101.8	-4.4	169.8	-5.3
Baton Rouge up to New Orleans LA3	130	192.5	-6.2	15.6	-2.4	155.6	-7.3
New Orleans LA to Mouth of Passes3	106	113.5	-2.4	5.1	-3.4	60.0	-6.6
Missouri R. (MO KS NE & IA) to Sioux City IA	732	5.0	-11.2	0.1	33.2	0.2	-11.9
Monongahela River PA and WV	129	20.9	-25.2	1.0	-24.7	6.7	-13.6
Ohio River PA WV OH KY IN and IL	981	207.2	-10.2	49.7	-12.3	103.7	-14.7
Ouachita and Black Rivers AR and LA	332	1.3	-26.9	0.2	-27.1	0.6	-29.7
Tennessee River TN KY MS and AL	652	39.2	-21	4.1	-22.5	22.9	-7.7
Pacific Coast							
Columbia River System OR WA and ID <sup>3</sup>	596	13.6	-3.9	2.2	7.2	1.9	9.1
Columbia River and Willamette River below Vancouver WA and Portland OR <sup>3</sup>	113	13.4	-2.9	0.5	-2.2	1.9	10.7
Vancouver WA to The Dalles OR	85	8.2	-0.6	0.6	1.9	1.9	9.8
The Dalles Dam to McNary Lock and Dam	100	7.0	1.5	0.6	11.4	1.8	10.2
Above McNary L & D to Kennewick WA	39	5.7	17.5	0.2	16.0	1.6	19.7
Snake River (WA and ID) to Lewiston ID	141	4.4	18.9	0.3	24.8	1.3	21.3
Willamette River above Portland OR	118	0.5	-59.6	**	**	**	-79.7

1. \*\* denotes ton-miles of less than 50 million.

2. Internal and intraport tons times total distance from origin to destination.

3. Includes coastwise entrance channel miles for tons and ton-miles but not for trip ton-miles.