

U.S. ARMY CORPS OF ENGINEERS ASSET MANAGEMENT PLAN



**US Army Corps
of Engineers®**

Prepared by
USACE Headquarters
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Washington, DC

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**U.S. Army Corps of Engineers
Asset Management Plan**

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Section 1. Introduction

The U.S. Army Corps of Engineers' (USACE) Asset Management Plan (AMP) was prepared in accordance with the Federal Real Property Council Guidance for Improved Asset Management, issued December 2004. The principles of the Federal Real Property Council (FRPC) established in response to Executive Order 13327 guide this plan. The FRPC's ten guiding principles, applicable to Federal real property asset management, are:

1. Support agency missions and strategic goals (*Section 2*)
2. Use public and commercial benchmarks and best practices (*Section 2*)
3. Employ life-cycle cost-benefit utilization (*Sections 2,3,4*)
4. Promote full and appropriate utilization (*Sections 2,3,4,5*)
5. Dispose of unneeded assets (*Section 5*)
6. Provide appropriate levels of investment (*Section 3,4*)
7. Accurately inventory and describe all assets (*Section 4*)
8. Employ balanced performance measures (*Section 4*)
9. Advance customer satisfaction (*Sections 2, 3*)
10. Provide for safe, secure, and healthy workplaces (*Section 2*)

This plan addresses the FRPC's template for agency asset management plans, which includes:

1. Integrated guiding principles (*Section 2*)
2. Agency-specific owner's objectives (*Section 2*)
3. Periodic evaluation of all assets (*Section 4,5*)
4. Prioritized operations and maintenance and capital plans (*Sections 3,4*)
5. Identified resource requirements to support plans (*Section 2*)
6. "Building Block" asset business plans in agency portfolio context (*Section 4*)
7. Continuous monitoring and feedback mechanisms (*Section 3,4*)
8. Consideration of socio-economic environmental responsibilities (*Sections 2,3*)
9. Adequate human capital support of asset management organization (*Section 2*)
10. Common government-wide terminology (*Appendix A*)

The section numbers following each FRPC principle and template item listed above reference this document where the principle is addressed.

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The USACE AMP is comprised of the following five sections which coordinate with the FRPC's principles and template items for Federal real property asset management:

Section 1 – Introduction provides the overview of the USACE AMP. For further information, http://www.usace.army.mil/inet/functions/cw/hot_topics/, select President's Management Agenda button and see pp. 15-16 of the document.

Section 2 – Support of USACE's Mission and Strategic Goals addresses USACE's mission and its real property support in implementing those missions and strategic goals, its human capital and organizational structure, decision-making framework, and owner's objectives.

Section 3 – Planning and Acquisition of Real Property describes how USACE plans for and acquires real property assets, develops its capital plan, identifies its prioritized acquisition list each fiscal year, measures the effectiveness of its acquisition results, and identifies key initiatives to improve financial management and acquisition performance.

Section 4 – Operations of Real Property describes how USACE operates its real property assets, and how it addresses its inventory system, its Operations and Maintenance Plans, its Asset Business Plans or "Building Block" Plans and its periodic evaluation of assets. Additionally, operational measures are described as well as key initiatives that are underway to improve operational performance.

Section 5 – Disposal of Unneeded Real Property describes how USACE disposes of unneeded real property assets and tracks the disposal.

USACE's overall mission includes both a Civil Works and Military Program. The military assets include approximately 8,000 in-leases that are reported to Assistant Chief of Staff for Installation Management in a separate USACE database for military assets, Rental Facilities Management Information System (RFMIS). The civil works assets, by comparison, constitute the preponderance of USACE's real property portfolio and the AMP will focus primarily on how these assets will be managed.

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Section 2. Support of the USACE's Missions and Strategic Goals

The U.S. Army Corps of Engineers is an executive branch agency within the Department of Defense and a Major Command within the Army. The Strategic Vision, Campaign Goals, and the Civil Works Strategic Plan strongly support managing a sustainable infrastructure. Asset management is a key element in ensuring a more efficient and effective organization. The USACE is committed to right-sizing its inventory and maintaining mission critical national infrastructure at performance levels that provide national security, are environmentally sustainable, and are economically advantageous to the Nation. The primary business areas where the USACE manages a considerable number of real property assets are navigation, hydropower, recreation, and flood and coastal storm damage reduction. Focusing on the Strategic Vision and achieving the Campaign Goals and Civil Works Strategic Plan will accomplish the overall USACE mission.

2.1 USACE Mission

The U.S. Army Corps of Engineers (USACE) serves the Armed Forces and the Nation by providing vital engineering services and capabilities as a public service across the full spectrum of operations—from peace to war—in support of national interests. USACE missions include five broad areas:

- Water Resources – Through the Civil Works program, USACE carries out a wide array of projects that provide flood and coastal storm damage reduction, hydropower, navigable waterways and channels, recreational opportunities, and water supply
- Environment – USACE's environmental mission has two major focus areas: restoration and stewardship. Efforts in both areas are guided by the USACE Environmental Operating Principles, which help balance economic and environmental concerns. USACE supports or manages numerous environmental programs that run the gamut from cleaning up areas on former military installations contaminated by hazardous waste or munitions to helping establish a small wetland that helps endangered species survive.
- Infrastructure – As part of the Civil Works program, USACE maintains direct control of 609 dams, maintains and/or operates 257 navigation locks, and operates 75 hydroelectric facilities generating 24 percent of the nation's hydropower and three percent of its total electricity. As part of its Military Construction Program, USACE contributes to the defense mission by building ranges and other training facilities, barracks, dining halls, hospitals, and workplaces for the Army; designing and managing construction and real estate services for the Air Force; and designing quality-of-life facilities such as recreation centers, commissaries, and exchanges. In addition to building and maintaining civil and military infrastructure, USACE's Research and Development community is constantly developing new construction, operation and maintenance technology, and programs to increase the effectiveness and longevity of this investment.

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- Homeland Security - In the wake of recent world events, USACE engineering expertise and emergency management abilities have become linked with the nation's homeland security.
- Warfighting – USACE provides a variety of support directly and indirectly to the warfighting effort. The USACE builds and helps maintain much of the infrastructure the Army and the Air Force use to train, house, and deploy our troops.

USACE’s supporting missions include Real Estate, Research and Development and Support to Other Agencies. For more information regarding USACE <http://www.usace.army.mil/missions/index.html> .

USACE Strategic Vision



Figure 2.1 USACE Strategic Framework

The USACE Strategic Vision, <http://www.hq.usace.army.mil/cepa/vision/vision.htm> embraces the mantra:

“One Team: Relevant, Ready, Responsive, and Reliable, proudly serving the Armed Forces and the Nation now and in the future. A full-spectrum Engineer Force of high quality civilians and soldiers, working with our partners to deliver innovative and effective solutions to the Nation’s engineering challenges.”

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Campaign Goals

USACE has identified three major goals to focus our efforts and help us reach our vision. These Goals are:

- 1) Support stability, reconstruction, and homeland security operations;
- 2) Develop sound water resource solutions; and
- 3) Enhance life cycle infrastructure management.

Goal 3 is further subdivided into the following main objectives that have direct implications to USACE Asset Management.

- 3a) Reinvent the Military Construction and Real Estate process to meet DoD transformation.
- 3b) Reduce security risks to critical military and civil infrastructure.
- 3c) Improve the reliability of water resources infrastructure using a risk-based asset management strategy.
- 3d) Design and construct innovative civil and military infrastructure to meet our nation's needs across the spectrum of operations.

USACE Civil Works Strategic Plan

The March 2004, Civil Works Strategic Plan 2004-2009, http://www.corpsresults.us/pdfs/cw_strat.pdf, states that USACE accomplishes its Civil Works (CW) mission through nine business programs:

- 1) Navigation
- 2) Flood and Coastal Storm Damage Reduction
- 3) Environmental protection and restoration
- 4) Hydropower
- 5) Recreation
- 6) Regulatory
- 7) Water supply
- 8) Emergency management
- 9) Support for others

Within the CW plan, USACE intends to meet its water resources challenges by embracing the following five strategic goals:

- 1) Provide sustainable development and integrated management of the nation's water resources.
- 2) Repair past environmental degradation and prevent future environmental losses.
- 3) Ensure projects perform to meet authorized purposes and evolving needs.
- 4) Reduce vulnerabilities and losses to the nation and the Army from natural and man-made disasters, including terrorism.
- 5) Be a world class public engineering organization.

The USACE Strategic Vision, Campaign Goals, and the CW Strategic Plan all have key elements which support asset management and a sustainable infrastructure. Specifically, both Goal 3 of the Campaign plan and Goal 3 of the CW plan focus on managing and modernizing infrastructure in an economically responsible manner.

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The primary business areas in which the USACE manages a considerable number of real property assets are navigation, hydropower, recreation, and flood and coastal storm damage reduction.

As stated previously, the Civil Works assets, by comparison, constitute the majority of USACE's real property portfolio. The AMP will focus primarily on how these assets will be managed.

2.1.1 Real Property Organization Mission

The USACE is organized into a headquarters located in Washington, D.C., nine regional Divisions and 41 Districts; eight Divisions and 38 Districts carry out Civil Works responsibilities in the United States. A military officer serves as the Chief of Engineers who oversees execution of both civil and military missions. The Chief of Engineers delegates responsibility for the leadership and management of the Civil Works mission to the Director of Civil Works (DCW), a general officer. Figures 2.2a and 2.2b provide the boundaries and headquarters locations of each Division and District for the Civil Works and Military Programs. Figure 2.3 provides an organizational chart.

Divisions and Districts are generally delineated by watersheds, allowing USACE to take a holistic approach when making recapitalization, design, maintenance, operational, and disposal decisions regarding assets supporting critical missions within each region. The entire watershed can be viewed as a system of real property assets that must be managed to balance competing demands and limited funding.

The 38 District offices have the operational mission of planning, designing, constructing, operating and maintaining, and disposal of real property assets. Each District manages assets within their own boundaries, but must consider system effects throughout the region. The eight Division offices provide the oversight and regional perspective for balancing competing demands within each respective region. The Headquarters has a strategic mission of establishing management policies, procedures and performance criteria, and budget submittal of the USACE programs.

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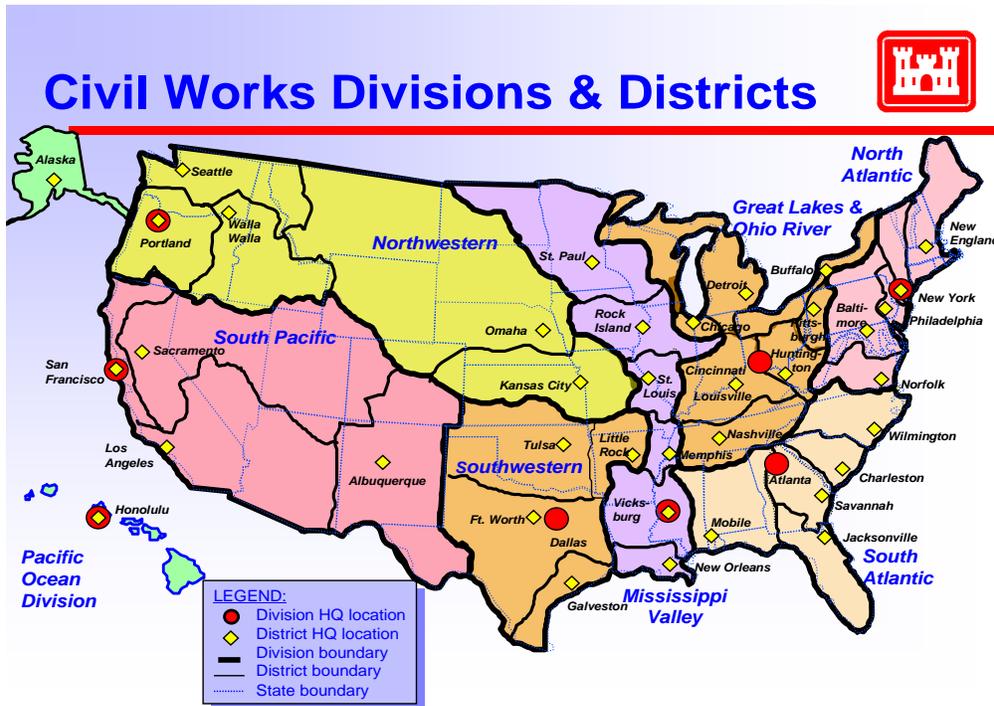


Figure 2.2a USACE Civil Works Divisions & Districts

Military Programs Divisions



Figure 2.2b USACE Military Program Divisions

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USACE has a challenging mission of managing real property that is federally owned and operated, is federally constructed and turned over to cost-share customers, or is federally maintained on non-federal property or easements. As required by Executive Order 13327, this report focuses on real property that is federally owned and operated.

USACE possesses approximately 11.8 million acres of land holdings recorded as 280,000 tracts of land in the Real Estate Management Information System (REMIS). USACE possesses approximately 55,000 buildings, structures or types of facilities all of which are recorded in REMIS. The types of constructed assets maintained and/or operated by USACE vary greatly in size, use and function. The capital investments with the highest operating costs are structures and facilities unique to the Civil Works mission of USACE. USACE owns, operates and maintains approximately 6,000 buildings and 21,000 structures that are classified as financial assets (construction costs of >\$25K). They are coded as assets in REMIS. The primary goal of USACE was to get the FRPC 23 data elements populated for these real property items. In addition, USACE owns, operates and maintains approximately 6,000 buildings and 22,000 structures whose original construction costs were <\$25K. The costs for these buildings and structures were expensed by USACE Resource Management Office. Records on these real property items are maintained in REMIS but they are coded as Expensed and construction costs are recorded as zero. A next push for USACE is to complete the population of the FRPC 23 data elements for the Expensed real property items. USACE assets include flood damage reduction dams, levees, flood walls, coastal structures, jetties, dikes, bank revetments, pumping stations, locks and dams, recreation facilities, hydropower facilities, and navigable waterways and channels. The USACE real property inventory contains approximately 1,000 coastal structures, 2,500 recreation areas, 75 hydropower facilities, 200 plus locks, 600 dams, and seven laboratories. USACE is responsible for operating and maintenance costs for approximately 25,000 miles of navigable federal channels and over 300 commercial harbors which are not federally owned and are not part of the USACE real property inventory. Many Civil Works projects, once authorized by Congress, are cost-shared with local sponsors. USACE constructs the projects and subsequently conveys them to the local partners and sponsors. Thereafter, the local partners and sponsors own and maintain the asset.

A key part of Campaign Goal 3c is the completion of the USACE Asset Management Plan (AMP) consistent with Federal Real Property Council (FRPC) requirements and Office of Management and Budget (OMB) approval. Goal 3c encompasses an asset management strategy that manages both federal and non-federal infrastructures. Campaign Goal 3c acknowledges that USACE needs to leverage its strategic relationships with other agencies, develop a recapitalization and disposal strategy, and optimize water resource operating and investment decisions, focusing on risk-based evaluations and rigorous asset management practices. The purpose of the final plan is to ensure USACE stays focused on all appropriate infrastructure assets. The implementation of Campaign Goal 3c will be a continuing effort that is flexible and respondent to any mandated authorities, with the sole purpose of ensuring that

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potential risks and loss of life and property are protected by maintaining our projects and systems up to optimum standards.

2.2 Organizational Infrastructure and Human Capital

USACE accomplishes its mission through its Divisions and Districts across the country and with a workforce comprised of civil and military service. The District Commander and his/her staff of planners, engineers, biologists, resource managers, real estate specialists, and project and operations managers have responsibility for all federal real property assets that have been authorized and appropriated through Congress.

The Divisions focus on the regional operational role. Realty officers are located in each of the eight Divisions. The Districts focus on mission execution and are supported by the Division and Headquarters. Real Estate specialists at each of the 38 Districts focus on the acquisition, inventory, management, and disposal of real property.

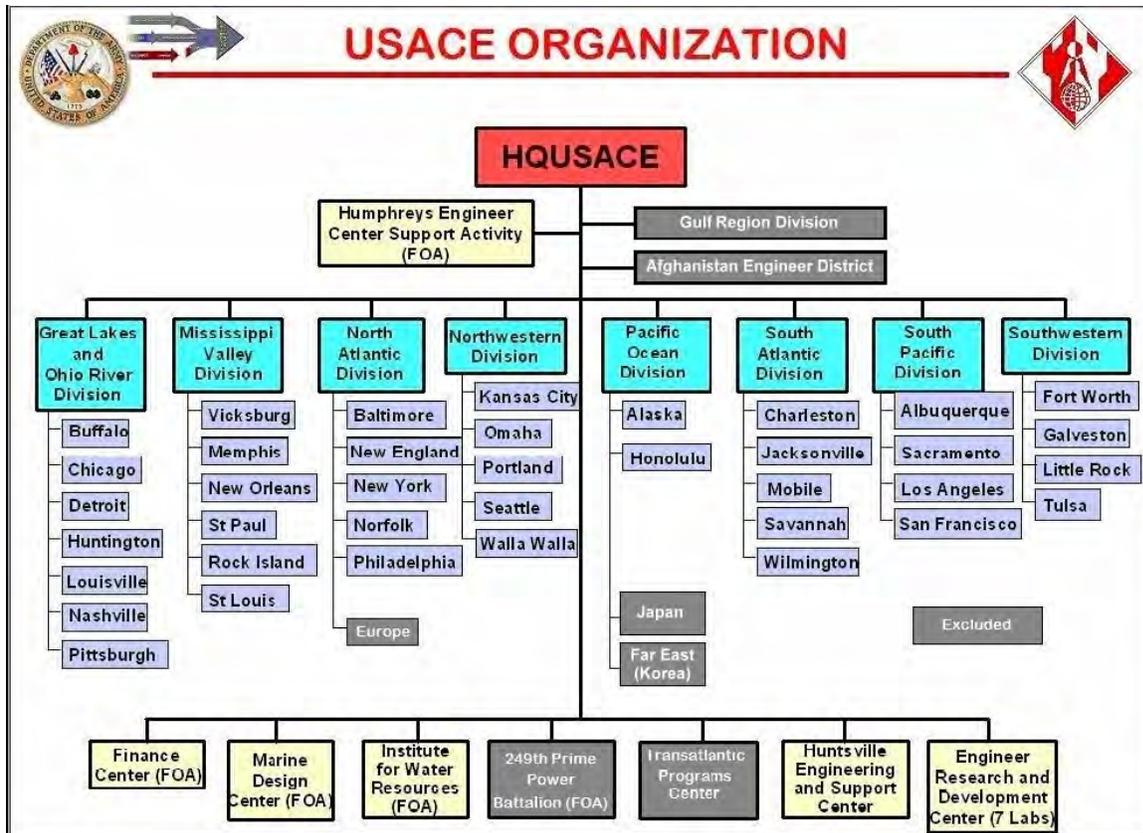


Figure 2.3 USACE Organizational Structure

In 2003, USACE embarked on “USACE 2012, Aligning USACE for Success in the 21st Century.” While USACE 2012 has evolved into the current Campaign Plan,

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basic tenets are key to USACE organizational success. Four key elements are: **One Corps, Regional Business Centers, Regional Integration Teams**, and **Communities of Practice**. Furthermore, a fifth element of the project management business process culture relies on cross-functional **Project Delivery Teams** to accomplish the work. Automated Information Systems and a commitment to becoming a Learning Organization also are important to achieving the USACE vision: One Team: Relevant, Ready, Responsive, and Reliable.

One Corps – With the concept of One Corps, each echelon (Washington, Division and District) will have discrete responsibilities, authorities, tasks, and activities that are commensurate with their role. The Washington-level Headquarters focuses on the strategic needs of the organization - strategic plans, direction, national relationships, policy development, and learning. The Division focuses on the regional operational role. The Districts are focused on mission execution and are supported by the Division and Headquarters. The concept of One Corps will promote mutual interdependence throughout the organization while aligning expertise with the work.

Regional Business Centers (RBC) focus on managing and executing the region's projects. Asset management and subsequent asset reporting to Headquarters is accomplished at the regional level. USACE develops and defends its budget based on nine business lines – navigation, flood damage reduction, storm damage reduction, hydropower, water supply, recreation, emergency management, environmental restoration, and regulatory. Each business line manager (BLM) in the RBC manages assets and ensures that they are addressed in the budget process. BLMs are responsible for all assets in their business line throughout all Districts and are able to identify best practices and benchmarks among the Districts. BLMs are able to observe the best asset management practices in the Districts and share them through, for example, websites, meetings, and after action reports (AARs). Benchmarking and best management practices are discussed further in Section 2.5. Business line managers also receive information including best practices from the Community of Practice network across the USACE and through external communications with industry and other agencies. Many projects are multi-use and cross several business lines.

Regional Integration Teams (RIT) are cross functional teams at Headquarters which focus on regional business success, whether it is answering a national policy question early in the process or making sure that a Congressional response on the status of the project accurately reflects the knowledge of the entire vertical team. Each RIT has a real estate professional who is responsible for real estate issues within the region.

Communities of Practice (CoP) is a group of people who regularly interact to collectively learn, solve problems, build skills and competencies, and develop best practices around a shared concern, goal, mission, set of problems, or work practice. CoPs cut across formal organizational structures and increase individual and organizational agility and responsiveness by enabling faster learning, problem solving, and competence building; greater reach to expertise across the force; and

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quicker development and diffusion of best practices. CoP structures range from informal to formal and may also be referred to as structured professional forums, knowledge networks, or collaborative environments. USACE team members volunteer to participate in at least one CoP. CoP members work together with a common sense of purpose and will share information, experiences, and lessons learned.

Project Delivery Team (PDT) – is a cross functional group, or groups, assembled by USACE to make the project management business process work. USACE draws on its diverse resources to assemble strong multi-disciplined PDTs that are unlimited by geographic or organizational boundaries. The PDT is responsible and accountable for delivering a quality project to the customer.

2.2.1 Organization Infrastructure

The Chief of Engineers (U.S. Army Lieutenant General) commands USACE through Division and District commanders from USACE Headquarters (HQUSACE) located in Washington, DC. The Chief of Engineers, supported by his/her staff, is responsible for all USACE missions, both Military Programs and Civil Works. See figure 2.4

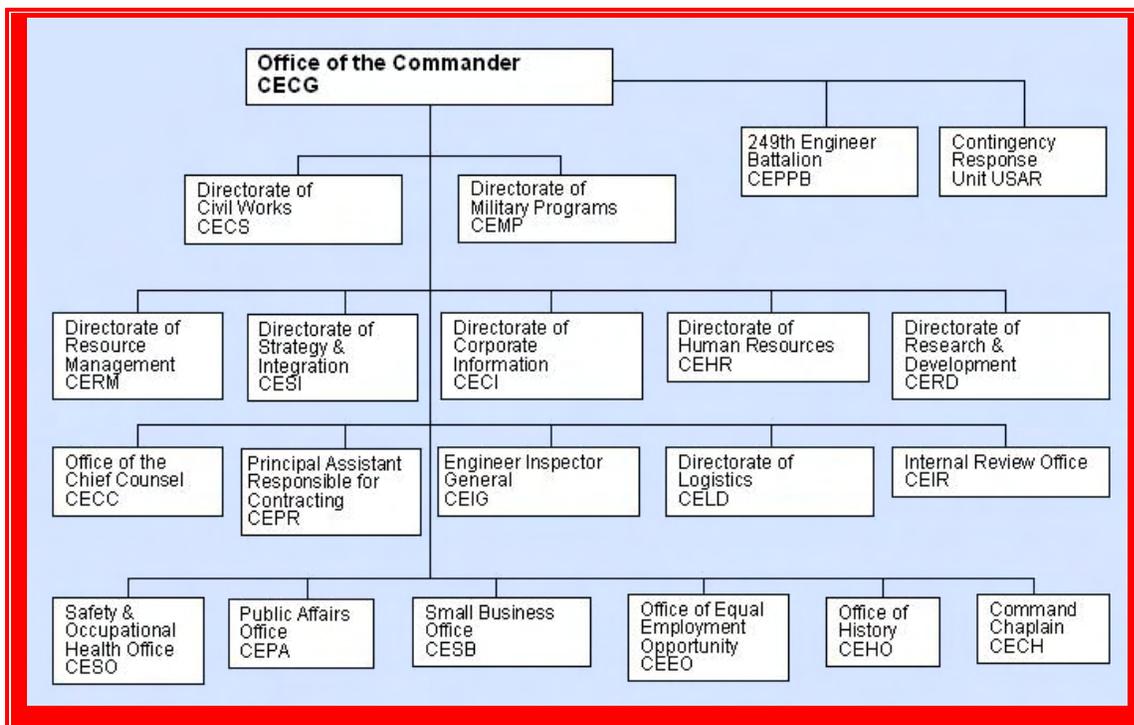


Figure 2.4 USACE Headquarters (HQUSACE)

Three directorates have primary responsibilities for real property asset management: Directorate of Civil Works, Directorate of Military Programs, and the Directorate of Logistics.

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The Directorate of Civil Works (CECW) has the lead for asset management and the other directorate/office staffs provide support as needed. The Asset Management Office in the Civil Works Directorate has the responsibility for oversight of the entire real property asset portfolio. This office in partnership with Real Estate Community of Practice serves as the focal point for coordinating real property asset issues between the Headquarters and the Divisions and reporting requirements to the Department of Defense (Senior Real Property Officer) and the Department of the Army (Assistant Secretary of the Army for Civil Works).

The Directorate of Military Programs (CEMP), through the Real Estate CoP, manages the full range of real estate services (appraisal, planning and control, acquisition, management, and disposal of land) for the Military and Civil Works activities of the Army and Air Force and for other federal agencies as requested. The head of the Real Estate CoP is the Director of Real Estate. The Real Estate community provides the full range of realty services from planning and acquisition, to management and disposal.

The Directorate of Logistics in conjunction with the Real Estate organization is responsible for planning, programming, and validating requirements of leased properties below certain thresholds. These thresholds are covered in Section 3.1.3 Acquisition of Major Leases. For the most part, the Directorate of Logistics does not have major responsibilities in the life cycle management of Civil Works assets.

2.2.2 Human Capital

The USACE employs nearly 34,600 people, including 650 military officers and 24,800 civilians who perform civil works duties. The 1200-member Real Estate community is composed of real estate specialists, real estate attorneys, appraisers, cartographers, budget analysts, and program analysts. Those numbers reflect a decrease in the number of employees by 12 percent from 1995 to 2002. Even with an increasing workload during that time, the USACE was able to continue execution through leveraging with the private sector and improvements in business process. The workforce represents a diverse set of skills and professions consistent with mission requirements. Most career fields are involved in some aspect of using, maintaining, or managing real property.

Each USACE District has a Real Estate employee who is designated by the District Engineer as the Real Property Accountable Officer (RPAO). The RPAO is responsible for maintaining accurate records in REMIS for the USACE Real Property Inventory and for ensuring that physical inventories are conducted of the real property inventory every three years. The RPAO assigns constructed assets to persons designated as Hand Receipt Holders who have physical custody and responsibility for the assets. A joint physical inventory is required where there is a transfer of responsibility from a Hand Receipt Holder to another employee.

Many disciplines are engaged in real property management. Engineers, environment and recreation specialists, operation project managers, real estate specialists, and

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logisticians all play major roles in Civil Works asset management. While real estate specialists focus on the acquisition, inventory, management, and disposal of real property, project managers and engineers plan, design, and manage construction of Civil Works projects and also forecast requirements for annual maintenance and operations. Operations project managers, including recreation specialists, operate and maintain real property assets to maximize the serviceable life of the project based on sound engineering estimates for funding and timely repairs. Logisticians are primarily engaged in leases and the maintenance of said property.

2.2.2.1 Asset Management Expertise

USACE has similar challenges as many of the other federal agencies concerning certain career fields – an aging workforce and loss of expertise/gaps in needed skill-sets for the future. The Human Resources Directorate (HRD) addressed these issues by implementing an action plan based on their Strategic Management of Human Capital in the USACE Plan, September 2002. This document can be found at <http://www.hq.usace.army.mil/cehr/HCStrategicPlan/USACEHCPlanHome.htm>

The strategic human capital plan was done in partnership with the Logistics Management Institute and supported the response to the President’s Management agenda and OMB Memorandum 01-07. Under the plan, four workforce scenarios were studied: 1) current supply, 2) future supply, 3) current demand, and 4) future demand. Using anticipated trends in workload, changes in requirements and processes, and in competitive sourcing, future workforce requirements were analyzed. The analysis projected gaps in human capital through 2008. The gap portion of the plan identified realty professionals and engineers as critical shortages. Both these professions are critical to asset management.

As the report above was completed in 2002, it may not adequately reflect the requirements for a fully implemented real property asset management workforce. As the AMP progresses, human resources and skill requirements will need to be identified so that HRD can modify their plan. This will be done over the next fiscal year. In the interim, USACE is closing the gap by fully capitalizing on the transformation of the organization through its new streamlined business processes and “team of teams” approach. Real property asset management is being resourced according to the organizational structure shown in Figure 2.5. It makes use of the existing organizational structure, creates new structure, and draws expertise from communities of practice and business line teams directly engaged in real property asset management. The organization is grounded by a centrally staffed USACE headquarters team that reports directly to the Chief of Operations and is responsible to the real property officer and an SES steering committee. The current organization is staffed with expertise from the field while plans for permanent positions are being finalized. Project delivery teams (PDTs) have been formed to support the HQ team. Each PDT is assigned to someone on the HQ team to provide direction and proponenty. Some of the PDTs currently in place are: 1) Facility Equipment Maintenance is led by USACE Division, Northwest, and nationally staffed for development and implementation of a computer maintenance management system. 2)

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Data Inventory team is led by USACE Real Estate Systems National Center (RESNC) and staffed by data architect specialists, database managers, business line and real estate specialists. This team is responsible for requirements of the FRPC to the Federal real property data inventory, identification of data gaps, and protocols to correct those gaps, and for developing a roadmap for the way ahead in data management. 3) Core Asset Management field support team is composed of a real estate specialist and an operations specialist from each district and division who will be responsible to the data inventory team for data calls and validation of inventory to include disposal and reinvestment assets. Others will be formed as requirements for implementation develop.

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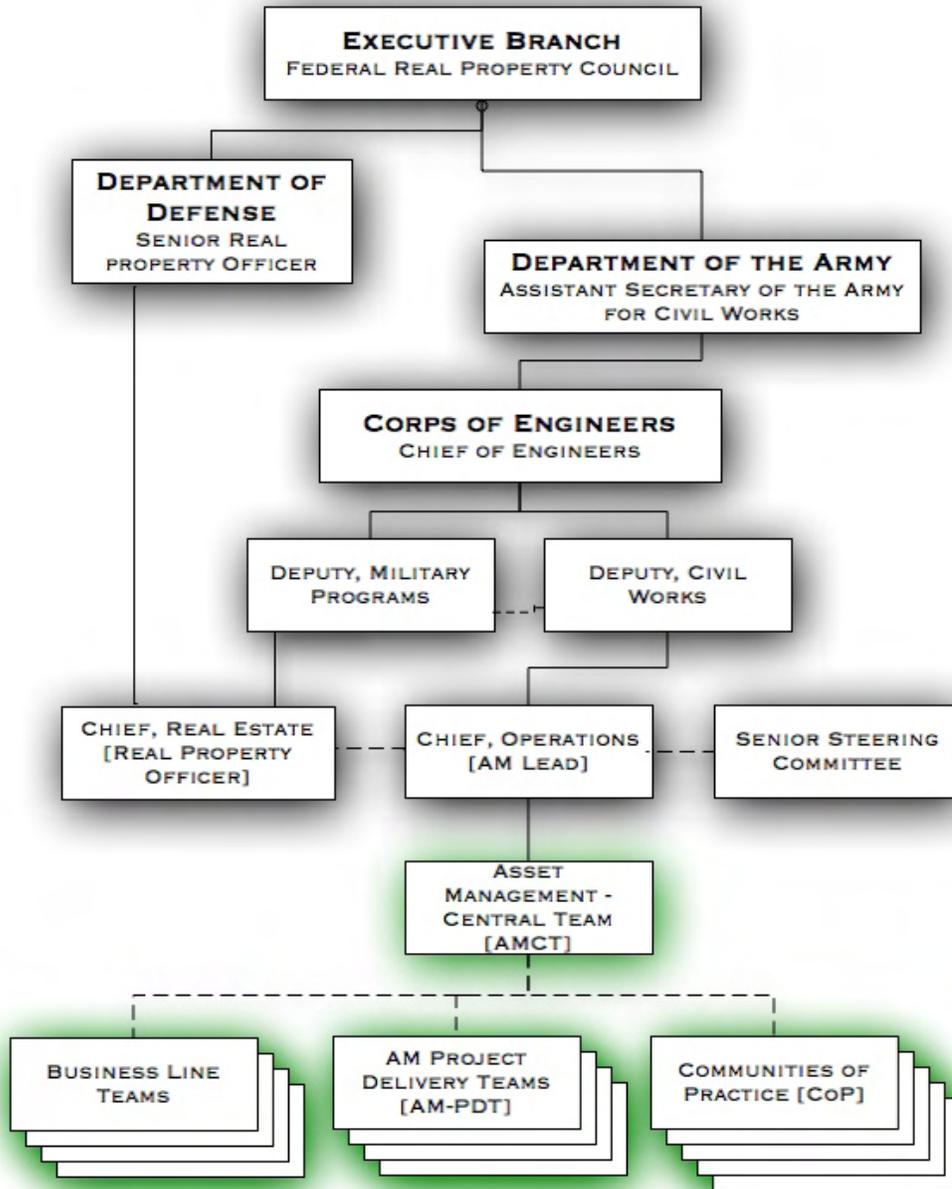


Figure 2.5 Real Property Asset Management Organization

2.2.2.2 Training

USACE is faced with the same future challenges as other federal agencies by the retirement of, and decline in, the number of available professional populations. In this scenario, engineers and realty professionals are targeted as two of the most critically needed declining disciplines, and a gap in expertise is anticipated. USACE addresses this situation in two distinct methods, recruitment and retention.

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One of the most visible recruitment programs utilized by USACE is the Intern Program. The Intern Program recruits students prior to graduation, and upon graduation, the student is placed in a working rotational program that extends throughout the USACE structure for a period of two years. Selection of the receiving interim by a branch or department is agreed upon between the recruitment officer and the selectee, and influencing factors are need and interest. Other recruitment campaigns are "Stay-In-School" and summer hire. In these programs, a science or engineering student works for USACE while they attend school or during the summer. USACE expands recruitment by attending job fairs and other professional career development events as well.

Retention, training, and career development of employees is enhanced by programs such as Career Path (CP) guidelines, Individual Development Plans (IDP), the Leadership Development Program (LDP), Proponent Sponsored Engineers Corps Training (PROSPECT) courses, support of professional enhancement seminars, academic courses/programs/degrees/certification, and USACE/intra-agency/trade sponsored conferences, and workshops. LDP is a three year program which develops leadership skills through specific assignments at various geographic locations. PROSPECT courses are USACE developed classes that provide specialized knowledge in various career areas. USACE supports degree programs and certifications from universities, colleges, and private institutions in such fields as project management, environmental scientist /engineer, and a plethora of other studies.

Currently, training for asset management consists of PROSPECT courses, (i.e., real estate acquisition, real estate management and disposal, real estate project management and control, property management, and relocations), conferences, on-the-job training, professional certifications, and specific requirements for individuals. During development and improvement of USACE asset management, centralized and standardized training programs will be developed and implemented.

2.3 Real Property Asset Management Decision-Making

USACE's real property asset management decisions are made at the Headquarters, Divisions, and Districts. Districts make day-to-day decisions in line with guidance, policy, and oversight from headquarters. Figure 2.6 shows the USACE Real Property decision process for new requirements. A new capability requirement may be first identified by a District, Division, or Headquarters USACE. New capability requirements are those that at least initially appear to require new construction in order to meet the needs of the customer.

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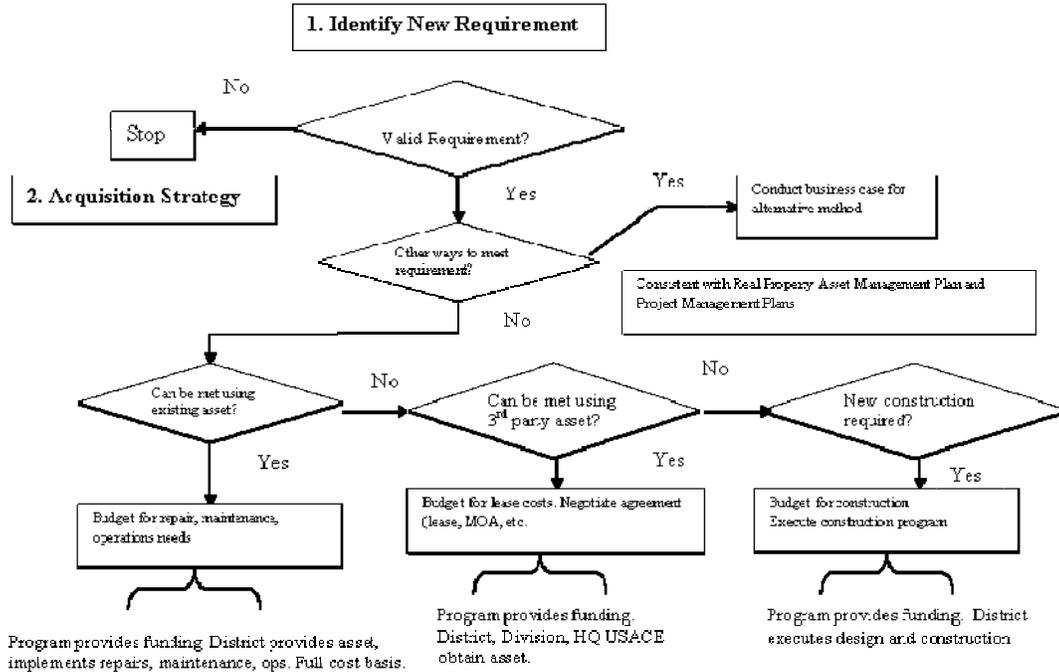


Figure 2.6 Real Property New Requirements

The Civil Works Directorate, responding to Congressional authorizations through the Assistant Secretary of the Army, is responsible for meeting the needs of the customer through study, justification, planning, design, construction, management, and disposal of Civil Works projects and real property assets not transferred to local sponsors.

The policy and procedures followed are outlined in Army Regulations (AR), Engineer Regulations (ER), Engineer Circulars (EC), and Policy Guidance Letters (PGL). The core documents are: AR 405 series; ER 405 series; EC 11-2-179 Programs Development Guidance; and ER 1105-2-100 Planning Guidance Notebook for real estate acquisition, management, and disposal actions.

AR 405 series and ER 405 series provide all the regulations pertinent to Real Estate. Acquisition, management, and disposal are further discussed in Sections 3, 4 and 5. (<http://www.hq.usace.army.mil/cere/policy.htm>) EC 11-2-179 contains policy, principles, and assumptions that are to be used in developing the annual USACE budget request. It includes performance requirements, evaluation criteria, submission schedules, and products. For each of the nine Civil Works business lines, program objectives, performance measures, rating and ranking criteria, and special considerations or special rating criteria are identified as appropriate. ER 1105-2-100 provides the overall direction by which USACE Civil Works projects are formulated, evaluated and selected for implementation. It contains a description of the planning process, missions and programs, specific policies applicable to each mission and program, and analytical requirements. Real Estate PGLs provide guidance on real

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estate policies pertaining to planning, control, management, disposal, acquisition and appraisal. These PGLs are listed in Appendix B.

A Civil Works project evolves from an idea about how to solve a problem to a functioning solution that reflects both the Nation's and the local sponsor's interests. During its lifetime, a project passes through five basic phases: (1) reconnaissance, (2) feasibility, (3) preconstruction engineering and design, (4) construction (including real estate acquisition and performance of relocations), and (5) operation, maintenance, repair, and rehabilitation. The Districts are responsible for execution of the five phases throughout the project life.

USACE acquisition, management, and disposal processes are controlled at the Division level excepting statutory and Congressional requirements. For example, Title 10 USC requires notification of Congress at the \$750,000 threshold. This threshold is applicable to real estate activities. Real property asset management is accomplished through project management business processes that are being standardized through the development of the asset management program.

Headquarters makes the final decisions concerning management of existing assets, including disposals, as discussed further in Section 5. However, Congress, stakeholders, and the Districts all have input into this process. These assets are tied directly to the socio-economic environment of the region and the nation.

USACE uses a rigorous budgeting process to ensure that resources are properly allocated at all levels to meet mission and institutional needs. Districts/Divisions make recommendations to HQUSACE for real property asset budgets for both new and existing assets based on life cycle management along with performance based budgeting factors. Performance based budgeting takes into account many aspects of a project such as usage, safety, impact to local economies and environment, etc. Factors such as these are used to weigh into the prioritization of funds. This process is described further in Section 3. This process ensures accountability for stewardship of resources throughout USACE, allows leadership to ensure that financial decisions match priorities and to make appropriated tradeoff decisions, and to respond to external requirements for budget submission and execution materials. A schematic of the general budgetary steps is presented in Figure 2.7 Budget Cycle, along with a brief explanation of each step. Additional information on USACE budgeting process can be found in EC 11-2-189 for Budget Year 2007. USACE and OMB work together to produce the President's Budget, which in turn is sent to Congress for its deliberation. A copy of the President's Budget for the USACE for Budget Year 2007 is available at <http://www.whitehouse.gov/omb/budget/fy2007/corps.html>

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Figure 2.7 Budget Cycle

- Jan - OMB guidance sets funding levels, policies and priorities. ASA(CW) clarifies guidance for HQ.
- Mar - HQ Issues Budget EC - describes programs, sets priority missions, Division ceilings, submission requirements and schedules. EC is posted on HQ Programs web page.
- Apr/May - District proposals submitted. Divisions review, work with Districts to improve, and delete those inconsistent with policy and to meet budget ceilings. Send a prioritized program to HQ.
- May/June - HQ reviews proposals, works with Divisions and Districts to improve, and deletes those inconsistent with policy. Prioritize program to meet USACE ceilings.
- Jul/Aug - Submit to ASA(CW). Review for compliance with Administration policies and priorities.
- Sep - Submit to OMB. Review in light of total Federal budget.
- Nov/Dec - OMB responds to ASA(CW). OMB may take action on specific projects or categories of work. ASA(CW) and Corps have an opportunity to appeal.
- Feb - President's budget to Congress.
- Mar/Apr - Congress holds hearings. DCW, ASA(CW), and Chief defend request before House and Senate Subcommittees. Sponsors and interest groups testify.

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- Jul/Sep - Subcommittees develop bills. May accept, reduce, or increase the President's request on every project. May delete or add a project. Actions reflect Congress' priorities/policies. House prepares bill; sends to Senate; if the two bills differ, convene conference to reach a compromise.
- Sep/Oct - Conference bill to President. Signature makes it law via an Appropriation Act.
- Oct/Dec - Funds are apportioned to the Corps by OMB and allotted to Divisions for distribution to Districts. Entire cycle takes about 2 years.

2.4 Owner's Objectives

USACE has a set of qualitative Owner's Objectives specific to its portfolio described below. Quantitative owner's objectives are expressed as the four metrics described under EO 13327 and other quantitative performance measures are being developed under separate directive from the Executive Order on business performance indicators. Additionally the USACE, through development and implementation of project management plans addressing the three Campaign goals, will set targets for success relative to infrastructure assets. As these plans mature, new management strategies will become a way of doing business for USACE.

Real Property Management Strategic Goals are the foundation for developing a portfolio or asset level strategy. See Table 2.1. USACE's asset management framework involves understanding and balancing mission needs/risks and the condition/performance of its assets. The strategic underpinning of this framework is to exploit new technologies and leverage national, industrial, and intellectual capabilities. USACE is also committed to providing stewardship of these assets in the best interest of the American taxpayer's investment.

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Table 2.1 Real Property Management Strategic Goals and Initiatives

Goal 1 USACE will identify and address real property requirements as an integral part of program and project planning.

- A. Include real property requirements and associated life-cycle costs in project budgets early in planning stages.
- B. Ensure facility program/project managers participate on project delivery teams from inception of program/project.
- C. Ensure program managers continually review and address real property requirements throughout project life.
- D. Identify capability shortages and develop plan for addressing them.
- E. Ensure validated future capabilities are maintained.

Goal 2 USACE will construct and operate new real property to meet mission requirements when existing capabilities cannot be effectively used or modified.

- A. Seek alternatives to new construction by using the following approach:
 - a. Consider advanced technologies.
 - b. Use/modify existing USACE real property.
 - c. Leverage the resources (fiscal and physical) of other Federal and governmental agencies, industry, and academia.
- B. When construction is needed, USACE will:
 - a. Plan, design, and construct facilities for sustainability to ensure new projects are safe, secure, reliable, economically viable and environmentally sound.
 - b. Advocate for appropriate construction, operation, and maintenance funds.
 - c. Use innovative technologies for planning, design, construction, operations and disposal.

Goal 3 USACE will continually evaluate its real property assets to ensure alignment with mission.

- A. Identify and address real property requirements as an integral part of strategic planning.
- B. Periodically evaluate consistency between missions requirements and real property infrastructure.
- C. Identify and eliminate redundant and excess real property.
- D. Dispose of unneeded facilities
- E. Develop and maintain a rolling 5-yr plan for future investments

Goal 4 USACE will leverage its real property to its maximum potential.

- A. Seek alternatives to USACE ownership of real property.
- B. Seek alternative uses for underutilized real property.
- C. Make full use of authorities allowing public/private partnerships and cost sharing.
- D. Seek adaptive re-use of historical facilities.

Goal 5 USACE will sustain, revitalize, and modernize its real property as required to support its mission.

- A. Define target levels for USACE facility condition.
- B. Determine and recommend resources to achieve target levels.
- C. Use innovative technologies and best practices for sustainment, revitalization and modernization.
- D. Implement sustainment best practices for facility requirements considering historical significance, environmental stewardship, safety, and social considerations.

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2.5 Benchmarking and Best Management Practices

USACE is utilizing benchmarking and best management practices to develop and improve the real property asset management program. Sources for benchmarking are both internal and external, which include USACE expertise, a robust internal research and development program, private industry, and other DoD agencies that lead in the asset management arena. Benchmarking occurs in every phase of asset management (planning, construction, operations, maintenance, and disposal of real property management). Best practices and innovations are independently reviewed prior to implementation.

Internally, the organizational structure of the Regional Business Center (RBC) and the Communities of Practice (CoP) support and encourage the development and use of benchmarking and best practices. Because RBC resource decisions are based on a holistic view of the system, any best practice from one district is shared and provides benefits to the entire system. Regionalization has led to streamlined processes from planning through maintenance and operations. Changes in contracting practices such as regional sharing of contracts, design-build, and partnering agreements have improved and promoted more dialog with contractors and stakeholders across regions to promote best practices.

USACE regularly practices sharing lessons learned through after action reports, web-based reporting sites, and through annual conferences and workshops where business teams and communities of practice share best practices. Some of the web portals used by the communities of practice are the Technical Excellence Network (TEN), Natural Resources Gateway, and Engineering Knowledge Online. Recent workshops and conferences supporting real property asset management include the Infrastructure Asset Management Workshop, August 2005, Washington, DC; Infrastructure Conference, September 2005, St. Louis, MO; the Real Estate Community of Practice Conference, April 2006, Southbridge, MA; National Operations team workshop, April 2006, Alexandria, VA; the USACE Lock Inspection and Maintenance workshop, April 2006, Vicksburg, MS; and the Management and Disposal workshop held in Jacksonville, FL, in FY06. These forums served as opportunities to network, share lessons learned, define challenges, and establish consistency in practices and technical/business problem solving.

Planning centers of expertise have been established for each major business area to ensure national perspectives and the best practitioners are engaged in the planning of major assets. The USACE is renowned for its national and regional centers of expertise and through its laboratories in applying and developing innovative methods for managing our missions. Prospect courses are taught in a multitude of areas to support real estate, design, operations, contracting, and other practices that are needed to plan and operate real property assets. All Prospect training is updated and prepared every fiscal year and provided to USACE employees at website: <http://pdsc.usace.army.mil>. Details on training are provided in Section 2.2.

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USACE is part of the Federal Real Property Association (FRPA) that meets monthly and is also a member of the Federal Real Property Council Inventory Sub-Committee. Real Estate asset management processes are actively benchmarked with GSA and other agencies. USACE is moving forward in developing a real estate Geographic Information System in support of DoD requirements for real property management. This effort is paving the way for the future vision of a robust data inventory system. In the areas of Engineering and Construction, USACE benchmarks with the Construction Industry Institute (CII) and the Construction Users Round Table (CURT), where 50 percent of membership in each organization are owners of facilities and deal with asset management. Similar to Engineering and Construction, Operation benchmarks with other federal agencies that have similar functions (BOR, TVA, and USFS).

Current benchmarking practices are occurring in the Hydro Power Business Line. Budgeting and allocation in this business line are taking two paths: (1) President's Budget requests with performance measures and (2) direct funding from Power Marketing Authorities/Preferred Customers with their concern for rates. Therefore, USACE is benchmarking with the Electric Utility Cost Group (EUCG), who is providing guidance that shows where the industry is, not only in figures, but in areas of concern. The Recreation business line has also benchmarked against similar Federal agency processes such as the National Parks Service for park usage.

To directly support the federal real property effort and ensure incorporation of best practices, the USACE has:

- Formed a centralized HQUSACE Asset Management Team
- Conducted an Asset Management Workshop, HECSA, Washington DC (15-17 Feb '05)
- Held an interagency workshop on Infrastructure Asset Management, Washington DC, (23-24 Aug '05)
- Conducted a Real Estate Management Information System (REMIS) Seminar and Workshop, Orlando, FL (1-5 Aug '05)
- Established a Real Property Inventory Support Contract for metric evaluations
- Established Task Orders with REMIS Support Contractor to perform specific tasks in support of HQUSACE Asset Management Team
- Hosted a Data Inventory Team Workshop, Huntsville, AL (22-25 May '06)
- Continued pilot deployment of the Facilities and Equipment Maintenance (FEM) system in Hydropower Business Line in the Northwest Division to capture actual maintenance costs
- Established Asset Management POC's at District Level from Real Estate and Operations Divisions

In August 2006, the USACE is planning a risk and reliability workshop which will focus on best practices both internally and externally to conduct risk-based condition assessment of infrastructure assets.

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USACE actively maintains a number of professional relationships to enhance its standing as the world's premier public engineering organization. These relationships are maintained at a local, regional, national and international level. The level of involvement with these organizations varies from limited involvement (e.g., informal participation of individual employees on a voluntary basis, and joining organizations as paying members) to more formal arrangements including memoranda of agreement and partnering agreements. The USACE expands their expertise through these partnerships and organizations by sharing national standards, networking, and exchange of best practices. Appendix C contains a partial list of organizations with formal partnering agreements with USACE, a list of many of the organizations with whom we maintain relationships, and those with whom we sustain organizational memberships.

Benchmarking and best management practices are periodically re-evaluated and improved as USACE strategic plans are implemented. Beginning with FY06, USACE is performing Command Strategic Reviews (CSR) in order to evaluate and monitor, status of strategic implementations, to include benchmarking and innovative efforts. These reviews are conducted on a regional basis and focus on the campaign goals and their implementation.

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Section 3. Planning and Acquisition of Real Property

During the acquisition phase, USACE translates mission needs into discreet requirements, marshals the necessary resources, and sees that the necessary real property assets are delivered.

To determine the acquisition requirement, USACE considers:

- the magnitude of the customer needs,
- the availability of existing assets in the immediate and regional area that could be modified to meet the customer's need,
- the potential of linking other customer needs in the region into a multipurpose project to determine the acquisition approach that is most appropriate.

Each of these factors has a significant impact on the cost of alternatives and thus the feasibility of the project acquired.

3.1 Capital Plan for Projects

All capital projects, new and major rehabilitation, which are part of USACE real property assets, are specifically funded by Congress. There is no upper or lower funding threshold. Appendix D contains a list of the Capital Investment projects included in the FY06 USACE program (includes projects having funding initiated for construction in previous FY). There are specific guidelines contained in the USACE annual budget guidance EC 11-2-189 for FY07 that are used to identify budgetable projects and their priorities.

The budget guidance contains the pertinent Public Laws, policies, regulations, economic assumptions, and performance measures that must be followed for the submission of capital projects. In addition to these requirements, there are internal USACE requirements, such as validating the project against the Civil Works Five Year Development Plan and the Civil Works Strategic Plan. The initial review and project prioritization begins at the District level. All projects must meet the budget guidelines contained in the Budget EC (as discussed in section 2.3).

Several performance criteria are used to evaluate navigation projects, including tonnage, cost/ton, ton-miles, high risk systems component (for locks & dams), public safety, critical support for other Federal requirements (US Coast Guard for example), subsistence harbors, support for commercial fishing, support for public transportation (ferries), and environmental and legal obligations (mitigation). For flood damage reduction facilities the O&M work prioritization pertains to the operational requirements of the projects, including safety and environmental and legal obligations. For natural resources management, priorities are to make continued progress on natural resources management activities, cultural and historic resource protection, and master planning mandates and requirements. Recreation has a long list of prioritization factors, including attendance, site and facility conditions, and

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opportunities for efficiency improvements. Finally, for the Hydropower program, items such as facility closures, risk of failure, safety, and court ordered mandates are major factors in evaluating and prioritizing hydropower budget requests.

All projects, whether initial or rehabilitation, must be prioritized on a regional basis at the Division level. Divisions prioritize and analyze the projects in relation to the watershed for each District. They ensure the upcoming amount of work for an area is economically and environmentally sound before forwarding to HQUSACE for review. HQ reviews the Division budget submittals and reprioritizes the Divisions as appropriate to address national needs and returns.

Districts ensure adherence to project guidelines and provide a prioritized project list to their respective Division based on District priorities. Divisions perform quality assurance to check the projects for completeness and consistency with the Budget EC and may reprioritize based on regional needs and priorities of all the districts within the Division area of operation. The majority of projects for existing assets will not require land acquisitions. However, any land acquisitions for major projects are included with the project submission and require Congressional approval. A real estate plan describing real estate requirements and costs is prepared for real estate acquisitions. The real estate plan considers various regulations, policies, and laws as well as project engineering designs to minimize the real estate requirements.

Leases for military recruiting stations performed by USACE require Congressional notification if they are greater than \$750,000. General Services Administration (GSA) retains responsibility for many major leases. However, USACE has its own leasing authority (10 USC 2661, 10 USC 2663, 10 USC 18233, 10 USC 18240). Guidelines for acquisition of leases are contained in ER 405-1-154.

In general, if the cost or annual rent is below \$750,000 USACE has the authority to contract for the lease. HQUSACE has delegated this authority to Division Commanders and the senior Realty Officer, GS-15 or above, with the authority to redelegate to the District Commander and the District Chief of Real Estate or the District's Chief of Acquisition. The only documents or actions forwarded to HQUSACE for approval will be those that have not been delegated by the Secretary of the Army or those that must be submitted by HQUSACE to another agency's headquarters. To ensure quality and consistency, standardized lease forms are utilized for all USACE leases. Execution of leases is delegated at levels which are based on certification of the qualifications of the delegated Real Estate representative. Quality Control checklists and plans are provided for use for each lease. Where practicable, lease requirements are completed. Lease costs are compared to appraised value.

Two types of leasing are done by USACE. The first is deemed to be an inlease where the Corps leases private property for a specified purpose such as office space, warehousing, or special purpose uses. The second type of lease is an outgrant where property owned by the United States is leased for such purposes as agricultural, grazing, commercial recreation, or other purposes which are a benefit to the public or

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in the best interest of the federal government. Previously approved standard templates are used for both to meet the needs of the specific leasing action.

3.1.1 New Construction Major Projects

The new construction program addresses program requirements that serve customer needs that cannot be provided with existing Federal assets or assets available in the private sector. Life-cycle economic analysis (including benefit-cost analysis), environmental impacts, and level of service in meeting the customer needs are key elements used in determining the priority of new construction projects. The emphasis is to construct, in partnership with a cost-sharing sponsor, major projects that contribute to solving a particular water resources problem.

General Services Administration (GSA) provides office space for the majority of District and Division headquarters and other administrative requirements. USACE does construct facilities, such as storage, maintenance, and administration buildings, incidental to major projects.

USACE District offices conduct project feasibility studies for potential new major construction projects. The problems, needs, and opportunities of an area are determined through coordination with the construction cost sharing partner. The “Economic and Environmental Principles and Guidelines for Water and Related Resources Implementation Studies” issued by the Water Resources Council in 1983 and subsequent guidance issued by USACE (ER 1105-2-100) provides the basis for formulation and evaluation studies. The Guidelines require those proposing projects to consider both non-structural and structural options, and to ensure proposed projects are cost-beneficial.

A multi-discipline team with expertise in planning, economics, environmental, cultural resources, engineering, and real estate are led by a project manager. The team investigates a full range of alternatives and recommends a plan that provides optimal economic life cycle returns with minimal impacts on environmental and cultural resources. USACE not only utilizes its own research and laboratory facilities, but also seeks out and acquires state of the art design, innovative construction techniques, and materials from other private and public sectors to insure that the resultant project is cost effective and sustainable throughout its design life.

The scope of the feasibility analysis includes not only the immediate project area but also assesses regional or watershed development options and impacts. As a part of the feasibility study, a detailed Project Management Plan is developed which includes project costs, schedules, a real estate plan describing real estate requirements and costs, and acquisition plans for design and construction. A Real Estate Plan (REP) is prepared to address real estate requirements and costs. The REP provides the decision maker with the type of, amount of, and estimated cost of the real estate which is required to support the proposed project.

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The recommended plan, with full National Environmental Policy Act (NEPA) compliance, is staffed for policy and technical reviews. Divisions perform an initial review. Depending on the project, Divisions may have another District or USACE laboratory which has particular expertise in the study/project subject area perform the technical review or send it to experts external to the agency for independent technical review. The report is then consecutively forwarded for review to HQUSACE Civil Works Directorate, ASA(CW), and OMB. HQUSACE and ASA(CW) review the proposed projects for policy compliance. OMB reviews proposed USACE projects under Executive Order 12322 to ensure that proposed projects are budgetable, that is, cost-beneficial, consistent with Administration policy, and competitive with other projects seeking Federal funding. In any given year, there are about 300 new or on-going construction projects that compete for limited resources in the USACE construction budget.

If a project is approved, the report for the project is forwarded to Congress for authorization. Upon authorization and funding, further detailed design is completed to include updates of economic and environmental impacts prior to requesting funding for construction.

Congress must specifically authorize a project before any construction or federal land acquisition can be undertaken. If authorized, annual funding is provided by Congress for project construction and subsequent operation and maintenance phase.

3.1.2 Repair and Alterations to Major Projects (or Major Rehabilitation Projects)

Major rehabilitation of existing projects is accomplished when reliability and/or efficiency improvements to an existing project can be realized. Restoration consists of structural work on a major project feature that is a USACE operated and maintained project. This restoration will defer capital expenditures for replacement of the structure.

For reliability improvements, rehabilitation is considered when an alternative can significantly extend the physical life of the structure and can be justified economically by life-cycle benefit-cost ratio analysis. To be considered under this category, the work requires at least \$6.6 million in capital outlays for projects other than navigation; for navigation projects, the cost threshold is at least \$10.6 million.

For efficiency improvements, rehabilitation operational efficiency considers increasing outputs beyond the original project design and requires at least \$1.3 million in capital outlays.

Feasibility studies, very similar in scope to those used for new capital projects, are conducted to determine the life cycle economic costs and benefits and the environmental/cultural impacts of alternative plans. A major component of the feasibility study includes definition of the existing project condition and operating requirements. The feasibility report and NEPA compliance reviews mirror those for

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new capital projects. No further Congressional authorization is required for Major Rehabilitation projects. The project prioritization process for funding is similar to the one mentioned in Section 3.1 Capital Plan for Projects.

Real Estate Plans (REP) are prepared in conjunction with major rehab studies to determine whether the construction, operation, and maintenance of the rehabbed structures can all be performed within the existing lands, easements, rights of way, and disposal areas and that no needed rights have been extinguished. Typically, the plan is needed only when the rehabbed structure falls outside the existing footprint.

3.1.3 Acquisition of Major Leases

As a matter of policy and practice, USACE acquires most of its general-purpose space (i.e., office space) through GSA. After acquisition, GSA continues to manage these leases. However, USACE does have statutory authority for leases of space for firm term for one year (10 USC 2661) and for land leases which do not exceed \$750,000 net annual rent (10 USC 2663). Once acquired by Real Estate, Logistics Directorate manages these general-purpose space leases.

USACE has delegated leasing authority from GSA for certain unique categories of space (FMR 102-73.150). Included in a categorical delegation is the authority to lease armed forces recruiting centers for firm terms up to five years. Many of USACE's leasing actions are for recruiting centers. USACE, as part of the Department of Defense, also has delegated leasing authority for certain types of special purpose space under FMR 102-73.175. The prime example of operating under GSA delegation is leases for the Recruiting Program. Most other leases for the military are special use space and not under the GSA delegation. Leases for civil space are acquired through GSA. In most cases, for a small office GSA will give the district authority to handle the lease. In larger cities, GSA often wants to handle the leasing.

USACE ER 405-1-15 outlines the distinction between minor and major lease procedures. The ER designates the process for minor leases, those with an annual rent less than or equal to \$100,000, excluding the cost of services and utilities, as "Small Lease Procedures" and outlines a simplified lease acquisition procedure. The process for major leases, those with an annual rent greater than \$100,000, excluding the cost of services and utilities, is designated as "Large Lease Procedures." Both processes follow full and open competition in order to comply with provisions of the Competition in Contracting Act. The main difference between the two is the use of a detailed solicitation process in the large lease procedure, which becomes the basis for the lease negotiations and becomes part of the lease.

3.2 Acquisition of Leases Below a Critical Threshold

USACE's largest leasing program is for Army, Navy, Air Force, and Marine Corps recruiting stations. USACE has Memorandum of Agreements with each of the services. For this program, USACE has delegated leasing authority under Federal Management Regulations (FMR) 102-73.150. The recruiting station leasing program

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is performed at the District level and managed at HQUSACE. Once these leases are signed, the properties are managed by the recruiting commands for which they are leased. Individual service recruiting commands provide funding through DoD for their recruiting stations. The recruiting commands identify and justify their requirements to DoD which then requests USACE to lease the stations.

USACE senior leadership maintains visibility of the program by a quarterly review of program execution metrics in the Command Management Review (CMR). The Rental Facilities Management Information System (RFMIS) maintains the data and generates the metrics. Districts input the data and HQUSACE, DoD, and the services have system access to review the data.

USACE developed RFMIS to more efficiently and effectively manage the program for customer satisfaction. Typically during the acquisition cycle, one of the armed forces will submit a request for recruiting station space in mid-summer of each FY. Once approved by the DoD program manager, this request is entered in RFMIS and assigned to one of the USACE District Real Estate Offices for action. The goal is to accomplish the space request without exceeding the requested delivery date by 30 days.

1. Action Accomplishment. The District goal is to accomplish 100 percent of the DoD approved program actions by the end of the FY. This count includes funded, committed, obligated, accomplished, and unaccomplished actions. This is essentially a cumulative score of all performance measures.
2. Responsiveness on Accomplishment. Districts are expected to estimate accurately the accomplishment date on an action within 30 days of the Initial plan date. Based on these criteria, Districts are expected to achieve at least a 90 percent rating.
3. Action Cost Estimating. Districts are not expected to have a cost variance greater than 10 percent for the FY.
4. Data Quality. Data contained in RFMIS should always be maintained at an acceptable level.
5. Policy Compliance. Districts are expected to comply with the Recruiting Program Policy and Procedure Guide 100% of the time.

RFMIS then assigns colors to each range of scores for a graphic representation of the District's overall performance for each quarter, Figure 3.1. Figure 3.2 is the 2nd Quarter FY06 USACE roll-up.

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Range =>: 95	GOLD
Range =>: 90	GREEN
Range =>: 80	AMBER
Range < : 80	RED

Figure 3.1 RFMIS Recruiting Station Rating Scale.

FY:	2006
Measured Quarter:	2
Overall Rating:	AMBER
Action Accomplishment:	GOLD
Responsiveness on Accomplishments:	RED
Action Cost Estimating:	GOLD
Data Quality:	AMBER
Policy Compliance:	AMBER
Upload_Date:	01-JUN-2006

Figure 3.2 Example RFMIS Quarterly Reporting

The performance of these districts in leasing function is reported to the Department of Defense in the Command Management Review (CMR). The major metric evaluated for CMR reporting is Action Accomplishment. HQUSACE and the customers are currently reviewing new metrics for this program. Updates for the current automated system are scheduled to be completed (Phase 1) in February 2007 and (Phase 2) in September 2007.

3.3 Acquisition Performance Measures and Continuous Monitoring

3.3.1 Federal Real Property Council Acquisition Measures

USACE will adopt applicable Federal Real Property Council acquisition measures once they have been developed and defined.

3.3.2 Agency Specific Measures

USACE has a very detailed acquisition tracking performance measurement system. Project managers at Districts use PRIMAVERA P2 to develop a project management plan that includes the entire project life cycle from the feasibility study through project disposal. The project management plan includes the acquisition schedule for all lands and constructed assets. The Resident Management System (RMS), also based on PRIMAVERA, provides construction execution, scheduling, cost, and other data from the project site that feeds PRIMIVERA P2. Project managers at the District level provide the construction metric data for the CMR at HQUSACE.

The construction metrics are sent to HQUSACE via the Divisions. Divisions review individual projects and consolidate data where appropriate. HQUSACE reviews the data, provides guidance to the Divisions, and forwards to ASA(CW) and DoD via the CMR. The metrics form the basis for reporting the Quarterly Army Performance

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Review, GPRA Annual Performance Report, or the Chief Financial Officer's (CFO) Report depending on the metric topic.

After construction projects are completed, the District project managers continue to use PRIMAVERA P2 to manage the operational life of the project. Major rehabilitations, inspections, and other key events are recorded for the assets by the project managers. These follow on metrics to construction vary from tracking asset usage to maintenance condition and will be covered in Section 4 Operations of Real Property. USACE senior management uses the CMR which tracks approximately 90 indicators of performance. Appendix E represents a list of CMR metrics for Civil Works and Real Estate Directorates, which includes planning, construction, and engineering.

3.4 Acquisition Initiatives

USACE is using innovative approaches for real property acquisition. USACE considers both the physical infrastructure as well as the delivery process. These processes continue to use appropriate science and technology, academia, or industry and focus USACE R&D on unique or critical USACE infrastructure needs. The objective is to provide innovative solutions through sustainable infrastructure with minimum lead-time; leverage private industry standards and practices; insure quality through life cycle analysis and to reduce acquisition time and cost. The intent is to provide significantly better, faster, cheaper, safer and greener infrastructure outcomes. USACE will appropriately apply these innovative infrastructure solutions throughout the organization. USACE will optimize its technology investments and resources while ensuring its effective use of science and engineering technology tools in support of its missions.

Examples of acquisition initiatives can be found throughout each phase of the process. Campaign Goal 3d addresses the whole concept of infrastructure innovation (described below). Other examples are innovations to improve the lease process (detailed below), Planning Centers of Expertise to streamline process and provide the best-of-the-best expertise to projects all around the country, new contracting ideas such as regional sharing or design-build, and innovations in design such as USACE's latest projects making use of in-the-wet-construction to minimize user impact and reduce costs.

Campaign Goal 3d – Infrastructure Innovation

The infrastructure acquisition processes should foster innovation, e.g., Best value (life cycle sustainability) performance based acquisition, Figure 3.3. In addition to mission performance it should specify sustainability performance. Sustainable means most positive benefits, least negative impacts, and includes mission performance, life cycle costs, and environmental impact of the entire systems.

Milestones:

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- Develop Process and Decision Model / Criteria for Evaluation of Innovation (Task 1) – Contract award: 28 April 06
- Develop Process for Demonstration of Innovative Evaluation Process Through Projects (Task 3) – Obligate funds: 26 May 06.
- Demonstrate Process for Identification of Potential Ready-to-Use Innovations/ New Capabilities (technology, process, business practice) (Task 4) – Obligate funds 1 Jul 06.
- Provide an In Progress Review for the Senior Leadership Conference – 7/10 Aug
- Implement Communications Strategy – 30 Sep
- Kickoff Pilot Solicitation – TBD – pending funding
- Pilot Evaluations – FY07

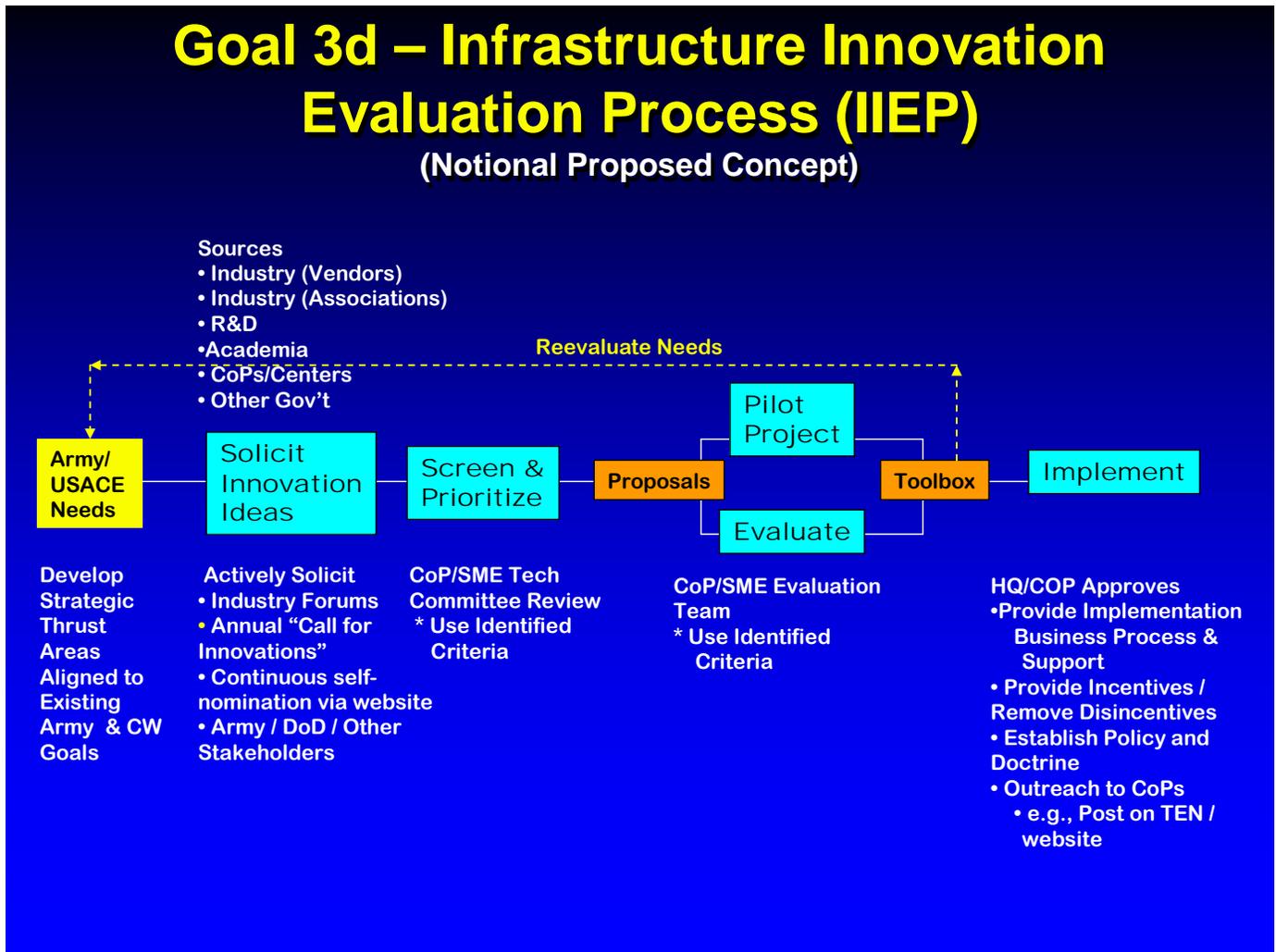


Figure 3.1 Goal 3d-Infrastructure Innovation Evaluation Process (IIEP)

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Reduce Process Time and Costs for the Acquisition of Facilities for the Department of Defense (DOD) Recruiting Facilities Program.

A Lean Six Sigma project team was developed to review the process involved in acquiring facilities for DOD recruiting facilities. The team reviewed the milestones for leasing new/relocating stations. A virtual discussion of the process with “field proponents”, including customers from the Department of the Navy, indicated that the process should be a 155 day process. A process mapping exercise, with specific attention to recognizing geographical/regional differences in work methods was executed. Reliance on current technological improvements in mail delivery, hardware and software capability and availability, and marketing strategies indicates that the process may be able to be completed in 98.5 days. This would result in a savings of 56.5 days and a reduction of 36.5 percent. The team goal is to validate the current (as-is), process then design a future (to-be) state. A test case will be done and will validate the new process for implementation as a standardized or best business practice.

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Section 4: Operations of Real Property

The operations phase of USACE's real property assets involves making decisions regarding management, operation and maintenance, and reinvestment, as well as monitoring and administering leases and servicing agency needs. Critical information is needed on all assets to support operations decision-making and is within the purview of both Civil Works and Logistics Directorates.

For Civil Works projects, the operations phase ensures that the project is operated and maintained to continue to deliver the level of beneficial outputs intended by the Congressional authorization, subject to the administration's budgetary policies and appropriations by Congress.

4.1 Inventory and Describe Assets

The majority of USACE assets are at the project level in less densely populated areas. These assets include land, buildings, and other structures. Section 2.1.1 Real Property Organization Mission provides an overview of the inventory. Appendix F has an updated list that was reported to the FRPP in the 1st Quarter FY06. There are approximately 55,000 real property assets. However, less than two percent of these assets constitute almost 90 percent of the plant replacement value (PRV). These low-density high cost constructed assets are well discernible across the Nation. They include multipurpose dams and reservoirs, hydropower dams, and navigation structures.

The USACE Real Estate Systems National Center has a suite of tools that manage USACE real property holdings. The Real Estate Management Information System (REMIS) is the official, auditable database of record for USACE Civil Works inventory of owned public lands, buildings, and structures. REMIS is the database of record for military land holdings of the Department of the Army and Air Force. REMIS also captures real estate activities performed by USACE for other Federal agencies, i.e., Environmental Protection Agency and Department of Energy. REMIS consists of 33 independent District databases that serve 38 Corps Districts and the Engineer Research and Development Center. REMIS is a comprehensive database that provides the USACE with a uniform, automated method of recording, storing, retrieving, and reporting information related to life-cycle real property at Civil Works projects and military installations.

The Rental Facilities Management Information System (RFMIS) is the database of record for real property that is in-leased by the Corps for civil and military purposes.

RECIS is an upward reporting tool that interfaces with REMIS and RFMIS to provide summary data to USACE Divisions and Headquarters. Data from REMIS and RFMIS is uploaded nightly to the RECIS System.

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REMIS, RFMIS, and RECIS operate within the Corps of Engineers Enterprise Infrastructure Services (CEEIS) network, and provide data summaries and reports at all levels of the organization. The systems are in an Oracle software environment, are Internet based, and access to the systems requires a Corps UPASS ID and Oracle password. The architecture of the three systems is shown below.

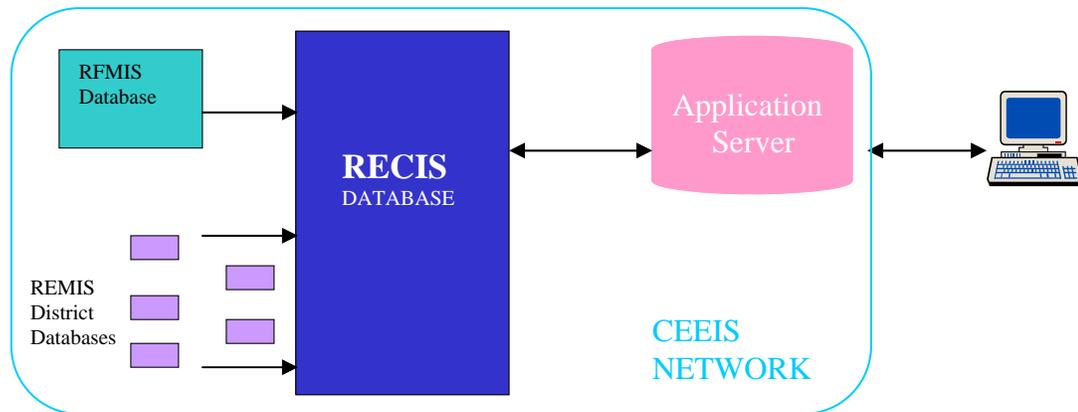


Figure 4.1 Architecture of CEEIS Network

REMIS interfaces with P2 and CEFMS. REMIS shares approximately fifty data tables with the Corps of Engineers Financial Management System (CEFMS). REMIS serves as the official auditable system of record for USACE real property at Civil Works projects for compliance with the Chief Financial Officers Act of 1990 and Department of Defense Inspector General (DoDIG) audits. REMIS interfaces with CEFMS for the capitalization of real property assets and CEFMS populates REMIS with acquisition and construction cost data for real property assets. REMIS administers and manages property that is out-granted at civil works projects, Army bases, and AF installations. The REMIS database interfaces with CEFMS to produce billings for civil and military out-grants that generate revenue.

The Federal Real Property Council's twenty-three mandated data fields have been implemented into REMIS and RFMIS. The real property holdings of USACE were reported to GSA via the Federal Real Property Profile-Internet Application (FRPP-IA) report that was generated from REMIS and RFMIS for FY05 according to GSA Interim Guidance for Improved Asset Management dated December 22, 2004. The Civil Works Directorate and the Real Estate Community of Practice are responsible for ensuring that the data is correct and updated. Briefings on the FRPC requirements have been provided for persons involved in asset management from District level to HQUSACE. This included USACE senior leadership, District Operations and Real Estate Chiefs, District Real Property Accountable Officers, District Operating Field Offices, and others involved in asset management.

A summary of the USACE real property inventory appears in Appendix F.

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4.1.1 Historic Preservation Requirements

District Commanders are responsible for ensuring that all activities on their project sites are in compliance with all cultural resource protection laws. District project managers produce project management plans that meet the requirements set by E.O. 13327 for real property owned, leased, or otherwise managed by USACE that “incorporate(s) planning and management requirements for historic property pursuant to 1387 of March 3, 2003 – Preserve America. The project management plans include historic properties, as defined by the National Historic Preservation Act of 1966 (NHPA), which meet the criteria of Federal real property, as defined in E.O. 13327.

These requirements are addressed in [AR 200-4](#) and the Real Estate Handbook, which has a special provision for outgrants for archeological study purposes ([EC 405-1-12](#)). These project sites include not only those at the constructed asset level, but also projects that are under construction. The project management plans include the previously mentioned feasibility study that requires an Environmental Assessment (EA) and adherence to E.O. 13327 prior to construction.

4.2 Asset Documentation

Upon completion of acquisition or construction of real property, final asset documentation data is kept electronically in REMIS. REMIS maintains data for owned land, buildings and structures as well as lesser interests or land rights held by USACE such as easements, licenses, and right of ways. USACE has developed a comprehensive data validation protocol plan. See Appendix G. Hard copy real estate documentation is maintained at the District level. The District that controls the project is the office of record for source documentation records and as such maintains planning documents, studies, authorizations, directives, deeds (easement or fee), title documents, land descriptions, inlease files, outgrant records, construction contracts and other related contracts and documents. USACE complies with the Chief Financial Officers Act of 1990 for source documentation for real property assets.

4.3 Asset Business Plans

USACE is developing a process through this asset management plan and its strategic plan for water resource infrastructure management to integrate its national real property inventory, REMIS, with the operational business process using a standardized maintenance management system, and ultimately with business processes through its five year development plans. These plans will take each constructed asset and using risk-based assessments, best practices and customer input evaluate the effects of investments not only on the individual asset, but on the total project, system, or region. Rolling three-year timelines developed in conjunction with this AMP will reflect this process as it matures (Appendix H will be modified to reflect this by end of the first quarter FY07).

Currently, USACE does not typically prepare business plans around each individually constructed asset, but uses facility types where appropriate to determine maintenance

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backlog, sustainment, and operational requirements for inventory records. In this process, assets are mapped to a facility type to determine sustainment, operations costs, and backlog of maintenance requirements which are stored in the data inventory, REMIS, for further development of the business plan. All assets currently not evaluated in this manner will be assessed per the data validation and gap plan described in Appendix G.

Two other systems will be used to manage the asset and track funding - PRIMAVERA P2 and Facility Equipment Maintenance (FEM) system. P2 is project management software that is being used to track construction, maintenance, and operational costs. FEM is a standardized computerized maintenance management system based on an industry standard and will be discussed further in 4.7.1.3. Plans to link P2 maintenance and operation costing to the Corps enterprise financial management system, CEFMS are currently being developed. The benefit for linking these two systems is that it will provide for total life-cycle monitoring of the asset with FEM providing background data into the global P2 program tool. FEM is an instrument used within an asset management strategy to reduce life cycle costs of water resource projects. FEM is deployed at the Corps' two consolidated data processing centers, and integrates several plant maintenance functions into a cost-effective asset management program. It supports and consolidates functions, such as equipment reliability centered maintenance, equipment installation, facility modification, and equipment calibration, into a single management environment. It provides capability to track life cycle activities and costs of all assets, thus providing near real-time effectiveness evaluation accountability of their maintenance management program. While FEM is still being deployed in FY06 through FY09, multipurpose water resource projects in the Northwestern Division (NWD) are currently using it for asset management.

USACE maintains a summary of each major project at the constructed asset level (such as a reservoir, recreation site, or lock and dam) as a stand alone system in its Project Digital Notebook [website](http://www.erdcpub/docs/erdc/images/ERDCFactSheet_Product_DigitalProjectNotebook.pdf).
http://www.erdcpub/docs/erdc/images/ERDCFactSheet_Product_DigitalProjectNotebook.pdf Searches may be performed by using factors such as location, river, district or division name, acreage, or project cost. An example of a project fact sheet is at Appendix I (Jacksonville Harbor). Additionally, USACE maintains a website, [Value to the Nation](#). For recreation facilities, for example, detailed information on facility visitation and the economic impact of its recreation facilities is kept. An example of such a report for Lake Sidney Lanier appears at Appendix J.

4.4 Periodic Evaluation of Assets

USACE tracks the physical condition of its Civil Works projects and uses the information to either formulate/prioritize its budget requests for O&M and Major Rehabilitation funds or dispose of the project. USACE performs Periodic Inspection and Continuing Evaluation of Completed Civil Works Structures (PICES) in accordance with the ER 1110-2-100 and Periodic Safety Inspection and Continuing

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Evaluation of USACE Bridges under ER 1110-2-110. The requirements for and the frequency of the inspections are specified in these Engineering Regulations. The inspections result in reports and recommendations which feed the budget process. USACE periodically reviews, as part of the budgeting process, the level of beneficial outputs (performance measures as described in Section 4.7.1 and Agency Specific performance measures as described in Section 4.7.2).

In accordance with AR 405-45 1-13 Real Property Inventory Management and EC 405-1-02 Chap 16.11.c(3) Real Estate – Project Inventory Management, Accountability and Documentation, USACE performs physical inventories of its real property inventory every three years. In addition, Real Estate Specialists perform Utilization Surveys each year. Data calls to Districts issued in Oct 05 and Mar 06 requested that dollar repair needs be developed at the constructed asset level for all real property assets whose construction costs met the \$25K threshold and entered into REMIS. A second field was implemented in REMIS with a *List of Values* to show the basis for the dollar repair needs. The choices are 1) *Detailed Engineer Estimate*, 2) *Comparable Work*, 3) *Rough Order of Magnitude*, 4) *Contractor/Vendor Quote*, and 5) *Other* - which must be explained in the Remarks field. Once the dollar repair needs were entered, REMIS calculated the condition index percentage based on the formula in the GSA Guidance.

Monitoring and reporting of project conditions occurs under various guises, depending on the program, and some examples are the Annual Condition Index Inspection (ACI), Real Property Inspection (RPI), Inspection of Completed Works (ICW), and Project Condition Survey (PCS), depending on the type of project and if funding is available. Many recreational sites are not inspected annually due to financial restraints, and structures are not funded for annual inspection or maintenance. Sites that are not manned are not inspected. These projects rely on Congressional aid for inspections and/or maintenance. Projects are monitored by the District for HQUSACE, who provides funding.

All USACE field project personnel monitor the conditions of their project daily during their normal work routine. If, during a daily inspection, damage is sighted, or an abnormality is noticed, the project manager is informed. From that date forth, the condition is tracked, monitored, and reported to the Chief of Operations. The Chief of Operations may allocate, or request allocation of funding, for this repair.

Some projects, such as breakwaters, piers, or navigational channels, have an Annual Condition Index (ACI) inspection. An inspection is made and delivered to the District Chief of Operations detailing project conditions, which creates a project history. The condition index inspection uses standardized relative ratings, as much as possible, so a comparison across the projects is universal. District Chiefs of Operation use this information in the formation of budgetary alignments, identifying the worse conditions, and the most important harbors. Building and structural reports are verbally delivered to the Chief of Operations.

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Real property inspections (RPI) are a team effort between Real Estate and Operations. Every three years, every improvement on the project is inspected, and any change is reported on the Real Property Inventory. Improvements, damages, and the conditions of the project are reported on the survey. Real Estate has the lead in this effort and provides a copy of the finished inspection to project personnel and the project manager. A report is provided to the Chief of Operations if something is damaged or deteriorating and a line for repairs needs to be put in the budget. A recreational site will be inspected by the Chief of Operations each year.

Inspection of Completed Works (ICW) is conducted on completed projects that have been turned over to other entities for use and maintenance. ICWs are managed by the Federal Flood Insurance Program, and, if the project is not maintained by the local sponsor as agreed to, the Federal Emergency Management Agency (FEMA) removes the project from its flood program, and the project is not eligible for FEMA flood relief. Reports of ICW use a software program named ENGLINK and are managed through the Emergency Management business line of USACE.

Project Condition Surveys (PCS) generally occur after a dredging effort and are usually included in the annual dredging budget as a program funded by HQ. Projects with commercial tonnage channels, ports, and harbors receive an annual inspection with a final technical report, which includes underwater photography, dive teams, or technology appropriate for the situation.

As a project ages, the required annual operation and maintenance costs rise and, eventually, the project may become a candidate for rehabilitation. At that point, USACE looks at the requirement as a new investment and conducts a project evaluation which can be considered the equivalent of a Feasibility Study. If the study determines that the costs of the rehabilitation are economically justified, USACE may recommend that the infrastructure investment needs be included in the President's budget. If the study determines that rehabilitation or replacement is not economically justified, USACE could initiate a request to Congress to deauthorize the project, as a precondition for disposal of the project (discussed further in Section 5). Most likely, the project would receive minimal operation and maintenance funds to keep the project safe and operational, or perhaps the project would be relegated to caretaker status.

For some types of Civil Works projects, USACE's Agency Specific performance measures provide more powerful tools for evaluating the performance of projects than the FRPC Performance Measures. For example, the Recreation Budget Evaluation System (Rec-BEST) software program provides a reliable means for tracking and documenting the physical condition of the many recreational features at a water resources project. This is accomplished through the use of a condition index, CI, as a budgetary performance measure.

The CI as defined here, is determined at the recreation area level by the project staff. It uses five components – buildings, roads and parking areas, sites (picnic and camp),

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boat ramps, and signs – for evaluation. Each component is rated on a 7 point scale using both descriptions and pictures for each condition point, from poor to excellent. This picture book approach improves consistency in evaluation across the country, since a poor road in Kansas may not look like a poor road in Virginia.

The CI, weighted by recreation visitation, is used to assist in making budgetary decisions about what proposed work provides the greatest benefit to the greatest number of users. In addition to the CI, Rec-BEST provides information about critical maintenance work, which is defined as work that, if not preformed in the budget year, will result in the loss of an important piece of recreation infrastructure. CI, combined with the critical maintenance indicator, delivers a rudimentary risk-based asset management program for recreation.

Rec-BEST currently does not interface with REMIS and the CI information remains resident in Rec-BEST. The possibility of mapping the CI to the Facility Condition Index field in REMIS will be evaluated in the near future. The condition field in REMIS is a self-populating ranking of the condition of each structure identified in REMIS based on the dollar amount of the estimated needed repairs. Districts have already been given guidance to populate the condition field in REMIS.

As another example, the HydroAmp program is an interagency effort to evaluate the operational condition and performance of USACE hydropower projects against the same performance benchmarks employed by private sector hydropower producers. HydroAmp will be covered in detail in 4.8.2. In addition to these tools, there are other inspections and input from users.

Another feedback mechanism is from federal advisory committees such as the Inland Waterways User's Board (IWUB). These commercial navigation stakeholders provide candid feedback on facility condition, known and likely industry fleet changes, and anticipated future usage. This is critical feedback from the customer base. Not only does the IWUB provide an assessment of the facilities, it also provides 50 percent of the funding for new navigation project construction and for major rehabilitation of existing navigation project features along 27 inland and intracoastal waterway systems through the Inland Waterways Trust Fund – a 20 cent per gallon tax on the fuel used by commercial navigation vessels.

The budgeting process requires that the continuing costs of operation and maintenance and major rehabilitation of the project be weighed against the continuing stream of beneficial outputs of the project. The adoption of an Asset Management Plan, especially the FRPC performance measures, including the Condition Index (as described further in Section 4.7), will provide additional input to the evaluation conducted in the budgeting process.

4.5 Operations and Maintenance Plans

District Operation Managers develop a prioritized O&M Plan based on maintenance work packages. These packages are maintenance tasks less than \$3 million that are

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associated with specific facilities in a system such as the Ohio River System. Input for these packages comes from the asset operators and also inspectors that perform the in-depth periodic assessment, which includes operations, engineering, economics, and environmental sections. The projects are prioritized based on a risk analysis and an overall view of the District facility portfolio. The risk analyses take into consideration the engineering, loss of life, mission, and economic aspects if the structure failed.

The O&M Plans for each district then gets prioritized by RBC's at the Division level based on a watershed priority/perspective. O&M Plans form the basis for determining work items to be considered in the President's budget. Performance Based Budgeting requires a work package plan for each task. They are project specific and include the backlog of maintenance and other factors that affect the work package.

The following process shows what is considered for an O&M Plan during the budget preparation process before funds are requested. The factors used to determine the disposition of assets include dependency, utilization, condition, and efficiency (operations and maintenance costs). Utilization is probably the most important factor in consolidation decisions, disposal decisions, or acquisition decisions. Condition and efficiency may indicate the need for additional maintenance, repair, and upgrade resources. There are also political or unique factors and considerations which cannot be ignored. *Figure 4.2 Reviewing Existing Assets* shows the process for the determination of the disposition of existing assets, however, no one factor will be the sole determination of asset disposition. Assets that are found to be no longer needed for mission may be analyzed for disposal through demolition, sale, or out-leasing.

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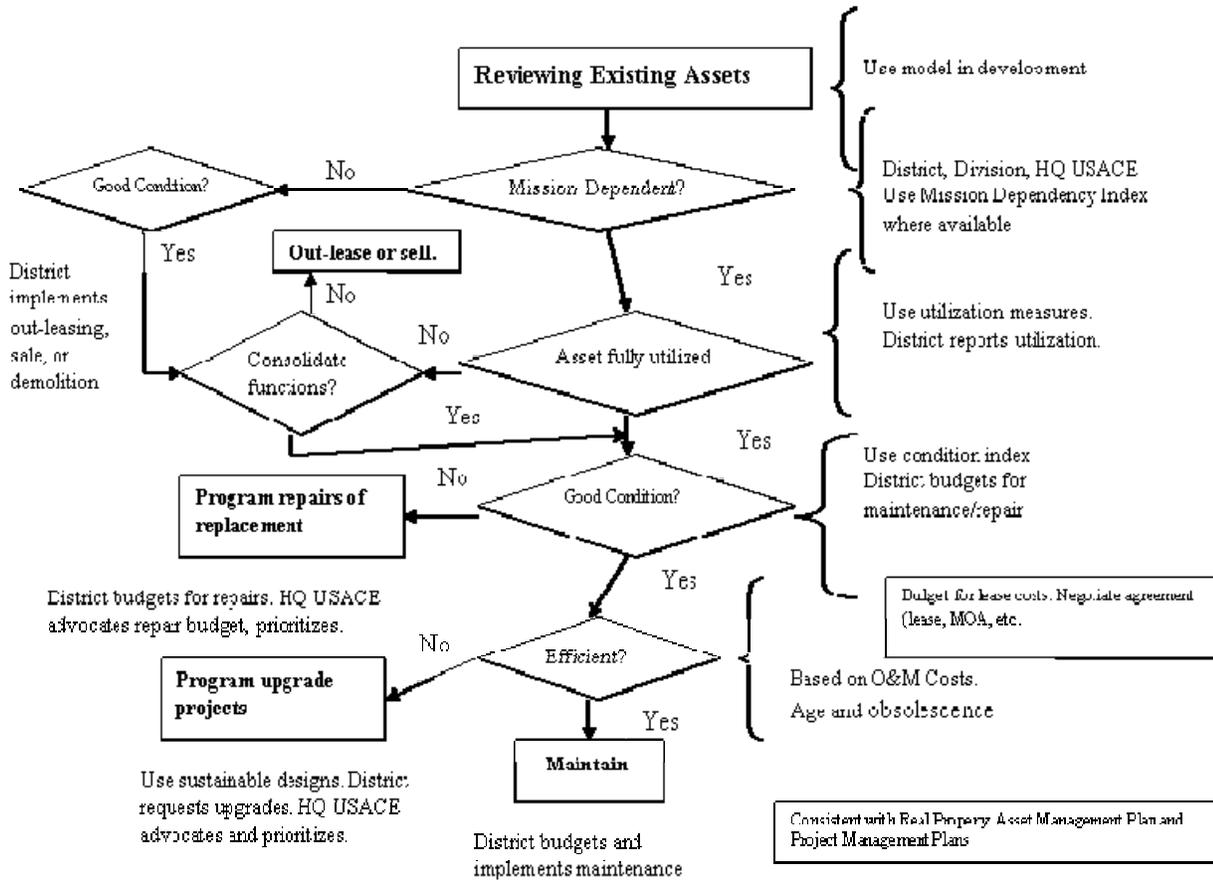


Figure 4.2 Reviewing Existing Assets

The USACE facility maintenance backlog will be modeled based on individual asset surveys similar to the U. S. Army Installation Status Report (ISR) system. Initial backlog costs will be provided by a data call and entered into REMIS. The model will use these backlog costs with the PRV that is resident in REMIS to determine the FCI. Once FEM is completely fielded, it can be used to gauge the accuracy of the model. USACE hydropower projects provide a good example of the backlog of maintenance for older projects.

USACE hydropower project operation and maintenance costs have been benchmarked in recent years to the Bureau of Reclamation, Hydro-Quebec, and the Bonneville Power Administration. This analysis raises questions about the adequacy of the funding of USACE hydropower projects since their construction. Comparisons with other utilities have raised questions about funding. Steps are now being taken to

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justify increased O&M funding tied to the potential increased electricity production as a result of future repairs/upgrades.

Also, an Operational Management Plan (OMP) is developed for each recreation facility at a Civil Works water project in accordance with ER 1130-2-550, Chapter 3 (<http://www.usace.army.mil/inet/usace-docs/eng-regs/er1130-2-550/toc.htm>) and EP 1130-2-550, Chapter 3 (<http://www.usace.army.mil/inet/usace-docs/eng-pamphlets/ep1130-2-550/c-3.pdf>).

Each OMP consists of two sections: (1) Natural Resources Management, addressing the long term objectives, annual staffing and equipment needs, and annual operating costs for managing the natural resources such as wildlife and vegetation, and (2) Park Management plan for safety, security, shoreline management, outgrants, maintenance, recreation use fee program, interpretation, cultural resources, and staffing and funding requirements. These OMP's are updated every five years.

The OMP's address real estate requirements in terms of land allocations for four categories of use: (1) Operations (land required for operation of the project, such as flood damage reduction or navigation), (2) Recreation (lands for public recreations), (3) Fish and wildlife, and (4) Mitigation (land acquired to offset losses associated with development of the project). An annual work plan that addresses the components of the above sections for real property operations and maintenance is completed for the coming year.

4.6 Real Asset Management and Business Line Performance Measures

USACE's budgeting process is addressed in the annual budget EC. Beginning in Fiscal Year 05, USACE initiated performance based budgeting for the nine business lines. The components of the budgeting system that are associated with the project management plan (performance, condition, risk, benefits, etc.) have already been discussed. Districts have accepted this budgeting technique and have become more attuned to its implications. Performance based budgeting will continue to be used in developing future budgets for the business lines below:

- Emergency Management (EM)
- Environment (EN)
- Flood and Coastal Storm Damage Reduction (F&CSDR)
- Hydropower (H)
- Navigation (N)
- Recreation (RC)
- Regulatory (RG)
- Water Supply (WS)
- Support for Others (SO)

Of these business lines, only four involve constructed assets on USACE owned/leased lands: Flood and Coastal Storm Damage Reduction, Hydropower, Recreation, and Navigation.

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The Flood and Coastal Storm Damage Reduction business line projects have been authorized by various authorities over the years. The ownership and operation and maintenance responsibilities vary authorization to authorization. The Flood and Coastal Storm Damage Reduction business line includes a considerable number of local protection projects, i.e., levee and floodwall projects to protect communities from riverine flooding and hurricanes. Those local protection projects were constructed on lands owned by local governments. After construction of the local protection projects, local interests maintain the projects. The only USACE interest in those local protection projects that remains after construction is an obligation to perform periodic serviceability inspections of the projects. Cost shared projects require the local sponsor to provide all Lands, Easements and Rights of way (LER). Title to lands or rights therein for cost shared projects only enter the name of the United States if a condemnation is performed on behalf of the local sponsor. USACE must condemn in the name of the United State. Following completion of condemnation action, the rights are conveyed to the local sponsor.

Districts perform and track the results of these inspections and provide the results to the project sponsors. The sponsors have the responsibility for any repairs or maintenance as otherwise prescribed by law, regulations, or a binding agreement with the federal government. Accordingly, those local protection projects are outside the scope of the FRPC required Asset Management Plan per EO 13327 Section 2.

There is a special levee and floodwall project within the F&CSDR business line which is on USACE Owned/leased lands: the Mississippi River and Tributaries (MR&T) project. This is a massive levee project spanning four Districts and providing a continuous high-level line of protection against Mississippi River flooding to the Mouth of the Mississippi River. Under the authority of the MR&T, the local sponsor furnishes USACE a right of entry to those lands to construct. The United States, under the control of USACE, owns in fee simple lands associated with major structures such as Old River Control Structure Bonnet Carrie Spillway, and rights thereto for environmental and flood damage reduction purposes and other similar structures.

The Navigation business line (both inland waterways and coastal channels), consists of stand-alone structures, dredged channels between locks, and coastal inlet channels permitting navigable drafts to shallow-draft and deep-draft ports.

These business lines and their respective performance measures are outlined below:

1. Flood and Coastal Storm Damage Reduction

USACE has the mission of reducing flood damage. USACE plans, designs, implements, and operates projects that reduce damages from both river and coastal flooding. Many of the projects provide other outputs such as hydropower, water supply, ecosystem restoration, and recreation. USACE flood and coastal storm damage reduction (F&CSDR) efforts range from technical assistance to small, local protection projects (levees or non-structural

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flood damage reduction measures) to major dams and levee systems. Today, most USACE constructed flood protection projects are owned and operated by sponsoring cities, towns, and agricultural districts. However, USACE continues to maintain and operate 383 dams and reservoirs for flood damage reduction and other purposes, as well as some levee systems and channels. The program objectives and performance measures are shown in Table 4.1.

Program Objective	Performance Measure
1. Invest in flood and coastal storm damage reduction solutions when the benefits exceed the costs	Remaining Benefit Cost Ratio (project specific measure)
2. As approved and funded, provide range of assistance to support sustainable regional, basin-wide, or watershed planning and activities in partnership with others	The incorporation of watershed principles into the plan formulation process via guidance and training
3. Deliver project benefits as quickly as possible within available resources	Percent change in constant dollar balance to complete programmed work on all ongoing, budgetable construction project
4. De-authorize projects that no longer: (a) show a positive benefit-to-cost ratio or (b) have the active support of a local cost-share sponsor	Deauthorization is a separate program.
5. Operate and maintain USACE infrastructure to ensure that designed levels of flood protection are realized	a. Percent of time flood and coastal storm damage reduction infrastructure sustains functional purpose b. Percent of projects maintained at design level

Table 4.1 Flood and Coastal Storm Damage Reduction

2. Hydropower

The USACE is the largest owner/operator of hydroelectric power plants in the United States. Many of the projects provide other outputs such as navigation, flood damage reduction, water supply, ecosystem restoration, and recreation. The USACE has 75 plants with a total installed capacity of 20,720 megawatts and produces nearly 70 billion kilowatt-hours a year. The program objectives and performance measures are shown in Table 4.2

Program Objective	Performance Measure
1. Invest in hydropower rehabilitation projects when the benefits exceed the costs, to the extent possible given fiscal	Remaining Benefit Cost Ratio (project specific measure)

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constraints.	
2. Invest in environmentally sustainable hydropower infrastructure improvements where economically justified.	To be developed in the future.
3. Provide reliable power. 4. Provide peaking power. 5. Maintain capability to provide power efficiently.	a. Forced outage rate. b. Physical condition/failure risk index.
6. Ensure that projects perform to meet authorized purposes and evolving conditions. Note: A program goal was not specifically identified for Hydropower; however, Joint Activities at multipurpose hydropower projects should strive to achieve these objectives.	No measures identified for Joint Activities.

Table 4.2 Hydropower

3. Navigation

USACE's mission has included the operation of navigation systems since 1824. Today the agency plans, designs, operates, and maintains projects that support 2.4 billion tons of commerce. Many of the projects provide other outputs such as flood damage reduction, hydropower, water supply, and ecosystem restoration and recreation. These projects include 926 installations ranging from shallow draft harbors and waterways, inland navigation systems with 240 locks at 195 sites, to major deep draft channels.

Program Objective	Performance Measure
1. Invest in navigation infrastructure when the benefits exceed the costs.	a. Remaining Benefit Cost Ratio b. Annual net benefits
2. Support sustainable regional, basin-wide, or watershed planning and activities in partnership with others.	Percent of projects recommended in Chief's reports that apply watershed principles
3. Fund high-priority O&M.	Percent change in dollar amount of essential backlog at key facilities.
4. Operate and manage the navigation infrastructure so as to maintain justified	Percent of time navigation infrastructure with high levels of commercial traffic sustains its

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levels of service in terms of the availability to commercial traffic of high-use navigation infrastructure (waterways, harbors, channels).	functional purpose.
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Table 4.3 Navigation

4. Recreation

The USACE’s recreation program mission is to provide quality outdoor public recreation experiences to serve the needs of present and future generations. The USACE recreation program goal is to enhance the quality of American life by providing benefits to individuals, communities, the national economy, and the environment.

USACE is the nation's leading Federal provider of outdoor recreation opportunities. As the host of more than 375 million visitors a year, USACE plays a major role in meeting the outdoor recreation needs of Americans. The recreation programs annually deliver approximately \$1 billion in national economic development benefits.

Program Objective	Performance Measure
1. Provide justified outdoor recreation opportunities in an effective and efficient manner at USACE operated water resources projects.	National Economic Development Benefit Recreation Unit Day Availability (RUDA)
2. Provide continued outdoor recreation opportunities to meet the needs of present and future generations.	Customer Satisfaction Recreation Receipts/Expenditure
3. Provide a safe and healthful outdoor recreation environment for USACE customers	Facility Condition Index

Table 4.4 Recreation

Although the recreation program is a well established and very visible program, it is faced with the challenge of providing high quality recreational facilities with constrained budgeting. Years of deficient funding have resulted in increased deferred maintenance issues and outdated infrastructure. As a result, the budget for this program will be based on how these facilities meet the performance measures.

The FY 05 President’s Budget included a Recreation Modernization Initiative, which included legislative proposals to provide additional recreation use fees to fund modernization projects. Additional fee authorities will be implemented expeditiously, upon enactment. Any resulting funds will be used to operate, maintain, and enhance existing recreation sites and facilities. USACE has developed a web-based tool,

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Recreation Budget Evaluation System (RecBEST, Appendix K), for use by the districts in calculating performance measures for each project submittal.

4.7 Operations Performance Measures and Continuous Monitoring

USACE has always had performance measures and continuous monitoring for the major structures. However, there has not been a system that included 1st tier elements as defined by the FRPC for all facilities until recently in REMIS. The plan to populate the data elements is in the USACE Gap Plan. Data elements regarding O&M and capturing other funding requirement elements have already been mentioned in earlier sections of the AMP. Until FEM is fully implemented, USACE will model the requirements using systems similar to U.S. Army's and DoD's.

The Operations and Maintenance Business Information Link (OMBIL) is a web-based business information gateway that allows Corps employees easy access to information about the Operations and Maintenance program. The OMBIL system concept originated from the Operations and Maintenance Plan of Improvement. One of the key system objectives is to maintain one-time data entry. The purpose of OMBIL is to provide the data and information requirements for program and project management at all organizational levels. Operations and Maintenance (O&M) corporate management information can be accessed through the [OMBIL Web page](#). The OMBIL system can be used to maintain and track O&M business information. The OMBIL system can also be used to view summaries related to O&M activities, output, resources, and performance.

OMBIL contains modules for each business function, which currently include Navigation (including Locks & Dredging), Hydropower, Recreation, Environmental Stewardship (including Natural Resources & Environmental Compliance), Flood Damage Reduction, and Regulatory. Each business function identified its own data needs and provided advice and assistance in the development of its specific OMBIL module. Data requirements may change in the future as they will be evaluated periodically to enhance its capability to meet existing as well as new requirements.

The Environmental Compliance Assessment [ERGO] Program was initiated by the Corps as a comprehensive self-evaluation and program management system for achieving, maintaining, and monitoring compliance with applicable environmental laws and regulations at USACE facilities and operating projects. The acronym, ERGO, has become synonymous with the assessment process. ERGO is the Environmental Review Guide for Operations. It is the Corps specific tool used to conduct annual environmental compliance assessments. Other tools used are the TEAM Guide & State Supplements. Corps facilities are required to perform internal and external assessments. External assessments are conducted on a minimum cycle of every five years and include major outgrants. Internal assessments are done annually, except for the year the external is done. Districts decide if internal assessments of major outgrants are necessary. Assessment results are entered in the OMBIL Environmental Compliance module. This program will directly support the "Restrictions" data element.

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4.7.1 Federal Real Property Council Measures

To facilitate the management of real property, the FRPC directed that Federal Agencies to create (if not already in place) a central real property manager at their headquarters level. The Civil Works Directorate has established an Asset Management business office to manage this requirement. A team has been assigned to complete the initial efforts. The FRPC also directed that 23 key asset management data elements be used to track assets down to the constructed asset level.

The data for 17 of the 23 FRPC required data elements are already resident in USACE's systems. Of the remaining six data elements, Data Element #5 Historical Status has been populated for all real property 45 years or older as Historic Register Eligible. The ultimate goal of USACE is to have automated updating of Historical status changes by crosswalking to Agency/State links for an automated notification system and automatically populating REMIS using the Real Property Accountable Officer's physical inventories. Data Element #23 Restrictions, is currently captured in the property title documents maintained at the field Real Estate Offices. While USACE tracks restrictions to the land parcel level of detail, the information currently resides in manual records kept in the District Real Estate Offices. USACE intends to capture the land restriction data as part of the effort to include parcel records in REMIS reporting. The goal of USACE for gathering restrictions data for constructed assets is to get all business lines operational from OMBIL.

The information associated with the remaining four 1st tier data elements are captured in other systems to varying degrees. A discussion of each of the four follows.

4.7.1.1 Facility Condition Index

As described in Section 4.4, the facility condition index (FCI) was calculated from dollar repair needs based on data calls issued to Districts in Oct 05 and Mar 06 for all real property records with constructed costs greater than \$25k. For the dollar repair needs that were based on rough order of magnitude, USACE could use two different methodologies that could generate a facility condition index. The Recreation facility condition index tool could be used to determine conditions for the approximately 28,000 low dollar Expensed buildings and structures (construction costs recorded as zero). A contractor is developing a Plant Replacement Value (PRV) for the Expensed real property items. After the PRV data is downloaded into REMIS, the REMIS calculation will generate the Facility Condition Index.

Project managers at the site could use a similar picture book technique to classify their projects as green, yellow, and red. (The color category would be associated with a Q-rating which relates to the dollar repair needs entered into REMIS at the constructed asset level). The color category would be modeled to a backlog of maintenance percentage and the requisite FRPC condition index calculated using $[(1 - \text{repair needs}/\text{plant replacement value}) * 100]$. The Department of Army currently uses this picture book technique on an annual basis and it has been found accurate for portfolio level facility type asset management. USACE ultimately plans to develop condition

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assessment tools for all business lines by integrating data to REMIS from other systems such as FEM, OMBIL and RECBEST.

USACE is developing a methodology called HyrdoAmp for its hydropower program in partnership with the Bureau of Reclamation, Hyrdo-Quebec, and the Bonneville Power Administration. This team has developed condition assessment guides for hydroelectric components. A detailed explanation is in section 4.7.2 Agency Specific, Facility Condition Index.

4.7.1.2 Facility Utilization Index

FRPC requires an initial utilization index for five categories of buildings: office, warehouse, laboratory, housing, and hospitals. USACE does not own any hospitals. By District data calls of Oct 05 and Mar 06, USACE completed the utilization survey and data has been entered into REMIS for the real property coded as Assets. The same process will be performed for the real property coded as Expensed. The majority of USACE leased office space is handled by GSA's leasing program. GSA in turn does the utilization survey.

USACE is reporting on utilization of the five building categories in accordance with an agreement between the DOD Senior Real Property Officer and Office of Management and Budget. With a baseline established in FY06, USACE will use USACE Disposition Decision Tree output, Hand Receipt Holder physical inventory output, and annual utilization survey output to gather data consistent with the FRPC definitions for the four categories of utilization applicable to USACE.

4.7.1.3 Operating and Maintenance Costs

The USACE has initially used a combination of the Department of Defense's Facility Sustainment Model (FSM) for maintenance costs and the Facility Operations Model (FOM) for operating costs to estimate total Annual O&M costs. The FSM is a mature OSD approved model used for DoD Sustainment [recurring maintenance and repair costs] appropriations that uses average per unit cost factors from the DOD Facility Pricing Guide, UFC 30701-series. The FOM is in its second year of usage by DoD. It has operational categories such as custodial, refuse, and fire/emergency services, utilities, etc. These models rely on alignment of Buildings and Structures asset types with the OSD Facility Analysis Code [FAC]. USACE assets were matched to an OSD FAC at the recorded asset level and the models generated estimated the Annual O&M costs. Where USACE has a unique asset that is not in the OSD system [eg locks and dams] a new FAC will have to be developed. It is estimated that 95 percent of the USACE recorded assets will map to the OSD FAC's and the initial mapping by Contract resources of USACE assets to the FAC's should be completed by 4th quarter FY06 for both categories of real property records – Assets and Expensed.

While these models are an excellent starting point for determining the Annual Operating and Maintenance costs per OMB requirements, it is incumbent on USACE

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to transition to “actual” costs where possible. Figure 4.3 illustrates this conceptual transition, and the steps required, from the current “as-is” model based determination to the future “to-be” actual cost based determination.

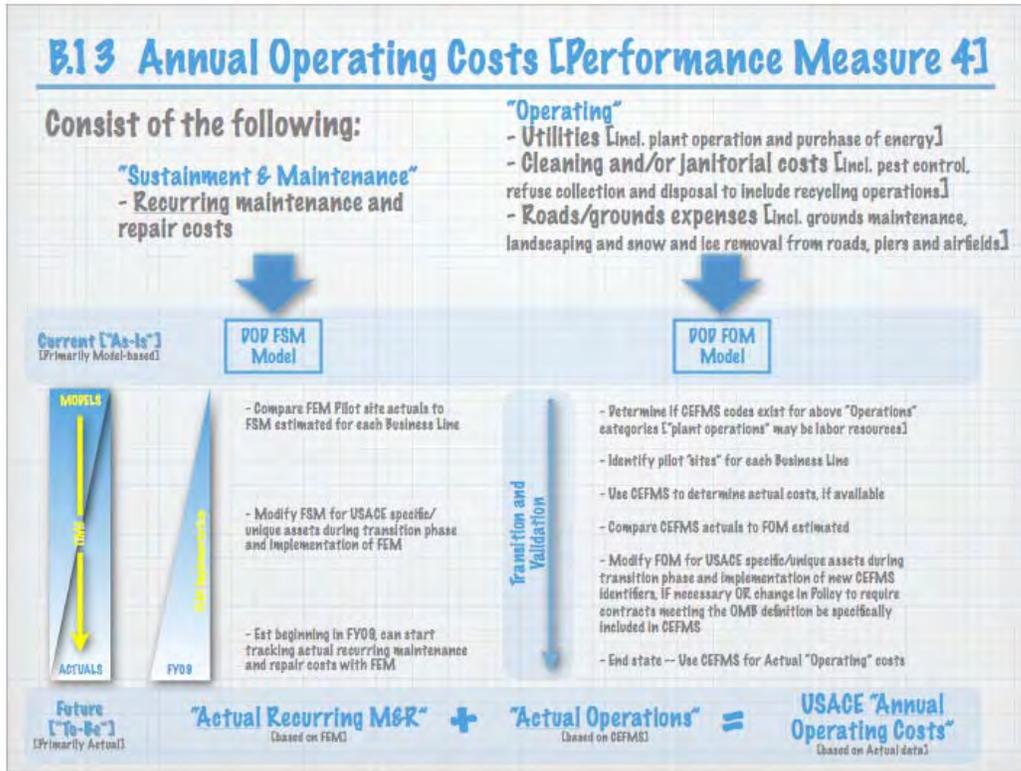


Figure 4.3 USACE Transition from Current to Future Annual Operating Costs

The combination of these models will provide the requirements for USACE O&M. The data from the modeling procedures will be compared to actual costs generated in FEM and expended in CEFMS for O&M to ensure that costs are consistent with actual budgeted and executed costs. USACE ultimate goal will be to provide accurate data and Quality Control by using FEM to drive cost output and incorporating Quality Assurance using CEFMS/OMBIL at the constructed asset level comparisons.

4.7.1.4 Mission Dependency

Mission dependency is the value an asset brings to the performance of the mission. The USACE is consistent with the Council’s latest standards and has already categorized its assets into the following FRPC categories: Mission Critical; Mission Dependent, Not Critical; and Not Mission Dependent.

- **Mission critical:** without the constructed asset or parcel of land, the mission is compromised. Examples of mission critical facilities include lock and dams, levees, powerhouses, etc. A loss of these facilities would not only

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compromise the mission but could adversely affect the public and possibly contribute to loss of life and property.

- Mission dependent, not critical: constructed asset or parcel of land that directly supports the mission but would not prevent the accomplishment of the mission if not present.
- Not mission dependent: does not affect the mission if the facility or parcel were not present. An example would be a constructed asset on a mission critical parcel used by another government agency or left vacant. In either situation, the asset is not needed.

The Mission Dependency data element is already populated in REMIS. A Mar 06 Data Call to the Districts requested that the data element be validated for each real property item. In addition, Quality Assurance checks are being conducted by the Districts to identify any facilities that may be operated by other agencies on USACE property (Mission dependent, not critical category). The Districts also entered disposal data into REMIS reflecting real property items that were disposed during FY06 or that are planned for disposal within the next three years. As the Council further defines its version of mission dependency, the USACE will work to ensure consistency with the Council's standards.

The ultimate goal of USACE is to integrate automated information systems (REMIS, OMBIL, RFMIS) to gather Mission Dependency data.

4.7.2 Agency Specific Measures

4.7.2.1 Facility Condition Index

USACE is developing a methodology called HyrdoAmp for its 75 assets in the hydropower program in partnership with the Bureau of Reclamation, Hyrdo-Quebec, and the Bonneville Power Administration. This team has developed condition assessment guides for hydroelectric components

<http://operations.usace.army.mil/bmp.cfm?CoP=Ops>

A two-tiered approach for assessing condition is used. Tier 1 relies on test data, inspection results, and other information that is readily available or obtained during routine operation and maintenance. A low condition index may indicate the need for a Tier 2 evaluation, comprised of specialized tests to refine the condition rating.

This condition index is used in making decisions on replacement or rehabilitation when faced with competing demands and limited resources. The simplest approach involves using these indices to determine their placement order for similar types of equipment. Condition indices can also be combined vertically into an aggregated unit summary index.

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Power plants in the Federal Columbia River System are currently performing Tier 1 condition assessments of all main power train equipment. Similar implementation throughout the other USACE Divisions is planned. Appendix L illustrates the Tier 1 assessment process. Transformer condition is evaluated based on four condition indicators as shown. The condition index and consequence of failure are used to plot this transformer and others onto the risk map. Equipment positioned in the lower right corner of the map is in the worst condition and poses the greatest risk to the system. Therefore, these items would be considered high priority candidates for repair or replacement.

HydroAmp exceeds the FRPC standards and is considerably more detailed than other facility condition indexes. The maintenance management system associated with this methodology is FEM (FEM is a Department of Defense migratory Computerized Maintenance Management System (CMMS)). The Joint Logistics Systems Center (JLSC) developed the system to meet the needs of DoD maintenance organizations. This system was designated as a DoD migratory system in 1995. FEM is the Corps tailored version of MAXIMO Enterprise Base Systems (MRO Software, Inc.), which is a Commercial-Off-The-Shelf-System (COTS) package).

USACE is in the process of determining performance measures for the majority of its assets. USACE's major civil assets consist of water related facilities such as hydroelectric plants, flood damage reduction projects, and related reservation land. As a result, these are generally non-revenue generating assets with the exception of the hydroelectric plants. Hydropower is an example of where there are extensive performance measures in the utility industry to benchmark.

USACE operated 356 hydroelectric power-generating units at 75 reservoirs that provide nearly a quarter of the nation's total hydropower capacity. These units are designed to start quickly and adjust to changing demands. The electricity generated is distributed regionally through four federal power marketing administrations.

The performance measure of these hydroelectric facilities is to keep the forced (unplanned) power outages at less than 2.3 percent in keeping with industry standards. A lower forced outage rate indicates more reliable public service. The following summarizes this performance over the past three years:

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	FY 02	FY 03	FY04	FY05	FY06
Performance target (% outage)	4.5	2.3	2.3	2.4	2.3
Actual reliability (% outage)	3.4	3.3	3.5	4.6	

Table 4.5 *Hydroelectric Facility Performance*

As this table indicates, the agency has not met its performance measure for the past three years. This is mainly due to the challenges of maintaining and rehabilitating aging equipment. However, by benchmarking hydroelectric O&M funding levels, USACE determined that their O&M funding levels were lower than the industry's. This is currently being addressed in discussions with the Resource Management CoP and partners in the Federal Columbia River Power System.

In addition to reliability, the hydroelectric program measures as kilowatt-hours generated to measure output and cost per kilowatt-hour to measure efficiency. Annual goals are not set for these indicators because power production is largely dependent on hydrologic conditions that cannot be managed. However, these indicators can still be compared to industry standards to gage the output and efficiency.

4.7.2.2 Security Risk Reduction

Managing the risks associated with the vulnerability of critical assets is one of the key aspects that must be considered as part of their assessment when evaluating physical protection alternatives against terrorist threats. The decisions made from these risk assessments must balance the potential consequences associated with them, while also considering the benefits derived from assisting in the accomplishment of the asset's primary role and ensure that the overall mission of the system is fulfilled. The USACE is contributing to the reduction of risks to critical water resources and military infrastructure from hostile activity through active support to the national Critical Infrastructure Security Program (CISP) and to the Department of Defense (DoD) Critical Infrastructure Program (CIP). The DoD CIP was initiated in 1999 as part of the "Y2K" preparation. Ten sectors are currently established, e.g., Defense Industrial Base, Financial Services, Public Works, Transportation, etc. USACE was designated as the DoD sector lead for Public Works infrastructure. After September 11, 2001, USACE Directorate of Civil Works established a Critical Project Security Program with the purpose to evaluate, identify, prioritize, and implement security upgrades to critical infrastructure owned, operated, and maintained by USACE. Since then, this program has expanded to become the current USACE's Critical Infrastructure Security Program (CISP) incorporating into its foundational goals the overall objectives outlined by the Department of Homeland Security National Infrastructure Protection Plan (DHS NIPP).

A global prioritization of critical projects was also developed in late 2001 as a more systematic step towards the development and implementation of physical security upgrades to USACE facilities (which include navigation locks and dams, flood

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damage reduction structures, power generating facilities, and related administrative office buildings). In FY02, a risk assessment evaluation of over 300 dams owned by USACE was developed using the Risk Assessment Methodology for Dams (RAM-D) process as part of the evaluating procedure. Because of the additional information gained from these RAM-D assessments, HQUSACE developed a project prioritization procedure aimed at reprioritizing the initial list of critical projects.

All USACE Major Subordinate Commands (MSCs) were required to use this procedure and establish a ranking of all critical projects that would require additional physical security measures based on the RAM-D assessments. The procedure used a number of criteria to determine each project's Relative Performance (RP) based on a Target Factor Value (TFV) and a Performance Factor Value (PFV). The project's RP is then used in a matrix approach against the total Consequences (C) to determine the project's relative ranking within the MSC. Based on this process, the RP is a subjective, relative measure of the project performance and is not an absolute value of the performance of the facility. Each MSC ranking matrix was used to prioritize all USACE's critical projects into a USACE-wide list. Using these additional considerations, 263 USACE facilities were identified as CI/KR from a security standpoint and a prioritized ranking was therefore established.

A Baseline Security Posture (BSP), as defined by USACE's Office of Homeland Security, was established as an initial step for the implementation of physical security upgrades of those critical projects identified from the RAM-D assessments. As part of the process, security teams define realistic threat scenarios and determine the likelihood of damage to a project from an assumed successful terrorist attack. An estimate on the number of fatalities and economic losses resulting from a potential attack is established. An appropriate BSP level (Level 1 or Level 2) is assigned to the project being evaluated based on the number of fatalities and associated economic losses. The required BSP level will correspond to the highest level as determined by either the number of fatalities or by the economic losses. The physical security features requirements associated to the BSP level are determined. Subsequently, adjustments to the security requirements of the facility under consideration are established to fit local project conditions, and measures are implemented. A security assessment to determine any additional security measures required is performed, and those measures are then implemented. All implemented measures will be periodically re-evaluated to determine if additional security measures are deemed necessary. During FY04-05, physical security upgrades at numerous sites were implemented, with additional upgrades to continue and scheduled for completion by the end of FY06.

4.8 Operations and Maintenance Initiatives

USACE is moving to proactive, preventive, and predictive asset management practices that are technology driven and based on fact-supported decision making. Predictive risk and reliability models, standardized maintenance standards and tools, regionalization of operations functions, improved partnering and customer involvement, and smart technology and effective communication strategies are a few

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of the areas that are moving USACE toward five year budget plans and life cycle management. USACE is investing in dedicated R&D efforts to develop risk-based predictive tools, innovative construction techniques and materials, and smart technologies to monitor performance for improved operations and maintenance practices. The following describe some of these initiatives that are underway and will be incorporated in the 3-year plan.

Standardization of operations and maintenance

The Facilities and Equipment Maintenance System (FEM), a computerized maintenance management system, will move the USACE from decentralized legacy systems to a corporately standardized business practice that facilitates planning and documentation of operation and maintenance activities. The information in FEM allows users to examine cost and condition variances for similar categories of assets and make management decisions to improve the effectiveness of operation and maintenance strategies. FEM as an AIS [automated information system] is scheduled to be implemented across all business lines and divisions by FY09. Utilization of the FEM AIS for O&M work management, capturing data to be used for work effectiveness/efficiency and facility condition evaluations will require 3-5 years from initial implementation, with full utilization [actual work and equipment data being analyzed for life-cycle asset management and applying the finding of the analysis] approximately 5 years after initial implementation of the FEM AIS.

It will also provide corporate level information to identify best performers by cost and labor utilization as well as to share best practices.

For the recreation program area, the Recreation Facility and Customer Service Standards were completely updated and published as Engineering Manual 1110-1-400 in November 2004. The standards provide comprehensive guidance for design, construction, maintenance, and operation of recreation sites and facilities, using a system of drawings and photos to illustrate concepts described in the text. The standards including photos and drawings are posted electronically on the Corps publications website.

In addition to national standards, regional efforts initiated by the Regional Business Centers are well underway to improve effectiveness of O&M asset management activities. Lakes and Rivers Division (LRD) has established maintenance standards for locks and dams on the Ohio River System and Great Lakes. The standards address regional norms for inspection, dewatering, work force capabilities, and critical maintenance positions, and lay the foundation for systems based utilization of the repair fleets on the Ohio River System. The standards have incorporated impact analysis to assist in prioritizing repair fleet work of navigation assets.

Technology Initiatives Supporting Life-cycle Management

To improve the O&M of federal coastal navigation and flood protection projects, USACE initiated a national coastal mapping program in 2004 to collect regional data to quantify the physical and environmental condition of our coasts. A mile-wide swath of lidar and spectral imagery is collected along the coast from a single airborne

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platform, resulting in engineering, economic, and environmental measurements, data and information used. The program is jointly supported by other Federal agencies leveraging nationwide activities and including the Integrated Ocean Observing System (IOOS). Coupled with the mapping activity is USACE sponsored R&D to develop risk-based condition assessment tools for prediction and prevention of deterioration and failure for coastal structures protecting our nation's beaches, channels, and harbors. As conditions are monitored and predictive technologies mature, maintenance and major rehabilitation can be prioritized and scheduled for optimal life cycle management.

R&D has led to development of important technologies to help improve USACE's ability to monitor and inspect the asset. One of these technologies, a remote submersible acoustic camera, is changing the way USACE does business. The operators can guide through a lock or dam underwater and inspect the condition of the asset in lieu of dewatering or a diver. This process improves safety by minimizing diving inspections, can minimize closure times during dewatering due to a more complete understanding of the problems ahead of time, and can reduce costs. The technology has already been deployed at some sites and will continue to be implemented nationally.

A technology initiative that transcends the life cycle asset management being developed by ERDC is the Common Integration Layer (CIL). The CIL is an approach and technology used to link disparate automated systems into a single cohesive infrastructure focused on fulfilling USACE business needs while minimizing rework and the impacts of application changes (See Figures 4.4 and 4.5).

The Goal of CIL is to:

- Provide an integration framework and centrally shared data for all USACE systems,
- Support a platform/vendor neutral approach to shared data, and
- Allow transactional systems to retain their individuality without adversely impacting shared data requirements.

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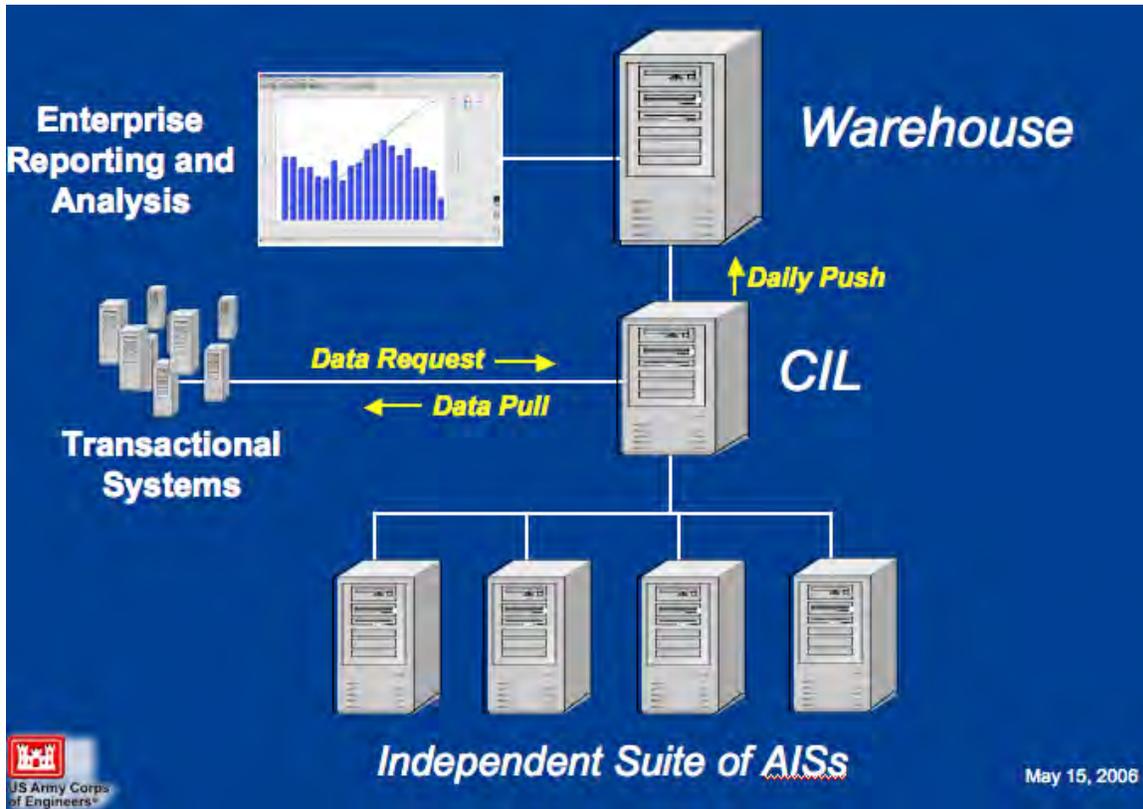


Figure 4.4 Conceptual overall USACE Integration Strategy

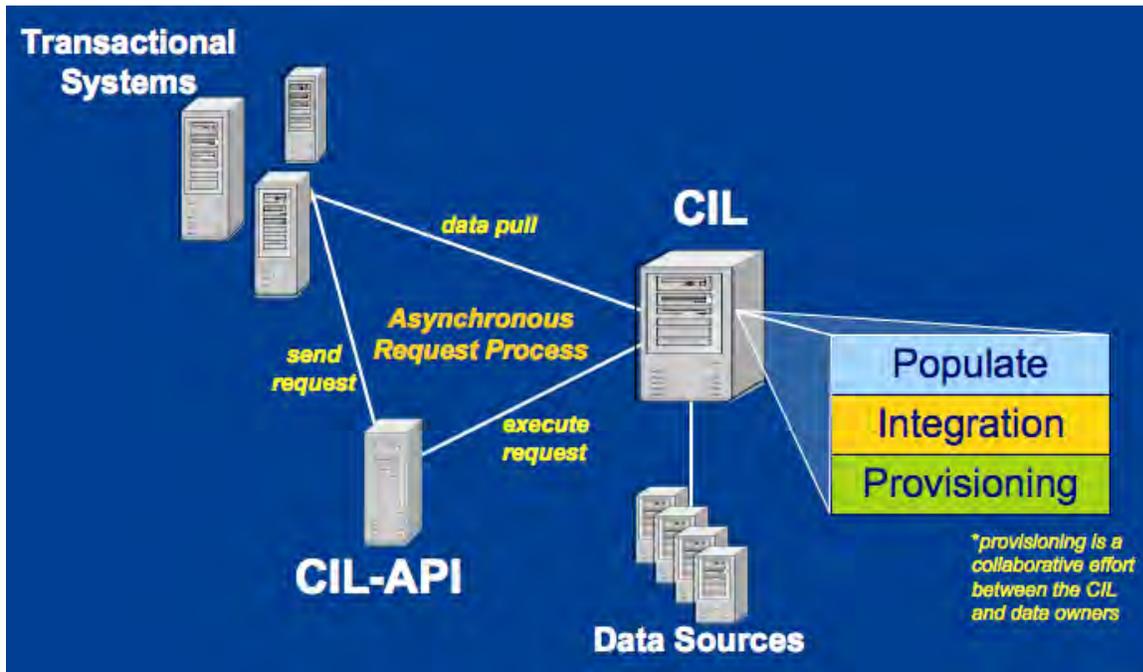


Figure 4.5 CIL Architecture

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In this architecture, REMIS, as an example, would be a Data Source/existing AIS, CEFMS would represent a transactional system.

Infrastructure Risk and Reliability

Similar activities are underway for major infrastructure assets in Inland Navigation and for Dam Safety Portfolio Risk Assessment. Risk-based condition assessment tools are being developed and implemented that identify major project or system components, predict deterioration and probability of failure, and propose a maintenance or major rehabilitation cycle that will minimize consequences and extend the life of the asset.

Regional initiatives, such as one developed for the Ohio River Mainstem called the Ohio River Navigation Investment Model, incorporate risk and reliability tools into the decision process for scheduling major maintenance and rehabilitation. The current R&D program is supporting national development of this tool for implementation outside the Ohio River system. A predictive maintenance system can reduce the need and frequency of scheduled inspection. When fully implemented, these systems will improve safety and reliability of infrastructure assets, and reduce the likelihood of failure of fracture critical components. The major benefit is achieved by life extension of the operating equipment and structures by taking corrective action in order to circumvent premature failure. These systems have the potential to deliver a better indication of overall electrical, mechanical, and structural condition, as well as reduce maintenance cost and personnel requirements.

Dam Safety Portfolio Risk Assessment program has already established its process for screening high risk dams and evaluating needed rehabilitation and has been effective in establishing national budget priorities for ensuring the safety and reliability of these major infrastructure assets. A similar program is under construction and funded for National Levee Assessment which will also support the Louisiana Coastal Protection study scheduled for completion in the next two years. Further coordination, development, and implementation of these tools will roll out over the next years and be included in the 3-year plan.

Communications

Communities of practice share best practices and lessons learned through many opportunities of national meetings, conferences, and training. Additionally, newer technologies through the internet have fostered development of robust communication tools for access to national best practices and delivery of products. One example is the Natural Resources Gateway. It is a web-based knowledge management system serving the natural resources management (NRM) community of practice. Through the Gateway, all members of the NRM CoP have easy access to best practices and lessons-learned information about practical, on-the-ground asset management. Through the Gateway, condition information related to recreation infrastructure at all USACE operated recreation areas is available for operations project managers to use in benchmarking conditions of their facilities against others around the nation. The

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gateway is expanding to include all operations communities of practice and will be included in development of the 3-year plan.

Systems Planning and Budgeting

As USACE is moving to a five year resource expenditure projection, regional centers are stepping out with ways to prioritize needs that are smart and customer supported. As a prime example, Navigation initiatives have been implemented in LRD's program titled "Achieving Navigation Systems Acceptable Levels of Risk". Although these Navigation mission-focused initiatives span well beyond O&M activities, they are elemental in a comprehensive management approach which constitutes life-cycle, a.k.a. Asset Management, which is adopted for application in a public administration setting. The challenge is changing the way we conduct business from thinking about stovepipe O&M and shifting the culture to comprehensive life-cycle management administered in a public setting. This initiative may have future roles, given expected maturity of the processes, in how we eventually apply principles for Asset Management, and business patterns may have fundamental applicability to other regions and business lines.

Cornerstones already initiated for applying Asset Management principles include:

- Establishing measurable value to the Nation for federal investments
- Setting uniform metrics enabling return-on-investment decisions
- Uniformly managing risks and assessing conditions
- Defining tenable performance expectations and applicability within the program
- Establishing supportable near-term (5 years) resource expenditure projections to achieve mission goals
- New assets economically contributing to national life-cycle improvement goals
- Creating transparency and accountability in a public administration setting
- Promoting collaboration for public stakeholders' input
- Establishing long-term (more than 5 years) strategy for regional system investments supporting national economic strategic goals

USACE is leaning forward to use new technology and work smarter to achieve best O&M practices for life cycle asset management.

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5. Disposal of Unneeded Real Property

As discussed in Section 4 above, aging Civil Works projects sometimes may cost more in Operation and Maintenance or rehabilitation costs than is justified by the value of the beneficial outputs of the project. As an overview of the USACE disposal process, the summary below captures actions and resource requirements. Further information follows in subsequent sections.

1) District prepares an internal decision document or report, which includes:

Section A

- General description, location, and size of property
- U.S. property interest
- Type of legislative jurisdiction
- Congressional involvement
- McKinney Act requirements
- Attached maps, legal description, etc.

Section B

- Information on buildings and improvements within proposed excess area
- Building number
- Condition of improvements
- Environmental condition (asbestos, LBP, etc.)
- Special Use facilities approval
- Chief of Chaplains
- Army Health Services Command

Section C

- Environmental and Cultural Considerations
- Clean Water Act
- Coastal Zone Management
- National Environmental Policy Act (NEPA)
- Comprehensive Environmental Response, compensation, and Liability Act (CERCLA)
- Endangered Species Act
- National Historic Preservation Act

Section D

- Report on Title
- Copies of deeds or Declaration of Taking
- List of exceptions, reservations and restrictions
- Encumbrances affecting title – outgrants

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- Maps and legal descriptions
- 2) Congress may enact special site specific legislation authorizing disposal of Civil Works real property and USACE support is provided as required.
- 3) Recommendations to excess or dispose of Civil Works real property
- Reassignment: Changing administrative or command/agency jurisdiction from one command to another within DA. Preparation of DD Form 1354.
 - Transfers: Changing administrative or command/agency jurisdiction from one military department to another: 10 USC 2571.
 - Changing administrative or command/agency jurisdiction between Federal agencies: Secretarial Letter, GSA Delegation, Specific Statutory Authority.
 - Encroachments: Curing of unauthorized use of Federal government property and protection of land title.
 - Conveyance – by Quitclaim Deed or other conveyance document
 - Conveyance to homeless provider pursuant to McKinney Act.
 - Public Benefit Conveyances.
 - Negotiated sale to state or local government at Fair Market Value.
 - Sale to public
 - Bill of Sale [improvements or timber without underlying land]
- 4) On-going real property life-cycle evaluation processes and studies by Civil Works community
- Determination on “Not Needed for current mission” or deteriorated beyond economical state of repair.
 - Civil Works survey of property requirements.
 - Building maintenance and repair.
 - Salvage and reuse of materials in Civil Works Construction and Maintenance Program using in-house resources.
- 5) Division, or in some cases District, approval required for the following when improvement has no commercial value or estimated cost of care exceeds estimated sale proceeds
- Donation to public body
 - Demolition
 - Abandon or destroy when underlying land not U.S.
- 6) DA Form 337, Request For Approval Of Disposal Of Buildings & Improvements, prepared by District Real Estate Office
- DA Form 337 approved by appropriate official, depending on type of disposal
- 7) GSA, Stakeholders and District Disposal Team evaluate real property disposal. USACE is the disposal agent for continuing authorities, site specific legislative disposals, and certain delegated levels under the Federal Property Administration Services Act (FPASA). GSA is not involved if USACE is the disposal agent.

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- Disposal Team or Civil Works Project identifies potentially excess real property to District, Division and HQ USACE.
- Screening by District within disposal authority and GSA electronic screening process
- Environmental (Cultural, Endangered Species, Contamination, Restoration) activities
- Report to address issues and include timelines for completion/finalization of documentation
- District provides information on title (reverter clauses, etc.)
- Disposal agency investigates marketability of property

8) Report submitted to District, Division, or HQUSACE, as appropriate to type of disposal. In some cases, the deed accompanies the Report.

9) HQUSACE recommends appropriate action on the Report and if required, submits to Deputy Assistant Secretary of Army (Installations and Housing) (DASA(I&H)) for approval of the report and determination of excess or approval of disposal, depending on disposal authority.

- DASA (I&H) returns Report/Determination, and Deed, if submitted with disposal package, to HQUSACE

10) HQUSACE submits approved disposal package to the District/Division.

11) If disposal authority is FPASA, and property will be reported to GSA:

- District prepares final Determination of DOD Screening
- District Submits preliminary Report of Excess (SF 118) to GSA
- GSA performs Federal screening and McKinney Act screening
- GSA and stakeholders develop disposal plan with disposal action alternatives to include:
 - Auction
 - Federal to Federal
 - Public Benefit Conveyance
 - Economic Development Conveyance
 - Negotiated Sale
 - Deed

12) If USACE is the disposal agent, then District prepares transfer Deed or Bill of Sale, as appropriate.

13) Deed package has to be submitted through channels to DASA(I&H), if deed was not part of original package.

Inasmuch as a Civil Works project is specifically authorized by the Congress, it may be disposed of only after Congress deauthorizes the project. Thus, deauthorization is the first step in disposal of a Civil Works project.

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Using Operation and Maintenance, General funds appropriated for the project, USACE initiates a formal deauthorization study process. The process includes trying to find a Federal or non-Federal entity willing to assume ownership of the project. Failing that, USACE can propose to Congress that the project be decommissioned, i.e., deactivated and made safe, and disposed of through the General Services Administration (GSA). To our knowledge, Congress has never deauthorized a Civil Works project as a predicate for decommissioning the project and ultimate disposing of the project lands through GSA authorities.

In the few cases in which the USACE has succeeded in deauthorizing a Federal project, the success has been partial. In these cases, no other Federal agency was interested in accepting responsibility for the project. Various negotiations with local governments resulted in partial transfers conditioned on considerable repairs. Absent Congressional authority to deauthorize, decommission, and dispose of a project, USACE must negotiate the ultimate disposal that puts local governments in control of the negotiation process. The local government usually has a good understanding of the condition of a project and knows the USACE's estimate of the cost to rehabilitate the project and the cost of decommissioning the project. The local governments also know that Congress will deauthorize a Civil Works project only if state and local agencies concur.

5.1 Tools to Support Decision-Making

ER 405-1-12 (Chapter 8, Sec. II) outlines the USACE policy for real estate utilization surveys. The agency, prior to obtaining an agreement with GSA which required real property utilization surveys only if a substantive change in authorization of project purpose, performed annual surveys of all civil works to verify that they are used efficiently, economically, and for their authorized use. This survey is then reported using Engineering Form 3871 "Report on Utilization of Civil Works Lands and Facilities" <http://www.usace.army.mil/inet/information/usace-docs/forms/e3871.pdf>.

To meet the requirement of the Asset Management EO, USACE will perform surveys of projects utilizing a multi-functional District team, PDT, composed of real estate, engineering, operations, planning, economist, legal, and environmental personnel. Their task is to perform an analysis of the project based on the Congressionally authorized purpose or purposes and determine if lands acquired for the project are sufficient to meet project needs or if lands and any associated improvements are no longer required to operate the project in the most efficient and effective manner. The PDT will examine physical plant, recreational, and other project features to reaffirm continued requirements as well as examine for the possible future requirements for rehabilitation and upgrades if merited. Each project survey will then be used as a building block of the system-wide survey which will describe the effectiveness and efficiency of the use of the assets within the system.

Lands identified as not being required for the project to continue to function, now and in the future in an efficient and effective manner, will then be evaluated as being excess to that project's requirements. This evaluation will involve an analysis of the

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economics of retention vs. the costs associated with the disposal process to determine the appropriate course of action to be recommended by the District.

If the District determines that the land is excess to the projects needs and disposal is economically and environmentally justifiable, then the District will seek to budget funding for the preparation of the necessary environmental, cultural, and other related documentation to be forward through the HQ to ASA(CW) for a determination of excess to agency needs.

5.2 Disposal Process

Real property, once determined to be excess to the needs of the agency, is transferred or disposed of under very succinct guidelines and regulations. Regulations for civil properties are found in ER 405-1-12 (Ch. 11), while military properties are under AR 405-90. Under each, properties are screened among DoD components for needs prior to being transferred to GSA for completion of the federal agency and McKinney Act screenings. Various levels of environmental and cultural investigation reports are developed for the properties as each progresses through the screening process. Also, the agency follows the procedures outlined in Federal Management Regulations (FMR) 102-75. Generally, USACE only has the disposal authority for assets valued at less than \$50,000. These assets, for the most part, are structures and improvements without underlying land, standing timber, embedded sand, gravel, underground water, inleases, permits, licenses, and easements. All other excess property must be reported to GSA to effect the disposal.

The Army with USACE as its real estate agent and with the USACE Civil Works Mission accomplishes its disposal program through reassignment (changing administrative or command jurisdiction from one command to another), transfers (changing administrative or command jurisdiction from one military department to another), and conveyances (divesting the U.S. title to real property that includes using the Quitclaim Deed and/or Bill of Sale). One significant difference between the USACE Military and Civil Works disposal missions is that the Military Services decide what is to be disposed, while the Civil disposals are determined within USACE. Within the Conveyance business process, there are three primary methods in the disposal business process for USACE: Federal Property and Administrative Services Act (FPASA) (40 USC 471, et seq), Continuing Army Authorities (AR 405-90, Disposals, ER 405-1-12, Chapter 11), and Special Legislation (10 USC 2696).

First, there are delegated disposal authorities that have been granted to USACE through the Department of Defense. These authorities are applicable to specific conditions such as disposal of facilities without the underlying lands, disposal of lands and facilities within the \$50,000 fair market value limitation, disposal of less than fee land estates (in leases, permits, licenses and easements), and disposal of fee lands within value limitations.

Second, there is the legislative approach where Congress assigns disposal authorities to USACE. These laws passed by Congress can designate USACE as the disposal

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agent for defined one-time actions at a specified location or be assigned as a continuing authorities program.

Thirdly, there is the use of the existing GSA disposal authorities and capabilities. GSA is utilized, unless otherwise provided for by specific statute, when value limitations are exceeded to accomplish the disposal of real property. Additionally, as the availability of resources and time scheduling criteria impact USACE, GSA can also be utilized for real property valued under the \$50,000 limitation and for legislated disposals.

For those disposals undertaken by USACE, under the \$50,000 limitation or legislated actions, the business process follows mandated actions that include:

- Contractual disposal of facilities
- Screening for use by legislated interest groups, to include compliance with the McKinney Act (conveyance to homeless provider)
- Screening for DoD, federal, state, and local government requirements
- Disposal of real property through a bidding process, auction, and/or sale mechanism.

USACE continues to act as the disposal agency for structures and improvements without underlying land, standing timber, embedded sand, gravel, underground water, inleases, permits, licenses, and easements.

USACE has a close working relationship with GSA as the disposal authority resides within GSA with the exception of statutory and legislative authorities granted to DoD and USACE.

Exceeding the \$50,000 limitation brings in the use of GSA resources. Upon a determination that USACE real property is no longer required for mission requirements, a Report of Excess, Standard Form 118, is prepared by the impacted USACE District Real Estate Office in accordance with requirements presented in Army Regulation 405-90, Disposal of Real Estate. This document is provided to GSA for further processing and eventual disposal of the real property. While GSA accomplishes the disposal process, USACE continues to retain custody and accountability, must protect and maintain property, and must act to prevent or remedy hazardous conditions.

USACE has several disposal authorities which are not under the purview of the Federal Property and Administrative Services Act (FPASA). These authorities range from transfers to other federal agencies to transfers of property to states or political subdivision thereof for public ports and airports. Each of these authorities is unique to the Congressionally intended purpose, thus each has differing requirements. A complete listing is available in ER 405-1-12, Chapter 11 for civil works and AR 405-90 for military projects.

5.3 Disposal Performance Measures and Continuous Monitoring

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USACE does not maintain any performance measures for the disposal process. However, disposal actions are tracked in REMIS.

5.4 Disposal Initiatives

In general, USACE has not pursued special legislation for any particular disposal authority. The agency does have disposal authority for specific types of property as discussed in [Chapter 11 of ER 405-1-12](#).

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APPENDIX A

Acronyms Used in This report		<u>Page</u>
AMP	Asset Management Plan	1
BLM	Business Line Manager	9
CECW	Directorate of Civil Works Corps of Engineers Financial Management	10
CEFMS	System	25
CEMP	Directorate of Military Programs	10
CIP	Critical Infrastructure Program	40
CISP	Critical Infrastructure Security Program	40
CoE	Chief of Engineers	6
CoP	Communities of Practice	8
CRM	Command Management Review	22
DCW	Director of Civil Works	6
FCI	Facility Condition Index	27
FEM	Facility Equipment Maintenance	26
FOM	Facility Operations Model	37
FRPC	Federal Real Property Council	1
FSM	Facility Sustainment Model	37
HRD	Human Resources Directorate	12
OMP	Operational Master Plan	30
P2	Primavera P2 project management software	26
QAQC	Quality Assurance Quality Control	15
RBC	Regional Business Center	8
Rec- Best	Recreation Budget Evaluation system	27
REMIS	Real Estate Management Information System Rental Facilities Management Information	25
RFMIS	System	22
RIT	Regional Integration Team	9
RMS	Resident management system	22

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APPENDIX B: REAL ESTATE POLICY GUIDANCE LETTERS

POLICY GUIDANCE LETTERS

PROPONENT	SUBJECT/TITLE	PUBLISHED FORMAT	SIGNED BY	DATE ISSUED
CERE-M-001	Real Estate Policy Guidance Letter No. 16 - Revision of Policy and Procedures for Disposal Actions of Improvements Without Underlying Land	HQUSACE Memorandum	B. Frankel DRE	2 Sep 98
CERE-L-002	Real Estate Policy Guidance Letter No. 15 - Congressional Disposal Reports Preparation (1 MB)	HQUSACE Memorandum	B. Frankel DRE	24 Jun 98
CERE-AM-003	Real Estate Policy Guidance Letter No. 14 - OCONUS In-leasing, Pursuant to 10 USC 2675	HQUSACE Memorandum	B. Frankel DRE	4 Feb 98
CERE-AM-004	Real Estate Policy Guidance Letter No. 13 - Ensuring Year 2000 Compliance of Leased Building Systems and Equipment	HQUSACE Memorandum	B. Frankel DRE	10 Feb 98
CERE-AP-005	Real Estate Policy Guidance Letter No. 11 - Real Estate Support for the EPA Superfund Program	HQUSACE Memorandum	B. Frankel DRE	11 Jul 95
CERE-006	Real Estate Policy Guidance Letter No. 10	HQUSACE Memorandum	B. Frankel DRE	6 Feb 95
CERE-P-007	Real Estate Policy Guidance Letter No. 5 - Screening Appraisal Reports During Preparation of the Real Estate Audit	HQUSACE Memorandum	B. Frankel DRE	19 Feb 93
CERE-MC-008	Real Estate Policy Guidance Letter No. 4 - Amendment to Real Estate Policy Guidance Letter No. 4 (2.3 MB.)	HQUSACE Memorandum	B. Frankel DRE	8 May 92
CERE-L-058	Real Estate Policy Guidance Letter No. 17 - Congressional Reports of GSA Leases (10 U.S.C. 2662)	HQUSACE Memorandum	E. Fagot ADRE	19 Jan 99
CERE-M-059	Real Estate Policy Guidance Letter No. 21 - Chapter 15-6, Revised AR 200-1 - Real Property Acquisition, Out-grant and Disposal Transactions for Non-BRAC Military and Civil Works Real Property	HQUSACE Memorandum	E. Fagot ADRE	14 Jan 99
CEMP-CR-060	Real Estate Policy Guidance Letter No. 22 - Acquisition Process for CONUS Leases to Support War and Certain Emergency, Contingency and Other	HQUSACE Memorandum	P. Sigur ADRE	28 Apr 05

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	Operations			
CEMP-CR-061	Real Estate Policy Guidance Letter No. 23 - Guidance for Residential Communities Initiative (RCI) Reports of Availability (ROA)	HQUSACE Memorandum	P. Sigur ADRE	22 Apr 05
CEMP-CR-062	Real Estate Policy Guidance Letter - Resolution of Disputes Involving Use of Installation Real Estate by Army Reserve Components	HQUSACE Memorandum	J. Whitaker	18 Oct 05
CEMP-CR-063	Real Estate Policy Guidance Letter - Recreation Development Policy for Out-granted Corps Land	HQUSACE Memorandum	D. Riley	6 Dec 05

PLANNING AND CONTROL

PROPONENT	SUBJECT/TITLE	PUBLISHED FORMAT	SIGNED BY	DATE ISSUED
CERE-PS-009	CFO Issues That Impact Real Estate	HQUSACE Memorandum	B. Frankel DRE	12 Nov 98
CERE-PR-010	Admin Costs for Housing Leases	Memorandum	K. McNiff CPD	20 Feb 97
CEAO/CERE-011	Chief Financial Officers Act Responsibilities for Real Property in the Corps (1 MB)	HQUSACE Memorandum	MG Stevens ACOE	1 Aug 96
CERE-P-012	Cost Estimates for Reimbursable Work	HQUSACE Memorandum	B. Frankel DRE	4 Aug 95
CECS-013	Reconciliation of Real Property Inventory Records with Accounting General Ledger/Cost Records (2.5 MB)	HQUSACE Memorandum	COL Brown	10 May 94
CERE-PR-014	Financing of Real Estate Services Provided by the Army	HQUSACE Memorandum	LTG Williams COE	30 Apr 93

MANAGEMENT AND DISPOSAL

PROPONENT	SUBJECT/TITLE	PUBLISHED FORMAT	SIGNED BY	DATE ISSUED
CERE-M-015	Administrative Fee Schedule and Interim Revision to ER 405-1-12, Chapter Eight, regarding Administrative Charges for Out-grants	HQUSACE Memorandum	S. Howell CMDD	21 Dec 92

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CERE-M-016	Surplus Determination for Base Realignment and Closure (BRAC) Properties	HQUSACE Memorandum	G. Paterson CBRACO	4 Feb 94
CERE-M-017	Increase of Small-Lot Timber Sales Authority to Resource Managers	HQUSACE Memorandum	S. Howell CMDD	31 Jul 95
CERE-M-018	REMIS Update	HQUSACE Memorandum	S. Howell CMDD	15 Sep 95
CERE-MM-019	Revision of Policy and Procedures for Out-granting AMC Industrial Facilities (1.1 MB)	HQUSACE Memorandum	S. Howell CMDD	29 Sep 95
CERE-C-020	Guidance for Leasing BRAC Properties	Memorandum	G. Paterson CBRACO	13 Jun 96
CERE-MC-021	Exchanges of Lands at Civil Works River and Harbor or Flood Conflict Projects	HQUSACE Memorandum	B. Frankel DRE	5 Feb 97
CERE-C-022	Leasing of Real Property at Base Closure Installations	HQUSACE Memorandum	G. Paterson CBRACO	18 Feb 97
CERE-M-023	REMIS Modifications for Agriculture, Grazing, and Recreational Leasing	HQUSACE Memorandum	B. Frankel DRE	27 Mar 97
CERE-MM-024	Revised Guidance - Privatization/Disposal of Utility at Active Military Installations (1 MB)	HQUSACE Memorandum	B. Frankel DRE	10 Oct 97
DAIM-FDF-U /CERE-025	Policy & Procedures for Privatization of Army Owned Utility Systems at Active Installations	ACSIM	MG Whaley ACSIM	4 Nov 97
CERE-M-026	FY98 Management & Disposal Programs CMRs	HQUSACE Memorandum	B. Frankel DRE	14 Nov 97
CERE-M-027	Army Regulation AR 405-80, Management of Title & Granting Use of Real Property (2 MB)	HQUSACE Memorandum	B. Frankel DRE	16 Dec 97
CERE-M-028	Army Regulation AR 405-80, Management of Title & Granting Use of Real Property	HQUSACE Memorandum	B. Frankel DRE	16 Dec 97
CERE-C-029	Guidance - Privatization/Disposal of Utility Systems at BRAC Military Installations	Memorandum	B. Frankel DRE	6 Feb 98
CERE-C-030	BRAC 95 - Change in Timing of State and Local Screening	HQUSACE Memorandum	B. Frankel DRE	20 May 98
CERE-MC-080	Real Estate Litigation Reports	HQUSACE	J. Howell	9 Apr 92

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		Memorandum	Chief Management and Disposal Div. DRE	
CERE-MM-081	Administration of U.S. Army Timber Harvest Program	HQUSACE Memorandum	D. Cohen Chief Management and Disposal Div. DRE	6 Jan 92
CERE-MM-082	Guidance on Compliance with the Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. 9620(h)) (CERCLA)	HQUSACE Memorandum	A. M. Ferry Chief Management and Disposal Div. DRE	15 Apr 91
CERE-MM-083	Real Estate Procedures Pursuant to McKinney Act (1.6 M.B.)	HQUSACE Memorandum	R. Binder Acting Chief Management and Disposal Div. DRE	2 Oct 89
CERE-MM-084	Revised ER 405-1-12, Release of Easement and Encroachments	HQUSACE Memorandum	D. Cohen, Chief Management and Disposal DRE	14 Oct 88
CERE-DAEN-REM-C-085	Army and Air Force Authority to Dispose of Underground Water Without the Land (FPMR 101-47.302-2)	HQUSACE Memorandum	D. Cohen Chief Management and Disposal DRE	31 Jan 86
CERE-DAEN-REM-086	Private Mineral Leases on DA Lands	HQUSACE Memorandum	D. Cohen Chief Management and Disposal DRE	16 Apr 1987

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CERE-M-087	Revised Guidance - Leases Issued Under Authority of Title 10, United States Code, Section 2667	HQUSACE Memorandum	Linda D. Garvin, Director of Real Estate	17 Aug 2001
ASA(I&E)/CEM P-CR-088	Transmittal of Model Language for Findings of Suitability to Transfer (FOST) and Deeds Pertaining to Army Real Estate Points of Contact FOST Checklist FOST Model Language Deed Checklist Deed Model Language	HQUSACE Memorandum	R. Fatz, DASA (ES&OH) J. Whitaker, DASA (I&H) C. Schmauder DGC(CW &E)	10 Jan 2005

ACQUISITION

PROPONENT	SUBJECT/TITLE	PUBLISHED FORMAT	SIGNED BY	DATE ISSUED
CERE-AM-031	Procedures for Lease Acquisition of Recruiting Facilities	HQUSACE Memorandum	L. Ouverson Norman CAD	14 May 93
CERE-A-032	Implementation of the FY99 Recruiting Facilities Program (1.8 MB)	HQUSACE Memorandum	B. Frankel DRE	3 Dec 98
CERE-MC-033	Title 10 USC 2668 Easements for the Rights-of Way	HQUSACE Memorandum	B. Frankel DRE	22 Jun 98
CERE-RA-034	Homeowners Assistance Program (HAP) - Policy Memorandum 92-3	HQUSACE Memorandum	D. Chapman CRSD	31 Jan 92
CERE-RA-035	Homeowners Assistance Program (HAP) - Policy Memorandum 92-6	HQUSACE Memorandum	D. Chapman CRSD	23 Apr 92
CERE-RA-036	Federal Income Tax (FIT) on Reimbursable Benefits, Policy Letter 93-1	HQUSACE Memorandum	D. Chapman CRSD	15 Mar 93
CERE-RP-037	Homeowners Assistance Program (HAP) - Policy Memorandum 93-2	HQUSACE Memorandum	D. Chapman CRSD	28 Apr 93
CERE-RP-038	Homeowners Assistance Program	HQUSACE	D.	17 Jun 93

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	(HAP) - Retirements	Memorandum	Chapman CRSD	
CERE-RP-039	Asbestos Screening - Homeowners Assistance Program (HAP) - Policy Memorandum 93-3	HQUSACE Memorandum	D. Chapman CRSD	23 Jun 93
CERE-RP-040	Authorization for Benefits - Homeowners Assistance Program (HAP) - Policy Memorandum 93-4	HQUSACE Memorandum	D. Chapman CRSD	7 Jul 93
CERE-RP-041	Homeowners Assistance Program (HAP) - Policy Memorandum 93-5	HQUSACE Memorandum	D. Chapman CRSD	27 Jul 93
CERE-RP-042	Homeowners Assistance Program (HAP) - Policy Memorandum 92-2B	HQUSACE Memorandum	D. Chapman CRSD	23 Aug 94
CERE-RP-043	Payment of Closing Costs for Private Sale Benefits, Homeowners Assistance Program (HAP)	HQUSACE Memorandum	J. Downey ACRSD	8 Nov 94
CERE-RP-044	Payment of Closing Costs for Private Sale Benefits, Homeowners Assistance Program (HAP)	Memo	J. Downey ACRSD	10 Nov 94
CERE-RP-045	Payment of Closing Costs for Private Sales Benefits, Homeowners Assistance Program (HAP)	HQUSACE Memorandum	D. Chapman CRSD	18 Apr 95
CERE-RP-046	Homeowners Assistance Program (HAP) - Assumable Mortgages	HQUSACE Memorandum	D. Chapman CRSD	17 Aug 95
CERE-RP-047	Policy Memorandum 96-1, Appeal Deadlines	Memorandum	D. Chapman CRSD	27 Nov 95
CERE-ZA-048	Executing the Homeowners Assistance Program (HAP)	HQUSACE Memorandum	MG Steven DCG	12 Dec 95
CERE-ZA-049	Executing the Homeowners Assistance Program (HAP)	HQUSACE Memorandum	B. Frankel DRE	3 Jan 96
CERE-RP-050	Payment of Closing Costs for Private Sale Benefits, Homeowners Assistance Program (HAP)	Memorandum	L. Bevins ACPOB	21 Aug 96
CERE-RP-051	Homeowners Assistance Program (HAP) Appraisals - Policy Memorandum 96-3	Memorandum	D. Chapman CRSD	3 Sep 96

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CERE-RP-052	Homeowners Assistance Program (HAP) Government Acquisitions Benefits - Policy Memorandum 96-5	HQUSACE Memorandum	E. Fagot ADRE	23 Oct 96
CERE-R-053	Private Sales Benefits with Department of Defense Relocation Services for Employees and HAP Benefits - Policy Memorandum 98-1	HQUSACE Memorandum	B. Frankel DRE	14 Oct 97
CERE-RP-054	Homeowners Assistance Program (HAP) - Multiple Announcements	HQUSACE Memorandum	B. Frankel DRE	17 Nov 97
CERE-R-055	Homeowners Assistance Program (HAP) - Market Impact Reports	Memorandum	B. Frankel DRE	16 Jan 98
CERE-060	Comptroller General's Advance Decision Concerning Payment for the Cost of Relocation of Certain Telephone Facilities	Memorandum	J.U. Moorhead ACOERE	29 Jan 58
CERE-ENGL /ENGLP-061	Acquisition and Relocation of Cemeteries	HQUSACE Memorandum	Unsigned	22 May 59
CERE-062	Delegation of Authority to the U.S. Army Division and District Engineers and Chiefs of Their Real Estate Divisions to Purchase Land and Interest Therein Pursuant to Title III, Public Law 91-646	HQUSACE Memorandum	W. Berge DRE	8 Jun 71
CERE-DAEN -REA-063	Delegation of Authority Pursuant to Section 221, Public Law 91-611	HQUSACE Memorandum	B. Farwell ADRE	26 May 78
CERE-DAEN -REA-P-064	Approval and Review of Title Opinions	HQUSACE Memorandum	D. Gray DRE	30 Sep 86
CERE-DAEN -REA-065	Delegation of Authority for Counteroffers and Settlements	HQUSACE Memorandum	D. Gray DRE	1 Oct 86
CERE-AP-066	Guidance for Utility and Other Relocations at Army Corps of Engineers Project	HQUSACE Memorandum	H. Fahy ADRE	27 Apr 90
CERE-L-067	Declarations of Non-navigability	HQUSACE Memorandum	S.J. Howell Chief Legislative Services DRE	25 Sep 91
CERE-AP-068	Designation of Omaha District as	HQUSACE	H Fahy	2 Oct 91

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	Central Point of Contact for DOE's Albuquerque, New Mexico, Office for Real Estate Support for UMTRCA Projects	Memorandum	Chief Acquisition Division DRE	
CERE-AP-069	Delegation of Authority to Accept Real Estate Work from the Department of Energy	HQUSACE Memorandum	B. Frankel DRE	7 May 92
CERE-AP-070	Retention of Real Records Related to Environmental Restoration Projects	HQUSACE Memorandum	B. Frankel DRE	16 Jun 92
CERE-AP-071	Delegation of Authority for Counteroffers and Settlements	Memorandum	L.O. Norman Chief Acquisition Div. DRE	5 Jan 93
CERE-AP-072	Standard Estate -Temporary Well and Pipeline Easement	HQUSACE Memorandum	L. O. Norman Chief Acquisition Div. DRE	6 Oct 93
CERE-AP-073	Level of Real Estate Effort Required in the Reconnaissance Phase	HQUSACE Memorandum	B. Frankel DRE	13 Dec 93
CERE-A-074	Assessing Land Contributions for Projects Cost-Shared Prior to the Water Resources Development Act of 1986 (WEDA 86)	HQUSACE Memorandum	B. Frankel DRE	15 Jun 94
CERE-AP-075	Delegation of Approval of Real Estate Plans for Continuing Authority Program Projects	HQUSACE Memorandum	L. O. Norman Chief Acquisition Div. DRE	1 Aug 95
CERE-AP-076	Standard Estates - Perpetual Beach Nourishment Easement and Perpetual Restrictive Dune Easement	HQUSACE Memorandum	L. O. Norman Chief Acquisition Div. DRE	4 Aug 95
CERE-AP-077	Authority to Execute Relocation	HQUSACE	B.	7 Aug 95

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	Agreements	Memorandum	Frankel DRE	
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APPRAISAL

PROPONENT	SUBJECT/TITLE	PUBLISHED FORMAT	SIGNED BY	DATE ISSUED
CERE-E-056	Valuation of Sites for Antenna or Tower Leases	HQUSACE Memorandum	B. Frankel DRE	24 Feb 98
CERE-MM-057	Revised Guidance - Privatization of Utility Systems at Active Military Installations	HQUSACE Memorandum	B. Frankel DRE	10 Oct 97
CERE-E-078	Chapter 4, ER 405-1-12 Real Estate Handbook	HQUSACE Memorandum	B. Frankel DRE	27 Nov 90
CERE-E-079	Delegation of Approval Authority for Real Estate Appraisal Reports	HQUSACE Memorandum	B. Frankel DRE	27 Nov 90

UNIFIED FACILITIES CRITERIA

PROPONENT	SUBJECT/TITLE	PUBLISHED FORMAT	SIGNED BY	DATE ISSUED
CERE-M-088	Transmittal of Unified Facilities Criteria (UFC 4-010-01) and Anti-Terrorism (AR 525-13)	HQUSACE Memorandum	Linda D. Garvin	29 Nov 02

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APPENDIX C: PARTNERING AGREEMENTS, ENGINEERING RELATIONSHIPS, AND NATIONAL MEMBERSHIPS

Current U.S. Army Corps of Engineering Partnering Agreements

1. **American Consulting Engineers Council (ACEC)** – 16 October 1992 – To achieve a world class partnership to provide quality and responsive engineering and consulting services to the Nation and to keep the U.S. competitive in the global economy.
2. **American Institute of Architects (AIA)** – 3 June 1994 – To promote our mutual interests in providing efficient, high quality, responsive architectural services to support the Nation in peace and war.
3. **American Public Works Association (APWA)** – 29 March 1996 – To facilitate the effective and efficient transfer of technologies developed by the USACE to civilian public works agencies.
4. **American Road and Transportation Builders Association (ARTBA)** – 10 August 1995 – To promote the effective and efficient research, development, planning, design, construction, operation and maintenance of surface transportation facilities in the United States.
5. **American Society of Civil Engineers (ASCE)** – 23 August 1994 – To promote mutual engineering interests.
6. **Associated Builders and Contractors (ABC)** – 4 February 1995 – To advance the American construction industry in order to better serve our Nation and maintain U.S. competitiveness in the global market.
7. **Associated General Contractors of America (AGC)** – 13 February 1995 - To recognize the importance of providing efficient, high quality, responsive construction services to support the Nation in times of peace and war and to develop a team-building process that creates mutual trust and respect for one another's respective roles in the construction process and recognize the risks inherent in those roles.
8. **Hazardous Waste Action Coalition (HWAC)** – 3 June 1993 – To address our participation in the Nation's environmental restoration program and to enhance the delivery of timely, cost-effective, quality services through better communications, prompt resolution of disputes, and improved working relationships for all stakeholders.
9. **HQ US Air Force (HQUSAF)** – 18 August 1994 – Agreement with the Directorate of Military Programs. To commit the two organizations to a mutual vision of excellent facilities and engineer support to Air Force commanders.
10. **International Association of Foundation Drilling (ADSC)** – 24 March 1994 – To work cooperatively to improve the quality and economy of drilled shaft foundations and earth retention systems.
11. **National Association of Women in Construction (NAWIC)** – 24 June 1996 – To achieve a full and equal partnership between our organizations and to promote our mutual concern of enhancing the role of women in the construction industry.
12. **National Society of Professional Engineers (NSPE)** – 30 March 1996 – To promote mutual engineering interests.

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Typical Engineering and Construction Community Relationships

American Association of Port Authorities (AAPA)
Associated Builders and Contractors (ABC)
American Council of Engineering Companies (ACEC)
American Council of Independent Laboratories (ACIL)
American Concrete Institute (ACI)
American Congress on Surveying and Mapping (ACSM)
Associated General Contractors (AGC)
American Institute of Architects (AIA)
American Planning Association (APA)
American Society of Interior Directors (ASID)
American Society of Landscape Architects (ASLA)
American Society of Civil Engineers (ASCE)
Association of State Dam Safety Officials (ASDSO)
Association of State Highway and Transportation Officials (AASHTO)
American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE)
Construction Engineering Research Foundation (CERF)
Construction Industry Institute (CII)
Construction Management Association of America (CMAA)
Construction Users Roundtable (CURT)
Design Build Institute of America (DBIA)
Fully Integrated and Automated Technology (FIATECH)
International Commission on Large Dams (ICOLD)
International Interior Design Association (IIDA)
Management Association of Private Photogrammetric Surveyors (MAPPS)
National Center for Construction Education and Research (NCCER)
National Council for Construction Information (NCCI)
National Construction Image Steering Committee (NCISC)
National Society of Professional Engineers (NSPE)
SAVE International (formerly Society of American Value Engineers)
Society for Marketing Professional Services (SMPS)
Society of American Military Engineers (SAME)
The Infrastructure Security Partnership (TISP)
United States Society on Dams (USSD)
US Green Building Council (USGBC)

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National Organizational Memberships (FY 2006)

American Association of State Highway and Transportation Officials (AASHTO)
Association of State Dam Safety Officials (ASDSO)
Construction Industry Institute (CII)
Construction Users Round Table (CURT)
Critical Infrastructure Round Table (CIRT)
Dam Safety Interest Group, Canadian Electrical Association Technologies, Inc. (DSIG)
Western Dredging Association (WEDA)
Federal Facilities Council (FFC)
Fully Automated and Integrated Technology (FIATECH)
International Alliance for Interoperability (IAI)
National Association of Women in Construction (NAWIC)
National Performance of Dams Program (NPDP)
The Infrastructure Security Partnership (TISP)
Transportation Review Board (TRB)
United States Society of Dams (USSD)
US Green Building Council (USGBC)
Water Management Interest Group, Canadian Electrical Association Technologies, Inc. (WMIG)

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APPENDIX D: CAPITAL INVESTMENT

State	Project Name	FY 2006 (\$K) Adjusted by Rescission (1%)
AK	ALASKA COASTAL EROSION, AK	2,376
AK	BETHEL BANK STABILIZATION, AK	3,713
AK	DILLINGHAM EMERGENCY BANK STABILIZATION, AK	2,970
AK	KAKE DAM, AK	4,950
AL	TUSCALOOSA, AL	3,960
AL	WALTER F GEORGE POWERPLANT, AL & GA (MAJOR REHAB)	4,080
AR	MONTGOMERY POINT LOCK AND DAM, AR	19,800
AR	RED RIVER BELOW DENISON DAM, LA, AR & TX	2,970
AR	RED RIVER EMERGENCY BANK PROTECTION, AR & LA	3,168
AZ	NOGALES WASH, AZ	2,970
AZ	RIO DE FLAG FLAGSTAFF, CA	3,465
AZ	TUCSON DRAINAGE AREA, AZ	9,900
CA	AMERICAN RIVER WATERSHED (COMMON FEATURES), CA	4,361
CA	AMERICAN RIVER WATERSHED (FOLSOM DAM MODIFICATIONS), CA	9,459
CA	AMERICAN RIVER WATERSHED (FOLSOM DAM RAISE), CA	14,850
CA	CITY OF SANTA CLARITA, CA	495
CA	CORTE MADERA CREEK, CA	186
CA	COYOTE AND BERRYESSA CREEKS, CA	371
CA	GUADALUPE RIVER, CA	5,544
CA	HARBOR/SOUTH BAY WATER RECYCLING STUDY, LOS ANGELES, CA	2,970
CA	KAWEAH RIVER, CA	4,257
CA	LAKE DAVIS WATER TREATMENT, CA	2,475
CA	LOWER WALNUT, CA - (WALNUT CREEK, CA)	186
CA	MARYSVILLE/YUBA CITY LEVEE RECONSTRUCTION, CA	368
CA	MURRIETA CREEK, CA	3,713
CA	NAPA RIVER, CA	11,880
CA	SACRAMENTO AREA, CA	5,940
CA	SACRAMENTO RIVER BANK PROTECTION PROJECT, CA	6,237
CA	SAN LORENZO RIVER, CA	743
CA	SAN LUIS REY RIVER, CA	990
CA	SAN RAMON VALLEY RECYCLED WATER, CA	2,970
CA	SANTA ANA RIVER MAINSTEM, CA	61,034
CA	SOUTH SACRAMENTO COUNTY STREAMS, CA	3,713
CA	STOCKTON METROPOLITIAN FLOOD CONTROL REIMBURSEMENT, CA	4,950
CA	SUCCESS DAM, TULE RIVER, CA (DAM SAFETY)	7,920
CA	UPPER GUADALUPE RIVER, CA	3,465
CA	YUBA RIVER BASIN, CA	1,188
FL	CEDAR HAMMOCK, WARES CREEK, FL	743
FL	HERBERT HOOVER DIKE, FL (MAJOR REHAB)	16,731
GA	ATLANTA - COMBINED SEWER OVERFLOW, GA	990
GA	BUFORD POWERHOUSE, GA (MAJOR REHAB)	5,754
GA	HARTWELL LAKE POWERHOUSE, GA & SC (MAJOR REHAB)	726
GA	OATES CREEK, RICHMOND COUNTY, GA (DEF CORR)	371
GA	RICHARD B RUSSELL DAM AND LAKE, GA & SC	1,287
GA	THURMOND LAKE POWERHOUSE, GA & SC (MAJOR REHAB)	5,643
HI	HAWAII WATER MANAGEMENT, HI	1,485
HI	IAO STREAM FLOOD CONTROL, MAUI, HI (DEF CORR)	371
IA	DES MOINES RECREATION RIVER AND GREENBELT, IA	4,950
IA	LOCK AND DAM 11, MISSISSIPPI RIVER, IA (MAJOR REHAB)	7,504
IA	LOCK AND DAM 19, MISSISSIPPI RIVER, IA (MAJOR REHAB)	17,327
IA	MISSOURI RIVER LEVEE SYSTEM, IA, NE, KS & MO	557
IA	PERRY CREEK, IA	9,900
ID	RURAL IDAHO, ID	4,950
IL	COOK COUNTY, ILLINOIS	371
IL	DES PLAINES RIVER, IL	3,713

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State	Project Name	FY 2006 (\$K) Adjusted by Rescission (1%)
IL	EAST ST LOUIS & VICINITY (INTERIOR FLOOD CONTROL), IL	297
IL	EAST ST LOUIS, IL	990
IL	LOCK AND DAM 24, MISSISSIPPI RIVER, IL & MO (MAJOR REHAB)	4,257
IL	MADISON AND ST. CLAIR COUNTIES, IL	743
IL	MCCOOK AND THORNTON RESERVOIRS, IL	27,225
IL	MELVIN PRICE LOCK AND DAM, IL & MO	557
IL	NUTWOOD DRAINAGE AND LEVEE DISTRICT, IL	198
IL	OLMSTED LOCKS AND DAM, OHIO RIVER, IL & KY	89,100
IL	WOOD RIVER DRAINAGE AND LEVEE DISTRICT, MADISON COUNTY, IL	584
IN	CALUMET REGION, IN	2,970
IN	INDIANA HARBOR (CONFINED DISPOSAL FACILITY), IN	7,920
IN	INDIANAPOLIS, ENV INFRA PLAN, IN CITY ON INDY	272
IN	INDIANAPOLIS, WHITE RIVER (NORTH), IN	3,168
IN	JOHN T MYERS LOCKS AND DAM, IN & KY	693
IN	LITTLE CALUMET RIVER BASIN, CADY MARSH DITCH, IN	8,118
IN	LITTLE CALUMET RIVER, IN	6,435
IN	MISSISSINewa LAKE, IN (MAJOR REHAB)	4,436
IN	OHIO RIVER GREENWAY PUBLIC ACCESS, IN	1,980
KS	ARKANSAS CITY, KS	2,593
KS	TURKEY CREEK BASIN, KS & MO	2,970
KS	TUTTLE CREEK LAKE, KS (DAM SAFETY)	26,730
KY	KENTUCKY LOCK AND DAM, TENNESSEE RIVER, KY	22,770
KY	MCALPINE LOCKS AND DAM, OHIO RIVER, KY & IN	69,300
KY	METROPOLITAN LOUISVILLE, POND CREEK, KY	3,633
KY	ROUGH RIVER LAKE, KY (DAM SAFETY ASSURANCE)	2,475
KY	SOUTHERN AND EASTERN KENTUCKY	1,485
LA	ASCENSION PARISH ENVIRONMENTAL INFRASTRUCTURE	371
LA	COMITE RIVER, LA	6,191
LA	EAST BATON ROUGE PARISH ENVIRONMENTAL INFRASTRUCTURE, LA	371
LA	EAST BATON ROUGE PARISH, LA	743
LA	GRAND ISLE AND VICINITY, LA	668
LA	IBERIA PARISH, LA ENVIRONMENTAL INFRASTRUCTURE	371
LA	INNER HARBOR NAVIGATION CANAL LOCK, LA	11,138
LA	J BENNETT JOHNSTON WATERWAY, LA	12,870
LA	LAKE PONTCHARTRAIN AND VICINITY, LA (HURRICANE PROTECTION)	3,960
LA	LAROSE TO GOLDEN MEADOW, LA (HURRICANE PROTECTION)	743
LA	LIVINGSTON PARISH ENVIRONMENTAL INFRASTRUCTURE	371
LA	NEW ORLEANS TO VENICE, LA (HURRICANE PROTECTION)	2,673
LA	OUACHITA RIVER LEVEES, LA	743
LA	SOUTHEAST LOUISIANA, LA	26,730
LA	WEST BANK AND VICINITY, NEW ORLEANS, LA	27,720
MA	MUDDY RIVER, MA	1,485
MD	CUMBERLAND, MD AND RIDGELEY, WV	891
MD	JENNINGS RANDOLPH LAKE, MD & WV (DAM SAFETY)	396
MI	GENESEE COUNTY, MI	335
MI	NEGAUMEE, MI	198
MI	OAKLAND COUNTY, MI	50
MI	SAULT STE MARIE (REPLACEMENT LOCK), MI	1,485
MN	BRECKENRIDGE, MN	1,114
MN	LOCK AND DAM 3, MISSISSIPPI RIVER, MN (MAJOR REHAB)	1,485
MN	MILLE LACS REGIONAL WASTEWATER, MN (GARRISON/ KATHIO TOWNSHIP)	1,114
MN	NORTHEASTERN MINNESOTA (SEC 569, WRDA 99)	3,713
MO	BLUE RIVER BASIN, KANSAS CITY, MO	3,960
MO	BLUE RIVER CHANNEL, KANSAS CITY, MO	4,950
MO	BOIS BRULE DRAINAGE AND LEVEE DISTRICT, MISSOURI	1,792

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State	Project Name	FY 2006 (\$K) Adjusted by Rescission (1%)
MO	CAPE GIRARDEAU (FLOODWALL), MO	297
MO	CHESTERFIELD, MO	891
MO	CLEARWATER LAKE, MO (MAJOR REHAB)	21,780
MO	MERAMEC RIVER BASIN, VALLEY PARK LEVEE, MO	7,506
MO	STE GENEVIEVE, MO	545
MS	DESOTO COUNTY WASTEWATER TREATMENT, MS	19,800
MS	MISSISSIPPI ENVIRONMENTAL INFRASTRUCTURE, MS	24,750
MS	NATCHEZ BLUFF, MS	248
MT	RURAL MONTANA, MT	4,950
NC	STANLY COUNTY WASTEWATER INFRASTRUCTURE, NC	1,188
ND	BUFORD - TRENTON IRRIGATION DISTRICT LAND ACQUISITION, ND	1,114
ND	GARRISON DAM AND POWER PLANT, ND (MAJOR REHAB)	3,546
ND	GRAND FORKS, ND - EAST GRAND FORKS, MN	39,600
ND	SHEYENNE RIVER, ND	545
NE	ANTELOPE CREEK, LINCOLN, NE	2,193
NE	MISSOURI NATIONAL RECREATIONAL RIVER, NE & SD	481
NE	WESTERN SARPY COUNTY AND CLEAR CREEK	1,485
NH	OTTER BROOK DAM, NH (DAM SAFETY)	1,416
NJ	HACKENSACK MEADOWLANDS, NJ	1,485
NJ	JOSEPH G MINISH HISTORIC WATERFRONT PARK, NJ	2,228
NJ	MOLLY ANN'S BROOK AT HALEDON, PROSPECT PARK AND PATERSON, NJ	2,970
NJ	RAMAPO AND MAHWAH RIVERS, MAHWAH, NJ AND SUFFERN, NY	186
NJ	RAMAPO RIVER AT OAKLAND, NJ	1,300
NJ	RARITAN RIVER BASIN, GREEN BROOK SUB-BASIN, NJ	4,950
NM	ACEQUIAS IRRIGATION SYSTEM, NM	2,302
NM	ALAMOGORDO, NM	4,158
NM	CENTRAL NEW MEXICO, NM	4,950
NM	MIDDLE RIO GRANDE FLOOD PROTECTION, BERNALILLO TO BELEN, NM	594
NM	NEW MEXICO ENVIRONMENTAL INFRASTRUCTURE PROGRAM	4,950
NM	RIO GRANDE FLOODWAY, SAN ACACIA TO BOSQUE DEL APACHE, NM	693
NV	CALIENTE, NV	1,980
NV	RURAL NEVADA	19,800
NV	TAHOE BASIN RESTORATION, NV AND CA	3,564
NV	TROPICANA AND FLAMINGO WASHES, NV	16,830
NY	NEW YORK CITY WATERSHED, NY	743
NY	ONONDAGA LAKE STORM WATER DISCHARGE, NY	3,465
OH	METROPOLITAN REGION OF CINCINNATI, DUCK CREEK, OH	1,634
OH	OHIO ENVIRONMENTAL INFRASTRUCTURE	12,870
OK	CANTON LAKE, OK (DAM SAFETY)	5,940
OK	ELM FORK, RED RIVER CHLORIDE, OK (CHLORIDE CONTROL)	371
OK	LAWTON, OKLAHOMA	38
OK	TAR CREEK CLEANUP, OK	3,713
OK	TENKILLER FERRY LAKE, OK (DAM SAFETY)	5,148
OR	BONNEVILLE POWERHOUSE PHASE II, OR & WA (MAJOR REHAB)	4,950
OR	COLUMBIA RIVER TREATY FISHING ACCESS SITES, OR & WA	3,960
OR	ELK CREEK LAKE, OR	297
PA	EMSWORTH LOCKS AND DAM, OHIO RIVER, PA (MAJOR REHAB)	14,850
PA	LOCKS AND DAMS 2, 3 AND 4, MONONGAHELA RIVER, PA	50,292
PA	NORTHEAST COUNTIES ENVIRONMENTAL INFRASTRUCTURE	1,931
PA	PROMPTON LAKE, PA	8,395
PA	SAW MILL RUN, PITTSBURGH, PA	743
PA	SOUTH CENTRAL PA ENVIRONMENTAL IMPROVEMENT PROGRAM, PA	8,910
PA	SOUTHEASTERN PENNSYLVANIA, PA	594
PA	THREE RIVERS WET WEATHER DEMO PROGRAM, PA	743
PA	WEST VIRGINIA AND PENNSYLVANIA FLOOD CONTROL, PA & WV	743

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State	Project Name	FY 2006 (\$K) Adjusted by Rescission (1%)
PA	WYOMING VALLEY, PA (LEVEE RAISING)	10,391
PR	ARECIBO RIVER, PR	3,960
PR	PORTUGUES AND BUCANA RIVERS, PR	13,860
PR	RIO PUERTO NUEVO, PR	19,800
RI	FOX POINT BARRIER - NARRANGANSETT BAY	520
SC	LAKES MARION AND MOULTRIE, SC	5,940
SD	BIG SIOUX RIVER, SIOUX FALLS, SD	1,485
TN	CHICKAMAUGA LOCK	9,900
TX	BRAYS BAYOU, HOUSTON, TX	11,682
TX	CLEAR CREEK, TX	1,114
TX	DALLAS FLOODWAY EXTENSION, TRINITY RIVER PROJECT, TX	11,138
TX	FORT WORTH, TX ---- CENTRAL CITY	6,930
TX	GRAHAM, TX (BRAZOS RIVER BASIN)	743
TX	HUNTING BAYOU, HOUSTON, TX	371
TX	JOHNSON CREEK, UPPER TRINITY BASIN, ARLINGTON, TX	371
TX	NORTH PADRE ISLAND, PACKERY CHANNEL, TX	4,038
TX	RED RIVER BASIN CHLORIDE CONTROL, TX & OK	1,114
TX	SAN ANTONIO CHANNEL IMPROVEMENT, TX	2,703
TX	SIMS BAYOU, HOUSTON, TX	17,820
TX	WHITNEY LAKE POWERHOUSE, TX (MAJOR REHAB)	3,379
UT	RURAL UTAH, UT	9,900
VA	EMBREY DAM, VA	1,485
VA	JOHN H KERR DAM AND RESERVOIR, VA & NC (MAJOR REHAB)	13,860
VA	LAKE MERRIWEATHER, GOSHEN DAM AND SPILLWAY, VA	2,970
VA	RICHMOND, VA (COMBINED SEWER OVERFLOW)	743
VA	ROANOKE RIVER UPPER BASIN, HEADWATERS AREA, VA	4,950
VT	LAKE CHAMPLAIN WATERSHED INITIATE, VT	1,485
WA	MT ST HELENS SEDIMENT CONTROL, WA	490
WA	MUD MOUNTAIN DAM, WA (DAM SAFETY)	4,356
WI	NORTHERN WISCONSIN ENVIRONMENTAL ASSISTANCE, WI	7,920
WV	BLUESTONE LAKE, WV (DAM SAFETY)	21,285
WV	CENTRAL WEST VIRGINIA, WV	557
WV	GREENBRIER RIVER BASIN, WV	1,980
WV	ISLAND CREEK, LOGAN, WV	302
WV	LEVISA AND TUG FORKS AND UPPER CUMBERLAND RIVER, WV, VA & KY	30,789
WV	LOWER MUD RIVER, MILTON, WV	1,238
WV	MARMET LOCK, KANAWHA RIVER, WV	72,765
WV	ROBERT C BYRD LOCKS AND DAM, OHIO RIVER, WV & OH	905
WV	SOUTHERN WV ENVIRONMENTAL INFRASTRUCTURE PROGRAM, WV	743
WV	WINFIELD LOCKS AND DAM, KANAWHA RIVER, WV	2,376
XX	DREDGED MATERIAL DISPOSAL FACILITIES PROGRAM	8,712
XX	EMERGENCY STREAMBANK PROTECTION PROJECTS (SECTION 14)	14,850
	TOTAL:	1,386,008
Source: FY2006 Construction, General Appropriation		
Note(s):		
- Funding amount includes 1% rescission		
- Projects may be cost shared in accordance with the		
Water Resources Development Act of 1986 [PL 99-662]		

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APPENDIX E: USACE CIVIL WORKS & REAL ESTATE METRICS

CIVIL WORKS

Functional Area and Proponent	Indicator and Evaluation Source of Data Visibility Level	Definition	Calculation(s)	Rating Criteria
PROGRAMS				
CW-01 PROGRAMMING, BUDGETING AND EXECUTING CIVIL WORKS TOTAL DIRECT PROGRAM CECW-BD FARRINGTON/761-1944	ACTUAL EXPENDITURE OF FUNDS EVALUATED AS A PERCENTAGE OF THE SCHEDULED EXPENDITURES REFLECTED IN THE 2101 BASIC SCHEDULE AND COMPARED TO AN EXPENDITURE GOAL OF 100% WITH A DEVIATION OF -2%. SOD: CECW-BD SCHEDULES OF OBLIGATIONS AND EXPENDITURES 2101 REPORT (RCS CECW-B-S) VISIBILITY: MSC ₂	ACTUAL EXPENDITURE OF FUNDS EVALUATED AS A PERCENTAGE OF THE SCHEDULED EXPENDITURES REFLECTED IN THE 2101 BASIC SCHEDULE AND COMPARED TO AN EXPENDITURE GOAL OF 100% WITH A DEVIATION OF -2%.	ACTUAL EXPENDITURES DIVIDED BY 2101 BASIC SCHEDULE AND COMPARED TO EXPENDITURE <u>GOAL OF 100%</u> WITH A DEVIATION OF -2%.	<u>GREEN:</u> ≥ 98% <u>AMBER:</u> ≥ 95% - 98% <u>RED:</u> < 95%
CW-02 PROGRAMMING, BUDGETING AND EXECUTING GENERAL INVESTIGATIONS TOTAL PROGRAM CECW-BW COOK/761-5833	ACTUAL EXPENDITURE OF FUNDS EVALUATED AS A PERCENTAGE OF THE SCHEDULED EXPENDITURES REFLECTED IN THE 2101 BASIC SCHEDULE AND COMPARED TO AN EXPENDITURE GOAL OF 100% WITH A DEVIATION OF -2%. SOD: CECW-BD SCHEDULES OF OBLIGATIONS AND EXPENDITURES 2101 REPORT (RCS CECW-B-S) VISIBILITY: MSC ₂	ACTUAL EXPENDITURE OF FUNDS EVALUATED AS A PERCENTAGE OF THE SCHEDULED EXPENDITURES REFLECTED IN THE 2101 BASIC SCHEDULE AND COMPARED TO AN EXPENDITURE GOAL OF 100% WITH A DEVIATION OF -2%.	ACTUAL EXPENDITURES DIVIDED BY 2101 BASIC SCHEDULE AND COMPARED TO EXPENDITURE <u>GOAL OF 100%</u> WITH A DEVIATION OF -2%.	<u>GREEN:</u> ≥ 98% <u>AMBER:</u> ≥ 95% - 98% <u>RED:</u> < 95%
CW-03 PROGRAMMING, BUDGETING AND EXECUTING CONSTRUCTION, GENERAL TOTAL PROGRAM CECW-BE HENRY/761-5856	ACTUAL EXPENDITURE OF FUNDS EVALUATED AS A PERCENTAGE OF THE SCHEDULED EXPENDITURES REFLECTED IN THE 2101 BASIC SCHEDULE AND COMPARED TO AN EXPENDITURE GOAL OF 100% WITH A DEVIATION OF -2%. SOD: CECW-BD SCHEDULES OF OBLIGATIONS AND EXPENDITURES 2101 REPORT (RCS CECW-B-S) VISIBILITY: MSC ₂	ACTUAL EXPENDITURE OF FUNDS EVALUATED AS A PERCENTAGE OF THE SCHEDULED EXPENDITURES REFLECTED IN THE 2101 BASIC SCHEDULE AND COMPARED TO AN EXPENDITURE GOAL OF 100% WITH A DEVIATION OF -2%.	ACTUAL EXPENDITURES DIVIDED BY 2101 BASIC SCHEDULE AND COMPARED TO <u>EXPENDITURE GOAL OF 100%</u> WITH A DEVIATION OF -2%.	<u>GREEN:</u> ≥ 98% <u>AMBER:</u> ≥ 95% - 98% <u>RED:</u> < 95%

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CIVIL WORKS

Functional Area and Proponent	Indicator and Evaluation Source of Data Visibility Level	Definition	Calculation(s)	Rating Criteria
CW-04 PROGRAMMING, BUDGETING AND EXECUTING CONSTRUCTION, GENERAL - CONTINUING AUTHORITIES PROGRAM TOTAL PROGRAM CECW-BE HENRY/761-3856	ACTUAL EXPENDITURE OF CAP FUNDS EVALUATED AS A PERCENTAGE OF THE SCHEDULED EXPENDITURES REFLECTED IN THE 2101 BASIC SCHEDULE AND COMPARED TO AN EXPENDITURE GOAL OF 100% WITH A DEVIATION OF -2%. SOD: CECW-BD SCHEDULES OF OBLIGATIONS AND EXPENDITURES 2101 REPORT (RCS CECW-B-S) VISIBILITY: MSC	ACTUAL EXPENDITURE OF CAP FUNDS EVALUATED AS A PERCENTAGE OF THE SCHEDULED EXPENDITURES REFLECTED IN THE 2101 BASIC SCHEDULE AND COMPARED TO AN EXPENDITURE GOAL OF 100% WITH A DEVIATION OF -2%	ACTUAL EXPENDITURES DIVIDED BY 2101 BASIC SCHEDULE AND COMPARED TO EXPENDITURE <u>GOAL OF 100%</u> WITH A DEVIATION OF -2%	<u>GREEN:</u> ≥ 98% <u>AMBER:</u> ≥ 95% - 98% <u>RED:</u> < 95%
CW-05 PROGRAMMING, BUDGETING AND EXECUTING OPERATIONS AND MAINTENANCE, GENERAL TOTAL PROGRAM CECW-BC BITTNER/761-4130	ACTUAL EXPENDITURE OF FUNDS EVALUATED AS A PERCENTAGE OF THE SCHEDULED EXPENDITURES REFLECTED IN THE 2101 BASIC SCHEDULE AND COMPARED TO AN EXPENDITURE GOAL OF 100% WITH A DEVIATION OF -2%. (R SOD: CECW-BD SCHEDULES OF OBLIGATIONS AND EXPENDITURES 2101 REPORT CS CECW-B-S) VISIBILITY: MSC	ACTUAL EXPENDITURE OF FUNDS EVALUATED AS A PERCENTAGE OF THE SCHEDULED EXPENDITURES REFLECTED IN THE 2101 BASIC SCHEDULE AND COMPARED TO AN EXPENDITURE GOAL OF 100% WITH A DEVIATION OF -2%	ACTUAL EXPENDITURES DIVIDED BY 2101 BASIC SCHEDULE AND COMPARED TO EXPENDITURE <u>GOAL OF 100%</u> WITH A DEVIATION OF -2%	<u>GREEN:</u> ≥ 98% <u>AMBER:</u> ≥ 95% - 98% <u>RED:</u> < 95%
CW-06 PROGRAMMING, BUDGETING AND EXECUTING MR&T TOTAL PROGRAM CECW-BC JONES/761-4105	ACTUAL EXPENDITURE OF FUNDS EVALUATED AS A PERCENTAGE OF THE SCHEDULED EXPENDITURES REFLECTED IN THE 2101 BASIC SCHEDULE AND COMPARED TO AN EXPENDITURE GOAL OF 100% WITH A DEVIATION OF -2%. SOD: CECW-BD SCHEDULES OF OBLIGATIONS AND EXPENDITURES 2101 REPORT (RCS CECW-B-S) VISIBILITY: MSC	ACTUAL EXPENDITURE OF FUNDS EVALUATED AS A PERCENTAGE OF THE SCHEDULED EXPENDITURES REFLECTED IN THE 2101 BASIC SCHEDULE AND COMPARED TO AN EXPENDITURE GOAL OF 100% WITH A DEVIATION OF -2%	ACTUAL EXPENDITURES DIVIDED BY 2101 BASIC SCHEDULE AND COMPARED TO EXPENDITURE <u>GOAL OF 100%</u> WITH A DEVIATION OF -2%	<u>GREEN:</u> ≥ 98% <u>AMBER:</u> ≥ 95% - 98% <u>RED:</u> < 95%

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CIVIL WORKS

Functional Area and Proponent	Indicator and Evaluation Source of Data Visibility Level	Definition	Calculation(s)	Rating Criteria
CW-07 CONGRESSIONAL INTENT CECW-BD FARRINGTON-LYNCH/761- 1944	EXECUTION OF CONGRESSIONAL ADDS EVALUATED BY PROJECT STARTS WITHIN THE SAME APPROPRIATION YEAR. INCLUDED ARE STUDIES AND PROJECTS IN GI, CG, INCLUDING CAP, O&M, AND MR&T APPROPRIATIONS SOD: CECW-BA SCHEDULES OF OBLIGATIONS AND EXPENDITURES 2101 REPORT (RCS CECW-B-5)	CONGRESSIONAL ADDS ARE THOSE NEW UNBUDGETED PROJECTS ADDED IN THE LEGISLATION & APPROVED FOR EXECUTION. DO NOT INCLUDE CONTINUING PROJECTS OR THOSE ADDED IN PRIOR YEARS UNDER SAME APPROPRIATION. STARTED EQUALS THOSE STUDIES OR PROJECTS WHICH HAVE INCURRED AN EXPENDITURE.	$\% \text{ STARTED} = \frac{\text{ADDS (STARTED)}}{\text{SCHEDULED NEW START CONGRESSIONAL ADDS}}$	GREEN: 100% SCHEDULED AND STARTED WITHIN THE YEAR ADDED. AMBER: = 90% - 99% RED: = 90%
CW-08 CUSTOMER COMMITMENTS CECW-BD HILTZ/761-1817	ACTUAL ACCOMPLISHMENT OF COMMITMENTS MADE WITH PROJECT SPONSOR EVALUATED AS A PERCENTAGE OF SCHEDULED COMMITMENTS MADE WITH PROJECT SPONSOR. SOD: PROJECT SPONSOR COMMITMENT MILESTONE DATES ENTERED IN PROMIS AND QUERIED BY PPDS. VISIBILITY: MSC;	COMMITMENTS MADE WITH PROJECT SPONSOR WHICH HAVE SCHEDULED DATES NEGOTIATED WITH PROJECT SPONSOR FOR ACHIEVEMENT IN CURRENT FY. MEASUREMENT IS A PERCENTAGE OF THE TOTAL NUMBER OF ACTUAL PROJECT SPONSOR COMMITMENTS MET ON TIME AS A FUNCTION OF THE TOTAL NUMBER OF PROJECT SPONSOR COMMITMENTS SCHEDULED.	NUMBER OF PROJECT SPONSOR COMMITMENTS MET FOR THE REPORTING PERIOD DIVIDED BY THE NUMBER OF PROJECT SPONSOR COMMITMENTS SCHEDULED FOR THE REPORTING PERIOD.	GREEN: = 90% AMBER: = 80% -90% RED: = 80%
CW-09 PROJECT MANAGEMENT PLANS CECW-BD HILTZ/761-1817	USE OF PROJECT MANAGEMENT PLANS AND INCLUSION OF QUALITY OBJECTIVES AS ELEMENTAL TOOLS OF THE CORPORATE PROJECT MANAGEMENT BUSINESS PROCESS. SOD: QUARTELRY DATA CALL. VISIBILITY: MSC;	NUMBER OF PROJECTS, NUMBER OF PROJECTS WITH PROJECT MANAGEMENT PLANS (PMP'S), AND NUMBER OF PMP'S WITH QUALITY OBJECTIVES.	$\frac{\# \text{ OF PROJECTS W. PMP'S}}{\# \text{ OF PROJECTS}}$ $\frac{\# \text{ PMP'S W. QUALITY OBJECTIVES}}{\# \text{ OF PROJECTS W. PMP'S}}$	GREEN: = 98% AMBER: =91% -98% RED: = 95%

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U.S. Army Corps of Engineers Asset Management Plan

CIVIL WORKS

Functional Area and Proponent	Indicator and Evaluation Source of Data Visibility Level	Definition	Calculation(s)	Rating Criteria
PLANNING				
CW-10 GENERAL INVESTIGATIONS (GI) STUDIES (RECONS) CECW-PM SMITH/761-4560	RECONNAISSANCE REPORTS EVALUATED BY ACTUAL COMPLETIONS AS A PERCENTAGE OF SCHEDULED COMPLETIONS. SOD: REPORTED COMPLETIONS IN GI DATABASE AND STUDY SCHEDULES CONTAINED IN CURRENT YEAR PLUS 1 JUSTIFICATIONS VISIBILITY: MSC ₄	A RECON REPORT IS COMPLETE WHEN THE DISTRICT SIGNS THE REPORT OR 903B ANALYSIS TO THE DIVISION FOR REVIEW OR WHEN THE STUDY IS TERMINATED	% COMPLETE = RECONNAISSANCE STUDY REPORTS COMPLETED DIVIDED BY REPORTS SCHEDULED	<u>GREEN:</u> = or = 90% SCHEDULED REPORTS ARE COMPLETED. <u>AMBER:</u> 80-89% SCHEDULED REPORTS ARE COMPLETED. <u>RED:</u> < 80% OF SCHEDULED REPORTS ARE COMPLETED.
CW-11 GENERAL INVESTIGATIONS (GI) STUDIES (FEASIBILITIES) CECW-PM SMITH/761-4560	FEASIBILITY STUDY COMPLETIONS EVALUATED BY ACTUAL COMPLETIONS AS A PERCENTAGE OF SCHEDULED COMPLETIONS. SOD: REPORTED COMPLETIONS IN GI DATABASE AND STUDY SCHEDULES IN CURRENT YEAR PLUS 1 JUSTIFICATIONS VISIBILITY: MSC ₄	A STUDY IS CONSIDERED COMPLETE WHEN THE DIVISION ENGINEER'S REPORT IS ISSUED OR WHEN THE STUDY IS TERMINATED	% COMPLETE = FEASIBILITY REPORTS COMPLETED DIVIDED BY REPORTS SCHEDULED	<u>GREEN:</u> = or = 90% SCHEDULED REPORTS ARE COMPLETED. <u>AMBER:</u> 80-89% SCHEDULED REPORTS ARE COMPLETED. <u>RED:</u> < 80% OF SCHEDULED REPORTS ARE COMPLETED.

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U.S. Army Corps of Engineers Asset Management Plan

CIVIL WORKS

Functional Area and Proponent	Indicator and Evaluation Source of Data Visibility Level	Definition	Calculation(s)	Rating Criteria
ENGINEERING				
CW-12 AWARD OF CONSTRUCTION CONTRACTS CECW-E1 STEELE/(703) 428-7338	CONSTRUCTION CONTRACT AWARDS WITH ECC OVER \$1M (CG & MRT) EVALUATED BY ACTUAL AWARDS VS. SCHEDULED SOD: PPD&PROMIS VISIBILITY: MSC4	AWARD OF CONSTRUCTION GENERAL (CG) AND MISSISSIPPI RIVER & TRIBUTARIES (MR&T) CONSTRUCTION CONTRACTS OVER \$1MILLION.	$\% \text{ OF CONTRACTS AWARDED} = \frac{\# \text{ CONTRACTS AWARDED}}{\# \text{ AWARDS SCHEDULED}} \times 100$	<u>GREEN:</u> $\geq 90\%$ <u>AMBER:</u> $\geq 80\%$ AND $\leq 89\%$ <u>RED:</u> $< 80\%$
CW-13 DESIGN COMPLETIONS CECW-E1 STEELE / (703) 428-7338	DESIGN COMPLETIONS WITH ESTIMATED CONSTRUCTION COSTS (ECC) OVER \$1M (CG & MR&T) EVALUATED BY ACTUAL COMPLETIONS VS. SCHEDULED. SOD: PPD&PROMIS VISIBILITY: MSC4	DESIGN COMPLETION FOR CONSTRUCTION GENERAL (CG) AND MISSISSIPPI RIVER AND TRIBUTARIES (MR&T) CONSTRUCTION CONTRACTS OVER \$1 MILLION.	$\% \text{ OF DESIGNS COMPLETED} = \frac{\# \text{ DESIGNS COMPLETED}}{\# \text{ DESIGNS SCHEDULED}} \times 100$	<u>GREEN:</u> $\geq 90\%$ <u>AMBER:</u> $\geq 80\%$ AND $\leq 89\%$ <u>RED:</u> $< 80\%$

CHAPTER 3 TABLE 2 PG - 5

U.S. Army Corps of Engineers Asset Management Plan

CIVIL WORKS

Functional Area and Proponent	Indicator and Evaluation Source of Data Visibility Level	Definition	Calculation(s)	Rating Criteria
POLICY				
CW-14 PROJECT COOPERATION AGREEMENTS CECW-PC SMITH/ 202-761-4236	PROJECT COOPERATION AGREEMENTS (PCAs) EVALUATED BY ACTUAL VS SCHEDULED SOD: MSC SCHEDULES AND EXECUTED PCA DATA FROM CECW-PC VISIBILITY: MSC	PROJECT COOPERATION AGREEMENTS EXECUTED AS A PERCENTAGE OF PCAs SCHEDULED FOR EXECUTION BY THE MSC	$\frac{\% \text{ EXECUTED}}{\# \text{ PCAs EXECUTED}} \div \frac{\# \text{ PCAs SCHEDULED}}{\# \text{ PCAs SCHEDULED}}$	<u>GREEN</u> : $\geq 90\%$ <u>AMBER</u> : $\geq 80\%$ AND $\leq 89\%$ <u>RED</u> : $< 80\%$

CHAPTER 3 TABLE 2 PG - 6

U.S. Army Corps of Engineers Asset Management Plan

REAL ESTATE

Functional Area and Proponent	Indicator and Evaluation Source of Data Visibility Level	Definition	Calculation (\$)	Rating Criteria & Governing Regulation or Law
<i>Acquisition</i>				
RE01 Recruiting Facilities Program CERÉ AM Silver 202-761-7495	High priority recruiting facilities leasing action delivery dates compared against the service recruiting commands' requested Reciprocal Occupancy Dates. SOD: RFMS VISIBILITY: Districts	Providing all Recruiting Facility High Priority Actions on the date requested by the Service Recruiting Command.	Each high priority recruiting facility lease possible score: BOD -30 to +2 days = 4, BOD +3 to +9 days = 3 BOD +10 to +19 days = 2 BOD ≥20 days = 1 Rating: total score / possible score	Rating Criteria: <u>GREEN</u> : ≥ 75 (-30 to +9 days variance) <u>AMBER</u> : ≥ 50% to 74.99% (+10 to +19 days) <u>RED</u> : < 49.99% (> 20 days variance)
RE02 Lease Government Housing Program CERÉ M-D Paladino 202-761-7545	Family housing leasing action delivery dates compared against requesting commands' initial request dates. SOD: RFMS VISIBILITY: Districts	Providing service members with leased family housing within time period based upon request dates and family arrival dates.	BOD is later of initial request date + 30 days, or family arrival date. Each family housing lease possible score: BOD -9 to -1 days = 4, BOD 0 to +1 day = 3, BOD +2 to +7 days = 2, BOD ≥ 8 days = 1 Rating: total score / possible score	Rating Criteria: <u>GREEN</u> : ≥ 75 (-9 to +1 days variance) <u>AMBER</u> : ≥ 50% to 74.99% (+2 to +7 days) <u>RED</u> : < 49.99% (> +8 days variance)

CHAPTER 3 TABLE 3 PG - 1

**U.S. Army Corps of Engineers
Asset Management Plan**

APPENDIX F: USACE REAL PROPERTY INVENTORY

Government Owned – Capitalized Real Property (Acquisition Costs Greater Than \$25,000)				
Land	Property Interest	Land Tracts	Acres	Acquisition Cost
	Fee Simple	139,000	7,700,000	\$4,200,000,000
	Lesser Estates	138,000	4,100,000	876,000,000
Totals		277,000	11,800,000	\$5,076,000,000
Facilities	Property Interest	No. of Items	Square Feet	Acquisition Cost
Buildings	Owner	6,000	13,300,000	\$1,100,000,000
Structures	Owner	21,000	various units of measure	20,000,000,000
Totals		27,000	13,300,000	\$21,100,000,000
Total Acquisition Cost				\$26,176,000,000

Government Owned – Not Capitalized Real Property (Acquisition Costs Less Than \$25,000)				
Facilities	Property Interest	No. of Items	Square Feet	Acquisition Cost
Buildings	Owner	6,000	3,000,000	(Expensed - cost removed) \$0
Structures	Owner	22,000	various units of measure	(Expensed - cost removed) \$0
Totals		28,000	3,000,000	(items in inventory until disposed)

Government Owned – Capitalized & Not Capitalized Real Property				
		No. of Items	Square Feet	
Grand Totals		55,000	16,300,000	

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APPENDIX G: REAL PROPERTY INVENTORY DATA VALIDATION REPORT

U.S. ARMY CORPS OF ENGINEERS PRESIDENT'S MANAGEMENT AGENDA SCORECARD OFFICE OF MANAGEMENT AND BUDGET REAL PROPERTY INVENTORY DATA VALIDATION REPORT JUNE 10th, 2006

Executive Summary

The United States Army Corps of Engineers (USACE) received direction from the Office of Management and Budget (OMB) to complete three actions:

- First, initiate real property asset management inventory data validation. To be completed by the end of the third quarter of the fiscal year 2006.
- Second, is to initiate data protocol. To be completed by the end of the third quarter of the fiscal year 2006.
- Third, revise data in the Real Estate Management Information System and close all data gaps by December 2007, for 23 Federal Real Property Council elements.

This report addresses data validation, reports data protocols, and discusses seven individual inventory data gaps:

- Restrictions
- Utilization
- Mission Dependency
- Condition Assessment
- Historical Status
- Annual Operating Costs
- Value

These seven elements are presented in three stages:

- As-Is (status as of today)
- Transitional (successful path to end goal)
- To-Be (desired end goal)

This report supports and updates the Real Property Gap Closure Plan with Data Validation Protocol and:

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- Table One: Federal Real Property Profile Data Element Status which tabulates the current reporting for all 23 elements
- Table Two: Asset Management Points of Contact, which provides organization-wide access to Division and District resources.

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A. Background of Reporting Requirement

Executive Order 13327 (EO), Federal Real Property Asset Management (FRPA), was set forth by the President of the United States to promote the efficient and economical use of America's real property assets and to assure management accountability for implementing Federal real property management. The EO determined the definition of Federal real property to be any real property owned, leased, or otherwise managed by the Federal government. Additional policy implementations of the EO were the establishment, designation, and definition of responsibilities of Agency Senior Real Property Officers, and a Federal Real Property Council (FRPC). The EO defines the role of the General Services Administration (GSA), and, among other duties, charged GSA to establish and maintain a single, comprehensive, and descriptive database of all real property under the custody and control of all executive branch agencies, except when otherwise required for reasons of national security. Public lands are covered under this order.

As a result of the Presidential Management Agenda (PMA), the U.S. Army Corps of Engineers (USACE) received a scorecard that, among other items, contains action items for June 2006. One action item is Inventory and Metrics, and USACE is to develop a protocol to validate inventory records focusing initially on high value assets. USACE defines a high value asset as one worth more than a million dollars. Querying the USACE Real Estate Management Information System (REMIS) data inventory shows that 2 percent of inventory accounts for over 90 percent of the total plant replacement value of real property. In addition, OMB directed the initiation of an inventory data validation process. These will be submitted to the Office of Management and Budget (OMB).

<u>Asset</u>	<u>Inventoried Amount</u>
Tracts of land	139,000
Acres of Land	11,700,000
Buildings	12,000
Structures	43,000

B. Data Dictionary

All terms used in this report referring to data elements and asset management are in direct correlation to the 23 data elements identified by GSA in *Interim FY 2005 Guidance for Real Property Inventory Reporting*, October 11, 2005. All terminology, definitions, and intent of verbiage in this report are in direct congruence with the intentions and requirements of EO 13327. The USACE Real Estate Management Information System (REMIS) has data fields for the 23 real property data elements.

C. USACE Real Property Inventory Data Analysis

The USACE real property inventory data was developed and reviewed by the Real Estate Systems and Support National Center (RESNC) of Mobile, Alabama. Each

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individual USACE building and structure type was matched to a Department of Defense (DoD) Facilities Analysis Category (FAC). An independent contractor hired by USACE provided technical support services implementing real property reporting requirements as defined by Federal Real Property Council (FRPC) and applying quality assurance measures to the inventory data. Specifically, the contractor was asked to review all 23 FRPC data elements and match them to the USACE real property inventory (RPI) with emphasis on Data Element No. 2, Real Property Use. After USACE assets were assigned a FAC, the Facilities Operation Model (FOM) could be used by the contractor to calculate a Plant Replacement Value (PRV) for each record when there was a match. When there was no match, the initial cost to the Government was inflated forward using OMB published inflation factors. The contractor also used DoD's FOM in conjunction with DoD's Facilities Sustainability Model (FSM) to calculate annual operating costs. (See Section 4.7.1.3)

Table One (shown on p. 107) presents the status of USACE for the 23 data elements of asset management as determined by FRPC. Column one provides the FRPC data element number; column two displays the data element; column three is the origin of the data; column four portrays the percentage of inventory data completion, or the projected date of completion; and column five houses remarks accompanying the status report.

Table Two (shown on p. 109) provides the USACE Headquarters Asset Management Team members (AM Central), asset management representatives from Operations and Real Estate from the eight Divisions, and Operations and Real Estate experts from the Districts. These individuals are the points of contact from the field to Headquarters and are responsible for responding to and initiating asset management questions, actions, and initiatives.

Data difficulties were designated as significant and minor.

1. Significant

- a. **Significant: Inventory units of measure or quantity**
Typically, inventory quantities are "each", and this reflects the direction of FRPC. But, this measure prevents calculating a valid inventory and valuation due to the uniqueness of some of USACE's real property assets. For example, Flood Control, Navigation, and Recreation may all use the "each" unit of measurement as actual structures in these categories and cannot be classified by a single unit. A further breakdown of these categories would lend itself to more meaningful reporting and measures.
- b. **Significant: Reduced valued of dams in inventory**
Dams are undervalued in the sustainment calculation as a result of both the inventory measure of "each" and the use of the Office of the Secretary of Defense's (OSD) default value for sustainment. If USACE incorporates real property category codes and FACs for future inventories, gradations

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of dam category codes should be incorporated to reflect weir, flood control, and navigation dams with an easily measured and recognizable unit of measure quantity (i.e., height, length).

- c. Significant: Lack of match for a real property asset
Another significant difficulty affiliated is cross matching a DoD FAC to the FRPC structure type. Locks cannot be matched to OSD FACs and are not included in the calculation of sustainment and operations.

2. Minor

- a. Minor data difficulties exist because of no standardized technology; many records have zero value and/or zero quantity reported.
- b. The quality of the data, as well as the presence or absence of data is a concern.
- c. Free form entries from the inventory system will be eliminated and replaced with standardized values and descriptions and drop-down fields.
- d. Other data anomalies discovered include misclassification, duplication, inconsistencies, and no match for codes. Locks, for example, have no code designation.
- e. Drawing plans and specifications were entered in REMIS but are not real property.
- f. Four hundred and fifty-eight records were classified as “not real property”, and assigned “NRP” in the FAC field. Examples of NRP items included floating docks, picnic tables, and benches.
- g. Replacement components are not considered real property by OSD. Consequently, components for power plants have inventory records that have been assigned a FAC code for a miscellaneous component, but have a sustainment and operations value of zero.
- h. Descriptions are not field verified, but need to be, as well as field processes.

Existing inspection processes require review across business lines and functional groups and require recommendations to consolidate processes. Procedures must include quality measures such as field verification of real property inventories and data elements, quality assurance and control protocols, field integration, training of data entry personnel, Real Property Accountable Officers, and project staff.

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D. Inventory Data Gaps

1. Restrictions

- a. As-Is: Headquarters provided initial population
 - 1) Populated two elements; Natural Resources and Water Rights
 - 2) Investigating effort required for population of remaining restrictions
- b. Transitional: Use existing resources: OMBIL, ERGO, and cultural inventory
 - 1) Identify auditable existing data in OMBIL and ERGO databases
 - 2) Indicate data gaps
 - 3) Develop implementation plan
 - 4) Use of water rights must be better defined
 - 5) Transform restriction information from hard copy to electronic
 - 6) Assets being disposed need to be linked to the restrictions data field
 - 7) Decision Tree needs to be implemented for USACE needs and requirements
 - 8) Populate necessary or applicable fields
- c. To-Be: All business lines are operational from OMBIL and all systems
 - 1) Restrictions will be populated from OMBIL and other appropriate sources.
 - 2) Refine restrictions input
 - 3) Look at permanent restrictions and how they impact mission

2. Utilization

- a. As-Is: Housing and laboratory records were populated.
 - 1) Mar 06 data call to Districts provides data for offices and warehouses.
 - 2) USACE does not own any hospitals.
- b. Transitional: Criteria below will apply to REMIS and RFMIS.
 - 1) RESNC will query all assets that have a usage code of office, warehouse, housing, or labs.
 - 2) Hand receipt holder will review all list items by line and be responsible to questions.
 - 3) Utilization survey to determine rates for offices and warehouses no later than 4th Quarter FY 06.

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- c. To-Be: Real Property Asset Officer (RPAO) must enter data annually into the “Planned Disposition” data field (interfacing all systems) by 30 Oct, using USACE guidance, USACE Disposition Decision Tree output and Hand Receipt Holder physical inspection input.
- 1) Offices: Determine number of people occupying space in office building
 - Create a data field in systems for occupancy count.
 - Use GSA policy of 230 rentable square feet per person.
 - System divides gross square footage by 230 giving occupancy.
 - Number of people divided by rate = utilization.
 - Calculations incorporated into system
 - 2) Warehouses: Calculate square feet presently occupied
 - Add data field to systems for occupancy (square feet)
 - Divide occupancy square feet by gross square feet
 - Compare to tables and incorporated into systems
 - 3) Laboratories: Define “active unit”
 - Determine number of active units in each lab.
 - Add data field to systems for number of active units
 - Divide active units by capacity in lab units
 - Compare guidance tables and incorporate calculation into system
 - 4) Housing: Calculate number of months asset was occupied during previous FY
 - Add data field for number of months occupied during previous FY
 - Divide data by 12 to get a percentage occupied
 - Incorporate calculation into system and compare to guidance

3. Mission Dependency

- a. As-Is: All currently owned property is populated as Mission Critical.
 - 1) Districts entered disposal data for all building and structures into REMIS.
 - 2) Disposal list created from REMIS.
- b. Transitional: Each business line determines asset critical status
 - 1) Use of risk and reliability or risk analysis models for determination
 - 2) Business line documents its own primary mission

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- 3) Use an auditable source for criteria
 - 4) Quality control and data validation provided by comparison to OMBIL
 - 5) Map data elements in systems and interface at constructed asset level
 - 6) Identify performance measures for business lines
- c. To-Be: Integrate data and inventory systems (OMBIL, REMIS, RFMIS, etc.) for Mission Dependency
4. Condition Assessment (Facility Condition Index)
- a. As-Is: Initial enterprise efforts on condition assessment initiated
 - 1) Data call to the field Oct 26, 05; Mar 1, 06; May 3, 06 for “repair needs” to be used with facility value models
 - 2) Cost estimating used for condition assessment
 - b. Transitional: Provide business line assessment tools
 - 1) Focus on repairs or replacements of components
 - 2) Define “repair, maintenance, and deferred maintenance”
 - 3) Link condition assessments to maintenance needs
 - 4) Determine reporting expense limit
 - 5) Crosswalk OMBL to REMIS using RECBEST
 - 6) Blend USACE “planning” expertise with “operations” expertise
 - 7) Determine types of operating and maintenance costs capitalized in CEFMS
 - 8) Comply with DoD and FRPC
 - 9) Identify business line processes and models
 - c. To-Be: Develop condition assessment tools for all business lines
 - 1) Initiate business line processes and models that populate REMIS
 - 2) Maintain consistency throughout USACE
 - 3) List all parts for all assets with costs to fix or replace
5. Historical Status
- a. As-Is: Evaluation of real property assets for historical status initiated
 - 1) All facilities 45 years old marked “Historical Register Eligible”
 - 2) All other facilities marked “To be Evaluated”
 - b. Transitional: Question and survey District records status
 - 1) Query national databases
 - 2) Cross reference to element #23 “Restrictions”

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- 3) Explore use of zip codes, not locations for land
- 4) Automatically populate for the future
- 5) Evaluate for registry and update REMIS
- 6) Field verification for quality control purposes

- c. To-Be: Automated updating of Historical status changes
 - 1) Cross agency/State links for an automated notification system
 - 2) Automatically populate REMIS including Real Property Accounting Officer inspection

6. Annual Operating Costs

- a. As-Is: Costs collected on a project basis; division among the assets the issue
 - 1) Annual operating costs developed for the RPI using DoD model
 - 2) Using existing funds tracking systems (CWIS, AMSCO, CEFMS)
- b. Transitional: Create nationwide standardization for REMIS and other data systems
 - 1) Integrate all existing data base systems
 - 2) Consistent and periodic deployment
 - 3) Clear and universal definitions required
 - 4) Investigate Quality Control using CEFMS/CWIS w/assets (REMIS)
 - 5) Quality Assurance provided with use of OMBIL data
- c. To-Be: Systems provide accurate “actual” costs
 - 1) Quality Control provided by using actual costs to drive model output
 - 2) Quality Assurance incorporated using CEFMS/OMBIL/asset level comparison

7. Value (Functional/Plant Replacement Value)

- a. As-Is: Initial values established for over 95 percent of assets.
 - 1) Use existing DoD models, inflation factors, and OMB methodology.
 - 2) For missing items an existing indexing system is used
- b. Transitional: Refine DoD model to pickup missing items focusing on high value assets
 - 1) Match leases to FAC
 - 2) Query Districts for lease input

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- 3) Implement Army CATCODES; setup CATCODES for entire RPI including dams, levees, jetties, channels, and locks
 - 4) Capture “little items” through CEFMS
 - 5) Inflate costs for items with no value
 - 6) Use cost estimating
 - 7) Use existing data from current systems
- c. To-Be: Quality Control through asset evaluation systems for replacement/repair cost
- 1) Refinements to facility replacement processes
 - 2) Quality Control and validation through industry accepted benchmarks
 - 3) Business lines define cost to replace assets at today’s standards with systems

E. Data Validation Protocol

1. Data validation, quality assurance and control, and increased accuracy of data will be accomplished through development of a USACE nationwide communication plan for asset management. Plan includes increased communication and coordination with business line leaders, data system managers, resource management, logistics, and information technology experts.
2. Quality Assurance/Quality Control procedures and data validation report is required as a contractual deliverable from all contractors to establish reporting accuracy.
3. Quality Assurance and Control and data validation is achieved through field verification of real property inventory by site visits and data calls to field and project personnel.
4. Standardization and commonality is to be established for definitions and universal processes.
5. Integrate Real Property Inventory records with CATCODES and develop category codes for unique items.
6. Quality Control and Assurance validation achieved by integration of all data collection systems and elements, for asset management, across all USACE lines, nationwide.
7. Focus, initially, shall be on the 2 percent of inventory that comprises the 90 percent of plant replacement value. The inspection process shall be reviewed.

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8. Quality Control and Assurance is attained through documentation of data manipulation process that leaves a historical trail for future use and modification.
9. Policy change will require mandatory collection and entry of data for asset management, including quantifiable metrics for performance.
10. Establish a unit of measure for dams, locks, navigational structures, etc. (i.e., height/length is a possible unit), establish FAC(s) to reflect the essential categories of unique facilities and compute a sustainment value for these structures.
11. Disposal List of Suitable Real Property Items:
 - a. Using guidance from PMA, EO 13327, and FRPC, there will be an evaluation of current regulations for process changes. This will lead to a regulated and automated USACE Disposition Decision Tree.
 - b. Using the REMIS real property inventory with the USACE Disposition Decision Tree for the Utilization categories for buildings, out-put will be reviewed and evaluated.
 - c. Using the Disposition Decision Tree out-put and the criteria of no longer needed to meet applicable mission, law, rule or regulatory requirement, the Real Property Accountability Officer (RPAO) or designated representative will physically inventory assets as required.
 - d. The Hand Receipt Holder (HRH) will be required to identify each inventory asset that is suitable for disposal during the next inventory review period.
 - e. The RPAO will enter USACE guidance, USACE Disposition Decision Tree output, physical inventory evaluation, and HRH input data into the Planned Disposition data field in REMIS, designating the disposal list of suitable real property items.
12. The constructed level asset values maintained in the REMIS inventory database are based on the construction or acquisition costs for each inventory item and are reflected in this report's Appendix F. A calculated functional/plant replacement value (PRV) for inventory item records above the \$25,000 USACE construction cost financial management threshold has been created in compliance with the FRPC guidance documents.

To create the PRV for all assets below the \$25,000 construction cost threshold to the OMB requested \$5,000 PRV threshold or minimum 1,000 square foot

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area, additional review and business process development will be accomplished.

- a. Assets below the \$25,000 threshold will be reviewed to eliminate items planned for disposal and those items incorrectly maintained as a real property inventory asset.
- b. All assets below the \$25,000 threshold will be screened to account for all items having a minimum 1,000 square foot area.
- c. Definitive definitions of what composes a “constructed level asset” will be established by USACE business line managers to eliminate unnecessary reporting of asset “components”, while still complying with the Chief Financial Officers Act requirements and Real Property Accountability Officer responsibilities.
- d. Assets below the \$25,000 construction cost threshold currently having a \$0 cost will be valued with a PRV.
 - 1) Utilizing DoD Facility Analysis Categories and facility asset models, initial values will be created for each inventory asset item.
 - 2) Repair need costs will be obtained to allow creation of the facility condition index.
- e. Business process changes will be accomplished that require the entering of cost data for all FRPC inventory items.

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**TABLE 1
USACE FRPP DATA ELEMENT STATUS**

FRPC No.	Data Element	Plan To Populate	Asset Data >\$25,000 30 June 06	Estimated Completion Date	Asset Data <\$25,000 30 Jun 06	Estimated Completion Date	Notes
1	REAL PROPERTY TYPE	Already obtained.	100	Complete	100	Complete	Complete
2	REAL PROPERTY USE	Already obtained.	100	Complete	100	Complete	Complete
3	LEGAL INTEREST	Already obtained.	100	Complete	100	Complete	Complete
4	STATUS/OUTGRA NT INDICATOR	Project provided	100	Complete	100	Complete	Complete
5	HISTORICAL STATUS	User Entry	50	Q4FY08	50	Q4FY08	All facilities 45 years old or older indicated as "Historic Register Eligible" (all others "to be evaluated")
6	REPORTING AGENCY	Already obtained.	100	Complete	100	Complete	Complete
7	USING ORGANIZATION	Project provided	100	Complete	100	Complete	Complete
8	SIZE	Already obtained.	100	Complete	100	Complete	Complete
9	UTILIZATION PERFORMANCE	User Entry	100	Complete	95	Q4FY08	Completed by 3-1-06 data call <\$25K – To Be Completed
10	VALUE	Algorithm	94	Q4FY08	0	Q4FY08	Using existing DoD models. Need lease match to FAC
11	CONDITION INDEX	User Entry	100	Complete	0	Q4FY08	>\$25K – Completed by 3-1-06 data call <\$25K – To Be Completed
12	MISSION DEPENDENCY	User Entry	100	Complete	100	Complete	Completed by 3-1-06 data call
13	ANNUAL OPERATING COSTS	Algorithm	94	Q4FY08	0	Q4FY08	Using existing DoD models <\$25K – To Be Completed

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14	MAIN LOCATION	Project provided	100	Complete	100	Complete	Complete
15	REAL PROPERTY UNIQUE IDENTIFIER	Already obtained.	100	Complete	100	Complete	Complete
16	CITY	Project provided	100	Complete	100	Complete	Complete
17	STATE	Project provided	100	Complete	100	Complete	Complete
18	COUNTRY	Project provided	100	Complete	100	Complete	Complete
19	COUNTY	Project provided	100	Complete	100	Complete	Complete
20	CONGRESSIONAL DISTRICT	Project provided	100	Complete	100	Complete	Complete
21	ZIP CODE	Project provided	100	Complete	100	Complete	Complete
22	INSTALLATION AND SUB-INSTALL IDENTIFIER	Project provided	100	Complete	100	Complete	Complete
23	RESTRICTIONS	User Entry	25	Q4FY08	25	Q4FY08	Populated natural resources & water rights. Goal is to get all business lines operational from OMBIL

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TABLE 2

**U.S. ARMY CORPS OF ENGINEERS
HEADQUARTERS, DIVISION AND DISTRICT
ASSET MANAGEMENT PROJECT DELIVERY
TEAMS
POINTS OF CONTACT**

HEADQUARTERS	Point Of Contact	Phone No.	Office
Sandra Knight	AMCT Leader	202-761-4657	CEERD-HV-T
Douglas Ellsworth	Member-Data Integration	202-761-4489	CEERD-CV-T
Amy Ellin-Cuebas	Member-Campaign Plan	202-761-7567	CESI-P
Namejs Ercums	Member-Disposal	202-761-5565	CEMP-CR
Rora Glenn	Member-Data Integration	251-690-2572	CESAM-RE
Cynthia Jester	Member-AMP	202-761-4701	CECW-LRD
Kelly Koontz	Member-Campaign Plan	202-761-0332	CECW-LRD
Barbara Reilly	Member-Data I./Disposal	202-761-4722	CEPOA-EN-TE-QM
David Weyer	Member-AMP	202-761-0015	CECW-HS-RAO
DIVISION OPERATIONS & REAL ESTATE			
DIVISION OPERATIONS & REAL ESTATE	Point Of Contact	Phone No.	Office
LRD-Louisville	O: BoB Willis	513-684-3057	CELRD-PDS-O
	O: Dan Butcher	513-684-3159	CELRD-PDS-L
	R: William White	513-684-2225	CELRD-PDS-P
MVD-Vicksburg	O: Tim Ethridge	601-634-5615	CEMVD-PD-KM
	R: John Segrest	601-634-5859	CEMVD-PD-SP
NAD-New York	O: William Rogers	718-765-7082	CENAD-RBT
	R: Rob Marshall	410-691-5014	CENAD-ET-R
NWD-Portland	O: Hiroshi Eto	503-808-3893	CENWD-PDS
	R: John Minger	503-808-3873	CENWD-PDS
POD-Honolulu	O: Thom Lichte	808-438-0397	CEPOD-RBT
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SWD-Dallas	O: Elisa Pellicciotto	469-487-7059	CESWD-PDS-O
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DISTRICT OPERATIONS & REAL ESTATE	Point Of Contact	Phone No.	Office
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	R: Janet Kriner	410-962-4944/4912	CENAB-RE-S
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Charleston-SAC	O: Vanessa Stoney	843-329-8092	CESAC-RM-MA
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Chicago-LRC	O: Steve Hungness	312-846-5480	CELRC-TS-C-T
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Detroit-LRE	O: Bill O'Donoghue	313-226-6797	CELRE-OT-T
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Jacksonville-SAJ	O: Richard Ryan	904-232-2034	CESAJ-CO-OP
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	R: Glenn Miltenberger	916-557-6824	CESPK-RE-RP
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DISTRICT OPERATIONS & REAL ESTATE	Point Of Contact	Phone No.	Office
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U.S. Army Corps of Engineers Asset Management Plan

APPENDIX H: INITIATIVES AND MEASURES/GOALS

3-Year Rolling Plan/Milestones																
					FY06				FY07				FY08			
					Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Acquisition																
	Major Assets (> \$1 million) Data				X											
	All Constructed Assets Data								X							
	Resolve unique asset gaps									X						
Operations																
	R&D of Facility Condition Indices				X	X	X	X	X	X	X	X	X	X	X	X
	Implement FEM/MAXIMO				X	X	X	X	X	X	X	X	X	X	X	X
	MVD, LRD,SWD							X								
	SAD, NAD, SPD, POD										X					
	Labs, residual projects															X
	Establish AM Teams							X								
	Implement Risk-Based Mgmt Plan															X
	Implement Hydropower Benchmarking Corpwide												X			

**U.S. Army Corps of Engineers
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APPENDIX I: JACKSONVILLE HARBOR PROJECT DIGITAL
NOTEBOOK FACT SHEET**



DETAILED INFORMATION



Project General Information

Record Number : 3076
Congressional Project Name : JACKSONVILLE HARBOR, FL
PWI : 8410
Authorization : Not provided by the district
Current Progress : Complete 1976/Active O&M
Project Type : B : Construction, General
Catagory/Class/SubClass : 210 : Navigation, Channels and Harbors
Condition of Improvement : 09/30/1996
Date of Database Update : 03/11/1998
Deep Draft : No

Project Organization Information

C.O.E. District : Jacksonville
C.O.E. Division : South Atlantic
State : Florida
Congressional District : FL03, FL04

Project Geographic Location Information

Stream/River : St. Johns River, Atlantic Ocean
Town/City : Jacksonville

U.S. Army Corps of Engineers
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Latitude : 30.33347222
Longitude : -81.62155556

Project Size Information

Federal Acreage : 0.0
NonFederal Funding : \$952,654.00
Total Cost : \$130,808,347.00
Description File : saj/saj_n002.txt

Projects Maps - Pictures - Description Information

Links : [Go to the Project Home Page](#)

Images : [View All Images](#)

Maps : (Click on the file name[s] to view) [saj/saj_002.jpg](#) - [saj/sajn002l.jpg](#)

Description

JACKSONVILLE HARBOR, FLORIDA		
Condition of Improvement, 30 September 1996		
ACTS	WORK AUTHORIZED	DOCUMENTS
ST. JOHNS RIVER, FLORIDA, OPPOSITE THE CITY OF JACKS		
2 Mar 1907	The 24-foot area from Hogan Creel to F.E.C. Ry. Bridge.	H. Doc. 663/59/1
14 Jun 1880	Jetties at entrance (maintenance only).	A.R. for 1879 p.767
3 Jun 1896	Entrance of jetties, etc (maintenance only)	H. Ex. Doc. 346/53/3 & A.R. for 1895 p.1586

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APPENDIX J: VALUE TO THE NATION REPORT FOR LAKE SIDNEY LANIER

 VALUE <i>to the</i> NATION FAST FACTS
Lake Level Report SIDNEY LANIER (LAKE) Recreation 1999
US Army Corps of Engineers — Value to the Nation

Social Benefits

Facilities

- 87 recreation areas
- 986 picnic sites
- 1,200 camping sites
- 38 playgrounds
- 31 swimming areas
- 41 trail miles
- 4 fishing docks
- 85 boat ramps
- 12 marinas
- 9,852 marina slips

Visits (person-trips)

- 7,665,157 in total
- 1,379,728 picnickers
- 79,044 campers
- 2,606,153 swimmers
- 536,561 water skiers
- 2,682,805 boaters
- 459,909 sightseers
- 1,533,031 fishermen
- 0 hunters
- 2,069,592 others

Benefits in Perspective

By providing opportunities for active recreation, Corps lakes help combat one of the most significant of the nation's health problems: lack of physical activity.

Recreational programs and activities at Corps lakes also help strengthen family ties and friendships; provide opportunities for children to develop personal skills, social values, and self-esteem; and increase water safety.

Economic Benefits

7,665,157 visits per year resulted in:

- \$125.97 million in visitor spending within 30 miles of the Corps lake.
- 67% of the spending was captured by local economy as direct sales effects.

Benefits in Perspective

The money spent by visitors to Corps lakes on trip expenses adds to the local and national economies by supporting jobs and generating income. Visitor spending represents a sizable component of the economy in many communities around Corps lakes.

With multiplier effects, visitor trip spending resulted in:

- \$146.59 million in total sales.
- \$83.72 million in total income.
- Supported 3,134 jobs in the local community surrounding the lake.

[Click here for more information about how these numbers are calculated](#)

U.S. Army Corps of Engineers Asset Management Plan

Environmental Benefits

- 19,288 land acres
- 38,000 water acres
- 540 shoreline miles
- 126 acres reforested
- 71,675 environmental educational contacts

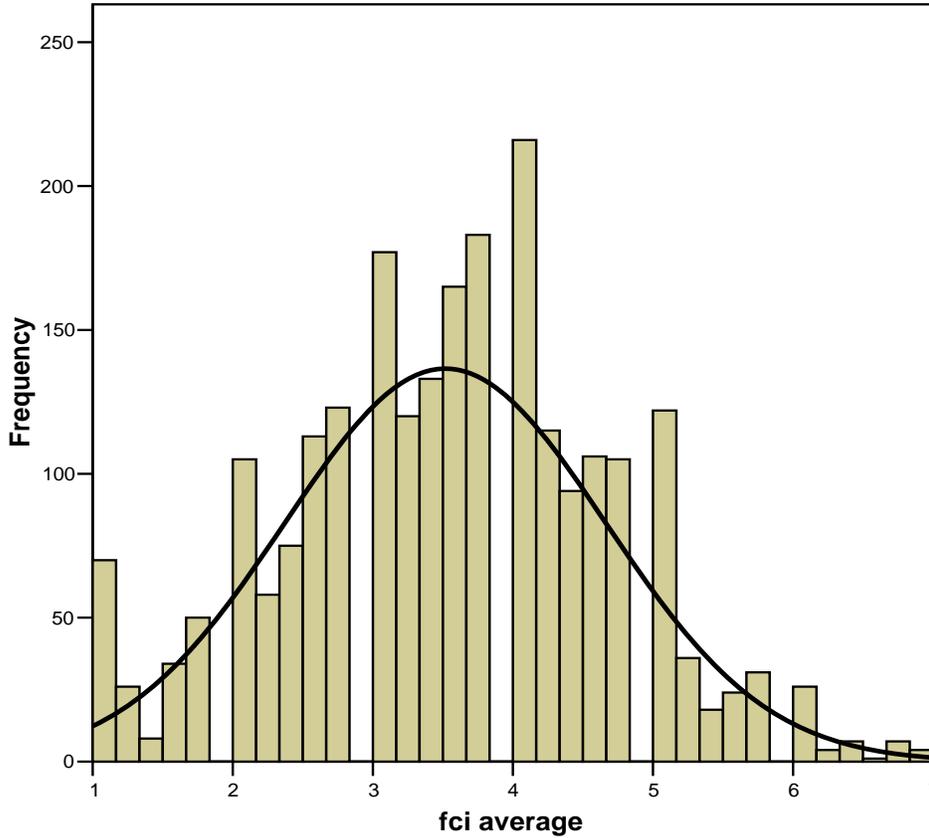
Benefits in Perspective

Recreation experiences increase motivation to learn more about the environment; understanding and awareness of environmental issues; and sensitivity to the environment.

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APPENDIX K: RECREATION FACILITY CONDITON INDEX

FCI distribution curve for all areas (current conditions) based on inputs of 2356 recreation areas. The weighted average (by visitation) of all FCI is 3.8, while the unweighted average is 3.5.



fci average		Statistics
N	Valid	2356
	Missing	155
Percentiles	10	2.00
	20	2.50
	30	3.00
	40	3.25
	50	3.60
	60	3.80
	70	4.00
	80	4.50
	90	5.00

**APPENDIX K: RECREATION FACILITY CONDITON INDEX
(Continued)**

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**Recreation Unit Day Availability (RUDA)
Current (FY 05) Conditions**

RUDA measures total "possible" recreation units (site days/nights) that can be provided during an open season. It does NOT measure the actual use of these facilities.
Report numbers of sites/parking spaces your areas CURRENTLY have and numbers of days open in FY 05. Default entries are from OMBIL and last year's Rec-BEST data.

You are working on project:
[ARKABUTLA LAKE](#)
[VICKSBURG DISTRICT](#)
[MISSISSIPPI VALLEY DIVISION](#)

Step 1:

Corps Managed Areas Only

Area	camping units (campsites/pads)	nights open	RUDA (camp)	# parking spaces (day use)	days open	RUDA (day)	RUDA (total)
BAYOU POINT	0	0	0	195	290	56,550	56,550
COLDWATER POINT	0	0	0	28	365	10,220	10,220
DUB PATTON AREA	80	305	24,400	135	365	49,275	73,675
HERNANDO POINT	83	305	25,315	203	365	74,095	99,410
HIGHWAY 51 LANDING	0	0	0	44	365	16,060	16,060
KELLYS CROSSING	24	365	8,760	47	365	17,155	25,915
OUTLET CHANNEL	65	365	23,725	146	365	53,290	77,015
PLANTATION POINT	0	0	0	20	180	3,600	3,600
PLEASANT HILL	10	365	3,650	37	365	13,505	17,155
SOUTH ABUTMENT	80	305	24,400	137	365	50,005	74,405
SUNFISH BAY	0	0	0	0	365	0	0

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APPENDIX K: RECREATION FACILITY CONDITION INDEX

(Continued) Condition Indices for Recreation Facilities

1. Roads and Parking

Gravel Roads and Parking

- a. Road surface in **excellent** condition: adequate amount of surfacing material in place; surface is smooth and level, no ruts, holes, or bumps; edge of road clearly defined
- b. Road surface in **good** condition: surfacing material thin in places; shallow depressions, minor rutting, washboarding, and holes present; vegetation or soil has blurred edge of road
- c. Road surface in **fair** condition: inadequate amount of surfacing material in place; significant numbers of ruts, bumps, and holes; significant washboarding; soil and vegetation have significantly encroached onto edge of road
- d. Road surface in **poor** condition: little or no surfacing material remaining; vegetation coming up through the road surface; numerous ruts, bumps, and holes; very rough, uneven surface; edge of road totally obscured by vegetation

Paved Roads and Parking

- a. Road surface in **excellent** condition: smooth, uniform surface; little to no cracking; no potholes; paved surfaces are adequately drained, culverts functioning correctly, no erosion or evidence of standing water; shoulders are uniform and at grade; no vegetative encroachment
- b. Road surface in **good** condition: some cracking and related deterioration; minor washboarding; occasional small potholes; evidence of minor problems with paved surface drainage, erosion and/or culvert malfunctions; some minor sloughing of shoulders; minor vegetative encroachment
- c. Road surface in **fair** condition: Significant alligator cracking and deterioration; some potholes and/or washboarding; evidence of moderate problems with paved surface drainage, some significant erosion and/or culvert malfunctions, intermittent standing water is evident; significant sloughing of shoulders and/or drop-off at road edge; significant vegetative encroachment
- d. Road surface in **poor** condition: major cracking and breaking up of road base; numerous potholes; rough, uneven surface; evidence of major paved surface drainage inadequacies, severe erosion problems, inadequate or clogged culverts, water collects and stands intermittently; shoulders are severely sloughed at pavement edges; major vegetative encroachment and breaking up of edges of road

APPENDIX K: RECREATION FACILITY CONDITION INDEX

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(Continued) Condition Indices for Recreation Facilities

2. Boat Ramps

- a. Boat Ramp in **excellent** condition: Surface free from cracks and chips; ramp edge backfill in excellent condition; riprap protection and erosion control measures adequate; no drop-off or sediment on end of ramp
- b. Boat Ramp in **good** condition: Surface free from cracks; some chipping of concrete surface may be present; riprap protection good; minor erosion may be occurring along ramp edges; slight drop-off or some sediment may be present on end of ramp
- c. Boat Ramp in **fair** condition: Surface has cracks; chipped concrete is present; riprap protection is inadequate or failing; erosion along ramp edges is undercutting slab; drop-off at end of ramp is present or sediment is present on end of ramp but does not impair use
- d. Boat Ramp in **poor** condition: Surface cracks with chipping; ramp suffers from displaced sections; riprap protection is absent; edges of ramp are undercut by erosion and edges are cracked and broken; drop-off is present at end of ramp or sediment is over the end of the ramp making it unusable

3. Buildings (buildings used by the public, including shelters)

Landscaping (if present)

- a. Landscaping in **excellent** condition: landscaping is very well laid out and maintained; plantings are lush and thriving; beds are edged and clean; no weeds
- b. Landscaping in **good** condition: landscaping beds and features are maintained; trees and shrubs are pruned; flowerbeds are edged, mostly clean and weeded
- c. Landscaping in **fair** condition: trees and shrubs have not been pruned; flowerbeds have some weeds and debris in them
- d. Landscaping in **poor** condition: landscape plantings that have died have been left; landscape plantings are missing; flowerbeds are overgrown and contain a lot of weeds and debris

Interior Surfaces and Fixtures

- a. Interior Surfaces and Fixtures in **excellent** condition: floor covering is undamaged and intact; ceilings are smooth and undamaged; walls are uniform and undamaged; electric and plumbing fixtures are all intact; totally free of corrosion and operating properly; counters, porcelain fixtures and partitions are undamaged and are in like new condition; no graffiti on any surfaces
- b. Interior Surfaces and Fixtures in **good** condition: floor covering scratched or otherwise somewhat marred; ceiling surface not smooth or has some damage, i.e., a few small cracks or holes; some damage to walls, i.e., scratches, small holes, small cracks; electric and plumbing fixtures intact, some discoloration or staining, some corrosion, operate less than smoothly; counters, porcelain fixtures and partitions, stained or discolored; minor amounts of graffiti on interior surfaces

APPENDIX K: RECREATION FACILITY CONDITION INDEX

(Continued) Condition Indices for Recreation Facilities

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c. Interior Surfaces and Fixtures in **fair** condition: floor covering worn, cracked or chipped; damage to ceilings, i.e., watermarks, cracks, holes, some loose surfacing material, some trim missing; damage to walls, i.e.; loose wall covering, trim missing, larger holes, gouges or cracks; electric and plumbing fixtures chipped, cracked, leaking or not completely functioning as designed; counters and porcelain fixtures chipped or cracked; partitions loose or scratched, not of uniform design; some graffiti on surfaces

d. Interior Surfaces and Fixtures in **poor** condition: floor covering significantly worn, broken or coming up; ceilings have holes in them or are sagging; significant damage to walls, i.e., seriously marred surfaces, vandalism; electric and plumbing fixtures broken, missing or inoperable; counters, porcelain fixtures and partitions broken or missing; considerable and/or offensive graffiti on interior surfaces

Doors and Windows

a. Doors and Windows in **excellent** condition: doors and windows all work smoothly as designed; all necessary hardware is in place and in good condition; no cracks or breaks in windows; all screens intact and undamaged

b. Doors and Windows in **good** condition: doors and windows all work as designed; doors have minor damage, i.e., dents, scratches; screens have very small tears or holes

c. Doors and Windows in **fair** condition: one or more doors or windows do not operate smoothly; doors or jams are rusting or warping; one to two windows are cracked; screens

d. Doors and Windows in **poor** condition: one or more doors or windows do not operate; doors are severely rusted, dented, or sprung; one or more windows are badly cracked or broken; screens are severely damaged or missing

Paint

a. Paint in **excellent** condition: painted surfaces are uniformly covered; paint application is smooth and streak-free; paint looks fresh with good color; no paint on surfaces where it does not belong

b. Paint in **good** condition: painted surfaces are somewhat faded; coverage is mostly uniform with very little paint on surfaces where it does not belong

c. Paint in **fair** condition: painted surfaces are very faded; coverage is not uniform; some cracking and peeling is beginning to take place

d. Paint in **poor** condition: significant peeling and paint loss is apparent; paint poorly applied, streaks and runs very noticeable

APPENDIX K: RECREATION FACILITY CONDITION INDEX (Continued) Condition Indices for Recreation Facilities

Roof

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- a. Roof in **excellent** condition: no damage to or deterioration of roof covering, fascia, or soffits
- b. Roof in **good** condition: minor damage to or deterioration of roof covering, i.e., small dents, faded paint, aged shingles
- c. Roof in **fair** condition: some damage to or deterioration of roof covering, i.e., dents, creases, cracked and peeling paint, loose, damaged, or curling shingles
- d. Roof in **poor** condition: significant damage to or deterioration of roof support and covering, i.e., warped or bowed, missing paint, missing shingles, leaks; fascia and soffits exhibiting dry rot or mildew

4. Sites

Utilities

- a. Utilities in **excellent** condition: electric pedestal and water hydrant straight and undamaged; electric pedestal with fresh paint coverage; pedestal cover plate operates smoothly; pedestal functions as designed; hydrant operates smoothly as designed and doesn't leak
- b. Utilities in **good** condition: electric pedestal and water hydrant straight; paint on pedestal is faded; pedestal functions as designed; small dents, scratches; slight rust; hydrant doesn't leak
- c. Utilities in **fair** condition: pedestal and/or hydrant slightly crooked; some cracking or peeling of paint on pedestals; some rust really beginning to show; pedestal and/or hydrant somewhat dented or bent; pedestal cover plate closes; hydrant leaks slightly
- d. Utilities in **poor** condition: pedestal and/or hydrant significantly dented, warped or crooked; pedestal and/or hydrant not fully operational as designed; significant paint loss and rust; cover plate on pedestal won't close; hydrant leaks significantly when used; missing parts

Cookers, Fire Rings, Utility Tables and Lantern Holders

- a. Cookers, Fire Rings, Utility Tables and Lantern Holders in **excellent** condition: straight, level, plumb installation; fully functional as designed; solid and firm; no rust; fresh, unfaded paint coverage
- b. Cookers, Fire Rings, Utility Tables and Lantern Holders in **good** condition: plumb and functional as designed; solid; some rust; minor dents and scrapes; slightly weathered, splintered wood; overall good paint coverage
- c. Cookers, Fire Rings, Utility Tables and Lantern Holders in **fair** condition: slightly off plumb or unlevel; still mostly functional as designed; some wobble; slightly bent; dents, scrapes or gouges; warped or bowed wood; significant rust; paint missing or peeling
- d. Cookers, Fire Rings, Utility Tables and Lantern Holders in **poor** condition: not plumb, leaning or very unlevel; very marginally functional; significantly dented or

APPENDIX K: RECREATION FACILITY CONDITION INDEX (Continued) Condition Indices for Recreation Facilities

bent; wobbly; holes in sides or bottom; rusted through rungs or grills; broken or missing wood;

Canopies

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- a. Canopies in **excellent** condition: Solid, firm and straight; undamaged; paint is fresh and not faded; no rust or rot
- b. Canopies in **good** condition: Solid and firm; slight damage resulting from normal wear and tear; faded paint; slight rust or rot
- c. Canopies in **fair** condition: Very little wobble; some damage such as dents, holes, or splinters; paint flaking and beginning to peel; some rust or rot
- d. Canopies in **poor** condition: Loose and wobbly, parts missing, canopy top sagging; significant damage or deterioration; peeling and missing paint

Tables

- a. Tables in **excellent** condition: table units are completely intact, not chipped, warped, splintered, or dented; surfaces are smooth; supports are solid and firm; if painted, paint is fresh and not faded
- b. Tables in **good** condition: table units intact, slight chipping or cracking, small dents; surfaces are slightly marred; paint is faded; supports are solid
- c. Tables in **fair** condition: tables have significant cracks, chips; surfaces are slightly warped, gouged, splintered and/or pitted; paint is starting to chip and peel; tables wobble slightly
- d. Tables in **poor** condition: tables are severely cracked and/or chipped, warped, bent, broken or have parts missing; surfaces are uneven and rough; significant loss of paint; tables are loose and rickety

Impact Zones

- a. Impact Zones in **excellent** condition: impact zones are well defined; surfaces are uniform, without cracks, spalls, large bumps, or depressions; containment barriers are undamaged and intact; surfacing material fresh and uniform; no vegetation growing in impact zones; no accumulations of debris
- b. Impact Zones in **good** condition: surfaces have some small cracks, spalls, bumps or depressions; some deterioration of containment barriers; surfacing material adequate; some vegetation and debris has encroached into impact zones
- c. Impact Zones in **fair** condition: surfaces have significant cracking and/or spalling, not uniformly smooth, rutted or some holes; containment barriers are loose, chipped or warped; surfacing material inadequate in places; significant vegetative encroachment and debris deposits
- d. Impact Zones in **poor** condition: surfaces have major irregularities; containment barriers are severely deteriorated, damaged, or missing; surfacing material is very thin; defined impact zone is highly obscured

APPENDIX K: RECREATION FACILITY CONDITION INDEX (Continued) Condition Indices for Recreation Facilities

Camping Pads/Pullouts

- a. Camping Pads/Pullouts in **excellent** condition: paved surfaces smooth with no cracking; gravel pads smooth, well delineated with fresh surfacing material; overhead clearance good for all sizes of camping units for which the site was designed

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- b. Camping Pads/Pullouts in **good** condition: little cracking of paved surfaces; adequate surfacing material on gravel pads; minor indentations; no holes; edges of pads defined; overhead clearance good for most units
- c. Camping Pads/Pullouts in **fair** condition: some cracking and related deterioration of paved surfaces; surfacing material thin in places on gravel pads; pads not smooth with some ridges and bumps; edges of pads somewhat obscured by vegetative encroachment or accumulation of soil; overhead clearance marginal, somewhat restricts sizes of units that can occupy the site
- d. Camping Pads/Pullouts in **poor** condition: significant cracking and deterioration of paved pad surfaces; inadequate surfacing material on gravel pads; holes in pads; vegetation growing through the pads; edges of pads totally obscured; overhead clearance poor, significantly restricts camping units that can be on the site

Signs

- a. Signs in **excellent** condition: sign panel smooth, surface unfaded and free of any dents, bends, or scratches; text and symbols totally intact, clear and unfaded; straight, level and plumb installation; mounting posts straight and firmly set, posts and mounting hardware in like new condition, freshly painted.
- b. Signs in **good** condition: sign panel unwarped, surface slightly faded with only minor chips, dents or scratches; text and symbols legible as designed with only slight fading and cracking; straight, level and plumb installation; mounting posts straight and firmly set, posts and mounting hardware sound, showing very little deterioration with paint only slightly faded.
- c. Signs in **fair** condition: sign panel slightly warped, somewhat faded, noticeably dented and/or scratched, corners slightly bent; text and symbols still legible but faded, scratched, cracked and/or slightly peeling; slightly crooked or less than plumb installation; mounting posts and hardware showing definite wear and tear loose, warping, some rust, weed eater damaged bases, faded paint.
- d. Signs in **poor** condition: sign panel vandalized, significantly faded, badly bent and/or scratched, containing holes and large dents, cracked or broken; text and symbols missing or faded and damaged to the point of being almost unreadable; signs crooked, leaning, twisted or dangling; mounting posts and/or hardware in poor condition rotted, rusted, wobbly, badly peeling or missing paint.

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APPENDIX L: HYDRO-AMP CONDITION INDEX

Example: Tier 1 Analysis of a GSU Transformer

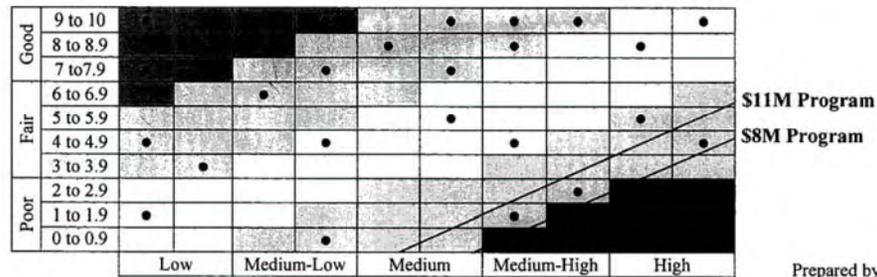
Transformer Condition Summary				
No.	Condition Indicator	Score × Weighting = Total		
		Factor	Factor	Score
1	Oil Analysis	3	1.143	3.429
2	Power Factor and Excitation Current Tests	2	0.952	1.904
3	Operation and Maintenance History	2	0.762	1.524
4	Age †	2	0.476	0.952
Condition Index (Sum of individual Total Scores)				7.8

Condition-Based Alternatives	
Condition Index	Suggested Course of Action
≥ 7.0 and ≤ 10 (Good)	Continue O&M without restriction. Repeat condition assessment as needed.
≥ 3.0 and < 7.0 (Fair)	Continue operation but reevaluate O&M practices. Consider using appropriate Tier 2 tests. Conduct full risk-economic assessment. Repeat condition assessment process as needed.
≥ 0 and < 3.0 (Poor)	Immediate evaluation including additional Tier 2 testing. Consultation with experts. Adjust O&M as prudent. Begin replacement/rehabilitation process.

① Perform Tier 1 assessment to score condition indicators and calculate the Condition Index.

② Use the Condition Index to rate condition and determine a course of action.

Risk Map



③ Use the Condition Index to evaluate risks and establish investment priorities.

Consequences
(Based on Risk to Revenue or other factors)

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