Integrated Water Resource Mgt – a Federal Perspective

Civil Works at a Strategic Crossroads

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Civil Works Value to the Nation

- 3% of Nation’s Electricity: $800 M + in sales
- Stewardship of 11.7 M Acres Public Lands
- 12,000 miles of Commercial Inland Waterways
- 400 miles of Shoreline Protection
- ~11,750 miles of Levees
- 50% cost of Rail; 10% cost of Trucks
- 11,750 miles of Levees
- 12,000 miles of Commercial Inland Waterways
- 400 miles of Shoreline Protection
- Recreation Areas: 370 M visitors / yr
- Generate $18 B + 350 K jobs
- Emergency Responses
- 68,800 Regulatory Permit Actions

• US Ports and Waterways convey >2B Tons of Commerce
• Foreign Trade alone creates >$160 B in Tax Revenues
National Water Resource Challenges

- Climate Change
- Governance
- Federal Budget
- Legislative Changes
- Demographic Shifts
- Persistent Conflict
- Energy
- Increasing Demand for Water
- Aging Infrastructure
- Declining Biodiversity
- Environmental Values
- Globalization
- Disaster Preparedness and Response
The value of the Corps CW’s capital stock portfolio has declined from a peak value of ~ $250 billion in 1983, to ~ $165 billion today, as new investment & maintenance have not kept pace with depreciation.
Challenging Times For America’s Infrastructure

- Aging Infrastructure
- Increasing Demand for Water
- Levee/Dam Safety

2009 Grades:
- Aviation: F
- Bridges: C
- Dams: D
- Drinking Water: F
- Energy: F
- Hazardous Waste: D
- Inland Waterways: D
- Levees: D
- Public Parks and Recreation: C
- Rail: C
- Roads: D
- Schools: D
- Solid Waste: C
- Transit: D
- Wastewater: D

America's Infrastructure GPA: D
Estimated 5 Year Investment Need: $2.2 Trillion
Water Resources Objectives

- Protect, develop and restore the Nation’s water and related land resources\(^1\)
- Operate and maintain existing Corps projects\(^1\)
- Train and prepare for emergency response needs\(^1\)
- Improve energy, water, and petroleum efficiency\(^2\)
- Double exports from FY2010 to FY2015\(^3\)

\(^1\)FY2011 CW Press Book Preface
\(^2\)Executive Order 13514 - Federal Leadership in Environmental, Energy, and Economic Performance
\(^3\)President’s 2011 State of the Union Address

NOTE: This is a listing of objectives, not a ranking.
Historical & Projected Obligations

Civil Works Obligations

NOTE: Approximately $7 billion carryover from FY10 to FY11 maintains high workload in FY11. Then, barring additional Emergency Supplemental Appropriations workload decreases substantially in FY12 and beyond.
Challenges

• Constrained Budgets
• Aging Infrastructure
• Disaster Preparedness and Response
• Increasing Demand for Water
• Long Term Recovery
• Climate Change
• Environmental Values
• Declining Biodiversity
• Demographic Shifts
• Globalization
• 8 + 2 Ecosystem Restoration Sites
• Principles & Guidelines
• Levee/Dam Safety

Strategies

• Integrated Water Resource Management
• Systems – Based Approach
• Risk-Informed Decision Making & Communication
• Collaboration & Partnering
• Asset Management
• State-of-the-Art Technology
USACE Campaign Plan

What will WE do to make our infrastructure great?

USACE Vision
A GREAT engineering force of highly disciplined people working with our partners through disciplined thought and action to deliver innovative and sustainable solutions to the Nation’s engineering challenges.

USACE Mission
Provide vital public engineering services in peace and war to strengthen our Nation’s security, energize the economy and reduce risks from disasters.

GREAT is
- Delivering superior performance.
- Setting the standard for the profession.
- Making a positive impact on the Nation and other nations.
- Being built to last by having a strong "bench" of educated, trained, competent, experienced, and certified professionals.

Goal 1
Deliver USACE support to combat, stability and disaster operations through forward deployed and reach back capabilities.

Objective 1a:
Ready, responsive and reliable.

Objective 1b:
Support the Operating and Generating Force.

Objective 1c:
Establish human resources and family support programs that promote readiness and quality of life.

Objective 1d:
Institutionalize USACE capabilities in interagency policy and doctrine.

Goal 2
Deliver enduring and essential water resource solutions through collaboration with partners and stakeholders.

Objective 2a:
Deliver integrated, sustainable, water resources solutions.

Objective 2b:
Implement collaborative approaches to effectively solve water resource problems.

Objective 2c:
Implement streamlined and transparent regulatory processes to sustain aquatic resources.

Objective 2d:
Enable Gulf Coast recovery.

Goal 3
Deliver innovative, resilient, sustainable solutions to the Armed Forces and the Nation.

Objective 3a:
Deliver sustainable infrastructure via consistent and effective military construction & real estate support to customers.

Objective 3b:
Improve protection, resilience and lifecycle investment in critical infrastructure.

Objective 3c:
Deliver reliable infrastructure using a risk-informed asset management strategy.

Objective 3d:
Develop and apply innovative approaches to delivering quality infrastructure.

Goal 4
Build and cultivate a competent, disciplined, and resilient team equipped to deliver high quality solutions.

Objective 4a:
Identify, develop, maintain, and strengthen technical competencies.

Objective 4b:
Communicate strategically and transparently.

Objective 4c:
Standardize business processes.

Objective 4d:
Establish tools and systems to get the right people in the right jobs, then develop and retain this highly skilled workforce.
Priorities

**USACE Establishing National Programs**

- **Dam Safety Program**
  - Portfolio screening to determine highest risk
  - Targeted funding for remediation planning at high risk facilities
  - Develop Interim Risk Reduction Measures

- **Levee Safety Program**
  - Under development
  - Modeled on Dam Safety Program
  - Ongoing partner and stakeholder engagement

- **Asset Management Prioritization**
  - Goal: Operational risk assessments to inform budgets
  - Modeled on Inland Navigation
  - Pilots include flood risk and coastal
Prioritization:

*The New Budgeting Paradigm*

- Budget Development Guiding Principles

  - Align with National goals, priorities & objectives
  - Finish projects we start
  - Focus on core missions
  - Provide efficient funding stream (results in fewer projects)
Approach to a More Sustainable Water Future

1) Integrated Water Resources Management
2) Governance and Management
3) Future National Water Resources Direction
4) Collaboration
5) Water Resources Investment Strategies
6) Managing Extreme Events
7) Knowledge & Technology Transfer
8) Water Resources Leadership
9) Communications and Education
Prioritization:

CA Bay-Delta IRWM System
An Integrated Approach to Bay Delta Projects

Priority Initiatives that, in combination, significantly improve—

- Flood Risk Management
- Ecosystem
- Water Supply
- Reservoir Operations
- Navigation
- Water Conservation
- Recreation

Key:
- **Blue Arrows** – Natural Flow Paths
- **Orange Arrows** – Conveyance Systems
- **Yellow Dots** – Navigation BL or Other
- **Green Dots** – Ecosystem BL
- **Red Dots** – Flood Damage Reduction BL
- **Blue Dots** – Reservoir Operations/O&M
CA BAY-Delta IRWM System Program

FY 2013 Strategic Priorities & Leverage

Priority Related Activities

• Yuba Reintro Initiative
• NHAAP
• BDCP
• Delta Plan
• CVFPP 2012
• FY 2013 Budget Process
• CA Roundtable
• System Reoperation

IFAP Priority Projects

• DELTA LTMS
• CALFED Levee Stability Program (McC-W)
• CVIFMS (Comp Study)
• Delta Study (DILFS)
• COORD ACCT

Key Stakeholders

• YCWA
• DWR
• MWD
• DSC
• SWC
• Reclamation
• FWS
• NMFS
• EPA
• NGO’s

Key Questions:

• How do we integrate project activities better with Key Stakeholders & Related Activities?
• How do we optimize multiple IWRM benefits with current Business Line budgeting?
• How do we better link ASA to HQ to SPD to SPK to PM for these key priority projects?
• How do we advance coordinated / federal interagency budgeting?
## Way Ahead

### CHALLENGES

1. Project-centric focus
2. Restrictive project benefits
3. Business Line budget criteria
4. Federal Coordination

### OPPORTUNITIES

1. Establish system-based programmatic IWRM framework
2. Broaden interpretation of Authorities
3. Pursue programmatic funding
4. Fund Agencies for coordinated project execution

“This MOU establishes a structure for coordinating and streamlining the actions of the federal agencies… to facilitate coordination and cooperation among these agencies in advancing the federal commitment to the Bay-Delta.”  

– Federal MOU Sep 2009