




Federal Agency Collaboration in Support of Integrated Water Resources Management

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National Federal Water Partners



Primary Roles:

- Monitoring
- Science
- Prediction
- Management
- Conservation
- Regulation
- Protection
- Mitigation
- Restoration
- Response
- Recovery

Assessment Agencies:

- U.S. Forest Service
- Natural Resources Conservation Service
- National Oceanic and Atmospheric Administration
- Army Corps of Engineers
- Environmental Protection Agency
- Federal Emergency Management Agency
- Bureau of Land Management
- Bureau of Reclamation
- Fish and Wildlife Service
- National Park Service
- U.S. Geological Survey
- Tennessee Valley Authority




National Imperatives

Protect Life and Property	• Floods and droughts cause more U.S. economic losses than any other type of natural disaster
Support Economic Security	• Water has always been a critical component in the success of any economic endeavor
Protect Health and Environment	• Water is the lifeblood of this planet
Mitigate Escalating Risk	• Triple Threat: Scarcity and floods, climate change, and aging infrastructure




Federal Agency Assessment

- The USACE's assessment of 12 Federal water resources agencies revealed broad recognition of the need for an integrative "Federal Tool Box" (FTB) to:
 - Streamline access to Federal water resource capabilities
 - Share technology, information, models, best practices
 - Leverage resources more effectively
 - Enable improved collaboration
- The Assessment highlights effective collaborations:
 - Bay Delta Conservation Plan
 - Chesapeake Bay Program Watershed Partnership




Enhance Federal Partnerships

- Water resources problems are significant and getting bigger
 - Climate change and variability are dramatically impacting water availability and quality
 - Socio-economic impacts of floods and droughts are escalating
 - Population growth and economic development are stressing water supplies
 - Increasing global demand for food and energy are causing unprecedented pressure on water resources and aquatic ecosystems
- Seamless integration and enhanced collaboration are required to address these challenges
- Each agency has an important role




Vision for the Federal Tool Box

Components	Characteristics
<ul style="list-style-type: none"> • Data, Forecasts, and Services (integrated at all scales) • Models and Tools (catalog and guidance to help users) • Information (agency programs, authorities, policies, and best practices) 	<ul style="list-style-type: none"> • Interoperability between decision support systems and tools • Seamless data exchange • Flexible and extensible design • One stop shopping

Federal Tool Box - Benefits

Integrate and improve access to information, enable collaborative workflow, and establish a common operating picture to support critical decision making

- Data and Information**
 - ✓ Enhanced observations and forecasts
 - ✓ Updated water use statistics and demographics
 - ✓ Climate change impacts
 - ✓ Current environmental status and trend indicators
 - ✓ Shared policy, authorities, and best practices
- Water Management**
 - ✓ Sustain water quality
 - ✓ Minimize flood and drought impacts
 - ✓ Promote conservation and ecosystem health
 - ✓ Optimize water allocation and use
 - ✓ Maximize hydropower generation
- Planning and Policy**
 - ✓ Foster coordinated water policy
 - ✓ Balance competing needs
 - ✓ Support adaptive water supply planning
 - ✓ Build community resilience
 - ✓ Sustain economic growth

Integrated Water Resources Science and Services

Three Cross-cutting Themes

- Human Dimensions**
 - Stakeholder Interactions and Communications

Establishing and maintaining a strong participatory process for building the social capital necessary for success
- Technical**
 - Information Services

Implementing sound IT engineering practices to promote the coordination and integration of interagency activities to achieve common goals
- Operational Science**
 - Summit-to-Sea Modeling and Prediction Framework

Apply physical and social science strategies to deliver an information system that is responsive to the needs of stakeholders

Federal Assessment Views

- The Federal Tool Box requires:
 - Significant, continued stakeholder input
 - Robust framework for data exchange and simplified information access
 - Viable cross-agency management, governance and funding strategy
- Integrated Water Resources Science and Services (IWRSS) is recommended as the prototype

Integrated Water Resources Science and Services

- Work in progress; still informal and unofficial
- Only three agencies thus far – NOAA, USACE, USGS
- FY 2010 – 12 goals include:
 - Establish formal agreements and proposed governance model
 - Conduct pilots to demonstrate interoperable infrastructure and deploy new science and technology
 - Develop integrated data, tools and services
- All envisioned components of the Federal Tool Box are not addressed

Integrated Water Resources Science and Services

Leap Ahead
Implement information and tools for next-generation adaptive water-related planning, preparedness and response activities

National Water Resources Information System

- 1 Integrate Information and Simplify Access
- 2 Increase Accuracy and Timeliness of Water Information
- 3 Provide New Summit-to-Sea High-resolution Water Resources Information and Forecasts

Federal Tool Box - Next Steps

- Establish an interagency steering committee to:
 - Involve additional Federal water agencies
 - Assess IWRSS as a potential prototype
 - Prepare development and implementation plan, including:
 - State and other stakeholder involvement
 - Business case to quantify benefits
 - Document cross-agency funding requirements and programming strategy
 - Recommend executive agency and governance structure
 - Identify priorities for development and demonstration