

The Army Corps of Engineers and America's Coasts and Estuaries

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**US Army Corps of Engineers
BUILDING STRONG®**

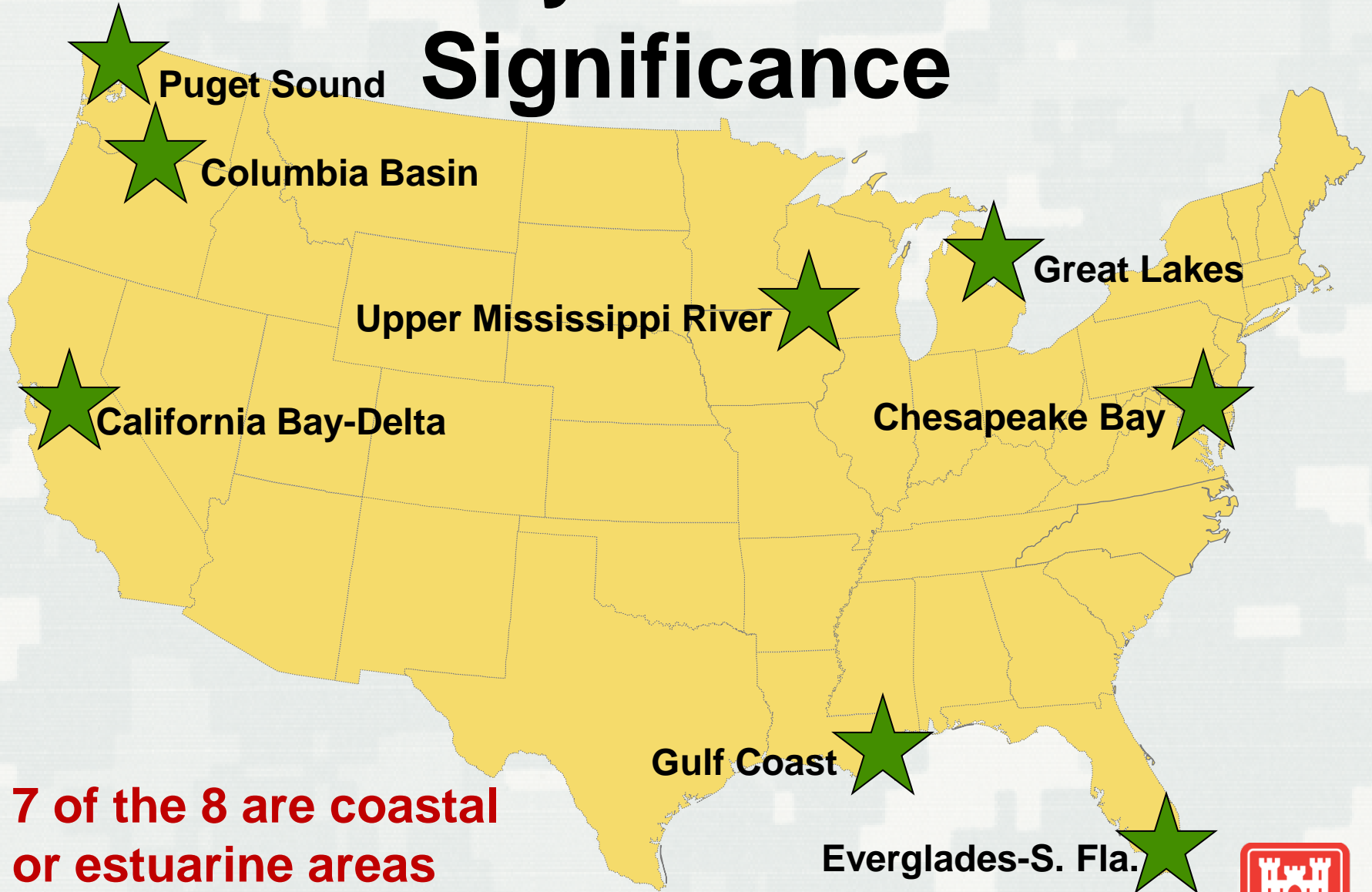


Federal Role in Water Resources



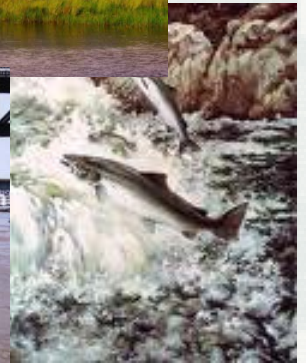
- ◆ Help solve water resources problems
- ◆ Facilitate and convene discussions for **collaborative planning, information sharing, conflict resolution**
- ◆ Manage public water resources infrastructure
 - ◆ Subsidize research & development
 - ◆ Gather and disseminate data
 - ◆ Prevent and manage disasters
 - ◆ **Protect aquatic resources**
 - ◆ Inform and educate
- ◆ Set and enforce high standards based on principles
 - ◆ Protect equity, especially for disadvantaged

CEQ's Ecosystems of National Significance



Our Strategy: Integrated Water Resources Management

A holistic focus on water resource challenges and opportunities that reflects **coordinated development and management** of water, land and related resources that maximizes economic services and environmental quality, ensures public safety, and provides for the sustainability of vital ecosystems

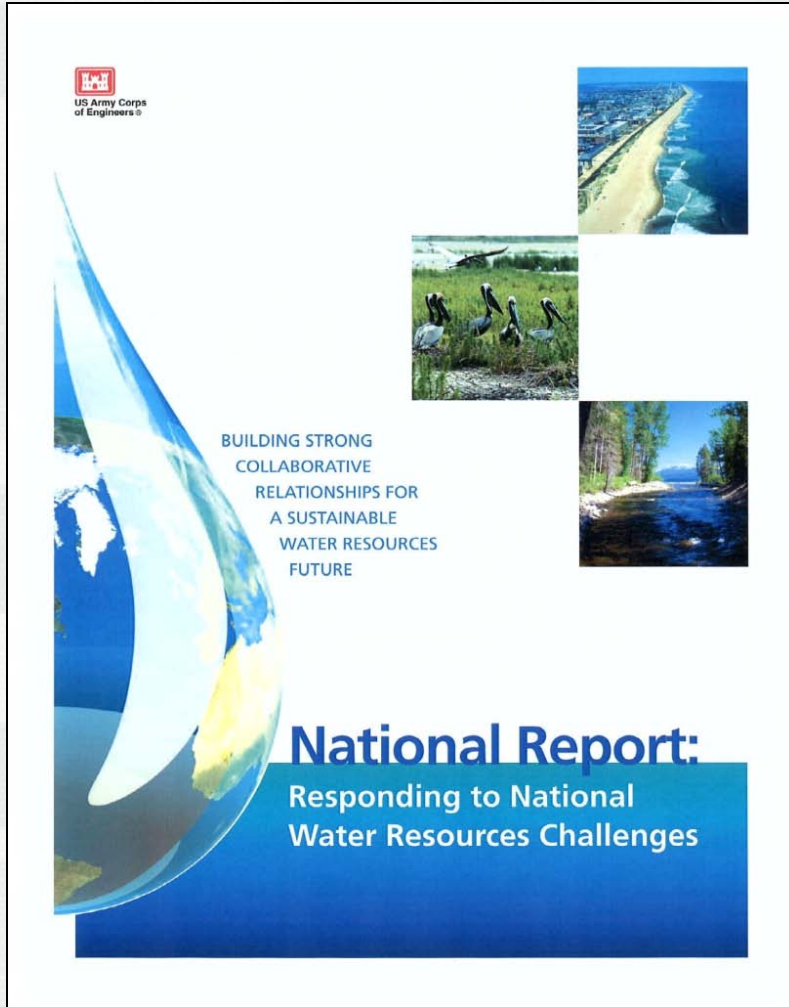


Building Strong Collaborative Relationships for a Sustainable Water Resources Future

- Identify & leverage opportunities for collaborative efforts
- Identify roles and opportunities where roles can be leveraged
- Create a joint national dialogue for water priorities
- Leverage Federal resources to assist states in their water resources planning and management



Approach to a 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) Enhance Water Resources Leadership
- 9) Communication and Education



Climate Change Adaptation

- **Goal:**

- Practical, nationally consistent, legally justifiable and cost-effective measures
- Reduce potential vulnerabilities
- Improve project and program resilience



- **Approach:**

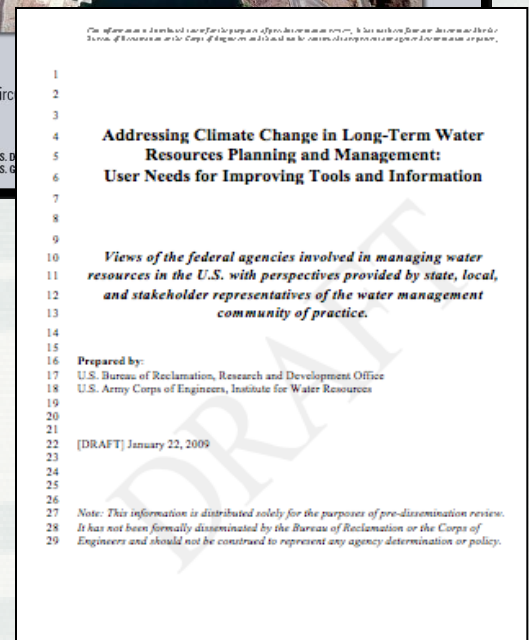
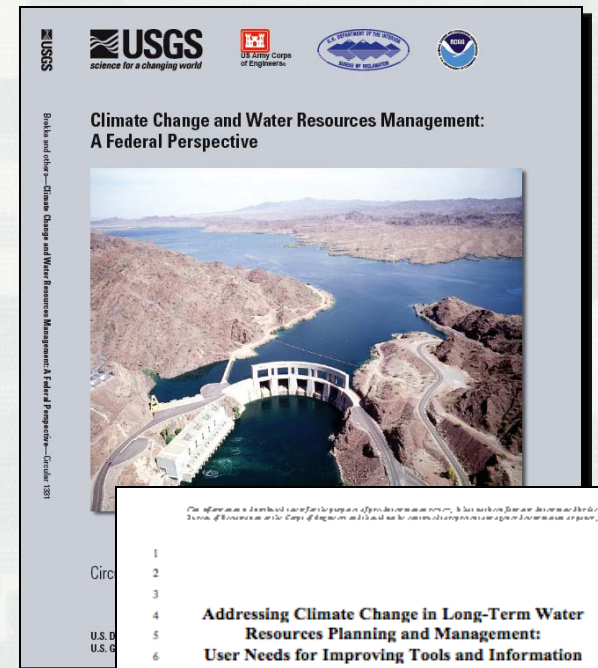
- Collaborative: include science agencies in developing policies; provide guidance for best available science
- Parallel rather than sequential
- Phased to begin with areas of smaller uncertainty
- Pilot-test and refine



Preparing for Climate Change

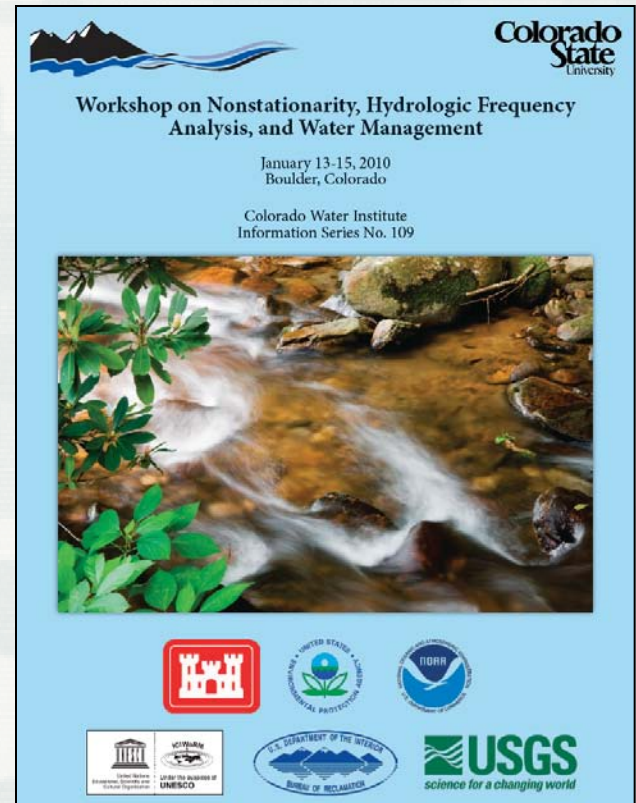
- **Defining user needs:**

- **USGS Circular 1331 *Climate Change and Water Resources Management — A Federal Perspective*** (Feb 2009)
- **Decadal to multi-decadal decisions: *Addressing Climate Change in Long-Term Water Resources Planning and Management: User Needs for Improving Tools and Information*** (summer 2010)
- **Sub-hourly to decadal decisions: *Use of Weather and Climate Forecasts in Near Term Federal Water Resources Management: Current Capabilities, Required Capabilities, and Gaps*** (In progress, expected winter 2010-11)



Preparing for Climate Change

- **Addressing user needs:**
 - **Nonstationarity workshop:**
Nonstationarity, Hydrologic Frequency Analysis, and Water Management (Jan 2010)
 - **Proceedings** (summer 2010)
 - **Special issue, *Journal of American Water Resources Association*** (16 papers)
 - **Provide peer-reviewed basis for consistent policies**
 - **Science agency responses to user needs docs** (2010-2011)



In Progress: Vulnerability Assessments

- **Build on existing tools:**
 - U.S. Geological Survey Coastal Vulnerability Index (CVI)
 - U.S. Forest Service Fire Management System
 - EPA Regional Vulnerability Assessment Tool
 - USACE Watershed Investment Decision Tool
- **Build on existing data:**
 - Program for Climate Model Diagnostics and Intercomparison (PCMDI) archive
 - Study for FEMA
- **Consider where climate is changing fastest or where changes or consequences are most severe**
- **Help prioritize adaptation actions**



Dredging & Disposal Issues

Not just "Spoil"

- **More demand for beneficial use of dredged material**
 - **Scarcity of disposal sites**
 - **Contaminated sediments**
 - **Dredging "windows" for protection of species**
- **Need for tools to predict shoaling, dredging requirements**
 - **Dredge Availability**
 - **Dwindling Operation & Maintenance Budget**

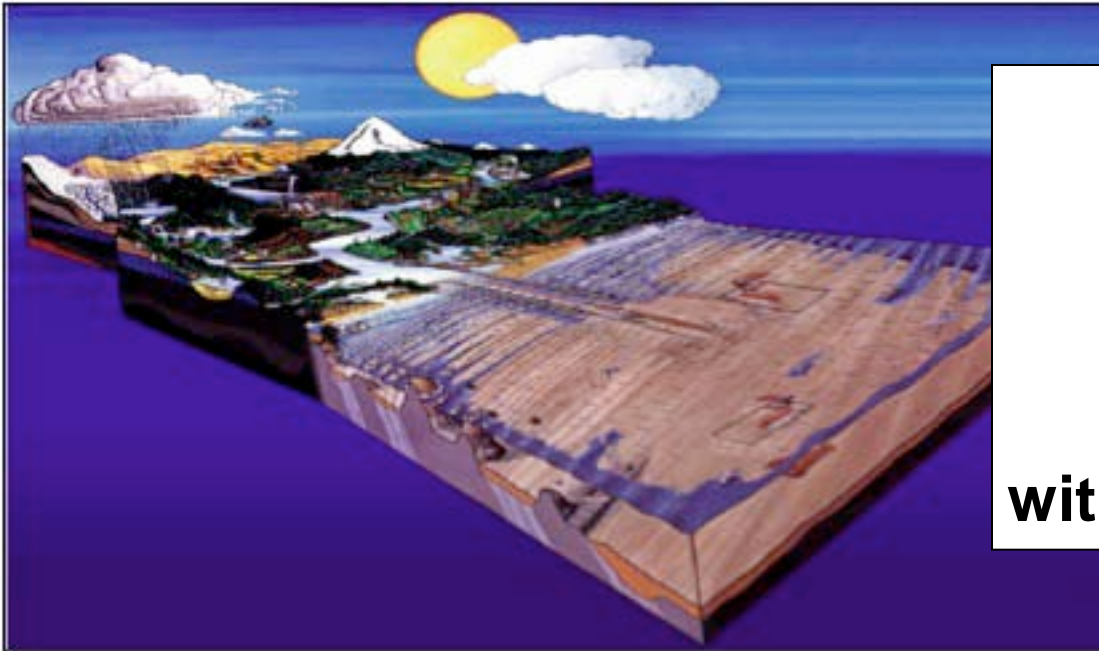
Beneficial Use of Dredged Material



- Prior to 1970, primarily to build/expand land for airports, ports, residential, or commercial development.
- Now used for many more projects and purposes:
 - Fish & wildlife habitat
 - Wetland restoration
 - Beach nourishment
 - Capping
 - Replacement fill
 - Topsoil
 - Decorative landscaping products
 - Fisheries improvement
 - Aquaculture
 - Berm creation
 - Land improvement
 - Shore protection
 - Construction materials
- Beneficial use may make traditional disposal of dredged material unnecessary, or at least reduce level of disposal.



Regional Sediment Management



A systems-based approach for collaboratively solving sediment-related issues within a regional strategy

- **Managing sediments & projects through a systems based approach**
 - **Managing sediment resources as a regional scale resource**
- **Supporting sustainable navigation, flood, storm damage reduction, environmental stewardship, and dredging practices**



Corps-Funded Projects under Estuarine Restoration Act 2000



We're All In This Together!

Congress

Other Federal Agencies

Non-governmental organizations

Administration

Private firms

Corps

Academic institutions

States

R&D community

Tribes

County & local governments

Stakeholders

