



# Integrated Water Resources Science and Services (IWRSS)

Collaborative Science, Services and Tools to Support  
Integrated and Adaptive Water Resources Management

April, 2011



# Outline

- Water Resources Stakeholder Needs
- Federal Agency Responsibilities
- IWRSS Consortium
  - ✓ Business Model
  - ✓ Strategy and Products
  - ✓ National Water Center
- Operating Concept
- Governance Structure
- Status and Schedule

# Stakeholder Needs Assessment

*"Building Strong Collaborative Relationships for a Sustainable Water Resources Future" (2010)*



US Army Corps  
of Engineers®

**50 States**

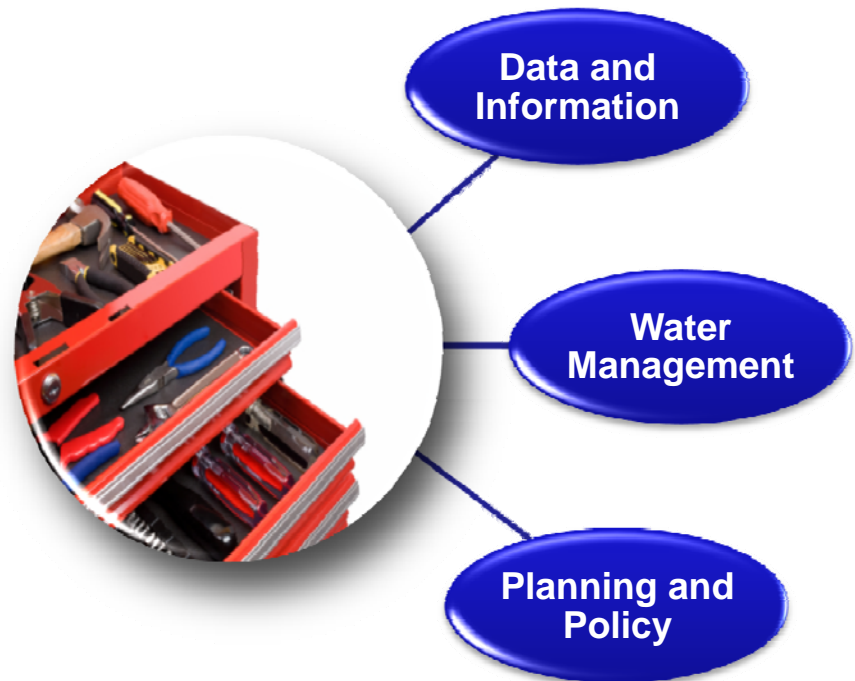
**+**

**12 Federal Agencies**

Recommended the NOAA-led  
**Integrated Water Resources  
Science and Services (IWRSS)**  
to prototype the Federal Tool Box

Broadly recognized need for an integrative  
“Federal Tool Box”

- ✓ Streamline access to Federal water resource capabilities
- ✓ Share technology, information, models, best practices



US Army Corps  
of Engineers®







SALT  
COMMERCE  
DEPARTMENT  
WATER



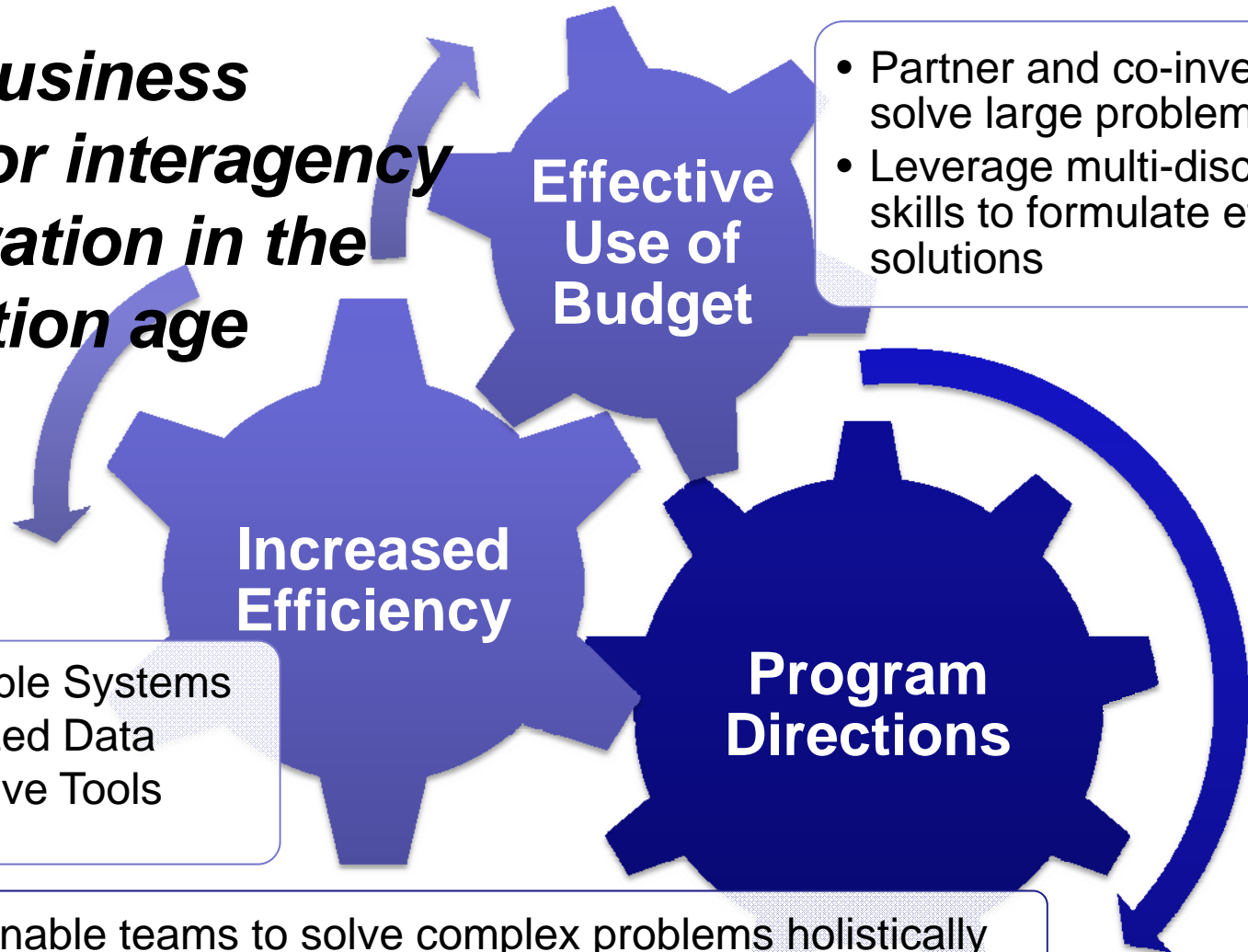
FRESH  
INTERIOR  
DEPARTMENT  
WATER

## 24 Federal Agencies have roles in fresh water:

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

# Integrated Water Resources Science and Services (IWRSS)

***A new business model for interagency collaboration in the information age***



- Partner and co-invest to solve large problems
- Leverage multi-disciplinary skills to formulate effective solutions

- Interoperable Systems
- Standardized Data
- Collaborative Tools

- Enable teams to solve complex problems holistically
- Understand decision impacts across agencies

# Integrated Water Resources Science and Services

## Five-Point Strategy

### Innovative Federal Consortium

- New business model for interagency collaboration
- Leverage investments
- Common Operating Picture

### In-Region Stakeholder Participation

- Deployment of regional service agents
- Strengthen participatory processes
- Develop social capital

### New Digital Information Products

- Summit to Sea
- Floods to Droughts
- Past, Present and Future

### Single Portal for Water Information

- One-stop shopping
- Federal Toolbox for forecasts, data, maps, policies, programs

### National Water Center

- New bricks and mortar facility
- Synthesis and Integration
- Multi-agency staffing

# New Digital Information Products

Local Information (<1 km<sup>2</sup>)

## Summit-to-Sea

Precipitation

Snowpack

Soil Moisture

Evapotranspiration

Groundwater

River flow

Surface Storage

Water Quality

Watershed – to – National Information

Past

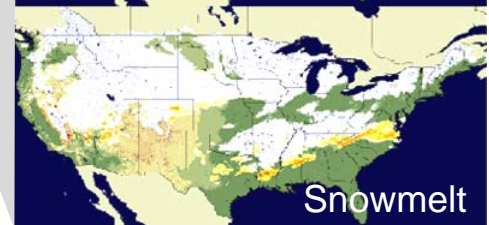
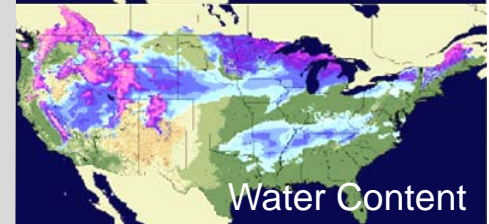
Water Census

Present

IWRSS

Future

## Pilot Products - Snowpack



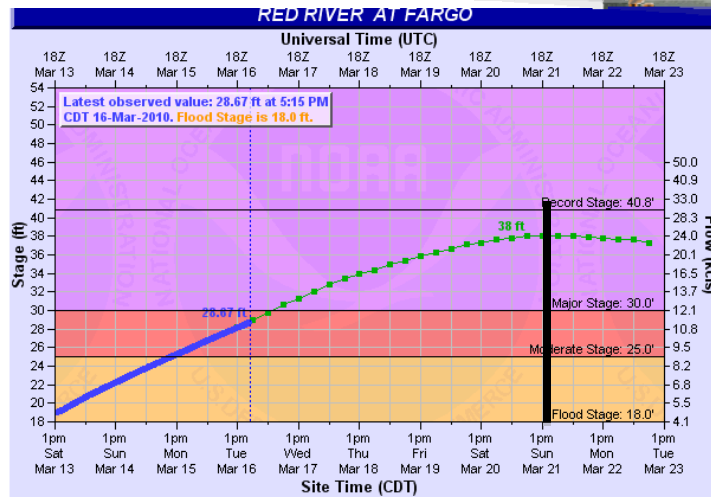
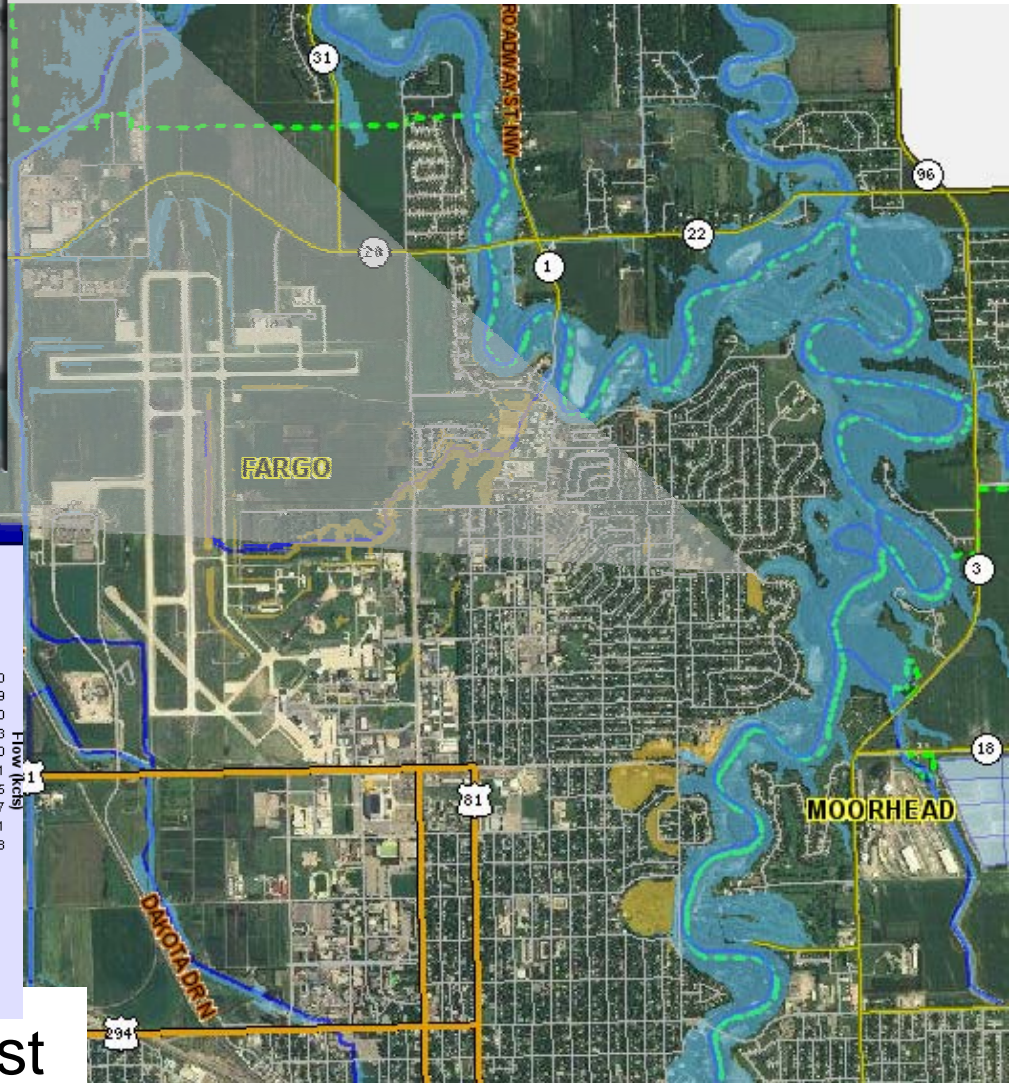
[www.nohrsc.noaa.gov](http://www.nohrsc.noaa.gov)



# New Digital Information Products



## Dynamic Flood Inundation Forecast



## Conventional Flood Forecast



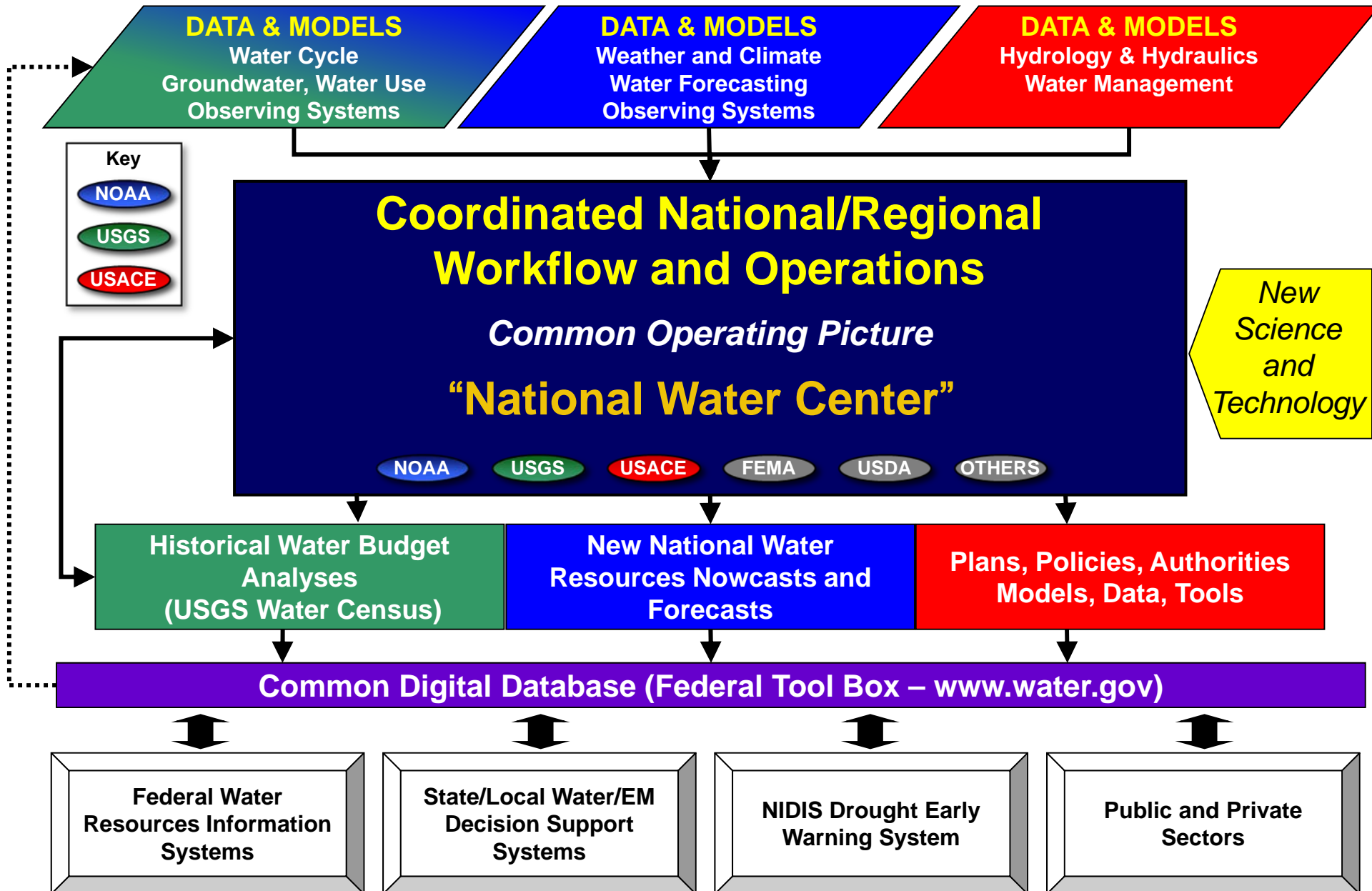
# Single Portal for Water Information



- One-stop shopping for federal water information, data, policies, tools
- Integrated multi-agency information
- Simplified access



# Straw National Water Center Concept (ca. 2009)



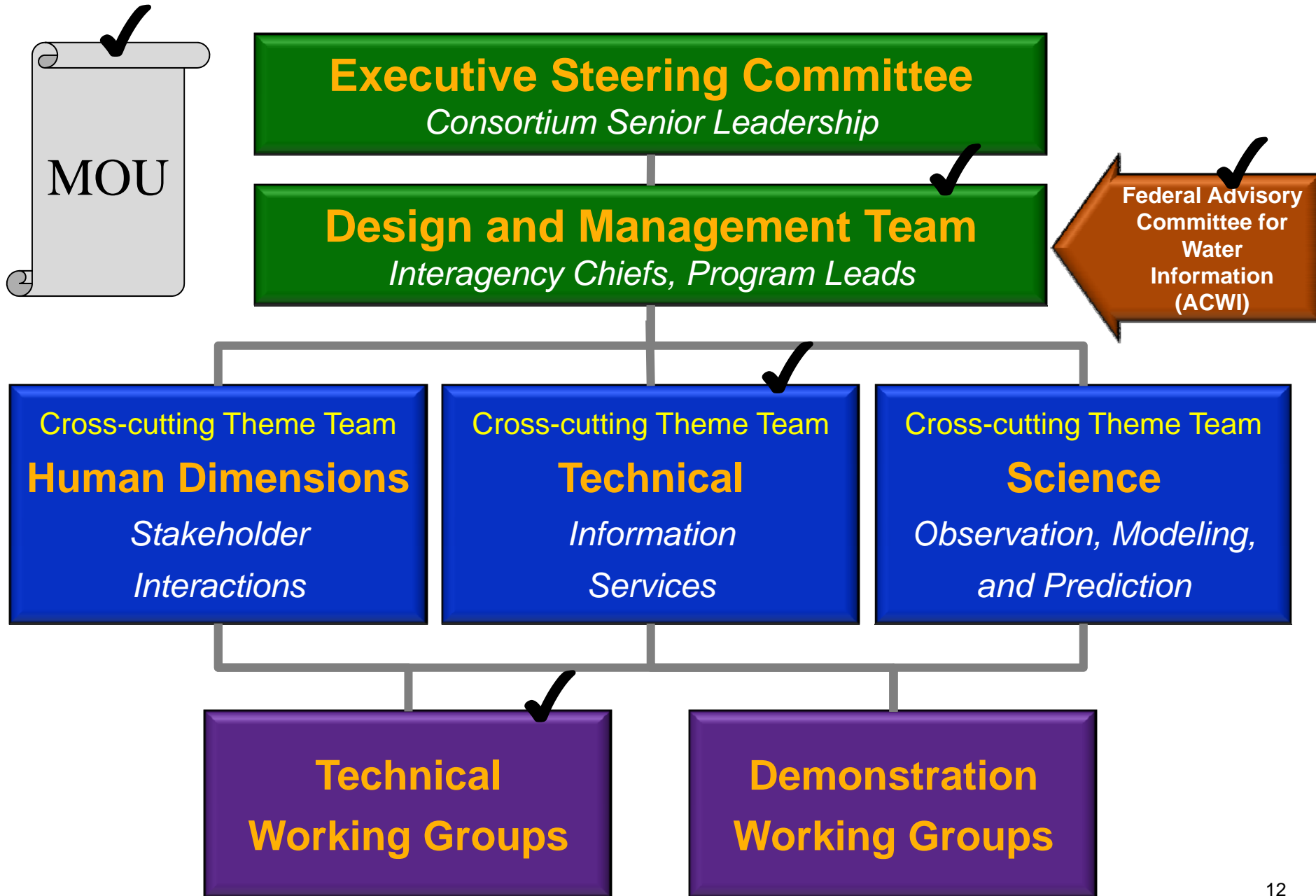
# National Water Center



- NOAA is constructing the IWRSS National Water Center (NWC) at the University of Alabama, Tuscaloosa.
  - 58,000 SF facility (full occupancy = 200)
  - operations center for water analysis, forecasting and decision support
  - applied water resources research and development center
  - geo-intelligence laboratory
  - distance-learning center
- Groundbreaking is expected in early FY12, completion in FY13



# IWRSS Governance Structure



# Status and Schedule

## Tri-Agency Overarching Memorandum of Understanding Signing Ceremony

- ✓ NOAA, USGS, USACE

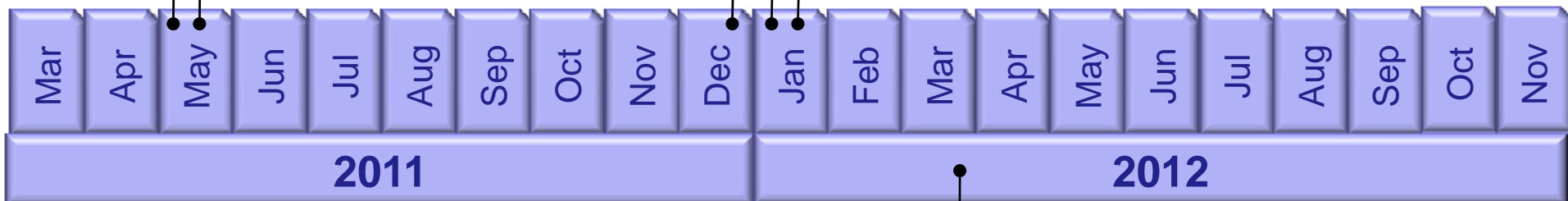
## Establish First Two Tri-Agency Task Teams

- ✓ System Interoperability and Data Synchronization
- ✓ National Flood Inundation Mapping Services

## First Two Tri-Agency Task Teams Complete Initial Plans

## Groundbreaking for National Water Center

## Initiate Development Projects



Expand IWRSS to Include Additional Agencies

