

**The National Integrated Drought Information System**

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**National Integrated Drought Information System**

*"No systematic collection and analysis of social, environmental, and economic data focused on the impacts of drought within the United States exists today"* Western Governors Association 2004

*Public Law 109-430 (The NIDIS Act 2006)*

**"Enable the Nation to move from a reactive to a more proactive approach to managing drought risks and impacts"**

*"better informed and more timely drought-related decisions leading to reduced impacts and costs"*

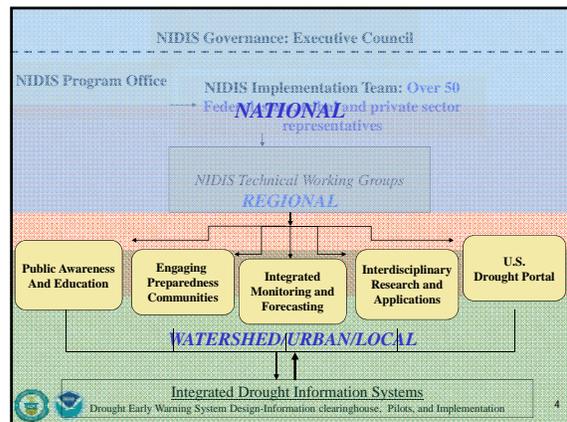
([www.drought.gov](http://www.drought.gov))

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**NIDIS Components**

1. NIDIS Office (PSD/CPO..)
2. U.S. Drought Portal (NCD, NDMC, RCCs..)
3. Climate Test Beds/Drought
  - Integrating data and forecasts (CPC..)
4. Coping with Drought
  - Applications and Decision support Research (RISAs, SARP, TRACS..)
5. NIDIS Early Warning Information Systems
  - Design, Prototyping, Implementation (multi-agency, multi-state)

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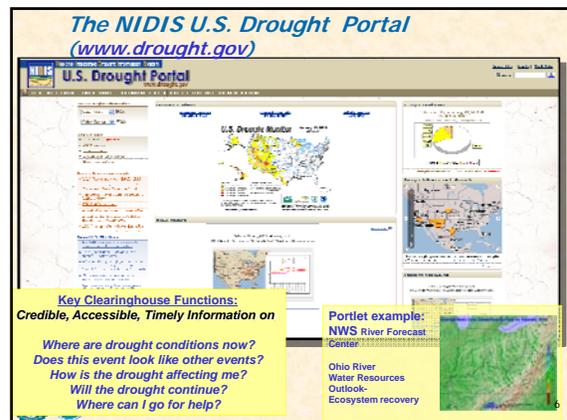
**National Level**

**NIDIS Knowledge Assessment Workshops (examples)**

- Remote Sensing Contributions to Drought Monitoring, February, 2008, Boulder- NOAA, USGS, NASA, USDA, universities, state climatologists, state-local drought officials
- National Status of Drought Early Warning Systems, June 2008, Kansas City-NOAA, USGS, USAID, USDA, USACE, NASA, tribes, universities, state government, water managers
- Drought, Climate change and Early Warning on Western Tribal Lands June 09- Rio Grande, Colorado, Columbia Missouri Basin tribes

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**The NIDIS U.S. Drought Portal**  
([www.drought.gov](http://www.drought.gov))



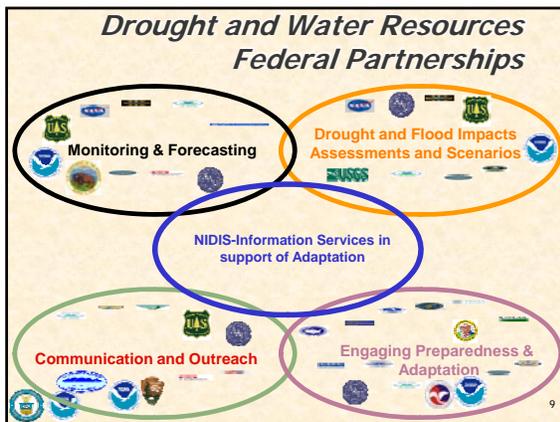
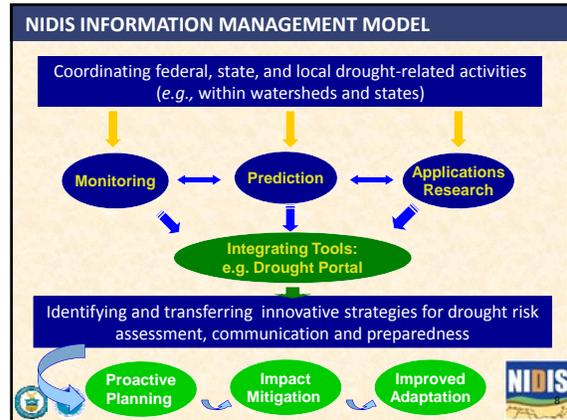
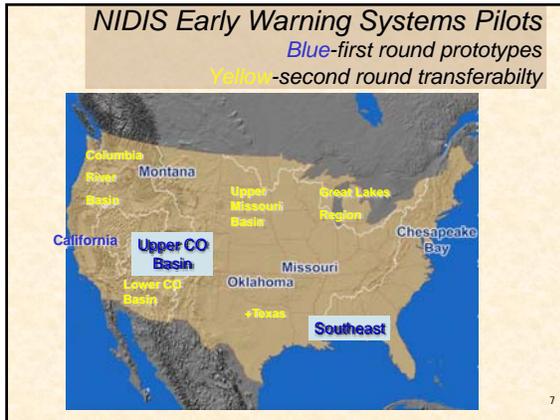
**Key Clearinghouse Functions:**  
Credible, Accessible, Timely Information on

- Where are drought conditions now?
- Does this event look like other events?
- How is the drought affecting me?
- Will the drought continue?
- Where can I go for help?

**Portlet example:**  
NWS River Forecast Center

Ohio River Water Resources Outlook: Ecosystem recovery

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### Upper Colorado River Basin Pilot

Orchestrating the portfolio of interagency, state and local resources to address user needs

- Categories of drought information users & scales of analysis
  - Upper Basin down to Lake Mead
    - Coordinated reservoir operations: Low flow shortage triggering criteria (Power/Water)
  - Sub-basin
    - Intra- and inter-basin transfers; Front ranges urban-agriculture-Changing water demand during drought
    - Ecosystem health/services including recreation and tourism impacts

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### Working with States: Coordination with Colorado Water Conservation Board

- Revision of the state plan to meet drought requirements of the State Natural Hazard Mitigation Plan, as well as FEMA and EMAP
- Development of indices that incorporate current surface water conditions and a forecast component
- Evaluate trigger points and the responses that they activate
- NRCS Revised Surface Water Supply Index (SWSI) for Colorado
- Coordination among drought plans of adjacent states under the auspices of NIDIS

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### Drought and Water Resources: Beyond The Impacts Report

Engaging communities, resource managers, science experts as climate changes

Drought information needs and usability: Entry points for proactive Planning-triggers and indicators

Enabling resilience: Best available drought risk & water supply information to inform infrastructure development and ongoing adaptation

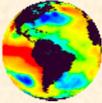
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## NIDIS VISION and GOALS



**“If we don’t get NIDIS right, we can’t get a national climate service right!”**

*Kelly Redmond (Western Regional Climate Center)  
6th Drought Monitor Forum, Austin, Tx Oct. 7-8, 2009*



**Lessons learned from NIDIS are informing the design and implementation of national climate services**


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## Where NOAA is headed with climate services








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### NOAA Envisions: An Informed Society Anticipating and Responding to Climate and its Impacts

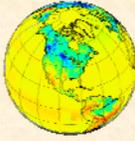
- ✓ Water restriction days are few and far between because a community uses reliable information about the likelihood of extreme droughts for planning.
- ✓ Homes powered by efficient, reliable renewable energy sources, supported by short and long-term environmental forecasts such as surface wind forecasts for wind turbines.
- ✓ A private sector climate industry spawning new jobs and a green economy built upon national climate service products and information, much like the private sector weather industry partnership with the national weather service
- ✓ Enhanced national security through the use of reliable climate information that communicates the risks of impacts on food, water, health, coastal sea level, and other critical resources

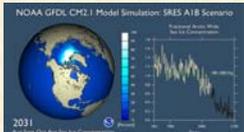

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### Meeting the rising demand for climate services

*“If America is to avoid the most damaging effects of climate change, we have to first understand it – and that is where the Department of Commerce is instrumental.”*  
- Secretary of Commerce, Gary Locke

1. Existing framework is not optimized for climate service delivery.
2. To meet climate service demands:
  - Connect users to existing climate products and services
  - Provide understandable, usable and accessible climate information
  - Actively engage users in service development.
3. Maintain observing, research, modeling and assessments, while delivering services
4. Promoting Collaborative Partnerships




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## NOAA’s role in national climate services

**International:**

- All nations must commit to developing international climate services, and continue on the progress made at the WCC-3.
- NOAA is internationally recognized as advancing the state of climate knowledge, for leadership in GEOS, and is viewed as critical to developing regional scale impact assessments

**National:**

- All agencies must consider climate change impacts as it relates to their mission areas, and commit to work within a cooperative and collaborative interagency strategy.
- NOAA provides core capabilities to national climate services through NOAA’s decades of expertise in observing, monitoring, research, modeling, assessments, and existing service delivery structures.

**Regional:**

- All agencies must commit to a **Regional Climate Service Enterprise** to ensure users have the climate information they need.
- NOAA’s regional service capacity, with over two centuries of experience, is delivering services today through public and private partnerships, and is ready to engage in the national climate service strategy.


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### NOAA commits to providing critical assets in science and service to a Federal partnership

**Federal Response to the nation’s climate challenges**

Partnerships & Collaboration


**Information Delivery and Decision Support**  
NOAA uses its national and regional infrastructure to deliver climate services today

**Assessments of Climate Change and Impacts**  
Leader in national and regional climate assessments  
Over 70% of federal IPCC AR4 WG1 authors were from NOAA

**Climate Change Research and Modeling**  
Internationally recognized global climate models from NOAA

**Climate Observations and Monitoring**  
Operates over 90 observation and monitoring systems  
NOAA is mandated to monitor and provide access to climate data & information


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