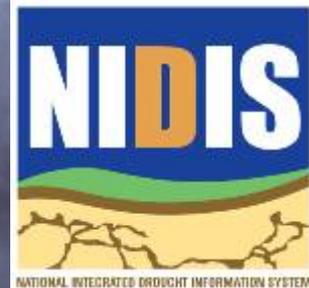


NIDIS VISION and GOALS

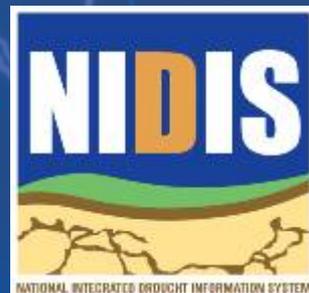


“A dynamic and accessible drought information system that provides users with the ability to determine the potential impacts of drought and the associated risks they bring, and the decision support tools needed to better prepare for and mitigate the effects of drought.” WGA/PL109-430 (2006)

NIDIS:

A prototype for information services in support of adaptation as climate changes (from variation through change)

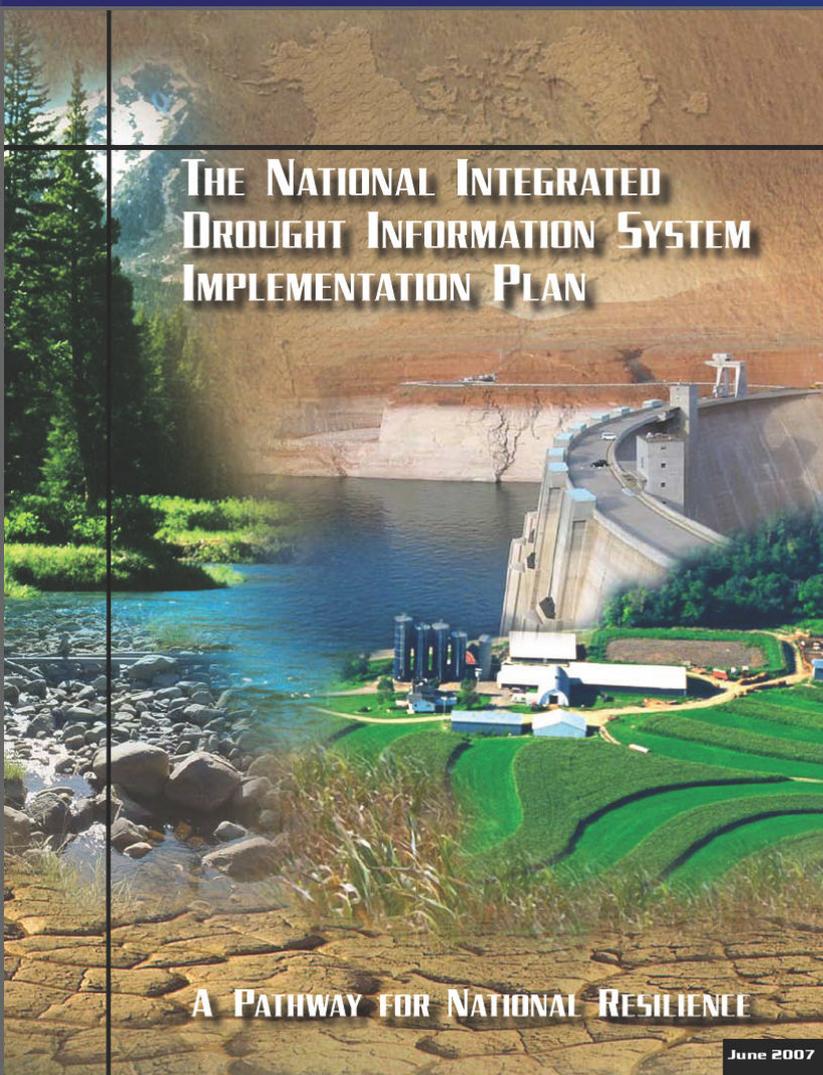
www.drought.gov



PL 109-430

www.drought.gov

**NIDIS Implementation Team
affiliations (to date):** →



Western Governors Association **New?:**

NOAA

USGS

Dept. of Interior (BoR)

U.S. Army Corps of Engineers

USDA (NRCS, ARS, CSREES)

NASA

Indigenous Waters Network

Regional Climate Centers

National Drought Mitigation Center

Association of State Climatologists

Cornell University

New Mexico State University

Rutgers University

South Dakota State University

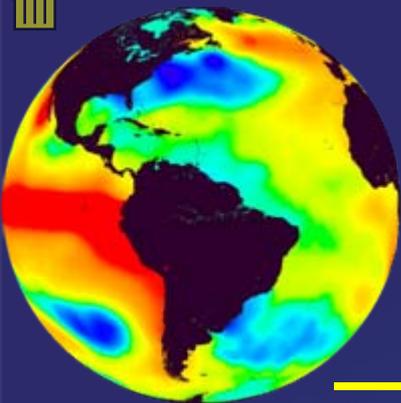
University of Oklahoma

University of South Carolina

University of Washington

The Weather Channel

Duke Power,
U. Georgia



Global Climatic-Drought Contributors: A continuum

— SCALES OF DROUGHT —

Heat Waves

Floods

Storm Track Variations

Madden-Julian
Oscillation

El Niño-Southern
Oscillation

Decadal Variability

Solar Variability

Deep Ocean

Circulation

Greenhouse Gases

30 | 1
DAYS | SEASON

3 | 10
YEARS | YEARS

30 | 100
YEARS | YEARS

SHORT-TERM

INTERANNUAL

DECADE-TO-CENTURY

Droughts span a large range of temporal and spatial scales

Droughts are driven by a number of complex variables

Drought Information: NIDIS Early Warning (sub)Systems

- **Monitoring and forecasting subsystem**

National, regional and local levels

- **Risk assessment sub-system**

Enable disaster management authorities to generate risk and impact scenarios, trigger and tools development

- **Preparedness sub-system**

Outline and inform and coordinate actions required to reduce the loss and damage expected from an impending event and for post-event planning

NIDIS Assessments: National and Regional/large watersheds

- Situation Assessments:

_____ Critical Issues, players, Decision criteria, timing and impacts characteristics

- Data streams and cross-timescale prediction: Knowledge/gap assessments

- Services Assessments

- Management Assessments

- Portal development and updating

U.S. Drought Portal Home Page www.drought.gov



The screenshot shows the homepage of the National Integrated Drought Information System (NIDIS). At the top, there is a navigation bar with the NIDIS logo on the left and a search bar on the right. Below the navigation bar, there are several main content areas:

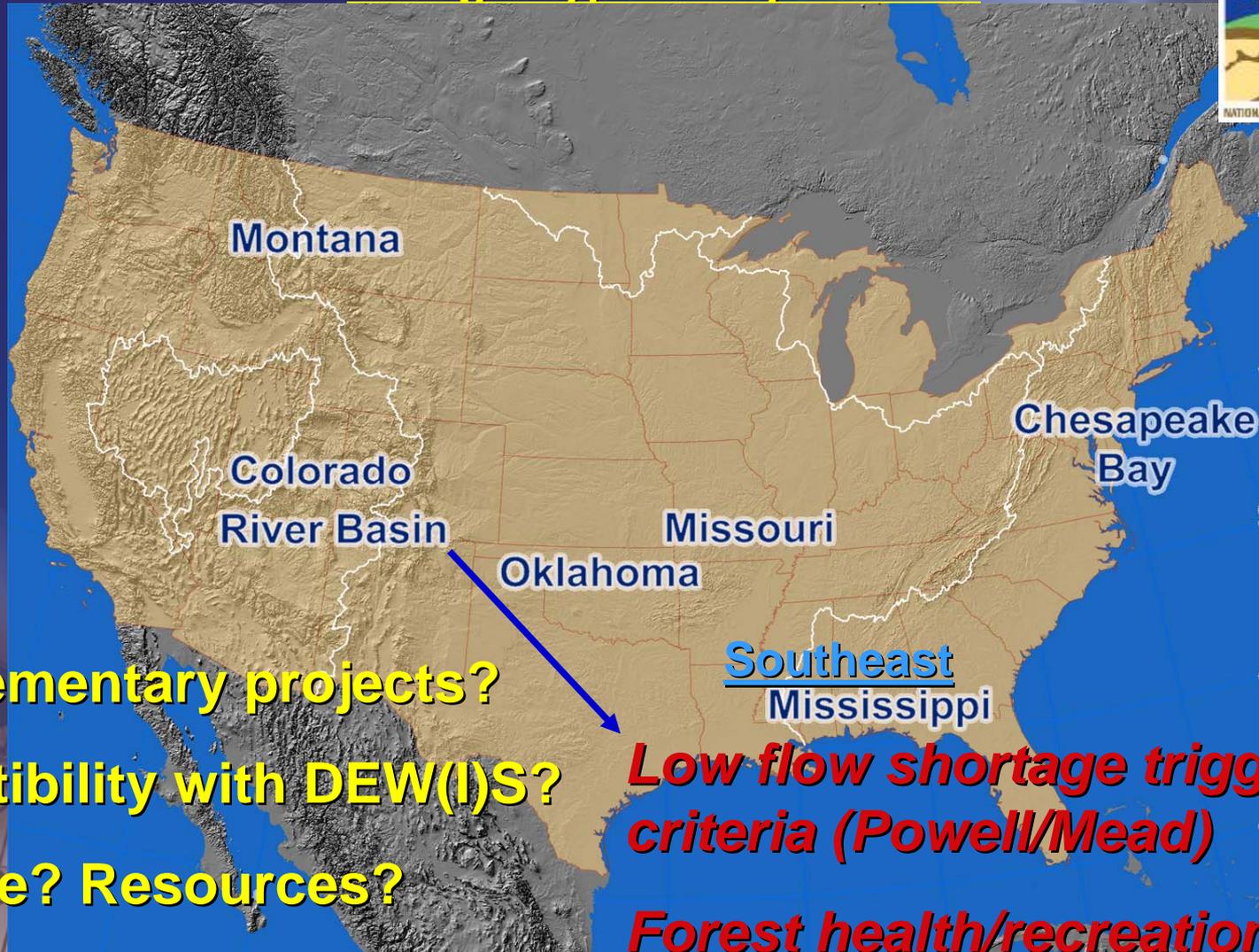
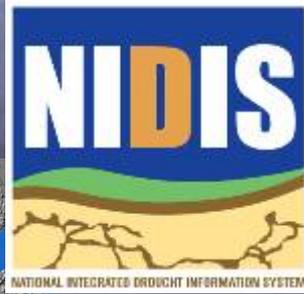
- Current Drought:** A map of the United States showing drought conditions. Text below the map discusses the challenges of tracking droughts and the need for a Drought Monitor.
- Seasonal Forecast:** A map of the United States showing seasonal drought forecasts. Text discusses the dry season and prospects for relief in California and the Southwest.
- Drought Impact:** A map of the United States showing drought impacts. Text discusses the National Drought Mitigation Center's Drought Impact Reporter and the challenges of tracking drought impacts.
- Media Resources:** A list of links including Updates, Background, Story Ideas, Specialist by Area, Recent Coverage, Pictures, Presentations, and Video Clips.
- NIDIS Announcements:** A section for announcements with three example entries, each with a date and a short paragraph of text.

Key Clearinghouse Functions:
Credibility, Legitimacy, Accessibility, Reliability
(timeliness etc.)

to answer

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?

NIDIS DEW(I)S Pilots: Drought type-Analysis units



Complementary projects?

Compatibility with DEW(I)S?

Timeline? Resources?

Outcomes? Sustainability?

Transferability?

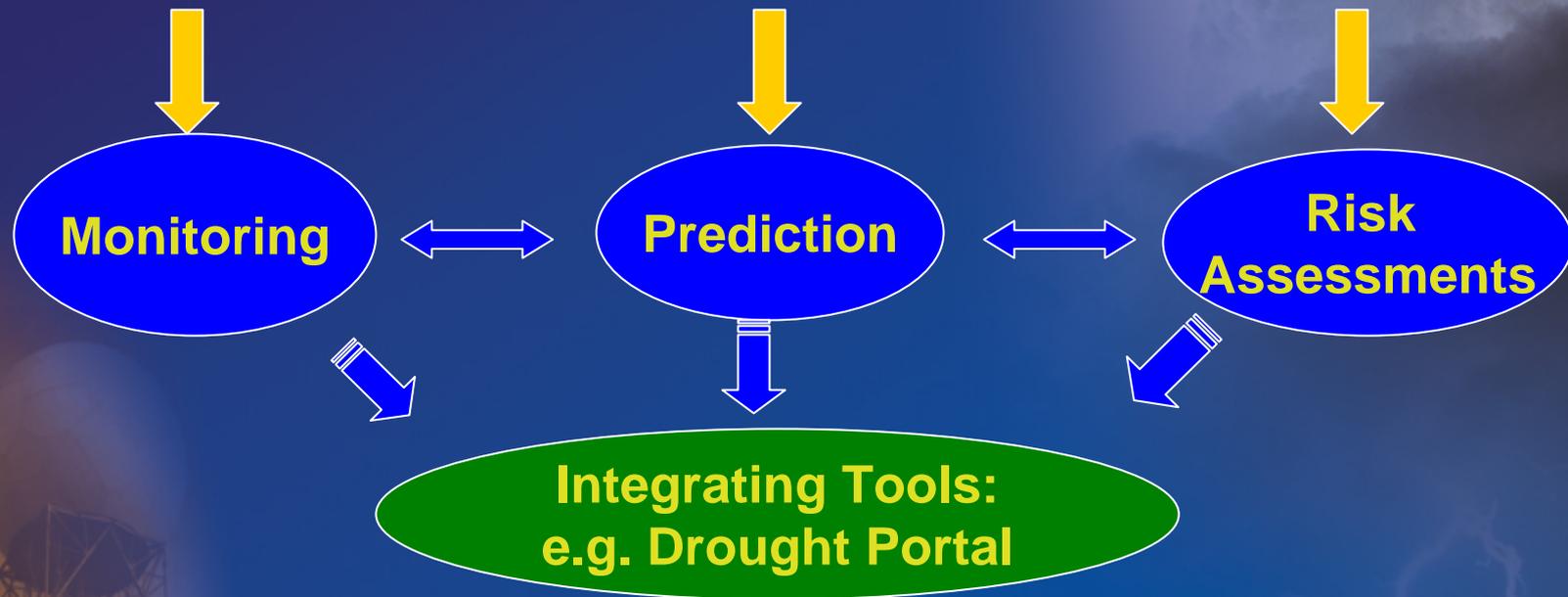
Low flow shortage triggering criteria (Powell/Mead)

Forest health/recreation/tribal lands

Urban-Interbasin transfers

NIDIS Process Model: Implementing NIDIS Pilots

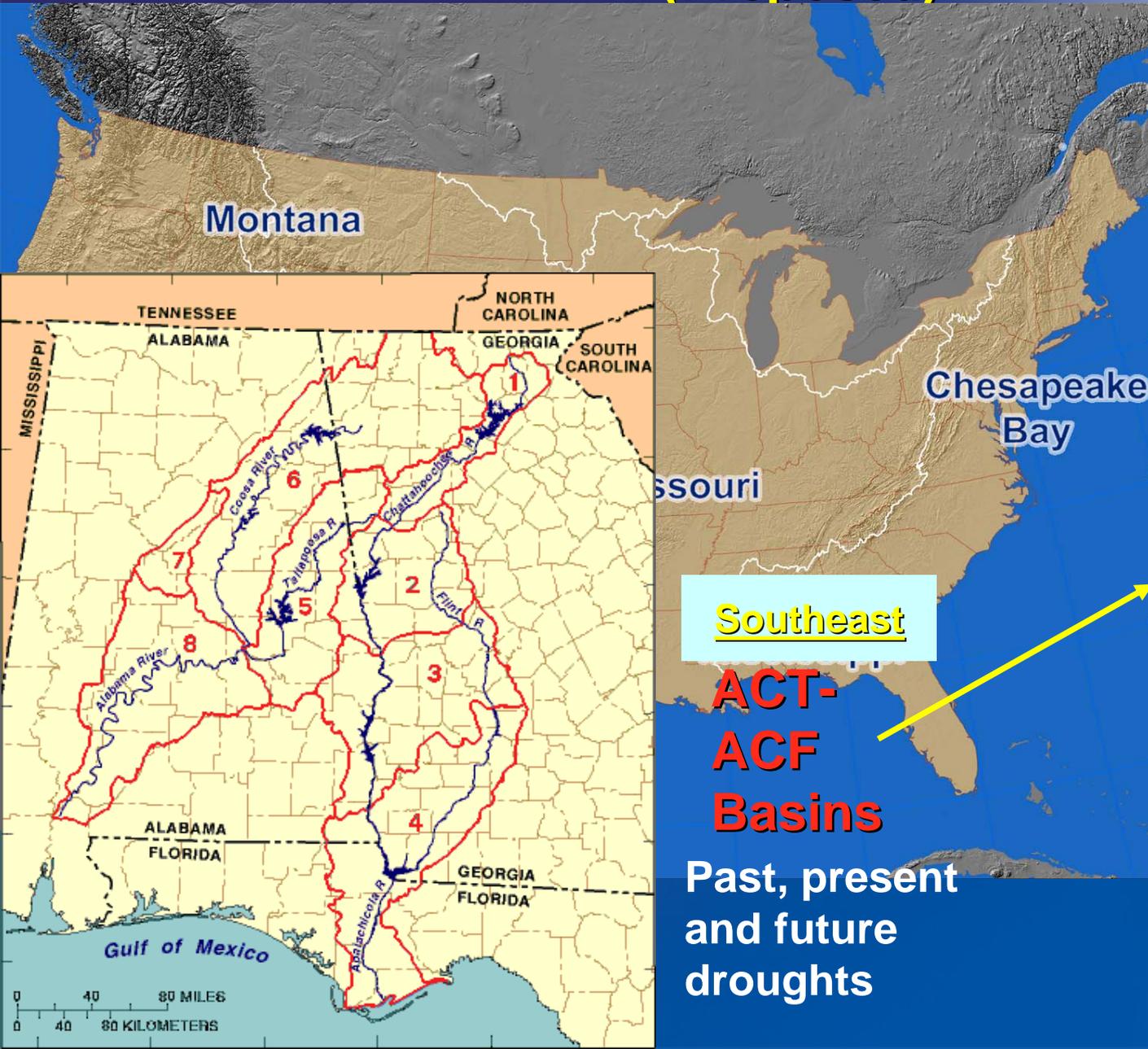
Coordinating federal, state, and local drought-related activities (e.g., within watersheds and states)



Identifying and diffusing innovative strategies for drought risk assessment, communication and preparedness



NIDIS Drought Early Warning Systems (Proposed)



Water supply & low flow:

Navigation

Energy

Urban and agricultural

Coastal-
Nearshore
impacts

Southeast

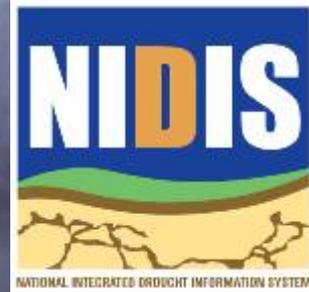
**ACT-
ACF
Basins**

Past, present
and future
droughts



- **Satellite/soil moisture monitoring (Feb. 6-7, 2008) Boulder CO)**
- **Coordinating Drought Information Services: The Southeast (April, Peachtree City. GA)**
- **Climate-drought projections (seasonal to change) for large Western Watersheds: Ongoing Whitepaper (May 2008)**
- **National Status of Drought Early Warning Systems (June, , Kansas City)**
- **Initiate Colorado DEWIS Pilot Salt Lake City, September 2008**
- **CLIVAR-Drought Report to NIDIS October Lincoln, NB**
- **Several sessions at Professional and stakeholder associations**
- **NIDIS Exec Council development, NPIT development**

NIDIS DEW(I)S Pilots: Drought type-Analysis units



**Complementary projects? Timeline? Resources?
Outcomes? Sustainability? Transferability?**

NIDIS Early Warning (sub)Systems

- Communication and public awareness sub-system

Communication/delivery of timely information on impending events, potential risk scenarios and preparedness strategies to vulnerable groups

- Drought Portal (incl. data assimilation visualization)

- Evaluation and feedback sub-system

Scale: Who are the actors? What are their perspectives and needs? What are the entry points for decision-making? What decisions are made? How can this (NIDIS) process be improved?

Timescales



Indeterminate

Flows necessary to protect endangered species

Long-term

Inter-basin allocations and those allocations among states

Decade

Upper Basin delivery obligations

Annual

Lake Powell-Lake Mead equalization storage

Seasonal

Peak heating and cooling months

Daily-monthly

Flood control operations, Kanab amber snail impacts

Hourly

Western Area Power Administration's power generation decisions

Household-municipal-county

Tribal/State

Regional

National

Global

Multiple competing values
Multiple, competing objectives

