



SCIPP Update & Lessons Learned

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Southern Climate Impacts Planning Program

Oklahoma Climatological Survey

Southern Climate Impacts Planning Program (SCIPP)

Multi-level Partnership:

- State climate offices of Oklahoma and Louisiana
- Southern Regional Climate Center
- National Weather Center

Major Program Focus:

- Help communities plan and prepare for extreme events

Other Emerging Foci:

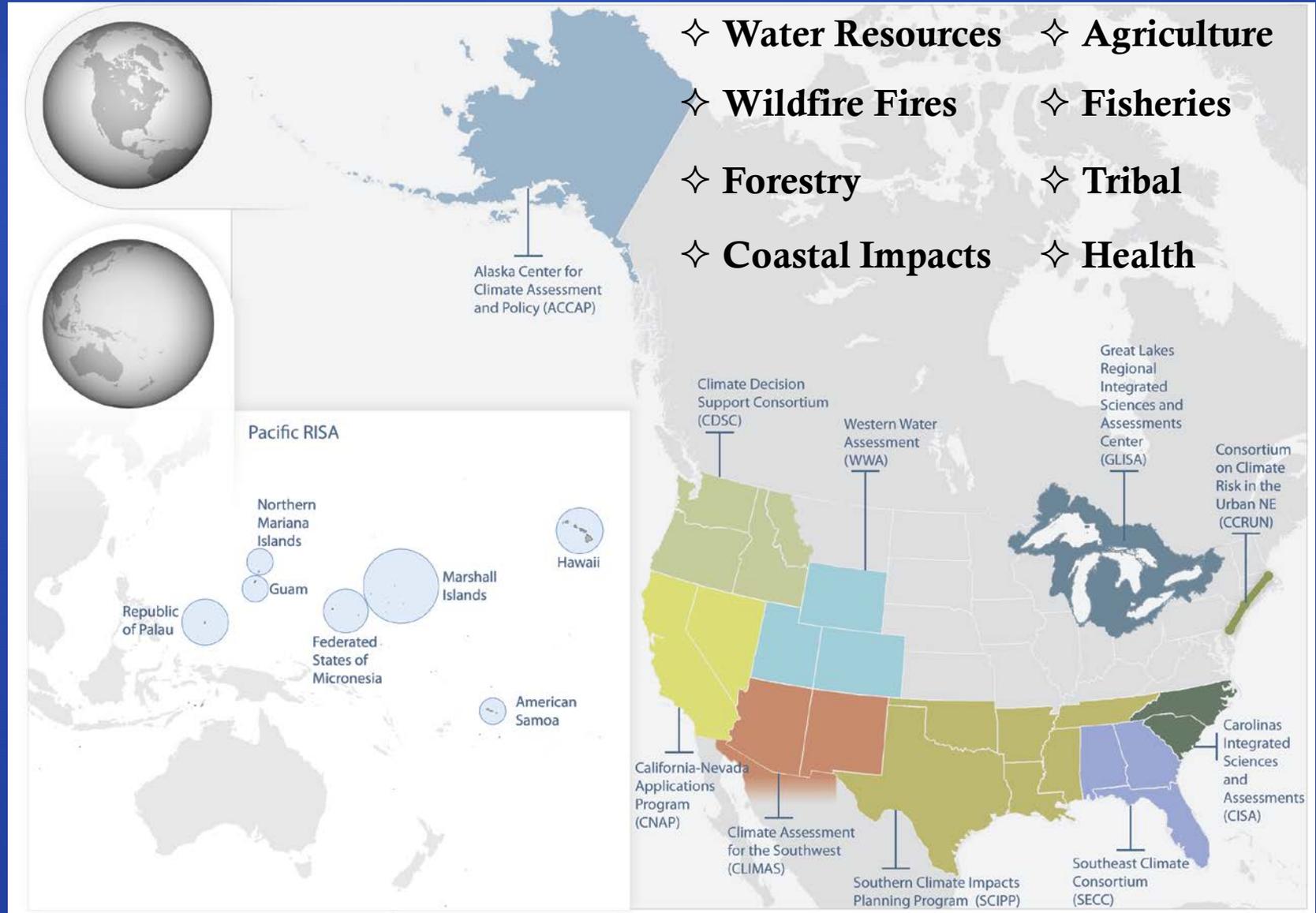
- Water resources
- Coastal impacts
- Climate adaptation

Misc:

- Region matches domain of the Southern Regional Climate Center



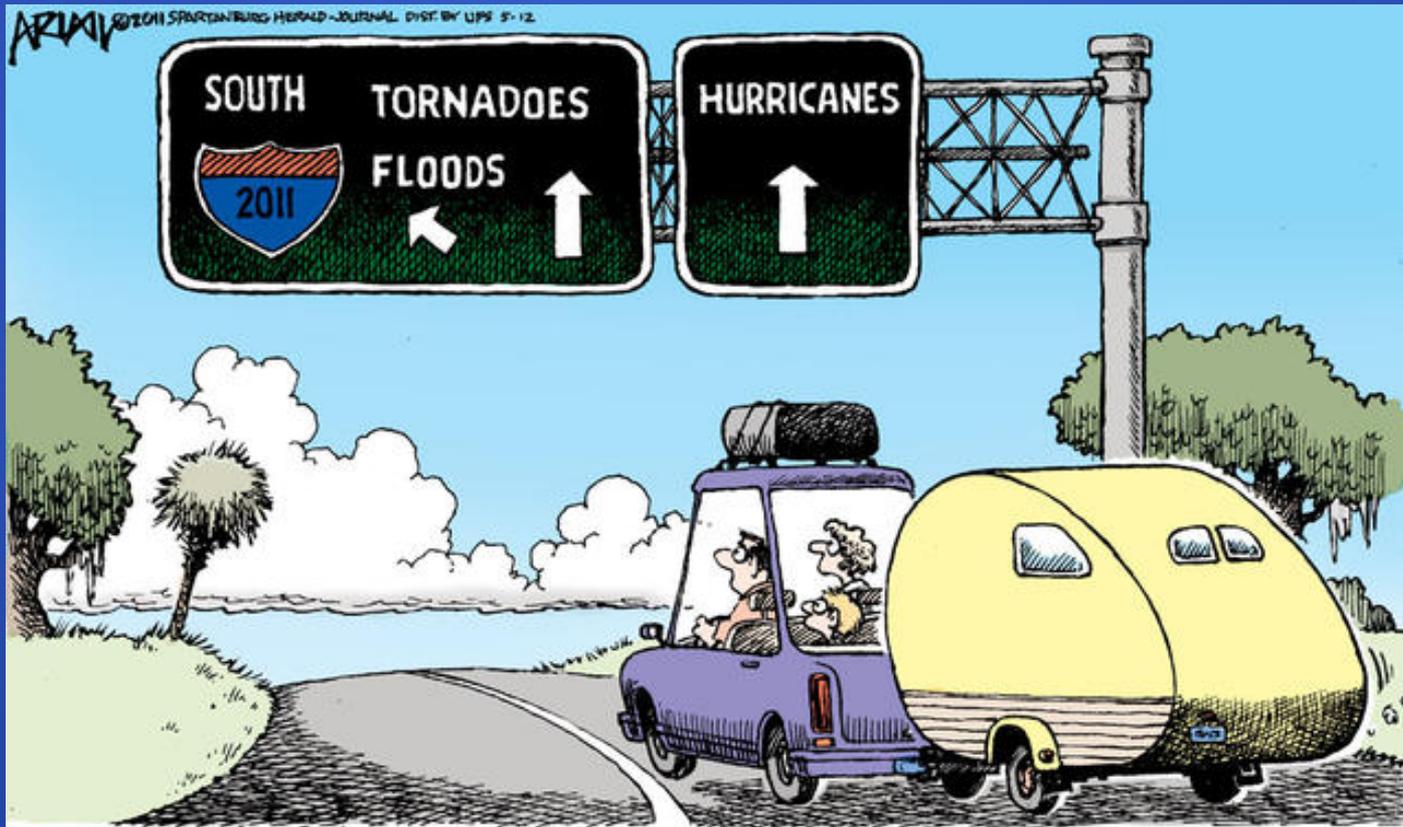
Regional Integrated Sciences and Assessments (RISA)



SCIPP Goals

- Increase the awareness of and preparedness for all climate hazards in the Southern U.S.
- Partner with and engage community level stakeholders to assess information needs and decision-making processes
- Develop an online visualization tool to assist with local level hazard mitigation planning
- Promote considerations of climate variability and climate change in long-term community planning
- Provide general education and outreach

Drought in a Multi-Hazard Context



Recent Declared Disasters in Oklahoma



Tornado (Apr 11)



Storms (Jun 10)



Tornado (May 10)



Winter Storm (Jan 10)



Winter Storm (Dec 09)



Wildfires (Apr 09)



Ice Storm (Jan 09)



Tornadoes (Feb 09)



Storms (Sep 08)



Drought (Julo8)



Floods (Jun 08)



Tornado (May 08)

Texas County, Oklahoma



Photo: Von Castor & Fox23 Tulsa



Photo: NWS-Tulsa



Photo: Kevin Burns

Working With Communities

Assess Needs

- Local and regional workshops
- Surveys and interviews with key individuals
- Creating a documents archive

Engage selected communities

- Test tools
- Learn metrics of what communities use to assess performance

Local and State Planning

- Groups like state hazard mitigation teams
- Identify requirements

General education and outreach

Work with groups to build 'knowledge communities' that can be resources for relevant information for local planners

Building Knowledge Communities

Intermediary groups that help translate scientific and technical information into formats more readily accessible to policy-makers

- Collect information and process into alternatives
- “science integrators”

Integrate “inventories of information” in a shared analytic framework

- Structure information into contextual evidence for decision-makers
- Relating findings to issues

Problems and solutions are **influenced as much by the way information is shared** as they are by objective criteria

- Shared knowledge requires trust and reciprocity

Building a drought knowledge community

Oklahoma's Drought Community

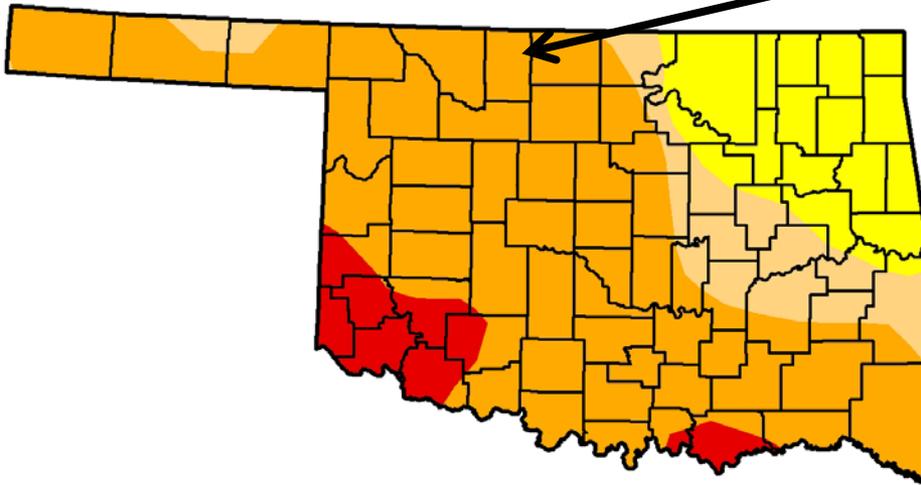
- Tiered drought plan
 - Monitoring: Oklahoma Water Resources Board
 - Impacts: Oklahoma Dept. of Agriculture
 - Management: Oklahoma Emergency Management
- Regular (monthly) publication of drought status (OWRB)
- Close collaboration with State Climate Office on Drought Monitor recommendations
- Close working relationship between agency directors and Governor

Oklahoma Drought 2005-06 Assessment

- Despite its severity, few surprises
- New drought tools and institutional partnerships were key (especially Drought Monitor *process*)
- Systems and plans fine-tuned through several previous events
- OWRB's Financial Assistance program funded \$1.6 billion in facility improvements since 1980, improving capacity
- Unlike monitoring, *ad hoc* response to impact information

An Example...

Alfalfa County, Oklahoma



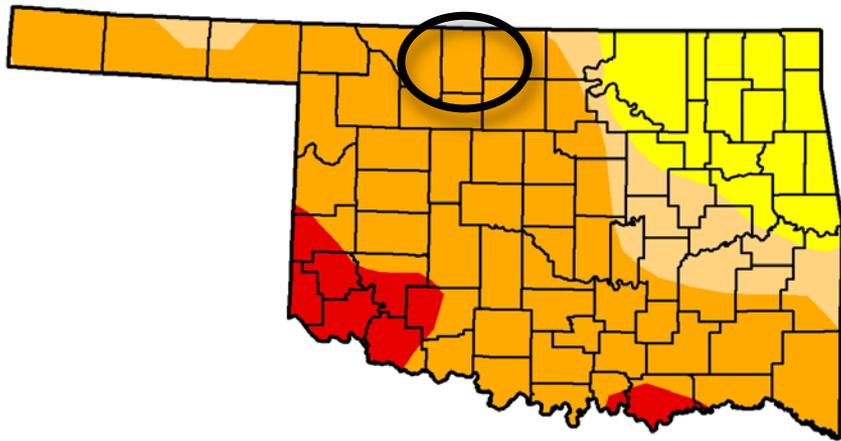
July 18, 2006

Lesson Learned from 2006

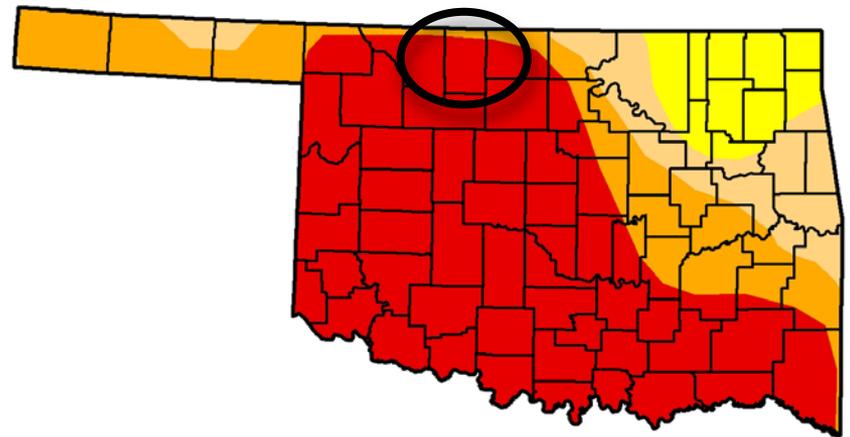
A rancher submitted the following report (July 2006): In Alfalfa County in NW Oklahoma for the month of June I recorded 1.3 inch of rainfall west of Manchester. **Wells are running dry** and we are drilling new wells. **Most all farm ponds are dry and many streams are dry.** Water is hauled to livestock from Manchester. We had two very short cuttings of alfalfa hay at **10 percent of average yield.** There will not be a 3rd cutting in many fields. The 4th of July we received .35 inch rain. **The Palmer Drought Index is off track once again.** The extreme drought leads much farther east than is shown on their map clear into Grant County. Kansas is receiving beneficial rains. As close as 15 miles north and east 2 inches of rain was recorded in Anthony, Kansas, and east of Anthony. **I would feed my cattle hay, if I had it or could afford to buy it.** - "Jack the Toad"

...but nothing particularly unusual in Alfalfa County compared to neighbors at first glance

We Listened!



July 18, 2006

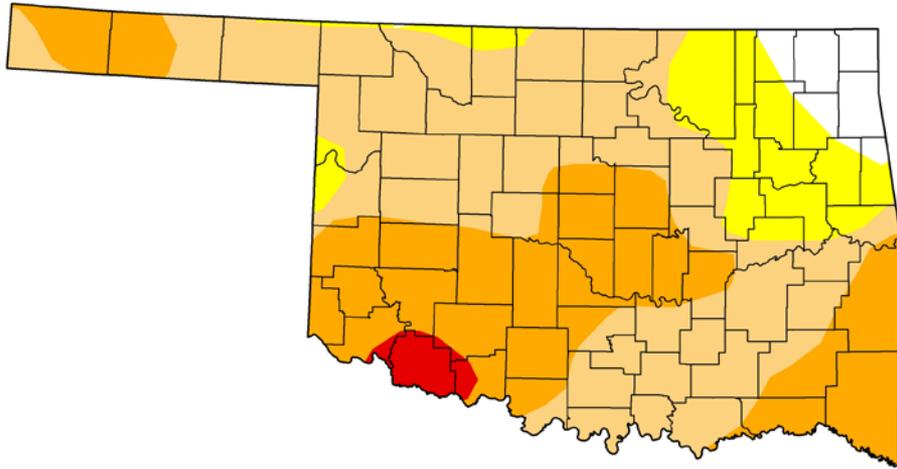


July 25, 2006

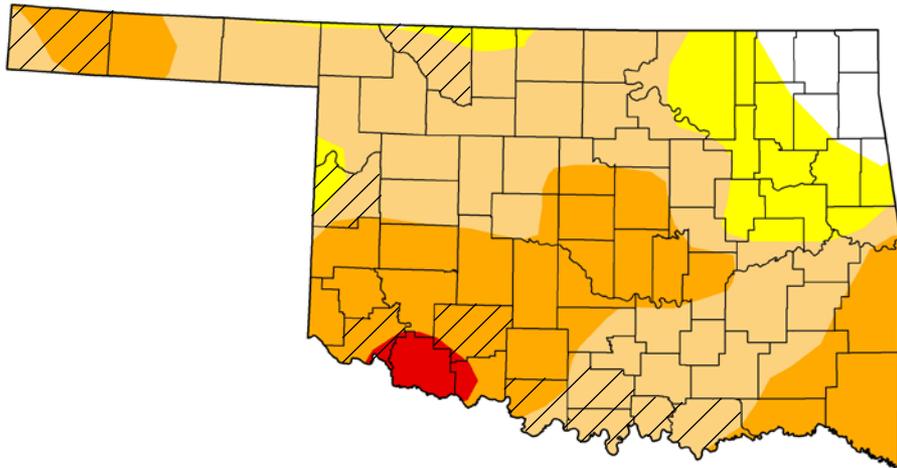
Now back to 2011...

- Meteorological indicators were again mixed
- Contacted a few county FSA offices for advice, but not systematic coverage
- Worked with state Conservation Commission to get county FSA offices to tell us about impacts
- Created drought@mesonet.org e-mail address to make reporting easier
 - *People do not like filling out forms!*
- We harvest the e-mails and enter them into the DIR
- Reports are used for recommendations to Drought Monitor authors

The Impact of Impacts



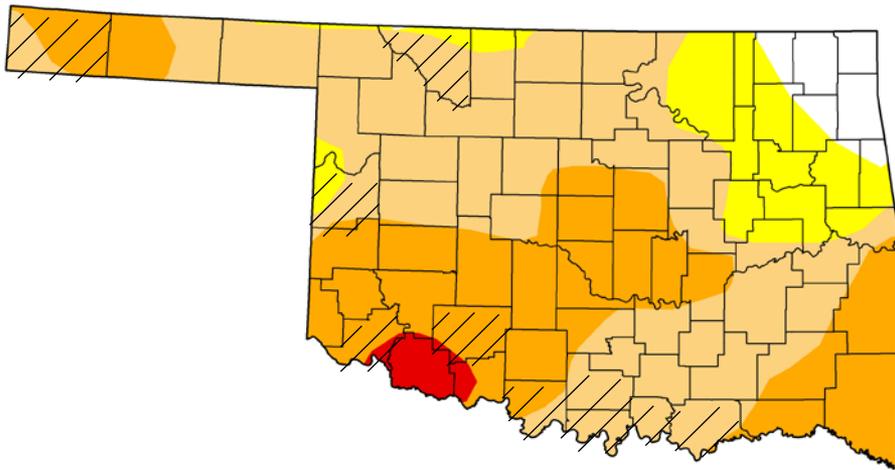
The Impact of Impacts



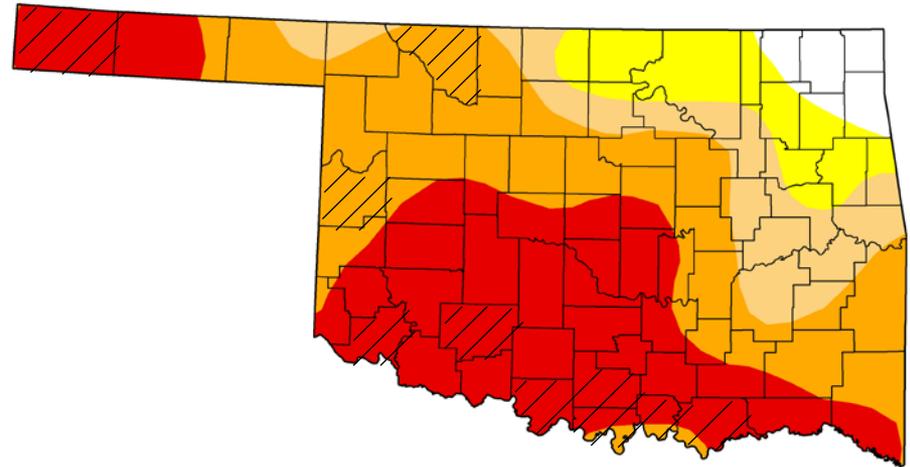
March 15, 2011

- Ponds are drying up
- Wheat will more than likely be gone by next week without a rain
- Producers that intended to graze small grain pastures out are having to sell livestock
- Planting of row crops will not happen until it rains; seedbeds are powder dry
- The snow was not very beneficial to the wheat crop due to blowing and a very dry light snow
- Several fires have started due to mechanical sparking
- Blowing dust across the roads so bad from tilled cotton fields it is extremely dangerous to drive some roads

The Impact of Impacts



March 15, 2011



April 19, 2011

Improving & Expanding

- More specific instructions to counties
 - Guidance on types of impacts we need to know
- Increase number of counties reporting
- Getting reports from the not-so-dry places
 - Knowing there is not a problem is as important as knowing severe impacts
- Expanding capabilities to the region
 - Stick with drought@mesonet.org e-mail?
 - Add state 'monitors' to recipient list or filter?
- ***All of this can be done with existing resources!***
 - Clearer instructions, easy process (e-mail), people already engaged on Drought Monitor discussion list

Supporting state planning

Workshop Goals

- 1) Introduce them to the Drought Monitor process and NIDIS
 - 2) Briefly discuss the strengths and weaknesses of various monitoring tools
 - 3) Provide examples of good structure of state drought plans, including monitoring, communication, impact reporting and connections to local communities
 - 4) Give them ample time to work with "experts" in outlining elements of their own (future) state plans.
- Potential Outcomes:
 - Think through context of drought in your state – Vulnerabilities, Monitoring networks, agencies and methods of communicating with each other
 - Look at tools and indices used in other state plans
 - Institutional, financial, social, cultural resources that can make raising awareness and/or managing events easier
 - What existing planning processes can help (state water plans, hazard plans)

State Drought Planning Workshop

- Identified state agency officials capable of leading a drought planning process
 - Arkansas: Ken Brazil - Arkansas Natural Resources Commission
 - Louisiana: Brad Spicer - Louisiana Department of Ag & Forestry
 - Mississippi: Jamie Crawford - Mississippi Department of Environmental Quality & Dean Pennington - Yazoo Mississippi Delta Water Management Group
 - Oklahoma: Julie Cunningham, OK Water Resources Board
 - Tennessee: Lee Keck & Scotty Sorrells, TN Dept of Environment & Conservation
 - Texas: Mario Chapa, Texas Division of Emergency Management
- Drought Knowledge Community
 - NDMC: Nicole Wall, Deb Bathke, Brian Fuchs, Crystal Bergman
 - State Climatologists: Mike Borengasser (AR), Barry Keim (LA), John Nielsen-Gammon (TX)
 - Southern Regional Climate Center: Kevin Robbins
 - NOAA / NIDIS (Doug Kluck)
 - Southeast Climate Consortium – Puneet Srivastava
 - SCIPP: Mark Shafer (OU) and Laura Becker (LSU)

Drought Workshop, Memphis



Drought Workshop, Memphis



Special Thanks to the National Drought Mitigation Center for contributing their expertise and to NIDIS for travel support!



Topics Covered

- Drought Planning 101
- Monitoring: Strengths and Weaknesses
- Overview of NIDIS & Engaging Preparedness Communities
- Texas Drought Planning Process
- Appreciative Inquiry Sessions
 - Drought Planning Investigation
 - Drought Planning Innovation
 - Drought Planning Integration (Community Capitals)
 - Drought Planning Implementation

Challenges of Region's Plans

- Need for more monitoring tools and predictions
- Even the best prepared states could use more analysis
 - Better coordination between sectors, agencies
- “In the West, they have spent 150 years trying to move water to where it is needed. In the Mississippi Delta, we’ve spent 150 years trying to move water away”
- Interest in wrapping drought into state water plans
 - Hazard plans may not be effective: mandatory and not much time put into them
- Need to revisit who / what agencies were involved in original plan and who needs to be added

What the Workshop Accomplished

- Attention to diversity of local sectors, resources
- There was as much conversation among state participants as there was between them and the “drought experts”
- Participants learned from each other in Appreciative Inquiry sessions
- Participants are now part of the drought knowledge community
 - Able to draw upon expertise as needed
 - They are now the experts in their states

Thank You!
