Southern Climate Impacts Planning Program (SCIPP)

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SCIPP
Southern Climate Impacts Planning Program

LSU

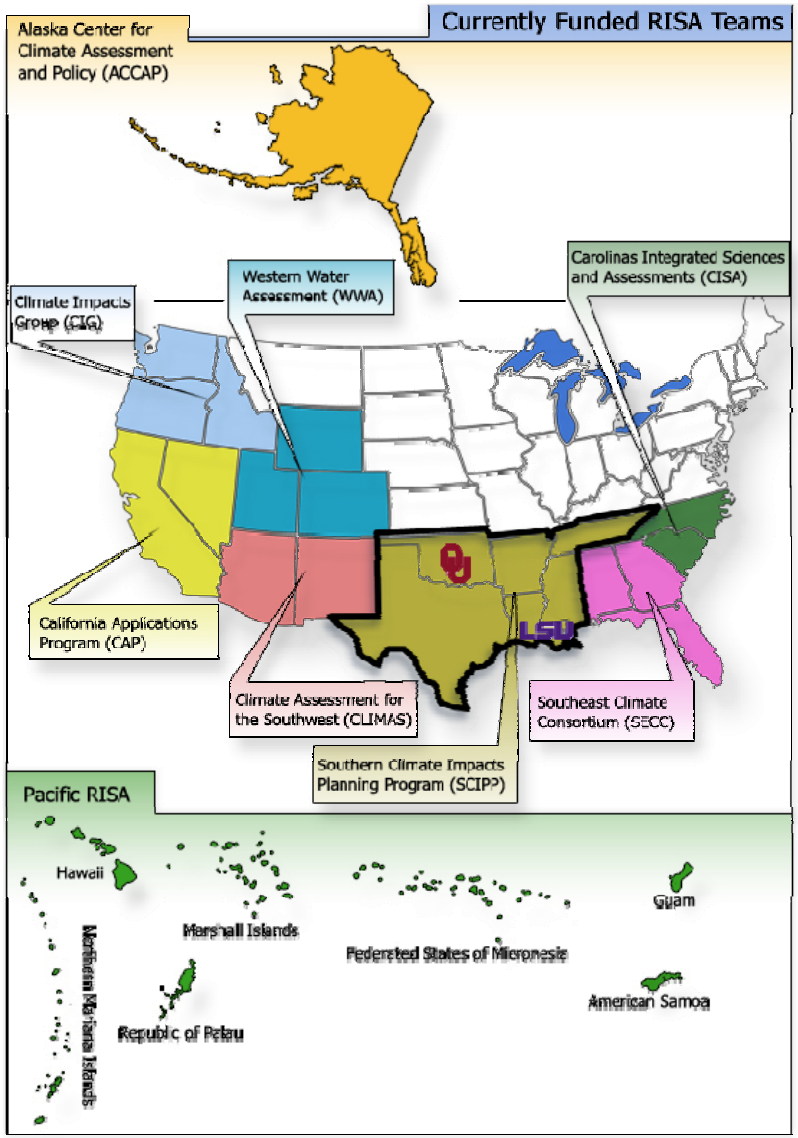
RISA Program

- SCIPP is the newest NOAA-funded Regional Integrated Sciences and Assessments (RISA) program in the United States.

"The Regional Integrated Sciences and Assessments (RISA) Program is helping to realign our nation's climate research to better serve society. Established by the National Oceanic and Atmospheric Administration (NOAA) in the mid-1990s, RISA projects point the way toward a new paradigm of 'stakeholder-driven' climate services that directly address society's needs and concerns. The RISA goal is to conduct the kinds of research and product development needed to help society make decisions in the face of climate variability and change…" (NOAA)

SCIPP

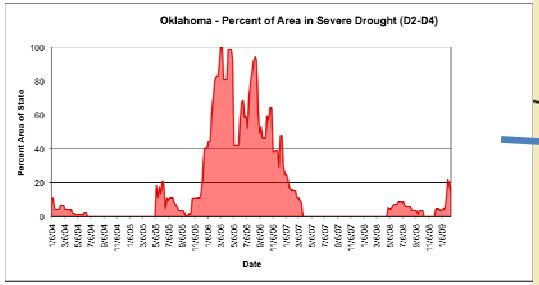
- **Research Units:**
  - Oklahoma Climatological Survey at the University of Oklahoma and the Department of Geography and Anthropology at Louisiana State University
- **Region Covered:**
  - Arkansas, Louisiana, Mississippi, Oklahoma, Tennessee, and Texas
- **Multi-level Partnership:**
  - State climate offices of Oklahoma and Louisiana
  - Southern Regional Climate Center
  - National Weather Center

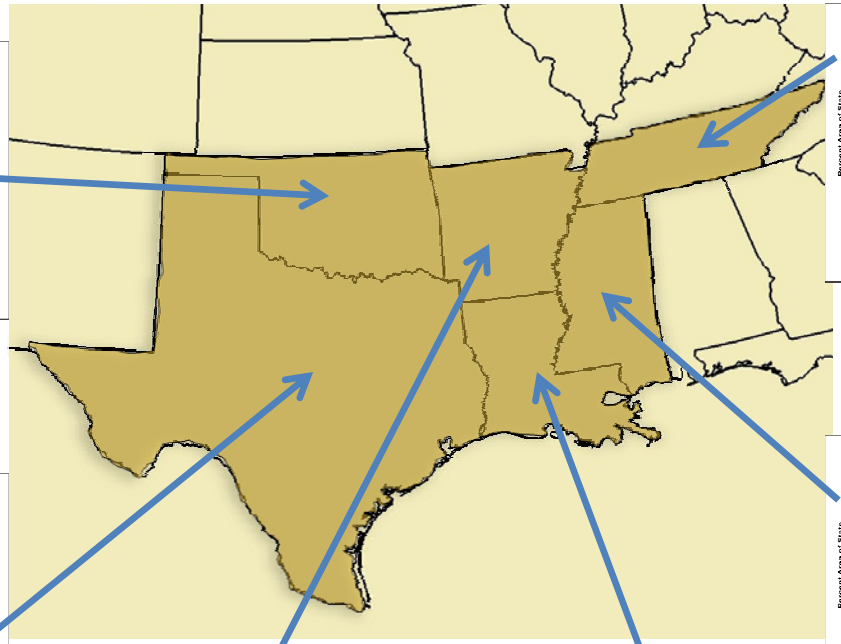


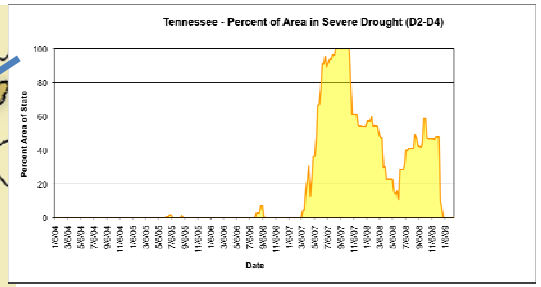
"The Drought RISA"

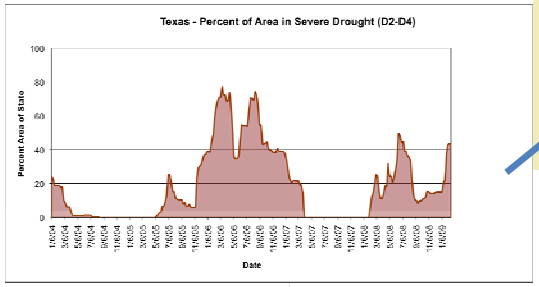
- Call for proposals issued in summer 2007
  - "The region needs to be one where drought is a serious concern to decision makers and public policy officials."
  - "Integrated physical-social science research for generating drought risk scenarios and assessing stakeholder needs and adaptive capacity should be a central part of the new RISA."
  - "The new RISA will need to coordinate with and provide input to the evolving National Integrated Drought Information System (NIDIS)."

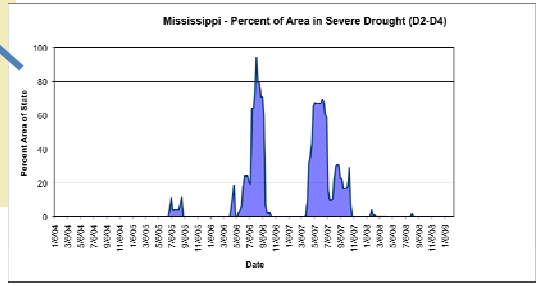
Drought in the Southern Plains

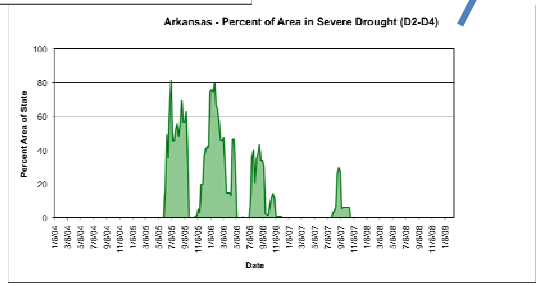


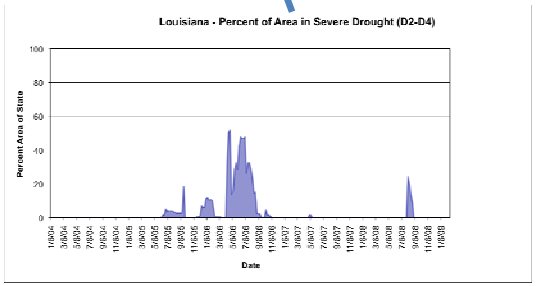












A Word About Drought

- Not as visually dramatic
- Usually not associated with loss of life
- Difficult to identify onset and end
- Difficult to quantitatively assess severity
- Not eligible for FEMA assistance
  - Requests handled by USDA
  - As a consequence, no mitigation funds
- ***Drought has to compete with these other hazards for attention … and usually loses***

Recent Declared Disasters in Oklahoma

1846 – Wildfires (Apr 09)

1823 – Ice Storm (Jan 09)

1820 – Tornadoes (Feb 09)

1803 – Storms (Sep 08)

USDA– Drought (Julo8)

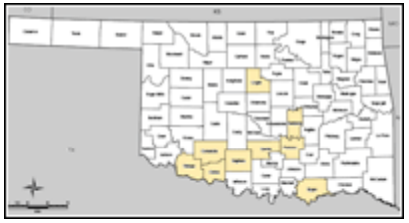
1775 – Floods (Jun 08)

1756 – Tornado (May 08)

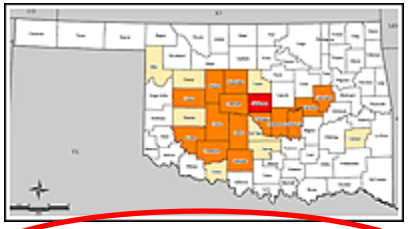
1754 – Floods (Apr 08)

1752 – Floods (May 08)

1735 – Ice Storm (Dec 07)



1723 – Floods (May 07)



1718 – Storms (Aug 07)

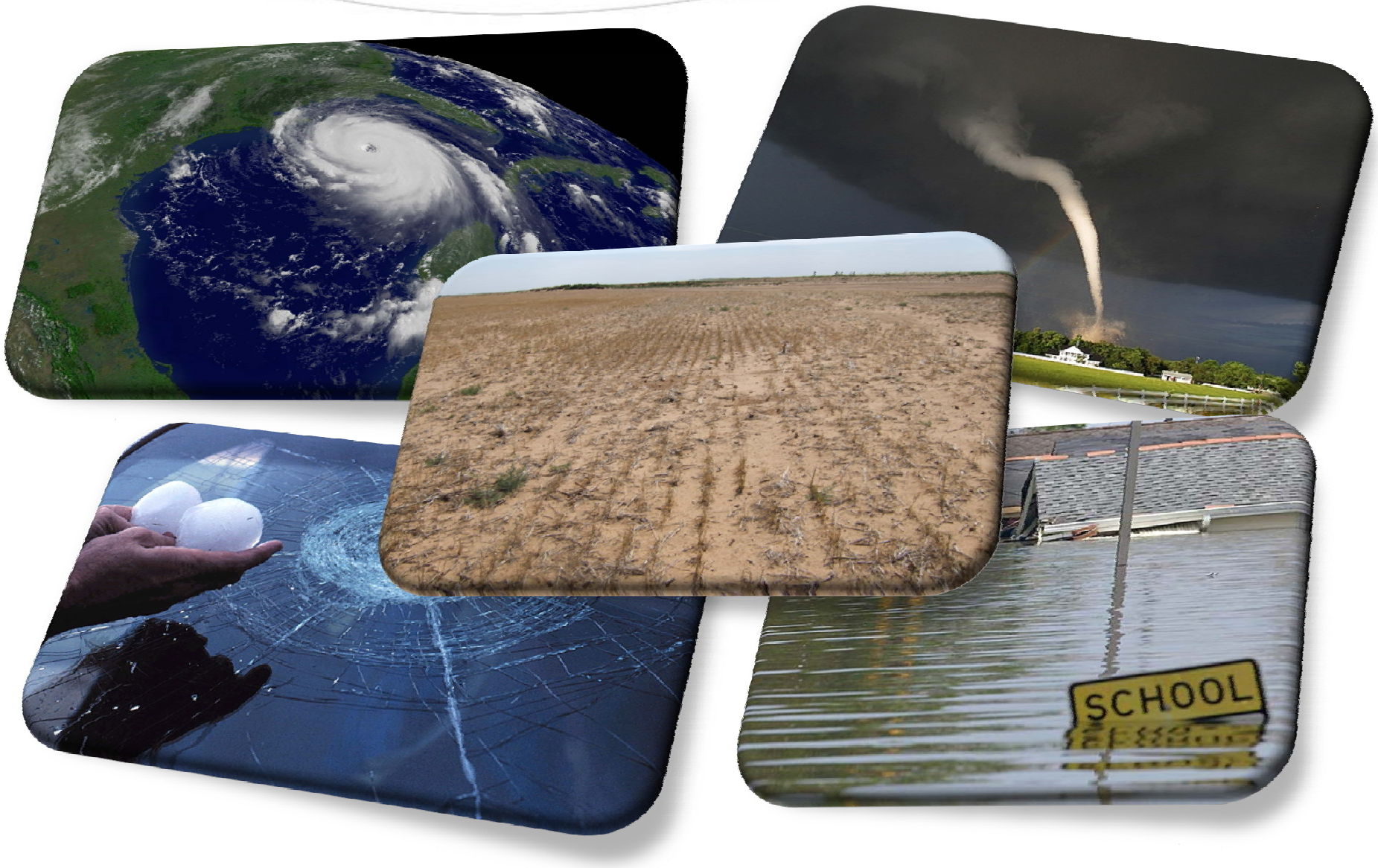
SCIPP States

Rank	State	Number of Disasters Declared
1	**Texas**	**83**
2	California	74
3	Florida	63
4	**Oklahoma**	**62**
5	New York	58
6	**Louisiana**	**55**
7	Alabama	51
7	Kentucky	51
9	**Arkansas**	**49**
9	Missouri	49
11	Illinois	48
12	**Mississippi**	**46**
13	Ohio	44
14	Washington	43
14	**Tennessee**	**43**

Disaster declarations as of October 2, 2009

Southern Climate

Multi-hazard approach



SCIPP Goals

- **Increase the preparedness for climate hazards** at the local levels through hazard planning and climate adaptation planning processes.
- **Bring drought into hazard planning** in the region the way tornadoes and hurricanes are today.
- **Provide historical climate hazard data through a web-based GIS portal** for use by planners and decision makers.
- Actively engage stakeholder communities across the 6-state region to determine climate information needs and provide **outreach and education on climate.**
- *Longer-term*: Provide **climate change projections and related information** for the 6-state SCIPP region.

Unified Hazards Assessment

- Actual reports from NCDC and other extreme events databases
- Easy display of historical events in their area
- Ability to assess changes in hazards profiles over time
- View anticipated hazard profiles in context of climate change projections
- Adjust demographic projections and view impacts
- Will merge seamlessly into FEMA local mitigation plan requirements
- *Goal: increase receptivity and saliency of the message*

SCIPP Program Elements

Element 1: Integrated Extreme Events Database

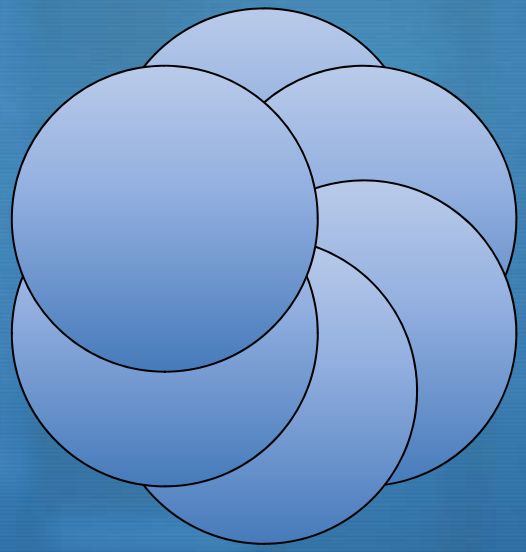
Element 2: Climate Risk Assessments

Element 3: Climate Risk WebGIS

Element 4: Community Engagement

Element 5: Education & Outreach

Element 6: NIDIS Pilot Project



Element 1: Integrated Extreme Events Database

- A unified archive of damaging events back to at least 1950
- Applied Climate Information System (ACIS) framework
- Accessible via: RCC, NCDC, NWS, and other partners
- Will include: storm events, stream and reservoir gauge observations and drought impacts (NIDIS)
- Will be available for you and your communities to utilize in many ways

Element 2: Climate Risk Assessments

- Historical/empirical climate information
  - Point-based and analyses
- Measures of climate variability and climate change projections
  - Downscaled climate change projections integrated into context of hazards
- Integration with the extreme events database and GIS-based query tools.

Element 3: Climate Risk WebGIS

- People experience events spatially and temporally
  - GIS helps bring out spatial and temporal dimensions of hazards rather than viewing each as series of discrete events
- Images effective for conveying findings to policy makers and communities
- Goal: be able to pull up a profile – historical and projected – of climate hazards for their community

Element 4: Community Engagement

- Establishing a strong relationship between community-level decision makers and our research team at the outset
- Building long-lasting, two-way relationships, to evaluate information needs, determine gaps, collaboratively develop products that meet planning needs, and continually refine those products to better serve them in their decision making processes
- Engagement will occur through a variety of partnerships with organizations, pilot communities, and focus groups

Element 5: Education & Outreach

- Assess how risks are perceived, what people know about climate and other hazards, hazard preparedness, and what and how people want to know.
  - A region-wide survey is being launched in the fall of 2009 to address these items.
- Later emphasis will focus on the development of pertinent climate education materials that will be provided both online and through the engagement process.

Element 6: NIDIS Support

- Increasing drought awareness and use of the NIDIS Drought Portal throughout the region
- Establishing some baseline assessments regarding use of drought triggers and actions
- Learn what people do with the information
- One of the planned NIDIS pilots includes states within the region

NIDIS Pilot Goals

- Facilitate development of a drought coordinator network
- Coordinate collaborative development of critical indicators and triggers
- Help secure funding, develop evaluation criteria, and conduct post-drought assessments
- Drought exercises or drought simulations for risk scenarios and generation of alternative options
- Facilitate the improvement of organizational networks

Drought in Oklahoma & Missouri

- Characteristics
  - Transition area between semi-arid (west) to abundant precipitation (east)
  - Rain-fed agriculture, aquifers, small reservoirs
  - Technology transfer issues
- Research Questions:
  - How do state level drought plans compare and differ?
  - What triggers are used to report drought severity?
  - What actions are taken after thresholds are reached?
  - What communication links exist within each state?
  - How does government response compare in each state?

State Drought Policy

- Research Approach
  - Review formal drought plans (state and local)
  - Interview state officials who were involved in creating those plans
  - Interview other state officials who have drought management responsibilities
  - Survey local officials on their drought management practices

- Policy Comparison
  - Both OK & MO exhibited punctuated equilibrium
    - Small periods with bursts of action
    - Little to no incrementalism; plans do not gradually evolve
    - Incremental adjustment is apparent in *monitoring* approaches
  - Drought events open policy windows in which streams (problems, policies & politics) may converge
  - During plan development, borrowing commonplace
    - Drought plan authors look to other states and organizations for ideas

Local Drought Policy

- What we hope to find out from surveys…
  - Roles and responsibilities for drought management
  - HOW each person takes action
  - WHY each person takes action
  - WHERE each person gets their information
  - Is the current drought plan enough?

- Survey Questions:
  1. Employment and Expertise (baseline)
  2. Perceptions of drought – how it is defined, what are its impacts
  3. Monitoring and Communication – sources & indices used; methods of getting the word out
  4. Local drought plans

- End Result (we hope):
  - Information selection
  - Comparison in communication techniques
  - a communications diagram linking individuals to each other and to state government

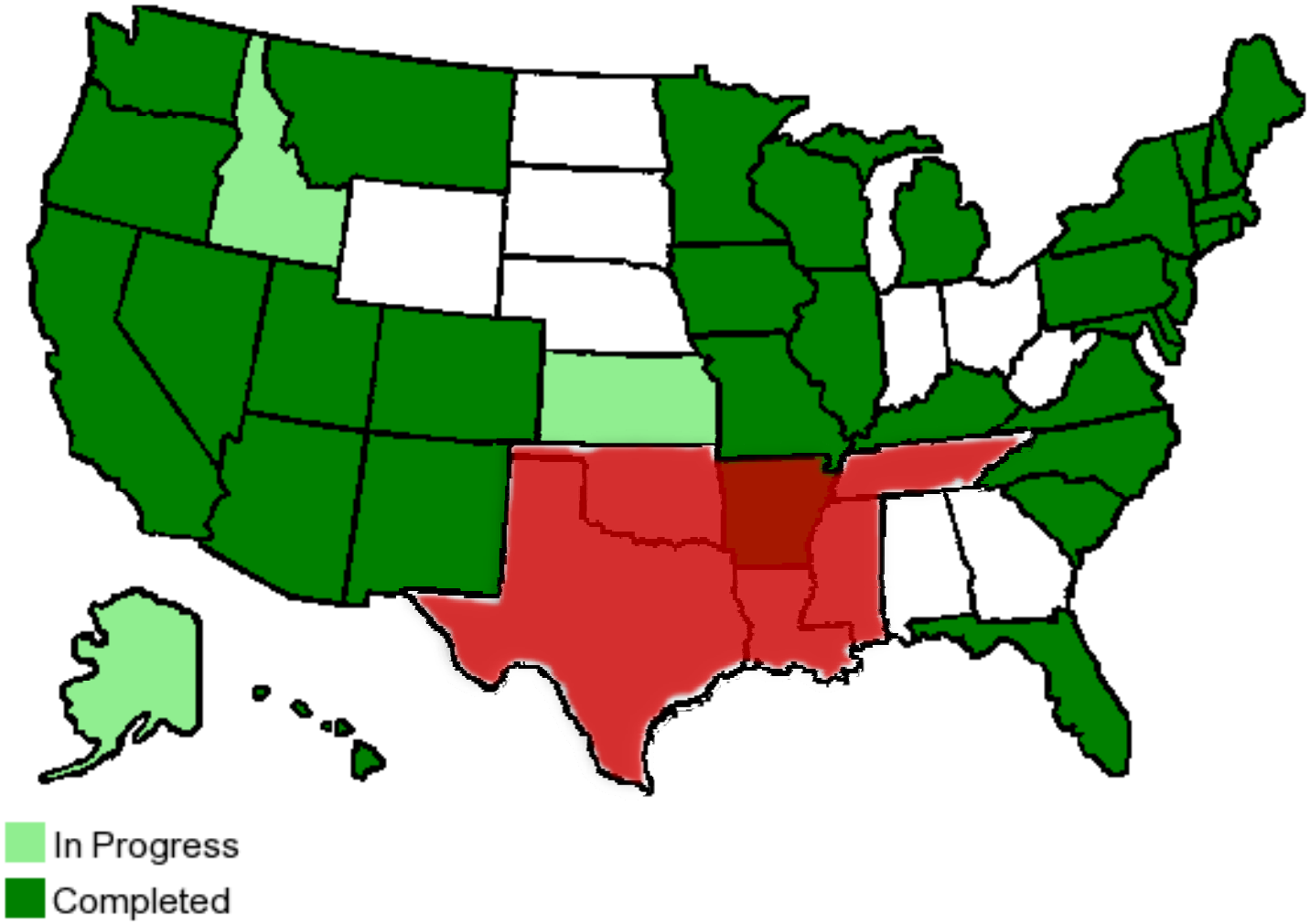
Example Questions

- When you hear the word "drought", what comes to your mind?
- How do you know when you are entering a drought?
- What is the worst drought you can recall? What were some associated impacts on your community?
- DURING DROUGHT, how frequently do you monitor the following indicators?
- For the indicators that you use most frequently were most important to you for drought monitoring, what characteristics make these sources important to you?
- DURING NORMAL to WET times, how frequently do you monitor the following indicators?
- When you become aware of or are alerted to drought, what do you do with that information?
- If you suspected there were some emerging drought issues in a particular county or region, whom would you contact to investigate?
- Do you think there is a disconnect between what the plan prepares for and what the community actually needs? Are there examples of the disconnect?

Lessons Learned (so far)…

- Program start-up is extremely time consuming
- Full-time staff dedicated to the project is essential
  - SCIPP has only one full-time employee
  - The rest of the staff are partial appointments
- If the economy crashes between the time you write the proposal and when it starts, there may be nobody left to do the work
  - Vacant positions disappear & people who initially committed have picked up additional duties
- Physical scientists have it easy … no institutional review board
- People (and organizations) are excited to talk about climate, even in the red states

Turning the Red States Green



Source: Pew Center on Global Climate Change

Questions?

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