

Developing Drought Outlook Forums in Support of Building a Regional Drought Early Warning Information System

**Climate Diagnostic and Prediction Workshop: Oct. 3 2011
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Outline

- ◉ Regional Climate Outlook Forums (RCOFs)
- ◉ National Integrated Drought Information System
- ◉ Governance Structure
- ◉ Drought Early Warning-three examples
- ◉ Summary

History of Regional Climate Outlook Forums

- Regional Climate Outlook Forums (RCOF): largely response to 1997–1998 El Niño event
- Purpose: Reduce vulnerability and risk associated with climate variability

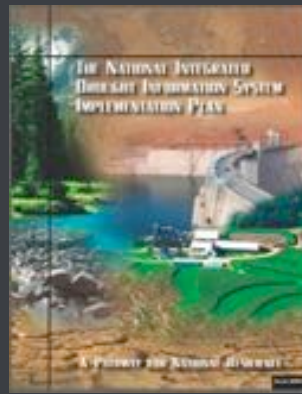
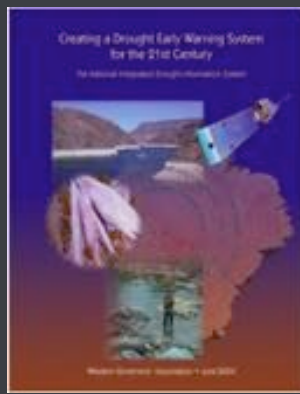
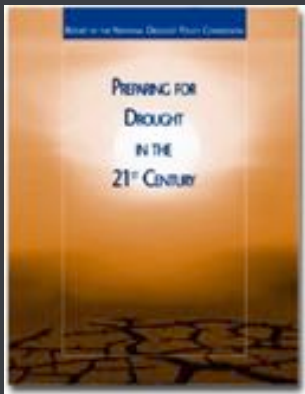


RCOF Process

- ◉ Prior to Forum experts develop a consensus forecast for the regional climate outlook, typically in a probabilistic form
- ◉ Produce forecast that can be applied and fine-tuned by met. services in the region to meet national needs
- ◉ Forums would involve climate scientists, representatives from the user sectors & the media for identification of impacts and implications, and developing response and comm. strategies
- ◉ Active involvement of stakeholders representatives of climate sensitive sectors
- ◉ Develop strategies to effectively communicate the information to decision-makers in all affected sectors
- ◉ Critique the session and its results; document improvements to the process and any challenges encountered

NIDIS: Creating a drought early warning information system

- 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”



- NIDIS Objectives
 - Coordinate** national drought monitoring and forecasting systems
 - Provide an **interactive drought information clearinghouse** and delivery system for products and services—including an internet portal and standardized products (databases, forecasts, Geographic Information Systems (GIS), maps, etc)
 - Design mechanisms for improving and incorporating information to **support coordinated preparedness and planning**

Governance across scales: Executive Council

NIDIS Program Office

NIDIS Implementation Team:

NIDIS Technical Working Groups

**Public Awareness
And Education**

**Engaging
Preparedness
Communities**

**Integrated
Monitoring and
Forecasting**

**Interdisciplinary
Research and
Applications**

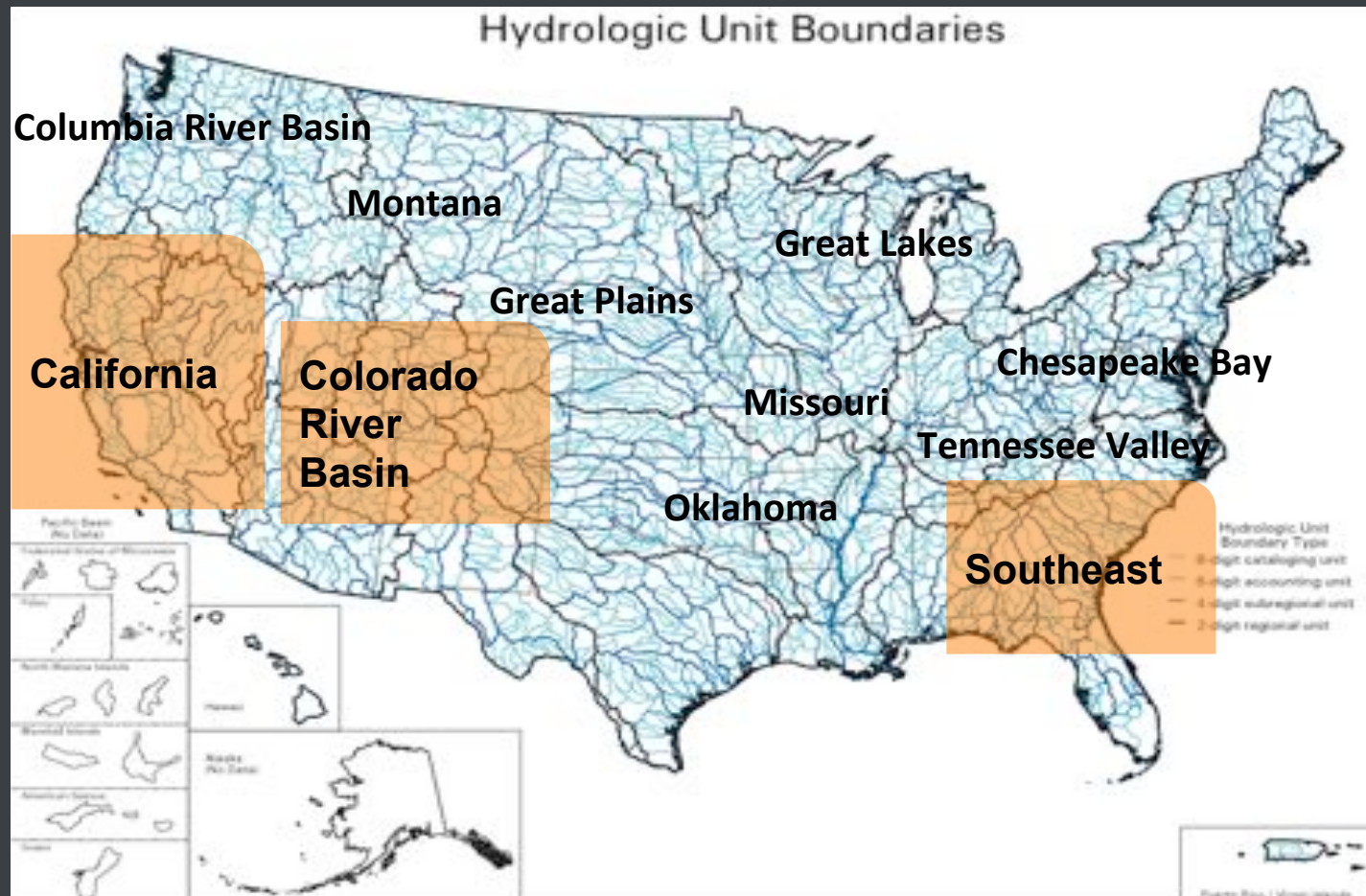
**U.S.
Drought Portal**

Regional Drought Early Warning Systems

Information clearinghouse, prototypes, and Implementation

A Look at Developing Regional Early Warning Systems

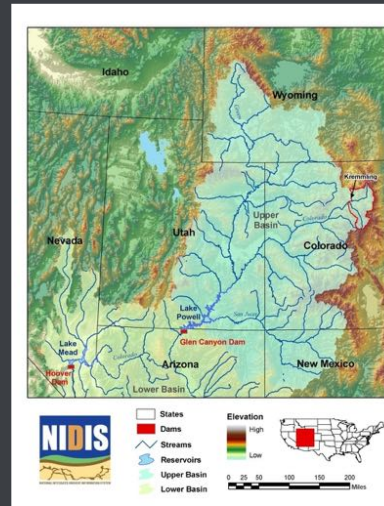
Early warning: provision of timely and effective information, through identified institutions, that allows individuals exposed to a hazard to take action to avoid or reduce their risk and prepare for effective response-
ISDR



Developing Drought Early Warning System in the UCRB

Network of Partners:

- State (CO, UT, WY)
- State Climatologists
- Federal Agencies
- Tribes
- Universities
- Stakeholder groups



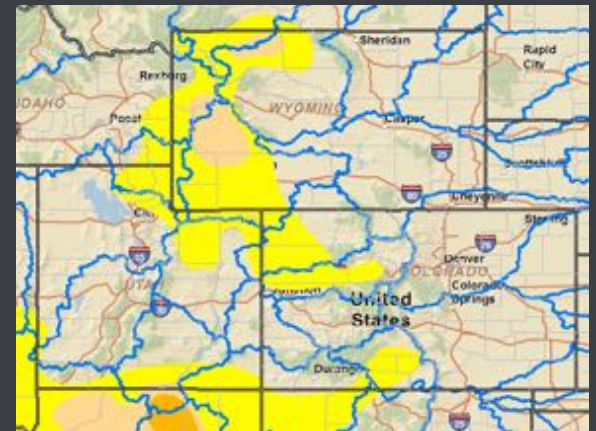
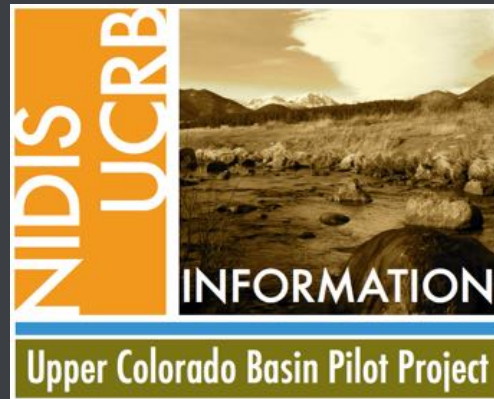
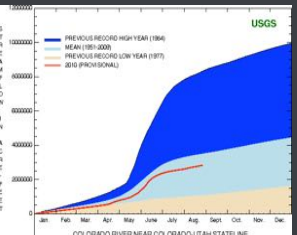
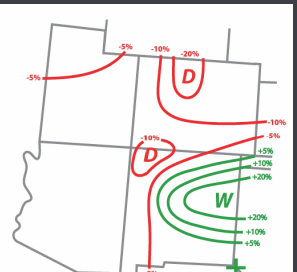
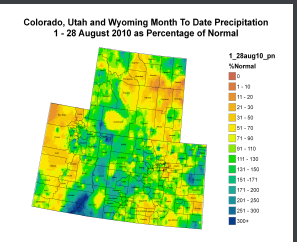
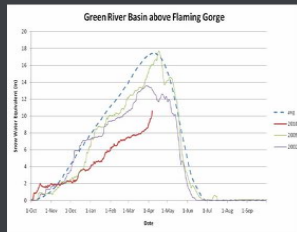
Establishing Drought Early Warning System:

- Inventory and assessment of drought indicators and triggers presently used in the UCRB
- Perform a monitoring networks gap analysis for the UCRB
- Develop a UCRB-specific drought monitor



UCRB Weekly Drought Assessment

<http://www.drought.gov/portal/server.pt/community/ucrb>



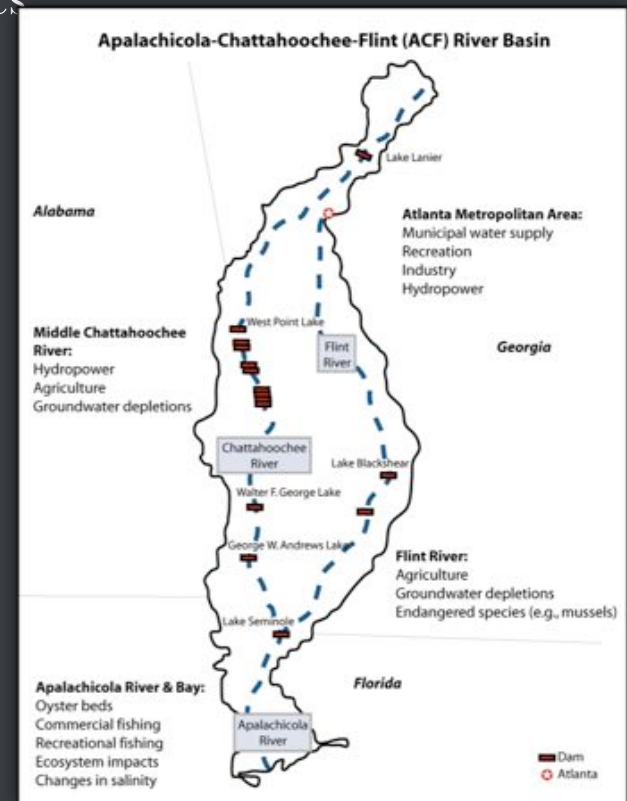
Consensus recommendation
to USDM author

Secondary benefits:
Improved communication
of local indicators to
Water Availability Task
Force and Ag Task Force

NIDIS ACF River Basin Pilot

- 5 Corps-operated dams
- 11 Dams owned and operated by power companies
- Buford Dam constructed for
 - Flood control, hydropower, navigation
- At least 20 years of litigation regarding allocation of water in the basin
- Seven stakeholder workshops from 2008-Present:

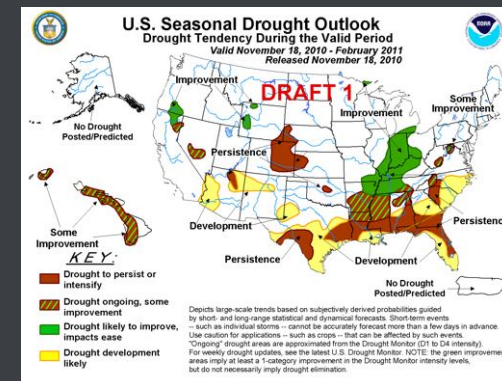
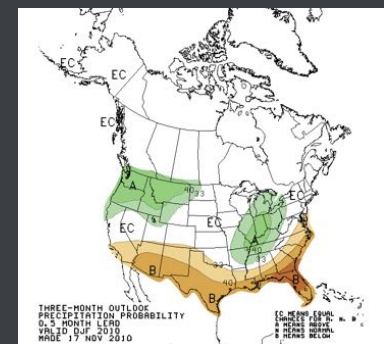
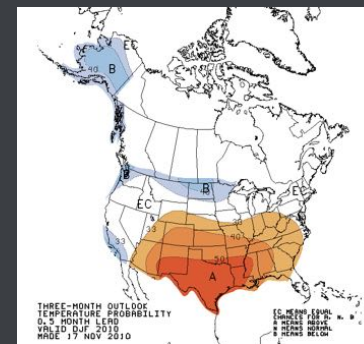
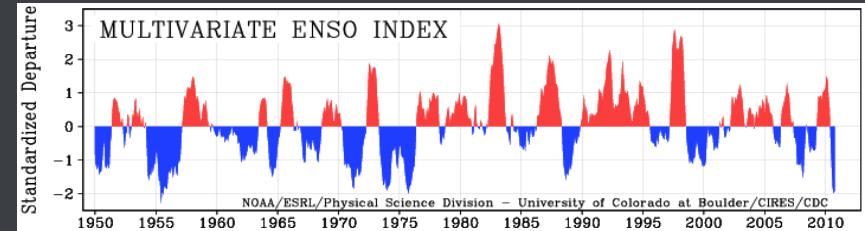
Improved information dissemination
Conduct Knowledge Assessments
Improved communication across political boundaries



SE Drought Outlook Forum Process

November 18, 2010 Albany, GA

- Observed and predicted state of climate system in the SE
- Implications of SE Outlook on ACF
 - Water Supply
 - Agriculture
 - Ecosystems
- Discussion of short-term and long-term vulnerabilities
- How to integrate information into planning and preparedness efforts
- Develop communication strategy



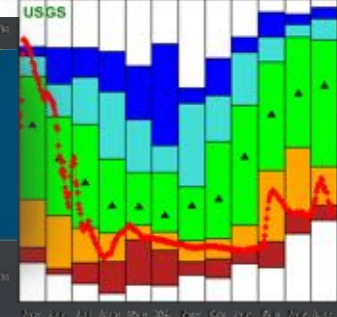
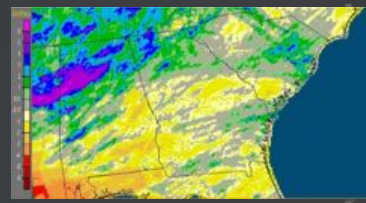
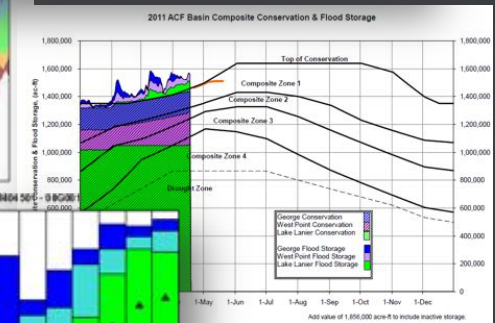
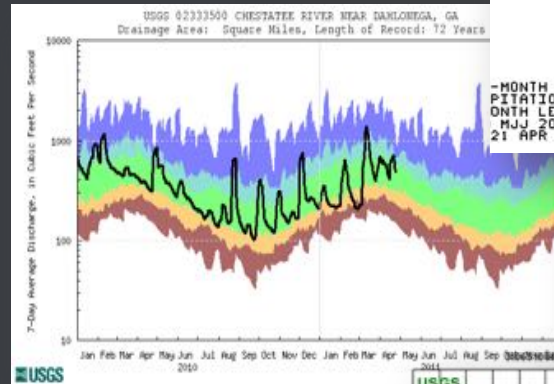
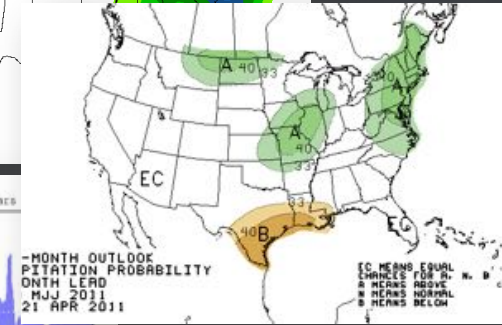
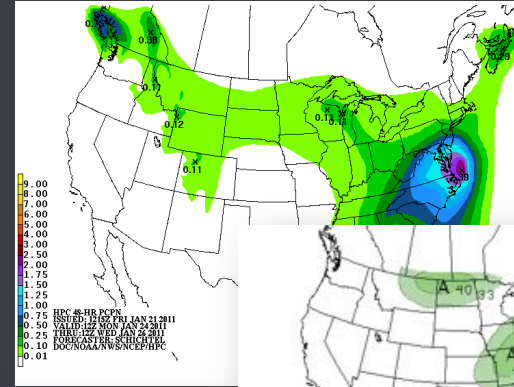
SE Drought Outlook Forum Summary

- Forecast for warm-dry winter
- Early warning information developed from several sources (SECOF, SCs, NWS, Universities)
- Observed one of the coldest winter on record, still relatively dry
- Anecdotal information indicates some action was taken but need to evaluate process
- Additional opportunity if weak La Niña continues into Fall/Winter

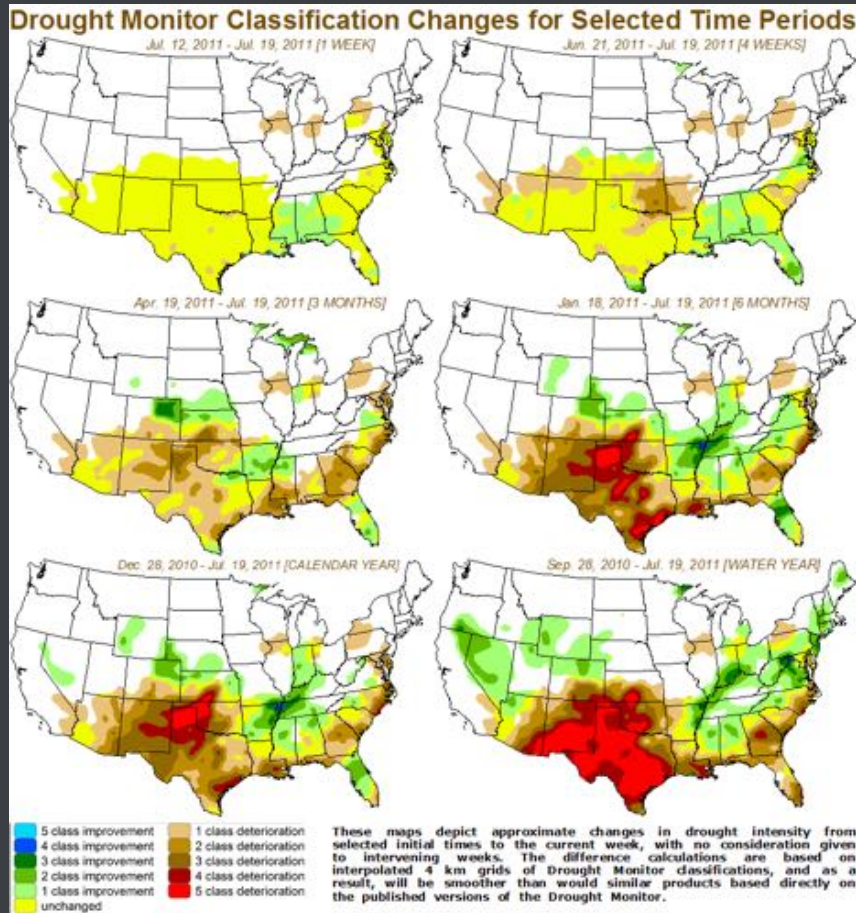
ACF Basin Drought Assessment Webinars

Network of Partners:

- ⦿ 3 State Climatologists
- ⦿ USGS
- ⦿ GA Environmental Protection Division
- ⦿ NW FL Water Management District
- ⦿ AL Department of Water Resources
- ⦿ NWS S. Region
- ⦿ SERFC
- ⦿ S. RCSD
- ⦿ SERCC
- ⦿ Habersham County Water Authority



Southern Plains Drought Impacts & Assessment



- Rapid onset/large spatial coverage
- Not in original Pilot plan
- Opportunity-attention was focused
- First steps:
 - Media webinars-April
 - Drought Outlook Forum-July

Southern Plains Drought Outlook Forum

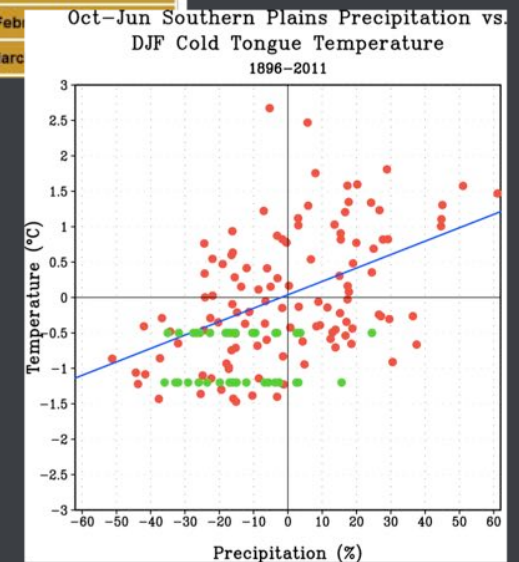
- Drought status and evolution
- Drought attribution
- Seasonal and Drought Outlooks
- Southern Plains Drought and La Nina
- Impacts
- When is drought a story
- State drought planning and response
- Improving coordination & delivery of drought information

Driest 9 Months on Record Midland International Airport

From October 2010 through June 2011 Midland International Airport has received 0.18 of an inch of precipitation. This is by far the least amount of precipitation that has fallen in any 9 consecutive month period since record keeping began in 1930. Here is a list of the top ten driest consecutive 9 months at the airport from 1930-2011:

Top Ten Consecutive Driest 9 Months 1930-2011 Midland Texas

Rank	Precipitation	Years and Months
1	0.18 inches	October 2010 - June 2011
2	2.02 inches	November 1950 - July 1951
3	2.55 inches	October 1950 - June 1951
4	2.66 inches	June 1951 - Feb
5	2.82 inches	July 1951 - Marc



Southern Plains: Next Steps

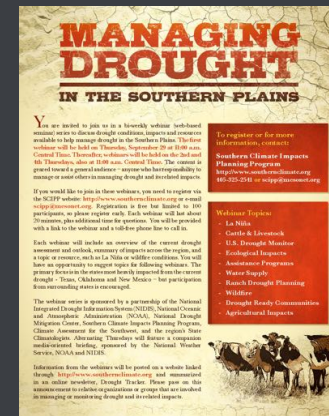
Bi-monthly stakeholder webinar: ~130 registered, diverse group

- Sectors & Impacts Poll
 - Agricultural Impacts-13
 - Cattle and Livestock-7
 - Ecological Impacts-0
 - Water Supply-25
 - Wildfire-7
 - Winter Wheat-3
- Resources & Monitoring Poll
 - Assistance Programs & Tax Deferrals-3
 - Drought Ready Communities-0
 - La Nina-36
 - Ranch Drought Planning-7
 - Reporting on Drought Impacts-14
 - U.S. Drought Monitor-9
 - Vegetation Health Monitoring-0

Monthly Media Webinar-third Thursday

- Focused on current and expected conditions
- Press release

Online Newsletter



Summary

- ◉ Variable approach for engagement-take advantage of opportunities
- ◉ Draw on existing networks
- ◉ RCOFs-not enough, follow-up is critical
- ◉ Develop networks that use RCOFs
- ◉ Cont. to look for points of entry into planning and preparedness activities
- ◉ Process is as important as the information

Thank You