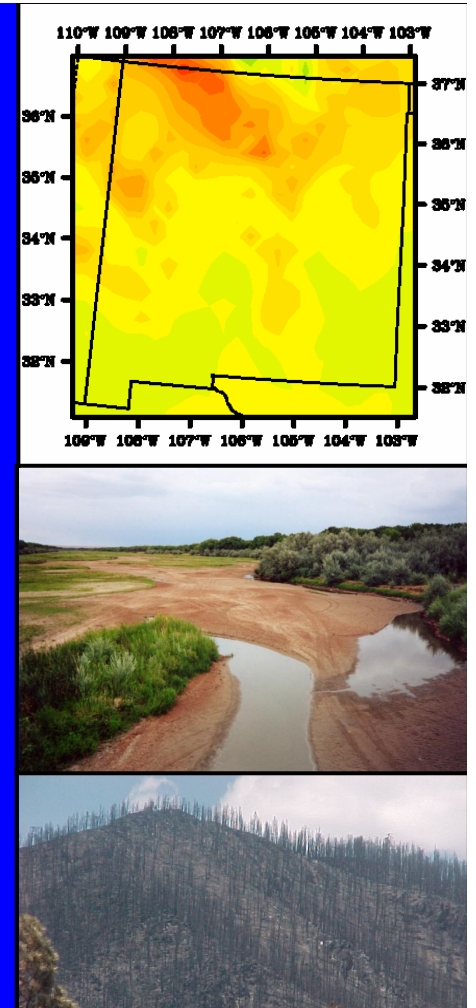


New Mexico Climate Change Ecology and Adaptation Workshop

Monday, October 22, 2007

Indian Pueblo Cultural Center
Albuquerque, New Mexico



INSTITUTE FOR THE STUDY
OF PLANET EARTH



CLIMAS

Climate Assessment Project for the Southwest



THE UNIVERSITY OF

ARIZONA

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The Nature
Conservancy



Protecting nature. Preserving life.™

Acknowledgments

- The Nature Conservancy
 - Priscilla Ornelas and others
- Institute for the Study of Planet Earth
 - Teresa Carochi
 - Melanie Lenart

Rio Grande 2002



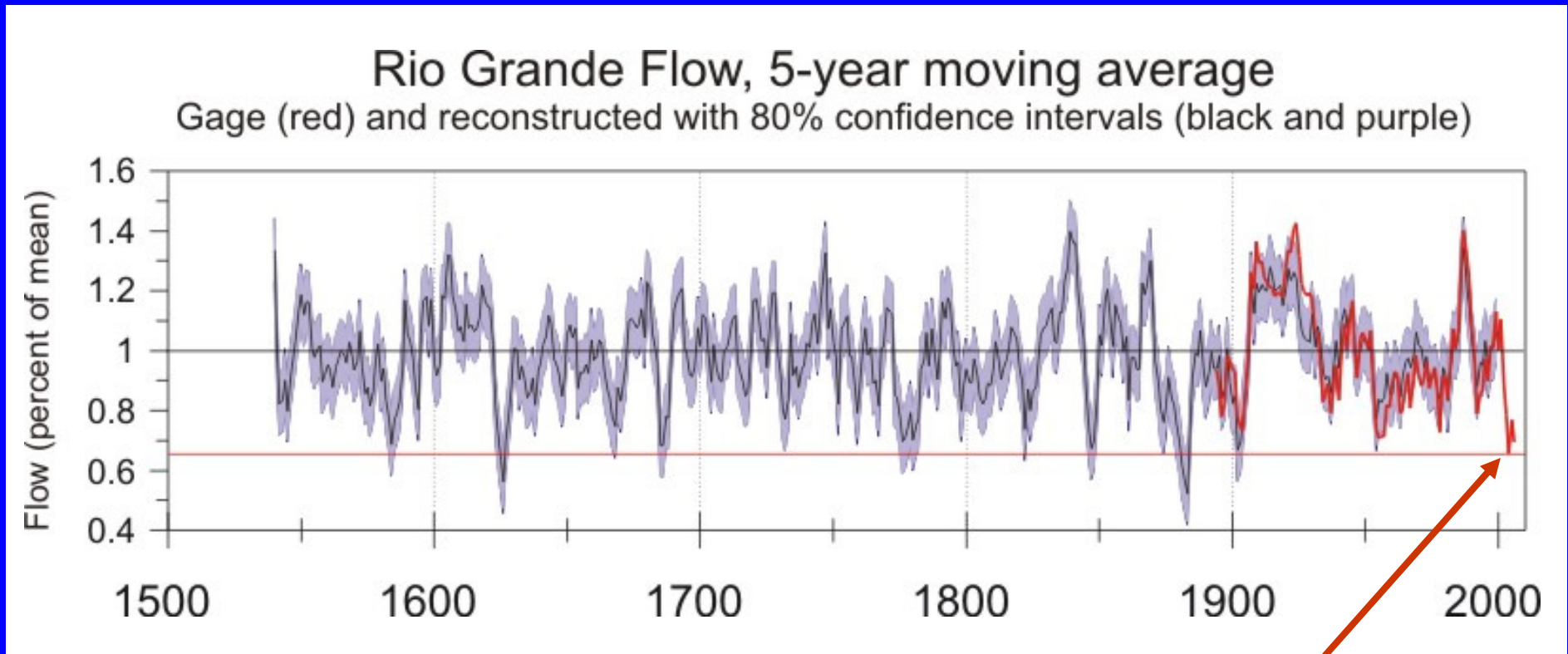
Courtesy USGS

Elephant Butte Reservoir 2002

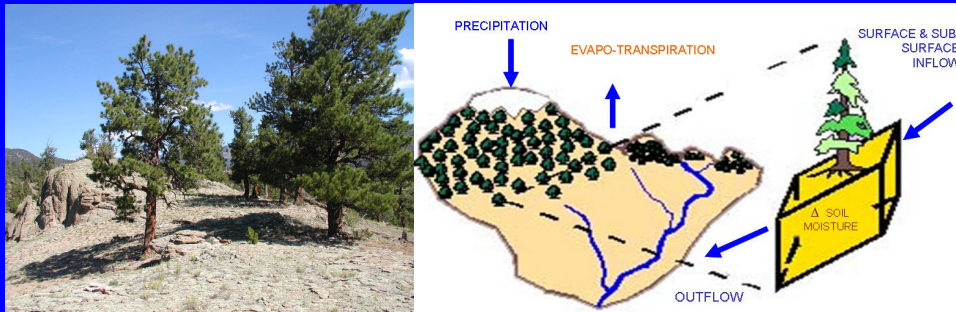


Courtesy USGS

The Recent Drought in a Long-term Context



2000-2004 average



Connie Woodhouse, Univ. Arizona

Ponderosa Pine Mortality: Los Alamos



Courtesy of Claudia Standish, Santa Fe National Forest

2002 Fire Damage



Courtesy of Claudia Standish, Santa Fe National Forest

Post-Fire Decreases in Infiltration Rates

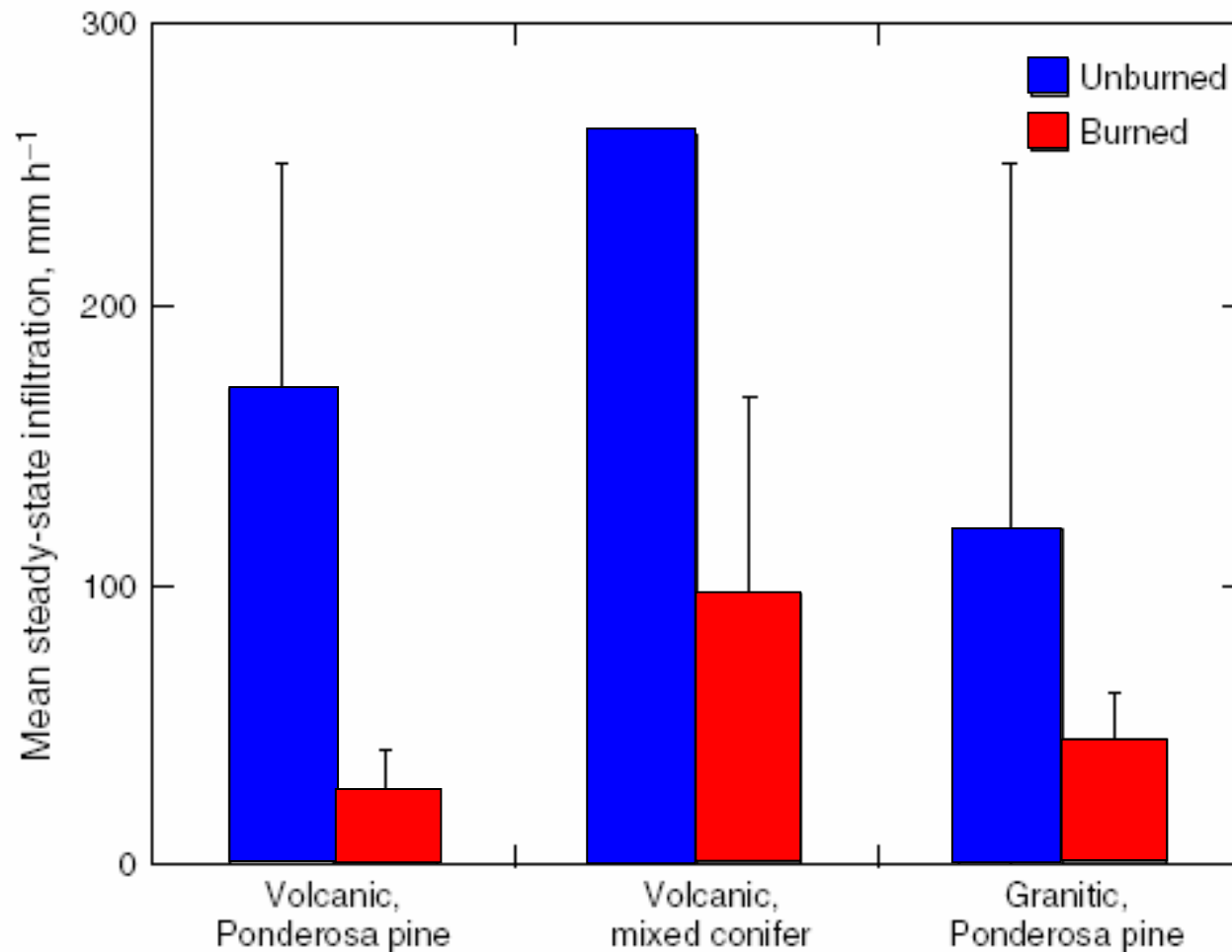
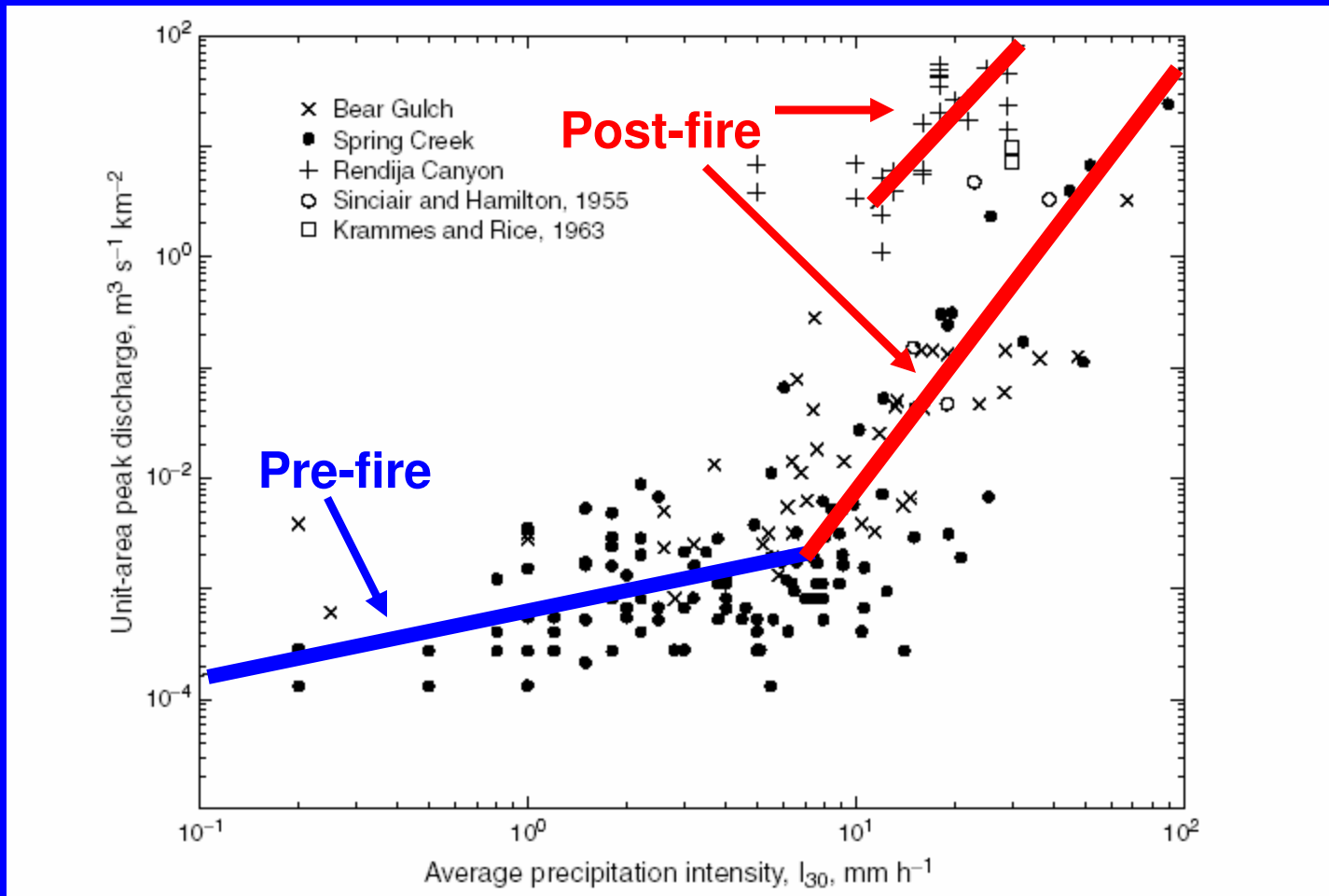


Figure 3. Steady-state infiltration rate in unburned and burned sites

From: Martin & Moody, *Hydrological Processes* 15, 2893-2903

Post-Fire Increases in Peak Discharge



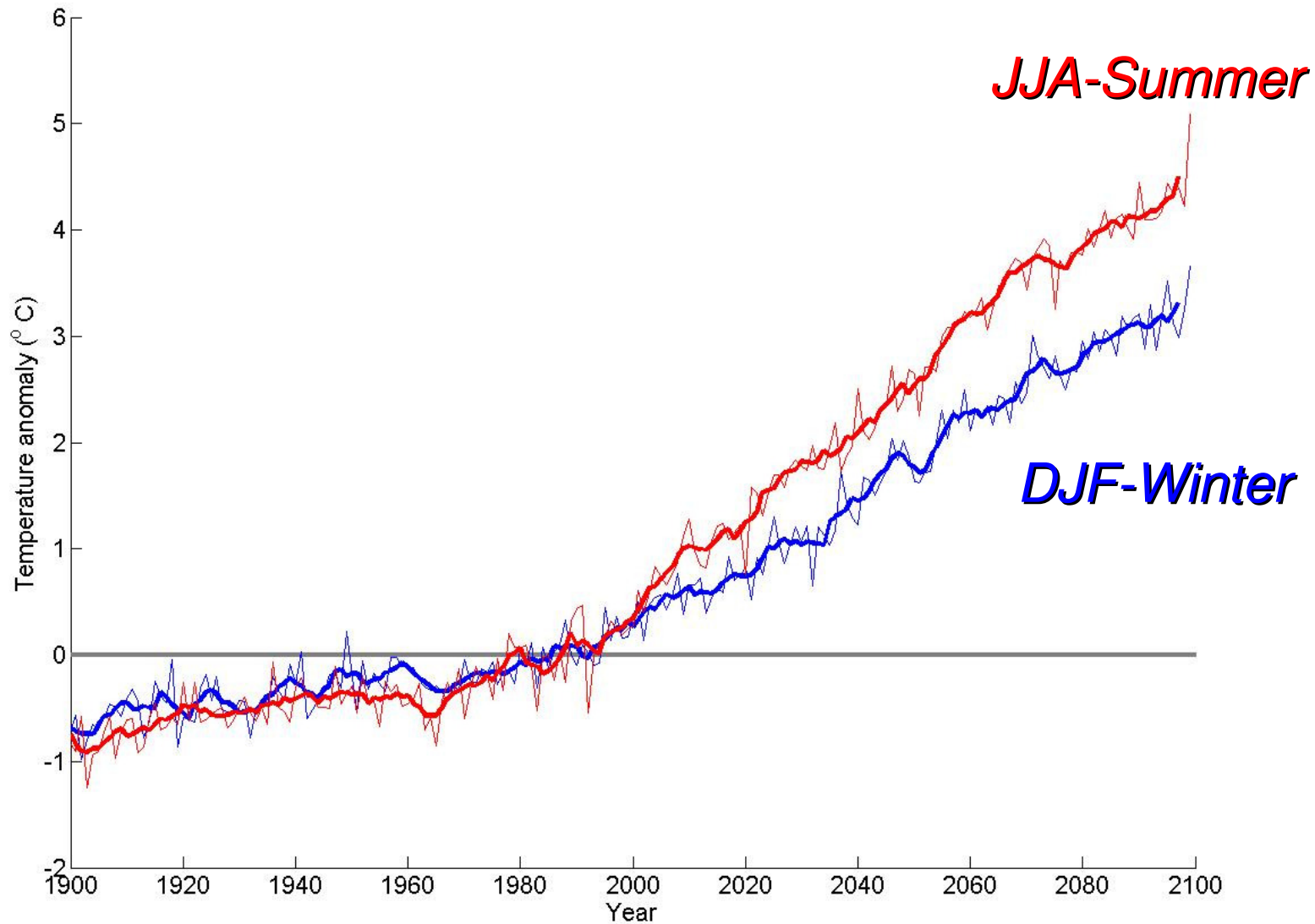
From: Martin & Moody, *Hydrological Processes* 15, 2893-2903

Increased Erosion



John Moody, USGS

NM Summer and Winter Temperature Projections



Data: Hoerling and Eischeid (NOAA-ESRL); PCMDI AR4

What To Do About It?

You can joke about it:

The bad news is that if the drought keeps up, within a few years we'll all be drinking reclaimed sewer water. The good news is that there won't be enough to go around.

Bill Miller, as quoted in the Chicago Sun-Times, 4
March 1977

What To Do About It?

You can wax philosophic about it:

A drought is a lack of water, but not necessarily a disaster. Whether or not a drought becomes a disaster depends on how people have been managing their land before the drought.

Lloyd Timberlake, *Africa in Crisis*, 1985

Workshop Goals

- Exchange information
 - Examine observed and projected climate changes
 - Explore climate change adaptation
- Engage in discussion
- Elucidate barriers and opportunities
- Express recommendations
 - *Actions*
 - *Next steps*
 - *Key participants*

Agenda

Time	Activity
8:45-10:30 AM	Climate Change Overview
10:30-10:45 AM	Break
10:45-11:15 AM	Climate Change → Management
11:15-11:45 AM	Climate Change Adaptation
11:45 AM-1 PM	Lunch
1:00-1:15 PM	Recap of Morning
1:15-1:45 PM	NM Agencies and Climate Change
1:45-3:40 PM	Group Discussion
3:45-4:00 PM	Summary and Action Items

Keep in Mind

- **Mitigation** = actions to prevent further warming
 - Reduce carbon emissions
- **Adaptation** = actions to adjust to expected warming
 - Enhance resilience
 - Increase resistance to change
 - Prepare for expected migration
 - Triage

Keep in Mind

- Benefits
- Building Capacity
 - *Coordination*
- Opportunities
 - *Existing policies, plans, efforts*
 - *Better management, conservation, funding*
- Barriers
 - *Policies, restrictions, resources*
- Barriers → Opportunities
- Needs
- Who else needs to be at the table?



The following slides
are for
Afternoon Discussions

Current Actions, Barriers, Opportunities

- What is your agency doing now about climate change?
- What more can it do? How does it need to act differently in a rapidly changing world?
- How can natural resource management agencies protect plants, animals, ecosystems, and ecosystem services (water supply, flood control, pollination, etc.) from degradation or loss? How should fire and water flows – New Mexico's signature ecological processes – be managed differently in a warmer, drier climate?
- What are the barriers to institutional adoption of climate change adaptation strategies? What are the opportunities?

Possible Actions, Opportunities, Coordination

- Which existing federal and state policies and management practices might be employed to facilitate response to climate change?
- Does climate change present us with opportunities for development of new or better conservation initiatives?
- How can natural resource managers best coordinate their responses to climate change?
- How can we build capacity – funding, staff and programs – to address the climate change threat?

What's Next?

- What overall actions do we recommend?
- What are the immediate next steps we should take?
 - Build awareness
 - Build capacity
 - Planning
- Who needs to be at the table?
 - Federal
 - State
 - Local