Colorado Water Conservation Board Statewide Drought Conference September 19-20, 2012

Drought Assessment for Recreation & Tourism: Southwestern Colorado



Deborah Thomas,

Department of Geography & Environmental Sciences
University of Colorado Denver (deborah.thomas@ucdenver.edu)

Olga Wilhelmi,

Integrated Science Program /
Research Applications Laboratory,
NCAR (olgaw@ucar.edu)

Project Team

Project Leads:

- Deborah Thomas, Department of Geography, University of Colorado Denver
- Olga Wilhelmi, Integrated Science Program / Research Applications Laboratory, NCAR

Project Support:

- Marcie Bidwell, Mountain Studies Institute, Durango Colorado
- Shannon Newell, Research Assistant, University of Colorado Denver

CWCB

- Taryn Hutchins-Cabibi & Veva Deheza (now at NOAA/NIDIS)
- A big thank you to all participants in SW

Colorado!

Presentation Overview

- The need: linkages between drought, tourism, and recreation
- 2. Pilot project overview
- 3. Framework for approaching drought, tourism, and recreation
- 4. Pilot highlights
- 5. Overarching themes

Presentation Outline

- 1. The need: linkages between drought, tourism, and recreation
- 2. Pilot project overview
- 3. Framework for approaching drought, tourism, and recreation
- 4. Pilot highlights
- 5. Overarching themes

Need - Why Tourism/Recreation & Drought?

"You can't talk about it (drought-tourism-recreation) without realizing that it's all interconnected. I don't think you can say that if we mitigate for aspen colors, that we can save the world. It's a combination of so many things. The way that I see people deal with drought, it's always going to be part of the conversation. It needs to be figured into the equation."

Background - Why Tourism/Recreation & Drought?

- Drought occurring somewhere within the state an estimated nine out of every ten years (CWCB, 2011)
- In 2010, direct travel industry spending in CO totaled over \$14.6 billion (Runyan, 2011)
- Environmental orientation of most Colorado recreation
- Drought affects all seasons, both directly and indirectly



2002 Drought Impacts on

Tourism/Recreation

Presentation Outline

- 1. The need: linkages between drought, tourism, and recreation
- 2. Pilot project overview
- 3. Framework for approaching drought, tourism, and recreation
- 4. Pilot highlights
- 5. Overarching themes

Pilot Project Background

- Evaluation of the metrics used in the State Drought Plan Vulnerability Assessment
- Recommendations for additional data and information to fill gap areas to refine the vulnerability assessment tool utilized in the 2010 Statewide Drought Plan specifically for tourism/recreation
- Identification of key stakeholders and development of a structure for stakeholder involvement

Pilot Project Design

Development of stakeholder list for SW Colorado

Iterative an continual process

Survey

- Administered via email from November 4, 2011, and February 1, 2012, to all on stakeholder list
- Three follow-up reminders
- □ 36% response rate (27 respondents)

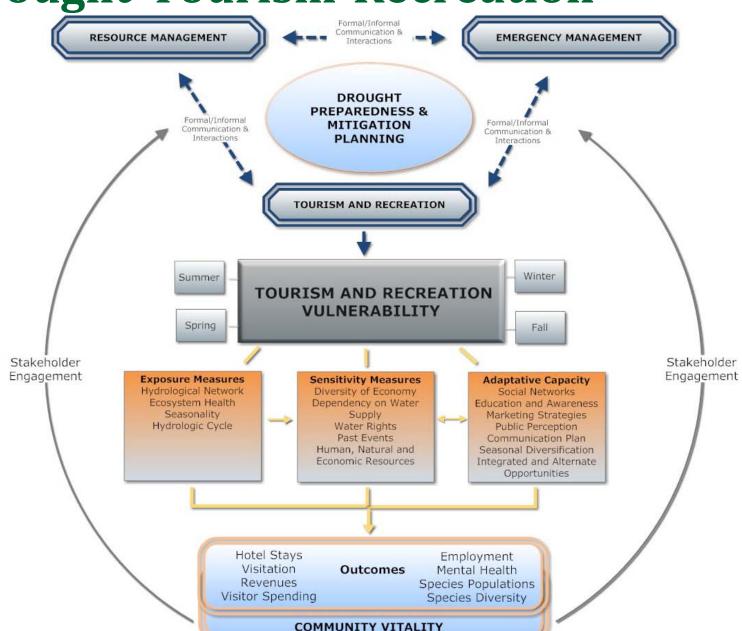
Focus Groups/Interviews

- Two focus groups (winter/summer), on December 1, 2011 in Durango
- Follow-up interviews with winter resorts

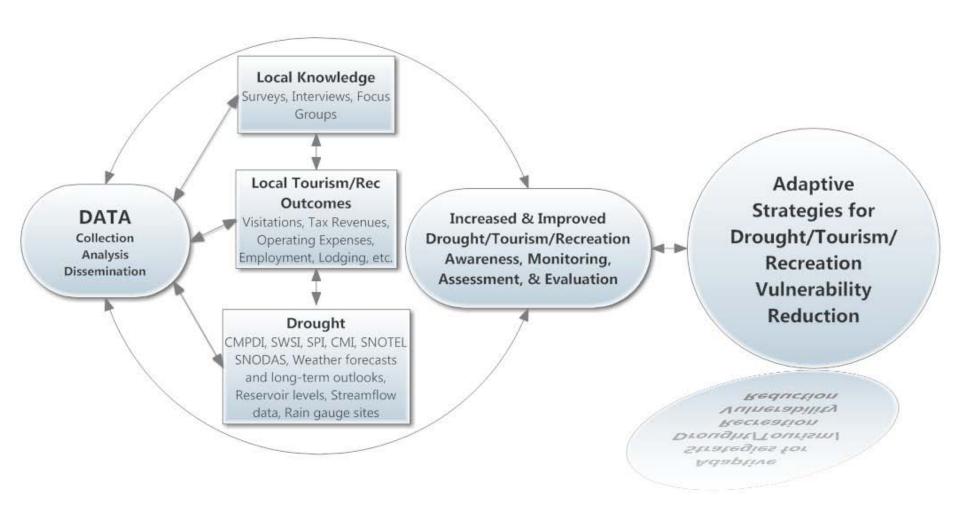
Presentation Outline

- 1. The need: linkages between drought, tourism, and recreation
- 2. Pilot project overview
- 3. Framework for approaching drought, tourism, and recreation
- 4. Pilot highlights
- 5. Overarching themes

Drought-Tourism-Recreation



Stakeholder Engagement Process



Presentation Outline

- 1. The need: linkages between drought, tourism, and recreation
- 2. Pilot project overview
- 3. Framework for approaching drought, tourism, and recreation
- 4. Pilot highlights
- 5. Overarching themes

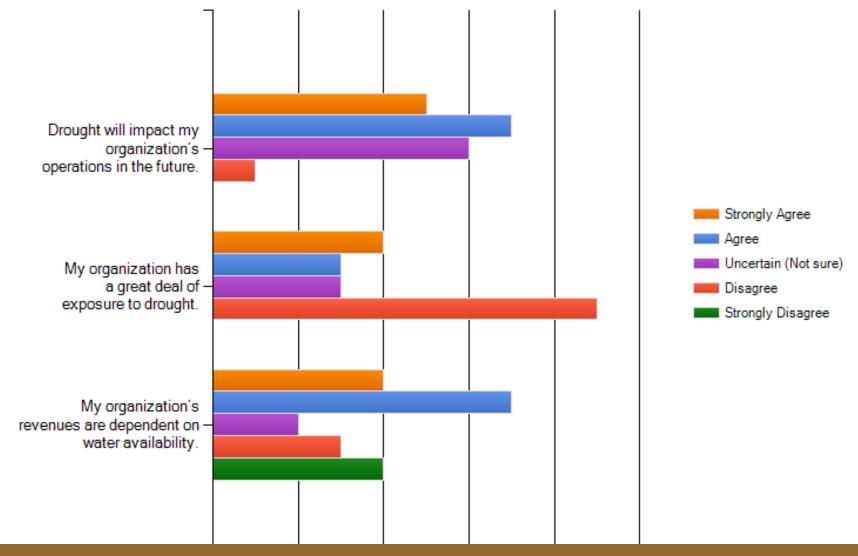
Pilot Survey Highlights

- Three obvious biases in respondents:
 - more summer tourism/recreation represented
 - few private for profit businesses participation (more public and non-profit entities)
 - lack of representation from those who perceived a lack of connection to drought.
- 13 non-profit, 3 private for profit business, and 9 government organizations (3 water authority/conservation districts)

Pilot Survey Highlights

- High level of drought experience
 - 18 organizations had experience with a previous drought, many listing 2002
- Minimal drought planning
 - 5 organizations had a drought mitigation and/or response plan
 - 4 organizations participate in any local or regional drought planning
 - Nobody reported a drought plan synchronized with either the state's or the region's
 - Only 2 had actual written plans

Mixed Concern and Uncertainty



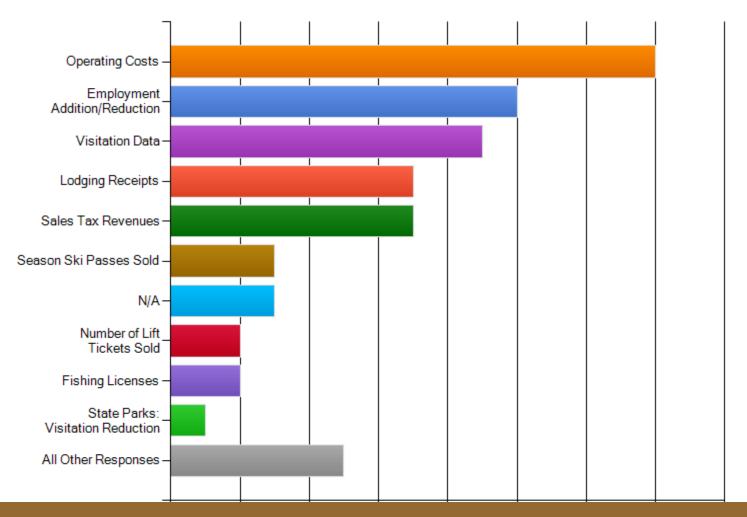
Exposure, Impacts, but only 2 plans.

Pilot Survey Highlights

- Limited awareness about and use of current drought monitoring and assessment data/tools
- Out of all listed in Drought Mitigation Plan, those predominantly identified:
 - stream flow data
 - weather forecasts
 - long-term outlooks
 - NRCS Snow Telemetry Network (SNOTEL) sites

Potential Tourism/Rec Data Sources

My organization has a system to track: [check all that apply]



Though, not necessarily willing to share.

Presentation Outline

- 1. The need: linkages between drought, tourism, and recreation
- 2. Pilot project overview
- 3. Framework for approaching drought, tourism, and recreation
- 4. Pilot highlights
- 5. Overarching themes

Survey, Focus Group & Interview Themes

- Impacts
- Very diverse sector with varied direct relationship to water
- Disconnect between drought/tourism/recreation
- Indicators and trends
- Coping strategies

Impacts

- Direct and indirect impacts on the tourism/recreation sector, spanning all seasons
 - boating, rafting, canoeing, fishing, skiing, snowmobiling, or skiing
- Intangible relationships are harder to quantify
 - Eg. decreased visitations and cancelations in hotel stays stemming from negative perceptions of dryness, never booked holidays because of wildfires (even far away from a vacation destination)
- Links to fires

Diversity of Sector

- Water recreation activities, such as fishing or rafting seem to identify more closely with natural resource management, and by extension with water management
- Many tourism activities are perhaps less directly tied to non-consumptive water use and so linkages less acknowledged
- Yet, diversity also offers solutions

Un-established Linkages

- Impacts need to be established
- Need for increased awareness and education about connections
- Establishing quantitatively and qualitatively the relevance of drought to tourism/recreation

Indicators and Trends

- Lowered visitations, reduced tax revenues, operating expenses, employment, or hotel visits (the most commonly collected data from the survey)
- Focus groups mentioned parks, trail logbooks,
 # people floating, train ticket sales, traffic data,
 or hunting tags
- No single indicator, but combination
 - Though visitation prioritized
- Collection and integration is a daunting task

Coping Strategies

- PR & marketing campaigns that highlight diversity across the community
- Importance of conveying current and accurate data
- Economic diversification



Building Community Vitality

- "Now, it's about all of the [tourism and] recreation opportunities; that diversity is important. When rafting goes down, mountain biking could go up."
 - Monitoring and assessment, development of metrics & mechanisms specific to this sector
 - Diversification
 - Effective PR and communication
 - Innovative and integrative planning

Many opportunities in this sector for reducing vulnerability and building resilience.