

# Partnering with NIDIS – the Upper Colorado River Basin Pilot Project

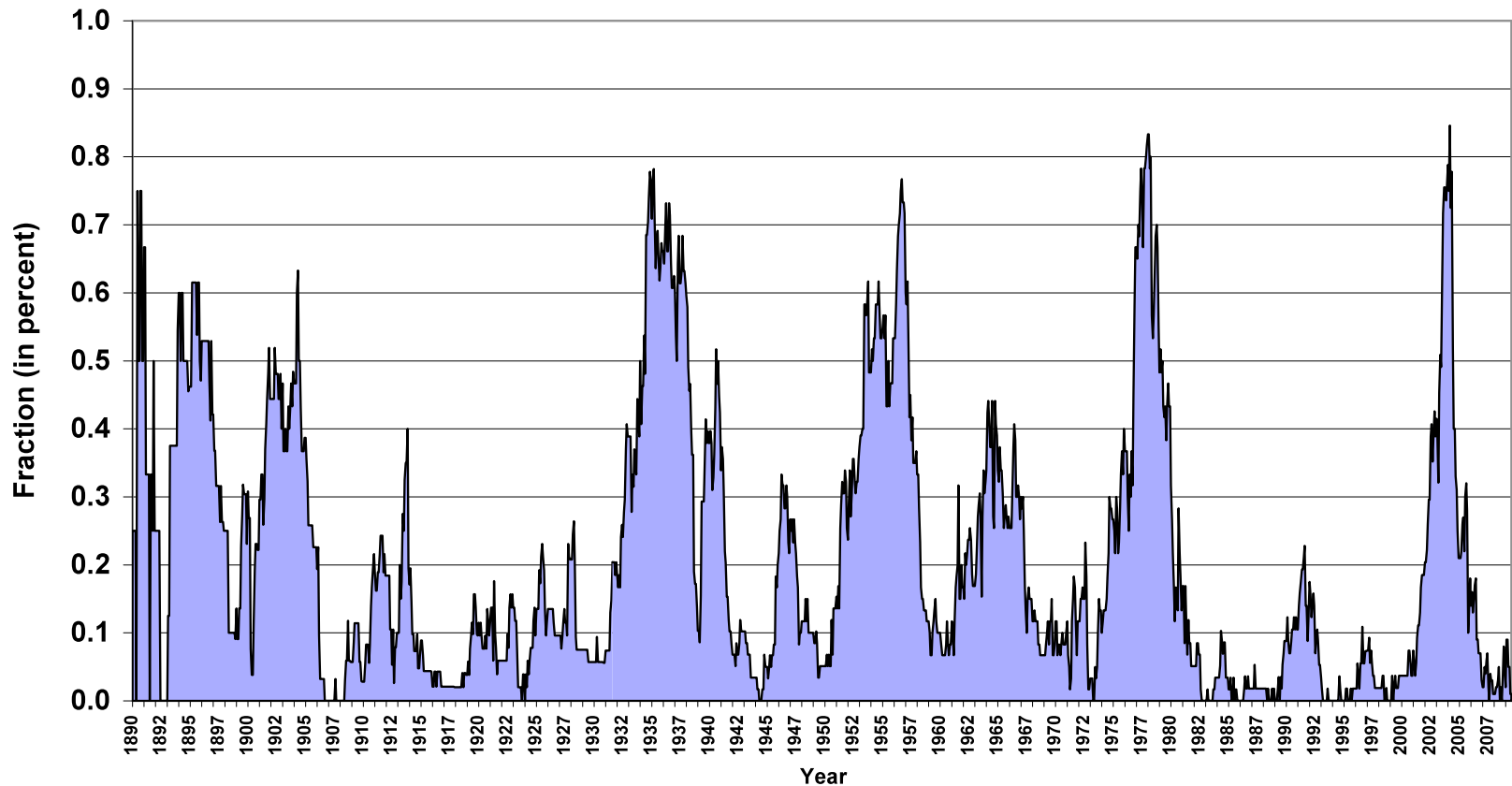
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Colorado Climate Center  
Colorado State University

2010 Climate Prediction Applications Science Workshop  
“Managing Water Resources and Drought in a Changing  
Climate”

March 2-4, 2010 San Diego, CA

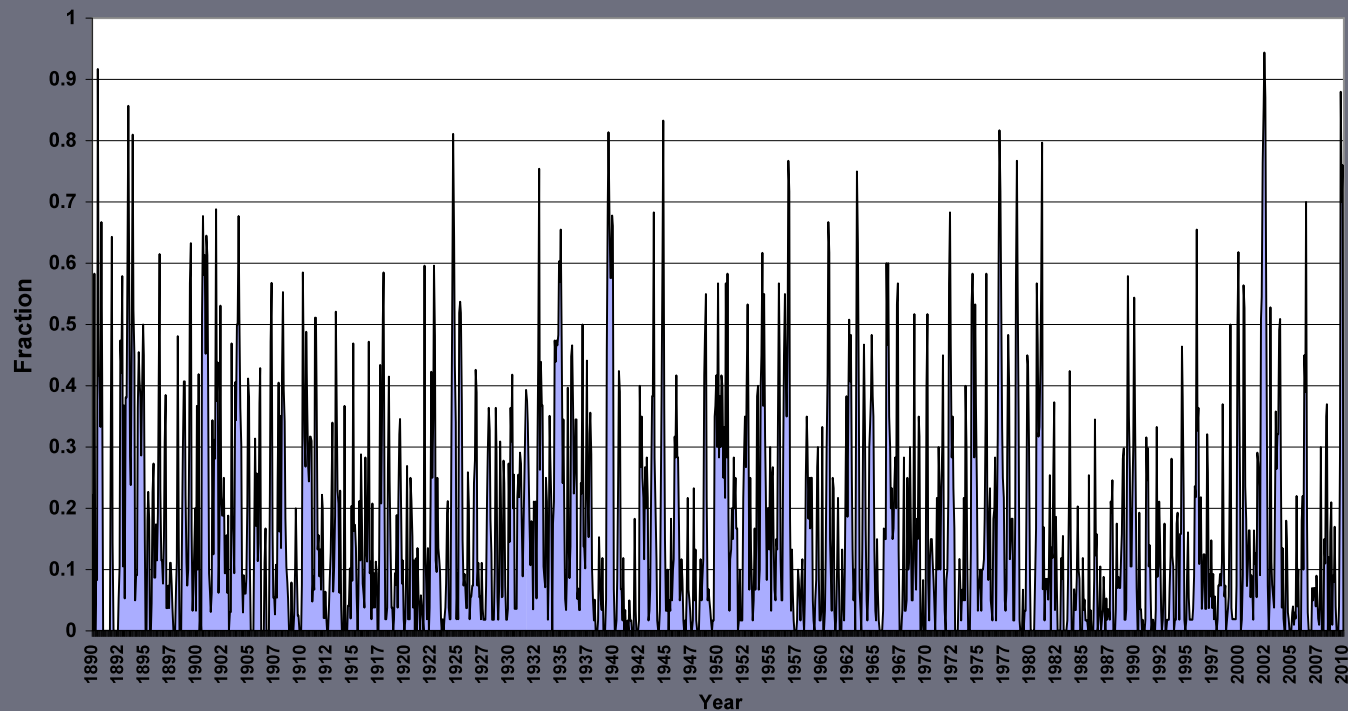
# Realistic Perspective – Drought Happens

**Fraction of Colorado in Drought**  
**Based on 48 month SPI**  
(1890 - July 2009)



# Drought "almost happens" often

**Fraction of Colorado in Drought**  
**Based on 3 month SPI**  
(1890 - December 2009)



- ▶ Systematic statewide multi-agency drought monitoring began in Colorado in 1977
- ▶ Colorado Drought Response plan of 1981 institutionalized multi-agency drought monitoring and response
- ▶ NIDIS selected the Upper Colorado River Basin as a pilot project ~2007 - 2008
- ▶ Colorado Climate Center began formal efforts with NIDIS pilot project in 2009

# Efforts toward a basin-specific drought monitor and early warning

## Priorities

- address user needs (based on recent NIDIS user interviews)
- meet Colorado Climate Center goals
- Support the Colorado Drought response and mitigation plan and update
- utilize US Drought Portal
- inform the US Drought Monitor
- Begin WY 2010
- Contribute knowledge toward other NIDIS regional and national “best practices”

# Recent Accomplishments

- ▶ Conducted personal interviews in 2009 with several dozen water users, water providers and resource managers, and watershed protectors in the Upper Colorado
  - Drought Triggers and Indicators
  - Monitoring gaps
  - Favorite data, products and processes

A favorite quote from Colorado reservoir operators: "Managing water during times of drought is easy. It's the high flows that give us fits and that's when we can best save water for later drought."

Another favorite quote: "If we're really going to make decisions that make a difference later, we need a skillful 2-year runoff forecast."

Beginning weekly "Water supply Assessments"

Weekly “mini webinars” to assess changing precipitation and water supply conditions

Winter  
2010



NIDIS - UPPER COLORADO BASIN PILOT PROJECT

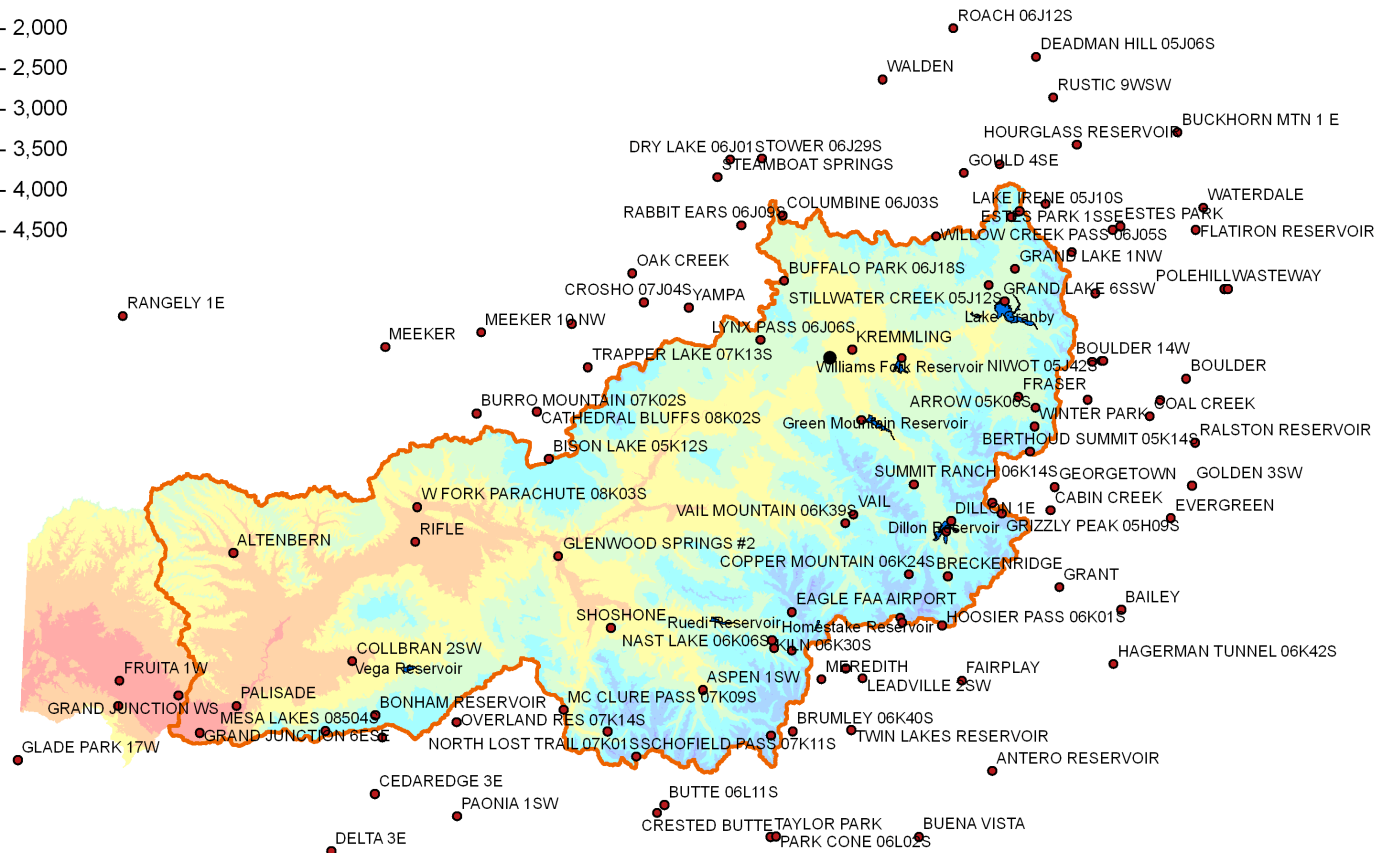
Weekly Climate, Water & Drought Assessment

- UCRB\_lakes
- wx\_data\_buffer
- gaging\_sta.txt Events

**ucrb\_dem**

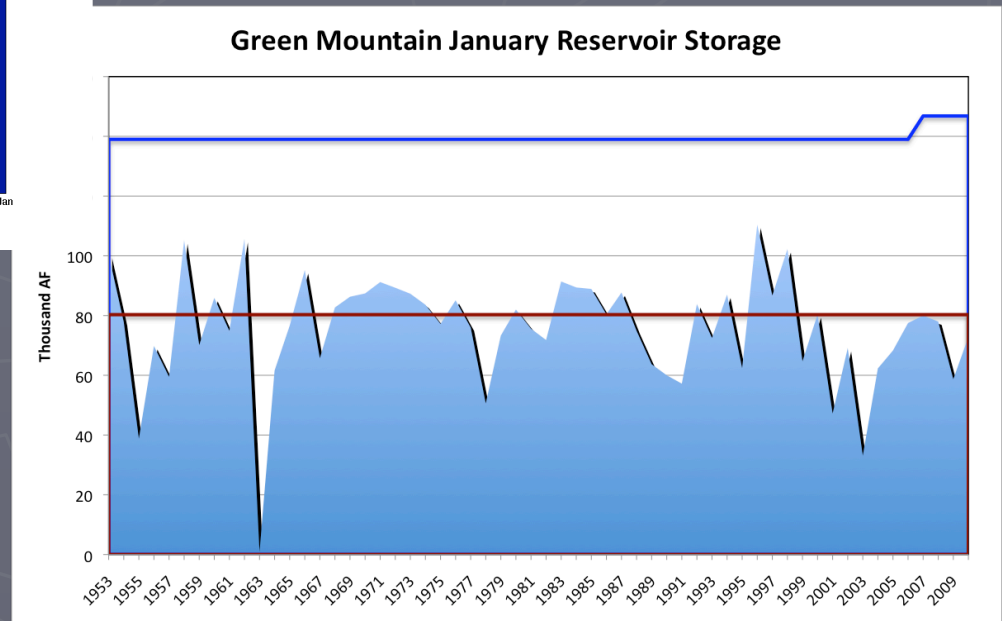
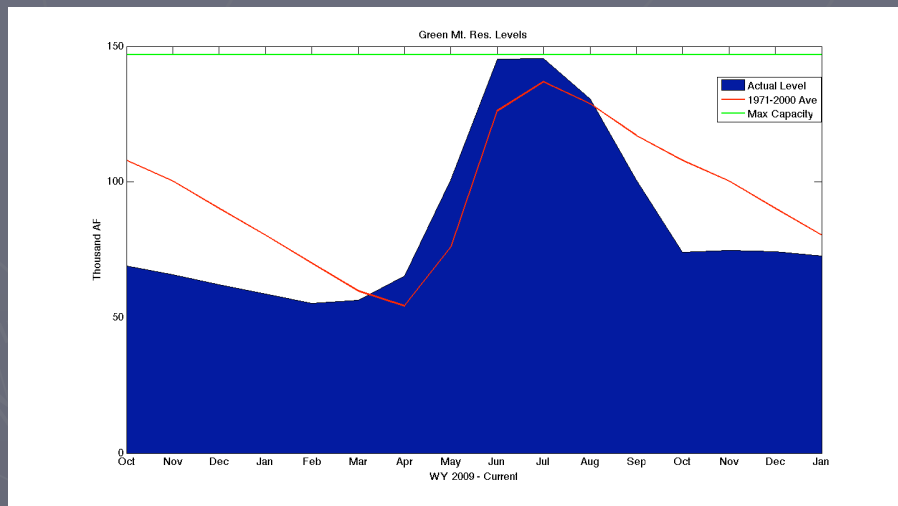
meters

- 1,316 - 1,500
- 1,501 - 2,000
- 2,001 - 2,500
- 2,501 - 3,000
- 3,001 - 3,500
- 3,501 - 4,000
- 4,001 - 4,500





# Learning to put current hydrologic information into historical perspective for diverse users



# Challenges

- ▶ Competing needs, changing priorities
- ▶ Difficult to maintain interest in “Drought” in certain sectors unless disaster is looming
- ▶ Fundamental conflict between “Recreation and Tourism” where DROT is a 4-letter word versus “Ag and Municipal” where drought is in the normal vocabulary
- ▶ Difficult boundaries make a difference – sometimes difficult to cross state borders
- ▶ Water Law controls the distribution of surface water but many scientists don’t adequately understand the law

# A Lowest common denominator approach to partnership development



# Community Collaborative Rain, Hail and Snow Network

-- when in doubt, just get out and measure --

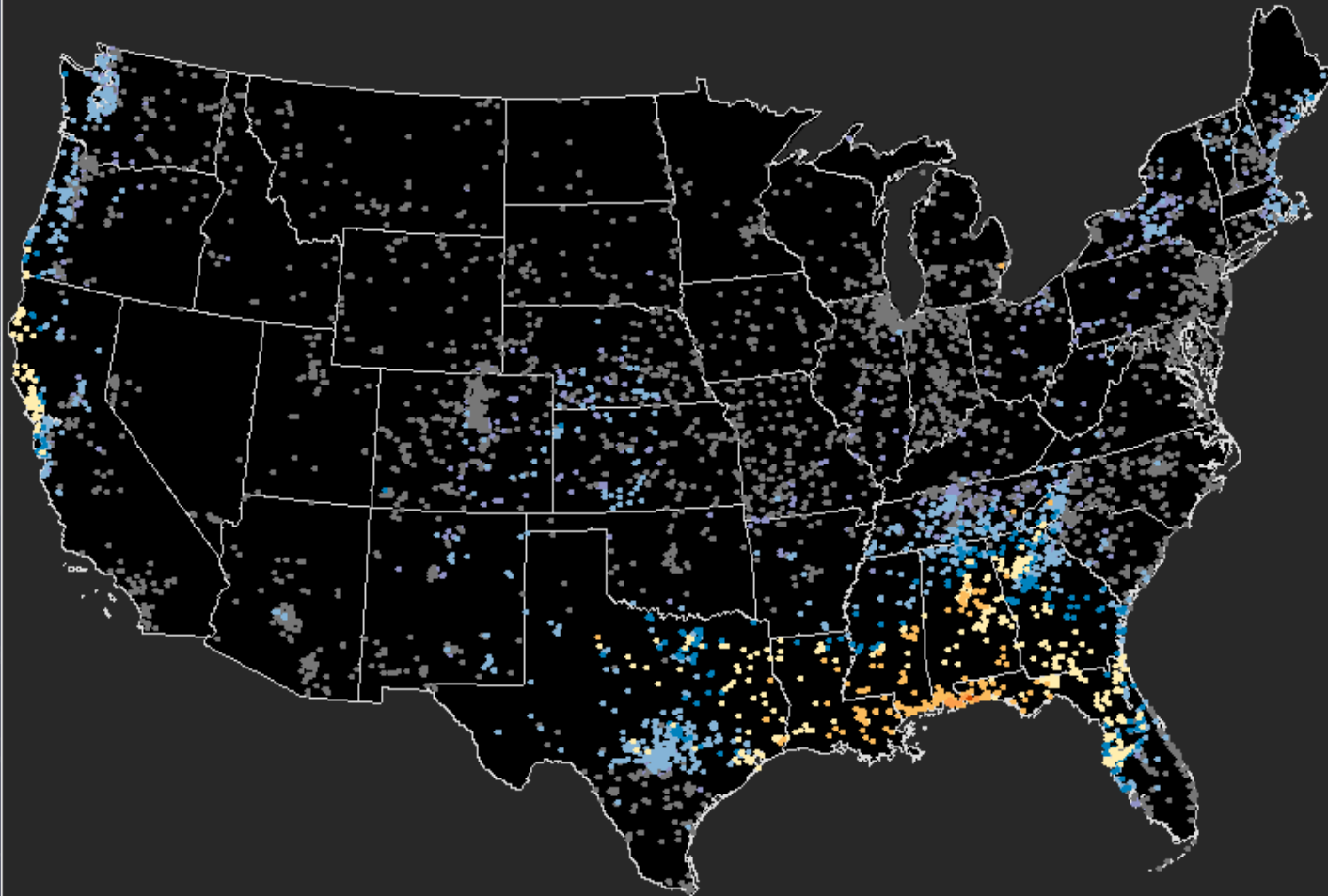


# CoCoRaHS precipitation today

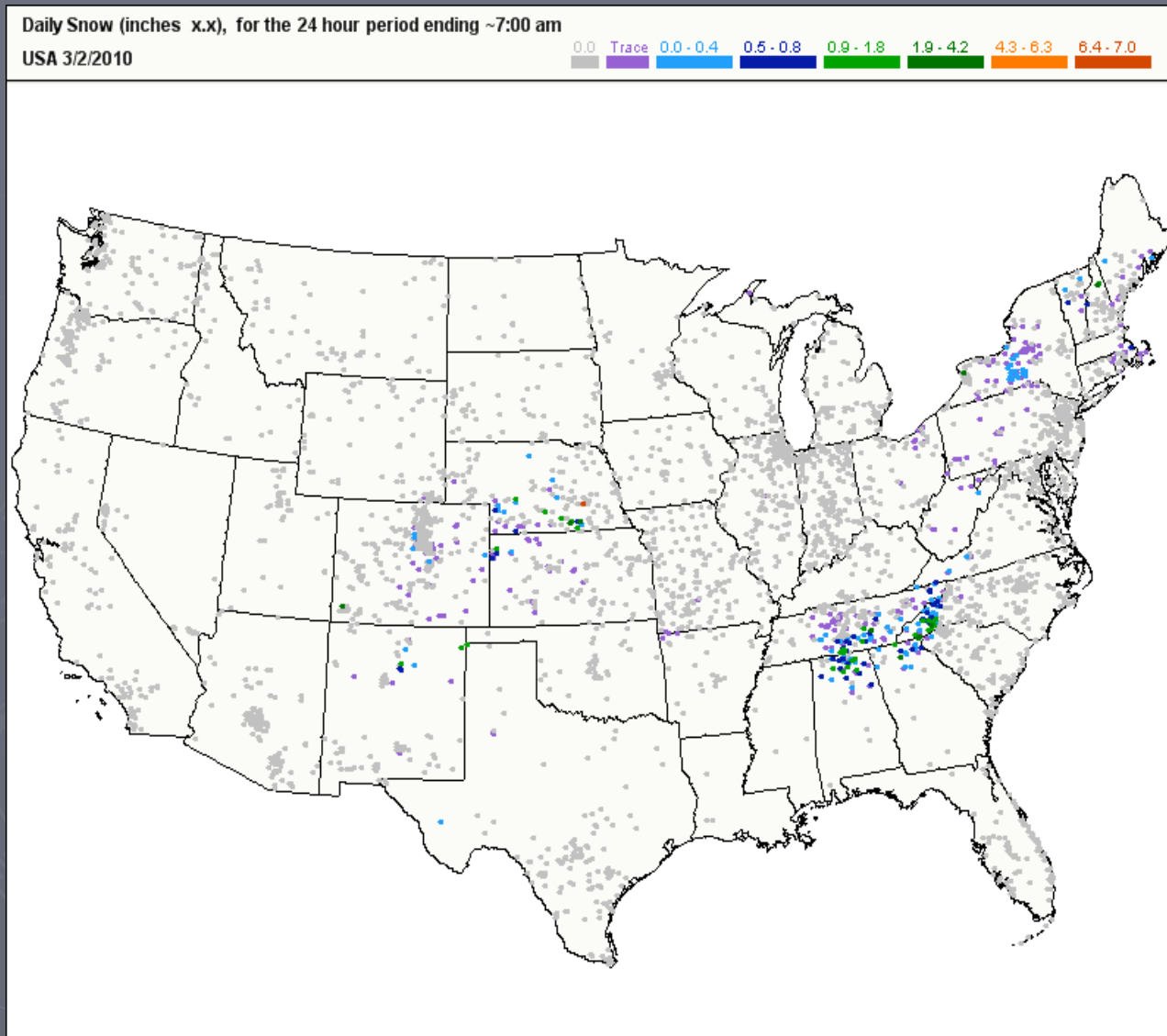
Daily Precipitation (inches x.xx), for the 24 hour period ending ~7:00 am

USA 3/2/2010

0.0 Trace 0.01 - 0.20 0.21 - 0.40 0.41 - 1.00 1.01 - 2.41 2.42 - 3.62 3.63 - 4.02



# CoCoRaHS snowfall Today



# Is your square mile covered?

- ▶ If not, please sign up to help measure rain, hail and snow from your backy
- ▶ If so, sign up anyway 😊
- ▶ <http://www.cocorahs.org>  
and click on "Join CoCoRaHS"



# Final Comment

- ▶ Drought is a pain. You rarely get awesome senses of accomplishment working with drought.

