

# Dealing with Drought-Adapting to a Changing Climate

## Castle Rock, CO, October 13, 2009

### Discussion Summary

#### ***Breakout Discussion #1:***

**What information, planning strategies, etc. helped, or would have helped, you deal with the impacts of the 2000s drought? What were the lessons learned through your experience with the drought?**

#### **Jeff Lukas' Group**

- Information that might have helped might have been there, but didn't know about it (e.g., paleo data)
- No matter how much data we have, Mother Nature might change her mind: issue of predictability
- Informational tools (upstream and downstream) for customer and broad understanding of climate and drought
- Need longer planning horizon than previously used
- No authority (water) over land use; will water supplies ever dictate no growth?

#### **Nolan Doesken's Group**

- Education for people dealing with climate and law, etc...
- Better policies regarding landscape water use
- Better land use planning that takes water resources into account
- Contingency planning that takes critical yield, firm yield into account
- More and better collaboration

#### **Christina Alvord & Taryn Hutchins-Cabibi's Group**

- Better communication/relationships/collaborations leading up to the drought
- Drought plans that are comprehensive for municipalities; would have helped relationships with other stakeholders if there had been a better plan in place
- Being able to react quickly in a logical fashion; policy hurdles that make quick action difficult; communicating with customers and communities about what needs to be done in a way that doesn't end up in a "boy that cried wolf situation": need to streamline decision-making
- Utilization of tools for monitoring; existed but weren't being used
- Different scenarios—didn't expect drought to evolve as quickly as it did (how do we address this in the future); 1-3 month outlook scenarios
- Regionalization at looking at impacts and the 1177 process
- Streamlining the drought trigger and water restrictions process
- Better understanding between conservation and demand hardening
- We rely too much on conservation to get us through drought
- Early warning and problems with buy-in (forecaster faith)

### **Joe Barsugli's Group**

- Importance of communication and education at all levels
- Understanding how water systems work among the populace
- Keeping the memory of drought alive!
- Landscaping and demand hardening; where does this go next time?
- Demand for more storage; general conflict between the desire for better supplies yet also desire for more non-consumptive needs and environmental protections
- Better predictions and observations
- Streamline bureaucracy at state engineer and federal level so can quickly respond--streamline all levels of governance

### **Chad McNutt's Group**

- Better coordination among water providers
- When is it a drought? Not a drought until it's gone
- Identifying triggers
- Characterization of customers and demand patterns and behavior
- Consistent messaging across water provider lines and districts
- Lack of ability to share water
- Better forecasting for agriculture; planting influence, etc.
- Water rates and value of water; drought has changed rates and structures; value of conservation

### **Group Wrap-Up/Additions**

- Perception of vulnerability between urban and suburban water users
- Education and planning to buffer mismatch between supply and demand; never going to be 100% for extreme events
- Mountain counties/granite rock: need well monitoring as indicators of drought and impacts on streamflow
- Water providers view drought as a failure in planning—not necessarily true
- Drought as a catalyst for longer term changes; need flexibility/adaptability in the plans
- Did 2002 last long enough? How would thing be different now if it had?
- Landscape water restrictions were the buffer (conservation); but what about now that we are now using more efficient tools