



# AWRA 2010 ANNUAL SYMPOSIUM

## Uncertainty & Future Management of Colorado's Water Resources

*How will future changes in climate or demographics affect water availability*

Friday, April 23, 2010

Mount Vernon Country Club, 24933 Clubhouse Circle  
Golden, Colorado 80401 • 303-526-0616

### Agenda

7:30 a.m. Registration and Continental Breakfast  
8:30 a.m. Introduction and Welcome *Bill Battaglin— President, AWRA Colorado Section*  
8:45 a.m. Colorado Foundation for Water Education *Nicole Seltzer, Executive Director*  
9:00 a.m. National and Global Water Perspectives *Ari Michelsen, President, National AWRA*  
9:15 a.m. **KEYNOTE PRESENTATION**  
**Protecting Colorado's Water Resources**  
*James Martin, Colorado Department of Natural Resources*

10:00 a.m. **BREAK**  
**MORNING PANEL SESSION - Uncertainty and Forecasts of Future Conditions in Colorado**

10:15 a.m. **Future climate conditions in Colorado: The known and the unknown**  
- 12:00 p.m. *Linda Mearns, NCAR*

**Alternatives to drying up agricultural water in Colorado**  
*Dr. James Pritchett, CSU*

**Tree-ring paleohydrology and planning for future conditions**  
*Jeff Lukas, Western Water Assessment*

**Population forecasts: Will people continue to move to Colorado?**  
*Elizabeth Garner, State Demographer*

**Beyond the projections: Finding a no regrets plan**  
*Marc Waage, Denver Water*

12:00 p.m. **BUFFET LUNCHEON**

12:30 p.m. **Luncheon Speaker**  
*Mayor John Hickenlooper, Mayor of the City of Denver*

1:15 p.m. **Student Presentations - Scholarship Recipients**  
*Assessing electrical geophysical methods for uranium roll front investigation— Sophie Hancock*  
*Enhancing ground water models for evaluating irrigation and drainage strategies— Eric Morway*  
*Inactivation of bacterial pathogens by exposure to blue light— Jane Turner*

#### BREAKOUT SESSIONS

##### Session B1 – Water Supply & Potential Consequences of Future Change

2:00 p.m. **Climate adaptation in Colorado**  
- 3:15 p.m. *Laurina Kaatz, Denver Water*  
**Regional approach to climate change planning: Joint Front Range Climate Change Vulnerability Study**  
*Mark Woodbury, Riverside Technology, Inc.*  
**Climate change hydrology for the Colorado River Water Availability Study: A watershed example**  
*Ben Harding, AMEC Earth & Environmental*  
**Vulnerability of Boulder's water supply to climate change: An example of a local assessment**  
*Joel Smith, Stratus Consulting, Inc.*  
**Effects of scale and uncertainty in forecast of hydrologic conditions: A tale of two ski areas**  
*William Battaglin, USGS*

##### Session B2 – Other Potential Consequences of Future Change on Water Resources

2:00 p.m. **Potential economic benefits of reducing salinity in the Upper Rio Grande Basin**  
- 3:15 p.m. *Ari Michelsen, University of Texas at El Paso*  
**Water storage project permitting...A better way?**  
*Mike Carnevale, Leonard Rice Engineers, Inc.*  
**Potential consequences of regulatory changes in Bear Creek watershed**  
*Russ Clayshulte, Bear Creek WA*  
**Water and the Colorado economy**  
*Greg Fisher, Denver Water*

3:00 p.m. **BREAK**  
3:15 p.m. **PANEL DISCUSSION: Protecting Colorado's water resources in the face of**  
- 4:30 p.m. **uncertainty about future climate, land use, and population**

*Panelists: Eric Kuhn, CO River WCD; Glenn Vawter, National Oil Shale Association;*  
*Jack Byers, Applegate Group, Inc.; and Dan Luecke*

4:15 - 6:00 **CASH BAR & RECEPTION** (1 beverage token included with registration)  
**Silent Auction Winners Announced!**



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