

Title: Characterizing Drought Risk Management, Information Use, and Response Strategies of Western Slope Water Managers

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Recent drought conditions, especially in 2002 and 2012, have tested the capacity of water-supply systems across the Upper Colorado River Basin to cope with and recover from drought. With such droughts occurring at a time of growing water demands and likely long-term reductions in overall runoff, the broader community of water managers, drought-information providers, and researchers is increasingly interested in understanding how drought risk perceptions and management practices vary across the Upper Colorado River Basin's diverse water systems, and specifically understanding the role that drought-related information, such as snowpack monitoring, streamflow forecasts, and weather and climate outlooks, currently plays and could play in the future to support decisions that reservoir managers and water providers make throughout the water year.

Focusing on Colorado's Western Slope, this study seeks to a) understand perceived risks and concerns faced by water managers related to drought management, b) characterize how drought information is currently used and accessed by water-management entities, and c) identify likely response strategies, including accessing and using new drought information, that are available to water managers in the face of drought. This presentation will highlight preliminary findings from in-person interviews, document analysis, observations of planning meetings, and other interactions with seven water-management entities across the Western Slope. After summarizing perceived risks, vulnerabilities, and buffers to drought identified by study participants, we will present 'decision calendars' reconstructed from interview responses for each of the participants to highlight similarities and differences among participants' timing of key decisions made throughout the water year and use of monitoring and forecast information to inform those decisions. We will then discuss opportunities and barriers for Western Slope water entities to incorporate new information in decision making and expand drought response options. Finally, we will highlight anecdotes from study participants' past experiences managing risk during drought events, and insights into how past drought events have shaped their capacity to manage future drought risk.

The findings from this study will be used to inform and improve drought-information services across the Upper Colorado River Basin, such as the Colorado Climate Center's Drought Briefing webinars, that are under the umbrella of the new Intermountain West Drought Early Warning System (IMW DEWS), part of the National Integrated Drought Information System (NIDIS). Ultimately, we intend that our efforts will make drought monitoring and forecasting information more timely, useable, and relevant to those who are tasked with managing our basin's critical water supply in the face of increasing drought risks.