



TO: Standing Advisory Committee
FROM: Laine Christman, Resource Economist
DATE: September 28, 2015
SUBJECT: Presentation and discussion of the Bureau of Reclamation Drought Grant and request for participation on the Drought Task Force

SUMMARY

The U.S. Bureau of Reclamation (USBR) established the WaterSmart Program to provide federal assistance to water authorities in the areas of water efficiency, integrating water and energy policies to support the sustainable use of all natural resources, and coordinating the water conservation activities of various federal bureaus and offices. In May of 2015, the USBR released the funding announcement for the WaterSMART: Drought Contingency Planning Grants for Fiscal Year 2015. The two-year grant is designed to incorporate the best science on climate change into water resource management within a collaborative, interagency framework. With the support of its Board, TMWA applied for the funding opportunity to address the potential influence of water-shed level climate change on water resource management in the Truckee Meadows area.

In September, TMWA received notification that its proposal would be awarded funding. Part of the requirements of the award is that TMWA create a Drought Planning Task Force. The Task Force will hold meetings to discuss various management actions and potential impacts from those actions, in response to climate change in the region. The Task Force is to be comprised of TMWA staff, government representatives, and stakeholders within the TMWA service area. Stakeholders can be representatives from different customer classes, fire services, as well as, individuals involved in environmental preservation and water-related recreational opportunities. TMWA is asking for support of the Task Force from the SAC and would like the SAC to nominate representatives willing to participate in this endeavor. The nominee must be willing and able to participate in Task Force meetings and provide additional outreach to their fellow class of customers. The process is scheduled to occur over the next two years with meetings being held approximately twice per year. Additional, smaller, informal meetings, that include additional participants, may be held as needed.

PROPOSAL ABSTRACT

In the arid Western United States (U.S.), water has always been a scarce resource. A water purveyor is tasked with the responsibility of providing and maintaining reliable water supplies, in perpetuity, to ensure the well-being and economic vitality of stakeholders within its jurisdiction.

Historically, water resource management plans have been quite static and reactionary to changes in water supply. As changes in the climate become increasingly prominent and erratic, managing for a sustainable supply of water resources has proven increasingly difficult. In order to achieve water supply sustainability in an uncertain future, the water purveyor must have a robust plan in place that specifies mitigation actions that insulate against future shocks to supplies and adapts to abrupt changes in short-term conditions. To design such a robust plan, the purveyor must incorporate scientific information regarding climate change in order to gain insight into both short-term and long-term shifts in environmental conditions in a given region. Moreover, the purveyor must consider current institutional constraints that regulate the allocation of water and can lead to a potential disconnect between what *should* be done and what *can* be done. In this proposal we propose a methodology that identifies both feasible and cost-efficient water management options for the Truckee Meadows Water Authority within the Truckee Basin, given multiple climate scenarios. Using a linear programming framework to optimize a suite of management options for each scenario, we will develop a decision support system that considers inputs on watershed-level climate change, water supplies, legislative and stakeholder constraints, and the costs of mitigation and response actions. The end result will be a updated Drought Contingency Plan that utilizes a dynamic decision support system which details a timetable outlining the optimal suite of actions to: i) provide adequate water resources; ii) satisfy cost recovery and all legal requirements; and iii) can adapt readily as conditions change within the Truckee Basin.