



MEMORANDUM
JANUARY 4, 2018

TO: BOARD OF DIRECTORS

FROM: ERIC KUHN

SUBJECT: *JOINT WEST SLOPE ROUNDTABLE RISK STUDY*

ACTION: *No action requested*

STRATEGIC INITIATIVE(S): 3.A., *Climate and Hydrologic Uncertainty*
4.A. & B. *Colorado River Supplies*
6.A. & C. *Agricultural Water Use*

Phase II of the Joint West Slope Roundtable Risk Study is nearing completion. As we begin discussing the next phase of this effort, it makes sense to review the original policy purposes for the study.

The Upper Basin's proposed drought contingency plan has three basic elements: augmentation (cloud seeding); drought operations of upstream CRSP units; and, demand management. The concept of demand management involves the (voluntary and compensated?) reduction of consumptive uses in the Upper Basin.

For phase I of the risk study, we looked at how often we might need to turn to demand management and how deep these cuts might be under several different hydrologic and demand assumptions. To conduct phase I study we (Hydros Consulting) utilized the Bureau of Reclamation's CRSS model. CRSS does a very good job of operating the large system reservoirs (such as Flaming Gorge, Lake Powell, and Lake Mead) and the diversions on the Lower Basin mainstem. In the Upper Basin, CRSS does a reasonable job of simulation aggregated Upper Basin consumptive uses, but it can't be used to answer questions about the specifics of how demand management options might impact flows, reservoir operations, etc. within individual sub-basins (such as the Gunnison or Yampa Basins). Thus, after phase I, we were unable to answer a number of important questions from the roundtables.

Phase II of the risk study was then designed with two major objectives. First, we used CRSS to look at demand management and answer several questions that were not addressed in phase I. Second, we evaluated if we could use CRSS in conjunction with Colorado's state-mod (which is a detailed water rights-based model covering all of the Colorado River sub-basins within Colorado) to answer specific questions. We've advanced phase II to the point where we can now, with confidence, say that we can use the two models to answer these questions.

What remains to be completed are a project report and briefing the roundtables and the state on the results. We also need to start scoping phase III where we will actually address specific questions. Recall that the scope of work for phase II was quite controversial at the CWCB level.

I recommend that the technical committee and Hydros begin drafting a phase III scope that we can review at future board meeting and the West Slope roundtables.