

## **Stakeholder negotiations to manage flows on the Dolores River**

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### **Abstract**

Large-scale dams have been built on almost every tributary in the Upper Colorado River Basin in order to offset the variability in river flows and to store and deliver water. These water projects have negatively impacted downstream ecosystems, cultures, and recreational economies and perpetuate a singular belief of what water “is”. Dominant water governance policies and entities are currently challenged by population growth, aridification, and shifting values. Modifying the operational flow regime of dams can potentially minimize these negative impacts to reflect a natural hydrograph and create a more dynamic allocation system. As a platform to address these operational changes, collaborative efforts have become more common in the Upper Colorado River Basin in recent decades. The impact collaborative programs (Upper Colorado River Endangered Species Program and the San Juan Implementation Program) have on operational regimes of Colorado River Storage Project dams serves as evidence towards a greater trend in the UCRB towards collaboration as it relates to project operations.

The Dolores River in Southwest Colorado is a tributary of the Colorado River and serves as a case study encompassing problems seen in the greater Colorado River Basin on a regional scale. Ensuing “trickle-down collaboration” efforts among regional stakeholders are also present in the sub-basin. Furthermore, vying stakeholder values regarding operational flow regimes from McPhee Dam complicate the management process. This research aims to illuminate a trend towards stakeholder collaboration in the Upper Colorado River Basin as a whole and will identify major constraints regarding implementation of dynamic flows, work with stakeholders to identify core values using a q-methodology approach, and finally prescribe both federal and local tools for a framework geared at implementing a more dynamic operational flow regime from McPhee Dam in the future.