

## **Water Rights Consulting: a Colorado-Based Perspective**

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**Abstract.** “First in time, first in right” is the foundational principle of the doctrine of prior appropriation that characterizes water rights administration in the western United States. In Colorado, a “plan for augmentation” provides a mechanism for junior water rights holders to develop reliable water supplies in over-appropriated basins by preventing injury to senior water rights through protective terms and conditions approved in Water Court. Attorneys rely on the expertise of water consultants to complete systematic analyses of hydrologic variables. Initial tasks quantify the magnitude and timing of demands, which are followed by an evaluation of physically-viable supplies. Climatic conditions in Colorado are such that storage and groundwater wells are frequently a component of the water supply. Water consultants then determine the volume of replacement water required to augment out-of-priority surface and lagged groundwater depletions. The evaluation of available augmentation supplies must consider intervening water rights, including instream flows, and determine whether replacements can be exchanged to the point of depletion, or if upstream replacements are necessary. Water Court applications are rigorously reviewed by attorneys and consultants representing senior water rights holders as well as State officials, and therefore, must be defensible. Sound analyses streamline the negotiation of stipulated agreements, provide efficient plans and designs, accurately determine the volume of high-cost augmentation water required, and ensure market-value for replacement supplies. Dr. MacDonald has taught the skills necessary to succeed in the demanding field of water rights consulting to countless individuals.