

## **Influence of Hydroclimate on Characteristics of Hydrograph Evolution in Snowmelt-Dominated River Systems**

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**Abstract.** We present results from application of a unique, physically-based approach to reveal the influence of interannual changes in hydroclimatic conditions on features of hydrograph evolution in snowmelt-dominated rivers of the Colorado River Basin (CRB). Results indicate that beginning in fall, differences in timing and magnitude of seasonal hydrograph form and amount of streamflow variability correlate strongly with relative magnitude and timing of the upcoming snowmelt runoff. These results suggest, and recent advances in understanding effects of ocean/atmosphere interactions on precipitation in the Western U.S. support, that essential hydroclimatic conditions that drive snowpack development and initiate snowmelt set-up by fall and persist into early spring.

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