Snow, grow and flow: Ecohydrological processes in the rain-snow transition zone

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The Dry Creek Experimental Watershed (DCEW: 28 km^2) in southwest Idaho , USA spans the rain-snow transition zone (RSTZ) where precipitation in the lower elevations (~800 m) is predominantly rain and in the higher elevations (~2000 m) is predominantly snow. This and other associated environmental gradients impose complex relationships between precipitation, plants, and water availability across the catchment. These relationships are further complicated as rain becomes more common in higher elevations due to climate warming. In this presentation I summarize recent work to characterize and model how ecohydrological process including soil moisture storage, evapotranspiration, primary productivity, and streamflow change across the RSTZ, demonstrate recent climate-induced changes, and speculate on the ecohydrological future of catchments in the RSTZ.