Can ENSO teleconnections be exploited for seasonal hydrological prediction in the Western U.S.

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El Nino is perhaps the strongest teleconnection in the extratropics. The current El Nino event is thought to be the strongest in the instrumental record. We use a set of ten grouped climate and snow water equivalent (SWE) stations distributed across the western U.S. to evaluate how well the U.S. National Multimodel Ensemble (NMME) seasonal climate forecast system is able to exploit ENSO signals. We do so through a comparison of stratified Ensemble Hydrologic Prediction (ESP), in which hydrological forcings for the VIC model are subselected from prior El Nino years, with NMME seasonal forecasts for the same years. We also evaluate the skill of both methods for point forecasts of SWE and accumulated winter (Nov-Mar) precipitation and average winter temperature for winter 2015-2016, and for SWE at the 10 forecast points for Apr 1, 2016.