

## **Analysis of Soil Moisture Metrics to Assess Societal Risks to Hydrological Extremes**

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Interactions between the soil and atmosphere result in important feedbacks that elevate societal risks to hydrological extremes. The links between heat wave intensity and soil moisture or the likelihood of flooding for given levels of soil moisture suggest antecedent soil conditions can provide important insights when assessing societal risks. Unfortunately, the scarcity of available in situ soil measurements combined with the sensitivity of soil observations to localized soil characteristics, topography, and climate make it challenging to monitor soil conditions over spatial scales relevant for societal impact assessments. In this study we explore multiple techniques to standardize in situ measurements from the U.S. Climate Reference Network (USCRN). It is anticipated that standardized soil moisture metrics may provide a more holistic framework for evaluating the severity of hydrological extremes and associated societal risks.