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**Abstract: Evaluation of *In Situ* Soil Moisture Metrics
to Monitor Hydrological Conditions**

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Interactions between the soil and atmosphere result in important feedbacks that elevate societal risks during hydrological extremes. During drought conditions, the lack of available soil moisture can warm surface temperatures and augment heat wave intensity. Additionally, moist soil conditions prior to heavy precipitation will lead to additional runoff and contribute to flooding potential. While soil conditions provide important insights to decisions makers managing societal risks, interpreting soil moisture observations can be challenging, considering the sensitivity of observations to local soil properties, topography, and climate. In this study, a methodology to create station-based soil moisture climatology is explored to improve the interpretation of soil moisture observations. Standardizing soil moisture observations allow for the development of metrics that improve the interpretation of soil moisture conditions, which can be vital to local and regional decision makers.