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The Western States Water Mission: A Hyper-Resolution Hydrological Modeling and Data Integration Platform

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Hydrological remote sensing has advanced significantly over the last decade, and will continue to grow with number of recent and near-future launched. Arguably, a platform for synthesizing remote observations is an important step towards improved modeling, understanding and prediction of terrestrial hydrology. In this presentation we describe the new NASA Western States Water Mission, a high-resolution, catchment-based modeling and data assimilation platform implemented for the western United States. Model structure will be described, as well as early results that include assimilation of satellite snow observations. A key feature of model development has been its treatment as a 'flight project' which enables leveraging of important NASA systems engineering and project management expertise.