**Forecast Informed Reservoir Operations: Developing an Adaptive, Science Based Proposed Water Management Strategy**

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**ABSTRACT** Many reservoirs are operated to provide both water supply and flood control, while balancing environmental needs and other considerations. Most are operated using rules established when streamflow forecasts had very low skill and thus are not allowable inputs into daily operations. However, with advances in weather prediction skill, forecasts today may be skillful enough to enable their use. Forecast-Informed Reservoir Operations (FIRO) tests the viability of this possibility along the US West Coast where the needs are great and where predictive skill has emerged for the dominant storm type – atmospheric rivers. A cross-disciplinary, multi-agency steering committee formed to evaluate FIRO viability at a pilot reservoir in northern California. This study showed such positive early results that a deviation request to test the ideas through real-world reservoir operations was submitted to USACE. The pilot reservoir has now operated successfully for two winters under a deviation, and an update to the water control manual is underway. Similar assessments are ongoing at three additional sites chosen to represent a wide range of locations. This presentation summarizes the partnership between research and operations at FIRO’s core, methods used to advance AR predictive skill, the data collection and monitoring efforts supporting FIRO goals, and the current status of existing viability assessments.

**BIO** Dr. Anna M. Wilson is the Field Research Manager with the Center for Western Weather and Water Extremes at the Scripps Institution of Oceanography. She earned her Ph.D. in Civil and Environmental Engineering from Duke University in 2016. Her current research interests are in supporting the development of physically based, accurate representations of atmospheric rivers and other extreme events in forecasts and projections, in support of science based resource management strategies. Her responsibilities include overseeing ground-based field programs in California and coordinating airborne field campaigns over the northeast Pacific.