

The RAL Seminar Series



NCAR

Helping Water Utilities Consider Climate Change in their Integrated Resource Planning Process

by

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Foothills Lab Building 2,
Room 1022, 3:30 p.m.**

Climate change may impact water resources management conditions in difficult-to-predict ways and, along with other uncertain factors, is a key challenge for water managers and planners. A framework is presented that helps organize the management problem including uncertain factors such as climate change, possible management responses, measure of system performance, and relations or models that can tie these elements together. Climate uncertainty is expressed as ensembles of local, daily weather that reflect a wide-range of plausible future climate change scenarios, derived from a non-parametric resampling method known as K-Nearest Neighbor. This method is demonstrated by evaluating the possible impact of climate change and other uncertainties on the Inland Empire Utilities Agency, in Southern California through the use of an integrated water resources model- The Water Evaluation and Planning (WEAP) system. The analysis shows that climate change could impact the region and suggests the need to augment its long-range water management plans to reduce its vulnerability to climate change.