

WATER – POSTER #42

Validating local droughts to enhance climate-resilient agricultural water management in Idaho

**Jae Ryu, jryu@uidaho.edu
University of Idaho**

As the climate continues to warm and the economy becomes more globalized, one of the great challenges facing agriculture producers, the agribusiness community, and policy makers is to find ways to mitigate the impacts of drought. Understanding the onset and intensity of drought is critical for agricultural water management in Idaho. Although federal agencies and research institutes utilize the up-to-date drought index maps for their decision making, such information is often difficult for end users to utilize since there is little data to indicate the validity of these indices in correctly predicting drought in their particular region. In this research, we will first develop Idaho-centric historic drought (ID-Drought) maps at local scales from archived historic annual water supply reports from Idaho watermasters, yield and production records from the National Agricultural Statistics Service, and crop insurance payments from the USDA Risk Management Agency. Once ID-Drought maps have been created, the skill score of the map will be then computed by cross-validating with the existing drought index maps currently available at federal and state research institutions. The research findings will provide useful insights for the end users to enhance drought monitoring and management efforts, thereby minimizing the impacts of drought in Idaho.