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**ESTIMATING EVAPOTRANSPIRATION FROM IRRIGATED AGRICULTURE AND GROUNDWATER
DISCHARGE AREAS IN NEVADA USING REMOTE SENSING AND WEATHER STATION DATA**

Justin Huntington*, Charles Morton, Jordan Beamer, Adam Sullivan, Brad Lyles, Rick Allen, Greg Pohl

ABSTRACT: Irrigation currently accounts for about 80% of total water withdrawals in Nevada. Accurate estimates of evapotranspiration (ET) from irrigated agriculture and groundwater discharge are becoming more important as increasing demands are placed on finite water supplies in Nevada and across the western U.S due to development and changing climate. Local, state, and federal water resource agencies require accurate estimates of crop ET and groundwater discharge for evaluating basin water budgets, irrigation development, and transfers of irrigation water for municipal use. Ongoing efforts of the Desert Research Institute and Nevada Division of Water Resources are focused on updating estimates of crop ET and basin water budgets throughout the state of Nevada. Updates are being performed by developing and applying remote sensing models to estimate historical ET from irrigated agriculture and phreatophyte groundwater discharge areas. This presentation reports on remote sensing modeling background and results, and the development of an agricultural weather station network to assist remote sensing efforts.

* Assistant Research Hydrologist, Desert Research Institute, 2215 Raggio Parkway, Reno, NV 89512 USA, Phone: 775-673-7670, Fax: 775-673-7397, Email: justinh@dri.edu