

Northern Nevada Water Planning Commission

STAFF REPORT

DATE: March 31, 2023
TO: Chairman and Members, Northern Nevada Water Planning Commission (NNWPC)
FROM: Kim Rigdon, Water Resources Program Manager
SUBJECT: Presentation and report regarding progress and status of Desert Research Institute's (DRI) Rain Gauge Network and Washoe Evapotranspiration projects

SUMMARY

Washoe County installed and maintained a rain gauge network (Network) of over 80 gauges with records that date back to the late 1990s. Following the merger of the Washoe County water utility with Truckee Meadows Water Authority, the project responsibilities have been assumed by the Western Regional Water Commission (WRWC) who contract with DRI to perform the monitoring and reporting. The project involves data collection and maintenance of manual gauges where measurements are collected and gauges are serviced twice a year. The intended use of the precipitation data was to validate and potentially improve existing groundwater recharge estimates that are commonly calculated using Hardman maps or Parameter Regression on Independent Slopes Model (PRISM; Daly et al. 1994) data.

Additionally, precipitation data could be used to provide improved monitoring of regional water sources and supplies. Precipitation measurements outside of the project are sparse in this region, especially central and northern Washoe County, and minimal efforts have been put into validating spatial estimates of precipitation. The precipitation data has recently been compiled electronically, providing a unique opportunity to analyze the quality of precipitation records, use the project data to validate spatial estimates of precipitation, and potentially improve existing groundwater recharge estimates.

The Washoe Evapotranspiration project is a network of weather stations located in the Reno and Sparks region that monitor evapotranspiration rates. These rates can then be used as a tool to estimate lawn and crop watering needs. DRI maintains and shares data from the following sites:

- Wolf Run Golf Course
- Valley Road at DRI
- Lazy Five Regional Park
- Wilson Commons Park
- Mogul Mountain Park
- Lemmon Valley Regional Park
- Cold Springs Community Center

The data collected from the stations is posted on www.wrcc.dri.edu/washoeEt with guidance for irrigation times depending on current data.

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