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ANALYSIS OF OBSERVATIONAL DATA: HYDROCLIMATE TRENDS AT SITES IN EASTERN NEVADA

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ABSTRACT: Hydrologic and climate observations from stations within a 100-mile buffer of the Hamlin, Snake, Spring, and Steptoe Valleys study area were selected for analyses. The present study is aimed at assessing climate change effects over an estimated infrastructure lifespan of 50 to 100 years, so where a sufficient period of record is available, trends are evaluated over a comparable timeframe. Trends were assessed over the 50-year time period from 1959 to 2008, in addition to the two twenty-five year records: 1959-1983, 1984-2008. Trends were assessed on various temporal scales including annual, seasonal, and monthly. Data sources include: the National Weather Service (NWS) Cooperative Observed Network (Co-op), the Natural Resources Conservation Service (NRCS) snow course and snow telemetry (Snotel) sites, the Nevada Division of Water Resources (NDWR), and the US Geological Survey (USGS) National Water Information System (NWIS). The study is ongoing and some preliminary trends identified in the analyses to-date include: increase of annual minimum, maximum, and average temperatures with the greatest increase in minimum temperature; positive minimum temperature trends for every month; negative maximum temperature trends for February, October, and November; increase of water year precipitation; and trend towards increase spring runoff.

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