

## Description of aquifer test for Simms well.

A single-well constant-rate test was conducted on 11/17/05 by Doug Maurer of the Nevada Water Science Center. . The well is located at 38.897278° N, 119.5806° W. The well is unique in that it completely penetrates Tertiary-age sediments on the eastern side of Carson Valley. Results of the aquifer test will be used in the development of a numerical ground-water flow model in Carson Valley, project # 9705-BPS01. Specifically, the estimated transmissivity will be used to develop a relation between transmissivity and specific yield. The relation will then be used with data from driller's logs to develop a preliminary distribution of transmissivity for the valley.

The pump rate varied slightly during the test from 144 to 132 GPM, averaging 139 GPM for the 5-hour test. A pre-test water level collected on 11/10/06 was 18.26 feet below the measuring point, only slightly lower than that of 18.23 measured prior to pumping on 11/17/05. For this reason, it was assumed that no long-term water-level trends were present during the test period. The flow rate was measured by an in-line totalizing meter and flow was diverted about 1,000 ft distant to a perennial pond along Pine Nut Creek. Water levels were measured with an electric tape and time from start up determined from a stop watch. Time-drawdown data were analyzed using an Excel spreadsheet program (Halford and Kuniansky, 2002) and the Cooper-Jacob analysis.

Results of the analysis indicate a hydraulic conductivity and transmissivity of 0.13 ft/day and 160 ft<sup>2</sup>/day, respectively.

## References Cited

Halford K.J., and Kuniansky, E.L. 2002, Documentation of spreadsheets for the analysis of aquifer pumping and slug test data: U.S. Geological Survey Open-File Report 02-197, 54 p.