

## Description of aquifer test for town of Gardnerville Ranchos # 2a well.

A single-well constant-rate test was conducted by Lumos Associates, Inc. of Carson City, Nevada. . The well is located at 38.91237° N, 119.7334° W, and is completed in the basin-fill aquifer of Carson Valley, Nevada. Copies of the time-drawdown and pump data were obtained from files of the Gardnerville Ranchos General Improvement District (Bob Spellburg, written commun., 2005). 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 during the test was 1,800 GPM, measured with a totalizing meter, for a period of 48 hours from 4/28/04 to 4/30/04. Adjustments in pump rates were made at numerous times during the test likely causing departures from a straight-line time-drawdown plot. The method of water-level measurements, location of discharge of pumped water, and pre-test water-level trends are not known. The well was reported completed on 4/26/04, and development of the well likely took place a relatively short time prior to the test period. Time-drawdown data were analyzed using an Excel spreadsheet program (Halford and Kuniandy, 2002) and the Cooper-Jacob analysis.

Results of the test indicate a hydraulic conductivity and transmissivity of 5.1 ft/day and 3,300 ft<sup>2</sup>/day, respectively.

## References Cited

Halford K.J., and Kuniandy, 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.