

Description of aquifer test for town of Gardnerville # 6 well.

A single-well constant-rate test was conducted by Sargent Irrigation Company of Reno, Nevada. The well is located at 38° 56' 4"N, 119° 43' 59.2"W, and is completed in the basin-fill aquifer of Carson Valley, Nevada. Copies of time-drawdown and pump data were obtained from files of the Gardnerville Water Company (Mark Gonzales, 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 for the bulk of the test was 1,764 GPM, varying from 1,700 to 1,880 for relatively short periods, with a total testing period of 28 hours from 2/10/95 to 2/11/95. The methods of water-level and flow-rate measurements, location of discharge of pumped water, and pre-test water-level trends are not known. The well was reported completed on 10/30/81, and the well was likely in use the entire 14-year period between completion and testing. Time-drawdown data were analyzed using an Excel spreadsheet program (Halford and Kuniansky, 2002) and the Cooper-Jacob analysis.

Results of the test indicate a hydraulic conductivity and transmissivity of 66 ft/day and 19,000 ft²/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.