

# Ground-Water Levels in Water Years 1984-86 And Estimated Ground-Water Pumpage in Water Years 1984-85, Carson Valley, Douglas County, Nevada

By David L. Berger

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## CONVERSION FACTORS AND ABBREVIATIONS

"Inch-pound" units of measure used in this report may be converted to International System (metric) units by using the following factors:

<i>Multiply</i>	<i>By</i>	<i>To obtain</i>
Acres	0.4047	Square hectometers (hm <sup>2</sup> )
Acre-feet (acre-ft)	0.001233	Cubic hectometers (hm <sup>3</sup> )
Acre-feet per year (acre-ft/yr)	0.001233	Cubic hectometers per year (hm <sup>3</sup> /yr)
Feet (ft)	0.3048	Meters (m)
Inches (in.)	25.40	Millimeters (mm)
Miles (mi)	1.609	Kilometers (km)

## NATIONAL GEODETIC VERTICAL DATUM

The term "National Geodetic Vertical Datum of 1929" (NGVD of 1929) replaces the formerly used term "mean sea level" to describe the datum for altitude measurements. The geodetic datum is derived from a general adjustment of the first-order leveling networks of both the United States and Canada.

GROUND-WATER LEVELS IN WATER YEARS 1984-86  
AND ESTIMATED GROUND-WATER PUMPAGE IN  
WATER YEARS 1984-85, CARSON VALLEY,  
DOUGLAS COUNTY, NEVADA

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ABSTRACT

Tabulations of ground-water level measurements made during water years 1984 through 1986 and summaries of estimated pumpage for water years 1984 and 1985 in Carson Valley, Douglas County, Nevada, are included in this report. The data are being collected to provide a record of long-term ground-water changes and pumpage estimates that can be incorporated into a ground-water model at a later date.

INTRODUCTION

Purpose and Scope

Ground-water levels are being measured quarterly at 56 wells in Carson Valley as part of a 5-year cooperative data-collection program between the U.S. Geological Survey and the Douglas County Department of Public Works. Municipal, agricultural, domestic, and industrial pumpage estimates are also collected and summarized. The purpose of this data-collection program is to record long-term ground-water changes and collect records of ground-water pumpage for incorporation into the existing ground-water model (Maurer, 1986). Ground-water measurements reported herein were made during water years 1984-86 (October 1983-September 1986). Estimates of pumping are for water years 1984 and 1985 (October 1983-September 1985).

Previous Work

During 1981 through 1983, approximately 70 wells were measured monthly to provide input data for a ground-water model. The model was developed to simulate ground-water and surface-water interaction and to aid planners in assessing the possible effects of development alternatives in Carson Valley (Maurer, 1986, p. 46). The measurements for this study extend the length of record at many of the original 70 wells and add new sites to the data base where additional information will aid in the refinement of the ground-water model.

## Description of Study Area

Carson Valley lies in the western edge of the Great Basin Province and is part of the Carson River drainage basin (figure 1). The north end of Carson Valley is approximately 4 miles south of Carson City, Nevada's capital. The drainage basin of Carson Valley is about 280,000 acres and the valley supports a population of about 25,000. Carson Valley is bounded by the Carson Range of the Sierra Nevada on the west and the Pine Nut Mountains on the east. The valley is 15 miles wide and 24 miles long.

## NUMBERING SYSTEM FOR WELLS

### Local Well Number

The local well numbering system used in this report is based on an index of hydrographic areas in Nevada (Rush, 1968) and on the rectangular subdivision of the public lands referenced to the Mount Diablo base line and meridian. Each number consists of four units separated by spaces: The first unit is the hydrographic area number. The second unit is the township, preceded by an N or S to indicate location north or south of the base line. The third unit is the range, preceded by an E to indicate location east of the meridian. The fourth unit consists of the section number and letters designating the quarter section, quarter-quarter section, and so on (A, B, C, and D indicate the northeast, northwest, southwest, and southwest quarters, respectively), followed by a number indicating the sequence in which the well was recorded. For example, well 105 N14 E20 32DCCC1 is in Carson Valley (hydrographic area 105). It is the first well recorded in the SW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of the SE $\frac{1}{4}$ , of section 32, Township 14 North, Range 20 East, Mount Diablo base line and meridian. Because of space limitations, wells are identified on plate 1 by section-subdivision letters and sequence number only.

### Site Identification Number

The well-site identification numbering system of the U.S. Geological Survey is based on the grid system of latitude and longitude. The system indicates the geographic location of the well site and provides a unique number for each site. The overall designation consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude; the next seven digits denote degrees, minutes, and seconds of longitude; and the last two digits (assigned sequentially) identify the wells or other sites within a 1-second grid.

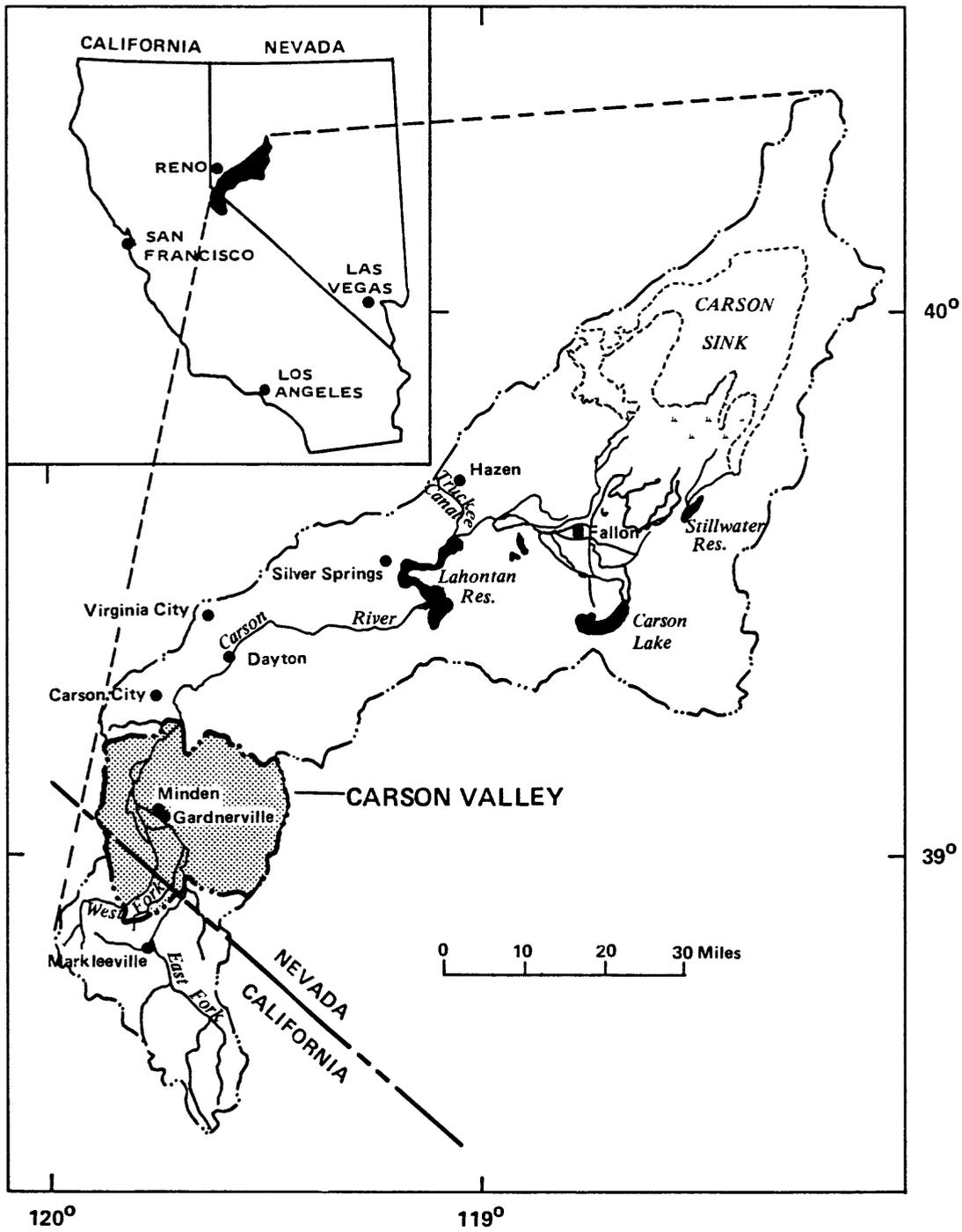


FIGURE 1.—Carson Valley and Carson River drainage basin.

## BASIC DATA

### Ground-Water Levels

Water-level measurements and general data on the wells monitored for this project are presented in table 1 (at end of text). The well network was designed to obtain an adequate coverage of ground-water levels for use in the ground-water model. Where ground-water usage increases or land-use change occurs the network will be expanded to obtain water-level data in these areas. The land-surface altitudes of the well sites were taken from a map with a scale of 1:4,800 and a contour interval of 5 feet. Well locations are shown on plate 1. Of the 56 wells measured 22 were drilled by the U.S. Geological Survey. The well sites are separated into four types; each type is explained briefly in the following paragraphs.

Thirty observation-well sites are used to measure the static water level throughout the valley. They are mostly comprised of domestic wells, U.S. Geological Survey wells, and unused irrigation wells.

Seventeen sites were developed to measure the ground-water gradient relative to the altitude of the water surface of nearby surface-water bodies. All wells at the ground-water gradient monitoring sites were drilled by the U.S. Geological Survey. Each site was surveyed to determine a reference point from which the surface-water altitude can be measured. At each site one or two shallow observation wells are located at known distances and altitudes from the surface-water body reference point. The ground-water level and the surface-water altitude are measured simultaneously to determine if the surface-water body is gaining from or losing to the ground-water system.

Three pumped observation wells are measured to determine the long-term effects of pumping on local ground-water levels. The measurements are made when the well has not been pumped for a considerable amount of time. The site status, such as recently pumped or nearby pumping, and the time when the well was last pumped, are recorded.

Six flowing wells are mainly located on the west side of Carson Valley and are considered to penetrate the deeper aquifer system (Maurer, 1986, p. 17). Measurements are made 10 minutes after flow has been shut off with a standard pressure gauge calibrated in units of inches of water. The readings are then converted to feet above land surface. The negative sign preceding the measurements in the table indicate water levels above land surface.

### Estimated Pumpage

Pumpage data were collected from the various subdivisions, public works departments, and industries in Carson Valley, and are presented in units of acre-feet (table 2). Agricultural kilowatt usage was acquired from Sierra Pacific Power Co. to estimate ground-water pumpage using methods established by Maurer (1986, p. 61). Total lift values that were used to convert kilowatt usage to acre-feet of pumpage ranged in value between 30 and 160 feet with an average of 80 feet. Domestic pumpage was determined by multiplying house counts by a conversion factor of 0.545 acre-ft/yr per domestic unit. The house counts were provided by the Douglas County Public Works Department. Meter readings of industrial pumpage were collected and then converted from gallons per month to acre-feet per year.

The total pumpage estimated for water year 1984 was about 7,700 acre-ft; generally the same volume estimated for water years 1982 and 1983 (Maurer, 1986, table 10). Estimated total pumpage for the dry water year 1985, about 10,800 acre-ft, was approximately equal to the amount pumped in 1981, also a dry year (Maurer, 1986, table 10). As shown in table 2, agricultural pumpage increased in 1985 to supplement the low surface-water supplies, while other pumpage volumes remain about the same.

### RESPONSE TO THE FEBRUARY 1986 STORM

During the period February 11 to February 20, 1986, the Carson Valley area received large quantities of precipitation, which caused localized flooding and heavy runoff. Well measurements made on December 11, 1985, and on March 11-12, 1986, were compared to identify changes in the ground-water system following the February storm. It is beyond the scope of this data report to determine how much of the observed change was a direct response to the storm and how much was normal seasonal fluctuations.

Relatively deep wells on the east side of the valley appeared to show no response to the rainfall and were actually declining; however, wells less than 200 feet deep showed water-level rises of 1 to 3 feet. Water levels in the wells on the valley floor, including Jacks Valley, rose from 1 to 5 feet. Wells located at the basin-fill/bedrock contact on the west side of the valley showed levels increasing 5 to 10 feet. All the flowing wells, located mostly west of the valley axis, responded to the added recharge with increased pressure heads of 0.8 to 3.3 feet.

TABLE 1.--Water levels and other data for wells, water years 1984-86

Primary use of water: H, domestic; I, irrigation; N, industrial; P, public supply, S, stock; U, unused.

Water level: Negative sign preceding a measurement indicates a water level above land surface, that is, flowing well.

Site status: F, flowing, head could not be measured (no water level recorded); O, obstruction encountered in well above the water surface (no water level recorded); P, site being pumped (no water level recorded); R, pumped recently; X, water level affected by stage in nearby surface-water site; "-", no status recorded.

Measurement method: G, pressure-gage; R, reported by driller, owner, or other; S, steel tape.

[All depths are from land surface]

Local number well name or owner	Site identification	Primary use of water	Altitude of land surface (feet)	Depth of well (feet)	Top of open interval (feet)	Water-level date	Water level (feet)	Site status	Measure- ment method
105 N11 E20 O6ACRC1 USGS STATELINE	385051119464101	U	4,845	15.5	13.00	10/12/1983	1.89	X	S
						5/15/1985	1.74	X	S
						8/22/1985	2.62	X	S
						12/11/1985	3.09	X	S
						3/12/1986	2.43	X	S
						6/04/1986	1.90	X	S
8/19/1986	1.83	X	S						
105 N12 E19 O1BCCD1 USGS WATERLOO/WEST FORK	385557119475701	U	4,700	18.6	18.40	10/12/1983	5.42	X	S
						2/09/1985	6.41	X	S
						5/15/1985	5.69	X	S
						8/22/1985	7.09	X	S
						12/11/1985	6.22	X	S
						3/12/1986	6.46	X	S
6/05/1986	5.30	X	S						
8/19/1986	6.54	X	S						
105 N12 E19 O2BDDD1 JOHN FEIL	385559119485701	S	4,696	262.0	--	11/01/1983	-11.55	-	G
						12/21/1983	-13.85	-	G
						2/16/1984	-11.67	-	G
						6/05/1986	-12.50	-	G
8/19/1986	-10.25	-	G						
105 N12 E19 O2CBAAL USGS WATERLOO/ BIG DITCH	385556119491501	U	4,705	22.0	20.00	10/12/1983	5.68	X	S
						2/09/1985	5.42	X	S
						5/15/1985	5.65	X	S
						8/22/1985	5.94	X	S
						12/11/1985	6.83	X	S
						3/12/1986	6.07	X	S
6/05/1986	5.87	X	S						
8/19/1986	6.08	X	S						

TABLE 1.--Water levels and other data for wells, water years 1984-86--Continued

Local number well name or owner	Site identification	Primary use of water	Altitude of land surface (feet)	Depth of well (feet)	Top of open interval (feet)	Water-level date	Water level (feet)	Site status	Measure- ment method
105 N12 E19 11CDCCI BLANKENSHIP	385439119490901	S	4,714	60.0	--	11/01/1983	-18.25	-	G
						3/14/1986	-17.50	-	G
						6/05/1986	-16.50	-	G
105 N12 E19 12CDDI USGS CENTERVILLE/ BROCKLISS	385438119475501	U	4,711	18.7	12.20	8/19/1986	-10.92	-	G
						2/08/1985	5.71	X	S
						5/15/1985	4.98	X	S
						8/22/1985	6.45	X	S
						12/11/1985	5.84	X	S
105 N12 E19 23CDBBI USGS SCOSSA	385304119460601	U	4,795	26.8	23.80	3/12/1986	3.12	X	S
						6/05/1986	3.49	X	S
						8/19/1986	4.34	X	S
						10/12/1983	1.61	-	S
						2/09/1985	1.79	-	S
105 N12 E19 24CCAAI WAYNE CURRIE	385303119480201	H	4,731	82.0	66.00	12/10/1985	3.13	-	S
						3/11/1986	0.05	-	S
						6/04/1986	1.01	-	S
						8/18/1986	2.81	-	S
						8/23/1985	-12.67	-	G
105 N12 E19 36ADDAI LEWALLEN	385138119471801	U	4,794	198.0	108.00	12/11/1985	-12.67	-	G
						3/12/1986	-14.50	-	G
						6/05/1986	-15.50	-	G
						8/19/1986	-15.00	-	G
						10/21/1983	1.14	-	S
105 N12 E20 04BAAA2 USGS HIGHWAY YARD	385620119453101	U	4,759	21.0	11.00	12/10/1985	3.19	-	S
						3/11/1986	2.50	-	S
						6/04/1986	0.92	-	S
						8/18/1986	1.29	-	S
						10/11/1983	5.56	-	S
						2/20/1984	6.65	-	S
						5/15/1985	5.29	-	S
						8/22/1985	4.43	-	S
						12/11/1985	6.22	-	S
						3/12/1986	6.57	-	S
						6/05/1986	4.71	-	S
						8/19/1986	5.08	-	S

TABLE 1.--Water levels and other data for wells, water years 1984-86--Continued

Local number well name or owner	Site identification	Primary use of water	Altitude of land surface (feet)	Depth of well (feet)	Top of open interval (feet)	Water-level date	Water level (feet)	Site status	Measure- ment method
105 N12 E20 06ABCCI USGS ROLPH	385612119464101	U.	4,716	20.5	17.50	10/12/1983	3.43	-	S
						5/15/1985	2.25	X	S
						8/22/1985	2.81	X	S
						12/11/1985	3.88	X	S
						3/12/1986	2.18	X	S
						6/05/1986	1.74	X	S
8/19/1986	4.80	X	S						
105 N12 E20 07DBCCI USGS CENTERVILLE/ U.S. 395	385452119464101	U	4,718	15.0	13.00	10/12/1983	1.70	-	S
						12/10/1985	1.53	-	S
						3/11/1986	0.70	X	S
						6/04/1986	1.79	X	S
						8/19/1986	1.94	X	S
105 N12 E20 09BCADI JOHN WHITE	385512119444801	I	4,769	450.0	100.00	10/11/1983	14.14	X	S
						12/11/1985	20.62	-	S
						3/11/1986	20.10	-	S
						6/04/1986	13.33	X	S
						8/18/1986	13.89	X	S
105 N12 E20 10AABI STODDARD JACOBSEN	385528119425801	U	4,821	355.0	130.00	10/11/1983	23.76	X	S
						5/15/1985	32.73	-	S
						8/22/1985	35.91	X	S
						12/10/1985	28.90	X	S
						3/11/1986	27.87	X	S
						6/04/1986	30.47	-	S
8/18/1986	29.34	X	S						
105 N12 E20 13ADCBI BARBARA LEE	385413119405001	H	5,005	250.0	230.00	10/11/1983	146.53	-	S
						12/10/1985	146.88	-	S
						3/11/1986	146.32	-	S
						6/04/1986	-	P	-
						8/18/1986	147.05	-	S
105 N12 E20 14ADCBI USGS SMOKESHOP	385430119422401	U	4,839	21.0	11.00	10/11/1983	4.19	X	S
						5/15/1985	5.22	X	S
						8/22/1985	5.07	X	S
						12/10/1985	6.30	X	S
						3/12/1986	6.31	X	S
						6/05/1986	4.48	X	S
8/19/1986	3.98	X	S						

TABLE 1.--Water levels and other data for wells, water years 1984-86--Continued

Local number well name or owner	Site identification	Primary use of water	Altitude of land surface (feet)	Depth of well (feet)	Top of open interval (feet)	Water-level date	Water level (feet)	Site status	Measure- ment method
105 N12 E20 19ABBB1 USGS VERDI	385343119464101	U	4,735	17.2	10.00	10/12/1983	2.67	-	S
						5/10/1985	2.60	X	S
						8/22/1985	3.77	X	S
						12/11/1985	3.42	-	S
						3/12/1986	2.87	X	S
105 N12 E21 05BDCC1 DOUGLAS COUNTY FIRE DEPT.	385558119391401	U	5,097	54.0	---	10/11/1983	12.21	-	S
						12/10/1985	12.59	-	S
						3/11/1986	8.93	-	S
						6/04/1986	10.48	0	S
105 N13 E19 09ADCA1 HOLLISTER	390021119504301	H	4,810	180.0	156.0	3/13/1986	103.01	X	S
						6/04/1986	104.93	-	S
105 N13 E19 09DDAB1 GENOA PARK	390016119504101	P	4,776	386.0	---	10/12/1983	29.50	-	S
						6/04/1986	--	P	-
						6/05/1986	22.18	R	S
105 N13 E19 11CCDD1 USGS E. GENOA RD./ CARSON RIVER	385951119491801	U	4,673	17.7	11.00	8/18/1986	--	P	S
						10/12/1983	7.37	X	S
						2/09/1985	7.60	X	S
						5/15/1985	7.10	X	S
						8/22/1985	8.04	X	S
105 N13 E19 11CCDD2 USGS W. GENOA RD./ CARSON RIVER	385951119492001	U	4,673	18.2	12.50	12/11/1985	8.03	X	S
						3/12/1986	3.99	X	S
						6/04/1986	4.07	X	S
						8/19/1986	7.47	X	S
						10/12/1983	8.12	X	S
2/09/1985	8.47	X	S						
5/15/1985	7.59	X	S						
8/22/1985	8.65	X	S						
12/11/1985	8.59	X	S						
3/12/1986	4.88	X	S						
6/04/1986	4.43	X	S						
8/19/1986	8.32	X	S						

TABLE 1.--Water levels and other data for wells, water years 1984-86--Continued

Local number well name or owner	Site identification	Primary use of water	Altitude of land surface (feet)	Depth of well (feet)	Top of open interval (feet)	Water-level date	Water level (feet)	Site status	Measure- ment method
105 N13 E19 12BRADI SETTLEMAYER HOME RANCH	390037119480701	S	4,667	400.0	--	11/01/1983	-15.48	-	G
						3/27/1984	-17.43	-	G
						8/23/1985	3.25	-	S
						12/11/1985	-14.93	-	G
						3/12/1986	-17.67	-	G
105 N13 E19 22CAAA1 USGS W. MULLER LANE/ BROCKLISS	385815119500301	U	4,677	16.3	10.30	6/04/1986	-17.10	-	G
						8/19/1986	-8.68	-	G
						10/12/1983	5.13	X	S
						2/09/1985	5.30	X	S
						5/15/1985	5.78	X	S
105 N13 E19 22CAA2 USGS E. MULLER LANE/ BROCKLISS	385815119500202	U	4,677	18.0	12.00	8/22/1985	6.08	X	S
						12/11/1985	5.87	X	S
						3/12/1986	4.44	X	S
						6/05/1986	4.88	X	S
						8/19/1989	5.97	X	S
105 N13 E19 22CCAC1 ALEXANDER	385813119502601	I	4,760	172	69.00	10/12/1983	4.71	X	S
						2/09/1985	4.69	X	S
						5/15/1985	5.32	X	S
						8/22/1985	5.57	X	S
						12/11/1985	5.42	X	S
105 N13 E19 23DDAD1 USGS MULLER LANE	385816119482401	U	4,681	21.0	18.00	3/12/1986	3.83	X	S
						6/05/1986	4.32	X	S
						8/19/1986	3.77	X	S
						10/12/1983	54.61	-	S
						5/15/1985	58.29	-	S
	3/11/1986	53.37	X	S					
	6/04/1986	46.82	-	S					
	8/18/1986	--	P	S					

TABLE 1.--Water levels and other data for wells, water years 1984-86--Continued

Local number well name or owner	Site identification	Primary use of water	Altitude of land surface (feet)	Depth of well (feet)	Top of open interval (feet)	Water-level date	Water level (feet)	Site status	Measure- ment method
105 N13 E19 24CADD1 DANGBERG/MULLER LANE	385821119475001	S	4,685	401.0	--	11/01/1983	-13.53	-	G
						12/20/1983	-14.34	-	G
						8/23/1985	-7.18	-	G
						12/11/1985	-13.35	-	G
						3/12/1986	-14.77	-	G
						6/04/1986	-13.60	-	G
8/19/1986	-9.85	-	G						
105 N13 E19 33DADD1 ALLERMAN	385637119503701	U	4,755	80.0	--	10/12/1983	19.87	-	S
						12/10/1985	23.24	-	S
						3/11/1986	16.51	-	S
						6/04/1986	18.72	-	S
						8/18/1986	22.49	-	S
						10/11/1983	32.11	-	S
105 N13 E20 03BCBB1 HECKMAN	390122119424701	U	4,756	108.0	--	12/10/1985	32.18	-	S
						3/11/1986	32.95	-	S
						6/04/1986	32.02	-	S
						8/18/1986	32.38	-	S
						10/11/1983	3.54	X	S
						5/15/1985	4.38	X	S
105 N13 E20 08ACBC1 USGS HEYBURN DITCH/ AIRPORT	390024119453501	U	4,692	21.1	19.10	8/22/1985	5.88	X	S
						12/11/1985	6.05	X	S
						3/12/1986	0.83	X	S
						6/04/1986	2.45	X	S
						8/19/1986	2.98	X	S
						10/11/1983	160.27	-	S
105 N13 E20 12BCAD1 COULTER	390025119412701	I	4,952	280.0	172.00	12/10/1985	159.79	-	S
						3/11/1986	167.15	-	S
						6/04/1986	173.33	-	S
						8/19/1986	161.70	-	S
105 N13 E20 14AADAI NEVIS NORTH	385944119414501	U	4,901	301.0	--	12/11/1985	92.08	-	S
						3/11/1986	92.59	-	S
						6/04/1986	92.79	-	S
						8/18/1986	92.35	-	S

TABLE 1.--Water levels and other data for wells, water years 1984-86--Continued

Local number well name or owner	Site identification	Primary use of water	Altitude of land surface (feet)	Depth of well (feet)	Top of open interval (feet)	Water-level date	Water level (feet)	Site status	Measure- ment method
105 N13 E20 18BAAA1 USGS GENOA RD./ U.S. 395	385948119464401	U	4,682	20.5	10.50	10/12/1983	3.12	X	S
						5/15/1985	3.07	X	S
						8/22/1985	4.15	X	S
						12/11/1985	3.27	-	S
						3/12/1986	2.89	-	S
105 N13 E20 19AAAB1 DANGBERG TROUGH	385859119461501	S	4,696	318.0	--	11/01/1983	-5.43	-	G
						8/22/1985	8.36	-	S
						12/10/1985	-4.93	-	G
						3/12/1986	-6.18	-	G
						6/04/1986	-5.60	-	G
105 N13 E20 19ACCC1 USGS STOCKYARD/ U.S. 395	385834119464101	U	4,694	11.0	2.00	10/11/1983	2.77	X	S
						2/20/1984	2.01	X	S
						5/15/1985	1.13	X	S
						8/22/1985	4.14	X	S
						12/10/1985	2.55	X	S
105 N13 E20 22CADD1 DANGBERG SEC. 22	385821119432401	I	4,799	--	--	10/11/1983	18.21	-	S
						12/10/1985	21.30	-	S
						3/11/1986	21.67	-	S
						6/04/1986	20.62	-	S
						8/18/1986	19.09	-	S
105 N13 E20 23DDAA1 NEVIS SOUTH	385815119413101	I	4,885	392.0	310.00	10/11/1983	76.62	-	S
						12/10/1985	76.93	-	S
						3/11/1986	78.05	-	S
						6/04/1986	77.37	-	S
						8/18/1986	77.69	-	S
105 N13 E20 26ABBB1 EARL MAY	385801119421501	I	4,868	130.0	90.00	10/11/1983	50.22	-	S
						11/26/1985	52.22	-	S
						12/10/1985	52.35	-	S
						3/11/1986	53.59	R	S
						6/04/1986	56.48	-	S
8/18/1986	52.78	R	S						

TABLE 1.--Water levels and other data for wells, water years 1984-86--Continued

Local number well name or owner	Site identification	Primary use of water	Altitude of land surface (feet)	Depth of well (feet)	Top of open interval (feet)	Water-level date	Water level (feet)	Site status	Measure- ment method
105 N13 E20 26DDAD1 LANE LISSER	385729119414501	I	4,922	180.0	104.00	10/11/1983	104.92	-	S
						12/10/1985	104.09	-	S
						3/11/1986	104.52	-	S
						6/04/1986	104.85	-	S
	8/18/1986	--						P	-
105 N13 E20 30DBBB1 USGS RESTSTOP	385730119464101	U	4,702	21.0	18.50	10/11/1983	5.97	-	S
						2/20/1984	6.40	-	S
						12/10/1985	8.01	-	S
						2/10/1986	8.15	-	S
						3/11/1986	4.63	-	S
						6/04/1986	5.61	-	S
	8/18/1986	6.79						-	S
105 N13 E20 32CAAA1 MACK	385630119452001	I	4,733	420.0	--	10/11/1983	9.08	X	S
						12/10/1985	11.42	-	S
						3/13/1986	10.63	-	S
						6/04/1986	10.11	-	S
						8/18/1986	9.80	X	S
105 N13 E20 34ACBC1 DANGBERG SEC. 34	385655119432101	I	4,791	--	--	10/11/1983	5.07	-	S
						8/22/1985	6.64	-	S
						12/10/1985	8.33	-	S
						3/11/1986	9.31	-	S
						6/04/1986	4.13	-	S
						8/19/1986	5.15	-	S
105 N13 E21 19CBBB1 BUCKEYE CREEK	385634119395901	U	5,000	140.0	--	12/10/1985	92.74	-	S
						3/11/1986	93.00	-	S
						6/04/1986	92.57	-	S
						8/18/1986	92.60	-	S
						12/10/1985	27.63	-	S
105 N13 E21 32BDAD1 ANITA JONES	385657119385801	I	5,141	608.0	50.00	3/11/1986	27.48	-	S
						6/04/1986	27.34	-	S
						8/18/1986	27.26	-	S
						10/13/1983	79.87	-	S
105 N14 E19 11CADC1 VERN ROSSE	390519119490201	H	5,167	250.0	110.10	1/18/1985	74.02	-	S
						12/10/1985	77.72	-	S
						3/11/1986	76.04	-	S
						6/04/1986	74.63	-	S
						8/18/1986	77.82	-	S

TABLE 1.--Water levels and other data for wells, water years 1984-86--Continued

Local number well name or owner	Site identification	Primary use of water	Altitude of land surface (feet)	Depth of well (feet)	Top of open interval (feet)	Water-level date	Water level (feet)	Site status	Measure- ment method
105 N14 E19 12ADAB1 RUSS PLUME	390542119472001	H	4,909	155.0	120.00	10/13/1983	42.87	-	S
						1/18/1985	35.59	-	S
						12/10/1985	39.01	-	S
						3/11/1986	33.99	-	S
105 N14 E19 15BBAB1 JOHN ASCUAGA	390501119502401	I	5,138	290.0	125.00	10/13/1983	6.30	-	S
						12/11/1985	15.75	-	S
						3/12/1986	7.59	-	S
						6/04/1986	3.06	-	S
105 N14 E19 26ABEC1 HARVEY GROSS SEC. 26	390315119485001	I	4,776	---	---	10/13/1983	19.69	-	S
						12/10/1985	20.04	-	S
						3/11/1986	19.57	-	S
						6/04/1986	20.51	-	S
105 N14 E20 07CBAD1 DOUGLAS COUNTY SEC. 7	390525119465901	U	4,801	---	---	10/11/1983	103.52	-	S
						12/10/1985	103.49	-	S
						3/11/1986	103.14	-	S
						6/04/1986	104.64	-	S
105 N14 E20 08BBBB1 CARSON VALLEY COMMUNITY CHURCH	390557119460701	P	4,900	340.0	270.00	5/24/1985	238.00	-	R
						12/09/1985	232.42	-	S
						2/10/1986	232.28	-	S
						3/11/1986	232.07	-	S
105 N14 E20 18ABAB1 IMPALA	390503119463501	H	4,760	425.0	151.00	1/18/1985	127.05	-	S
						12/19/1985	129.25	-	S
						1/31/1986	124.06	-	S
						3/17/1986	120.78	-	S
						8/18/1986	---	P	-

TABLE 1.--Water levels and other data for wells, water years 1984-86--Continued

Local number well name or owner	Site identification	Primary use of water	Altitude of land surface (feet)	Depth of well (feet)	Top of open interval (feet)	Water-level date	Water level (feet)	Site status	Measure- ment method
105 N14 E20 29ACCC1 USGS RAILROAD GRADE	390307119452201	U	4,657	17.4	13.30	10/11/1983	6.27	-	S
						5/15/1985	6.08	-	S
						12/10/1985	7.58	-	S
						3/11/1986	1.46	X	S
105 N14 E20 30DCCB1 USGS CRADLEBAUGH	390205119464301	U	4,654	20.5	10.50	6/04/1986	4.85	-	S
						8/18/1986	6.85	-	S
						10/11/1983	4.40	-	S
						5/15/1985	4.14	-	S
105 N14 E20 32DCCC1 USGS HEYBURN DITCH	390137119453601	U	4,679	21.0	11.00	12/10/1985	4.77	-	S
						3/11/1986	2.09	X	S
						6/04/1986	3.36	-	S
						8/18/1986	4.99	-	S
						10/11/1983	3.30	-	S
						5/15/1985	3.17	-	S
105 N14 E20 33BCD1 CARSON NEVADA INC.	390208119444601	U	4,683	220.0	60.00	8/22/1985	6.19	-	S
						12/11/1985	4.24	-	S
						3/12/1986	1.59	X	S
						6/04/1986	2.74	-	S
						8/19/1986	4.69	X	S
						10/11/1983	0.20	-	S
12/10/1985	0.92	-	S						
	3/11/1986	--	-	P	-				
	6/04/1986	-1.03	-	-	-				
	8/18/1986	0.06	-	-	-				

TABLE 2.--Estimated ground-water pumpage,  
water years 1984-85

[Rounded to nearest 100 acre-feet]

Pumpage category	Water year	Acre-feet
Agricultural	1984	2,800
	1985	5,700
Domestic	1984	1,300
	1985	1,400
Industrial	1984	200
	1985	200
Municipal	1984	3,400
	1985	3,500
TOTAL <sup>1</sup>	1984	7,700
	1985	10,800

<sup>1</sup> Estimated total pumpage for water years 1981-83 (Maurer, 1986, table 10): 1981, 14,500 acre-feet; 1982, 7,400 acre-feet; 1983, 7,000 acre-feet.

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- Maurer, D. K., 1986, Geohydrology and simulated response to ground-water pumpage in Carson Valley, a river-dominated basin in Douglas County, Nevada, and Alpine County, California: U.S. Geological Survey Water-Resources Investigations Report 86-4328, 109 p.
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