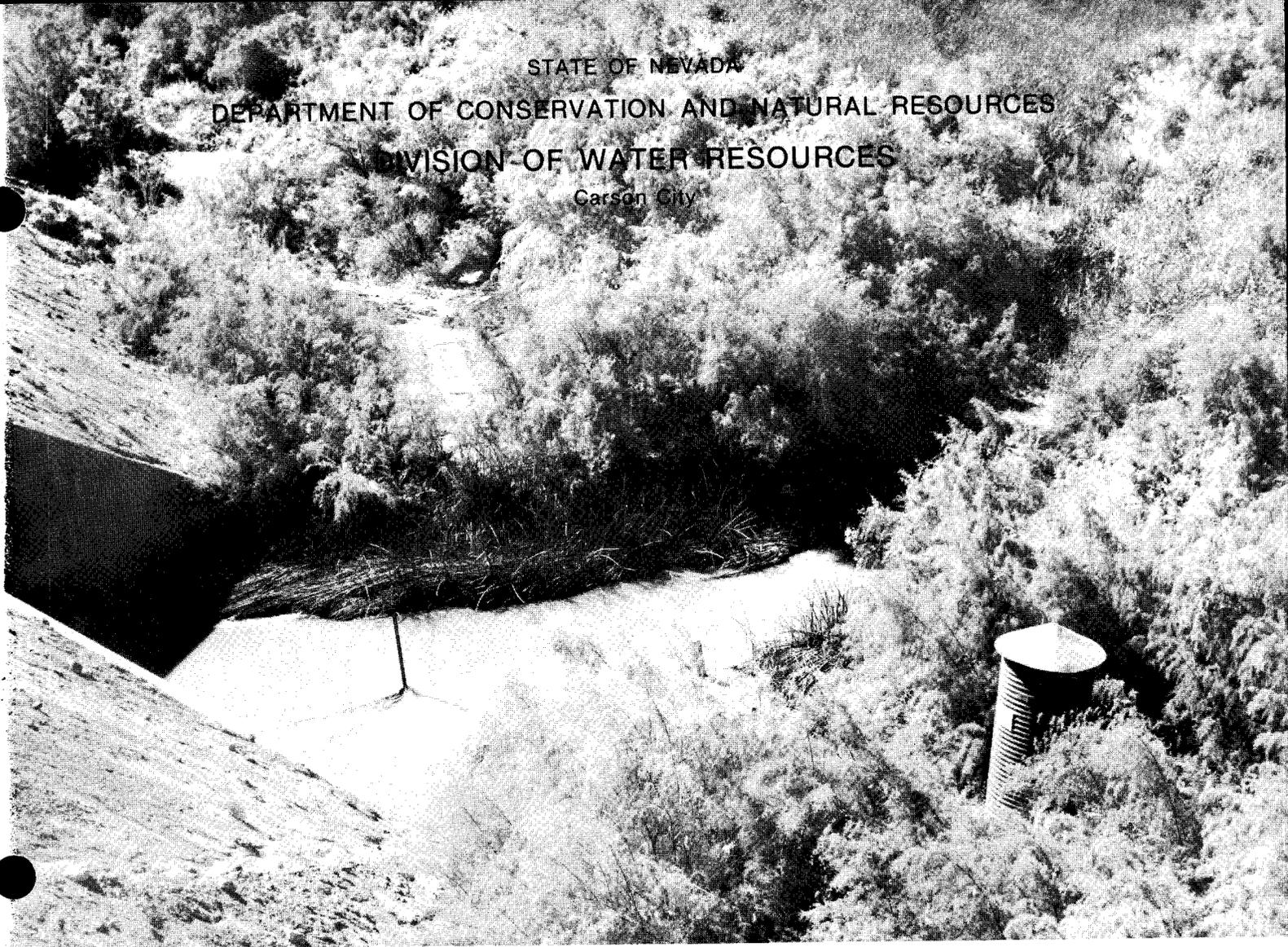


STATE OF NEVADA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF WATER RESOURCES
Carson City



U.S. Geological Survey gaging station (No. 09419800) and box culvert control on Las Vegas Wash at upstream side of Northshore Road. (View southwest.) Gage records stage of surface-water outflow from Las Vegas Valley. Photograph by Patrick A. Glancy, January 1976.

WATER RESOURCES—INFORMATION SERIES

REPORT 29

**WATER-LEVEL CHANGES ASSOCIATED WITH GROUND-WATER DEVELOPMENT
IN LAS VEGAS VALLEY, NEVADA, MARCH 1977 TO MARCH 1978**

By
David B. Wood

Prepared cooperatively by the
Geological Survey, U.S. Department of the Interior

1979



Same site pictured on front cover. Scene documents upstream migration of channel headcut after removal of box culvert on May 19, 1978. Photograph by James R. Harrill, July 1978.

STATE OF NEVADA
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Cover photograph--U.S. Geological Survey gaging station (no. 09419800) and box culvert control on Las Vegas Wash at upstream side of North-shore Road. (View southwest. Gage records stage of surface-water outflow from Las Vegas Valley. Photograph by Patrick A. Glancy, January 1976.

Inside front cover--Same site pictured on front cover. Scene documents upstream migration of channel headcut after removal of box culvert on May 19, 1978. Photograph by James R. Harrill, July 1978.

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METRIC UNITS

For those readers who may prefer to use metric units rather than inch-pound units, the conversion factors for the terms used in this report are listed below:

<u>Multiply inch-pound unit</u>	<u>By</u>	<u>To obtain metric unit</u>
foot (ft)	0.3048	meter (m)
mile (mi)	1.609	kilometer (km)
acre-foot (acre-ft)	0.001233	cubic hectometer (hm ³)

WATER-LEVEL CHANGES ASSOCIATED WITH GROUND-WATER DEVELOPMENT
IN LAS VEGAS VALLEY, NEVADA, MARCH 1977 TO MARCH 1978

By David B. Wood

ABSTRACT

Ground-water data collected in Las Vegas Valley between March 1977 and March 1978 are summarized. Ground-water pumpage during 1977 was about 69,000 acre-feet, about 1,000 acre-feet less than was pumped in 1976. Importation of water from Lake Mead remained about 84,000 acre-feet for 1976 and 1977.

Water levels in deep wells generally declined on the west side of the valley and rose on its east side. Water levels in shallow wells throughout the valley rose slightly; on the periphery of the valley, they generally declined.

GENERAL STATEMENT

This report has been prepared by the U.S. Geological Survey in cooperation with the Nevada Department of Conservation and Natural Resources. The purpose of this study is to monitor ground-water conditions in Las Vegas Valley so that current information will be available to those involved in management and evaluation of its water resources. This report summarizes ground-water data collected from March 1977 to March 1978. Information for the preceding period 1971-77 has been summarized in previously published reports (Harrill, 1976a, b, c, 1974, and Katzer, 1977). Information for this report was collected and prepared by the Water Resources Division of the U.S. Geological Survey.

The report contains a tabulation of water-level measurements made primarily during the spring seasons of 1974-78 (table 1). A multiyear period is listed when possible in table 1, to permit evaluation of water-level trends in individual wells. In addition to water levels measured by the U.S. Geological Survey, the tabulation includes measurements by the Las Vegas Valley Water District, the State Division of Water Resources, and the Desert Research Institute. Well locations are shown on a large map (pl. 1).

Municipal and industrial water for Las Vegas is supplied from ground-water pumpage and water imports from Lake Mead. While ground-water pumpage for 1977 was 69,000 acre-ft, water imports were 84,000 acre-ft. A tabulation summarizing available records of ground-water pumpage since 1955 is given in table 2. Water imports from Lake Mead

are summarized in table 3. The relations among ground-water pumpage, imports of Lake Mead water, and surface-water outflow from Las Vegas Valley via Las Vegas Wash are shown in figure 1. The areal distribution of pumping in 1978 is shown in figure 2.

Surface-water outflow from the valley is indicated by the flows at two gaging stations; one located near Henderson, shown on plate 1, and the other located about 5 miles farther downstream at Northshore Road near Boulder City, not shown on plate 1. The Henderson gage has been in operation since 1958; however, some inflow from the Henderson area enters the wash downstream from this site. The Boulder City gage was installed in 1970 and measures the approximate total valley outflow.

To facilitate analysis of data, two maps were prepared; one shows water-level changes in heavily pumped artesian zones of the valley-fill reservoir (fig. 3). This map includes information on wells that penetrate part or all of the shallow, middle, and deep zones of aquifers as defined by Maxey and Jameson (1948, p. 81 and 82). Most wells penetrate more than one aquifer zone, and their water levels are composites of heads in the aquifers tapped. Depths of these wells range between 200 and generally less than 1,100 ft, and most penetrate more than 100 ft of saturated valley fill. In this report, the three zones of aquifers are grouped together and referred to as the "principal aquifers." Water-level declines in the principal aquifers in excess of 5 ft, as shown in figure 3, may be due in part, to a variation in the seasonal distribution of pumping.

Table 1.--Water levels and other data for wells

(ALL SITES IN LAS VEGAS VALLEY, HYDROGRAPHIC AREA 212. ALL DEPTHS ARE FROM LAND SURFACE DATUM EXCEPT THOSE FOR DRI OBSERVATION WELLS, WHICH ARE FROM MEASURING POINTS. ABBREVIATIONS USED ARE EXPLAINED IN FOOTNOTES ON LAST PAGE OF TABLE.)

WELL NUMBER	SITE IDENTIFICATION	OWNER	LAND SURFACE ALTITUDE (FEET)	WELL DEPTH (FEET)	DEPTH TO FIRST PERFORATION (FEET)	WATER-LEVEL MEASUREMENTS		REMARKS	STAT METH
						DATE	DEPTH (FEET)		
212 S19 E60 04DAB 1	361959115154801	NEV DIV FORESTRY	I 2454.	780.0		03/04/74	55.11		S
						05/14/74		P	S
						08/26/74	68.63		S
						11/27/74	57.33		S
						03/13/75		P	S
						05/05/75	55.42		S
						08/07/75	58.77		S
						03/18/76	54.76		
						11/18/76	65.40		
						03/05/77	60.42		
						05/09/77	64.40		
10/28/77	67.60								
03/10/78	64.67								
212 S19 E60 05ABD 1	361926115164501	KEN DOWDY	2570.	265.0	185.	03/13/75	177.80		
						03/03/76	183.75		S
						03/05/77	186.15		S
						03/11/78	190.50		
212 S19 E60 09BCC 1	361843115161001	J P GOUMOND	2510.	830.0		02/25/74	136.90		S
						02/25/75	137.48		S
						03/01/76	139.40		S
						03/07/77	144.88		S
						03/02/78	147.49		S
212 S19 E60 12DB 1	361806115122701	ELMER LAUR	2350.	240.0		03/12/75	110.88		
						03/02/76	103.19		S
						03/05/77	105.00		
						03/03/78	107.08		
212 S19 E60 24CBB 1	361624115130801	EMILY AND BOB BURKES	2320.	250.0		03/12/75	71.75		S
						03/02/76	70.43		S
						03/05/77	72.59		S
						03/03/78	74.14		
212 S19 E60 25CCC 1	361536115131301	W J SPRIANGER	2300.	300.0	60.	03/04/74	121.34		S
						03/12/75	121.53		S
						03/02/76	124.38		S
						03/05/77	127.97		S
						03/03/78	129.76		
212 S19 E60 26DCB 1	361540115133301	EUGENE MANZI	2310.	250.0	100.	03/04/74	84.28		S
						03/12/75	90.00		S
						03/09/77	101.30		S
						03/03/78	99.79		
212 S19 E60 27BDC 1	361611115151301	USGS	U 2361.	905.0		02/24/75	54.16		
						03/29/76	57.36		
						02/28/77	62.60		
						03/07/78	64.27		
212 S19 E60 29BDD 1	361613115171401	PATRICK EDMUNDSON	H 2530.	303.0		03/03/76	166.76		
						03/13/78	170.90		
212 S19 E60 29CAD 1	361603115171701	PAUL THOMPSON	H 2530.			03/13/78	178.50		
212 S19 E60 32ACA 1	361520115164001	ERNEST FISHER	2465.	350.0		03/04/74	129.22		
						03/11/77	139.16		
						03/03/78	145.02		
212 S19 E60 32ACA 2	361520115164002	DOMINIC MAGNETTI	H 2465.	400.0		03/11/77	141.52	T	S
						03/13/78	145.36	T	S
212 S19 E60 33DDD 1	361451115153401	W S MILLIKEN	2360.	325.0		03/04/75	151.03		S
						03/03/76	150.78		S
						03/09/77	155.30		S
						03/03/78	157.54		
212 S19 E60 36CBB 1	361453115130301	SNMRE	2290.			03/04/74	138.79		S
						03/12/75	142.46		S
						03/02/76	145.03		S
						03/05/77	148.12		S
						03/03/78	152.29		
212 S19 E61 21DD8 1	361626115090701	CITY NLV	2610.	1300.0	50.	03/04/74	28.26		S
						03/12/75	28.48		S
						03/01/76	28.23		S
						03/01/77	28.30		S
						03/01/78	28.50		

WELL NUMBER	SITE IDENTIFICATION	OWNER	LAND SURFACE ALTITUDE (FEET)	WELL DEPTH (FEET)	DEPTH TO FIRST PERFORATION (FEET)	WATER-LEVEL MEASUREMENTS			
						DATE	DEPTH (FEET)	REMARKS STAT METH	
212 S19 E61 290CC 1	361536115101601	LYNN REUSCH	2165.	200.0	80.	03/05/74	79.00	S	
						03/09/77	81.14	S	
						03/03/78	81.81		
212 S19 E61 31ADA 1	361510115112401	BILL KNECHT	2185.	100.0		03/13/74	87.32	S	
						03/11/75	87.49	S	
						04/01/76	86.74	S	
						02/17/77	87.52	S	
						03/02/78	86.60		
212 S19 E61 310DA 1	361447115112401	IGNACIO C GUTIERRES	2190.	165.0		03/05/74	84.08	S	
						03/12/75	99.61	S	
						03/04/76	102.46	S	
						03/02/77	101.65	S	
						02/28/78	101.66		
212 S19 E62 290DB 1	361555115034801	LEE YOFFE	H	1975.	300.0		03/10/77	97.42	S
							03/03/78	96.44	S
212 S19 E62 330DU 1	361449115024501	STANDARD OIL CU	1897.	300.0	120.	03/05/74	98.47	S	
						03/04/75	99.56	S	
						03/02/76	99.47	S	
						03/01/77	98.45	S	
						02/27/78	96.06		
212 S19 E62 350CD 1	361451115004401	LK MEAD B	1867.	838.0		03/06/74	133.62		
						02/27/75	137.45	S	
						03/02/76	122.38	S	
						02/28/77	114.80	S	
						03/01/78	118.60		
212 S19 E62 36CCB 1	361445115001601	LK MEAD B	1874.	880.0		03/06/74	149.40	S	
						02/27/75	143.32	S	
						03/02/76	128.49	S	
						02/28/77	136.92		
						03/01/78	130.68		
212 S19 E62 360BB 1	361453114594301	LK MEAD B	1895.	1434.0		02/27/75	195.09	S	
						03/02/76	186.98	S	
						02/28/77	145.28	S	
						03/01/78	143.20		
212 S20 E60 01ADC 1	361416115123701	ANN JONES	2125.	148.0		03/04/74	97.30	S	
						02/26/75	103.61	S	
						03/07/76	104.57	S	
						03/04/77	107.74	S	
						02/28/78	111.39	S	
212 S20 E60 010AD 1	361340115123201		2218.	93.0		03/04/74	86.54	S	
						02/26/75	74.60	S	
						03/04/76	75.34	S	
						03/02/77	77.56	S	
						02/28/78	77.64		
212 S20 E60 028DA 1	361410115141601	QUICK STOP MARKET	2310.	180.0		03/04/74	156.38	S	
						02/26/75	172.92	S	
						03/04/76	175.81	S	
						03/02/77	179.50	S	
						02/28/78	183.68		
212 S20 E60 028DD 1	361400115141301		2305.	275.0		03/07/74	142.93	S	
						02/26/75	148.84	S	
						03/04/76	150.22	S	
						03/08/77	156.11	S	
						02/28/78	158.91		
212 S20 E60 020DD 1	361359115133101	ARTHUR E GREY	U	2207.	707.0	03/07/74	233.24	S	
						05/14/74	237.32	S	
						08/26/74	249.70	S	
						11/27/74	240.98	S	
						02/26/75	245.33	S	
						05/05/75	246.90	S	
						08/07/75	252.75	S	
						03/04/76	250.32		
						12/01/76	258.91		
						03/02/77	257.17		
						05/09/77	262.12		
						07/14/77	268.40		
						10/12/77	270.22		
						02/28/78	265.31		

WELL NUMBER	SITE IDENTIFICATION	OWNER	LAND SURFACE ALTITUDE (FEET)	WELL DEPTH (FEET)	DEPTH TO FIRST PERFOR- ATION (FEET)	WATER-LEVEL MEASUREMENTS		REMARKS	STAT METH
						DATE	DEPTH (FEET)		
212 S20 E60 09DCC 1	361259115153901	LAWRENCE MONTELLU	2400.	450.0	360.	03/07/74	340.74	S	
						03/04/75	351.09	S	
						03/06/76	363.59		
						03/05/77	364.00	S	
						03/03/78	372.15		
212 S20 E60 10CDB 1	361254115152301	CHARLES BROWN	2340.	500.0		03/06/74	289.49	S	
						01/01/75	299.74	S	
						03/03/76	303.00	S	
						03/09/77	310.09	S	
						03/03/78	321.46		
212 S20 E60 11CAA 1	361303115140301	LVVWD	2287.	1003.0	307.	03/05/75	246.00	A	
						02/15/77	257.00	A	
						03/07/78	279.00		
212 S20 E60 11CBB 1	361301115142401	LVVWD	2300.	1000.0	265.	03/05/75	308.00	P	
						02/09/76	272.00		
						02/15/77	350.00	P	
						03/07/78	300.00		
212 S20 E60 11DAA 1	361303115152801	R S BARNETT	2271.	180.0	90.	03/06/74	102.73	S	
						02/26/75	109.99	S	
						03/04/76	117.08	S	
						03/02/77	116.00	S	
						02/28/78	111.08		
212 S20 E60 13DCC 1	361201115123701	MIKE TUMASELLI	2224.	132.0		03/06/74	60.94	S	
						02/26/75	61.33	S	
						03/05/76	56.89	S	
						03/02/77	61.60	S	
						03/01/78	56.31		
212 S20 E60 21AAB 1	361212115154201	LVVWD	P 2419.	975.0	500.	01/13/76	398.00		
						03/07/78	418.00		
212 S20 E60 21AAD 1	361206115153701	LVVWD	P 2406.	937.0	575.	11/08/75	398.00		
						03/07/78	416.00		
212 S20 E60 23AAB 1	361143115133801	LVVWD	2270.	900.0	330.	02/25/74	252.00	A	
						03/05/75	296.00	A	
						02/05/76	273.00	A	
						02/15/77	310.00		
						03/07/78	285.00		
212 S20 E60 23CCC 1	361121115142701	LVVWD	P 2363.	998.0	480.	05/25/75	345.00		
						03/07/78	359.00		
212 S20 E60 23CDD 2	361120115140101	LVVWD	P 2325.	991.0	500.	01/30/75	326.00		
						03/07/78	353.00		
212 S20 E60 24BBB 1	361141115130801	LVVWD	2257.	900.0	200.	02/25/74	230.00	A	
						03/05/75	275.00	A	
						02/04/76	250.00	A	
						02/15/77	259.00	A	
						03/07/78	264.00		
212 S20 E60 26DCC 1	361025115133801	LVVWD	2335.	960.0	400.	02/25/74	321.00	S	
						03/05/75	341.00	A	
						02/05/76	348.00	A	
						02/15/77	350.00	A	
						03/07/78	345.00		
212 S20 E60 27AAD 1	361106115143001	LVVWD	P 2370.	1000.0	455.	02/01/76	370.00		
						03/08/78	379.00		
212 S20 E60 34CCB 1	360934115151201	LVVWD	2510.	1002.0	500.	02/05/76	488.00	A	
						02/15/77	519.00	A	
						03/07/78	528.00		
212 S20 E60 35DD 1	360940115133001	LVVWD	P 2300.	1006.0	550.	02/01/78	320.00	R	
212 S20 E60 36BDD 1	361002115130801	LVVWD	2255.	830.0	251.	02/25/74	252.00	A	
						03/05/75	265.00	S	
						02/05/76	271.00	A	
						02/15/77	286.00	A	
						03/07/78	288.00		
212 S20 E60 36CCC 1	360935115132301	U	2288.	175.0		03/04/76	59.75		
						03/09/77	59.35		
						03/02/78	56.31		

WELL NUMBER	SITE IDENTIFICATION	OWNER	LAND SURFACE ELEVATION (FEET)	WELL DEPTH (FEET)	DEPTH TO FIRST PERFORATION (FEET)	WATER-LEVEL MEASUREMENTS		
						DATE	DEPTH (FEET)	REMARKS STAT METH
212 S20 E61 01CBA 1	361342115063801		1913.	250.0		03/04/74	52.92	S
						03/12/75	54.58	S
						03/01/76	53.97	S
						02/17/77	54.28	S
						03/02/78	52.78	
212 S20 E61 02DBB 1	361419115072201	HARTWELL & LUWE	U 1900.	785.0	90.	03/04/74	38.72	S
						05/15/74	36.77	S
						08/26/74	47.99	S
						11/26/74	39.14	S
						03/04/75	38.17	S
						05/05/75	35.69	S
						08/07/75	40.89	S
						11/18/76	32.54	
						03/01/77	32.91	
						05/09/77	29.94	
						07/14/77	30.86	
						10/12/77	31.60	
						02/27/78	29.44	
						02/28/78	78.67	
212 S20 E61 03ADC 1	362748115081901	NELLIS AFB	1990.	500.0	203.	03/06/74	68.98	S
						02/26/75	83.49	S
						03/02/76	70.38	S
						03/01/77	65.06	
						03/01/78	59.94	
212 S20 E61 03DAD 1	361344115081401	NELLIS AFB	1982.	291.0		02/26/75	63.98	S
						03/02/76	60.89	S
						03/01/77	64.38	S
						03/01/78	54.82	
212 S20 E61 04BDC 1	361426115095001		U 2103.	270.0		03/04/76	75.70	S
						03/02/77	77.09	S
						02/28/78	78.67	S
212 S20 E61 04CDD 1	361346115095501	MARVIN LEE	2107.	300.0	115.	03/05/74	147.00	S
						02/26/75	149.69	S
						03/04/76	146.57	S
						03/02/77	146.50	S
						02/28/78	144.88	
212 S20 E61 06CBD 1	361346115115901	CITY NLV	2211.	1000.0	758.	02/27/75	186.74	S
						03/04/77	193.76	S
						02/28/78	204.21	
212 S20 E61 07CCB 1	361301115115401	ROGERS	2228.	300.0		03/05/74	61.22	S
						03/12/75	57.90	S
						03/04/76	65.20	S
						03/09/77	66.27	S
						02/28/78	61.27	
212 S20 E61 08ACA 1	361321115101801		2179.	300.0		03/05/74	140.75	S
						02/26/75	146.20	S
						03/05/76	149.09	S
						03/02/77	152.07	S
						02/28/78	155.01	
212 S20 E61 128CA 1	361323115063601	DENNIS GROVER	1891.	160.0		03/06/74	47.81	S
						03/09/77	42.84	S
						02/27/78	43.45	
212 S20 E61 12CCA 1	361311115064301		1877.	155.0		03/06/74	60.48	S
						03/04/75	58.74	S
						03/02/76	49.52	S
						03/01/77	45.62	S
						02/27/78	45.33	
212 S20 E61 13ABD 1	361232115061001	CITY NLV	1857.	1230.0	102.	03/04/74	76.11	S
						02/28/75	69.87	S
						03/01/76	58.92	
						03/01/77	55.40	S
						03/01/78	52.10	

WELL NUMBER	SITE IDENTIFICATION	OWNER	LAND SURFACE ALTITUDE (FEET)	WELL DEPTH (FEET)	DEPTH TO FIRST PERFORATION (FEET)	WATER-LEVEL MEASUREMENTS		
						DATE	DEPTH (FEET)	REMARKS STAT METH
212 S20 E61 13ACD 1	361222115061501	CONSOL SERVICES	1847.	560.0	480.	03/13/74	82.22	S
						03/12/75	55.50	S
						03/30/76	52.12	S
						02/17/77	71.86	S
						03/06/78	43.83	
212 S20 E61 17CAD 1	361209115104601		2138.	150.0		03/04/74	63.87	S
						02/26/75	66.12	S
						03/05/76	66.98	S
						03/02/77	63.74	S
						02/28/78	66.32	
212 S20 E61 17CDB 1	361222115105601	LVVWD	U 2146.	655.0	550.	03/04/74	124.39	S
						03/05/76	140.03	S
						03/04/77	147.73	S
						02/28/78	154.33	S
212 S20 E61 18ABB 1	361238115112101	CITY NLV	2198.	975.0		03/01/78	222.88	
212 S20 E61 18BCC 1	361237115121401	CITY NLV	P 2208.	500.0	300.	02/28/78	213.07	S
212 S20 E61 19BCB 1	361141115115701	LVVWD	2199.	1004.0	225.	03/05/75	268.00	A
						02/04/76	250.00	
						03/01/78	219.00	
212 S20 E61 19BCC 1	361134115115701	LVVWD	2198.	1000.0	215.	03/05/75	275.00	A
						02/04/76	280.00	
						03/07/78	223.00	
212 S20 E61 20CDC 1	361120115105301	LVVWD	P 2108.	925.0	300.	12/01/74	119.00	
						02/01/76	120.00	
						03/07/78	134.00	
212 S20 E61 21AAD 1	361139115091001		2043.			03/07/74	45.21	S
						02/26/75	43.72	S
						03/05/76	45.28	S
						03/02/77	41.96	S
						02/28/78	41.88	
212 S20 E61 21BAA 1	361147115094001	CITY NLV	2064.	397.0	200.	03/04/74	52.58	S
						03/03/75	56.93	S
						03/01/76	57.90	S
						03/01/77	60.16	S
						03/01/78	61.84	
212 S20 E61 21BAB 1	361145115094801		2064.	400.0	148.	03/04/74	56.12	S
						02/26/75	59.63	S
						03/01/76	60.48	S
						03/02/77	63.61	S
						02/28/78	65.42	
212 S20 E61 22BCD 1	361141115085001	CITY NLV	2019.	1000.0	500.	03/05/74	55.35	S
						02/28/75	59.48	S
						03/01/76	56.36	S
						03/01/77	58.52	S
						03/01/78	57.98	
212 S20 E61 22DAC 1	361120115080401	CITY NLV	1911.	1105.0	249.	03/05/74	29.84	S
						02/28/75	30.78	S
						03/01/76	25.95	S
						03/01/77	20.92	S
						03/01/78	20.62	
212 S20 E61 22DBD 1	361118115081701	DRI	1919.	24.0		03/05/74	16.33	S
						02/26/75	15.68	
						03/01/76	15.02	S
						03/03/77	15.07	S
						03/01/78	15.38	
212 S20 E61 24ADB 1	361141115060801	CITY NLV	1827.	450.0	90.	03/05/74	49.92	S
						03/01/76	42.50	S
						03/01/77	41.50	S
						03/01/78	37.10	
212 S20 E61 24CBB 1	361140115064901	CITY NLV	P 1843.	450.0	150.	02/28/75	12.97	S
						03/01/76	9.69	S
						03/01/77	7.92	S
						03/07/78	7.02	S

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						DATE	DEPTH (FEET)	
212 S20 E61 24CCA 1	361110115064601	CITY NLV	1840.	500.0	186.	03/05/74	16.86	S
						02/28/75	15.53	S
						03/01/76	12.53	S
						03/01/77	9.89	S
						03/01/78	8.95	
212 S20 E61 26CAD 1	361025115074401	CITY OF LAS VEGAS	1878.	352.0		03/07/74	-17.50	
						03/04/75	-17.60	
						03/03/76	-17.90	
						03/02/77	-17.40	
						03/10/78	-17.60	
212 S20 E61 27ADB 1	361051115081401	ST NEV DEPT HWYS	1960.	195.0		03/13/74	22.94	S
						03/12/75	23.00	S
						03/31/76	23.65	S
						02/17/77	23.11	S
						03/06/78	19.54	
212 S20 E61 29CCC 2	361021115105901	LVVWD	2110.	1000.0	550.	02/04/76	128.00	
						03/07/78	138.00	
212 S20 E61 30CDB 1	361029115114701	LVVWD	2188.	1005.0	205.	02/25/74	173.00	A
						02/05/76	205.00	A
						02/15/77	214.00	A
						03/01/78	214.00	
212 S20 E61 30CDU 1	361023115114401	LVVWD	2168.	1050.0	500.	02/25/74	149.00	A
						03/05/75	185.00	A
						02/05/76	184.00	A
						02/15/77	205.00	A
						03/07/78	211.00	
212 S20 E61 30DDC 1	361027115112501	LVVWD	P 2140.	902.0	560.	02/01/76	176.00	
						03/07/78	221.00	
212 S20 E61 31AAB 1	361012115112601	LVVWD	2149.	1014.0	510.	02/25/74	128.00	A
						03/05/75	156.00	A
						02/05/76	170.00	A
						02/15/77	173.00	A
						03/07/78	180.00	
212 S20 E61 31AAD 2	361014115111401	LVVWD	P 2140.	500.0	278.	02/25/74	122.00	H
						02/07/76	150.00	R
						02/15/77	159.00	R
						03/07/78	165.00	H
212 S20 E61 31ACB 1	361000115112901	LVVWD	2165.	1000.0	257.	02/26/74	150.00	
						03/08/78	180.50	
212 S20 E61 31ADD 2	361002115112601	LVVWD	P 2121.	932.0	548.	01/08/74	117.00	
						02/01/76	142.00	
						03/07/78	152.00	
212 S20 E61 31DAB 1	360942115111101	LVVWD	2129.	766.0	513.	02/25/74	118.00	A
						03/05/75	145.00	A
						02/05/76	143.00	A
						02/15/77	147.00	A
						03/07/78	154.00	A
212 S20 E61 31DAC 2	360945115112501	LVVWD	P 2130.	1000.0	360.	03/07/78	152.00	A
212 S20 E61 31DAU 1	360938115111101	LVVWD	2132.	1200.0	500.	02/25/74	112.00	A
						03/05/75	143.00	A
						02/05/76	151.00	A
						02/15/77	146.00	A
						03/07/78	159.00	
212 S20 E61 31DDB 1	360944115112701	LVVWD	P 2135.	410.0	193.	02/25/74	112.00	
						03/05/75	137.00	H
						02/07/76	146.00	R
						02/15/77	150.00	R
						03/07/78	185.00	S H

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						DATE	DEPTH (FEET)	REMARKS STAT METH
212 S20 E61 32CDC 1	360941115104801	KENNETH SEARLES	H 2102.	665.0	570.	03/06/74	77.78	S
						05/14/74	89.95	S
						08/26/74	106.14	S
						11/27/74	96.10	S
						02/26/75	88.04	S
						05/05/75	86.15	S
						08/07/75	108.19	S
						03/08/76	65.89	S
						11/18/76	69.09	
						03/02/77	64.26	S
						05/09/77	66.17	
						07/14/77	75.91	
						10/12/77	69.28	
						03/02/78	61.88	
212 S20 E61 33CBC 2	360945115100301		H 2062.	47.0		03/06/74	11.15	S
						02/27/75	12.79	S
						03/08/76	12.49	S
						03/02/77	12.42	S
						03/02/78	12.70	S
212 S20 E61 33CBC 3	360945115100502		2062.	60.0		03/06/74	25.09	S
						02/27/75	30.27	S
						03/08/76	30.43	S
						03/02/77	32.14	S
						03/02/78	32.65	S
212 S20 E61 34CBC 1	361008115084101	UNION PAC RR	2034.	780.0	280.	03/11/74	53.90	S
						02/27/75	53.26	S
						03/07/77	58.45	S
						03/02/78	59.40	
212 S20 E61 36CBC 1	361006115064401		1838.			03/07/74	-20.20	G
						03/10/75	-20.00	G
						03/03/76	-20.00	G
						03/02/77	-20.00	G
						03/10/78	-21.00	
212 S20 E61 36BCD 1	360954115064201	THEODORE ROSSAKT	1824.	300.0	250.	03/07/74	6.91	S
						03/02/77	6.92	
						02/28/78	7.29	
212 S20 E62 01BBC 1	361421115001601	LK MEAD B	1865.	1026.0	96.	03/06/74	127.46	S
						02/27/75	149.99	S
						03/02/76	137.38	S
						02/28/77	134.43	S
						03/01/78	132.91	
212 S20 E62 04ADD 1	361412115023501	NELLIS AFH	1871.	800.0	90.	03/06/74	69.89	S
						02/26/75	73.88	S
						03/02/76	81.88	S
						03/01/77	73.50	S
						03/01/78	65.52	
212 S20 E62 04BDC 1	361410115031101	NELLIS INN	1872.	200.0		03/06/74	63.80	
						03/04/75	65.10	
						03/02/76	69.54	
						03/01/77	65.79	
						02/27/78	65.17	
212 S20 E62 04CBC 1	361354115032401	CENTRAL TEL CO	1865.	250.0	175.	03/05/74	70.54	
						03/04/75	72.17	S
						03/02/76	77.55	S
						03/01/77	73.94	S
						02/27/78	67.34	
212 S20 E62 05CAA 1	361400115040901	CITY NLV	1869.	1000.0	500.	03/04/74	113.79	S
						02/28/75	111.37	S
						03/01/76	107.95	S
						03/01/77	104.63	S
						03/01/78	101.56	
212 S20 E62 07CDC 1	361302115051301	CONSUL SERV INC	1849.	300.0	205.	03/04/75	91.72	S
						03/02/76	87.64	S
						03/01/77	83.65	S
						02/28/78	80.32	

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212	S20 E62 07DBC 1	361306115045501	BOBS TRANS CITY	1857.	235.0	03/05/74	99.10	S	
						03/04/75	106.59	S	
						03/02/76	98.02	S	
						03/01/77	97.24	S	
						02/28/78	95.11		
212	S20 E62 08BAB 1	361337115042501	NEVADA DRIVE IN	1860.	200.0	03/05/74	84.48	S	
						03/04/75	84.29	S	
						03/02/76	84.23	S	
						03/01/77	83.95	S	
						02/27/78	83.12		
212	S20 E62 09ABC 1	361331115025301	NELLIS AFB	1840.	850.0	144.	03/06/74	121.49	S
						02/26/75	124.02	S	
						03/01/76	113.68	S	
						02/28/77	116.63	S	
						03/01/78	102.25		
212	S20 E62 09BCC 1	361327115032401	NELLIS AFB	1837.	760.0	150.	02/28/75	95.35	S
						03/02/76	91.09	S	
						02/28/77	97.04	S	
						03/01/78	84.20		
212	S20 E62 09CCC 1	361258115032101	NELLIS AFB	1827.	650.0	290.	03/06/74	104.86	S
						03/26/75	107.44	S	
						03/02/76	100.01	S	
						02/28/77	112.42	S	
						03/01/78	92.09		
212	S20 E62 09DCD 1	361258115024301	NELLIS AFB	1818.	802.0		03/06/74	114.12	
							03/02/76	105.13	S
							03/01/77	113.18	S
							03/01/78	96.90	S
212	S20 E62 15BBA 1	361233115021501	NELLIS AFB	1816.	1000.0	320.	03/06/74	119.23	S
							03/02/76	98.20	S
							03/01/77	107.68	S
							03/01/78	94.66	
212	S20 E62 16ACC 1	361241115024801	NELLIS AFB	1811.	694.0	274.	03/06/74	128.00	S
							02/26/75	112.84	S
							03/02/76	104.73	S
							03/01/77	110.28	S
							03/01/78	97.87	
212	S20 E62 16BCD 1	361223115031101	GERRY SYLVESTER	1825.	180.0		03/05/74	112.54	S
							03/09/77	110.77	S
							02/27/78	105.32	
212	S20 E62 16CCD 1	361204115032101		1798.	220.0		03/05/74	89.24	S
							03/06/75	91.10	S
							03/03/76	90.55	S
							03/01/77	91.05	S
							02/27/78	89.43	
212	S20 E62 17AAA 1	361250115033901	EVANS	1826.	250.0	82.	03/06/74	85.49	S
							03/09/77	84.79	S
							02/27/78	82.22	
212	S20 E62 17BCC 1	361239115041901		1827.	142.0		03/05/74	90.53	S
							03/03/75	93.74	S
							03/02/76	89.12	S
							03/01/77	88.73	S
							02/27/78	85.30	
212	S20 E62 18BAB 1	361250115051801	CITY NLV	1845.	450.0	80.	03/05/74	95.90	S
							02/28/75	87.40	S
							03/01/76	83.65	S
							03/01/77	81.35	S
							03/01/78	76.58	
212	S20 E62 18BBD 1	361243115052501	CITY NLV	1847.	700.0	350.	03/05/74	92.51	
							03/03/75	88.40	S
							03/01/76	80.40	S
							03/01/77	78.14	S
							03/01/78	73.08	

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						DATE	DEPTH (FEET)	
212 S20 E62 19ACB 1	361145115045801	GUERNSEY	1815.	200.0		03/06/74	79.84	S
						03/04/75	77.27	S
						03/02/76	69.67	S
						03/01/77	66.87	S
						02/27/78	59.96	
212 S20 E62 198BD 1	361147115052301	WILLIAM COOK	1822.	205.0		03/06/74	51.74	S
						03/04/75	41.56	S
						03/02/76	36.95	S
						03/01/77	30.91	S
						02/27/78	26.50	
212 S20 E62 19UCD 1	361114115045501	TOM LENO	1795.	65.0		03/07/74	54.10	S
						03/09/77	47.20	
						05/18/77	43.60	S
						02/27/78	43.75	
212 S20 E62 20ADA 1	361156115034801	U	1790.	155.0		03/05/74	77.84	S
						05/15/74	78.39	S
						08/16/74	80.30	S
						11/27/74	80.28	S
						03/06/75	79.71	S
						05/06/75	78.71	S
						08/06/75	83.02	S
						03/02/76	78.90	S
						03/01/77	79.44	S
						05/09/77	78.74	
						07/14/77	80.10	
						10/12/77	86.39	
						02/27/78	77.43	
212 S20 E62 21CAB 1	361131115031601	ROSE KELLY	1782.	357.0	80.	03/04/74	84.39	S
						02/24/75	84.96	S
						03/29/76	86.12	S
						02/28/77	86.00	S
						03/07/78	82.11	
212 S20 E62 21DBA 1	361125115024801		1784.	150.0		03/06/74	87.05	S
						03/06/75	88.86	S
						03/02/76	88.85	S
						03/01/77	88.99	S
						02/27/78	88.70	
212 S20 E62 21DBB 1	361127115030101	L M SKUGARD	1782.	225.0		03/06/74	83.83	S
						03/06/75	85.23	S
						03/02/76	85.47	S
						03/01/77	85.72	S
						02/27/78	84.88	
212 S20 E62 22CCA 2	361128115022201	CHARLES HUNT	D	1792.	150.0	03/07/74	96.78	S
						03/02/76	99.60	S
						03/01/77	99.31	S
						02/27/78	102.86	S
212 S20 E62 26BBC 1	361100115011901	FORREST PURDY		1900.	330.0	03/04/74	146.18	
						03/06/75	146.36	
						03/01/77	145.16	
						02/28/78	145.40	
212 S20 E62 28BCD 1	361059115032501	A C OWENS	H	1765.	115.0	03/07/74	70.63	S
						03/06/75	72.45	S
						03/03/76	71.16	S
						03/01/77	70.36	S
						02/27/78	69.16	S
212 S20 E62 29ABB 1	361116115040501		H	1781.	84.0	03/01/77	80.60	S
						02/27/78	79.00	S

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212 S20 E62 29UCA 1	361036115040401		1766.	98.0		03/07/74	66.31	S
						05/15/74	66.33	S
						08/16/74	66.95	S
						11/27/74	67.06	S
						03/06/75	68.64	S
						05/06/75	66.74	S
						08/06/75	71.79	S
						03/03/76	66.10	
						11/18/76	65.90	
						03/01/77	64.07	
						05/09/77	63.53	
						07/14/77	63.50	
						10/12/77	75.06	
						02/27/78	61.51	
212 S20 E62 32BBH 1	361025115044701	E B GRUBB	I 1772.	500.0		03/07/74	47.61	S
						05/15/74	47.38	S
						08/16/74	47.68	S
						11/27/74	36.69	S
						03/07/75	47.57	S
						05/06/75	45.46	S
						08/06/75	46.95	S
						11/11/75	44.30	
						03/03/76	43.01	
						05/26/76	42.41	
						08/26/76	41.80	
						11/18/76	40.99	
						03/01/77	39.93	
						05/09/77	39.41	
07/14/77	39.10							
10/12/77	39.00							
02/27/78	37.13							
212 S20 E62 34CAB 1	360952115020701		1740.	100.0		03/07/74	50.00	S
						03/07/75	53.45	S
						03/03/76	53.43	S
						03/01/77	52.89	S
						02/28/78	52.35	
212 S21 E60 01CAD 1	360839115125501	MARY JOHN	2262.	155.0		03/08/74	111.89	
						02/27/75	111.76	
						03/08/76	109.47	
						03/02/77	105.60	
03/02/78	102.86							
212 S21 E60 01DAC 1	360839115124201		2239.	175.0		03/04/74	93.91	S
						02/27/75	92.45	S
						03/08/76	90.74	S
						03/02/77	87.20	S
						03/02/78	84.80	
212 S21 E60 01DBB 1	360847115125301		2261.	190.0		03/08/74	147.99	S
						02/27/75	148.16	S
						03/08/76	148.03	S
						03/02/77	143.83	S
						03/02/78	146.36	
212 S21 E60 10ADB 1	360804115143901	GEORGE HEYER	2410.	450.0	260.	03/08/74	396.32	S
						02/27/75	394.68	S
						03/08/76	400.33	S
						03/03/77	405.74	S
						03/03/78	410.20	
212 S21 E60 11ABC 1	360808115134801	ROY FLIPPEN	2328.	700.0		03/08/74	311.06	S
						02/27/75	317.18	S
						03/08/76	322.52	S
						03/03/77	327.50	S
						03/03/78	332.34	
212 S21 E60 12ABD 1	360812115124701		2238.	154.0		03/08/74	104.51	S
						02/27/75	101.50	S
						03/08/76	97.39	S
						03/02/77	94.26	S
						03/03/78	93.58	

WELL NUMBER	SITE IDENTIFICATION	OWNER	LAND SURFACE ALTITUDE (FEET)	WELL DEPTH (FEET)	DEPTH TO FIRST PERFOR- ATION (FEET)	WATER-LEVEL MEASUREMENTS		
						DATE	DEPTH (FEET)	REMARKS STAT METH
212 S21 E60 12ADD 1	360802115123001		2222.	150.0		03/08/74	83.37	S
						02/27/75	81.87	S
						03/08/76	78.86	S
						03/02/77	75.03	S
						03/03/78	73.08	
212 S21 E60 12BAB 1	360825115130501		2270.	165.0		03/08/74	145.09	S
						02/27/75	150.21	S
						03/08/76	154.32	S
						03/02/77	154.56	S
						03/03/78	153.51	
212 S21 E60 13AAD 1	360729115123201	L A GRIFFIS	2228.	200.0	140.	03/08/74	131.94	S
						02/27/75	141.59	S
						03/08/76	133.93	S
						03/02/77	131.79	S
						03/03/78	130.63	
212 S21 E60 15ADA 1	360714115143401	WELLS CARGU	2375.	600.0	300.	04/08/74	324.74	S
						02/27/75	329.87	S
						03/03/76	335.08	S
						03/03/77	340.30	S
						03/03/78	343.76	
212 S21 E60 16BDD 1	360712115155501	CLEAR GRAVEL INC	2545.	750.0	405.	03/08/74	443.05	S
						03/04/75	447.91	S
						03/03/76	452.68	S
						03/05/77	457.78	S
						03/03/78	461.84	
212 S21 E60 35ADA 1	360444115132301	FRANK KIM	2359.	300.0	230.	03/08/74	271.14	S
						02/28/75	276.30	S
						03/09/76	286.75	S
						03/04/77	282.73	S
						03/02/78	286.66	
212 S21 E61 01ABA 1	360911115061401	KLAS	1830.	300.0	115.	03/07/74	3.41	S
						03/12/75	8.10	S
						03/30/76	9.18	S
						02/17/77	4.00	S
						03/07/78	2.85	
212 S21 E61 02DCC 1	360837115071501	R J KALTERBORN	1920.	398.0		03/11/74	-3.00	S
						03/07/78		F
212 S21 E61 03ABB 2	360931115083802	W PARK	U 2014.	807.0		03/11/74	35.93	
						05/14/74	40.84	
						08/26/74	52.79	
						11/27/74	48.94	
						02/27/75	39.94	
						03/09/76	38.02	
						11/18/76	49.50	
						03/03/77	42.24	
						05/10/77	45.68	
						07/14/77	52.70	
						10/12/77	56.31	
						03/02/78	43.20	
						212 S21 E61 04BAA 1	360915115093401	
02/27/75	51.07	S						
03/09/76	43.72	S						
03/03/77	55.60	S						
03/02/78	38.10							
212 S21 E61 04DDB 1	360846115091401	BOULDER DAM INC	2042.	500.0		03/11/74	19.51	S
						02/27/75	20.06	S
						03/29/76	20.09	S
						02/14/77	19.84	S
						03/07/78	18.07	
212 S21 E61 06ACC 1	360858115112901	J D PORTER	2178.	394.0		03/13/74	157.00	S
						03/12/75	157.91	S
						02/17/77	157.10	S
						03/07/78	156.25	

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						DATE	DEPTH (FEET)	REMARKS STAT METH	
212 S21 E61 07DDC 1	360748115112901	AL WHEELER	2162.	167.0		03/08/74	61.43	S	
						03/08/76	60.57	S	
						03/03/77	59.38	S	
						03/03/78	58.00		
212 S21 E61 08DAB 1	360802115101501	WILGAR BROS GLASS	2093.	150.0	70.	03/11/74	28.68	S	
						03/27/75	27.78	S	
						03/08/76	25.19	S	
						03/03/77	26.88	S	
						03/03/78	27.14		
212 S21 E61 10CDA 1	360754115083301	LV INT CNTRY CLUB	2029.	270.0		03/11/74	71.44	S	
						02/27/75	75.91	S	
						03/08/76	57.60	S	
						03/03/77	63.42	S	
						03/03/78	53.31		
212 S21 E61 13CHC 1	360706115064901		1935.	200.0		03/13/74	21.15	S	
						03/11/75	19.70	S	
						03/31/76	21.10	S	
						02/18/77	17.00	S	
212 S21 E61 16BBD 1	360720115093701	HUGHES TOOL CO	2081.	972.0		03/11/75	88.49	S	
						03/30/76	90.10		
						02/18/77	91.76	S	
						03/08/78	82.49		
212 S21 E61 19CHA 1	360614115114901	KEND	2215.	300.0	210.	02/28/75	187.37	S	
						03/09/76	190.39	S	
						03/04/77	194.70	S	
						03/02/78	198.25		
212 S21 E61 22BBA 1	360649115090001	LVVWD	U	2041.	1200.0	318.	03/10/78	48.53	S
212 S21 E61 22CBA 1	360620115084901	PAUL TUDDEY	2050.	690.0		03/12/74	41.22	S	
						03/11/75	40.90	S	
						04/01/76	47.35	S	
						02/18/77	43.23	S	
						03/07/78	32.89		
212 S21 E61 22CCC 1	360600115091001	A P BAKER	U	2072.	500.0	03/08/74	35.97	S	
						05/14/74	68.47	S	
						08/26/74	90.39	S	
						11/25/74	49.74	S	
						02/28/75	41.57	S	
						05/05/75	51.91	S	
						08/07/75	58.67	S	
						12/05/75	46.34		
						05/26/76	72.03		
						08/27/76	88.34		
						11/18/76	54.46		
						03/03/77	44.86	S	
						05/10/77	56.21		
						07/14/77	89.32	S	
						10/12/77	87.50	S	
02/28/78	39.14								
212 S21 E61 23CBC 1	360614115075001		2010.			03/06/74	36.97	S	
						03/04/76	22.93	S	
						03/03/77	29.49	S	
						02/28/78	23.86		
212 S21 E61 27CDD 1	360516115082801		2072.	175.0		03/08/74	18.15		
						02/28/75	19.29		
						03/04/76	19.81		
						03/03/77	20.46		
						02/28/78	20.10		
212 S21 E61 28CAB 1	360528115094201		2129.			03/11/74	40.06	S	
						02/24/75	39.72	S	
						03/29/76	38.68	S	
						02/28/77	37.10	S	
						03/07/78	52.96		

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						DATE	DEPTH (FEET)	REMARKS STAT METH								
212 S21 E61 29AAC 1	360543115101301	MORRIS WULLMAN	2140.	540.0		03/04/74	67.28	S								
						02/24/75	73.90	S								
						03/29/76	79.12	S								
						02/28/77	84.39	S								
						03/07/78	71.71									
212 S21 E61 30DAB 1	360518115112101	S HALL	2225.	304.0		03/13/74	136.93	S								
						03/11/75	134.25	S								
						04/01/76	134.98	S								
						02/18/77	145.25	S								
						03/07/78	147.85									
212 S21 E61 33CCA 1	360424115094501		2189.	105.0		03/09/74	15.16	S								
						03/04/75	20.80	S								
						03/17/76	20.92	S								
						03/03/77	23.14	S								
						02/28/78	25.49									
212 S21 E61 35CCB 1	360426115074801	MARION R MCCANN	2065.	490.0		03/13/74	26.74	S								
						03/11/75	31.00	S								
						03/31/76	32.10	S								
						02/18/77	30.85	S								
						02/17/78	33.31									
212 S21 E61 35DBA 1	360442115072201		U	2033.	114.0		03/09/78	30.82	S							
212 S21 E61 36ADC 2	360449115061201	USGS	U	1948.	25.9	23.	08/03/77	17.00								
							02/23/78	18.80								
212 S21 E62 04ABB 1	360933115032001	WINTERWOOD RANCH	I	1738.	195.0	30.	03/07/74	49.45	S							
							03/07/75	47.98	S							
							03/03/76	47.92	S							
							03/01/77	46.77	S							
							03/10/78	45.83	S							
212 S21 E62 07DDC 1	360741115050001	KORK		1810.	100.0		03/13/74	13.28	S							
							03/11/75	12.90	S							
							03/30/76	12.28	S							
							02/17/77	12.10	S							
							02/17/78	10.42								
212 S21 E62 080BD 2	360733115034401	DORIS UKELLY		1731.	200.0		03/11/74	14.57	S							
							03/07/75	14.98	S							
							03/03/76	12.85	S							
							03/02/77	13.02	S							
							02/28/78	13.28								
212 S21 E62 09ABB 1	360833115031901	USGS	U	1715.	37.0	34.	08/03/77	17.00								
							02/28/78	15.26	S							
212 S21 E62 10ACA 1	360826115020001	NEVADA POWER CO	U	1705.	715.0	50.	03/07/74	14.81	S							
							05/15/74	14.21	S							
							08/16/74	14.07	S							
							11/27/74	13.49	S							
							03/07/75	14.43	S							
							05/06/75	13.90	S							
							08/06/75	14.36	S							
							03/03/76	13.36								
							11/18/76	14.61								
							03/02/77	13.64								
							05/10/77	13.86								
							07/14/77	14.75								
							10/12/77	16.30								
							02/28/78	15.05								
							03/16/78	16.32								
														03/07/74	7.20	S
														05/15/74	6.84	S
							08/16/74	6.85	S							
							11/27/74	6.18	S							
							03/07/75	7.72	S							
							05/06/75	6.47	S							
							08/06/75	7.47	S							
							03/03/76	6.74								
							11/18/76	9.01								
							03/02/77	6.91								
							05/10/77	7.32								
							07/14/77	7.98								
							10/12/77	9.81								
							02/28/78	8.89								
							03/16/78	7.47								

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						DATE	DEPTH (FEET)		
212	S21 E62 15BCD 1	360712115021501	LDS FARM	1685.	205.0		03/07/74 03/04/75 03/16/76 03/02/77 02/24/78	5.62 6.77 5.15 5.61 8.05	S S
212	S21 E62 15DDA 1	360245115004701	DRI	U 1672.	35.2	0.	03/11/78	3.22	R
212	S21 E62 15DDA 2	360703115014901	DRI	U 1672.	102.0	98.	03/11/78	4.38	R
212	S21 E62 18AAB 1	360735115045201		1812.	100.0		03/11/74 04/10/75 03/03/76 03/02/77 02/28/78	9.62 7.82 8.85 8.84 8.25	S S S S
212	S21 E62 18AAC 1	360725115045501	C V PATRICK	1817.	115.0		03/03/76 03/02/77 02/28/78	6.19 5.85 5.42	S S
212	S21 E62 18CDA 1	360656115051501		1867.			03/13/74 03/11/75 03/31/76 02/18/77 02/17/78	22.25 17.40 19.40 15.90 14.44	S S S S
212	S21 E62 20DDD 1	360601115034401	L BILLMAN	1720.	500.0		05/18/77 07/14/77 02/27/78	-50.00 -42.00 -47.00	
212	S21 E62 27CCC 1	360509115023001		1665.	360.0		03/13/74 03/12/75 04/01/76 02/18/77 03/08/78	20.00 20.00 20.08 20.86 20.72	S S
212	S21 E62 29BAD 1	360541115041401		1765.			03/11/74 03/04/75 03/16/76 03/02/77 02/24/78	14.98 14.35 14.10 12.71 11.36	S S S S
212	S21 E62 29CCB 1	360520115045301	J R BOND	U 1840.	404.0		03/11/74 05/14/74 08/16/74 11/27/74 03/04/75 11/18/76 05/09/77 07/14/77 10/12/77 02/25/78	-5.10 -5.30 -3.50	F F F F F F
212	S21 E62 30CCC 1	360508115054301	G H GRAYSON	1939.	166.0		03/12/74 03/04/75 03/16/76 03/02/77 02/25/78	4.20 1.18 1.63 1.39 0.0	S S S S
212	S21 E62 36BAA 1	360506115001101	DRI	U 1584.	62.3	57.	03/11/78	12.73	R
212	S21 E63 28ACA 1	360644114563801	DRI	U 1485.	134.0	90.	03/04/76 03/07/77 03/11/78	27.46 30.83 32.02	R R R
212	S21 E63 28ACA 2	360545114563401		U 1475.	40.8	39.	03/11/78	22.95	R
212	S21 E63 29CCB 1	360520114582401	DRI	1528.	91.0	85.	03/14/76 03/11/78	17.76 2.48	R R
212	S21 E63 30CBC 1	360527114593301	DRI	1559.	26.0	23.	03/04/76 03/07/77 03/11/78	4.30 1.40 3.41	R S
212	S21 E63 30CBC 2	360526114593301	DRI	1559.	47.0	43.	03/04/76 03/11/78	4.24 3.41	
212	S21 E63 31BAB 1	360506114502101	DRI	U 1553.	68.0	63.	03/07/77 03/11/78	0.84	F
212	S21 E63 31BAB 2	360459114592201	DRI	1553.	18.0	14.	03/04/76 03/07/77 03/11/78	5.68 5.80 5.73	R

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212 S21 E63 31CCA 1	360424114592201	DRI	1614.	40.0	37.	03/04/76	19.60	R
						03/07/77	15.35	S
						03/11/78	14.34	
212 S22 E60 01DDD 1	360318115123501	LVVWD	2363.	1071.0	250.	03/11/74	265.28	S
						03/08/77	272.66	S
						03/10/78	270.00	
212 S22 E60 14CDB 1	360143115140401	HAYES TURNEY	2531.	500.0	400.	03/09/74	383.00	S
						03/16/76	387.00	S
						03/04/77	388.82	S
						03/09/78	391.37	
212 S22 E60 16AAC 1	360216115154301	DANNIE MYERS	2660.	610.0	545.	03/05/77	542.59	S
						03/04/78	545.12	
212 S22 E60 20BDC 1	360102115170701	RED STAR OIL CU	2805.	3767.0		03/13/74	594.85	S
						03/05/77	593.88	S
						03/03/78	592.93	
212 S22 E60 20CDB 1	360047115171401	MOFFAT & LILLIS	2810.	710.0	610.	03/09/74	481.46	S
						03/03/75	482.30	S
						03/03/76	482.35	S
						03/05/77	483.47	S
						03/03/78	483.77	
212 S22 E60 23BBD 1	360118115141101	JOE HORNYAK	2545.	500.0	410.	03/12/74	401.98	S
						03/10/75	403.86	S
						03/16/76	405.50	S
						03/04/77	407.82	S
						03/09/78	409.38	
212 S22 E60 24ADD 1	360104115123001	HARLYN LANG	2383.	400.0	350.	03/13/74	243.50	S
						03/10/75	245.39	S
						03/09/76	247.30	S
						03/04/77	249.32	S
						03/01/78	251.08	S
212 S22 E61 02ACC 1	360343115072201		2046.	102.0		03/11/74	35.61	S
						03/04/75	38.31	S
						03/04/76	40.07	S
						03/03/77	40.19	S
						03/01/78	41.22	
212 S22 E61 02CCC 1	360322115075301		2071.	90.0		03/12/74	21.52	S
						03/04/75	26.68	S
						03/17/76	28.58	S
						05/18/77	31.08	S
						03/01/78	29.46	
212 S22 E61 03CCB 1	360340115090801	GEORGE CRUICKETT	I 2150.	575.0		03/13/74	70.20	S
						05/14/74	75.76	S
						08/27/74	94.42	
						03/04/75	96.72	S
						08/08/75	88.90	S
						12/05/75	75.92	
						05/26/76	81.10	
						08/03/76	83.80	
						11/29/76	78.30	
						03/03/77	54.03	S
						05/13/77	80.86	
						07/14/77	84.45	
						10/28/77	82.89	
03/16/78	77.55							
212 S22 E61 03DCA 1	360329115081801		2080.			03/12/74	18.91	S
						03/04/75	19.67	S
						03/17/76	19.66	S
						03/03/77	19.78	S
						03/09/78	19.86	
212 S22 E61 03DOB 1	360333115082101	HUGHES ESTATE	U 2080.			03/03/77	-2.39	S
						03/09/78	-2.73	S
212 S22 E61 04ABA 1	360400115092401		2159.	113.0		03/11/74	73.92	S
						03/04/75	79.78	S
						03/04/76	77.63	S
						03/03/77	79.46	S
						03/09/78	80.90	

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						DATE	DEPTH (FEET)	
212 S22 E61 04DCB 1	360324115092401		2190.	245.0		03/12/74	91.01	S
						03/10/75	93.19	S
						03/04/76	94.95	S
						03/03/77	97.75	S
						03/01/78	97.92	
212 S22 E61 05BCA 1	360347115110601	JOHN MARSHALL	2270.	300.0		03/09/74	178.42	S
						03/10/75	181.33	S
						03/04/76	183.96	
						03/02/78	189.10	
212 S22 E61 05DAU 1	360327115102001		2225.	190.0		03/09/74	133.56	S
						03/10/75	137.80	S
						03/04/76	140.65	S
						03/03/77	143.64	S
						03/01/78	145.34	
212 S22 E61 06CDC 1	360327115115901	ULLIE CAMERON	2348.	305.0		03/09/74	249.58	S
						03/10/75	252.00	S
						03/16/76	254.97	S
						03/04/77	257.46	S
						03/02/78	260.87	
212 S22 E61 09DCA 1	360241115092701		2194.	112.0		03/12/74	105.90	S
						03/10/75	109.12	S
						03/04/76	111.27	S
						03/04/77	113.51	S
						03/01/78	114.49	
212 S22 E61 10BDA 1	360253115083901	WARM SPRNGS MCH	2115.	160.0		03/12/74	32.82	S
						03/04/75	38.47	S
						03/04/76	37.64	S
						03/04/77	40.91	S
						03/01/78	40.44	
212 S22 E61 11BRC 1	360255115080001		2069.	300.0		03/12/74	31.69	S
						03/04/75	34.08	S
						03/04/76	35.32	S
						03/04/77	35.22	S
						03/01/78	34.47	
212 S22 E61 12ABC 1	360310115062601	THOMAS WHITTLE	2022.	180.0		03/12/74	20.99	S
						03/04/75	21.94	S
						03/16/76	25.83	S
						03/02/77	28.81	S
						02/23/78	27.78	
212 S22 E61 04BCB 1	360349115100001	FITZPATRICK	U 2225.	355.0		02/25/74	135.26	R
						02/25/75	138.46	R
						03/29/76	141.88	R
						03/07/77	144.38	R
						03/02/78	145.55	R
212 S22 E61 14ABA 1	360224115072201	TERRY KING	2110.	163.0		03/12/74	52.74	S
						03/15/76	56.42	S
						03/02/77	55.20	
						02/23/78	56.70	
212 S22 E61 16CDB 1	360145115094701	RICHARD W BOTTILLER	2224.	250.0		03/04/76	125.10	
						03/04/77	128.20	
						03/01/78	129.95	
212 S22 E61 18CAC 1	360156115120501	JAMES KNEZ	2356.	360.0		03/10/75	234.57	S
						03/17/76	236.79	S
						03/04/77	243.09	S
						03/01/78	240.95	S
212 S22 E61 20BAU 1	360112115104501	ED CLOVER	2287.	210.0		03/10/75	181.62	S
						03/04/76	183.55	S
						03/04/77	179.39	S
						03/09/78	181.30	S
212 S22 E61 21BBD 1	360120115100001	HOT WELL	2232.	150.0		03/12/74	124.38	S
						03/10/75	131.15	S
						03/04/76	129.27	S
						03/04/77	131.98	S
						03/01/78	133.85	S

WELL NUMBER	SITE IDENTIFICATION	OWNER	LAND SURFACE ALTITUDE (FEET)	WELL DEPTH (FEET)	DEPTH TO FIRST PERFORATION (FEET)	WATER-LEVEL MEASUREMENTS		REMARKS	
						DATE	DEPTH (FEET)		
212	S22 E61 24CDD 1	360051115064401	KAYMUND SMITH	2220.	200.0	100.	03/04/75 03/16/76 03/03/77 02/23/78	156.94 157.83 156.97 157.90	
212	S22 E61 28BBA 1	360041115100001	JOE DAILEY	2243.	200.0		03/13/74 03/11/75 04/01/76 02/18/77 02/15/78	125.30 126.40 125.85 132.00 134.35	S S S S
212	S22 E61 30DAC 1	360006115113101	WILLIE M NELSON	2315.	300.0		03/13/74 03/10/75 03/17/76 03/04/77 03/01/78	151.91 153.22 154.80 156.16 157.07	S S S S
212	S22 E62 01CBC 1	360345115002901	RAY PLUMBER	I 1681.	1135.0		03/12/74 05/15/74 08/16/74 12/19/74 03/04/75 05/06/75 08/08/75 03/04/76 05/28/76 08/27/76 11/18/76 03/04/77 05/10/77 07/14/77 10/12/77 02/26/78	-64.00 -65.50 -66.20 -66.00 -67.10 -67.70 -69.20 -69.10 -70.00 -70.00 -70.00 -69.20 -68.50 -68.00 -69.50 -69.80	
212	S22 E62 03CCC 1	360324115024001	CITY OF HENDERSON	1778.	1000.0	430.	03/10/74 03/04/75 03/04/76 03/02/77 02/26/78	-11.20 -11.40 -11.20 -11.10 -11.60	G
212	S22 E62 04BCB 1	360356115033701	DRI	1740.	93.0	90.	03/04/76 03/07/77 03/11/78	0.20	F F
212	S22 E62 04BCB 2	360354115055201	DRI	1777.	40.0	36.	03/04/76 03/07/77 03/11/78	9.59 8.17 6.67	R S
212	S22 E62 04BCB 3	360355115034401	DRI	U 1777.	101.0	98.	03/04/76 03/07/77 03/11/78	19.20 19.32 19.15	R
212	S22 E62 04DCC 1	360322115030801	CITY OF HENDERSON	1798.	780.0	430.	03/10/74 03/04/75 03/04/76 03/02/77 02/26/78	-3.60 -4.00 -4.40 -5.00 -5.50	
212	S22 E62 07CBA 1	360251115054901	DANIELSON	2050.	148.0		03/13/74 03/11/75 04/01/76 02/18/77 02/17/78	114.24 114.50 114.02 116.60 116.70	
212	S22 E62 08CBD 1	360241115044001	PARADISE V CNTRY CLUB	1982.	712.0	565.	03/12/74 03/04/75 03/16/76 03/03/77 02/23/78	96.95 95.71 96.90 97.24 98.08	S S S S
212	S22 E62 11CBB 1	360253115014101	DRI	1780.	63.0	47.	03/04/76 03/07/77 03/11/78	36.10 36.12 36.08	R S
212	S22 E63 05CBB 1	360344114582501	DRI	1707.	244.0	241.	03/05/76 03/07/77 03/11/78	29.82 48.26 45.13	S S

WELL NUMBER	SITE IDENTIFICATION	OWNER	LAND SURFACE ALTITUDE (FEET)	WELL DEPTH (FEET)	DEPTH TO FIRST PERFORATION (FEET)	WATER-LEVEL MEASUREMENTS		REMARKS
						DATE	DEPTH (FEET)	
212 S22 E63 07BCB 1	360308114592701	DRI	U 1739.	24.0	19.	03/04/76	9.59	R
						03/07/77	9.92	S
						03/11/78	11.23	
212 S22 E63 07BCB 2	360307114592601	DRI	1739.	91.0	87.	03/04/76	10.55	S
						03/07/77	11.63	S
						03/11/78	12.54	
212 S22 E63 20ABC 1	360122114574801	CITY OF HENDERSON	2030.	750.0	460.	03/07/74	329.07	S
						03/04/75	328.42	S
						03/04/76	326.99	S
						03/03/77	326.32	S
						03/01/78	325.20	
212 S23 E61 03BCC 1	361136115101401	SKY HARBOR AIRPORT	2375.	650.0	220.	03/07/74	195.10	S
						03/04/75	197.89	S
						03/04/76	196.69	S
						03/05/77	197.75	S
						03/04/78	198.52	
212 S23 E61 16AAA 1	361012115102401	V VISTA MBL HM PRK	2490.	400.0	360.	03/14/74	298.35	S
						03/04/75	298.18	S
						03/04/76	297.90	S
						03/05/77	300.74	S
						03/04/78	301.71	

1. OWNER ABBREVIATIONS:

CITY NLV-CITY OF NORTH LAS VEGAS
DRI-DESERT RESEARCH INSTITUTE
LK MEAD B-LAKE MEAD BASE
LVVWD-LAS VEGAS VALLEY WATER DISTRICT
NELLIS AFB-NELLIS AIR FORCE BASE
USGS-U. S. GEOLOGICAL SURVEY

2. WATER USE ABBREVIATIONS:

H-DOMESTIC
I-IRRIGATION
P-PUBLIC SUPPLY
S-STOCK
U-UNUSED

3. WATER LEVEL MEASUREMENT ABBREVIATIONS:

DEPTH
(-)-MINUS SIGN PRECEDING MEASUREMENT, INDICATES WATER LEVEL ABOVE LAND SURFACE DATUM.
STATUS
F-FLOWING
P-PUMPING
S-NEARBY, PUMPING
T-NEARBY, RECENTLY PUMPED
METHOD
A-AIRLINE
G-PRESSURE GAGE
R-REPURIED
S-STEEL TAPE

Table 2.--*Estimated ground-water pumpage, 1955-77*

(From pumpage inventories by the Nevada State Engineer;
rounded to the nearest 1,000 acre-feet)

Year	Pumpage (acre-feet per year)	Year	Pumpage (acre-feet per year)
1955	40,000	1970	86,000
1956	43,000	1971	85,000
1957	44,000	1972	70,000
1958	43,000	1973	70,000
1959	46,000	1974	78,000
1960	48,000	1975	73,000
1961	52,000	1976	70,000
1962	a 54,000	1977	69,000
1963	a 59,000		
1964	a 69,000		
1965	73,000		
1966	78,000		
1967	81,000		
1968	88,000		
1969	87,000		

a. Revised from previously published estimates (Harrill, 1974, table 2).

The other map shows water-level changes in a shallower zone of saturated valley fill (fig. 4). Water in these zones occurs under both water-table and artesian conditions. This unit has been called the near-surface zone of aquifers, or the near-surface reservoir by Malmberg (1965, p. 24). The term "near-surface reservoir" is used in this report. The reservoir is not well defined in areal extent or depth, and, except where it comprises the incompletely confining deposits above the shallow artesian aquifers, it is difficult to delineate because it is not a distinct lithologic or hydrologic unit (Malmberg, 1965, p. 24).

Table 3.--Summary of imports from Lake Mead, 1955-77
 (From records of the Nevada Division of Water Resources)

IMPORTS (in acre-feet per year)							
Southern Nevada Water Project ¹							
Year	Las Vegas Valley Water District	City of Henderson and BMI	Las Vegas Valley Water District	Nellis Air Force Base	City of North Las Vegas	City of Henderson	Total, Las Vegas Valley
1955	428	16,255	0	0	0	0	16,683
1956	1,589	21,175	0	0	0	0	22,764
1957	1,247	16,778	0	0	0	0	18,025
1958	2,202	15,581	0	0	0	0	17,783
1959	1,079	15,450	0	0	0	0	16,529
1960	2,146	15,898	0	0	0	0	18,044
1961	3,334	15,773	0	0	0	0	19,107
1962	4,887	16,473	0	0	0	0	21,360
1963	6,407	18,084	0	0	0	0	24,491
1964	5,879	16,423	0	0	0	0	22,302
1965	3,596	16,298	0	0	0	0	19,894
1966	5,334	18,079	0	0	0	0	23,413
1967	4,651	18,794	0	0	0	0	23,445
1968	6,920	22,951	0	0	0	0	29,871
1969	9,558	24,021	0	0	0	0	33,579
1970	13,350	20,897	0	0	0	0	34,247
1971	6,120	19,687	14,544	284	454	0	41,089
1972	0 a	19,683	42,038	1,445	1,324	4	a 64,494
1973	0	19,345	48,674	1,276	2,341	1,735	73,371
1974	0	19,268	49,290	1,504	3,394	1,939	75,395
1975	0 a	16,832	54,735	1,885	6,302	1,545	a 81,299
1976	0	14,081	59,349	2,158	6,466	1,895	83,949
1977	0	12,567	60,244	2,628	6,318	2,160	83,917

1. First water delivered on June 16, 1971.
 a. Revised from previously published figures.

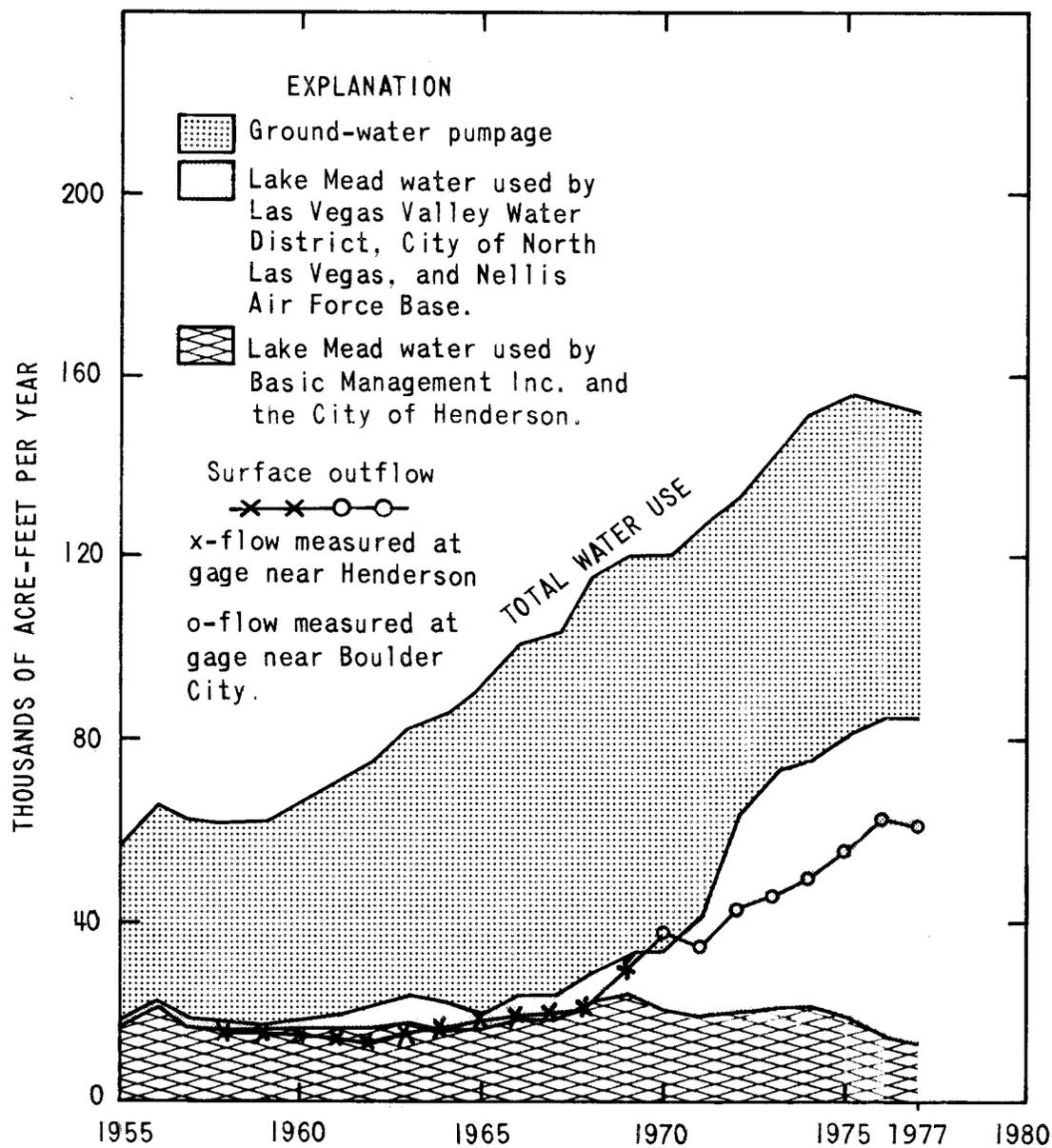


Figure 1.--Relation between ground-water and imports of Lake Mead water, 1955-1977, and measured at the Las Vegas wash gaging stations near Henderson, 1958-1969, and near Boulder City, 1970-1977.

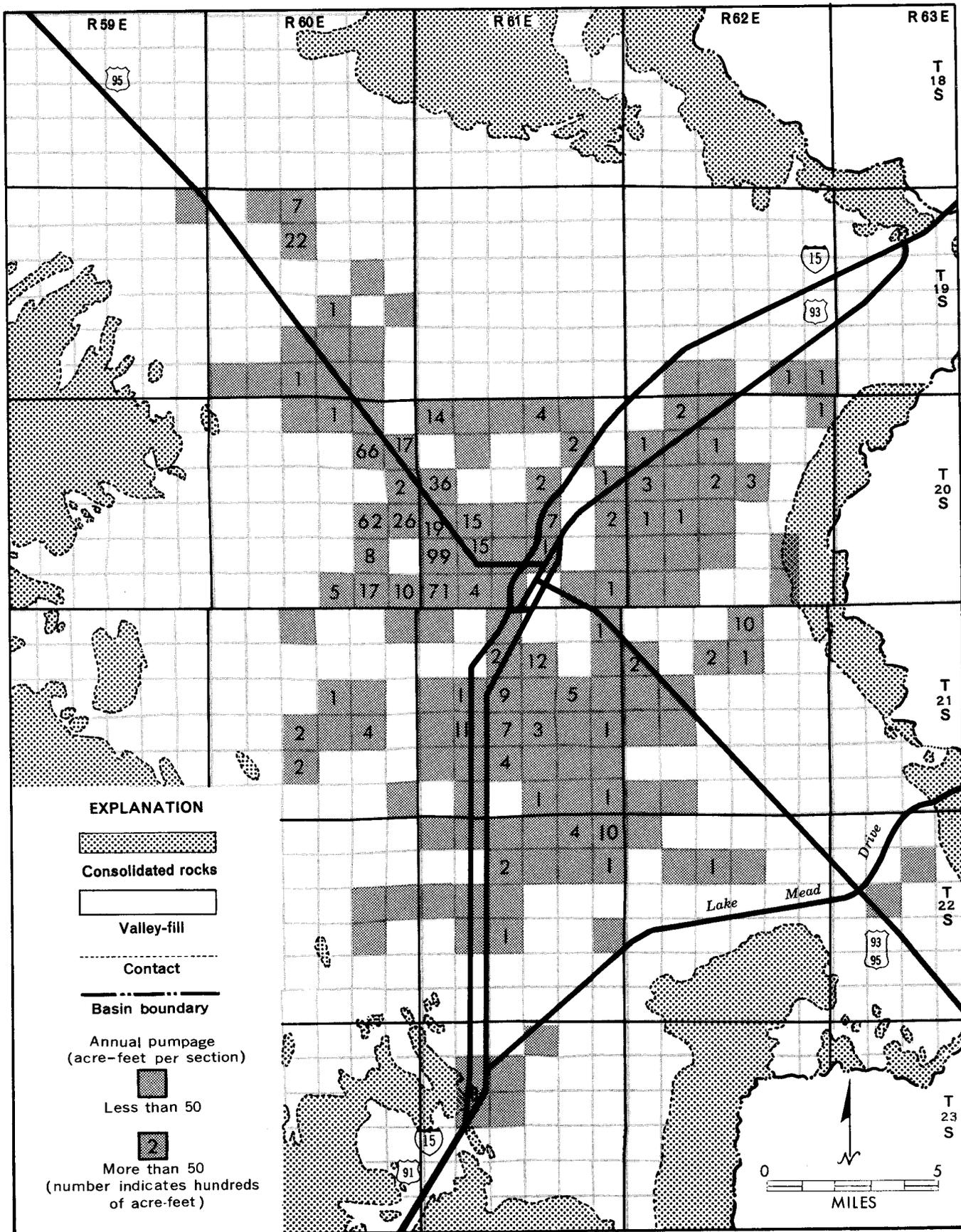


Figure 2.--Distribution of pumpage in 1977.

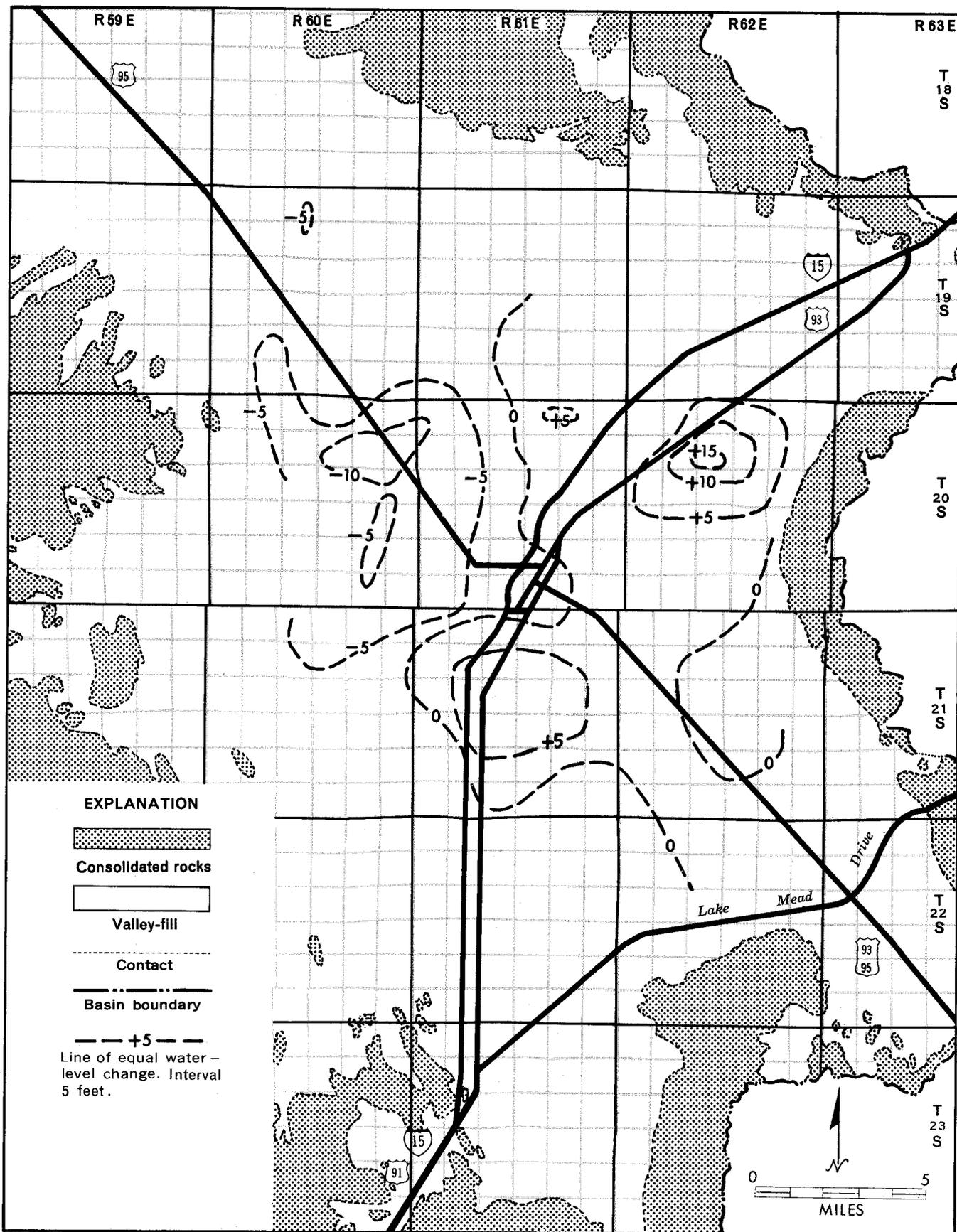


Figure 3.--Approximate net change in water levels in wells that penetrate the principal aquifers, March 1977-March 1978.

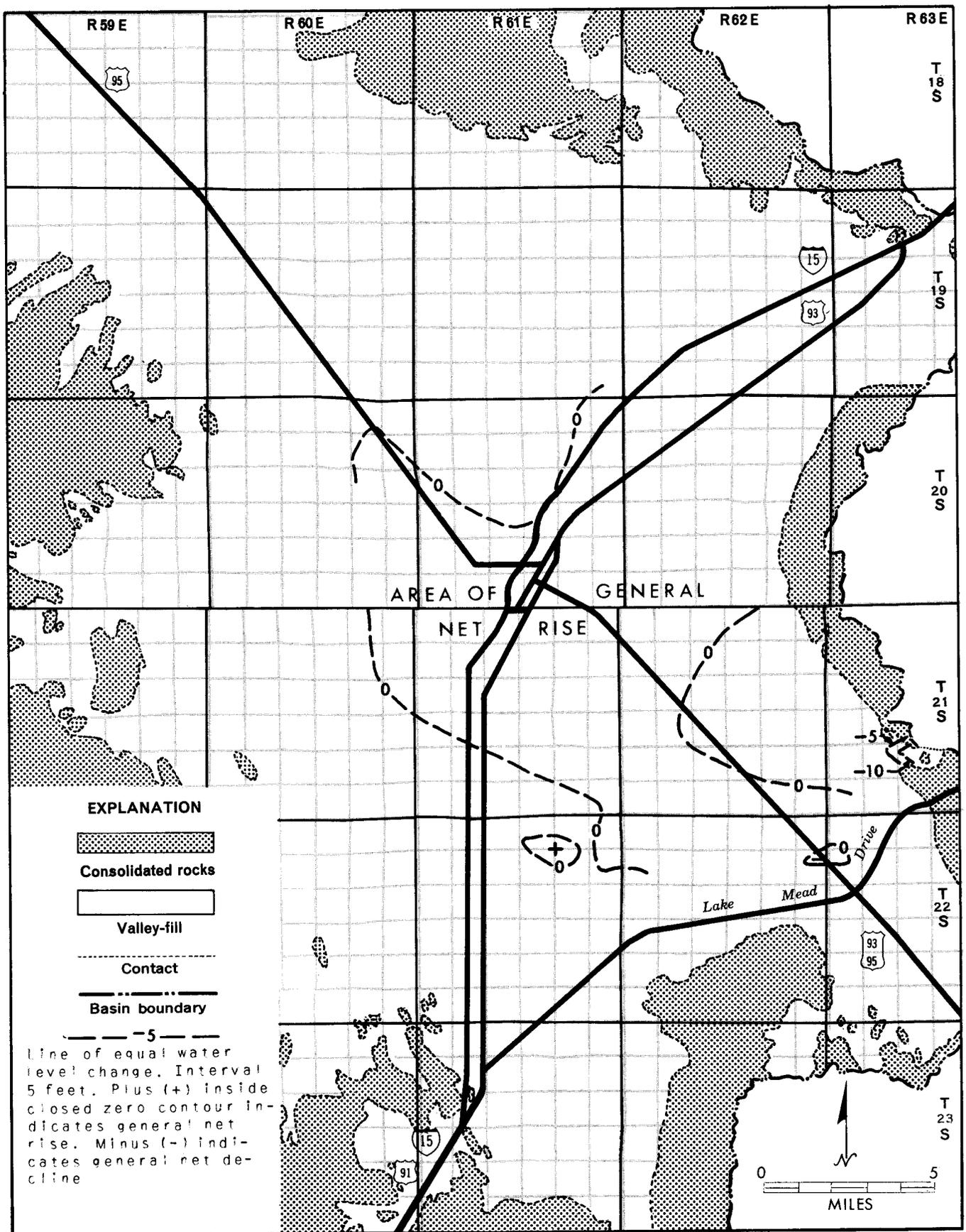


Figure 4.--Approximate net change in water levels in wells that penetrate the near surface reservoir, March 1977-March 1978.

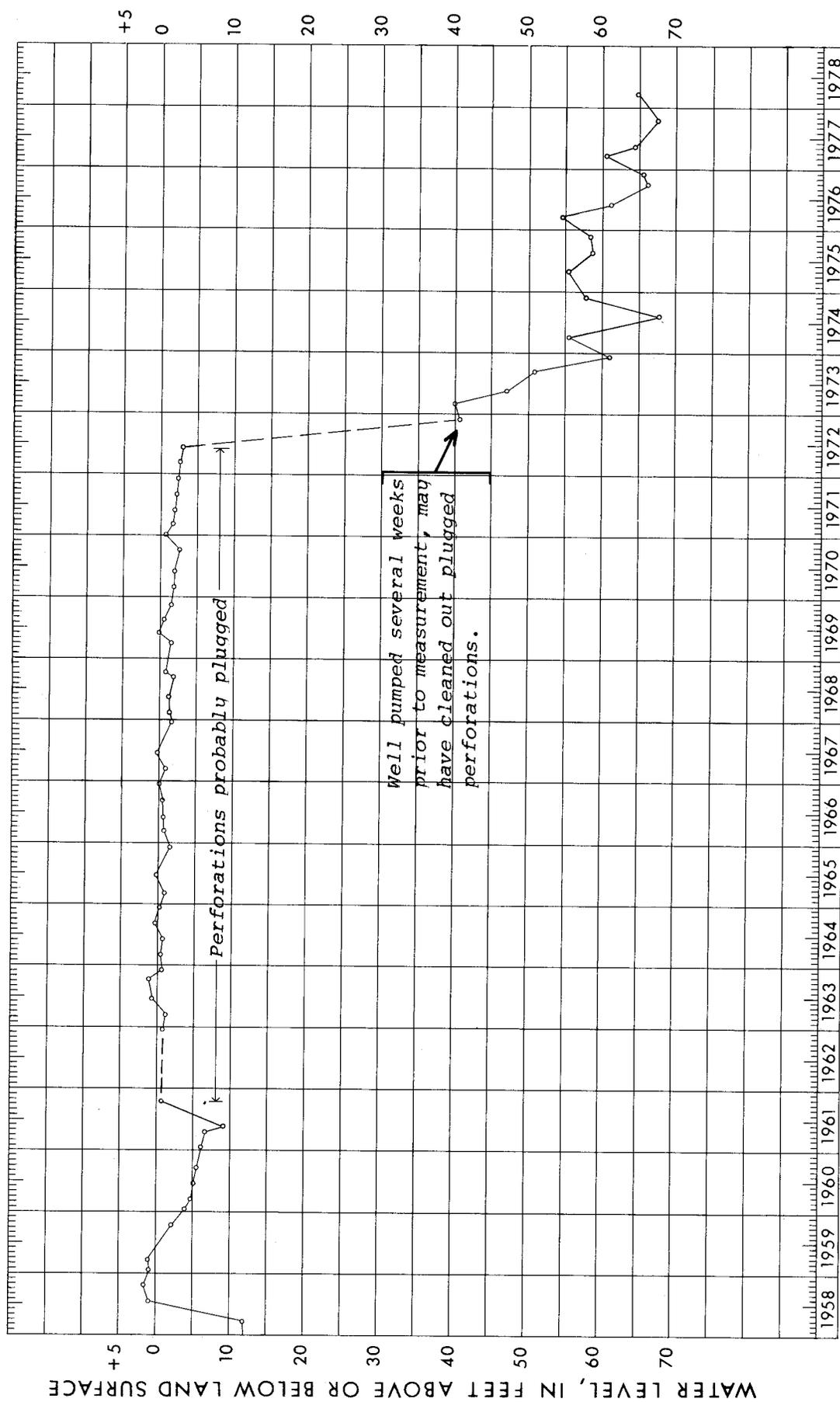


Figure 5.--Water-level changes in well 212 S19 E60 4dbl.

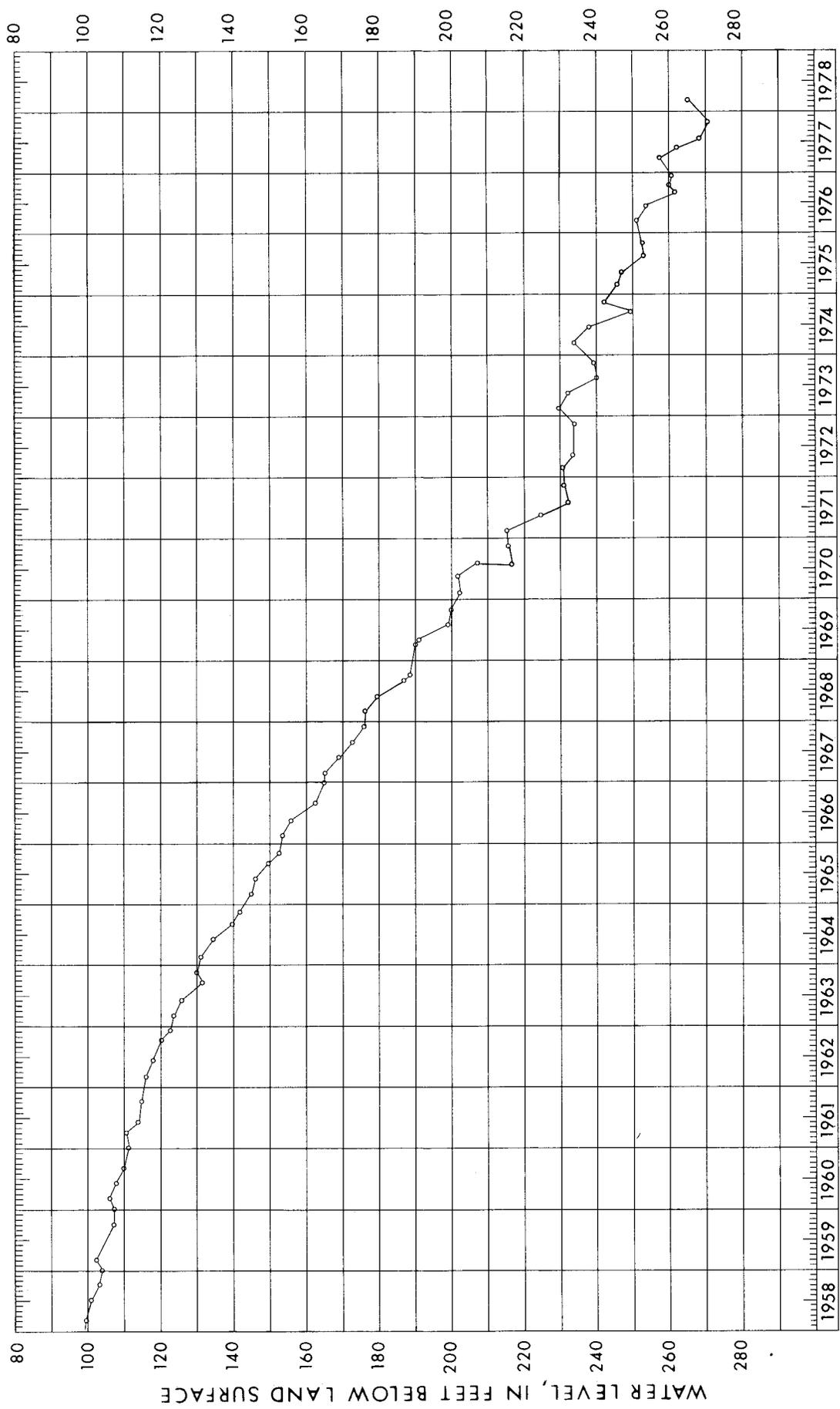


Figure 6. -- Water-level changes in well 212 S20 E60 2ddd1.

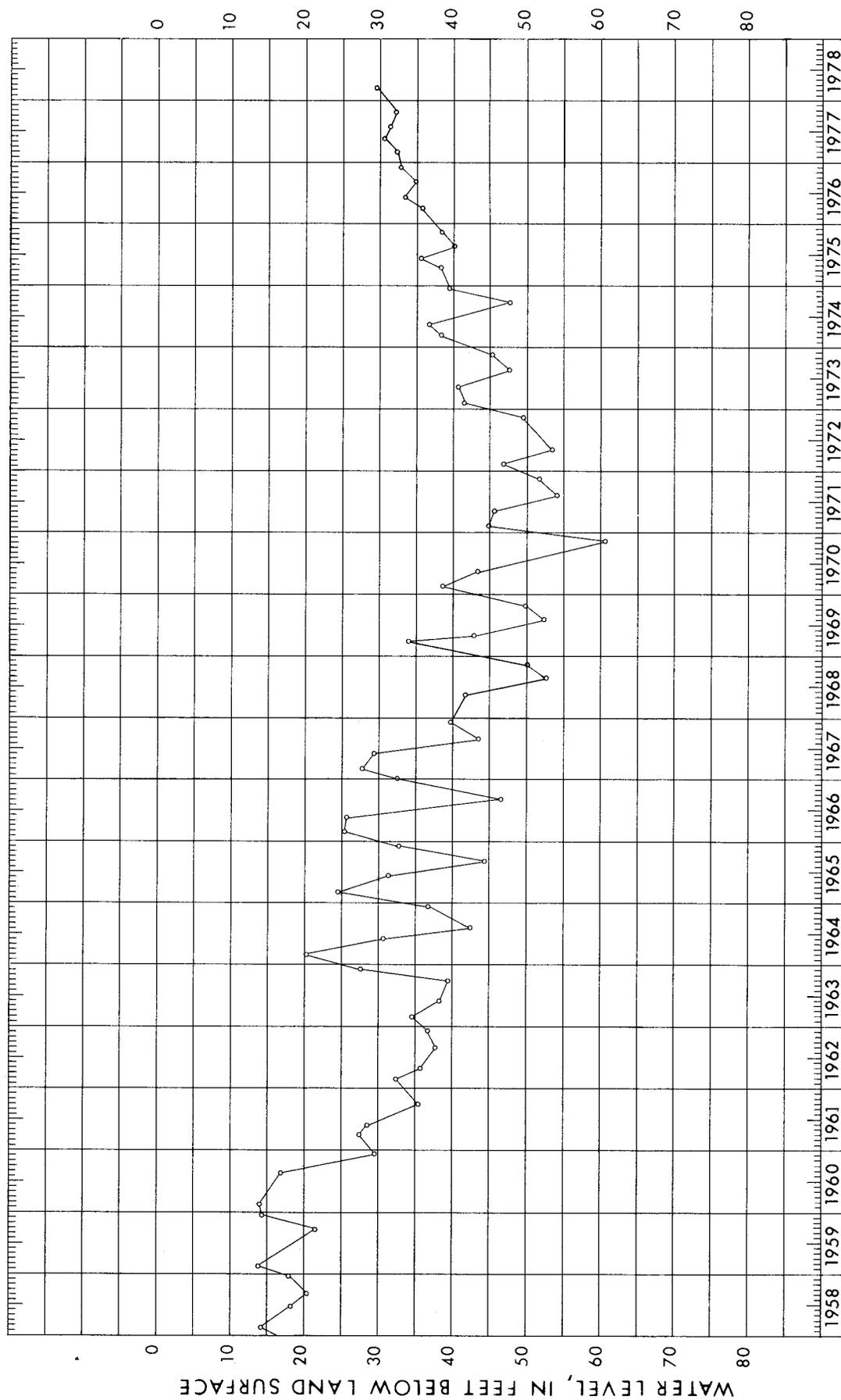


Figure 7. -- Water-level changes in well 212 S20 E61 2dbb1.

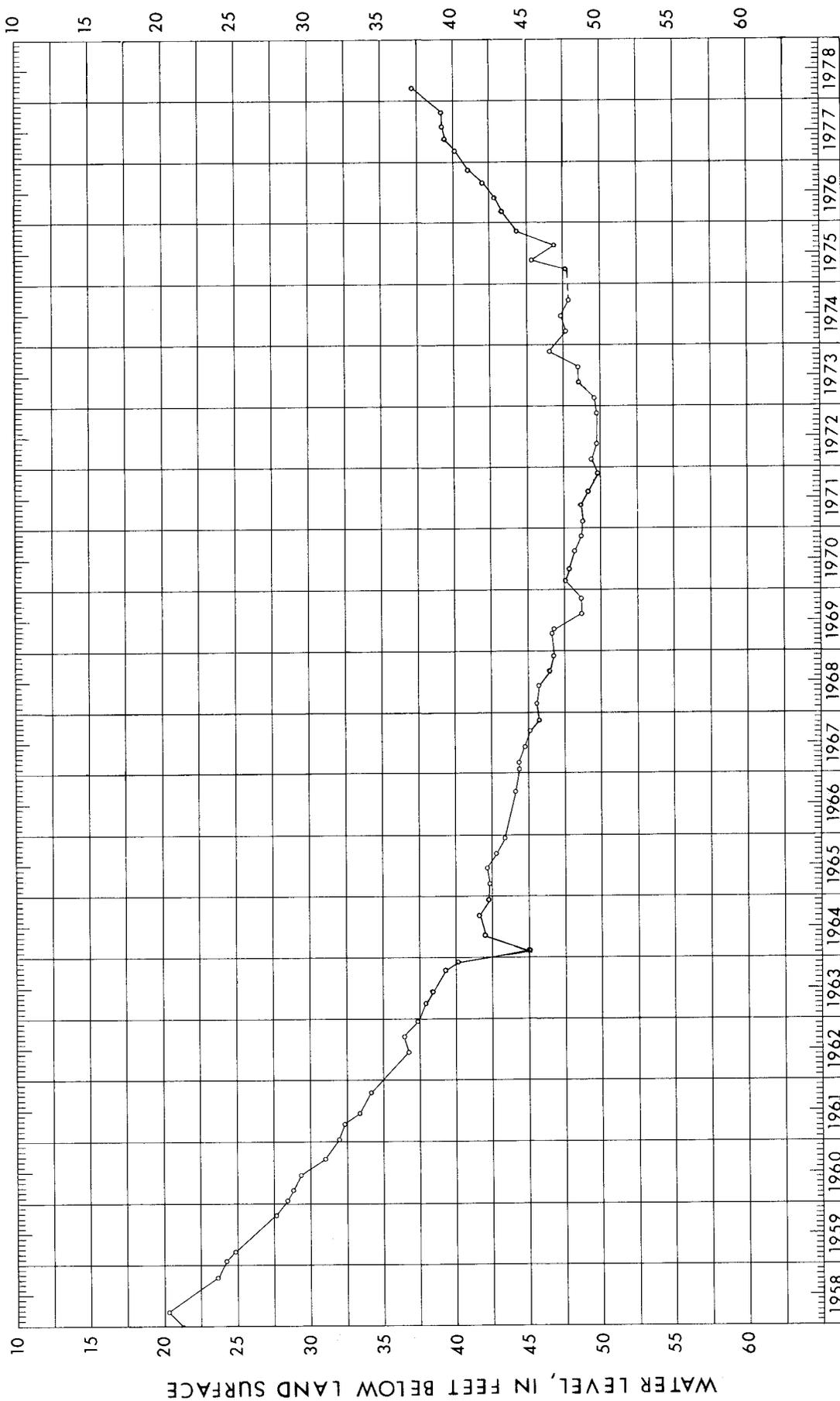


Figure 8. -- Water-level changes in well 212 S20 E62 32bbb1.

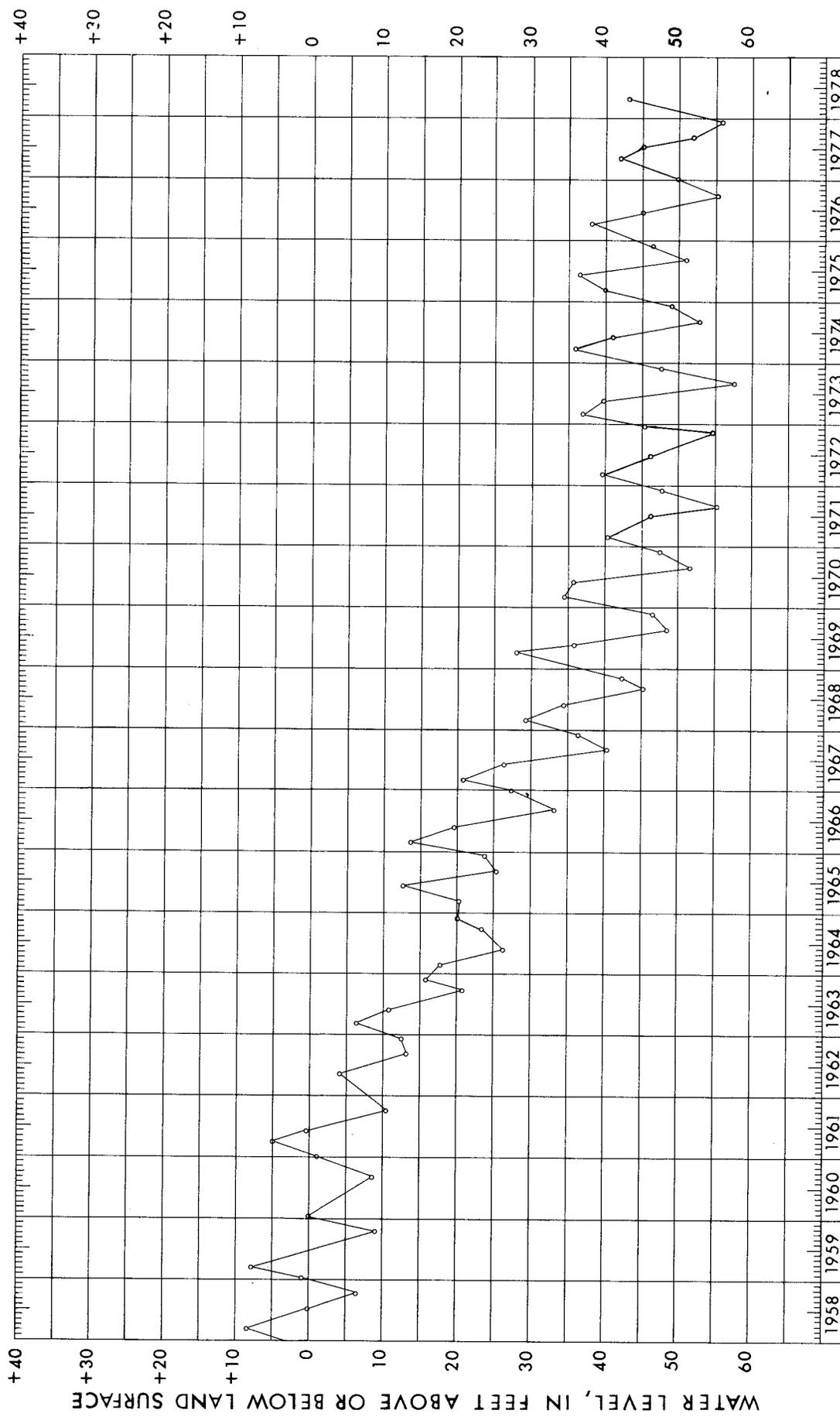


Figure 9.-- Water - level changes in well 212 S21 E61 3abb2.

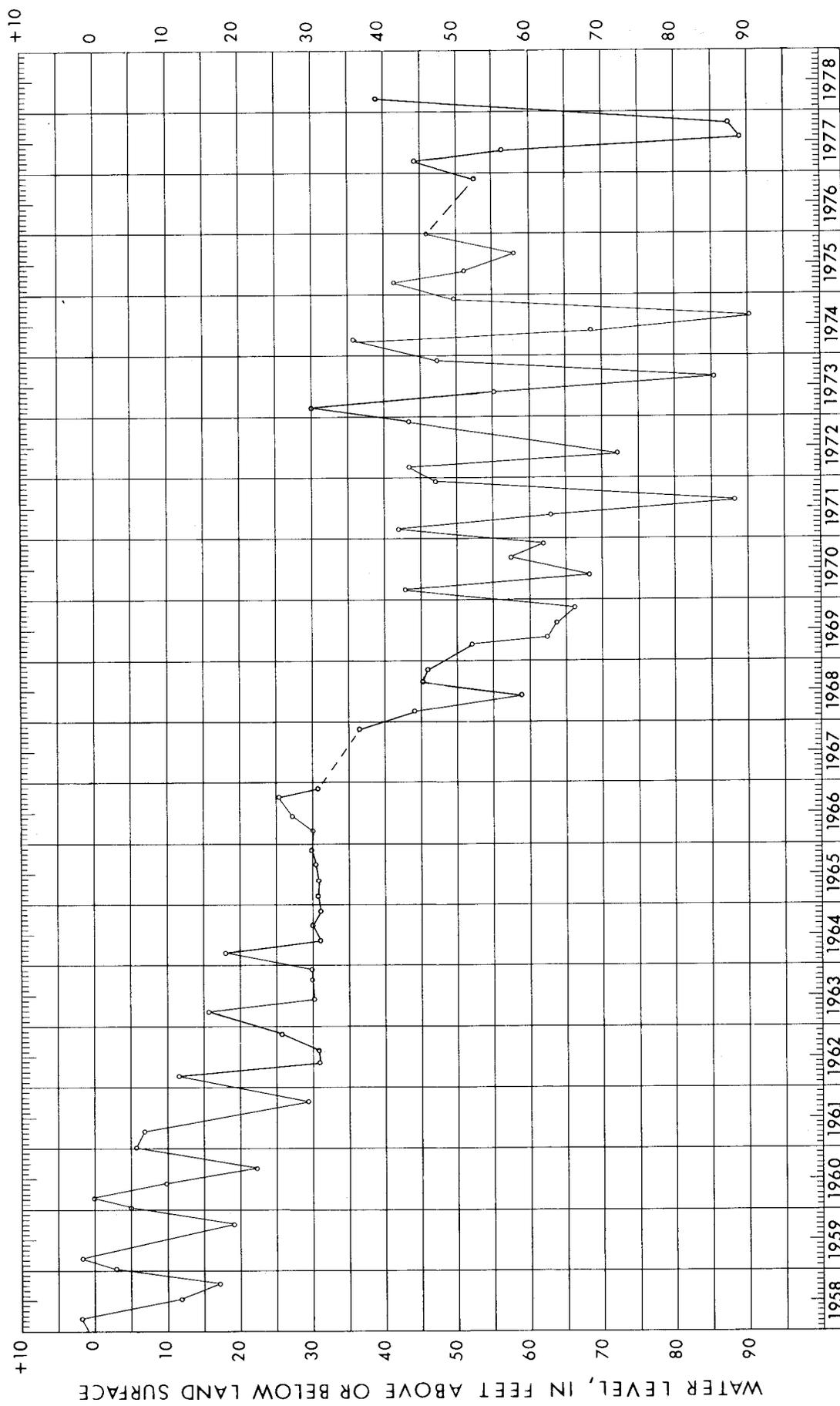


Figure 10.--Water - level changes in well 212 S21 E61 22cccl.

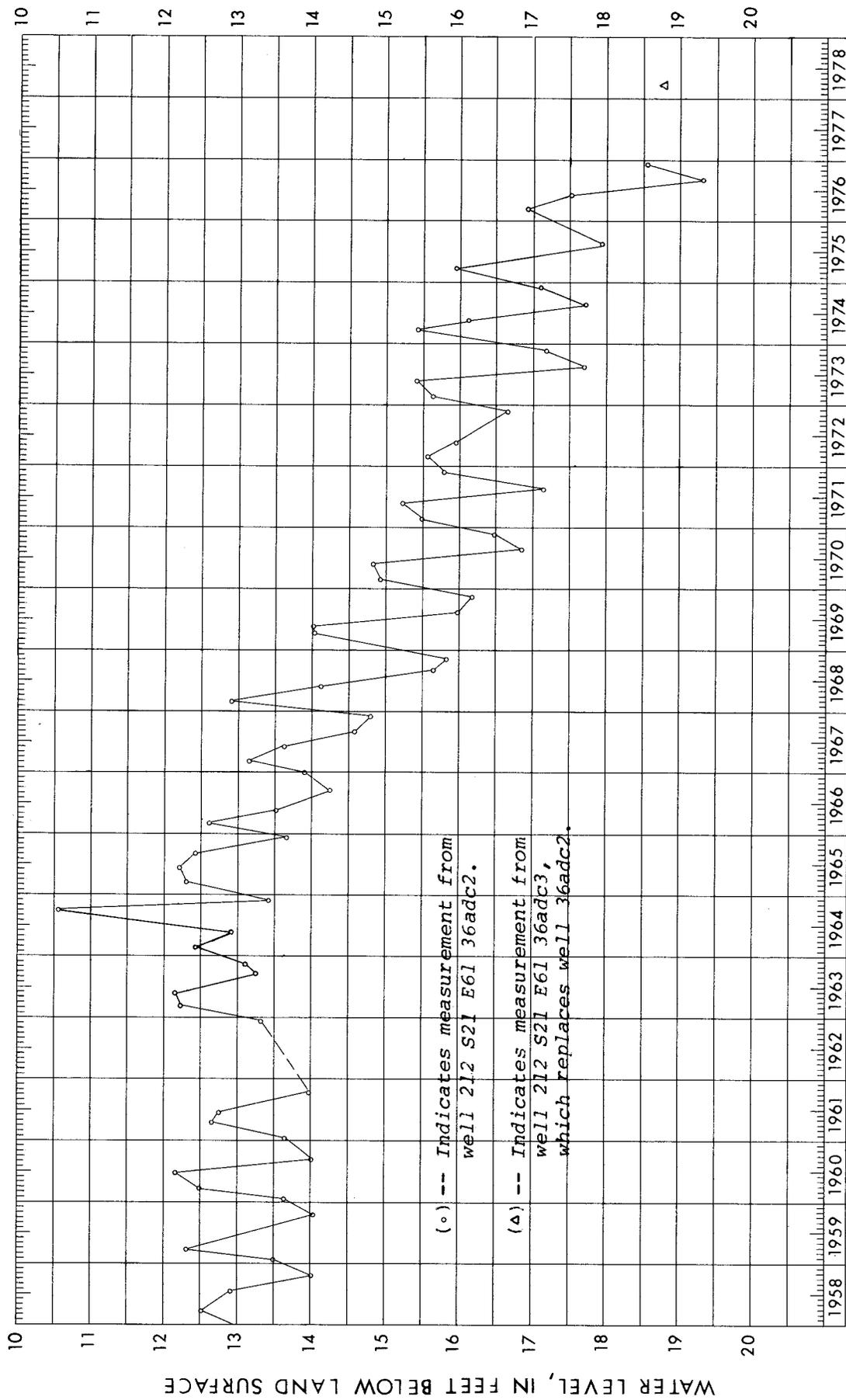


Figure 11.--Water-level changes in wells 212 S21 E61 36adc2 and 36adc3.

In this report, wells that penetrate 100 ft or less of saturated valley fill are considered to indicate conditions in the near-surface reservoir. Maps of the near-surface reservoir may not adequately describe water-table conditions beneath areas where lawn-irrigation water infiltrates the soil and percolates down to a shallow water table, or where a large head difference between zones is caused by pumping.

Hydrographs of seven selected observation wells are also included to show the rate of water-level change during the period 1958-78 (figs. 5-11).

NUMBERING SYSTEM FOR WELLS

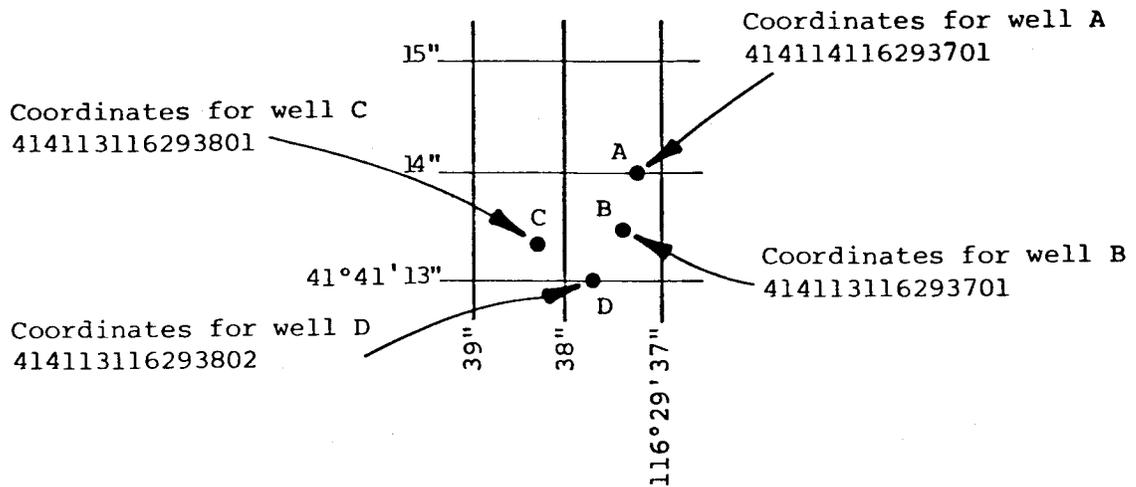
Well Numbers

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 five 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, preceded by an E, is the range east of the meridian. The fourth unit consists of the section number. Quarter sections are designated in the fifth segment counterclockwise "a" through "d", beginning with "a" for the northeast quarter section. Where field maps are sufficiently accurate, additional letters "a" through "d" are also assigned in counterclockwise sequence to further subdivide the quarter sections into 40- or 10-acre tracts. The letters are followed by a number indicating the order in which the well was recorded in that particular tract. For example, well 212 S19 E60 4dabl is in Las Vegas Valley (hydrographic area 212). It is the first well recorded in the NW 1/4 of the NE 1/4 of the SE 1/4 of section 4, Township 19 South, Range 60 East, Mount Diablo base line and meridian.

Because of limitation of space, wells are identified on plates by quarter-section letters and sequence numbers only.

Site Identification

The well site identification numbering system of the U.S. Geological Survey is based on the grid system of latitude and longitude. The system provides the geographic location of the well site and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude, the next 7 digits denote degrees, minutes, and seconds of longitude, and the last 2 digits (assigned sequentially) identify the wells or other sites within a 1-second grid. See diagram below.



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- Rush, F. E., 1968, Index of hydrographic areas in Nevada: Nevada Division of Water Resources Information Series Report 6, 38 p.



Base from U.S. Geological Survey
1:24,000 and 1:62,500 quadrangles

1 1/2 0 1 2 3 4 Miles
1 5 0 1 2 3 4 5 Kilometres
Contour interval, in feet, is variable; datum is mean sea level

PLATE 1.—WELL LOCATIONS, LAS VEGAS VALLEY, NEVADA, 1978.

Cartography by Phil Silva