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## **Water Supply at Los Alamos During 1976**

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# WATER SUPPLY AT LOS ALAMOS DURING 1976

by

William D. Purtymun

## ABSTRACT

The Los Alamos water supply for 1976 consisted of production of  $1691 \times 10^6$  gal from wells in three fields, and  $41 \times 10^6$  gal from the gallery in Water Canyon. Water-level trends are as anticipated under current production practices. The production from the well field was from 15 wells. Well LA-6 is on standby status to be used only in emergency. The loss of this well has resulted in greater production from wells LA-1B, -4, and -5 in the field. The construction of a new well in the Pajarito Field has been delayed. An exceedingly dry summer or loss of a high-yield well during a peak demand period will result in a water shortage. Rehabilitation of older wells should be continued to ensure a dependable supply and efficient use of already established booster stations and transmission lines.

LOS ALAMOS NATIONAL LABORATORY



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## I. INTRODUCTION

This report summarizes pumpage and aquifer conditions for wells in the Los Alamos, Guaje, and Pajarito well fields (Fig. 1). These wells supply most of the water used for municipal and industrial purposes in Los Alamos; the gallery in Water Canyon which supplies the balance of the water supply is also discussed. This report is a joint effort between the Los Alamos Scientific Laboratory (LASL), Group H-8, and the Utilities and Engineering Division of Zia Company to ensure a reliable and continuing historical record and to provide guidance for management of water resources and

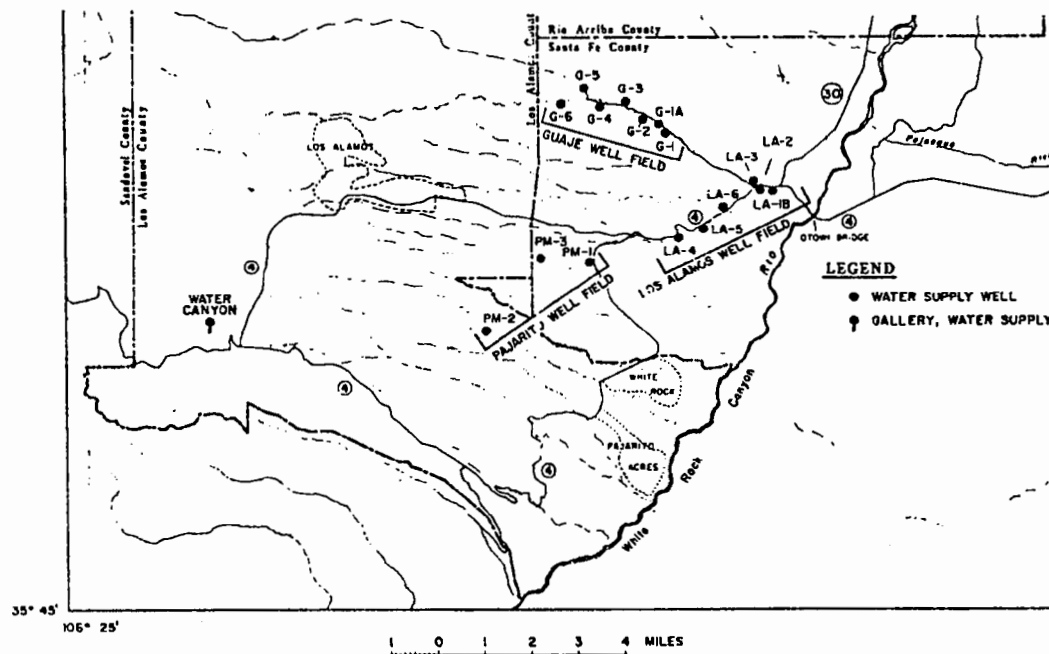


Fig. 1. Location of well fields, supply wells, and gallery water supply.

long-range planning for the water supply system. One summary report and five annual reports have been issued as the results of these studies.<sup>1,6</sup> A seventh report extrapolates water-level trends in the well fields to 1983 under current production.<sup>7</sup>

The Utilities and Engineering Division of Zia Company, the Energy Research and Development Administration (ERDA) support contractor at Los Alamos, maintains and operates the water supply system. Water is pumped from the wells, through transmission lines, and lifted by booster pumps into reservoirs for storage and distribution to the community and Laboratory areas (Fig. 1). Water from the gallery flows by gravity through a microfilter station and is pumped into one of the system's reservoirs for distribution. The Utilities and Engineering Division maintains monthly records on hours of operation. Monthly average nonpumping and pumping water levels are computed from air-line recorders on each well. These data provide input for calculating pumping rates, drawdown (difference between nonpumping and pumping water levels), specific capacity

(pump rate per unit drawdown), and other well-field statistics that are included in the report.

Hydrographs have been prepared for 1 observation well, the 16 supply wells in 3 well fields, and the gallery in Water Canyon. The hydrographs for the wells show annual average nonpumping and pumping water levels, specific capacity, and annual pumpage for the years the wells have been in production. The hydrograph for the gallery presents the annual production and the average annual discharge rate. The Appendix contains basic pumping and production statistics for the supply wells, on an annual basis, for the period of record.

## II. WELL-FIELD CHARACTERISTICS

The pumpage from the three well fields increased by  $155 \times 10^6$  gal, from  $1536 \times 10^6$  gal in 1975 to  $1691 \times 10^6$  gal in 1976 (Table I). Pumpage has generally increased since the first wells went

TABLE I  
PRODUCTION FROM WELLS AND GALLERY 1947-1976  
( $\times 10^6$  GAL.)

Year	Los Alamos Field	Guaje Field	Pajarito Field	Well Field Total	Water Canyon Gallery
1947	147	0	0	147	84
1948	264	0	0	264	97
1949	302	0	0	302	92
1950	547	3	0	550	54
1951	702	68	0	770	39
1952	448	350	0	798	48
1953	444	372	0	816	39
1954	380	374	0	754	40
1955	407	375	0	782	33
1956	437	506	0	943	23
1957	350	378	0	728	40
1958	372	395	0	767	60
1959	391	478	0	869	No Record
1960	530	533	0	1063	48
1961	546	624	0	1170	54
1962	577	597	0	1174	67
1963	539	654	0	1193	51
1964	627	665	0	1292	45
1965	447	571	99	1117	72
1966	450	613	127	1190	82
1967	373	464	481	1318	56
1968	345	474	584	1403	65
1969	331	435	569	1335	80
1970	360	423	595	1378	65
1971	412	484	657	1553	37
1972	380	467	662	1509	40
1973	406	475	685	1566	49
1974	369	453	802	1624	35
1975	356	431	749	1536	42
1976	343	531	817	1691	41
Total	12,582	12,193	6,827	31,602	1,578

into production in 1947 (Fig. 2). The projected increase in pumpage from 1974 to 1979 is  $128 \times 10^6$  gal/yr (393 ac-ft/yr).<sup>8</sup> The pumpage in 1976 was highest on record, but falls short of projected increase in pumpage for 1976 by about  $300 \times 10^6$  gal. The annual pumpage will continue to increase with the continued growth of the Laboratory and community.

The water levels in the well fluctuate in response to the amount of pumpage. The heaviest demand for water in 1976 occurred in June, July, and August, while January, February, and December were months of least pumpage. The average pumping rate for periods of production during the year was 8511 gpm. The annual average pumping rate indicates pumping conditions of the well, and it should not be construed that water can be delivered continuously at this rate.

Pumpage during the peak demand period June 11 through July 12 was  $299.4 \times 10^6$  gal (Fig. 3). The daily pumpage exceeded  $10 \times 10^6$  gal for 14 days of the 32-day period. The pumping rate of the three fields decreased to 8250 gpm as water levels declined. Operating all wells for a 24-hr period would yield about  $11.9 \times 10^6$  gal of pumpage. The daily pumpage at times was less than the demand during the period as water was being used from reservoir storage. The wells were operated for an average of 80% of the time during the peak demand period compared to 66% of the time for the 10 days preceding the period and 41% of the time the 10 days after the conclusion of the period.

The total production from the three well fields since 1947 has been  $31\,602 \times 10^6$  gal (Table I). The annual production, percent of pumpage by field, and percent of total pumpage of individual wells for 1975 and 1976 are given in Table II. The average annual pumping rates for individual wells for the period 1972 through 1976 is shown in Table III. Production and well characteristics for 1976 are presented in Table IV.

#### A. Los Alamos Well Field

The Los Alamos well field is composed of six supply wells and one observation well. Production in 1976 was from five supply wells--the sixth is on standby status for emergency use only. The

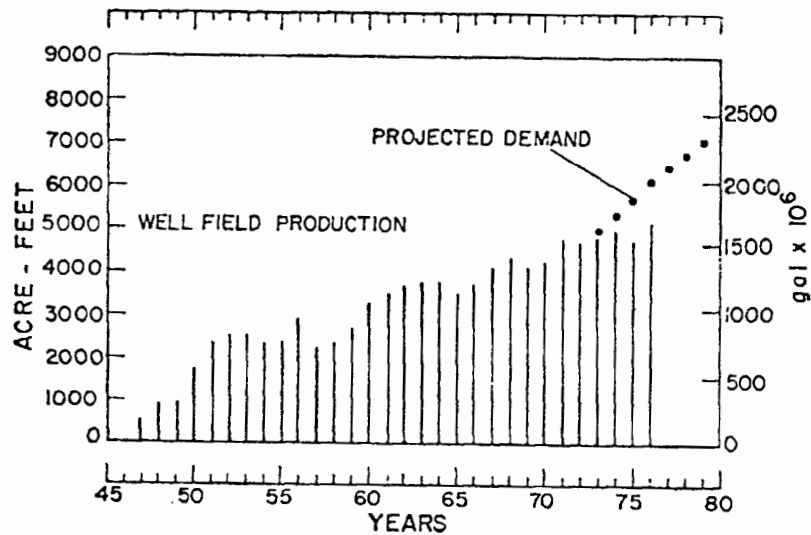


Fig. 2. Well field production 1947-76 and projected demand 1973-79.

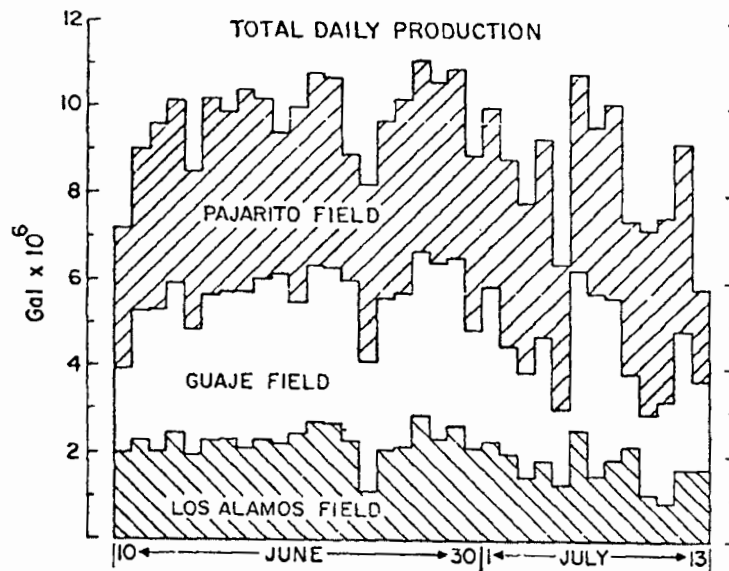


Fig. 3. Peak demand period June 11 through June 12 showing daily well production and total daily production.

TABLE II  
PRODUCTION AND PERCENT OF PRODUCTION BY WELL,  
FIELDS, AND GALLERY 1975 AND 1976

	Production (X 10 <sup>6</sup> GAL)		Percent by Field		Percent of Well Field Total	
	1975	1976	1975	1976	1975	1976
<u>Los Alamos Field</u>						
LA-1	0	0	0	0	0	0
LA-1B	75	80	21	23	5	5
LA-2	40	40	11	12	3	2
LA-3	43	42	12	12	3	2
LA-4	82	98	23	29	5	6
LA-5	64	78	18	23	4	5
LA-6	52	5	15	1	3	<1
Sub Total	356	343	100	100	23	21
<u>Guaje Field</u>						
G-1	56	65	13	12	4	4
G-1A	85	92	20	18	6	5
G-2	74	81	17	15	5	5
G-3	43	82	10	15	2	5
G-4	41	58	10	11	2	3
G-5	75	95	17	18	5	6
G-6	57	58	13	11	4	3
Sub Total	431	531	100	100	28	31
<u>Pajarito Field</u>						
PM-1	95	107	13	13	6	6
PM-2	385	442	51	54	25	26
PM-3	269	268	36	33	18	16
Sub Total	749	817	100	100	49	48
<u>Water Canyon Gallery</u>						
Sub Total	42	41	-	-	-	-
Total	1578	1732	-	-	-	-



TABLE III  
AVERAGE ANNUAL PUMPING RATE OF WELLS AND DISCHARGE FROM GALLERY,  
1972-1976

		(gpm) Year				
		1972	1973	1974	1975	1976
<u>Los Alamos Field</u>						
	LA-1	0	0	0	0	0
	LA-1B	566	553	540	537	526
	LA-2	299	296	301	290	267
	LA-3	300	346	316	313	285
	LA-4	593	589	594	591	584
	LA-5	467	460	460	460	462
	LA-6	569	573	569	551	-- <sup>a</sup>
	Sub Total	2794	2817	2780	2742	2124
<u>Guaje Field</u>						
	G-1	384	375	375	377	366
	G-1A	544	531	520	519	512
	G-2	424	429	447	456	452
	G-3	299	278	273	273	463
	G-4	196	206	214	346	337
	G-5	531	541	560	549	536
	G-6	378	364	360	348	325
	Sub Total	2756	2724	2749	2868	2991
<u>Pajarito Field</u>						
	PM-1	586	460	606	615	607
	PM-2	1393	1388	1381	1383	1369
	PM-3	1309	1320	1313	1312	1410
	Sub Total	3288	3168	3300	3310	3386
Total		8838	8709	8829	8920	8511
<u>Water Canyon Gallery</u>		75	94	67	81	76

<sup>a</sup>Well on stand-by-rate ≈550 gpm.

pumpage from the field decreased  $13 \times 10^6$  gal, from  $356 \times 10^6$  in 1975 to  $343 \times 10^6$  gal in 1976. This reflects 21% of the total pumpage for the year (Table II).

Well LA-1 was retired as a supply well in 1956, due to reduced yield and a sand problem. It is now used as an observation well to monitor water-level trends in the lower part of the field. The water level at LA-1 reflects pumpage from the replacement well

LA-1B located nearby, and showed a reduced level in 1976 due to increased pumpage from well LA-1B (Fig. 4).

Pumpage from well LA-1B increased  $5 \times 10^3$  gal, to  $80 \times 10^6$  gal in 1976 (Table II). Water levels declined with the increased pumpage (Fig. 5).

Pumpage from well LA-2 remained at  $40 \times 10^6$  gal in 1976, the same as in 1975; water levels were lower in 1976 (Fig. 6).

Pumpage from well LA-3 decreased about  $1 \times 10^6$  gal, to  $42 \times 10^6$  gal in 1976; water levels were lower in 1976 (Fig. 7).

Pumpage from well LA-4 increased  $16 \times 10^3$  gal, to  $98 \times 10^6$  gal in 1976; water levels declined with the increased pumpage (Fig. 8).

Pumpage from well LA-5 increased  $14 \times 10^6$  gal, to  $78 \times 10^6$  gal in 1976; water levels were slightly lower (Fig. 9).

TABLE IV  
PRODUCTION AND WELL CHARACTERISTICS, 1976

	Hours of Operation	Production		Annual Average			Specific Capacity (gpm/ft)
		Pumpage (X 10 <sup>6</sup> Gal)	Pumping Rate (gpm)	Nonpumping (ft)	Pumping (ft)	Drawdown (ft)	
<u>Los Alamos Field</u>							
LA-1	0	0.0	0.0	69.2	0.0	0.0	0.0
LA-1B	2521	79.6	526.3	49.8	175.8	126.0	4.2
LA-2	2488	39.9	267.3	113.2	322.1	208.9	1.3
LA-3	2474	42.3	284.9	88.0	221.5	133.5	2.1
LA-4	2802	98.2	584.1	277.2	373.5	96.3	6.1
LA-5 <sup>a</sup>	2799	77.6	462.1	150.0	310.2	160.2	2.9
LA-6 <sup>a</sup>	175	5.1	485.7	95.7	—	—	—
		342.7					
<u>Guaite Field</u>							
G-1	2962	65.1	366.3	—	—	—	—
G-1A	2983	91.6	511.8	301.6	350.0	48.4	10.6
G-2	2990	81.1	452.1	344.1	388.0	43.9	10.3
G-3	2971	82.6	463.4	374.1	461.6	87.5	5.3
G-4	2859	57.8	336.9	405.7	570.8	165.1	2.0
G-5	2955	95.0	535.8	441.6	504.0	62.4	8.6
G-6	2966	57.8	324.8	583.8	662.1	78.3	4.1
		531.0					
<u>Pajarito Field</u>							
PM-1	2933	106.8	606.9	743.8	767.4	23.7	25.6
PM-2	5382	442.0	1368.8	865.6	924.2	58.6	23.4
PM-3	3171	268.3	1410.2	758.0	783.8	25.8	54.7
		817.1					
Well Fields Total		1690.8					

<sup>a</sup> Well pumped into line for test Jan. and Feb.; well now on stand-by status

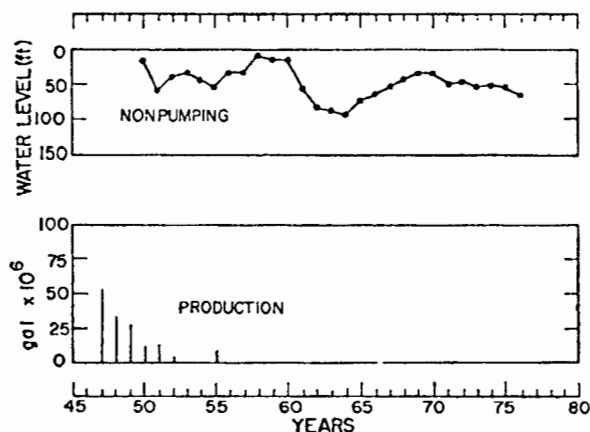


Fig. 4 Annual average non-pumping water level and annual production, Los Alamos well LA-1.

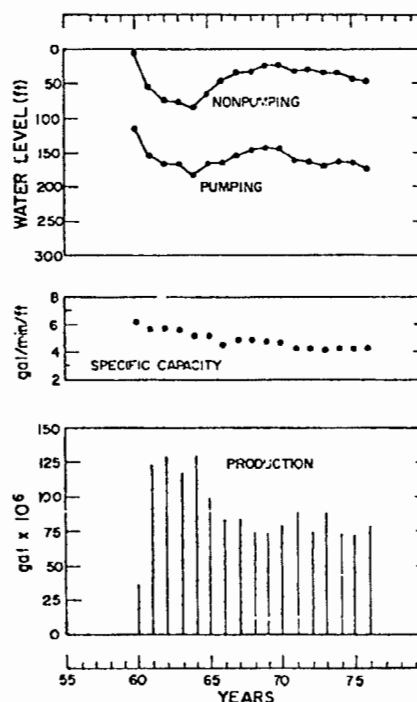


Fig. 5 Annual average non-pumping and pumping water levels, annual average specific capacity, and annual production, Los Alamos well LA-1B.

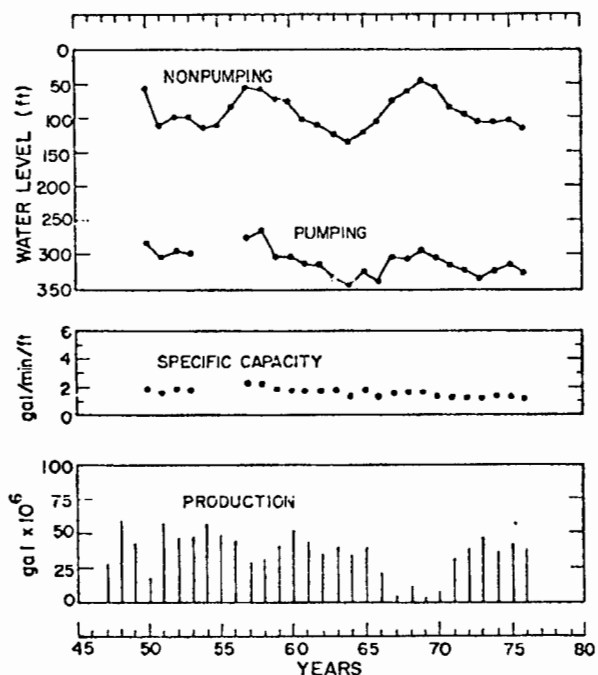


Fig. 6 Annual average nonpumping and pumping water levels, annual average specific capacity, and annual production, Los Alamos well LA-2.

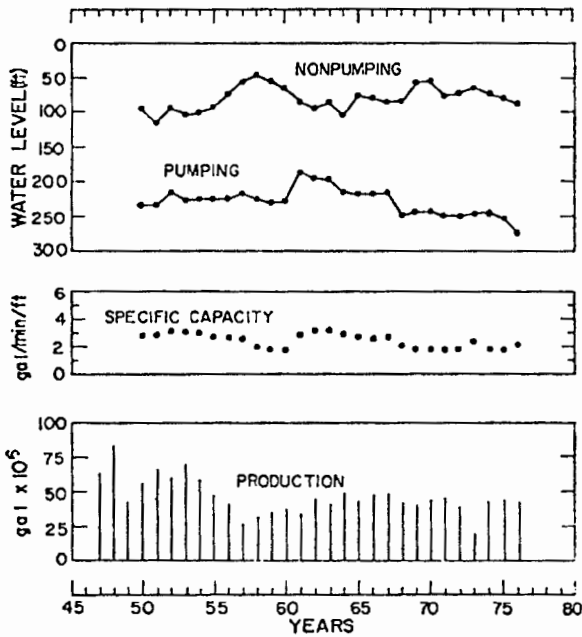


Fig. 7 Annual average nonpumping and pumping water levels, annual average specific capacity, and annual production, Los Alamos well LA-3.

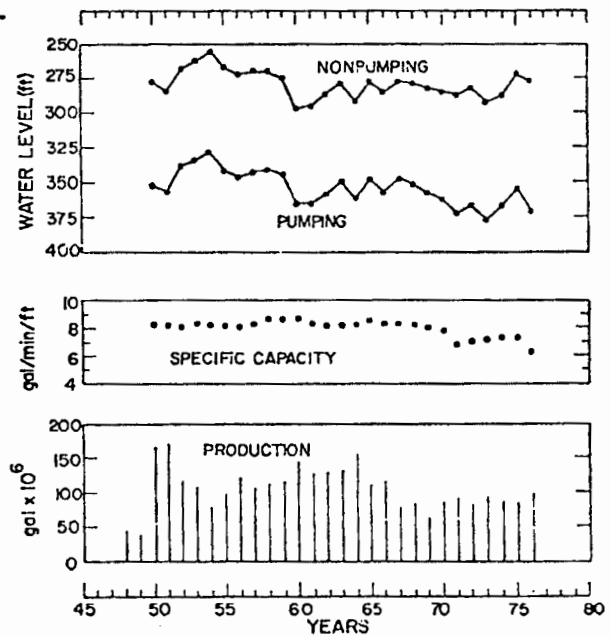


Fig. 8 Annual average nonpumping and pumping water levels, annual average specific capacity, and annual production, Los Alamos well LA-4.

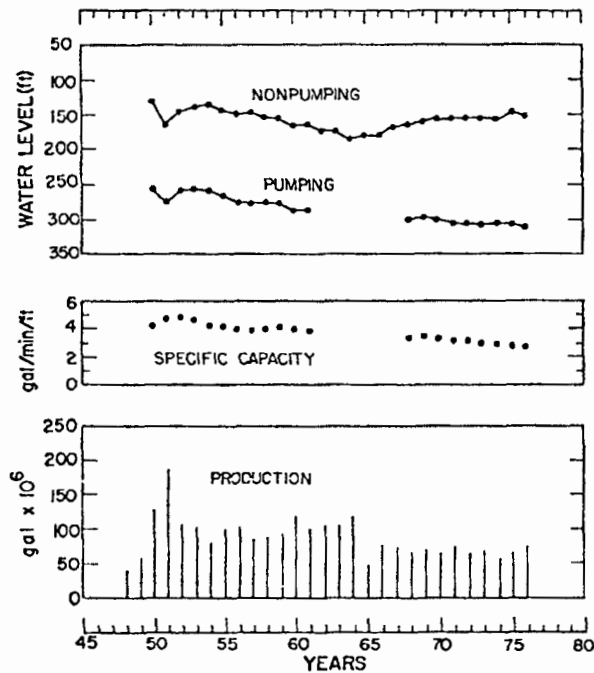


Fig. 9 Annual average nonpumping and pumping water levels, annual average specific capacity, and annual production, Los Alamos well LA-5.

Well LA-6 was placed on standby, as the arsenic concentration in the water from the well exceeds limits for municipal supply.<sup>6,9</sup> About  $5 \times 10^6$  gal were pumped from the well in January while tests were being conducted. Water levels are higher due to the reduced pumpage (Fig. 10).

The pumpage from the field declined to its lowest amount since 1970. The loss of well LA-6 has necessitated an increase of pumpage from wells LA-1B, -4, and -5. The results have been a general decline in water levels in the lower (LA-1B, -2, and -3) and upper (LA-4 and -5) parts of the field, with water levels recovering in the mid-reach (LA-6) of the field (Fig. 1). The long-term effect on water levels and pumping rates of wells LA-1B, -2, -3, -4, and -5, due to increased pumpage on these wells, can not be made at this time, as a longer period of record is required.

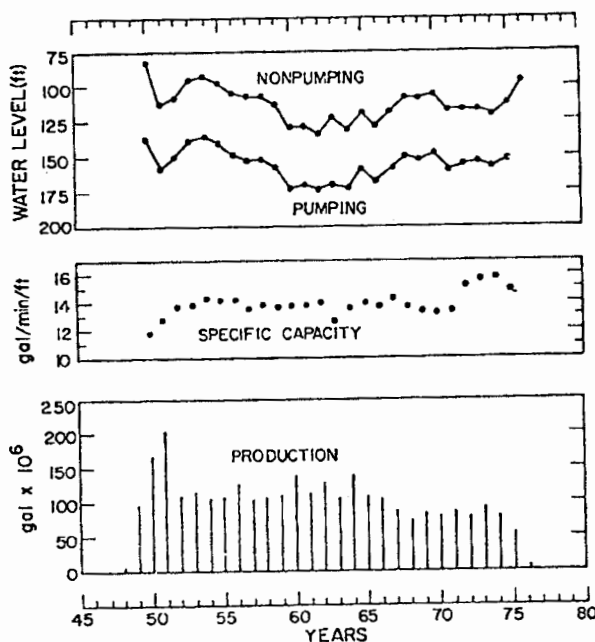


Fig. 10 Annual average nonpumping and pumping water levels, annual average specific capacity, and annual production, Los Alamos well LA-6.

The average annual pumping rate from the field was 2124 gpm in 1976 (Table III). There was a slight decline in pumping rates from the individual wells in 1976, when compared to 1975, as the result of lower water levels. The total pumping rate of wells in the field (2124 gpm) was less than the capacity of the system (Booster 4, 2300 gpm) for the first time since the field was in field operation in 1950. The specific capacity of the five producing wells remained about the same, with only well LA-4 showing a slight decline.

#### B. Guaje Well Field

The Guaje well field is composed of seven wells (Fig. 1). The pumpage from the field increased  $100 \times 10^6$  gal, from  $431 \times 10^6$  in 1975 to  $531 \times 10^6$  gal in 1976 (Table I). The field produced 31% of the total pumpage (Table II).

The pumpage from well G-1 increased  $9 \times 10^6$  gal, to  $65 \times 10^6$  gal in 1976. The air line became inoperable in September 1975, thus water level and specific capacity figures are not available. The water levels (nonpumping and pumping) and specific capacity have declined since 1964, with declining production indicating deterioration of the well (Fig. 11). Rehabilitation to improve the yield from the well is to be scheduled as funds become available in late 1977.

Pumpage from well G-1A increased  $7 \times 10^6$  gal, to  $92 \times 10^6$  gal in 1976; water levels were slightly higher (Fig. 12). Rehabilitation of the well in 1973 has improved the production capabilities of the well.

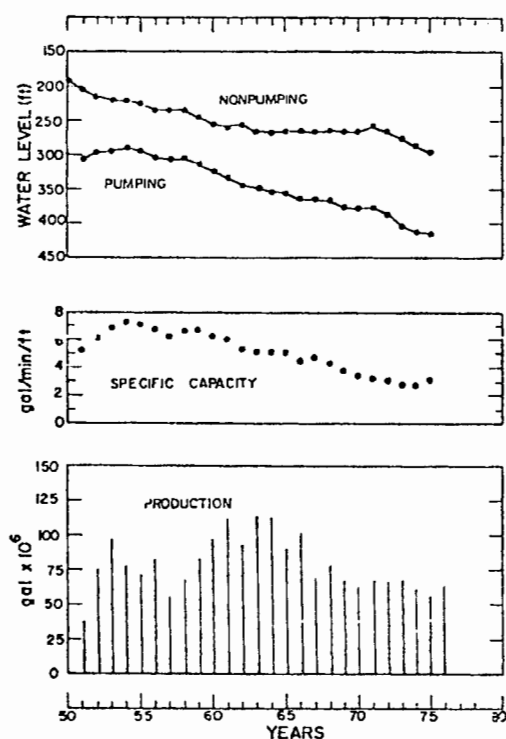


Fig. 11 Annual average non-pumping and pumping water levels, annual average specific capacity, and annual production, Guaje Well G-1.

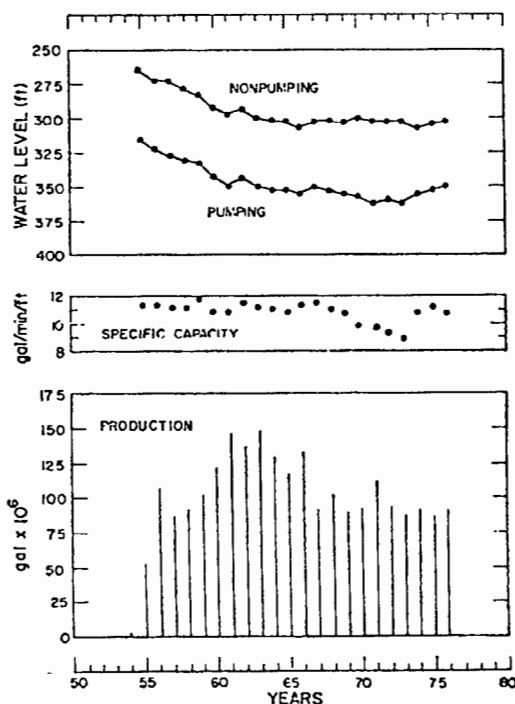


Fig 12 Annual average non-pumping and pumping water levels, annual average specific capacity, and annual production, Guaje Well G-1A.

Pumpage from well G-2 increased  $39 \times 10^6$  gal, to  $81 \times 10^6$  gal in 1976; water levels declined slightly (Fig. 13).

Pumpage from well G-3 increased  $39 \times 10^6$  gal in 1976; water levels declined with the increased pumpage (Fig. 14). Rehabilitation of the well and pump in January resulted in an increased pumping rate (273 to 463 gpm) and an increase in specific capacity (3.1 to 5.3 gpm/ft). Operations of the well are satisfactory.

Pumpage from well G-4 increased  $17 \times 10^6$  gal, to  $58 \times 10^6$  gal in 1976; water levels were lower in 1976 with the increased production (Fig. 15). The specific capacity decreased slightly from 2.2 to 2.0 gpm/ft in 1976. Pumpage from the well has exceeded  $50 \times 10^6$  gal for the first time since 1954.

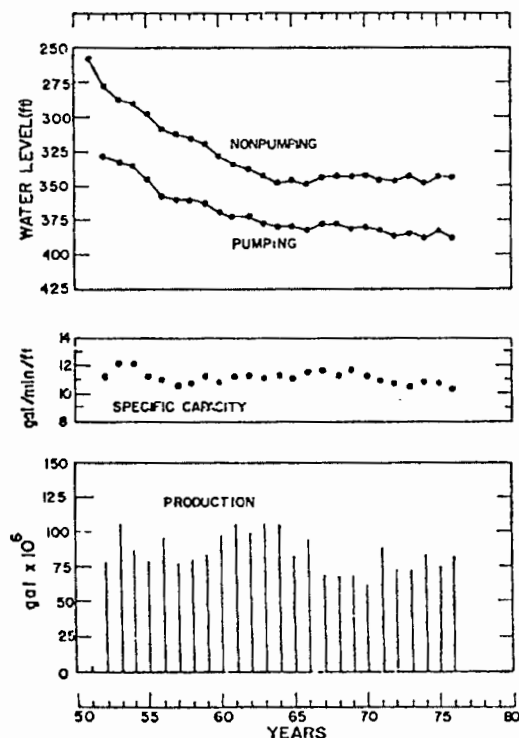


Fig. 13 Annual average non-pumping and pumping water levels, annual average specific capacity, and annual production, Guaje well G-2.

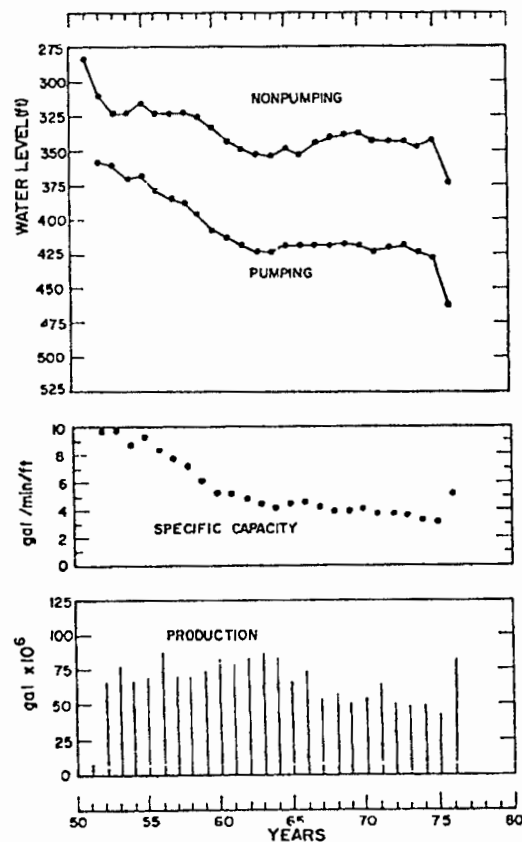


Fig. 14 Annual average non-pumping and pumping water levels, annual average specific capacity, and annual production, Guaje well G-3.



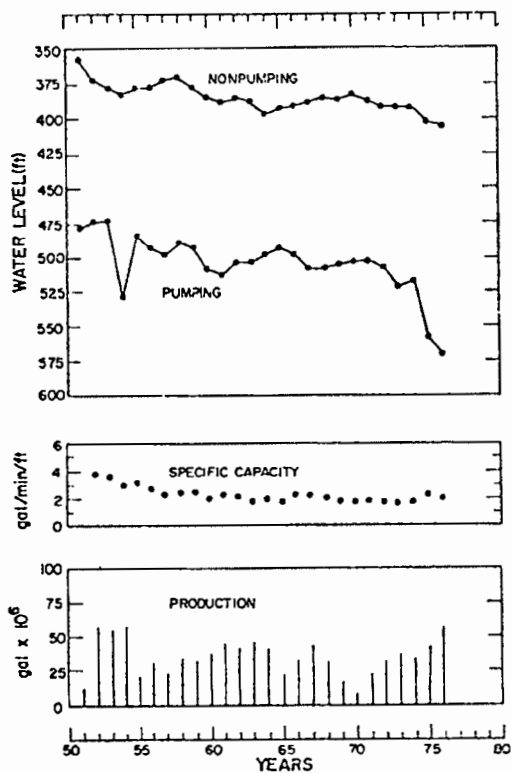


Fig. 15 Annual average non-pumping and pumping water levels, annual average specific capacity, and annual production, Guaje well G-4.

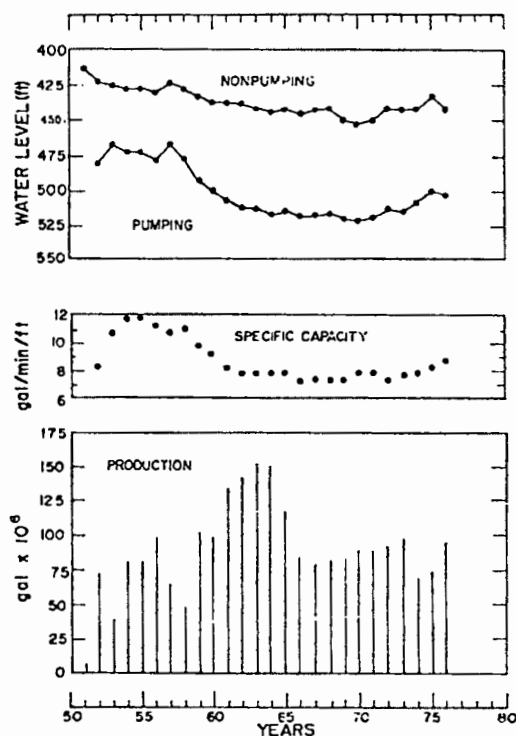


Fig. 16 Annual average non-pumping and pumping water levels, annual average specific capacity, and annual production, Guaje well G-5.

Pumpage from well G-5 increased  $20 \times 10^6$  gal, to  $95 \times 10^6$  gal in 1976; water levels declined in 1976 (Fig. 16).

Pumpage from well G-6 increased  $1 \times 10^6$  gal, to  $58 \times 10^6$  gal in 1976; water levels were lower (Fig. 17).

Pumpage from the field increased in 1976, which resulted in a slight decline in water levels. There was no significant change in specific capacities of the wells, with the exception of well G-3 as previously noted. The average pumping rate for the field increased 122 gpm, from 2868 gpm in 1975 to 2991 gpm in 1976, due to rehabilitation of wells G-3 and -4 (Table III). There was no significant change in pumping rates from the remaining wells.

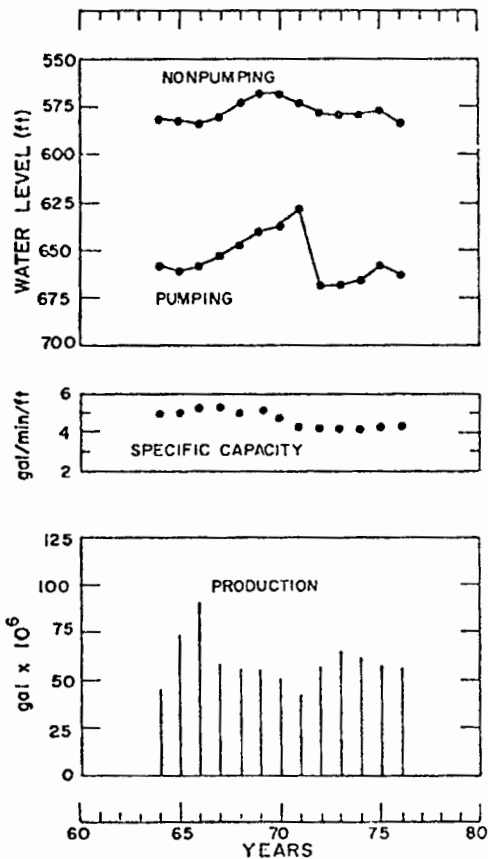


Fig. 17 Annual average nonpumping and pumping water levels, annual average specific capacity, and annual production, Guaje well G-6.

### C. Pajarito Well Field

The Pajarito well field is composed of three wells (Fig. 1). Pumpage from the wells increased  $68 \times 10^6$  gal from  $749 \times 10^6$  gal in 1975 to  $817 \times 10^6$  gal in 1976. The field produced 48% of the total pumpage from the three well fields.

Pumpage from well PM-1 increased  $12 \times 10^6$  gal, to  $107 \times 10^6$  gal; water levels in 1976 declined from the previous year (Fig. 18).

Pumpage from well PM-2 increased  $57 \times 10^3$  gal, to  $442 \times 10^6$  gal in 1976; water levels declined with the increased pumpage (Fig. 19).

Pumpage from well PM-3 decreased  $1 \times 10^6$  gal, to  $268 \times 10^3$  gal; water levels declined (Fig. 20).

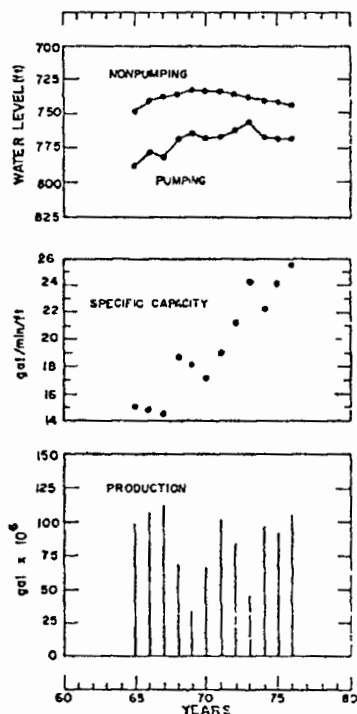


Fig. 18 Annual average nonpumping and pumping water levels, annual average specific capacity, and annual production, Pajarito well PM-1.

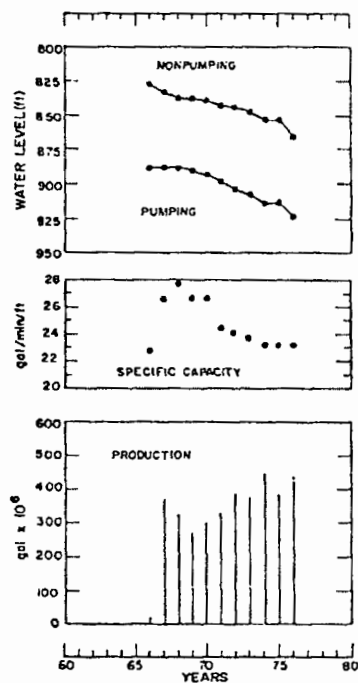


Fig. 19 Annual average nonpumping and pumping water levels, annual average specific capacity, and annual production, Pajarito well PM-2.

The total pumpage from the field increased in 1976. The field furnishes the water supply for White Rock. There has been a gradual decline in both pumping and nonpumping water levels since the wells first went into production. The average annual pumping rate increased about 76 gpm, to 3386 gpm in 1976. There was no significant change in specific capacities of the wells.

### III. WATER CANYON SUPPLY

Production from the gallery in Water Canyon decreased by  $2 \times 10^6$  gal; from  $43 \times 10^6$  gal in 1975 to  $41 \times 10^6$  gal in 1976 (Table V). The gallery has been an excellent source of water, producing

TABLE V  
PRODUCTION FROM WATER CANYON GALLERY  
(10<sup>6</sup> GAL)

<u>Month</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
January	3.2	3.3	4.3	3.0	2.9	3.0
February	3.0	2.6	2.8	2.6	2.7	2.8
March	3.7	2.7	1.9	3.3	0.5	3.4
April	3.6	4.1	0.9	4.1	0.0	3.4
May	3.3	3.7	4.6	3.9	2.9	3.8
June	3.4	3.1	8.9	2.7	9.0	3.6
July	2.9	3.1	8.0	0.8	7.2	2.8
August	3.1	3.1	5.2	2.8	3.6	4.6
September	2.8	3.2	3.4	2.7	3.1	4.3
October	2.6	3.5	3.8	3.0	4.0	2.8
November	2.5	4.0	2.3	2.9	2.9	3.1
December	2.7	3.2	3.1	3.3	3.7	3.2
Total	36.7	39.6	49.2	35.1	42.5	40.8

1578 x 10<sup>6</sup> gal for the period of record from 1947 through 1976 (Table I). The average annual discharge has ranged from 67 to 94 gpm since 1971 (Fig. 21). Renovation of the gallery is planned for 1977.

#### IV. SUMMARY AND RECOMMENDATION

The production from the well fields increased 155 x 10<sup>6</sup> gal from 1975 to 1976. The water levels in the Los Alamos, Guaje, and Pajarito fields were as expected from trends established over the period of record.

Field production from the Los Alamos field declined; however, the loss of well LA-6 has resulted in greater production from wells LA-1B, -4, and -5 which meets the demand. However, increased pumpage from these wells has caused a water level decline in the upper and lower parts of the field. Water levels in the mid-reach of the field (LA-6) have shown a recovery. These trends will be closely watched to monitor hydrologic effects on the remaining producing supply wells in the field.

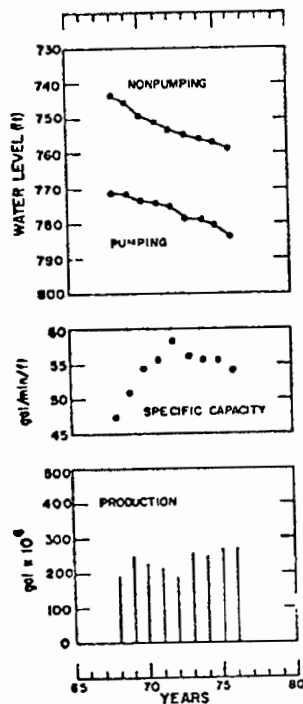


Fig. 20 Annual average nonpumping and pumping water levels, annual average specific capacity, and annual production, Pajarito well PM-3.

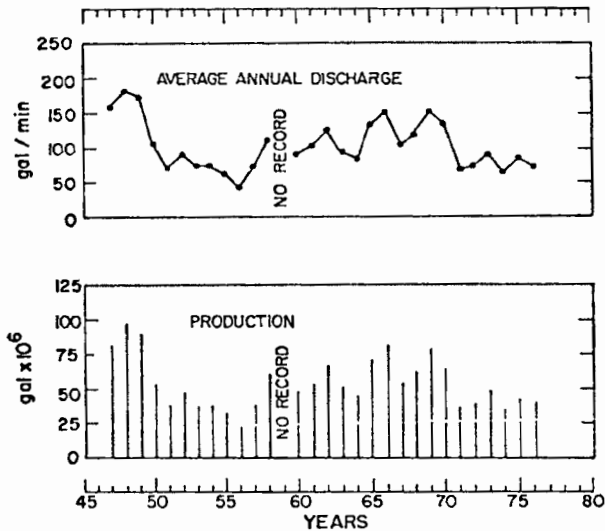


Fig. 21 Annual average discharge and annual production from the gallery in Water Canyon.

The new well scheduled for construction in the Pajarito Field was delayed. Until the well is operational, an exceedingly dry summer or outage of a high yield well during the peak demand period will result in a shortage of water. Pumpage during peak demand periods in 1976 was at times less than demand as water was being used from storage. It is anticipated that the pumpage will increase with continued expansion of Laboratory facilities and with the projected increase in population and housing in the County. Consequently, the water supply for the Laboratory and County is entering a critical period. Under the present plans, placement of a new well into the system is at least 3 years away.

Well-field operations in 1976 were very satisfactory. The rehabilitation of wells by removing sediment accumulation, additional development, and repair of casing and pumps should be continued. Four producing wells in the Los Alamos field were completed prior to 1950; six wells in the Guaje field were completed prior to 1953. Rehabilitation of these older wells is necessary to maintain the already established water distribution system.

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# APPENDIX

## SUMMARY OF LOS ALAMOS MUNICIPAL WELL-FIELD CHARACTERISTICS

### Aquifer Conditions at Supply Wells

#### Well LA-1

YEAR	PUMP TIME	PUMP- AGE MILLN	PUMP RATE	WATER LEVELS		DRAW DOWN	SPEC CAP
	HR	GAL	GPM	NON- PUMP FT	PUMP FT	FT	GPM/ FT
1947	3468	54.0	252.4	5.0	0.0	0.0	0.0
1948	2988	34.7	193.4	5.0	0.0	0.0	0.0
1949	1361	26.7	327.3	5.0	0.0	0.0	0.0
1950	563	10.5	311.9	18.9	0.0	0.0	0.0
1951	1215	14.6	201.3	59.1	0.0	0.0	0.0
1952	286	3.4	201.0	48.0	0.0	0.0	0.0
1953	0	0.0	2.0	35.7	0.0	0.0	0.0
1954	0	0.0	2.0	42.0	0.0	0.0	0.0
1955	690	9.7	234.4	51.3	0.0	0.0	0.0
1956	39	0.0	2.0	37.5	0.0	0.0	0.0
1957	0	0.0	2.0	37.2	0.0	0.0	0.0
1958	0	0.0	2.0	18.0	0.0	0.0	0.0
1959	0	0.0	2.0	13.3	0.0	0.0	0.0
1960	0	0.0	2.0	17.2	0.0	0.0	0.0
1961	0	0.0	2.0	58.7	0.0	0.0	0.0
1962	0	0.0	2.0	87.9	0.0	0.0	0.0
1963	0	0.0	2.0	92.4	0.0	0.0	0.0
1964	0	0.0	2.0	95.4	0.0	0.0	0.0
1965	0	0.0	2.0	78.3	0.0	0.0	0.0
1966	0	0.0	2.0	62.7	0.0	0.0	0.0
1967	0	0.0	2.0	52.3	0.0	0.0	0.0
1968	0	0.0	2.0	42.0	0.0	0.0	0.0
1969	0	0.0	2.0	37.7	0.0	0.0	0.0
1970	0	0.0	2.0	37.1	0.0	0.0	0.0
1971	0	0.0	2.0	58.7	0.0	0.0	0.0
1972	0	0.0	2.0	49.4	0.0	0.0	0.0
1973	0	0.0	2.0	55.0	0.0	0.0	0.0
1974	0	0.0	2.0	52.7	0.0	0.0	0.0
1975	0	0.0	2.0	57.5	0.0	0.0	0.0

#### Well LA-1B

YEAR	PUMP TIME	PUMP- AGE MILLN	PUMP RATE	WATER LEVELS		DRAW DOWN	SPEC CAP
	HR	GAL	GPM	NON- PUMP FT	PUMP FT	FT	GPM/ FT
1960	415	36.3	644.7	6.5	111.5	105.0	6.1
1961	3727	124.7	557.4	53.8	154.2	100.3	5.6
1962	3436	129.1	544.8	71.9	168.7	96.7	5.7
1963	3649	117.4	534.7	74.3	169.6	95.2	5.6
1964	4174	130.3	528.3	81.3	182.8	101.5	5.1
1965	3007	97.4	542.5	63.3	169.5	106.3	5.1
1966	2589	82.4	548.4	49.9	169.2	119.3	4.5
1967	2519	84.4	562.7	39.2	153.2	114.0	4.9
1968	2183	74.0	564.2	31.8	146.5	114.7	4.9
1969	2244	75.7	562.2	21.9	142.3	120.4	4.7
1970	2369	79.7	566.4	22.4	143.2	120.8	4.6
1971	2633	89.1	564.3	31.2	141.7	130.5	4.3
1972	2215	75.3	564.2	38.7	162.8	132.2	4.3
1973	2628	87.2	553.0	37.1	170.4	133.3	4.1
1974	2282	73.4	539.7	35.2	161.3	126.2	4.3
1975	2308	74.4	537.4	42.4	168.0	125.6	4.3

# Aquifer Conditions at Supply Wells

## Well LA-2

YEAR	PUMP TIME HR	PUMP- AGE MILLN GAL	PUMP RATE GPM	WATER LEVELS		DRAW DOWN FT	SPEC CAP GPM/ FT
				NON- PUMP FT	PUMP FT		
1947	963	27.6	297.4	0.0	0.0	0.0	0.0
1948	3659	59.3	270.1	0.0	0.0	0.0	0.0
1949	1654	41.8	420.9	0.0	0.0	0.0	0.0
1950	614	15.6	423.6	58.7	285.4	226.8	1.9
1951	2415	57.7	294.4	111.2	304.7	193.5	1.5
1952	1980	46.3	379.8	100.8	299.6	198.8	1.9
1953	2201	47.2	357.3	100.4	300.7	200.3	1.8
1954	2601	56.8	364.1	116.0	0.0	0.0	0.0
1955	2223	49.4	371.2	110.3	0.0	0.0	0.0
1956	1805	44.2	407.9	87.8	0.0	0.0	0.0
1957	1066	29.6	463.0	53.5	277.0	223.5	2.1
1958	1156	31.1	445.1	59.6	269.7	210.1	2.1
1959	1594	40.7	424.6	71.3	303.0	231.7	1.8
1960	2169	51.6	394.6	76.4	304.7	228.2	1.7
1961	2149	41.4	344.3	101.2	312.9	211.7	1.6
1962	1823	35.7	326.3	110.7	313.8	203.1	1.6
1963	1999	40.7	339.7	124.9	332.2	205.3	1.7
1964	1924	34.2	294.3	137.3	346.7	209.5	1.4
1965	1911	39.8	344.7	121.2	329.8	208.7	1.7
1966	1070	21.4	332.7	108.4	340.5	232.1	1.4
1967	238	4.9	344.4	77.6	303.7	226.1	1.5
1968	502	11.3	374.8	67.8	305.0	241.2	1.6
1969	155	3.8	407.2	49.8	297.4	247.6	1.6
1970	341	7.2	351.9	50.3	309.8	250.5	1.4
1971	1787	31.8	294.2	87.5	317.6	230.1	1.3
1972	2189	39.3	299.0	96.4	322.4	226.0	1.3
1973	2625	46.7	294.5	104.4	333.7	227.3	1.3
1974	2033	36.8	301.4	100.2	324.6	215.3	1.4
1975	2310	40.2	289.9	102.7	319.7	217.0	1.3

## Well LA-3

YEAR	PUMP TIME HR	PUMP- AGE MILLN GAL	PUMP RATE GPM	WATER LEVELS		DRAW DOWN FT	SPEC CAP GPM/ FT
				NON- PUMP FT	PUMP FT		
1947	1476	64.9	371.2	0.0	0.0	0.0	0.0
1948	3647	82.5	377.1	0.0	0.0	0.0	0.0
1949	1505	41.7	461.7	0.0	0.0	0.0	0.0
1950	2793	57.8	344.6	97.0	231.1	134.1	2.6
1951	3554	66.9	313.5	116.2	232.6	116.4	2.7
1952	2514	58.0	324.2	94.1	218.1	124.0	3.1
1953	3104	69.7	374.1	102.7	229.1	126.4	3.0
1954	2595	57.3	368.1	100.7	224.7	123.9	3.0
1955	2195	48.7	369.4	91.2	225.7	134.6	2.7
1956	1849	42.1	379.7	71.8	221.6	147.8	2.6
1957	1080	26.1	402.4	58.7	218.6	162.9	2.5
1958	1612	33.6	347.7	49.4	224.8	175.4	2.0
1959	1821	35.0	314.9	54.1	230.9	176.8	1.8
1960	2174	38.4	294.4	67.6	229.5	161.9	1.8
1961	1939	34.7	298.4	85.0	189.2	104.2	2.9
1962	2361	45.4	320.9	92.6	192.3	99.7	3.2
1963	7128	42.5	332.5	99.8	197.0	107.2	3.1
1964	2574	50.4	326.4	104.5	217.4	112.9	2.5
1965	1961	43.4	368.8	79.2	219.8	140.6	2.6
1966	2230	46.1	347.9	84.9	219.3	138.4	2.5
1967	2274	47.4	347.4	84.0	217.7	131.7	2.6
1968	2127	42.7	334.9	81.6	250.6	169.0	2.0
1969	2072	40.1	322.2	58.3	246.2	187.8	1.7
1970	2303	44.0	318.7	55.0	241.1	186.1	1.7
1971	2556	45.4	294.1	76.8	250.4	173.6	1.7
1972	2205	39.7	299.8	72.7	250.6	177.8	1.7
1973	977	20.3	344.4	64.6	248.0	183.4	1.9
1974	2291	43.5	316.4	72.8	244.5	171.7	1.8
1975	2306	43.3	313.0	79.9	252.7	172.7	1.8



# Aquifer Conditions at Supply Wells

## Well LA-4

YEAR	PUMP TIME	PUMP- AGE MILLN GAL	PUMP RATE GPM	WATER LEVELS		DRAW DOWN FT	SPEC CAP GPM/ FT
	HR			NON- PUMP FT	PUMP FT		
1948	1570	42.7	453.4	0.0	0.0	0.0	0.0
1949	940	37.5	664.7	0.0	0.0	0.0	0.0
1950	4550	164.4	633.0	277.5	352.7	75.2	8.4
1951	4909	173.6	589.4	285.0	356.7	71.7	8.2
1952	3429	119.6	581.2	267.3	339.2	71.9	8.1
1953	3034	109.1	599.4	263.7	335.4	71.7	8.4
1954	2133	70.2	611.0	255.0	328.8	73.8	8.3
1955	2647	94.5	594.9	260.3	341.5	73.2	8.1
1956	3402	120.2	589.0	272.8	346.3	73.5	8.0
1957	2844	105.4	617.5	276.0	344.7	74.7	8.3
1958	2973	110.3	618.4	270.4	342.4	72.0	8.6
1959	3084	113.5	613.4	275.0	345.9	70.9	8.6
1960	4084	145.6	544.2	294.3	365.4	69.1	8.6
1961	3657	129.7	584.2	295.5	365.2	69.7	8.4
1962	3688	129.3	584.5	286.4	358.7	72.3	8.1
1963	3718	130.5	554.9	279.8	350.8	71.0	8.2
1964	4500	155.0	574.2	291.0	351.1	70.1	8.2
1965	3110	111.4	597.1	270.1	349.4	70.3	8.5
1966	3279	115.6	587.8	285.3	356.0	70.7	8.3
1967	2127	77.1	604.5	277.5	349.9	72.5	8.3
1968	2276	81.7	598.0	279.6	351.5	71.9	8.3
1969	1694	61.8	609.1	282.0	358.0	76.0	8.0
1970	2333	83.5	596.4	285.7	363.4	77.7	7.7
1971	2519	89.0	588.4	297.0	372.6	85.6	6.9
1972	2322	82.0	542.4	282.3	366.6	84.2	7.0
1973	2616	92.4	588.5	294.2	376.6	82.3	7.1
1974	2306	82.2	593.9	286.1	356.5	80.4	7.4
1975	2319	82.3	591.4	272.0	355.0	83.0	7.1

## Well LA-5

YEAR	PUMP TIME	PUMP- AGE MILLN GAL	PUMP RATE GPM	WATER LEVELS		DRAW DOWN FT	SPEC CAP GPM/ FT
	HR			NON- PUMP FT	PUMP FT		
1948	1171	40.4	574.4	0.0	0.0	0.0	0.0
1949	1763	58.5	552.4	0.0	0.0	0.0	0.0
1950	4052	130.1	535.0	130.7	254.0	123.3	4.3
1951	6004	187.4	521.2	162.1	271.8	109.7	4.7
1952	3425	109.6	533.3	147.0	259.0	112.0	4.8
1953	3278	103.9	528.4	140.8	256.7	115.9	4.6
1954	2546	80.1	524.4	137.2	258.7	121.5	4.3
1955	3158	97.3	513.3	144.8	266.7	121.9	4.2
1956	3476	104.5	501.1	150.1	275.7	125.6	4.0
1957	2868	86.0	500.0	140.7	277.1	127.4	3.9
1958	3009	89.4	498.0	151.1	276.6	125.5	4.0
1959	3088	93.5	504.6	150.3	279.5	124.2	4.1
1960	4088	119.1	485.4	167.7	287.7	120.0	4.0
1961	3534	100.3	473.1	165.0	287.6	122.6	3.9
1962	3735	107.7	480.4	171.7	0.0	0.0	0.0
1963	3726	105.0	469.4	171.1	0.0	0.0	0.0
1964	4236	118.8	467.3	184.5	0.0	0.0	0.0
1965	1740	50.5	484.0	180.2	0.0	0.0	0.0
1966	2817	79.3	469.1	180.3	0.0	0.0	0.0
1967	2533	73.7	484.9	167.5	0.0	0.0	0.0
1968	2233	63.3	472.2	161.1	300.1	139.0	3.4
1969	2402	68.5	475.3	160.6	297.7	137.2	3.5
1970	2353	66.1	468.1	156.9	300.0	143.1	3.3
1971	2659	74.4	466.4	154.8	302.5	147.7	3.2
1972	2301	64.4	466.6	153.5	304.3	150.8	3.1
1973	2476	68.3	460.0	155.9	308.4	152.5	3.0
1974	1903	52.5	460.0	154.4	306.2	151.8	3.0
1975	2318	63.4	459.7	149.2	308.7	159.5	2.9

# Aquifer Conditions at Supply Wells

## Well LA-6

YEAR	PUMP TIME	PUMP- AGE MILLN GAL	PUMP RATE GPM	WATER LEVELS		DRAW DOWN FT	SPEC CAP GPM/ FT
				NON- PUMP FT	PUMP FT		
1948	116	4.4	698.1	11.0	0.0	0.0	0.0
1949	2451	95.8	651.5	11.0	0.0	0.0	0.0
1950	4490	167.4	623.7	11.4	136.4	53.0	11.8
1951	5882	201.3	571.9	114.9	159.7	44.7	12.8
1952	3168	110.4	581.5	109.2	150.7	42.5	13.7
1953	3177	113.8	577.2	95.2	138.5	43.2	13.8
1954	2894	107.1	614.4	92.3	135.1	42.7	14.4
1955	2411	108.0	414.1	96.7	140.1	43.4	14.2
1956	3438	125.8	609.8	105.9	149.2	43.2	14.1
1957	2833	102.4	602.5	107.3	152.0	44.7	13.5
1958	2957	106.4	602.7	107.7	151.5	43.8	13.8
1959	3046	108.4	581.1	114.6	157.4	43.0	13.6
1960	4044	138.6	565.7	130.0	171.6	41.6	13.6
1961	3284	112.5	571.0	129.4	170.9	41.5	13.8
1962	3886	129.4	554.1	135.2	174.9	39.7	14.0
1963	2953	102.4	581.5	124.8	170.8	46.0	12.6
1964	4244	138.4	541.3	131.9	172.2	40.3	13.5
1965	3145	103.8	549.9	120.4	159.9	39.5	13.9
1966	3173	104.0	544.1	129.1	169.2	40.2	13.6
1967	2511	85.4	564.5	119.2	157.5	39.4	14.4
1968	2111	71.6	565.1	108.7	150.2	41.4	13.6
1969	2402	81.6	565.9	109.0	151.3	42.3	13.4
1970	2337	79.1	564.1	104.2	149.1	42.9	13.1
1971	2472	82.3	554.0	119.5	160.0	41.4	13.4
1972	2317	79.2	569.4	117.3	155.0	37.7	15.1
1973	2038	40.6	572.4	117.5	154.7	36.9	15.5
1974	2337	79.8	569.4	120.1	156.4	36.3	15.7
1975	1571	51.4	551.0	113.3	151.0	37.7	14.6

## Well G-1

YEAR	PUMP TIME	PUMP- AGE MILLN GAL	PUMP RATE GPM	WATER LEVELS		DRAW DOWN FT	SPEC CAP GPM/ FT
				NON- PUMP FT	PUMP FT		
1950	0	2.8	11.0	195.0	0.0	0.0	0.0
1951	1168	37.7	534.7	202.5	309.0	106.5	5.1
1952	2476	75.3	507.8	212.6	295.3	82.7	6.1
1953	3275	97.3	494.1	220.7	292.3	72.2	6.9
1954	2616	77.8	435.4	220.7	290.0	69.2	7.2
1955	2406	70.3	488.2	225.7	294.6	68.8	7.1
1956	2458	83.2	468.7	234.9	302.7	67.7	6.9
1957	2098	55.4	443.2	235.9	307.0	71.1	6.2
1958	2460	68.1	461.1	237.9	307.7	69.8	6.6
1959	2452	82.4	465.3	244.8	313.9	69.1	6.7
1960	3564	96.0	449.0	253.7	325.0	71.3	6.3
1961	4236	112.4	442.3	259.8	332.7	72.9	6.1
1962	3431	93.5	454.5	257.9	342.0	84.1	5.4
1963	4519	114.8	421.4	264.6	347.9	83.3	5.1
1964	4374	113.8	433.5	269.1	351.8	82.7	5.2
1965	3530	90.7	429.4	267.9	352.3	84.4	5.1
1966	4074	102.6	419.7	268.7	362.6	93.9	4.5
1967	2615	69.4	445.4	264.2	361.8	95.7	4.7
1968	2446	78.4	438.2	267.7	366.2	102.4	4.3
1969	2657	68.3	428.4	264.3	376.2	109.9	3.9
1970	2712	64.7	397.7	263.9	377.2	113.2	3.5
1971	2408	67.4	389.1	258.2	377.9	119.7	3.2
1972	2865	66.1	384.3	263.8	388.9	125.1	3.1
1973	2497	67.3	375.2	271.0	403.2	132.2	2.8
1974	2767	62.3	375.3	282.1	411.7	128.6	2.9
1975	2467	55.7	374.4	292.9	411.4	118.5	3.2

# Aquifer Conditions at Supply Wells

## Well G-1A

YEAR	PUMP TIME HR	PUMP- AGE MILLN GAL	PUMP RATE GPM	WATER LEVELS		DRAW DOWN FI	SPEC CAP GPM/ FT
				NON- PUMP FT	PUMP FT		
1954	108	4.6	706.7	8.0	0.0	0.0	0.0
1955	1531	53.0	576.2	266.2	315.8	50.7	11.4
1956	3130	107.7	571.4	272.7	323.1	50.4	11.4
1957	2470	87.0	587.1	271.6	326.5	52.9	11.1
1958	2670	92.5	577.7	278.8	330.7	51.9	11.1
1959	2965	102.7	577.1	283.8	333.2	49.4	11.7
1960	3641	122.8	561.4	291.1	342.4	51.3	10.9
1961	4297	147.3	571.2	297.7	350.0	52.3	10.9
1962	3972	136.1	571.1	294.6	344.3	49.7	11.5
1963	4525	149.7	551.4	300.8	350.2	49.4	11.2
1964	3852	129.3	552.5	301.8	352.7	50.8	11.0
1965	3505	116.5	554.1	301.9	352.8	51.0	10.9
1966	3964	133.4	566.7	306.1	355.1	49.0	11.4
1967	2720	91.3	559.6	301.9	350.6	48.7	11.5
1968	3089	103.2	557.1	301.7	352.1	50.4	11.0
1969	2695	90.1	561.1	303.2	355.5	52.3	10.7
1970	2772	92.5	556.1	300.2	356.4	50.7	9.8
1971	3313	111.8	562.4	305.7	361.5	58.8	9.6
1972	2879	94.0	544.3	302.3	360.7	58.3	9.3
1973	2760	87.4	531.1	302.2	361.7	59.5	8.9
1974	2974	92.7	519.5	307.0	355.0	48.0	10.8
1975	2740	85.3	518.7	304.2	350.9	46.7	11.1

## Well G-2

YEAR	PUMP TIME HR	PUMP- AGE MILLN GAL	PUMP RATE GPM	WATER LEVELS		DRAW DOWN FI	SPEC CAP GPM/ FT
				NON- PUMP FT	PUMP FT		
1951	123	3.4	533.2	259.3	0.0	0.0	0.0
1952	2372	78.3	540.5	279.1	327.2	48.1	11.4
1953	3254	105.6	540.6	299.5	333.7	44.2	12.2
1954	2682	86.3	536.5	290.9	335.2	44.2	12.1
1955	2487	78.8	528.0	290.6	345.4	46.8	11.3
1956	3109	95.8	517.4	310.3	357.0	46.7	11.0
1957	2458	76.1	516.3	311.3	360.3	49.0	10.5
1958	2707	80.1	497.2	315.3	360.8	45.5	10.8
1959	2938	84.6	480.0	320.2	362.7	42.5	11.3
1960	3535	96.6	455.3	327.7	370.0	42.3	10.8
1961	3982	105.3	440.0	335.6	374.9	39.3	11.2
1962	4076	99.4	408.1	337.7	373.5	35.8	11.4
1963	4563	105.7	384.2	343.9	378.7	34.7	11.1
1964	4541	105.3	384.4	344.3	380.2	33.9	11.4
1965	3535	82.6	389.3	345.6	380.6	35.0	11.1
1966	3994	94.7	395.2	349.0	382.1	34.1	11.6
1967	2743	67.6	410.5	344.3	379.1	34.7	11.8
1968	2732	66.5	405.5	347.8	379.3	35.5	11.4
1969	2679	68.0	427.1	344.2	381.0	36.7	11.6
1970	2431	62.8	430.1	342.7	380.6	37.9	11.3
1971	3420	87.4	426.0	345.2	383.7	38.6	11.0
1972	2867	73.4	427.9	347.8	387.8	40.0	10.6
1973	2816	72.4	424.7	344.2	385.2	41.0	10.5
1974	4056	82.0	447.1	344.9	388.5	41.6	10.8
1975	2724	74.5	455.7	341.4	383.7	42.2	10.8

# Aquifer Conditions at Supply Wells

## Well G-3

YEAR	PUMP TIME	PUMP- AGE MILLN GAL	PUMP RATE GPM	WATER LEVELS		DRAW DOWN FT	SPEC CAP GPM/ FT
	HR			NON- PUMP FT	PUMP FT		
1951	192	7.3	633.7	281.5	0.0	0.0	0.0
1952	2379	65.4	458.3	310.5	358.0	47.5	9.6
1953	3192	76.4	398.7	322.4	360.4	38.0	10.5
1954	2675	66.1	411.6	322.2	370.2	48.0	8.6
1955	2369	69.4	488.9	315.5	367.7	52.2	9.4
1956	3149	87.4	465.5	324.4	379.8	55.4	8.4
1957	2517	70.2	464.9	324.4	385.4	61.0	7.6
1958	2562	69.5	452.1	322.8	386.2	63.4	7.1
1959	2931	74.0	424.2	325.5	395.2	69.7	6.1
1960	3591	82.5	382.7	334.6	407.1	72.5	5.3
1961	3612	79.4	368.8	343.5	414.1	70.5	5.2
1962	4057	83.1	344.0	348.1	418.3	70.2	4.9
1963	4555	86.1	317.1	351.9	422.1	70.2	4.5
1964	4487	78.6	292.0	354.8	424.3	69.5	4.2
1965	3498	65.6	312.4	340.5	418.7	69.2	4.5
1966	3971	73.7	307.7	352.7	419.7	66.9	4.6
1967	2752	52.4	320.3	344.5	416.2	73.7	4.3
1968	3086	58.5	305.1	340.9	418.1	77.2	4.0
1969	2672	50.8	316.7	338.4	416.9	76.5	4.0
1970	2736	55.4	337.3	336.1	419.0	82.9	4.1
1971	3337	64.2	320.5	341.5	423.5	81.9	3.9
1972	2838	50.7	298.7	341.2	420.7	79.5	3.8
1973	2843	47.3	277.8	341.3	418.2	76.8	3.6
1974	3006	49.3	271.4	342.4	424.2	81.8	3.3
1975	2632	43.1	272.7	340.3	427.7	86.3	3.1

## Well G-4

YEAR	PUMP TIME	PUMP- AGE MILLN GAL	PUMP RATE GPM	WATER LEVELS		DRAW DOWN FT	SPEC CAP GPM/ FT
	HR			NON- PUMP FT	PUMP FT		
1951	0	12.5	0.0	357.2	477.0	119.8	0.0
1952	2401	56.4	394.4	374.0	474.2	100.2	3.9
1953	2677	55.2	330.9	370.9	472.2	92.3	3.7
1954	2256	58.8	434.2	392.9	526.2	143.3	3.0
1955	1172	22.7	322.9	377.5	481.3	103.7	3.1
1956	1800	33.4	313.2	377.2	491.2	114.0	2.8
1957	1324	24.2	304.3	372.5	497.5	124.9	2.4
1958	1970	35.4	304.0	370.3	489.7	119.3	2.5
1959	1819	31.6	289.7	374.3	493.8	115.4	2.5
1960	2457	37.0	250.2	385.0	509.0	124.0	2.0
1961	2787	45.0	269.3	389.1	512.5	123.4	2.2
1962	2738	41.7	253.2	388.8	504.7	118.9	2.1
1963	3519	46.4	219.7	388.0	504.4	110.4	1.9
1964	3561	42.2	200.7	396.1	498.6	102.5	2.0
1965	2100	23.8	188.7	392.7	491.8	98.1	1.9
1966	2219	33.6	252.1	391.4	497.8	106.4	2.4
1967	2690	44.8	277.4	387.7	508.6	120.9	2.3
1968	2083	31.4	251.0	395.7	508.7	122.9	2.0
1969	1309	17.4	221.9	386.7	505.2	118.5	1.9
1970	606	7.7	211.7	384.2	504.5	120.2	1.8
1971	1640	21.0	213.5	388.7	503.3	114.6	1.9
1972	2840	33.3	195.5	391.5	506.5	115.0	1.7
1973	3006	37.2	204.2	391.7	521.1	129.4	1.6
1974	2672	34.3	212.7	391.7	518.8	127.1	1.7
1975	1977	41.0	345.5	402.7	558.7	156.0	2.2

# Aquifer Conditions at Supply Wells

## Well G-5

YEAR	PUMP TIME	PUMP- AGE MILLN GAL	PUMP RATE GPM	WATER LEVELS		DRAW DOWN FT	SPEC CAP GPM/ FT
	HR			NON- PUMP FT	PUMP FT		
1951	0	6.7	5.7	414.2	0.0	0.0	0.0
1952	2579	73.8	474.6	422.5	480.0	57.5	8.3
1953	1433	37.8	435.4	425.3	466.6	41.3	10.6
1954	2017	80.4	515.4	428.8	473.2	44.3	11.6
1955	2529	80.4	529.6	426.7	471.7	44.9	11.8
1956	3052	97.0	529.4	430.7	478.3	47.7	11.1
1957	2385	64.1	448.1	426.4	466.1	41.7	10.8
1958	1523	49.1	536.9	427.8	476.8	49.0	11.0
1959	2417	101.7	581.4	434.9	494.8	59.9	9.7
1960	2828	98.0	577.2	436.8	500.6	63.8	9.1
1961	3408	134.0	571.5	437.5	507.0	69.5	8.2
1962	4186	152.0	565.2	430.8	511.2	71.4	7.9
1963	4528	151.0	555.2	441.0	513.1	72.1	7.7
1964	4532	150.4	553.2	445.6	516.2	70.6	7.8
1965	3520	117.1	554.5	443.3	515.6	72.2	7.7
1966	2555	83.2	542.7	445.1	519.5	74.4	7.3
1967	2405	80.0	554.4	443.8	518.6	74.8	7.4
1968	2513	81.2	539.5	442.9	516.4	74.0	7.3
1969	2649	83.3	524.1	450.1	520.5	70.4	7.4
1970	2771	88.9	534.5	453.4	521.2	67.8	7.9
1971	2657	88.3	553.2	450.5	520.9	70.4	7.9
1972	2402	92.4	538.6	441.4	514.2	72.7	7.3
1973	3003	97.5	548.9	443.8	515.2	71.4	7.6
1974	2054	69.0	559.7	440.2	512.6	72.3	7.7
1975	2266	74.7	540.2	433.4	500.4	67.0	8.2

## Well G-6

YEAR	PUMP TIME	PUMP- AGE MILLN GAL	PUMP RATE GPM	WATER LEVELS		DRAW DOWN FT	SPEC CAP GPM/ FT
	HR			NON- PUMP FT	PUMP FT		
1964	1912	45.0	392.1	580.7	658.7	76.0	5.0
1965	3200	74.4	390.1	581.8	650.5	78.7	5.0
1966	3931	92.2	390.8	584.7	657.9	73.2	5.3
1967	2454	57.8	392.7	580.0	653.3	73.3	5.4
1968	2547	56.2	368.9	573.6	646.5	72.7	5.0
1969	2698	55.6	343.6	568.2	635.7	67.5	5.1
1970	2765	51.0	307.5	568.6	633.5	65.0	4.7
1971	2432	42.8	243.4	573.2	624.4	56.2	4.3
1972	2516	57.0	377.5	577.5	669.5	92.1	4.1
1973	2491	65.3	363.4	570.4	667.2	87.8	4.1
1974	2950	63.2	365.3	579.7	665.3	86.7	4.2
1975	2717	56.7	347.5	576.8	659.3	82.5	4.2

## Well PM-1

YEAR	PUMP TIME	PUMP- AGE MILLN GAL	PUMP RATE GPM	WATER LEVELS		DRAW DOWN FT	SPEC CAP GPM/ FT
	HR			NON- PUMP FT	PUMP FT		
1965	2754	99.2	600.3	746.1	786.3	40.1	15.0
1966	3086	108.0	583.2	740.0	779.4	39.4	14.8
1967	2070	111.0	644.9	737.0	781.3	44.3	14.5
1968	1046	68.1	514.5	735.5	768.5	33.0	18.6
1969	451	34.4	602.7	732.5	765.8	33.2	18.1
1970	1781	66.2	610.7	733.2	764.3	36.2	17.1
1971	2728	101.0	617.1	733.5	766.0	32.5	19.0
1972	2415	84.4	586.2	735.0	762.4	27.4	21.4
1973	1688	46.5	459.4	736.2	755.0	18.8	24.4
1974	2649	96.3	606.1	740.5	767.7	27.2	22.3
1975	2567	94.8	615.3	740.6	766.2	25.6	24.1

# Aquifer Conditions at Supply Wells

## Well PM-2

YEAR	PUMP TIME HR	PUMP- AGE MILLN GAL	PUMP RATE GPM	WATER LEVELS		DRAW DOWN FT	SPEC CAP GPM/ FT
				NON- PUMP FT	PUMP FT		
1966	221	18.4	1428.0	824.0	889.0	63.0	22.7
1967	4336	370.0	1422.3	833.9	887.6	53.7	26.5
1968	3865	328.2	1415.1	837.7	888.7	51.0	27.7
1969	3304	279.4	1412.0	837.5	890.5	53.0	26.6
1970	3529	300.6	1419.8	838.7	893.1	54.3	26.1
1971	4035	339.5	1402.4	841.2	898.4	57.2	24.5
1972	4611	385.3	1392.4	844.8	902.3	57.5	24.2
1973	4571	380.6	1387.4	848.9	906.9	58.0	23.9
1974	5443	450.9	1382.6	852.9	912.0	59.1	23.4
1975	4644	385.3	1382.8	854.2	913.2	59.0	23.4

## Well PM-3

YEAR	PUMP TIME HR	PUMP- AGE MILLN GAL	PUMP RATE GPM	WATER LEVELS		DRAW DOWN FT	SPEC CAP GPM/ FT
				NON- PUMP FT	PUMP FT		
1968	2327	187.4	1342.4	747.3	771.5	28.2	47.6
1969	3241	254.7	1309.6	745.9	771.6	25.7	51.0
1970	2905	227.8	1304.8	749.7	773.7	23.9	54.6
1971	2774	216.3	1299.6	758.7	774.1	23.3	55.7
1972	2445	192.1	1309.4	752.2	774.7	22.5	58.2
1973	3256	257.8	1319.8	754.6	778.2	23.6	56.0
1974	3241	255.3	1312.8	755.7	779.2	23.6	55.7
1975	3421	269.3	1312.0	758.9	780.5	23.6	55.6