UNITED STATES

DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

SECOND PROGRESS REPORT ON THE COOPERATIVE INVESTIGATION OF SPRINGS AND STREAM FLOW IN THE TECOLOTE TUNNEL AREA OF SANTA BARBARA COUNTY, CALIFORNIA

By

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Prepared in cooperation with the
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50-101

Second Progress Report on the Cooperative Investigation of Springs and Stream Flow in the Tecolote Tunnel Area of Santa Barbara County, California

Introduction

This report represents the second of a series of progress reports giving the results of discharge measurements made at more than 100 locations in the Santa Ynez Mountains from the Refugio Canyon on the west to the San Marcos Pass and Painted Cave area on the east. The flow in all the developed springs and headwater streams within this area, here designated as the Tecolote Tunnel Area for the purpose of this report, is generally measured monthly. The primary purpose of this second progress report is to make available to the public all factual data regarding the flow at these locations obtained since the preparation of the first progress report, issued in May 1949.

Near the mid-point of this area the Bureau of Reclamation and the Santa Barbara County Water Agency proposed a tunnel, known as Tecolote Tunnel, for the purpose of diverting a portion of the runoff of the Santa Ynez River drainage area into water-deficient Santa Barbara and the coastal areas to the east and west. Because the water users of the mountain springs in the Tecolote Tunnel Area are somewhat apprehensive as to the influence this tunnel may have on their present water supply, the Santa Barbara Water Agency has requested the Geological Survey to obtain records of flow in their springs at

frequent and regular intervals. During the current fiscal year these observations have been made as a result of a cooperative agreement between the Geological Survey and the Santa Barbara County Water Agency whereby each paid half the cost of the investigation. During the previous fiscal year all the costs to the Geological Survey in obtaining these observations were completely reimbursed by the Bureau of Reclamation.

Acknowledgments

The work and the preparation of this report was under the direct supervision of Douglas R. Woodward since March 1950 and under Harlowe M. Stafford prior to that date, all under the general supervision of R. C. Briggs, District Engineer. The observations of the flow from the springs were made by Clasen E. Burgess and Walter C. Heinrich. The writers also want to acknowledge the help of their colleagues in the Ground Water Branch of the Geological Survey in the preparation of this report.

Previous Investigations

At the request of the Santa Barbara County Water Agency and under a cooperative agreement between that agency and the Geological Survey, Mr. J. E. Upson of the Ground Water Branch located and measured the flow from 48 springs in the Santa Ynez Mountains between the site of Tecolote Tunnel and the San Marcos Pass road during the period of June to August 1948. In many instances partial chemical analyses were made of these spring waters. During October and November 1948 the

Ground Water Branch extended the location and examination of springs to cover the entire Tecolote Tunnel Area. In general these observations included description of the spring, the geologic formation in which the spring is located, and the first discharge measurement of the flow in the spring, all of which was given in the first progress report.

In February 1946, at the request of the Bureau of Reclamation, the Surface Water Branch began a systematic series of discharge measurements above the points of diversion in Tecolote, Eagle, and Dos Pueblos Canyons. During October 1948 a reconnaissance of all the principal streams in the Tecolote Tunnel Area was made and a network of gaging sites established, insofar as practicable, above the known diversions.

During February 1949 these two programs of flow observation were consolidated and turned over to the Surface Water Branch for continued measurement.

Precipitation

Since July 1, 1949, the precipitation at Santa Barbara amounted to 13.10 inches or about 73 percent of normal for this station. Likewise at Santa Maria, more than 50 miles northwest of Santa Barbara, the precipitation amounted to only 66 percent of normal. Sub-normal precipitation of this magnitude will, of course, have an adverse influence on 1949-50 spring and stream runoff. However, of even more influence on the flow of these springs and streams is the effect of the antecedent dry years. The distribution of the annual precipitation

for the 8-year period of 1942-50 is given in the following table for Santa Barbara and Santa Maria in terms of their normal precipitations.

Table 1.- Annual precipitation at Santa Barbara and Santa Maria for the period of 1942-50 in percent of normal precipitation.

Year	Santa Barbara	Santa Maria
1942-43	133	120
-44	98	101
-45	83	82
-46	62	80
-47	71	58
-48	50	58
-49	59	69
-50	(73)	(66)

Following the usual California practice, the climatological year of July 1 to June 30 has been used in deriving the above. This table shows that the present dry year has been preceded by five subnormal seasons, with the last normal year being 1943-44. With this sequence of events, the recharge of mountain ground water should be well below normal, and in fact almost negligible in some of the preceding dry years.

Runoff

As to be expected from the preceding table, the runoff in the Santa Ynez Mountains has also been below normal for the last 6 years. This is quite evident in table 2, which contains the annual runoff

Table 2.- Annual runoff in acre-feet for San Jose, Atascadero, Carpinteria, and Salsipuedes Creeks for the period 1941-49.

Water year	San Jose Creek	Atascadero Creek	Carpinteria Creek	Salsipuedes Creek
1941-42	765	220	316	10,650
-43	2,970	4,880	6,340	10,710
-44	1,070	2,280	1,680	8,870
-45	500	850	1,100	600
-46	390	265	208	630
-47	580	1,080	546	870
-48	30	40	4.8	402
-49	278	---	17.1	1,710
Estimated Mean for the 25-year period of 1920-45:	1,110	1,500	1,700	5,600

beginning with the water year 1941-42 for San Jose, Atascadero, Carpinteria, and Salsipuedes Creeks. All of these drainage areas are in the Santa Ynez Mountains and San Jose Creek is within the Tecolote Tunnel Area. The lowest horizontal column of this table contains an estimate of mean annual runoff in these streams for the 25-year base period of 1920-45. It is impracticable at this time to include the runoff for the 1949-50 water year; however, the records at key stations, which are kept current, show the runoff to be well below normal. The mountain drainage area of Santa Ysabel Creek in San Diego County has an accumulated runoff for this water year, as of May 1, 1950, of only

19 percent of normal and the equally-mountainous drainage area of Arroyo Seco near Pasadena in Los Angeles County, an accumulated runoff of only 35 percent of normal. Also the accumulated runoff of the adjacent Santa Ynez River at the valley-floor station near Lompoc as of May 1, 1950 is only 5 percent of normal; however, this record cannot be taken as representative because of regulation and diversions in its headwater areas.

This current subnormal year was preceded by the equally dry year of 1948-49 in which the runoff of the above four streams ranged from 1 to 31 percent of the 25-year normal. Moreover, that year was preceded by the even drier year of 1947-48 in which the annual runoff ranged from 1 to 7 percent of normal. The Water Bulletin[a/] shows that the

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[a/] Briggs, Revoe C., Stafford, Harlowe M. and Troxell, Harold C.; U. S. Geological Survey Water Bulletin, Los Angeles, (p.3), June 30, 1949.

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runoff during this year at 42 percent of the southern California gaging stations was less than 10 percent of their average runoff and that the runoff at 62 percent of these stations was 20 percent or less of the average runoff. However, as pointed out in this bulletin, the runoff in this very dry year was not nearly as low as in those even drier years of 1898 to 1900.

The runoff for the 1946-47 water year, while somewhat wetter, was still a subnormal year. The Water Bulletin[b/] shows that the runoff for

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[b/] Briggs, Revoe C., Stafford, Harlowe M., and Troxell, Harold C.; U. S. Geological Survey Water Bulletin, Los Angeles, (p.3) June 30, 1948.

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this water year was less than 10 percent of average at 16 percent of the southern California stations and less than 20 percent of average at 30 percent of these stations.

The runoff in the Santa Ynez Mountain streams during these three antecedent years listed in table 2 is largely a measure of the mountain storm surface runoff, as flow generally occurred only on days of excessive rates of precipitation. For example, during the water year of 1946-47 there were only 25 days when the daily discharge exceeded 0.5 second-foot at the San Jose Creek gaging station.

The subnormal precipitation and mountain ground-water recharge have resulted in subnormal surface and ground-water runoff during the current, as well as the 5 antecedent years, and this fact should be fully considered in appraising the factual data given in the subsequent tables.

Location and distribution of measuring sites

A map showing the location of discharge observations in the Tecolote Tunnel Area and designated as plate 1 is bound in the back of this report. The number shown at each site corresponds to the station number used throughout this progress report. In addition, this map gives the topography and the location of Tecolote Tunnel and Cachuma dam and reservoir.

The altitude and distribution of these measuring sites in reference to the Tecolote Tunnel are shown in figure 1. In that the strike of the major rock formations are largely east-west, the location of the

measuring sites are given in miles due east or west of the tunnel. In that the tunnel does not have a north-south alignment, these distances will not be normal to the tunnel. In this respect, the diagram differs from that shown in figure 2 of the first progress report, where the sites were plotted on the basis of longitude. On this earlier diagram, the projection of the tunnel shows the north portal to be about 2.5 miles west of the south portal, with the piezometric gradients being computed from the mid-point of the tunnel. In the case of figure 1 of this report, however, the north and south portals are coincidental except for slight differences in altitude. In this instance it has been necessary to project the alignment of the tunnel beyond the portals in order to obtain the east and west distances for those springs at the lower altitudes along the toe of the mountains. The altitude along the divide measured in distance east or west of the tunnel is also included to indicate the nearness of certain springs to the divide.

The piezometric gradients radiating from the tunnel are shown on figure 1, as a preliminary guide as to the relative importance of each measuring site with respect to the possible influence of the tunnel on its flow. If the Santa Ynez Mountains were a completely homogeneous mass, it could be expected that the flow of those springs or streams having the steepest gradient in reference to the tunnel would be subject to the greatest influence from the tunnel while the flow of those having the flattest of such gradients would be subject to the least influence. Actually, the Santa Ynez Mountains in this

area are far from homogeneous, and very little is known regarding the relation of its various ground-water bodies to each other and to the controlling geologic structures.

Records

The results of all discharge measurements of springs and streams in the Tecolote Tunnel Area from the beginning of this investigation through the month of April 1950 are given in table 3 bound in the back portion of this report. On separate pages for each station are the chronological listing of discharge measurements, preceded by short paragraphs which give the location, altitude and description of the station, information respecting diversions in the case of stream stations, and reference to any previous measurements not listed. Each measuring site is identified by a station number which corresponds to the location number shown on the map, plate 1.

It is expected, that as further measurements are made, the results will be tabulated on the proper pages of this table, and that future progress reports will be in the form of a supplement to the present report.

Runoff distribution

The following analyses are intended to show the typical runoff distribution for the springs of the Tecolote Tunnel Area since the beginning of the spring measuring program started in January 1949. By way of introduction, the runoff-distribution for two typical springs in the Painted Cave region is shown on figure 2. The records from

Typical hydrographs in the Tecolote Tunnel Area

for the period Feb. 1949 to April 1950

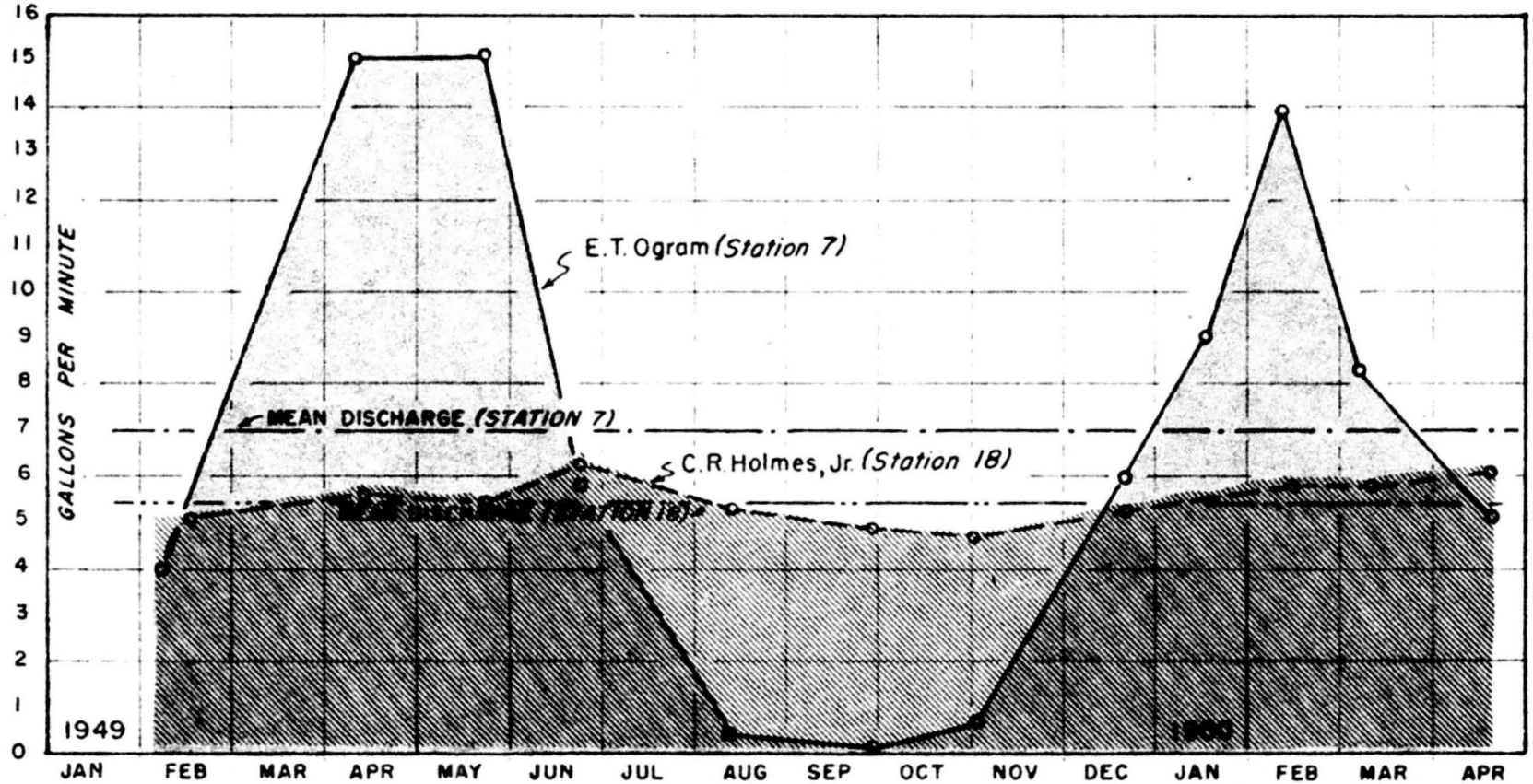


Figure 2

these springs were selected because of similarity in location, both being in the Coldwater sandstone with both having approximately the same mean discharge during the period of investigation. The individual observations obtained at each of these springs in gallons per minute have been plotted on figure 2 at the proper date and these points connected by a series of straight lines to show the approximate runoff-distribution for the period of February 1949 to April 1950.

At the E. T. Ogram spring (station 7) a flow of 4.0 gallons per minute in early February 1949 increased to 15 gallons per minute in April and May. In terms of the mean discharge for the entire period, the flow increases from .57 of the mean value in February 1949 to 2.15 times the mean in April and May. These latter values are dimensionless terms and are often extremely useful in comparing runoff in springs of different magnitude. (In that the runoff during this 16-month period is undoubtedly well below normal due to the current and the four antecedent dry years, the mean values mentioned above may prove to have little significance as the period of observation lengthens. However this is partially offset by the inclusion of two Januarys through Aprils within the observational period. Of course the selection of the base runoff has little influence on the shape or form of the hydrograph showing runoff distribution.) Probably because of increasing evapotranspiration losses, the flow in this spring decreased to .18 gallons per minute or .03 of the mean discharge in late September. With the passage of summer and the advent of the rainfall seasons, the flow in this spring again increased to 14 gallons per minute or 2.00 times

the mean discharge. By mid-April the flow had again decreased to 5.2 gallons per minute or .74 of the mean discharge. Consequently, during this period of slightly longer than a year, the flow in this spring had ranged from .03 to 2.15 of the mean discharge for the period of February 1949 to April 1950. Possibly it can be more simply stated that the flow in the spring ranged from 3 to 215 percent of the mean discharge.

In contrast, the flow in the C. R. Holmes Jr.'s spring (spring 18) increased from a flow of 5.0 gallons per minute in mid-February to a maximum of 6.3 gallons in late June. This represents an increase from .91 of the mean discharge in February to 1.15 of the mean in June. During the following summer the flow decreased to 4.7 gallons per minute in early November, probably as a result of evapotranspiration losses and then with a reduction in these losses the flow increased to a maximum of 6.2 gallons per minute in mid-April. Within this base period the flow ranged from 86 to 115 percent of the mean discharge, which is of considerable significance in that the spring is located in the creek bed and thereby subject to the storm surface runoff from the entire upstream drainage area.

This seasonal range in spring discharge is the result of an extremely complex array of influences, such as uniformity of recharge to the ground-water body supporting the spring, the natural water losses between the point of recharge and point of spring development, to the care and methods used in the development and maintenance of the spring and to many other obscure and unknown features. It is tentatively believed that the seasonal range in spring discharge is definitely

a major individual spring characteristic and will persist from year to year as long as there is no modifications in the method or mode of the spring's development.

Should the records from this very limited observational period be confirmed by subsequent measurements, then it is quite evident that the runoff-distribution at the C. R. Holmes' spring is by far a much better indicator of trend than the record obtained at the E. T. Ogram spring. In the case of the Holmes' spring the combined water-consuming influences appear to be small compared to the ground-water recharge, while in the second spring they appear to be large in terms of the average recharge. Of course, there is the distinct probability that during the rainfall season the flow in the second spring might contain runoff from temporary but more permeable ground-water bodies located above the spring.

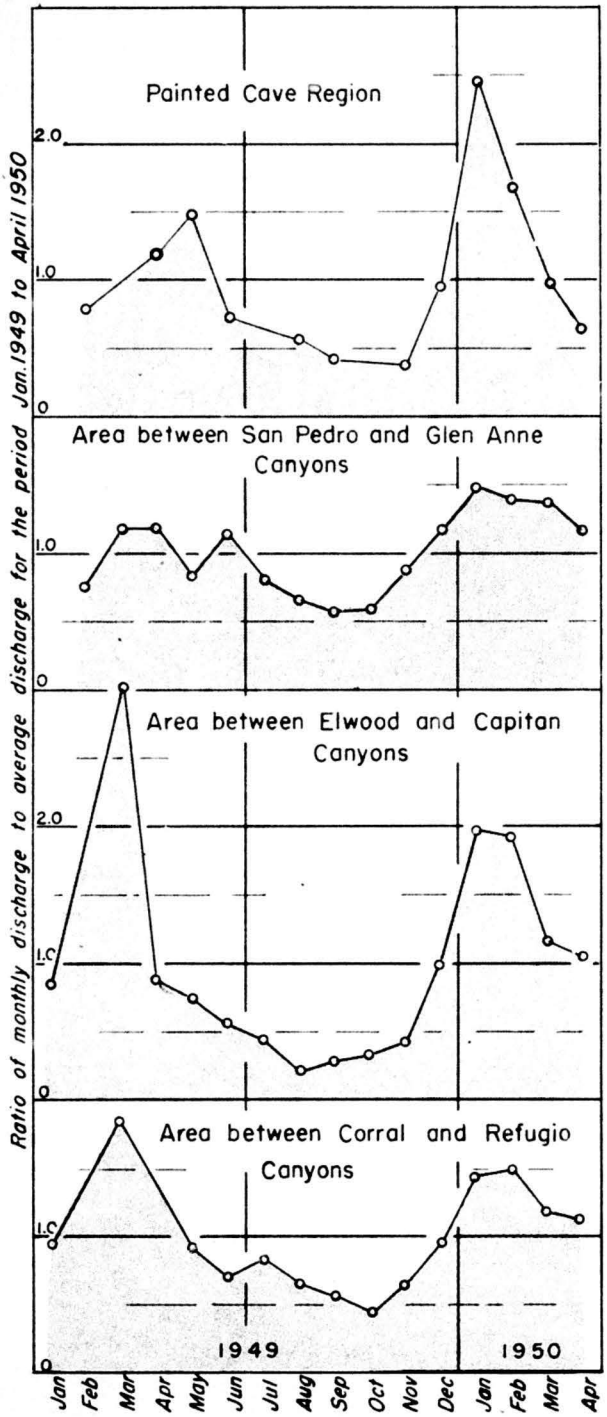
In order to determine the regional influence, if any, on the runoff-distribution, composite hydrographs were prepared for seven general regions. These consisted of the Painted Cave region, the area between and including San Pedro and Glen Anne Canyons, the area between and including Elwood and Capitan Canyons and the area between and including Corral and Refugio Canyons. All of these areas are on the south side of the Santa Ynez Mountains with two being east and two being west of the Tecolote Tunnel. On the north side of the Santa Ynez Mountains the area was divided into three regions: one east and two west of the Tecolote Tunnel. These regions consisted of the area between and including Los Laureles and Hot Springs Canyons, the area between and

including Bear and Tequepis Canyons and the area between and including Hilton and Quiota Canyons. The average hydrograph for each of these regions is shown on figure 3 in terms of the average discharge for the period January 1949 to April 1950.

There could be considerable variation in these regional hydrographs as they are dependent upon the individual association or combination of heterogeneous discharge hydrographs, two of which are shown in figure 2. If most of the springs within the region have characteristics such as those shown by spring 18, then the seasonal range in discharge would be small; on the other hand, if runoff distribution characteristics similar to spring 7 are predominant, then the seasonal range will be much greater. On a regional basis the area between San Pedro and Glen Anne Canyons shows the least seasonal range while the adjacent area between Elwood and Capitan Canyons shows the greatest seasonal range, although there really is not much difference in runoff characteristics on a regional basis except during the rainfall season.

As a further analysis, the records of runoff were segregated on the basis of seasonal range in discharge without regard to location or discharge. Because of the uncertain character of the winter observations due to the presence of storm surface and ground-water runoff, the segregation was made on the basis of summer flow. Five classes or types were established, as indicated in the following table:

Figure 3



Regional hydrographs of flow in springs of the Tecolote Tunnel Area for the period of January 1949 to April 1950

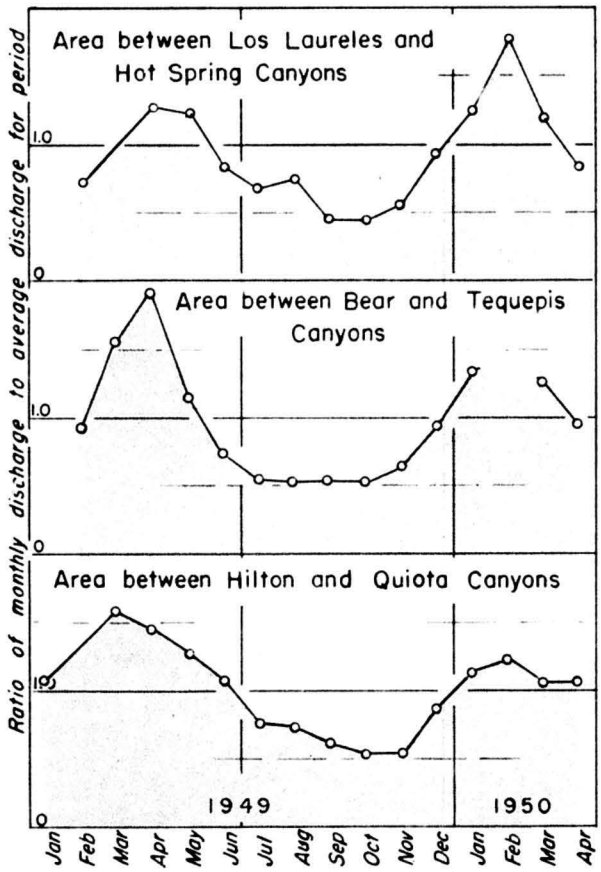


Table 4.- Discharge-distribution characteristics

Type	Minimum summer observation in percent of the mean discharge
A	greater than 80
B	60 to 79
B	40 to 59
D	20 to 39
E	0 to 19

It was necessary to restrict this analysis to 82 springs, because of the isolated position of some springs thereby having fewer observations, the imperfect records obtained at other springs and because some springs were reported dry during the entire period. The average runoff for this combination of springs amounted to 22.5 gallons per minute for the period of January 1949 to April 1950, which is generally believed to be a period of subnormal runoff.

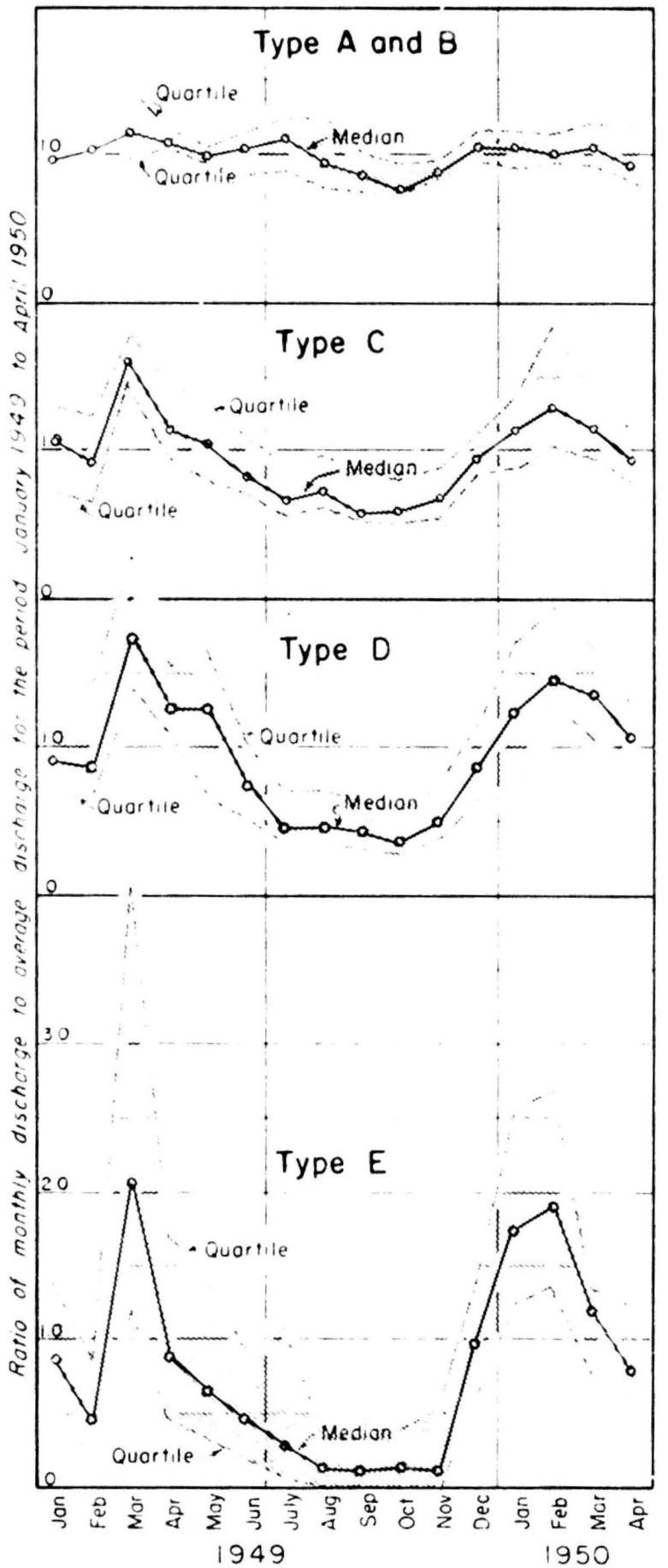
On the basis of the segregation shown in table 4, there were only 3 type A springs and 7 type B springs. Consequently, these two groups were combined. The average runoff for this group of 10 springs amounted to 9.1 gallons per minute or about 40 percent of that for the entire series. The relative magnitude of the runoff is often an important factor in the seasonal distribution, as water losses affecting the spring's runoff could be large in terms of its observed flow. Therefore, the runoff of these 10 springs being only 40 percent of the average for the entire series is highly significant in that distribution of the flow from these springs should be most sensitive to variations in evapotranspiration losses.

The monthly median values for these 10 records are shown graphically in the upper part of figure 4 in terms of ratio to average discharge for the base period of January 1949 to April 1950. These median values ranged from a minimum of .77 of the mean discharge in October 1949 to a maximum of 1.15 of the mean discharge in March 1949. In addition, the upper and lower quartiles were plotted on either side of the median as an indication of the stability of flow. As 50 percent of the observations for any one month will fall between these two limits, the closer they come together the greater the stability of the runoff-distribution pattern. Duri..g the months of April and November 1949 the range between the upper and lower quartiles amounted to the minimum value of 10 percent of the average discharge. This range between the quartiles increased to a maximum of 49 percent in March 1949 or the month of greatest instability in runoff for these 10 springs. For purpose of comparison the average range between quartiles for this group of springs amounted to 27 percent of the average discharge.

The second part of figure 4 shows graphically the median and quartile values for runoff in the 19 springs classified as Type C. The average discharge for individual springs amounted to 12.9 gallons per minute or about 57 percent of the average for the entire series of 82 springs. The median values ranged from a maximum of 1.60 of the average discharge in March 1949 to a minimum of .59 of the average discharge in September 1949. The range between quartiles varied from 28 percent of the average discharge in December 1949 to 59 percent of the average discharge in January 1949. The average range between

Figure 4

Discharge distribution of the Tecolote Tunnel Area springs for the period January 1949 to April 1950



quartiles for the entire period of record amounted to 43 percent of the average discharge, thereby showing a lesser degree of runoff stability than in the first group.

The third section of figure 4 shows the average runoff-distribution for the 25 springs having a Type D classification. The average discharge for the individual springs of this group amounted to 25.1 gallons per minute or about 111 percent of average for the entire series of 82 springs. Therefore, as a group, these springs were much larger producers than the springs in the two preceding groups.

The median runoff values for this group of springs ranged from .37 of the average discharge in October 1949 to 1.72 of the average discharge in March 1949 following a seasonal pattern quite similar to that for the Type C springs. The range between quartiles varied from 31 percent of the average discharge in October 1949 to 103 percent of the average discharge in January 1950. However, this range between quartiles is extremely constant through June to December 1949. The average range between quartiles amounted to 58 percent indicating even less runoff stability than the two preceding groups.

The fourth and final section of figure 4 shows the average runoff-distribution for the 28 springs having a Type E classification. The average discharge of individual springs amounted to 31.6 gallons per minute or 140 percent of the average for the entire series making these the largest producers of all the springs.

The median runoff values for this group of springs varied from .12 of the average discharge in November 1949 to 2.08 of the average

discharge in March 1949 along a pattern quite similar to that for Type C and D springs. The range between quartiles ranged from 33 percent of the average discharge in September 1949 to 289 percent of the average discharge in March 1949, with the average range amounting to 94 percent of the average discharge making the runoff-distribution pattern the least stable of all the groups.

It is quite evident from these analyses that trends in runoff may be most significant in the springs producing Type A runoff-distribution and the least significant in those springs producing Type E runoff-distribution. Consequently, this tends to place considerably greater importance on records obtained from one group of springs as against another group. Of course statistical analyses such as the above should be supported by a more thorough investigation of the physical features at each spring so as to eliminate any misinterpretation of the runoff data.

Table 3

Discharge measurements of developed springs and small springs in the Tecolote Tunnel Area of the Santa Ynez Mountains, Santa Barbara County, California, through April 1950.

SAN ANTONIO CREEK AT SAN MARCOS PASS ROAD

Location.- Lat. 34°28'00", long. 119°46'10". At bridge on State Highway 150, about 2 miles north of Highway 101.

Altitude.- About 500 feet, from topographic map.

Description.- Measuring site in natural creek channel, at highway crossing.

Diversion.- Two diversions above station-1, on Cat Canyon, 25 foot concrete dam with reservoir capacity of 500,000 gal., and 2, 1.5 M.G. reservoir on Loma Abaja.

Previous measurements.- 1945.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min	°F
Nov. 15, 1948	(8:05 a.m.)	No flow	No flow	
Dec. 13	(8:45 a.m.)	No flow	No flow	
Jan. 3, 1949	(8:30 a.m.)	No flow	No flow	
Mar. 16	(3:00 p.m.)	0.78	350	
Apr. 11	(12:45 p.m.)	.092	41	
May 11	(11:20 a.m.)	.020	9.1	
June 13	(9:10 a.m.)	.053	23.8	
July 19	(1:00 p.m.)	No flow	No flow	
Aug. 12	(10:10 a.m.)	No flow	No flow	
Sept. 13	(12:45 p.m.)	No flow	No flow	
Nov. 1	(8:45 a.m.)	No flow	No flow	
16	(11:40 a.m.)	No flow	No flow	
Dec. 14	(9:15 a.m.)	No flow	No flow	
Jan. 9, 1950	(2:35 p.m.)	No flow	No flow	
Feb. 13	(9:20 a.m.)	.52	230	47
Mar. 8	(10:40 a.m.)	.092	41	55
Apr. 19	(10:30 a.m.)	.050	22	64

SPRING - ETIENNE LEJEUNE

Location.- Lat. 34°30'50", long. 119°47'10", about 0.6 mile north of Painted Cave.

Altitude.- About 2,700 feet, from topographic map.

Description.- Uncurbed pool at foot of boulders at falls in creek bed. Discharge measured at outlet of pool.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Feb. 8, 1949		0.0051	2.3	
Apr. 11	(9:30 a.m.)	.021	9.4	
May 23	(10:30 a.m.)	.0071	3.2	
June 23	(8:05 a.m.)	.0069	3.10	60
Aug. 12	(9:00 a.m.)	.011	5.1	57
Sept. 29	(8:25 a.m.)	.012	5.2	
Nov. 1	(9:15 a.m.)	.0059	2.6	55
Dec. 20	(8:35 a.m.)	.0077	3.4	42
Jan. 17, 1950	(9:10 a.m.)	.019	8.2	46
Feb. 13	(1:30 p.m.)	.023	10	47
Mar. 8	(11:25 a.m.)	.018	7.9	50
Apr. 19	(11:10 a.m.)	.0096	4.3	57

SPRING - ETIENNE LEJEUNE

Location.- Lat. 34°30'50", long. 119°47'20", about 0.7 mile north of Painted Cave.

Altitude.- About 2,650 feet, from topographic map.

Description.- Seeps in stream channel impounded by small concrete dam. Discharge measured above upper diversion dam.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Feb. 8, 1949		0.0014	0.65	
Apr. 11	(9:50 a.m.)	.0019	.86	
May 23	(10:50 a.m.)	.0088	3.9	
June 23	(8:25 a.m.)	No flow	No flow	
Aug. 12	(9:10 a.m.)	No flow	No flow	
Sept. 29	(8:35 a.m.)	No flow	No flow	
Nov. 1	(9:30 a.m.)	No flow	No flow	
Dec. 20	(8:55 a.m.)	.0066	2.9	42
Jan. 17,1950	(9:30 a.m.)	.092	41	44
Feb. 13	(1:50 p.m.)	.011	4.8	
Mar. 8	(11:45 a.m.)	No flow	No flow	
Apr. 19	(11:30 a.m.)	No flow	No flow	

SPRING - PAINTED CAVE - MUTUAL WATER COMPANY

Location.- Lat. 34°30'30", long. 119°47'20", about 0.3 mile north of Painted Cave.

Altitude.- 2,590 feet, from topographic map.

Description.- Cemented pool on sandstone ledge in creek bed.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
June 19, 1948	(estimate)	0.009 to .011	4 to 5	
Oct. 26		.0052	2.33	
Feb. 9, 1949		.0096	4.3	
Apr. 11	(9:05 a.m.)	.0045	2.0	
May 23	(10:10 a.m.)	.0066	3.0	
June 23	(7:55 a.m.)	.00046	.21	
Aug. 12	(8:50 a.m.)	No flow	No flow	
Sept. 29	(8:00 a.m.)	No flow	No flow	
Nov. 1	(9:05 a.m.)	No flow	No flow	
Dec. 20	(8:20 a.m.)	.016	7.1	43
Jan. 17, 1950	(8:45 a.m.)	.099	44	47
Feb. 13	(1:10 p.m.)	.042	19	52
Mar. 7	(11:15 a.m.)	.002	.90	50
Apr. 19	(11:00 a.m.)	No flow	No flow	

SPRING - E. T. OGRAM

Location.- Lat. 34°30'20", long. 119°47'10" at Painted Cave.

Altitude.- About 2,560 feet, from topographic map.

Description.- Uncontrolled seepage from fractures in sandstone ledge on valley side. Discharge measured at end of 3-inch pipe.

DATE	DISCHARGE		TEMP.
	Second-feet	Gals. per min.	°F
June 19, 1948 (estimated)	0.001	0.5	
Feb. 9, 1949	.0089	4.0	
Apr. 11 (10:50 a.m.)	.033	15	
May 23 (9:55 a.m.)	.033	15	
June 23 (8:40 a.m.)	.013	5.9	58
Aug. 12 (9:25 a.m.)	.0011	.48	58
Sept 29 (8:45 a.m.)	.00041	.18	
Nov. 1 (10:00 a.m.)	.0014	.64	
Dec. 20 (9:15 a.m.)	.013	6.0	56
Jan. 17, 1950 (9:45 a.m.)	.020	9.1	57
Feb. 13 (2:10 p.m.)	.030	14	
Mar. 7 (12:10 p.m.)	.019	8.3	59
Apr. 19 (11:40 a.m.)	.012	5.2	58

SPRING - SAM NICHOLS

Location.- Lat. 34°30'20", long. 119°47'10", at Painted Cave

Altitude.- About 2,360 feet, from topographic map.

Description.- Seeps in landslide on valley side. Discharge measured at end of tile pipe to concrete settling box.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Oct. 26, 1948		0.0056	2.5	
Feb. 9, 1949		.017	7.8	
Apr. 11,	(11:10 a.m.)	.021	9.2	
May 23	(9:30 a.m.)	.029	13	
June 23	(9:10 a.m.)	.019	8.6	
Aug. 12	(9:45 a.m.)	.0099	4.44	57
Sept 29	(9:05 a.m.)	.0058	2.6	
Nov. 1	(10:25 a.m.)	.0050	2.2	61
Dec. 20	(9:40 a.m.)	.019	8.7	55
Jan. 17, 1950	(10:10 a.m.)	.025	11	54
Feb. 9	(9:45 a.m.)	.022	10	54
Mar. 8	(1:10 p.m.)	.019	8.6	55
Apr. 19	(noon)	.012	5.6	55

SPRING - SAM NUCKOLS

Location.- Lat. 34°30'10", long. 119°47'10", at Painted Cave.

Altitude.- About 2,300 feet, from topographic map.

Description.- Two concrete curbed seeps on hillside 8 feet apart. Measurement of both springs at end of overflow pipes. Not used at present time. Beginning May 23, 1949 inflow to cistern measured.

DATE	DISCHARGE				TEMP.
	Second-feet		Gals. per min.		°F
	North Spr.	South Spr.	North Spr.	South Spr.	
Oct.25, 1948	0.00060	0.00071	0.27	0.32	
Feb. 9, 1949	.00091	.0018	.41	.81	
Apr.11 (11:25 a.m.)	.0010	.0028	.45	1.3	
May 23 (9:40 a.m.)	.012	-	5.3	-	
June 23 (8:55 a.m.)	.0049	-	2.19	-	
Aug. 12 (9:30 a.m.)	.0028	-	1.26	-	
Sept.29 (9:00 a.m.)	.0056	-	2.51	-	
Nov. 1 (10:20 a.m.)	.0047	-	2.1	-	67
Dec. 20 (9:55 a.m.)	a .0027	-	a 1.2	-	
Jan. 17, 1950 (10:20 a.m.)	a .0031	-	a 1.4	-	57
Feb. 14 (9:30 a.m.)	.018	-	8.2	-	56
Mar. 8 (1:00 p.m.)	.020	-	8.8	-	59
Apr. 19 (11:55 a.m.)	.0098	-	4.4	-	60

a possible unknown wastage.

SPRING - SAM NUCKOLS

Location.- Lat. 34°30'10", long. 119°47'10", at Painted Cave.

Altitude.- About 2,300 feet, from topographic map.

Description.- Seep in alluvium on valley side. Discharge measurements at overflow from bottling plant.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
June 19, 1948		0.0048	2.14	
Oct. 26,		.0018	.8	
Feb. 16, 1949		.012	5.4	
Apr. 11,	(11:00 a.m.)	.0084	3.8	
May 23	(9:15 a.m.)	.0073	3.3	
June 23	(8:45 a.m.)	.0095	4.26	59
Aug. 12	(9:35 a.m.)	* .0038	* 1.69	57
Sept 29	(8:55 a.m.)	No flow	No flow	
Nov. 1	(10:15 a.m.)	No flow	No flow	
Dec. 20	(9:30 a.m.)	No flow	No flow	
Jan. 17,1950	(10:00 a.m.)	No flow	No flow	
Feb. 14	(9:15 a.m.)	No flow	No flow	
Mar. 8	(12:55 p.m.)	No flow	No flow	
Apr. 19	(11:50 a.m.)	.014	6.4	58

* Combined flow of springs 10 & 11

MARIA YGNACIO CREEK AT OLD SAN MARCOS PASS ROAD

Location.- Lat. 34°27'40", 119°47'40". At bridge on old San Marcos Pass Road about 0.6 mile above Goleta Foothill Road.

Altitude.- 140 feet, from topographic map.

Description.- Measurements made in natural creek channel at bridge.

Diversion.- One diversion about 1.3 miles above station.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Oct. 27, 1948	(3:00 p.m.)	0.12	54	
Nov. 15	(10:00 a.m.)	No flow	No flow	
Dec. 13	(8:55 a.m.)	No flow	No flow	
Jan. 3, 1949	(8:55 a.m.)	.11	49	
Mar. 17,	(11:15 a.m.)	.37	166	
Apr. 11	(12:15 p.m.)	.16	72	
May 11	(11:55 a.m.)	.14	62	
June 13	(8:55 a.m.)	.018	8.1	
July 19	(12:40 p.m.)	.022	9.9	66
Aug. 12	(10:30 a.m.)	.0022	1.09	
~~Sept. 15~~	~~(2:00 p.m.)~~	~~Less than .005~~		
Nov. 1	(8:30 a.m.)	.0030	1.35	55
Nov. 16	(11:55 a.m.)	.0024	1.08	56
Dec. 14	(10:00 a.m.)	.12	53	46
Jan. 10, 1950	(8:40 a.m.)	.18	79	42
Feb. 13	(8:45 a.m.)	.28	120	46
Mar. 8	(8:55 a.m.)	.042	19	
Apr. 19	(8:25 a.m.)	.006	2.7	58

UNNAMED CREEK NEAR HOBO ROCK

Location.- Lat. 34°30'20", long. 119°48'10", at falls about 200 yards upstream from highway 150 near Hobo Rock.

Altitude.- About 1,700 feet, from topographic map.

Description.- Measuring site in stream channel.

Diversions.- No known diversions above station.

DATE	DISCHARGE		TEMP.
	Second-feet	Gals. per min.	°F
July 20, 1948	0.021	9.4	
Feb. 8, 1949	.011	5.1	
Apr. 11, (8:30 a.m.)	.042	19	
May 23 (11:30 a.m.)	.061	27	
June 23 (10:05 a.m.)	.033	14.8	
Aug. 11 (11:45 a.m.)	.026	11.7	60
Sept.30 (11:05 a.m.)	.015	6.9	
Nov. 1 (11:00 a.m.)	.013	5.9	
Dec. 20 (10:30 a.m.)	.041	18	44
Jan. 17, 1950 (10:45 a.m.)	.054	24	49
Feb. 14 (10:15 a.m.)	.054	24	50
Mar. 8 (1:55 p.m.)	.040	18	55
Apr. 18 (11:40 a.m.)	.036	16	59

SPRING - FOOTLR GLEN PARK, COUNTY OF SANTA BARBARA

Location.- Lat. 34°30'20", long. 119°48'20", about 0.2 mile north of Highway 150.

Altitude.- About 1,720 feet, from topographic map.

Description.- Bricked pool on sandstone ledge in creek bottom. Discharge measurements at inflow to storage tank. Some flow over earth collecting dam, but measured and included in the discharge.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
July 19, 1948		0.0016	0.7	
Feb. 10, 1949		.0029	1.3	
Apr. 13	(12-noon)	.0041	1.8	
May 23	(1:20 p.m.)	.0056	2.5	
June 23	(10:45 a.m.)	.0014	.63	
Aug. 11	(11:30 a.m.)	.0013	.58	
Sept 30	(11:20 a.m.)	No flow	No flow	
Nov. 1	(11:45 a.m.)	.000056	.025	
Dec. 20	(11:00 a.m.)	.0027	1.2	
Jan. 17, 1950	(11:15 a.m.)	.0017	.74	47
Feb. 14	(10:40 a.m.)	.0019	.85	51
Mar. 8	(2:30 p.m.)	.0026	1.1	55
Apr. 18	(11:20 a.m.)	.00049	.22	68

SPRING - KINEVAN FILING - FOREST SERVICE

Location.- Lat. 34°30'20", long. 119° 49'50", about 0.5 mile southwest of Highway 150.

Altitude.- About 2,300 feet, from topographic Map.

Description.- Stone-curbed pool in alluvium on hillside. Discharge measured at inflow to storage tank.

DATE	DISCHARGE		TEMP.
	Second-feet	Gals. per min.	°F
June 15, 1948	0.0022	1.0	
Feb. 16, 1949	.0025	1.1	
Apr. 13 (10:40 a.m.)	.0032	1.4	
May 24 (10:40 a.m.)	.0032	1.4	
June 24 (8:15 a.m.)	.0024	1.08	
Aug. 11 (8:15 a.m.)	.0018	.80	59
Sept 30 (8:20 a.m.)	.0013	.58	
Nov. 28 (8:20 a.m.)	.0016	.73	58
Dec. 28 (2:25 p.m.	.0017	.77	59
Jan. 26, 1950 (12:15 p.m.)	.0021	.94	59
Feb. 17 (11:30 a.m.)	.0046	2.1	
Mar. 9 (9:45 a.m.)	.0025	1.1	59
Apr. 18 (9:00 a.m.)	.0019	.86	60

SPRING - TOM KINEVAN

Location.- Lat. 34°30'30", long. 119° 49'40", about 0.3 mile southwest of Highway 150.

Altitude.- About 2,230 feet, from topographic map.

Description.- Dug pit in alluvial wash below sandstone ledge. Discharge measured in pipe line to storage tank.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
June 15, 1948		0.0074	3.3	
Feb. 16, 1949		.0076	3.4	
Apr. 13	(10:20 a.m.)	.0092	4.1	
May 24	(10:30 a.m.)	.0090	4.0	
June 24	(8:00 a.m.)	.0077	3.44	58
Aug. 11	(8:30 a.m.)	.0075	3.35	59
Sept 30	(8:05 a.m.)	.0051	2.27	
Nov. 28	(8:05 a.m.)	.0051	2.3	59
Dec. 28	(2:05 p.m.)	.0052	2.4	59
Jan. 26, 1950	(noon)	.0049	2.2	58
Feb. 17	(11:20 a.m.)	.0027	1.2	
Mar. 9	(9:35 a.m.)	.0059	2.6	59
Apr. 18	(8:30 a.m.)	.0041	1.8	57

SPRING - C. R. Holmes, Jr., et al

Location.- Lat. 34°30'20", long. 119°46'40", at Highway 150 near San Marcos Pass.

Altitude.- About 1,900 feet, from topographic map.

Description.- Seeps in alluvium along creek bed; one enclosed in concrete box. Discharge measured at takeoff from pipe line below concrete box.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
July 30, 1948		0.011	4.8	
Feb. 16, 1949		.011	5.0	
Apr. 13	(11:30 a.m.)	.013	5.6	
May 23	(1:52 p.m.)	.012	5.5	
June 23	(11:30 a.m.)	.014	6.3	62
Aug. 11	(11:10 a.m.)	.012	5.3	60
Sept. 30	(11:45 a.m.)	.011	4.9	
Nov. 1	(11:30 a.m.)	.010	4.7	62
Dec. 20	(11:25 a.m.)	.012	5.3	56
Jan. 17, 1950	(11:40 a.m.)	.012	5.4	54
Feb. 14	(11:06 a.m.)	.013	5.8	51
Mar. 9	(12:45 p.m.)	.013	5.8	60
Apr. 18	(11:15 a.m.)	.014	6.2	62

SAN JOSE CREEK AT HOLMES' PLACE, SAN MARCOS PASS

Location.- Lat. 34°30'10", long. 119°48'40", at Holmes' Place (Old Spaulding place) about 300 feet south of Highway 150 and about 1.0 mile northwest of the San Marcos Trout Club.

Altitude.- 1,890 feet, from topographic map.

Description.- Measurements made at next to the lowest dam below Spring #18.

Diversion.- Several diversions above and particularly Spring #18 which occurs in creek channel.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
July 30, 1948	(estimated)	0.016-.018	7-8	
Feb. 16, 1949		.017	7.5	
Apr. 13	(11:25 a.m.)	.027	12	
May 23	(1:45 p.m.)	.18	83	
June 23	(11:20 a.m.)	.028	12.4	
Aug. 11	(11:00 a.m.)	.026	11.9	56
Sept. 30	(11:30 a.m.)	.023	10.2	
Nov. 1	(11:15 a.m.)	.023	10.3	55
Dec. 20	(11:30 a.m.)	.17	77	44
Jan. 17, 1950	(11:30 a.m.)	.44	200	48
Feb. 14	(10:55 a.m.)	.32	140	48
Mar. 9	(12:30 p.m.)	.030	13	52
Apr. 18	(11:05 a.m.)	.018	8.1	59

SPRING - SAN MARCOS TROUT CLUB

Location.- Lat. 34°29'40", long. 119°48'30", about 0.5 mile west of Highway 150.

Altitude.- About 1,700 feet, from topographic map.

Description.- Wood-curbed seep in alluvium of creek bottom. Discharge measured at inflow from 3/4 -inch pipe line to settling box above orifices 1, 2 and 3 of Spring #21. After Feb. 10, 1949 discharge measured at storage tank and represents the combined flow of Springs 20 and 21.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
July 30, 1948		0.0033	1.5	
Feb. 10, 1949		.0033	1.5	
Apr. 11,	(11:45 a.m.)	.016	7.3	
May 24	(1:15 p.m.)	.033	15	
June 23	(9:45 a.m.)	.013	5.9	74
Aug. 11	(12:10 p.m.)	.010	4.69	72
Sept. 29	(9:30 a.m.)	.0082	3.7	
Nov. 1	(8:10 a.m.)	.0084	3.8	69
Nov. 28	(11:10 a.m.)	.0103	4.6	66
Dec. 14	(9:40 a.m.)	.020	9.0	55
Jan. 10, 1950	(8:15 a.m.)	.013	5.7	42
Feb. 13	(8:15 a.m.)	.041	18	55
Mar. 8	(8:25 a.m.)	.020	8.8	55
Apr. 19	(8:05 a.m.)	.014	6.4	59

SPRING - SAN MARCOS TROUT CLUB

Location.- Lat. 34°29'40", long. 119°48'20", about 0.3 mile west of Highway 150.

Altitude.- About 1,450 feet, from topographic map.

Description.- Four wood-curbed seeps in alluvial wash on hillside. Discharge measured at inflow to storage tank less discharge of Spring #20. (See records for Spring 20).

DATE	DISCHARGE		TEMP. °F
	Second-feet	Gals. per min.	
July 30, 1948	0.0071	3.2	
Feb. 10, 1949	.0094	4.2	

SPRING - RISHI SINGH GREYWALL

Location.- Lat. 34°29'40", long. 119°49'00".

Altitude.- About 1,700 feet, from topographic map.

Description.- Concreted pool on sandstone in creek bed; water from fractures. Discharge measured at overflow from storage tank.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
June 17, 1948		0.0065	2.9	
Feb. 10, 1949		.0076	3.4	
Apr. 13	(9:45 a.m.)	Pumping	Pumping	
May 24	(12:45 p.m.)	.012	5.2	
June 24	(10:50 a.m.)	.0068	3.03	59
Aug. 11	(10:30 a.m.)	.0057	2.57	59
Sept.30	(10:30 a.m.)	Pumping	Pumping	
Nov. 28	(10:30 a.m.)	.0062	2.8	57
Dec. 28	(1:05 p.m.)	.0069	3.1	
Jan. 26, 1950	(11:30 a.m.)	Pumping	Pumping	
Feb. 17	(10:50 a.m.)	.013	6.0	
Mar. 9	(12:15 p.m.)	Pumping	Pumping	
Apr. 18	(11:00 a.m.)	do	do	

SAN JOSE CREEK 1.0 MILE ABOVE PATTERSON AVE. BRIDGE

Location.- Lat. 34°28'30", long. 119°48'20", directly below fork in creek and about 1 mile north of Patterson Ave.

Altitude.- About 250 feet, from topographic map.

Description.- Measuring site is just below forks in natural creek bed; and is reached by private dirt road along left bank of creek.

Diversions.- Several minor diversions above in Trout Club area.

Previous measurements.- 1943-1945

DATE	DISCHARGE		TEMP.
	Second-feet	Gals. per min.	°F
Oct. 27, 1948 (4:00 p.m.)	0.07	31	
Nov. 15 (10:25 a.m.)	.12	54	
Nov. 29 (8:55 a.m.)	.062	28	
Dec. 13 (9:10 a.m.)	.16	74	
Jan. 3, 1949 (9:20 a.m.)	.32	144	
Mar. 17 (10:40 a.m.)	1.03	462	
Apr. 25 (11:05 a.m.)	.25	112	
May 11 (12:15 p.m.)	.085	38	
June 13 (8:15 a.m.)	.26	119	
July 19 (12:20 p.m.)	.044	19.7	
Aug. 12 (10:45 p.m.)	.084	37.7	66
Sept. 15 (1:40 p.m.)	.029	13.0	
Oct. 17 (1:25 p.m.)	.102	46	64
Nov. 16 (9:05 a.m.)	.19	87	56
Dec. 14 (10:30 a.m.)	.28	124	49
Jan. 10, 1950 (9:15 a.m.)	.83	374	44
Feb. 13 (10:05 a.m.)	1.5	680	50
Mar. 8 (9:20 a.m.)	.38	170	53
Apr. 13 (1:50 p.m.)	.23	100	64

WEST FORK SAN JOSE CREEK ABOVE RESERVOIR

Location.- Lat. 34°28'40", long. 119°49'20". On Golden West Farms property, about 0.1 mile above reservoir and 1.7 miles above junction with San Jose Creek.

Altitude.- About 430 feet, from topographic map.

Description.- Measurements made by current meter in stream channel or by volumetric measurement at culvert. Reached by ranch road off of Patterson Ave.

Diversion.- No known diversions above station.

DATE	DISCHARGE		TEMP.
	Second-feet	Gals. per min.	°F
Nov. 29, 1948 (10:00 a.m.)	0.24	108	
Dec. 2 (10:05 a.m.)	.25	112	
Dec. 13 (9:40 a.m.)	.26	117	
Jan. 3, 1949 (3:30 p.m.)	.33	150	
Feb. 23 (3:00 p.m.)	.27	120	
Mar. 17 (10:00 a.m.)	.34	153	
Apr. 25 (11:30 a.m.)	No flow	No flow	
May 11 (1:10 p.m.)	No flow	No flow	
June 13 (7:50 a.m.)	No flow	No flow	
July 19 (11:50 a.m.)	.020	9.0	
Aug. 12 (11:10 a.m.)	.022	9.9	61
Sept. 15 (1:15 p.m.)	.34	155	
Oct. 17 (1:45 p.m.)	.29	130	65
Nov. 16 (7:55 a.m.)	.22	97	60
Dec. 14 (11:00 a.m.)	No flow	No flow	
Jan. 10, 1950 (10:15 a.m.)	No flow	No flow	
Feb. 13 (12:15 p.m.)	.0050	2.2	51
Mar. 8 (9:55 a.m.)	.030	13	53
Apr. 13 (1:25 p.m.)	.014	6.3	59

SPRING - A. ARMANDO

Location.- Lat. 34°28'10", long. 119°49'40".

Altitude.- About 470 feet, from topographic map.

Description.- Cave in sandstone beds.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Oct. 18, 1948		No flow	No flow	
Feb. 23, 1949		Almost dry		
Mar. 31	(11:55 a.m.)	No flow	No flow	
May 26	(12:30 p.m.)	No flow	No flow	
June 20	(7:20 a.m.)	No flow	No flow	
July 19	(9:50 a.m.)	No flow	No flow	
Aug. 16	(10:30 a.m.)	No flow	No flow	
Sept.15	(11:55 a.m.)	No flow	No flow	
Oct. 12	(3:15 p.m.)	No flow	No flow	
Nov. 29	(12:50 p.m.)	No flow	No flow	
Dec. 13	(1:10 p.m.)	No flow	No flow	
Jan. 23, 1950	(11:45 a.m.)	No flow	No flow	
Mar. 17	(8:05 a.m.)	No flow	No flow	
Apr. 20	(8:00 a.m.)	No flow	No flow	

SPRING - A. ARMANDO

Location.- Lat. 34°28'10", long. 119°49'40".

Altitude.- About 400 feet, from topographic map.

Description.- Tunnel in hillside in nearly vertical sandstone beds. Discharge measured at mouth of tunnel.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Oct. 18, 1948		less than 0.002	less than 1	
Feb. 23, 1949		.00022	0.1	
Mar. 31	(12:15 p.m.)	No flow	No flow	
May 26	(12:15 p.m.)	No flow	No flow	
June 20	(7:25 a.m.)	No flow	No flow	
July 19	(9:55 a.m.)	No flow	No flow	
Aug. 16	(10:45 a.m.)	No flow	No flow	
Sept.15	(12:00 noon)	No flow	No flow	
Oct. 12	(3:00 p.m.)	No flow	No flow	
Nov. 29	(12:55 p.m.)	No flow	No flow	
Dec. 13	( )	No flow	No flow	
Jan. 23, 1950,	(12:00 noon)	No flow	No flow	
Mar. 17	(7:45 a.m.)	No flow	No flow	
Apr. 20	(8:15 a.m.)	No flow	No flow	

SPRING - SAWYER ESTATE

Location.- Lat. 34°29'10", long. 119°49'50".

Altitude.- About 1,250 feet, from topographic map.

Description.- Spring diverted at rock rubble dam across creek bed. Prior to June 20, 1949 at open pit in alluvial wash about 3/8 mile downstream.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Oct. 19, 1948		No flow	No flow	
Feb. 23, 1949		No flow	No flow	
Mar. 31,	(10:30 a.m.)	No flow	No flow	
May 26,	(12:00 noon)	No flow	No flow	
June 20	(9:50 a.m.)	0.019	8.6	65
July 19	(10:35 a.m.)	.019	8.5	
Aug. 16	(11:20 a.m.)	.008	3.6	59
Sept.15	(12:30 p.m.)	.008	3.6	
Nov. 29	(1:15 p.m.)	.012	5.4	56
Dec. 13	(2:10 p.m.)	.022	9.9	60
Jan. 23, 1950	(12:40 p.m.)	.035	15.7	
Mar. 17	(9:30 a.m.)	.019	8.5	52
Apr. 20	(8:50 a.m.)	.019	8.5	55

SPRING - SAWYER ESTATE

Location.- Lat. 34°29'40", long. 119°49'45", about 1.0 mile above point of diversion.

Altitude.- About 2,050 feet, from topographic map.

Description.- Seepage in stream channel at rock outcrop just above sight of Strawberry flats, as known to the Sawyer estate.

DATE	DISCHARGE		TEMP.
	Second-feet	Gals. per min.	°F
Oct. 12, 1949 (5:20 a.m.)	0.029	13	
Jan. 23, 1950 (1:15 p.m.)	.033	15	60
Apr. 20 (9:35 a.m.)	.026	12	57

SAN PEDRO CANYON CREEK AT FORKS

Location.- Lat. 34°28'40", long. 119°49'50", at Fork in creek about 0.3 mile upstream from Stow Company diversion and about 3.2 miles north of Highway 101.

Altitude .- About 600 feet, from topographic map.

Description.- Measuring site is at fork in creek where rock barrier presumably brings subsurface flow to surface and is reached by path from house at top of hill when Spring #28 is visited.

Diversion.- No known diversion above station.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Oct. 19, 1948		0.06	27	
Feb. 23, 1949		.10	47	
Mar. 31	(10:55 a.m.)	.072	32	
May 26	(11:30 a.m.)	.093	41.7	
June 20	(10:20 a.m.)	.10	46.2	58
July 19	(11:10 a.m.)	.063	28.3	
Aug. 16	(11:50 a.m.)	.069	31.0	61
Nov. 29	(1:30 p.m.)	.080	36	56
Dec. 13	(2:30 p.m.)	.11	49	49

SAN PEDRO CANYON CREEK ABOVE DIVERSION

Location.- Lat. 34°28'40", long. 119°50'10", in creek bed slightly upstream from Side Canyon to Spring #31, and at end of La Patera lane about 3.2 miles north of Highway 101.

Altitude.- About 400 feet, from topographic map.

Description.- Diversion works is concrete dike across creek channel with 6-inch outlet line.

Diversion.- No known diversions above station.

DATE	DISCHARGE		TEMP.
	Second-feet	Gals. per min.	°F
July 23, 1948 (estimated)	0.07	30	
Nov. 1 (2:10 p.m.)	.065	29	
Nov. 15 (11:10 a.m.)	.091	41	
Nov. 29 (10:50 a.m.)	.10	45	
Dec. 13 (10:25 a.m.)	.11	50	
Dec. 13 (11:45 a.m.)	.11	50	
Feb. 23, 1949 (9:29 a.m.)	.10	45	
Mar. 17 (9:10 a.m.)	.18	81	
Apr. 25 (1:20 p.m.)	.11	51	
May 26 (10:35 a.m.)	.11	49.4	
June 20 (8:50 a.m.)	.12	52	
July 19 (9:25 a.m.)	.084	37.7	
Aug. 16 (9:25 a.m.)	.079	35.5	61
Sept. 15 (11:35 a.m.)	.066	29.6	
Oct. 17 (10:45 a.m.)	.087	39	60
Nov. 29 (12:25 p.m.)	.12	54	55
Dec. 14 (12:25 p.m.)	.12	56	47
Jan. 10, 1950 (11:25 a.m.)	.14	63	49
Feb. 24 (11:55 a.m.)	.13	58	53
Mar. 15 (1:00 p.m.)	.15	66	
Apr. 13 (12:30 p.m.)	.11	51	59

SPRING - MRS. K. C. CARNATHAN & MRS. B. O'BANNON

Location.- Lat. 34°23'40", Long. 119°50'10"

Altitude.- About 425 feet, from topographic map.

Description.- Several seeps in landslide on valley walls. Discharge measured at 2-inch valve in pipe line.

DATE		DISCHARGE		TEMP. °F
		Second-feet	Gals. per min.	
July 23, 1948	(estimated)	0.06 - .08	25 - 35	
Oct. 19	(estimated)	.04	18 - 20	
Nov. 1	(2:50 p.m.)	.064	29	
Feb. 23, 1949	(9:00 a.m.)	.075	34	
Apr. 25	(1:05 p.m.)	.066	30	
May 26	(10:15 a.m.)	.064	28.6	
Aug. 16	(9:10 a.m.)	.062	27.8	66
Sept. 15	(11:25 a.m.)	.062	28.0	
Oct. 17	(10:30 a.m.)	.066	29	65
Nov. 29	(12:10 p.m.)	.065	29	65
Dec. 14	(12:15 p.m.)	.064	29	
Jan. 10	(11:05 a.m.)	.065	29	60
Feb. 24	(11:30 a.m.)	.066	29	59
Mar. 15	(1:25 p.m.)	.065	29	
Apr. 13	(12:15 p.m.)	.062	28	66

BARTLETT CANYON CREEK ABOVE DIVERSION

Location.- Lat. 34°28'40", long. 119°51'20", at end of Cameros Valley road 0.7 mile above junction with Dry Creek and about 3.7 miles north of Highway 101.

Altitude.- About 500 feet, from topographic map.

Description.- Measuring site is above diversion at solid rock barrier in creek channel which presumably brings most of the sub-surface flow to surface.

Diversion.- There are no known diversions above station.

DATE	DISCHARGE: Second-feet	DISCHARGE: Gals. per min.	TEMP. °F
July 28, 1948 (estimated)	0.05	24	
Oct. 29 (3:44 p.m.)	.032	14	
Nov. 15 (12:55 p.m.)	.039	18	
Nov. 29 (12:25 p.m.)	.038	17	
Dec. 13 (12:45 p.m.)	.045	20	
Feb. 18, 1949 (1:00 p.m.)	.047	21	
Mar. 17 (8:25 a.m.)	.092	41	
Apr. 26 (1:10 p.m.)	.054	24	
May 26 (9:20 a.m.)	.050	22.4	
June 13 (12:15 p.m.)	.045	20.2	
July 18 (12:45 p.m.)	.033	14.8	66
Aug. 16 (8:15 a.m.)	.034	15.3	61
Sept. 15 (10:25 a.m.)	.031	13.9	
Oct. 17 (8:30 a.m.)	.038	17.1	60
Nov. 14 (10:55 a.m.)	.057	26	58
Dec. 13 (10:25 a.m.)	.055	25	50
Jan. 25, 1950 (2:50 p.m.)	.059	26	53
Feb. 24 (10:40 a.m.)	.055	25	54
Mar. 15 (11:55 a.m.)	.049	22	53
Apr. 13 (11:25 a.m.)	.038	17	59

SPRING - T. B. BISHOP COMPANY

Location.- Lat. 34°29'30", long. 119°52'10"

Altitude.- About 800 feet, from topographic map.

Description.- Seeps in alluvium on creek bottom. Discharge measured above diversion dam.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
July 29, 1948		0.053	24	
Feb. 18, 1949		.067	30	
Mar. 31	(9:05 a.m.)	.17	75	
Apr. 26	(2:25 p.m.)	.11	48	
May 26	(8:15 a.m.)	.10	44.8	
June 13	(11:30 a.m.)	.084	37.5	
July 18	(12:00 noon)	.051	23.1	63
Aug. 15	(11:10 a.m.)	.062	27.8	59
Sept. 15	(9:35 a.m.)	.057	25.4	
Oct. 17	(9:00 a.m.)	.062	28	60
Nov. 14	(10:00 a.m.)	.066	29	57
Dec. 13	(9:30 a.m.)	.10	45	50
Jan. 25, 1950	(1:45 p.m.)	.13	60	50
Feb. 24	(9:30 a.m.)	.14	61	
Mar. 15	(11:00 a.m.)	.14	64	54
Apr. 13	(10:30 a.m.)	.14	62	57

Mc COY CANYON CREEK

Location.- Lat. 34°28'40", long. 119°52'15", on Bishop Company Ranch.

Altitude.- About 700 feet, from topographic map.

Description.- Flow that occurs in creek below Spring #35. Above in McCoy Canyon at Station #35 normally all flow is diverted. Flow at #35a is now being wasted below in creek channel.

Measuring site is at rock outcrop about 50 feet above horizontal well.

DATE	DISCHARGE		TEMP.
	Second-feet	Gals. per min.	°F
Jan. 25, 1950 (11:50 a.m.)	0.024	10.7	49
Apr. 13 (9:50 a.m.)	.017	7.6	57

HORIZONTAL WELL, McCOY CANYON, BISHOP RANCH CO.

Location.- Lat. 34°28'40", long. 119°52'15".

Altitude.- About 700 feet, from topographic map.

Description.- 1,200-foot horizontal well paralleling creek channel in a northerly direction in Sespe Sandstone.

DATE	DISCHARGE		TEMP.
	Second-feet	Gals. per min.	°F
Jan. 25, 1950 (11:30 a.m.)	0.38	168	67
Apr. 13 (9:45 a.m.)	.34	150	68

SPRING - OLAF HOVE

Location.- Lat. 34°28'50", long. 119°52'50"

Altitude.- About 600 feet, from topographic map.

Description.- Seeps in alluvium along creek bed - flow concentrated by dam across creek. Discharge measured at inflow to reservoir from settling box.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
July 22, 1948		0.0038	1.7	
Oct. 15		.0038	1.7	
Feb. 17, 1949	(4:00 p.m.)	.0069	3.1	
Mar. 31	(8:00 a.m.)	.011	4.8	
Apr. 25	(2:30 p.m.)	.015	6.9	
June 13	(10:30 a.m.)	.013	5.7	
July 18	(11:45 a.m.)	.0071	3.19	62
Aug. 15	(12:00 noon)	.0060	2.68	59
Sept. 15	(8:50 a.m.)	.0051	2.29	
Oct. 12	(12:30 p.m.)	.0023	1.04	63
Nov. 14	(8:35 a.m.)	.0063	2.8	55
Dec. 13	(8:30 a.m.)	.0092	4.1	44
Jan. 10,1950	(12:30 p.m.)	.010	4.5	53
Feb. 24	(8:25 a.m.)	.019	8.3	55
Mar. 15	(9:40 a.m.)	.017	7.8	52
Apr. 13	(8:30 a.m.)	.012	5.6	55

GLEN ANNE CREEK AT DAMSITE

Location.- Lat. 34°28'20", long. 119°52'40", at narrows in Glen Anne Canyon and at damsite of proposed reservoir at end of Tecolote Tunnel. About 2.9 miles north of Highway 101.

Altitude.- About 350 feet, from topographic map.

Description.-Measurement site at mouth of canyon in narrows of box canyon reached by Glen Anne Canyon road.

Diversions.- Olaf Hove diverts from Spring #36 in Creek bed about 0.5 mile above station.

DATE	DISCHARGE	
	Second-feet	Gals. per min.
Nov. 2, 1948 (10:30 a.m.)	No flow	No flow
Dec. 13 (1:50 p.m.)	No flow	No flow
Feb. 17, 1949 (3:45 p.m.)	No flow	No flow
Mar. 16 (1:45 p.m.)	No flow	No flow
Aug. 15 (12:20 p.m.)	No flow	No flow
Nov. 14 (8:45 a.m.)	No flow	No flow
Jan. 10, 1950 (12:10 p.m.)	No flow	No flow

DIVERSION - ELMWOOD DAIRIES

Location.- Lat. 34°28'10", long. 119°53'30".

Altitude.- About 320 feet, from topographic map.

Description.- Wood-curbed seep in alluvium of creek bottom. Discharge measured at inflow to settling box.

DATE	DISCHARGE		TEMP.
	Second-feet	Gals. per min.	°F
Aug. 16, 1948	0.0027	1.2	
Feb. 17, 1949	.0076	3.4	
Mar. 16 (12:55 p.m.)	.0047	2.1	
Mar. 30 (3:45 p.m.)	.036	16	
Apr. 26 (10:55 a.m.)	.13	60	
Sept.13 (10:00 a.m.)	.005	less than 1 (Est)	

ELLWOOD CANYON CREEK ABOVE DIVERSIONS

Location.- Lat. 34°28'10", long. 119°53'30", Narrows near end of Arroyo Canyon Road, about 2.8 miles north of Highway 101.

Altitude.- About 304 feet, from Bureau of Reclamation Bench Mark.

Description.- Measuring site in narrows at mouth of Canyon which is above all diversions. Measurements of extremely low flow made volumetric at diversion box 300 feet below.

Remarks.- There is abandoned 2-inch line to Spring #29 in creek bed about 0.5 mile above station.
(Note - 6-inch line to Dairies not operating Mar. 16, 1949; but it will be used later).

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Oct. 28, 1948	(5:30 p.m.)	No flow	No flow	
Nov. 15	(2:25 p.m.)	No flow	No flow	
Nov. 29	(1:25 p.m.)	No flow	No flow	
Feb. 17, 1949	(1:00 p.m.)	0.075	34	
Mar. 16	(1:05 p.m.)	.98	440	
Mar. 30	(2:00 p.m.)	.33	148	
Apr. 26	(10:55 p.m.)	.13	60	
June 20	( )	.031	13.8	62
July 19	(8:40 a.m.)	.017	7.6	59
Aug. 15	(1:25 p.m.)	.0026	1.17	62
Nov. 14	(12:30 p.m.)	.0010	.45	63
Dec. 19	(11:15 a.m.)	.25	114	
Jan. 23, 1950	(11:05 a.m.)	.33	149	55
Feb. 21	(12:45 p.m.)	.38	170	
Mar. 15	(8:45 a.m.)	.12	54	51
Apr. 12	(12:10 p.m.)	.12	52	53

ELLWOOD CANYON CREEK AT DOTY DIVERSION

Location.- Lat. 34°27'40", long. 119°53'30", at Doty diversion dam in Elwood Canyon, about 2.1 miles north of Highway 101.

Altitude.- About 225 feet, from topographic map.

Description.- Measuring site in Creek channel at old abandoned concrete diversion dam.

Diversions.- Several diversions above station.

DATE		DISCHARGE	
		Second-feet	Gals. per min.
Aug. 17, 1948		No flow	No flow
Feb. 17, 1949		No flow	No flow
Mar. 30	(1:15 p.m.)	No flow	No flow
Apr. 26	(10:15 a.m.)	No flow	No flow
June 20		No flow	No flow
July 19	(8:25 a.m.)	No flow	No flow
Aug. 15	(1:15 p.m.)	No flow	No flow
Sept. 13	(9:45 a.m.)	No flow	No flow
Nov. 14	(12:05 p.m.)	No flow	No flow
Dec. 19	(10:40 a.m.)	No flow	No flow

SPRING - ELLWOOD DAIRIES

Location.- Lat. 34°27'10", long. 119°53'30"

Altitude.- About 225 feet, from topographic map.

Description.- Timbered drift in sandstone bed on hillside. Discharge measured at outlet faucet by watering trough.

DATE		DISCHARGE		TEMP
		Second-feet	Gals. per min.	°F
Aug. 17, 1948		0.0018	0.8	
Mar. 30, 1949	(12:45 p.m.)	No flow	No flow	
Apr. 26	(9:15 a.m.)	.0012	.53	
June 20	( )	.00077	.35	
July 19	(8:05 a.m.)	No flow	No flow	
Aug. 15	(1:00 p.m.)	No flow	No flow	
Sept. 13	(9:25 a.m.)	No flow	No flow	
Nov. 14	(11:55 a.m.)	.000088	.040	
Dec. 19	(10:05 a.m.)	.0012	.56	
Jan. 23, 1950	(10:15 a.m.)	.0029	1.30	
Feb. 21	(12:25 p.m.)	No flow	No flow	
Mar. 15	(8:30 a.m.)	No flow	No flow	
Apr. 12	(11:30 a.m.)	.000075	.034	

SPRING - ELLWOOD DAIRIES

Location.- Lat. 34°27'00", Long. 119°53'40".

Altitude.- About 160 feet, from topographic map.

Description.- Former seep in alluvium of valley floor.

DATE	DISCHARGE: Second-feet	DISCHARGE: Gals. per min	Water level in feet below reference point
Aug. 18, 1948	No flow	No flow	
Feb. 17, 1949	No flow	No flow	
Mar. 30, (1:00 p.m.)	No flow	No flow	18.97
Apr. 26 (9:25 a.m.)	No flow	No flow	17.38
June 20 (11:20 a.m.)	No flow	No flow	15.25
July 19 (8:15 a.m.)	No flow	No flow	15.40
Aug. 15 (1:10 p.m.)	No flow	No flow	15.34
Sept. 13 (9:30 a.m.)	No flow	No flow	15.84
Nov. 14 (12:00 noon)	No flow	No flow	16.03
Dec. 19 (10:30 a.m.)	No flow	No flow	14.12
Jan. 23, 1950 (10:30 a.m.)	No flow	No flow	13.28
Feb. 21 (12:30 p.m.)	No flow	No flow	12.77
Mar. 15 (8:35 a.m.)	No flow	No flow	12.78
Apr. 12 (11:50 a.m.)	No flow	No flow	12.67

SPRING - ELLWOOD DAIRIES

Location.- Lat. 34°26'40", long. 119°53'40".

Altitude.- About 150 feet, from topographic map.

Description.- Open excavated pool in landslide on valley side.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Aug. 18, 1948		No flow	No flow	
Feb. 17, 1949		Practically no flow	Practically no flow	
Mar. 30	(12:30 p.m.)	No flow	No flow	
Apr. 26	(9:00 a.m.)	No flow	No flow	
June 20	(12:00 noon)	No flow	No flow	
July 19	(7:55 a.m.)	No flow	No flow	
Aug. 15	(12:50 p.m.)	No flow	No flow	
Sept. 13	(9:20 a.m.)	No flow	No flow	
Nov. 14	(11:45 a.m.)	No flow	No flow	
Dec. 19	(9:50 a.m.)	No flow	No flow	

WINCHESTER CANYON CREEK

Location.- Lat. 34°28'50", 119°54'20", at end of Winchester Canyon Road and about 3.4 miles north of Highway 101.

Altitude.- About 550 feet, from topographic map.

Description.- Measuring site at abandoned spring in creek bed.

Diversions.- No known diversions above station

Remarks.- On Nov. 15, 1948, Mr. Hollister, property owner below, stated he may redevelop spring here which has been abandoned and was dry on this date.

DATE	DISCHARGE		TEMP.
	Second-feet	Gals. per min.	°F
Nov. 2, 1948 (9:30 a.m.)	No flow	No flow	
Nov. 15 (2:50 p.m.)	No flow	No flow	
Nov. 29 (1:55 p.m.)	No flow	No flow	
Mar. 16, 1949 (12:35 p.m.)	No flow	No flow	
Apr. 26 (8:25 a.m.)	No flow	No flow	
Aug. 15 (10:40 a.m.)	No flow	No flow	
Nov. 14 (1:30 p.m.)	No flow	No flow	
Dec. 14 (1:15 p.m.)	No flow	No flow	
Jan. 23, 1950 (9:40 a.m.)	No flow	No flow	
Mar. 15 (7:55 a.m.)	No flow	No flow	
Apr. 12 (11:15 a.m.)	No flow	No flow	

TECOLOTE CANYON CREEK ABOVE DIVERSION NEAR ELLWOOD

Location.- Lat. 34°29'20", long. 119°54'30", about 0.4 mile north of end of road through Tecolote Ranch, and about 4.0 miles north of Highway 101.

Altitude.- About 720 feet, from topographic map.

Description.- During extreme low flow the measuring site is about 1,500 feet above Tecolote Ranch diversion at outcrop, at all other times the flow is measured at another rock outcrop about 100 feet above diversion.

Diversion.- No known diversions above this station.

DATE	DISCHARGE		TEMP. °F
	Second-feet	Gals. per min.	
Feb. 15, 1946 (1:10 p.m.)	0.42	190	
Apr. 18 (10:05 a.m.)	.97	440	
Apr. 7, 1947 (2:30 p.m.)	1.42	640	
May 15 (9:00 a.m.)	.06	27	
June 18	.02	9.0	
July 17 (10:40 a.m.)	a .005	2.2	
Dec. 5 (10:45 a.m.)	.045	20	
Jan. 9, 1948 (10:00 a.m.)	.13	60	
Feb. 18 (10:00 a.m.)	.13	60	
Mar. 18 (11:00 a.m.)	.21	92	
Apr. 15 (9:45 a.m.)	.27	120	
May 14 (9:00 a.m.)	.061	27	
June 11 (10:30 a.m.)	.061	27	
July 21 (8:15 a.m.)	.011	4.9	
Aug. 19 (10:20 a.m.)	No flow	No flow	
Sept. 15 (9:05 a.m.)	No flow	No flow	
Oct. 15	No flow	No flow	
Oct. 19 (10:00 a.m.)	No flow	No flow	
Nov. 15 (3:45 p.m.)	No flow	No flow	
Dec. 13 (2:45 p.m.)	No flow	No flow	
Jan. 17, 1949 (10:05 a.m.)	.18	81	
Mar. 16 (11:45 a.m.)	1.14	510	
Apr. 25 (10:10 a.m.)	.10	45	
May 13 (12:20 p.m.)	.061	27	
June 20 (12:40 p.m.)	.065	29.2	
July 18 (10:10 a.m.)	No flow	No flow	
Aug. 15 (10:15 a.m.)	No flow	No flow	
Sept. 13 (9:00 a.m.)	No flow	No flow	
Oct. 12 (11:30 a.m.)	No flow	No flow	
Nov. 15 (11:50 a.m.)	No flow	No flow	
Dec. 19 (1:00 p.m.)	.23	102	52
Jan. 19, 1950 (10:50 a.m.)	.71	320	52
Feb. 23 (8:45 a.m.)	.55	250	
Mar. 14 (12:45 p.m.)	.21	93	53
Apr. 12 (9:45 a.m.)	.18	83	54

a Estimated.

SPAULDING RANCH DIVERSION FROM TECOLOTE CANYON CREEK NEAR ELWOOD

Location.- Lat. 34°28'45", long. 119°43'40", about 3 miles north of Highway 101.

Altitude.- About 400 feet, from topographic map.

Description.- Volumetric measuring device 1,500 feet below point of diversion at valve on 6-inch conduit to reservoir.

DATE		DISCHARGE		TEMP.
		Second feet	Gals. per min.	°F
Nov. 15, 1949	(12:10 p.m.)	0.029	13	60
Feb. 23, 1950	(9:15 a.m.)	No meast.	No meast.	
Mar. 15		.23	100	
Mar. 20		.18	80	
Apr. 12	(10:45 a.m.)	.25	110	

SPRING - L. G. DREYFUS ESTATE

Location.- Lat. 34°28'30", long. 119°55'40".

Altitude.- About 350 feet, from topographic map.

Description.- Two concrete-curbed seeps at foot of hill. Discharge measured at settling box.

DATE	DISCHARGE		TEMP.
	Second-feet	Gals. per min.	°F
Jan. 17, 1949 (10:15 a.m.)	0.00027	0.12	
Mar. 30 (3:00 p.m.)	.00015	.067	
May 13 (10:50 a.m.)	.00023	.10	
June 20 (2:30 p.m.)	.00015	.069	
July 18 (9:25 a.m.)	.00016	.071	
Aug. 15 (9:40 a.m.)	Pract. dry		
Sept 13 (8:20 a.m.)	Pract. dry		
Oct. 12 (10:40 a.m.)	.000061	.028	
Nov. 15 (10:55 a.m.)	.000051	.023	
Dec. 21 (8:10 a.m.)	.00010	.047	52
Jan. 19, 1950 (9:15 a.m.)	.00034	.15	53
Feb. 21 (11:00 a.m.)	.000099	.044	
Mar. 14 (11:35 a.m.)	.000085	.038	57
Apr. 12 (8:50 a.m.)	.000093	.042	63

MIDDLE FORK, EAGLE CANYON CREEK

Location.- Lat. 34°29'00", long. 119°55'40", in Eagle Canyon at upper-most diversion about 3.0 miles north of Highway 101.

Altitude.- About 500 feet, from topographic map.

Description.- Measuring site at diversion box 2,600 feet above Eagle Canyon Road. The 2-inch line from this diversion box broken and the diversion abandoned.

Diversion.- No known diversions above this station.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Oct. 18, 1948		No flow	No flow	
Jan. 17, 1949	(12:45 p.m.)	0.0078	3.5	
Mar. 30	(9:15 a.m.)	.014	6.3	
May 13	(10:15 a.m.)	No flow	No flow	
June 20	(1:45 p.m.)	No flow	No flow	
July 18	(8:50 a.m.)	No flow	No flow	
Aug. 15	(9:00 a.m.)	No flow	No flow	
Sept. 13	(7:50 a.m.)	No flow	No flow	
Oct. 17	(10:05 p.m.)	No flow	No flow	
Nov. 15	(10:15 a.m.)	No flow	No flow	
Dec. 21	(8:35 a.m.)	No flow	No flow	
Jan. 19,1950	(9:40 a.m.)	No flow	No flow	
Feb. 21	(10:35 a.m.)	No flow	No flow	
Mar. 14	(11:00 a.m.)	No flow	No flow	
Apr. 12	(8:00 a.m.)	No flow	No flow	

EAGLE CANYON CREEK NEAR ELLWOOD

Location.- Lat. 34°28'50", long. 119°56'00", at uppermost diversion about 0.2 mile above middle fork of Eagle Canyon Creek and about 2.9 miles north of Highway 101.

Altitude.- About 425 feet, from topographic map.

Description.- Measuring site above junction box (stamped Smith Bros. 1924)

Diversion.- None above measuring point.

Remarks.- This diversion used by the Dreyfus estate does not look as though it were being used at the present time.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Feb. 15, 1946		less than 0.02	less than 9	
Mar. 15	(3:30 p.m.)	less than .01	less than 5	
Apr. 7, 1947	(3:50 p.m.)	.01	4.5	
May 5	(3:20 p.m.)	.01	4.5	
Dec. 5	(10:10 a.m.)	No flow	No flow	
Jan. 9, 1948	(9:30 a.m.)	No flow	No flow	
Feb. 18	(9:05 a.m.)	No flow	No flow	
Mar. 18	(9:30 a.m.)	No flow	No flow	
Apr. 15	(9:00 a.m.)	No flow	No flow	
May 14	(8:15 a.m.)	No flow	No flow	
June 11	(9:30 a.m.)	No flow	No flow	
July 21	(7:30 a.m.)	No flow	No flow	
Aug. 19	(9:15 a.m.)	No flow	No flow	
Sept. 15	(8:30 a.m.)	No flow	No flow	
Oct. 19	(10:30 a.m.)	No flow	No flow	
Nov. 17	(10:45 a.m.)	No flow	No flow	
Dec. 13		No flow	No flow	
Jan. 17, 1949	(2:20 p.m.)	.0020	.91	
Mar. 16	(10:10 a.m.)	.073	33	
Apr. 25	(9:15 a.m.)	.015	6.7	
May 13	(9:35 a.m.)	.007	3.1	
June 20	(2:10 p.m.)	.010	4.49	
July 18	(9:a.m.	.0023	1.03	
Aug. 15	(9:15 a.m.)	.0022	.99	
Sept. 13	(8:05 a.m.)	.003	1.4	
Oct. 12	(10:15 a.m.)	.0034	1.53	
Nov. 15	(10:30 a.m.)	.0032	1.44	55
Dec. 21	(8:50 a.m.)	.010	4.6	
Jan. 19, 1950	(9:45 a.m.)	.048	22	51
Feb. 21	(10:45 a.m.)	.058	26	
Mar. 14	(11:15 a.m.)	.032	14	54
Apr. 12	(8:20 a.m.)	.028	13	

DOS PUEBLOS CREEK NEAR NAPLES.

Location.- Lat. 34°29'10", long. 119°57'10", at diversion of Dos Pueblos Ranch about 2.6 miles north of Highway 101 and about 2.9 miles north of Naples.

Established.- Recorder started at 3:00 p.m., Feb. 21, 1949.

Gage.- Recorder Stevens type F # 12805-49 (8 day)

Altitude.- About 520 feet, from topographic map.

Description.- Control is a combination 90° V-notch weir and overflow weir. Measuring site about 150 feet upstream.

Diversion.- No known diversions above station.

DATE		DISCHARGE	
		Second-feet	Gals. per min.
Feb. 15, 1946	(10:50 a.m.)	0.91	410
Mar. 15	(2:40 p.m.)	.75	340
Apr. 18	(8:35 a.m.)	1.20	540
May 5, 1947	(2:30 p.m.)	.52	230
June 18	(9:00 a.m.)	.40	180
July 17	(8:40 a.m.)	.40	180
Aug. 7	(2:15 p.m.)	.17	76
Sept. 10	(8:35 a.m.)	.40	180
Oct. 2	(8:45 a.m.)	.29	130
Dec. 5	(9:10 a.m.)	.49	220
Jan. 5, 1948	(8:50 a.m.)	.58	260
Feb. 18	(8:20 a.m.)	.67	300
Mar. 18	(8:45 a.m.)	.47	210
Apr. 16	(8:35 a.m.)	.64	290
May 14	(7:40 a.m.)	.47	210
June 11	(8:45 a.m.)	.39	180
July 21	(9:10 a.m.)	.33	150
Aug. 19	(8:50 a.m.)	.19	85
Sept. 15	(7:20 a.m.)	.052	23
Oct. 19	(11:10 a.m.)	.27	120
Oct. 22	(2:50 p.m.)	.28	130
Oct. 22	(3:05 p.m.)	.21	94
Oct. 22	(3:20 p.m.)	.21	94
Nov. 2		.23	100
Nov. 17	(12-noon)	.26	120
Dec. 14	(12:55 p.m.)	.36	160
Jan. 17, 1949	(3:45 p.m.)	.47	210
Feb. 2	(12:35 p.m.)	.50	220
Feb. 7	(11:05 a.m.)	.88	400
Mar. 4	(10:15 a.m.)	7.2	3200
Mar. 11	(12:25 p.m.)	6.9	3100
Mar. 16	(8:40 a.m.)	2.09	940
Mar. 29	(3:05 p.m.)	.89	400
Apr. 25	(8:10 a.m.)	.54	240

DOS PUEBLOS CREEK NEAR NAPLES - Contd.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
May 13, 1949	(8:30 a.m.)	0.48	215	
June 21	(8:00 a.m.)	.43	195	
July 18	(8:10 a.m.)	.49	220	
Aug. 15	(8:15 a.m.)	.33	148	
Sept. 9	(10:25 a.m.)	.29	131	
Oct. 12	(9:20 a.m.)	.24	110	
Nov. 15	(9:50 a.m.)	.68	310	55
Nov. 29	(10:50 a.m.)	.78	350	55
Dec. 15	(1:10 p.m.)	.97	440	50
Jan. 9, 1950	(11:10 a.m.)	.56	250	
Jan. 11	(9:00 a.m.)	3.2	1400	
Feb. 21	(9:05 a.m.)	1.3	590	
Mar. 14	(9:45 a.m.)	.86	390	50
Apr. 11	(12:20 p.m.)	.68	300	

DOS PUEBLOS RANCH WELL ABOVE DIVERSION IN DOS PUEBLOS CANYON

Location.- Lat. 34°29'15", long. 119°57'10" about 1/4 mile above diversion.

Altitude.- About 550 feet, from topographic map.

Description.- Vertical well on west bank 50 feet from creek bed, drilled in 1949.

DATE	DISCHARGE		Water level in feet below reference point
	Second-feet	Gals. per min.	
June 21, 1949 (8:00 a.m.)	No flow	No flow	12.53
July 18 (8:25 a.m.)	No flow	No flow	13.01
Feb. 21, 1950 (9:40 a.m.)	No flow	No flow	14.90
Mar. 14 (10:20 a.m.)	No flow	No flow	14.52

WELL - UPPER HORIZONTAL WELL ON THE DOS PUEBLOS RANCH

Location.- Lat. 34°31'05", long. 119°56'50", about 2.5 miles upstream from Dos Pueblos Ranch company's point of diversion and on the easterly side of the West Fork of Dos Pueblos Canyon Creek near Naples.

Altitude.- 1,985 feet. (Furnished by Ranch Co.).

Description.- 3-inch cased horizontal well extending 1,300 feet in northerly direction. This well is referred to as No. 129 by Dos Pueblos Ranch Company.

		Second-feet	Gals. per min.	°F
Dec. 15, 1949	(11:25 a.m.)	0.60	27	60
Feb. 21, 1950	(8:30 a.m.)	well closed		

WELL - HORIZONTAL WELL, DOS PUEBLOS RANCH

Location.- Lat. 34°31'00", long. 119°56'55", about 100 feet downstream from Station 50 and on the westerly side of the West Fork of Dos Pueblos Canyon Creek near Naples.

Altitude.- About 1950 feet, from figure furnished by Dos Pueblos Ranch Company.

Description.- Two 3-inch cased holes: (131a) is 1415 feet and (131b) 350 feet in a northerly direction. The two holes have a common discharge pipe.

DATE	DISCHARGE		TEMP.
	Second-feet	Gals. per min.	°F
Dec. 15, 1949 (11:35 a.m.)	0.63	280	60
Feb. 21, 1950 (8:30 a.m.)	cut off	cut off	

SPRING - W. H. WOODS

Location.- Lat. 34°29'30", long. 119°57'50"

Altitude.- About 750 feet, from topographic map.

Description.- Seepage intercepted by 345 foot tunnel in mountainside. Discharge measured at end of pipe line to reservoir.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals per min.	°F
Nov. 1, 1948	(11:00 a.m.)	0.004	1.8	
Nov. 18		.0036	1.6	
Jan. 18, 1949	(10:25 a.m.)	.0055	2.4	
Mar. 15	(3:00 p.m.)	.026	12	
Apr. 27	(10:50 a.m.)	.0075	3.4	
May 13	(1:30 p.m.)	.0061	2.7	
June 21	(9:15 a.m.)	.0055	2.46	
July 21	(12:45 p.m.)	.0040	1.78	
Aug. 16	(1:15 p.m.)	.0037	1.65	79
Sept. 9	(8:50 a.m.)	.0035	1.55	61
Oct. 14	(8:50 a.m.)	.0035	1.58	62
Nov. 15	(9:05 a.m.)	.0044	1.95	65
Dec. 21	(10:30 a.m.)	*	*	
Jan. 19,1950	(8:00 a.m.)	*	*	
Feb. 21	(1:45 p.m.)	*	*	
Mar. 14	(9:10 a.m.)	.010	4.5	55
Apr. 11	(11:30 a.m.)	.0083	3.7	65

* Reservoir full - inlet pipes submerged.

LAS VARAS CANYON CREEK ABOVE DIVERSIONS.

Location.- Lat. 34°29'20", long. 119°57'50", at end of roadway, above Lemon Grove in Las Varas Canyon about 2.3 miles north of Highway 101.

Altitude.- About 550 feet, from topographic map.

Description.- Measuring site in stream channel above uppermost diversion.

DATE		DISCHARGE	
		Second-feet	Gals. per min.
Nov. 29, 1948		No flow	No flow
Dec. 14	(1:25 p.m.)	No flow	No flow
Jan. 18, 1949	(10:00 a.m.)	No flow	No flow
May 13	(1:20 p.m.)	No flow	No flow
June 21	(9:15 a.m.)	No flow	No flow
Jan. 19, 1950	(7:55 a.m.)	No flow	No flow

LAS VARAS CANYON CREEK AT STATE DIVERSION

Location.- Lat. 34°26'30", long. 119°37'50", at diversion dam in Las Varas Canyon on Russell L. Doty property, about 18 miles north of Highway 101.

Altitude.- About 400', from topographic map.

Description.- Measuring site in natural channel above diversion. Diversion made through a 3-inch line to wooden tank about 2,000 feet downstream.

Diversion.- There are several diversions above this point of measurement.

DATE	DISCHARGE	
	second-feet	Gals. per min.
Dec. 13, 1948	No flow	No flow
Jan. 18, 1949 (10:05 a.m.)	No flow	No flow
Mar. 29 (12:45 p.m.)	No flow	No flow
Apr. 27 (10:40 a.m.)	No flow	No flow
May 13 (1:10 p.m.)	No flow	No flow
June 21 (9:05 a.m.)	No flow	No flow
July 21 (11:55 a.m.)	No flow	No flow
Aug. 16 (1:00 p.m.)	No flow	No flow
Sept. 9 (9:00 a.m.)	No flow	No flow
Oct. 14 (8:30 a.m.)	No flow	No flow
Nov. 15 (8:55 a.m.)	No flow	No flow
Dec. 21 (9:45 a.m.)	No flow	No flow

LAS VARAS CANYON CREEK AT LOWER DOTY DIVERSION

Location.- Lat. 34°28'00", long. 119°58'00", at diversion dam in Las Varas Canyon on Russell E. Doty property, about 0.7 mile north of Highway 101.

Altitude.- About 240', from topographic map.

Description.- Discharge obtained by measuring the diversion and waste bypassing the diversion.

Diversions.- Several above.

Remarks.- This is lowest diversion in canyon with several diversions and deep wells above.

DATE	DISCHARGE		TEMP.
	Second-feet	Gals per min.	°F
Dec. 13, 1948	0.013	5.95	
Jan. 18, 1949 (9:00 a.m.)	.014	6.4	
Mar. 29 (12:20 p.m.)	.018	8.1	
Apr. 27 (10:20 a.m.)	.017	7.6	
May 13 (1:00 p.m.)	No meast.	No meast.	
June 21 (8:50 a.m.)	No meast.	No meast.	
July 21 (11:45 a.m.)	.0049	2.19	
Aug. 16 (12:50 p.m.)	.0029	1.28	63
Sept. 9 (9:15 a.m.)	Unable to measure		
Oct. 14 (8:25 a.m.)	.0072	3.2	60
Nov. 15 (8:30 a.m.)	.010	4.5	50
Dec. 21 (9:30 a.m.)	.018	8.1	40
Jan. 19, 1950 (8:35 a.m.)	.016	7.4	
Feb. 21 (1:20 p.m.)	.016	7.3	
Mar. 14 (8:50 a.m.)	.018	7.9	46
Apr. 11 (11:10 a.m.)	.016	7.1	57

GATO CANYON CREEK ABOVE DIVERSIONS

Location.- Lat. 34°29'50", 119°58'10", at end of roadway up Gato Canyon, about 2.8 miles north of Highway 101.

Altitude.- About 1,100 feet, from topographic map.

Description.- Measuring site in stream channel about 50 feet above diversion. During low flow periods, volumetric measurements made in junction box about 200 feet below point of diversion, owned by Edwards estate.

Diversion.- No known diversions above station.

DATE	DISCHARGE		TEMP. °F
	Second-feet	Gals. per min.	
Nov. 1, 1948 (9:30 a.m.)	No flow	No flow	
Nov. 17 (12:45 p.m.)	No flow	No flow	
Nov. 22	No flow	No flow	
Nov. 30 (11:30 a.m.)	No flow	No flow	
Dec. 14 (12:15 p.m.)	No flow	No flow	
Jan. 18, 1949 (12-noon)	0.050	22	
Mar. 24 (9:40 a.m.)	.56	250	
Apr. 27 (12:30 p.m.)	.063	28	
May 12 (1:20 p.m.)	.076	34	
June 21 (10:00 a.m.)	.050	22.3	
July 21 (11:25 a.m.)	.0036	1.63	
Aug. 17 (7:30 a.m.)	No flow	No flow	
Oct. 14 (7:45 a.m.)	No flow	No flow	
Nov. 15 (8:00 a.m.)	No flow	No flow	
Dec. 27 (8:30 a.m.)	.20	90	
Jan. 23, 1950 (8:15 a.m.)	.31	137	54
Feb. 20 (2:30 p.m.)	.32	140	
Mar. 14 (8:00 a.m.)	.096	43	49
Apr. 11 (9:45 a.m.)	.078	35	57

LAS YEGUAS CANYON CREEK

Location.- Lat. 34°28'20", long. 119°59'30", in Las Yeguas Canyon at road-crossing about 0.9 mile north of Highway 101.

Altitude.- About 190 feet, from topographic map.

Description.- Measurements made volumetrically or with current meter in the channel near the road-crossing.

Diversions.- No known diversions above station.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Nov. 1, 1948	(8:45 a.m.)	0.004	1.8	
Nov. 17	(1:15 p.m.)	.017	7.8	
Nov. 23		.017	7.8	
Nov. 30		.019	8.6	
Dec. 14	(11:45 a.m.)	.024	11	
Jan. 18, 1949	(1:30 p.m.)	.032	14	
Mar. 15, 1949	(12:45 p.m.)	.096	43	
Apr. 27	(9:40 a.m.)	.054	24	
May 12	(12:15 p.m.)	.033	15	
June 21	(11:00 a.m.)	.029	13	
July 21	(10:35 a.m.)	.019	8.6	
Aug. 17	(8:30 a.m.)	.015	6.7	58
Sept. 9	(7:30 a.m.)	.013	5.8	59
Oct. 13	(	.014	6.2	58
Nov. 16	(12:50 p.m.)	.019	8.3	54
Dec. 21	(12:30 p.m.)	.042	19	45
Jan. 18, 1950	(12:25 p.m.)	.089	40	
Feb. 20	(11:55 a.m.)	.11	50	
Mar. 13	(12:30 p.m.)	.079	35	52
Apr. 11	(8:05 a.m.)	.066	29	49

SPRING - EDWARDS ESTATE

Location.- Lat. 34°28'00", long. 119°59'30"

Altitude.- About 130 feet from topographic map.

Description.- Wood-curbed spring box, 8 feet by 12 feet, east side of Las Yeguas Creek, at foot sandstone bluff. Discharge measured at 1-3/4 inch overflow pipe from spring box.

DATE	DISCHARGE		TEMP.
	Second-feet	Gals.per min.	°F
Nov. 23, 1948	0.020	9.2	
Mar. 29, 1949 (10:35 a.m.)	.027	12	
Apr. 27 (9:25 a.m.)	.026	12	
May 12 (12:25 p.m.)	No meas.	No meas.	
June 21 (11:05 a.m.)	.017	7.5	
July 21 (10:30 a.m.)	.029	13.2	
Aug. 17 (8:15 a.m.)	No meas.	No meas.	
Sept. 9 (7:45 a.m.)	No meas.	No meas.	
Sept. 9 (12:30 p.m.)	.019	8.6	
Oct. 13 (12;30 p.m.)	.020	8.8	65
Nov. 16 (1:27 p.m.)	.022	9.8	65
Dec. 21 (11:59 a.m.)	.023	10	65
Jan. 18, 1950 (12:10 p.m.)	.030	13	
Feb. 20 (11:45 a.m.)	.029	13	
Mar. 13 (12:25 p.m.)	.031	14	64
Apr. 11 (7:55 a.m.)	.030	14	65

LAS YEGUAS CANYON CREEK AT HIGHWAY 101.

Location.- Lat. 34°27'40", long. 120°00'00", at Highway 101 road crossing, about 0.2 mile north of the Pacific Ocean.

Altitude.- About 40', from topographic map.

Description.- Measuring site in the natural stream channel just below the bridge culvert.

Diversion.- Edwards Estate diverts from Spring #62 above.

DATE	DISCHARGE		TEMP.
	Second-feet	Gals. per min.	°F
Nov. 23, 1948	0.11	50	
Jan. 18, 1949 (2:05 p.m.)	.16	72	
Mar. 15 (1:05 p.m.)	.25	110	
Apr. 27 (9:50 a.m.)	.16	71	
May 12 (12:40 p.m.)	.11	48	
June 21 (11:35 a.m.)	.11	50	
July 21 (10:50 a.m.)	.097	43.6	
Aug. 17 (8:00 a.m.)	.10	45	59
Sept. 9 (7:55 a.m.)	.089	40	
Oct. 13 (1:00 p.m.)	.074	33	62
Nov. 16 (12:30 p.m.)	.15	67	57
Dec. 21 (11:00 a.m.)	.13	57	
Jan. 18, 1950 (11:33 a.m.)	.20	91	53
Feb. 20 (12:10 p.m.)	.25	110	
Mar. 13 (12:50 p.m.)	.25	110	58
Apr. 11 (9:05 a.m.)	.23	105	55

SPRING - GILA LAND COMPANY

Location.- Lat. 34°28'10", long. 110°00'30" .

Altitude.- About 230 feet, from topographic map.

Description.- Seep in creek bed.

DATE		DISCHARGE		TEMP.
		Second-feet	G.p.m. per in.	°F
Nov. 24, 1948		Almost dry	Almost dry	
Jan. 18, 1949		0.0020	0.88	
Mar. 29	(11:30 a.m.)	.0044	2.0	
May 12	(1:50 p.m.)	No flow	No flow	
Sept. 12	(10:50 a.m.)	No flow	No flow	
Oct. 13	(11:15 a.m.)	.00069	.31	59
Nov. 17	(9:30 a.m.)	No flow	No flow	
Dec. 27	(9:15 a.m.)	No flow	No flow	
Jan. 18, 1950	(1:20 p.m.)	No flow	No flow	
Feb. 20	(11:25 a.m.)	.0062	2.8	
Mar. 13	(12:05 p.m.)	.005	2.2	
Apr. 11	(8:45 a.m.)	.002	.90	54

CAPITAN CREEK ABOVE GILA LAND COMPANY DIVERSION

Location.- Lat. 34°29'40", long. 120°00'20", above diversion at end of roadway, about 2.4 miles north of highway 101.

Altitude.- About 800 feet, from topographic map.

Description.- Measuring site in natural channel about 200 feet upstream of the concrete diversion dam of Gila Land Company.

Diversion.- No known diversions above station.

DATE	DISCHARGE		TEMP.
	Second-feet	Gals. per min.	°F
Oct. 28, 1948 (11:10 a.m.)	0.094	42	
Nov. 17 (2:10 p.m.)	.037	17	
Nov. 24	.036	16	
Nov. 30 (10:00 a.m.)	.072	32	
Dec. 14 (10:50 a.m.)	.17	76	
Jan. 13, 1949 (3:10 p.m.)	.20	90	
Mar. 15 (11:35 a.m.)	1.08	485	
Apr. 27 (8:35 a.m.)	.30	135	
May 12 (11:15 a.m.)	.24	109	
June 21 (12 noon)	.13	58	59
July 21 (9:40 a.m.)	.012	5.4	
Aug. 17 (9:20 a.m.)	.033	15	59
Sept. 12 (10:15 a.m.)	No flow	No flow	
Oct. 13 (10:15 a.m.)	.0041	1.83	54
Nov. 17 (8:25 a.m.)	.047	21	55
Dec. 27 (11:55 a.m.)	.18	80	48
Jan. 18 (10:40 a.m.)	.42	190	49
Feb. 20 (10:40 a.m.)	.72	320	
Mar. 13 (11:30 a.m.)	.34	150	54
Apr. 10 (11:40 a.m.)	.24	106	54

SPRING - GEORGE M. WILLIAMS ESTATE

Location.- Lat. 34°29'10", long. 120°02'10"

Altitude.- About 300 feet from topographic map.

Description.- Seepage at foot of sandstone cliff.

DATE	DISCHARGE		TEMP.
	Second-feet	Gals. per min.	°F
Nov. 16, 1948 (estimated)	0.001	0.67	
Jan. 19, 1949 (9:15 a.m.)	.0031	1.4	
Mar. 29 (9:15 a.m.)	.0031	1.4	
May 12 (9:15 a.m.)	.0029	1.3	
June 21 (1:10 p.m.)	.0024	1.1	?
July 21 (8:45 a.m.)	.0030	1.4	62
Aug. 17 (10:30 a.m.)	.0027	1.2	66
Sept. 12 (9:10 a.m.)	.0025	1.1	63
Oct. 13 (9:45 a.m.)	.0029	1.3	62
Nov. 17 (10:10 a.m.)	.0027	1.2	62
Dec. 27 (12:50 p.m.)	.0029	1.3	62
Jan. 18, 1950 (9:05 a.m.)	.0030	1.4	59
Feb. 26 (9:15 a.m.)	.0027	1.2	
Mar. 13 (10:00 a.m.)	.0025	1.1	60
Apr. 10 (9:10 a.m.)	.0024	1.1	59

CORRAL CREEK

Location.- Lat. 34°29'00", long. 120°02'20", in Canada del Corral about 1.4 miles north of Highway 101.

Altitude.- About 250 feet, from topographic map.

Description.- Measuring site in natural channel at or near cattle pen.

Diversion.- From one spring above station.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Oct. 28, 1948	(10:15 a.m.)	0.031	14	
Nov. 19	(9:15 a.m.)	.037	17	
Nov. 30	(9:05 a.m.)	.022	9.9	
Dec. 14	(10:00 a.m.)	.029	13	
Jan. 19, 1949	(9:30 a.m.)	.11	50	
Mar. 15	(10:20 a.m.)	1.02	460	
May 12	(9:25 a.m.)	.14	65	
June 21	(1:15 p.m.	.058	26	
July 21	(8:35 a.m.)	.051	23	59
Aug. 17	(10:25 a.m.)	.031	14	59
Sept.12	(9:00 a.m.)	.028	12	59
Oct. 13	(8:35 a.m.)	.028	12.6	54
Nov. 17	(10:05 a.m.)	.025	11.4	50
Dec. 27	(1:00 p.m.)	.13	59	
Jan. 18, 1950	(9:10 a.m.)	.56	250	50
Feb. 20	(9:20 a.m.)	.47	210	
Mar. 13	(10:40 a.m.)	.26	120	50
Apr. 10	(9:20 a.m.)	.19	85	51

SPRING - GEORGE M. WILLIAMS ESTATE

Location.- Lat. 34°29'20", long. 120°02'30"

Altitude.- About 350 feet, from topographic map.

Description.- Flow from narrow canyon in sandstone. Discharge measured at outlet of natural pool.

DATE	DISCHARGE		TEMP.
	Second-feet	Gals. per min.	°F
Nov. 16, 1948	0.0089	4.0	
Jan. 19, 1949 (10:30 a.m.)	.0076	3.4	
Mar. 29 (9:45 a.m.)	.011	4.9	
May 12 (10:10 a.m.)	.0036	1.6	
Oct. 13 (9:00 a.m.)	.00063	.28	58
Nov. 17 (10:40 a.m.)	.0032	1.4	57
Dec. 27 (1:30 p.m.)	.006	2.7	
Jan. 18, 1950 (9:45 a.m.)	.0044	2.0	50
Feb. 20 (9:45 a.m.)	.0094	4.2	
Mar. 13 (10:25 a.m.)	.008	3.6	
Apr. 10 (10:00 a.m.)	.004	1.8	57

SPRING - COVARRUBIAS ESTATE

Location.- Lat. 34°28'20", long. 120°02'30".

Altitude.- About 100 feet, from topographic map.

Description.- Seepage into creek above diversion dam. Discharge measured at sandbox about 120 feet downstream from diversion dam.

DATE	DISCHARGE		TEMP.
	Second-feet	Gals. per min.	°F
Nov. 16, 1948	0.0045	2.0	
Mar. 29, 1949 (8:40 a.m.)	.40	180	
May 12 (10:30 a.m.)	.069	31	
June 21 (1:30 p.m.)	.028	12.6	
July 21 (8:20 a.m.)	.00090	.40	
Aug. 17 (10:15 a.m.)	.0027	1.2	
Sept. 12 (8:40 a.m.)	.011	4.9	
Oct. 13 (8:15 a.m.)	.004	1.8	
Nov. 17 (9:30 a.m.)	.002	.90	58
Dec. 27 (12:25 p.m.)	.10	45	53
Jan. 18, 1950 (8:35 a.m.)	.56	250	51
Feb. 20 (8:40 a.m.)	.52	240	
Mar. 13 (9:30 a.m.)	.30	140	
Apr. 10 (8:45 a.m.)	.27	120	51

SPRING - ERRO ESTATE

Location.- Lat. 34°29'40", long. 120°03'20".

Altitude.- About 430 feet, from topographic map.

Description.- Pool in creek bottom on sandstone beds.

DATE	DISCHARGE	
	Second-feet	Gals. per min.
Nov. 17, 1948	No flow	No flow
Jan. 21, 1949 (9:40 a.m.)	0.0014	0.62
May 12 (8:40 a.m.)	No flow	No flow
July 21 (8:00 a.m.)	No flow	No flow
Aug. 17 (11:05 a.m.)	No flow	No flow
Sept. 12 (8:10 a.m.)	No flow	No flow
Oct. 13 (7:30 a.m.)	No flow	No flow
Nov. 17 (11:35 a.m.)	No flow	No flow
Dec. 27 (2:10 p.m.)	No flow	No flow
Jan. 18, 1950 (8:05 a.m.)	No flow	No flow
Feb. 20 (8:00 a.m.)	No flow	No flow
Mar. 13 (9:10 a.m.)	No flow	No flow
Apr. 10 (8:10 a.m.)	No flow	No flow

CANADA DEL VENADITO CREEK

Location.- Lat. 34°29'40", long. 120°03'20", in Canada del Venadito, about 2.3 miles north of Highway 101.

Altitude.- About 430 feet, from topographic map.

Description.-Measuring site in stream channel at end of road.

Diversion.- None.

DATE	DISCHARGE	
	Second-feet	Gals. per min.
Oct. 28, 1948 (9:30 a.m.)	No flow	No flow
Nov. 30 (8:45 a.m.)	No flow	No flow
Dec. 14 (9:30 a.m.)	No flow	No flow
Mar. 15, 1949 (9:45 a.m.)	No flow	No flow

SPRING - GEORGE M. WILLIAMS ESTATE

Location.- Lat. 34°28'40", long. 120°03'20"

Altitude.- About 200 feet, from topographic map.

Description.- Seepage into uncurbed pool in narrow valley on hillside.

DATE	DISCHARGE	
	Second-feet	Gals. per min.
Nov. 17, 1948	No flow	No flow
Jan. 21, 1949 (9:15 a.m.)	0.00028	0.13
Mar. 29 (8:10 a.m.)	No flow	No flow
May 12 (8:05 a.m.)	No flow	No flow
June 22 (12:30 p.m.)	No flow	No flow
July 21 (7:45 a.m.)	No flow	No flow
Aug. 17 (11:00 a.m.)	No flow	No flow
Sept. 12 (7:50 a.m.)	No flow	No flow
Oct. 13 (7:15 a.m.)	No flow	No flow
Nov. 17 (11:20 a.m.)	No flow	No flow
Dec. 27 (1:45 p.m.)	No flow	No flow
Jan. 18, 1950 (7:40 a.m.)	No flow	No flow
Feb. 20 (7:45 a.m.)	No flow	No flow
Mar. 13 (8:30 a.m.)	No flow	No flow
Apr. 10 (7:40 a.m.)	No flow	No flow

SPRING - D. F. BATTLER

Location.- Lat. 34°31'50", long. 120° 03'00".

Altitude.- About 2,230 feet, from topographic map.

Description.- Stone-curbed seep, wood-curbed seep and minor uncurbed seeps in alluvium of steep canyon bottom. Discharge measured as overflow from settling box.

DATE	DISCHARGE	
	Second-feet	Gals. per min.
Aug. 27, 1948	0.010	4.6
Dec. 2	.010	4.6
May 28, 1949 (9:35 a.m.)	.012	5.6

SPRING - D. A. SATTLER

Location.- Lat. 34°32'00", long. 120°03'20",

Altitude.- About 2,270 feet from topographic map.

Description.- Wood-curbed seep in alluvium on hillside. Discharge measured at end of 1-inch pipe leading to tank.

DATE	DISCHARGE	
	Second-feet	Gals. per min.
Aug. 27, 1948	0.00040	0.18
Dec. 17	.00042	.19
Jan. 27, 1949 (3:00 p.m.)	No meas.	No meas.
May 28 (10:25 a.m.)	.00054	.24

SPRING - MRS. FLORENCE BROWN

Location.- Lat. 34°31'30", long. 120°03'20".

Altitude.- About 1,800 feet, from topographic map.

Description.- Stone-curbed pool west side of creek. Discharge measured at valve 50 feet below spring. Prior to April 21, 1950 discharge measured at end of 3/4-inch pipeline about 2000 feet below spring.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Nov. 8, 1948		0.00085	0.38	
Jan. 28, 1949	(11:20 a.m.)	.0011	.51	
May 25	(12:30 a.m.)	.00089	.40	
Sept. 14	(11:05 a.m.)	No meast.	No meast.	
Dec. 29	(11:15 a.m.)	No meast.	No meast.	
Mar. 10, 1950	(11:30 a.m.)	.0010	.45	85
Apr. 21	(12:10 p.m.)	.0069	3.1	60

SPRING - SAN ANTONIO ESTATE

Location.- Lat. 34°31'10", long. 120°04'00".

Altitude.- About 1,300 feet, from topographic map.

Description.- Spring rises through weathered shale on hillside.

DATE	DISCHARGE		TEMP.
	Second-feet	Gals. per min.	°F
Nov. 8, 1948	0.018-.022	8-10	
Jan. 28, 1949 (2:00 p.m.)	.019	8.6	
May 25 (1:05 p.m.)	.011	4.80	
Nov. 30 (1:30 p.m.)	.020	9.1	66
Dec. 29 (10:25 a.m.)	.023	10	63

SPRING - MRS. FLORENCE BROWN

Location.- Lat. 34°31'00", long. 100°03'30".

Altitude.- About 1,250 feet from topographic map.

Description.- Two small short tunnels dug into sandstone cliff about 45 feet above stream bed. Beginning Jan. 16, 1950 discharge measured at valve on canyon crossing about 200 feet below spring.

DATE	DISCHARGE		TEMP.
	Second-feet	Gals. per min.	°F
Nov. 15, 1948	0.0041	1.85	
Jan. 21, 1949 (3:25 p.m.)	.0069	3.1	
May 10 (10:10 a.m.)	.00082	.37**	
July 20 (12:00 noon)	.0036	1.64	
Sept. 12 (12:55 p.m.)	.0051	2.3	
Nov. 17 (1:45 p.m.)	.0033	1.5	
Dec. 29 (9:30 a.m.)	.0057	2.6 **	
Jan. 16, 1950 (11:30 a.m.)	.0044	2.0	61
Feb. 16, (9:45 a.m.)	*	*	
Mar. 10 (10:30 a.m.)	.0048	2.1	
Apr. 21 (1:05 p.m.)	.0041	1.8	60

** Measurement doubtful
* No measurement - Spring needs cleaning

SPRING - MRS. FLORENCE BROWN

Location.- Lat. 34°30'50", long. 120°03'40"

Altitude.- About 1,200 feet, from topographic map.

Description.- Drilled hole into sandstone cliff, 25 feet above creek. Discharge measured at end of ½-inch pipe.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Nov. 3, 1948		0.0026	1.17	
Jan. 21, 1949		.0046	2.1	
May 10	(10:00 a.m.)	.0042	1.9	
July 20	(12:20 p.m.)	.0050	2.2	76
Sept. 12	(12:30 p.m.)	.0053	2.4	
Nov. 17	(1:25 p.m.)	.0039	1.7	74
Dec. 29	(9:10 a.m.)	.0052	2.3	44
Jan. 16, 1950	(11:10 a.m.)	.0038	1.7	62
Feb. 16	(9:30 a.m.)	.0039	1.7	63
Mar. 10	(10:20 a.m.)	.0039	1.8	65
Apr. 21	(1:10 p.m.)	.0032	1.5	62

SPRING - WILLIAM FELIZ

Location.- Lat. 34°31'30", Long. 120°04'30"

Altitude.- About 2,000 feet, from topographic map.

Description.- Seepage from hole dug into hillside.

DATE	DISCHARGE		TEMP.
	Second-feet	Gals. per min.	°F
Dec. 2, 1948	No flow	No flow	
Jan. 28, 1949 (10:15 a.m.)	No flow	No flow	
Mar. 28 (10:05 a.m.)	0.0010	0.45	
May 25 (2:00 p.m.)	.00085	.38	
July 20 (11:25 a.m.)	.00076	.34	
Sept. 14 (11:35 a.m.)	.00018	.079	
Nov. 30 (12:35 p.m.)	No flow	No flow	
Dec. 29 (10:55 a.m.)	No flow	No flow	
Jan. 16, 1950 (12:40 p.m.)	.00025	.11	62
Feb. 16 (10:30 a.m.)	.00074	.33	
Mar. 10 (11:20 a.m.)	.00075	.34	63
Apr. 21 (12:35 p.m.)	.0015	.67	57

CANADA DEL REFUGIO CREEK

Location.- Lat. 34°30'30", long. 120°03'50", at forks of Canada del Refugio Creek near Refugio Guard Station about 3.0 miles north of Highway 101.

Altitude.- About 400 feet, from topographic map.

Description.- Measuring site at fork just below Circle-Bar-B Ranch and above diversion for 2½-inch line in creek bed, or during extremely low flows observations can be made by volumetric means at culvert about 100 yards upstream.

Diversion.- Only minor diversions above station.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Oct. 28, 1948	(8:39 a.m.)	0.12	54	
Nov. 19	(8:30 a.m.)	.11	49	
Nov. 30	(8:15 a.m.)	.095	43	
Dec. 3		.085	38	
Dec. 7		.11	49	
Dec. 14	(8:40 a.m.)	.14	63	
Jan. 21, 1949	(1:30 p.m.)	.19	85	
Mar. 15	(8:20 a.m.)	.70	314	
May 10	(9:35 a.m.)	.13	60	
June 22	(11:30 a.m.)	.076	34.3	
July 20	(12:30 p.m.)	.055	24.5	65
Aug. 17	(1:00 p.m.)	.070	32	65
Sept. 12	(11:50 a.m.)	.064	29	63
Oct. 14	(10:20 a.m.)	.084	38	63
Nov. 17	(1:00 p.m.)	.086	39	58
Dec. 29	(8:50 a.m.)	.13	57	47
Jan. 16, 1950	(10:40 a.m.)	.42	190	48
Feb. 16	(9:05 a.m.)	.39	180	53
Mar. 10	(9:35 a.m.)	.19	83	54
Apr. 21	(1:25 p.m.)	.15	67	59

SPRING - C. DAL POZZO & ALEGRIA ESTATE

Location.- Lat. 34°30'10", long. 120°04'00".

Altitude.- About 420 feet, from topographic map.

Description.- Seepage at foot of sandstone cliff. Discharge measured at east side of culvert under road.

DATE	DISCHARGE		TEMP.
	Second-feet	Gals. per min.	°F
Nov. 3, 1948	0.0018	0.82	
Dec. 2	.0017	.77	
Jan. 21, 1949 (1:20 p.m.)	.0032	1.4	
Mar. 28 (9:45 a.m.)	.0036	1.6	
May 10 (9:30 a.m.)	.0027	1.2	
June 22 (11:35 a.m.)	.0018	.80	
July 20 (12:40 p.m.)	.0015	.69	
Aug. 17 (12:40 p.m.)	.0013	.59	
Sept. 12 (11:45 a.m.)	.0011	.51	68
Oct. 14 (10:20 a.m.)	.0016	.74	65
Nov. 17 (12:50 p.m.)	.0019	.86	62
Dec. 29 (8:30 a.m.)	.0029	1.3	51
Jan. 16, 1950 (10:30 a.m.)	.0038	1.7	51
Feb. 16 (8:55 a.m.)	.0032	1.4	55
Mar. 10 (9:25 a.m.)	.0032	1.4	56
Apr. 21 (1:25 p.m.)	.0028	1.3	

SPRING - JOHN ALLGRIA

Location.- Lat. 34°30'10", long. 120°03'40".

Altitude.- About 450 feet from topographic map.

Description.- Drilled hole in sandstone cliff. Discharge measured by disconnecting union in pipe line near spring.

DATE	DISCHARGE		TEMP.
	Second-feet	Gals. per min.	°F
Jan. 28, 1949 (9:25 a.m.)	0.0024	1.09	
Mar. 28 (9:30 a.m.)	.0042	1.9	
May 10 (8:40 a.m.)	.0028	1.2	
Aug. 17 (12:25 p.m.)	.0058	2.6	
Oct. 14 (10:10 a.m.)	.0024	1.08	68
Nov. 17 (12:35 p.m.)	.0025	1.14	71
Dec. 29 (8:15 a.m.)	.0035	1.6	64
Jan. 16, 1950 (10:15 a.m.)	.0032	1.5	64
Feb. 1[illegible] ([illegible] a.m.)	.0031	1.4	61
Mar. 10 (9:00 a.m.)	.0028	1.2	65
Apr. 21 (1:55 p.m.)	.0027	1.2	65

SPRING - M. F. ERRO

Location.- Lat. 34°28'20", long. 120°04'10".

Altitude.- About 100 feet, from topographic map.

Description.- Uncurbed seep at foot of bluff, west side Refugio Creek. Discharge at end of 2-inch pipe to stock trough.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Dec. 2, 1948		0.0019	0.87	
Jan. 21, 1949	(11:40 a.m.)	.0020	.90	
Mar. 28	(8:45 a.m.)	.0017	.77	
May 10	(8:05 a.m.)	.0016	.71	
June 22	(11:45 a.m.)	.0016	.73	
July 20	(12:55 p.m.)	.0015	.69	
Aug. 17	(11:30 a.m.)	.00019	.084	
Sept. 12	(11:25 a.m.)	.00029	.13	70
Oct. 14	(9:35 a.m.)	One drop per 1.2 seconds.		
Nov. 17	(12:05 p.m.)	.0019	.87	67
Dec. 21	(1:15 p.m.)	.0021	.96	62
Jan. 16	(9:45 a.m.)	.0021	.96	61
Feb. 16	(8:17 a.m.)	.0019	.87	61
Mar. 10	(8:00 a.m.)	.0019	.85	60
Apr. 10	(12:30 p.m.)	.0017	.78	68

SPRING - M. F. ERRO

Location.- Lat. 34°28'20", long. 120°04'10" .

Altitude.- About 100 feet, from topographic map .

Description.- Seepage collected in shallow ditch at foot of bluff, west side Refugio Creek. Discharge measured at end of 2-inch pipe to stock trough.

DATE	DISCHARGE		TEMP.
	Second-feet	Gals. per min.	°F
Dec. 2, 1948	0.00067	0.30	
Jan. 21, 1949 (11:45 a.m.)	.00017	.075	
Mar. 28, (8:30 a.m.)	.000033	.015	
May 10 (8:10 a.m.)	.00075	.34	
June 22 (11:50 a.m.)	.00050	.22	
July 20 (1:00 p.m.)	.00055	.25	76
Aug. 17 (11:25 a.m.)	.00035	.16	
Sept. 12 (11:30 a.m.)	.00020	.088	70
Oct. 14 (9:30 a.m.)	.00019	.087	65
Nov. 17 (12:10 p.m.)	.00048	.21	64
Dec. 21 (1:20 p.m.)	.00064	.29	55
Jan. 16, 1950 (9:50 a.m.)	.00064	.29	51
Feb. 16 (8:15 a.m.)	.00064	.29	
Mar. 10 (8:05 a.m.)	.00069	.31	55
Apr. 10 (12:30 p.m.)	.00053	.24	71

SPRING - M. r. ERRO

Location.- Lat. 34°28'00", long. 120°04'10",

Altitude.- About 70 feet, from topographic map.

Description.- Wood-curbed spring at foot of bluff. Measured discharge represents total flow into two stock troughs.

DATE	DISCHARGE		TEMP.
	Second-feet	Gals. per min.	°F
Dec. 7, 1948	0.010	4.5	
Jan. 21, 1949 (11:25 a.m.)	.0095	4.3	
Mar. 28 (8:15 a.m.)	.0090	4.0	
May 10 (7:55 a.m.)	.0089	4.0	
June 22 (12:00 noon)	.0089	4.0	
July 20 (1:15 p.m.)	.0091	4.1	
Aug. 17 (11:20 a.m.)	.010	4.7	
Sept. 12 (11:15 a.m.)	.0086	3.9	67
Oct. 14 (9:20 a.m.)	.0088	3.9	
Nov. 17 (12:00 noon)	.0078	3.5	63
Dec. 21 (1:30 p.m.)	.0092	4.1	65
Jan. 16, 1950 (9:35 a.m.)	.0084	3.8	64
Feb. 16 (8:05 a.m.)	.0080	4.0	64
Mar. 10 (7:50 a.m.)	.0093	4.2	66
Apr. 10 (1:00 p.m.)	.010	4.5	70

SPRING - TOM KINEVAN

Location.- Lat. 34°30'30", long. 119°50'00".

Altitude.- About 2,380 feet from topographic maps.

Description.- Open pool in alluvial veneer on sandstone.

DATE	DISCHARGE: Second-feet	DISCHARGE: Gals. per min.	Water level in feet below reference point
June 15, 1948	No flow	No flow	
Apr. 13, 1949 (1:10 p.m.)	No flow	No flow	1.63
May 24 (8:15 a.m.)	No flow	No flow	1.44
June 24 (11:50 a.m.)	No flow	No flow	4.39
Aug. 12 (8:05 a.m.)	No flow	No flow	2.34
Sept.30 (7:40 a.m.)	No flow	No flow	1.98
Nov. 1 (12:15 p.m.)	No flow	No flow	1.98
Dec. 20 (12:05 p.m.)	No flow	No flow	1.60
Jan. 17, 1950 (12:15 p.m.)	No flow	No flow	1.15
Feb. 13 (11:50 a.m.)	No flow	No flow	1.01
Mar. 9 (9:00 a.m.)	No flow	No flow	1.47
Apr. 18 (12:50 p.m.)	No flow	No flow	1.92

SPRING - MRS. NELL K. REAM

Location.- Lat. 34°30'40", long. 119°50'00".

Altitude.- About 2,340 feet from topographic map.

Description.- Seep in alluvial veneer on sandstone.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
June 15, 1948		Practially dry		
Feb. 15, 1949		Practially dry		
Apr. 13	(1:00 p.m.)	0.00060	0.27	
May 24	(8:10 a.m.)	.00072	.32	
June 24	(12:00 noon)	.00032	.14	
Aug. 12	(8:10 a.m.)	.00017	.078	58
Sept. 30	(7:45 a.m.)	.00010	.046	
Nov. 1	(12:25 p.m.)	.00013	.082	60
Dec. 20	(12:10 p.m.)	.00088	.39	45
Jan. 17, 1950	(12:10 p.m.)	*	*	
Feb. 14	(11:55 a.m.)	*	*	
Mar. 9	(9:05 a.m.)	*	*	
Apr. 18	(12:55 p.m.)	1.2 drops per second		

* Open spring basin filled with mud and leaves-no visible flow.

SPRING - MRS. NELL K. REAM

Location.- Lat. 34°30'40", long. 119°50'00" .

Altitude.- About 2,320 feet, from topographic map.

Description.- Covered pool in alluvium on sandstone in creek bed. Discharge measured at inflow to settling box.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
June 15, 1948		0.0085	3.8	
Feb. 15, 1949		.0089	4.0	
Apr. 13,	(12:55 p.m.)	.010	4.5	
May 24	(8:25 a.m.)	.0094	4.2	
June 24	(12:00 noon)	.0088	3.93	
Aug. 12	(8:15 A.m.)	.0084	3.77	59
Sept. 30	(7:50 a.m.)	.0076	3.41	
Nov. 1	(12:30 p.m.)	.0073	3.29	58
Dec. 20	(12:25 p.m.)	.012	5.5	55
Jan. 17, 1950	(12:30 p.m.)	.032	14	65
Feb. 14	(12:05 p.m.)	.028	13	55
Mar. 9	(9:10 a.m.)	.025	11	56
Apr. 18	(1:00 p.m.)	.018	8.1	57

SPRING - TOM KINEVAN

Location.- Lat. 34°30'40", long. 119°50'00".

Altitude.- About 2,350 feet, from topographic map.

Description.- Covered seep in alluvial veneer on sandstone. Discharge measured as inflow to storage tank.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
June 15, 1948		0.0047	2.1	
Feb. 15, 1949		.0051	2.3	
Apr. 13	(12:50 p.m.)	.0067	3.0	
May 24	(8:05 p.m.)	.0073	3.3	
June 24	(11:40 a.m.	.0033	1.50	
Aug. 12	(8:00 a.m.)	.0038	1.68	62
Sept. 30	(7:30 a.m.)	.0028	1.27	
Nov. 1	(12:05 p.m.)	.0027	1.22	62
Dec. 20	(12:00 Noon)	No meas.	No meas.	
Jan. 17, 1950	(12:10 p.m.)	.0019	a .85	60
Feb. 14	(11:45 a.m.)	.010	4.5	59
Mar. 9	(8:50 a.m.)	.007	3.2	60
Apr. 18	(12:40 p.m.)	.0058	2.6	62

a Unmeasured portion of flow being wasted.

SPRING - P. C. BRYCE, U. S. FOREST SERVICE

Location.- Lat. 34°30'10", long. 119°51'40" .

Altitude.- About 2,900 feet, from topographic map.

Description.- Plank-curbed and covered pool in alluvium on sandstone in creek bottom.

DATE	DISCHARGE		TEMP.
	Second-feet	Gals. per min.	°F
June 17, 1948	Practically dry	Practically dry	
Feb. 10, 1949	0.0047	2.1	
Apr. 13 (9:15 a.m.)	.0024	1.1	
May 24 (12:15 p.m.)	.010	4.7	
June 24 (10:20 a.m.)	No flow	No flow *	
Aug. 11 (10:15 a.m.)	No flow	No flow *	
Sept. 30 (10:05 a.m.)	No flow	No flow	
Nov. 28 (10:00 a.m.)	No flow	No flow	
Dec. 28 (12:35 p.m.)	.0020	.91	53
Jan. 26, 1950 (11:00 a.m.)	.0061	2.7	50
Feb. 17 (10:00 a.m.)	.018	8.2	
Mar. 9 (11:30 a.m.)	.0052	2.3	59
Apr. 18 (10:35 a.m.)	.0025	1.1	68

* Water in box but no overflow.

SPRING - MRS. ADELAIDE OVINGTON

Location.- Lat. 34°31'10", long. 119°50'20".

Altitude.- About 1,850 feet, from topographic map.

Description.- Seeps in landslide on valley side. Discharge measured at settling box. These measurements do not include the discharge of the upper and lower undeveloped springs.

DATE	DISCHARGE AT SETTLING BOX		UPPER UNDEVELOPED SPRING		LOWER UNDEVELOPED SPRING		TEMP.
	Second-feet	Gals. per min.	Second-feet	Gals. per min.	Second-feet	Gals. per min.	°F
1948							
June 24	0.0024	1.1	-	-	-	-	
1949							
Feb. 15	.0018	.83	0.0069	3.1	0.0045	2.0	
Apr. 12 (8:30 a.m.)	.0026	1.2	-	-	-	-	
May 11 (9:30 a.m.)	.0019	.85					
June 23 (12:15 p.m.)	.0013	.59					59
Aug. 11 (1:00 p.m.)	.0035	1.56					60
Sept. 30 (12:30 p.m.)	.0016	.73					
Nov. 1 (1:00 p.m.)	.0012	.56					60
Dec. 20 (12:45 p.m.)	.0036	1.6					57
Jan. 17, 1950	.0015	.67					57
Feb. 14 (12:25 p.m.)	.0048	2.1					
Mar. 9 (1:30 p.m.)	.0027	1.2					
Apr. 18 (1:20 p.m.)	.0026	1.2					62

COLD SPRING CANYON CREEK AT HIGHWAY 150

Location.- Lat. 34°31'20", Long. 119°50'20", below the principal forks at Highway 150.

Altitude.- About 1,600 feet, from topographic map.

Description.- Measuring site in natural channel at Highway culvert.

Diversion.- Diversion of about 2 miner's inches occurs above measuring site.

DATE	DISCHARGE		TEMP.
	Second-feet	Gals. per min.	
Oct. 29, 1948 (12:45 p.m.)	No flow	No flow	
Nov. 5 (11:20 a.m.)	No flow	No flow	
Dec. 15 (11:45 a.m.)	No flow	No flow	
Jan. 31, 1949 (11:15 a.m.)	0.018	8.0	
Apr. 18 (1:30 p.m.)	.033	15	
May 27 (1:10 p.m.)	.046	20.6	
June 22 (1:30 p.m.)	.030	13.5	57
July 18 (11:30 a.m.)	.0033	1.50	69
Aug. 16 (12:00 noon)	.023	10.4	55
Sept. 27 (1:30 p.m.)	.036	16.2	61
Oct. 25 (1:30 p.m.)	.022	9.9	53
Nov. 18 (11:30 a.m.)	.048	21.5	54
Dec. 21 (1:50 p.m.)	.071	32	47
Jan. 16, 1950 (8:05 a.m.)	.097	44	45
Feb. 23 (11:45 a.m.)	.062	28	50
Mar. 23 (12:35 p.m.)	.025	11	50
Apr. 21 (1:15 p.m.)	.024	11	55

SPRING - U. S. FOREST SERVICE

Location.- Lat. 34°30'40", long. 119°52'40".

Altitude.- About 2,475 feet, from topographic map.

Description.- Seeps in alluvium on hillside.

DATE	DISCHARGE		TEMP.
	Second-feet	Gals. per min.	°F
Aug. 19, 1948	No flow	No flow	
Feb. 10, 1949	No flow	No flow	
Apr. 13 (8:30 a.m.)	No flow	No flow	
May 24 (11:15 a.m.)	No flow	No flow	
June 24 (9:35 a.m.)	No flow	No flow	
Aug. 11 (9:30 a.m.)	No flow	No flow	
Sept. 30 (9:20 a.m.)	No flow	No flow	
Nov. 28 (9:00 a.m.)	No flow	No flow	
Dec. 28 (11:45 a.m.)	No flow	No flow	
Jan. 26, 1950 (9:15 a.m.)	No flow	No flow	
Feb. 17 (8:45 a.m.)	No flow	No flow	
Mar. 9 (10:30 a.m.)	No flow	No flow	
Apr. 18 (9:40 a.m.)	No flow	No flow	

SPRING - P. C. BRYCE, U. S. FOREST SERVICE

Location.- Lat. 34°30'40", long. 119°52'20".

Altitude.- About 2,025 feet, from topographic map.

Description.- Seeps in alluvium on creek bed and valley well.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Aug. 19, 1948		Less than 0.002	Less than 1	
Feb. 10, 1949		Less than .002	Less than 1	
Apr. 13	(8:45 a.m.)	.0013	0.59	
May 24	(11:35 a.m.)	.00096	.43	
June 24	(9:55 a.m.)	.0013	.57	
Aug. 11	(9:45 a.m.)	.00070	.32	
Sept. 30	(9:40 a.m.)	.00044	.20	
Nov. 28	(9:20 a.m.)	.0013	.56	57
Dec. 28	(12:00 Noon)	.00092	.41	56
Jan. 26, 1950	(9:30 a.m.)	.0019	.86	56
Feb. 17	(9:05 a.m.)	.0036	1.6	
Mar. 9	(11:00 a.m.)	.0030	1.3	57
Apr. 18	(10:00 a.m.)	.0020	.91	66

SPRING - IRVING WILLS

Location.- Lat. 34°31'40", long. 119°51'30".

Altitude.- About 1,280 feet, from topographic map.

Description.- Seep in alluvium on shale. Discharge measured at inflow to settling box from upper 2-inch line.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
June 25, 1948		0.0042	1.9	
Feb. 28, 1949		a .014	a 6.2	
May 11	(8:40 a.m.)	a .015	a 6.6	
June 24	(1:10 p.m.)	a .015	a 6.7	
Sept. 30	(1:15 p.m.)	a No flow	a No flow	
Nov. 1	(1:50 p.m.)	No meas.	No meas.	
Dec. 1	(8:30 a.m.)	No meas.	No meas.	
Dec. 20	(1:30 p.m.)	a .037	a 17	Up-50, L-56
Jan. 17, 1950	(1:30 p.m.)	a .041	a 18	53
Feb. 14	(1:20 p.m.)	a .097	a 44	55
Mar. 17	(11:40 a.m.)	a .041	a 18	
Apr. 20	(11:30 a.m.)	No meast.	No meast.	

a Combined discharge springs 101 & 102.

SPRING - IRVINE HILLS

Location.- Lat. 34°31'50", Long. 119°51'40"

Altitude.- About 1,100 feet from topographic map.

Description.- Seep in alluvium on creek bed. Discharge measured as inflow to settling box from lower pipe.

DATE	DISCHARGE	
	Second-feet	Gals. per min.
June 25, 1948 (estimated)	0.01	4.4

See Station 101.

SPRING - S. A. NASH-BOULDAN, U. S. FOREST SERVICE

Location.- Lat. 34°31'50", long. 119° 51'50" .

Altitude.- About 1,100 feet, from topographic map.

Description.- Seeps in alluvium on valley side. Discharge measured from rate of recovery of water level after it had been bailed below certain level.

DATE	DISCHARGE		TEMP.
	Second-feet	Gals. per min.	°F
June 25, 1948	Not measured	Not measured	
Feb. 16, 1949 (1:15 p.m.)	0.0013	0.58	
May 11 (8:30 a.m.)	.0051	2.3	
June 24 (1:25 p.m.)	.0047	2.11	
Sept. 30 (1:30 p.m.)	.0018	.83	
Nov. 1 (2:05 p.m.)	.0021	.93	60
Dec. 20 (1:45 p.m.)	.0023	1.0	55
Jan. 17, 1950 (1:45 p.m.)	.0047	2.1	
Feb. 14 (1:30 p.m.)	.0049	2.2	59
Mar. 17 (11:20 a.m.)	.0058	2.6	

UNNAMED CREEK TRIBUTARY TO LOS LAURELES CANYON CREEK

Location.- Lat. 34°32'10", long. 119°51'30", above Highway 150.

Altitude.- About 850 feet, from topographic map.

Description.- Measuring site in natural stream channel.

Diversions.- Diversions above from springs 101, 102 and 103, by Irving Wills and Mesa-Souldan.

DATE	DISCHARGE		TEMP.
	Second-feet	Gals. per min.	°F
Oct. 29, 1948 (12:05 p.m.)	No flow	No flow	
Nov. 5 (10:50 a.m.)	No flow	No flow	
Dec. 15 (11:35 a.m.)	No flow	No flow	
Jan. 31, 1949 (10:55 a.m.)	0.13	58	
Mar. 16 (12:40 p.m.)	.80	359	
Apr. 18 (2:00 p.m.)	.18	82	
May 27 (1:30 p.m.)	.029	13	
June 22 (1:00 p.m.)	No flow	No flow	
July 18 (11:50 a.m.)	No flow	No flow	
Aug. 16 (12:30 p.m.)	No flow	No flow	
Sept. 27 (2:00 p.m.)	No flow	No flow	
Oct. 25 (12:30 p.m.)	No flow	No flow	
Nov. 18 (12:05 p.m.)	.017	7.6	57
Dec. 21 (1:20 p.m.)	.11	49	
Jan. 16, 1950 (8:40 a.m.)	.30	[illegible]	43
Feb. 23 (12:30 p.m.)	.25	114	52
Mar. 23 (11:30 a.m.)	.17	75	50
Apr. 21 (12:30 p.m.)	.098	44	58

SPRING - A. DOWLING

Location.- Lat. 34°32'20", long. 119°51'50".

Altitude.- About 920 feet, from topographic map.

Description.- Small spring in debris filled draw and stone-curbed spring in adjacent draw connected together and piped to storage tank. Discharge measured at end of 1-inch pipe line to storage tank.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Mar. 2, 1949	(10:00 a.m.)	0.0011	0.50	
Apr. 20	(11:30 a.m.)	.0024	1.07	
May 27	(11:50 a.m.)	.00068	.31	
June 22	(11:00 a.m.)	.00027	.12	
July 18	(1:15 p.m.)	.00021	.096	88
Aug. 16	(1:00 p.m.)	.00019	.083	
Sept.27	(2:20 p.m.)	.00078	.35	
Oct. 25	(2:00 p.m.)	.00020	.088	
Nov. 18	(12:30 p.m.)	.00076	.34	
Dec. 21	(2:30 p.m.)	.00086	.38	
Jan. 16, 1950	(9:00 a.m.)	.00035	.16	
Feb. 23	(1:50 p.m.)	.00054	.24	57
Mar. 23	(9:45 a.m.)	.00098	.44	51
Apr. 21	(10:45 a.m.)	.00078	.35	67

SPRING - A. BOWLING

Location.- Lat. 34°32'20", long. 119°52'00".

Altitude.- About 1,000 feet, from topographic map.

Description.- Wood-curbed spring box in draw, 4-inch horizontal well (187 feet long) and two small seeps connected together and piped to house or storage tank. Discharge measured at sunken concrete storage tank below swimming pool.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Mar. 2, 1949	(10:20 a.m.)	0.0031	1.4	
Apr. 20	(12:00 noon)	pumping	pumping	
May 27	(12:35 p.m.)	.00029	.13	
June 22	(12:00 noon)	.00061	.27	
July 18	(12:15 p.m.)	.00090	.41	87
Aug. 16	(2:00 p.m.)	.0014	.62	
Sept. 27	(3:20 p.m.)	.0013	.60	
Oct. 25	(3:15 p.m.)	.0012	.56	
Nov. 18	(1:00 p.m.)	.0014	.62	
Dec. 21	(3:15 p.m.)	.0011	.48	
Jan. 16, 1950	(10:00 a.m.)	.0011	.48	
Feb. 23	(1:00 p.m.)	.0017	.75	57
Mar. 23	(10:55 a.m.)	.0015	.68	54
Apr. 21	(11:45 a.m.)	.00035	.16	68

SPRING - A. DOWLING

Location.- Lat. 34°32'20", long. 119°52'00".

Altitude.- About 1,100 feet, from topographic map.

Description.- Measured at union 50 feet below a 187-foot horizontal well.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
May 27, 1949	(12:35 p.m.)	0.0021	0.94	
June 22,	(11:20 a.m.)	.0016	.71	
July 18	(12:30 p.m.)	.0019	.83	61
Aug. 16	(1:20 p.m.)	.0014	.62	60
Sept. 27	(2:40 p.m.)	.0010	.47	60
Oct. 25	(2:20 p.m.)	.0012	.54	60
Nov. 18	(1:15 p.m.)	.00062	.28	70
Dec. 21	(2:45 p.m.)	.0015	.65	58
Jan. 16, 1950	(9:20 a.m.)	.0020	.88	
Feb. 23	(1:15 p.m.)	.0019	.83	59
Mar. 23	(10:05 a.m.)	.0020	.88	60
Apr. 21	(11:00 a.m.)	.0013	.58	60

STATION 106-B

SPRING - A. DOWLING

Location.- Lat. 34°32'20", long. 119°52'05".

Altitude.- About 1,200 feet, from topographic map.

Description.- Measured 50 feet below wood-curbed box in canyon.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
May 27, 1949	(12:20 p.m.)	0.0046	2.1	
June 22		.0069	3.08	57
July 18	(12:50 p.m.)	.0048	2.14	59
Aug. 16	(1:40 p.m.)	.0050	2.26	60
Sept. 27	(3:00 p.m.)	.00038	.17	58
Oct. 25	(2:45 p.m.)	.00048	.21	55
Nov. 18	(12:45 p.m.)	.00019	.083	72
Dec. 21	(3:00 p.m.)	.000029	.013	47
Jan. 16, 1950	(9:35 a.m.)	.00066	.29	37
Feb. 23	(1:30 p.m.)	.00028	.13	55
Mar. 23	(10:30 a.m.)	.00030	.13	50
Apr. 21	(11:15 a.m.)	.00022	.10	72

HOT SPRINGS CREEK AT SOUTH NEAR SANTA BARBARA.

Location.- Lat. 34°32'40", 119°52'50", at Highway 150 crossing about 0.5 mile above junction with Santa Ynez River.

Altitude.- About 825 feet, from topographic map.

Description.- Measuring site in natural channel just upstream of the Highway.

Diversion.- One diversion of 1½ miner's inch above, reported by manager of Murphy Ranch.

Previous measurements.- 1935 to 1946.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Oct. 29, 1948		0.40	180	
Nov. 18	(1:25 p.m.)	.31	140	
Nov. 30	(2:50 p.m.)	.33	150	
Dec. 15	(11:15 a.m.)	.44	200	
Jan. 31, 1949	(10:30 a.m.)	.47	210	
Mar. 18	(12:30 p.m.)	.72	320	
Apr. 18	(2:20 p.m.)	.44	198	
May 27	(11:00 a.m.)	.10	45.3	
June 21	(2:00 p.m.)	.26	114	64
July 18	(1:45 p.m.)	No flow	No flow	71
Aug. 16	(2:15 p.m.)	.078	35	66
Sept. 27	(12:50 p.m.)	.096	43	61
Oct. 25	(12:15 p.m.)	.16	70	56
Nov. 18	(1:45 p.m.)	.29	130	58
Dec. 21	(12:50 p.m.)	.42	190	46
Jan. 16, 1950	(10:30 a.m.)	.62	278	47
Feb. 23	(2:15 p.m.)	.51	230	57
Mar. 23	(9:05 a.m.)	.40	180	52
Apr. 21	(10:05 a.m.)	.39	180	58

UNNAMED CREEK TRIBUTARY TO SANTA YNEZ RIVER

Location.- Lat. 34°33'10", long. 119°54'40", at a site along Highway 150 and about 1.0 mile above junction with the Santa Ynez River.

Altitude.- About 800 feet, from topographic map.

Description.- Measuring site in natural stream channel.

Diversion.- None reported above station.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Nov. 5, 1948	(10:15 a.m.)	No flow	No flow	
Dec. 15	(11:00 a.m.)	No flow	No flow	
Mar. 18, 1949	(1:00 p.m.)	0.28	130	
Apr. 18		.061	27	
May 27	(10:45 a.m.)	No flow	No flow	
June 21	(1:30 p.m.)	No flow	No flow	
July 18	(2:00 p.m.)	No flow	No flow	
Aug. 16	(3:00 p.m.)	No flow	No flow	
Sept. 27	(12:30 p.m.)	No flow	No flow	
Oct. 25	(11:45 a.m.)	No flow	No flow	
Nov. 18	(2:00 p.m.)	No flow	No flow	
Dec. 21	(12:30 p.m.)	No flow	No flow	
Jan. 16, 1950	(11:00 a.m.)	.059	26	43
Feb. 23	(2:45 p.m.)	.13	59	51
Mar. 23	(8:30 a.m.)	.046	21	50
Apr. 21	(9:25 a.m.)	.023	10	54

SPRING - T. M. STORKE

Location.- Lat. 34°32'50", long. 119°56'10"

Altitude.- About 1,190 feet from topographic map.

Description.- Wood-curbed seep in alluvium in creek bed. Discharge obtained by bailing water from spring and measuring the rate of recovery.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
July 20, 1948		No meas.	No measurement	
Dec. 16		No meas.	No measurement	
Feb. 3, 1949	(3:30 p.m.)	0.0024	1.1	
Mar. 22	(12:35 p.m.)	.064	29	
Apr. 21	(11:30 a.m.)	.014	6.4	
May 31	(12:55 p.m.)	.0062	2.8	
June 23	( )	.0016	.72	61
July 21	(10:45 a.m.)	No flow	No flow	
Aug. 18	(10:15 a.m.)	No flow	No flow	
Sept. 29	(12:20 p.m.)	No flow	No flow	
Oct. 27	(11:30 a.m.)	No flow	No flow	
Nov. 21	(1:15 p.m.)	No flow	No flow	
Dec. 22	(11:00 a.m.)	.0040	1.8	47
Jan. 19, 1950	(11:45 a.m.)	.057	26	
Feb. 24	(11:15 a.m.)	.038	17	55
Mar. 21	(10:30 a.m.)	.013	5.8	50
Apr. 20	(11:00 a.m.)	.014	6.3	55

SPRING - T. M. STORKE

Location.- Lat. 34°33'00", long. 119°56'10".

Altitude.- About 1,185 feet, from topographic map.

Description.- Two wood-curbed seeps on valley side. Discharge measured at aerator. Water has a "sulphur" odor and taste.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
July 20, 1948	(estimated)	0.0014	0.65	
Dec. 16		.0010	.46	
Feb. 3, 1949	(3:15 p.m.)	.0013	.58	
Mar. 22	(12:10 p.m.)	.0022	.98	
Apr. 21	(11:00 a.m)	.0021	.94	
May 31	(12:45 p.m.)	.0019	.83	
June 23	(10:40 a.m.)	.0015	.68	89
July 21	(10:30 a.m.)	.0012	.53	82
Aug. 18	(10:00 a.m.)	.00076	.34	80
Sept. 29	(12:00 noon)	.00058	.26	73
Oct. 27	(11:15 a.m.)	.00063	.28	63
Nov. 24	(1:00 p.m.)	.00074	.33	62
Dec. 22	(10:45 a.m.)	.00084	.38	
Jan. 19, 1950	(11:30 a.m.)	.0012	.56	60
Feb. 24	(11:00 a.m.)	.0022	1.0	65
Mar. 21	(10:15 a.m.)	.0022	.97	69
Apr. 20	(10:45 a.m.)	.00098	.44	71

BEAR CANYON CREEK ABOVE STORKE DIVERSION

Location.- Lat. 34°32'30", 119°56'30", at diversion dam 1.2 miles southwest of Storke residence.

Altitude.- About 1,600 feet, from topographic map.

Description.- Measuring site just above Storke diversion dam.

Diversion.- None reported above station.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
July 3, 1948	(estimated)	0.002	1	
Dec. 16		.0027	1.2	
Feb. 3, 1949	(4:30 p.m.)	.0095	4.3	45
Mar. 22	(11:10 a.m.)	.031	14	
Apr. 21	(10:30 a.m.)	.0089	4.0	
May 31	(12:05 a.m.)	.0063	2.82	
June 23	(10:00 a.m.)	.0037	1.67	58
July 21	(9:40 a.m.)	.0030	1.36	56
Aug. 18	(9:30 a.m.)	.0028	1.24	55
Sept. 29	(11:15 a.m.)	.0020	.88	56
Oct. 27	(10:30 a.m.)	.0021	.94	50
Nov. 21	(12:15 p.m.)	.0024	1.09	52
Dec. 22	(10:15 a.m.)	.010	4.5	
Jan. 19	(10:30 a.m.)	.027	12	52
Feb. 24	(10:15 a.m.	.017	7.8	50
Mar. 21	(9:35 a.m.)	.0098	4.4	51
Apr. 20	(10:00 a.m.)	.0087	3.9	55

SPRING - DAVID GRAY, JR.

Location.- Lat. 34°32'40", long. 119°56'40".

Altitude.- About 1,600 feet, from topographic map.

Description.- Wood-curbed spring in hillside. Discharge measured at spring.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Dec. 16, 1948		0.00094	0.42	
Feb. 3, 1949	(5:45 p.m.)	.0011	.50	53
Mar. 22	(10:30 a.m.)	.0016	.70	
Apr. 21	(10:00 a.m.)	.0012	.56	
May 31	(11:20 a.m.)	.0010	.47	
June 23	(8:45 a.m.)	.00078	.35	86
July 21	(9:00 a.m.)	.00068	.31	82
Aug. 18	(8:45 a.m.)	.00067	.30	78
Sept. 29	(10:15 a.m.)	.00054	.24	84
Oct. 27	(9:30 a.m.)	.00051	.23	63
Nov. 21	(11:50 a.m.)	.00068	.31	58
Dec. 22	(9:45 a.m.)	.00084	.38	42
Jan. 19, 1950	(9:45 a.m.)	.0012	.54	53
Feb. 24	(9:40 a.m.)	.0012	.54	53
Mar. 21	(9:00 a.m.)	.0010	.47	60
Apr. 20	(9:15 a.m.)	.00090	.41	76

SPRING - T. M. STORKE

Location.- Lat. 34°33'20", long. 119°55'40".

Altitude.- About 850 feet, from topographic map.

Description.- Three wood-curbed seeps in alluvium capping terrace. Discharge measured as inflow to galvanized corrugated storage tank.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
July 20, 1948	(estimated)	0.0003	0.14	
Dec. 16		.00040	.18	
Feb. 3, 1949	(2:00 p.m.)	.00020	.088	
Mar. 22	(1:40 p.m.)	.000045	.020	
Apr. 21	(12-noon)	.00019	.086	
May 31	(1:30 p.m.)	.000067	.030	
June 23	(11:45 a.m.)	.000054	.024	81
July 21	(11:30 a.m.)	.000043	.019	69
Aug. 18	(10:45 a.m.)	.000047	.021	73
Sept. 29	(1:30 p.m.)	.00020	.091	83
Oct. 27	(12:15 p.m.)	.00032	.14	61
Nov. 21	(1:30 p.m.)	.00040	.18	61
Dec. 22	(11:30 a.m.)	.00036	.16	46
Jan. 19, 1950	(12:30 p.m.)	.00038	.17	57
Feb. 24	(12:05 p.m.)	.00042	.19	55
Mar. 21	(11:00 a.m.)	.00042	.19	63
Apr. 20	(11:30 a.m.)	.00031	.14	68

SPRING - T. M. STORKE

Location.- Lat. 34°33'20", long. 119°55'40".

Altitude.- About 850 feet, from topographic map.

Description.- Wood-curbed seep in alluvium capping terrace. Discharge measured as inflow to stock tank.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F.
July 20, 1948		0.000078	0.035	
Dec. 16		.000080	.036	
Feb. 3, 1949	(1:20 p. m.)	.000089	.040	
Mar. 22	(2:10 p.m.)	.00022	.099	
Apr. 21	(12:20 p.m.)	.00024	.11	
May 31	(1:45 p.m.)	.00018	.082	
June 23	(12:00 noon)	.00010	.047	
July 21	(11:45 a.m.)	One drop every _ seconds		
Aug. 18	(11:00 a.m.)	.000049	.021	80
Sept. 29	(1:50 p.m.)	One drop per second		77
Oct. 27	(12:30 p.m.)	One drop per 8 seconds.		62
Nov. 21	(1:45 p.m.)	.000067	.020	56
Dec. 22	(11:45 a.m.)	.00010	.045	40
Jan. 19, 1950	(12:45 p.m.)	.00020	.091	54
Feb. 24	(12:20 p.m.)	.00039	.17	54
Mar. 21	(11:15 a.m.)	.00048	.21	59
Apr. 20	(11:45 a.m.)	.00057	.25	68

UNNAMED TRIBUTARY TO SANTA YNEZ RIVER ABOVE GRAY DIVERSION

Location.- Lat. 34°32'40", long. 119°56'50", above Gray diversion about 1.7 miles south of Highway 150.

Altitude.- About 1,600 feet, from topographic map.

Description.- Just below wooden catchment box in creek bed, operated by David Gray Jr.

Diversion.- None reported above station.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Dec. 16, 1948		No flow	No flow	
Feb. 3, 1949	(5:20 p.m.)	No flow	No flow	
Mar. 22	(10:00 a.m.)	0.0013	0.58	
Apr. 21	(9:15 a.m.)	.0076	3.4	
May 31	(10:50 a.m.)	.00076	.34	
June 23	(8:15 a.m.)	.00074	.33	55
July 21	(8:20 a.m.)	.00062	.28	71
Aug. 18	(8:10 a.m.)	.00061	.27	69
Sept. 29	(9:30 a.m.)	.00058	.26	67
Oct. 27	(8:45 a.m.)	.00033	.15	56
Nov. 21	(11:30 a.m.)	.00035	.16	56
Dec. 22	(9:00 a.m.)	.00033	.15	53
Jan. 19, 1950	(9:15 a.m.)	.00045	.20	53
Feb. 24	(9:00 a.m.)	.00073	.33	54
Mar. 21	(8:40 a.m.)	.00074	.33	54
Apr. 20	(8:45 a.m.)	.00098	.44	58

SPRING - DAVID GRAY, JR.

Location.- Lat. 34°32'50", long. 119°56'50".

Altitude.- About 1,580 feet, from topographic map.

Description.- Drilled hole into sandstone exposure. Discharge measured at end of hose into earth reservoir.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Dec. 16, 1948		0.00025	0.11	
Feb. 3, 1949	(5:10 p.m.)	No flow	No flow	
Mar. 22	(9:30 a.m.)	.00081	.36	
Apr. 21	(9:00 a.m.)	.00084	.38	
May 31	(11:05 a.m.)	.0013	.60	
June 23	(9:10 a.m.)	No flow	No flow	
July 21	(8:00 a.m.)	.00059	.26	51
Aug. 18	(8:30 a.m.)	.00061	.27	56
Sept. 29	(9:50 a.m.)	.00040	.18	58
Oct. 27	(9:00 a.m.)	No flow	No flow	
Nov. 21	(11:15 a.m.)	No flow	No flow	
Dec. 22	(9:20 a.m.)	No flow	No flow	
Jan. 19, 1950	(9:00 a.m.)	No flow	No flow	
Feb. 24	(9:20 a.m.)	.0016	.70	47
Mar. 21	(8:50 a.m.)	.0035	1.6	54
Apr. 20	(8:30 a.m.)	.00073	.33	57

UNNAMED TRIBUTARY OF N. SANTA YNEZ RIVER - R. G. WELCH RANCH

Location.-Lat. 34°34'00", long. 119°56'00", at Highway 150 crossing about 0.4 mile above junction with the Santa Ynez River.

Altitude.- About 700 feet, from topographic map.

Description.- Measuring site in natural stream channel above highway.

Diversion.- Several diversions above.

DATE	DISCHARGE		TEMP.
	Second-feet	Gals. per min.	°F
Oct. 21, 1948 (Estimated)	0.02	11	
Nov. 5 (8:15 a.m.)	.023	10	
Nov. 18 (1:03 p.m.)	.019	8.5	
Nov. 30 (estimated)	.031	14	
Dec. 15 (10:30 a.m.)	.029	13	
Jan. 31, 1949 (10:00 a.m.)	.034	15	
Feb. 3 (12:45 p.m.)	.030	14	
Mar. 18 (11:30 a.m.)	.026	12	
Apr. 19 (1:30 p.m.)	.017	7.6	
May 26 (2:50 p.m.)	.011	4.94	
June 20 (1:30 p.m.)	.013	5.7	61
July 19 (1:00 p.m.)	.0074	3.33	66
Aug. 15 (2:10 p.m.)	.0097	4.36	62
Sept. 26 (2:35 p.m.)	.013	5.7	59
Oct. 24 (2:50 p.m.)	.011	5.0	53
Nov. 18 (2:30 p.m.)	.013	5.7	55
Dec. 19 (1:30 p.m.)	.026	12	52
Jan. 16, 1950 (11:30 a.m.)	.030	13	43
Feb. 20 (2:30 p.m.)	.027	12	54
Mar. 21 (11:40 a.m.)	.033	15	55
Apr. 21 (8:45 a.m.)	.025	11	59

STATION 128a

SEEPAGE FROM NORTH PORTAL OF TECOLOTE TUNNEL

Location.- Lat. 34°34'00", long. 119°55'50", at North Portal.

Altitude.- About 670 feet from topograph map.

Description.- Water pumped out of excavation, measured at end of 6-inch pipe at point of wastage.

DATE	DISCHARGE		TEMP.	Progress of
	Second-feet	Gals. per min.	°F	excavation (ft.)
April 4, 1950 (11:15 a.m.)	0.011	4.9	59	Station 8 + 35
April 12 (1:20 p.m.)	.0092	4.1	59	8 + 75
April 18 (1:45 p.m.)	.0019	.84	68	10 + 45
May 4 (noon)	.035	16	59	17 + 37

TEJUEPIS CREEK ABOVE BOY SCOUT CAMP DIVERSION

Location.- Lat. 34°32'20", long. 119°57'30", at Mrs. Clark's diversion, about 2.4 miles south of Highway 150.

Altitude.- About 1,900 feet, from topographic map.

Description.- Measuring site above wood diversion box at rock outcrop about 2.9 miles by road and trail above Highway 150.

Diversion.- None reported above station.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
June 24, 1948	(estimated)	0.03 to .04	15 to 20	
Oct. 29	(9:05 a.m.)	0.039	18	
Nov. 18	(12:05 p.m.)	.041	18	
Dec. 15	(9:25 a.m.)	.037	17	
Jan. 31, 1949	(9:10 a.m.)	.056	25	
Mar. 18	(9:15 a.m.)	.14	63	
Apr. 20	(8:40 a.m.)	.083	37	
May 27	(8:30 a.m.)	.053	23.8	
June 22	(8:10 p.m.)	.041	18.4	55
July 20	(12:10 p.m.)	.012	5.4	60
Aug. 19	(8:30 p.m.)	.034	15	56
Sept. 28	(8:40 a.m.)	.018	8.1	55
Oct. 26	(9:20 a.m.)	.024	11	53
Nov. 22	(11:20 a.m.)	.040	18	54
Dec. 20	(1:30 p.m.)	.097	44	51
Jan. 18, 1950	(2:00 p.m.)	.15	68	50
Feb. 21	(1:30 p.m.)	.13	57	51
Mar. 22	(2:00 p.m.)	.063	28	53
Apr. 18	(1:00 p.m.)	.044	20	55

SPRING - F. F. LEADBETTER

Location.- Lat. 34°33'00", long. 119°57'40".

Altitude.- About 1,530 feet, from topographic map.

Description.- Plank-curbed pool in landslide on shale. Discharge measured as inflow to settling box.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
June 23, 1948		0.0047	2.1	
Feb. 3, 1949	(10:05 a.m.)	.0036	1.6	
Mar. 18	(10:20 a.m.)	.0057	2.6	
Apr. 20	(10:00 a.m.)	.0053	2.4	
May 27	(9:45 a.m.)	.0036	1.63	
June 22		.0028	1.28	61
July 20	(1:00 p.m.)	.0020	.88	62
Aug. 19	(9:45 a.m.)	.0019	.83	61
Sept. 28	(10:10 a.m.)	.0017	.75	58
Oct. 26	(10:30 a.m.)	.0014	.62	58
Nov. 22	(12:45 p.m.)	.0016	.71	56
Dec. 20	(2:30 p.m.)	.0019	.83	53
Jan. 18, 1950	(2:45 p.m.)	.0024	1.07	56
Feb. 21	(2:15 p.m.)	.0030	1.4	56
Mar. 20	(1:10 p.m.)	.0026	1.2	57
Apr. 18		.0021	.94	60

SPRING - H. NOEL, U. S. FOREST SERVICE

Location.- Lat. 34°33'10", long. 119°57'40".

Altitude.- About 1,550 feet, from topographic map.

Description.- Concreted seep in alluvium. Discharge measured at end of pipe line to storage reservoir.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
June 23, 1948		0.0107	4.8	
Feb. 3, 1949	(10:40 a.m.)	.0082	3.7	
Mar. 18	(10:35 a.m.)	.0085	3.8	
Apr. 20	(10:10 a.m.)	.0084	3.8	
May 27	(10:00 a.m.)	.0088	3.93	
June22		.0085	3.81	65
July 20	(1:15 p.m.)	.0089	4.00	66
Aug. 19	(10:10 a.m.)	.0082	3.7	64
Sept. 28	(10:30 a.m.)	.0075	3.4	62
Oct. 26	(10:50 a.m.)	.0061	2.7	64
Nov. 22	(1:00 p.m.)	.0076	3.4	60
Dec. 20	(2:45 p.m.)	.0082	3.7	
Jan. 18, 1950	(3:00 p.m.)	.0082	3.7	57
Feb. 21	(2:30 p.m.)	.0079	3.6	58
Mar. 20	(1:00 p.m.)	.0098	4.4	61
Apr. 18		.0067	3.0	64

SPRING - MRS. W. A. CLARK, U. S. FOREST SERVICE

Location.- Lat. 34°33'10", long. 119°57'30".

Altitude.- About 1,250 feet, from topographic map.

Description.- Seeps into ditch on hillside. Discharge measured at end of 6-inch tile pipe into settling box.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Feb. 3, 1949	(11:20 a.m.)	0.0014	0.63	56
Mar. 18	(10:45 a.m.)	.0033	1.5	
Apr. 20	(10:30 a.m.)	.0060	2.7	
May 27	(10:15 a.m.)	.0033	1.48	
June 22		.0020	.92	59
July 20	(1:30 p.m.)	.0011	.50	65
Aug. 19	(10:30 a.m.)	.00084	.38	63
Sept. 28	(10:50 a.m.)	.00074	.33	60
Oct. 26	(11:10 a.m.)	.00071	.32	57
Nov. 22	(1:30 p.m.)	.00073	.33	58
Dec. 20	(3:00 p.m.)	.00096	.43	53
Jan. 18, 1950	(3:15 p.m.)	.0019	.83	57
Feb. 21	(2:45 p.m.)	.0056	2.5	58
Mar. 20	(1:20 p.m.)	.0048	2.1	58
Apr. 18		.0036	1.6	60

TEQUEPIS CANYON CREEK AT HIGHWAY 150

Location.- Lat. 34°34'20", long. 119°57'00", at road crossing of Highway 150

Altitude.- About 750 feet, from topographic map.

Description.- Measuring site in stream channel above bridge.

Diversions.- Several above.

DATE		DISCHARGE	
		Second-feet	Gals. per min.
Mar. 18, 1949	(11:20 a.m.)	No flow	No flow
Apr. 19	(1:00 p.m.)	No flow	No flow
May 26	(2:30 p.m.)	No flow	No flow
June 20	(1:00 p.m.)	No flow	No flow
July 18	(2:20 p.m.)	No flow	No flow
Aug. 15	(1:40 p.m.)	No flow	No flow
Sept. 26	(2:10 p.m.)	No flow	No flow
Oct. 24	(2:20 p.m.)	No flow	No flow
Nov. 17	(12:30 p.m.)	No flow	No flow
Dec. 19	(2:00 p.m.)	No flow	No flow
Jan. 16, 1950	(12:15 p.m.)	No flow	No flow
Feb. 20	(2:00 p.m.)	No flow	No flow
Mar. 22	(3:30 p.m.)	No flow	No flow
Apr. 19	(12:30 p.m.)	No flow	No flow

SPRING - J. V. CRAWFORD

Location.- Lat. 34°33'50", long. 119°58'20".

Altitude.- About 1,070 feet, from topographic map.

Description.- Pool in sandstone bed of side canyon.

DATE	DISCHARGE		TEMP.
	Second-feet	Gals. per min.	°F
Oct. 28, 1948 (estimated)	0.001	0.5	
Jan. 26, 1949 (11:45 a.m.)	.0010	.47	
Mar. 21 (2:00 p.m.)	.0017	.75	
Apr. 21 (1:35 p.m.)	.0012	.52	
June 1 (11:30 a.m.)	.00084	.38	
June 23 (1:40 p.m.)	.00074	.33	63
July 21 (1:15 p.m.)	.00071	.32	60
Aug. 18 (12:30 p.m.)	.00071	.32	61
Sept. 28 (12:35 p.m.)	.00074	.33	58
Oct. 26 (1:00 p.m.)	.00061	.27	55
Nov. 21 (2:45 p.m.)	.00078	.35	55
Dec. 22 (1:15 p.m.)	.0011	.50	48
Jan. 17 (1:45 p.m.)	.00051	.23	52
Feb. 24 (1:45 p.m.)	.00029	.13	55
Mar. 21 (1:30 p.m.)	.0011	.50	55
Apr. 20 (1:45 p.m.)	.0010	.45	58

SPRING, CROWN ELEVEN RANCH

Location.- Lat. 34°34'00", long. 119°58'10".

Altitude.- About 990 feet, from topographic map.

Description.- Two connected curbed seeps on alluvial slope. Discharge at outlet of one-inch pipe leading to watering trough.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Oct. 21, 1948		0.0023	1.0	
Jan. 26, 1949	(11:20 a.m.)	.0019	.86	
Mar. 21	(1:20 p.m.)	.0022	1.0	
Apr. 21	(1:00 p.m.)	.0020	.91	
June 1	(11:00 a.m.)	.0039	1.76	
June 23	(1:00 p.m.)	.0039	1.75	66
July 21	(12:45 p.m.)	.0017	.75	62
Aug. 18	(1:00 p.m.)	.0032	1:45	68
Sept. 28	(12:00 noon)	.0029	1:30	66
Oct. 26	(12:15 p.m.)	.0022	1.00	65
Nov. 21	(2:10 p.m.)	.00096	.43	60
Dec. 22	(12:30 p.m.)	.0021	.94	62
Jan. 17, 1950	(1:00 p.m.)	.0021	.94	65
Feb. 24	(1:00 p.m.)	.0042	1.9	65
Mar. 21	(1:00 p.m.)	.0036	1.6	65
Apr. 20	(1:00 p.m.)	.0038	1.7	67

SPRING - CROWN ELEVEN RANCH

Location.- Lat. 34°33'50", long. 119°58'10".

Altitude.- About 970 feet, from topographic map.

Description.- Seepage from alluvial fill collected in ditch on east bank of creek. Discharge measured at end of old 4-inch pipe line.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Oct. 28, 1948		0.0016	0.73	
Jan. 26, 1949	(12:10 p.m.)	.0014	.62	
Mar. 21	(1:00 p.m.)	.0032	1.4	
Apr. 21	(1:15 p.m.)	.0026	1.2	
June 1	(11:10 a.m.)	.0028	1.25	
June 23	(1:15 p.m.)	.0024	1.07	65
July 21	(12:30 p.m.)	.0030	1.36	67
Aug. 18	(12:15 p.m.)	.0015	.68	67
Sept. 28	(12:15 p.m.)	.0014	.65	66
Oct. 26	(12:30 p.m.)	.0014	.62	65
Nov. 21	(2:20 p.m.)	.0013	.58	68
Dec. 22	(12:45 p.m.)	.0014	.62	62
Jan. 17, 1950	(1:15 p.m.)	.0016	.71	65
Feb. 24	(1:15 p.m.)	.0024	1.1	65
Mar. 21	(1:15 p.m.)	.0028	1.2	67
Apr. 20	(1:15 p.m.)	.0026	1.2	67

UNNAMED CREEK, TRIBUARY TO SANTA YNEZ RIVER AT HARVEY RANCH

Location.- Lat. 34°34'00", long. 119°58'10", at 6-foot road culvert about 1.0 mile south of Highway 150.

Altitude.- About 950 feet, from topographic map.

Description.- Measuring site in natural channel.

Diversions.- Several diversions above from springs.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Oct. 22, 1948		0.0050	2.6	
Jan. 26, 1949	(12:40 p.m.)	.016	7.2	
Mar. 21	(3:00 p.m.)	.030	13	
Apr. 21	(2:00 p.m.)	.030	13	
June 1	(11:50 a.m.)	.024	10.9	
June 23	(2:10 p.m.)	.017	7.5	65
July 21	(1:45 p.m.)	.012	5.3	61
Aug. 18	(1:30 p.m.)	.0084	3.8	67
Sept. 28	(1:00 p.m.)	.0074	3.3	56
Oct. 26	(1:30 p.m.)	.0065	2.9	52
Nov. 21	(3:00 p.m.)	.0079	3.5	53
Dec. 22	(1:45 p.m.)	.015	6.9	40
Jan. 17, 1950	(2:15 p.m.)	.022	10	53
Feb. 24	(2:15 p.m.)	.027	12	55
Mar. 21	(2:00 p.m.)	.031	14	57
Apr. 20	(2:15 p.m.)	.021	14	62

SPRING - UNNAMED TRIBUTARY TO SANTA YNEZ RIVER AT HIGHWAY 150.

Location.- Lat. 34°34'50", 119°58'20", at road crossing of Highway 150 and about 200 yards west of Ohio Oil Company Road.

Altitude.- About 680 feet, from topographic map.

Description.- Measuring site is in natural stream channel just above highway culvert on the San Lucas Ranch, Mr. Crawford, owner.

Diversions.- No known diversions above station.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Nov. 13, 1948	(9:10 a.m.)	No flow	No flow	
Jan. 31, 1949	(8:10 a.m.)	0.068	31	
Mar. 8	(1:10 p.m.)	.020	9.0	
Apr. 19	(12:15 p.m.)	.012	5.4	
May 26	(2:10 p.m.)	No flow	No flow	
June 20	(12:10 p.m.)	No flow	No flow	
July 18	(2:30 p.m.)	No flow	No flow	
Aug. 15	(1:20 p.m.)	No flow	No flow	
Sept. 26	(1:50 p.m.)	No flow	No flow	
Oct. 24	(2:00 p.m.)	No flow	No flow	
Nov. 17	(2:30 p.m.)	No flow	No flow	
Dec. 17	(2:15 p.m.)	.011	4.9	50
Jan. 16, 1950	(12:40 p.m.)	.010	4.5	40
Feb. 20	(1:45 p.m.)	.010	4.5	
Mar. 20	(12:10 p.m.)	.005	2.2	57
Apr. 21	(8:20 a.m.)	.0056	2.5	55

HILTON CANYON CREEK

Location.- Lat. 34°32'20", long. 119°58'40", about 3.2 miles south of Highway 150 near oil well.

Altitude.- About 2,300 feet, from topographic map.

Description.- Measuring site in natural stream channel on San Lucas Ranch.

Diversion.- No known diversions above station.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Nov. 18, 1948	(10:30 a.m.)	No flow	No flow	
Dec. 15	(8:15 a.m.)	No flow	No flow	
Mar. 21, 1949	(10:50 a.m.)	0.00011	0.048	
Apr. 20	(2:15 p.m.)	No flow	No flow	
May 31	(9:30 a.m.)	No flow	No flow	
June 21	(10:30 a.m.)	No flow	No flow	
July 20	(11:00 a.m.)	No flow	No flow	
Aug. 16	(10:30 a.m.)	No flow	No flow	
Sept. 27	(10:30 a.m.)	No flow	No flow	
Oct. 25	(10:50 a.m.)	No flow	No flow	
Nov. 22	(10:00 a.m.)	No flow	No flow	
Dec. 21	(11:30 a.m.)	No flow	No flow	

SPRING - J. V. CRAWFORD

Location.- Lat. 34°32'50", long. 119°58'50".

Altitude.- About 1,930 feet, from topographic map.

Description.- Seeps in creek bed a short distance above diversion dam. Discharge at outlet of 2-inch pipe, 0.25 mile north at reservoir.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals per min.	°F
Oct. 25, 1948		0.010	4.6	
Jan. 26, 1949	(10:00 a.m.)	.085	38	
Mar. 21	(11:00 a.m.)	.11	50	
Apr. 20	(1:30 p.m.)	.068	31	
May 31	(10:00 a.m.)	.12	52	
June 1	(11:00 a.m.)	.098	44	58
July 20	(10:45 a.m.)	.083	37.3	66
Aug. 16	(11:00 a.m.)	.022	9.8	57
Sept. 27	(11:00 a.m.)	.016	7.3	57
Oct. 25	(10:30 a.m.)	.012	5.5	54
Nov. 22	(10:15 a.m.)	.016	7.2	52
Dec. 21	(11:00 a.m.)	.041	18.	47
Jan. 17, 1950	(11:45 a.m.)	.068	31	52
Feb. 21	(10:30 a.m.)	.068	30	50
Mar. 20	(11:15 a.m.)	.045	20	54
Apr. 19	(11:30 a.m.)	.034	15	58

HILTON CANYON CREEK AT HIGHWAY 150

Location.- Lat. 34°35'10", long. 119°59'10", at Highway 150.

Altitude.- About 650 feet, from topographic map.

Description.- Measuring site in natural stream channel above highway crossing.

Diversion.- Several diversions above station.

DATE		DISCHARGE	
		Second-feet	Gals. per min.
Mar. 8, 1949	(1:30 p.m.)	No flow	No flow
Mar. 21	(12-noon)	No flow	No flow
Apr. 19	(12-noon)	No flow	No flow
May 26	(2:00 p.m.)	No flow	No flow
June 20	(11:50 a.m.)	No flow	No flow
July 18	(2:50 p.m.)	No flow	No flow
Aug. 15	(1:00 p.m.)	No flow	No flow
Sept. 26	(1:30 p.m.)	No flow	No flow
Oct. 24	(1:45 p.m.)	No flow	No flow
Nov. 17	(2:45 p.m.)	No flow	No flow
Dec. 19	(1:30 p.m.)	No flow	No flow
Jan. 16, 1950	(1:10 p.m.)	No flow	No flow
Feb. 20	(1:30 p.m.)	No flow	No flow
Mar. 20		No flow	No flow
Apr. 19	(1:00 p.m.)	No flow	No flow

STATION 142

SPRING - J. V. CRAWFORD

Location.- Lat. 34°34'40", long. 119°59'20".

Altitude.- About 930 feet, from topographic map.

Description.- Wood-curbed seep on hillside. Discharge measured at end of 2-inch line to stock trough.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Oct. 28, 1948		0.000067	0.03	
Jan. 26, 1949	(2:00 p.m.)	.00013	.058	
Mar. 8	(12:40 p.m.)	.00013	.057	
Apr. 19	(11:40 a.m.)	.00013	.057	
May 26	(1:40 p.m.)	.00012	.052	
June 21	(12:45 p.m.)	.000076	.034	106
July 19	(2:05 p.m.)	No flow	No flow	91
Aug. 15	(2:35 p.m.)	One drop in 8 seconds		
Sept. 26	(1:00 p.m.)	No flow	No flow	
Oct. 24	(1:20 p.m.)	No flow	No flow	
Nov. 17	(3:10 p.m.)	No flow	No flow	
Dec. 19	(1:00 p.m.)	1.9 drops per second		48
Jan. 16, 1950	(1:50 p.m.)	.000015	.0068	49
Feb. 20	(1:00 p.m.)	.000033	.015	55
Mar. 20	(10:20 a.m.)	2 drops per second		57
Apr. 20	(2:45 p.m.)	.15 drops per second		

MONO'S CREEK AT G. WALSKA FISH POND

Location.- Lat. 34°32'20", long. 120°00'30", at G. Walska Fish pond about 0.8 mile northeast of El Capitan Lodge.

Altitude.-About 2,200 feet, from topographic map.

Description.- The measuring site is at overflow pipe from fish pond in natural stream channel reached by about 2 miles of private mountain road from El Capitan Lodge.

Diversion.- No known diversions above.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Jan. 27, 1949	(11:50 a.m.)	0.057	26	39
Mar. 28	(12:45 p.m.)	.098	44	
May 25	(9:45 a.m.)	.055	24.6	
June 22	(9:25 a.m.)	.043	19.1	59
July 20	(9:10 a.m.)	.034	15.3	60
Sept. 14	(9:20 a.m.)	.030	13.3	
Nov. 30	(10:40 a.m.)	.039	17.6	50
Dec. 28	(9:35 a.m.)	.057	26	45
Jan. 24, 1950	(8:40 a.m.)	.081	36	48
Feb. 16	(noon)	.12	55	
Apr. 21	(10:40 a.m.)	.059	26	59

SPRING - MADAME GANNA WALSKA

Location.- Lat. 34°32'10", long. 120°00'50".

Altitude.- About 2,650 feet, from topographic map.

Description.- Seeps on side of canyon impounded by small dam across the creek.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Dec. 7, 1948		0.0062	2.8	
Jan. 27, 1949	(10:55 a.m.)	.0088	3.9	47
Mar. 28	(12:20 a.m.)	.024	10.8	
May 25	(9:20 a.m.)	.010	4.49	
June 22	(9:00 a.m.)	.0080	3.59	57
July 20	(8:50 a.m.)	.0026	1.17	58
Sept. 14	(8:55 a.m.)	.010	4.49	
Nov. 30	(9:55 a.m.)	.006	2.7	52
Dec. 28	(9:15 a.m.)	.009	4.0	46
Jan. 24, 1950	(9:00 a.m.)	.023	10.5	47
Feb. 16	(11:40 a.m.)	.024	11	
Apr. 21	(10:25 a.m.)	.012	5.4	56

SPRING - J. V. CRAWFORD

Location.- Lat. 34°33'30", long. 120°01'10"

Altitude.- About 1,700 feet, from topographic map.

Description.- Seepage into uncurbed pool near bottom of small valley in hillside.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Oct. 25, 1948		No flow	No flow	
Jan. 26, 1949	(5:30 p.m.)	0.00018	0.082	
Mar. 8	(10:20 a.m.)	.00029	.128	
Apr. 19	(9:15 a.m.)	.00043	.19	
June 1	(9:35 a.m.)	.00024	.11	
June 21	(9:20 a.m.)	.00018	.080	57
July 20	(9:30 a.m.)	.00010	.045	59
Aug. 16	(9:25 a.m.)	.000043	.019	56
Sept. 27	(9:40 a.m.)	No flow	No flow	
Oct. 25	(9:45 a.m.)	No flow	No flow	
Nov. 22	(9:45 a.m.)	No flow	No flow	53
Dec. 21	(9:45 a.m.)	.00013	.060	40
Jan. 17, 1950	(10:15 a.m.)	.00020	.091	50
Feb. 21	(9:35 a.m.)	.00021	.096	46
Mar. 20		.00015	.065	50
Apr. 19	(10:00 a.m.)	.00022	.10	61

SPRING - J. V. CRAWFORD

Location.- Lat. 34°33'20", long. 120°01' 20" .

Altitude.- About 1,750 feet, from topographic map.

Description.- Seepage into uncurbed pool on hillside.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Oct. 25, 1948	(estimated)	0.0007	1/3	
Jan. 26, 1949	(5:20 p.m.)	.0011	0.48	
Mar. 8	(10:30 a.m.)	.0011	.48	
Apr. 19	(9:30 a.m.)	.0011	.50	
June 1	(9:15 a.m.)	.0010	.47	
June 21	(9:05 a.m.)	.00098	.44	58
July 20	(9:15 a.m.)	.00067	.30	60
Aug. 16	(9:10 a.m.)	.00076	.34	57
Sept. 27	(9:20 a.m.)	.00060	.27	56
Oct. 25	(9:30 a.m.)	.00036	.16	55
Nov. 22	(9:30 a.m.)	.00071	.32	53
Dec. 21	(9:30 a.m.)	.00076	.34	47
Jan. 17, 1950	(10:00 a.m.)	.00088	.39	54
Feb. 21	(9:20 a.m.)	.00066	.29	49
Mar. 20	(9:10 a.m.)	.00084	.38	52
Apr. 19	(9:45 a.m.)	.00098	.44	58

SPRING - J. V. CRAWFORD

Location.- Lat. 34°33'20", long. 120°01'30".

Altitude.- About 1,700 feet, from topographic map.

Description.- Seepage into uncurbed pool from alluvium on hillside.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Oct. 25, 1948	(Estimated)	0.0004	1/6	
Jan. 26, 1949	(5:10 p.m.)	.00060	0.27	
Mar. 8	(10:40 a.m.)	.00063	.28	
Apr. 19	(9:45 a.m.)	.00028	.12	
June 1	(9:00 a.m.)	.00051	.23	
June 21	(8:50 a.m.)	.00049	.22	58
July 20	(9:00 a.m.)	.00044	.20	60
Aug. 16	(8:50 a.m.)	.00045	.20	57
Sept. 27	(9:00 a.m.)	.00046	.21	57
Oct. 25	(9:15 a.m.)	.00045	.20	56
Nov. 22	(9:15 a.m.)	.00048	.21	54
Dec. 21	(10:00 a.m.)	.00048	.22	44
Jan. 17, 1950	(9:45 a.m.)	.00050	.22	50
Feb. 21	(9:05 a.m.)	.00045	.20	49
Mar. 20	(9:00 a.m.)	.00029	.13	53
Apr. 19	(9:30 a.m.)	.00036	.16	63

SPRING - J. V. CRAWFORD

Location.- Lat. 34°33'40", long. 120°01'40".

Altitude.- About 1,150 feet, from topographic map.

Description.- Wood-curbed spring in side canyon near bottom of 8-foot natural falls. Discharge measured at end of 3/4-inch pipe leading to circular concrete stock trough.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Oct. 25, 1948		0.00027	0.12	
Jan. 26, 1949	(4:50 p.m.)	.00095	.43	
Mar. 6	(9:10 a.m.)	.0015	.68	
Apr. 19	(8:45 a.m.)	.0012	.56	
June 1	(8:30 a.m.)	.00084	.38	
June 21	(8:20 a.m.)	.00057	.25	50
July 20	(8:30 a.m.)	.00027	.12	56
Aug. 16	(8:25 a.m.)	.00031	.14	50
Sept. 27	(8:30 a.m.)	.00026	.11	56
Oct. 25	(8:45 a.m.)	.00033	.15	55
Nov. 22	(8:45 a.m.)	.00049	.22	48
Dec. 21	(9:00 a.m.)	.00093	.42	41
Jan. 17, 1950	(9:15 a.m.)	.0013	.60	49
Feb. 21	(8:25 a.m.)	.0012	.52	46
Mar. 20	(8:20 a.m.)	.0010	.47	50
Apr. 19	(9:00 a.m.)	.00095	.43	55

SAN LUCAS CREEK BELOW SPRING #149

Location.- Lat. 34°33'50", long. 120°01'40", at wood cribbed spring No. 149 about 1.7 miles south of Highway 150.

Altitude.- About 1,100 feet, from topographic map.

Description.- Measuring site in natural stream channel below spring #149.

Diversion.- Spring #149 diversion above for stock.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Apr. 19, 1949	(9:00 a.m.)	No flow	No flow	
June 1	(8:35 a.m.)	No flow	No flow	
June 21	(8:30 a.m.)	No flow	No flow	
July 20	(8:15 a.m.)	No flow	No flow	
Aug. 16	(8:15 a.m.)	No flow	No flow	
Sept. 27	(8:20 a.m.)	No flow	No flow	
Oct. 25	(8:30 a.m.)	No flow	No flow	
Nov. 22	(8:30 a.m.)	No flow	No flow	
Dec. 21	(8:50 a.m.)	No flow	No flow	
Jan. 17, 1950	(9:00 a.m.)	0.017	7.5	49
Feb. 21	(8:40 a.m.)	.021	9.4	50
Mar. 20	(8:35 a.m.)	.010	4.9	52
Apr. 19	(8:45 a.m.)	.0044	2.0	55

SPRING - RANCHO JUAN Y LOLITA

Location.- Lat. 34°34'10", long. 120°03'10"

Altitude.- About 1,150 feet, from topographic map.

Description.- Wood-curbed pool on hillside. Discharge measured at first pipe union below spring.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Dec. 3, 1948		Not meas.	Not meas.	
Feb. 1, 1949		0.0056	2.50	
Apr. 8	(8:30 a.m.)	.0059	2.7	
May 26	(8:30 a.m.)	.0053	2.40	
June 20	(8:05 a.m.)	.0050	2.24	68
July 19	(8:00 a.m.)	.0045	2.03	64
Aug. 15	(8:00 a.m.)	.0044	1.97	64
Sept. 26	(8:15 a.m.)	.0040	1.78	62
Oct. 24	(8:45 a.m.)	.0037	1.64	62
Nov. 21	(8:30 a.m.)	.0024	1.07	62
Dec. 20	(8:15 a.m.)	.0032	1.42	60
Jan. 18, 1950	(8:30 a.m.)	.0034	1.54	63
Feb. 20	(8:30 a.m.)	.0020	.89	62
Mar. 22	(8:25 a.m.)	.0027	1.2	63
Apr. 18	(8:20 a.m.)	.0028	1.3	62

EAST FORK, QUIOTA CREEK

Location.- Lat. 34°33'20", long. 120°03'20", about 1.3 miles east of Refugio Pass Road.

Altitude.- About 950 feet, from topographic map.

Description.- Measuring site at outcrop in natural stream channel, reached by private road on the Juan Y. Lolita Ranch.

Diversion.- No known diversions.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
May 26, 1949	(10:35 a.m.)	No flow	No flow	
June 20	(10:20 a.m.)	No flow	No flow	
July 19	(10:30 a.m.)	No flow	No flow	
Aug. 15	(10:20 a.m.)	No flow	No flow	
Sept.26	(10:10 a.m.)	No flow	No flow	
Oct. 24	(11:00 a.m.)	No flow	No flow	
Nov. 21	(9:45 a.m.)	No flow	No flow	
Dec. 20	(10:30 a.m.)	No flow	No flow	
Jan. 18, 1950	(11:30 a.m.)	No flow	No flow	

SPRING - RANCH JUAN Y LOLITA

Location.- Lat. 34°33'30", long. 120°03'30".

Altitude.- About 1,150 feet, from topographic map.

Description.- Seep in small side canyon. Stock drink from pools.

DATE	DISCHARGE		TEMP.
	Second-Feet	Gals. per min.	°F
Feb. 1, 1949	0.00080	0.36	
Apr. 8 (11:45 a.m.)	.00047	.21	
May 26 (10:50 a.m.)	.00048	.21	
June 20 (10:35 a.m.)	.00019	.086	71
July 19 (11:00 a.m.)	.00015	.068	69
Aug. 15 (10:40 a.m.)	.00022	.100	61
Sept.26 (10:20 a.m.)	.000091	.041	60
Oct. 24 (10:45 a.m.)	.00014	.061	54
Nov. 21 (10:00 a.m.)	.00019	.087	53
Dec. 20 (10:45 a.m.)	.00034	.15	45
Jan. 18, 1950 (11:45 a.m.)	.00070	.31	55
Feb. 20 (10:45 a.m.)	.00057	.25	52
Mar. 22 (10:45 a.m.)	.00056	.25	
Apr. 18 (10:30 a.m.)	.00046	.21	60

SPRING - RANCHO JUAN Y LOLITA

Location.- Lat. 34°33'40", long. 120°04'20".

Altitude.- About 1,100 feet, from topographic map.

Description.- Old wood-curbed seep in bottom of valley. Discharge measured in boggy area downstream.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Nov. 10, 1948	(estimated)	0.0007	1/3	
Feb. 1, 1949		.00060	0.27	
Apr. 8	(10:45 a.m.)	.00059	.27	
May 26	(10:00 a.m.)	.00038	.17	
June 20	(9:45 a.m.)	.00026	.12	72
July 19	(10:00 a.m.)	.00019	.085	77
Aug. 15	(9:45 a.m.)	.00025	.11	65
Sept. 26	(9:45 a.m.)	.00016	.071	60
Oct. 24	(10:05 a.m.)	.00017	.075	55
Nov. 21	(9:15 a.m.)	.00011	.050	52
Dec. 20	(10:00 a.m.)	.00026	.11	41
Jan. 18, 1950	(10:45 a.m.)	.00013	.059	56
Feb. 20	(10:00 a.m.)	.00023	.10	52
Mar. 22	(10:00 a.m.)	.000093	.042	65
Apr. 18	(10:00 a.m.)	.00015	.065	64

SPRING - U. S. FOREST SERVICE

Location.- Lat. 34°32'10", long. 120°03'50".

Altitude.- About 2,040 feet, from topographic map.

Description.- Concrete-curbed spring, 7 feet deep. Discharge measured at road crossing, 170 feet downstream.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Jan. 27, 1949	(4:35 p.m.)	0.023	10.4	
Mar. 28	(2:30 p.m.)	.052	23	
May 25	(11:55 a.m.)	.005	2.24	
June 22	(11:00 a.m.)	No flow	No flow	
July 20	(10:45 a.m.)	No flow	No flow	
Sept.14	(10:50 a.m.)	No flow	No flow	
Nov. 30	(11:40 a.m.)	No flow	No flow	
Dec. 29	(11:35 a.m.)	.0015	.65	49
Jan. 16, 1950	(1:05 p.m.)	.19	85	46
Feb. 16	(1:40 p.m.)	.034	15	
Mar. 10	(12:15 p.m.)	.0012	.54	51
Apr. 21	(8:15 a.m.)	No flow	No flow	

WEST FORK QUIOTA CREEK

Location.- Lat. 34°33'10", long. 120°04'20", about 0.3 mile east of Refugio Pass Road.

Altitude.- About 800 feet, from topographic map.

Description.- Measuring site in natural creek channel at road crossing on Juan Y Lolita Ranch.

Diversion.- No known diversions above station. An upstream diversion for the former C.C.C. Camp has been abandoned.

DATE		DISCHARGE		TEMP.
		Second-feet	Gals. per min.	°F
Feb. 1, 1949	(3:15 p.m.)	0.076	34	
April 8	(11:15 a.m.)	.16	70	
May 26	(9:40 a.m.)	.013	5.8	
June 20	(9:35 a.m.)	No flow	No flow	
July 19	(9:30 a.m.)	No flow	No flow	
Aug. 15	(9:20 a.m.)	No flow	No flow	
Sept.16	(9:30 a.m.)	No flow	No flow	
Oct. 24	(9:45 a.m.)	No flow	No flow	
Nov. 21	(9:00 a.m.)	No flow	No flow	
Dec. 20	(9:30 a.m.)	.11	51	42
Jan. 18, 1950	(10:15 a.m.)	.20	89	48
Feb. 20	(9:30 a.m.)	.30	130	50
Mar. 22	(9:30 a.m.)	.014	6.3	53
Apr. 18	(9:23 a.m.)	.049	22	57

Plate I

Map showing location of discharge observations in the Tecolote Tunnel Area of Santa Barbara County, California

Scale 1:50,000

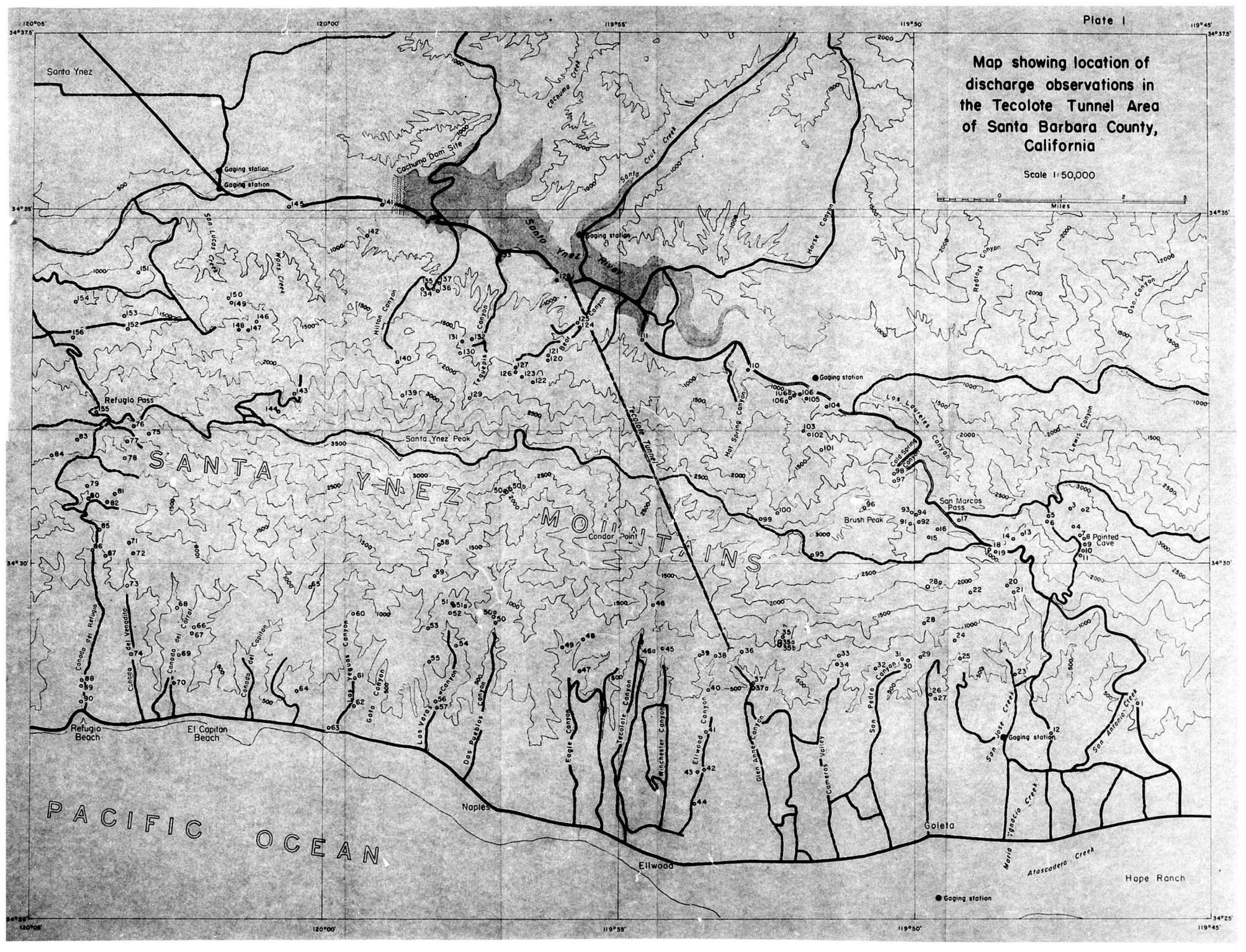
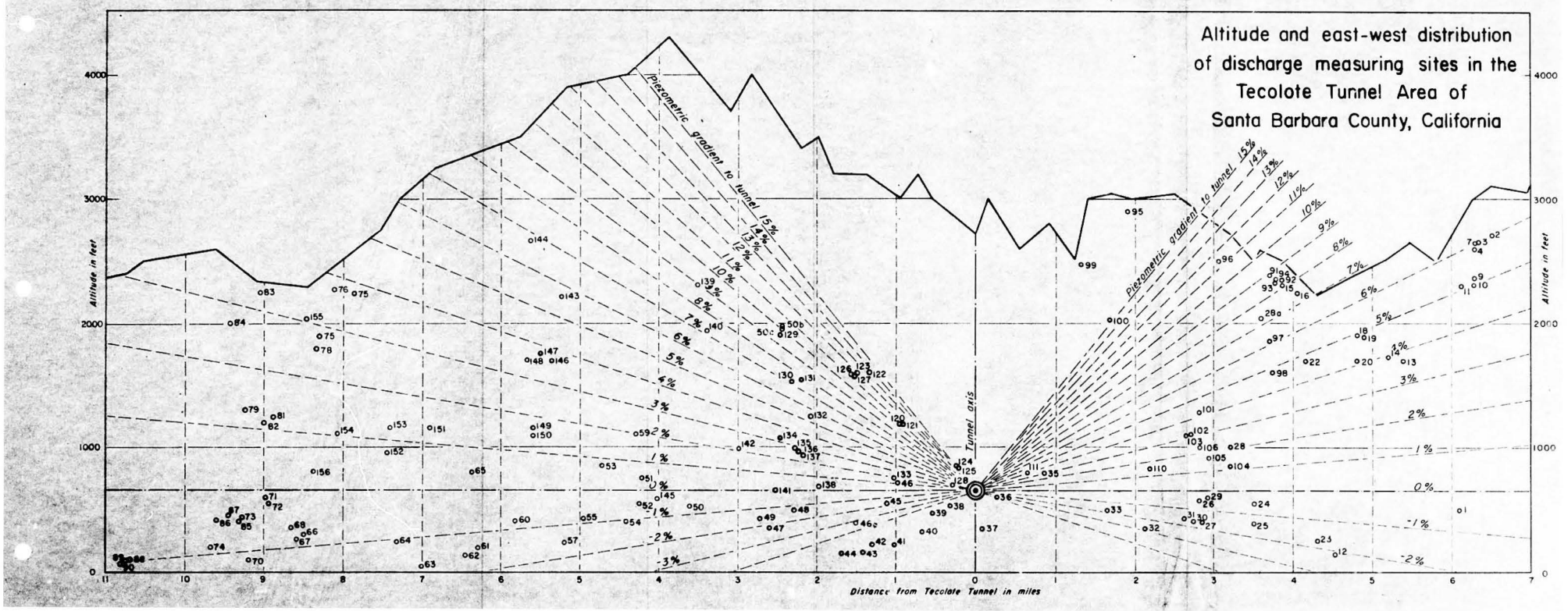


Figure 1


Altitude and east-west distribution of discharge measuring sites in the Tecolote Tunnel Area of Santa Barbara County, California
Piezometric gradient to tunnel 15%
14%
13%
12%
11%
10%
9%
8%
7%
6%
5%
4%
3%
2%
1%
0%
-1%
-2%
Tunnel axis
Altitude in feet
Distance from Tecolote Tunnel in miles
4000
3000
2000
1000
0
11
10
9
8
7
6
5
4
3
2
1
0
1
2
3
4
5
6
7