Water Levels and Artesian Pressures in Observation Wells in the United States 1955

Part 6. Southwestern States and Territory of Hawaii

Prepared under the direction of A. N. SAYRE, *Chief, Ground Water Branch*

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PREFACE

This report was prepared by the Geological Survey in cooperation with the States of Arizona, California, Nevada, and New Mexico, with the Territory of Hawaii, and with other agencies, by personnel of the Water Resources Division under the direction of:

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WATER LEVELS AND ARTESIAN PRESSURES IN OBSERVATION WELLS IN THE UNITED STATES IN 1955

Part 6. SOUTHWESTERN STATES

INTRODUCTION

By A. N. Sayre

The publication of records of water levels and artesian pressures annually in the United States was begun by the Geological Survey in 1935. Prior to 1940 the records for each year were published in a single volume--1935, 777; 1936, 817; 1937, 840; 1938, 845; 1939, 886. Since 1940, records have been published in six annual volumes, covering the northeastern, southeastern, north-central, south-central, northwestern and southwestern sections of the country. Hawaii is included in the southwestern section. The following table gives the numbers of Water-Supply Papers from 1940 through 1955.

Year	North-eastern (1)	South-eastern (2)	North-central (3)	South-central (4)	North-western (5)	South-western (6)
1940	906	907	908	909	910	911
1941	936	937	938	939	940	941
1942	944	945	946	947	948	949
1943	986	987	988	989	990	991
1944	1016	1017	1018	1019	1020	1021
1945	1023	1024	1025	1026	1027	1028
1946	1071	1072	1073	1074	1075	1076
1947	1096	1097	1098	1099	1100	1101
1948	1126	1127	1128	1129	1130	1131
1949	1156	1157	1158	1159	1160	1161
1950	1165	1166	1167	1168	1169	1170
1951	1191	1192	1193	1194	1195	1196
1952	1221	1222	1223	1224	1225	1226
1953	1265	1266	1267	1268	1269	1270
1954	1321	1322	1323	1324	1325	1326
1955	1404	1405	1406	1407	1408	1409

The objectives of the observation-well program are to provide a day-to-day evaluation of available ground-water supplies, to facilitate the prediction of trends in ground-water levels that will indicate the probable status of important ground-water supplies in the future, to delineate present or potential areas of detrimentally high or low ground-water levels, to aid in the prediction of the base flow of streams, to determine the several forces that act on a ground-water body, and to demonstrate the interplay of those forces in the ground-water regimen, to furnish information for use in basic research, and to provide long-term continuous records of fluctuations of water levels in representative wells. These selected records serve as a framework to which many short-term records collected during an intensive investigation may be related.

Water levels in wells are seldom stationary but move up or down a fraction of an inch or many feet within a short time. Water-table wells may be influenced by direct recharge from precipitation, withdrawals from wells or springs, transpiration by vegetation, evaporation from the soil, and changes in atmospheric pressure. Artesian wells are influenced over large areas by changes in the rate of pumping from other wells, changes in atmospheric pressure, earthquakes, ocean tides, earth tides, and recharge from precipitation, although the recharge may not be noticeable immediately. When accurate comparisons of water levels are made it is desirable to apply corrections for these influences, several of which may be compensating or additive according to the conditions at those particular times.

Water-level measurements are given in feet with reference to land-surface datum or sea-level datum. Land-surface datum is a precise datum plane that is approximately at land surface at each well. Mean sea level (msl) is the datum plane on which the national network of precise levels is based. When some measurements in a table are above and others are below the plane of reference, a plus (+) or minus (-) sign is placed immediately before the first entry in each column. Readings between plus signs are above the plane of reference and those between minus signs are below the plane of reference.

For the most part, discussions of precipitation in this report are based on data furnished by the United States Weather Bureau.

Measurements of water levels and artesian pressures in wells were made under the direction of the district supervisors of the Ground Water Branch in the several States.

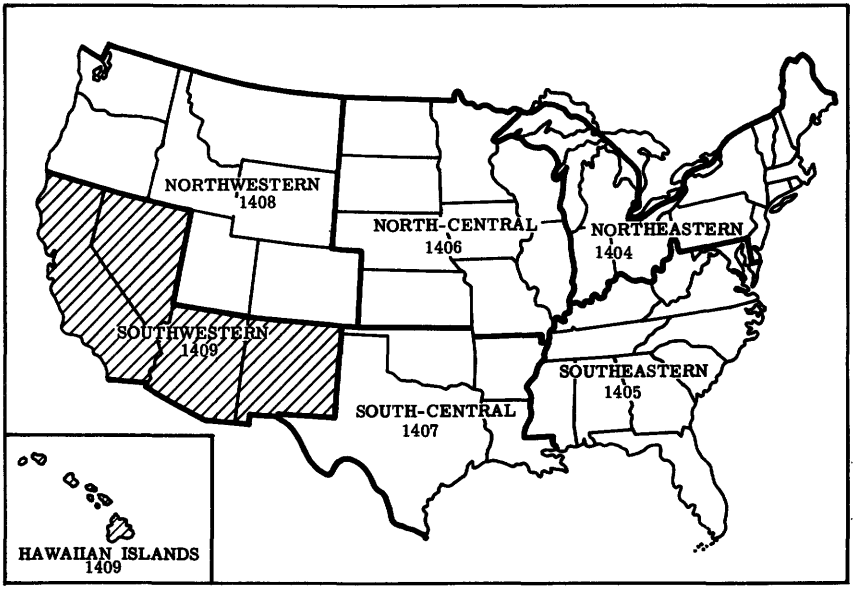

Figure 1. --Outline map of the United States showing areas included in each of the six water-supply papers on water levels and artesian pressures in observation wells in 1955. The shaded area indicates the States included in this volume.

Verda M. Dougherty was responsible for the compilation of the report and Rodney Hart edited the illustrations.

ARIZONA

By P. W. Johnson, N. D. White, and J. M. Cahill

Scope of Water-Level Program

The water-level program in the State of Arizona is part of the State-Federal cooperative program financed jointly by State and Federal funds. These funds are administrated under a cooperative agreement between the Arizona State Land Department and the U. S. Geological Survey. The work, performed by the Ground Water Branch of the Survey under this agreement, includes the collection of basic hydrologic data, geological and ground-water investigations of individual areas, and studies related to the solution of specific hydrologic and geologic problems. The funds available under this program are distributed among these three phases in such a way that the greater part is expended for the collection of basic hydrologic data.

The basic hydrologic data include the well and pumpage inventories, water-level and discharge measurements of wells and springs, and collection of water samples for chemical analysis. These data are necessary for the evaluation of the yearly changes and trends in ground-water conditions in Arizona and are used in the compilation of annual water-level reports.

Geological and ground-water investigations of individual areas are detailed studies made on a long-range basis in order to evaluate the ground-water resources more accurately. Three such studies are the Palomas Plain and Harquahala Plains projects, now nearing completion, and a new project which includes the portion of Apache County south of the Navajo Indian Reservation.

In recent years an increasing demand for information on the occurrence, movement, recharge, storage, discharge, fluctuation, and quality of ground water has led to a greater emphasis on studies involving the analysis of the available basic geologic and hydrologic data and to the collection of data specifically related to these problems. This phase of the program should provide a more accurate quantitative determination of the ground-water resources of the State. Current projects of this nature are the determination of productivity of deep aquifers and of changes in the chemical quality of ground water at depth in the Salt River Valley and the analysis of geologic and hydrologic data collected since 1903 in the Florence-Casa Grande-Komatke area in Pinal County. The collection, cataloging, and study of drill cuttings from selected wells and deep oil tests was continued during 1955.

Work financed entirely by Federal funds was continued in the Mogollon Rim region as part of the long-range investigation of the water resources of central Arizona. Work was continued during 1955 on the Navajo, Hopi, and Papago Indian Reservations in cooperation with the Bureau of Indian Affairs. The Navajo-Hopi project is nearing completion, and a comprehensive report on the ground-water resources of this area will conclude this long-range project. Arizona's participation in the nationwide program of determining changes in the quality of ground water included the collection of water samples from selected wells and springs for analysis. The monthly observation-well program in 1955 included the measuring of 18 federally and privately owned wells in the State. One of these is a Federal key well reported monthly as part of the nationwide program. Figures 2-15 show the location of observation wells.

Under the cooperative program, about 3,000 water-level measurements were made in 1,700 wells in 1955. The rate of discharge in gallons per minute was measured in about 350 wells. About 6,500 wells equipped with pumps rated more than 5 horsepower were used to irrigate approximately 1,200,000 acres in the State during 1955 (Arizona Agriculture 1956, by G. W. Barr: Arizona Agr. Expt. Sta., Bull. 270, January 1956).

Included in this report are summary statements of changes or trends in the ground-water conditions throughout the State by counties, tabulation of pumpage by areas, and water-level measurements for selected wells. Graphs are included to show comparative changes in the stage of the water level in selected wells, pumpage, and precipitation for most areas for the years 1946 to 1955, inclusive. Other graphs show cumulative changes in the water level and pumpage in the Salt River Valley, 1930-55, and in Pinal County, 1940-55. Contour maps showing the change in water level in some of the more intensely cultivated areas in the State also are included. Figure 16 shows the location of these areas in the State. Water-level measurements not included in this report are available in the open files in the offices of the Geological Survey, Ground Water Branch, at Tucson and at Phoenix.

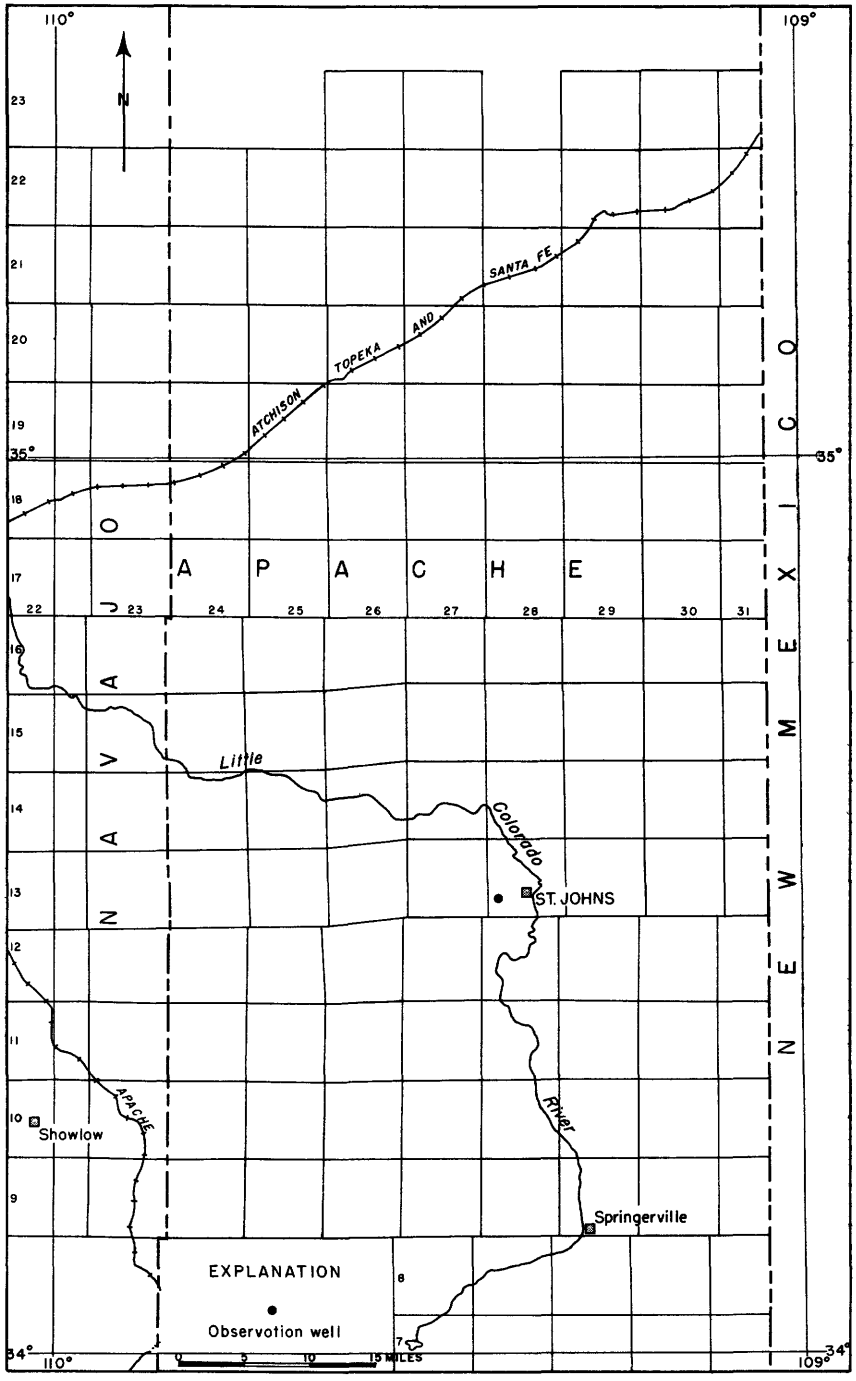

Figure 2. --Location of observation well in Apache County, Ariz., 1955.

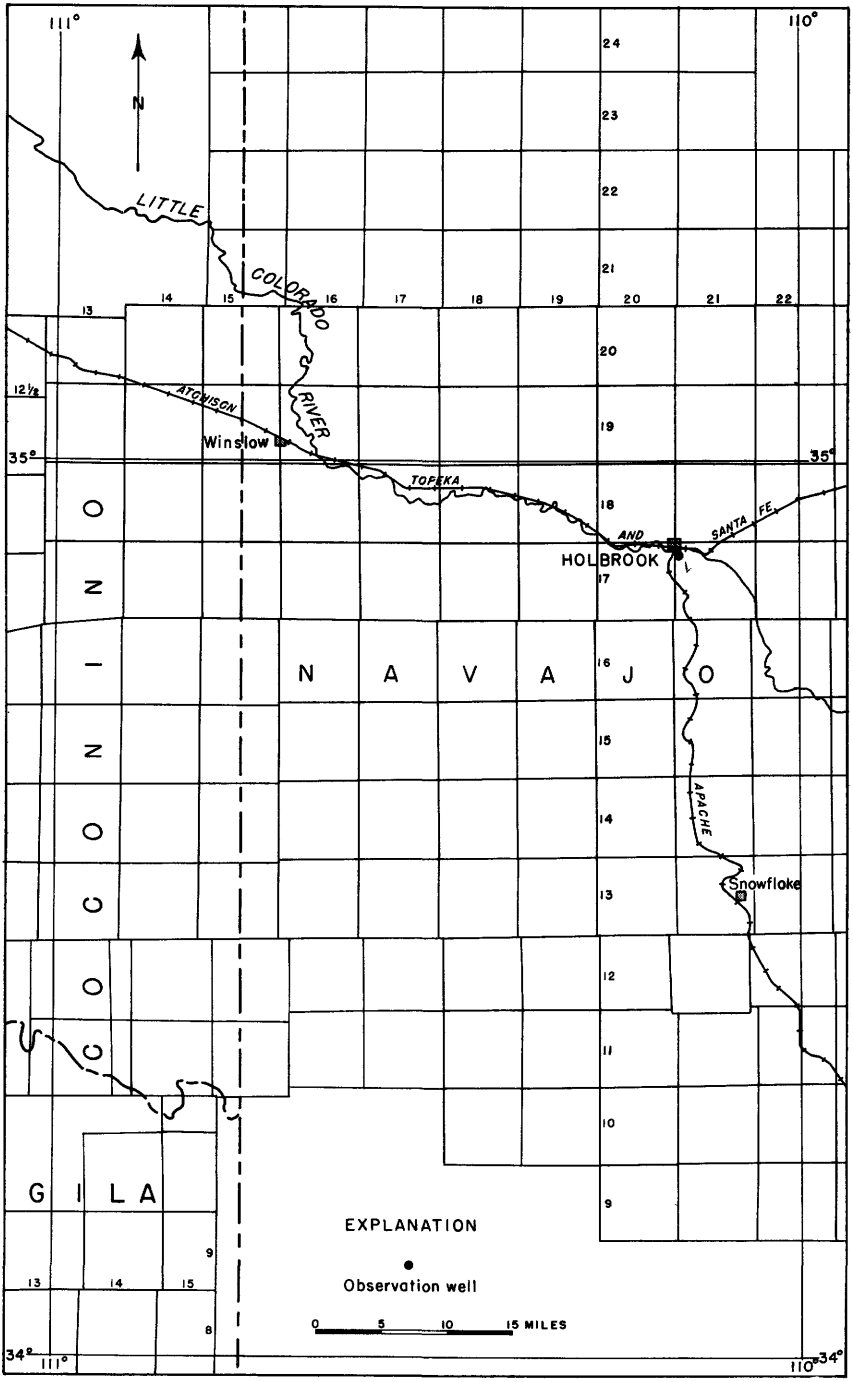

Figure 3. --Location of observation well in Navajo County, Ariz., 1955.

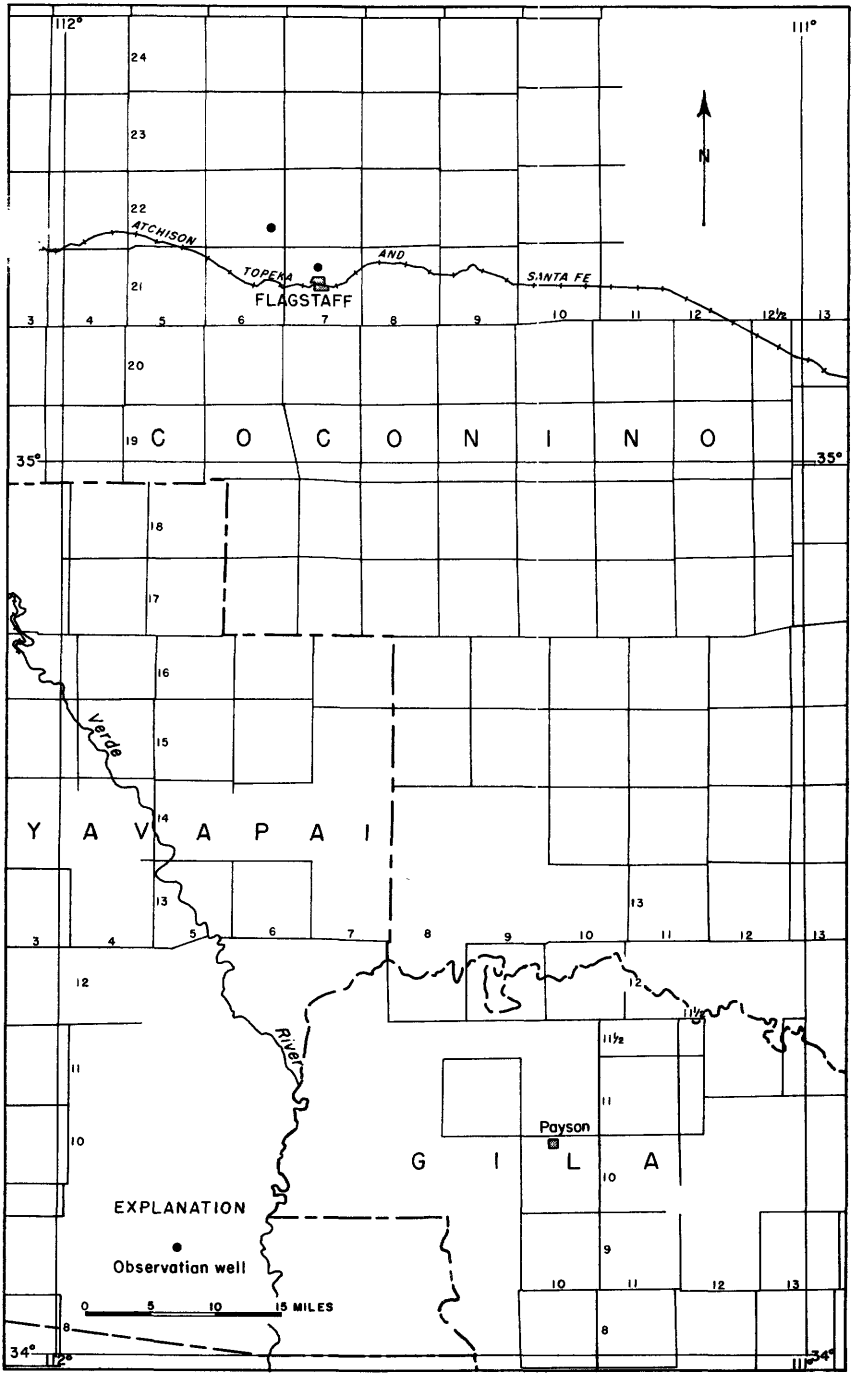

Figure 4. --Location of observation wells in Coconino County, Ariz., 1955.

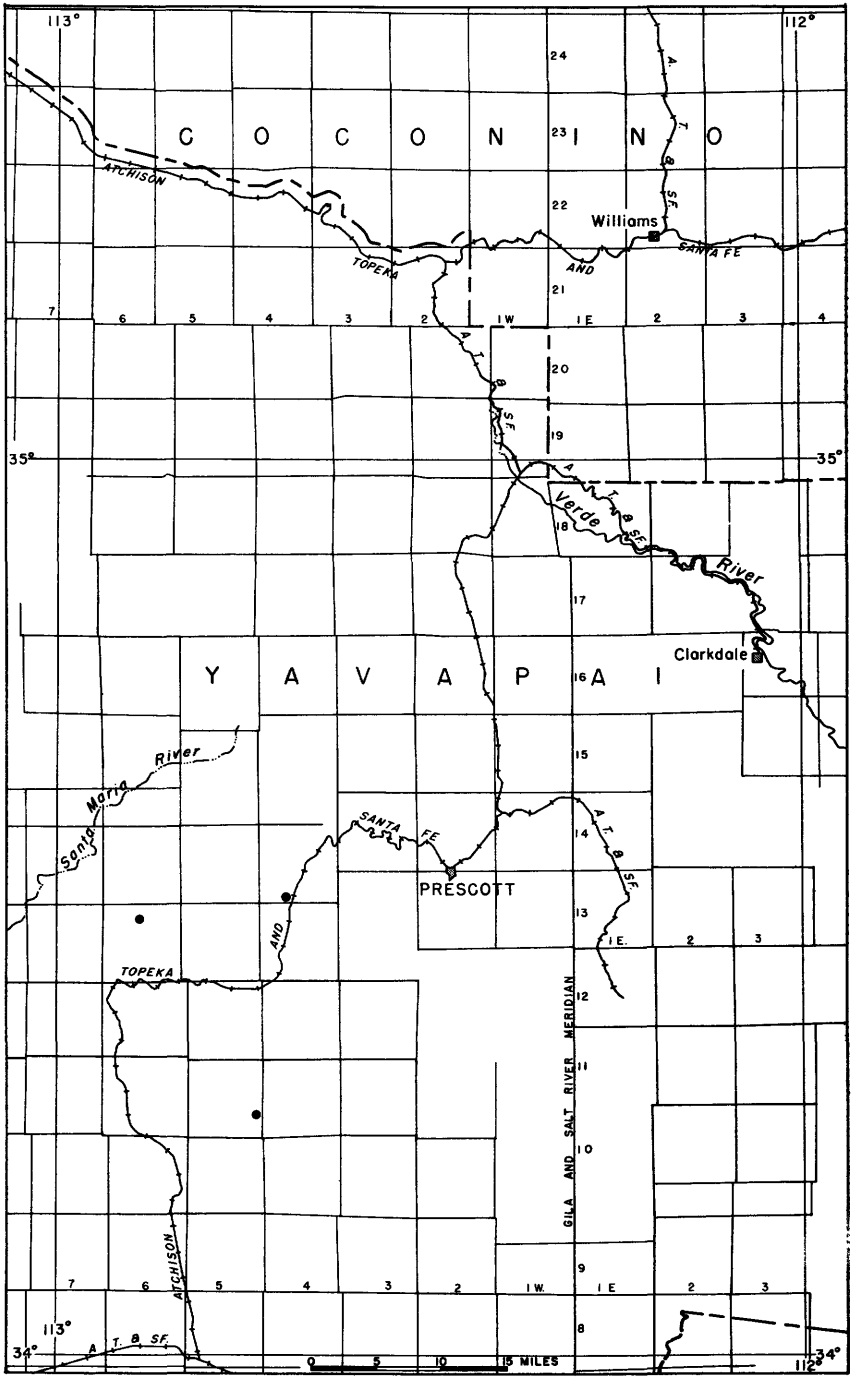

Figure 5.--Location of observation wells in Yavapai County, Ariz., 1955.

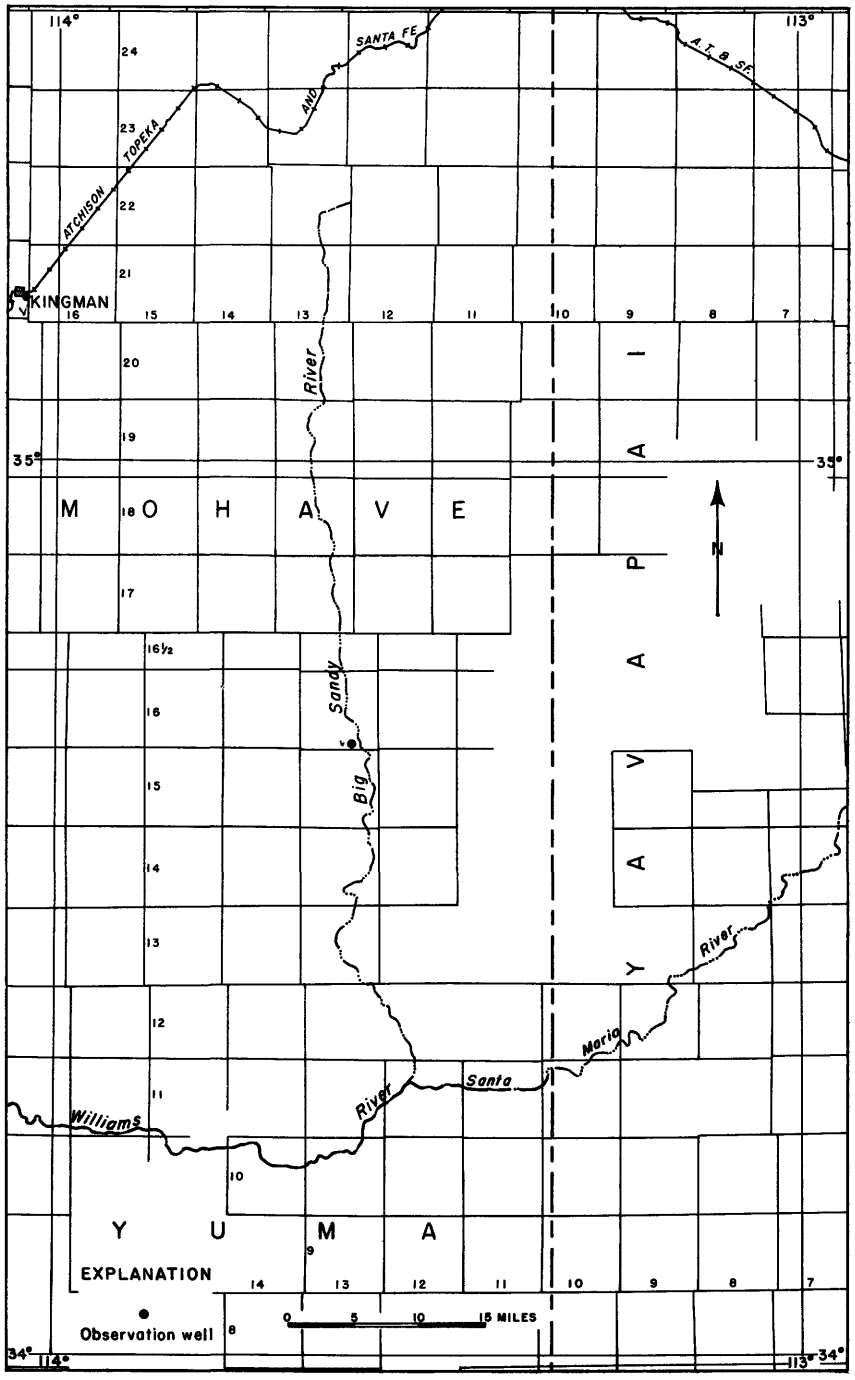

Figure 6. --Location of observation wells in Mohave County, Ariz., 1955.

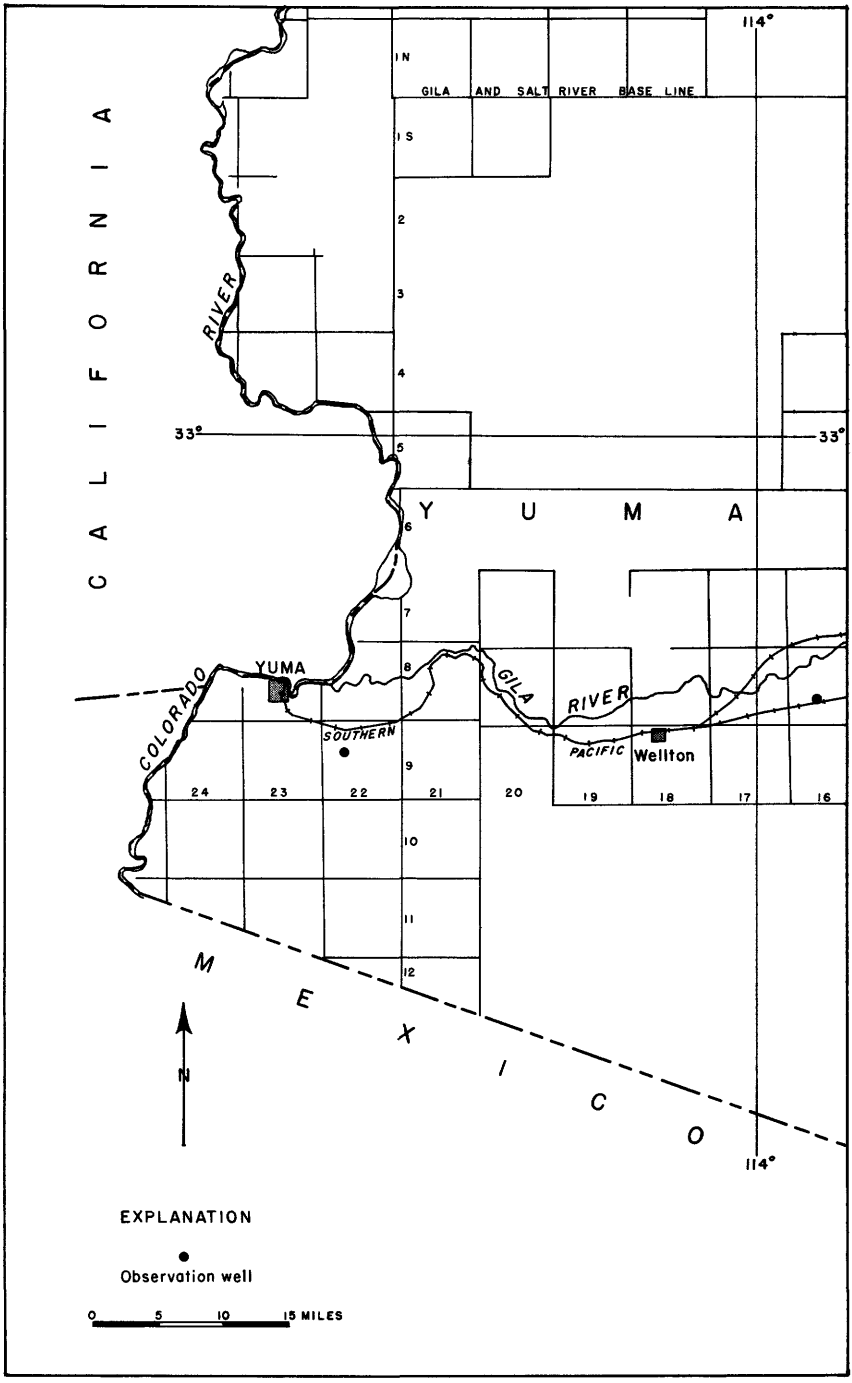

Figure 7. --Location of observation wells in Yuma County, Ariz., 1955.

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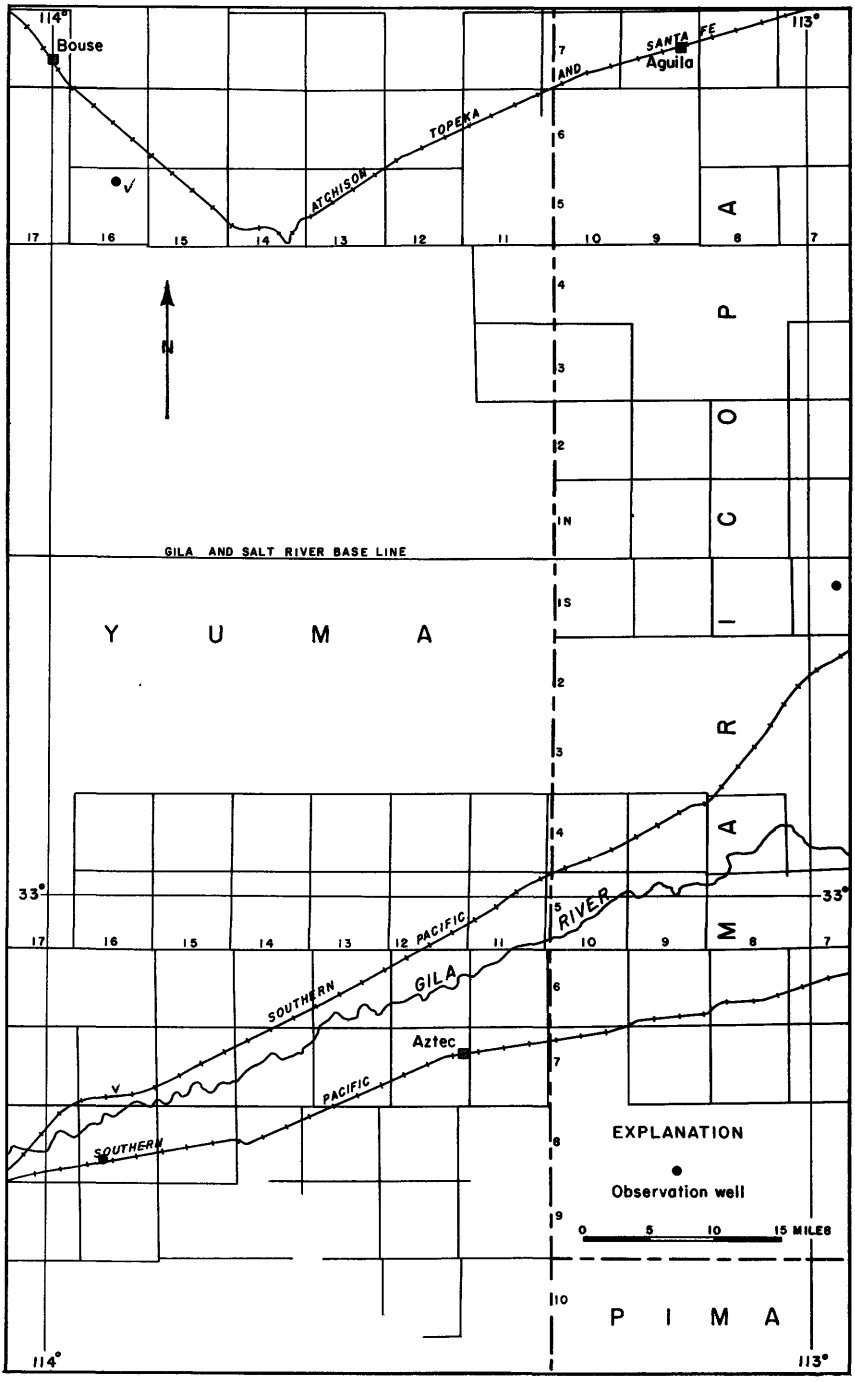

Figure 8. --Location of observation wells in Yuma and Maricopa Counties, Ariz., 1955.

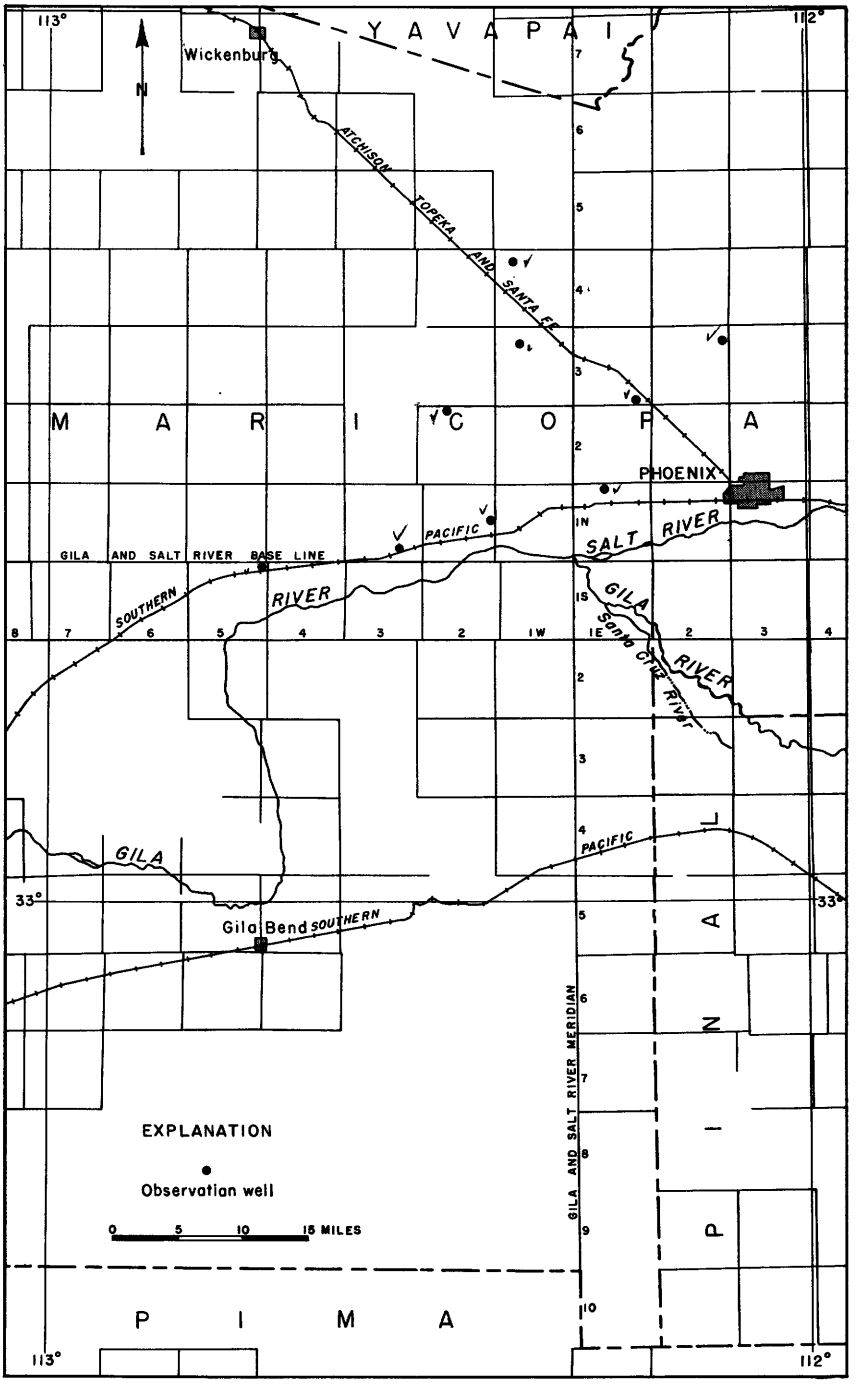

Figure 9. --Location of observation wells in Maricopa County, Ariz., 1955.

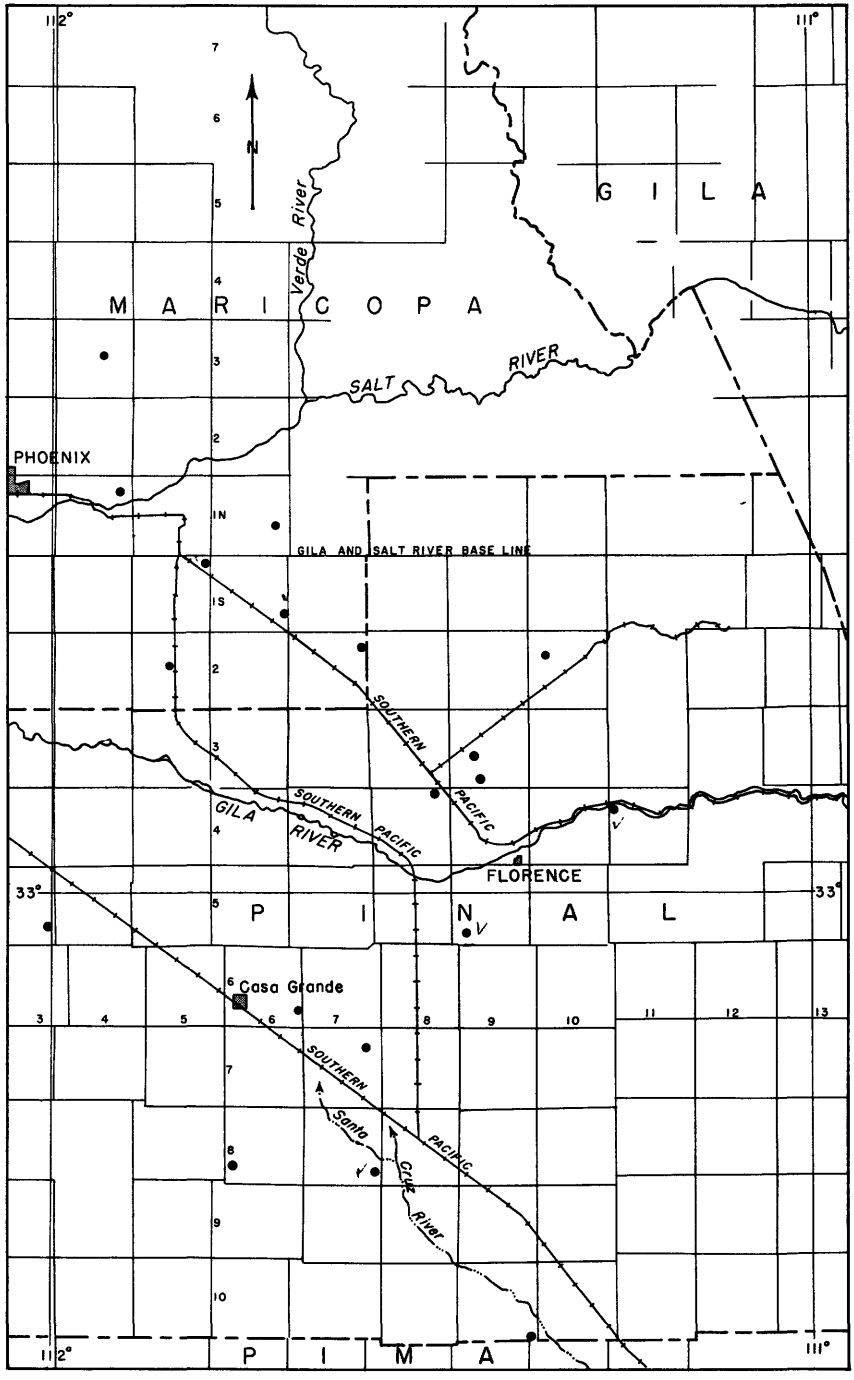

Figure 10. --Location of observation wells in Maricopa and Pinal Counties, Ariz., 1955.

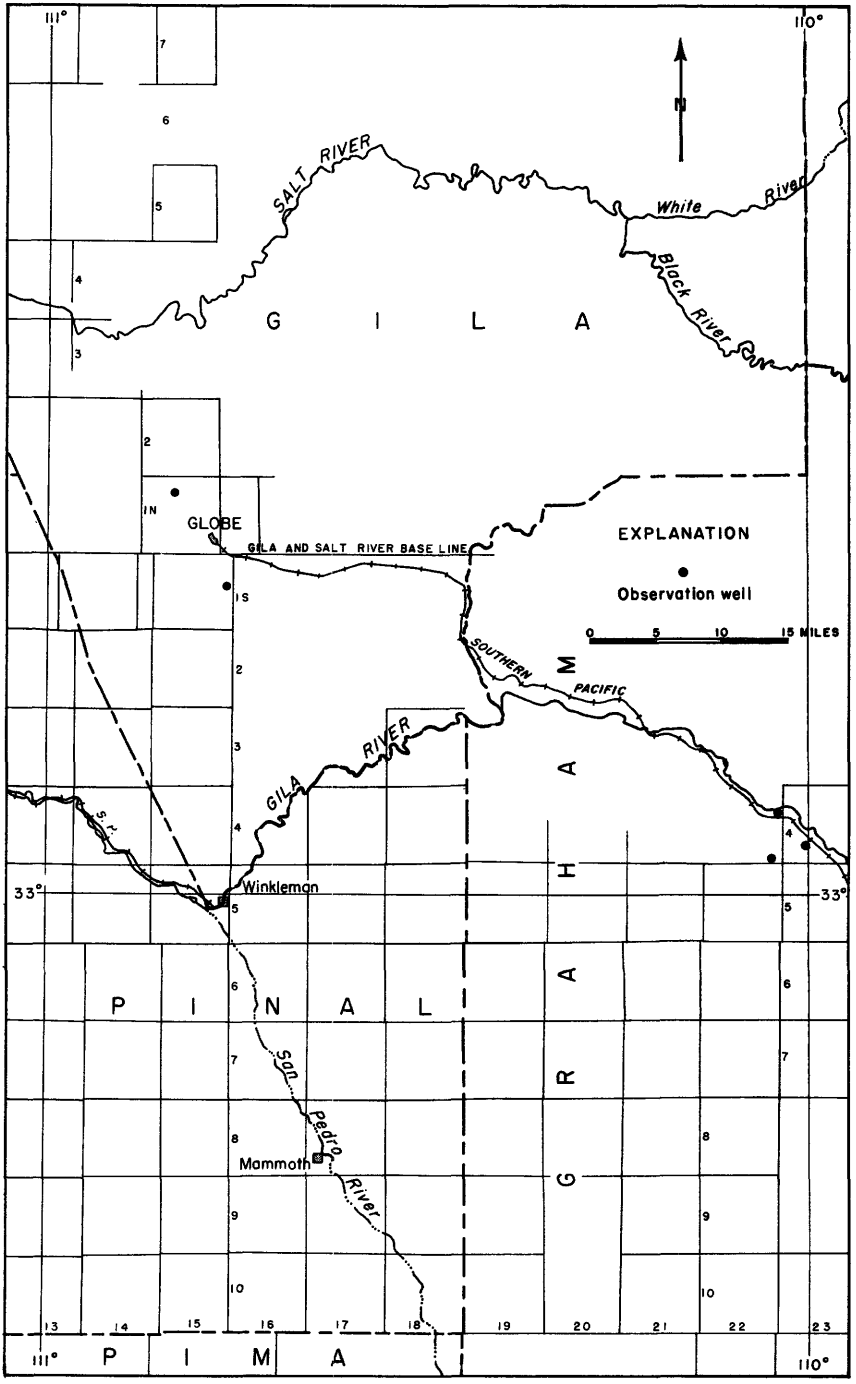

Figure 11. --Location of observation wells in Gila and Graham Counties, Ariz., 1955.

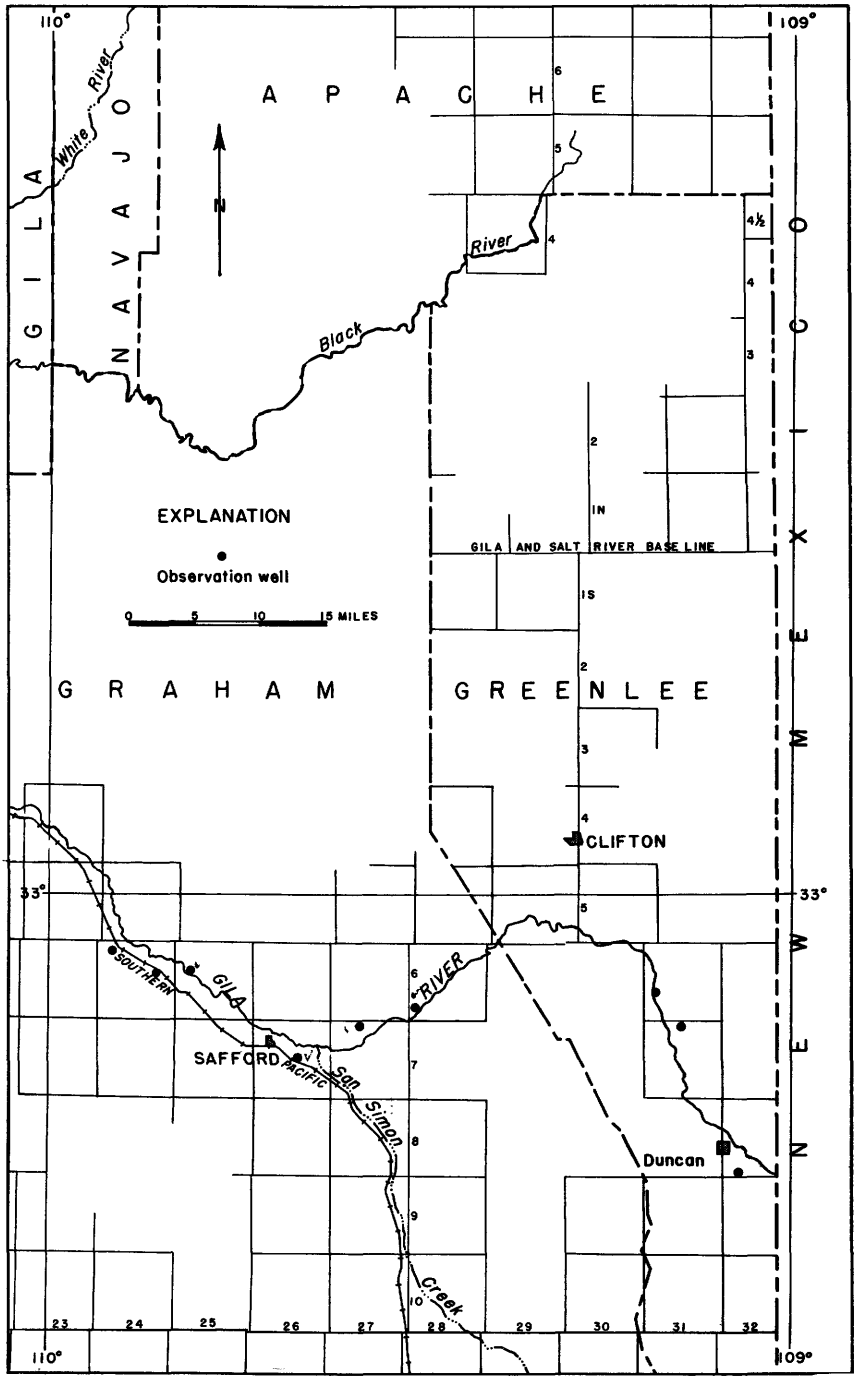

Figure 12. --Location of observation wells in Graham and Greenlee Counties, Ariz., 1955.

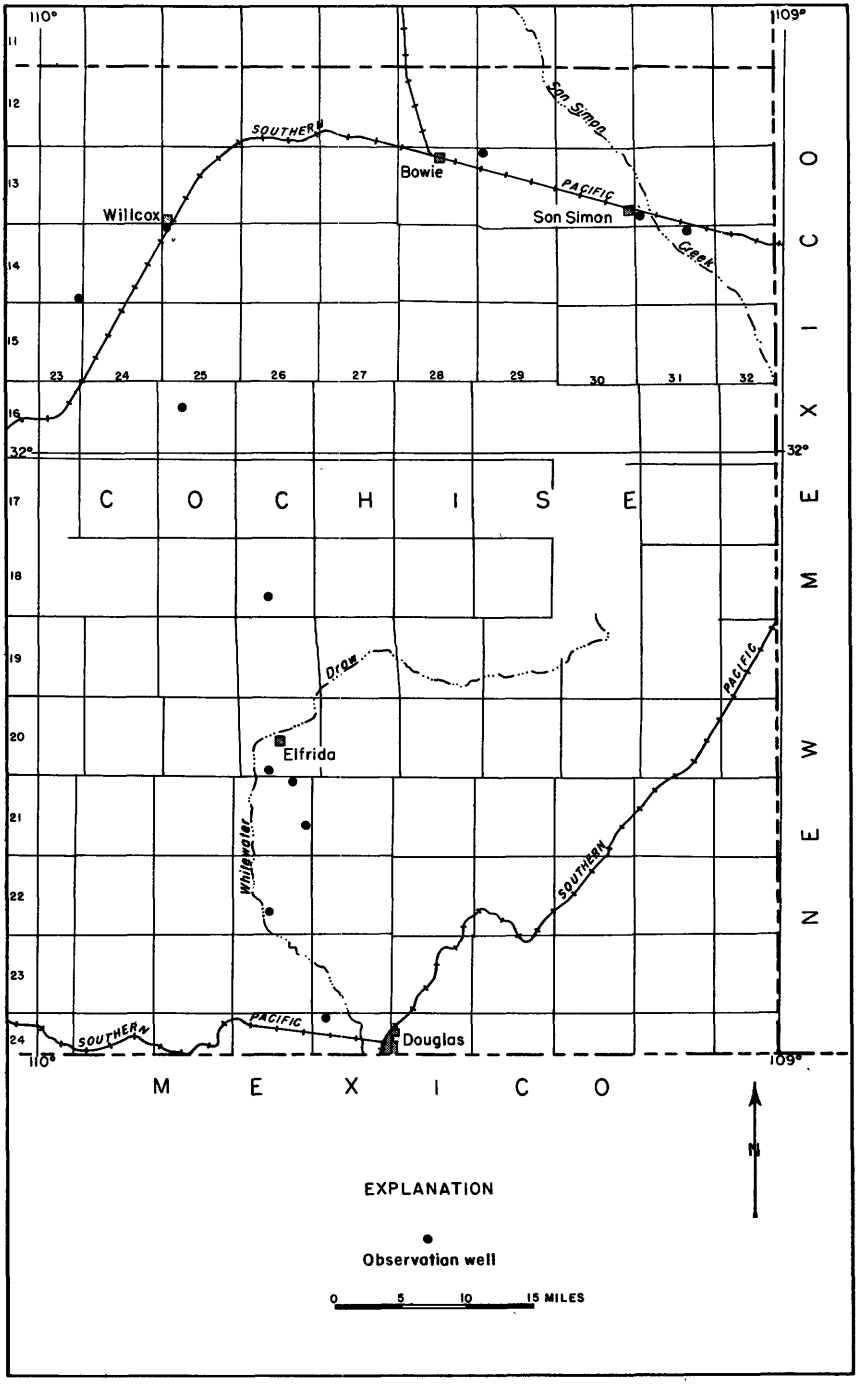

Figure 13. --Location of observation wells in Cochise County, Ariz., 1955.

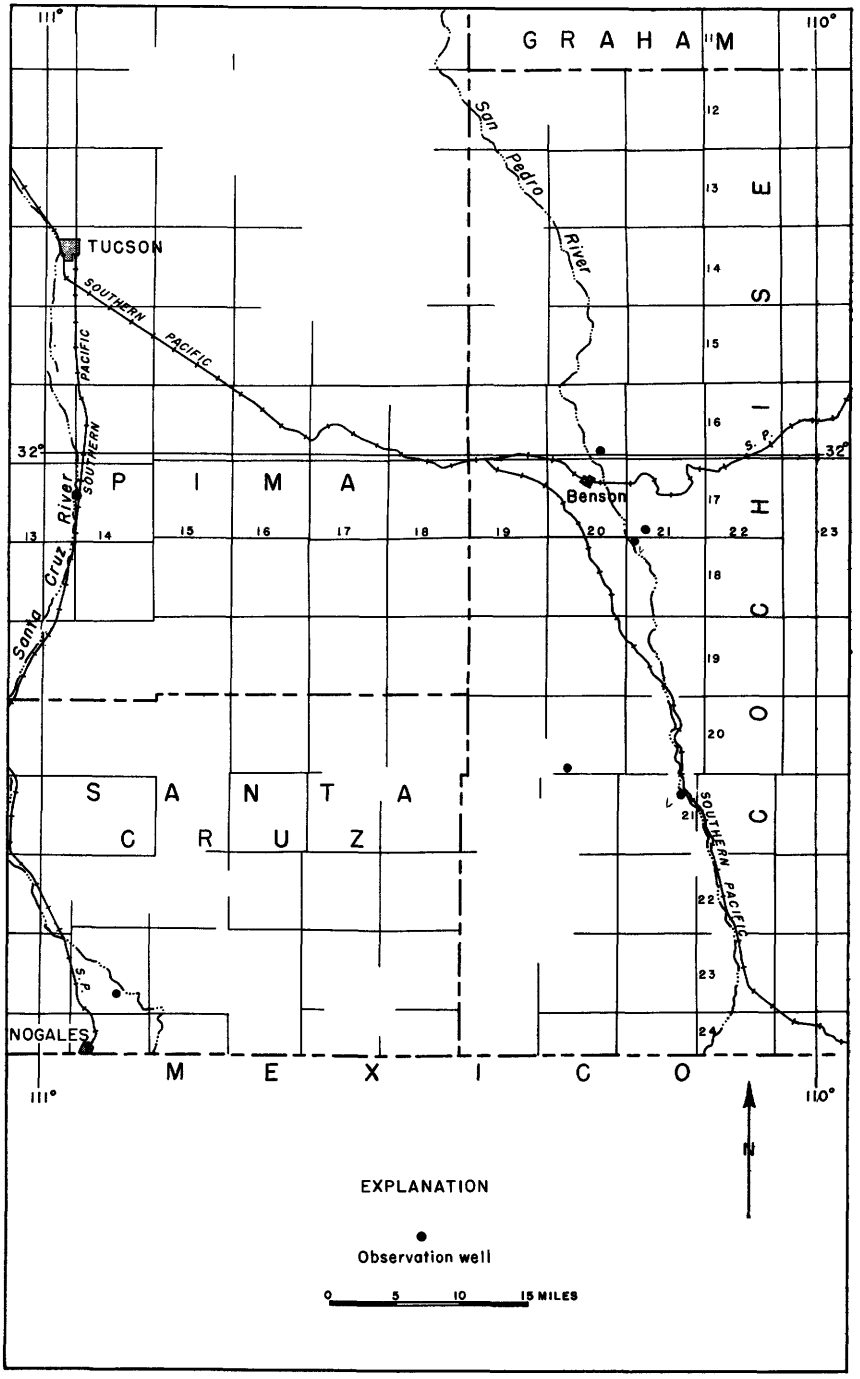

Figure 14. --Location of observation wells in Cochise, Pima, and Santa Cruz Counties, Ariz., 1955.

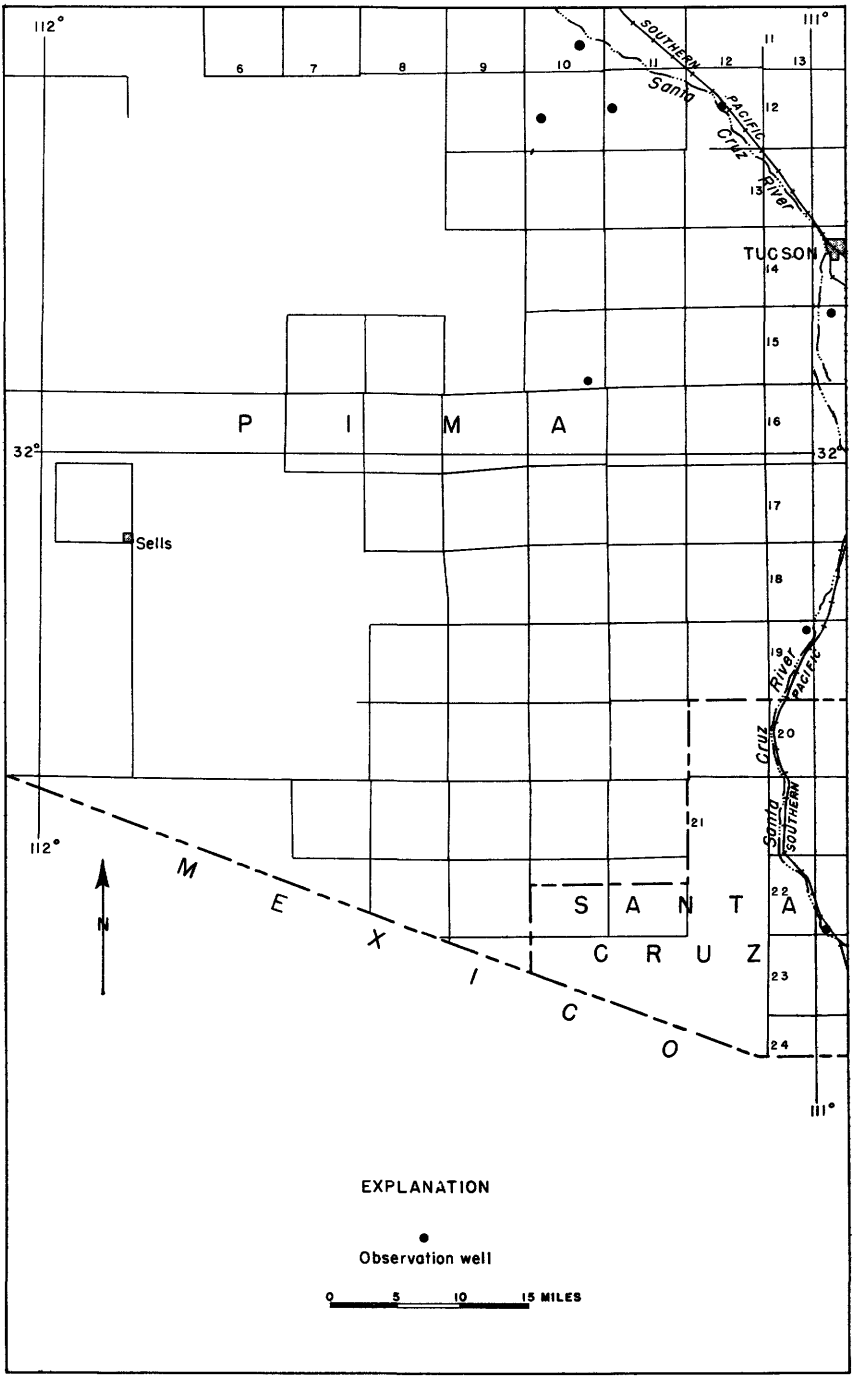

Figure 15. --Location of observation wells in Pima and Santa Cruz Counties, Ariz., 1955.

The following reports on ground-water resources of Arizona were prepared and released to the open file by the Geological Survey in 1955:

Water resources of Bill Williams River valley near Alamo, Ariz., by H. N. Wolcott, H. E. Skibitzke, and L. C. Halpenny: U. S. Geol. Survey Water-Supply Paper 1360-D, 31 p., 1 pl., 5 figs., 5 tables.

Geology and ground-water resources of the Douglas basin, Arizona, by D. R. Coates and R. L. Cushman: U. S. Geol. Survey Water-Supply Paper 1354, 56 p., 5 pl., 5 figs., 4 tables.

Memorandum on the geology and ground-water resources of Dripping Springs basin, Gila and Pinal Counties, Ariz., by D. R. Coates, typed, 11 p., 1 pl., 2 figs., 4 tables.

Pumpage and ground-water levels in Arizona in 1954, by P. W. Johnson, N. D. White, and H. N. Wolcott, mimeographed, 30 p., 11 figs.

Memorandum on water-supply investigations at Shiprock School, Navajo Indian Reservation, San Juan County, N. Mex., by J. T. Callahan and J. W. Harshbarger, typed, 11 p., 1 fig.

Stratigraphy of the uppermost Triassic and the Jurassic rocks of the Navajo country, by J. W. Harshbarger, C. A. Repenning, and J. H. Irwin: U. S. Geol. Survey Professional Paper 291.

Revisions in correlation and nomenclature of Triassic and Jurassic formations in southwestern Utah and northern Arizona, by Paul Averitt, Janis S. Detterman, John W. Harshbarger, Charles A. Repenning, and Richard F. Wilson: Am. Assoc. Petroleum Geologists Bull., v. 39, no. 12, p. 2515-2524.

Ground water in the Wupatki and Sunset Crater National Monuments, Coconino County, Ariz., by O. J. Cosner, typed, 19 p., 1 pl., 3 figs., 4 tables.

Effect of western drought on the water resources of Safford Valley, Ariz., 1940-52, by R. L. Cushman and L. C. Halpenny: Am. Geophys. Union Trans., v. 36, no. 1, p. 87-94.

Ground-water resources and geology of the Gila Bend and Dendora areas, Maricopa County, Ariz., by P. W. Johnson and J. M. Cahill, typed, 43 p., 4 pl., 6 figs., 5 tables.

Memorandum on geology and ground-water resources in the vicinity of Oracle, Pinal County, Ariz., by L. A. Heindl, typed 11 p., 2 figs., 2 tables.

Ground-water conditions between Oracle and Oracle Junction, Pinal County, Ariz., by L. A. Heindl, typed, 5 p., 1 fig., 2 tables.

Precipitation

Climatological data in this report were obtained from the Annual Summary 1955, Climatological Data, U. S. Weather Bureau, written by R. A. Dightman. Temperatures in Arizona averaged below normal for the first 8 months of 1955 and averaged about normal for the last 4 months. The average temperature for the year for the State was 59.0°F, 1.0° below normal.

The Weather Bureau has divided the State into seven divisions for the purpose of identifying areas where similar conditions exist. These are discussed in the following:

> For the year as a whole the three northern divisions averaged dry, and it was very dry in the Northeastern Division except for the three month June-August period. The three southern divisions fared better, but were dry the last four months. Most important to the State's economy of the year's precipitation features was the plentiful summer precipitation in nearly all sections. June has been wetter in Arizona only twice since 1895, and July and August both averaged over 150 percent of normal with only slight variations between divisions. In sharp contrast to the preceding wet three months, September was very dry, having been drier only once before (1953) in 60 years. By divisions the Northeastern averaged shortest of normal with a 3.03-inch deficiency, the South Central had the greatest excess, 1.02 inches ..... Driest stations mostly were either along the normally dry western edge of Arizona or in the northern and eastern parts of the Northeastern Division. .....Severe thunderstorms occurred several times in several areas after July 15 to late in August, but although damage was locally severe, the worst storms covered limited areas ..... As a whole the year's weather (1955) was favorable for ranches and farms in spite of early and late season dry spells .....Aside from the early season freezes, and slight local frost damage in the late fall, irrigated crops did quite well all year and water supplies, which had dropped to very low levels in some reservoirs during the spring, were improved greatly by the July and August rains.

Total annual runoff figures for 1955 as measured by the Geological Survey include: Salt River near Roosevelt, 222,000 acre-feet; Tonto Creek near Roosevelt, 65,010 acre-feet; and Verde River above Horseshoe Dam, 214,800 acre-feet.

Pumpage

The following table shows the approximate amount of ground water pumped in areas of irrigation development and the totals for the State for the 5-year period 1951-55. These totals have been rounded because the measurements are not precise enough to justify a more exact figure. Therefore, the total pumpage for the State is estimated to have been about 4,400,000 acre-feet in 1955. This estimate is somewhat less than the amount of ground water pumped in 1954 and about twice the amount of water diverted from surface-water supplies in the State during 1955.

Data from the University of Arizona (Barr, 1956) indicate that about 1,200,000 acres of land was irrigated in 1955 in the State. This represents a decrease of about 50,000 acres from 1954. According to Dr. Barr, cash income from crops and livestock amounted to about 335 million dollars in 1955, a decrease of about 45 million dollars from 1954.

The small decrease in acreage and the greater than normal precipitation during the growing season may account for the decrease in the amount of ground water pumped for irrigation.

Pumpage, in acre-feet, from wells in principal ground-water areas in Arizona

Area	1951	1952	1953	1954	1955
Cochise County:					
San Simon Basin a/	(b)	15,000	25,000	32,000	40,000
Willcox Basin	38,000	39,000	75,000	70,000	80,000
Douglas Basin	38,000	42,000	45,000	42,000	50,000
Graham County:					
Safford Valley	125,000	70,000	120,000	90,000	90,000
Greenlee County:					
Duncan Valley c/	33,000	17,000	30,000	27,000	25,000
Maricopa County:					
Salt River Valley area d/	1,910,000	2,000,000	2,300,000	2,300,000	2,200,000
Waterman Wash area	(e)	(e)	28,000	30,000	40,000
Harquahala Plains area	(e)	(e)	20,000	33,000	30,000
Gila Bend area	110,000	120,000	145,000	139,000	140,000
Dendora area		6,000	5,000	7,000	6,000
Pima County:					
Part of Santa Cruz Basin	240,000	250,000	380,000	300,000	300,000
Pinal County:					
Part of Santa Cruz Basin and Gila River Basin	1,030,000	950,000	1,400,000	1,200,000	1,200,000
Santa Cruz County:					
Part of Santa Cruz Basin	30,000	27,000	27,000	20,000	20,000
Yuma County:					
Palomas Plain area	15,000	26,000	47,000	30,000	25,000
Wellton-Mohawk area	50,000	40,000	16,000	9,000	8,000
South Gila Valley	62,000	60,000	60,000	60,000	55,000
Northern Yuma County f/	(b)	(b)	28,000	26,000	25,000
Other areas: g/	75,000	65,000	75,000	100,000	100,000
Total:	3,756,000	3,727,000	4,826,000	4,515,000	4,434,000
Rounded to:	3,750,000	3,730,000	4,800,000	4,500,000	4,400,000

a/ Includes Bowie area.
b/ Not determined.
c/ Does not include Virden Valley, N. Mex.
d/ Includes Queen Creek area, Maricopa and Pinal Counties.
e/ From 1950 to 1952, inclusive, was included in Salt River Valley area.
f/ Ranegras Plain and McMullen Valley.
g/ Estimated pumpage for smaller irrigated areas for which records have not been collected. These include: Upper San Pedro Valley, Lower San Pedro Valley, Cactus Flat-Artesia area, St. Johns area, Snowflake-Taylor area, Hunt area, Woodruff area, Joseph City area, Chino Valley, Williamson Valley, Skull Valley, Peeples Valley, Date Creek area, Big Sandy Valley, Valentine area, and Parker area.

Interpretation of Water-Level Fluctuations

The following summaries include the water-level fluctuations and general ground-water conditions for each of the 14 counties of Arizona, listed alphabetically.

Apache County.--Water levels in wells in Apache County indicated a slight rise during 1955. Most of the wells in this area are under artesian pressure with heads ranging from slightly above the surface to about 30 feet below the surface. Precipitation at St. Johns amounted to 10.13 inches in 1955, about 88 percent of normal.

Cochise County.--There are four principal areas of development in Cochise County: (1) the Upper San Pedro Valley, (2) the San Simon Basin, (3) the Willcox Basin, and (4) the Douglas Basin.

Water levels in wells in the Upper San Pedro Valley indicated an average rise of more than 1 foot in 1955. Wells (D-21-21)11aad and (D-20-20)32cdb in the Charleston-Fort Huachuca area both showed a rise. Well (D-16-20)34acd near Pomerene showed a negligible rise, and well (D-17-21)32bad near St. David showed a decline of more than 1 foot during 1955. (See fig. 17.) Precipitation at Fairbank amounted to 13.95 inches, about 18 percent greater than normal.

The amount of ground water pumped in the San Simon Basin in 1955 was about 40,000 acre-feet, an increase of about 8,000 acre-feet from 1954. Many wells in this basin tap water under artesian pressure and some of them flow, but all irrigation wells must be pumped to provide sufficient water. Cultivation in the San Simon Basin is centered in two areas near the towns of San Simon and Bowie. Water levels in wells in the San Simon area indicated an average decline of about 6 feet during 1955. Figure 17 shows hydrographs of two wells in this area. Water levels in the area ranged from less than 10 to more than 100 feet below the surface. Precipitation at San Simon was 5.81 inches in 1955, about 67 percent of normal. In the Bowie area, water levels in wells showed declines ranging from 10 to 62 feet and averaging nearly 30 feet during 1955. The greatest decline occurred in the area about 2 miles south of Bowie. Well (D-13-29)6ccc showed a decline of about 30 feet during 1955. Depths to water ranged from less than 25 feet on the eastern edge of the area to about 300 feet on the western edge. Precipitation at Bowie was 7.28 inches during 1955, about 78 percent of normal.

Pumpage of ground water in the Willcox Basin amounted to about 80,000 acre-feet in 1955, an increase of 10,000 acre-feet from 1954. This may be chiefly attributed to an increase in acreage under cultivation. There are two main areas of development in the Willcox Basin, the Stewart area northwest of Willcox and the Kansas Settlement area southeast of Willcox.

Figure 18 shows contours of the change in the water level in the Willcox Basin for 1955. In the Stewart area, fluctuations in water levels in wells ranged from no change to a decline of more than 8 feet averaging about 3 feet of decline during 1955. Small rises were measured in a few shallow wells. In general, the lesser declines were measured near Willcox and on the outer fringes of the irrigated area and the greater declines in the center of the irrigated area and toward the northern edge of the basin. Depths to water ranged from about 30 feet on the southern edge of the irrigated area near Willcox to more than 100 feet on the northern fringe of the cultivated area. South of Willcox and north of the playa, water levels averaged about 25 feet below the surface.

Water levels in wells in the Kansas Settlement area of Willcox Basin indicated an average decline of about 6 feet during 1955. Declines of as much as 12 feet were measured in the center of the irrigated area, and small rises in water level occurred in some shallow wells along the outer fringes of the area. The range in depth to water was from 30 to more than 200 feet. Wells (D-14-23)36baa and (D-14-25)6cac (fig. 19), outside the cultivated area between the Stewart and Kansas Settlement developments, showed no decline during 1955. Precipitation at Willcox amounted to 10.01 inches in 1955, about 84 percent of normal.

About 50,000 acre-feet of ground water was pumped in the Douglas Basin in 1955. This represents an increase of about 8,000 acre-feet from the amount pumped during 1954. Figure 20 shows contours of the change in the water level for 1955 in the Douglas Basin. Fluctuations in water levels in the basin ranged from a rise of slightly less than 2 feet in a few wells outside the cultivated area to a decline of about 3 feet in the center of the cultivated area. Between Double Adobe and the Mexican border, the average decline in water level was about half a foot. From McNeal to Double Adobe, the decline in water level averaged slightly more than 1 foot. From the vicinity of Elfrida north to the limit of the irrigated area, water levels showed an average decline of slightly more than 2 feet. For the basin as a whole, the average change in water level was a decline of about 2 feet. Figure 19 shows hydrographs of two wells in the basin. The range in depth to water within the cultivated area in the basin was from about 35 feet along Whitewater Draw to more than 100 feet toward the mountain fronts. Precipitation at Douglas amounted to 12.01 inches during 1955, about 99 percent of normal.

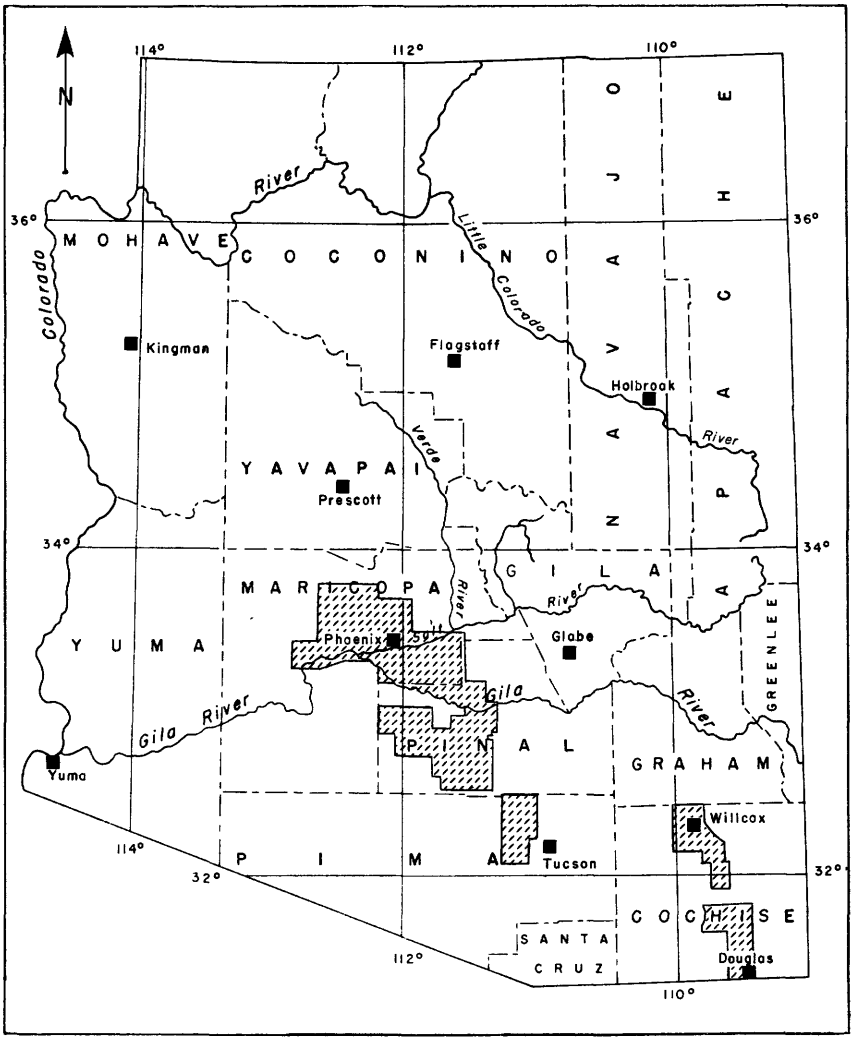

Figure 16. --Index of areas for which maps showing change in water levels are included in this report.

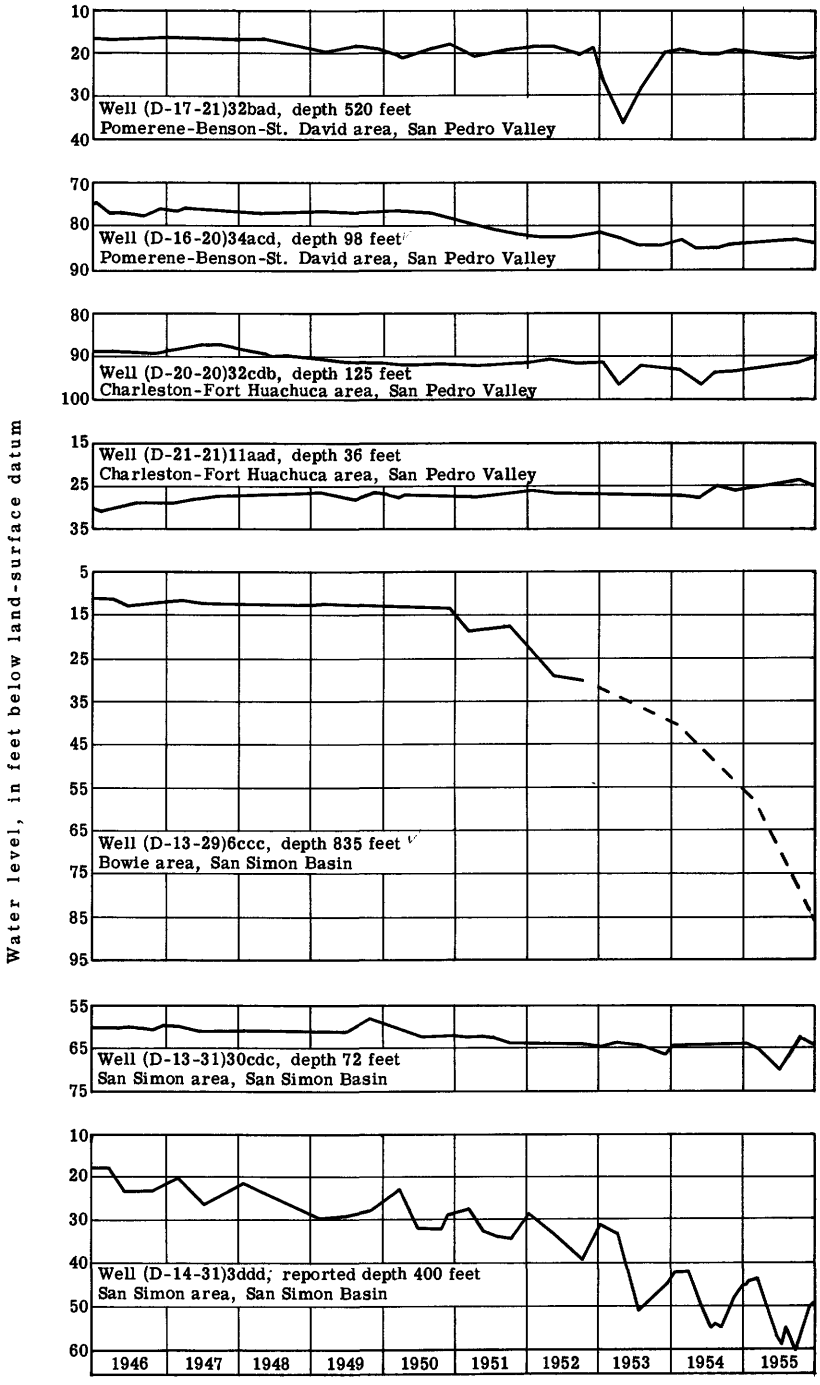

Figure 17. --Water levels in wells in San Pedro Valley and San Simon Basin, Cochise County, Ariz., 1946-55.

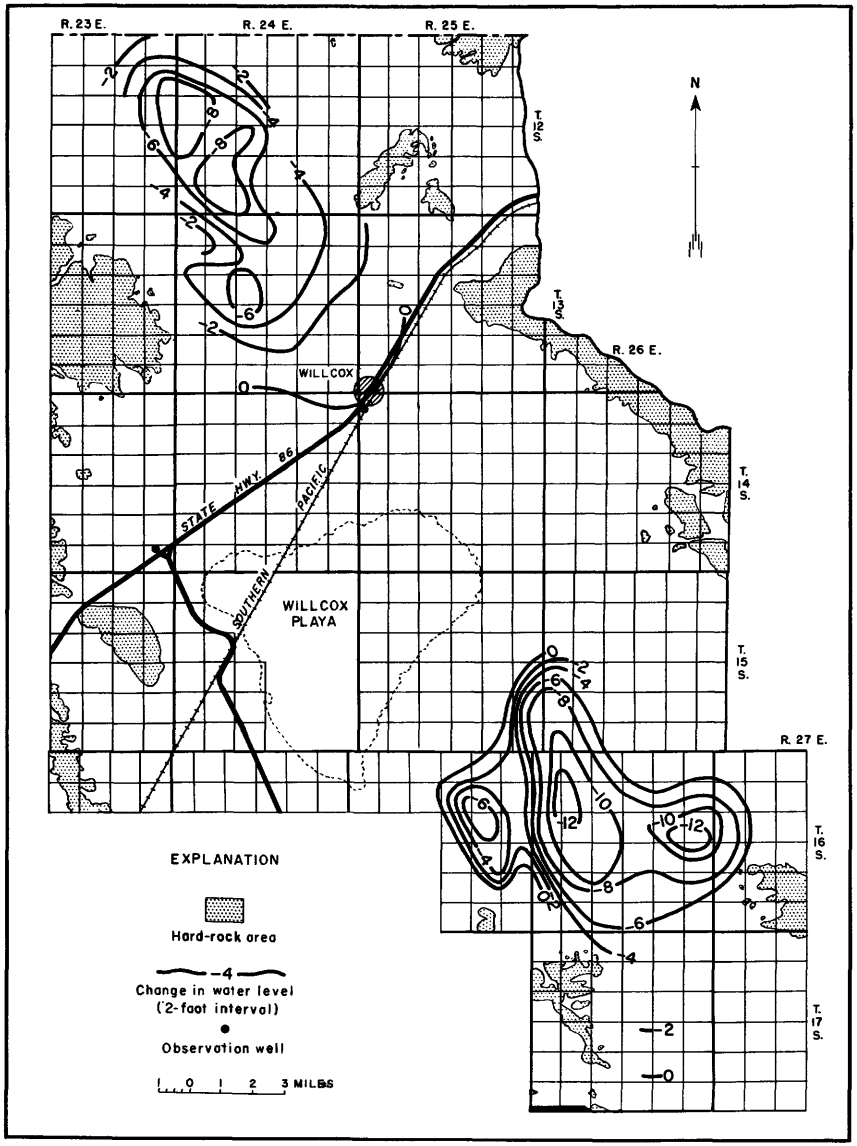

Figure 18. --Change in water level from spring 1955 to spring 1956 in Willcox Basin, Cochise County, Ariz.

Coconino County. --Water levels in wells in the vicinity of Williams indicated a rise of about half a foot in 1955. However, the shallow water table in this area is readily affected by precipitation. Precipitation at Williams during 1955 was 21.95 inches, about 4 percent above normal.

In a few places in the Flagstaff area, small supplies of water are obtained from relatively shallow wells. These wells showed a decline of less than half a foot. Precipitation at Flagstaff amounted to 17.97 inches in 1955, about 97 percent of normal.

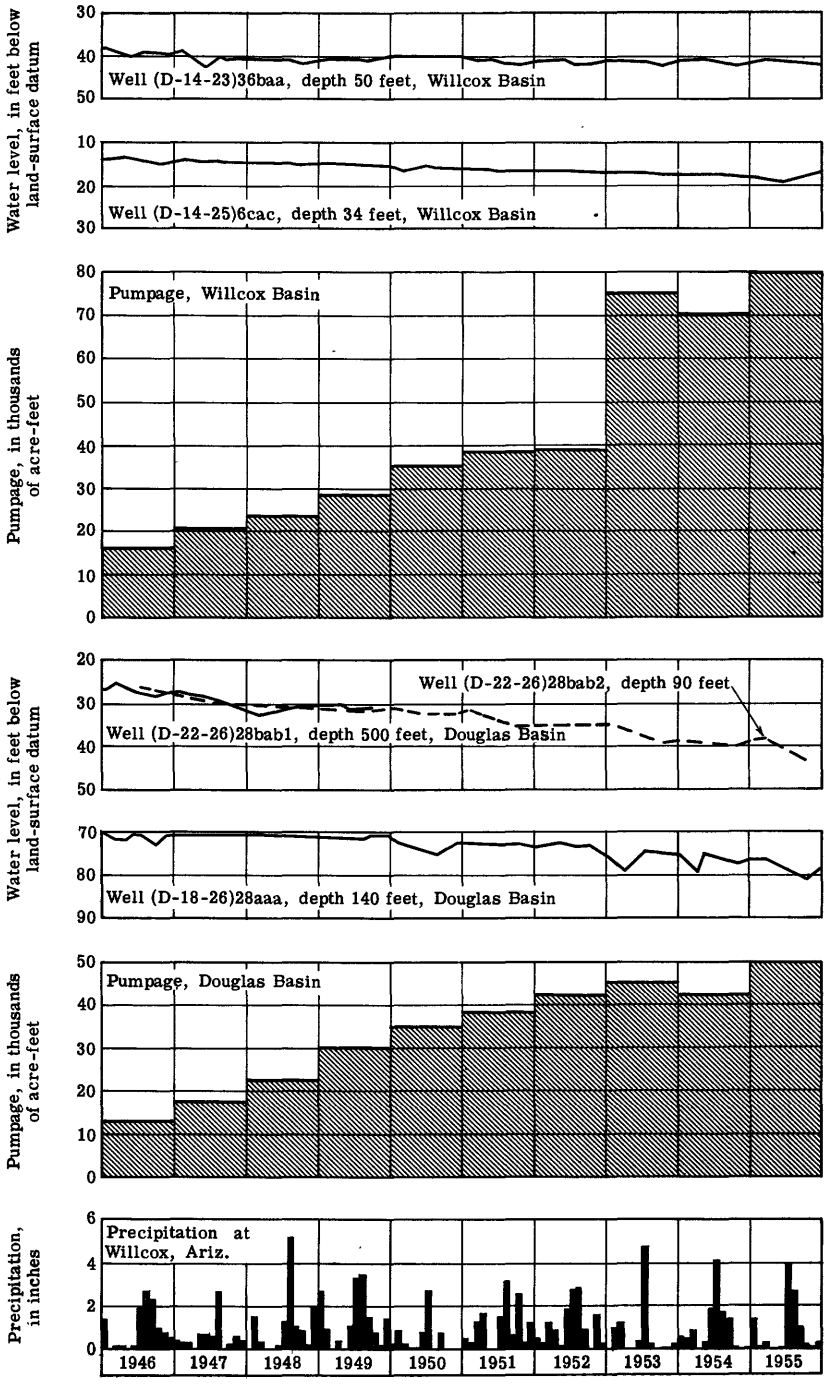

Figure 19. --Water levels in wells, pumpage in Willcox and Douglas Basins, and precipitation at Willcox, Cochise County, Ariz., 1946-55.

Gila County.--In the upper Pinal Creek and Dripping Springs areas of Gila County, water levels fluctuated widely during 1955, but no particular pattern of rise or decline could be determined. Precipitation at Globe was 15.53 inches for 1955, about 3 percent greater than normal.

Graham County.--Water levels in wells in Safford Valley indicated a rise during 1955. In the area from San Jose to Safford, water levels in wells showed fluctuations ranging from a decline of about 1 foot to a rise of more than 6 feet, averaging about 2 feet of rise during 1955. Well (D-7-26)22bac in this area shows a rise of about 2 feet. In the Safford-Pima area, fluctuation of water levels in wells ranged from a decline of about 5 feet to a rise of about 1½ feet; in the

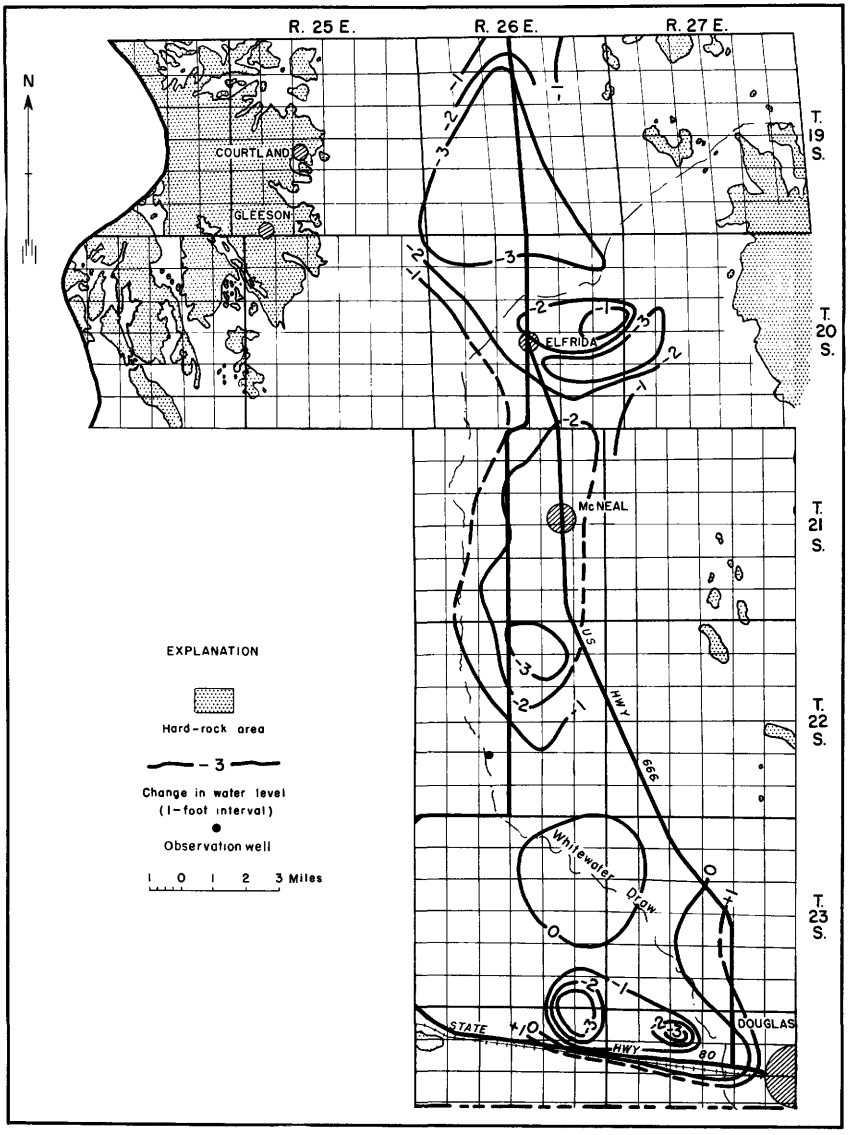

Figure 20.--Change in water level from spring 1955 to spring 1956 in Douglas Basin, Cochise County, Ariz.

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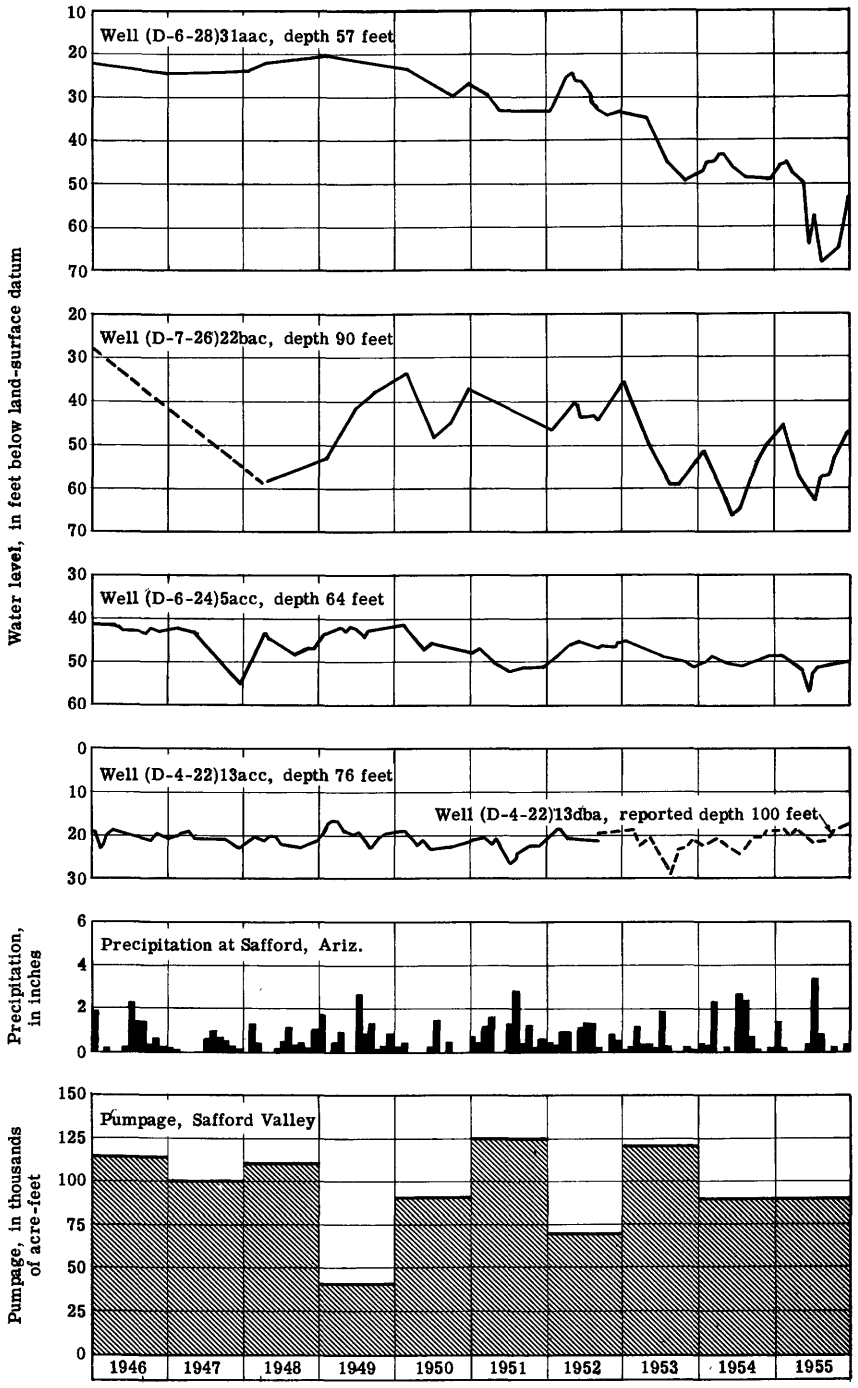

Figure 21. --Water levels in wells, precipitation at Safford, and pumpage in Safford Valley, Graham County, Ariz., 1946-55.

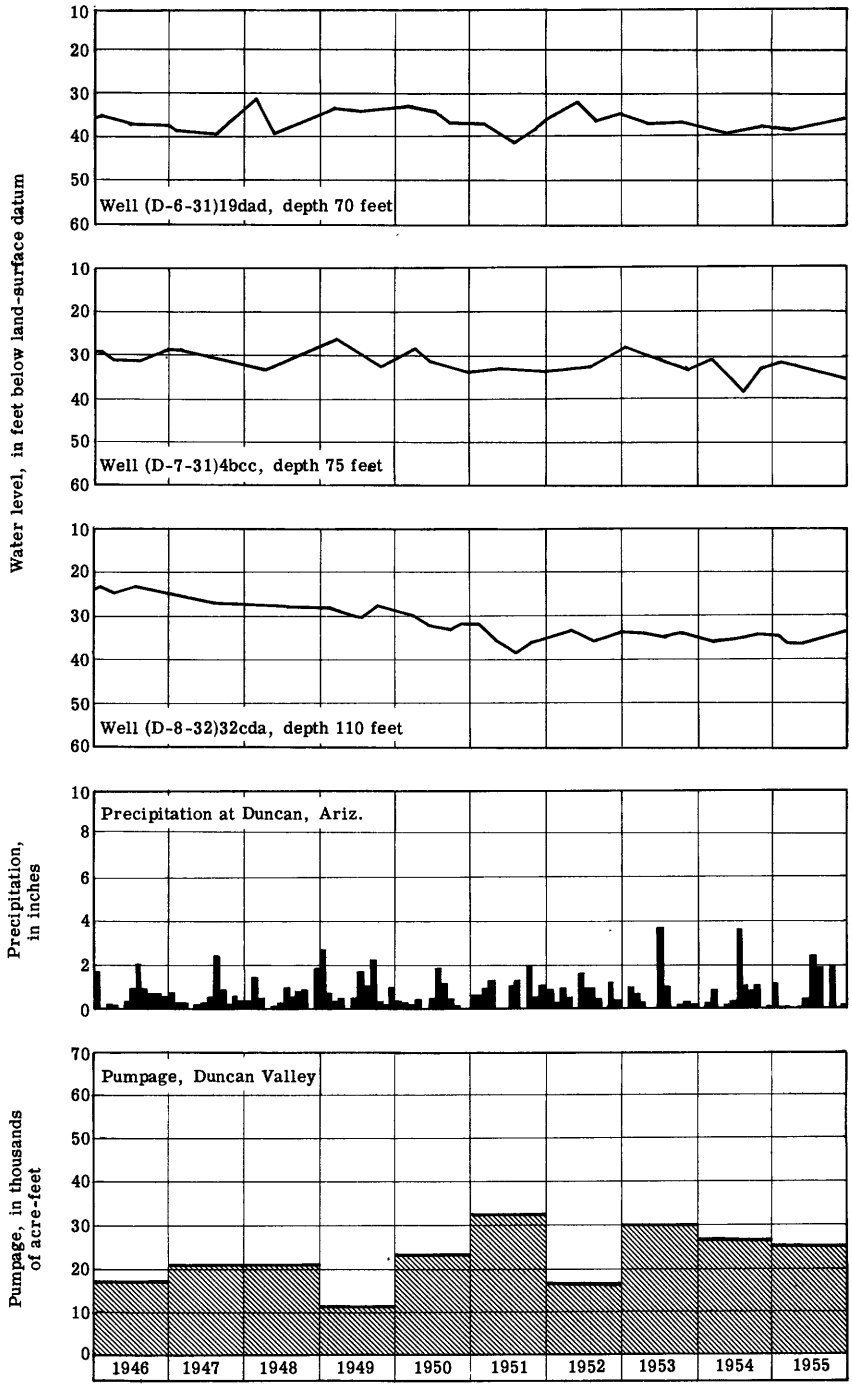

Figure 22. --Water levels in wells, precipitation at Duncan, and pumpage in Duncan Valley, Greenlee County, Ariz., 1946-55.

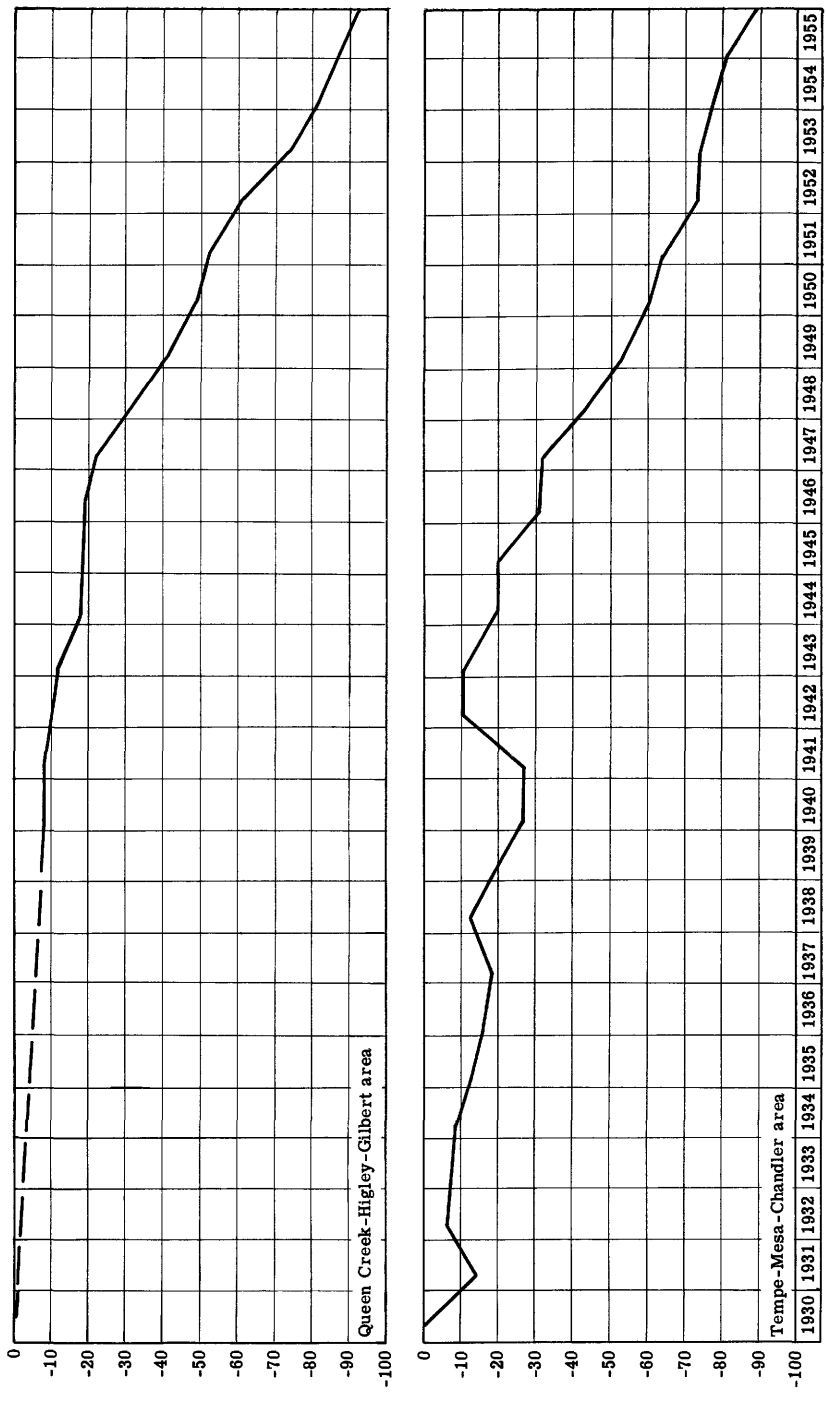

Figure 23. --Cumulative net changes of average water level in two areas of Salt River Valley, Maricopa County, Ariz., 1930-55.

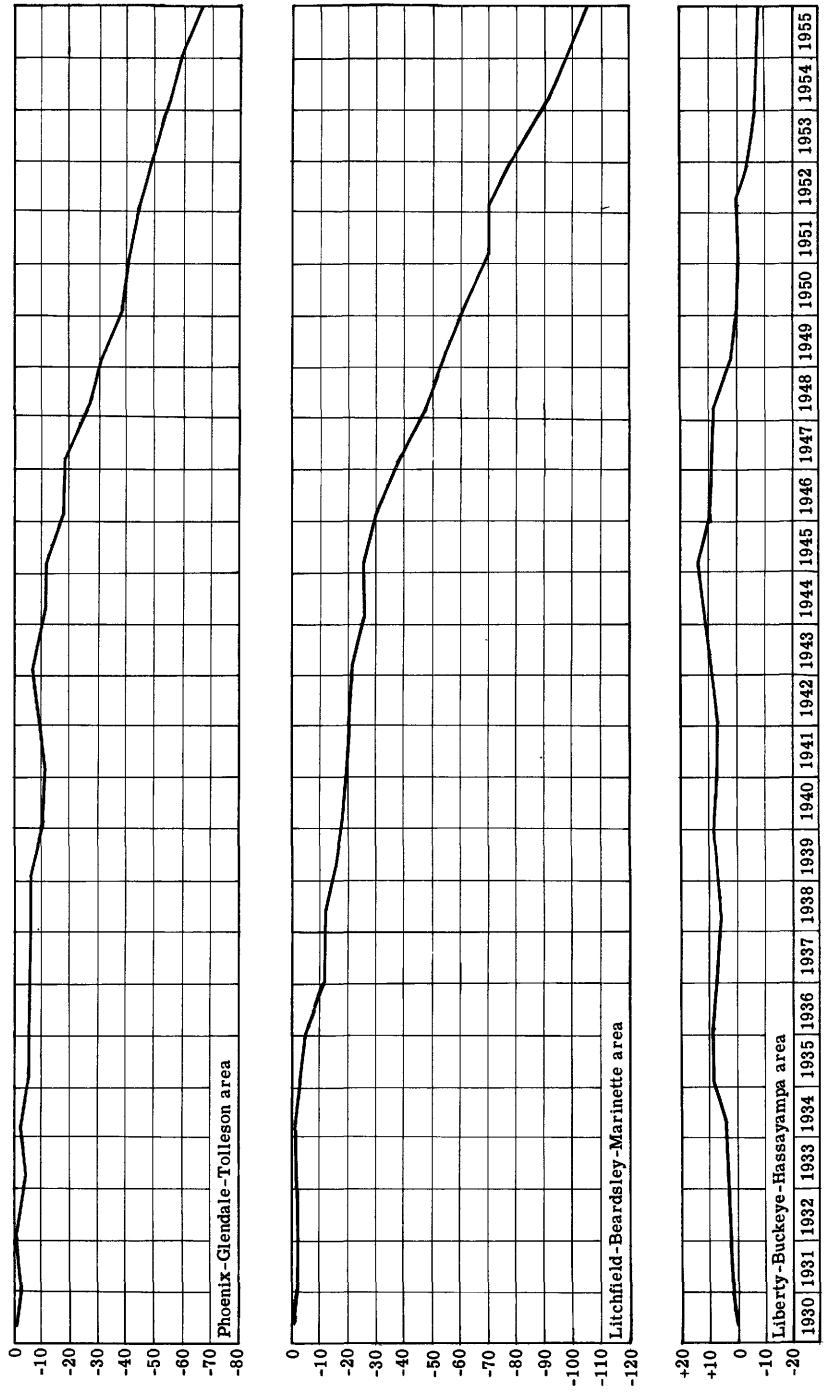

Figure 24. --Cumulative net changes of average water level in three areas of Salt River Valley, Maricopa County, Ariz., 1930-55.

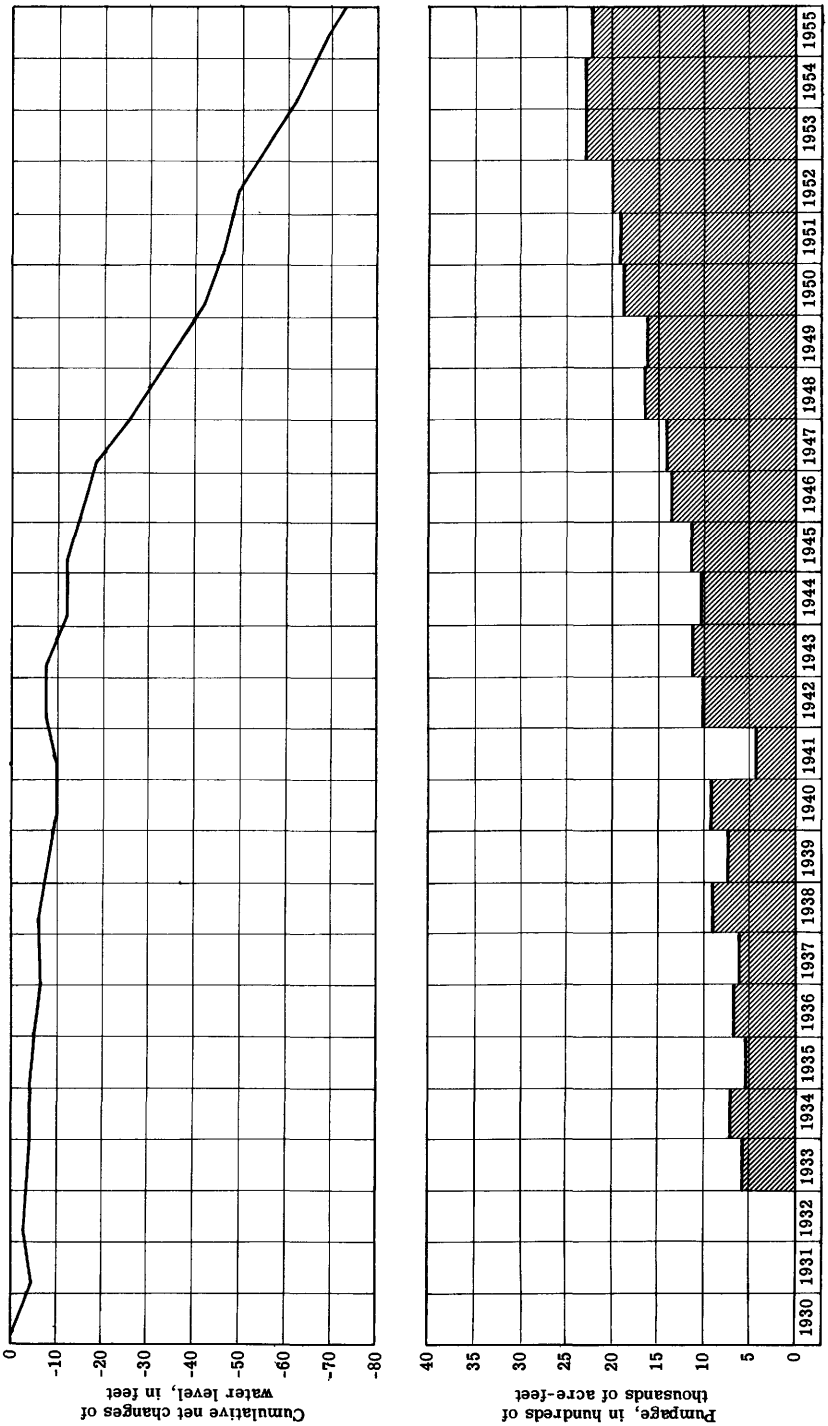

Figure 25. --Cumulative net changes of water level and pumpage for irrigation in Salt River Valley, Maricopa County, Ariz.

Pima-Cork area, water levels showed an average of less than half a foot of decline for 1955. Well (D-6-24)5acc is representative of this area. Changes in the stage of the water table in wells in the Pima-Eden area during 1955 ranged from about 1½ feet of decline to about 2 feet of rise. In the Cork-Geronimo area, an average rise in water level of slightly less than half a foot was measured; fluctuations ranged from less than 1 foot of decline to about 3 feet of rise. Well (D-6-28)31aac, east of the San Jose-Safford area, showed about 4 feet of decline for 1955. Well (D-4-22)13dba, representative of the area north of Geronimo, showed about 1 foot of rise in water level during 1955. About 90,000 acre-feet of ground water was pumped in the Safford Valley in 1955, the same as in 1954. Surface-water diversions in the valley for 1955 amounted to about 6,000 acre-feet more than in 1954. Precipitation at Safford was 6.59 inches in 1955, about 75 percent of normal. In the Aravaipa Valley, water levels in wells showed an average decline of about 2 feet during 1955. (See fig. 21.)

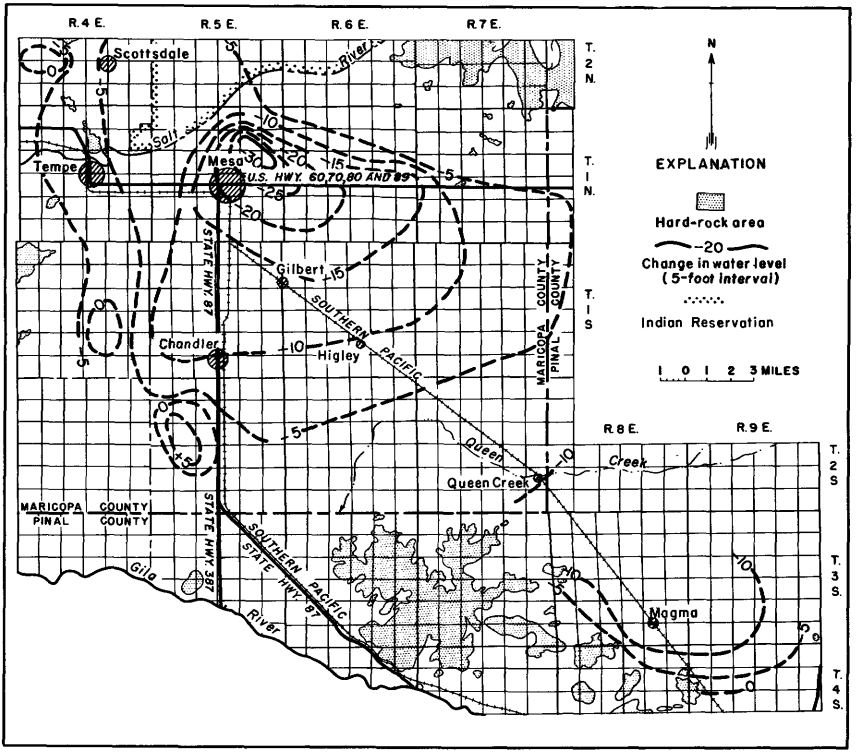

Figure 26. --Change in water level from spring 1955 to spring 1956 in Queen Creek-Higley-Gilbert and Tempe-Mesa-Chandler areas, Maricopa and Pinal Counties, Ariz.

Greenlee County. --Water levels in wells in Duncan Valley indicated both rises and declines during 1955. In the area between the Arizona-New Mexico State line and Sheldon, the average decline in water level was about 3.5 feet. Fluctuations in water levels in this area ranged from a rise of about half a foot to a decline of almost 8 feet. Well (D-8-32)32cda in this area showed no appreciable change in water level during 1955. Between Sheldon and York the range in fluctuations in the water level was from a rise of about 1½ feet to a decline of slightly more than 4 feet, averaging nearly half a foot of decline. Well (D-7-31)4bcc about halfway between Sheldon and York showed a decline of 3 feet, and well (D-8-31)19dad near York showed a rise of about 1 foot in water level during 1955. About 25,000 acre-feet of ground water was pumped and about 13,000 acre-feet of surface water was diverted for irrigation in Duncan Valley in 1955, about the same amounts as in 1954. Precipitation at Duncan amounted to 8.62 inches during 1955. (See fig. 22.)

Maricopa County.--Water levels in Maricopa County have shown an irregular pattern in recent years, owing to year-round pumping. The average cumulative net changes of water levels in various parts of the Salt River Valley are shown in figures 23-24. The average cumulative change of the water levels and pumpage in the Salt River Valley are shown in figure 25. Figures 26 through 34 show contours of the changes in water level in various parts of the Salt River Valley for the periods spring 1955 to spring 1956, spring 1950 to spring 1956, and spring 1942 to spring 1956, respectively.

In 1955 in the Queen Creek-Higley-Gilbert area, water-level fluctuations ranged from no change to about 20 feet of decline, averaging about 7 feet of decline (fig. 26). In areas where supplemental surface water was available, the average decline was only about 3 feet in 1955. For the period spring 1950 to spring 1956, declines ranged from about 50 to about 110 feet (fig. 27), and for spring 1942 to spring 1956, about 25 to 150 feet (fig. 28). The eastern portion of the Queen Creek area lies in Pinal County but is included in this section because it is part of this area.

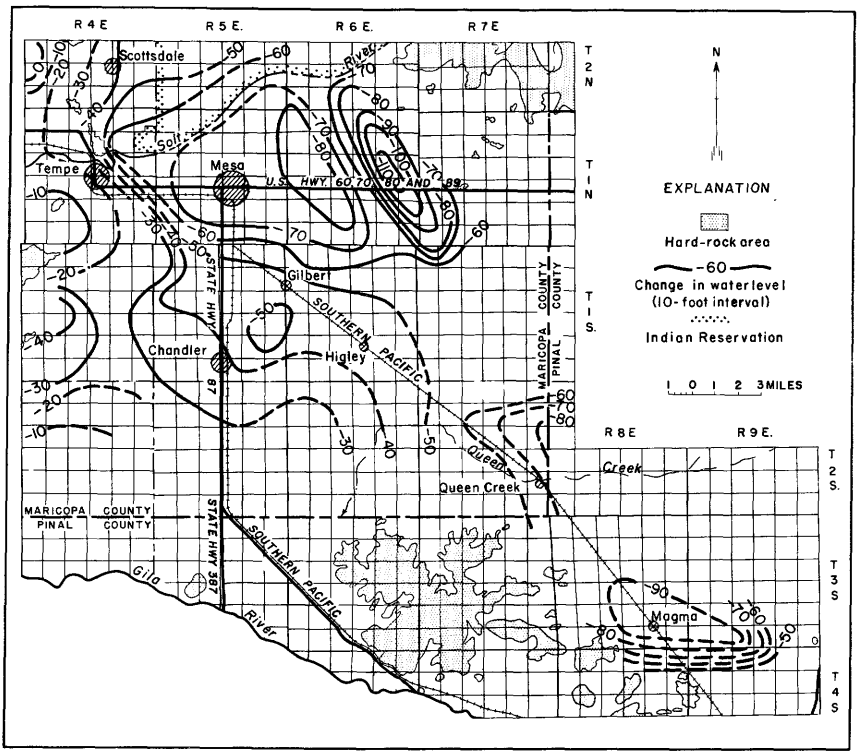

Figure 27.--Change in water level from spring 1950 to spring 1956 in Queen Creek-Higley-Gilbert and Tempe-Mesa-Chandler areas, Maricopa and Pinal Counties, Ariz.

In the Tempe-Mesa-Chandler area, water-level fluctuations ranged from a rise of about 5 feet to a decline of about 30 feet, indicating an average decline of about 6 feet for 1955 (fig. 26). In this area, declines in water level ranged from about 10 to about 70 feet for the period spring 1950 to spring 1956 (fig. 27) and from about 25 to about 150 feet for the period spring 1942 to spring 1956 (fig. 28).

Water levels in the Phoenix-Glendale-Tolleson area declined an average of about 6 feet in 1955, ranging from zero to about 15 feet (fig. 29). For the period spring 1950 to spring 1956, declines ranged from zero to about 60 feet (fig. 30) and from zero to about 150 feet for spring 1942 to spring 1956 (fig. 31). An average decline of about 11 feet was measured in the Deer Valley area in 1955.

Water-level declines in the Litchfield-Beardsley-Marinette area averaged 6 feet, ranging from about 5 to 20 feet in 1955 (fig. 32). This average rate of decline was less than in 1954. In this area, declines in water level ranged from about 30 to 80 feet for the period spring 1950 to spring 1956 (fig. 33) and from about 75 to about 150 feet for the period spring 1942 to spring 1956 (fig. 34).

The average decline in the Liberty-Buckeye-Hassayampa area amounted to about 1 foot in 1955. Water-table fluctuations in wells ranged from a rise of about 2 feet along the Hassayampa River to a decline of about 5 feet in the Liberty area during 1955 (fig. 32). Declines in this area for the period spring 1950 to spring 1956 ranged from less than 10 to about 20 feet (fig. 33) and from less than 25 to about 50 feet for the period spring 1942 to spring 1956 (fig. 34). Water levels in this area follow the same downward trend as in the other areas in the valley, but the rate of decline is much less, owing to the continuous recharge from irrigation water applied to cultivated lands upstream.

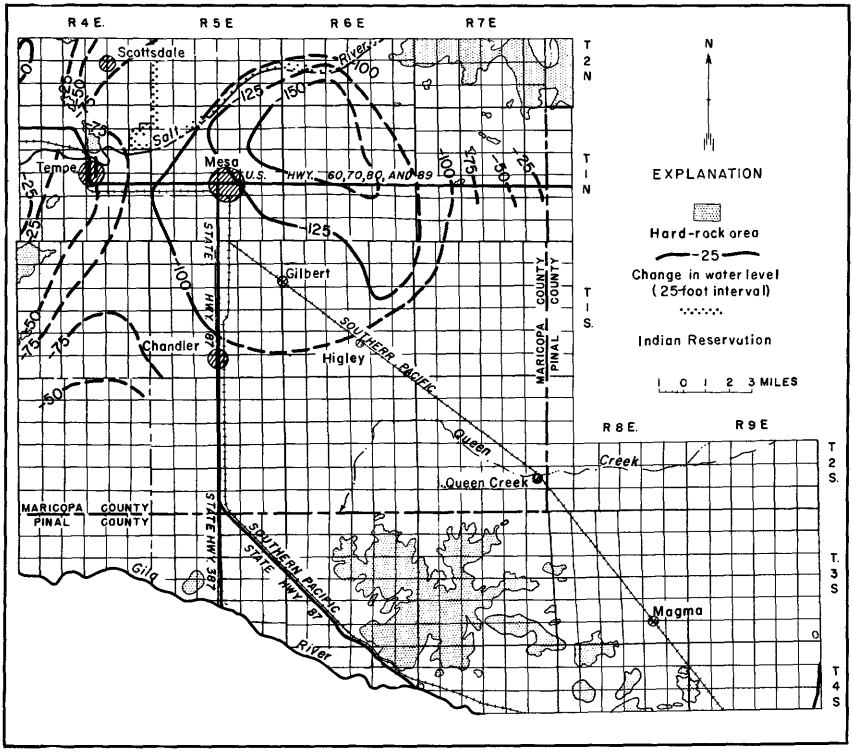

Figure 28. --Change in water level from spring 1942 to spring 1956 in Queen Creek-Higley-Gilbert and Tempe-Mesa-Chandler areas, Maricopa and Pinal Counties, Ariz.

Pumpage in the Salt River Valley during 1955 amounted to about 2, 200, 000 acre-feet, a decrease of 100, 000 acre-feet from 1954. Rainfall at Phoenix during 1955 amounted to 9. 82 inches, about 37 percent greater than normal; 4. 19 inches occurred in July, thus permitting a reduction in the pumping of ground water during that month.

In the Waterman Wash area, declines ranged from an average of about 10 feet in the cultivated area to no appreciable decline near Mobile. Pumpage amounted to about 40, 000 acre-feet, an increase of about 10, 000 acre-feet from 1954.

The average water-table decline in the Harquahala Plains area amounted to about 1 foot. Pumpage in this area amounted to about 30,000 acre-feet, a decrease of about 3,000 acre-feet from 1954. Rainfall at Harquahala Plains was about 4.76 inches in 1955.

Water-table declines in the Gila Bend area ranged from slightly less than 2 feet west and northwest of Gila Bend to about 10 feet in the Rainbow Valley area north of Gila Bend. Additional wells were drilled in this vicinity to augment the supply of water being pumped into a canal for transportation on the surface to irrigate land west of Gila Bend. Pumpage in the Gila Bend and Rainbow Valley areas amounted to about 140,000 acre-feet, slightly more than in 1954. Precipitation at Gila Bend was 7.02 inches in 1955, about 27 percent greater than normal.

In the Dendora area, recharge from flood flows in the Gila River resulted in a rise of about 2 feet in water levels during 1955. Pumpage amounted to about 6,000 acre-feet, about 1,000 acre-feet less than in 1954.

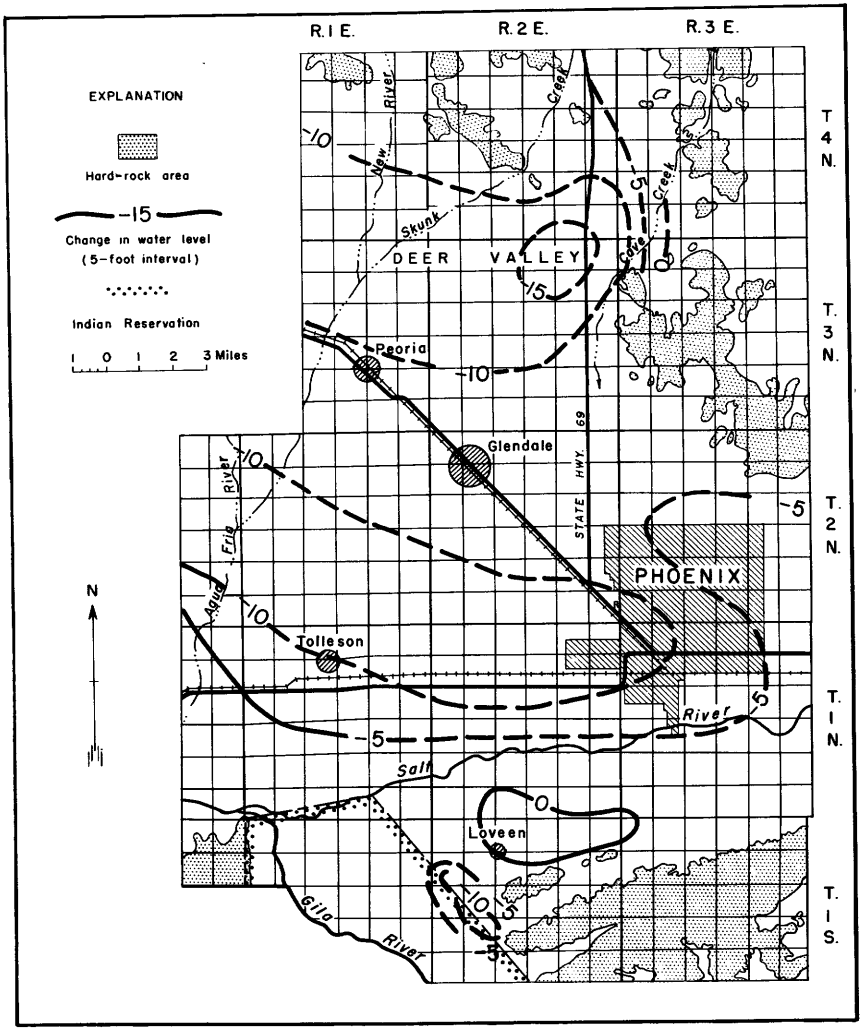

Figure 29. --Change in water level from spring 1955 to spring 1956 in Phoenix-Glendale-Tolleson area, Maricopa County, Ariz.

Mohave County.--Water levels along the Big Sandy River indicated an average rise of less than 1 foot in 1955; wells north of Wikieup showed an average decline of about 2 feet. The overall average was a rise of less than half a foot. Precipitation at Wikieup was 8.80 inches, about 85 percent of normal.

In the Kingman area, there was no appreciable change in the stage of the water table during 1955. The precipitation for the year at Kingman was 7.25 inches, 72 percent of normal.

Navajo County.--Most of the wells measured in Navajo County derive water from the Coconino sandstone. Water levels in these wells showed only a small decline during 1955. Precipitation at Pinedale amounted to 15.41 inches in 1955, about 82 percent of normal.

Pima County.--Water-level fluctuations in Pima County are discussed separately as follows: (1) Avra-Marana area, (2) Tucson-Cortaro area, (3) Tucson area, (4) Tucson-Continental area, and (5) Rillito-Tanque Verde-Pantano area.

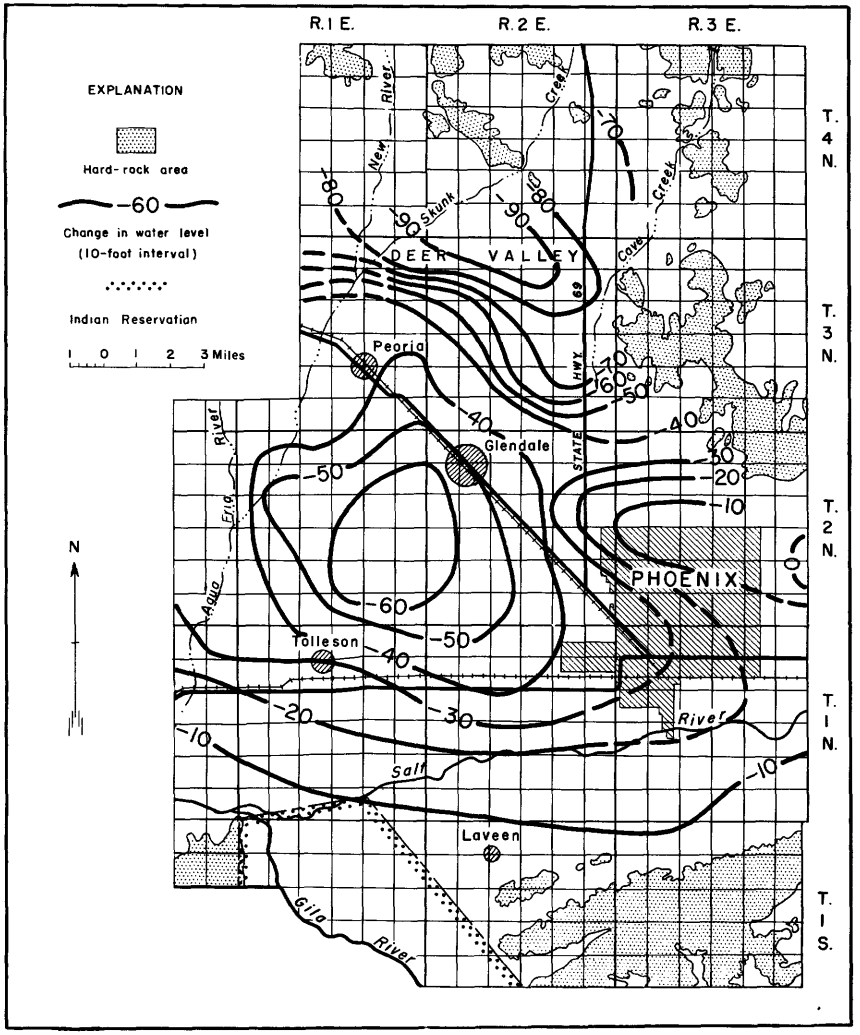

Figure 30.--Change in water level from spring 1950 to spring 1956 in Phoenix-Glendale-Tolleson area, Maricopa County, Ariz.

Figure 35 shows contours of the change in water level in the Avra-Marana area for 1955. Fluctuations in water levels in this area ranged from a rise of about 1 foot to a decline of about 7 feet during 1955, averaging slightly more than 5 feet of decline. In the southern part of the area, water levels declined about 1 foot, but there were a few small local rises. Well (D-15-10)-35aaa (fig. 36) showed a decline of slightly less than 2 feet. Depths to water in the area ranged from about 175 to more than 300 feet. The shallower depths to water were measured in the downstream part of the area near the Pima-Pinal County line and the greater depths in the southern part of the area in Tps. 14 and 15 S., R. 11 E., north of the Ajo Highway.

Fluctuations in water levels in the Tucson-Cortaro area ranged from a rise of slightly more than 2 feet to a decline of about 6 feet during 1955. Along the Santa Cruz River between Rillito Narrows and Cortaro, water levels in most wells rose during 1955. Well (D-12-12)16bad (fig. 36) showed no essential change in water level during 1955. Between Cortaro and the northern limits of greater Tucson, fluctuations in water levels ranged from no change to a decline of about 6 feet. The range in depth to water in the area was from about 70 to more than 100 feet.

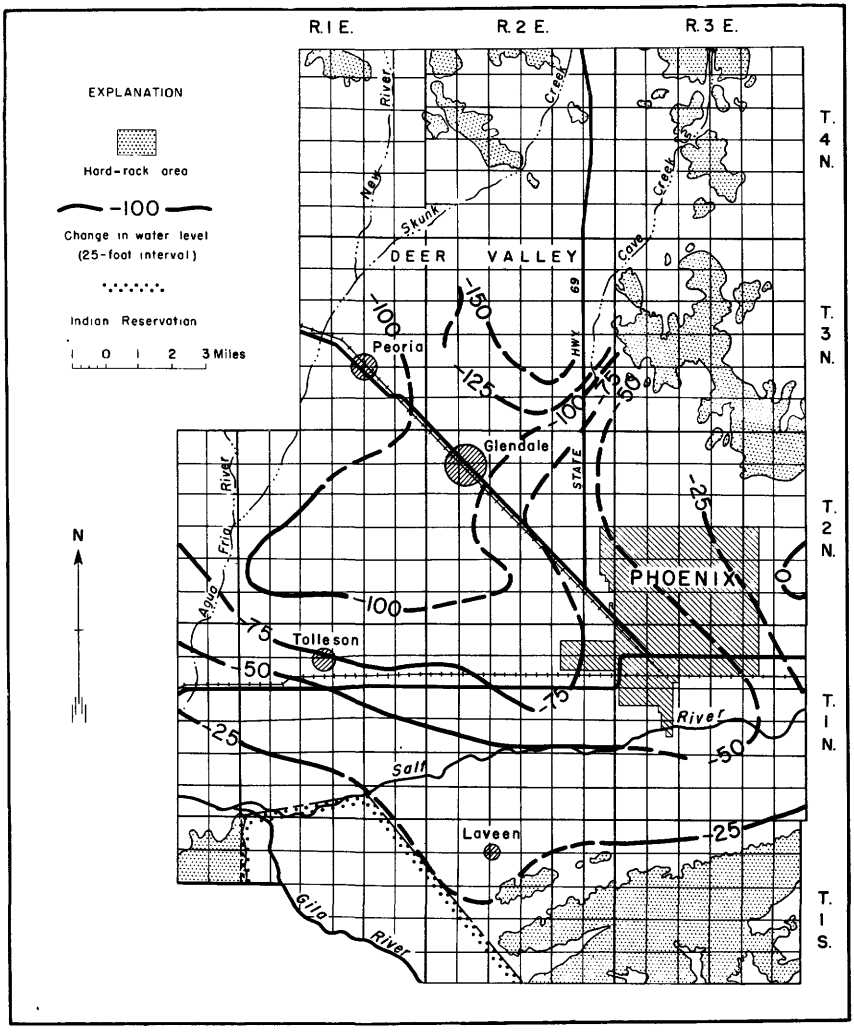

Figure 31. --Change in water level from spring 1942 to spring 1956 in Phoenix-Glendale-Tolleson area, Maricopa County, Ariz.

Water levels in wells in the Tucson area fluctuated widely during 1955. In the city's well field in the northeastern part of Tucson, water levels showed an average decline of about 2½ feet. Water levels in wells in the "Southside" well field rose an average of slightly more than 7 feet during 1955. These averages were obtained from water-level data supplied by the city of Tucson. Well (D-15-13)2cca (fig. 36) showed a rise of about 9 feet for 1955. The range in depth to water was from less than 40 feet near the Santa Cruz River to about 160 feet near the eastern city limits.

Fluctuations in water levels in the Tucson-Continental area, which extends to the Pima-Santa Cruz County line, ranged from a rise of about 10 feet to a decline of about 10 feet in 1955. From the southern limits of Tucson to Sahuarita, water levels in most wells indicated a rise during the year. Well (D-17-14)18cab (fig. 36) in this area shows this trend. Water levels in wells between Sahuarita and Continental declined somewhat during 1955. This decline is attributed to the more or less continuous pumping to supply water for both winter and summer crops in this part of the area. Between Continental and the Pima-Santa Cruz County line, fluctuations in water levels ranged from a decline of about 10 feet near Continental to a rise of about 7 feet near the county line. Depths to water ranged from about 40 feet just south of Tucson to more than 100 feet near Continental. Water levels near the county line ranged from about 30 to 50 feet.

Along Rillito Creek, water levels in wells indicated fluctuations ranging from a decline of 2 feet to a rise of about 1 foot during 1955. Changes in water levels in most wells along Tanque

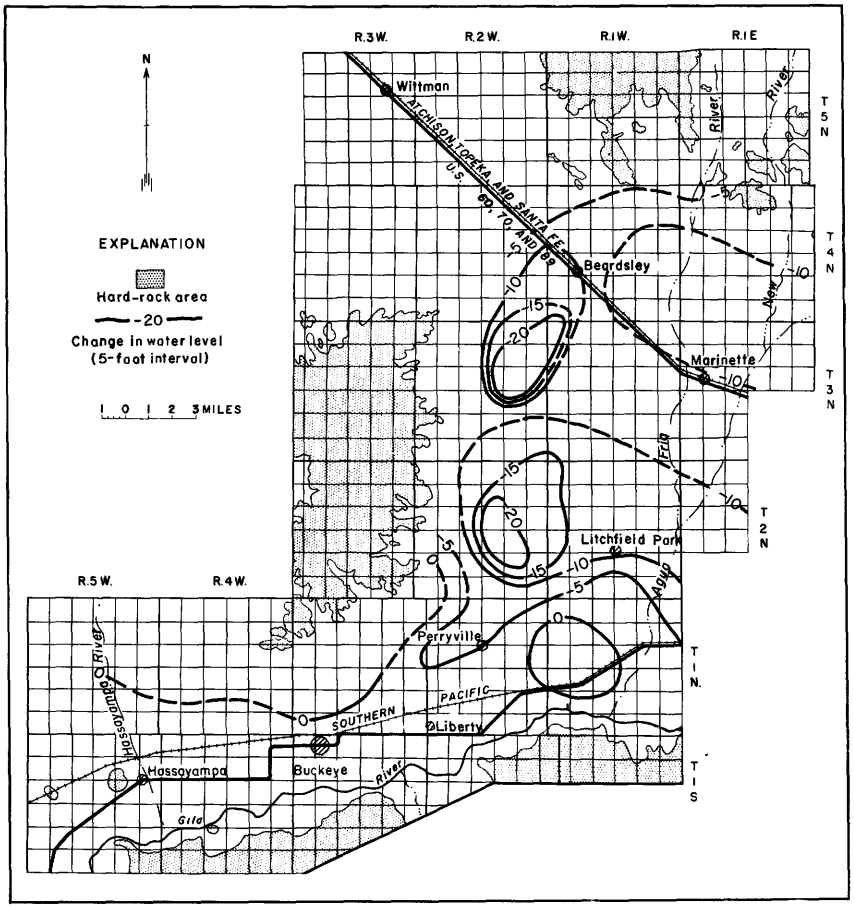

Figure 32.--Change in water level from spring 1955 to spring 1956 in Litchfield-Beardsley-Marinette and Liberty-Buckeye-Hassayampa areas, Maricopa County, Ariz.

Verde Creek showed rises ranging from less than 1 foot to more than 5 feet during 1955. Slight rises in water levels were measured also along Pantano Wash. Depths to water ranged from less than 20 feet along Rillito and Tanque Verde Creeks to more than 250 feet near the mountains.

Pumpage of ground water in Pima County during 1955 amounted to about 300,000 acre-feet. Precipitation at the University of Arizona, Tucson, amounted to 10.93 inches in 1955, about 6 percent greater than normal.

Pinal County.--Pumpage of ground water for irrigation in Pinal County continued to cause a decline in the water table during 1955. About 1,200,000 acre-feet of ground water was pumped in the county during the year. The cumulative net decline shown by the hydrographs for the three major irrigated areas in Pinal County in figure 37 are based on water-level measurements in several hundred wells. Figures 38 through 43 show contours of the change in water level in these areas for the periods spring 1955 to spring 1956 and spring 1951 to spring 1956, respectively. Water-level fluctuations in the three areas are discussed separately as follows: (1) Casa Grande-Florence area, (2) Maricopa-Stanfield area, and (3) Eloy area.

Water levels in wells in the Casa Grande-Florence area indicated an average decline of nearly 6 feet during 1955 and an average of about 25 feet for the period spring 1951 to spring 1956. Local declines of nearly 20 feet were measured in the heavily pumped sections during 1955 (fig. 38).

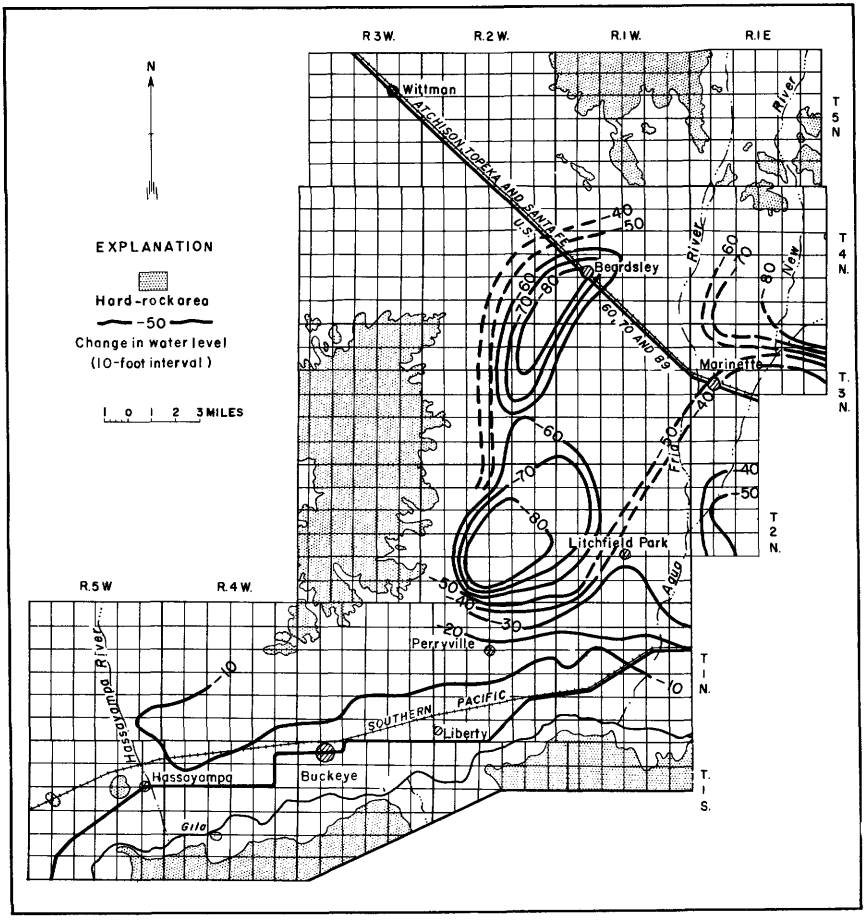

Figure 33.--Change in water level from spring 1950 to spring 1956 in Litchfield-Beardsley-Marinette and Liberty-Buckeye-Hassayampa areas, Maricopa County, Ariz.

Figure 39 shows that declines of as much as 50 feet were measured in some areas in the 5-year period spring 1951 to spring 1956. Between Casa Grande and Coolidge, declines in water levels ranged from 5 to 15 feet for 1955 (fig. 38) and from 10 to 50 feet for the period spring 1951 to spring 1956 (fig. 39). The range in depth to water in the Casa Grande-Florence area for 1955 was from about 50 feet northeast of Casa Grande to about 175 feet near the eastern edge of the irrigated area. Precipitation at Casa Grande was 8.42 inches for 1955, nearly 8 percent greater than normal.

In the Maricopa-Stanfield area, the average decline in water level amounted to about 12 feet for 1955 and about 65 feet for the period spring 1951 to spring 1956. Declines in water levels for 1955 ranged from no decline in an area about 1 mile south of the Southern Pacific Railroad and about 4 miles northwest of Casa Grande to as much as 25 feet near the mountains south of the Maricopa Indian Reservation (fig. 40). For the 5-year period spring 1951 to spring 1956, water-table declines in the Maricopa-Stanfield area ranged from about 10 to 130 feet (fig. 41). Depths to water for 1955 ranged from about 50 feet near the northern boundary of the Maricopa Indian Reservation to about 300 feet near the mountains on the western edge of the area and as much as 400 feet in a few wells at the southwestern edge of the irrigated area. Precipitation at Maricopa is estimated to have been 7.60 inches in 1955.

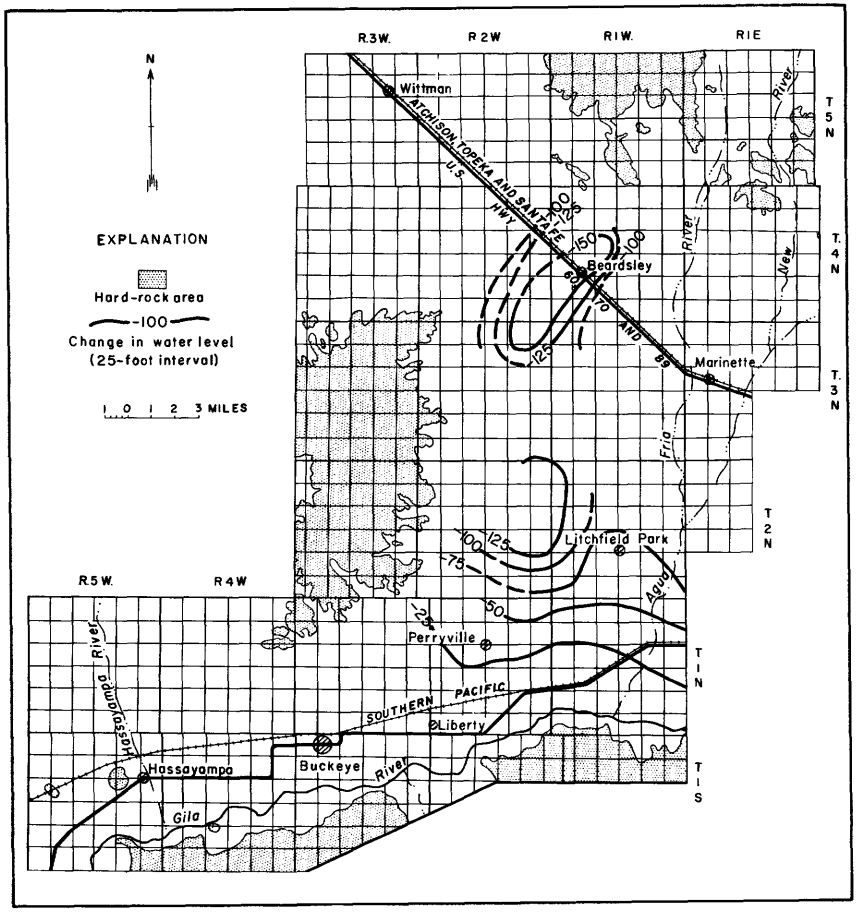

Figure 34. --Change in water level from spring 1942 to spring 1956 in Litchfield-Beardsley-Marinette and Liberty-Buckeye-Hassayampa areas, Maricopa County, Ariz.

Water levels in wells in the Eloy area declined an average of nearly 11 feet during 1955 and an average of about 45 feet in the period spring 1951 to spring 1956. Declines in water levels ranged from zero to about 20 feet in the area for 1955 (fig. 42) and from about 10 to about 70 feet for the 5-year period spring 1951 to spring 1956 (fig. 43). At the boundary of the area about 6 miles north of Eloy, water levels indicated an average decline of about 5 feet for 1955 and about 30 feet for the period spring 1951 to spring 1956. Depths to water in the area for 1955 ranged from about 125 feet near the eastern boundary of the Papago Indian Reservation to about 275 feet south of the town of Eloy. Precipitation at Eloy was 8.69 inches during 1955.

Santa Cruz County.--Water levels in most wells in the Santa Cruz County part of the Santa Cruz River basin rose during 1955, though some local declines were measured. In the area between the Pima-Santa Cruz County line and Tubac, water levels showed fluctuations from a decline of nearly 5 feet to a rise of about 2 feet. From Tubac to Calabasas, the range in water-level fluctuation was from a decline of over 6 feet to a rise of nearly 19 feet. Well (D-22-13)35dcd (fig. 44) near Calabasas showed a rise of about 19 feet for the year. Between Calabasas and the International Boundary, fluctuations in water level ranged from a decline of less than half a foot

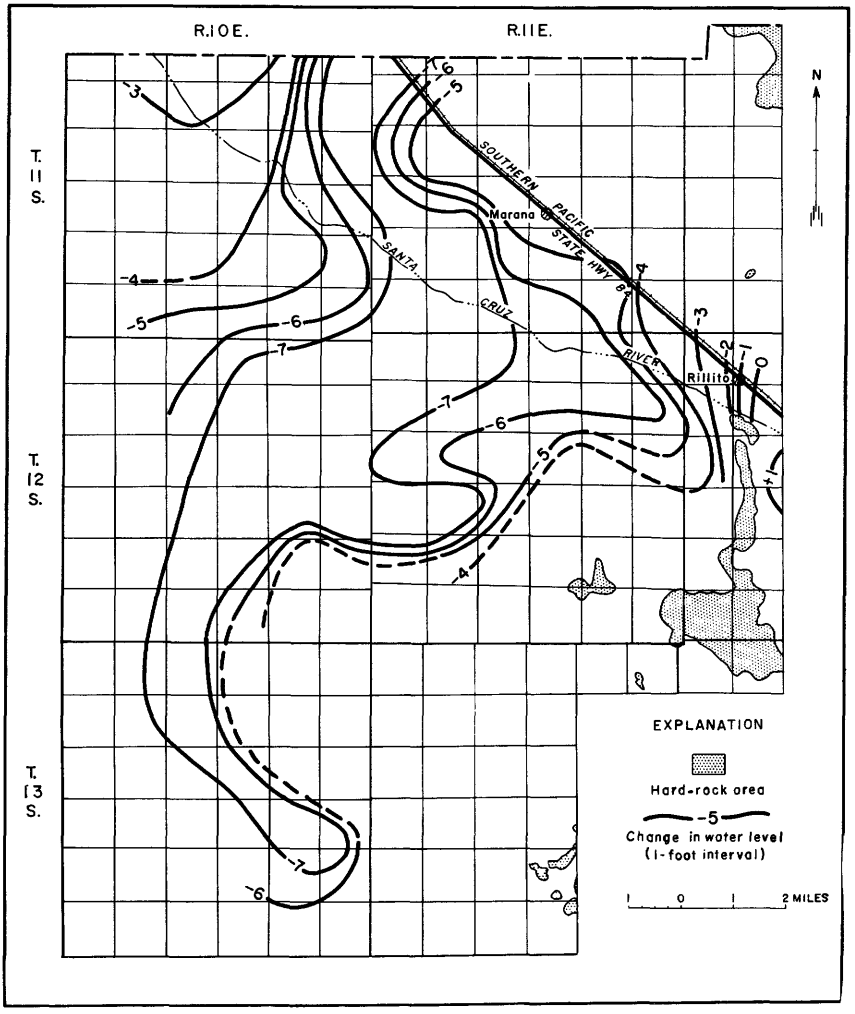

Figure 35.--Change in water level from spring 1955 to spring 1956 in Avra-Marana area, Pima County, Ariz.

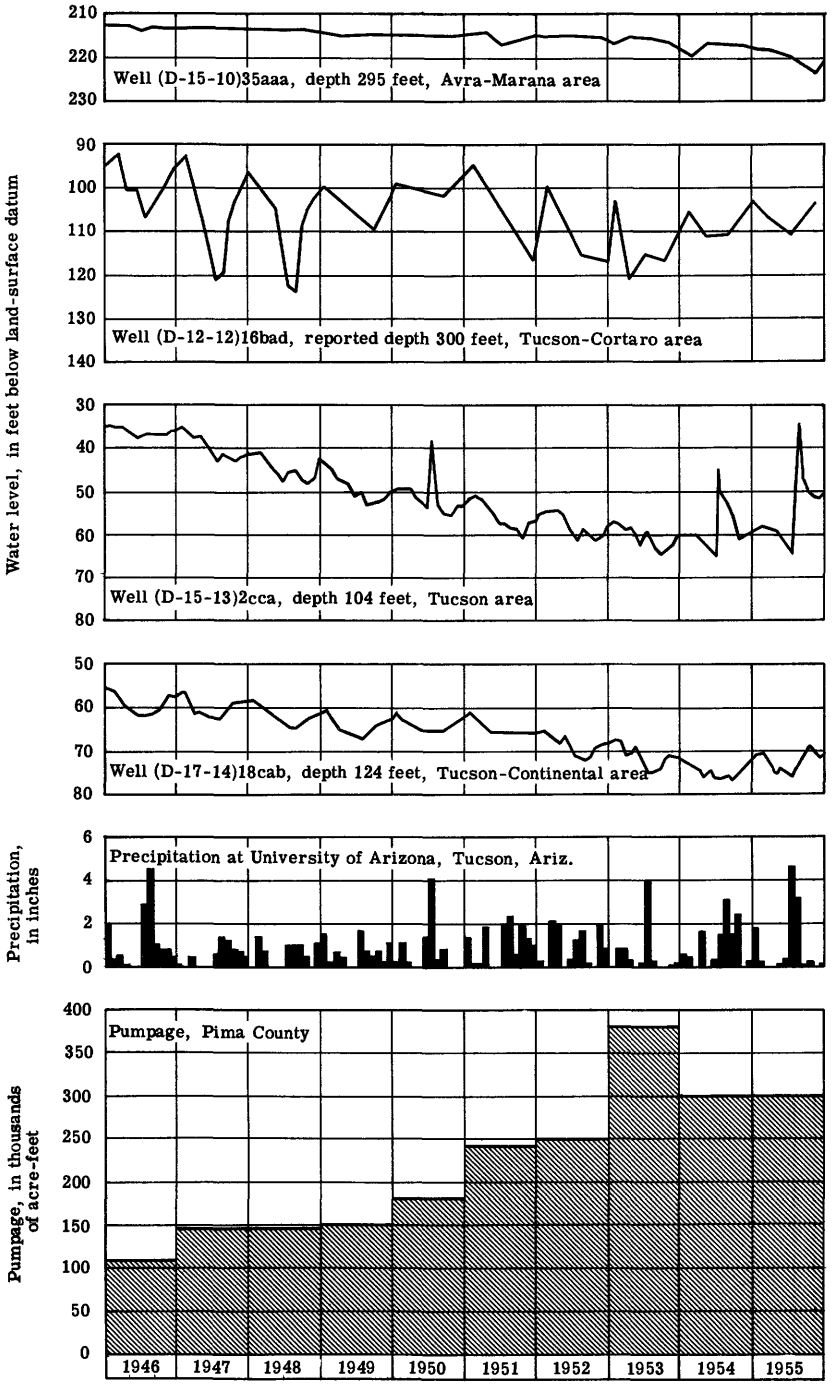

Figure 36. --Water levels in wells in Avra-Marana, Tucson-Cortaro, Tucson, and Tucson-Continental areas, precipitation at Tucson, and pumpage in Pima County, Ariz., 1946-55.

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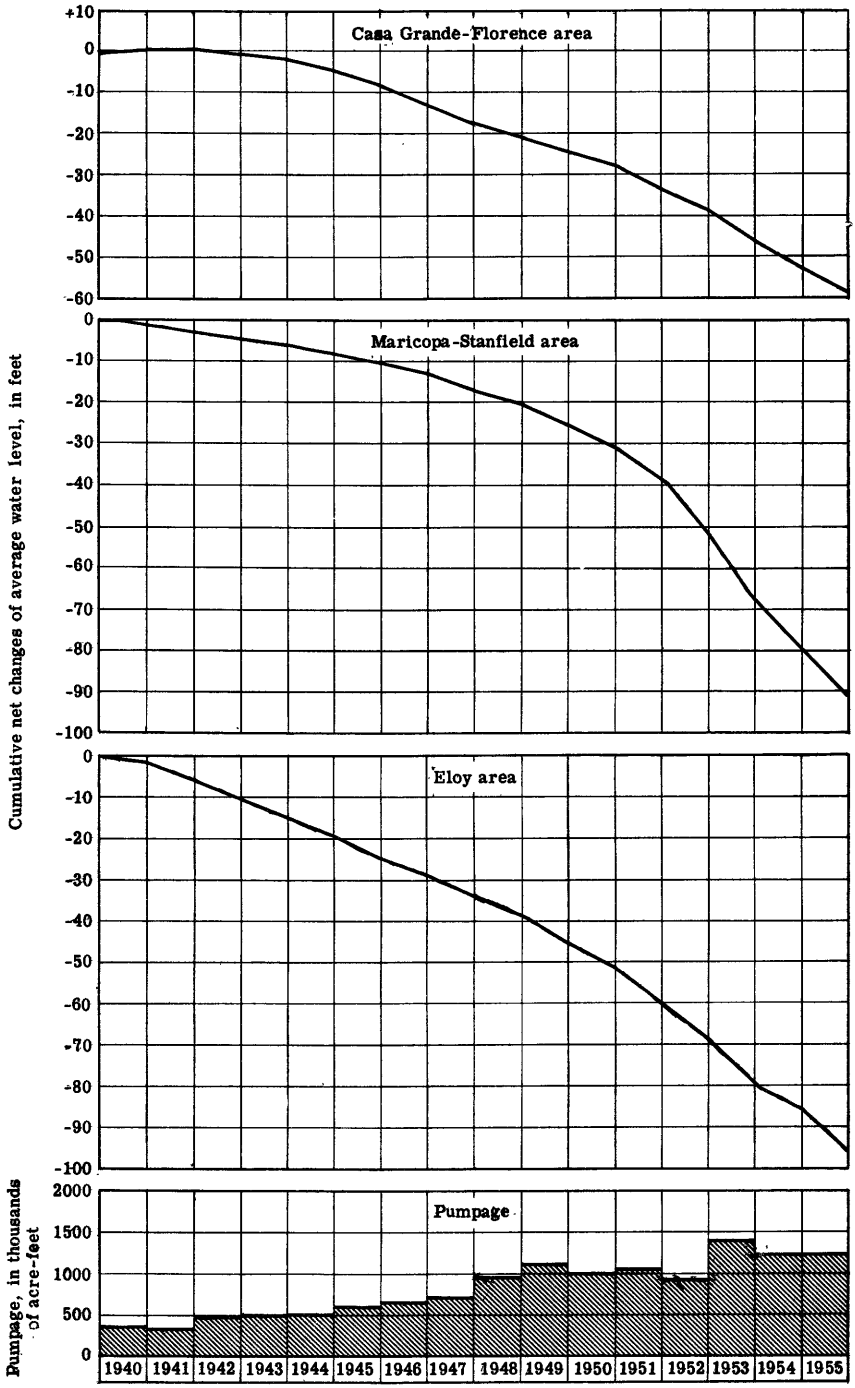


Figure 37. --Cumulative net changes of average water level and pumpage in parts of Santa Cruz Basin within Pinal County, Ariz., 1940-55.

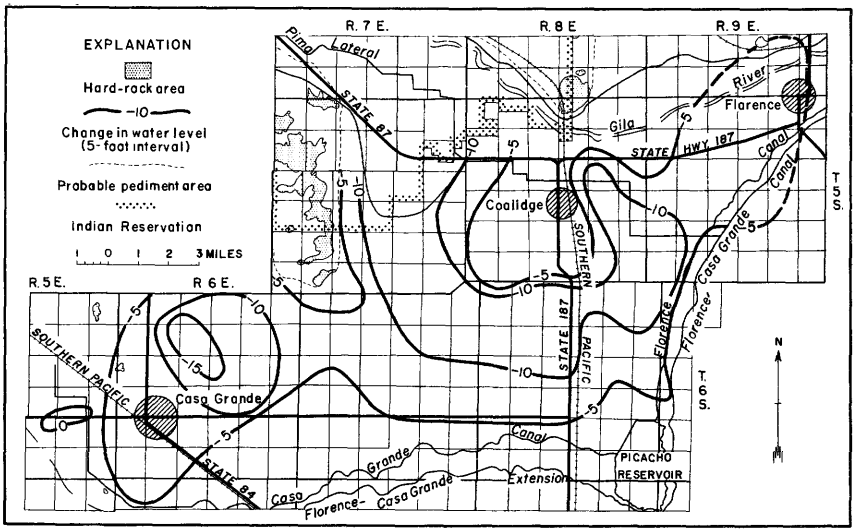


Figure 38. --Change in water level from spring 1955 to spring 1956 in Casa Grande-Florence area, Pinal County, Ariz.

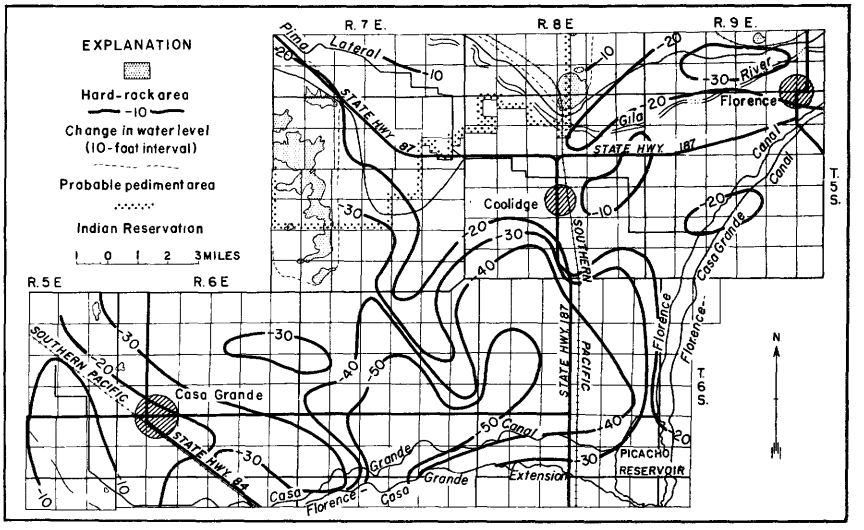


Figure 39. --Change in water level from spring 1951 to spring 1956 in Casa Grande-Florence area, Pinal County, Ariz.

to a rise of nearly 22 feet. Well (D-23-14)27baa (fig. 44) in this area showed a rise of about half a foot in 1955. The greatest rise in water level was measured at the junction of Sonoita Creek and the Santa Cruz River, where recharge caused marked fluctuations in water levels. A few miles downstream from the junction, water levels declined during 1955. Depths to water in this area ranged from 5 to 50 feet, averaging about 25 feet along the river. Ground water pumped for irrigation in Santa Cruz County amounted to about 20,000 acre-feet in 1955. Precipitation at Nogales was 16.06 inches for 1955, about 1 percent greater than normal.

Yavapai County.--Water levels in wells in the southern part of Chino Valley indicated an average decline of slightly more than half a foot in 1955, but those in the northern end of the valley showed a slight rise. In Peeples Valley, ground-water levels showed a rise of about 1 foot in

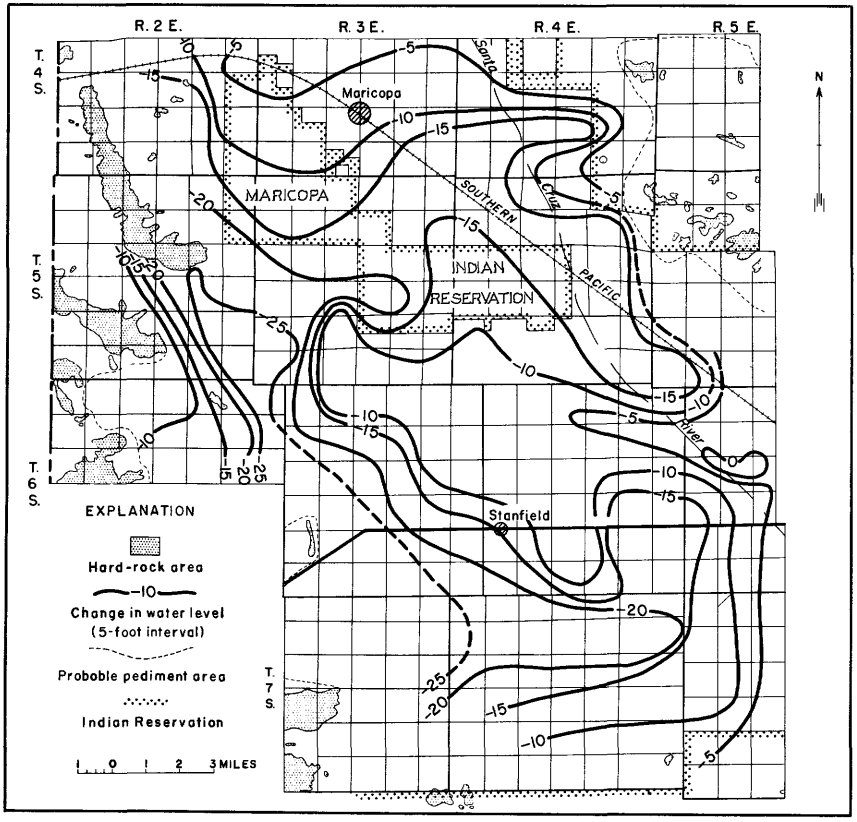


Figure 40.--Change in water level from spring 1955 to spring 1956 in Maricopa-Stanfield area, Pinal County, Ariz.

1955. There was little change in the stage of the water table in Skull Valley, but wells along Kirkland Creek showed a slight rise in the water table. Precipitation at Prescott in 1955 was 17.82 inches, about 89 percent of normal. Precipitation in Chino Valley amounted to 10.87 inches.

Yuma County.--In the Wellton-Mohawk area of southern Yuma County, water levels continued to rise during 1955, averaging about 3 feet. Well (C-8-16)28bda (fig. 45) in this area showed about 1 foot of rise during 1955. As more surface water was available for irrigation, fewer wells were pumped during 1955 than in previous years. Pumpage in the Wellton-Mohawk area during 1955 amounted to about 8,000 acre-feet, about 1,000 acre-feet less than in 1954. Precipitation at Wellton in 1955 was 4.67 inches, about 4 percent greater than normal.

Water levels continued to rise in the south Gila Valley in 1955, averaging slightly less than 1 foot. There was a rise of slightly more than 2 feet in the Yuma Mesa area, as shown in the graph of well (C-9-22)17ddd (fig. 45). Pumpage in the south Gila Valley amounted to about 55,000 acre-feet in 1955. Precipitation at Yuma in 1955 was 3.31 inches, about 91 percent of normal.

In the Palomas Plain area, water levels during 1955 indicated a decline, averaging slightly more than half a foot. However, in wells along the Gila River, water levels showed a rise of about 1 foot, owing to recharge from floodwaters. Pumpage in the Palomas Plain area in 1955 was about 25,000 acre-feet. Part of this area lies within Maricopa County but, as most of the cultivated acreage is in Yuma County, it is included in this section. Precipitation at Sentinel in 1955 was 6.39 inches.

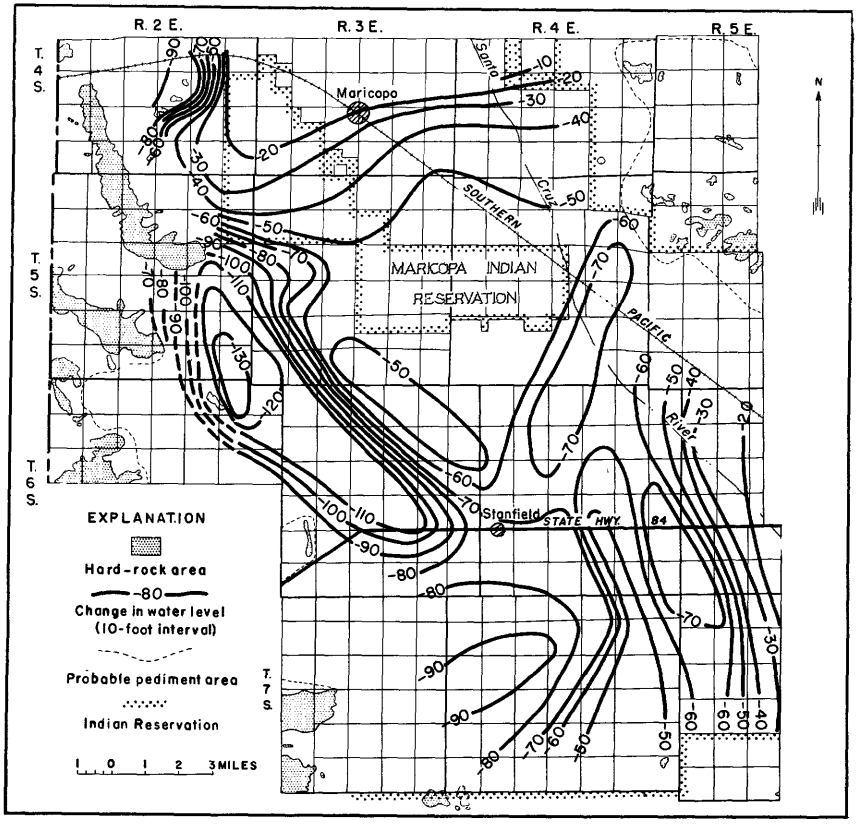


Figure 41.--Change in water level from spring 1951 to spring 1956 in Maricopa-Stanfield area, Pinal County, Ariz.

Water levels in the two major agricultural areas of northern Yuma County, Ranegras Plain and McMullen Valley, indicated an average rise of about half a foot in 1955. Fluctuations in water level in these areas ranged from a rise of about 2 feet in wells adjacent to Bouse Wash to about half a foot of decline in wells near the cultivated area in Ranegras Plain. The latter condition is shown in the hydrograph of well (B-5-16)10ddd (fig. 45). Pumpage in northern Yuma County during 1955 amounted to about 25,000 acre-feet, slightly less than in 1954. Precipitation at Salome in 1955 was 7.12 inches, about 93 percent of normal.

Acknowledgments

Many irrigation districts, power companies, and individuals cooperated in furnishing much of the information in this report. The following organizations were particularly helpful in furnishing data on which figures for pumpage were based: Arizona Public Service Co.; Buckeye Irrigation District; Bu-Gas Distributors; Citizens Utility Co.; City of Douglas; City of Nogales; City of Tucson; Cortaro Farms; Duncan Utilities Co.; Eloy Light and Power Co.; Gila Water Commissioner; Goodyear Farms; Magma Natural Gas Co.; Maricopa County Municipal Water Conservation District; Mohawk Municipal Water Conservation District; Natural Gas Service Co.; Roosevelt Irrigation District; Roosevelt Water Conservation District; Rural Electrification Administration; Safford Municipal Utilities; Salt River Valley Water Users' Association; San Carlos Irrigation District; Trico Electric Cooperative; Tucson Gas Electric Light and Power Co.; U. S. Bureau of Indian Affairs; and U. S. Bureau of Reclamation.

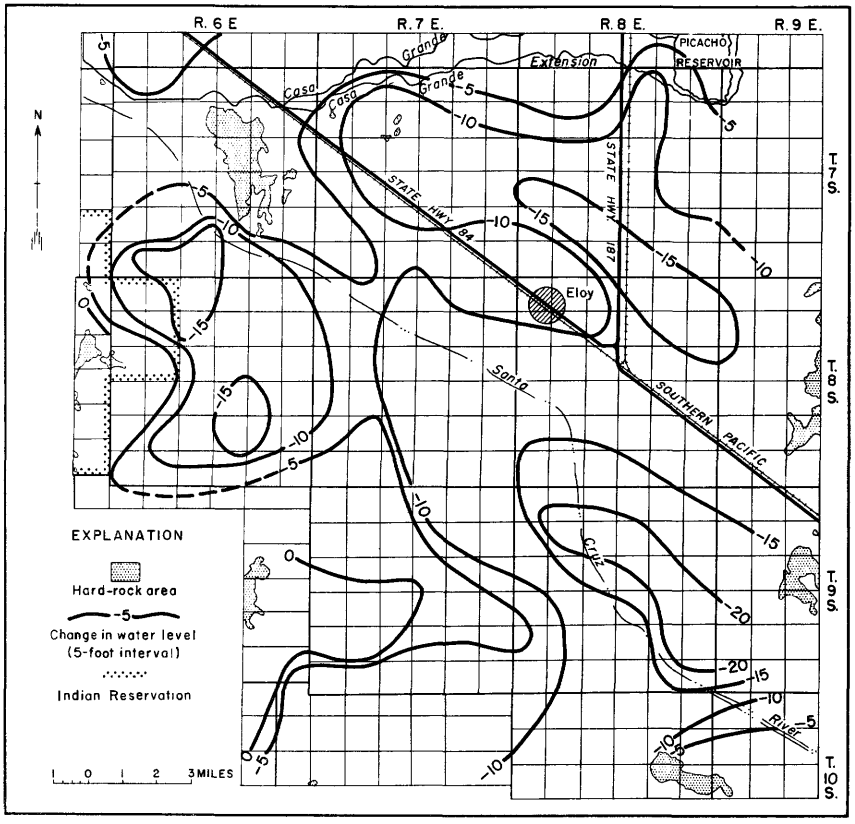


Figure 42. --Change in water level from spring 1955 to spring 1956 in Eloy area, Pinal County, Ariz.

Well-Numbering System

The well numbers used by the Ground Water Branch of the Geological Survey in Arizona are in accordance with the Bureau of Land Management system of land subdivision. The land survey in Arizona is based on the Gila and Salt River base line and meridian which divide the State into four quadrants. These quadrants are designated counterclockwise by the capital letters A, B, C, and D. All land north and east of the point of origin is in A quadrant, that north and west in B quadrant, that south and west in C quadrant, and that south and east in D quadrant. The first digit of a well number indicates the township, the second the range, and the third the section in which the well is situated. The lowercase letters a, b, c, and d, after the section number, indicate the well location within the section. The first letter denotes a particular 160-acre tract,

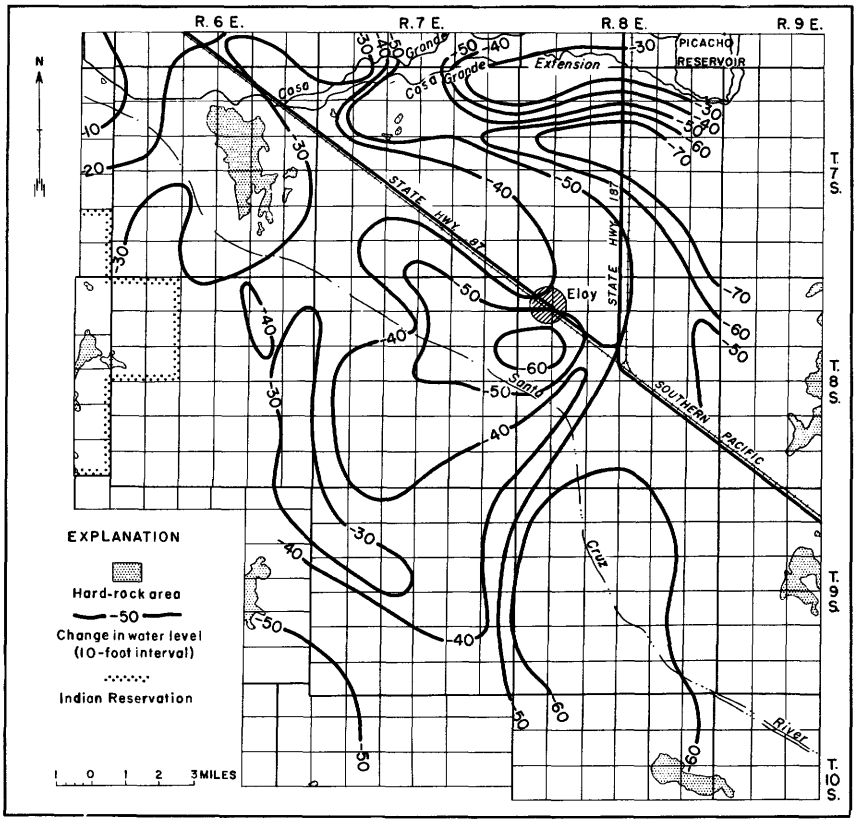


Figure 43. --Change in water level from spring 1951 to spring 1956 in Eloy area, Pinal County, Ariz.

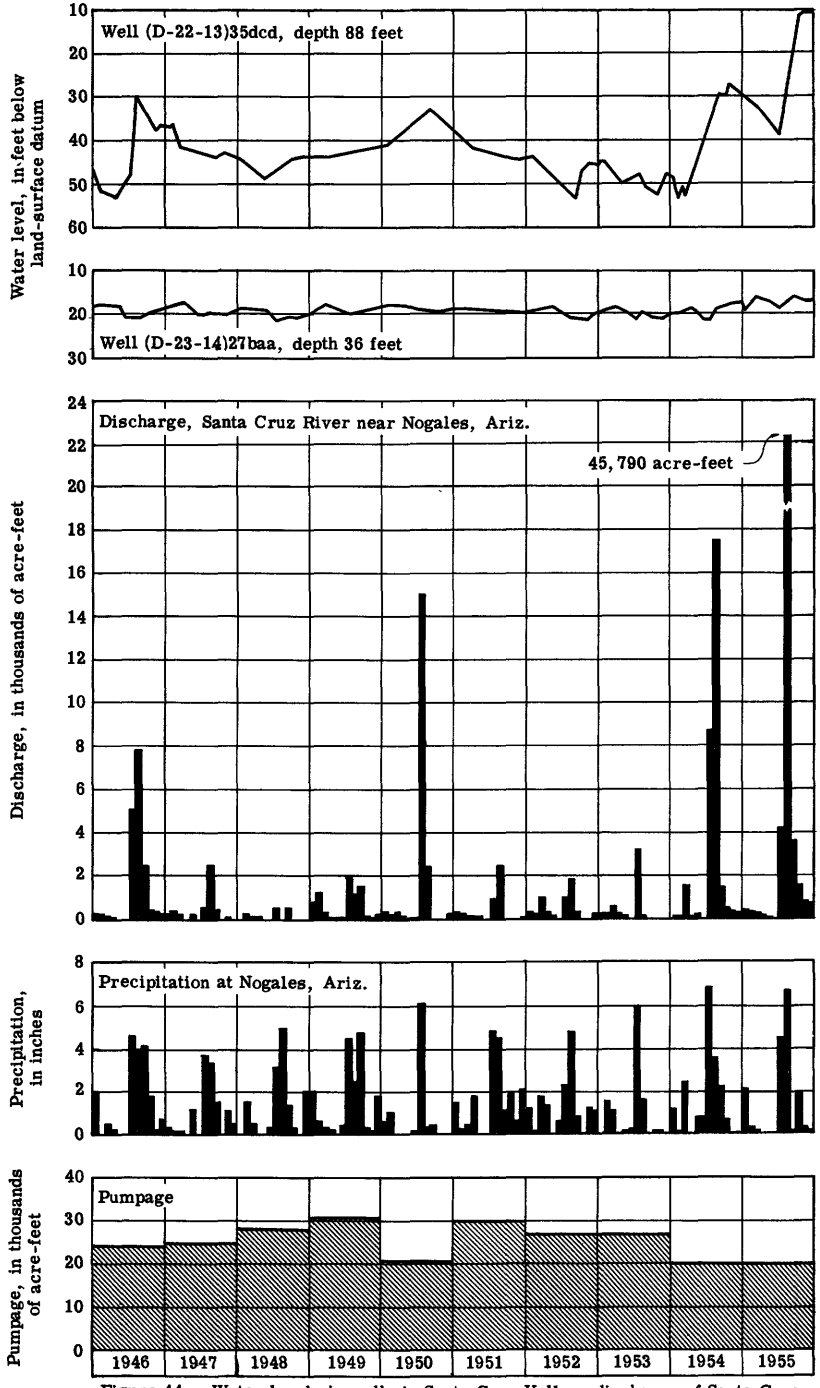


Figure 44. --Water levels in wells in Santa Cruz Valley, discharge of Santa Cruz River near Nogales, precipitation at Nogales, and pumpage in Santa Cruz County, Ariz., 1946-55.

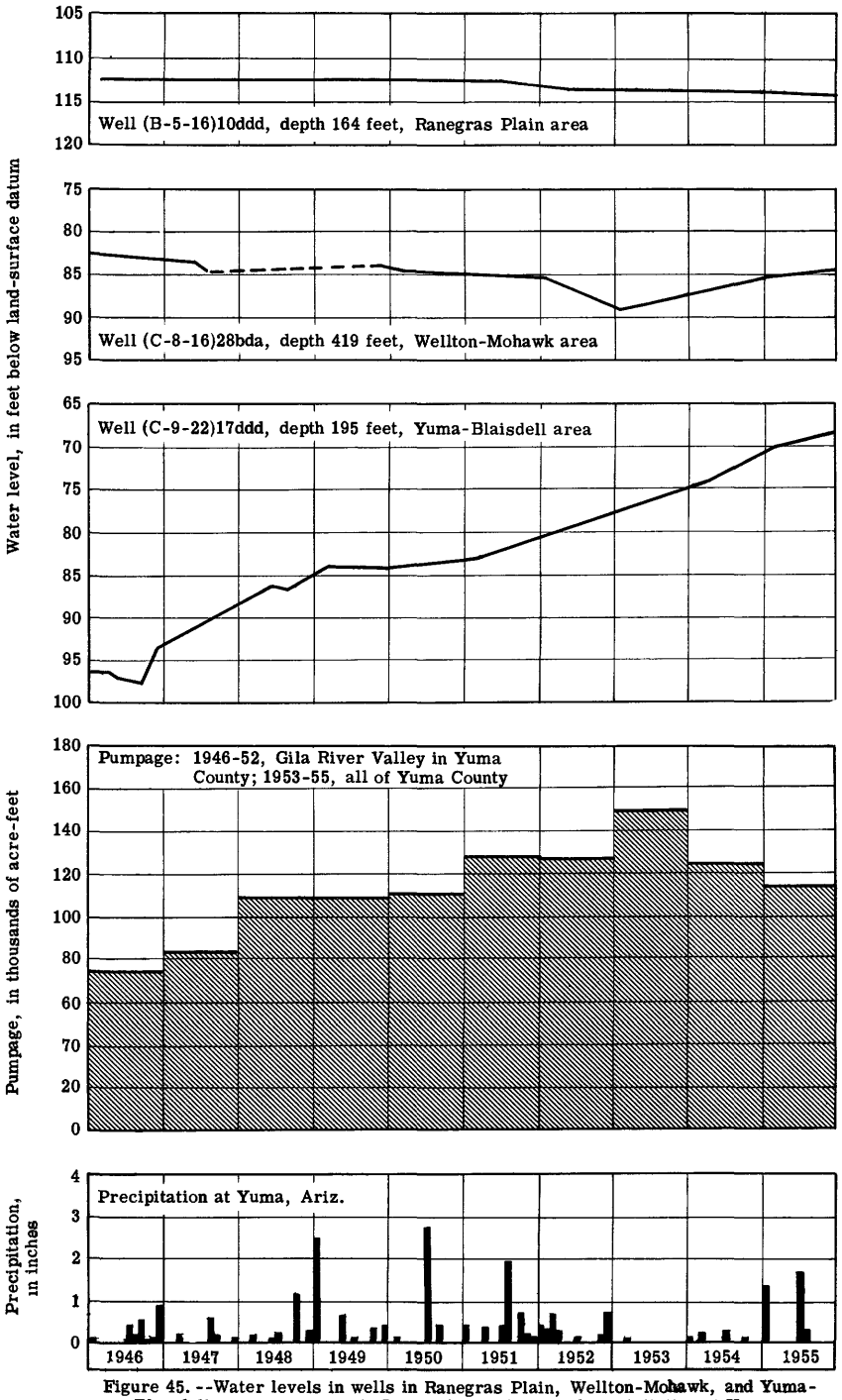
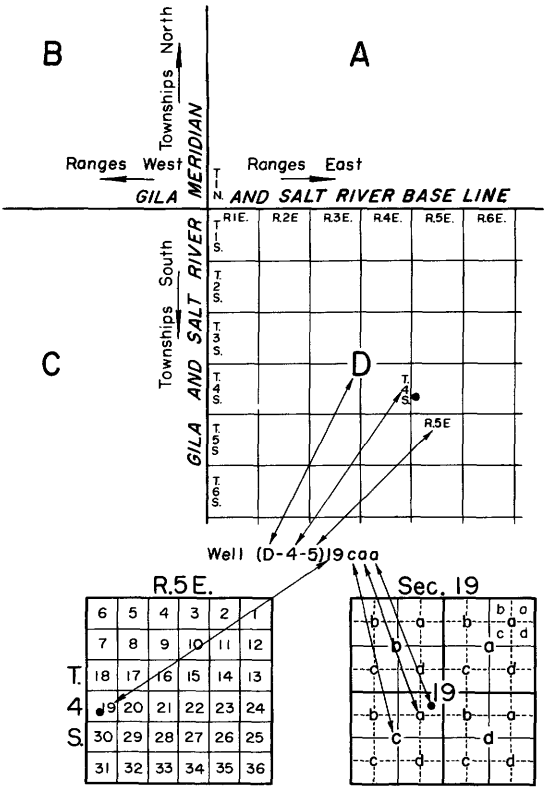


Figure 45. --Water levels in wells in Ranegras Plain, Wellton-Mohawk, and Yuma-Blaisdell areas, pumpage in Lower Gila Valley, and precipitation at Yuma, Yuma County, Ariz., 1946-55.

the second the 40-acre tract, and the third the 10-acre tract. These letters are assigned in a counterclockwise direction beginning in the northeast quarter. If the location is known within a 10-acre tract, three lowercase letters are shown in the well number. In the example shown, well number (D-4-5)19caa designates the well as being in the $NE\frac{1}{4}NE\frac{1}{4}SW\frac{1}{4}$ sec. 19, T. 4 S., R. 5 E. Where there is more than one well within a 10-acre tract, consecutive numbers beginning with 1 are added as suffixes.



Well Descriptions and Water-Level Measurements

(Water levels are in feet below land-surface datum unless otherwise indicated.)

Apache County

(A-13-28)29ca. E. L. Johns. Drilled domestic water-table well in gravel, diameter 12 inches, depth 50 feet. Highest water level 8.43 below lsd, Aug. 7, 1950; lowest 24.35 below lsd, June 11, 1947. Records available: 1944-55. June 28, 28.20, pumping; Oct. 26, 32.74, pumping.

Cochise County

(D-13-29)6ccc. A. R. Spikes. Drilled stock and irrigation artesian well in sand and gravel, diameter 6 inches, reported depth 835 feet. Land-surface datum is about 3,675 feet above msl. Highest water level 9.49 below lsd, May 2, 1941; lowest 87.36 below lsd, Aug. 18, 1954. Records available: 1941-42, 1944, 1946-47, 1949-52, 1954-55. Feb. 2, 57.65.

(D-13-31)30cdc. Elmer Franklin. Drilled domestic water-table well in sand and gravel, diameter 4 inches, depth 72 feet. Land-surface datum is about 3,610 feet above msl. Highest water level 58.70 below lsd, Nov. 2, 1949; lowest 70.08 below lsd, July 1, 1955. Records available: 1940-42, 1944, 1946-55. Feb. 2, 64.08; Mar. 21, 65.00; July 1, 70.08; Oct. 18, 62.01.

(D-14-23)36baa. Fay Proctor. Drilled domestic and stock water-table well in sand and gravel, diameter 6 inches, depth 50 feet. Land-surface datum is about 4,210 feet above msl. Highest water level 36.05 below lsd, May 13, 1942; lowest 42.93 below lsd, June 11, 1947. Records available: 1942, 1944-55. Feb. 1, 41.46; Mar. 22, 41.20.

(D-14-25)6cac. E. T. Dunlap. Drilled domestic water-table well in sand and gravel, diameter 6 inches, depth 34 feet. Land-surface datum is about 4,166 feet above msl. Highest water level 9.80 below lsd, Oct. 21, 1955; lowest 19.13 below lsd, June 27, 1955. Records available: 1942, 1944-55. Feb. 1, 18.00; Mar. 22, 18.33; June 27, 19.13; Oct. 21, 9.80.

(D-14-31)3ddd. A. G. Pierce. Drilled unused artesian well in sand and clay, diameter 8 inches, reported depth 400 feet. Land-surface datum is about 3,690 feet above msl. Highest water level 17.20 below lsd, Apr. 24, 1942; lowest 60.20 below lsd, Oct. 1-3, 1955. Records available: 1941-42, 1946-55.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	45.86	.....	43.71	43.48	.....	53.46	57.12	58.08	57.79	60.20	55.40	50.98
2	45.72	.....	43.67	43.50	.....	53.56	57.24	57.89	57.90	60.20	55.27	50.88
3	45.69	44.20	43.60	.....	.....	53.68	57.36	57.68	58.02	60.20	55.14	50.79
4	45.65	.....	.....	.....	.....	53.82	57.47	57.53	58.15	60.18	55.00	50.70
5	45.60	.....	.....	.....	.....	53.96	57.58	57.39	58.30	60.15	54.86	50.60
6	45.53	.....	.....	.....	.....	54.08	57.68	57.17	58.42	60.06	54.73	50.50
7	45.47	44.11	.....	.....	.....	54.24	57.77	57.10	58.53	59.93	54.59	50.43
8	45.43	44.05	.....	.....	.....	54.39	57.89	56.95	58.65	59.73	54.43	50.34
9	45.39	44.00	.....	.....	50.29	54.51	58.01	56.80	58.75	59.50	54.28	50.25
10	45.32	44.00	.....	.....	50.36	54.65	58.12	56.62	58.85	59.20	54.13	50.16
11	.....	43.97	.....	.....	50.56	54.81	58.23	56.45	58.93	59.02	53.98	50.01
12	.....	43.93	.....	.....	50.77	54.96	58.33	56.37	59.02	58.79	53.82	.....
13	.....	43.92	.....	.....	50.96	55.09	58.42	56.36	59.12	58.57	53.67	.....
14	.....	43.89	.....	.....	51.12	55.23	58.47	56.37	59.21	58.32	53.52	.....
15	.....	43.87	.....	.....	51.29	55.36	58.51	56.39	59.29	58.09	53.37	.....
16	.....	43.86	.....	.....	51.45	55.47	58.54	56.42	59.36	57.87	53.22	.....
17	.....	43.85	.....	.....	51.57	55.58	58.68	56.45	59.45	57.68	53.06	.....
18	.....	43.81	.....	.....	51.62	55.70	58.76	56.50	59.54	57.47	52.91	.....
19	.....	43.85	.....	.....	51.68	55.83	58.91	56.53	59.62	57.30	52.76	.....
20	.....	43.85	.....	.....	51.71	55.94	58.98	56.53	59.68	57.05	52.61	.....
21	.....	43.85	.....	.....	51.75	56.06	59.05	56.61	59.74	56.92	52.46	.....
22	.....	43.84	.....	.....	51.80	56.17	59.13	56.69	59.76	56.78	52.30	.....
23	.....	43.84	.....	.....	51.95	56.27	59.20	56.79	59.82	56.64	52.15	.....
24	.....	43.82	.....	.....	52.10	56.38	59.23	56.87	59.86	56.50	52.00	.....
25	.....	43.79	.....	.....	52.26	56.43	59.10	57.03	59.92	56.37	51.85	.....
26	.....	43.79	.....	.....	52.44	56.53	58.80	57.15	59.99	56.23	51.70	.....
27	.....	43.77	.....	48.90	52.65	56.64	58.70	57.27	60.05	56.09	51.54	.....
28	.....	43.73	.....	.....	52.83	56.76	58.60	57.37	60.10	55.96	51.39	50.22
29	.....		.....	.....	53.01	56.87	58.49	57.45	60.14	55.82	51.20	50.16
30	.....		43.43	.....	53.14	56.99	58.38	57.55	60.17	55.68	51.11	50.11
31	.....		43.44		53.31		58.26	57.67		55.55		50.03

(D-16-20)34acd. L. A. Scott. Drilled domestic and stock water-table well in sand and gravel, diameter 6 inches, depth 98 feet. Highest water level 70.42 below lsd, June 12, 1941; lowest 85.57 below lsd, May 28, 1954. Records available: 1941-42, 1944-55. Oct. 7, 83.29.

(D-16-25)16add. W. D. Wear. Drilled stock water-table well in sand and gravel, diameter 6 inches, depth 65 feet. Land-surface datum is about 4,190 feet above msl. Highest water level 33.99 below lsd, June 7, 1944; lowest 42.27 below lsd, Jan. 19, 1953. Records available: 1942, 1944-55. Pumping at time of measurement. Jan. 31, 39.88; Mar. 23, 40.53; June 28, 40.56; Oct. 20, 39.70.

(D-17-21)32bad. Boquillas Cattle Co. Drilled domestic and stock artesian well in sand and gravel, diameter 6 inches, reported depth 520 feet, cased to 500. Highest water level 16.92 below lsd, Dec. 9, 1946; lowest 21.81 below lsd, Oct. 4, 1955. Records available: 1944-55. Oct. 4, 21.81.

(D-18-21)6aab. Walter Haymore. Drilled domestic water-table well in sand and gravel, diameter 4 inches, depth 60 feet. Highest water level 25.62 below lsd, Mar. 30, 1946; lowest 39.68 below lsd, May 28, 1954. Records available: 1944-55. Oct. 4, 33.14.

(D-18-26)28aaa. Frank Geers. Drilled stock water-table well in sand and gravel, diameter 6 inches, depth 140 feet. Land-surface datum is 4,267.8 feet above msl. Highest water level 70.65 below lsd, Dec. 21, 1949; lowest 81.54 below lsd, Oct. 20, 1955. Records available: 1946-55. Jan. 10, 76.82; Mar. 22, 76.83; Oct. 20, 81.54.

(D-20-20)32cdb. Lon Hunt. Drilled unused water-table well in sand and gravel, diameter 6 inches, depth 125 feet. Highest water level 86.17 below lsd, Apr. 2, 1941; lowest 96.60 below lsd, May 24, 1954. Records available: 1941-43, 1945-55. Oct. 4, 91.37.

(D-20-26)33add. Frank Sproul. Drilled irrigation water-table well in sand and gravel, diameter 16 inches, depth 64 feet, perforations 24-64. Land-surface datum is 4,124.2 feet above msl. Highest water level 22.46 below lsd, May 27, 1942; lowest 56.46 below lsd, Jan. 19, 1954. Records available: 1942, 1944-54. Measurement discontinued.

(D-21-21)11aad. J. L. Parker. Dug unused water-table well in sand and gravel, diameter 4 feet, depth 36 feet. Highest water level 23.87 below lsd, Oct. 4, 1955; lowest 30.69 below lsd, Apr. 9, 1941. Records available: 1941, 1944-55. Oct. 4, 23.87.

(D-21-26)25aa. Randel and Hunt. Drilled unused water-table well in sand and gravel, diameter 20 inches, depth 110 feet. Highest water level 36.60 below lsd, Aug. 26, 1947; lowest 55.38 below lsd, Nov. 8-15, 1955. Records available: 1947-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 26, 1947	36.60	June 16, 1948	c39.63	Feb. 23, 1949	40.56	Dec. 20, 1949	42.40
Sept. 23	36.91	Oct. 12	40.35	Mar. 5	c41.40	Feb. 9, 1950	42.30
Oct. 23	37.28	Feb. 9, 1949	39.19	Oct. 11	42.24	June 28	42.91

c Nearby well being pumped.

Daily highest water level from recorder graph, 1950

Oct. 31	42.65	Nov. 16	42.82	Dec. 1	42.55	Dec. 16	42.42
Nov. 1	42.68	17	42.81	2	42.52	17	42.42
2	42.72	18	42.78	3	42.52	18	42.41
3	42.76	19	42.75	4	42.52	19	42.41
4	42.80	20	42.74	5	42.50	20	42.41
5	42.84	21	42.73	6	42.49	21	42.41
6	42.88	22	42.72	7	42.48	22	42.40
7	42.88	23	42.69	8	42.46	23	42.40
8	42.88	24	42.69	9	42.45	24	42.39
9	42.88	25	42.66	10	42.45	25	42.39
10	42.89	26	42.65	11	42.45	26	42.39
11	42.88	27	42.60	12	42.44	27	42.38
12	42.88	28	42.59	13	42.43	28	42.38
13	42.87	29	42.58	14	42.43	29	42.37
14	42.85	30	42.57	15	42.42	30	42.37
15	42.83						

Daily highest water level from recorder graph, 1951

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	42.37	42.25	42.16	42.13	42.10	42.32	42.76	43.64	44.11	.....	44.76	44.78
2	42.36	42.25	42.16	42.12	42.11	42.34	42.77	43.65	44.13	.....	44.76	44.78
3	42.36	42.24	42.16	42.12	42.11	42.36	42.78	43.67	44.15	.....	44.76	44.79
4	42.36	42.24	42.16	42.11	42.11	42.38	42.80	43.69	44.17	.....	44.76	44.79
5	42.35	42.23	42.17	42.11	42.12	42.40	42.82	43.71	44.19	.....	44.76	44.79
6	42.35	42.23	42.17	42.10	42.12	42.42	42.84	43.73	44.21	.....	44.76	44.78
7	42.35	42.22	42.17	42.10	42.12	42.44	42.86	43.75	44.23	.....	44.76	44.78
8	42.34	42.22	42.17	42.09	42.13	42.46	42.88	43.77	44.25	.....	44.76	44.78
9	42.34	42.21	42.17	42.09	42.13	42.48	42.90	43.79	44.27	.....	44.77	44.78
10	42.34	42.21	42.17	42.08	42.14	42.50	42.92	43.81	44.29	.....	44.77	44.77
11	42.33	42.20	42.17	42.08	42.14	42.52	42.94	43.83	44.31	.....	44.76	44.77
12	42.33	42.19	42.17	42.07	42.15	42.54	42.96	43.85	44.33	44.77	44.75	44.76
13	42.33	42.18	42.18	42.07	42.15	42.56	42.98	43.87	44.35	44.77	44.74	44.76
14	42.32	42.17	42.18	42.06	42.16	42.58	43.00	43.89	44.37	44.77	44.74	44.76
15	42.32	42.16	42.18	42.06	42.16	42.60	43.02	43.91	44.39	44.77	44.74	44.76
16	42.31	42.15	42.18	42.06	42.16	42.61	43.04	43.92	.....	44.77	44.74	44.76
17	42.31	42.15	42.18	42.06	42.17	42.62	43.07	43.93	.....	44.77	44.75	44.75
18	42.30	42.15	42.18	42.06	42.18	42.63	43.11	43.94	.....	44.77	44.75	44.74
19	42.30	42.15	42.18	42.06	42.19	42.64	43.16	43.95	.....	44.77	44.75	44.74
20	42.30	42.15	42.18	42.07	42.20	42.65	43.22	43.96	.....	44.77	44.75	44.73

(D-21-26)2baa--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
21	42.30	42.15	42.18	42.07	42.21	42.66	43.28	43.97	.....	44.77	44.76	44.73
22	42.30	42.15	42.18	42.07	42.22	42.67	43.34	43.98	.....	44.77	44.76	44.72
23	42.29	42.15	42.17	42.08	42.23	42.68	43.40	43.99	.....	44.77	44.76	44.71
24	42.29	42.15	42.17	42.08	42.24	42.69	43.46	44.00	.....	44.77	44.76	44.71
25	42.29	42.16	42.16	42.08	42.25	42.70	43.52	44.01	.....	44.77	44.77	44.71
26	42.28	42.16	42.16	42.09	42.26	42.71	43.58	44.02	.....	44.77	44.77	44.70
27	42.28	42.16	42.15	42.09	42.27	42.72	43.59	44.03	.....	44.77	44.77	44.69
28	42.27	42.16	42.15	42.09	42.28	42.73	43.60	44.04	.....	44.76	44.77	44.69
29	42.27		42.14	42.10	42.29	42.74	43.61	44.05	.....	44.76	44.77	44.67
30	42.26		42.14	42.10	42.30	42.75	43.62	44.07	.....	44.76	44.78	44.67
31	42.26		42.13		42.31		43.63	44.09		44.76		44.67

Daily highest water level from recorder graph, 1952

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	44.66	44.44	44.22	44.05	44.26	44.68	45.03	45.41	45.45	46.01	46.48	46.74
2	44.64	44.43	44.22	44.04	44.27	44.69	45.04	45.39	45.47	46.03	46.49	46.75
3	44.63	44.43	44.21	44.04	44.29	44.70	45.05	45.37	45.49	46.05	46.50	46.75
4	44.62	44.42	44.21	44.04	44.30	44.72	45.07	45.36	45.51	46.07	46.51	46.76
5	44.62	44.42	44.20	44.04	44.31	44.73	45.08	45.33	45.53	46.08	46.52	46.76
6	44.61	44.41	44.19	44.04	44.33	44.74	45.09	45.29	45.55	46.10	46.53	46.77
7	44.60	44.40	44.18	44.03	44.34	44.75	45.11	45.27	45.57	46.12	46.54	46.78
8	44.60	44.39	44.17	44.03	44.36	44.76	45.12	45.25	45.59	46.14	46.55	46.79
9	44.59	44.39	44.17	44.04	44.37	44.77	45.13	45.25	45.61	46.16	46.57	46.79
10	44.58	44.38	44.16	44.07	44.39	44.78	45.15	45.25	45.63	46.17	46.58	46.80
11	44.58	44.37	44.16	44.09	44.40	44.79	45.16	45.25	45.64	46.19	46.59	46.80
12	44.57	44.36	44.15	44.10	44.41	44.80	45.17	45.27	45.66	46.20	46.60	46.81
13	44.56	44.36	44.13	44.12	44.42	44.82	45.19	45.28	45.68	46.22	46.61	46.81
14	44.55	44.35	44.14	44.13	44.44	44.83	45.20	45.30	45.70	46.23	46.62	46.82
15	44.55	44.34	44.13	44.13	44.45	44.84	45.22	45.32	45.72	46.25	46.63	46.82
16	44.54	44.33	44.11	44.14	44.47	44.85	45.23	45.34	45.74	46.26	46.64	46.82
17	44.53	44.32	44.11	44.14	44.48	44.86	45.24	45.35	45.75	46.28	46.65	46.83
18	44.52	44.31	44.11	44.14	44.50	44.87	45.26	45.37	45.77	46.29	46.65	46.83
19	44.52	44.31	44.10	44.15	44.51	44.88	45.27	45.36	45.79	46.30	46.65	46.83
20	44.51	44.30	44.09	44.15	44.52	44.89	45.29	45.34	45.81	46.32	46.65	46.83
21	44.50	44.30	44.09	44.16	44.53	44.90	45.30	45.31	45.83	46.33	46.66	46.84
22	44.50	44.29	44.09	44.17	44.54	44.92	45.32	45.30	45.85	46.35	46.67	46.84
23	44.49	44.28	44.08	44.18	44.56	44.93	45.33	45.30	45.86	46.36	46.67	46.84
24	44.48	44.28	44.07	44.18	44.57	44.94	45.34	45.31	45.88	46.38	46.68	46.84
25	44.48	44.27	44.07	44.20	44.59	44.95	45.36	45.32	45.90	46.39	46.69	46.84
26	44.47	44.26	44.07	44.20	44.60	44.96	45.37	45.34	45.92	46.40	46.70	46.85
27	44.46	44.25	44.06	44.20	44.62	44.98	45.38	45.34	45.94	46.41	46.71	46.85
28	44.46	44.25	44.05	44.22	44.63	44.99	45.38	45.37	45.96	46.43	46.72	46.85
29	44.45	44.22	44.05	44.24	44.65	45.00	45.39	45.39	45.97	46.44	46.72	46.85
30	44.44		44.05	44.25	44.66	45.01	45.40	45.41	45.99	46.45	46.73	46.85
31	44.44		44.05		44.67		45.41	45.43		46.46		46.85

Daily highest water level from recorder graph, 1953

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	46.85	46.68	46.49	46.55	46.97	47.28	47.78	47.55	48.82	49.68	50.04	50.29
2	46.85	46.68	46.49	46.56	46.98	47.30	47.80	47.46	48.89	49.69	50.05	50.29
3	46.85	46.67	46.49	46.57	46.99	47.31	47.83	47.42	48.94	49.69	50.06	50.30
4	46.85	46.66	46.48	46.58	47.00	47.33	47.85	47.40	48.99	49.70	50.07	50.30
5	46.84	46.65	46.48	46.60	47.01	47.35	47.87	47.40	49.05	49.72	50.08	50.31
6	46.84	46.64	46.48	46.60	47.02	47.37	47.90	47.41	49.10	49.73	50.09	50.32
7	46.84	46.63	.....	46.62	47.03	.....	47.92	47.43	49.16	49.74	50.10	50.32
8	46.84	46.62	.....	46.64	47.04	47.41	47.94	47.45	49.21	49.75	50.11	50.32
9	46.83	46.62	.....	46.65	47.05	47.43	47.96	47.48	49.26	49.76	50.12	50.33
10	46.83	46.62	.....	46.67	47.07	47.45	47.98	47.52	49.32	49.77	50.12	50.34
11	46.82	46.61	.....	46.68	47.08	47.47	47.99	47.56	49.36	49.78	50.13	50.34
12	46.82	46.60	.....	46.70	47.09	47.48	48.01	47.62	49.43	49.80	50.14	50.34
13	46.81	46.59	.....	46.71	47.14	47.49	48.03	47.66	49.48	49.81	50.15	50.35
14	46.81	46.58	.....	46.73	47.17	47.50	48.05	47.70	49.53	49.83	50.17	50.35
15	46.80	46.57	.....	46.74	47.20	47.51	48.06	47.74	49.58	49.85	50.18	50.36
16	46.79	46.57	.....	46.75	47.19	47.52	48.07	47.79	49.59	49.85	50.19	50.36
17	46.79	46.56	.....	46.78	47.14	47.53	48.10	47.83	49.62	49.87	50.20	50.36
18	46.78	46.55	.....	46.80	47.11	47.55	48.11	47.90	49.63	49.88	50.20	50.36
19	46.78	46.54	.....	46.81	47.10	47.56	48.13	47.95	49.63	49.89	50.21	50.37
20	46.77	46.54	.....	46.82	47.10	.....	48.14	48.05	49.64	49.90	50.22	50.37

(D-21-26)2baa--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
21	46.76	46.53	.....	46.84	47.11	.....	48.16	48.14	49.64	49.92	50.23	50.37
22	46.76	46.52	.....	46.85	47.12	.....	48.17	48.18	49.64	49.93	50.24	50.37
23	46.75	46.52	.....	46.87	47.13	.....	48.19	48.26	49.64	49.94	50.24	50.38
24	46.75	46.51	.....	46.88	47.16	.....	48.20	48.35	49.64	49.95	50.25	50.42
25	46.74	46.51	.....	46.89	47.18	.....	48.23	48.41	49.64	49.96	50.25	50.46
26	46.73	46.50	.....	46.90	47.20	47.69	48.25	48.47	49.64	49.98	50.26	50.48
27	46.72	46.50	.....	46.91	47.21	47.70	48.28	48.53	49.65	49.99	50.27	50.44
28	46.72	46.49	.....	46.91	47.22	47.72	48.20	48.59	49.65	50.00	50.27	50.35
29	46.71		.....	46.93	47.23	47.74	48.03	48.66	49.66	50.01	50.28	50.28
30	46.70		.....	46.94	47.24	47.76	47.90	48.70	49.67	50.02	50.28	50.25
31	46.69		.....		47.26		47.68	48.77		50.03		50.23

Daily highest water level from recorder graph, 1954

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	50.23	.....	.....	50.01	50.58	51.14	51.75	.....	.....	.....	52.64	.....
2	50.23	.....	.....	.....	50.60	51.16	51.77	.....	.....	.....	52.65	.....
3	50.23	.....	.....	.....	50.62	51.18	51.79	.....	.....	.....	52.65	.....
4	50.23	50.17	50.17	.....	50.64	51.20	51.80	.....	.....	.....	52.66	.....
5	50.23	.....	50.16	.....	50.65	51.22	51.82	.....	.....	.....	52.66	.....
6	50.23	.....	50.14	.....	50.67	51.24	51.84	.....	.....	.....	52.67	.....
7	50.23	.....	50.13	.....	50.68	.....	51.84	.....	.....	.....	52.68	.....
8	50.24	.....	50.12	.....	50.70	.....	51.86	.....	.....	.....	52.68	52.72
9	50.24	.....	50.11	.....	50.72	.....	51.88	.....	52.03	.....	52.68	52.72
10	.....	.....	50.09	.....	50.74	.....	51.90	.....	52.04	.....	52.69	52.72
11	.....	.....	50.08	.....	50.75	.....	51.92	.....	52.08	.....	52.70	52.72
12	.....	.....	50.08	.....	50.76	.....	51.93	.....	52.11	.....	52.70	52.72
13	.....	.....	50.08	.....	50.79	.....	51.95	.....	52.13	.....	52.70	52.72
14	.....	.....	50.07	.....	50.81	.....	51.96	.....	52.16	.....	52.71	52.72
15	.....	.....	50.07	.....	50.83	.....	51.98	.....	52.18	.....	52.71	52.72
16	.....	.....	50.06	.....	50.85	.....	52.00	.....	52.20	.....	52.72	52.71
17	.....	.....	50.06	.....	50.87	.....	52.01	.....	52.21	.....	52.72	52.71
18	.....	.....	50.05	.....	50.89	.....	52.03	.....	52.22	.....	52.72	52.70
19	.....	.....	50.04	.....	50.91	.....	52.04	.....	52.24	.....	52.72	52.70
20	.....	.....	50.03	.....	50.94	.....	52.06	51.60	52.26	.....	52.73	52.69
21	.....	.....	50.03	.....	50.95	.....	52.07	.....	52.28	52.58	52.73	52.68
22	.....	.....	50.01	.....	50.97	.....	52.09	.....	52.29	52.58	52.73	52.68
23	.....	.....	50.02	.....	50.98	51.64	.....	.....	52.31	52.59	52.73	52.67
24	.....	.....	50.01	.....	51.00	51.65	.....	.....	52.32	52.60	52.73	52.66
25	.....	.....	50.01	.....	51.02	51.66	.....	.....	.....	52.60	.....	52.66
26	.....	.....	50.01	.....	51.04	51.68	.....	.....	.....	52.61	.....	52.65
27	.....	.....	50.01	.....	51.05	51.69	.....	.....	.....	52.62	.....	52.65
28	.....	.....	50.00	50.55	51.06	51.70	.....	.....	.....	52.62	.....	52.64
29	.....		49.99	50.56	51.08	51.72	.....	.....	.....	52.63	.....	52.63
30	.....		50.00	50.57	51.09	51.74	.....	.....	.....	52.63	.....	52.62
31	.....		50.00		51.12		.....	.....		52.64		52.62

Daily highest water level from recorder graph, 1955

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	52.61	52.39	52.22	52.53	52.98	53.56	54.28	54.76	53.79	54.93	55.35	55.29
2	52.60	52.38	52.22	52.54	53.00	53.59	54.32	54.71	53.81	54.96	55.36	55.28
3	52.60	52.37	52.21	52.56	53.02	53.62	54.36	54.65	53.83	54.98	55.36	55.27
4	52.60	52.36	52.21	52.58	53.04	53.66	54.40	54.60	53.86	55.00	55.37	55.26
5	52.59	52.36	52.21	52.60	53.06	53.68	54.43	54.55	53.93	55.02	55.37	55.26
6	52.58	52.36	52.20	52.62	53.08	53.70	54.46	54.51	53.98	55.04	55.37	55.25
7	52.57	52.35	52.20	52.64	53.10	53.72	54.48	54.47	54.03	55.06	55.37	55.24
8	52.57	52.34	52.19	52.65	53.12	53.75	54.50	54.44	54.08	55.08	55.38	55.23
9	52.56	52.34	52.18	52.67	53.14	53.77	54.53	54.40	54.14	55.10	55.38	55.22
10	52.55	52.33	52.18	52.68	53.16	53.79	54.56	54.35	54.19	55.11	55.38	55.21
11	52.54	52.32	52.18	52.70	53.18	53.82	54.59	54.32	54.24	55.13	55.38	55.20
12	52.54	52.32	52.18	52.72	53.20	53.85	54.62	54.28	54.30	55.15	55.38	55.19
13	52.53	52.31	52.18	52.73	53.23	53.87	54.65	54.24	54.34	55.16	55.38	55.18
14	52.52	52.30	52.18	52.73	53.25	53.89	54.68	54.21	54.40	55.18	55.38	55.17
15	52.52	52.29	52.19	52.74	53.27	53.91	54.70	54.18	54.45	55.19	55.38	55.16
16	52.50	52.28	52.22	52.75	53.29	53.93	54.72	54.14	54.49	55.21	55.37	55.15
17	52.50	52.28	52.23	52.76	53.31	53.95	54.76	54.11	54.55	55.22	55.36	55.15
18	52.49	52.27	52.27	52.77	53.33	53.97	54.78	54.08	54.58	55.24	55.36	55.14
19	52.48	52.27	52.29	52.78	53.35	53.99	54.80	54.04	54.60	55.25	55.36	55.13
20	52.48	52.26	52.31	52.80	53.37	54.02	54.82	54.01	54.62	55.26	55.35	55.12

(D-21-26)2baa--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
21	52.47	52.26	52.34	52.81	53.39	54.04	54.84	53.98	54.64	55.27	55.34	55.11
22	52.46	52.26	52.36	52.82	53.41	54.06	54.86	53.95	54.65	55.28	55.34	55.10
23	52.45	52.25	52.38	52.83	53.43	54.08	54.88	53.92	54.67	55.29	55.33	55.09
24	52.44	52.24	52.41	52.84	53.44	54.10	54.90	53.87	54.70	55.30	55.33	55.08
25	52.44	52.24	52.43	52.85	53.45	54.12	54.92	53.85	54.74	55.31	55.32	55.07
26	52.43	52.24	52.46	52.87	53.46	54.14	54.92	53.82	54.77	55.32	55.31	55.06
27	52.42	52.23	52.48	52.89	53.47	54.16	54.92	53.80	54.81	55.32	55.31	55.05
28	52.42	52.22	52.50	52.92	53.49	54.19	54.89	53.78	54.84	55.33	55.30	55.04
29	52.41		52.51	52.94	53.51	54.21	54.87	53.77	54.87	55.34	55.29	55.04
30	52.40		52.50	52.96	53.52	54.25	54.82	53.77	54.90	55.34	55.29	55.02
31	52.39		52.51		53.54		54.80	53.78		55.35		55.01

(D-21-26)24baa. McNeal Cemetery. Drilled domestic water-table well in sand and gravel, diameter 8 inches, depth 196 feet. Land-surface datum is 4,195.8 feet above msl. Highest water level 112.00 below lsd, Jan. 31, 1946; lowest 136.67 below lsd, Oct. 19, 1955. Records available: 1946-55. Jan. 11, 128.00; Mar. 21, 128.18; July 7, 129.18; Oct. 19, 136.67.

(D-22-26)28bab2. J. E. Brophy. Drilled irrigation water-table well in sand and gravel, diameter 8 inches, depth 90 feet. Highest water level 26.42 below lsd, July 25, 1946; lowest 43.34 below lsd, Oct. 19, 1955. Records available: 1946-47, 1949-51, 1953-55. Jan. 11, 38.75; Mar. 21, 38.10; Oct. 19, 43.34.

(D-24-27)5bdb. Fred Price. Dug stock water-table well in sand and gravel, diameter 8 feet, depth 82 feet. Land-surface datum is about 3,996 feet above msl. Highest water level 54.30 below lsd, May 26, 1942; lowest 62.29 below lsd, Nov. 3, 1954. Records available: 1942, 1944-55. Jan. 10, 61.60; Mar. 22, 62.00.

Coconino County

(A-21-7)9ddc. Pinewood Dairy. Dug stock water-table well in gravel, diameter 4 feet, depth 25 feet. Highest water level 11.93 below lsd, June 5, 1945; lowest 19.34 below lsd, Oct. 15, 1948. Records available: 1944-51, 1953-54. Measurement discontinued.

(A-22-6)26aaa. City of Flagstaff. Drilled unused water-table well in Coconino sandstone, diameter 16 inches, reported depth 1,021 feet. Highest water level 129.68 below lsd, Sept. 28, 1945; lowest 131.24 below lsd, Nov. 10, 1955. Records available: 1944-55. June 30, 131.19; Nov. 10, 131.24.

Gila County

(A-1-15)9aad. Kenneth Hoopes. Drilled industrial water-table well in sand and gravel, diameter 12 inches, depth 160 feet. Highest water level 39.25 below lsd, Apr. 9, 1952; lowest 90.40 below lsd, Oct. 3, 1950. Records available: 1945-55. Sept. 27, 94.78, nearby well being pumped.

(D-1-15)13bad. Schniffen. Drilled unused water-table well in sand and gravel, diameter 6 inches, depth 105 feet. Highest water level 3.50 below lsd, May 5, 1949; lowest 38.87 below lsd, Apr. 11, 1951. Records available: 1946-55. Sept. 27, 19.42.

Graham County

(D-4-22)13dba. Aubrey Rabb. Drilled irrigation water-table well in sand and gravel, diameter 16 inches, reported depth 100 feet. Highest water level 17.90 below lsd, Dec. 27, 1955; lowest 28.98 below lsd, Aug. 31, 1953. Records available: 1953-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	19.38	Apr. 26	19.18	Aug. 30	21.50	Nov. 29	18.06
Mar. 1	19.38	June 28	21.26	Oct. 25	18.62	Dec. 27	17.90
29	20.48	July 26	21.66				

(D-4-22)35ddd. Pat Hinton. Drilled stock water-table well in sand and gravel, diameter 6 inches, depth 75 feet. Land-surface datum is 2,859.5 feet above msl. Highest water level 17.08 below lsd, Feb. 11, 1943; lowest 39.36 below lsd, Mar. 29, 1940. Records available: 1939-44, 1946-55. Jan. 18, 32.02; Apr. 5, 39.43, pumped recently; July 19, 38.80, pumped recently; Oct. 11, 32.90.

(D-4-23)29adc. Silas Jarvis. Drilled irrigation water-table well in sand and gravel, diameter 16 inches, depth 83 feet, cased to 83, perforations 53-73. Land-surface datum is 2,705.7 feet above msl. Highest water level 46.10 below lsd, Mar. 18, 1941; lowest 63.23 below lsd, Feb. 15, 1948. Records available: 1940-55.

Feb. 1	54.04	Apr. 26	56.76	Aug. 30	57.04	Nov. 29	54.73
Mar. 1	53.45	May 31	58.90	Sept. 27	58.22	Dec. 27	53.84
29	55.64	July 26	59.36				

(D-6-24)5acc. Eldon Palmer. Drilled irrigation water-table well in sand and gravel, diameter 16 inches, depth 64 feet. Land-surface datum is 2,779.6 feet above msl. Highest water level 38.93 below lsd, May 29, 1941; lowest 57.70 below lsd, June 28, 1955. Records available: 1940-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	49.45	Apr. 26	50.90	July 26	52.37	Oct. 25	50.97
Mar. 1	49.16	May 31	51.80	Aug. 30	51.20	Nov. 29	50.30
29	50.22	June 28	57.70	Sept. 27	51.16	Dec. 27	50.08

(D-6-24)13cbb. W. J. Preston. Drilled domestic water-table well in sand and gravel, diameter 5 inches, depth 48 feet. Land-surface datum is 2,828.8 feet above msl. Highest water level 29.15 below lsd, May 28, 1942; lowest 45.79 below lsd, Jan. 22, 1952. Records available: 1939-40, 1942-55.

Feb. 1	41.97	Apr. 26	42.11	July 26	43.89	Oct. 24	43.73
Mar. 1	42.34	May 31	42.56	Aug. 30	43.90	Nov. 29	43.38
29	42.35	June 28	43.11	Sept. 27	43.79	Dec. 27	43.07

(D-6-25)20aaa. Vance Marshall. Drilled irrigation water-table well in sand and gravel, diameter 16 inches, depth 46 feet. Land-surface datum is 2,821.6 feet above msl. Highest water level 10.77 below lsd, May 26, 1941; lowest 24.70 below lsd, July 26, 1955. Records available: 1939-46, 1948-50, 1952-55. Erroneously reported previously as 17ddd.

Feb. 1	19.58	Apr. 26	24.16	Aug. 30	22.56	Nov. 29	22.44
Mar. 1	18.88	July 26	24.70	Sept. 27	22.25	Dec. 27	21.14

(D-6-28)31aac. J. W. Earven. Drilled irrigation water-table well in sand and gravel, diameter 16 inches, reported depth 200 feet. Highest water level 17.14 below lsd, Apr. 16, 1941; lowest 68.20 below lsd, Aug. 29, 1955. Records available: 1940-55.

Jan. 31	46.95	Apr. 25	47.98	July 25	56.75	Nov. 28	64.84
Feb. 28	45.44	May 30	49.56	Aug. 29	68.20	Dec. 27	53.79
Mar. 28	45.35	June 27	64.40	Oct. 24	66.10		

(D-7-26)22bac. Lee Johns. Drilled irrigation water-table well in sand and gravel, diameter 16 inches, depth 90 feet, cased to 90. Land-surface datum is 2,950.3 feet above msl. Highest water level 20.27 below lsd, May 25, 1942; lowest 66.36 below lsd, June 28, 1954. Records available: 1940-55.

Jan. 31	46.83	May 30	58.74	Sept. 26	56.86	Nov. 30	50.22
Feb. 28	45.45	July 25	63.38	Oct. 24	52.47	Dec. 27	47.38
Apr. 25	54.98	Aug. 29	57.60				

(D-7-27)4dad. Zelma Clonts. Drilled irrigation water-table well in sand and gravel, diameter 16 inches, depth 81 feet, cased to 81, perforations 10-60. Land-surface datum is about 3,012 feet above msl. Highest water level 9.32 below lsd, Apr. 16, 1941; lowest 40.65 below lsd, July 25, 1955. Records available: 1940-50, 1952-55. Jan. 31, 29.82; Feb. 28, 28.50; July 25, 40.65; Sept. 26, 36.60; Oct. 24, 34.58; Dec. 27, 31.49.

Greenlee County

(D-6-31)19dad. D. W. Rapier. Drilled domestic water-table well in sand and gravel, diameter 12 inches, depth 70 feet. Highest water level 30.76 below lsd, May 5, 1941; lowest 40.66 below lsd, Aug. 27, 1951. Records available: 1939-55. Mar. 29, 38.87; Dec. 8, 37.19.

(D-7-31)4bcc. Barney & Frazier. Drilled irrigation water-table well in sand and gravel, diameter 20 inches, depth 75 feet. Land-surface datum is 3,544.4 feet above msl. Highest water level 24.25 below lsd, May 5, 1941; lowest 38.85 below lsd, Aug. 11, 1954. Records available: 1939-43, 1945-55. Feb. 3, 31.41; Dec. 8, 35.70.

(D-8-32)32cda. Lavar Merrill. Drilled domestic water-table well in sand and gravel, diameter 4 inches, depth 110 feet. Land-surface datum is 3,716.0 feet above msl. Highest water level 22.68 below lsd, Mar. 15, 1945; lowest 38.56 below lsd, Aug. 27, 1951. Records available: 1939-55. Feb. 3, 33.80; Mar. 29, 34.91; June 30, 35.73; Dec. 8, 33.56.

Maricopa County

(A-1-1)4aaa2. Isabell-Hartner Ranches. Drilled irrigation water-table well in sand and gravel, diameter 20 inches, depth 514 feet, cased to 365, perforations 150-355. Highest water level 111.12 below lsd, Feb. 2, 1953; lowest 131.55 below lsd, Nov. 22, 1955. Records available: 1953-55. Feb. 24, 129.94; May 13, 178.66, nearby well being pumped; Nov. 22, 131.55.

(A-1-4)11bcb. J. B. House. Drilled domestic water-table well in sand and gravel, diameter 6 inches, depth 201 feet. Highest water level 36.75 below lsd, Feb. 21, 1946; lowest 122.19 below lsd, Nov. 18, 1955. Records available: 1946-55. Mar. 7, 107.84; May 16, 117.00; Aug. 2, 115.88; Nov. 18, 122.19.

(A-1-6)23daa. Logan Stillwell. Drilled domestic water-table well in sand and gravel, diameter 10 inches, depth 408 feet. Land-surface datum is 1,375.7 feet above msl. Highest water level 229.20 below lsd, Mar. 19, 1946; lowest 364.36 below lsd, Nov. 18, 1955. Records available: 1946, 1948-55. Feb. 16, 342.10; May 18, 354.69; Aug. 2, 360.45; Nov. 18, 364.36.

(A-3-1)35baa. Otis Cook. Drilled domestic water-table well in sand and gravel, diameter 6 inches, depth 217 feet. Highest water level 54.47 below lsd, Mar. 20, 1946; lowest 127.56 below lsd, Aug. 1, 1955. Records available: 1946-55. Feb. 24, 120.29; May 12, 125.75; Aug. 1, 127.56; Nov. 21, 127.17.

(A-3-2)12caa. John M. Jacobs. Drilled unused water-table well in sand and gravel, diameter 20 inches, depth 809 feet. Land-surface datum is 1,309.7 feet above msl. Highest water level 253.96 below lsd, Feb. 21, 1949; lowest 346.40 below lsd, Aug. 1, 1955. Records available: 1948-55. Feb. 24, 346.16; May 12, 360.90, nearby well being pumped, Aug. 1, 346.40; Nov. 21, 364.89, nearby well being pumped.

(A-3-4)15ddd. David and Leona Gooze. Drilled unused water-table well in sand and gravel, diameter 6 inches, depth 193 feet, uncased. Highest water level 165.82 below lsd, Mar. 24, 1946; lowest 171.46 below lsd, Oct. 21, 1952. Records available: 1946-54. No measurement made in 1955.

(B-1-2)13acd. Roosevelt Irrigation District. Drilled irrigation water-table well in sand and gravel, diameter 20 inches, depth 155 feet, perforations 40-130. Land-surface datum is 958.9 feet above msl. Highest water level 39.0 below lsd, Apr. 30, 1928; lowest 74.55 below lsd, Nov. 21, 1955. Records available: 1928-31, 1934-41, 1944-45, 1947-55. Feb. 18, 71.80; May 13, 72.82; Aug. 4, 73.15; Nov. 21, 74.55.

(B-1-3)34bbb. Roosevelt Irrigation District. Drilled irrigation water-table well in sand and gravel, diameter 20 inches, depth 200 feet, perforations 74-176. Land-surface datum is 916.7 feet above msl. Highest water level 54.2 below lsd, June 1, 1944; lowest 76.32 below lsd, Nov. 3, 1952. Records available: 1928-55. Feb. 18, 68.49; May 13, 69.53; Aug. 4, 69.62; Nov. 22, 68.85.

(B-2-2)4dcb. Maricopa County Municipal Water Conservation District No. 1. Drilled unused water-table well in sand and gravel, diameter 20 inches, depth 500 feet, perforations 204-484. Highest water level 183.7 below lsd, May 17, 1940; lowest 250.50 below lsd, Feb. 16, 1955. Records available: 1940-42, 1946-55. Feb. 16, 250.50.

(B-3-1)8abb. R. I. C. Manning. Drilled irrigation well in sand and gravel, diameter 20 inches, reported depth 800 feet, perforations 200-800. Highest water level 246.13 below lsd, Jan. 29, 1952; lowest 289.05 below lsd, Nov. 28, 1955. Records available: 1951-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Nov. 14, 1951	247.55	May 5, 1953	260.38	Feb. 5, 1954	269.01	May 12, 1955	284.80
Jan. 29, 1952	246.13	Nov. 16	268.88	Nov. 18	283.21	Nov. 28	289.05
Nov. 19	258.74						

(B-4-1)8daa. Maricopa County Municipal Water Conservation District No. 1. Drilled unused water-table well in sand and gravel, diameter 20 inches, depth 500 feet, perforations 182-484. Land-surface datum is about 1,335 feet above msl. Highest water level 180.0 below lsd, Nov. 28, 1938; lowest 249.51 below lsd, Aug. 1, 1955. Records available: 1938, 1940-42, 1944, 1946-55. Feb. 3, 246.60; May 12, 249.20; Aug. 1, 249.51.

(C-1-5)1aab. Charles Yokum. Drilled stock water-table well in sand and gravel, diameter 6 inches, depth 185 feet. Highest water level 62.77 below lsd, Oct. 25, 1946; lowest 82.34 below lsd, May 13, 1954. Records available: 1946-55. Feb. 18, 81.25; Dec. 27, 77.90.

(C-1-7)15bbb. Lee C. Underdown. Drilled unused water-table well in sand and gravel, diameter 20 inches, depth 650 feet, perforations 164-254. Highest water level 178.22 below lsd, Mar. 4, 1949; lowest 186.03 below lsd, Nov. 22, 1955. Records available: 1949-55. Feb. 7, 184.85; May 13, 185.86; Aug. 4, 185.54; Nov. 22, 186.03.

(D-1-5)1bbb. Salt River Valley Water Users' Association. Drilled domestic water-table well in sand and gravel, diameter 16 inches, depth 180 feet. Land-surface datum is 1,222.2 feet above msl. Highest water level 67.20 below lsd, Dec. 10, 1945; lowest dry, May 16, 1955. Records available: 1945-55. Mar. 7, 156.31; May 16, dry.

(D-1-6)25aaa. Roosevelt Water Conservation District. Drilled domestic water-table well in sand and gravel, diameter 18 inches, depth 223 feet. Land-surface datum is 1,324.1 feet above msl. Highest water level 92.76 below lsd, May 26, 1941; lowest 149.25 below lsd, Aug. 2, 1955. Records available: 1939-55. Feb. 18, 147.58; May 16, 149.22; Aug. 2, 149.25; Nov. 18, 148.11.

(D-2-5)15bbb. L. S. Breckler. Drilled domestic water-table well in sand and gravel, diameter 6 inches, depth 200 feet. Land-surface datum is 1,214.0 feet above msl. Highest water level 40.2 below lsd, Mar. 23, 1945; lowest 110.62 below lsd, Aug. 2, 1955. Records available: 1945-55. Mar. 7, 104.05; May 13, 108.36; Aug. 2, 110.62; Nov. 18, 108.26.

(D-2-7)12ddd. L. M. Mecham. Drilled irrigation water-table well in sand and gravel, diameter 20 inches, depth 600 feet, perforations 250-585. Highest water level 177.00 below lsd, Feb. 28, 1948; lowest 266.41 below lsd, Nov. 18, 1955. Records available: 1948-55. Nov. 18, 266.41.

Mohave County

(B-16-13)34dd. Dr. A. E. Carter. Dug domestic and stock water-table well in sand and gravel, diameter 4 feet, depth 20 feet. Highest water level 11.40 below lsd, Nov. 8, 1955; lowest 18.50 below lsd, Aug. 3, 1951. Records available: 1945-55. June 1, 16.39, pumping; Nov. 8, 11.40.

(B-21-17)24cd. E. A. Kier. Drilled domestic water-table well in sand and gravel, diameter 6 inches, depth 120 feet. Highest water level 101.46 below lsd, Aug. 14, 1944; lowest 112.49 below lsd, Sept. 19, 1952. Records available: 1944-55. June 1, 108.59; Nov. 9, 110.02.

Navajo County

(A-17-21)7bb. Arizona State Highway Department. Drilled unused water-table well in Coconino sandstone, diameter 10 inches, depth 110 feet. Land-surface datum is 5,110.5 feet above msl. Highest water level 39.51 below lsd, June 3, 1948; lowest 44.13 below lsd, July 2, 1952. Records available: 1944-55. June 27, 40.56; Oct. 28, 40.40.

Pima County

(D-11-10)22add. Tom Greenfield. Drilled domestic and irrigation water-table well in sand and gravel, diameter 20 inches, reported depth 600 feet, cased to 600, perforations 145-582. Land-surface datum is 1,914.6 feet above msl. Highest water level 140.66 below lsd, Feb. 28, 1940; lowest 186.44 below lsd, May 6, 1954. Records available: 1940, 1942, 1945-48, 1950-55. Jan. 5, 176.33.

(D-12-10)20ddc. B. Wong. Drilled domestic water-table well in sand and gravel, diameter 7 inches, depth 222 feet. Land-surface datum is 2,021.4 feet above msl. Highest water level 184.79 below lsd, Apr. 15, 1940; lowest 222.87 below lsd, Aug. 26, 1954. Records available: 1940, 1942, 1944-54. Measurement discontinued.

(D-12-11)18ddd. J. E. Glover. Drilled domestic and stock water-table well in sand and gravel, diameter 10 inches, depth 218 feet. Highest water level 189.37 below lsd, June 13, 1941; lowest 214.92 below lsd, May 6, 1954. Records available: 1940-42, 1944-47, 1949-54. Measurement discontinued.

(D-12-12)16bad. Cortaro Water Users' Association. Drilled unused water-table well in sand and gravel, diameter 24 to 18 inches, reported depth 300 feet, cased to 292, perforations 75-285. Highest water level 74.71 below lsd, Feb. 20, 1940; lowest 123.33 below lsd, Aug. 25, 1948. Records available: 1939-55. Jan. 3, 103.01; Mar. 24, 106.50; July 7, 110.77; Nov. 14, 103.23.

(D-15-10)35aaa. State of Arizona. Drilled unused water-table well in sand and gravel, diameter 6 inches, depth 295 feet. Highest water level 212.17 below lsd, Oct. 7, 1948; lowest 223.42 below lsd, Nov. 14, 1955. Records available: 1940-42, 1944, 1946-55. Jan. 5, 217.85; Apr. 21, 218.03; July 7, 219.31; Nov. 14, 223.42.

(D-15-13)2cca. City of Tucson. Dug and drilled unused water-table well in sand and gravel, diameter 12 inches, depth 104 feet. Highest water level 31.70 below lsd, July 29, 1942; lowest 64.97 below lsd, June 22, 1954. Records available: 1942-55.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	.....	.....	59.00	60.94	63.51	59.02	.....	49.70	51.01	51.28
2	.....	.....	.....	.....	59.11	61.03	63.64	57.50	.....	49.66	51.03	51.17
3	.....	.....	.....	.....	59.08	61.05	63.72	56.97	.....	49.61	51.02	51.39
4	.....	.....	.....	.....	58.99	61.08	63.80	.....	.....	49.69	51.02	51.30
5	.....	.....	.....	.....	59.17	61.17	63.90	.....	.....	49.56	50.99	51.18

(D-15-13)2cca--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
6	.....	.....	.....	.....	59.26	61.28	64.00	.....	.....	49.54	50.99	51.09
7	.....	.....	.....	.....	59.27	61.36	64.13	.....	.....	49.55	50.97	51.17
8	.....	.....	.....	.....	59.33	61.36	64.26	.....	.....	49.59	50.96	51.29
9	.....	.....	.....	.....	59.43	61.49	64.37	.....	.....	49.67	50.81	51.18
10	.....	.....	.....	.....	.....	61.68	64.50	.....	.....	49.72	50.81	51.15
11	.....	.....	.....	.....	.....	61.82	64.62	.....	.....	49.84	50.83	50.98
12	.....	.....	.....	.....	.....	61.84	64.68	.....	.....	49.95	50.97	50.82
13	.....	.....	.....	.....	.....	61.89	64.72	.....	.....	50.02	50.92	50.80
14	.....	.....	.....	.....	.....	62.02	64.66	.....	46.54	50.04	50.84	51.10
15	.....	.....	.....	.....	.....	61.99	64.62	.....	47.09	50.14	50.84	50.71
16	.....	.....	.....	.....	.....	62.14	64.72	.....	47.51	50.21	50.78	50.60
17	.....	.....	.....	.....	.....	62.19	64.77	.....	47.95	50.32	50.78	50.90
18	.....	.....	.....	59.11	.....	62.26	64.70	.....	48.13	50.39	50.98	50.99
19	.....	.....	.....	59.11	.....	62.37	64.60	.....	48.36	50.43	50.87	50.95
20	.....	.....	.....	59.01	.....	62.48	64.38	.....	48.53	50.46	50.85	50.83
21	.....	.....	.....	58.97	.....	62.60	64.08	.....	48.72	50.52	50.77	50.77
22	.....	.....	.....	58.82	.....	62.64	63.86	.....	48.91	50.51	50.91	50.73
23	.....	58.04	.....	58.84	60.32	62.70	61.45	.....	49.01	50.61	50.92	50.70
24	58.70	.....	.....	58.77	60.24	62.88	58.40	.....	49.19	50.68	50.98	50.85
25	.....	.....	58.86	58.81	60.28	63.00	58.04	.....	49.42	50.66	50.98	50.67
26	.....	.....	.....	58.81	60.52	63.07	58.26	.....	49.59	50.74	51.07	50.52
27	.....	.....	.....	58.86	60.62	63.18	58.79	.....	49.72	50.79	51.14	50.45
28	.....	.....	.....	58.74	60.66	63.24	59.43	.....	49.73	50.92	51.08	50.51
29	.....		.....	58.94	60.64	63.30	59.95	34.53	49.84	50.92	51.12	50.61
30	.....		.....	59.02	60.76	63.42	60.32	34.55	49.91	50.88	51.24	50.64
31	.....		.....		60.84		60.55	34.77		50.89		50.64

(D-17-14)18cab. Arizona State Highway Department. Dug observation water-table well in sand and gravel, diameter 36 to 12 inches, depth 124 feet. Highest water level 52.16 below lsd, Jan. 2, 1940; lowest 76.32 below lsd, July 17, 1955. Records available: 1939-55.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	71.78	70.80	70.57	73.31	75.14	74.75	75.50	74.79	72.12	70.03	69.85	71.26
2	71.76	70.73	70.58	73.44	75.12	74.83	75.49	74.66	72.10	69.97	69.72	71.27
3	71.75	70.75	70.60	73.60	75.04	74.89	75.49	74.63	72.09	69.85	69.97	71.41
4	71.75	70.73	70.60	73.72	74.96	74.89	75.62	74.56	72.14	69.80	70.07	71.46
5	71.65	70.67	70.64	73.85	74.94	74.88	75.71	74.45	72.13	69.72	70.13	71.50
6	71.58	70.69	70.64	73.99	74.88	74.88	75.80	74.38	72.08	69.68	70.19	71.55
7	71.60	70.63	70.60	74.12	74.80	74.87	75.89	74.29	71.96	69.55	70.27	71.51
8	71.62	70.57	70.61	74.26	74.75	74.86	75.97	74.20	71.87	69.51	70.38	71.43
9	71.55	.....	70.64	74.39	74.69	74.88	75.92	74.13	71.79	69.42	70.24	71.36
10	71.49	.....	70.74	74.48	74.63	74.91	75.92	74.04	71.80	69.35	70.17	71.38
11	71.49	.....	70.79	74.64	74.55	74.93	76.01	73.95	71.82	69.31	70.13	71.34
12	71.47	.....	70.84	74.78	74.48	74.93	76.08	73.88	71.82	69.12	70.18	71.31
13	71.36	.....	70.87	74.86	74.42	74.96	76.14	73.81	71.82	69.18	70.26	71.31
14	71.40	.....	70.93	74.96	74.39	75.00	76.16	73.71	71.67	69.08	70.33	71.33
15	71.36	.....	71.04	75.10	74.35	74.97	76.20	73.60	71.63	69.06	70.38	71.28
16	71.25	70.57	71.11	75.20	74.30	75.02	76.27	73.50	71.50	68.98	70.45	71.27
17	71.22	.....	71.28	75.26	74.26	75.01	76.32	73.41	71.40	68.98	70.50	71.32
18	71.20	.....	71.40	75.40	74.25	75.07	76.15	73.30	71.28	68.93	70.60	71.36
19	71.23	.....	71.51	75.44	74.20	75.22	76.04	73.17	71.17	68.88	70.59	71.35
20	71.16	.....	71.73	75.42	74.16	75.34	75.99	73.09	71.05	68.90	70.66	71.35
21	71.14	.....	71.94	75.38	74.14	75.44	75.83	72.98	70.97	69.00	70.68	71.32
22	71.09	.....	71.97	75.37	74.16	75.51	75.72	72.88	70.88	69.07	70.83	71.29
23	71.04	70.68	72.14	75.35	74.13	75.54	75.64	72.75	70.74	69.16	70.85	71.27
24	71.06	70.61	72.27	75.32	74.09	75.55	75.54	72.65	70.66	69.26	70.94	71.27
25	71.02	70.58	72.39	75.30	74.10	75.53	75.46	72.55	70.59	69.26	70.96	71.25
26	71.04	70.66	72.53	75.26	74.12	75.50	75.37	72.43	70.49	69.34	71.02	71.20
27	70.96	70.60	72.68	75.26	74.24	75.50	75.25	72.29	70.39	69.44	71.07	71.19
28	70.95	70.62	72.83	75.19	74.36	75.44	75.15	72.19	70.29	69.53	71.08	71.17
29	70.92		72.93	75.20	74.44	75.42	75.06	72.10	70.20	69.58	71.15	71.17
30	70.87		73.06	75.20	74.53	75.56	74.98	72.15	70.12	69.63	71.25	71.15
31	70.86		73.22		74.60		74.89	72.14		69.74		71.12

(D-19-13)3baa. Owner's No. W1. Farmers Investment Co. Dug and drilled irrigation water-table well in sand and gravel, diameter 96 to 10 inches, depth 246 feet, cased to 246, perforations 42-224. Highest water level 47.44 below lsd, Oct. 3, 1939; lowest 83.02 below lsd, Oct. 25, 1954. Records available: 1939-55. Jan. 4, 70.02; Jan. 24, 68.30; Feb. 23, 69.10; May 23, 75.88; Oct. 28, 67.74; Nov. 28, 67.08.

Pinal County

(D-2-10)8ccc. E. M. Little. Drilled unused water-table well in sand and gravel, diameter 8 inches, depth 437 feet. Highest water level 396.82 below lsd, Jan. 22, 1946; lowest 411.72 below lsd, Feb. 28, 1941. Records available: 1939-55. Feb. 16, 405.37; May 18, 405.70; Aug. 2, 406.25; Nov. 18, 406.51.

(D-3-9)20aaa. Elmer C. Von Glahn. Drilled irrigation water-table well in sand and gravel, diameter 20 inches, depth 600 feet, perforations 285-585. Highest water level 222.70 below lsd, Feb. 17, 1949; lowest 268.30 below lsd, Nov. 12, 1952. Records available: 1942, 1948-52. Measurement discontinued.

(D-3-9)33bbd. John Payne. Drilled unused irrigation water-table well in sand and gravel, diameter 20 inches, depth 746 feet, perforations 257-740. Highest water level 234.24 below lsd, Feb. 24, 1953; lowest 281.68 below lsd, Aug. 2, 1955. Records available: 1953-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 24, 1953	234.24	May 11, 1954	266.68	Feb. 16, 1955	266.66	Aug. 2,1955	281.68
Oct. 20	260.95	Oct. 17	270.59	May 18	277.42	Nov. 18	281.22

(D-4-8)2ccc. Arizona Ranches, Inc. Drilled unused water-table well in sand and gravel, diameter 20 inches, depth 237 feet. Land-surface datum is 1,530.5 feet above msl. Highest water level 157.96 below lsd, June 12, 1941; lowest 230.48 below lsd, Nov. 18, 1955. Records available: 1941-55. Feb. 16, 226.02; May 18, 227.46; Aug. 2, 228.68; Nov. 18, 230.48.

(D-4-11)7cca. Bureau of Indian Affairs well 7. Drilled unused water-table well in sand and gravel, diameter 20 inches, reported depth 162 feet, cased to 80. Land-surface datum is 1,560.4 feet above msl. Highest water level 15.30 below lsd, June 29, 1943; lowest 44.14 below lsd, Nov. 24, 1948. Records available: 1942-55. Jan. 26, 27.72; Mar. 31, 28.52; June 27, 33.22; Oct. 12, 28.44.

(D-5-3)25add. Decker and Miller. Drilled irrigation water-table well in sand and gravel, diameter 20 inches, depth 550 feet. Highest water level 119.45 below lsd, Feb. 2, 1951; lowest 192.61 below lsd, Oct. 11, 1955. Records available: 1951-52, 1954-55. Feb. 2, 1951, 119.45; Feb. 7, 1952, 127.10; Nov. 17, 1954, 184.10; Jan. 17, 1955, 165.62; Oct. 11, 192.61.

(D-5-9)29ada. Bureau of Indian Affairs well 76. Drilled unused water-table well in sand and gravel, diameter 16 inches, reported depth 616 feet, perforations 134-440. Land-surface datum is 1,520.0 feet above msl. Highest water level 114.24 below lsd, Feb. 16, 1944; lowest 190.12 below lsd, June 27, 1955. Records available: 1942-55. Jan. 26, 161.72; Mar. 31, 187.70; June 27, 190.12; Oct. 12, 173.54.

(D-6-6)25ddd. H. L. Early. Drilled irrigation water-table well in sand and gravel, diameter 16 inches, depth 171 feet. Land-surface datum is 1,438.3 feet above msl. Highest water level 39.00 below lsd, Apr. 18, 1940; lowest 123.00 below lsd, June 29, 1955. Records available: 1940-52, 1954-55. Jan. 17, 104.32; Mar. 30, 111.55; June 29, 123.00; Oct. 12, 108.17.

(D-7-7)11cdd. E. C. Grasty. Drilled irrigation water-table well in sand and gravel, diameter 20 inches, depth 460 feet, perforations 100-430. Land-surface datum is 1,498.2 feet above msl. Highest water level 85.93 below lsd, Mar. 11, 1942; lowest 194.26 below lsd, Oct. 12, 1955. Records available: 1942-55. Oct. 12, 194.26.

(D-8-6)30dad. Chiu Chuischu Ranch. Drilled irrigation water-table well in sand and gravel, diameter 20 inches, depth 296 feet, perforations 69-200. Highest water level 108.59 below lsd, July 28, 1948; lowest 172.39 below lsd, Oct. 14, 1955. Records available: 1948-52, 1954-55. Jan. 26, 145.81; Mar. 30, 156.60; June 28, 161.60; Oct. 14, 172.39.

(D-8-7)25ddd. R. E. Hamilton. Drilled irrigation water-table well in sand and gravel, diameter 20 inches, depth 997 feet. Land-surface datum is 1,614.8 feet above msl. Highest water level 124.47 below lsd, Mar. 24, 1941; lowest 281.10 below lsd, Aug. 4, 1954. Records available: 1940-52, 1954-55. Jan. 17, 264.95.

(D-10-9)36ddd1. King Investment Co. Drilled domestic water-table well in sand and gravel, depth 230 feet, diameter 8 inches. Highest water level 134.40 below lsd, Oct. 12, 1939; lowest 166.77 below lsd, Jan. 5, 1955. Records available: 1939, 1941-44, 1949-55. Jan. 5, 166.77; Mar. 24, 173.73, nearby well being pumped; July 7, 179.00, nearby well being pumped.

Santa Cruz County

(D-22-13)35dcd. T. T. Pendleton. Drilled irrigation water-table well in sand and gravel, diameter 20 inches, depth 88 feet. Highest water level 11.06 below lsd, Oct. 27, 1955; lowest 53.71 below lsd, Feb. 9, 1954. Records available: 1939-55. Jan. 3, 29.01; Apr. 25, 33.43; July 8, 38.30; Oct. 27, 11.06.

(D-23-14)27baa. Ramon Michelena. Dug unused water-table well in sand and gravel, diameter 5 feet, depth 36 feet, concrete casing to 9, open hole 9-36. Highest water level 15.95 below lsd, Mar. 25, 1955; lowest 21.80 below lsd, July 28, 1948. Records available: 1939-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	17.48	Feb. 23	17.15	May 23	16.87	July 8	18.55
24	19.12	Mar. 25	15.95	June 22	18.07	Oct. 27	16.72

Yavapai County

(B-11-5)25dab. Mr. Towne. Drilled unused water-table well in sand and gravel, diameter 8 inches, depth 212 feet. Highest water level 23.60 below lsd, July 16, 1952; lowest 40.80 below lsd, Aug. 4, 1951. Records available: 1946, 1948-49, 1951-55. June 1, 33.48; Nov. 7, 31.56.

(B-13-6)9dd. J. W. Ropeter. Dug irrigation water-table well in sand and gravel, diameter 6 feet, depth 22 feet. Highest water level 13.98 below lsd, Jan. 17, 1945; lowest 18.08 below lsd, June 1, 1955. Records available: 1945-49, 1951-55. June 1, 18.08; Nov. 7, 15.34.

(B-14-4)33ab. C. C. McLain. Drilled unused water-table well in sand and gravel, diameter 16 inches, depth 73 feet. Well deepened to 85 feet. Highest water level 11.03 below lsd, Apr. 14, 1945; lowest 18.43 below lsd, June 1, 1955. Records available: 1944-49, 1951-55. June 1, 18.43; Nov. 8, 18.17.

Yuma County

(B-5-16)10ddd. Crowder Cattle Co. Drilled unused water-table well in sand and gravel, diameter 16 inches, depth 164 feet. Highest water level 112.60 below lsd, Feb. 21, 1946; lowest 113.70 below lsd, Feb. 8, 1955. Records available: 1946, 1948-55. Feb. 8, 113.70.

(C-8-16)28bda. Bob Anderson. Drilled domestic well in sand and gravel, diameter 16 inches, depth 419 feet. Highest water level 82.62 below lsd, Dec. 19, 1945; lowest 86.98 below lsd, Mar. 3, 1954. Records available: 1945-47, 1949-55. Jan. 25, 85.18.

(C-9-22)17ddd. Archie J. Griffin. Drilled unused water-table well in sand and gravel, diameter 16 inches, depth 195 feet. Land-surface datum is 210.5 feet above msl. Highest water level 70.42 below lsd, Jan. 27, 1955; lowest 97.63 below lsd, Sept. 5, 1946. Records available: 1945-55. Jan. 27, 70.42.

CALIFORNIA

By L. C. Dutcher, K. S. Muir, and B. E. Lofgren

Scope of Water-Level Program

This report shows the progress made in 1955 in the measurement of water levels in California by the Geological Survey in cooperation or collaboration with several other Federal, State, and local agencies. Also, it reviews the general scope of other water-level programs in which the Geological Survey did not participate.

The following table lists the number of observation wells in 8 of the 58 counties. San Joaquin County is in the central part of the State; the others are in the southern part, south of the Tehachapi Mountains. Water-level measurements are included in this report for all the principal ground-water areas in San Diego and Santa Barbara Counties and for scattered basins and areas in the other counties.

Distribution of observation wells in California in 1955
(for which water-level records are given in this report)

County	Number of observation wells	Number of wells with recording gages
Kern County:		
Antelope Valley, part	1	0
Los Angeles County:		
Antelope Valley, part	26	0
San Gabriel River basin	1	1
Coastal plain	6	0
Orange County:		
Coastal plain	18	0
Riverside County:		
San Jacinto Valley	3	0
San Bernardino County:		
Mojave River basin	51	0
Santa Ana River basin	11	0
San Diego County:		
San Luis Rey River basin	10	0
San Dieguito River basin	6	0
San Diego River basin	9	0
Sweetwater River basin	2	0
Otay River basin	2	0
Tia Juana River basin	4	0
San Joaquin County:		
Mokelumne River basin	24	0
Santa Barbara County:		
Carpinteria Basin	18	0
Goleta Basin	26	3
Santa Ynez Valley	77	5
San Antonio Valley	4	0
Santa Maria Valley	48	0
Cuyama Valley	15	0
	362	9

In addition to the program in which the Geological Survey participated, systematic measurements of water levels were made in widely scattered and extensive areas by numerous agencies. In the southern part of the State, the California Department of Public Works, Division of Water Resources continued to assemble water-level records from various agencies for the South Coastal Basin and for Antelope and San Jacinto Valleys. Records for 1951, 1952, and 1953 have been published in the Division's Bulletins 39-T, 39-U, and 39-V, respectively. The California Division of Water Resources also continued to assemble records from various agencies for the North Coastal, San Francisco Bay, Central Coastal, Central Valley, Lahontan, and Colorado Desert regions.

Records for the year in these areas have been published in the Division's annual bulletin, "Water conditions in California, April 1, 1955." The programs of the various agencies are listed in the following tables.

Programs of water-level measurements by public agencies in the South Coastal Basin in 1955

Subarea and agency	Wells measured and frequency of measurements			
	Semi-annually	Quarterly	Monthly	More frequently
Coastal plain, Los Angeles County:				
San Gabriel Valley Protective Association			65	
City of Long Beach			24	45
Los Angeles County Flood Control District	a598		b162	
California Division of Water Resources (West Coastal Basin)	175			
Coastal plain, Orange County:				
Orange County Flood Control District		47	376	45
San Fernando Valley:				
Los Angeles Division of Water and Power	121		75	16
Los Angeles County Flood Control District	66		c50	
Soil Conservation Service (Western part of valley)			27	
Raymond Basin:				
California Division of Water Resources	110			
San Gabriel Valley:				
Los Angeles County Flood Control District	d199		e116	
San Gabriel Valley Protective Association			75	
Upper Santa Ana Valley:				
Chino Basin				
San Bernardino County Flood Control District	239		39	79
San Bernardino Valley				
San Bernardino Valley Water Conservation District		f130		
San Bernardino Water Department		107	36	
San Jacinto Valley:				
Riverside Flood Control and Conservation District	g69		24	
Elsinore area, Riverside County:				
California Division of Water Resources	g90		10	
San Luis Rey Valley, San Diego County:				
California Division of Water Resources			19	

a Includes 98 shallow test holes.
b Includes 67 shallow test holes.
c Includes 8 shallow test holes.
d Includes 22 shallow test holes.
e Includes 13 shallow test holes.
f Includes 15 shallow test holes.
g Annual measurement.

Programs of water-level measurements by public agencies in the southern California desert areas in 1955

Subarea and agency	Wells measured and frequency of measurements			
	Annually	Semi-annually	Quarterly	Monthly
Tehachapi Valley, Kern County:				
Soil Conservation Service				45
Mojave River basin, San Bernardino County:				
San Bernardino County Flood Control District		153		29
Morongo Valley, San Bernardino County:				
San Bernardino County Flood Control District		10		
Yucca-Twentynine Palms area, San Bernardino County:				
San Bernardino County Flood Control District		99		
Lucerne Valley, San Bernardino County:				
San Bernardino County Flood Control District		23		
U. S. Geological Survey		23		
Borrego Valley, San Diego County:				
U. S. Geological Survey		14		

Programs of water-level measurements by public agencies in the southern California desert areas in 1955--Continued

Subarea and agency	Wells measured and frequency of measurements			
	Annually	Semi-annually	Quarterly	Monthly
Coachella Valley, Riverside County:				
Coachella Valley County Water District			56	
Ocotillo Valley, San Diego County:				
U. S. Geological Survey		3		
Coyote Valley, San Bernardino County:				
U. S. Geological Survey		5		
California Division of Water Resources		5		
Cronise Valleys, San Bernardino County:				
U. S. Geological Survey		4		
Soda Lake Valley, San Bernardino County:				
U. S. Geological Survey		5		
California Division of Water Resources		1		
Silver Lake Valley, San Bernardino County:				
U. S. Geological Survey		1		
Superior Valley, San Bernardino County:				
U. S. Geological Survey		4		
Cuddeback Valley, San Bernardino County:				
U. S. Geological Survey		4		
Indian Wells Valley, Kern County:				
U. S. Geological Survey				2
Harper Valley, San Bernardino County:				
U. S. Geological Survey		11		
Fremont Valley, Kern County:				
Chaffee Basin				
U. S. Geological Survey		3		
Koehn Lake area				
U. S. Geological Survey		12		
Antelope Valley, Los Angeles and Kern Counties:				
Lancaster, Neenach, Buttes, and Rock Creek Basins				
California Division of Water Resources	20	85		
Los Angeles County Flood Control District		32		
Willow Springs area, Kern County:				
U. S. Geological Survey		5		
North Muroc Basin, Kern County:				
U. S. Geological Survey		3		
Johnson Valley, San Bernardino County:				
U. S. Geological Survey		2		
Pahrump Valley, Inyo County:				
California Division of Water Resources		9		
Upper Kingston Valley, San Bernardino County:				
California Division of Water Resources		3		
Ivanpah Valley, San Bernardino County:				
California Division of Water Resources		7		
Mesquite Valley, San Bernardino County:				
California Division of Water Resources		15		
Kelso Valley, San Bernardino County:				
California Division of Water Resources		1		
Lanfair Valley, San Bernardino County:				
California Division of Water Resources		8		
Fenner Valley, San Bernardino County:				
California Division of Water Resources		5		
Vidal Valley, San Bernardino and Riverside Counties:				
California Division of Water Resources		1		
Chuckwalla Valley, Riverside County:				
California Division of Water Resources		4		
Bristol Valley, San Bernardino County:				
California Division of Water Resources		4		
Jacumba Valley, San Diego County:				
California Division of Water Resources		7		
Middle Amargosa Basin, Kern County:				
California Division of Water Resources		1		

Precipitation

The following is quoted from the annual report of climatological data issued by the U. S. Weather Bureau:

> By far the outstanding 1955 weather occurrence in California was the series of heavy flood-producing rains of December in northern and central areas. Well over half the 1955 yearly precipitation fell during December at most stations in the northern half of the State. It was by quite a margin the wettest December on record over most of northern California, and all major streams flooded at record or near-record levels. The year otherwise was cool and dry, and there was persistent dryness in Southeast Desert Basins and South Coast Drainage. The first seven months averaged very cool for the season almost everywhere, then the last five months were mostly quite a bit warmer than usual. Aside from December's serious rains and floods, there were only a few destructive storms during the year. Agriculture as a whole did quite well in spite of some local early season freeze losses, dry ranges and slow dry land crops, and local storm damage.
>
> The State 1955 precipitation average was 22.74 inches, 0.38 inch above normal, but this generalization obscures some salient features, by station, season, and division. It was drier than the usual year in North Coast Drainage and the two divisions, while the other four divisions came out of the year with sizeable excesses (headed by Northeast Interior Basins +7.34 inches from a 1955 25.82-inch average total). The largest single station deficiencies were in the South Coast Drainage in the general area east and northeast of Los Angeles. The total of 24.94 inches at Hoegees Camp Ivy was 16.56 inches short of normal, and Camp Baldy FC 85 F was 16.08 inches below normal. On the wet side was Blue Canyon, where the yearly total of 84.17 inches was 30.66 inches more than the long-term mean. The highest station 1955 total was 97.82 inches at Strawberry Valley. Both by totals and by percentages of normal the driest stations were in the Southeast Desert Basins. Cow Creek had the smallest California total for 1955, 0.53 inch, 1.64 inches below and 25 percent of normal. However, the lowest percentage of normal was 18 at Inyokern Armitage (total 0.76 inch, 3.37 inches below normal). Snowfall in mountain areas was fairly heavy, especially late in the year. Aided by snowfall near 150 inches in December, Soda Springs and Twin Lakes had totals for 1955 of 435.0 and 502.0 inches, respectively.
>
> The phenomenal rains (snows at higher levels) that covered most of northern and central California the last half of December not only produced the wettest State December average of record by quite a margin, but accomplished this in spite of a very dry December in the two southern divisions. Several December totals at wetter points exceeded 40 inches, and Strawberry Valley in Yuba County had a total of 54.08 inches for the month, well over half the annual total. 17.00 inches of that December total fell during the December 22-23 period when flooding became most severe. The Blue Canyon December total of 45.12 inches was a staggering 36.37 inches above normal, but departures greater than +30 inches were noted at several places. By any standard of comparison these late December rains in northern California were unprecedented, not only for several points which had their wettest Decembers of record, but also from the standpoint of the excessive flooding, which occurred on nearly all streams in the northern half of the State.

Where there is a marked seasonal range in precipitation, such as prevails throughout California, ground-water storage is generally greatest and natural ground-water levels are highest during or somewhat after the height of the wet season. During the following dry season when the unconfined ground-water storage is depleted by natural discharge, water levels decline until soil-moisture deficiencies have been replenished by the first rains of the next wet season. Thus, for the climatic conditions of California, the ground-water level commonly is less closely related to precipitation in the calendar year than in a "water year" which spans one wet season and the following dry season. For this treatment of runoff, the water year is considered as ending September 30, the most practicable average date for near-maximum depletion of unconfined ground-water storage and near-minimum runoff.

The following table shows the precipitation at 15 representative stations during the water year ending September 30, 1955, expressed both in inches and in percentage of the average for the 60 years ending September 30, 1950. The 15-station average was 83 percent of the 60-year average; the median of the group was 82 percent of the 60-year average. The regional distribution of rainfall is illustrated by this table. For the central and southern coast ranges, the rainfall was deficient at all stations, ranging from a low of 68 percent at Cuyamaca to a high of 95 percent at Santa Barbara. For the other stations reported, the rainfall was above average at 3 stations and below average at 5 stations.

Precipitation in the year ending September 30, 1955, and percent of 60-year average at 15 representative stations

Province	Station and county	Precipitation, 1954-55	
		Inches	Percent of 60-year average [a]
Northern Coast Ranges	Eureka, Humboldt	32.68	85
Coast Ranges of central and southern California	San Francisco, San Francisco	15.55	77
	San Luis Obispo, San Luis Obispo	17.31	82
	Santa Barbara, Santa Barbara	16.91	95
	Los Angeles, Los Angeles	11.99	83
	San Bernardino, San Bernardino	13.28	80
	San Diego, San Diego	7.32	72
	Cuyamaca, San Diego	26.01	68
Great Valley (California Trough)	Red Bluff, Tehama	19.34	84
	Stockton, San Joaquin	14.27	103
	Fresno, Fresno	10.28	109
Sierra Nevada	Nevada City, Nevada	39.69	80
	West Point, Calaveras	27.59	70
Great Basin (Southwestern Bolson province)	Indio, Riverside	1.85	55
	Needles, San Bernardino	4.81	106

[a] Average for years ending Sept. 30, 1891 to 1950.

Interpretation of Water-Level Fluctuations

Coastal plain in Los Angeles and Orange Counties.--Water-level measurements in 20 observation wells in Los Angeles and Orange Counties, in addition to those made by the Geological Survey, were furnished by various local agencies. Extensive programs for periodic water-level measurements were continued in Orange County, chiefly by the Orange County Flood Control District; in Los Angeles County, chiefly by the Los Angeles County Flood Control District, the San Gabriel Valley Protective Association, the city of Long Beach, and the California Division of Water Resources.

Records are included for 2 wells in the main coastal basin in Los Angeles County, for 14 wells in the main coastal basin in Orange County, for 4 wells in the west (coastal) basin in Los Angeles County, and for 4 wells in the West Basin (southwest of the Newport-Inglewood uplift) in Orange County. Four of the wells in Orange County are "permanent" observation wells, which were measured by the Geological Survey twice during the year.

San Gabriel River basin.--A recording gage was in operation throughout 1955 in well S/10-18, the index well for the upper San Gabriel Valley.

Mojave River basin.--The observation-well program in the Mojave River basin was continued by the San Bernardino County Flood Control District. The tabulations of water-level measurements in the Mojave River basin are separated into three subareas. Of the 56 wells reported for 1954, 51 are continued, as follows: 15 in the upper basin, 15 in the middle basin, and 21 in the lower basin. Wells 5/4W-11P2, 6/3W-28R1, and 8/4E-7E1 were not measured in 1955; wells 9/1W-10M1 and 9/3W-28A1 were discontinued.

San Diego County.--During 1955 the observation-well program in San Diego County was continued by the Geological Survey. Many wells were measured quarterly, a few more frequently. The tabulations of water-level measurements in the coastal valleys of San Diego County are separated into six subareas. All the 32 wells reported for 1954, except well 14/3W-7C1 in the San Dieguito River basin, are continued for 1955. In addition, the records for wells 15/1W-13R4 and 16/3W-23H1 in San Diego Valley are reported for the first time.

Antelope Valley.--The observation-well program in Antelope Valley was continued by the Los Angeles County Flood Control District and the California Division of Water Resources. Many wells are measured semiannually, a few monthly. In addition to the wells listed in this report, measurements in 28 candidate wells in the central and northern parts of the valley were continued. Records are included for well 9/15-25D1 in Kern County and for 26 wells in Los Angeles County.

San Jacinto Valley.--Measurements in the San Jacinto Valley by the Riverside County Flood Control and Conservation District are tabulated for three wells. These are the same as those included in the 1954 report.

San Bernardino area.--The observation-well program in the ground-water basins in the upper Santa Ana River valley was continued by several public and private agencies. Principal among these are the city of San Bernardino, the San Bernardino Valley Water Conservation District, and the San Bernardino County Flood Control District. Records are included for 7 wells in Bunker Hill Basin, 2 wells in Rialto-Colton Basin, and 1 well each in Chino and in the upper Lytle Basins. All the 12 wells reported for 1954, except well 1S/4-21A1, appear in this report.

Santa Barbara County.--Investigation of ground-water resources was continued during 1955 in cooperation with the Santa Barbara County Water Agency. Water-level measurements were made in 188 wells, 8 of which were equipped with recording gages. Figures 46-52 show the location of the observation wells in Santa Barbara County. Water-Supply Paper 1068 contains tabulated descriptions of 2,246 wells in the various ground-water basins in 1942 and many water-level measurements made before 1942 by the city of Santa Barbara, Santa Maria Valley Water Conservation District, San Joaquin Power Division of the Pacific Gas and Electric Co., Union Sugar Co., Union Oil Co., and other organizations and individuals. During 1955, interpretive reports were in preparation on a reappraisal of the ground-water resources of the Santa Ynez River valley and the Carpinteria and Goleta Basins.

In addition to the water-level measurements made by the Geological Survey in 1955, those made by the city of Santa Maria and the Santa Maria Valley Water Conservation District are included in this report.

Replenishment of the ground-water reservoirs is dependent on winter precipitation. Between 1945 and 1951 when precipitation was below normal, replenishment of most of the basins was insufficient to meet requirements and ground-water levels were drawn down substantially. The above-average rainfall of the winter of 1951-52 caused a temporary cessation of the downward trend.

The south-coast communities united to solve their water problem by building Cachuma Dam and a distribution system for the conservation of floodwaters of the Santa Ynez River. The dam was completed in 1953, but work is still in progress in the transmountain tunnel and parts of the coastal distribution system. The hot water found in the drilling of the transmountain tunnel was distributed to the south-coast communities in 1955 to supplement their water supplies. The water users of the Santa Maria Valley have approved a plan for the construction of Vaquero Dam on the Cuyama River. Regulated releases of floodwaters impounded by this reservoir will be used to recharge the ground-water reservoir that lies beneath the Santa Maria plain.

Figures 53 and 54 show precipitation at 3 stations, water-level fluctuations in 10 wells, and a curve of the accumulated departure from normal precipitation at Santa Maria. These graphs illustrate the relation of ground-water level to precipitation. During "wet" years water levels rise, indicating ground-water replenishment. The decline of water levels generally coincides with periods of below-normal rainfall, indicating a depletion of ground water in storage. Beginning about 1945, water levels throughout Santa Barbara County declined steadily as a result of increased water use and below-average precipitation. Ground-water depletion during the years 1945-51 was more serious in some basins than in others, according to the magnitude of the unbalance between withdrawal and replenishment. In the winter of 1951-52, above-average precipitation wholly or nearly replenished those basins in which overdraft was small; in the basins of large overdraft, only a small part of the depleted storage was replenished. As a result of below-average precipitation and streamflow in 1953, 1954, and 1955, water levels, in general, resumed the downward trend that prevailed during the period 1945-51. The following discussion of water-level fluctuations is by ground-water basins, because each basin is a separate hydrologic unit.

Water levels in the Carpinteria Basin declined in 1955. The average decline in 18 wells was 2.5 feet from the spring of 1954 to the spring of 1955, but a small recovery, averaging 0.2 foot, was observed in the area of confined water. Spring-high water levels of 1955 approximated those of 1949 but were still about 34 feet below the highest stages of 1942. Elsewhere in the basin, principally in the area of recharge along the base of the foothills, water levels declined an average of about 4.7 feet. The hydrograph of well 4/25-27Q2 (fig. 53) is representative of water-level fluctuations in the area of confined water. During 1955 the collection of water samples to be tested for chloride contamination was continued. Samples from 11 wells showed an average chloride content of 73 ppm (parts per million), a decrease of 37 ppm from the average for 1954. The highest chloride content was still at the western end of the basin, where the average concentration was 131 ppm.

Water levels in the Goleta Basin recovered in 1955, even though precipitation was below normal. In the confined-water area that underlies nearly all the central alluvial plain, the average spring-high stage was about 3.2 feet higher than that of 1954. Within the recharge area along the base of the foothills, recoveries were somewhat less than in the confined-water area. The 1955 spring-high stages averaged 0.8 foot above those for 1954. Although water levels in the Goleta Basin did recover in 1955, they were still about 18 feet lower than the spring-high average for 1942. The hydrographs of wells 4/28-17H11 and 4/28-9A3 (fig. 53) show fluctuations in the

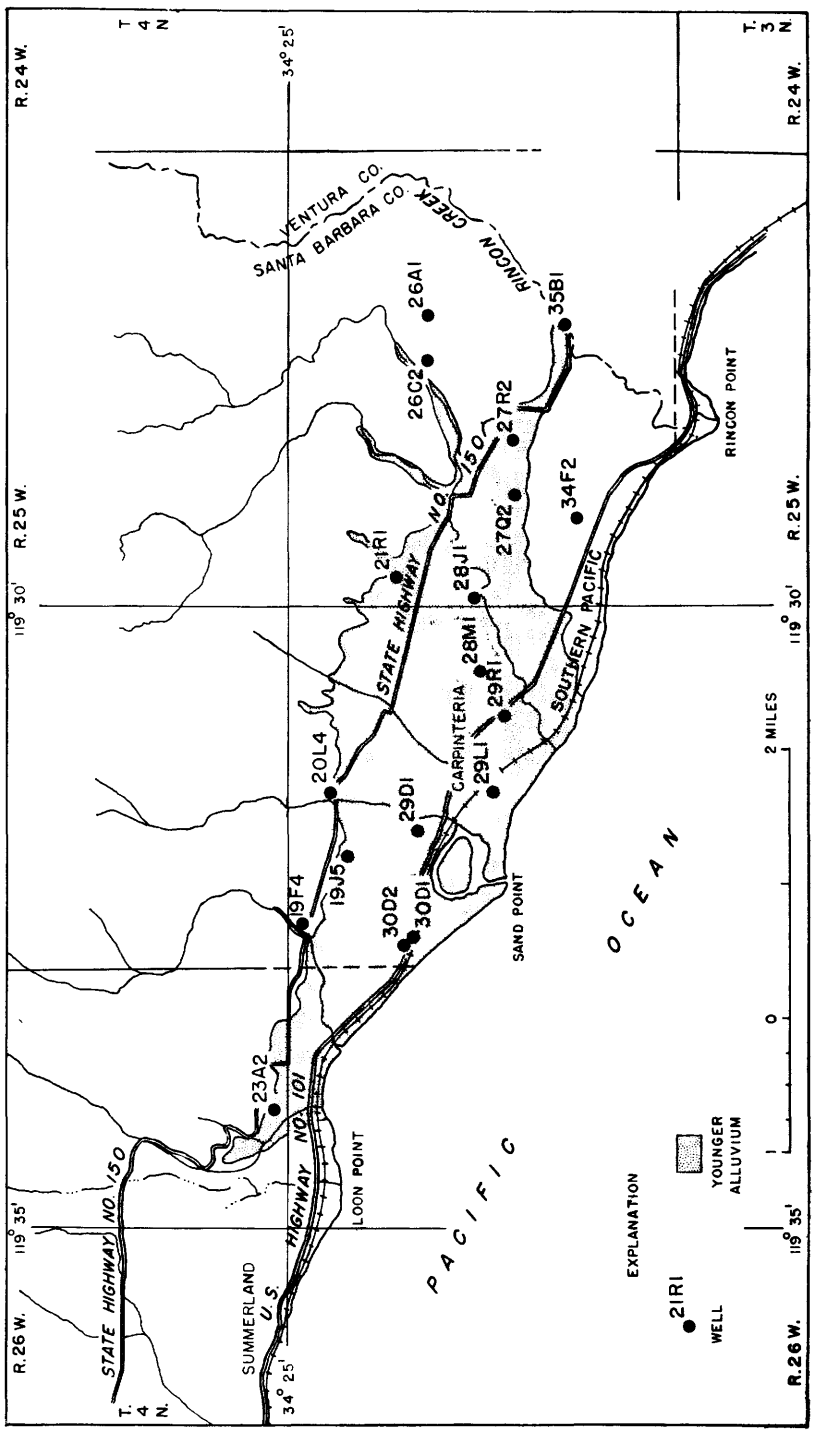


Figure 46.--Location of observation wells in Carpinteria Basin, Santa Barbara County, Calif., 1955.

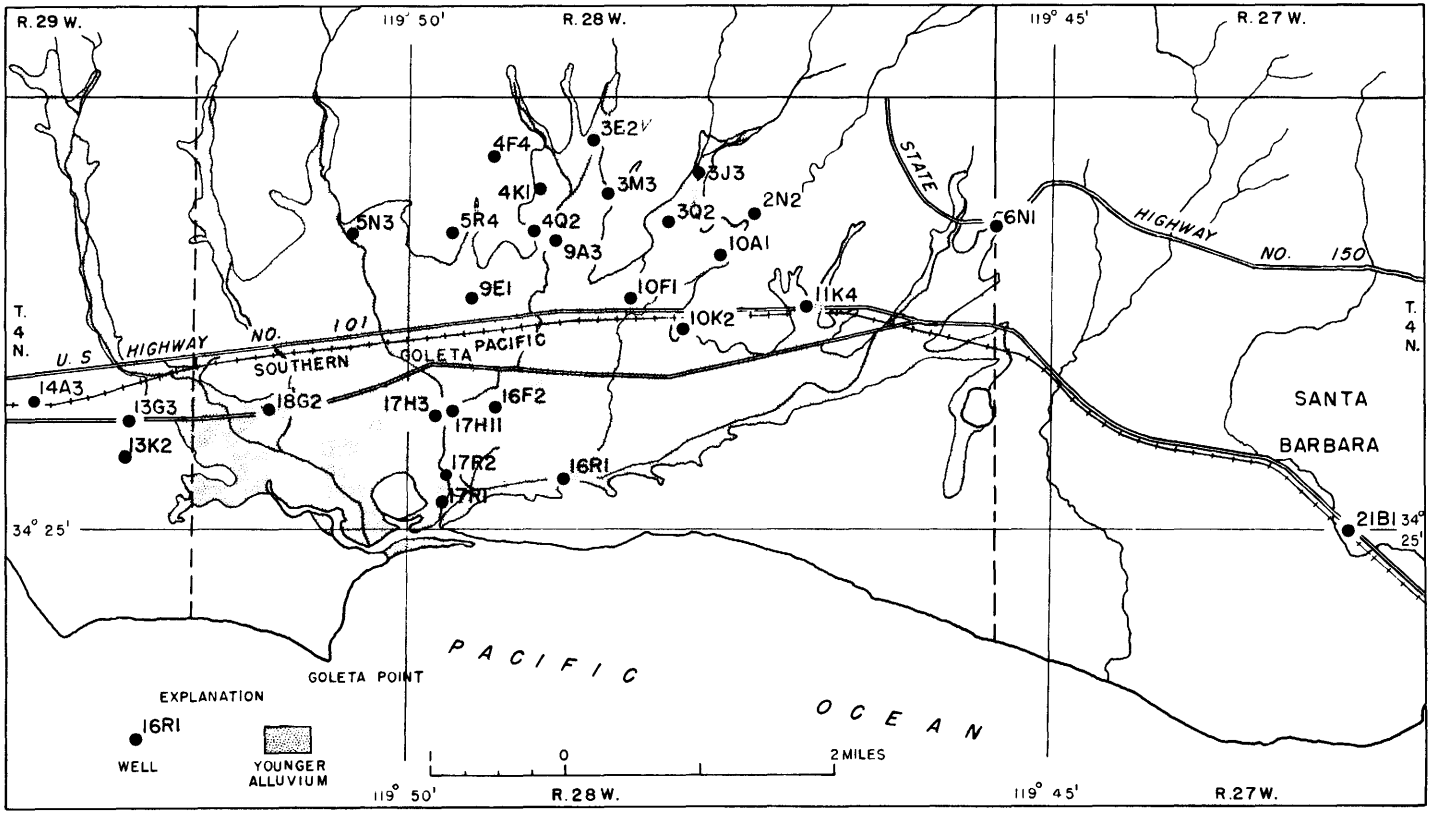


Figure 47.--Location of observation wells in Goleta Basin, Santa Barbara County, Calif., 1955.

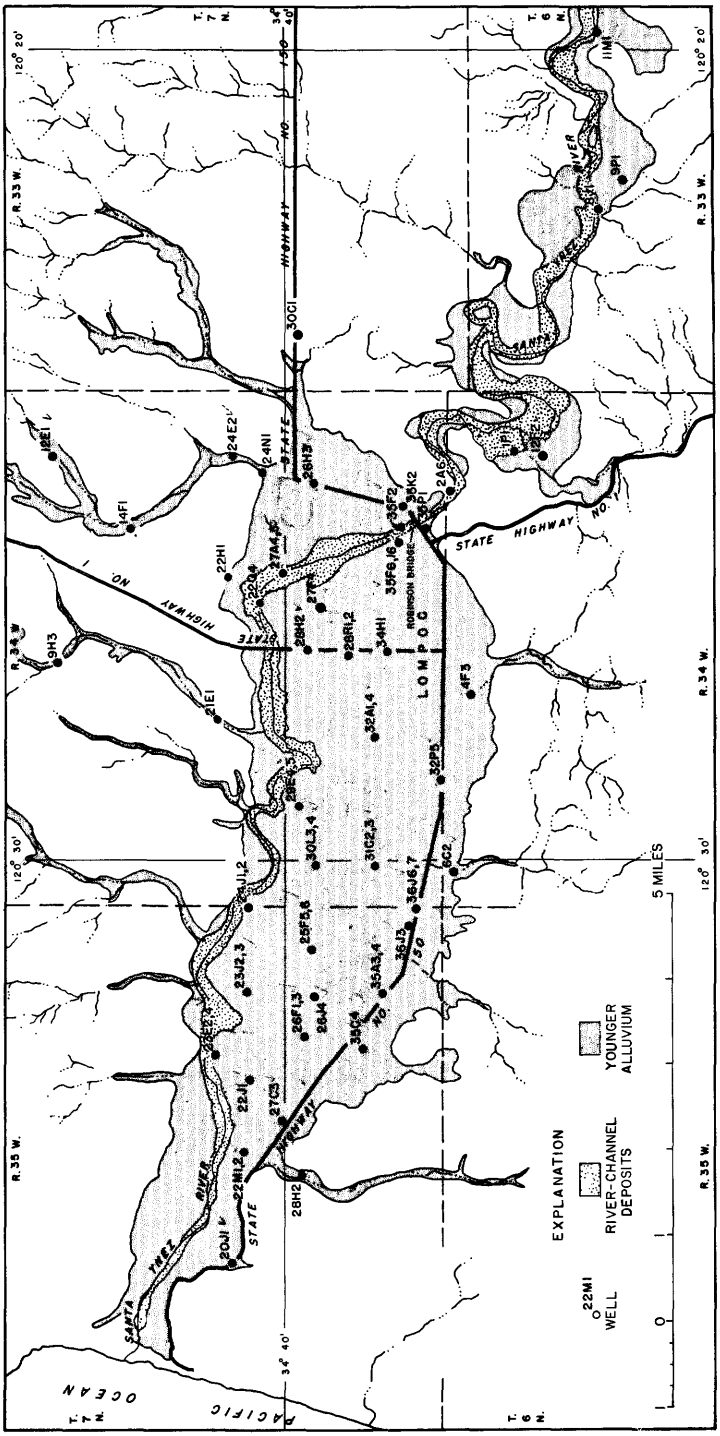


Figure 48.--Location of observation wells in Lompoc plain, Santa Barbara County, Calif., 1955.

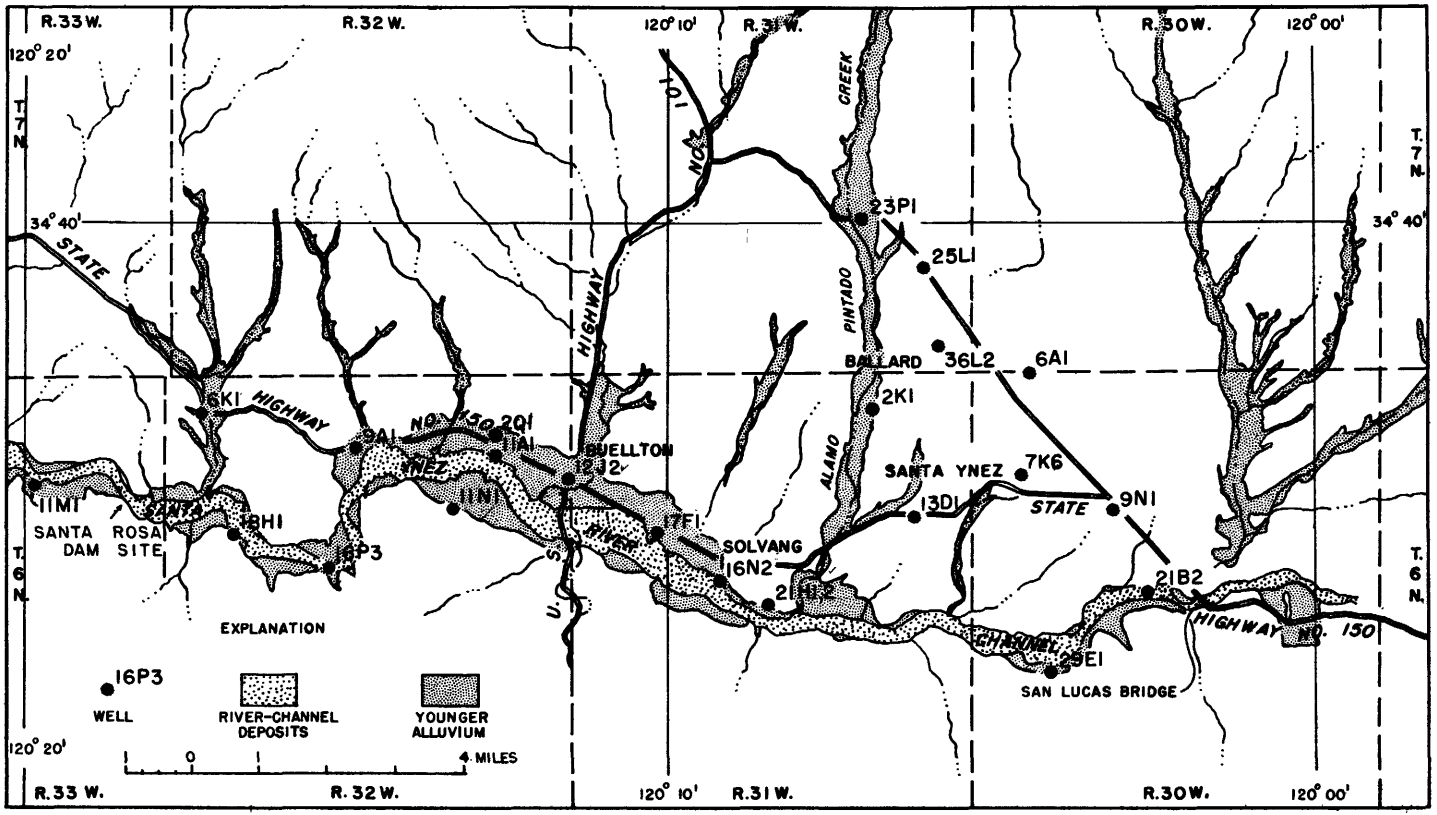


Figure 49.--Location of observation wells in Santa Ynez River valley, Santa Barbara County, Calif., 1955.

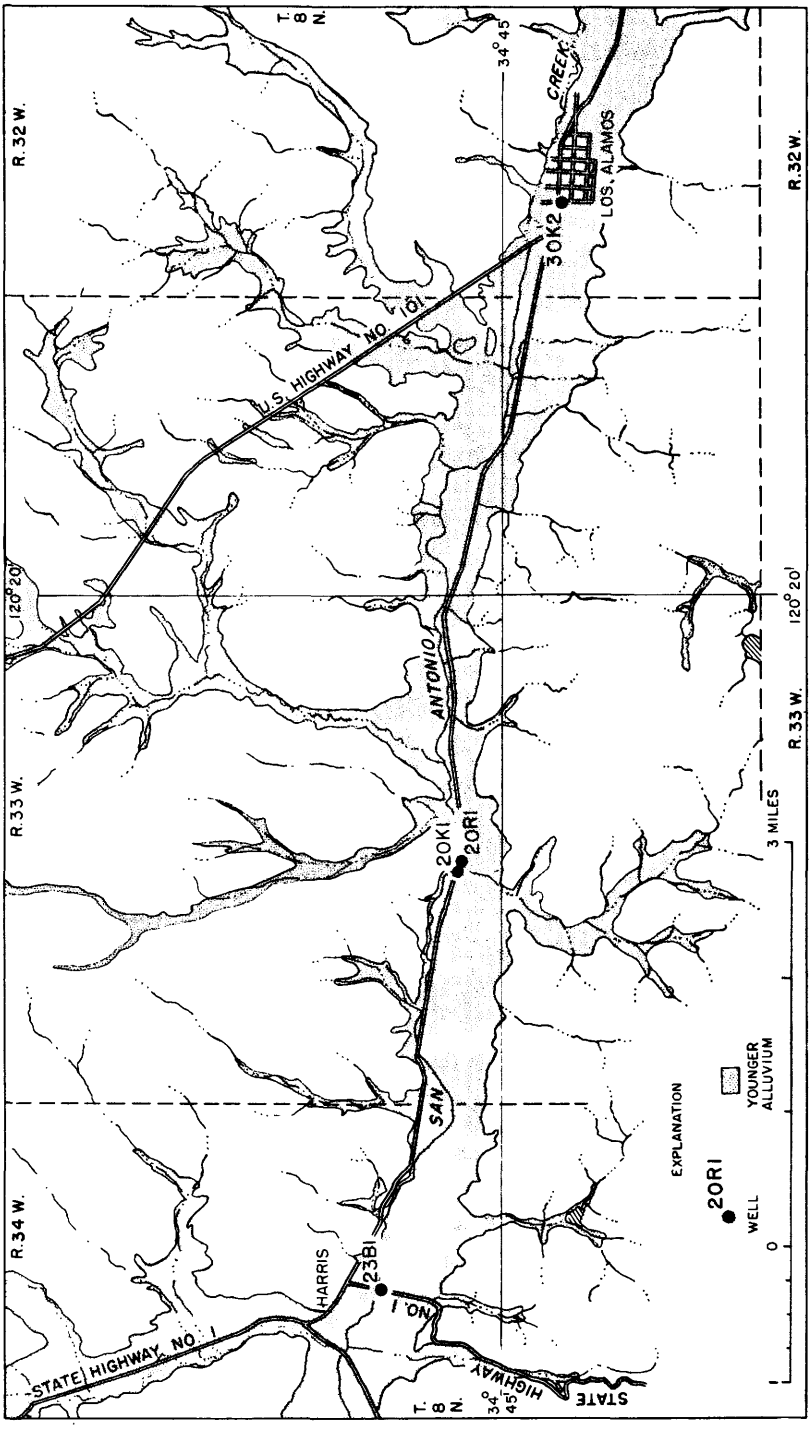


Figure 50.--Location of observation wells in San Antonio Valley, Santa Barbara County, Calif., 1955.

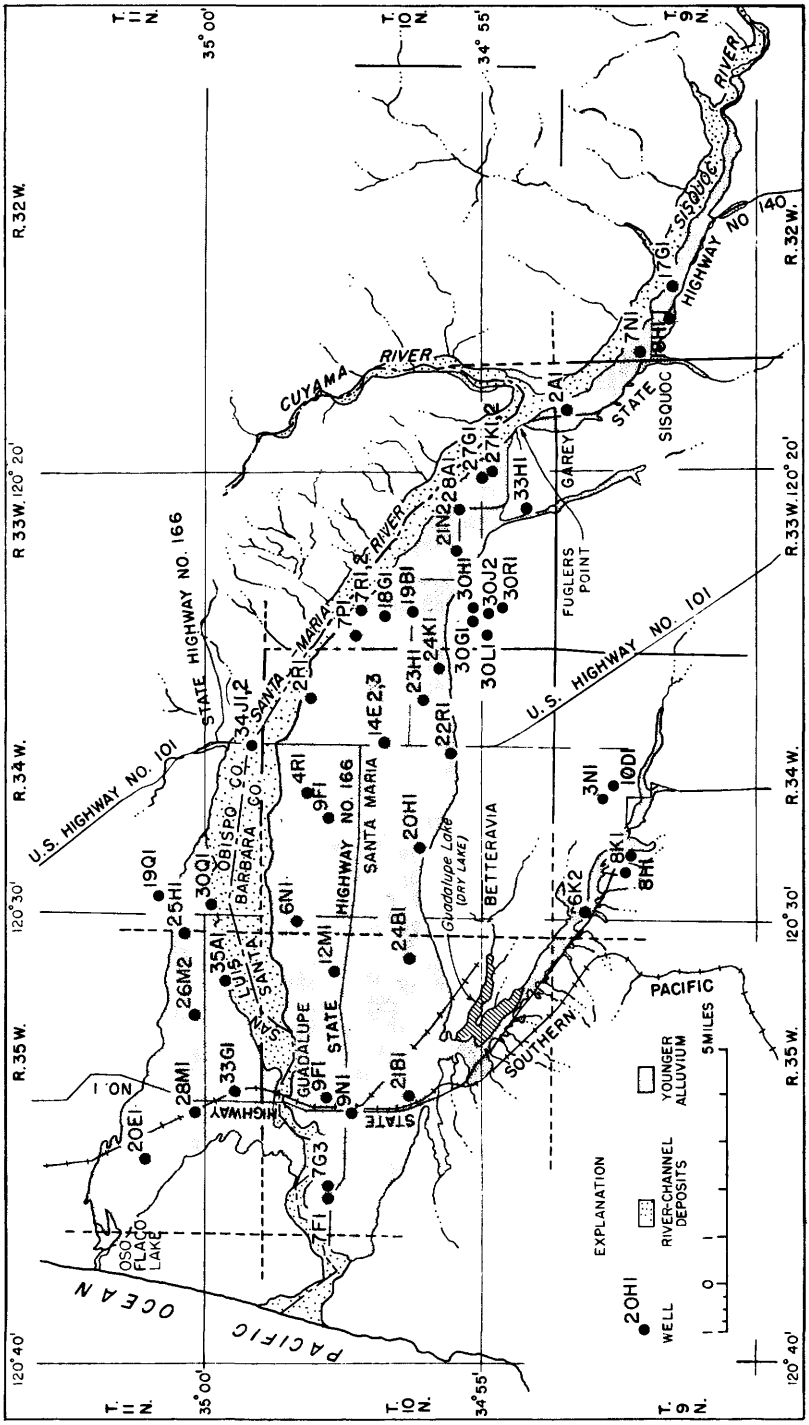


Figure 51.--Location of observation wells in Santa Maria Valley, Santa Barbara County, Calif., 1955.

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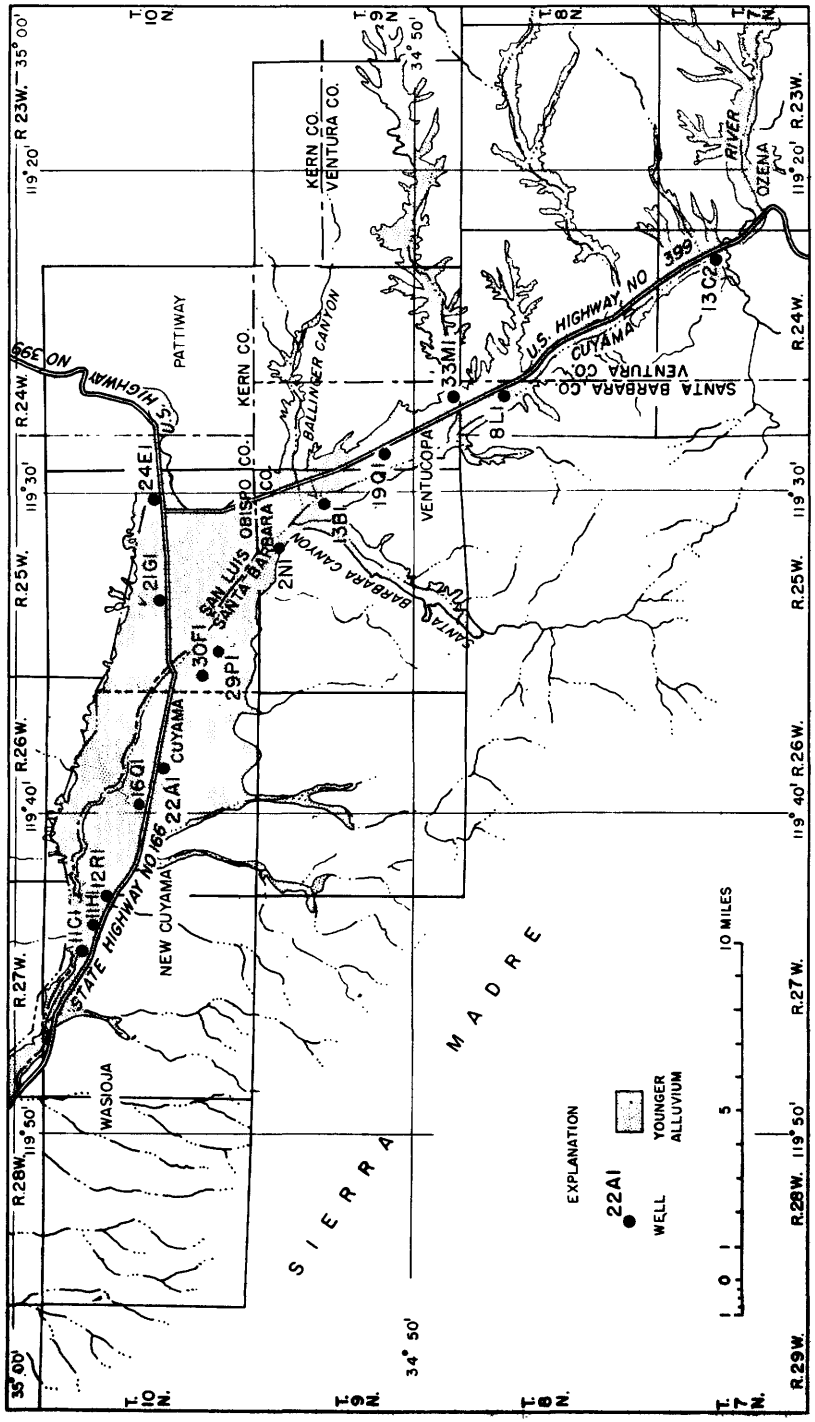

Figure 52.--Location of observation wells in Cuyama Valley, Santa Barbara County, Calif., 1955.

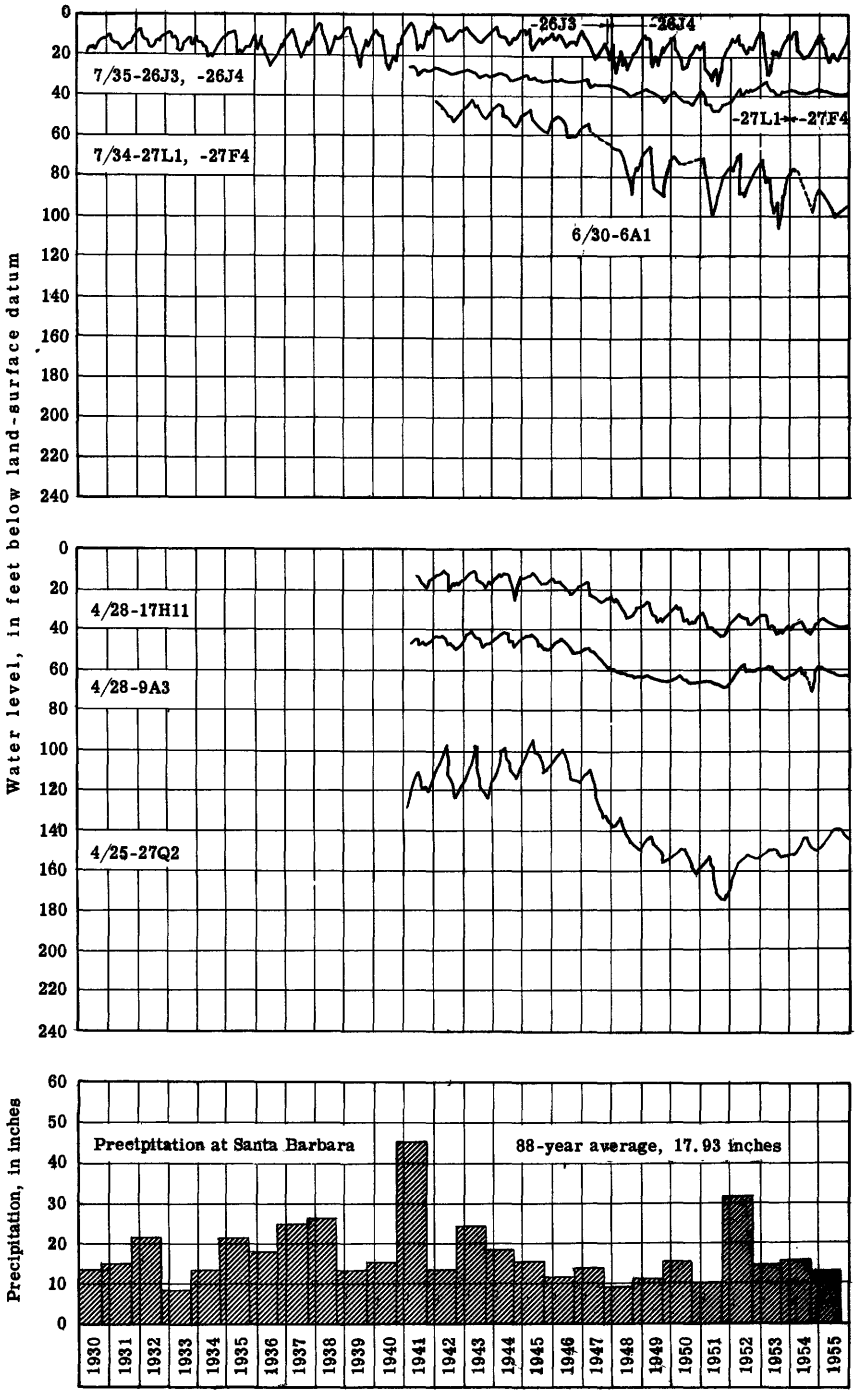

Figure 53. --Water-level fluctuations in 6 wells in Santa Barbara County and precipitation by water years at Santa Barbara, Calif.

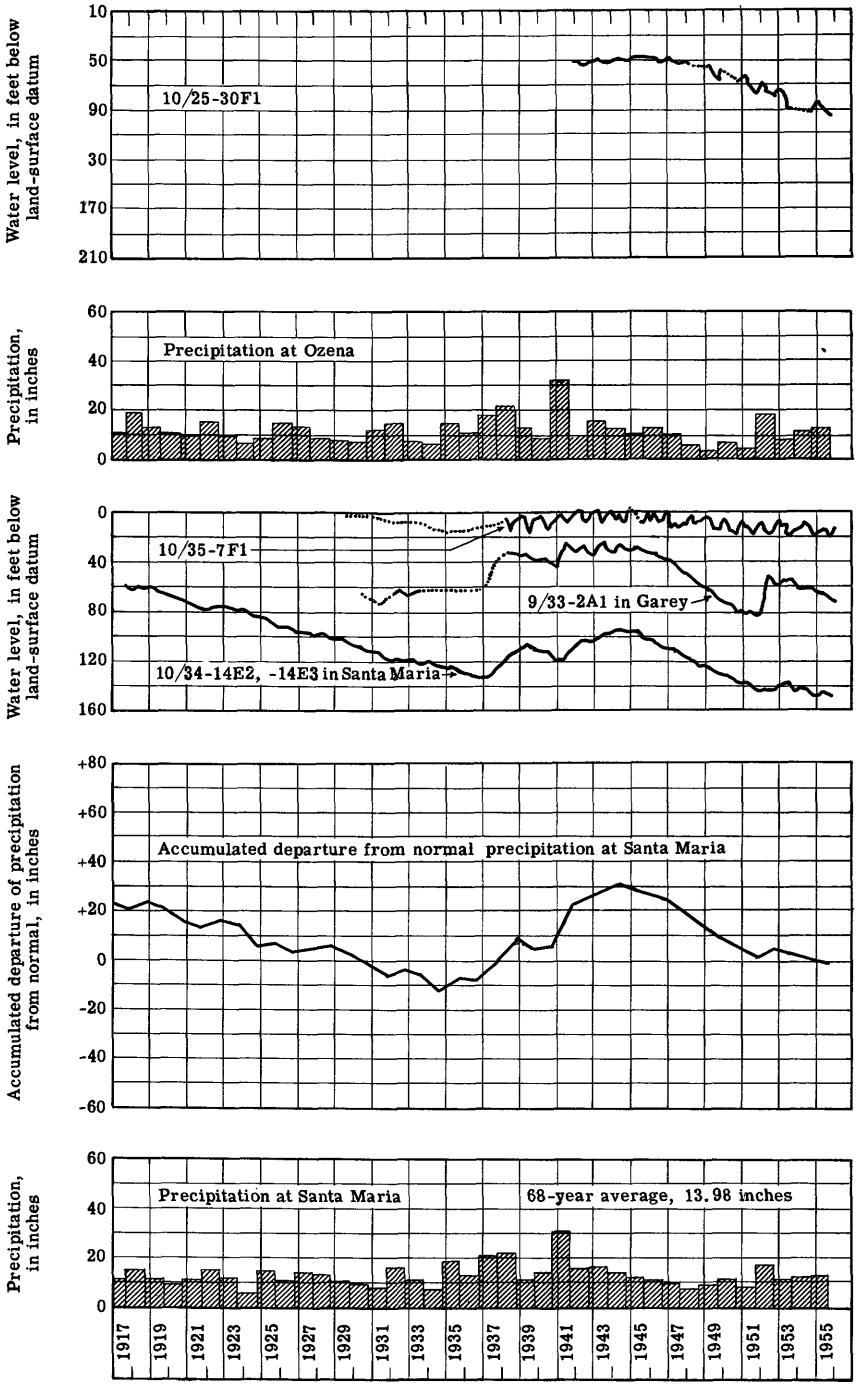

Figure 54. --Water-level fluctuations in 4 wells in Santa Barbara County and precipitation by water years at Santa Maria and Ozena, Calif.

area of confined water and the area of recharge, respectively. In the Goleta Basin, as in the Carpinteria Basin, periodic sampling from wells along the coast revealed no increase in chloride concentration from 1954 to 1955.

Well locations in the several hydrologic units in the Santa Ynez River valley are shown on two maps. Figure 48 shows the Lompoc plain and a short stretch of the alluvial deposits adjacent to the river upstream from Robinson Bridge. Figure 49 shows the remainder of the alluvial deposits upstream to San Lucas Bridge and also the Santa Ynez upland.

In general, the ground water in storage beneath the Lompoc plain and the alluvial deposits adjacent to the river was restored to near capacity by the above-normal rainfall in the winter of 1951-52. The downward trend of water levels began again in the years of below-normal precipitation after 1952 (when ground-water withdrawals exceeded recharge.)

The decline of water levels in the observation wells on the Santa Ynez upland from the spring of 1954 to the spring of 1955 averaged 3.6 feet. The smallest declines were toward the southern end of the upland and the greatest in the central part. The hydrograph of well 6/30-6A1 (fig. 53) showed a decline of 3.0 feet. Spring-high water levels in 1955 were, on the average, about 25 feet below those of 1942.

Water levels in wells near the river between San Lucas Bridge and Robinson Bridge remained essentially the same as in 1954 and only slightly lower than in December 1942.

Spring-high water levels beneath the Lompoc plain ranged from 2.80 feet below to 0.30 foot above those of 1954. Water levels in the recharge area at the eastern end and along the southern fringe of the Lompoc plain averaged a spring-high decline of 1.0 foot. In this area, the 1955 spring-high stages were only 6 feet lower than in 1944, the close of a wet period. In the area of confined water, the levels declined an average of 0.4 foot. The hydrographs of wells 7/35-26J3, -26J4, 7/34-27F4, and -27L1 (fig. 53) show fluctuations in the area of confined water and area of recharge, respectively. Collection of water samples to test for chloride contamination was continued during 1955; the analyses showed no increase in chloride concentration. In fact, the chloride concentration of water in the main water-bearing zone has not changed appreciably in the past 14 years.

In general, water levels in San Antonio Valley showed a net decline from spring 1954 to spring 1955. The greatest decline observed, 2.0 feet, was at the eastern end of the valley near Los Alamos in well 8/32-30K2. Smaller declines were observed farther west, where the water level in well 8/32-23B1 near Harris declined only 0.7 foot. Heavy pumping for irrigation during the summer near Los Alamos continued to affect shallow domestic wells to the extent that shallow supplies were nearly depleted by summer's end.

The Santa Maria Valley area, the largest agricultural district in the county, consists of the broad alluvial plain adjacent to the Santa Maria River, the elevated terraces north and south of this plain, and the relatively small alluvial plain adjacent to the Sisquoc River. The average decline of water levels in the confined-water area, which underlies the western half of the Santa Maria River plain, was 2.7 feet. Average spring-high water levels in this area in 1955 were about 20 feet below those of 1942. The hydrograph of well 10/35-7F1 (fig. 54) is typical of the wells in the confined-water area. The water levels in the remainder of the plain (recharge area) showed a net decline of 4.4 feet from spring 1954 to spring 1955. Water levels in the recharge area are about 39 feet lower than those in the spring of 1942. The hydrographs of wells 9/33-2A1, 10/34-14E2, and -14E3 (fig. 54) are typical of the wells in the recharge area. Beneath the Sisquoc plain the water-level declines were generally greater than in the recharge area. The average decline was 8.4 feet during the year. The chloride content of well waters at the western end of the Santa Maria Valley remained essentially the same as in previous years, averaging less than 100 ppm. Water levels near the coast remained above sea level; consequently, there was no immediate threat of sea-water encroachment.

The lack of electric power before 1946 in the Cuyama Valley, a broad semiarid valley in the extreme northeastern part of the county, tended to restrict intensive irrigation. Consequently, water levels in the principal agricultural area near the western end of the valley remained fairly static until heavy withdrawals began in 1946. Figure 54 shows the decline in water level in 1946 and the continuation due to increased irrigation demands and below-normal precipitation. The below-normal precipitation in 1955, coupled with increased pumping, resulted in a lowering of the water table. The greatest effect was in the central section of the valley, where water levels in some wells declined as much as 6.9 feet; the average spring-high decline from 1954 to 1955 was 4.8 feet. The decline at the lower and upper ends of the valley was not so great as in the middle part, averaging 1.7 feet and 3.2 feet, respectively. Since 1946, water levels in observation wells have declined about 24 feet on the average.

Mokelumne River basin. --The East Bay Municipal Utility District continued the program of monthly measurements of water levels in selected observation wells in the Mokelumne area in the central part of the Great Valley. Records for 24 wells, used as an index to changes in ground-water storage, have been published by the Geological Survey since 1935. Of the original 24 wells, 9 have been destroyed or abandoned because of lowering water table, but 9 nearby wells have been added so that currently records for 24 wells are being published.

The following table shows the average yearly water-level changes in the index wells in 1955 and the fluctuations in yearly rainfall. Rainfall during 1955 averaged 120 percent of the 40-year average, an increase from that of 1954 which averaged 93 percent. The wettest month in 1955 was December.

Average yearly rise or decline of water levels in observation wells and yearly rainfall in the Mokelumne area, 1950-55

Year	Number of wells	Water level		Rainfall a/	
		Yearly rise (+) or decline (-) (feet)	Accumulated rise (+) or decline (-) (feet) b/	Excess (+) or deficiency (-) (inches)	Accumulated excess (+) or deficiency (-) (inches) b/
1950	24	+1.71	-4.45	+9.52	+6.80
1951	24	-.88	-5.33	+2.72	+9.52
1952	20	+1.11	-4.22	+7.17	+16.69
1953	18	-1.89	-6.11	-8.48	+8.21
1954	19	-2.44	-8.55	-2.86	+5.35
1955	19	+.37	-8.18	+7.80	+13.15

a/ Average of rainfall in the headwater area at Electra, West Point, and Twin Lakes, 1906-45. Average yearly rainfall at the 3 stations in this 40-year period was 38.74 inches.
b/ Accumulation dates from Jan. 1, 1934.

The following table shows the seasonal changes in water level in 1955 during the periods of increasing and of diminishing withdrawals. Recharge early in 1955 was not sufficient to offset the withdrawals for irrigation, as indicated by the average decline of about 2.1 feet. Because water levels rose an average of 2.1 feet in the last half of the year, there was no change in the average for 1955.

Seasonal changes in water level, in feet, in 19 observation wells in the Mokelumne area, 1955

Period	Greatest rise	Greatest recession	Average change
Jan. 1 to May 31 (increasing withdrawal for irrigation)	+4.03	-9.13	-2.09
June 1 to Dec. 31 (diminishing withdrawal)	+11.40	-4.76	+2.06
The year	+8.93	-2.94	-.03

Well-Numbering System

The well-numbering system shows the location of wells according to the rectangular system of public-land surveys. Water-Supply Paper 991 contains a cross-reference table of previous numbers and location symbols. For well 9/13-20H1 in Antelope Valley in Kern County, the segment of the number before the hyphen indicates the township and range (T. 9 N., R. 13 W.). Letters indicating cardinal directions appear in this part of the symbol if a basin or area spans two or more quadrants of a particular base and meridian. The digits between the hyphen and the letter indicate the section (sec. 20). The letter indicates the 40-acre block within the section as shown by the diagram. Within the 40-acre tract, the wells are numbered serially as indicated by the final digit. Thus, well 9/13-20H1 was the first well listed by the Geological Survey in the $SE\frac{1}{4}NE\frac{1}{4}$ sec. 20, township 9 north, range 13 west. For a well whose location is known only approximately, the number is shortened to the designation of township, range, and section. For areas which have never been subdivided by public-land surveys, the rectangular system has been projected, commonly after private surveys or after projections made by local officials for purposes of land assessment. The description and records are given by counties in alphabetical sequence and for each county by valleys or ground-water basins. Thus, each group of data pertains to a distinct ground-water area as indicated by subheadings in the report.

D	C	B	A
E	F	G	H
M	L	K	J
N	P	Q	R

Well Descriptions and Water-Level Measurements

(Water levels are in feet below land-surface datum unless otherwise indicated.)

Kern County

Antelope Valley

9/13-20H1. Harry White. Near Willow Springs. Drilled irrigation well in alluvium, diameter 12 inches, depth 350 feet. Land-surface datum is about 2,430 feet above msl. Highest water level 36.0 below lsd, Apr. 29, 1922; lowest 125.8 below lsd, Mar. 11, 1953. Records available: 1921-53. No measurement made in 1955.

9/15-25D1. H. W. Hunter. Near Fairmont. Drilled unused well in alluvium, diameter 8 inches, depth 278 feet. Land-surface datum is about 2,710 feet above msl. Highest water level 223.7 below lsd, Mar. 9, 1949; lowest 234.3 below lsd, Oct. 31, 1955. Records available: 1948-55. Mar. 15, 232.2; Oct. 31, 234.3. Records furnished by California Division of Water Resources.

Los Angeles County

Antelope Valley

[Measurements furnished by Los Angeles County Flood Control District are marked with an asterisk]

*5/9-6B1. H. W. Setterlund. Near Little Rock. Drilled irrigation well in alluvium, diameter 12 inches, reported depth 98 feet. Land-surface datum is about 2,846 feet above msl. Highest water level 25.1 below lsd, July 29, 1944; lowest 63 below lsd, July 20, 1954. Records available: 1940-54. No measurement made in 1955.

*5/9-20J1. J. N. Petino. Llano. Drilled unused well in alluvium, diameter 10 inches, depth 274 feet. Land-surface datum is 3,166 feet above msl. Highest water level 235.8 below lsd, Nov. 4, 1947; lowest 266.1 below lsd, Nov. 8, 1954. Records available: 1942-43, 1945, 1947-49, 1952-54. Measurement discontinued.

*5/10-6N1. Little Rock Irrigation District. Near Little Rock. Drilled unused well in alluvium, diameter 14 inches. Land-surface datum is about 2,777 feet above msl. Highest water level 85.0 below lsd, Mar. 2, 1945; lowest 131.50 below lsd, Aug. 17, 1954. Records available: 1938, 1940-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	120.70	Apr. 12	118.85	July 19	128.15	Oct. 25	130.30
Feb. 8	125.10	May 11	118.7	Aug. 16	130.08	Nov. 29	129.90
Mar. 8	119.15	June 21	123.78	Sept. 13	130.10	Dec. 19	126.80

*5/10-7E1. Calavalley Mutual Water Co. Formerly Calavalley. Near Little Rock. Drilled unused well in alluvium, diameter 16 inches, reported depth 550 feet. Land-surface datum is about 2,816 feet above msl. Highest water level 116.2 below lsd, Mar. 28, 1945; lowest 183.3 below lsd, Aug. 16, 1955. Records available: 1938, 1940-53, 1955. July 19, 179.35; Aug. 16, 183.3; Sept. 13, 180.6; Oct. 26, 181.25.

*5/10-26B1. C. Kromb. Near Little Rock. Drilled domestic well in alluvium, diameter 10 inches, reported depth 87 feet. Land-surface datum is about 3,156 feet above msl. Highest water level 41.69 below lsd, Nov. 24, 1952; lowest 57.49 below lsd, Nov. 5, 1951. Records available: 1940-42, 1945-54. No measurement made in 1955.

*5/11-4E1. Sam Yellen. Near Palmdale. Drilled irrigation well in alluvium, diameter 12 inches. Land-surface datum is about 2,695 feet above msl. Highest water level 149.4 below lsd, Dec. 14, 1948; lowest 172.85 below lsd, Nov. 27, 1953. Records available: 1948-55. Oct. 26, 166.3.

*5/11-9Q1. Owner unknown. Near Little Rock. Drilled unused well in alluvium, diameter 10 inches, depth 99 feet. Land-surface datum is about 2,856 feet above msl. Highest water level 29.4 below lsd, Mar. 7, 1945; lowest 54.8 below lsd, Nov. 17, 1952. Records available: 1940-46, 1948-55. Oct. 21, 53.05.

*5/11-10R1. H. C. Smith. Near bridge over Little Rock Creek. Drilled unused well in alluvium, diameter 16 inches. Land-surface datum is about 2,835 feet above msl. Highest water level 41.8 below lsd, July 18, 1941; lowest 144.5 below lsd, Aug. 13, 1938. Records available: 1927-28, 1930, 1932, 1937-55. Jan. 11, 117.40; Feb. 8, 117.70; Mar. 9, 116.95; Apr. 11, 118.5; May 11, 118.4.

*5/11-12Q1. Wheelock. Near Little Rock. Drilled irrigation well in alluvium, diameter 16 inches, reported depth 392 feet. Land-surface datum is about 2,832 feet above msl. Highest water level 122.2 below lsd, Mar. 2, 1945; lowest 176.4 below lsd, Nov. 8, 1954. Records available: 1940-54. No measurement made in 1955.

*6/8-18C1. Rouff. Near Lovejoy Buttes. Drilled domestic and stock well in alluvium, diameter 9 inches, reported depth 210 feet. Land-surface datum is about 2,732 feet above msl. Highest water level 128.55 below lsd, Dec. 7, 1945; lowest 169.6 below lsd, July 5, 1945. Records available: 1939-41, 1944-55. Oct. 25, 163.8.

*6/9-4H2. Wilsona School. Lovejoy Buttes. Drilled well in alluvium, diameter 10 inches, reported depth 336 feet. Land-surface datum is about 2,594 feet above msl. Highest water level 120.56 below lsd, Nov. 23, 1949; lowest 130.55 below lsd, Dec. 25, 1955. Records available: 1949-55. Dec. 25, 130.55.

*6/9-11N1. Owner unknown. Near Lovejoy Buttes. Drilled unused well in alluvium, diameter 8 inches. Land-surface datum is about 2,666 feet above msl. Highest water level 137.28 below lsd, Dec. 27, 1951; lowest 142.32 below lsd, Apr. 6, 1954. Records available: 1951-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	140.60	Apr. 12	140.75	July 19	140.95	Oct. 25	141.05
Feb. 8	140.50	May 11	140.78	Aug. 16	140.94	Nov. 29	141.60
Mar. 8	140.60	June 21	140.85	Sept. 13	141.05	Dec. 19	141.20

*6/10-9E1. C. Weist. Near Alpine Butte. Drilled irrigation well in alluvium, diameter 14 inches. Land-surface datum is about 2,576 feet above msl. Highest water level 125.4 below lsd, Dec. 2, 1941; lowest 206.3 below lsd, Oct. 26, 1955. Records available: 1940-43, 1945-46, 1948-55. Oct. 26, 206.3.

*6/10-9Q1. Henry Winters. Near Alpine Butte. Drilled irrigation and domestic well in alluvium, diameter 16 inches, reported depth 275 feet. Land-surface datum is about 2,596 feet above msl. Highest water level 142.1 below lsd, Dec. 2, 1941; lowest 158.90 below lsd, Oct. 26, 1955. Records available: 1940-48, 1950-55. Oct. 26, 158.90.

*6/10-27C1. McCaleb. Near Little Rock. Drilled unused well in alluvium, diameter 16 inches, reported depth 400 feet. Land-surface datum is about 2,677 feet above msl. Highest water level 148.1 below lsd, Dec. 15, 1943; lowest 161.97 below lsd, Nov. 8, 1954. Records available: 1940-41, 1943, 1944-54. No measurement made in 1955.

*6/11-4C1. U. S. Air Force. Northeast of Palmdale. Drilled unused well in alluvium, diameter 20 inches. Land-surface datum is about 2,480 feet above msl. Highest water level 147.0 below lsd, Dec. 5, 1942; lowest 228.9 below lsd, Nov. 16, 1954. Records available: 1942-43, 1945-46, 1948-49, 1951-54. No measurement made in 1955.

*6/11-12Q1. E. J. Ball. Near Little Rock Wash. Drilled unused well in alluvium, diameter 18 inches. Land-surface datum is about 2,552 feet above msl. Highest water level 176.0 below lsd, Nov. 25, 1941; lowest 232.15 below lsd, Oct. 26, 1955. Records available: 1941-55. Oct. 26, 232.15.

*6/12-24C1. Palmdale Irrigation District. Near Palmdale. Drilled unused well in alluvium, diameter 14 inches, depth 327 feet. Land-surface datum is about 2,587 feet above msl. Highest water level 255.85 below lsd, June 4, 1952; lowest 298 below lsd, July 20, 1954. Records available: 1950-55.

Jan. 11	260.50	Apr. 12	289.90	Sept. 13	297.50	Nov. 28	294.05
Feb. 8	274.25	May 11	292.20	Oct. 24	297.30	Dec. 19	294.30
Mar. 8	280.40	Aug. 16	296.70				

*6/13-12J1. Glick. Near Quartz Hill. Drilled stock well in alluvium, diameter 14 inches, reported depth 454 feet. Land-surface datum is about 2,607 feet above msl. Highest water level 233.7 below lsd, May 31, 1940; lowest 265.3 below lsd, Oct. 24, 1955. Records available: 1940-55. Oct. 24, 265.3.

*7/9-17N1. W. H. Brown. Near Piute Butte. Drilled irrigation well in alluvium, diameter 14 inches, reported depth 324 feet. Land-surface datum is about 2,492 feet above msl. Highest water level 127.83 below lsd, Feb. 5, 1946; lowest 188.6 below lsd, Nov. 9, 1954. Records available: 1945-48, 1950-55. Nov. 7, 185.6.

*7/11-28E1. Leshim. Near Lancaster. Drilled unused well in alluvium, diameter 12 inches, depth 450 feet. Land-surface datum is about 2,440 feet above msl. Highest water level 112.8 below lsd, Dec. 14, 1943; lowest 218.4 below lsd, Oct. 25, 1955. Records available: 1943, 1945-55. Oct. 25, 218.4.

*7/12-15F2. Los Angeles County Water District well 4. 10th and Date Sts., Lancaster. Drilled public-supply well in alluvium, diameter 16 inches to 244 feet and 12 inches to 372 feet, reported depth 600 feet. Land-surface datum is about 2,354 feet above msl. Highest water level 42.9 below lsd, Feb. 28, 1945; lowest 106.8 below lsd, Oct. 24, 1955. Records available: 1943-45, 1947-55. Oct. 24, 106.8.

*7/13-21J2. W. S. McCanlies. Near Quartz Hill. Drilled unused well in alluvium, diameter 10 inches, depth 182 feet. Land-surface datum is 2,371 feet above msl. Highest water level 59.0 below lsd, Feb. 28, 1945; lowest 153.7 below lsd, Oct. 24, 1955. Records available: 1942-45, 1947-55. Oct. 24, 153.7.

*7/13-27M1. A. F. Godde. Near Quartz Hill. Drilled irrigation well in alluvium, diameter 14 inches. Land-surface datum is about 2,421 feet above msl. Highest water level 116.8 below lsd, Nov. 24, 1941; lowest 239.75 below lsd, Nov. 1, 1955. Records available: 1941-43, 1945-55. Nov. 1, 239.75.

*7/14-10F1. F. H. Ullman. Near Antelope Buttes. Drilled domestic well in alluvium, diameter 10 inches, reported depth 250 feet. Land-surface datum is about 2,557 feet above msl. Highest water level 184.2 below lsd, Nov. 7, 1942; lowest 238.1 below lsd, Oct. 24, 1955. Records available: 1942-43, 1945-55. Oct. 24, 238.1.

[Measurements furnished by California Division of Water Resources are marked with double asterisks]

**8/10-19Q1. Union Trust & Savings Bank. East of Redman School. Drilled unused well in alluvium, diameter 12 inches, reported depth 750 feet. Land-surface datum is about 2,342 feet above msl. Highest water level 29.7 below lsd, Apr. 9, 1941; lowest 124.41 below lsd, Nov. 7, 1951. Records available: 1939-42, 1944-48, 1950-55. Nov. 9, 107.09.

**8/12-4K1. Owner unknown. Near Rosamond. Drilled unused well in alluvium, diameter 6 inches, depth 265 feet. Land-surface datum is about 2,307 feet above msl. Highest water level 0.8 below lsd, Jan. 10, 1943; lowest dry at 37.3, Nov. 1, 1955. Records available: 1943-47, 1949-55. Mar. 15, 24.7; Nov. 1, dry at 37.3.

8/12-20B1. Owner unknown. Near Oban. Drilled unused well in alluvium, diameter 6 inches, depth 53 feet. Land-surface datum is about 2,317 feet above msl. Highest water level 3.2 below lsd, Jan. 31, 1942; lowest 44.16 below lsd, Nov. 10, 1954. Records available: 1941-54. Measurement discontinued.

**8/13-7H1. Lone Butte Ranch. Near Willow Springs. Drilled irrigation well in alluvium, diameter 14 inches, reported depth 500 feet. Land-surface datum is about 2,443 feet above msl. Highest water level 93.1 below lsd, Apr. 9, 1941; lowest 218.8 below lsd, Nov. 1, 1955. Records available: 1940-44, 1946-55. Mar. 15, 167.5; Nov. 1, 218.8.

8/14-2R1. Owner unknown. Near Antelope Buttes. Drilled unused well in alluvium, diameter 14 inches. Land-surface datum is about 2,494 feet above msl. Highest water level 124.3 below lsd, Nov. 24, 1942; lowest 192.6 below lsd, Nov. 23, 1953. Records available: 1942-43, 1945-53. Measurement discontinued.

**8/14-14R1. G. Getzlaff. Near Fairmont Butte. Drilled unused well in alluvium, diameter 16 inches, depth 254 feet. Land-surface datum is about 2,494 feet above msl. Highest water level 135.2 below lsd, Mar. 12, 1945; lowest 198.0 below lsd, Oct. 31, 1955. Records available: 1943-55. Mar. 15, 190.4; Oct. 31, 198.0.

8/15-27R1. I. T. Brandt. Near Fairmont. Drilled domestic well in alluvium. Land-surface datum is about 2,806 feet above msl. Highest water level 139.95 below lsd, Dec. 8, 1947; lowest 147.1 below lsd, June 10, 1953. Records available: 1945-53. Measurement discontinued.

**8/15-33G1. J. Alesso. Near Fairmont. Drilled domestic well in alluvium, diameter 12 inches, depth 282 feet. Land-surface datum is about 2,930 feet above msl. Highest water level 194.0 below lsd, Jan. 23, 1946; lowest 239.6 below lsd, Oct. 31, 1955. Records available: 1946-55. Mar. 16, 234.1; Oct. 31, 239.6.

8/15-36M1. Fairmont School. Drilled domestic well in alluvium, diameter 8 inches, reported depth 266 feet. Land-surface datum is about 2,785 feet above msl. Highest water level 72.3 below lsd, Dec. 8, 1947; lowest 89.5 below lsd, Dec. 3, 1951. Records available: 1943-45, 1947, 1949-54. No measurement made in 1955.

**8/16-5N1. Carpy. Near Neenach. Drilled unused well in alluvium, diameter 10 inches, depth 224 feet. Land-surface datum is about 2,900 feet above msl. Highest water level 190.65 below lsd, Dec. 8, 1947; lowest 218.2 below lsd, Nov. 14, 1942. Records available: 1942-55. Mar. 15, 203.9; Oct. 31, 207.3.

8/16-14L1. Snyder. Near Neenach. Drilled domestic well in alluvium, diameter 10 inches. Land-surface datum is about 2,859 feet above msl. Highest water level 105.5 below lsd, Nov. 13, 1945; lowest 129.10 below lsd, Dec. 9, 1949. Records available: 1945-47, 1949-50, 1952-53. Measurement discontinued.

San Gabriel River Basin

1S/10-18. Baldwin Park. Drilled water-table observation well tapping fine sand to coarse gravel in alluvial deposits, diameter 16 inches, depth 200 feet, perforations 74-174. Land-surface datum is 387 feet above msl. Highest water level 56.0 below lsd, May 19, 1916; lowest 141.62 below lsd, Nov. 20, 1951. Records available: 1903-55.

Daily mean water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	131.73	131.31	131.13	130.80	131.12	131.39	133.24	135.52	137.85	139.80	140.24	139.14
2	131.71	131.28	131.09	130.83	131.12	131.41	133.30	135.60	137.97	139.83	140.26	139.09
3	131.72	131.29	131.07	130.84	131.07	131.46	133.35	135.69	138.10	139.86	140.27	139.03
4	131.76	131.30	131.05	130.84	131.02	131.51	133.38	135.77	137.24	139.89	140.29	138.96
5	131.71	131.25	131.04	130.86	131.02	131.59	133.42	135.83	137.35	139.89	140.29	138.89
6	131.66	131.27	131.03	130.88	130.99	131.64	133.47	135.90	137.45	139.91	140.30	138.83
7	131.66	131.28	131.02	130.90	130.98	131.70	133.52	135.99	137.57	139.93	140.32	138.76
8	131.66	131.23	131.01	130.94	130.96	131.75	133.60	136.06	137.69	139.97	140.34	138.69
9	131.64	131.23	130.99	130.97	130.92	131.81	133.68	136.14	137.80	139.99	140.33	138.62
10	131.61	131.27	130.97	130.99	130.90	131.89	133.75	136.22	137.88	140.01	140.33	138.57
11	131.63	131.27	130.95	131.01	130.89	131.95	133.80	136.29	137.96	140.02	140.32	138.51
12	131.61	131.28	130.93	131.04	130.86	132.01	133.87	136.36	139.03	140.04	140.30	138.44
13	131.58	131.30	130.91	131.06	130.85	132.09	133.95	136.44	139.11	140.05	140.27	138.39
14	131.59	131.31	130.88	131.09	130.86	132.15	134.03	136.51	139.19	140.05	140.21	138.34
15	131.60	131.29	130.86	131.14	130.86	132.19	134.12	136.56	139.26	140.07	140.15	138.26
16	131.55	131.30	130.85	131.16	130.86	132.26	134.21	136.62	139.33	140.08	140.08	138.20
17	131.57	131.27	130.83	131.17	130.88	132.32	134.30	136.70	139.38	140.08	140.02	138.14
18	131.52	131.26	130.80	131.20	130.93	132.38	134.39	136.78	139.44	140.08	139.97	138.09
19	131.52	131.26	130.76	131.22	131.01	132.47	134.49	136.85	139.47	140.09	139.89	138.04
20	131.52	131.24	130.80	131.24	131.10	132.55	134.58	136.93	139.49	140.10	139.84	137.97
21	131.49	131.24	130.83	131.26	131.12	132.61	134.63	137.01	139.54	140.10	139.77	137.90
22	131.47	131.21	130.79	131.28	131.17	132.70	134.75	137.08	139.58	140.10	139.72	137.83
23	131.45	131.19	130.75	131.26	131.20	132.79	134.82	137.14	139.60	140.12	139.65	137.77
24	131.41	131.17	130.74	131.23	131.18	132.87	134.89	137.22	139.61	140.13	139.57	137.72
25	131.38	131.17	130.73	131.22	131.18	132.95	134.98	137.29	139.65	140.13	139.51	137.66
26	131.39	131.20	130.75	131.19	131.20	133.01	135.07	137.37	139.67	140.14	139.44	137.59
27	131.36	131.18	130.77	131.15	131.23	133.05	135.15	137.43	139.69	140.14	139.39	137.53
28	131.34	131.17	130.80	131.12	131.27	133.10	135.22	137.52	139.72	140.16	139.33	137.47
29	131.33		130.81	131.14	131.29	133.14	135.31	137.59	139.75	140.17	139.27	137.43
30	131.32		130.80	131.14	131.33	133.19	135.38	137.66	139.77	140.20	139.21	137.38
31	131.33		130.81		131.35		135.46	137.75		140.23		137.34

Coastal Plain

3S/12-8L3. Los Angeles County Farm. Near Downey. Drilled unused artesian well in Gaspur water-bearing zone of Recent age and underlying deposits of Pleistocene age, diameter 8 inches, depth 248 feet. Land-surface datum is about 92 feet above msl. Highest water level 14.45 below lsd, Mar. 20, 1930; lowest 67.51 below lsd, Aug. 29, 1955. Records available: 1930-55. Records furnished by San Gabriel Valley Protective Association.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	59.03	Apr. 25	61.33	July 25	65.49	Oct. 31	66.00
Feb. 28	58.87	May 30	62.83	Aug. 29	67.51	Nov. 28	63.66
Mar. 28	61.51	June 27	64.02	Sept. 27	66.03	Dec. 27	62.67

3S/14-3K1. Southern California Water Co. Yukon plant well 1. Near Inglewood. Drilled public-supply artesian well in sand and gravel deposits of Pleistocene age, diameter 16 inches, depth 652 feet, perforations 368-414, 538-552, 562-578. Land-surface datum is about 74 feet above msl. Highest water level 97 below lsd, Feb. 1, 1942; lowest 168 below lsd, Sept. 14, 1950. Records available: 1941-55. Records furnished by Southern California Water Co. Water level below sea level.

3S/14-3K1--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	147	May 7	150	Aug. 7	146	Nov. 7	146
Feb. 7	147	June 7	155	Sept. 7	154	Dec. 7	142
Mar. 7	146	July 7	153	Oct. 7	148	28	145
Apr. 7	148						

3S/14-21B1. Southern California Water Co. Rosecrans plant well 1. Near Hawthorne. Drilled public-supply artesian well in sand and gravel deposits of Pleistocene age, diameter 16 inches, depth 500 feet. Land-surface datum is about 63 feet above msl. Highest water level 66 below lsd, May 1, 1931; lowest 128 below lsd, July 14, 1953. Records available: 1931-37, 1939-55. Records furnished by Southern California Water Co. Water level below sea level.

Jan. 7	114	May 7	125	Aug. 7	124	Nov. 7	119
Feb. 7	114	June 7	125	Sept. 7	125	Dec. 7	121
Mar. 7	114	July 7	123	Oct. 7	121	28	121
Apr. 7	123						

4S/11-5D1. V. Capovilla. Near Norwalk. Drilled domestic artesian well in deposits of Pleistocene age, diameter 10 inches, depth 270 feet. Land-surface datum is 44.7 feet above msl. Highest water level 3.41 below lsd, Mar. 17, 1933; lowest 80.67 below lsd, July 23, 1953. Records available: 1930-55. Records furnished by Orange County Flood Control District. Water level below sea level.

Jan. 27	46.27	Apr. 28	63.41	June 28	70.68	Nov. 29	57.51
Feb. 24	46.26	May 24	60.82	Oct. 20	67.82	Dec. 20	55.61
Mar. 29	60.96						

4S/13-14L1. Southern California Edison Co., Ltd. Long Beach. Drilled unused artesian well in Gaspur water-bearing zone of Recent age, diameter 10 inches, depth 114 feet, perforations 90-114. Land-surface datum is 28.55 feet above msl. Highest water level 20.62 below lsd, Apr. 5, 1941; lowest 42.02 below lsd, Dec. 26, 1955. Records available: 1930-55. Records furnished by city of Long Beach. Water level below sea level.

Jan. 3	39.35	Apr. 25	39.83	July 25	40.66	Oct. 31	41.55
31	39.11	May 30	40.04	Aug. 29	40.90	Nov. 28	41.91
Feb. 28	39.26	June 27	40.39	Sept. 26	41.37	Dec. 26	42.02
Mar. 28	39.84						

4S/13-23G2. City of Long Beach. Drilled unused artesian well in gravel in uppermost part of Silverado water-bearing zone of Pleistocene age, diameter 26 to 16 inches, depth 1,074 feet, perforations 650-900. Land-surface datum is 24.50 feet above msl. Highest water level 52.93 below lsd, Feb. 6, 1939; lowest 131.75 below lsd, July 20, 1953. Records available: 1932-55. Records furnished by city of Long Beach. Water level below sea level.

Jan. 3	120.25	Apr. 25	120.15	July 25	116.30	Oct. 31	112.22
Feb. 28	120.53	May 30	120.70	Aug. 29	114.41	Nov. 28	107.36
Mar. 28	123.97	June 27	117.80	Sept. 26	112.90	Dec. 26	106.87

Orange County

Coastal Plain

[Measurements furnished by Orange County Flood Control District are marked with an asterisk]

*3S/11-36Q2. M. Del Giorgio. Near Buena Park. Drilled unused artesian well in deposits of Pleistocene age, diameter 12 inches, depth 666 feet, perforations 500-650. Land-surface datum is 91.58 feet above msl. Highest water level 48.02 below lsd, Mar. 28, 1945; lowest 122.96 below lsd, Aug. 9, 1954. Records available: 1930-55. Water level below sea level.

Jan. 3	98.98	Apr. 4	107.91	July 11	116.30	Oct. 10	113.80
Feb. 7	95.59	May 2	107.67	Aug. 29	122.19	Nov. 14	113.31
Mar. 14	99.64	June 6	105.74	Sept. 12	122.75	Dec. 5	99.38

*4S/10-22L2. Halderman & Callens. Near Anaheim. Drilled irrigation artesian and water-table well in sand and gravel of Pleistocene age, diameter 16 inches, depth 475 feet, perforations 140-158, 370-401, 410-457. Land-surface datum is 136 feet above msl. Highest water level 97.16 below lsd, May 3, 1945; lowest 153.70 below lsd, Sept. 14, 1951. Records available: 1928-55. Water level below sea level.

Jan. 13	140.76	Apr. 12	144.75	Aug. 11	150.87	Nov. 10	148.24
Feb. 8	141.22	July 7	152.06	Sept. 21	150.97	Dec. 8	142.25
Mar. 8	142.08						

4S/11-19K1. Los Alamitos Sugar Co. Near Los Alamitos. Drilled unused artesian well in deposits of Pleistocene age, diameter 12 inches, depth 448 feet, perforations 440-460. Land-surface datum is 28.50 feet above msl. Highest water level flowing, 1901; lowest 70.52 below lsd, July 26, 1954. Records available: 1901, 1903, 1929-55. Measurements by city of Long Beach. Water level below sea level.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	42.54	Apr. 25	57.98	July 25	67.90	Oct. 31	54.65
Feb. 28	49.66	May 30	49.46	Aug. 29	67.98	Nov. 28	47.48
Mar. 28	57.44	June 27	60.63	Sept. 26	64.42	Dec. 26	44.33

*5S/10-9D1. Julio Martinez. Near Garden Grove. Drilled public-supply artesian well in Gaspur water-bearing zone of Recent age and underlying deposits of Pleistocene age, diameter 12 inches, depth 250 feet. Land-surface datum is 74.7 feet above msl. Highest water level 17.9 below lsd, June 13, 1922; lowest 94.44 below lsd, Dec. 10, 1954. Records available: 1922, 1924-25, 1927-28, 1930-55. Water level below sea level. Jan. 13, 88.08; Feb. 8, 86.34; Mar. 8, 86.80; June 10, 88.38; Dec. 8, 91.84.

*5S/10-28B1. John Sturtevant. Near Santa Ana. Drilled unused artesian well in deposits of Pleistocene age, diameter 10 inches, depth 122 feet. Land-surface datum is 45.1 feet above msl. Highest water level 23.90 below lsd, Jan. 12, 1945; lowest 76.28 below lsd, Aug. 11, 1955. Records available: 1935-55. Water level below sea level.

Jan. 18	54.83	Apr. 14	68.32	July 8	70.06	Nov. 15	61.25
Feb. 8	57.56	May 12	58.30	Aug. 11	76.28	Dec. 12	58.43
Mar. 10	64.24	June 10	67.10	Sept. 15	71.90		

*5S/11-2E1. Western Trust & Savings Bank. Near Westminster. Drilled irrigation artesian well in deposits of Pleistocene age, diameter 12 inches, depth 517 feet. Land-surface datum is 47.98 feet above msl. Highest water level 22.31 below lsd, May 19, 1930; lowest 87.91 below lsd, Aug. 10, 1954. Records available: 1929-55. Water level below sea level.

Jan. 13	62.68	Apr. 7	79.82	July 7	81.45	Oct. 10	78.50
Feb. 4	66.24	May 10	66.04	Aug. 9	87.30	Dec. 6	66.14
Mar. 4	68.75	June 9	74.43	Sept. 6	85.93		

*5S/11-16D2. Anaheim Sugar Co. Near Seal Beach. Drilled unused artesian well in deposits of Pleistocene age, diameter 10 inches, depth 400 feet. Land-surface datum is 16.62 feet above msl. Highest water level 0.70 above lsd, Feb. 6, 1930; lowest 50.30 below lsd, Aug. 3, 1955. Records available: 1929-55. Water level below sea level.

Jan. 5	32.62	May 4	38.75	Aug. 3	50.30	Nov. 2	45.18
Feb. 2	41.93	June 1	35.88	Sept. 7	48.05	Dec. 7	34.68
Mar. 2	47.91	July 6	41.81	Oct. 5	42.41	28	34.21
Apr. 6	41.85						

5S/11-18N1. U. S. Navy. Near Seal Beach. Drilled observation well in water-bearing deposits of Pleistocene age, diameter 6 inches, depth 250 feet. Land-surface datum is 4.85 feet above msl. Highest water level 1.58 below lsd, Jan. 25, 1944; lowest 4.96 Feb. 21, 1944, July 9, 1953. Records available: 1941-48, 1951-55. May 31, 4.70; Dec. 27, 4.23.

5S/11-18P1. U. S. Navy. Near Seal Beach. Drilled observation well in water-bearing deposits of Pleistocene age, diameter 6 inches, depth 126 feet. Land-surface datum is 4.78 feet above msl. Highest water level 1.24 above lsd, Jan. 15, 1942; lowest 2.58 below lsd, July 9, 1953. Records available: 1941-48, 1951-55. May 31, 2.06; Dec. 27, 1.89.

*5S/11-25P1. E. J. Lecrivain. Near Huntington Beach. Drilled domestic artesian well in deposits of Pleistocene age, diameter 12 inches, depth 150 feet. Land-surface datum is 48 feet above msl. Highest water level 33.90 below lsd, Feb. 25, 1932; lowest 72.61 below lsd, Mar. 12, 1954. Records available: 1930-55. Water level below sea level.

Jan. 18	63.02	Apr. 14	71.44	July 8	68.77	Oct. 13	70.58
Feb. 8	67.68	May 12	66.42	Aug. 11	71.94	Nov. 15	67.51
Mar. 10	72.43	June 10	66.73	Sept. 15	71.74	Dec. 12	65.01

*5S/11-28A1. A. Ruoff. Near Huntington Beach. Drilled irrigation artesian well in deposits of Pleistocene age, diameter 10 inches, depth 453 feet. Land-surface datum is 7.13 feet above msl. Highest water level 15.18 above lsd, May 23, 1945; lowest 54.95 below lsd, Mar. 12, 1954. Records available: 1930-55. Water level below sea level.

Jan. 19	34.14	June 10	36.62	Sept. 15	47.04	Nov. 15	43.05
Apr. 14	48.01	July 8	38.07	Oct. 13	47.57	Dec. 12	39.19
May 12	28.19	Aug. 10	44.52				

5S/11-29E1. U. S. Government. Near Sunset Beach. Drilled observation well in water-bearing deposits of Pleistocene age, diameter 6 inches, depth 220 feet. Land-surface datum is 7.56 feet above msl. Highest water level 0.05 above lsd, June 2, 1942; lowest 8.18 below lsd, Oct. 9, 1943. Records available: 1941-48, 1951-54. No measurement made in 1955.

5S/11-29E2. U. S. Government. Near Sunset Beach. Drilled observation well in water-bearing deposits of Pleistocene age, diameter 6 inches, depth 120 feet. Land-surface datum is 6.57 feet above msl. Highest water level 4.06 below lsd, Dec. 20, 1941; lowest 5.93 below lsd, May 16, 1952. Records available: 1941-48, 1951-55. May 31, 5.90; Dec. 27, 5.78.

5S/12-12P1. U. S. Navy. Near Seal Beach. Drilled unused artesian well in deposits of Pleistocene age, diameter 12 inches, depth 185 feet. Land-surface datum is 15.97 feet above msl. Highest water level 6.26 below lsd, Mar. 13, 1933; lowest 38.35 below lsd, Aug. 14, 1955. Records available: 1930-55. Records furnished by city of Long Beach. Water level below sea level.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 21	31.38	Apr. 15	35.85	July 29	37.71	Oct. 7	36.80
Feb. 11	34.68	May 27	34.05	Aug. 14	38.35	Nov. 9	33.68
Mar. 25	36.11	June 17	33.44	Sept. 16	38.23	Dec. 30	32.71

5S/12-13D1. U. S. Navy. Near Seal Beach. Drilled observation well in water-bearing deposits of Pleistocene age, diameter 6 inches, depth 210 feet. Land-surface datum is 24.55 feet above msl. Highest water level 22.08 below lsd, Apr. 20, 1942; lowest 24.56 below lsd, Jan. 15, 1942. Records available: 1942-48, 1951-55. May 31, 23.52; Dec. 27, 23.67.

*6S/10-1L2. I. A. W. Henry. Near Santa Ana. Drilled unused artesian well in deposits of Pleistocene age, diameter 2½ inches, depth 143 feet. Land-surface datum is 39.65 feet above msl. Highest water level flowing, 1904; lowest 36.00 below lsd, July 15, 1952. Records available: 1904, 1921-55.

Jan. 20	25.93	Apr. 15	26.31	July 12	26.58	Oct. 13	27.60
Feb. 14	25.69	May 13	26.02	Aug. 16	26.91	Nov. 15	27.70
Mar. 15	26.20	June 14	26.39	Sept. 19	27.37	Dec. 13	27.41

*6S/10-5C1. Robert Gisler. Huntington Beach. Drilled irrigation artesian well in Talbert water-bearing zone and underlying deposits of Pleistocene age, diameter 14 inches, depth 209 feet, perforations 85-92, 126-144, 165-184. Land-surface datum is 19.24 feet above msl. Highest water level 4.18 below lsd, Jan. 17, 1942; lowest 48.42 below lsd, Mar. 9, 1953. Records available: 1931-55. Water level below sea level.

Jan. 3	33.70	Apr. 4	45.34	July 11	43.50	Nov. 14	38.79
Feb. 7	41.53	May 2	40.62	Sept. 12	44.62	Dec. 5	36.58
Mar. 7	47.93	June 6	38.82	Oct. 3	41.93		

*6S/11-13G2. Surf Land & Water Co. East of Huntington Beach. Drilled unused artesian well in Talbert water-bearing zone, diameter 12 inches, depth 154 feet. Land-surface datum is 2.85 feet above msl. Highest water level 1.65 above lsd, Apr. 21, 1941; lowest 17.09 below lsd, Feb. 21, 1951. Records available: 1930-55. Water level below sea level.

Jan. 5	8.70	May 4	12.04	Aug. 3	11.87	Nov. 2	10.53
Feb. 2	9.58	June 1	10.47	Sept. 7	11.99	Dec. 7	9.68
Mar. 2	13.57	July 6	10.36	Oct. 5	11.35	28	9.31
Apr. 6	13.34						

*I-9F1. The Irvine Co. Near Santa Ana. Drilled irrigation artesian well in deposits of Pleistocene age, diameter 20 to 10 inches, depth 1,208 feet. Land-surface datum is 51 feet above msl. Highest water level 23.62 below lsd, Apr. 18, 1945; lowest 102.83 below lsd, July 25, 1951. Records available: 1932-55. Water level below sea level.

Jan. 5	70.75	Apr. 27	89.97	Aug. 17	94.50	Nov. 2	85.79
Feb. 2	70.64	May 18	85.24	Sept. 14	92.19	Dec. 28	75.49
Mar. 9	79.01	June 8	83.25	Oct. 5	87.87		

Riverside County

San Jacinto Valley

4/3W-32E1. James Malcolm. Perris. Drilled well in alluvium, diameter 16 inches. Land-surface datum is about 1,433 feet above msl. Highest water level 62.45 below lsd, Apr. 26, 1948; lowest 73.49 below lsd, Apr. 26, 1942. Records available: 1929-55. Jan. 4, 70.14; Mar. 2, 70.16; July 7, 70.56; Oct. 5, 70.94; Dec. 6, 71.08.

5/2W-27E2. Fred Harvey. Winchester. Drilled domestic well in alluvium, diameter 9 inches. Land-surface datum is about 1,477 feet above msl. Highest water level 25.20 below lsd, Mar. 4, 1931; lowest 52.02 below lsd, Dec. 6, 1955. Records available: 1930-55. Jan. 4, 47.62; Mar. 2, 47.24; May 31, 48.33; July 7, 48.43; Oct. 5, 49.28; Dec. 6, 52.02.

6/3W-4A2. Menifee School. Menifee Valley. Drilled domestic well in alluvium. Land-surface datum is about 1,438 feet above msl. Highest water level 45.79 below lsd, Mar. 7, 1945; lowest 72.60 below lsd, Jan. 23, 1953. Records available: 1925-34, 1936, 1938-55. Jan. 4, 64.87; Mar. 2, 65.28; July 7, 66.97; Sept. 1, 71.04.

San Bernardino County

Chino Basin
[Measurements furnished by San Bernardino County Flood Control District are marked with an asterisk]

*1S/5-22E1. Citizens Land & Water Co. Bloomington. Drilled unused well in alluvium of Pleistocene age, diameter 14 inches, depth 620 feet. Land-surface datum is 1,107.0 feet above msl. Highest water level 236.8 below lsd, Oct. 7, 1927; lowest 263.00 below lsd, Dec. 2, 1955. Records available: 1927-55. Mar. 1, 259.80; June 2, 259.37; Sept. 6, 262.14; Dec. 2, 263.00.

Mojave River Basin
Upper Basin

*3/3W-6E2. Mike Spranger. Near Mojave River southeast of Hesperia. Drilled well in alluvium, diameter 12 inches, reported depth 61 feet. Land-surface datum is about 2,950 feet above msl. Highest water level 4.50 below lsd, May 11, 1954; lowest 57.27 below lsd, Nov. 26, 1951. Records available: 1948-55. Apr. 12, 9.1; May 8, 44.4.

*3/4W-13B2. W. T. Boehringer. Near Mojave River southeast of Hesperia. Drilled well in alluvium, diameter 10 inches. Land-surface datum is about 2,950 feet above msl. Highest water level 79.26 below lsd, May 26, 1953; lowest 97.80 below lsd, Nov. 16, 1954. Records available: 1951-55. Apr. 12, 83.5; Dec. 8, 84.95.

*4/3W-1M1. E. D. S. Pope. Apple Valley near Deadman Point. Drilled unused irrigation well in alluvium, reported depth 730 feet. Land-surface datum is about 3,044 feet above msl. Highest water level 182.50 below lsd, Jan. 15, 1953; lowest 210.05 below lsd, Nov. 27, 1951. Records available: 1930-33, 1935-43, 1945-55. Dec. 9, 209.07.

*4/3W-6B1. Pettis. Northeast of Hesperia. Drilled irrigation well in alluvium, diameter 12 inches. Land-surface datum is about 2,871 feet above msl. Highest water level 50.78 below lsd, Nov. 21, 1945; lowest 71.89 below lsd, Apr. 12, 1955. Records available: 1931-32, 1934-55. Apr. 12, 71.89; Dec. 9, 68.57.

*4/3W-6D1. A. W. Phillips. Northeast of Hesperia. Drilled domestic well in alluvium, diameter 10 inches, reported depth 100 feet. Land-surface datum is about 2,872 feet above msl. Highest water level 51.5 below lsd, Feb. 24, 1917; lowest 65.40 below lsd, Nov. 16, 1954. Records available: 1917, 1930-55. Apr. 12, 62.8.

*4/3W-18E1. Owner unknown. Near Mojave River east of Hesperia. Drilled irrigation well in alluvium, diameter 12 inches, reported depth 100 feet. Land-surface datum is about 2,867 feet above msl. Highest water level 14.36 below lsd, May 2, 1945; lowest 42.50 below lsd, Dec. 8, 1955. Records available: 1930-32, 1935, 1938-55. Apr. 12, 40.14; Dec. 8, 42.50.

*4/3W-19R1. Arrowhead Reservoir & Power Co. Southeast of Hesperia. Driven observation well in alluvium, diameter 2 inches, reported depth 45 feet. Land-surface datum is about 2,890 feet above msl. Highest water level 10.75 below lsd, June 12, 1907; lowest 43.70 below lsd, Nov. 6, 1953, Apr. 12, 1955. Records available: 1905, 1907, 1930-55. Apr. 12, 43.70; Dec. 8, 39.40.

*5/3W-3D1. Dick Lewis. Apple Valley east of Victorville. Drilled domestic and irrigation well in alluvium, diameter 12 inches. Land-surface datum is about 2,914 feet above msl. Highest water level 71.80 below lsd, May 7, 1948; lowest 87.90 below lsd, Nov. 16, 1954. Records available: 1948-49, 1951-55. Dec. 8, 85.00.

*5/3W-13D1. Eva V. Case. Apple Valley southeast of Victorville. Drilled domestic well in alluvium, diameter 6 inches. Land-surface datum is about 2,990 feet above msl. Highest water level 89.21 below lsd, May 7, 1948; lowest 96.20 below lsd, May 11, 1954. Records available: 1948-55. Apr. 12, 91.21; Dec. 8, 91.45.

*5/3W-18F1. Owner unknown. Southeast of Victorville. Drilled irrigation well in alluvium, diameter 14 inches, reported depth 464 feet. Land-surface datum is about 2,909 feet above msl. Highest water level 98.0 below lsd, Feb. 27, 1917; lowest 119.38 below lsd, Dec. 8, 1955. Records available: 1917, 1923, 1930-33, 1935, 1937-53, 1955. Dec. 8, 119.38.

*5/3W-22A1. Curtis Marshall. Apple Valley southeast of Victorville. Drilled domestic and irrigation well in alluvium, diameter 12 inches. Land-surface datum is about 2,924 feet above msl. Highest water level 88.87 below lsd, May 7, 1948; lowest 102.4 below lsd, Nov. 16, 1954. Records available: 1948-55. Dec. 8, 95.70.

5/3W-24N1. Douglas. Apple Valley southeast of Victorville. Drilled domestic well in alluvium, diameter 12 inches. Land-surface datum is about 2,928 feet above msl. Highest water level 89.04 below lsd, May 7, 1948; lowest 105.30 below lsd, Nov. 16, 1954. Records available: 1948-55. Apr. 12, 99.80; Dec. 8, 102.30.

*5/4W-10M1. Owner unknown. Victorville. Dug domestic well in alluvium. Land-surface datum is about 2,765 feet above msl. Highest water level 43.57 below lsd, Dec. 21, 1943; lowest 62.45 below lsd, Nov. 16, 1954. Records available: 1930-32, 1935, 1937-55. Apr. 12, 52.32.

*5/4W-11P1. Mr. Pratt. Near Victorville. Drilled domestic well in alluvium, diameter 8 inches, reported depth 65 feet. Land-surface datum is about 2,786 feet above msl. Highest water level 53.77 below lsd, Dec. 13, 1944; lowest 62.40 below lsd, May 11, 1954. Records available: 1931-32, 1935, 1937-55. Apr. 12, 55.26; Dec. 8, 50.20.

5/4W-11P2. Lee Saul. Near Victorville. Drilled irrigation well in alluvium, diameter 16 inches, reported depth 323 feet. Land-surface datum is about 2,791 feet above msl. Highest water level 27.65 below lsd, June 15, 1932; lowest 50.60 below lsd, May 10, 1949. Records available: 1931-32, 1935-54. No measurement made in 1955.

*5/4W-35A1. A. Sorensen. Near Hesperia. Drilled irrigation well in alluvium, diameter 10 inches. Land-surface datum is about 2,802 feet above msl. Highest water level flowing, Nov. 24, 1952; lowest 11.83 below lsd, May 12, 1954. Records available: 1917, 1930-31, 1945, 1948-55. Apr. 12, 2.00.

6/3W-28R1. Irene McCarthy. Apple Valley northeast of Victorville. Drilled domestic and irrigation well in alluvium. Land-surface datum is about 2,968 feet above msl. Highest water level 125.70 below lsd, May 13, 1948; lowest 135.00 below lsd, Nov. 16, 1954. Records available: 1948-54. No measurement made in 1955.

Middle Basin

*7/4W-30C1. Owner unknown. Near Bryman Crossing. Drilled irrigation well in alluvium. Land-surface datum is about 2,561 feet above msl. Highest water level 36.90 below lsd, Jan. 4, 1945; lowest 60.81 below lsd, Feb. 17, 1953. Records available: 1930-32, 1935-55. Apr. 15, 58.98; Dec. 9, 58.89.

8/3W-4M1. Everett Swing. Near Hodge Crossing. Dug unused well in alluvium, diameter 6 feet. Land-surface datum is about 2,288 feet above msl. Highest water level 13.10 below lsd, May 13, 1943; lowest 16.14 below lsd, Nov. 27, 1951. Records available: 1930-33, 1939-54. Measurement discontinued.

*8/4W-12Q1. Holcomb Bros. Near Wild Crossing. Drilled irrigation well in alluvium. Land-surface datum is about 2,329 feet above msl. Highest water level 8.16 below lsd, May 13, 1954; lowest 17.29 below lsd, Apr. 13, 1955. Records available: 1931-32, 1935-37, 1939-41, 1943-55. Apr. 13, 17.29; Dec. 9, 13.60.

*8/4W-20N1. Pofapoff. Near Helendale. Dug irrigation and domestic well in alluvium. Land-surface datum is about 2,430 feet above msl. Highest water level 2.01 below lsd, Mar. 8, 1932; lowest 27.24 below lsd, Dec. 9, 1955. Records available: 1930-32, 1934-47, 1951-55. Apr. 13, 23.50; Dec. 9, 27.24.

*8/4W-31D1. F. H. Merrill. Near Helendale. Dug domestic and irrigation well in alluvium, diameter 8 feet, reported depth 68 feet. Land-surface datum is about 2,465 feet above msl. Highest water level 42.19 below lsd, Nov. 18, 1948; lowest 60.60 below lsd, May 13, 1954. Records available: 1930-32, 1939-55. Apr. 13, 56.44; Dec. 9, 55.20.

*8/4W-31R1. Fred Orebaugh. Near Helendale. Dug and drilled unused well, diameter 14 inches. Land-surface datum is about 2,449 feet above msl. Highest water level 5.14 below lsd, Jan. 16, 1953; lowest 19.27 below lsd, Dec. 9, 1955. Records available: 1930-32, 1934-48, 1950-55. Dec. 9, 19.27.

*9/1W-10D2. R. E. Hettick. Southeast of Barstow. Drilled irrigation well in alluvium, diameter 12 inches, reported depth 132 feet. Land-surface datum is about 2,030 feet above msl. Highest water level 5.41 below lsd, May 1, 1946; lowest 22.08 below lsd, Mar. 18, 1953. Records available: 1945-55. Apr. 18, 13.90; Dec. 15, 14.20.

9/1W-10M1. Greystone Auto Camp. Near Barstow. Drilled domestic well in alluvium. Land-surface datum is about 2,100 feet above msl. Highest water level 48.01 below lsd, Apr. 26, 1944; lowest 60.07 below lsd, Nov. 28, 1951. Records available: 1930, 1932, 1935, 1938-47, 1949-53. No measurement made in 1955.

*9/1W-13B1. F. Ryerse. West of Daggett. Dug and drilled irrigation well in alluvium. Land-surface datum is about 2,011 feet above msl. Highest water level 6.24 below lsd, Apr. 26, 1944; lowest 48.42 below lsd, Dec. 13, 1955. Records available: 1925-28, 1930-32, 1935, 1938-53, 1955. Apr. 15, 36.69; Dec. 13, 48.42.

*9/2W-19B1. Sweeten. Near Lenwood Crossing. Domestic well in alluvium. Land-surface datum is about 2,255 feet above msl. Highest water level 62.29 below lsd, May 21, 1947; lowest 77.60 below lsd, Dec. 14, 1955. Records available: 1930-32, 1935, 1937-55. Apr. 18, 77.20; Dec. 14, 77.60.

*9/3W-10R1. Owner unknown. Near Lenwood Crossing. Dug and drilled irrigation well. Land-surface datum is about 2,209 feet above msl. Highest water level 8.73 below lsd, May 13, 1943; lowest 31.60 below lsd, Dec. 12, 1955. Records available: 1930-32, 1935-49, 1951-55. Apr. 14, 29.11; Dec. 12, 31.60.

*9/3W-14D1. Bullock. Near Lenwood Crossing. Dug and drilled irrigation well. Land-surface datum is about 2,230 feet above msl. Highest water level 7.33 below lsd, May 4, 1945; lowest 28.85 below lsd, Nov. 12, 1953. Records available: 1930-32, 1934-55. Apr. 14, 22.19; Dec. 12, 24.18.

9/3W-28A1. J. Slagill. Near Hodge Crossing. Dug and drilled irrigation well in alluvium. Land-surface datum is about 2,210 feet above msl. Highest water level 3.37 below lsd, Mar. 4, 1932; lowest 26.80 below lsd, Nov. 12, 1953. Records available: 1930-36, 1938-53. No measurement made in 1955.

*10/1W-31C1. Terry. Near Barstow. Drilled irrigation well in alluvium. Land-surface datum is about 2,130 feet above msl. Highest water level 42.26 below lsd, Apr. 15, 1955; lowest 51.00 below lsd, Aug. 13, 1931. Records available: 1930-32, 1935, 1938-55. Apr. 15, 42.26; Dec. 13, 45.58.

*10/2W-19P1. Shipley. Northwest of Barstow. Drilled domestic well in alluvium. Land-surface datum is about 2,216 feet above msl. Highest water level 63.19 below lsd, Apr. 4, 1930; lowest 81.90 below lsd, Nov. 13, 1953. Records available: 1930-33, 1935, 1937-45, 1947-55. Apr. 15, 76.18; Dec. 12, 77.80.

*10/2W-30R1. Dixie Crossing School. Northwest of Barstow. Drilled domestic well in alluvium, diameter 12 inches. Land-surface datum is about 2,175 feet above msl. Highest water level 23.78 below lsd, May 27, 1953; lowest 26.60 below lsd, Apr. 15, 1955. Records available: 1952-55. Apr. 15, 26.60.

*10/3W-32C1. Owner unknown. Near Hinkley. Dug and drilled unused well in alluvium. Land-surface datum is about 2,219 feet above msl. Highest water level 54.70 below lsd, Feb. 25, 1931; lowest 71.25 below lsd, Nov. 17, 1954. Records available: 1931-32, 1934, 1936-55. Apr. 14, 68.05; Dec. 12, 60.45.

*11/3W-34F1. B Bar B Ranch. Hinkley Valley north of Hinkley. Dug unused well in alluvium. Land-surface datum is about 2,085 feet above msl. Highest water level 29.40 below lsd, Jan. 3, 1936; lowest 37.89 below lsd, Dec. 12, 1955. Records available: 1930-32, 1934-55. Apr. 14, 37.59; Dec. 12, 37.89.

Lower Basin

*8/3E-3E1. C. W. Beaverstock. Near Newberry. Drilled well in alluvium, diameter 24 inches. Land-surface datum is about 1,820 feet above msl. Highest water level 3.80 below lsd, Apr. 28, 1932; lowest 9.72 below lsd, Nov. 21, 1952. Records available: 1930-32, 1935-55. Apr. 15, 6.63; Dec. 14, 7.90.

*8/3E-4B1. H. B. Barrett. Near Newberry. Drilled irrigation well in alluvial fan deposits, diameter 10 inches, depth 16 feet. Land-surface datum is about 1,819 feet above msl. Highest water level 0.54 below lsd, Feb. 26, 1932; lowest 6.20 below lsd, Nov. 16, 1953. Records available: 1930-32, 1935-55. Apr. 15, 4.56; Dec. 14, 6.15.

*8/3E-4B2. H. B. Barrett. Near Newberry. Dug and drilled irrigation well in alluvial fan deposits, reported depth 50 feet. Land-surface datum is about 1,820 feet above msl. Highest water level 0.95 below lsd, Feb. 26, 1932; lowest 10.57 below lsd, Apr. 15, 1955. Records available: 1922, 1930-32, 1935-36, 1938-55. Apr. 15, 10.57.

8/4E-7E1. L. Bodine. Near Troy Dry Lake. Dug and drilled irrigation well in alluvium. Land-surface datum is about 1,802 feet above msl. Highest water level 21.67 below lsd, Dec. 8, 1932; lowest 25.26 below lsd, Nov. 17, 1953. Records available: 1919, 1922, 1930-32, 1938-48, 1950, 1952-53. No measurement made in 1955.

*8/4E-12L1. Mojave Camp Service Station. East of Troy Dry Lake. Drilled well in alluvium, reported depth 205 feet. Land-surface datum is about 1,810 feet above msl. Highest water level 30.40 below lsd, Jan. 2, Nov. 18, 1947; lowest 33.58 below lsd, Nov. 24, 1942. Records available: 1930, 1932, 1935-45, 1947-55. Apr. 18, 31.45; Dec. 14, 30.59.

*9/1E-12D1. Aron Kimble. Near Daggett. Drilled well in alluvium. Land-surface datum is about 1,950 feet above msl. Highest water level 33.50 below lsd, Apr. 26, 1944; lowest 58.53 below lsd, Apr. 18, 1955. Records available: 1930, 1932, 1934-35, 1937-45, 1947-55. Apr. 18, 58.53; Dec. 15, 57.40.

*9/1E-13E1. Owner unknown. Near Daggett. Drilled well in alluvium, diameter 12 inches. Land-surface datum is about 1,949 feet above msl. Highest water level 49.93 below lsd, May 19, 1943; lowest 81.75 below lsd, Nov. 16, 1953. Records available: 1925-28, 1930-55. Apr. 15, 78.22; Dec. 14, 79.28.

*9/1E-13E2. Getz. Drilled well in alluvium, diameter 12 inches. Land-surface datum is about 1,950 feet above msl. Highest water level 54.46 below lsd, Apr. 26, 1944; lowest 85.40 below lsd, Nov. 16, 1953. Records available: 1925-27, 1930-33, 1935-55. Apr. 15, 83.70; Dec. 14, 79.30.

9/1E-18E1. Borland. Near Daggett. Dug and drilled irrigation well in alluvium. Land-surface datum is about 1,996 feet above msl. Highest water level 6.90 below lsd, Apr. 26, 1944; lowest 43.51 below lsd, May 2, 1950. Records available: 1925-28, 1930-32, 1934-50, 1952. No measurement made in 1955.

*9/1E-20N1. B. Lamantain. Near Daggett. Dug well in alluvium. Land-surface datum is about 2,200 feet above msl. Highest water level 82.40 below lsd, Nov. 20, 1952; lowest 112.50 below lsd, Apr. 15, 1955. Records available: 1952-55. Apr. 15, 112.50; Dec. 13, 101.70.

*9/2E-4D1. Owner unknown. East of Yermo. Drilled well in alluvium. Land-surface datum is about 1,895 feet above msl. Highest water level 15.18 below lsd, Apr. 24, 1944; lowest 30.55 below lsd, Dec. 14, 1955. Records available: 1930-32, 1934-35, 1937-55. Apr. 18, 29.33; Dec. 14, 30.55.

*9/2E-14N2. Scobel & Haimut. Near Minneola Crossing. Drilled unused well in alluvium, diameter 12 inches, reported depth 300 feet. Land-surface datum is about 1,896 feet above msl. Highest water level 15.30 below lsd, Nov. 16, 1945; lowest 30.15 below lsd, Apr. 15, 1955. Records available: 1925, 1927-28, 1930-35, 1937-55. Apr. 15, 30.15; Dec. 14, 28.07.

*9/2E-14N3. Scobel & Haimut. Near Minneola Crossing. Drilled stock well in alluvium, reported depth 173 feet. Land-surface datum is about 1,883 feet above msl. Highest water level 14.0 below lsd, June 13, 1924; lowest 27.30 below lsd, May 18, 1954. Records available: 1924-28, 1930-33, 1935, 1937-55. Apr. 15, 25.74; Dec. 14, 26.53.

9/2E-18F1. Owner unknown. East of Daggett. Drilled unused well in alluvium, diameter 12 inches. Land-surface datum is about 1,934 feet above msl. Highest water level 47.95 below lsd, May 10, 1945; lowest 66.40 below lsd, Dec. 14, 1955. Records available: 1924-28, 1930-40, 1942-43, 1945-55. Apr. 15, 61.33; Dec. 14, 66.40.

*9/2E-20Q1. Daggett Airport. Minneola Crossing. Drilled domestic well in alluvium, diameter 12 inches, reported depth 142 feet. Land-surface datum is about 1,922 feet above msl. Highest water level 41.81 below lsd, Nov. 15, 1945; lowest 59.20 below lsd, May 18, 1954. Records available: 1932, 1941-48, 1952-55. Apr. 15, 56.42; Dec. 14, 57.50.

9/3E-3D1. Almond Ranch. South of Harvard. Drilled irrigation well in alluvium, diameter 12 inches. Land-surface datum is about 1,823 feet above msl. Highest water level 40.85 below lsd, Nov. 6, 1950; lowest dry, Nov. 26, 1954. Records available: 1919, 1926, 1930-35, 1937-54. Measurement discontinued.

*9/3E-12E1. Tankersley. Northeast of Troy Dry Lake. Drilled domestic and irrigation well in alluvium. Land-surface datum is about 1,801 feet above msl. Highest water level 23.84 below lsd, Mar. 23, 1922; lowest 35.60 below lsd, May 19, 1954. Records available: 1922, 1930-33, 1935, 1937-44, 1946-55. Apr. 18, 34.67; Dec. 14, 34.40.

*9/3E-19E1. Edwards. Near Newberry. Drilled unused well in alluvium, diameter 12 inches, reported depth 200 feet. Land-surface datum is about 1,860 feet above msl. Highest water level flowing, Oct. 31, 1919, May 22, 1922; lowest 11.46 below lsd, Dec. 14, 1955. Records available: 1919, 1922, 1930-32, 1935, 1938-48, 1950, 1952-55. Apr. 15, 11.01; Dec. 14, 11.46.

*9/3E-19P1. Frey. Near Newberry. Drilled unused well in alluvium, diameter 12 inches, reported depth 151 feet. Land-surface datum is about 1,859 feet above msl. Highest water level flowing, Jan. 3, May 10, Nov. 16, 1945, May 2, 1946, May 23, 1947; lowest 6.00 below lsd, Dec. 14, 1955. Records available: 1919, 1922, 1930-35, 1938-47, 1951-55. Apr. 15, 5.33; Dec. 14, 6.00.

*9/3E-32A1. Berden. Newberry. Drilled well in alluvium. Land-surface datum is about 1,837 feet above msl. Highest water level 5.25 below lsd, June 4, 1952; lowest 8.30 below lsd, Nov. 23, 1954. Records available: 1952-55. Apr. 15, 6.80; Dec. 14, 7.30.

*9/3E-34D1. Clickenbeard. Near Newberry. Drilled and dug domestic well in alluvium. Land-surface datum is about 1,828 feet above msl. Highest water level 28.22 below lsd, Feb. 20, 1930; lowest 36.20 below lsd, Dec. 14, 1955. Records available: 1919, 1922, 1930-32, 1934-43, 1945, 1947-55. Apr. 15, 34.06; Dec. 14, 36.20.

*9/4E-20L1. F. L. Shepherd. North of Troy Dry Lake. Drilled well in alluvium, diameter 6 inches, reported depth 72 feet. Land-surface datum is about 1,780 feet above msl. Highest water level 9.49, below lsd, June 3, 1952; lowest 12.60 below lsd, Dec. 14, 1955. Records available: 1952-55. Apr. 18, 12.34; Dec. 14, 12.60.

*9/4E-31K1. Owner unknown. Near Troy Dry Lake. Drilled unused well, diameter 12 inches, reported depth 25 feet. Land-surface datum is about 1,788 feet above msl. Highest water level 12.86 below lsd, Apr. 25, 1944; lowest 16.46 below lsd, Nov. 24, 1942. Records available: 1930-32, 1935-55. Apr. 18, 14.18; Dec. 14, 14.50.

*10/2E-32P1. Yermo Mutual Water Co. Near Yermo. Drilled unused well in alluvium, diameter 16 inches, depth 413 feet. Land-surface datum is about 1,906 feet above msl. Highest water level 18.53 below lsd, Dec. 15, 1922; lowest 39.30 below lsd, Dec. 15, 1955. Records available: 1919-20, 1922, 1924, 1929-55. Apr. 18, 37.55; Dec. 15, 39.30.

Santa Ana River Basin
San Bernardino Area

1N/4-32N1. City of San Bernardino. Baseline well. Northwest of San Bernardino. Drilled observation well in alluvium of Pleistocene age, diameter 20 inches, depth 581 feet. Land-surface datum is about 1,184 feet above msl. Highest water level 49.4 below lsd, Mar. 6, 1947; lowest 147.2 below lsd, Oct. 7, 1955. Records available: 1946-55. Mar. 25, 135.9; June 10, 137.2; Oct. 7, 147.2; Dec. 30, 142.7. Records furnished by owner.

1N/5-23P4. Lytle Creek Water & Improvement Co., upper group well 4. Upper Lytle Basin northwest of San Bernardino. Drilled irrigation and public-supply well in alluvium of Pleistocene age, diameter 20 inches, reported depth 647 feet. Land-surface datum is about 1,462 feet above msl. Highest water level flowing, 1939, 1941-43; lowest 261.0 below lsd, Nov. 26, 1951. Records available: 1930-55. Mar. 7, 164.0; Apr. 4, 158.0. Records furnished by owner.

1S/3-17C1. E. N. Smith. Known as Williams Well. Near Santa Ana River northwest of Redlands. Drilled observation well in alluvium of Recent age, diameter 10 inches, depth 110 feet. Land-surface datum is 1,150 feet above msl. Highest water level 0.00, August 1892, April 1893; lowest dry at 95.53, Nov. 19, 26, 1955. Records available: 1892-94, 1896, 1898-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	83.90	Apr. 9	79.45	July 9	85.36	Oct. 8	93.53
8	83.60	16	79.86	16	86.03	15	93.86
15	83.60	23	80.45	23	86.53	22	94.28
22	82.30	30	81.03	30	87.28	29	94.62
29	82.50	May 7	81.28	Aug. 6	87.86	Nov. 5	94.95
Feb. 5	82.10	14	81.28	13	88.62	17	95.36
12	81.36	21	81.53	20	89.45	19	f95.53
19	81.12	28	82.03	27	90.12	26	(f)
26	80.53	June 4	82.46	Sept. 3	90.86	Dec. 3	95.36
Mar. 5	80.28	11	82.86	10	91.53	10	95.28
12	79.86	18	83.53	17	92.28	17	94.95
19	79.46	25	84.28	24	92.62	24	94.45
26	79.12	July 2	84.78	Oct. 1	93.03	31	94.36
Apr. 2	79.03						

f Dry.

1S/3-23A2. Judson Street Mutual Water Co. In eastern part of Bunker Hill Basin northeast of Redlands. Drilled irrigation well in alluvium of Pleistocene age, diameter 20 inches, depth about 400 feet. Land-surface datum is about 1,495 feet above msl. Highest water level 191.5 below lsd, June 2, 1939; lowest 305.2 below lsd, June 15, 1954. Records available: 1930-32, 1934-55. Records furnished by San Bernardino Valley Water Conservation District. Feb. 28, 282.1; May 3, 284.7; Nov. 8, 300.7, nearby well being pumped; Dec. 6, 294.9.

1S/3-32D1. Hinckley. Windmill well. Near San Timoteo Canyon west of Redlands. Drilled unused well in alluvium of Pliocene(?) and Pleistocene age, diameter 10 inches, depth 720 feet. Land-surface datum is 1,206.9 feet above msl. Highest water level 35.1 below lsd, Mar. 2, 1923; lowest 156.9 below lsd, Aug. 4, 1955. Records available: 1900, 1904-7, 1910-55. Records furnished by San Bernardino Valley Water Conservation District. Mar. 1, 117.72, nearby well being pumped; June 1, 134.80, nearby well being pumped; Aug. 4, 156.9; Dec. 6, 141.3.

1S/4-1A6. Riverside Water Co., McCrary tract well 4. Drilled public-supply well in alluvium of Pleistocene age, diameter 10 inches, reported depth 648 feet. Land-surface datum is 1,096.0 feet above msl. Highest water level 51.94 above lsd, Mar. 25, 1917; lowest 51.35 below lsd, Oct. 7, 1955. Records available: 1915-55. Records furnished by owner. Jan. 7, 31.95; Mar. 4, 28.55; June 3, 38.45; Oct. 7, 51.35; Dec. 2, 45.15.

1S/4-15A1. Philippi Quiroz. Drilled domestic well in alluvium of Pleistocene and Recent age, diameter 10 inches, reported depth 500 feet. Land-surface datum is about 1,008 feet above msl. Highest water level flowing, Jan. 31, 1955; lowest 17.78 below lsd, Sept. 29, 1955. Records available: 1915-55. Jan. 31, flowing; May 13, 2.02; June 30, 13.58; Sept. 29, 17.78; Nov. 16, 12.78. Records furnished by San Bernardino City Water Department.

1S/4-15M2. Meeks & Daley Water Co. South E St. well. In Bunker Hill Basin near Warm Creek south of San Bernardino. Drilled irrigation well in alluvium of Pleistocene and Recent age, diameter 20 inches, reported depth 603 feet. Land-surface datum is about 980 feet above msl. Highest water level 1.2 below lsd, Mar. 13, 1944; lowest 37.80 below lsd, Nov. 16, 1955. Records available: 1933-55. Records furnished by San Bernardino City Water Department. Jan. 31, 6.90; Mar. 30, 18.10; Nov. 16, 37.80.

1S/4-21A1. City of San Bernardino, sewage plant well. South of San Bernardino near Colton narrows. Drilled industrial well in alluvium of Recent age, diameter 10 inches, reported depth 292 feet. Land-surface datum is 970.2 feet above msl. Highest water level 16.2 above lsd, Mar. 13, 1944, Apr. 11, 1945; lowest 27.72 below lsd, Dec. 22, 1953. Records available: 1939-54. No measurement made in 1955.

1S/4-29H2. Riverside Water Co., flume 1. South of Colton in Rialto-Colton Basin. Drilled irrigation well in alluvium of Pleistocene and Recent age, diameter 20 inches, reported depth 189 feet. Land-surface datum is about 934 feet above msl. Highest water level 3.5 below lsd, June 3, 1938; lowest 85.1 below lsd, Oct. 20, 1934. Records available: 1928-55. Records furnished by owner. Jan. 28, 47.0; May 6, 46.9; July 1, 59.7; Oct. 21, 76.45; Dec. 30, 65.4.

1S/5-2K1. Lytle Creek Water & Improvement Co. Willow Street well. Near Rialto. Drilled irrigation well in alluvium of Pleistocene age, diameter 20 inches, reported depth 828 feet. Land-surface datum is about 1,287 feet above msl. Highest water level 220 below lsd, Dec. 4, 1944; lowest 276.6 below lsd, Oct. 21, 1955. Records available: 1931-37, 1940-55. Records furnished by owner. Mar. 7, 271.0; July 4, 275.0; Oct. 21, 276.6.

San Diego County

San Diego River Basin

15/1E-10L1. Foster Dairy. Near El Monte Park. Drilled irrigation water-table well in alluvium of Recent age, diameter 12 inches, reported depth 110 feet. Land-surface datum is about 470 feet above msl. Highest water level 27.96 below lsd, Aug. 18, 1948; lowest 42.75 below lsd, June 23, 1955. Records available: 1948-55. Feb. 24, 41.30; June 23, 42.75.

15/1E-17H6. La Mesa Lemon Grove and Spring Valley Irrigation District. Near Lakeside. Drilled unused water-table well in alluvium of Recent age, diameter 14 inches, depth 61 feet, perforations 39-61. Land-surface datum is 434.4 feet above msl. Highest water level 0.2 below lsd, May 18, 1930; lowest 59.60 below lsd, Aug. 24, 1954. Records available: 1929-32, 1934-55. Feb. 24, 54.42; June 23, 54.25; Aug. 19, 54.46; Dec. 6, 53.40.

15/1W-13R4. Owner unknown. Lakeside. Drilled unused water-table well in alluvium of Recent age, diameter 12 inches, depth 107 feet. Land-surface datum is 386.5 feet above msl. Highest water level 34.75 below lsd, Feb. 24, 1954; lowest 43.60 below lsd, Aug. 19, 1955. Records available: 1953-55.

15/1W-13R4--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Dec. 10, 1953	35.94	Aug. 24, 1954	38.86	Feb. 24, 1955	40.38	Aug. 19, 1955	43.60
Feb. 24, 1954	34.75	Nov. 10	39.28	June 23	41.25	Dec. 6	42.00
May 18	36.45						

15/1W-24D7. City of San Diego. Near Lakeside. Drilled unused water-table well in alluvium of Recent age, diameter 14 inches, depth 45 feet. Land-surface datum is 371.4 feet above msl. Highest water level 0.04 above lsd, May 10, 1941; lowest dry, Aug. 19, 1955. Records available: 1937-55. Feb. 24, 34.60; June 23, 42.08; Aug. 19, dry; Dec. 6, 45.38.

15/1W-28B1. Dr. Good. Near Santee. Drilled unused water-table well in alluvium of Recent age, diameter 10 inches, depth 39 feet. Land-surface datum is 336.5 feet above msl. Highest water level 6.48 below lsd, Mar. 10, 1915; lowest 23.15 below lsd, Dec. 6, 1955. Records available: 1915, 1919-55. Feb. 24, 21.13; June 23, 22.10; Aug. 19, 22.67; Dec. 6, 23.15.

16/2W-19D1. Woodward Sand Co. Mission Valley. Drilled unused water-table well in alluvium of Recent age, diameter 6 inches, depth 57 feet. Land-surface datum is 47.2 feet above msl. Highest water level 15.40 below lsd, May 18, 1954; lowest 22.98 below lsd, Dec. 6, 1955. Records available: 1953-55. Feb. 24, 18.07; June 23, 20.02; Aug. 19, 21.31; Dec. 6, 22.98.

16/3W-21R1. Beratino. Near San Diego. Drilled domestic water-table well in alluvium of Recent age, diameter 8 inches, depth 27 feet. Land-surface datum is about 15 feet above msl. Highest water level 8.20 below lsd, Aug. 24, 1954; lowest 11.46 below lsd, Dec. 6, 1955. Records available: 1953-55. Feb. 24, 9.28; June 23, 10.15; Aug. 19, 10.87; Dec. 6, 11.46.

16/3W-23H1. W. W. Miller. Mission Valley. Drilled irrigation water-table well in alluvium of Recent age, diameter 16 inches, depth 54 feet. Land-surface datum is about 30 feet above msl. Highest water level 10.94 below lsd, Feb. 23, 1954; lowest 14.29 below lsd, Aug. 19, 1955. Records available: 1953-55. Dec. 16, 1953, 12.06; Feb. 23, 1954, 10.94; May 18, 11.83; Aug. 24, 12.60; Aug. 19, 1955, 14.29.

16/3W-23K3. S. H. McIntosh. Mission Valley. Driven observation water-table well in alluvium of Recent age, diameter 2 inches, depth 20 feet. Land-surface datum is 26.8 feet above msl. Highest water level 4.76 below lsd, Mar. 11, 1937; lowest dry, Aug. 19, Dec. 6, 1955. Records available: 1927-55. Feb. 24, 12.50; June 23, 14.56; Aug. 19, dry; Dec. 6, dry.

San Dieguito River Basin

12/1W-31H2. City of San Diego. San Pasqual Valley. Drilled domestic water-table well in alluvial deposits, diameter 12 inches, depth 46 feet. Land-surface datum is 357.4 feet above msl. Highest water level 3.59 below lsd, Feb. 22, 1933; lowest 13.90 below lsd, Nov. 30, 1955. Records available: 1929-55. Corrected measurements in 1954.

Feb. 23, 1954	10.14	Aug. 23, 1954	11.37	Feb. 25, 1955	11.25	Aug. 16, 1955	13.28
May 14	8.87	Nov. 12	12.10	June 16	12.10	Nov. 30	13.90

12/1W-33J1. F. B. Gierman. San Pasqual Valley. Dug concrete-lined unused water-table well in alluvium of Recent age, diameter 10 inches, depth 17 feet. Land-surface datum is 391.8 feet above msl. Highest water level 0.00, Mar. 30, 1944; lowest 7.30 below lsd, Nov. 24, 1953. Records available: 1943-55. Feb. 25, 5.65; June 16, 6.33; Aug. 16, 6.72; Nov. 30, 6.58.

12/1W-35F1. San Pasqual Academy. Near San Pasqual. Drilled unused water-table well in alluvium of Recent age, diameter 5 inches, depth 37 feet. Land-surface datum is about 430 feet above msl. Highest water level 6.17 below lsd, May 22, 1946; lowest 23.74 below lsd, Jan. 7, 1952. Records available: 1945-55. Feb. 25, 19.40.

13/2W-1J1. Owner unknown. Near upstream end at Lake Hodges near gaging station. Drilled unused water-table well in alluvium of Recent age, diameter 14 inches, depth 86 feet. Land-surface datum is about 335 feet above msl. Highest water level 2.27 below lsd, May 14, 1954; lowest 16.72 below lsd, Nov. 30, 1955. Records available: 1953-55. Feb. 25, 5.56; Apr. 13, 5.54; May 16, 5.69; June 16, 6.00; Aug. 16, 8.65; Nov. 30, 16.72.

13/3W-33C1. Owner unknown. Near Rancho Santa Fe. Drilled unused water-table well in alluvium of Recent age, diameter 12 inches, depth 66 feet. Land-surface datum is about 40 feet above msl. Highest water level 30.88 below lsd, Dec. 7, 1953; lowest 35.65 below lsd, Nov. 30, 1955. Records available: 1953-55. Mar. 1, 32.75; June 16, 33.44; Aug. 16, 34.08; Nov. 30, 35.65.

13/3W-33M1. Griset Bros. Near Rancho Santa Fe. Drilled unused water-table well in alluvium of Recent age, diameter 12 inches, depth 90 feet. Land-surface datum is about 35 feet above msl. Highest water level 28.22 below lsd, Jan. 8, 1954; lowest 41.38 below lsd, Nov. 30, 1955. Records available: 1954-55. Water level below sea level. Mar. 1, 36.03; June 16, 38.40 Aug. 16, 39.46; Nov. 30, 41.38.

14/3W-7C1. Walter Connelly. Near Del Mar. Drilled unused artesian well in alluvium of Recent age, diameter 10 inches, depth 80 feet. Land-surface datum is about 15 feet above msl. Highest water level 7.66 below lsd, Feb. 23, 1954; lowest 19.50 below lsd, May 14, 1954. Records available: 1953-54. No measurement made in 1955.

San Luis Rey River Basin

10/1W-8P1. H. N. Berger. Pauma Valley. Drilled unused water-table well in alluvium of Recent age, diameter 14 inches, depth 198 feet. Land-surface datum is about 725 feet above msl. Highest water level 10.28 below lsd, May 14, 1954; lowest 18.76 below lsd, Nov. 12, 1954. Records available: 1954-55. Feb. 25, 12.97; Dec. 5, 16.30.

10/2W-6F2. San Luis Rey Ranch. Monserate Narrows, near gaging station. Drilled unused water-table well in alluvium of Recent age, diameter 12 inches, depth 109 feet. Land-surface datum is 282.36 feet above msl. Highest water level 5.18 below lsd, Mar. 15, 1943; lowest 16.90 below lsd, Dec. 5, 1955. Records available: 1937-55. Feb. 25, 9.12; June 16, 9.57; Aug. 15, 14.18; Dec. 5, 16.90.

10/3W-11G1. Fallbrook Public Utility District. Near Bonsall. Drilled unused water-table well in alluvium of Recent age, diameter 8 inches, depth 66 feet. Land-surface datum is 236.91 feet above msl. Highest water level 2.33 below lsd, Mar. 15, 1943; lowest 23.50 below lsd, Dec. 5, 1955. Records available: 1939-55. Feb. 25, 17.00; June 16, 20.08; Aug. 15, 21.70; Dec. 5, 23.50.

10/3W-16F1. San Luis Rey Mutual Heights Water Co. In well field at intersection of Bonsall and Monserate Rds. Drilled unused water-table well in alluvium of Recent age, diameter 12 inches, depth 59 feet. Land-surface datum is about 190 feet above msl. Highest water level 31.27 below lsd, May 14, 1954; lowest 43.43 below lsd, Aug. 15, 1955. Records available: 1953-55. Feb. 25, 34.05; June 16, 40.40; Aug. 15, 43.43; Dec. 5, 41.20.

10/3W-30K1. Fallbrook Public Utility District. Near Bonsall. Drilled unused water-table well in alluvium of Recent age, diameter 8 inches, reported depth 80 feet. Land-surface datum is 149.76 feet above msl. Highest water level 6.09 below lsd, Mar. 17, 1941; lowest 21.40 below lsd, Dec. 5, 1955. Records available: 1939-55. Feb. 25, 19.28; June 16, 19.65; Aug. 15, 20.17; Dec. 5, 21.40.

11/4W-2D1. Winston Properties. Near San Luis Rey. Drilled irrigation water-table well in alluvium of Recent age, diameter 12 inches, reported depth 110 feet. Land-surface datum is about 95 feet above msl. Highest water level 36.69 below lsd, Feb. 23, 1954; lowest 60.70 below lsd, Dec. 5, 1955. Records available: 1953-55. Feb. 25, 45.98; Dec. 5, 60.70.

11/4W-9F1. City of Oceanside. Near San Luis Rey. Drilled observation well in alluvium of Recent age, diameter 4 inches, reported depth 199 feet. Land-surface datum is about 63 feet above msl. Highest water level 3.47 below lsd, Mar. 14, 1943; lowest 64.93 below lsd, Nov. 8, 1955. Records available: 1940-55. Records furnished by city of Oceanside.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	56.35	Apr. 4	55.27	July 10	57.26	Oct. 4	60.43
Feb. 9	55.52	May 5	55.93	Aug. 1	j64.77	Nov. 8	64.93
Mar. 11	55.02	June 7	56.83	Sept. 7	60.84	Dec. 9	61.27

j Water level below sea level.

11/4W-18C2. Robert Slaught. Near San Luis Rey. Drilled unused artesian well in alluvium of Recent age, diameter 12 inches, reported depth 134 feet. Land-surface datum is about 37 feet above msl. Highest water level 34.72 below lsd, Mar. 4, 1952; lowest 61.59 below lsd, Aug. 31, 1954. Records available: 1952-55. Water level below sea level. Feb. 25, 46.70; June 16, 55.10; Aug. 15, 60.90; Dec. 5, 52.00.

11/4W-18L3. Carlsbad Mutual Water Co. Near Oceanside. Drilled observation artesian well in alluvium of Recent age, diameter 6 inches, reported depth 115 feet. Land-surface datum is 35.34 feet above msl. Highest water level 5.97 below lsd, Apr. 14, 1941; lowest 67.57 below lsd, Aug. 15, 1955. Records available: 1939-55. Records furnished by Carlsbad Mutual Water Co. Water level below sea level. Feb. 25, 51.35; June 16, 61.95; Aug. 15, 67.57; Dec. 5, 52.90.

11/5W-13N1. City of Oceanside. Near airport. Drilled unused artesian well in alluvium of Recent age, diameter 14 inches, depth 160 feet. Land-surface datum is 16.26 feet above msl. Highest water level 1.61 below lsd, Mar. 15, 1943; lowest 28.08 below lsd, Sept. 7, 1955. Records available: 1939-55. Records furnished by city of Oceanside. Water level below sea level.

Jan. 4	24.33	Apr. 4	25.17	July 10	25.66	Oct. 4	27.42
Feb. 9	23.50	May 5	23.08	Aug. 1	27.00	Nov. 8	27.82
Mar. 11	23.08	June 7	25.08	Sept. 7	28.08	Dec. 9	25.42

Otay River Basin

18/1W-19D1. W. Ellerson. Near Otay. Drilled domestic water-table well in marine sand and gravel of Pliocene age, diameter 10 inches, reported depth 182 feet. Land-surface datum is about 130 feet above msl. Highest water level 55.40 below lsd, May 18, 1954; lowest 63.85 below lsd, Dec. 6, 1955. Records available: 1953-55. Feb. 24, 57.65; June 23, 57.90; Aug. 19, 59.90; Dec. 6, 63.85.

18/2W-22F1. Western Aire Motel. Near Otay. Drilled domestic well in alluvium of Recent age, diameter 10 inches, reported depth 150 feet. Land-surface datum is about 40 feet above msl. Highest water level 18.40 below lsd, Apr. 10, 1922; lowest 48.30 below lsd, Dec. 6, 1955. Records available: 1916-55. Feb. 24, 38.89; June 23, 47.25, water level below sea level; Aug. 19, 45.30, water level below sea level; Dec. 6, 48.30, water level below sea level.

Sweetwater River Basin

17/1W-19Q2. California Water & Telephone Co. Near Sunnyside. Drilled unused water-table well in alluvium of Recent age, diameter 12 inches, depth 40 feet. Land-surface datum is about 85 feet above msl. Highest water level 1.51 below lsd, Dec. 23, 1943; lowest 38.29 below lsd, Dec. 28, 1949. Records available: 1943-55. Feb. 24, 6.69; June 23, 6.36; Aug. 19, 7.00; Dec. 6, 6.50.

17/2W-35E1. Owner unknown. Near Chula Vista. Drilled domestic well in alluvium of Recent age, diameter 12 inches, depth 58 feet. Land-surface datum is about 35 feet above msl. Highest water level 8.62 below lsd, Nov. 10, 1954; lowest 13.20 below lsd, Dec. 6, 1955. Records available: 1953-55. Feb. 24, 12.17; June 23, 12.78; Aug. 19, 13.15; Dec. 6, 13.20.

Tia Juana River Basin

18/2W-33L1. Robert Egger. Near Nestor. Driven observation water-table well in alluvium of Recent age, diameter 2 inches, depth 29 feet. Land-surface datum is 19.04 feet above msl. Highest water level 5.16 below lsd, May 15, 1941; lowest 28.57 below lsd, Dec. 6, 1955. Records available: 1927-55. Water level below sea level. Feb. 24, 21.50; June 23, 24.49; Aug. 19, 26.70; Dec. 6, 28.57.

18/2W-34J1. C. Iguchi. Near Nestor. Driven observation water-table well in alluvium of Recent age, diameter 2 inches, depth 28 feet. Land-surface datum is 30.97 feet above msl. Highest water level 3.01 below lsd, Jan. 26, 1944; lowest 25.85 below lsd, Dec. 6, 1955. Records available: 1927-55. Feb. 24, 23.60; June 23, 25.06; Aug. 19, 25.30; Dec. 6, 25.85.

19/2W-1N1. State of California. Near San Ysidro. Drilled observation water-table well in alluvium of Recent age, diameter 8 inches, depth 68 feet. Land-surface datum is about 50 feet above msl. Highest water level 8.32 below lsd, May 18, 1954; lowest 15.00 below lsd, Dec. 6, 1955. Records available: 1953-55. Feb. 24, 10.55; June 23, 12.09; Aug. 19, 13.20; Dec. 6, 15.00.

19/2W-4A6. California Water & Telephone Co. Near Nestor. Drilled unused artesian well in alluvium of Recent age, diameter 12 inches, depth 90 feet. Land-surface datum is about 25 feet above msl. Highest water level 19.87 below lsd, May 18, 1954; lowest 33.00 below lsd, Dec. 6, 1955. Records available: 1953-55. Water level below sea level. Feb. 24, 26.15; June 23, 30.12; Aug. 19, 32.50; Dec. 6, 33.00.

San Joaquin County

Mokelumne River Basin

[Measurements furnished by East Bay Municipal Utility District are marked with an asterisk]

*3N/6-3K11. F. B. Mills Estate. About 1.8 miles west of Lodi. Drilled irrigation water-table well in Victor formation, diameter 12 inches, depth 120 feet. Land-surface datum is 41.03 feet above msl. Highest water level 11.62 below lsd, Jan. 2, 1951; lowest 22.20 below lsd, July 1, 1955. Records available: 1947-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	19.21	Apr. 1	20.60	July 1	22.20	Nov. 1	20.08
Feb. 1	19.50	May 2	19.64	Aug. 1	21.34	Dec. 1	20.28
Mar. 1	19.82	June 2	18.96	Oct. 3	20.23		

*3N/6-17D11. A. Delu. Near Lodi. Drilled irrigation water-table well in Victor formation, diameter 12 inches, depth 93 feet. Land-surface datum is 23.80 feet above msl. Highest water level 7.46 below lsd, May 1, 1952; lowest 25.40 below lsd, Sept. 1, 1955. Records available: 1949-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	18.68	Apr. 1	16.50	July 1	20.81	Oct. 3	23.97
Feb. 1	17.75	May 2	17.30	Aug. 1	24.37	Nov. 1	22.33
Mar. 1	16.72	June 1	18.35	Sept. 1	25.40	Dec. 1	20.83

*3N/6-25R11. E. E. Morse Estate. About 4.4 miles south of Lodi. Drilled domestic water-table well in Victor formation, diameter 10 inches, depth 93 feet. Land-surface datum is 40.55 feet above msl. Highest water level 26.15 below lsd, Jan. 5, 1953; lowest 38.59 below lsd, Oct. 5, 1955. Records available: 1948-55. Jan. 3, 30.70; Oct. 5, 38.59.

3N/6-36R2. Leland W. Bunch. About 5.5 miles south of Lodi. Drilled domestic water-table well in Victor formation, diameter 8 inches, depth 85 feet. Land-surface datum is 37.97 feet above msl. Highest water level 11.72 below lsd, Apr. 8, 1938; lowest 38.43 below lsd, Oct. 5, 1955. Records available: 1926-29, 1935-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	27.37	May 2	27.95	Aug. 1	36.21	Oct. 15	36.92
Feb. 1	26.65	June 1	30.15	Sept. 1	37.47	Nov. 1	37.18
Mar. 1	26.22	July 1	34.08	Oct. 5	38.43	Dec. 1	35.01
Apr. 1	27.53						

3N/7-3C1. Jacob Knoll. About 4.0 miles east of Lodi. Drilled observation water-table well in Victor formation, diameter 8 inches, depth 48 feet, cased to 48, perforations 38-48. Land-surface datum is 80.45 feet above msl. Highest water level 25.31 below lsd, June 2, 1943; lowest 42.72 below lsd, Dec. 1, 1955. Records available: 1935-55.

Jan. 4	41.27	Apr. 1	41.69	July 1	39.81	Oct. 6	41.44
Feb. 1	41.18	May 2	41.00	Aug. 1	40.94	Nov. 1	42.57
Mar. 1	41.28	June 1	38.05	Sept. 1	41.80	Dec. 1	42.72

3N/7-6M8. R. E. and Ruth F. Coker. About 215 feet east of Cherokee Lane and 2 feet north of Southern Pacific RR. right-of-way, Lodi. Drilled observation water-table well in Victor formation, diameter 4 inches, depth 40 feet, cased to 40, perforations 30-40. Land-surface datum is 53.35 feet above msl. Highest water level 17.82 below lsd, Apr. 30, 1943; lowest dry, May 3, July-December 1954, April-October 1955. Records available: 1935-55.

Jan. 3	27.62	Apr. 1	(f)	July 1	(f)	Sept. 1	(f)
Feb. 1	27.32	May 2	(f)	Aug. 1	(f)	Oct. 5	(f)
Mar. 1	27.56	June 1	(f)				

f Dry.

3N/7-7M1. J. and Rachel K. Goetken. East of Cherokee Lane, Lodi. Drilled irrigation water-table well in Victor formation, diameter 10 inches, depth 49 feet. Land-surface datum is 52.63 feet above msl. Highest water level 24.51 below lsd, Apr. 6, 1938; lowest 42.52 below lsd, May 1, 1950. Records available: 1935-55.

Jan. 3	35.60	Apr. 1	38.57	July 1	39.67	Oct. 5	38.30
Feb. 1	35.03	May 2	40.47	Aug. 1	38.95	Nov. 1	37.68
Mar. 1	35.57	June 1	39.27	Sept. 1	39.75	Dec. 1	35.73

3N/7-10L3. Edward Preszler. Near Lodi. Drilled observation water-table well in Victor formation, diameter 10 inches, depth 57 feet, cased to 57, perforations 47-57. Land-surface datum is 72.59 feet above msl. Highest water level 35.33 below lsd, Jan. 12, 1939; lowest dry, Apr. 1, May 3, June 1, 1954. Records available: 1935-55.

Jan. 4	47.24	Apr. 1	47.58	July 1	43.56	Oct. 5	45.56
Feb. 1	36.46	May 2	42.76	Aug. 1	43.39	Nov. 1	46.54
Mar. 1	46.23	June 1	43.21	Sept. 1	44.13	Dec. 1	47.49

3N/7-10L4. Edward Preszler. Near Lodi. Drilled observation water-table well in Victor, Arroyo Seco, and Laguna formations, diameter 12 to 10 inches, depth 190 feet, cased to 190. Land-surface datum is 72.37 feet above msl. Highest water level 35.13 below lsd, Jan. 12, 1939; lowest 64.04 below lsd, July 1, 1955. Records available: 1935-55.

Jan. 4	52.78	Apr. 1	62.03	July 1	64.04	Nov. 1	57.79
Feb. 1	51.85	May 2	63.16	Sept. 1	63.95	Dec. 1	55.82
Mar. 1	51.98	June 1	61.24	Oct. 5	60.03		

*3N/7-18N12. Joe Garnero. About 2.5 miles south of Lodi. Drilled domestic water-table well in Victor formation, diameter 6 inches, depth 78 feet. Land-surface datum is 47.44 feet above msl. Highest water level 29.86 below lsd, Feb. 2, 1953; lowest 44.40 below lsd, Aug. 1, 1950. Records available: 1946-55.

Jan. 3	35.47	Apr. 1	36.30	Aug. 1	42.94	Nov. 1	38.39
Feb. 1	34.89	May 2	40.73	Sept. 1	41.44	Dec. 1	37.39
Mar. 1	34.51	June 1	40.70	Oct. 5	39.50		

*3N/7-22C11. John Nietschke. About 4.6 miles southeast of Lodi. Drilled domestic water-table well, largely in Victor formation, but probably penetrating into underlying Arroyo Seco and Laguna formations, diameter 8 inches, depth 137 feet. Land-surface datum is 66.43 feet above msl. Highest water level 50.21 below lsd, Mar. 2, 1953; lowest 68.52 below lsd, Sept. 1, 1955. Records available: 1952-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	58.75	Apr. 1	59.45	July 1	64.74	Oct. 5	65.83
Feb. 1	57.45	May 2	60.76	Aug. 1	67.96	Nov. 1	64.81
Mar. 1	56.34	June 1	63.13	Sept. 1	68.52	Dec. 1	61.87

3N/7-27F3. John F. Heitzmann. About 5.5 miles southeast of Lodi. Drilled observation water-table well in Victor formation, diameter 8 inches, depth 91 feet, cased to 63. Land-surface datum is 59.42 feet above msl. Highest water level 26.12 below lsd, Mar. 31, 1943; lowest 63.60 below lsd, Sept. 1, 1955. Records available: 1935-55.

Jan. 4	56.27	Apr. 1	53.19	July 1	59.19	Oct. 5	62.59
Feb. 1	54.79	May 2	53.69	Aug. 1	61.76	Nov. 1	61.37
Mar. 1	53.34	June 1	55.02	Sept. 1	63.60	Dec. 1	59.70

*4N/6-12R11. A. T. Carlson. About 4.5 miles north of Lodi. Drilled domestic and irrigation water-table well in Victor, Arroyo Seco, and Laguna formations, diameter 8 inches, reported depth 150 feet. Land-surface datum is 57.95 feet above msl. Highest water level 38.84 below lsd, May 1, 1952; lowest 59.02 below lsd, Aug. 2, 1954. Records available: 1948-55.

Jan. 3	48.13	Apr. 1	50.77	Aug. 1	58.99	Nov. 1	56.31
Feb. 1	46.83	May 2	46.53	Oct. 5	58.57	Dec. 1	53.03
Mar. 1	45.77	July 1	54.03				

*4N/6-13J11. Dorothy Woodworth. About 4.0 miles north of Lodi. Drilled domestic water-table well in Victor formation, diameter 6 inches, depth 74 feet. Land-surface datum is 59.43 feet above msl. Highest water level 38.53 below lsd, May 1, 1952; lowest 58.34 below lsd, Sept. 1, 1955. Records available: 1948-55.

Jan. 3	47.57	Apr. 1	46.34	Aug. 1	57.84	Nov. 1	52.35
Feb. 1	46.62	June 1	49.01	Sept. 1	58.34	Dec. 1	50.46
Mar. 1	45.63	July 1	54.09	Oct. 5	54.48		

4N/6-34R1. E. M. Smith. About 1.7 miles northwest of Lodi. Drilled unused water-table well in Victor formation, diameter 10 inches, reported depth 120 feet in 1926-29, reported 34 feet in 1935, and 19 feet in 1950. Land-surface datum is 43.28 feet above msl. Highest water level 2.60 below lsd, June 14, 1935; lowest dry several times, 1950, 1954-55. Records available: 1926-29, 1935-55. Dry entire year.

4N/6-36D1. D. D. Smith and S. H. and I. Zimmerman. About 1.6 miles north of Lodi. Drilled unused water-table well in Victor formation, diameter 6 inches, depth 35 feet. Land-surface datum is 49.90 feet above msl. Highest water level 15.02 below lsd, Mar. 31, 1943; lowest dry at 35, May 1, 1946. Records available: 1926-29, 1935-55.

Jan. 3	25.32	Apr. 1	26.62	July 1	27.53	Oct. 4	25.91
Feb. 1	25.28	May 2	29.70	Aug. 1	27.73	Nov. 1	25.56
Mar. 1	25.16	June 1	29.30	Sept. 1	27.43	Dec. 1	26.12

4N/7-15B3. Robert L. Carter. About 6.0 miles northeast of Lodi. Drilled observation water-table well in Victor formation, diameter 8 inches, depth 85 feet, cased to 69. Land-surface datum is 92.05 feet above msl. Highest water level 32.11 below lsd, Sept. 1, 1939; lowest 75.47 below lsd, Sept. 1, 1955. Records available: 1935-55.

Jan. 5	68.47	Apr. 1	66.40	July 1	71.70	Oct. 7	74.50
Feb. 1	62.93	May 2	67.09	Aug. 1	73.82	Nov. 1	73.40
Mar. 1	66.23	June 1	68.91	Sept. 1	75.47	Dec. 1	71.90

4N/7-22Q4. Adolphus Eddlemon. About 4.9 miles northeast of Lodi, 5 feet north of well 4N/7-22Q5. Drilled observation water-table well in Victor formation and underlying unclassified sand and gravel, diameter 10 inches, depth 51 feet, cased to 51, perforations 39-49. Land-surface datum is 83.61 feet above msl. Highest water level 35.95 below lsd, Apr. 30, 1943; lowest dry several times, 1949-51, 1954-55. Records available: 1935-55. Dry entire year.

4N/7-22Q5. Adolphus Eddlemon. About 4.9 miles northeast of Lodi, 5 feet south of well 4N/7-22Q4. Drilled observation artesian well in Victor, Arroyo Seco, and Laguna formations, diameter 10 inches, depth 266 feet, cased 0-79, 129-149. Land-surface datum is 83.83 feet above msl. Highest water level 36.34 below lsd, Mar. 31, 1943; lowest 65.67 below lsd, Aug. 2, 1954. Records available: 1935-55.

Jan. 4	53.64	Apr. 1	56.49	July 1	65.30	Oct. 7	60.25
Feb. 1	52.71	May 2	60.55	Aug. 1	65.25	Nov. 1	58.68
Mar. 1	52.24	June 1	62.77	Sept. 1	64.69	Dec. 1	56.92

4N/7-27P1. Frank H. and Leonard W. Buck. About 4.4 miles northeast of Lodi. Drilled observation water-table well in Victor formation, diameter 10 inches, depth 49 feet, cased to 49, perforations 39-49. Land-surface datum is 81.20 feet above msl. Highest water level 24.60 below lsd, June 3, 1938; lowest 38.95 below lsd, Sept. 1, 1955. Records available: 1935-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	36.99	Apr. 1	37.74	July 1	38.67	Oct. 7	38.66
Feb. 1	36.77	May 2	38.24	Aug. 1	38.79	Nov. 1	38.59
Mar. 1	36.73	June 1	38.30	Sept. 1	38.95	Dec. 1	38.48

*4N/7-30E4. Charles Weber. About 2.5 miles north of Lodi. Drilled unused water-table well in Victor formation, diameter 6 inches, depth 76 feet. Land-surface datum is 57.18 feet above msl. Highest water level 26.35 below lsd, Jan. 4, 1944; lowest 44.67 below lsd, Sept. 1, 1955. Records available: 1941-55.

Jan. 3	37.81	Apr. 1	37.15	July 1	43.74	Oct. 5	42.26
Feb. 1	37.17	May 2	42.70	Aug. 1	44.36	Nov. 1	40.82
Mar. 1	36.56	June 1	42.88	Sept. 1	44.67	Dec. 1	39.88

4N/7-31M3. Charles H. Woest. About 1.2 miles north of Lodi. Drilled domestic water-table well in Victor formation, diameter 6 inches, depth 50 feet. Land-surface datum is 57.78 feet above msl. Highest water level 15.94 below lsd, June 3, 1938; lowest 32.73 below lsd, Apr. 1, 1948. Records available: 1935-55.

Jan. 3	27.89	Apr. 1	28.69	July 1	29.88	Oct. 5	28.05
Feb. 1	27.78	May 2	31.94	Aug. 1	29.92	Nov. 1	28.13
Mar. 1	27.81	June 1	29.74	Sept. 1	29.14	Dec. 1	29.59

4N/7-31N5. Jacob Goehring. About 1.0 mile northeast of Lodi. Drilled observation water-table well in alluvium, diameter 4 inches, depth 25 feet, cased to 25, perforations 15-25. Land-surface datum is 44.12 feet above msl. Highest water level 1.73 below lsd, Apr. 30, 1943; lowest 14.63 below lsd, Mar. 1, 1948. Records available: 1935-55.

Jan. 3	12.42	Apr. 1	12.65	July 1	10.70	Oct. 5	10.70
Feb. 1	12.36	May 2	10.98	Aug. 1	10.79	Nov. 1	11.00
Mar. 1	12.54	June 1	10.70	Sept. 1	10.80	Dec. 1	13.19

*4N/7-34F11. John J. Schmiedt. About 4.2 miles east of Lodi. Drilled observation water-table well in alluvium, diameter 4 inches, depth 24 feet. Land-surface datum is 61.76 feet above msl. Highest water level 11.69 below lsd, July 1, 1953; lowest 17.49 below lsd, June 1, 1955. Records available: 1952-55.

Jan. 4	15.02	Apr. 1	16.74	July 1	16.90	Oct. 6	16.85
Feb. 1	14.84	May 2	17.27	Aug. 1	16.68	Nov. 1	16.88
Mar. 1	15.29	June 1	17.49	Sept. 1	16.52	Dec. 1	16.76

Santa Barbara County

Carpinteria Basin

4/25-19F4. M. F. Lewis. Near Carpinteria. Drilled domestic and irrigation artesian well in older alluvium and Casitas formation, diameter 8 inches, depth 250 feet. Land-surface datum is about 106 feet above msl. Highest water level 77.10 below lsd, May 27, 1943; lowest 123.40 below lsd, Mar. 22, 1950. Records available: 1941-55.

Jan. 27	97.07	Apr. 29	93.99	July 26	95.88	Oct. 27	102.05
Feb. 25	96.37	May 26	92.80	Aug. 29	98.83	Nov. 28	102.19
Mar. 31	93.13	June 28	98.26	Sept. 30	101.57	Dec. 29	100.59

4/25-19J5. Lyman & Young. Drilled unused artesian well in alluvium, diameter 8 inches, depth 100 feet. Land-surface datum is about 55 feet above msl. Highest water level 39.41 below lsd, Apr. 23, 1942; lowest 92.95 below lsd, Sept. 25, 1951. Records available: 1941-55.

Mar. 31	55.54	Apr. 29	58.15	July 26	c67.76	Nov. 28	70.82
Apr. 7	56.16	May 26	56.07	Aug. 29	70.25	Dec. 29	67.80

c Nearby well being pumped.

4/25-20L4. Carpinteria County Water District. Drilled recharge water-table well in alluvium and Casitas formation, diameter 10 inches, depth 264 feet, cased to 254, perforations 62-254. Land-surface datum is about 111 feet above msl. Highest water level 95.90 below lsd, Mar. 31, 1955; lowest 153.17 below lsd, Sept. 25, 1951. Records available: 1949-55.

Mar. 31	95.90	June 28	112.26	Sept. 30	129.55	Nov. 28	128.63
Apr. 29	113.04	July 26	125.30	Oct. 27	c133.15	Dec. 29	125.25
May 26	108.10	Aug. 29	c129.56				

c Nearby well being pumped.

4/25-21R1. Ben Moore. Drilled unused water-table well in Casitas formation, diameter 12 inches, depth 468 feet, cased to 434, perforations 82-90, 120-150, 170-176, 240, 289-304, 314-318, 341, 356-386, 412-416. Land-surface datum is about 127 feet above msl. Highest water level 64.47 below lsd, June 5, 1945; lowest 126.08 below lsd, Nov. 26, 1951. Records available: 1941-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	119.21	Apr. 29	115.32	July 26	114.60	Oct. 27	117.26
Feb. 25	117.45	May 26	115.24	Aug. 29	115.51	Nov. 28	116.12
Mar. 31	116.32	June 28	122.30	Sept. 30	116.67	Dec. 29	115.23

4/25-26A1. Moses Mesa Associates Co. Drilled unused water-table well in Casitas formation, diameter 10 inches, depth 480 feet, cased to 480, perforations 228-480. Land-surface datum is about 412 feet above msl. Highest water level 230.09 below lsd, Feb. 8, 1946; lowest 387.00 below lsd, Nov. 28, 1955. Records available: 1946-55.

Jan. 27	333.83	Apr. 29	328.99	Aug. 29	366.28	Oct. 27	c382.60
Feb. 25	330.33	May 26	328.60	Sept. 30	369.80	Nov. 28	387.00
Mar. 31	325.70						

c Nearby well being pumped.

4/25-26C2. Shepard Mesa Mutual Water Co. Drilled unused water-table well in Casitas formation, diameter 10 inches, depth 450 feet. Land-surface datum is about 432 feet above msl. Highest water level 226.10 below lsd, May 6, 1946; lowest 353.99 below lsd, Nov. 26, 1951. Records available: 1946-55.

Jan. 27	325.90	Mar. 31	322.15	May 26	329.00	Sept. 30	341.55
Feb. 26	321.42	Apr. 29	329.42	Aug. 29	338.84	Oct. 27	343.90

4/25-27Q2. A. F. Heimlich. Drilled unused artesian well in Casitas formation, diameter 10 inches, depth 198 feet. Land-surface datum is about 127 feet above msl. Highest water level 92.86 below lsd, Apr. 30, 1945; lowest 175.42 below lsd, Sept. 25, 1951. Records available: 1941-55. Recording gage removed June 15.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	146.35	143.80	142.00	139.20	139.45	.....	.....	.....	.....	.....	.....	.....
2	146.33	143.77	141.95	139.17	139.58	.....	.....	.....	.....	.....	.....	.....
3	146.33	143.80	141.97	139.15	139.60	138.55	.....	.....	.....	.....	.....	.....
4	146.39	143.86	141.84	139.06	139.31	138.33	.....	.....	.....	.....	.....	.....
5	146.32	143.55	141.82	139.17	139.30	138.27	.....	.....	.....	.....	.....	.....
6	146.24	143.55	141.80	139.22	139.34	138.29	.....	.....	.....	.....	.....	.....
7	146.24	143.75	141.40	139.18	139.30	138.33	.....	.....	.....	.....	.....	.....
8	146.26	143.35	141.30	139.15	139.28	138.21	.....	.....	.....	.....	.....	.....
9	.....	143.20	141.31	139.14	139.23	138.17	.....	.....	.....	.....	.....	.....
10	.....	143.25	141.35	139.05	138.22	138.18	.....	.....	.....	.....	.....	.....
11	.....	143.37	141.35	139.06	139.22	138.28	.....	.....	.....	.....	.....	.....
12	.....	143.30	141.15	139.29	139.07	138.30	.....	.....	.....	.....	.....	.....
13	.....	143.23	140.95	139.58	138.92	138.30	.....	.....	.....	.....	.....	.....
14	.....	143.22	140.83	139.40	138.92	138.43	.....	.....	.....	.....	.....	.....
15	.....	143.09	140.79	139.33	139.00	138.28	.....	.....	.....	.....	.....	.....
16	.....	143.03	140.80	139.53	138.79	.....	.....	.....	.....	.....	.....	.....
17	.....	142.95	140.71	139.65	138.67	.....	.....	.....	.....	.....	.....	.....
18	.....	142.92	140.46	139.76	138.65	.....	.....	.....	.....	.....	.....	.....
19	144.11	143.00	140.26	139.87	138.56	.....	.....	.....	.....	.....	.....	.....
20	144.08	142.91	140.30	139.83	138.55	.....	.....	.....	.....	.....	.....	.....
21	144.04	142.90	140.45	139.55	138.44	.....	.....	.....	.....	.....	.....	.....
22	144.01	142.55	140.08	139.50	138.45	.....	.....	.....	.....	.....	.....	.....
23	143.96	142.55	140.03	139.50	138.65	.....	.....	.....	.....	.....	.....	.....
24	143.93	142.40	139.93	139.45	138.45	.....	.....	.....	.....	.....	.....	.....
25	143.93	142.31	139.70	139.46	138.37	.....	.....	.....	.....	.....	.....	.....
26	143.96	142.35	139.64	139.54	.....	.....	h141.02	.....	.....	.....	.....	.....
27	143.93	142.30	139.65	139.45	.....	.....	.....	.....	.....	h146.58	.....	.....
28	143.88	142.30	139.70	139.25	.....	h140.16	.....	.....	.....	.....	h146.68	.....
29	143.83		.....	139.25	h138.56	.....	.....	h142.72	.....	.....	.....	h146.44
30	143.80		.....	139.45	.....	.....	.....	.....	h145.68	.....	.....	.....
31	143.83		h139.45		.....		.....	.....		.....		.....

h Tape measurement.

4/25-27R2. W. H. Yule. Drilled irrigation artesian well in Casitas formation, diameter 12 to 10 inches, depth 421 feet, cased to 421, perforations 295-310, 350-378, 392-420. Land-surface datum is about 132 feet above msl. Highest water level 94.96 below lsd, Apr. 30, 1945; lowest 182.23 below lsd, Sept. 25, 1951. Records available: 1941-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	163.34	Apr. 29	157.84	July 26	158.95	Nov. 28	163.14
Feb. 25	160.19	May 26	157.10	Aug. 29	163.26	Dec. 29	160.24
Mar. 31	157.97						

4/25-28J1. W. C. and C. A. Catlin. Drilled domestic and irrigation water-table well in alluvium, diameter 12 inches, depth 175 feet, cased to 175, perforations 59-175. Land-surface datum is about 89 feet above msl. Highest water level 23.00 below lsd, June 1919; lowest 124.64 below lsd, Nov. 23, 1953. Records available: 1919, 1930, 1937-38, 1940-55. Jan. 27, 110.19; Feb. 25, 106.69; Mar. 31, 103.52; May 26, 101.70; Sept. 30, 116.24; Nov. 28, 114.03.

4/25-28M1. Mrs. A. Baylor. Drilled unused artesian well in alluvium, diameter 2 inches, depth 96 feet. Land-surface datum is about 57 feet above msl. Highest water level 19.84 below lsd, Apr. 30, 1945; lowest dry, Aug. 30-Sept. 25, 1951. Records available: 1941-55.

Jan. 27	71.91	Apr. 29	69.78	July 26	80.85	Oct. 27	81.80
Feb. 25	68.63	May 29	69.29	Aug. 29	81.27	Nov. 28	75.92
Mar. 31	65.66	June 28	80.38	Sept. 30	79.26	Dec. 29	72.70

4/25-29D1. H. Sturmer. Drilled domestic and irrigation artesian well in alluvium, diameter 12 inches, depth 147 feet. Land-surface datum is about 17 feet above msl. Highest water level 1.48 below lsd, Apr. 23, 1942; lowest 57.28 below lsd, Sept. 25, 1951. Records available: 1928-29, 1938, 1941-55.

Jan. 27	25.98	Apr. 29	21.70	July 26	33.68	Oct. 27	35.30
Feb. 25	23.68	May 26	20.60	Aug. 29	37.48	Nov. 28	33.60
Mar. 31	19.46	June 28	25.64	Sept. 30	35.85	Dec. 29	30.62

4/25-29L1. A. P. Salzgeber. Drilled unused artesian well in alluvium, diameter 2 inches, depth 110 feet. Land-surface datum is about 18 feet above msl. Highest water level 12.26 below lsd, May 25, 1954; lowest 51.24 below lsd, Sept. 25, 1951. Records available: 1950-55.

Jan. 27	17.70	Apr. 29	14.48	July 26	25.25	Oct. 27	28.91
Feb. 25	15.04	May 26	12.38	Aug. 29	29.48	Nov. 28	23.80
Mar. 31	12.53	June 28	21.17	Sept. 30	28.90	Dec. 29	20.87

4/25-29R1. Carpinteria Union High School. Drilled unused artesian well in alluvium, diameter 10 inches, depth 176 feet. Land-surface datum is about 32 feet above msl. Highest water level 8.67 below lsd, Apr. 23, 1942; lowest 68.85 below lsd, Aug. 29, 1955. Records available: 1941-55.

Jan. 27	44.98	Apr. 29	43.91	July 26	57.91	Oct. 27	61.26
Feb. 25	43.26	May 26	42.11	Aug. 29	68.85	Nov. 28	52.25
Mar. 31	41.84	June 28	56.05	Sept. 30	65.75	Dec. 29	47.21

4/25-30D1. Sandyland Beach Club. Drilled domestic artesian well in alluvium, diameter 10 inches, depth 210 feet. Land-surface datum is about 7 feet above msl. Highest water level flowing, May 6, 1938; lowest 48.73 below lsd, Nov. 26, 1951. Records available: 1938, 1941-55.

Jan. 27	10.50	Apr. 29	11.39	July 26	14.30	Oct. 27	16.96
Feb. 25	8.20	May 26	9.00	Aug. 29	16.40	Nov. 28	15.24
Apr. 7	8.92	June 28	8.94	Sept. 30	17.56		

4/25-30D2. California State Highway Dept. Drilled unused water-table well in alluvium, diameter 8 inches, depth 93 feet. Land-surface datum is about 18 feet above msl. Highest water level 11.98 below lsd, May 25, 1954; lowest 41.39 below lsd, Sept. 25, 1951. Records available: 1949-55.

Jan. 27	17.96	Apr. 29	16.37	July 26	21.82	Oct. 27	24.60
Feb. 25	15.90	May 26	14.04	Aug. 29	23.05	Nov. 28	23.71
Mar. 31	14.34	June 28	17.08	Sept. 30	25.67	Dec. 29	20.58

4/25-34F2. H. R. Hirsch. Drilled gravel-packed unused water-table well in Santa Barbara formation, diameter 12 inches, depth 563 feet, cased to 563, perforations 83-563. Land-surface datum is 154.1 feet above msl. Highest water level 125.50 below lsd, June 2, 1949; lowest 142.68 below lsd, Dec. 29, 1955. Records available: 1949-55.

Jan. 27	141.29	Apr. 29	141.60	July 26	142.10	Oct. 27	142.54
Feb. 25	141.25	May 26	141.49	Aug. 29	142.22	Nov. 28	142.45
Mar. 31	141.54	June 28	141.90	Sept. 30	142.36	Dec. 29	142.68

4/25-35B1. E. R. Dickover. Drilled domestic water-table well in Casitas formation, diameter 12 inches, depth 140 feet. Land-surface datum is about 193 feet above msl. Highest water level 19.18 below lsd, Mar. 8, 1945; lowest 134.18 below lsd, Sept. 25, 1951. Records available: 1941-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	108.44	Apr. 29	114.12	Aug. 29	c133.88	Nov. 28	129.44
Feb. 25	106.10	June 28	c123.60	Sept. 30	c136.50	Dec. 29	126.14
Mar. 31	c106.70	July 26	c125.40	Oct. 27	c139.63		

c Nearby well being pumped.

4/26-23A2. Frank Wymond. Drilled domestic and irrigation artesian well in Casitas formation, diameter 10 inches, depth 330 feet. Land-surface datum is about 63 feet above msl. Highest water level 45.44 below lsd, Apr. 25, 1950; lowest 85.00 below lsd, Apr. 23, 1951. Records available: 1941, 1947-55.

Jan. 27	50.09	Apr. 29	51.40	July 26	62.23	Oct. 27	52.20
Feb. 25	49.57	May 26	52.42	Aug. 29	63.01	Nov. 28	51.56
Mar. 31	49.57	June 28	57.12	Sept. 30	61.98	Dec. 29	50.38

Goleta Basin

4/27-6N1. John McCaughy. Drilled domestic and irrigation water-table well in Santa Barbara formation, diameter 10 inches, depth 180 feet, perforations 47-100. Land-surface datum is about 231 feet above msl. Highest water level 83.76 below lsd, May 22, 1942; lowest 116.10 below lsd, July 29, 1954. Records available: 1941-49, 1952-55. Jan. 27, 109.41; Apr. 29, 109.72; May 26, 114.72; July 26, 109.80.

4/27-21B1. City of Santa Barbara. Victoria and Rancheria Sts. Drilled unused artesian well in older alluvium and Santa Barbara formation, diameter 16 inches, depth 454 feet, perforations 145-350. Land-surface datum is about 68 feet above msl. Highest water level 37.04 below lsd, Feb. 2, 1948; lowest 99.58 below lsd, Oct. 18-19, 1951. Records available: 1948-55.

Jan. 8	58.92	Apr. 22	63.46	July 22	61.70	Oct. 7	56.60
15	58.45	29	59.22	29	60.10	14	56.00
22	57.99	May 6	56.20	Aug. 5	58.05	21	55.80
28	57.50	13	62.25	12	59.29	27	55.02
Mar. 4	55.00	20	59.10	19	57.00	Nov. 10	54.55
11	55.80	June 3	61.26	26	56.65	18	54.09
18	55.64	17	64.40	Sept. 2	56.42	24	53.89
Apr. 1	61.92	24	66.45	9	58.55	Dec. 1	54.85
8	57.55	July 1	65.10	16	58.38	9	52.89
18	61.86	10	65.33	29	57.13	16	53.37

4/28-2N2. County of Santa Barbara. Tuckers Grove. Drilled unused water-table well in Santa Barbara formation, diameter 6 inches, depth 100 feet. Land-surface datum is 177.65 feet above msl. Highest water level 12.94 below lsd, Apr. 30, 1954; lowest 61.34 below lsd, Nov. 26, 1951. Records available: 1943-55.

Jan. 27	c14.23	Apr. 29	22.91	July 26	28.40	Oct. 27	34.25
Feb. 25	15.30	May 25	21.81	Aug. 29	30.58	Nov. 28	c35.98
Mar. 21	18.20	June 28	25.86	Sept. 30	32.65	Dec. 29	35.80

c Nearby well being pumped.

4/28-3E2. Peter Cavaletto. Near Goleta. Drilled unused water-table well in alluvium, diameter 8 inches, depth 75 feet. Land-surface datum is 116.73 feet above msl. Highest water level 8.57 below lsd, Apr. 12, 1941; lowest 45.17 below lsd, Oct. 22, 1948. Records available: 1941-55.

Jan. 27	12.75	Apr. 29	12.86	July 26	c15.90	Oct. 27	18.50
Feb. 25	12.51	May 25	12.56	Aug. 29	17.42	Nov. 28	12.66
Mar. 31	12.56	June 28	c26.29	Sept. 30	23.15	Dec. 29	13.45

c Nearby well being pumped.

4/28-3J3. Hollister Estate. Old San Marcos Pass Rd., north of Cathedral Oaks Rd. Drilled unused water-table well in alluvium, diameter 10 inches, depth 194 feet. Land-surface datum is about 137 feet above msl. Highest water level 36.05 below lsd, Dec. 29, 1955; lowest 42.04 below lsd, Nov. 28, 1955. Records available: 1955.

Jan. 17	39.99	Apr. 29	37.83	July 26	39.45	Oct. 27	40.43
Feb. 25	38.03	May 25	37.71	Aug. 29	40.35	Nov. 28	42.04
Mar. 31	38.50	June 28	c39.54	Sept. 30	41.25	Dec. 29	36.05

c Nearby well being pumped.

4/28-3M3. L. W. Fowler. Cathedral Oaks Rd. and Patterson Ave. Drilled unused water-table well in alluvium, diameter 8 inches, depth 171 feet. Land-surface datum is 118.40 feet above msl. Highest water level 113.01 below lsd, Dec. 26, 1947; lowest 145.24 below lsd, Sept. 30, 1949. Records available: 1947-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	121.95	May 25	119.67	Sept. 30	120.95	Nov. 28	119.15
Apr. 11	119.78	June 28	118.98	Oct. 27	118.93	Dec. 29	118.80
29	c120.11	Aug. 29	118.80				

c Nearby well being pumped.

4/28-3Q2. A. J. Haverland. Old San Marcos Pass and Cathedral Oaks Rds. Drilled unused artesian well in Santa Barbara formation, diameter 12 inches, depth 360 feet, cased to 360, perforations 126-360. Land-surface datum is 120.57 feet above msl. Highest water level 84.67 below lsd, Jan. 27, 1948; lowest 154.64 below lsd, Sept. 25, 1951. Records available: 1941, 1943-55.

Jan. 27	140.17	Apr. 29	139.40	July 26	144.02	Oct. 27	143.30
Feb. 25	139.06	May 25	138.49	Aug. 29	145.22	Nov. 28	142.63
Mar. 31	c144.10	June 28	c143.19	Sept. 30	c146.06	Dec. 29	141.63

c Nearby well being pumped.

4/28-4F4. W. C. Laird. Kellogg and Patterson Aves. Drilled unused water-table well in Santa Barbara formation, diameter 8 inches. Land-surface datum is about 145 feet above msl. Highest water level 61.37 below lsd, May 25, 1955; lowest 63.75 below lsd, Jan. 17, 1955. Records available: 1955. Jan. 17, 63.75; Feb. 25, 62.73; Apr. 29, 61.82; May 25, 61.37.

4/28-4K1. Joe Sexton. Between Kellogg Ave. and San Jose Creek, south of Patterson Ave. Drilled irrigation water-table well in alluvium, diameter 10 inches. Land-surface datum is 109.06 feet above msl. Highest water level 33.81 below lsd, Jan. 22, 1945; lowest 52.40 below lsd, Oct. 27, 1955. Records available: 1945, 1955.

Jan. 22, 1945	33.81	Apr. 29, 1955	47.82	July 26, 1955	48.38	Oct. 27, 1955	52.40
Jan. 17, 1955	49.65	May 25	47.42	Aug. 29	48.00	Nov. 28	47.97
Feb. 25	48.54	June 28	49.03	Sept. 30	48.70	Dec. 29	47.34
Mar. 31	48.18						

4/28-4Q2. R. S. Rowe. Drilled unused artesian well in Santa Barbara formation, diameter 12 inches, depth 325 feet, perforations 243-258, 290-310. Land-surface datum is 88.45 feet above msl. Highest water level 61.24 below lsd, Apr. 30, 1945; lowest 117.92 below lsd, June 6, 1950. Records available: 1941-55.

Jan. 17	110.25	Mar. 31	105.48	June 28	c116.62	Oct. 27	110.75
27	109.50	Apr. 29	105.89	Aug. 29	c119.19	Nov. 28	108.04
Feb. 25	107.70	May 25	104.13	Sept. 30	109.43		

c Nearby well being pumped.

4/28-5N3. Sellar Bullard. Stow Canyon Rd. and San Pedro Creek. Drilled unused water-table well in Santa Barbara formation, diameter 10 inches, depth 278 feet. Land-surface datum is 83.40 feet above msl. Highest water level 47.50 below lsd, Nov. 28, 1955; lowest 60.08 below lsd, Sept. 30, 1941. Records available: 1941, 1954-55.

Sept. 30, 1941	60.08	Apr. 29, 1955	50.20	Sept. 30, 1955	48.39	Nov. 28, 1955	47.50
Dec. 30, 1954	51.69	May 25	49.50	Oct. 27	48.75	Dec. 29	50.90
Apr. 8, 1955	50.48						

4/28-5R4. F. J. Ewing. Fairview and Stow Canyon Rds. Drilled irrigation artesian well in Santa Barbara formation, diameter 12 inches, depth 154 feet. Land-surface datum is 57.15 feet above msl. Highest water level 40.00 below lsd, June 1937; lowest 78.70 below lsd, Sept. 30, 1954. Records available: 1937-38, 1941, 1943-55.

Jan. 27	76.30	Apr. 29	76.05	Aug. 29	77.05	Oct. 27	76.37
Feb. 25	76.00	May 25	75.50	Sept. 30	76.70	Nov. 28	75.94
Mar. 31	75.64	July 26	76.25				

4/28-9A3. L. M. Cavaletto. Southern Pacific RR. and Patterson Ave. Drilled unused water-table well in Santa Barbara formation, diameter 12 inches, depth 125 feet. Land-surface datum is 84.10 feet above msl. Highest water level 38.60 below lsd, March 1943; lowest 71.51 below lsd, Sept. 30, 1954. Records available: 1941-55.

Jan. 27	58.89	Apr. 29	58.26	July 26	59.74	Oct. 27	66.27
Feb. 25	58.53	May 29	57.40	Aug. 29	61.63	Nov. 28	63.77
Mar. 31	58.59	June 28	58.54	Sept. 30	63.02	Dec. 29	63.45

4/28-9E1. A. T. Spaulding. Fairview and Encina Rds. Drilled domestic artesian well in Santa Barbara formation, diameter 12 inches, depth 310 feet. Land-surface datum is 43.58 feet above msl. Highest water level 27.64 below lsd, June 7, 1941; lowest 78.66 below lsd, Oct. 29, 1954. Records available: 1941, 1943-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	75.45	Apr. 29	74.23	Sept. 30	78.25	Nov. 28	76.40
Feb. 25	74.80	May 25	b74.14	Oct. 27	77.25	Dec. 29	75.78
Mar. 31	74.30	July 26	77.42				

b Pumped recently.

4/28-10A1. John S. Greene. Turnpike Rd. and Loma Abaja Creek. Drilled unused water-table well in Santa Barbara formation, diameter 8 inches, depth 154 feet. Land-surface datum is 121.59 feet above msl. Highest water level 93.30 below lsd, May 2, 1944; lowest 142.55 below lsd, June 25, 1953. Records available: 1941-55.

Jan. 27	101.92	Apr. 29	102.58	July 26	103.77	Oct. 27	115.80
Feb. 25	102.34	May 25	102.57	Aug. 29	104.35	Nov. 28	123.49
Mar. 31	102.25	June 28	107.10	Sept. 30	110.04	Dec. 29	122.46

4/28-10F1. J. S. Edwards. Patterson Ave. and Maria Ygnacio Creek. Drilled domestic and irrigation artesian well in Santa Barbara formation, diameter 12 inches, depth 459 feet, cased to 459, perforations 72-198, 312-459. Land-surface datum is 79.90 feet above msl. Highest water level 56.44 below lsd, Apr. 28, 1943; lowest 98.55 below lsd, Oct. 31, 1951. Records available: 1932-33, 1937-38, 1941-55.

Jan. 28	82.34	Apr. 29	78.77	Sept. 30	88.83	Nov. 28	80.69
Feb. 25	81.41	May 25	78.30	Oct. 27	80.88	Dec. 29	80.66
Mar. 31	79.40	June 28	83.00				

4/28-10K2. W. G. Troup. Southern Pacific RR. and San Marcos Pass Rd. Drilled domestic and irrigation artesian well in alluvium, diameter 10 inches, depth 215 feet. Land-surface datum is 85.47 feet above msl. Highest water level 82.90 below lsd, Apr. 24, 1942; lowest 142.11 below lsd, June 28, 1954. Records available: 1941-55. Jan. 28, 129.33; Feb. 25, 128.87; Mar. 31, 127.78; Apr. 29, 127.10; May 25, 126.60; June 28, 127.58. Measurement discontinued.

4/28-11K4. Giovanni Cavalli. Drilled irrigation artesian well in Santa Barbara formation, diameter 12 inches, depth 297 feet. Land-surface datum is about 67 feet above msl. Highest water level 67.72 below lsd, Mar. 7, 1947; lowest 119.95 below lsd, Aug. 26, 1954. Records available: 1947-55.

Jan. 28	107.74	Mar. 31	107.00	May 25	106.16	Oct. 27	110.52
Feb. 25	107.30	Apr. 29	106.49	Sept. 30	116.40	Nov. 28	109.80

4/28-16F2. John Begg. U. S. Highway 101 and Goleta Beach Rd. Drilled unused artesian well in Santa Barbara formation, diameter 6 inches, depth 148 feet. Land-surface datum is about 22 feet above msl. Highest water level 26.26 below lsd, June 3, 1944; lowest 98.85 below lsd, Apr. 23, 1951. Records available: 1941, 1943-55.

Jan. 28	59.65	June 28	64.00	Aug. 29	71.99	Oct. 27	69.88
Feb. 25	59.25	July 26	69.86	Sept. 30	72.41	Nov. 28	62.30
Mar. 31	58.70						

4/28-16R1. Pacific Lighting Corp. Drilled domestic and industrial water-table well in alluvium and Santa Barbara formation, diameter 10 inches, depth 140 feet, perforations 37-47, 67-97, 107-138. Land-surface datum is about 24 feet above msl. Highest water level 7.77 below lsd, Apr. 30, 1945; lowest dry, June 25, 1953. Records available: 1941, 1945-55.

Jan. 28	27.70	Apr. 29	24.67	July 26	24.45	Oct. 27	26.10
Feb. 25	27.40	May 25	24.20	Aug. 29	25.05	Nov. 28	26.18
Mar. 31	25.20	June 28	23.30	Sept. 30	25.64		

4/28-17H3. Elmo Little. Mathews Ave. and Fairview Rd. Drilled domestic water-table well in alluvium, diameter 12 inches, depth 12 feet. Land-surface datum is about 11 feet above msl. Highest water level 1.49 below lsd, Mar. 1, 1944; lowest dry, Sept. 25-Dec. 24, 1951. Records available: 1941-55. Jan. 27, 4.42; Feb. 25, 4.40; Mar. 31, 4.37; Apr. 29, 4.96; May 25, 4.30; June 28, 5.56; July 26, 6.03. Measurement discontinued.

4/28-17H11. Mrs. L. Oakley and Mrs. M. Bonetti. Nectarine Ave. and San Jose Creek. Drilled domestic and irrigation well in Santa Barbara formation, diameter 6 inches, depth 119 feet. Land-surface datum is about 10 feet above msl. Highest water level 9.97 below lsd, Apr. 24, 1942; lowest 44.67 below lsd, Sept. 24, 1951. Records available: 1941-55.

Jan. 27	35.84	Apr. 29	34.31	Aug. 29	37.87	Oct. 27	37.62
Feb. 25	35.51	May 25	33.65	Sept. 30	37.96	Nov. 28	36.16
Mar. 31	34.10	July 26	37.02				

4/28-17R1. U. S. Geol. Survey, Pacific Lighting Gas Supply Co. Near Goleta. Drilled observation well in alluvium and Monterey formation, diameter 4 inches, depth 158 feet, cased to 158, perforations 125-146. Land-surface datum is 4.91 feet above msl. Highest water level 16.02 below lsd, June 24, 1955; lowest 19.00 below lsd, Sept. 5-6, 1955. Records available: 1955.

Daily highest water level from recorder graph*

Day	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	16.22	18.21	18.66	18.80	18.29	17.40
2	.....	16.31	18.20	18.72	18.82	18.32	17.34
3	.....	16.40	18.25	18.74	18.88	18.33	17.39
4	.....	16.54	18.29	18.84	18.89	18.33	17.36
5	.....	16.61	18.30	19.00	18.81	18.28	.....
6	.....	16.64	18.31	19.00	18.75	18.22	.....
7	.....	16.63	18.34	18.92	18.73	18.20	.....
8	.....	16.61	18.28	18.88	18.66	18.22	.....
9	.....	16.61	18.24	18.90	18.64	18.09	.....
10	.....	16.64	18.23	18.91	18.65	18.08	.....
11	.....	16.69	18.29	18.91	18.68	17.93	.....
12	.....	16.79	18.12	18.94	18.65	17.96	.....
13	.....	16.91	18.15	18.91	18.63	18.00	.....
14	.....	16.96	18.16	18.89	18.52	17.97	.....
15	.....	17.00	18.13	18.88	18.51	18.06	.....
16	16.29	17.11	18.11	18.86	18.48	18.12	.....
17	.....	17.17	18.14	18.87	18.46	18.16	.....
18	.....	17.28	18.18	18.87	18.44	18.18	.....
19	.....	17.36	18.21	18.89	18.36	18.06	.....
20	16.17	17.46	18.21	18.80	18.30	17.98	.....
21	16.12	17.59	18.22	18.76	18.27	17.92	.....
22	16.06	17.78	18.22	18.81	18.28	17.96	.....
23	16.03	17.90	18.27	18.88	18.29	17.92	.....
24	16.02	17.97	18.37	18.86	18.32	17.88	.....
25	16.04	18.04	18.46	18.84	18.32	17.88	.....
26	16.03	18.14	18.56	18.88	18.28	17.82	.....
27	16.19	18.22	18.61	18.88	18.30	17.68	.....
28	16.19	18.22	18.64	18.88	18.34	17.62	.....
29	16.18	18.17	18.65	18.86	18.32	17.58	.....
30	16.19	18.19	18.61	18.82	18.26	17.52	16.54
31		18.20	18.63		18.26		16.56

* No record for January, February, March, April, and May.

4/28-17R2. U. S. Geol. Survey, Pacific Lighting Gas Supply Co. Near Goleta. Drilled observation well in alluvium and Monterey formation, diameter 4 inches, depth 155 feet, cased to 155, perforations 104-146. Land-surface datum is 7.87 feet above msl. Highest water level 33.81 below lsd, June 23, 1955; lowest 39.83 below lsd, Aug. 27, 1955. Records available: 1955.

Daily highest water level from recorder graph*

Day	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	34.64	38.37	39.74	.....	.....	35.41
2	.....	34.65	38.44	.....	.....	.....	35.35
3	.....	34.66	38.50	.....	.....	.....	35.25
4	.....	34.66	38.60	.....	.....	.....	35.18
5	.....	34.66	38.67	.....	.....	.....	35.10
6	.....	34.89	38.61	.....	38.40	37.60	35.05
7	.....	35.01	38.48	.....	38.30	37.50	.....
8	.....	35.32	38.35	.....	38.26	37.34	.....
9	.....	35.50	38.33	.....	38.18	37.24	.....
10	.....	35.59	38.33	.....	38.10	37.10	.....
11	.....	35.59	38.44	.....	38.02	36.99	.....
12	.....	35.73	38.58	.....	37.96	36.95	.....
13	.....	36.00	.....	.....	37.90	36.95	.....
14	.....	36.31	.....	.....	37.80	36.96	34.73
15	.....	36.56	38.67	.....	37.71	.....	34.71
16	33.89	36.70	38.55	.....	37.61	.....	34.67
17	.....	36.83	38.50	.....	37.56	.....	34.62
18	.....	36.91	38.48	.....	37.48	.....	34.59
19	.....	37.27	38.46	.....	37.33	.....	34.59
20	33.83	37.73	38.45	.....	37.31	.....	34.56
21	33.84	38.12	38.43	.....	37.46	.....	34.50
22	33.84	38.41	38.40	.....	37.67	36.13	34.41
23	33.81	38.49	38.42	.....	.....	36.05	.....
24	.....	38.40	38.75	.....	.....	35.97	.....
25	.....	38.28	39.15	.....	.....	35.90	.....

4/28-17R2--Continued.

Day	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	.....	38.20	39.55	.....	.....	35.84	.....
27	34.14	38.16	39.83	.....	.....	35.77	.....
28	34.30	38.16	39.78	.....	.....	35.64	.....
29	34.43	38.18	39.60	.....	.....	35.57	.....
30	34.58	38.21	39.53	.....	.....	35.51	.....
31		38.30	39.53		.....		.....

* No record for January, February, March, April, and May.

4/28-18G2. T. B. Bishop Co. Drilled unused artesian well in Santa Barbara formation, diameter 16 inches, depth 395 feet, cased to 395, perforations 123-139, 159-179, 199-255, 275, 395. Land-surface datum is about 7 feet above msl. Highest water level 12.94 below lsd, Dec. 29, 1955; lowest 45.99 below lsd, Aug. 2, 1949. Records available: 1941-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	17.88	Apr. 29	16.43	July 26	15.57	Oct. 27	14.80
Feb. 25	17.19	May 25	16.05	Aug. 29	16.05	Nov. 28	14.50
Mar. 31	16.23	June 28	15.25	Sept. 30	15.00	Dec. 29	12.94

4/29-13G3. T. B. Bishop Co. Hollister Ave. and Storke Rd. Drilled irrigation water-table well in Santa Barbara formation, diameter 12 inches, depth 189 feet, cased to 189, perforations 164-189. Land-surface datum is about 41 feet above msl. Highest water level 55.20 below lsd, Dec. 29, 1955; lowest 72.59 below lsd, Nov. 26, 1951. Records available: 1951-55.

Jan. 27	59.68	Apr. 29	58.46	July 26	58.01	Nov. 28	58.83
Feb. 25	59.32	May 25	57.93	Aug. 29	56.49	Dec. 29	55.20
Mar. 31	58.70	June 28	57.31	Sept. 30	56.11		

4/29-13K2. T. B. Bishop. Storke Rd. south of Hollister Ave. Drilled unused water-table well in Santa Barbara formation, diameter 12 inches, depth 378 feet, cased to 330, perforations 108-111, 129-132, 150-153, 171-174, 192-195, 204-225, 232-238, 253-259, 267-330. Land-surface datum is about 24 feet above msl. Highest water level 38.23 below lsd, Dec. 29, 1955; lowest 55.59 below lsd, Sept. 28, 1950. Records available: 1941-51, 1954-55.

Nov. 9, 1954	42.16	May 25, 1955	40.58	Sept. 30, 1955	39.20	Nov. 28, 1955	38.45
Apr. 7, 1955	41.28	July 26	39.90	Oct. 27	39.68	Dec. 29	38.23
29	41.00	Aug. 29	39.66				

4/29-14A3. Frank Baker. Glen Annie Rd. and Southern Pacific RR. Drilled domestic and irrigation water-table well in Santa Barbara formation, diameter 12 inches, depth 126 feet. Land-surface datum is about 51 feet above msl. Highest water level 69.95 below lsd, Dec. 29, 1955; lowest 87.46 below lsd, July 30, 1951. Records available: 1941-55.

Jan. 27	74.32	Apr. 29	73.22	July 26	71.95	Oct. 27	70.65
Feb. 25	73.90	May 25	72.65	Aug. 29	71.25	Nov. 28	73.78
Mar. 31	73.44	June 28	72.26	Sept. 30	74.05	Dec. 29	69.95

San Antonio Valley

8/32-30K2. John Parma. Los Alamos. U. S. Highway 101 and Den St. Drilled unused artesian well in alluvium, diameter 16 inches, depth 100 feet. Land-surface datum is about 555 feet above msl. Highest water level 1.16 above lsd, Feb. 29, 1944; lowest 34.00 below lsd, Aug. 30, 1955. Records available: 1943-55.

Jan. 25	9.88	Apr. 28	c16.42	July 29	c27.62	Oct. 25	19.63
Feb. 24	8.84	May 25	18.00	Aug. 30	34.00	Nov. 29	13.86
Mar. 31	c8.65	June 28	24.44	Oct. 3	17.36	Dec. 27	11.57

c Nearby well being pumped.

8/33-20K1. Virginia Barca Estate. Near Los Alamos. Drilled unused artesian well in alluvium and Paso Robles formation, diameter 16 inches, depth 351 feet, perforations 10-97, 215-235. Land-surface datum is about 410 feet above msl. Highest water level 4.27 below lsd, Feb. 29, 1944; lowest 38.15 below lsd, Apr. 29, 1947. Records available: 1943-55.

Jan. 25	28.60	Apr. 28	28.68	July 29	30.47	Oct. 25	30.29
Feb. 24	28.99	May 25	29.22	Aug. 30	30.09	Nov. 29	30.37
Mar. 31	29.37	June 28	29.89	Oct. 3	30.20	Dec. 27	30.03

8/33-20R1. Virginia Barca Estate. Near Los Alamos. Drilled domestic water-table well in alluvium, diameter 10 inches, depth 75 feet. Land-surface datum is about 410 feet above msl. Highest water level 21.20 below lsd, Jan. 30, 1947; lowest 36.32 below lsd, Sept. 27, 1950. Records available: 1943-55. Jan. 25, 25.93; May 25, 27.52, pumping; Aug. 30, 27.85; Nov. 29, 28.42.

8/34-23B1. Josephine Harris Estate. Near Los Alamos. Harris-Los Alamos Rd. and State Highway 1. Drilled unused artesian well in alluvium, diameter 12 inches, depth 150 feet. Land-surface datum is about 310 feet above msl. Highest water level 12.19 below lsd, Feb. 29, 1944; lowest 20.30 below lsd, Mar. 27, 1953. Records available: 1943-55. Nearby well being pumped.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	17.00	Apr. 28	18.15	July 29	19.50	Oct. 25	18.51
Feb. 24	16.87	May 25	20.34	Aug. 30	19.39	Nov. 29	18.01
Mar. 31	16.86	June 28	19.39	Oct. 3	19.50	Dec. 27	17.75

Santa Maria Valley

9/32-3N1. City of Santa Maria. Near Orcutt. Drilled unused water-table well in Paso Robles formation, diameter 16 inches, depth 248 feet, perforations 163-190. Land-surface datum is about 258 feet above msl. Highest water level 142 below lsd, June 30, July 31, 1937, June 30, 1938; lowest 181.89 below lsd, Sept. 29, 1955. Records available: 1932-34, 1937-41, 1955.

Jan. 25	c179.33	May 25	180.22	Aug. 30	181.65	Nov. 29	181.14
Mar. 31	179.78	June 28	180.68	Sept. 29	181.89	Dec. 27	c180.84
Apr. 28	180.02	July 28	180.89	Oct. 25	181.40		

c Nearby well being pumped.

9/32-7N1. Valerio Tognazzini. Near Sisquoc. State Highway 140 and Pacific Coast Ry. Drilled irrigation water-table well in Paso Robles formation, diameter 16 inches, depth 204 feet, perforations 82-97, 105-145, 162-185. Land-surface datum is about 422 feet above msl. Highest water level 34.62 below lsd, Apr. 27, 1944; lowest 113.95 below lsd, Oct. 30, 1951. Records available: 1924, 1930, 1932-33, 1938-55.

Jan. 1	g83.15	Mar. 31	82.99	May 25	84.69	Oct. 1	g98.25
25	83.94	Apr. 1	g86.75	July 1	g90.25	Nov. 29	89.70
Feb. 24	83.84	28	84.01				

g By Santa Maria Valley Water Conservation District.

9/32-17G1. Caldrone Estate. Near Sisquoc. Tepusquet Creek Rd. and State Highway 140. Drilled domestic water-table well in alluvium and Paso Robles formation, diameter 6 inches, depth 107 feet. Land-surface datum is about 447 feet above msl. Highest water level 11.22 below lsd, Apr. 5, 1943; lowest 66.33 below lsd, June 1, 1950. Records available: 1941-55. Apr. 28, 49.86; Aug. 30, 51.19.

9/32-18H1. M. L. Gracia. Near Sisquoc. Drilled irrigation well in alluvium, diameter 16 inches, depth 456 feet. Land-surface datum is about 443 feet above msl. Highest water level 64.29 below lsd, Apr. 28, 1955; lowest 81.27 below lsd, Dec. 18, 1950. Records available: 1950, 1955. Mar. 29, 1950, 75.73; Dec. 18, 81.27; Apr. 28, 1955, 64.29; May 25, 65.00; Dec. 29, 80.63.

9/33-2A1. Santa Maria Realty Co. Garey. Wicks and Andrews Aves. Drilled irrigation water-table well in alluvium and Paso Robles formation, diameter 12 inches, depth 168 feet. Land-surface datum is 378.72 feet above msl. Highest water level 23.62 below lsd, June 4, 1941; lowest 83.50 below lsd, Jan. 1, 1952. Records available: 1930-33, 1936, 1938-55.

Jan. 1	g68.07	Mar. 31	67.76	July 1	g70.40	Oct. 25	75.40
4	68.27	Apr. 1	g67.83	Sept. 29	75.54	Nov. 29	74.40
25	68.74	28	68.58	Oct. 1	g75.40	Dec. 27	77.85
Feb. 24	68.74	May 25	68.93				

g By Santa Maria Valley Water Conservation District.

9/34-6K2. Associated Oil Co. Near Orcutt. Highway 1 and Casmalia Rd. Drilled unused water-table well in Orcutt formation, diameter 12 inches, depth 139 feet. Land-surface datum is about 161 feet above msl. Highest water level 59.22 below lsd, Mar. 26, 1942; lowest 87.14 below lsd, Sept. 29, 1955. Records available: 1942, 1951-55.

Jan. 25	83.39	Apr. 28	84.39	July 28	85.22	Oct. 25	86.36
Feb. 24	83.28	May 25	84.73	Aug. 30	87.04	Nov. 29	86.30
Mar. 31	84.05	June 28	84.85	Sept. 29	87.14	Dec. 27	86.61

9/34-8H1. Richfield Oil Corp. 1 mile west of Orcutt on Highway 1. Drilled domestic water-table well in Orcutt formation, diameter 12 inches, depth 200 feet. Land-surface datum is about 222 feet above msl. Records available: 1955. Nov. 29, 139.00; Dec. 27, 138.97.

9/34-8K1. C. Muscio. Near Orcutt. Casmalia and Orcutt-Casmalia Rds. Drilled domestic and irrigation water-table well in Orcutt and Paso Robles formations, diameter 14 inches, depth 231 feet. Land-surface datum is about 257 feet above msl. Highest water level 144.54 below lsd, Jan. 30, 1947; lowest 199.39 below lsd, May 29, 1954. Records available: 1942, 1947-55. Jan. 25, 196.59; Apr. 28, 170.94. Measurement discontinued.

9/34-10D1. John Borgia. Near Orcutt. Drilled unused water-table well in Orcutt formation, diameter 12 inches, depth 208 feet. Land-surface datum is about 275 feet above msl. Highest water level 229.12 below lsd, Feb. 24, 1955; lowest 233.20 below lsd, Sept. 29, 1955. Records available: 1955.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	229.19	Apr. 28	230.67	July 28	232.17	Oct. 25	232.75
Feb. 24	229.12	May 25	230.99	Aug. 30	233.00	Nov. 29	232.10
Mar. 31	230.00	June 28	231.54	Sept. 29	233.20		

10/33-7P1. P. T. Bonetti. Suey Rd. and Main St. Drilled irrigation water-table well in alluvium and Paso Robles formation, diameter 18 inches, depth 365 feet, cased to 330. Land-surface datum is about 260 feet above msl. Highest water level 112.76 below lsd, Oct. 28, 1952; lowest 132.72 below lsd, Oct. 30, 1951. Records available: 1951-55.

Jan. 4	122.19	Mar. 31	123.94	May 25	124.92	Oct. 25	126.82
25	122.07	Apr. 28	123.98	Aug. 30	126.81	Dec. 27	125.35
Feb. 24	123.07						

10/33-7R1. P. T. Bonetti. Near Santa Maria. Drilled unused water-table well in Paso Robles formation, diameter 16 inches, depth 200 feet. Land-surface datum is about 270 feet above msl. Highest water level 78.45 below lsd, Feb. 12, 1942; lowest 120.69 below lsd, Nov. 29, 1955. Records available: 1942, 1955. Feb. 12, 1942, 78.45; Nov. 29, 1955, 120.69; Dec. 29, 120.43.

10/33-7R2. Mrs. Lucy Howard. Near Santa Maria. Drilled domestic water-table well in alluvium, diameter 8 inches, reported depth 140 feet. Land-surface datum is about 272 feet above msl. Highest water level 63.91 below lsd, June 29, 1944; lowest 124.90 below lsd, Mar. 1, 1950. Records available: 1944-50, 1952-55. Jan. 25, 111.06. Measurement discontinued.

10/33-18G1. La Brea Securities Co. well 8. Near Santa Maria. Suey Rd. and Santa Maria Valley RR. Drilled irrigation water-table well in alluvium and Paso Robles formation, diameter 16 inches, depth 436 feet, cased to 424, perforations 132-142, 288-320, 336-340, 408-422. Land-surface datum is about 273 feet above msl. Highest water level 66.75 below lsd, July 1, 1943; lowest 132.10 below lsd, Apr. 1, 1951. Records available: 1939-55. Measurement by Santa Maria Valley Water Conservation District. Jan. 1, 116.50, pumped recently; Jan. 4, 113.50; Apr. 1, 114.83, pumped recently; July 1, 119.90, pumped recently; Oct. 1, 123.25, pumped recently.

10/33-19B1. Owen T. Rice. Near Santa Maria. Battles and East Stowell Rds. Drilled irrigation water-table well in alluvium and Paso Robles formation, diameter 16 inches, depth 307 feet, perforations 92-97, 116-125, 190-215, 238-248. Land-surface datum is about 275 feet above msl. Highest water level 73.31 below lsd, Sept. 2, 1943; lowest 157.46 below lsd, June 27, 1951. Records available: 1927, 1929-55.

Jan. 1	g115.75	Feb. 24	115.25	Apr. 28	115.52	Nov. 29	120.80
5	115.42	Mar. 31	115.70	July 1	g142.41	Dec. 27	119.30
26	115.53	Apr. 1	g116.00	Oct. 1	g146.40		

g By Santa Maria Valley Water Conservation District.

10/33-21N2. Frank Costa, Jr. Near Santa Maria. Santa Maria Valley RR. and State Highway 140. Drilled domestic water-table well in Paso Robles formation, diameter 16 inches, depth 215 feet. Land-surface datum is about 307 feet above msl. Highest water level 67.14 below lsd, June 29, 1944; lowest 140.92 below lsd, Sept. 25, 1951. Records available: 1930, 1944-55. Jan. 25, 110.13; Feb. 24, 110.53; Apr. 28, 114.85.

10/33-27G1. W. C. Adam. Near Santa Maria. State Highway 140 and Pacific Coast Ry. Drilled stock and irrigation water-table well in Paso Robles formation, diameter 16 inches, depth 272 feet, perforations 140-180, 240-260. Land-surface datum is about 338 feet above msl. Highest water level 26.00 below lsd, July 1, 1938; lowest 119.50 below lsd, July 1, 1951. Records available: 1929-33, 1936, 1938-55. Measurement by Santa Maria Valley Water Conservation District. Jan. 1, 64.05; Jan. 5, 64.45; Apr. 1, 69.60, pumped recently; July 1, 73.70; Oct. 1, 85.86.

10/33-27K1. L. H. Adam. Near Santa Maria. State Highway 140 and Pacific Coast Ry. Drilled unused water-table well in alluvium and Paso Robles formation, diameter 12 inches, depth 300 feet. Land-surface datum is about 345 feet above msl. Highest water level 25.08 below lsd, May 19, 1941; lowest 109.56 below lsd, Sept. 27, 1950. Records available: 1941-54. Measurement discontinued.

10/33-27K2. Newhall Land Co. Near Santa Maria. State Highway 140 and Pacific Coast Ry. Drilled irrigation water-table well in Paso Robles formation, diameter 16 inches, depth 255 feet, perforations 95-110, 138-156. Land-surface datum is about 344 feet above msl. Highest water level 51.27 below lsd, Sept. 10, 1941; lowest 108.74 below lsd, Dec. 13, 1950. Records available: 1941, 1950, 1955.

10/33-27K2--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 10, 1941	51.27	Jan. 25, 1955	67.95	Apr. 28, 1955	73.91	Aug. 30, 1955	74.87
Apr. 27, 1950	102.74	Feb. 24	68.97	May 25	73.99	Nov. 29	76.91
Dec. 13	108.74						

10/33-28A1. Joe Soares. Near Santa Maria. Drilled irrigation water-table well in Paso Robles formation, diameter 18 inches, depth 374 feet, perforations 100-215, 242-335. Land-surface datum is about 325 feet above msl. Highest water level 31.99 below lsd, July 1, 1938; lowest 114.52 below lsd, Sept. 25, 1951. Records available: 1929-55.

Jan. 1	bg70.80	Apr. 1	bg73.47	May 25	c77.88	Oct. 1	bg90.05
5	69.91	28	76.55	July 1	bg82.40	Dec. 27	89.50
25	c70.54						

b Pumped recently.
c Nearby well being pumped.
g By Santa Maria Valley Water Conservation District.

10/33-30G1. Lillian Cook. Near Santa Maria. Drilled public-supply water-table well in Paso Robles formation, diameter 16 inches, depth 676 feet, perforations 325-370, 397-432, 454-486, 505-512, 529-561, 575-585, 612-662. Land-surface datum is about 320 feet above msl. Highest water level 170.42 below lsd, Jan. 1, 1953; lowest 189.35 below lsd, July 1, 1952. Records available: 1951-55. Measurement by Santa Maria Valley Water Conservation District. Jan. 1, 176.90; Apr. 1, 175.00; July 1, 188.90, pumped recently; Oct. 1, 185.37.

10/33-30H1. John Prell. Near Santa Maria. Drilled irrigation water-table well in Paso Robles formation, diameter 22 inches, depth 758 feet, perforations 158-716. Land-surface datum is about 310 feet above msl. Highest water level 151.51 below lsd, Apr. 1, 1952; lowest 182.00 below lsd, Apr. 1, 1955. Records available: 1951-55. Measurement by Santa Maria Valley Water Conservation District. Jan. 1, 176.00; Apr. 1, 182.00; July 1, 175.00; Oct. 1, 178.00.

10/33-30J2. Ross J. Martinez. Near Santa Maria. Drilled domestic water-table well in Paso Robles formation, diameter 8 inches, depth 234 feet. Land-surface datum is about 315 feet above msl. Highest water level 156.17 below lsd, Apr. 1, 1952; lowest 174.50 below lsd, Oct. 1, 1955. Records available: 1951-55. Measurement by Santa Maria Valley Water Conservation District. Jan. 1, 159.50; Apr. 1, 159.00, pumped recently; July 1, 162.00; Oct. 1, 174.50.

10/33-30L1. R. R. Bush Oil Co. Near Santa Maria. Drilled industrial water-table well in Paso Robles formation, diameter 16 inches, depth 500 feet, perforations 190-210, 218-244, 268-286, 310-315, 327-342, 385-418, 450-485. Land-surface datum is about 310 feet above msl. Highest water level 174.00 below lsd, Jan. 1, 1953; lowest 194.25 below lsd, Aug. 1, 1951. Records available: 1951-55. Measurement by Santa Maria Valley Water Conservation District. Jan. 1, 182.00; Apr. 1, 192.70; July 1, 191.08; Oct. 1, 190.47.

10/33-30R1. Santa Maria Berry Farms. Near Santa Maria. Rice School and Section 8 Rds. Drilled irrigation water-table well in Orcutt and Paso Robles formations, diameter 16 to 14 inches, depth 544 feet, cased to 538, perforations 82-538. Land-surface datum is about 335 feet above msl. Highest water level 165.38 below lsd, Jan. 1, 1953; lowest 184.00 below lsd, Oct. 1, 1951. Records available: 1951-55. Measurement by Santa Maria Valley Water Conservation District. Jan. 1, 165.60; Jan. 4, 166.35; Apr. 1, 170.50, pumped recently; July 1, 174.50, pumped recently; Oct. 1, 173.80.

10/33-33H1. E. L. Sargent. Near Santa Maria. Sisquoc and Bradley Canyon Rds. Drilled domestic and stock water-table well in Paso Robles formation, diameter 16 inches, depth 290 feet, perforations 204-232, 245-250, 270-280. Land-surface datum is about 402 feet above msl. Highest water level 179.50 below lsd, Jan. 29, 1947; lowest 224.01 below lsd, Oct. 28, 1954. Records available: 1947-55.

Jan. 5	217.53	Feb. 24	217.24	Sept. 29	222.89	Nov. 29	222.11
25	b217.20	Mar. 31	217.30	Oct. 25	222.50	Dec. 27	219.31

b Pumped recently.

10/34-2R1. Gracio Apalatequi. Near Santa Maria. U. S. Highway 101 and Donovan Rd. Drilled irrigation water-table well in alluvium and Paso Robles formation, diameter 14 inches, depth 294 feet, cased to 284, perforations 106-130, 180-190, 221-226. Land-surface datum is about 230 feet above msl. Highest water level 69.16 below lsd, June 1, 1943; lowest 137.90 below lsd, Oct. 1, 1955. Records available: 1929-30, 1933, 1938-55.

Jan. 1	g123.77	Mar. 31	124.04	May 25	124.92	Oct. 1	g137.90
4	124.18	Apr. 1	g123.90	July 1	bg149.15	25	133.90
25	122.86	28	123.69	Sept. 29	134.15	Dec. 27	124.65
Feb. 24	123.16						

b Pumped recently.
g By Santa Maria Valley Water Conservation District.

10/34-4R1. Gerald Donovan. Near Santa Maria. Donovan and North Blosser Rds. Drilled irrigation water-table well in alluvium and Paso Robles formation, diameter 16 inches, depth 192 feet, cased to 182, perforations 90-108, 133-174, 182-184. Land-surface datum is about 192 feet above msl. Highest water level 72.89 below lsd, Mar. 1, 1945; lowest 124.19 below lsd, Nov. 27, 1954. Records available: 1930, 1942, 1945-55. Feb. 24, 121.52; Apr. 19, 123.60; Apr. 28, 123.20; May 25, 123.75.

10/34-6N1. Grisingher & Signorelli. Near Santa Maria. State Highway 166 and Bonita Rd. Drilled irrigation artesian well in alluvium, diameter 16 inches, depth 190 feet. Land-surface datum is about 152 feet above msl. Highest water level 48.40 below lsd, Apr. 1, 1943; lowest 101.30 below lsd, Oct. 1, 1955. Records available: 1930, 1934, 1936-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	g91.95	Apr. 1	g92.05	July 1	g97.10	Nov. 29	98.59
25	90.05	28	92.63	Oct. 1	g101.30	Dec. 27	98.20
Feb. 24	90.23						

g By Santa Maria Valley Water Conservation District.

10/34-9F1. Mrs. A. E. Preisker. Near Santa Maria. State Highway 166 and North Blosser Rd. Drilled irrigation water-table well in alluvium and Paso Robles formation, diameter 16 inches, depth 224 feet, perforations 130-147, 160-210, 217-221. Land-surface datum is about 189 feet above msl. Highest water level 70.62 below lsd, Apr. 1, 1944; lowest 126.10 below lsd, Oct. 1, 1955. Records available: 1942-55. Measurement by Santa Maria Valley Water Conservation District. Jan. 1, 120.53; Apr. 1, 119.10; Apr. 19, 120.10; July 1, 121.86; Oct. 1, 126.10.

10/34-14E2. City of Santa Maria. Santa Maria Valley RR. and U. S. Highway 101. Drilled public-supply water-table well in Paso Robles formation, diameter 16 inches, depth 182 feet. Land-surface datum is about 225 feet above msl. Highest water level 104.10 below lsd, Jan. 7, 1942; lowest 154.70 below lsd, Oct. 25, 1955. Records available: 1942, 1955.

Jan. 7, 1942	104.10	Oct. 2, 1955	g153.83	Oct. 23, 1955	g154.17	Nov. 29, 1955	154.48
Apr. 18, 1955	148.24	3	154.07	25	154.70	Dec. 28	153.35
Sept. 29	g153.10	16	g154.17				

g By city of Santa Maria.

10/34-14E3. City of Santa Maria. Santa Maria Valley RR. and U. S. Highway 101. Drilled unused water-table well in alluvium and Paso Robles formation, diameter 16 inches, depth 160 feet, cased to 182, perforations 87-109, 164-181. Land-surface datum is about 225 feet above msl. Highest water level 58.67 below lsd, Dec. 22, 1918; lowest dry at 155.98, Sept. 11, 18, 25, 29, 1955. Records available: 1917-55.

Jan. 2	g151.16	Mar. 20	g147.75	May 22	g149.43	July 31	g153.17
4	146.42	27	g148.90	25	148.27	Aug. 7	g153.17
9	g150.96	31	147.69	29	g149.48	14	g154.38
16	g150.73	Apr. 3	g148.51	June 5	g149.33	21	g154.10
23	g149.80	10	g149.93	12	g149.40	28	g154.75
25	148.30	17	g149.41	19	g149.37	30	c154.54
30	g149.69	18	148.28	26	g148.65	Sept. 4	g155.73
Feb. 6	g149.16	24	g149.40	28	c151.63	11	fg155.98
13	g140.63	28	147.76	July 10	g149.73	18	g(f)
20	g149.77	May 1	g149.33	17	g152.63	25	g(f)
24	148.16	8	g148.01	24	g152.46	29	(f)
27	g148.54	15	g148.33	28	c152.59	Dec. 28	153.45
Mar. 6	g148.59						

c Nearby well being pumped.
f Dry.
g By city of Santa Maria.

10/34-20H1. Ulisse Tognazzini. Near Santa Maria. Casmalia Rd. and Santa Maria Valley RR. Drilled irrigation water-table well in alluvium and Paso Robles formation, diameter 16 inches, depth 246 feet, cased to 242, perforations 90-130, 140-176, 196-238. Land-surface datum is about 182 feet above msl. Highest water level 66.57 below lsd, Mar. 1, 1945; lowest 121.03 below lsd, Jan. 25, 1955. Records available: 1930, 1942, 1944-55. Jan. 25, 121.03; Feb. 24, 115.07; Mar. 31, 115.65; Apr. 28, 116.59.

10/34-22R1. George J. Wheat. Near Santa Maria. Stowell Rd. and U. S. Highway 101. Drilled industrial water-table well in alluvium and Paso Robles formation, diameter 16 inches, depth 252 feet, cased to 245, perforations 118-242. Land-surface datum is about 217 feet above msl. Highest water level 93.19 below lsd, Mar. 1, 1945; lowest 147.32 below lsd, Sept. 28, 1954. Records available: 1931, 1934, 1938-55. Jan. 1, *139.50; Mar. 31, 138.90; Apr. 1, *132.84, pumped recently; Apr. 28, 139.88; July 1, *141.90, pumped recently; Oct. 1, *144.53, pumped recently. *By Santa Maria Valley Water Conservation District.

10/34-23H1. Marion B. Rice. Near Santa Maria. Stowell and South Nance Rds. Drilled irrigation water-table well in alluvium and Paso Robles formation, diameter 18 inches, depth 218 feet, cased to 208. Land-surface datum is about 242 feet above msl. Highest water level 100.65 below lsd, Apr. 1, 1943; lowest 155.77 below lsd, Sept. 29, 1955. Records available: 1929-30, 1933, 1938-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	g150.30	Mar. 31	149.49	July 1	bg153.25	Oct. 25	155.70
26	149.23	Apr. 1	g149.40	Sept. 29	155.77	Nov. 29	155.39
Feb. 24	148.58	28	149.86	Oct. 1	g155.40	Dec. 27	153.57

b Pumped recently.
g By Santa Maria Valley Water Conservation District.

10/34-24K1. Union Oil Co. of Calif. Near Santa Maria. Drilled unused water-table well in Paso Robles formation, diameter 12 inches, depth 714 feet, perforations 650-657, 692-710. Land-surface datum is about 245 feet above msl. Highest water level 75.32 below lsd, Dec. 30, 1941; lowest 128.70 below lsd, Oct. 1, 1955. Records available: 1941, 1951-55. Measurement by Santa Maria Valley Water Conservation District. Jan. 1, 118.90; Apr. 1, 119.10, pumped recently; July 1, 125.60; Oct. 1, 128.70.

10/35-7F1. M. J. Ellis. Near Guadalupe. Drilled domestic and irrigation artesian well in alluvium and Paso Robles formation, diameter 12 inches, depth 249 feet, perforations 140-145, 200-225. Land-surface datum is about 48 feet above msl. Highest water level flowing, Dec. 30, 1943, Feb. 29, 1944; lowest 20.09 below lsd, June 25, 1953. Records available: 1929-36, 1938-55.

Jan. 1	g10.10	Mar. 31	10.21	July 1	g19.40	Nov. 29	12.63
25	9.18	Apr. 1	g16.90	Oct. 1	bg25.00	Dec. 29	10.93
Feb. 24	9.22	28	15.06				

b Pumped recently.
g By Santa Maria Valley Water Conservation District.

10/35-7G3. John Jenkins. Near Guadalupe. Drilled unused artesian well in alluvium and Paso Robles formation, diameter 16 inches, depth 286 feet. Land-surface datum is about 53 feet above msl. Highest water level 3.24 below lsd, Feb. 29, 1944; lowest 31.41 below lsd, June 30, 1954. Records available: 1942-55.

Jan. 25	18.70	Apr. 28	22.51	July 28	c29.79	Oct. 25	c30.30
Feb. 24	18.80	May 25	c29.40	Aug. 30	c30.81	Nov. 29	22.42
Mar. 31	19.65	June 28	c29.55	Sept. 29	c30.10	Dec. 27	20.60

c Nearby well being pumped.

10/35-9F1. Waller-Franklin Seed Co. Near Guadalupe. State Highway 166 and Southern Pacific RR. Drilled irrigation artesian well in alluvium, diameter 12 inches, depth 198 feet. Land-surface datum is about 88 feet above msl. Highest water level 13.61 below lsd, May 19, 1942; lowest 52.33 below lsd, June 27, 1951. Records available: 1930, 1933, 1935-36, 1938-55.

Jan. 1	g36.41	Apr. 1	bg49.28	July 1	g49.47	Nov. 29	47.02
25	34.49	28	39.54	Oct. 1	g48.16	Dec. 27	39.57

b Pumped recently.
g By Santa Maria Valley Water Conservation District.

10/35-9N1. Agnes King. Guadalupe. Drilled irrigation artesian well in Paso Robles formation, diameter 16 inches, depth 285 feet. Land-surface datum is about 87 feet above msl. Highest water level 13.30 below lsd, Apr. 1, 1945; lowest 51.35 below lsd, Oct. 1, 1951. Records available: 1930, 1938-55. Measurement by Santa Maria Valley Water Conservation District. Jan. 1, 34.90; Apr. 1, 55.03, pumped recently; July 1, 58.55, pumped recently; Oct. 1, 45.80.

10/35-12M1. E. and G. Le Roy. Near Santa Maria. State Highway 166 and Bonita Rd. Drilled irrigation artesian well in alluvium, diameter 16 inches, depth 210 feet, perforations 133-148, 173-185. Land-surface datum is about 138 feet above msl. Highest water level 23.43 below lsd, Jan. 23, 1924; lowest 83.70 below lsd, Oct. 1, 1954. Records available: 1924, 1927, 1930-32, 1938-55. Measurement by Santa Maria Valley Water Conservation District. Jan. 1, 77.10; Apr. 1, 81.54, pumped recently; July 1, 88.38, pumped recently; Oct. 1, 87.60, pumped recently.

10/35-21B1. Mathison & Shaw. Near Guadalupe. Corralillos Canyon Rd. and Southern Pacific RR. Drilled irrigation artesian well in alluvium, diameter 16 inches, depth 310 feet, perforations 102-118, 134-136, 145-175, 246-248, 251-300. Land-surface datum is about 94 feet above msl. Highest water level 7.85 below lsd, Feb. 29, 1944; lowest 57.66 below lsd, Aug. 27, 1954. Records available: 1938-55. Jan. 1, *32.44; Jan. 25, 29.11; Apr. 1, *42.45; July 1, *47.96, pumped recently; Oct. 1, *42.90; Oct. 25, 41.13; Nov. 29, 34.47. *Measurement by Santa Maria Valley Water Conservation District.

10/35-24B1. Union Sugar Co. Near Santa Maria. Corralillos Canyon and Ray Rds. Drilled irrigation artesian well in alluvium and Paso Robles formation, diameter 16 inches, depth 290 feet, perforations 122-153, 169-175, 178-288. Land-surface datum is about 144 feet above msl. Highest water level 42.55 below lsd, Feb. 29, 1944; lowest 109.10 below lsd, Sept. 29, 1955. Records available: 1934, 1938-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	g80.12	June 28	90.75	Sept. 29	109.10	Nov. 29	89.52
25	79.18	July 1	g91.70	Oct. 1	g90.70	Dec. 27	83.51
Apr. 1	g86.40	Aug. 30	c108.85	25	97.80		

c Nearby well being pumped.
g By Santa Maria Valley Water Conservation District.

11/34-19Q1. Frank Silva. Near Santa Maria. Drilled domestic water-table well in Orcutt and Paso Robles formations, diameter 6 inches, depth 315 feet. Land-surface datum is about 305 feet above msl. Highest water level 223.77 below lsd, Jan. 30, 1947; lowest 254.12 below lsd, Aug. 29, 1951. Records available: 1947-55. Feb. 24, 246.14. Measurement discontinued.

11/34-30Q1. Mary Bolton. Near Santa Maria. Bonita and Guadalupe-Nipomo Rds. Drilled irrigation water-table well in alluvium, diameter 16 inches, depth 180 feet. Land-surface datum is about 148 feet above msl. Highest water level 34.59 below lsd, May 16, 1941; lowest 91.00 below lsd, Oct. 1, 1955. Records available: 1930, 1933, 1936, 1938-55. Jan. 1, *82.88; Jan. 25, 86.41; Apr. 1, *83.25, pumped recently; July 1, *87.50; Oct. 1, *91.00. *Measurement by Santa Maria Valley Water Conservation District.

11/34-34J1. L. O. Fox. Near Santa Maria. Drilled domestic and stock water-table well in alluvium, diameter 8 inches, depth 103 feet. Land-surface datum is about 209 feet above msl. Highest water level 62.37 below lsd, Apr. 30, 1942; lowest 126.75 below lsd, Nov. 27, 1954. Records available: 1930, 1942, 1947-55. Jan. 4, 124.53; Jan. 25, 121.76; Apr. 28, 114.86; May 25, 88.46. Measurement discontinued.

11/34-34J2. Leon Loerness. Near Santa Maria. Drilled irrigation water-table well in Paso Robles formation, diameter 10 inches, depth 214 feet, perforations 115-125, 162-171, 193-198, 211-213. Land-surface datum is about 148 feet above msl. Highest water level 97.59 below lsd, July 29, 1955; lowest 104.42 below lsd, Nov. 29, 1955. Records available: 1955. July 29, 97.59; Nov. 29, 104.42; Dec. 27, 102.60.

11/35-20E1. Union Sugar Co. Near Guadalupe. Southern Pacific RR. and Oso Flaco Lake Rd. Drilled irrigation artesian well in Paso Robles formation, diameter 18 inches, depth 525 feet, cased to 444, perforations 150-444. Land-surface datum is about 49 feet above msl. Highest water level flowing, Feb. 29, 1944; lowest 29.50 below lsd, Apr. 1, 1941. Records available: 1938-55.

Jan. 1	bg38.90	Apr. 1	g17.40	July 1	bg51.00	Nov. 29	20.54
25	10.46	28	15.46	Oct. 1	g20.33	Dec. 27	17.99
Feb. 24	11.70	May 25	17.83				

b Pumped recently.
g By Santa Maria Valley Water Conservation District.

11/35-25H1. M. J. Mendoza. Near Santa Maria. Bonita and Guadalupe-Nipomo Rds. Drilled unused water-table well in alluvium, diameter 16 inches, depth 129 feet. Land-surface datum is about 135 feet above msl. Highest water level 33.42 below lsd, June 29, 1944; lowest 67.88 below lsd, Sept. 29, 1955. Records available: 1942, 1944-55.

Jan. 25	64.23	Apr. 28	64.57	Aug. 30	65.95	Nov. 29	66.99
Feb. 24	64.20	June 28	65.05	Sept. 29	67.88	Dec. 27	67.10
Mar. 31	64.34	July 28	c69.31				

c Nearby well being pumped.

11/35-26M2. Sam Tognazzini. Near Guadalupe. Oso Flaco Lake and Guadalupe-Nipomo Rds. Drilled unused artesian well in alluvium and Paso Robles formation, diameter 14 inches, depth 324 feet, perforations 112-125, 254-280, 300-320. Land-surface datum is about 106 feet above msl. Highest water level 28.92 below lsd, Nov. 29, 1944; lowest 65.99 below lsd, July 26, 1950. Records available: 1930, 1944-55.

Jan. 25	54.34	Apr. 28	59.14	July 28	c74.89	Oct. 25	c73.15
Feb. 24	54.40	May 25	d63.73	Aug. 30	c75.18	Nov. 29	61.47
Mar. 31	c69.19	June 28	c68.48	Sept. 29	c73.02	Dec. 27	59.99

c Nearby well being pumped.
d Nearby well pumped recently.

11/35-28M1. Union Sugar Co. Near Guadalupe. Oso Flaco Lake Rd. and Southern Pacific RR. Drilled irrigation artesian well in Paso Robles formation, diameter 16 inches, depth 376 feet, perforations 235-239, 272-276, 300-372. Land-surface datum is about 77 feet above msl. Highest water level 11.07 below lsd, Dec. 30, 1943; lowest 50.15 below lsd, July 1, 1954. Records available: 1934, 1938-55. Jan. 1, *32.50; Apr. 1, *41.90; Apr. 20, 39.20; July 1, *54.35, pumped recently; Oct. 1, *51.90, pumped recently. *Measurement by Santa Maria Valley Water Conservation District.

11/35-33G1. H. E. Pezzoni. Near Guadalupe. Southern Pacific RR. and Guadalupe-Nipomo Rd. Drilled irrigation artesian well in alluvium, diameter 10 inches, depth 141 feet. Land-surface datum is about 91 feet above msl. Highest water level 16.49 below lsd, Feb. 29, 1944; lowest 52.75 below lsd, Sept. 29, 1955. Records available: 1930, 1933-34, 1938-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	g42.46	Apr. 1	g49.53	July 1	bg54.68	Oct. 25	52.60
25	40.08	28	42.80	Sept. 29	52.75	Nov. 29	47.47
Feb. 24	41.42	May 25	48.22	Oct. 1	g52.31	Dec. 27	44.73
Mar. 31	42.11						

b Pumped recently.
g By Santa Maria Valley Water Conservation District.

11/35-35A1. Elmer A. Runels. Near Guadalupe. Bonita and Nipomo-Guadalupe Rds. Drilled irrigation artesian well in alluvium, diameter 16 inches, depth 195 feet, perforations 125-189. Land-surface datum is about 123 feet above msl. Highest water level 24.50 below lsd, Feb. 24, 1925; lowest 71.05 below lsd, July 1, 1955. Records available: 1925, 1930, 1938-55. Jan. 1, *66.40; Apr. 1, *67.57, pumped recently; Apr. 19, 69.15; July 1, *71.05; Oct. 1, *73.83, pumped recently. *Measurement by Santa Maria Valley Water Conservation District.

Upper Santa Ynez Valley

6/30-6A1. Sam Torrence. Near Santa Ynez. Telephone Rd. and Baseline Ave. Drilled irrigation water-table well in terrace deposits, diameter 16 inches, depth 262 feet, perforations 42-260. Land-surface datum is about 669 feet above msl. Highest water level 42.02 below lsd, Apr. 8, 1943; lowest 100.92 below lsd, June 30, 1953. Records available: 1942-55.

Jan. 26	80.46	Mar. 24	78.57	Sept. 29	b103.28	Nov. 30	89.11
Feb. 24	79.24	May 26	90.05	Oct. 12	98.45	Dec. 28	86.44

b Pumped recently.

6/30-7K6. Valley Pump and Supply Co. Santa Ynez. Drilled unused water-table well in terrace deposits, diameter 8 inches, depth 100 feet, cased to 96, perforations 53-93. Land-surface datum is about 611 feet above msl. Highest water level 40.44 below lsd, Mar. 11, 1952; lowest 51.83 below lsd, Oct. 18, 1954. Records available: 1950, 1952-55.

Feb. 1950	g41.00	Oct. 16, 1953	47.20	Mar. 28, 1955	45.72	Oct. 25, 1955	50.04
Mar. 11, 1952	40.44	Mar. 17, 1954	44.02	Sept. 29	50.35	Nov. 30	48.64
Oct. 24	47.56	Oct. 18	51.83	Oct. 13	50.00	Dec. 28	47.80
Mar. 9, 1953	42.55						

g By well driller.

6/30-9N1. San Lucas Ranch. Near Santa Ynez. Drilled stock water-table well in Paso Robles(?) formation, diameter 8 inches, depth 160 feet. Land-surface datum is about 653 feet above msl. Highest water level 30.71 below lsd, Sept. 1, 1944; lowest 40.65 below lsd, June 30, 1955. Records available: 1941-55.

Jan. 26	39.00	Apr. 28	38.93	July 28	a48.00	Oct. 25	39.30
Feb. 24	38.98	May 27	40.40	Aug. 31	39.72	Nov. 30	39.28
Mar. 24	39.05	June 30	40.65	Sept. 29	39.24	Dec. 28	39.20

a Pumping.

6/30-21B2. Rancho Juan y Lolita. Near Santa Ynez. Drilled irrigation water-table well in river-channel deposits, diameter 14 inches, reported depth 70 feet. Land-surface datum is about 495 feet above msl. Highest water level 12.35 below lsd, Apr. 28, 1954; lowest 19.98 below lsd, Sept. 29, 1953. Records available: 1952-55.

Jan. 26	14.72	May 27	13.49	Oct. 11	19.14	Dec. 1	19.45
Feb. 24	13.43	June 30	18.50	25	19.29	28	15.52
Mar. 30	13.14	Sept. 29	19.22				

6/30-29E1. Rancho Juan y Lolita. Near Santa Ynez. Drilled unused water-table well in alluvium, diameter 10 inches, depth 52 feet. Land-surface datum is about 461 feet above msl. Highest water level 7.90 below lsd, Mar. 10, 1941; lowest 24.00 below lsd, May 20-21, 1951. Records available: 1933-55.

6/30-29E1--Continued.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	23.07	23.28	17.50	13.44	15.06	12.98	15.12	18.58	20.95	21.44	21.98	22.47
2	23.07	23.26	17.10	13.43	14.95	13.01	15.26	18.73	21.00	21.45	22.01	22.47
3	23.08	23.26	16.77	13.43	14.70	13.00	15.38	18.88	21.03	21.47	22.03	22.56
4	23.09	23.26	16.45	13.44	14.40	13.00	15.50	19.02	21.05	21.49	22.05	22.58
5	23.10	23.25	16.25	13.45	14.12	13.00	15.62	19.16	21.07	21.50	22.07	22.60
6	23.10	23.25	15.96	13.50	13.80	13.04	15.75	19.30	21.10	21.53	22.07	22.62
7	.....	23.23	15.68	13.56	13.60	13.09	15.87	19.44	21.11	21.51	22.10	22.64
8	23.14	23.20	15.35	13.64	13.42	13.05	16.00	19.56	21.12	21.51	22.13	22.65
9	23.14	23.17	15.21	13.70	13.24	13.05	16.09	19.64	21.15	21.52	22.15	22.63
10	23.14	23.16	15.21	13.80	13.15	13.06	16.22	19.76	21.15	21.54	22.12	22.61
11	23.16	23.10	14.87	13.90	13.08	.....	16.34	19.85	21.16	21.56	22.12	22.61
12	23.16	23.07	14.60	14.00	13.02	.....	16.45	19.93	21.17	21.57	22.12	22.61
13	23.16	23.04	14.44	14.10	.....	.....	16.58	19.88	21.19	21.60	22.12	22.61
14	23.16	23.00	14.30	14.20	.....	13.29	16.69	19.91	21.21	21.62	22.12	22.65
15	23.22	22.94	14.18	14.30	.....	13.37	16.74	19.91	21.23	21.63	22.21	22.65
16	23.23	22.94	14.10	.....	.....	13.41	16.69	19.91	21.22	21.65	22.21	22.70
17	23.23	22.80	14.02	.....	.....	13.50	16.69	19.96	21.23	21.67	22.22	22.70
18	23.23	22.74	13.89	.....	12.80	13.65	16.75	20.04	21.24	21.70	22.27	22.71
19	23.23	22.74	13.80	14.72	12.80	13.73	17.00	20.10	21.25	21.72	22.27	22.73
20	23.24	22.55	13.77	14.81	12.81	13.85	17.12	20.17	21.26	21.74	22.28	22.75
21	23.25	22.42	13.75	14.90	12.83	13.95	17.03	20.25	21.28	21.75	22.30	22.78
22	23.25	22.25	13.70	15.00	12.82	14.06	17.02	20.31	21.30	21.78	22.32	22.78
23	23.25	21.62	13.65	15.11	12.83	14.18	17.07	20.37	21.31	21.78	22.34	22.80
24	23.26	20.50	13.63	15.20	12.80	14.29	17.17	20.40	.....	21.81	22.35	22.82
25	23.28	19.37	13.61	15.27	.....	14.40	17.27	20.53	.....	21.83	22.37	22.83
26	23.30	18.92	13.59	15.32	.....	14.55	17.40	20.60	.....	21.85	22.43	22.84
27	23.31	18.47	13.56	15.24	.....	14.65	17.58	20.64	.....	21.86	22.43	22.85
28	23.31	17.97	13.55	15.17	12.86	14.78	17.77	20.70	.....	21.88	22.43	22.85
29	23.30		13.54	15.15	12.89	14.90	17.99	20.76	21.43	21.94	22.43	22.87
30	23.29		13.52	15.11	12.91	15.01	18.20	20.84	21.42	21.95	22.47	22.88
31	23.28		13.50		12.95		18.40	20.90		21.96		22.87

6/31-2K1. Sam de la Cuesta. Near Ballard. Drilled domestic and irrigation water-table well in alluvium, diameter 10 inches, depth 75 feet. Land-surface datum is about 627 feet above msl. Highest water level 23.02 below lsd, Jan. 9, 1942; lowest 49.60 below lsd, Sept. 21, 1951. Records available: 1942, 1947-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	38.10	May 27	43.82	Oct. 13	41.86	Nov. 30	41.74
Feb. 24	38.80	July 28	40.85	25	43.40	Dec. 28	41.22
Mar. 28	37.00						

6/31-13D1. Mrs. W. E. Parker. Near Santa Ynez. Refugio Pass Rd. and State Highway 150. Drilled domestic water-table well in Paso Robles formation, diameter 10 inches, depth 170 feet. Land-surface datum is about 608 feet above msl. Highest water level 102.58 below lsd, Mar. 9, 1942; lowest 120.95 below lsd, Oct. 11, 1955. Records available: 1941-55.

Jan. 26	115.74	May 27	114.85	Aug. 31	116.30	Oct. 25	117.13
Feb. 24	114.56	June 30	115.59	Sept. 29	116.54	Nov. 30	116.80
Mar. 24	114.93	July 28	115.94	Oct. 11	120.95	Dec. 28	116.40
Apr. 28	116.15						

6/31-16N2. H. G. Peterson. Near Solvang. Drilled irrigation water-table well in river-channel deposits, diameter 16 inches, depth 47 feet. Land-surface datum is about 368 feet above msl. Highest water level 5.93 below lsd, May 1, 1941; lowest 23.01 below lsd, Oct. 30, 1951. Records available: 1941-42, 1949-55.

Jan. 26	11.17	Apr. 28	11.07	July 28	18.50	Oct. 25	22.50
Feb. 24	10.83	May 27	10.34	Sept. 29	22.18	Nov. 30	22.04
Mar. 24	10.33	June 30	14.00	Oct. 11	22.23	Dec. 28	12.57

6/31-17F1. John R. Orton. Near Buellton. Dug domestic water-table well in alluvium, diameter 12 inches, depth 43 feet. Land-surface datum is 362.90 feet above msl. Highest water level 14.80 below lsd, Apr. 9, 1941; lowest 29.68 below lsd, July 27, 1951. Records available: 1931-55.

Jan. 26	24.00	Apr. 28	22.56	July 28	a29.90	Oct. 25	27.67
Feb. 24	22.45	May 19	21.39	Aug. 31	a28.37	Nov. 30	27.30
Mar. 17	21.71	June 22	22.99	Sept. 29	a26.89	Dec. 20	27.18

a Pumping.

6/31-21H1. Alisal Corp. Alisal Rd. north of Santa Ynez River. Drilled domestic water-table well in alluvium, diameter 8 inches, depth 60 feet. Land-surface datum is 399.34 feet above msl. Highest water level 6.28 below lsd, Jan. 15, Apr. 6, 1942; lowest 18.25 below lsd, Mar. 17, 1954. Records available: 1941-42, 1945, 1950, 1952-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Dec. 5, 1941	6.71	Aug. 6, 1942	7.47	Mar. 5, 1952	9.02	Sept. 29, 1955	13.77
Jan. 15, 1942	6.28	Sept. 1	7.06	Oct. 29	a10.43	Oct. 12	13.76
29	6.44	Oct. 6	6.63	Mar. 31, 1953	8.80	25	13.77
Mar. 9	6.40	Nov. 12	6.98	Oct. 22	a9.30	Nov. 15	13.89
Apr. 6	6.28	Dec. 31	6.75	Mar. 17, 1954	18.25	30	13.83
May 26	a6.83	Apr. 10, 1945	6.59	Nov. 5	12.09	Dec. 20	13.30
June 11	6.76	Mar. 15, 1950	10.51	Mar. 24, 1955	12.02	28	13.34
July 10	6.80	Apr. 3	10.86	Sept. 15	13.35		

a Pumping.

6/31-21H2. Petan Dairy Ranch. Near Solvang. Santa Ynez River and Alisal Rd. Drilled unused water-table well in alluvium, diameter 8 inches, depth 13 feet. Land-surface datum is about 407 feet above msl. Highest water level 0.70 below lsd, Mar. 7, 1941; lowest 13.87 below lsd, May 13, 1955. Records available: 1931-55. Jan. 26, 12.98; Feb. 24, 12.83; May 13, 13.87; May 27, 13.28; Aug. 31, 13.50. Measurement discontinued.

6/32-2Q1. Wallace Dine. Highway 150 west of Buellton. Drilled domestic water-table well in Paso Robles formation, diameter 8 inches, depth 115 feet, cased to 110, perforations 50-76. Land-surface datum is 359.46 feet above msl. Highest water level 56.20 below lsd, May 22, 1952, Apr. 26, 1955; lowest 59.91 below lsd, Mar. 2, 1951. Records available: 1949-55.

Oct. 25, 1949	59.21	Apr. 29, 1952	56.46	May 5, 1953	57.39	Nov. 17, 1954	59.05
Mar. 16, 1950	58.15	May 22	56.20	June 9	57.05	Dec. 22	59.10
Nov. 21	59.29	June 26	56.66	July 10	56.95	Jan. 24, 1955	58.98
Jan. 15, 1951	59.14	July 16	57.04	Oct. 19	57.56	Feb. 21	58.72
Mar. 2	59.91	Aug. 29	56.32	Nov. 25	58.02	Mar. 28	b58.69
30	58.79	Oct. 2	56.40	Feb. 26, 1954	58.29	Apr. 26	56.20
June 1	58.98	22	56.89	Mar. 10	58.28	May 19	57.02
Aug. 13	59.20	Nov. 18	57.16	Apr. 8	58.34	June 22	57.68
Oct. 11	59.51	Dec. 23	57.26	May 18	58.58	Aug. 9	58.00
Nov. 6	59.56	Jan. 7, 1953	57.23	June 10	58.33	25	57.95
Dec. 5	59.62	21	57.27	July 22	58.46	Sept. 15	57.75
31	59.56	Feb. 11	57.45	Aug. 18	58.25	Oct. 12	58.14
Jan. 30, 1952	57.91	Mar. 10	57.74	Sept. 27	58.74	Nov. 15	58.53
Feb. 26	b57.11	Apr. 1	57.93	Oct. 20	58.90	Dec. 28	58.72
Mar. 24	57.65						

b Pumped recently.

6/32-6K1. Manuel P. Domingos. Near Buellton. Drilled domestic and stock water-table well in alluvium, diameter 12 inches, depth 74 feet. Land-surface datum is about 390 feet above msl. Highest water level 10.50 below lsd, July 9, 1932; lowest 22.90 below lsd, Oct. 29, 1953. Records available: 1932-34, 1941-55.

Jan. 26	19.94	June 30	20.20	Aug. 31	20.51	Oct. 25	20.58
Apr. 5	20.05	July 28	20.33	Oct. 13	20.55	Nov. 30	20.69

6/32-9A1. Owen E. Hollister. Near Buellton. Drilled domestic water-table well in alluvium, diameter 8 inches, depth 58 feet. Land-surface datum is 309.33 feet above msl. Highest water level 26.20 below lsd, Jan. 21, 1942; lowest 37.69 below lsd, Aug. 6, 1942. Records available: 1932-55.

Jan. 26	33.59	Apr. 28	35.50	July 14	35.46	Oct. 25	35.15
Feb. 24	33.46	May 27	34.75	Aug. 31	37.20	Nov. 30	34.48
Mar. 10	33.48	June 22	34.90				

6/32-11A1. Thomas O'Neill. Near Buellton. Drilled unused water-table well in Paso Robles(?) formation, diameter 8 inches, depth 125 feet. Land-surface datum is 341.88 feet above msl. Highest water level 39.24 below lsd, Apr. 25, 1952; lowest 53.80 below lsd, July 14, 1955. Records available: 1950-55. Jan. 26, 45.53; Feb. 24, 44.50; Mar. 28, 45.37, nearby well being pumped; Apr. 28, 47.24; May 27, 46.86; June 30, 48.95; July 14, 53.80. Measurement discontinued.

6/32-11N1. Doty & Mercer. Near Buellton. Drilled domestic water-table well in alluvium, diameter 8 inches, depth 50 feet. Land-surface datum is 332.74 feet above msl. Highest water level 24.77 below lsd, Apr. 9, 1952; lowest 36.80 below lsd, Dec. 2, 1954. Records available: 1932, 1941, 1949-55.

Jan. 25	36.05	May 13	33.96	July 27	32.40	Oct. 26	35.86
Feb. 23	35.40	26	33.92	Aug. 9	33.00	Nov. 29	36.67
Mar. 29	35.08	June 29	32.32	Sept. 28	34.45	Dec. 27	b36.55

b Pumped recently.

6/32-12J2. A. Bodine. Buellton. Drilled unused water-table well in Paso Robles formation, diameter 6 inches, depth 126 feet. Land-surface datum is 356.96 feet above msl. Highest water level 22.98 below lsd, Sept. 11, 1941; lowest 38.47 below lsd, Sept. 28, 1949. Records available: 1941-55. Jan. 26, 32.63; Feb. 24, 32.86. Measurement discontinued.

6/32-16P3. Channing Peake. Near Buellton. Drilled irrigation water-table well in alluvium, diameter 16 inches, depth 70 feet. Land-surface datum is about 293 feet above msl. Highest water level 41.82 below lsd, Feb. 24, 1943; lowest 53.68 below lsd, Mar. 27, 1951. Records available: 1941-55. Jan. 25, 43.90; Feb. 23, 43.86; Mar. 29, 43.76; Apr. 29, 44.17; Nov. 29, 48.59; Dec. 27, 42.75.

6/32-18H1. T. J. Donovan. Near Buellton. Drilled domestic and stock water-table well in alluvium, diameter 8 inches, depth 50 feet. Land-surface datum is about 266 feet above msl. Highest water level 25.80 below lsd, Oct. 18, 1941; lowest 40.16 below lsd, Nov. 28, 1951. Records available: 1932-42, 1949-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	33.80	Apr. 26	34.30	July 27	35.90	Dec. 20	36.40
Feb. 23	33.14	May 26	a33.44	Sept. 28	35.80	27	32.73
Mar. 30	33.05	June 29	33.90	Oct. 26	38.60		

a Pumping.

6/33-8J1. Hollister Estate. Near Lompoc. Drilled domestic water-table well in alluvium, diameter 10 inches, depth 62 feet. Land-surface datum is about 202 feet above msl. Highest water level 40.76 below lsd, Mar. 27, 1952; lowest 52.14 below lsd, Sept. 24, 1951. Records available: 1941-42, 1949-55.

Jan. 25	42.84	Apr. 26	43.23	July 27	43.25	Oct. 18	45.00
Feb. 23	42.44	May 26	42.74	Aug. 30	44.94	Nov. 29	44.69
Mar. 17	42.32	June 29	43.03	Sept. 28	45.17	Dec. 27	42.65

6/33-9P1. Hollister Estate. Near Lompoc. Drilled unused water-table well in alluvium, diameter 16 inches, depth 83 feet. Land-surface datum is about 200 feet above msl. Highest water level 21.80 below lsd, Apr. 3, 1941; lowest 54.61 below lsd, Nov. 30, 1950. Records available: 1932-55.

Jan. 25	39.65	Apr. 27	c45.43	July 27	c46.00	Oct. 28	42.58
Feb. 23	39.10	May 26	41.17	Aug. 30	45.88	Nov. 29	42.01
Apr. 4	41.40	June 29	40.88	Sept. 28	43.37	Dec. 27	41.34

c Nearby well being pumped.

6/33-11M1. William Rennie. Drilled irrigation water-table well in river-channel deposits and alluvium, diameter 16 inches, depth 65 feet, cased to 63, perforations 4-30, 56-63. Land-surface datum is about 207 feet above msl. Highest water level 4.29 below lsd, Feb. 27, 1950; lowest 16.39 below lsd, Nov. 7, 1951. Records available: 1947, 1949-55.

Jan. 25	8.30	May 26	8.16	Aug. 30	13.41	Nov. 29	12.05
Feb. 23	8.11	June 29	12.61	Sept. 15	12.46	Dec. 20	11.75
Apr. 26	8.89	July 27	13.05	Oct. 26	12.83	27	7.16

6/34-1P1. Hollister Estate. Near Lompoc. Santa Rosa Rd. and Salsipuedes Creek. Drilled irrigation water-table well in alluvium, diameter 16 inches, depth 164 feet, cased to 164, perforations 54-72, 127-162. Land-surface datum is about 154 feet above msl. Highest water level 36.46 below lsd, Mar. 27, 1952; lowest 45.41 below lsd, July 26, 1951. Records available: 1949-55.

Jan. 25	40.00	Apr. 26	39.50	July 27	42.70	Nov. 29	43.80
Feb. 23	39.48	May 12	41.05	Oct. 26	44.20	Dec. 27	40.10
Mar. 17	39.07						

6/34-2A6. Hattie Madsen. Near Lompoc. Drilled irrigation water-table well in alluvium, diameter 16 inches, depth 185 feet, cased to 185, perforations 56-66, 107-178. Land-surface datum is 129.96 feet above msl. Highest water level 36.40 below lsd, Dec. 30, 1952; lowest 44.72 below lsd, July 6, 1949. Records available: 1948-55.

Jan. 26	37.40	Apr. 28	36.81	July 28	38.31	Nov. 30	39.70
Feb. 24	37.02	May 27	36.72	Sept. 29	39.29	Dec. 28	36.69

6/34-4F3. City of Lompoc. West Olive and O Sts. Drilled unused water-table well in alluvium, diameter 16 inches, depth 81 feet, perforations 60-77. Land-surface datum is about 95 feet above msl. Highest water level 43.44 below lsd, Jan. 27, 1954; lowest 58.17 below lsd, Apr. 24, 1951. Records available: 1950-55.

Jan. 25	44.83	Apr. 26	50.17	July 27	48.15	Oct. 26	47.76
Feb. 23	44.23	May 26	c50.03	Aug. 30	48.25	Nov. 29	47.23
Mar. 30	c51.85	June 29	49.57	Sept. 28	c51.74	Dec. 27	46.50

c Nearby well being pumped.

6/34-6C2. Bank of America. Near Lompoc. Ocean and Legge Aves. Drilled domestic and stock artesian well in Careaga sand, diameter 12 inches, depth 185 feet, perforations 115-155. Land-surface datum is 99.80 feet above msl. Highest water level 47.88 below lsd, Feb. 24, 1943; lowest 76.78 below lsd, Apr. 24, 1951. Records available: 1930-39, 1943-55. May 26, 63.20; July 27, 65.32; Oct. 14, 59.94; Dec. 27, 57.60.

6/34-12F2. Hollister Estate. Near Lompoc. Santa Rosa Rd. and Salsipuedes Creek. Drilled unused water-table well in alluvium, diameter 6 inches, depth 50 feet. Land-surface datum is about 151 feet above msl. Highest water level 34.21 below lsd, June 29, 1953; lowest 40.18 below lsd, Dec. 26, 1951. Records available: 1942, 1949-54. Measurement discontinued.

Lower Santa Ynez Valley

7/31-23P1. F. L. Mattei. Los Olivos. Drilled domestic and irrigation water-table well in Paso Robles formation, diameter 8 inches, depth 141 feet. Land-surface datum is about 827 feet above msl. Highest water level 8.09 below lsd, Aug. 7, 1942; lowest 65.64 below lsd, Sept. 29, 1955. Records available: 1942-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	39.48	Apr. 28	42.26	Sept. 29	65.64	Oct. 25	61.98
Feb. 24	38.18	June 30	62.45	Oct. 11	62.20	Nov. 30	60.08

7/31-25L1. Dr. Ina M. Richter and Mrs. Virginia Lee. Near Los Olivos. Drilled domestic water-table well in Paso Robles formation, diameter 12 inches, depth 200 feet. Land-surface datum is about 806 feet above msl. Highest water level 55.83 below lsd, Apr. 27, 1944; lowest 95.55 below lsd, Oct. 25, 1955. Records available: 1942-55.

Jan. 26	92.35	Apr. 28	93.43	July 28	94.35	Oct. 25	95.55
Feb. 24	92.95	May 27	93.68	Aug. 31	94.94	Nov. 30	95.40
Mar. 25	a98.01	June 30	94.50	Sept. 29	95.29	Dec. 28	95.35

a Pumping.

7/31-36L2. D. B. Kilbourne. Near Ballard. Baseline and Grand (Refugio) Aves. Drilled domestic and irrigation water-table well in Paso Robles formation, diameter 12 inches, depth 230 feet. Land-surface datum is about 715 feet above msl. Highest water level 16.54 below lsd, Apr. 7, 1943; lowest 67.08 below lsd, July 28, 1955. Records available: 1942-55.

Jan. 26	50.53	Apr. 28	57.81	Aug. 31	65.73	Oct. 12	62.13
Feb. 24	49.54	July 28	67.08	Sept. 29	63.87	Dec. 28	55.68
Mar. 25	49.81						

7/33-30C1. John Valla. Near Lompoc. Orcutt Rd. and State Highway 150. Drilled unused water-table well in Paso Robles formation, diameter 8 inches, depth 183 feet. Land-surface datum is about 233 feet above msl. Highest water level 150.41 below lsd, Feb. 1, 1946; lowest 157.67 below lsd, Oct. 25, 1955. Records available: 1941-55.

Jan. 26	157.30	Apr. 28	157.18	July 29	157.21	Oct. 25	157.67
Feb. 24	157.27	May 27	157.15	Aug. 31	157.21	Nov. 30	157.66
Mar. 30	c157.28	June 30	157.23	Sept. 29	157.24	Dec. 28	157.64

c Nearby well being pumped.

7/34-9H3. U. S. Geol. Survey, Union Oil Co., Purisima Lease. Near Lompoc. Drilled observation water-table well in Orcutt formation, diameter 8 inches, depth 103 feet, cased to 103. Land-surface datum is about 275 feet above msl. Highest water level 9.32 below lsd, Oct. 10, 1948, Sept. 3, 1949; lowest 12.48 below lsd, Oct. 15, 1955. Records available: 1948-55.

Jan. 27	11.72	May 6	11.64	Sept. 16	12.20	Nov. 30	12.30
Feb. 11	11.24	June 24	11.85	Oct. 15	12.48	Dec. 28	12.08

7/34-12E1. U. S. Geol. Survey, Union Oil Co., Purisima Lease. Near Lompoc. Drilled observation water-table well in Careaga sand, diameter 8 to 16 inches, depth 385 feet, cased to 385, perforations 345-385. Land-surface datum is 385.83 feet above msl. Highest water level 301.70 below lsd, June 25, 1949; lowest 304.75 below lsd, Dec. 19, 1955. Records available: 1949-55.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	304.02	304.10	304.25	.....	.....	304.49	304.38	.....	.....	304.48	304.53	304.56
2	303.94	304.37	304.25	302.67	.....	304.52	304.37	.....	.....	304.48	304.57	304.56
3	304.00	304.38	304.29	302.53	.....	304.42	304.45	.....	.....	304.48	304.60	304.52
4	304.31	304.46	304.26	302.46	.....	304.38	304.49	.....	.....	304.54	304.66	304.52
5	304.28	304.33	304.25	302.54	.....	304.34	304.45	.....	.....	304.56	304.65	304.62

7/34-12E1--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
6	304.11	304.34	304.44	302.59	.....	304.39	304.35	.....	.....	304.61	304.60	304.57
7	304.14	304.46	304.16	302.61	.....	304.42	304.28	.....	.....	304.65	304.60	304.62
8	304.22	304.28	304.10	302.60	.....	304.35	304.30	.....	.....	304.65	304.64	304.65
9	304.17	304.18	304.16	302.61	.....	304.35	304.36	.....	.....	304.62	304.50	304.62
10	304.17	304.18	304.22	302.64	.....	304.37	304.36	304.58	.....	304.62	304.30	304.63
11	304.41	304.26	304.33	302.67	.....	304.41	304.39	.....	.....	304.57	304.39	304.55
12	304.44	304.28	304.38	302.63	.....	304.45	304.43	.....	.....	304.56	304.39	304.50
13	304.30	304.25	304.33	302.55	.....	304.50	304.51	.....	304.54	304.56	304.47	304.53
14	304.29	304.27	304.25	302.53	.....	304.63	304.55	.....	304.58	304.51	304.48	304.68
15	304.33	304.23	304.27	302.60	.....	304.60	304.51	.....	304.55	304.50	304.66	304.52
16	304.34	304.17	304.31	302.58	.....	304.51	304.45	.....	304.52	304.50	304.56	304.52
17	304.16	304.17	304.35	302.51	.....	304.47	304.43	.....	304.52	304.50	304.56	304.55
18	304.15	304.26	304.25	302.59	.....	304.43	304.44	.....	304.58	304.55	304.70	304.61
19	304.36	304.35	304.18	302.58	.....	304.44	304.47	.....	304.56	304.63	304.62	304.75
20	304.57	304.34	.....	302.47	.....	304.47	304.51	.....	304.46	304.68	304.59	304.70
21	304.60	304.42	.....	302.39	.....	304.54	304.54	.....	304.46	304.71	304.59	304.40
22	304.59	304.30	.....	302.57	.....	304.47	.....	.....	304.51	304.72	304.74	304.22
23	304.49	304.30	.....	302.60	.....	304.37	.....	.....	304.56	304.70	304.74	304.22
24	.....	304.12	.....	302.62	.....	304.33	.....	.....	304.56	304.69	304.74	304.42
25	.....	304.12	.....	302.64	.....	304.36	.....	.....	304.56	304.63	304.71	304.51
26	.....	304.20	.....	302.71	.....	304.45	.....	.....	304.59	304.60	304.66	304.56
27	304.33	304.20	.....	302.55	304.44	304.47	.....	.....	304.64	304.60	304.58	304.57
28	304.22	304.39	.....	302.48	304.44	304.50	.....	.....	304.59	304.62	304.50	304.58
29	304.10		.....	302.49	304.37	304.41	.....	.....	304.56	304.50	304.50	304.65
30	304.10		.....	302.53	304.38	304.40	.....	.....	304.56	304.44	304.56	304.68
31	304.20		.....		304.42		.....	.....		304.44		304.70

7/34-14F1. Walter F. Ziesche. Near Lompoc. Drilled unused water-table well in Paso Robles formation, diameter 12 inches, depth 250 feet. Land-surface datum is 268.32 feet above msl. Highest water level 194.94 below lsd, Oct. 23, 1947; lowest 200.84 below lsd, Sept. 29, 1955. Records available: 1947-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	199.55	Apr. 28	200.00	July 28	199.98	Oct. 25	200.22
Feb. 24	199.35	May 27	199.80	Aug. 31	200.78	Nov. 30	200.20
Apr. 1	199.54	June 30	199.99	Sept. 29	200.84	Dec. 28	199.95

7/34-21E1. U. S. Geol. Survey, U. S. Army, Camp Cooke Military Reservation. Near Lompoc. Drilled observation artesian well in Orcutt formation, diameter 8 inches, depth 145 feet, cased to 145, perforations 73-93. Land-surface datum is about 82 feet above msl. Highest water level 17.97 below lsd, Apr. 1, 1949; lowest 25.02 below lsd, Aug. 10, 1951. Records available: 1948-55.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	20.07	19.68	19.45	20.89	.....	21.82	21.99	22.28	22.06	21.70	21.78	21.15
2	20.06	19.66	19.47	20.97	.....	21.90	21.99	22.27	22.05	21.69	21.78	21.15
3	20.09	19.65	19.49	21.06	.....	21.92	22.03	22.28	22.05	21.70	21.81	21.09
4	20.18	19.65	19.50	21.08	.....	21.96	22.00	22.36	22.06	21.71	21.84	21.09
5	20.05	19.59	19.52	21.26	.....	21.93	21.95	22.38	22.01	21.73	21.81	21.04
6	19.97	19.62	19.61	21.37	21.86	21.94	21.91	22.40	21.95	21.80	21.77	21.04
7	20.01	19.62	19.53	21.43	21.85	22.02	21.91	22.33	21.94	21.86	21.74	21.06
8	20.04	19.52	19.53	21.48	21.82	22.08	21.96	22.28	21.96	21.84	21.76	21.00
9	19.95	19.49	19.61	21.59	21.79	22.13	22.06	22.30	22.02	21.83	21.65	21.05
10	19.95	19.50	19.67	21.71	21.80	22.17	22.07	22.31	21.99	21.80	21.63	21.04
11	20.03	19.52	19.70	21.79	21.79	22.10	22.08	22.28	21.94	21.81	21.68	21.02
12	19.98	19.56	19.74	21.89	21.77	22.04	22.11	22.26	21.94	21.84	21.74	20.99
13	19.91	19.52	19.71	21.95	21.76	22.06	22.17	22.25	21.91	21.85	21.67	21.02
14	19.91	19.51	19.70	22.03	21.76	22.15	22.18	22.25	21.87	21.80	21.70	21.08
15	19.93	19.46	19.75	22.15	21.75	22.16	22.17	22.24	21.84	21.81	21.66	21.01
16	19.93	19.47	19.80	22.21	21.72	22.10	22.13	22.22	21.85	21.81	21.55	20.96
17	19.78	19.47	19.88	22.25	21.68	22.09	22.10	22.22	21.86	21.76	21.55	20.95
18	19.79	19.52	19.87	22.33	21.66	22.04	22.08	22.25	21.81	21.77	21.56	20.94
19	19.87	19.53	19.91	22.34	21.63	22.00	22.09	22.28	21.80	21.80	21.48	20.95
20	19.97	19.51	.....	22.33	21.68	22.01	22.14	22.28	21.76	21.79	21.45	20.93
21	19.87	19.52	.....	22.31	21.66	22.05	22.19	22.22	21.76	21.78	21.46	20.91
22	19.84	19.43	.....	22.30	21.67	22.03	22.22	22.21	21.80	21.79	21.43	20.80
23	19.80	19.45	.....	22.33	21.70	.....	22.21	22.20	21.77	21.78	21.42	20.80
24	.....	19.43	.....	22.18	21.68	.....	22.19	22.21	21.77	21.75	21.37	20.81
25	.....	19.43	.....	22.18	21.68	22.03	22.21	22.21	21.75	21.77	21.34	20.75

7/34-21E1--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	.....	19.50	.....	22.14	21.74	22.02	22.25	22.19	21.75	21.79	21.30	20.74
27	19.73	19.50	.....	22.10	21.75	21.98	22.25	22.15	21.75	21.83	21.29	20.72
28	19.69	19.51	.....	22.11	21.76	21.98	22.25	22.09	21.72	21.83	21.20	20.73
29	19.67		.....	22.14	21.71	21.97	22.27	22.09	21.70	21.82	21.22	20.73
30	19.67		.....	22.15	21.72	21.99	22.31	22.09	21.70	21.77	21.15	20.73
31	19.70		.....		21.73		22.31	22.09		21.75		20.69

7/34-22H1. H. E. Harris. Near Lompoc. Rucker Crossing of Santa Ynez River. Drilled domestic artesian well in alluvium and Orcutt formation, diameter 12 inches, depth 208 feet, cased to 193, perforations 87-100, 167-190. Land-surface datum is about 97 feet above msl. Highest water level 20.80 below lsd, Mar. 7, 1941; lowest 31.75 below lsd, May 28, 1951. Records available: 1941-42, 1946-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	28.36	May 27	31.58	Aug. 31	31.03	Nov. 30	29.43
Feb. 24	28.23	June 30	30.25	Sept. 29	30.86	Dec. 28	29.17
Apr. 1	c32.07	July 28	31.06	Oct. 25	29.74		

c Nearby well being pumped.

7/34-22Q4. U. S. Geol. Survey, A. Scolari property. Near Lompoc. Rucker Crossing Rd. and North A St. Drilled observation water-table well in alluvium, diameter 2 inches, depth 24 feet, cased to 24, screen 21-24. Land-surface datum is 82.72 feet above msl. Highest water level 12.82 below lsd, Jan. 6, 1953; lowest dry, Aug. 28, 1950-Dec. 26, 1951. Records available: 1947-55.

Jan. 25	18.77	Apr. 27	17.76	July 25	18.60	Oct. 26	19.63
Feb. 23	18.70	May 26	17.75	Aug. 30	19.43	Nov. 29	19.80
Mar. 14	18.52	June 29	17.98	Sept. 28	19.58	Dec. 27	19.18

7/34-24E2. J. F. de Costa. Near Lompoc. Drilled irrigation water-table well in Paso Robles formation, diameter 16 inches, depth 191 feet, perforations 119-140. Land-surface datum is 178.25 feet above msl. Highest water level 103.17 below lsd, Nov. 27, 1938; lowest 109.80 below lsd, Aug. 30, 1954. Records available: 1938, 1947, 1953-55.

Jan. 27	108.14	Apr. 28	108.80	July 28	109.27	Nov. 30	109.02
Feb. 24	107.83	May 27	108.70	Sept. 29	109.38	Dec. 28	108.92
Apr. 1	108.59	June 30	109.18	Oct. 25	109.35		

7/34-24N1. La Purisima Mission State Park. Near Lompoc. Drilled irrigation water-table well in Paso Robles formation, diameter 16 inches, depth 183 feet, perforations 130-143. Land-surface datum is 130.4 feet above msl. Highest water level 51.2 below lsd, May 26, 1930; lowest 62.62 below lsd, Sept. 29, 1955. Records available: 1930-35, 1949, 1953-55. Jan. 26, 59.27; Feb. 24, 58.99; Apr. 28, 61.95; Aug. 31, 62.54; Sept. 29, 62.62; Nov. 30, 60.82; Dec. 28, 60.26.

7/34-26H3. R. C. Lilly. Near Lompoc. Drilled unused water-table well in alluvium, diameter 16 inches, depth 123 feet. Land-surface datum is about 115 feet above msl. Highest water level 40.13 below lsd, Mar. 9, 1950; lowest 46.25 below lsd, Apr. 9, 1955. Records available: 1950-55.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	42.10	41.84	41.53	45.03	45.19	44.43	44.82	45.34	45.11	44.70	44.11	43.60
2	42.10	41.83	41.53	45.40	45.12	44.29	44.87	45.44	45.20	44.67	44.20	43.63
3	42.10	41.81	41.53	45.60	45.18	44.26	44.95	45.50	45.22	44.62	44.30	43.60
4	42.09	41.80	41.50	45.70	45.09	44.26	44.79	45.62	45.25	44.59	44.37	43.56
5	42.15	41.74	41.52	45.83	45.09	44.31	44.71	45.75	45.23	44.53	44.30	43.57
6	41.97	41.74	41.55	45.97	44.91	44.37	44.84	45.77	45.35	44.50	44.23	43.58
7	41.97	41.76	41.50	46.05	44.85	44.42	44.97	45.63	45.40	44.47	44.18	43.58
8	42.05	41.69	41.47	46.10	44.74	44.41	45.09	45.50	45.40	44.47	44.18	43.54
9	42.01	41.67	41.50	46.25	44.68	44.41	45.05	45.55	45.34	44.44	44.14	43.41
10	42.00	41.70	41.92	46.02	44.65	44.54	44.95	45.50	45.30	44.44	44.05	43.42
11	42.01	41.70	42.15	46.04	44.65	.....	44.90	45.49	45.10	44.51	44.12	43.40
12	42.03	41.70	42.20	45.90	44.45	.....	45.01	45.50	45.03	44.60	44.24	43.35
13	41.96	41.67	42.25	45.63	44.43	.....	45.01	45.50	45.03	44.65	44.19	43.34
14	41.96	41.67	42.16	45.50	45.45	44.97	45.04	45.50	45.09	44.50	44.18	43.35
15	41.96	41.64	42.23	45.56	45.41	45.03	45.10	45.50	45.03	44.50	44.10	43.33
16	41.97	41.63	42.44	.....	45.30	44.99	45.10	45.50	45.02	44.49	44.04	43.31
17	41.97	41.62	42.63	.....	45.29	45.02	45.10	45.50	45.01	44.45	43.96	43.31
18	41.90	41.64	42.64	45.48	45.28	44.95	45.10	45.50	44.97	44.40	43.96	43.30
19	41.90	41.65	42.61	45.60	45.25	44.80	45.10	45.56	44.93	44.38	43.86	43.30
20	41.94	41.65	42.71	45.70	44.25	44.74	45.15	45.55	44.98	44.32	43.85	43.30

7/34-26H3--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
21	41.95	41.65	42.65	45.68	44.24	44.72	45.15	45.35	45.05	44.30	43.73	43.22
22	41.94	41.63	42.95	45.58	44.28	44.76	45.29	45.33	45.05	44.27	43.74	43.14
23	41.93	41.63	43.11	45.45	44.27	44.79	45.28	45.32	45.05	44.27	43.76	43.09
24	41.88	41.62	43.26	45.47	44.34	44.82	45.25	45.31	45.00	44.25	43.76	42.12
25	41.85	41.52	43.68	45.40	44.38	44.97	45.17	45.35	44.93	44.25	43.76	42.75
26	41.85	41.54	43.93	45.42	44.42	44.83	45.24	45.24	44.90	44.25	43.73	43.10
27	41.86	41.55	44.17	45.42	44.48	44.74	45.34	45.14	44.95	44.24	43.71	43.10
28	41.82	41.57	44.38	45.30	44.53	44.70	45.41	45.10	44.86	44.17	43.65	43.10
29	41.82		44.85	45.41	44.38	44.66	45.39	45.06	44.76	44.13	43.65	43.08
30	41.81		44.55	45.28	44.36	44.76	45.37	45.05	44.74	44.09	43.65	43.09
31	41.82		44.89		44.40		45.37	45.05		44.09		43.09

7/34-27A4. U. S. Geol. Survey, L. H. Schuyler property. Near Lompoc. North A St. and Santa Ynez River. Drilled observation water-table well in alluvium, diameter 2 inches, depth 30 feet. Land-surface datum is 79.19 feet above msl. Highest water level 8.19 below lsd, Feb. 24, 1953; lowest dry, Aug. 28, 1950-Dec. 26, 1951. Records available: 1947-54. Measurement discontinued.

7/34-27A5. U. S. Geol. Survey, L. H. Schuyler property. Near Lompoc. North A St. and Santa Ynez River. Driven observation water-table well in alluvium, diameter 1½ inches, depth 19 feet. Land-surface datum is about 79.19 feet above msl. Highest water level 12.12 below lsd, Apr. 5, 1955; lowest 15.78 below lsd, Dec. 21, 1955. Records available: 1955.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 21	13.54	May 19	13.04	Aug. 25	14.90	Nov. 16	15.57
Mar. 14	12.47	June 22	13.90	Sept. 12	15.15	Dec. 21	15.78
Apr. 5	12.12	July 15	14.35	Oct. 18	15.47	30	13.45

7/34-27F4. J. M. Wilson. Near Lompoc. Northwest corner A St. and Central Ave. Drilled irrigation water-table well in alluvium, diameter 16 inches, depth 178 feet, perforations 110-172. Land-surface datum is 96.79 feet above msl. Highest water level 31.91 below lsd, Feb. 3, 1953; lowest 40.68 below lsd, Jan. 15, 1952. Records available: 1952-55.

Jan. 15, 1952	40.68	Nov. 28, 1952	34.50	Nov. 24, 1953	35.71	Mar. 14, 1955	34.95
31	38.98	Dec. 29	32.92	Jan. 8, 1954	38.45	May 2	38.00
Feb. 20	37.07	Jan. 27, 1953	32.00	Feb. 25	34.61	19	38.44
Mar. 25	34.52	Feb. 3	31.91	Mar. 30	33.87	June 22	38.27
Apr. 11	34.11	24	32.44	Aug. 12	38.23	Aug. 10	39.16
May 2	35.40	Mar. 19	b34.71	Oct. 26	37.13	Sept. 12	38.65
June 27	35.05	Apr. 29	36.52	Nov. 17	36.83	Oct. 18	38.35
Aug. 25	35.63	May 26	35.77	Dec. 22	35.70	Nov. 16	37.43
Sept. 12	36.21	Aug. 27	36.63	Jan. 21, 1955	35.40	Dec. 30	37.83
Oct. 21	35.72	Sept. 30	36.40	Feb. 21	34.96		

b Pumped recently.

7/34-28H2. T. M. Parks. Near Lompoc. Central Ave. and H St. Drilled unused artesian well in alluvium, diameter 6 inches, depth 78 feet. Land-surface datum is 89.55 feet above msl. Highest water level 21.74 below lsd, Mar. 10, 1943; lowest 43.14 below lsd, May 28, 1951. Records available: 1930-39, 1942-55.

Jan. 25	30.53	May 26	35.73	Aug. 30	34.59	Nov. 29	32.55
Feb. 23	30.31	June 29	35.31	Sept. 28	34.09	Dec. 27	31.78
Apr. 27	37.53	July 27	34.71	Oct. 25	34.53		

7/34-28R1. W. A. Burpee. Near Lompoc. North Ave. and H St. Drilled unused artesian well in alluvium, diameter 12 inches, depth 146 feet, cased to 146, perforations 106-146. Land-surface datum is 69.68 feet above msl. Highest water level 2.09 below lsd, Apr. 23, 1941; lowest 24.31 below lsd, Mar. 27, 1951. Records available: 1930-55.

Jan. 25	10.86	Apr. 27	18.21	Sept. 28	14.26	Nov. 29	12.88
Feb. 23	10.57	July 27	14.95	Oct. 25	14.75	Dec. 27	12.31
Apr. 4	19.13	Aug. 30	15.86				

7/34-28R2. U. S. Geol. Survey, W. A. Burpee property. Near Lompoc. Drilled observation water-table well in alluvium, diameter 2 inches, original depth 16 feet, deepened to 19. Land-surface datum is 69.50 feet above msl. Highest water level 2.70 below lsd, Mar. 2, 1944; lowest dry, June 28-Dec. 26, 1951. Records available: 1943-55.

Jan. 25	11.92	May 26	13.67	Aug. 30	14.17	Nov. 29	13.83
Feb. 23	11.77	June 29	13.53	Sept. 28	14.11	Dec. 27	13.37
Apr. 27	12.96	July 27	13.95	Oct. 25	14.02		

7/34-29E4. W. H. Sanor. Near Lompoc. Central and Floradale Aves. Drilled irrigation artesian well in alluvium, diameter 16 inches, depth 176 feet. Land-surface datum is 67.71 feet above msl. Highest water level 18.48 below lsd, Dec. 29, 1946; lowest 42.26 below lsd, Mar. 27, 1951. Records available: 1945-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	20.54	Apr. 27	32.65	Sept. 28	25.23	Nov. 29	22.60
Feb. 23	23.40	July 27	27.85	Oct. 14	24.62	Dec. 27	21.83
Mar. 31	37.71	Aug. 30	27.88	26	25.97		

7/34-29E5. U. S. Geol. Survey, W. H. Sanor property. Near Lompoc. Drilled observation water-table well in alluvium, diameter 2 inches, depth 27 feet, cased to 27. Land-surface datum is 67.74 feet above msl. Highest water level 18.21 below lsd, Oct. 12, 1945; lowest dry, June 28, 1951-Feb. 28, 1952. Records available: 1945-55.

Jan. 25	21.06	Apr. 27	22.73	July 27	22.98	Oct. 26	22.48
Feb. 23	20.88	May 26	22.78	Aug. 30	22.96	Nov. 29	22.43
Mar. 31	21.29	June 29	c22.83	Sept. 28	22.68	Dec. 27	22.08

c Nearby well being pumped.

7/34-30L3. U. S. Geol. Survey, Union Sugar Co. property. Near Lompoc. Drilled observation water-table well in alluvium, diameter 2 inches, depth 27 feet, cased to 27. Land-surface datum is 58.79 feet above msl. Highest water level 15.83 below lsd, Dec. 29, 1946; lowest dry, May 28-Sept. 24, 1951. Records available: 1945-55.

Jan. 25	17.72	Apr. 27	c22.88	July 27	22.26	Oct. 26	20.52
Feb. 23	17.83	May 26	21.86	Aug. 30	21.87	Nov. 29	19.88
Mar. 31	c15.15	June 29	22.58	Sept. 28	21.11	Dec. 27	19.13

c Nearby well being pumped.

7/34-30L4. Union Sugar Co. Near Lompoc. Legge and Central Aves. Drilled irrigation artesian well in alluvium, diameter 14 inches. Land-surface datum is about 59 feet above msl. Highest water level 16.56 below lsd, Jan. 27, 1953; lowest 36.10 below lsd, Mar. 30, 1953. Records available: 1951-55. May 26, 25.93; July 27, 27.09; Sept. 28, 21.50; Oct. 14, 21.40; Oct. 26, 21.02; Nov. 29, 18.83; Dec. 27, 18.00.

7/34-31C2. Union Sugar Co. Near Lompoc. Ocean and Legge Aves. Drilled irrigation artesian well in alluvium, diameter 14 inches. Land-surface datum is 64.72 feet above msl. Highest water level 8.56 below lsd, Apr. 16, 1941; lowest 46.38, Sept. 24, 1948. Records available: 1941, 1947-55.

Jan. 25	20.32	May 26	27.72	Aug. 30	25.32	Oct. 26	23.93
Feb. 23	23.26	June 29	30.62	Sept. 28	24.45	Nov. 29	22.14
Apr. 27	35.34	July 27	30.02	Oct. 14	24.09	Dec. 27	21.36

7/34-31C3. U. S. Geol. Survey, Union Sugar Co. property. Near Lompoc. Drilled observation water-table well in alluvium, diameter 2 inches, depth 28 feet. Land-surface datum is 64.68 feet above msl. Highest water level 12.24 below lsd, Apr. 29, 1953; lowest 21.97 below lsd, Dec. 26, 1951. Records available: 1947-55.

Jan. 25	19.19	Apr. 27	12.37	July 27	17.58	Oct. 26	19.09
Feb. 23	19.20	May 26	16.19	Aug. 30	17.67	Nov. 29	19.59
Apr. 4	c19.87	June 29	16.65	Sept. 28	18.25	Dec. 27	19.65

c Nearby well being pumped.

7/34-32A1. Mrs. May Clemmens. Near Lompoc. Pine Ave. and Thirteenth Rd. Drilled irrigation artesian well in alluvium, diameter 12 inches, depth 180 feet, cased to 175, perforations 147-174. Land-surface datum is about 79 feet above msl. Highest water level 17.6 below lsd, Apr. 11, May 2, 1941; lowest 48.94 below lsd, Apr. 27, 1955. Records available: 1939-42, 1947-55.

Jan. 25	28.60	Apr. 27	48.94	Sept. 28	36.15	Nov. 29	35.00
Apr. 4	45.72	June 29	41.70	Oct. 18	32.08	Dec. 27	32.22
5	47.80	Aug. 30	33.75	26	37.15		

7/34-32A4. U. S. Geol. Survey, O. F. Benn property. Near Lompoc. Drilled observation water-table well in alluvium, diameter 2 inches, depth 31 feet. Land-surface datum is 79.28 feet above msl. Highest water level 24.21 below lsd, Dec. 31, 1947; lowest dry, July 27, 1950-Jan. 30, 1951, Mar. 27, 1951-Dec. 29, 1952. Records available: 1947-55.

Jan. 25	26.99	Apr. 27	29.17	July 27	c29.85	Oct. 26	29.45
Feb. 23	27.00	May 26	29.70	Aug. 30	29.65	Nov. 29	28.87
Apr. 5	28.70	June 29	29.60	Sept. 28	29.58	Dec. 27	29.04

c Nearby well being pumped.

7/34-32P5. U. S. Geol. Survey, J. Bodger & Sons property. Near Lompoc. Ocean and Bailey Aves. Drilled observation water-table well in alluvium, diameter 2 inches, depth 37 feet. Land-surface datum is 77.60 feet above msl. Highest water level 24.47 below lsd, Feb. 1, 1949; lowest 35.50 below lsd, May 28, 1951. Records available: 1947-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	29.40	Apr. 27	30.13	July 27	30.65	Oct. 26	30.13
Feb. 23	28.70	May 26	30.20	Aug. 30	29.70	Nov. 29	30.22
Apr. 5	29.73	June 29	31.07	Sept. 28	29.85	Dec. 27	30.11

7/34-34H1. Johns-Manville Corp. Lompoc. Pine Ave. and First St. Drilled irrigation water-table well in alluvium, diameter 12 inches, depth 160 feet, perforations 118-156. Land-surface datum is 112.10 feet above msl. Highest water level 33.46 below lsd, May 8, 1941; lowest 56.71 below lsd, July 26, 1951. Records available: 1941-55.

Jan. 25	44.72	May 26	44.09	Aug. 30	47.22	Nov. 29	47.38
Feb. 23	44.20	June 29	48.07	Sept. 28	47.38	Dec. 27	46.40
Apr. 27	44.98	July 27	46.64	Oct. 26	47.74		

7/34-35F2. Valla Bros. Near Lompoc. Drilled unused water-table well in alluvium, diameter 15 inches, depth 140 feet, perforations 30-54, 96-136. Land-surface datum is 100.33 feet above msl. Highest water level 9.53 below lsd, Mar. 6, 1941; lowest 32.92 below lsd, Nov. 29, 1951. Records available: 1930-55.

Jan. 26	22.77	Apr. 28	20.35	July 28	c25.53	Oct. 25	28.05
Feb. 24	19.38	May 27	18.32	Aug. 31	27.29	Nov. 30	28.22
Apr. 4	18.85	June 30	22.92	Sept. 29	27.78	Dec. 28	20.35

c Nearby well being pumped.

7/34-35F6. U. S. Geol. Survey, M. Schuyler property. Near Lompoc. Drilled observation water-table well in alluvium, diameter 2 inches, depth 55 feet, cased to 55. Land-surface datum is 119.46 feet above msl. Highest water level 35.91 below lsd, Feb. 23, 1944; lowest dry several times, 1945-51. Records available: 1943-55.

Jan. 25	45.40	Apr. 27	43.26	July 27	c46.82	Oct. 26	49.18
Feb. 23	42.33	May 26	40.57	Aug. 30	48.50	Nov. 29	49.84
Mar. 31	41.57	June 29	44.46	Sept. 28	48.82	Dec. 21	49.29

c Nearby well being pumped.

7/34-35F16. M. Schuyler. Near Lompoc. North First St. and College Ave. Drilled irrigation water-table well in alluvium, diameter 16 inches, depth 173 feet, cased to 170, perforations 119-170. Land-surface datum is 119.5 feet above msl. Highest water level 39.42 below lsd, Dec. 30, 1952; lowest 61.15 below lsd, July 26, 1951. Records available: 1947-55.

Jan. 25	45.95	May 26	43.08	Sept. 28	49.84	Nov. 29	49.40
Feb. 23	44.31	June 29	46.52	Oct. 26	50.25	Dec. 21	50.03
Apr. 27	44.40	Aug. 30	49.84				

7/34-35K2. Mrs. M. McDonald. Near Lompoc. Drilled unused water-table well in alluvium, diameter 10 inches, depth 28 feet. Land-surface datum is 96.01 feet above msl. Highest water level 4.67 below lsd, Mar. 13, Apr. 10, 1941; lowest 19.98 below lsd, May 4, 1950. Records available: 1930-55.

Jan. 26	13.22	Apr. 28	11.96	July 28	12.70	Oct. 25	13.80
Feb. 24	12.15	May 27	11.48	Aug. 31	13.30	Nov. 30	14.00
Mar. 14	12.40	June 30	12.08	Sept. 29	13.59	Dec. 28	13.79

7/34-35P1. W. P. and N. L. Robinson. Near Lompoc. Drilled unused water-table well in alluvium, diameter 8 inches, depth 63 feet. Land-surface datum is 121.3 feet above msl. Highest water level 29.32 below lsd, Mar. 6, 1941; lowest 51.90 below lsd, Mar. 5, 1948. Records available: 1931-50, 1953-55.

Jan. 26	41.30	May 27	38.15	Aug. 30	46.24	Oct. 26	47.86
Feb. 24	38.98	June 30	41.06	Sept. 29	46.55	Nov. 30	47.57
Apr. 28	42.70	July 28	43.72				

7/35-20J1. U. S. Army, Camp Cooke Military Reservation. Surf. Drilled unused artesian well in alluvium, diameter 6 inches, depth 108 feet. Land-surface datum is 19.07 feet above msl. Highest water level 4.91 below lsd, Mar. 27, 1952; lowest 31.27 below lsd, July 15, 1930. Records available: 1930-55.

Jan. 25	7.37	May 26	7.89	Aug. 30	10.32	Nov. 29	8.54
Feb. 23	7.23	June 29	8.70	Sept. 28	10.43	Dec. 27	6.36
Mar. 31	8.76	July 27	10.17	Oct. 26	8.95		

7/35-22J1. Union Sugar Co. Near Lompoc. Ocean and Renwick Aves. Drilled irrigation artesian well in alluvium, diameter 16 inches, depth 185 feet, perforations 133-180. Land-surface datum is 32.04 feet above msl. Highest water level 6.80 below lsd, Apr. 10, 1941; lowest 24.03 below lsd, Apr. 24, 1951. Records available: 1930-35, 1941-42, 1945-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	9.08	Apr. 27	14.12	Aug. 30	16.10	Nov. 29	11.21
Feb. 23	9.88	May 26	13.99	Oct. 17	12.67	Dec. 27	9.65
Mar. 31	16.44	July 27	15.15	26	11.92		

7/35-22M1. U. S. Army, Camp Cooke Military Reservation. Near Lompoc. Drilled irrigation artesian well in alluvium, diameter 12 inches, depth 180 feet. Land-surface datum is 28.84 feet above msl. Highest water level 2.87 below lsd, Mar. 27, 1952; lowest 18.51 below lsd, July 27, 1950. Records available: 1947-55. Jan. 25, 5.45; Feb. 23, 7.27; Apr. 27, 9.02; May 26, 8.27; June 29, 9.77; Sept. 28, 9.26; Nov. 29, 7.53.

7/35-22M2. U. S. Geol. Survey, U. S. Army, Camp Cooke Military Reservation. Near Lompoc. Drilled observation water-table well in alluvium, diameter 2 inches, depth 22 feet. Land-surface datum is 28.20 feet above msl. Highest water level 5.14 below lsd, Mar. 27, 1952; lowest 14.95 below lsd, Dec. 31, 1947, Oct. 21, 1948. Records available: 1947-55.

Jan. 25	9.20	Apr. 27	8.52	July 27	c8.32	Oct. 26	c7.05
Feb. 23	8.67	May 26	6.80	Aug. 30	c6.70	Nov. 29	9.33
Mar. 31	c9.58	June 29	8.55	Sept. 28	7.20		

c Nearby well being pumped.

7/35-23E2. Union Sugar Co. Near Lompoc. Ocean and Union Sugar Aves. Drilled irrigation artesian well in alluvium, diameter 16 inches, depth 212 feet, perforations 170-190. Land-surface datum is 36.59 feet above msl. Highest water level 11.86 below lsd, Mar. 27, 1952; lowest 33.06 below lsd, July 27, 1949. Records available: 1930-35, 1941-43, 1945-55.

Jan. 25	13.68	May 26	18.20	Oct. 17	16.88	Nov. 29	15.78
Feb. 23	14.68	June 29	17.18	26	16.54	Dec. 27	13.63
Apr. 27	17.03	Sept. 28	18.40				

7/35-23E4. U. S. Geol. Survey, Union Sugar Co. property. Near Lompoc. Ocean and Union Sugar Aves. Drilled observation water-table well in alluvium, diameter 2 inches, depth 28 feet. Land-surface datum is 36.90 feet above msl. Highest water level 12.22 below lsd, Mar. 27, 1952; lowest 22.67 below lsd, July 22, 1948. Records available: 1947-55.

Jan. 25	16.10	Apr. 27	16.00	July 27	16.09	Oct. 26	16.44
Feb. 23	16.02	May 26	16.05	Aug. 30	15.15	Nov. 29	16.52
Mar. 31	c15.94	June 29	16.05	Sept. 28	16.32	Dec. 27	15.60

c Nearby well being pumped.

7/35-23J2. Union Sugar Co. Near Lompoc. Central and Artesia Aves. Drilled irrigation artesian well in alluvium, diameter 12 inches, depth 158 feet. Land-surface datum is 43.93 feet above msl. Highest water level 11.94 below lsd, Jan. 27, 1953; lowest 29.92 below lsd, Aug. 26, 1948. Records available: 1947-55.

Jan. 25	12.80	June 29	20.35	Oct. 17	19.15	Nov. 29	15.60
Apr. 27	19.50	Aug. 30	19.56	26	16.74	Dec. 27	14.50
May 26	20.70	Sept. 28	19.32				

7/35-23J3. U. S. Geol. Survey, Union Sugar Co. property. Near Lompoc. Drilled observation water-table well in alluvium, diameter 2 inches, depth 32 feet, cased to 32. Land-surface datum is 43.43 feet above msl. Highest water level 14.28 below lsd, Jan. 27, 1953; lowest 26.56 below lsd, Oct. 29, 1951. Records available: 1947-55.

Jan. 25	15.25	Apr. 27	19.30	July 27	c21.48	Oct. 26	19.85
Feb. 23	c15.88	May 26	19.55	Aug. 30	21.18	Nov. 29	19.05
Mar. 31	c16.95	June 29	20.64	Sept. 28	20.51	Dec. 27	17.75

c Nearby well being pumped.

7/35-24J1. T. M. Parks. Near Lompoc. Drilled unused artesian well in alluvium, diameter 12 inches, depth 171 feet. Land-surface datum is 59.40 feet above msl. Highest water level 18.26 below lsd, May 6, 1941; lowest 35.83 below lsd, Apr. 27, 1948. Records available: 1941-43, 1947-50, 1952-55.

Jan. 25	24.68	Apr. 27	25.29	July 27	26.06	Oct. 26	25.90
Feb. 23	24.60	May 26	25.49	Aug. 30	26.30	Nov. 29	26.47
Mar. 31	24.71	June 29	25.82	Sept. 28	26.49	Dec. 27	26.09

7/35-24J2. U. S. Geol. Survey, T. M. Parks property. Near Lompoc. Central and Douglass Aves. Drilled observation water-table well in alluvium, diameter 2 inches, depth 33 feet. Land-surface datum is 58.98 feet above msl. Highest water level 18.25 below lsd, June 30, 1954; lowest dry several times, 1949, 1951-52. Records available: 1947-55. Jan. 25, 20.68; Feb. 23, 20.98; Apr. 27, 21.42; May 26, 21.70; June 29, 21.87. Measurement discontinued.

7/35-25F5. Union Sugar Co. Near Lompoc. Central and De Wolf Aves. Drilled irrigation artesian well in alluvium, diameter 12 inches, depth 180 feet, perforations 145-175. Land-surface datum is 47.44 feet above msl. Highest water level 10.13 below lsd, Jan. 27, 1953; lowest 27.51 below lsd, Mar. 31, 1955. Records available: 1945-48, 1952-55. Mar. 31, 27.51; Apr. 27, 24.48; May 26, 18.78; July 27, 22.26; Aug. 30, 17.48.

7/35-25F6. U. S. Geol. Survey, Union Sugar Co. property. Near Lompoc. Central and De Wolf Aves. Drilled observation water-table well in alluvium, diameter 2 inches, depth 19 feet. Land-surface datum is 47.70 feet above msl. Highest water level 6.09 below lsd, May 2, 1946; lowest 15.90 below lsd, Nov. 28, 1951. Records available: 1945-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	12.87	Apr. 27	9.48	July 27	11.30	Oct. 26	13.47
Feb. 23	12.50	May 26	10.93	Aug. 30	12.50	Nov. 29	13.52
Mar. 31	10.49	June 29	11.35	Sept. 28	13.28	Dec. 27	12.95

7/35-26F1. Union Sugar Co. Near Lompoc. Central and Union Sugar Aves. Drilled irrigation artesian well in alluvium, diameter 16 inches, depth 186 feet, perforations 117-176. Land-surface datum is 36.84 feet above msl. Highest water level 0.32 below lsd, Apr. 7, 1941; lowest 27.09 below lsd, July 6, 1949. Records available: 1941, 1947-55.

Jan. 25	7.94	Apr. 27	17.06	July 27	c18.40	Oct. 26	10.68
Feb. 23	11.70	May 26	c17.50	Aug. 30	14.59	Nov. 29	9.94
Mar. 31	d16.00	June 29	c18.37	Sept. 28	14.62	Dec. 27	8.82

c Nearby well being pumped.
d Nearby well pumped recently.

7/35-26F3. U. S. Geol. Survey, Union Sugar Co. property. Near Lompoc. Union Sugar and Central Aves. Drilled observation water-table well in alluvium, diameter 2 inches, depth 18 feet. Land-surface datum is 34.70 feet above msl. Highest water level 6.19 below lsd, Jan. 27, 1953; lowest 13.29 below lsd, July 27, 1949. Records available: 1947-55.

Jan. 25	7.24	Apr. 27	d7.67	July 27	c8.75	Oct. 26	8.70
Feb. 23	7.85	May 26	c8.12	Aug. 30	7.94	Nov. 29	8.63
Mar. 31	d8.40	June 29	c7.88	Sept. 28	7.97		

c Nearby well being pumped.
d Nearby well pumped recently.

7/35-26J4. County of Santa Barbara, Artesia School District. Near Lompoc. Artesia and Central Aves. Drilled public-supply artesian well in alluvium, diameter 8 inches, depth 141 feet, perforations 132-140. Land-surface datum is 40.86 feet above msl. Highest water level 7.50 below lsd, Jan. 27, 1953; lowest 33.63 below lsd, July 26, 1951. Records available: 1947-55.

Jan. 25	8.18	Apr. 27	18.43	July 27	20.94	Oct. 26	11.44
Feb. 28	13.55	May 26	17.03	Aug. 30	14.68	Nov. 29	10.25
Mar. 30	25.64	June 29	19.34	Sept. 28	18.00	Dec. 27	9.12

7/35-27C3. County National Bank and Trust Co. Near Lompoc. Drilled unused water-table well in Orcutt(?) formation, diameter 12 inches, depth 158 feet, perforations 74-95, 106-158. Land-surface datum is 28.42 feet above msl. Highest water level 0.64 below lsd, Apr. 2, 1941; lowest 24.14 below lsd, June 30, 1939. Records available: 1932-34, 1939-42, 1953-55.

Jan. 25	5.85	Apr. 27	9.40	July 27	13.51	Oct. 17	9.01
Feb. 23	6.72	May 26	8.75	Aug. 30	15.75	26	8.47
Mar. 29	9.84	June 29	c11.24	Sept. 28	9.70	Dec. 27	6.05

7/35-28H2. U. S. Army, Camp Cooke Military Reservation. Near Lompoc. Drilled stock artesian well in Paso Robles formation, diameter 12 inches, depth 67 feet. Land-surface datum is 38.55 feet above msl. Highest water level flowing, Jan. 29, 1953, Jan. 27, Mar. 30, 1954; lowest 22.45 below lsd, Apr. 15, 1931. Records available: 1930-34, 1941, 1953-55. Mar. 31, 8.15, pumping; Apr. 27, 4.70, pumping; May 26, 2.20; Aug. 30, 9.32, pumped recently; Oct. 26, 3.92; Dec. 27, 1.46.

7/35-35A3. Gus Aquistapace. Near Lompoc. Ocean and Artesia Aves. Drilled irrigation artesian well in Orcutt(?) formation, diameter 14 inches, depth 100 feet, cased to 98, perforations 78-92. Land-surface datum is 45.58 feet above msl. Highest water level 8.60 below lsd, Mar. 20, 1952; lowest 25.81 below lsd, July 27, 1950. Records available: 1947-55.

Jan. 25	9.08	May 26	11.14	Sept. 28	12.05	Nov. 29	10.18
Feb. 23	9.01	June 29	12.85	Oct. 17	11.50	Dec. 27	9.45
Apr. 27	12.88	Aug. 30	16.62	26	11.02		

7/35-35A4. U. S. Geol. Survey, Gus Aquistapace property. Near Lompoc. Ocean and Artesia Aves. Drilled observation water-table well in alluvium, diameter 2 inches, depth 23 feet. Land-surface datum is 45.88 feet above msl. Highest water level 2.51 below lsd, Mar. 27, 1952; lowest 16.95 below lsd, Oct. 29, 1951. Records available: 1947-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	6.87	Apr. 27	7.22	July 27	c11.00	Oct. 26	11.44
Feb. 23	7.58	May 26	7.58	Aug. 30	11.86	Nov. 29	10.86
Apr. 1	c8.82	June 29	10.47	Sept. 28	11.95	Dec. 27	4.40

c Nearby well being pumped.

7/35-35C4. U. S. Geol. Survey, U. S. Army, Camp Cooke Military Reservation. Near Lompoc. Ocean and Union Sugar Aves. Drilled observation water-table well in alluvium, diameter 2 inches, depth 9 feet, cased to 9. Land-surface datum is 36.68 feet above msl. Highest water level 1.65 below lsd, Mar. 30, 1954; lowest 4.82 below lsd, Oct. 26, 1955. Records available: 1947-55.

Jan. 25	2.13	Apr. 27	3.12	July 27	2.94	Oct. 26	4.82
Feb. 23	2.36	May 26	4.43	Aug. 30	4.25	Nov. 29	2.76
Apr. 1	2.40	June 29	3.26	Sept. 28	4.29	Dec. 27	1.75

7/35-36J3. Ted Holden. Near Lompoc. Drilled irrigation artesian well in older alluvium, diameter 16 inches, depth 102 feet, perforations 71-95. Land-surface datum is 58.76 feet above msl. Highest water level 4.56 below lsd, Apr. 16, 1941; lowest 35.05 below lsd, Apr. 15, 1955. Records available: 1930-42, 1953-55.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	21.35	20.45	21.15	29.12	25.75	.....	26.97	27.09	24.12	23.76	22.72	21.83
2	21.30	20.45	21.13	29.34	25.50	.....	26.69	27.16	.....	23.42	22.68	21.78
3	21.26	20.45	21.10	29.35	25.24	.....	26.86	27.15	.....	23.40	22.63	21.80
4	21.26	20.58	21.07	29.79	25.09	25.81	26.20	27.30	.....	23.77	22.58	21.77
5	21.21	20.58	21.07	30.33	24.91	26.30	25.95	27.03	.....	23.53	22.59	21.77
6	21.08	20.58	21.15	30.69	24.79	26.10	25.66	26.78	.....	23.15	22.59	21.76
7	21.08	20.58	21.25	31.35	24.74	26.30	25.63	26.67	.....	23.12	22.60	21.76
8	20.96	20.58	21.24	31.62	24.84	26.66	25.88	26.66	.....	23.14	22.64	21.76
9	20.94	20.58	21.24	32.10	24.95	26.53	25.94	26.66	25.11	23.14	22.69	21.76
10	20.91	20.58	21.24	31.96	25.04	26.25	25.70	26.95	24.88	23.14	22.71	21.76
11	20.90	20.65	21.35	31.65	25.08	.....	25.47	26.40	26.73	23.09	22.70	21.76
12	20.88	20.64	21.41	32.25	24.80	.....	25.45	26.00	.....	23.07	22.70	21.75
13	20.86	20.57	21.63	34.65	24.69	.....	25.70	25.75	.....	23.07	22.69	21.74
14	20.85	20.51	21.74	34.85	24.70	26.05	25.90	25.50	.....	23.00	22.69	21.71
15	20.84	20.49	21.97	35.05	24.67	26.54	26.65	25.42	.....	23.00	22.69	21.69
16	20.84	20.49	22.98	.....	24.57	26.71	26.95	25.36	.....	23.00	22.44	21.66
17	20.84	20.50	23.95	.....	24.45	27.04	27.59	25.36	.....	22.97	22.35	21.67
18	20.55	20.45	24.08	34.25	24.22	27.23	27.41	25.38	.....	22.95	22.26	21.63
19	20.58	20.45	24.40	33.90	24.22	27.39	27.63	25.34	.....	22.94	22.18	21.60
20	20.65	20.42	24.29	32.45	24.85	27.28	26.79	25.40	.....	22.90	22.11	21.60
21	20.69	20.42	24.29	30.85	25.38	27.26	26.53	24.99	.....	22.92	22.07	21.61
22	20.65	20.42	24.90	28.70	25.24	27.48	26.64	24.82	.....	22.92	22.07	21.62
23	20.64	20.57	25.60	28.20	25.02	27.42	26.83	24.70	25.20	22.89	22.07	21.54
24	20.60	20.75	26.35	28.20	24.87	27.48	27.42	24.65	25.20	22.85	22.07	21.31
25	20.59	20.95	27.30	28.05	24.60	27.61	27.27	24.62	24.55	22.83	21.99	21.36
26	20.59	20.95	28.15	27.53	24.46	27.25	27.43	24.63	23.85	22.77	21.98	21.34
27	20.56	21.07	28.55	27.19	24.32	27.13	27.58	25.14	24.37	22.77	21.96	21.29
28	20.52	21.15	28.90	26.93	.....	27.13	27.78	24.93	23.90	22.76	21.91	21.26
29	20.47		.....	26.45	.....	27.00	27.52	24.51	23.95	22.76	21.87	21.22
30	20.45		.....	26.07	.....	27.03	27.06	24.26	23.88	22.76	21.87	21.22
31	20.45		.....		.....		27.08	24.16		22.72		21.22

7/35-36J6. Ted Holden. Near Lompoc. Ocean and Douglass Aves. Drilled irrigation artesian well in alluvium, diameter 16 inches, depth 102 feet. Land-surface datum is 58.50 feet above msl. Highest water level 20.05 below lsd, Mar. 27, 1952; lowest 38.15 below lsd, July 27, 1950. Records available: 1947-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	20.67	Apr. 27	28.91	Oct. 17	23.48	Nov. 29	22.04
Feb. 23	20.74	May 26	25.41	26	23.06	Dec. 27	21.31
Apr. 1	31.54						

7/35-36J7. U. S. Geol. Survey, Denholm Seed Co. property. Near Lompoc. Ocean and Douglass Aves. Drilled observation water-table well in alluvium, diameter 2 inches, depth 32 feet. Land-surface datum is 58.50 feet above msl. Highest water level 19.17 below lsd, Jan. 27, 1953; lowest 31.32 below lsd, July 27, 1950. Records available: 1947-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	20.87	Apr. 27	25.96	July 27	25.23	Oct. 26	22.69
Feb. 23	20.48	May 26	23.84	Aug. 30	23.93	Nov. 29	21.93
Apr. 1	23.35	June 29	24.90	Sept. 28	23.83	Dec. 27	21.42

Cuyama Valley

7/24-13C2. Ventura County, Apache School District. Near Camp Ozena at Apache School. Drilled domestic water-table well in alluvium, diameter 8 inches, depth 165 feet. Land-surface datum is about 3,418 feet above msl. Highest water level 18.92 below lsd, May 27, 1952; lowest 47.23 below lsd, May 28, 1951. Records available: 1950-55.

Jan. 26	27.36	Apr. 27	26.16	Sept. 28	30.21	Nov. 30	32.19
Feb. 23	26.18	July 27	28.95	Oct. 27	29.15	Dec. 29	31.62
Mar. 30	25.95						

8/24-8L1. Hickey Bros. Land Co. Drilled unused water-table well in alluvium and older continental deposits, diameter 12 inches, depth 290 feet. Land-surface datum is about 3,050 feet above msl. Highest water level 122.19 below lsd, Sept. 28, 1953; lowest 151.51 below lsd, Jan. 28, 1952. Records available: 1950-55.

Jan. 26	131.72	Apr. 27	134.19	July 27	c136.20	Oct. 27	c136.50
Feb. 23	132.54	May 24	c135.33	Aug. 31	c136.50	Nov. 30	c136.80
Mar. 30	133.90	June 29	c135.89	Sept. 28	c136.81	Dec. 29	139.50

c Nearby well being pumped.

9/24-19Q1. Sam Knittle. Drilled unused water-table well in alluvium, diameter 6 inches, depth 90 feet. Land-surface datum is 2,784.19 feet above msl. Highest water level 16.13 below lsd, May 30, 1944; lowest 77.56 below lsd, Sept. 28, 1955. Records available: 1941-55.

Jan. 26	75.31	Apr. 27	75.32	July 27	76.59	Oct. 27	77.42
Feb. 23	75.15	May 24	75.55	Aug. 31	c77.20	Nov. 30	76.91
Mar. 30	75.04	June 29	c76.06	Sept. 28	77.56	Dec. 29	76.67

c Nearby well being pumped.

9/24-33M1. Walter C. Barnes. Drilled unused water-table well in older continental deposits, diameter 12 inches, depth 233 feet. Land-surface datum is about 3,049 feet above msl. Highest water level 170.81 below lsd, May 1, 1950; lowest 187.31 below lsd, Mar. 27, 1952. Records available: 1950-55.

Jan. 26	182.60	Apr. 27	183.12	July 27	183.65	Oct. 27	184.49
Feb. 23	182.73	May 24	183.25	Aug. 31	183.80	Nov. 30	185.33
Mar. 30	182.99	June 29	183.57	Sept. 28	184.61	Dec. 29	185.66

9/25-2N1. Julius Broden. Near Cuyama. Drilled unused water-table well in older continental deposits, diameter 8 inches, depth 254 feet. Land-surface datum is about 2,550 feet above msl. Highest water level 139.14 below lsd, Mar. 26, 1953; lowest 147.05 below lsd, Nov. 26, 1954. Records available: 1953-55.

Jan. 26	142.48	Apr. 27	142.44	July 27	142.99	Oct. 27	143.29
Feb. 23	142.50	May 24	142.56	Aug. 31	143.51	Nov. 30	143.24
Mar. 30	142.35	June 29	142.69	Sept. 28	143.88		

9/25-13B1. William B. Farry. Near Cuyama. Drilled domestic water-table well in alluvium, diameter 10 inches, depth 120 feet. Land-surface datum is about 2,700 feet above msl. Highest water level 101.82 below lsd, July 8, 1952; lowest 109.41 below lsd, Dec. 29, 1955. Records available: 1952-55. Apr. 27, 104.80; May 24, 104.77; Dec. 29, 109.41.

10/25-21G1. E. H. Mettler. Near Cuyama. Cuyama River and State Highway 166. Drilled irrigation water-table well in alluvium and older continental deposits, diameter 16 to 10 inches, depth 657 feet, cased to 657, perforations 108-348, 354-655. Land-surface datum is about 2,357 feet above msl. Highest water level 77.41 below lsd, Jan. 29, 1947; lowest 131.73 below lsd, Dec. 29, 1955. Records available: 1947-55. Jan. 26, 120.38; Feb. 23, 120.75; Dec. 29, 131.73.

10/25-24E1. E. H. Mettler & Sons. Near Cuyama. Drilled domestic water-table well in older continental deposits, diameter 16 inches, reported depth 600 feet. Land-surface datum is about 2,470 feet above msl. Highest water level 198.00 below lsd, May 31, 1950; lowest 239.11 below lsd, Oct. 27, 1955. Records available: 1950, 1952-55. Jan. 26, 218.70; Feb. 23, 219.29; Apr. 27, 219.49; May 24, 220.04; Oct. 27, 239.11; Nov. 30, 228.75; Dec. 29, 224.29.

10/25-29P1. Oscar Schaeffer. Near Cuyama. Drilled irrigation water-table well in alluvium and older continental deposits, diameter 16 inches, depth 403 feet. Land-surface datum is about 2,370 feet above msl. Highest water level 122.36 below lsd, Feb. 24, 1953; lowest 147.93 below lsd, Sept. 28, 1954. Records available: 1952-55. Jan. 26, 132.87; May 24, 146.45; Oct. 27, 144.33; Nov. 30, 142.07; Dec. 29, 141.49.

10/25-30F1. Adolph Kirschenmann. Drilled irrigation water-table well in alluvium and older continental deposits, diameter 16 inches, depth 376 feet, cased to 374, perforations 124-160, 170-187, 196-202, 229-232, 241-250, 265-268, 274-313, 332-370. Land-surface datum is about 2,311 feet above msl. Highest water level 47.36 below lsd, Apr. 24, 1945; lowest 97.02 below lsd, Nov. 30, 1954. Records available: 1941-55. Jan. 26, 83.00; Oct. 27, 94.81; Nov. 30, 97.02; Dec. 29, 96.45.

10/26-16Q1. H. S. Russell. Near Cuyama. Drilled irrigation well in alluvium, diameter 14 inches. Land-surface datum is about 2,205 feet above msl. Highest water level 33.33 below lsd, Feb. 23, 1954; lowest 71.50 below lsd, Sept. 28, 1955. Records available: 1954-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	35.58	Apr. 27	57.75	July 27	62.00	Oct. 27	46.36
Feb. 23	35.81	May 24	45.94	Aug. 31	68.70	Nov. 30	42.01
Mar. 30	40.78	June 29	60.92	Sept. 28	71.50	Dec. 29	46.08

10/26-22A1. W. C. Ramelli. Drilled unused artesian well in alluvium and older continental deposits, diameter 12 inches, depth 423 feet, cased to 423, perforations 103-115, 124-145, 176-187, 208-237, 250-305, 327-343, 355-391, 402-423. Land-surface datum is about 2,200 feet above msl. Highest water level 0.51 above lsd, Mar. 1, 1944; lowest 37.40 below lsd, Aug. 26, 1954. Records available: 1941-55.

Jan. 26	13.19	Apr. 27	22.77	July 27	36.60	Nov. 30	16.82
Feb. 23	19.40	May 24	30.73	Oct. 27	23.09	Dec. 29	15.10
Mar. 30	26.59	June 29	34.50				

10/27-11C1. A. P. Anderson. Near Cuyama. Drilled domestic and irrigation water-table well in alluvium and older continental deposits, diameter 14 inches, depth 378 feet, plugged back to 127, perforations 36-117. Land-surface datum is about 1,963 feet above msl. Highest water level 23.94 below lsd, June 17, 1942; lowest 41.38 below lsd, Sept. 28, 1954. Records available: 1942, 1947-55. Jan. 26, 28.10; Feb. 23, 28.40; Oct. 27, 36.05; Nov. 30, 28.25; Dec. 29, 27.70.

10/27-11H1. Walt Smith. Near Cuyama. Drilled irrigation well in alluvium and older continental deposits, diameter 14 inches. Land-surface datum is about 1,995 feet above msl. Highest water level 21.14 below lsd, Feb. 23, 1954; lowest 32.47 below lsd, Nov. 30, 1955. Records available: 1954-55. Jan. 26, 23.00; Feb. 23, 23.40; Nov. 30, 32.47; Dec. 29, 32.00.

10/27-12R1. William Kirschenmann Estate. Drilled domestic and irrigation water-table well in alluvium, diameter 12 inches, depth 131 feet, cased to 131, perforations 53-128. Land-surface datum is about 2,036 feet above msl. Highest water level 38.58 below lsd, Apr. 28, 1942; lowest 57.89 below lsd, Oct. 27, 1955. Records available: 1941-55. Jan. 26, 51.35; Mar. 30, 50.65; Apr. 27, 52.43; May 24, 53.63; Oct. 27, 57.89; Nov. 30, 55.93; Dec. 29, 54.80.

HAWAII

By K. J. Takasaki

Scope of Water-Level Program

The program of investigating ground-water resources in Hawaii in 1955 was continued in cooperation with the Hawaii Division of Hydrography. About 758 water-level measurements were made in 121 wells, 62 of which were measured periodically. In addition, 720 chloride determinations were made on water from 196 wells. Two recording gages and three nonrecording gages were maintained. On the Island of Oahu, the Honolulu Board of Water Supply made 89 water-level measurements in 85 wells. The Board maintained recording gages on 17 wells. Figures 55-59 show the location of observation wells on the Islands of Hawaii, Kauai, Maui, Molokai and Lanai, and Oahu.

Precipitation

Precipitation in 1955 in the Territory ranged from a low of 92 percent of normal for the Island of Hawaii to a high of 158 percent of normal for the Island of Lanai. In general, the areas in the northwestern part of the chain received higher than normal rainfall in contrast to the Islands of Maui and Hawaii to the southeast which had near-normal and below-normal rainfall.

The following table, based on data compiled by the U. S. Weather Bureau, shows percent of normal monthly rainfall in the areas of ground-water investigations.

Percent of normal rainfall in the Territory of Hawaii, 1955

Month	Kauai	Oahu	Molokai	Lanai	Maui	Hawaii
January	104	70	66	96	81	77
February	138	348	267	159	186	269
March	79	123	140	100	90	68
April	83	63	18	18	84	86
May	84	95	45	25	99	101
June	47	62	51	20	61	101
July	87	88	70	71	104	100
August	111	118	152	132	97	74
September	106	86	85	306	58	74
October	115	56	23	8	43	46
November	311	104	165	637	83	90
December	115	144	173	455	147	73
Year	122	117	110	158	98	92

In the Honolulu intake area, distribution of rainfall during 1955 was, in general, similar to that of the Island of Oahu. Percent of normal monthly rainfall based on records of ten stations in the intake area are given in the following table. The figures were compiled by the Honolulu Board of Water Supply. Rainfall records for the area for the 10-year period ending in 1955 are shown in figure 60.

Percent of normal rainfall in Honolulu intake area, 1955

Month	Percent of normal rainfall	Month	Percent of normal rainfall	Month	Percent of normal rainfall
January	85	May	69	September	58
February	342	June	54	October	45
March	112	July	85	November	89
April	86	August	105	December	186
				Percent of normal	110

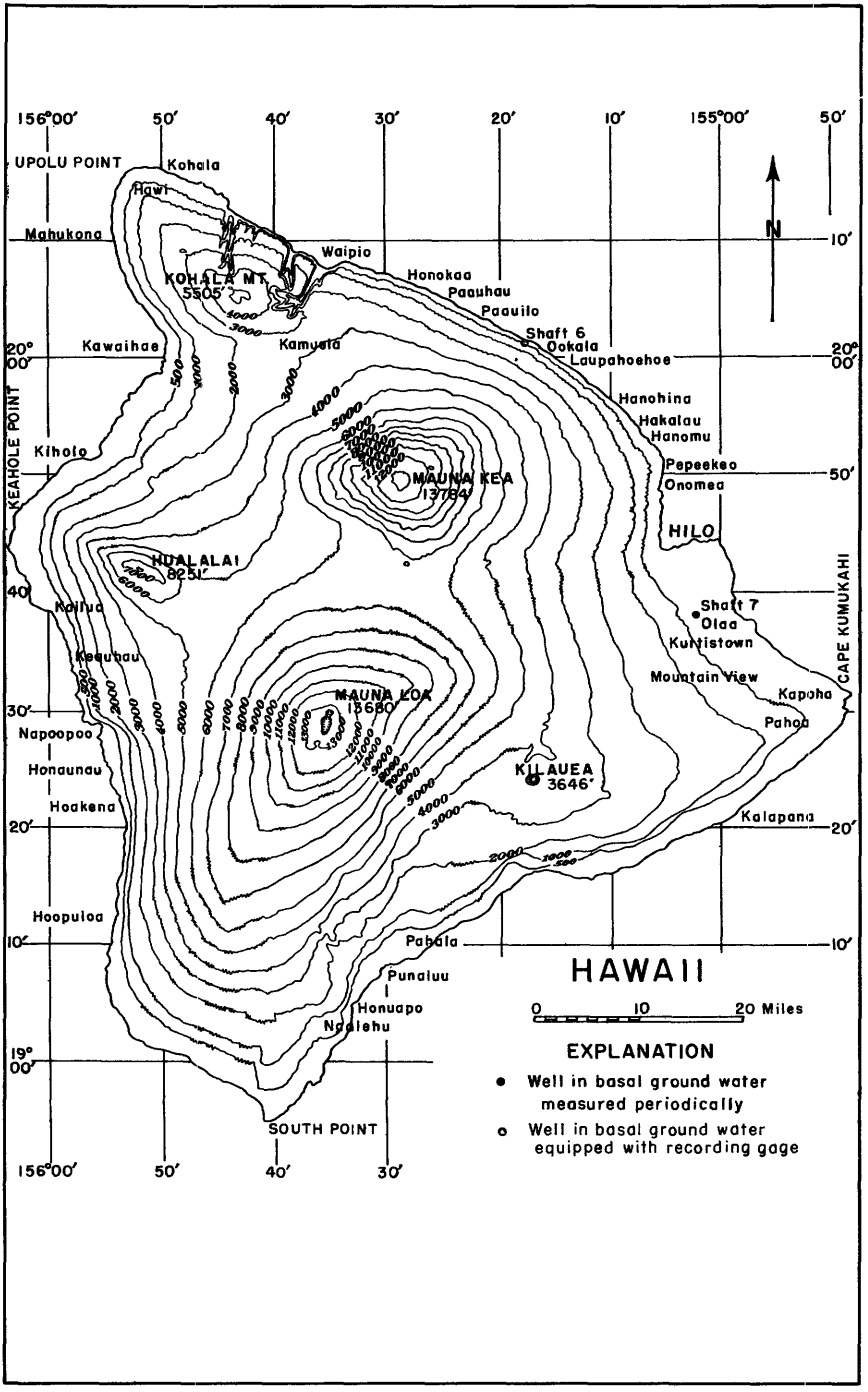

Figure 55. --Location of observation wells on Island of Hawaii, 1955.

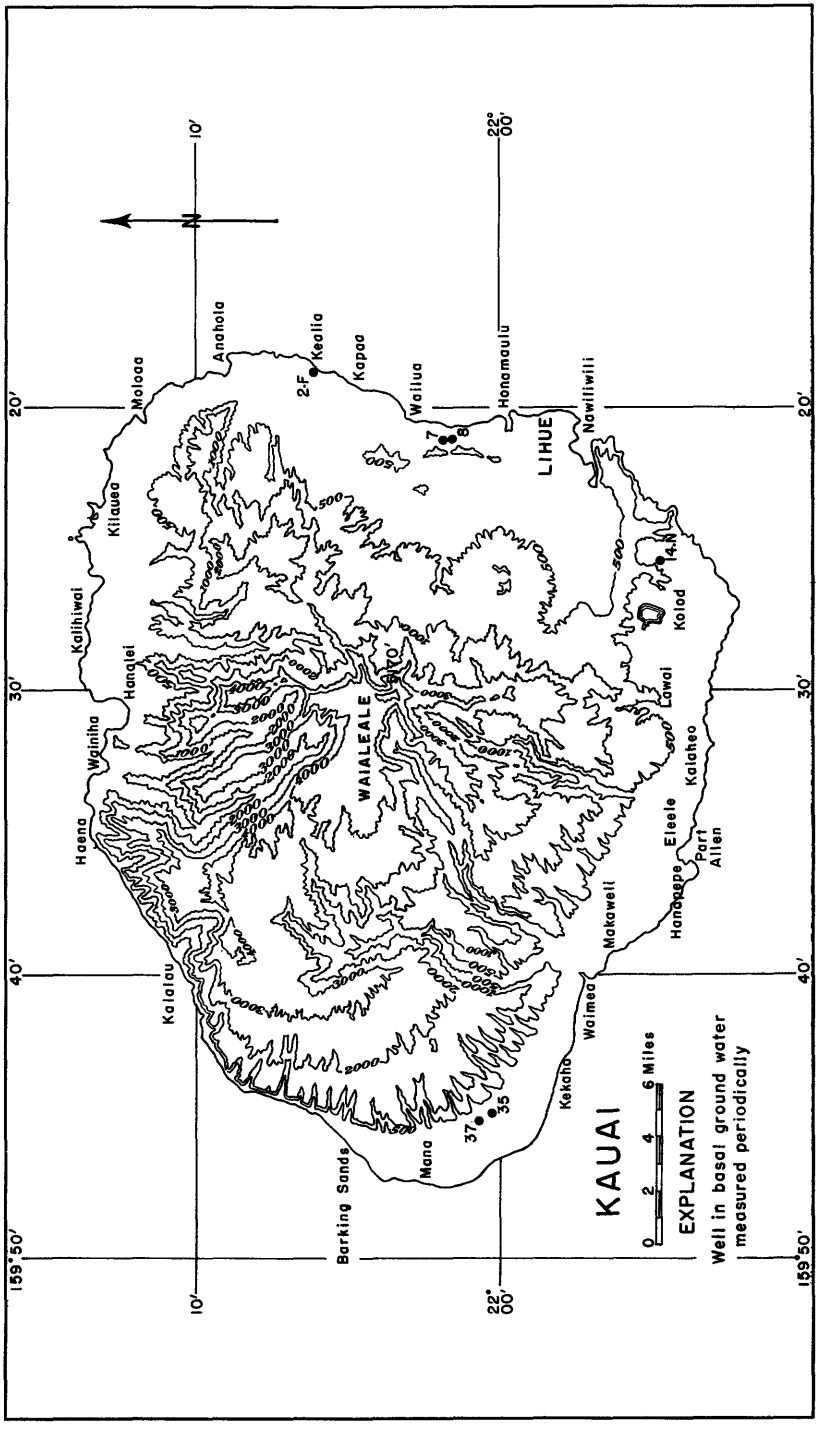

Figure 56.--Location of observation wells on Island of Kauai, 1955.

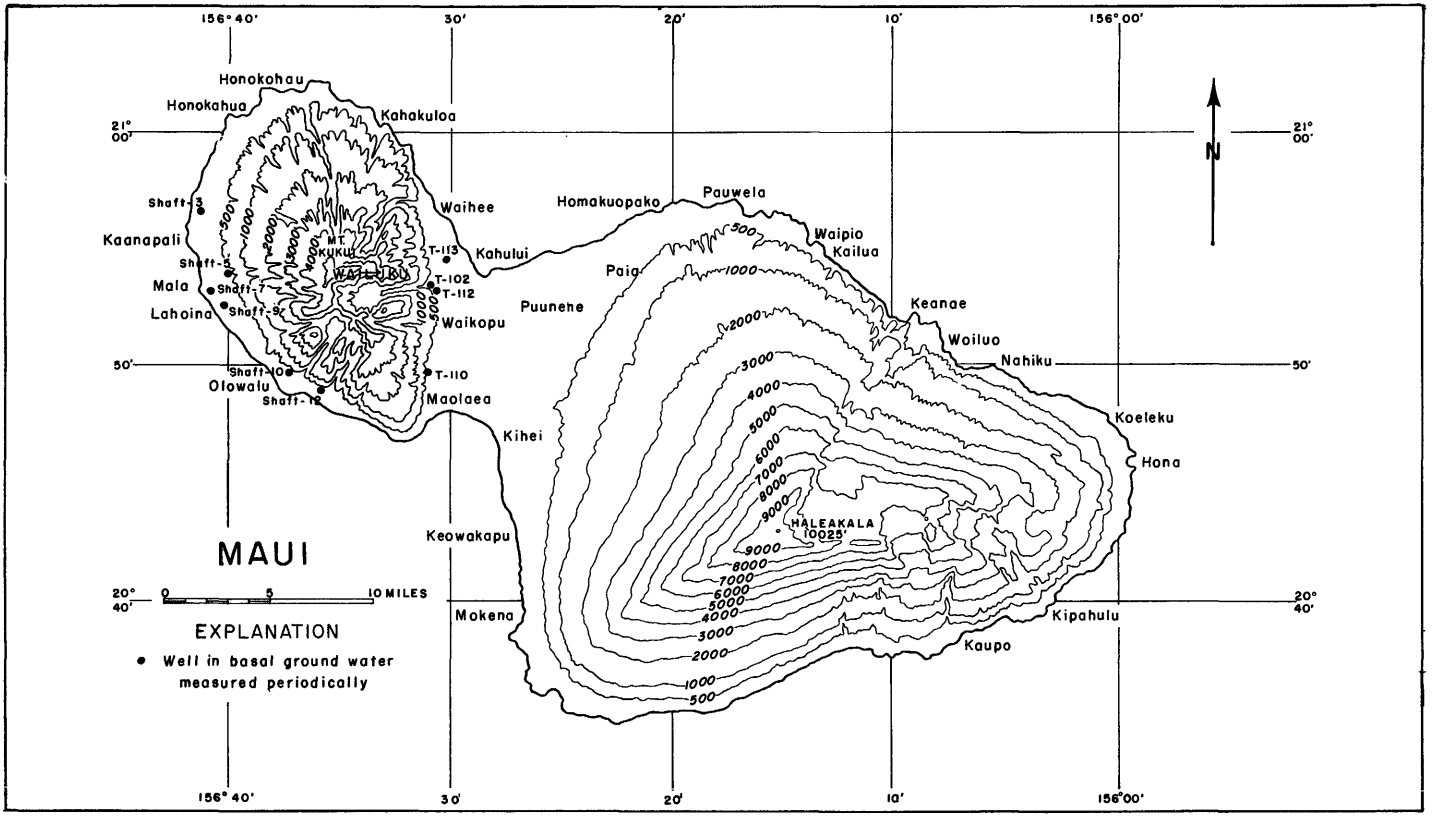

Figure 57. --Location of observation wells on Island of Maui, 1955.

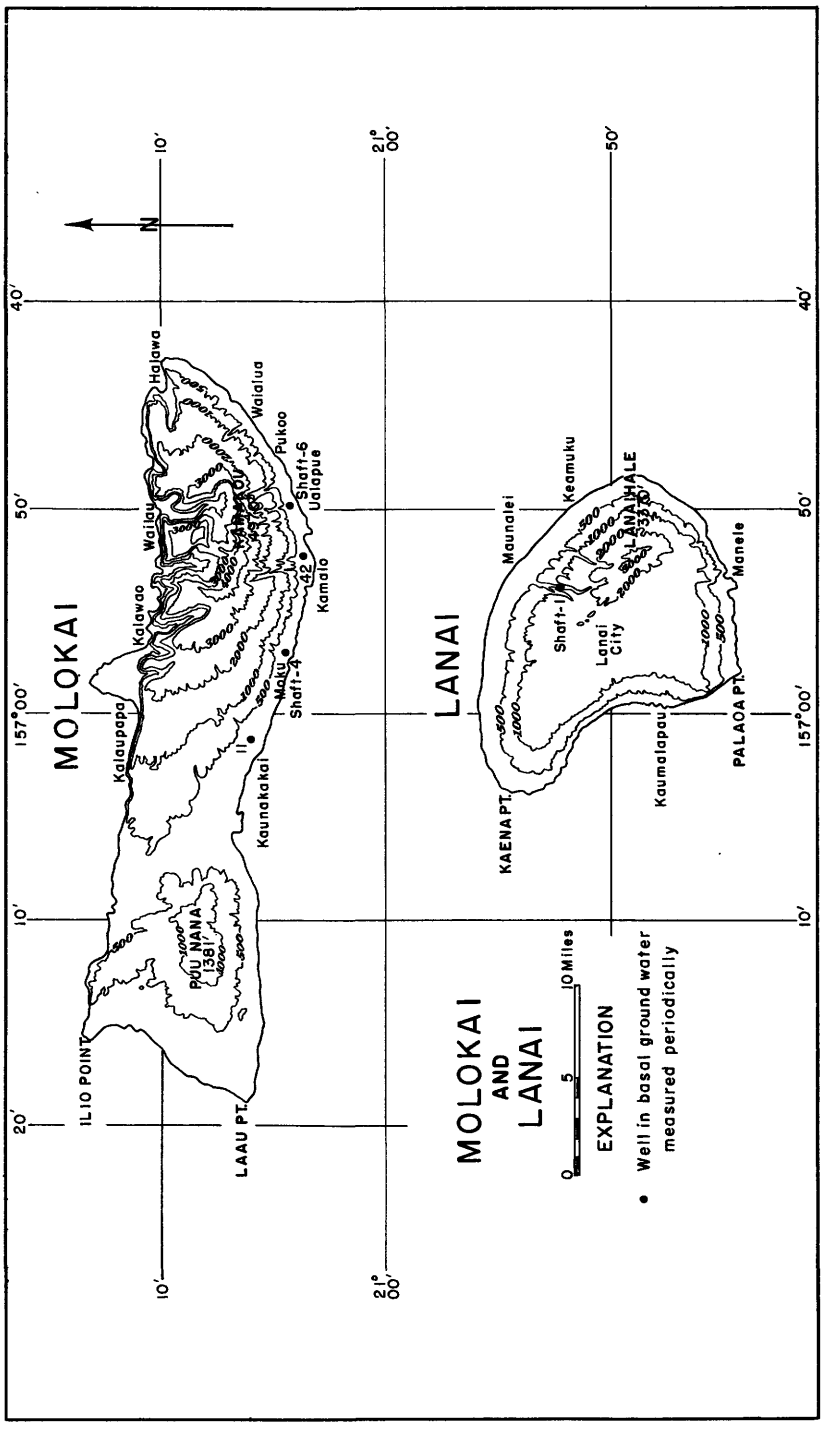

Figure 58.--Location of observation wells on Islands of Molokai and Lanai, 1955.

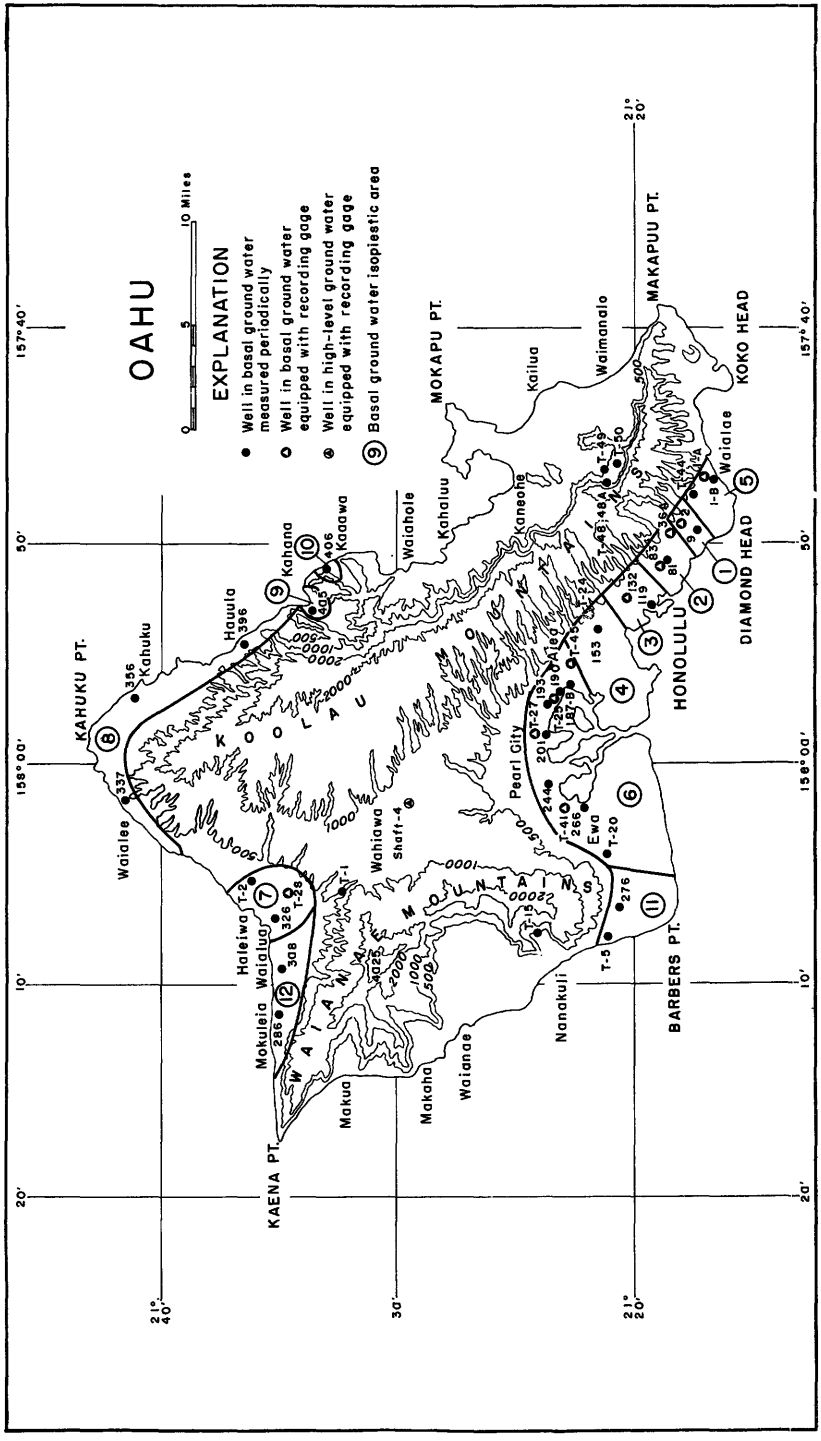

Figure 59.--Location of observation wells on Island of Oahu, 1955.

Pumpage

The total pumpage of ground water during 1955, about 192,000 million gallons or an average of about 526 mgd (million gallons per day), is slightly below the 1954 figure of 204,000 million gallons (560 mgd). Pumpage on the Island of Maui decreased 7,742 million gallons (21 mgd), on Oahu, 3,366 million gallons (9 mgd), and on Hawaii, 1,372 million gallons (4 mgd). Ground-water draft in Lanai and in Molokai was about the same as in 1954. In Kauai, increased pumpage along the west coast raised the total slightly from that of 1954. The pumping rate on Maui was about 198 mgd, 80 percent of which was drawn from aquifers in the Maui Isthmus. In addition to the ground water pumped, 77,915 million gallons (213 mgd) was delivered to the Maui Isthmus in East Maui Irrigation Co. ditches. In Oahu, 57,237 million gallons (157 mgd) drawn from basalts of the Koolau volcanic series in the Pearl Harbor area represents about 55 percent of the total pumpage of 106,976 million gallons (293 mgd). Maui and Oahu accounted for 93 percent of the total ground-water pumpage in the Territory.

Pumpage, in millions of gallons, from wells and tunnels in the Territory of Hawaii, 1955

Island of Hawaii		
Hamakua Mill Co.		
Paauilo well (shaft 5)		741
Hawaiian Agricultural Co.		
Pahala shaft (shaft 8)		451
Hutchinson Sugar Plantation Co.		
Honuapo well (10)		e668
Kaiwiki Sugar Co.		
Domestic tunnel (shaft 6)	e90	
Cane cleaning plant tunnel (shaft 6)	411	501
Kohala Sugar Co.		
Hoea pump (shaft 2)	612	
Kohala pump (shaft 4)	1,342	
Waikane pump (shaft 1)	220	
Honokane tunnel	e174	
Halaula domestic well	53	2,401
Olaa Sugar Co.		
Olaa shaft (shaft 7)		1,295
Pepeekeo Sugar Co.		73
Total		6,130

Island of Kauai		
County of Kauai		
Hanapepe shaft	83	
Waimea shaft	124	
Kekaha shaft	45	
Koloa well (16)	67	319
Kekaha Sugar Co.		
Well 9 (27)	0	
Wells K-1 to K-5 (32)	1,310	
Wells M-1 to M-12 (45)	1,845	
Kekaha pump	467	
Mana pump	142	
Waiawa pump	1,208	4,972
Olokele Sugar Co.		
Domestic shaft		e500
Total		pq5,791

Island of Lanai		
Hawaiian Pineapple Co.		
Tunnel 1 (Maunalei)	65	
Shaft 2 (Maunalei)	35	
Shaft 3 (Hii Bench)	r180	
Well 1 (Palawai)	8	
3 (Kapano)	79	
4 (Soules Bench)	116	
5 (Waiakeakua)	68	551
Total		551

Island of Maui		
County of Maui		
Pump 1 Mokuhau	296	
Pump 2 Mokuhau	91	387
Hawaiian Commercial and Sugar Co.		
Pump 1 (14)	550	
2A-B (25)	4,325	
3A-B (15)	5,509	
4 (24)	3,204	
5 (19)	2,579	
6A-B (18)	6,062	
7A-B (16)	7,027	
8 (17)	4,289	
9 (22)	3,471	
Central Power Plant (20)	0	
Pump 11A-B (32)	0	
12 (31)	1,317	
13A-B (29)	4,130	
16A, B, D (30)	4,466	
17 (28)	2,338	
18A-B (27)	4,216	
19	3,610	57,113
Pioneer Mill Co.		
Pump A (9) Lahaina	1,842	
B (8) Lahaina	1,352	
C (7) Mill	2,466	
D (3) Kaanapali	2,048	
F (2) Honokawai	854	
G (4) Hahakea	652	
H (3) Kaanapali	1,789	
L (6) Wahiluli	199	
M (5) Kahoma	1,698	
N (10) Olowalu	622	
O (11) Olowalu	46	
P (12) Ukumehame	131	
R Honokawai shaft	336	14,035

Pumpage, in millions of gallons, from wells and tunnels in the Territory of Hawaii, 1955--Continued

Island of Maui--Continued		
Maui Pineapple Co.		
Kahului cannery (shaft 13)		e330
Wailuku Sugar Co.		
Wailuku shaft		478
Total		72,343
Island of Molokai		
County of Maui		
Conant-Kawela (shaft 4)	68	
Kalae tunnel (tunnel 5)	3	
Ualapue (shaft 6)	33	104
California Packing Corp.		
Kualapuu (15)	31	
Kalualohe (17)	133	164
Hawaiian Homes Commission		
Kauluwai (16)		20
Total		288
Island of Oahu		
Ewa Plantation Co.		
Pump 2 (257)	1,102	
3 (264)	3,112	
4 (264)	2,305	
5 (259)	2,280	
6 (259)	2,027	
7 (263)	2,056	
8 (270)	732	
10 (276)	2,494	
11 (276)	1,129	
12 (276)	1,223	
13 (276)	20	
15 (shaft 3)	2,572	
16 (shaft 3)	4,133	
20 (dug well 20)	478	
21 (dug well 21)	321	
22 (dug well 22)	283	
23 (dug well 23)	1,794	
24 (dug well 24)	336	
25 (254)	292	28,689
California Packing Corp.		
Kunia well (330-5)		16
Hawaiian Electric Co.		
Tunnel (shaft 8)	2,190	
Wells (199-1)	559	
Kaluaoopu Spring	2,190	4,939
Honolulu Board of Water Supply		
Kalihi station (shaft 6)	2,890	
Waialae station (shaft 7)	138	
Halawa station (shaft 12)	5,111	
Kaimuki station (7)	1,095	
Beretania station (88)	1,785	
Kalihi station (128)	1,325	12,344
Honolulu Suburban Water System		
Aiea (190-1B)	134	
Pearl City (shaft 9) (202-1A, 202-1B)	98 35	
Waipahu (241) (241-1A, 241-1B)	0 154	

Island of Oahu--Continued		
Honolulu Suburban Water System--Continued		
Nanakuli (dug well 16)	3	
Lualualei (shaft 2)	70	
Makaha (shaft 1)	76	
Wahiawa (330-3, 330-6)	321	
Waialua (333)	99	
Hauula (394)	34	
Kaaawa (shaft 10)	28	
Waihee tunnel	26	
Kahaluu tunnel	793	
Luluku tunnels and springs	94	
Kahanaiki (422)	0	
Waimanalo		
City and County tunnel	139	
Plantation tunnel	e40	
Waialee Training School (337-1 & 2)	7	
Waianae		
City and County tunnel	(s)	
Other tunnels	(s)	2,151
Kahuku Plantation Co.		
Pump 1 (353	1,083	
2 (341)	2,492	
3 (362)	1,547	
5 (352)	1,777	
6 (362-1)	427	
7 (363)	172	
8 (357)	279	
12 (361)	100	
14 (338)	e522	
15 (348)	208	
17 (362)	80	
20 (377)	844	
23 (387)	94	
25 (373)	126	
26 (392)	17	
27 (396)	360	
Mill Pump (355)	e715	10,843
Oahu Sugar Co.		
Waipahu section		
Pump 1 (247)	405	
2 (249)	1,917	
3 (249)	962	
4 & 4B (248 & tunnel)	619	
5 (274)	2,491	
6 & 6B (239)	1,732	
7 (246)	2,874	
8 (Waikele Spring)	1,644	
9 (Waiawa Spring)	200	
Aiea section		
Pump 1 (185)	467	
2 (196)	0	
3 (186)	1,394	
4 (197)	2,645	
5 & 5B (189)	1,031	
6 (Kalauao Spring)	989	
16 (199-1)	(t)	
21 & 21B (shaft 13)	1,185	20,556
Private wells in Honolulu		u3,943
Territorial Hospital, Kaneohe (416)		109
U. S. Army		
Schofield (shaft 4)		e1,350

Pumpage, in millions of gallons, from wells and tunnels in the Territory of Hawaii, 1955--Continued

Island of Oahu--Continued			Island of Oahu--Continued		
U. S. Navy			Waialua Agricultural Co. --Continued		
Aiea (shaft 5)	134		Pump 15 (317)	30	
Red Hill (shaft 11)	231		16 (316)	76	
Barber's Point (shaft 14)	532		17 (shaft 17)	2,480	
Aiea wells (187)	10		: pump (319)	2,208	14,490
Pearl City wells	13				
Lualualei tunnel	125		Waimano Home		
Waiawa (shaft 16)	5,092	6,137	(196-1)	16	
			(196-1B)	103	119
Waialua Agricultural Co.					
Pump 1 (321)	678		Waianae Development Co.		
2 (322A to I)	1,795		City and County tunnel	e715	
2A (322J to N)	1,564		Other tunnels	e575	1,290
3A & B (331)	929				
4 (334)	1,116		Total		106,976
5 (285)	937				
6 (299 & 301)	136				
7 (324)	450		Grand total		192,079
8 (329)	231				
9 (327)	206				
10 (323)	1,253				
11 (296)	69				
12 (332)	144				
13 (328)	187				

e Estimated.

p Pumpage for McBryde Sugar Co. not included. Three pumps in Hanapepe and one in Lawai Valley pump both surface and ground water. It is not possible to separate ground-water draft from surface water.

q Does not include pumpage from Lihue Plantation Co. which is normally about 600 million gallons.

r Formerly reported under Well 2 (Hii Bench). Well 2 has been intercepted by the construction of shaft 3.

s Flow from city and county tunnel and other Waianae tunnels included with that of Waianae Development Co.

t Pumpage from pump 16 (199-1) included with that of Hawaiian Electric Co.

u Reported by Honolulu Board of Water Supply. Includes pumpage from wells belonging to military establishments in Honolulu.

Interpretation of Water-Level Fluctuations

Observation wells in the Territory generally follow the pattern of high stages in the winter and early spring and low stages in the summer and early fall, reflecting the normal distribution of annual rainfall. The yearly range in water level is somewhat greater in areas where ground water is pumped for irrigation, because the heaviest pumping occurs during the summer, the period of low rainfall.

Rainfall on Oahu, which was well above normal at the end of 1954 and in February and March 1955, caused water levels in the Honolulu-Pearl Harbor area to reach the highest stages since 1937 and 1938. These high spring stages were followed by lower summer stages which were, however, $2\frac{1}{2}$ to $4\frac{1}{2}$ feet higher than in 1954. Figure 60 shows water levels and chlorides in wells 81 and 1B and precipitation in the Honolulu watershed, 1946-55. Elsewhere on Oahu, the lower summer water levels of 1955 showed net gains, ranging from a few tenths of a foot to a foot above the 1954 summer lows. Exceptions were wells 326 (area 7) and 356 (area 8) where net losses of about a tenth of a foot were observed. In September, the water level in well 356 reached the lowest of record, despite a rise in the spring and a good recovery at the end of 1955. The chloride content of the water in test hole 2 (area 7), which increased sixfold from early 1954 to early 1955, showed a decrease of about 40 percent of that increase by the end of the year. In wells 193 and 201 in area 6, chloride contents reached the highest of record for the wells. There were no marked changes in chloride elsewhere on Oahu. Figure 61 shows water levels and chlorides in wells 201, 244, and 266 in the Pearl Harbor area, 1946-55.

Water levels in observation wells in Maui continued to recover from the low stages of 1953. The chloride content of the water in wells in the Maui Isthmus showed no marked change. Water in shafts along the west coast of Maui showed some decrease in chloride content from 1954. In Molokai, water levels in shafts 4 and 6 reached the lowest of record in June of 1955. Deficient rainfall from April to July was probably the cause of the decline in wells in Molokai, but heavier rains toward the end of the year caused the water levels to recover. The chloride content of the water in observation wells in Molokai increased markedly in June and July but decreased to their

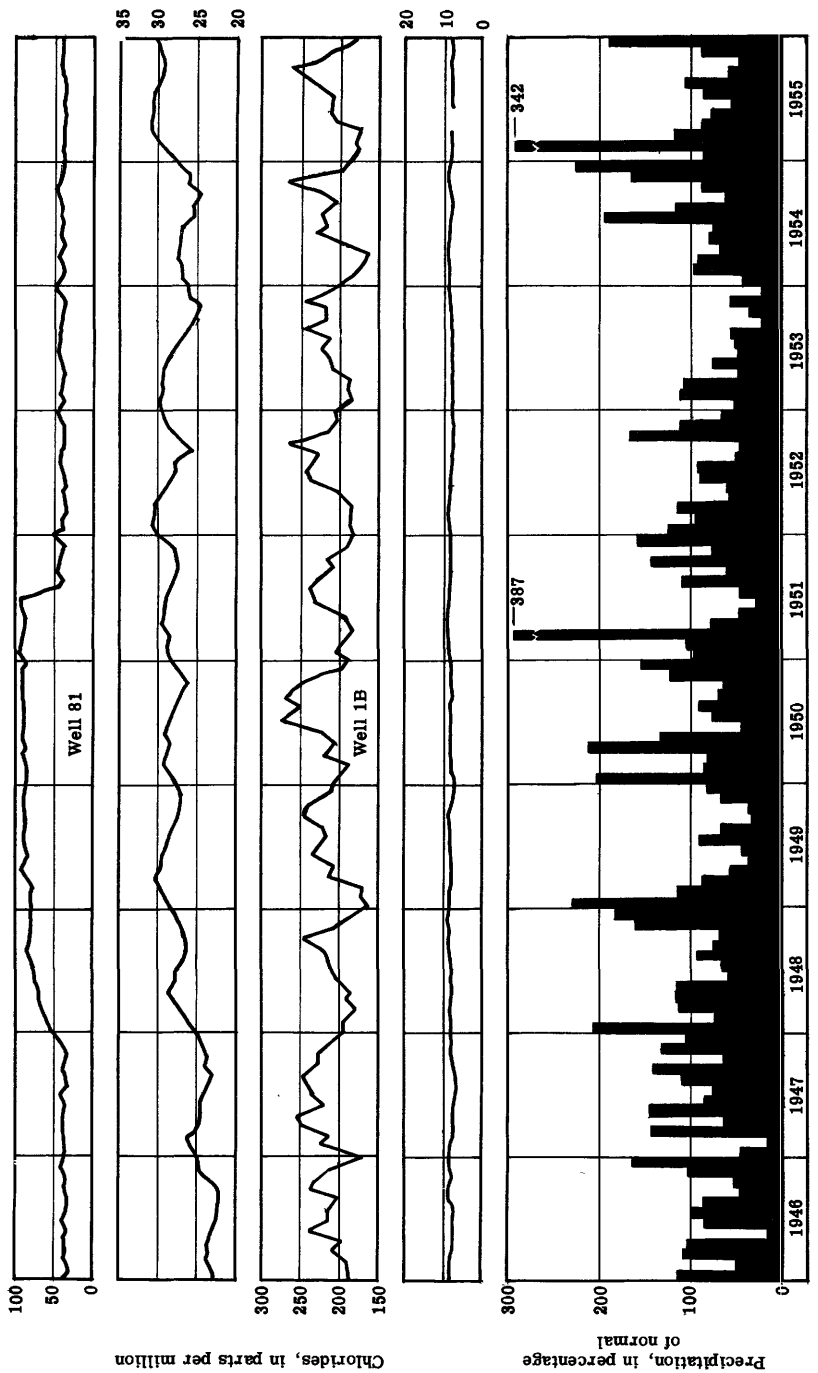

Figure 60.--Water levels and chlorides in wells 81 and 1B in Honolulu and precipitation in the Honolulu watershed, 1946-55.

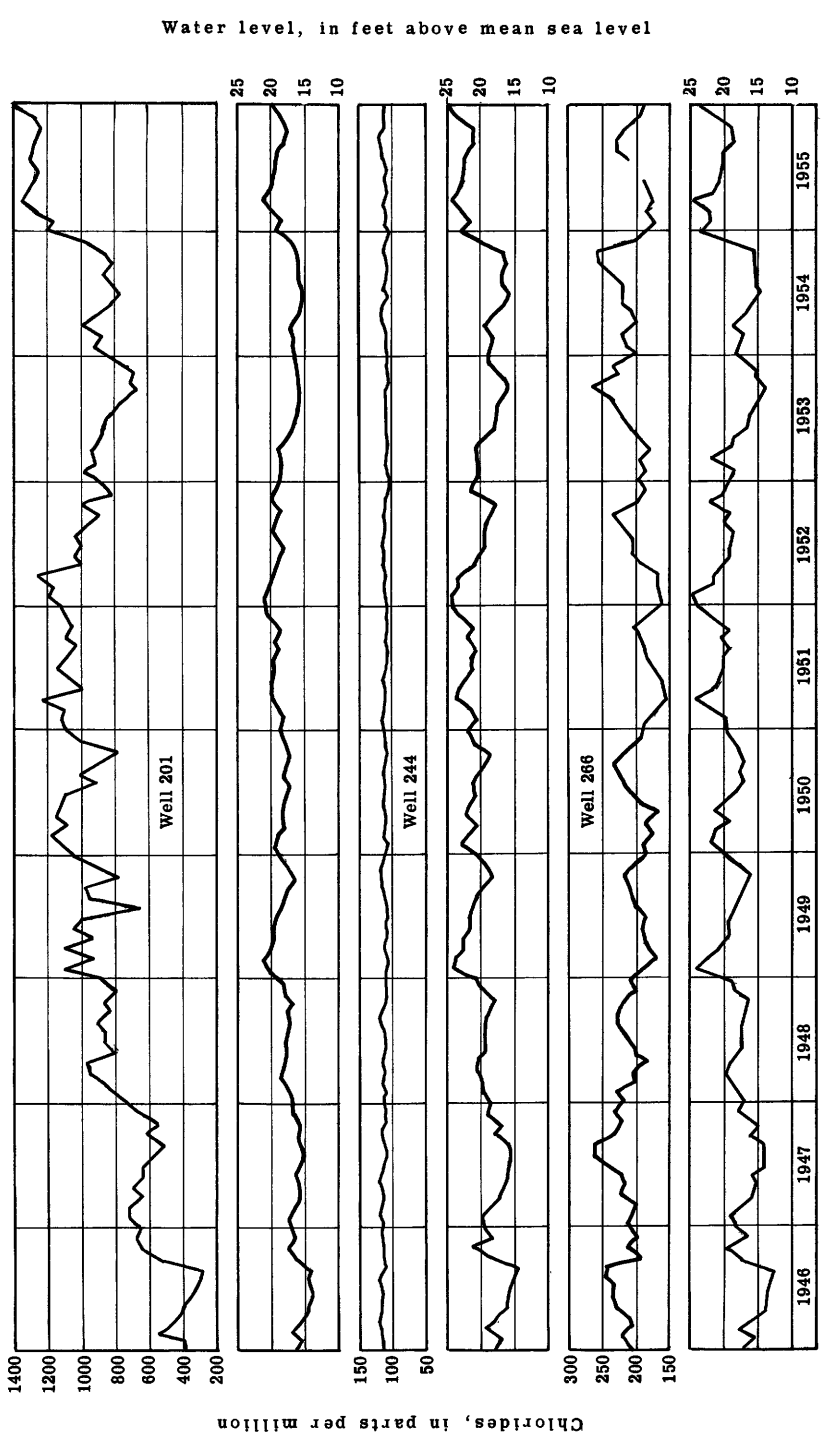

Figure 61.--Water levels and chlorides in wells 201, 244, and 266 in the Pearl Harbor area, Oahu, 1946-55.

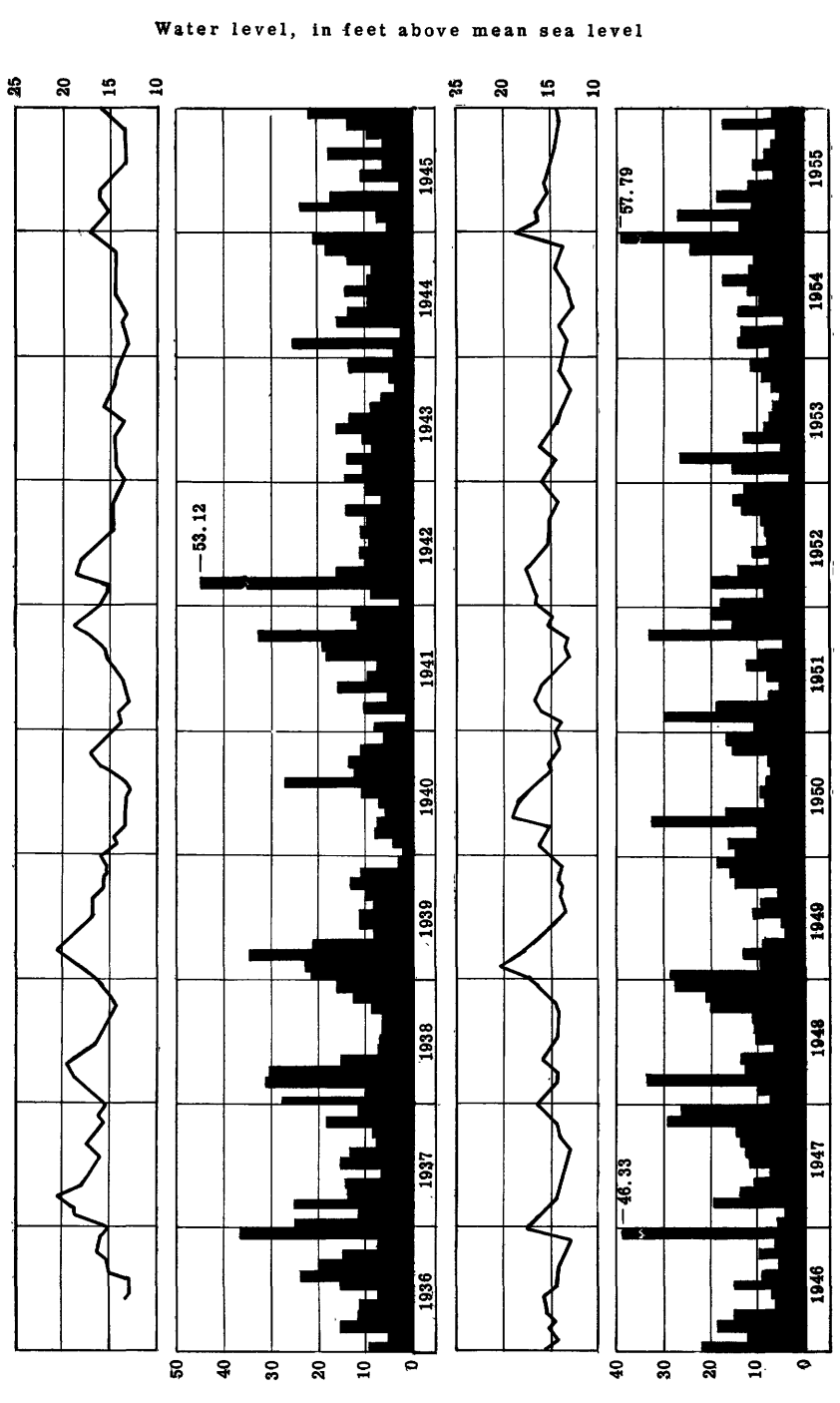

Figure 62. --Water-level fluctuations in shaft 7 and monthly precipitation at Olaa, Hawaii, 1936-55.

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former quality when water levels rose during the late fall. Shaft 7 in Olaa on the Island of Hawaii showed a slow net lowering of water level of about 6 feet during 1955 from the sudden 8-foot rise in December 1954. Figure 62 shows water-level fluctuations in shaft 7 and monthly precipitation at Olaa, 1936-55. Water levels in shaft 6 on the island were slightly higher and the chloride content of the water slightly lower than in 1954. On the Island of Kauai, water levels and the chloride content of the water in observation wells remained about the same.

Month of high and low heads in artesian wells and net gain or loss in static head, in feet, in typical wells on the Island of Oahu, 1955

Area	Name	Well	High	Low	Net gain or loss
1	St. Louis Heights	2	April	January	+1.83
2	Makiki-Pacific Heights	36A	May	January	+2.29
3	Kapalama	132	May	January	+1.91
4	Moanalua	T-24	April	January	+1.36
5	Wilhelmina Rise	T-44	December	January	+.58
6	Pearl Harbor	201	March	October	+.90
		244	March	September	+1.35
		266	March	September	+1.29
7	Waialua	326	November	June	+.46
8	Kahuku	356	March	September	-.14
		396	March	June	-.20
9	Kahana	405	August	June	-.22
10	Kaaawa	406	April	January	+.74
11	Gilbert	T-5	February	July	-.28
12	Mokuleia	286	November	June	+.35
		308	November	June	+.18

Lowest head in 1926, 1954, and 1955 and net change in head, 1926-55, in observation wells on Oahu

Area	Name	Well	Water level (feet above sea level)			Net change 1926-55 (feet)
			1926	1954	1955	
1	St. Louis Heights	2	20.88	25.47	27.46	+6.58
2	Makiki-Pacific Heights	36A	j23.52	25.36	28.30	+4.78
3	Kapalama	132	24.84	23.68	26.73	+1.89
4	Moanalua	T-24	k24.00	21.42	24.16	+.16
6	Pearl Harbor	201	17.09	15.16	18.04	+.95
		244	17.27	16.52	20.67	+3.40
		266	15.75	14.86	19.03	+3.28
7	Waialua	326	10.34	9.87	9.75	-.59
8	Kahuku	356	13.05	8.97	8.82	-4.23
		396	18.78	18.10	18.28	-.50
12	Mokuleia	308	17.55	18.12	18.09	+.54

j Estimated from well 83
k Estimated from well 144

Acknowledgments

For the Island of Kauai, records for wells 35 and 37 were supplied by the Kekaha Sugar Co. Records of chloride content for shaft 6 on Hawaii were furnished by the Kaiwiki Sugar Co. and water levels for shaft 7 by the Olaa Sugar Co. The Wailuku Sugar Co. supplied the water levels and chloride data for Maui test holes 102, 110, 112, and 113. Records for shafts 3, 5, 7, 9, 10, and 12 on the west coast of Maui were furnished by the Pioneer Mill Co. The Honolulu Board of Water Supply on Oahu made available their records for wells 1A, 2, 36A, and 132, and test holes 24, 25, 27, 28, 41, 44, and 45. Data for test holes 1 and 2 on Oahu were supplied by the Waialua Agricultural Co.

Well-Numbering System

Beginning with number 1, drilled wells are numbered consecutively in geographic sequence around the island. Single wells separated from others and pumped separately are numbered individually. A group of closely spaced wells used to supply a central pumping plant is included under a single number with each individual of the group distinguished by a letter. In some areas, certain numbers are left unassigned for the purpose of designating new drilled wells. Holes drilled especially for test or observation purposes are called test borings. Test borings on each island are numbered beginning with "1" and are distinguished by a "T" before each number. Shaft-type wells are high-capacity installations designed especially for the development of basal ground water. This type of well consists of a vertical or inclined shaft at the bottom of which drilled holes, tunnels, or a sump supply water to the pumps.

Well Descriptions and Water-Level Measurements

(Water levels are in feet above msl; chloride in parts per million.)

Island of Hawaii

Shaft 6. Kaiwiki Sugar Co. Ookala. Lat. 20°01'05", long. 155°17'15". Dug domestic and irrigation basal water-table well in basalt of Hamakua volcanic series, size 6½ by 6 feet, vertical depth of 30-degree inclined shaft 300 feet; two infiltration tunnels, size 4 by 6 feet, total length 650 feet. Land-surface datum is 300 feet above msl. Highest water level 7.04 above msl, June 20, 1938; lowest 2.92 above msl, Apr. 27, 1946. Records available: 1937-55.

Daily mean water level, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	5.3	5.5	5.6	5.6	5.8	5.5	5.3	5.7	5.5	5.6	5.7	5.6
2	5.3	5.5	5.6	5.8	5.7	5.5	5.3	5.7	5.6	5.7	5.7	5.5
3	5.4	5.5	5.6	5.8	5.6	5.5	5.5	5.7	5.7	5.6	5.7	5.5
4	5.4	5.5	5.6	5.7	5.6	5.5	5.6	5.7	5.8	5.6	5.7	5.5
5	5.4	5.6	5.7	5.7	5.7	5.6	5.5	5.7	5.8	5.6	5.7	5.5
6	5.5	5.7	5.8	5.7	5.7	5.5	5.5	5.7	5.7	5.6	5.7	5.5
7	5.5	5.6	5.7	5.7	5.8	5.5	5.4	5.8	5.6	5.5	5.7	5.4
8	5.4	5.6	5.6	5.8	5.8	5.5	5.4	5.7	5.6	5.6	5.8	5.5
9	5.4	5.5	5.6	5.8	5.7	5.4	5.4	5.7	5.5	5.7	5.8	5.5
10	5.4	5.5	5.6	5.9	5.6	5.4	5.6	5.7	5.7	5.5	5.8	5.4
11	5.4	5.4	5.6	5.7	5.6	5.5	5.4	5.7	5.7	5.4	5.8	5.4
12	5.4	5.5	5.7	5.7	5.6	5.6	5.5	5.7	5.6	5.5	5.7	5.4
13	5.3	5.6	5.7	5.7	5.6	5.5	5.5	5.7	5.5	5.4	5.7	5.4
14	5.3	5.5	5.6	5.7	5.7	5.5	5.5	5.8	5.5	5.4	5.7	5.4
15	5.3	5.5	5.6	5.7	5.8	5.5	5.5	5.7	5.6	5.5	5.6	5.4
16	5.4	5.5	5.7	5.8	5.7	5.5	5.5	5.7	5.6	5.6	5.6	5.4
17	5.4	5.5	5.6	5.8	5.7	5.5	5.7	5.7	5.8	5.6	5.6	5.4
18	5.3	5.6	5.6	5.7	5.8	5.5	5.6	5.8	5.9	5.6	5.6	5.4
19	5.4	5.8	5.8	5.7	5.8	5.6	5.6	5.8	5.7	5.6	5.6	5.5
20	5.4	5.9	5.9	5.7	5.8	5.5	5.6	5.7	5.6	5.6	5.6	5.6
21	5.4	5.8	5.7	5.7	5.7	5.4	5.6	5.9	5.6	5.6	5.6	5.6
22	5.4	5.7	5.8	5.7	5.7	5.4	5.6	5.7	5.5	5.6	5.7	5.5
23	5.3	5.8	5.9	5.9	5.6	5.4	5.6	5.6	5.5	5.6	5.6	5.5
24	5.3	5.8	6.0	5.9	5.6	5.3	5.7	5.6	5.6	5.6	5.6	5.4
25	5.3	5.7	5.9	5.8	5.6	5.3	5.6	5.6	5.7	5.6	5.6	5.4
26	5.3	5.8	5.8	5.7	5.6	5.5	5.6	5.6	5.5	5.6	5.7	5.5
27	5.3	5.8	5.8	5.8	5.6	5.3	5.6	5.7	5.5	5.6	5.7	5.5
28	5.2	5.7	5.6	5.8	5.7	5.3	5.6	5.8	5.5	5.7	5.7	5.5
29	5.4		5.6	5.7	5.8	5.3	5.6	5.7	5.5	5.7	5.7	5.5
30	5.5		5.6	5.8	5.7	5.3	5.7	5.6	5.5	5.7	5.6	5.5
31	5.5		5.6		5.6		5.8	5.5		5.7		5.5

Date	Chloride ppm	Date	Chloride ppm	Date	Chloride ppm	Date	Chloride ppm
Jan. 4	19	Apr. 4	31	July 5	37	Oct. 3	37
10	18	11	32	11	51	10	35
17	18	18	38	18	46	17	53
24	33	25	31	25	47	24	20
31	37	May 2	31	Aug. 1	46	31	18
Feb. 7	41	9	31	8	49	Nov. 7	24
14	38	16	37	15	52	14	20
21	39	23	43	22	48	21	19
25	44	30	43	29	58	28	18
Mar. 7	31	June 6	43	Sept. 6	32	Dec. 5	19
14	32	13	41	12	32	12	16
21	42	20	42	19	43	19	15
28	35	27	73	26	42	27	19

Shaft 7. Olaa Sugar Co. Olaa. Lat. 19°37'50", long. 155°02'00". Dug domestic and irrigation basal water-table well in basalt of Kahuku volcanic series, size 10 by 10 feet, depth 203 feet; three infiltration tunnels, total length 48 feet. Land-surface datum is 220 feet above msl. Highest water level 25.86 above msl, Mar. 6, 1939; lowest 12.53 above msl, Dec. 5, 1953. Records available: 1936-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	19.21	Apr. 2	16.78	June 25	15.86	Sept. 17	14.19
15	19.19	9	16.54	July 2	15.61	24	14.03
22	18.36	16	16.51	9	15.44	Oct. 1	14.03
29	17.53	23	16.25	16	15.19	8	14.03
Feb. 5	17.65	30	15.83	23	14.78	15	14.11
12	17.46	May 7	16.28	30	15.03	22	13.86
19	18.19	14	16.42	Aug. 6	15.03	29	13.61
26	18.36	21	16.36	13	15.03	Dec. 10	13.65
Mar. 5	18.61	28	16.54	20	14.86	17	13.65
12	18.28	June 4	16.36	27	14.59	24	13.65
19	17.78	11	16.18	Sept. 3	14.53	31	13.86
26	17.19	18	15.93	10	14.36		

Island of Kauai

2F. Lihue Plantation Co., Ltd. Kealia. Lat. 22°06'05", long. 159°18'40". Drilled domestic and irrigation artesian basal-water well in basalt, diameter 12 inches, depth 213 feet, cased to 95. Land-surface datum is 8.05 feet above msl. Highest water level 11.17 above msl, Nov. 20, 1940; lowest 9.15, July 26, 1946. Records available: 1937-55. Chloride in ppm: Jan. 27, 42; Apr. 22, 45; June 22, 40; Aug. 25, 42; Oct. 25, 40; Dec. 6, 40.

7. Lihue Plantation Co., Ltd. Wailua. Lat. 22°01'30", long. 159°20'55". Drilled unused artesian basal-water well in basalt, diameter 8 inches, depth 240 feet, cased to 60. Land-surface datum is 12 feet above msl. Records available: 1937-55. Chloride in ppm: Apr. 11, 178; June 24, 155; Aug. 25, 160; Dec. 6, 162.

8. Lihue Plantation Co., Ltd. Wailua. Lat. 22°01'25", long. 159°20'50". Drilled unused artesian basal-water well in basalt, diameter 10 inches, depth 250 feet, cased to 60. Land-surface datum is 11.95 feet above msl. Highest water level 12.99 above msl, Oct. 16, 1941; lowest 7.54 above msl, Apr. 26, 1951. Records available: 1937-55. Chloride in ppm: Apr. 22, 138; June 24, 131; Aug. 25, 120; Dec. 6, 124.

14N. Grove Farm Co., Ltd. Mahaulepu. Lat. 20°54'45", long. 159°25'20". Drilled unused basal-water well in basalt, diameter 12 inches, depth 532 feet, cased to 315. Land-surface datum is 86.02 feet above msl. Highest water level 31.52 above msl, July 28, 1939; lowest 28.0 above msl, Oct. 25, 1934. Records available: 1934, 1937-50, 1953-54. No measurement made in 1955.

35. Kekaha Sugar Co. Near Kekaha. Lat. 22°00'10", long. 159°44'50". Drilled irrigation artesian basal-water well in basalt, diameter 12 inches, depth 245 feet, cased to 168. Land-surface datum is 7.82 feet above msl. Highest water level 11.32 above msl, Dec. 20, 1937; lowest 7.63 above msl, Apr. 17, 1944. Records available: 1937-55. Monthly average.

Date	Water level	Chloride ppm	Date	Water level	Chloride ppm
Jan.	10.64	218	July	10.60	269
Feb.	10.66	209	Aug.	10.56	298
Mar.	10.64	235	Sept.	10.60	268
Apr.	10.66	248	Oct.	10.63	279
May	10.62	278	Nov.	10.70	291
June	10.60	243			

37. Kekaha Sugar Co. Near Kekaha. Lat. 22°00'45", long. 159°45'20". Drilled irrigation artesian basal-water well in basalt, diameter 12 inches, depth 262 feet, cased to 188. Land-surface datum is 9.98 feet above msl. Highest water level 11.08 above msl, Feb. 15, 1943; lowest 7.93 above msl, June 14, 1947. Records available: 1937-50, 1952-55. Monthly average.

Date	Water level	Chloride ppm	Date	Water level	Chloride ppm
Jan.	10.42	228	July	10.32	284
Feb.	10.42	246	Aug.	10.33	281
Mar.	10.42	237	Sept.	10.39	248
Apr.	10.40	269	Oct.	10.37	267
May	10.36	272	Nov.	10.45	109
June	10.36	254			

Island of Lanai

Shaft 1. Hawaiian Pineapple Co. Maunalei Canyon. Lat. 20°52'45", long. 156°53'45". Dug domestic and irrigation basal water-table well in basalt, size 7 by 6 feet, vertical depth of 30-degree inclined shaft 293 feet; infiltration tunnel 1.4 feet above msl, length 536 feet. Land-surface datum is 294 feet above msl. Highest water level 2.83 above msl, October 1943; lowest 2.30 above msl, Aug. 1, 1937. Records available: 1936-49. No measurement made in 1955.

Island of Maui

T-102. Wailuku Sugar Co. Iao Valley near Wailuku. Lat. 20°53'09", long. 156°31'27". Drilled observation basal water-table well in basalt of Wailuku volcanic series, diameter 6 inches, depth 475 feet, cased to 20, $\frac{3}{4}$-inch pipe inserted to 465. Land-surface datum is 453.90 feet above msl. Highest water level 36.6 above msl, Oct. 20, 1942; lowest 16.75 above msl, Sept. 15, 1953. Records available: 1940-55.

Date	Water level	Chloride ppm	Date	Water level	Chloride ppm
Jan. 17	22.5	23	Aug. 16	24.5	27
Feb. 15	23.5	25	Sept. 16	24.5	25
Mar. 15	24.0	25	Oct. 15	24.5	27
Apr. 15	24.5	25	Nov. 15	24.5	27
May 17	24.5	31	Dec. 15	24.5	..
June 16	24.5	29	19	....	27
July 15	24.0	25			

T-110. Wailuku Sugar Co. Near Puu Hele. Lat. 20°49'20", long. 156°31'01". Drilled observation basal water-table well in basalt of Wailuku volcanic series, diameter $\frac{3}{4}$ inch, depth 325 feet, cased to 313, perforations 309-313. Land-surface datum is 312.67 feet above msl. Highest water level 8.9 above msl, Sept. 15, 1950; lowest 3.6 above msl, Oct. 19, 1955. Records available: 1939-55.

Jan. 19	5.1	239	Aug. 18	4.6	239
Feb. 18	5.1	239	Sept. 19	4.6	243
Mar. 14	5.1	228	Oct. 19	3.6	243
Apr. 18	5.7	233	Nov. 25	5.1	...
May 19	5.7	237	Dec. 14	...	253
June 21	4.8	228	23	8.3	
July 18	4.6	233			

T-112. Wailuku Sugar Co. Wailuku. Lat. 20°53'07", long. 156°30'47". Drilled observation basal water-table well in basalt of Wailuku volcanic series, diameter $1\frac{1}{2}$ inches, depth 477 feet. Land-surface datum is 457.07 feet above msl. Highest water level 31.55 above msl, Oct. 16, 1947; lowest 16.50 above msl, Dec. 15, 1953. Records available: 1946-55. Jan. 15, 21.6; Feb. 15, 22.6; Mar. 15, 23.0; Apr. 19, 23.6; May 19, 23.5.

T-113. Wailuku Sugar Co. Wailuku Mill. Lat. 20°53'55", long. 156°30'05". Drilled observation artesian basal-water well in basalt, diameter $1\frac{1}{2}$ inches, depth 705 feet, cased to 705, perforations 663-705. Land-surface datum is 181.09 feet above msl. Highest water level 18.6 above msl, Nov. 14, 1947; lowest 14.1 above msl, July 19, 1954. Records available: 1946-55. Feb. 18, 16.7 ft., 118 ppm; Mar. 15, 16.9 ft., 112 ppm; Apr. 19, 16.8 ft., 125 ppm; May 19, 16.8 ft., 120 ppm.

Shaft 3. Pioneer Mill Co., Ltd. Kaanapali. Lat. 20°56'30", long. 156°41'30". Dug irrigation basal water-table well in basalt of Wailuku volcanic series, depth 25 feet; two infiltration tunnels, total length of tunnels 1,561 feet, 11 supplemental drilled wells at bottom of shaft. Land-surface datum is 27 feet above msl. Highest water level 2.98 above msl, Dec. 31, 1948; lowest 1.43 above msl, Dec. 31, 1949. Records available: 1937-55. June 7, 644 ppm; Oct. 7, 923 ppm; Dec. 31, 1.9 ft.

Shaft 5. Pioneer Mill Co., Ltd. Kahoma. Lat. 20°53'50", long. 156°40'00". Dug irrigation basal water-table well in basalt of Wailuku volcanic series, depth 323 feet; two infiltration tunnels, total length of tunnels 3,801 feet. Land-surface datum is 322 feet above msl. Highest water level 3.78 above msl, Dec. 31, 1948; lowest 1.93 above msl, Dec. 31, 1945. Records available: 1937-55. Mar. 30, 96 ppm; Oct. 25, 603 ppm; Dec. 31, 2.8 ft.

Shaft 7. Pioneer Mill Co., Ltd. Plantation mill in Lahaina. Lat. 20°53'00", long. 156°40'40". Dug irrigation basal water-table well in basalt of Wailuku volcanic series, depth 39 feet; one infiltration tunnel, length 768 feet, 3 supplemental drilled wells at bottom of shaft. Land-surface datum is 34 feet above msl. Highest water level 3.63 above msl, Dec. 31, 1940; lowest 2.6 above msl, Dec. 31, 1953. Records available: 1937-55. Jan. 19, 1,671 ppm; Nov. 30, 682 ppm; Dec. 31, 3.2 ft.

Shaft 9. Pioneer Mill Co., Ltd. Lahaina. Lat. 20°52'25", long. 156°40'15". Dug irrigation basal water-table well in basalt of Wailuku volcanic series, depth 31 feet; one infiltration tunnel, length 1,094 feet, 10 supplemental drilled wells at bottom of shaft. Land-surface datum is 30 feet above msl. Highest water level 2.83 above msl, Dec. 31, 1948; lowest 1.5 above msl, Dec. 31, 1953. Records available: 1937-55. Apr. 13, 12 ppm; Oct. 25, 723 ppm; Dec. 31, 2.0 ft.

Shaft 10. Pioneer Mill Co., Ltd. Olowalu. Lat. 20°49'30", long. 156°37'15". Dug irritation water-table well in basalt of Wailuku volcanic series, vertical depth of 30-degree inclined shaft 300 feet; one infiltration tunnel, length 239 feet. Land-surface datum is 165 feet above msl. Highest water level 4.3 above msl, Dec. 31, 1950; lowest 3.1 above msl, Dec. 31, 1953. Records available: 1937-55. Apr. 13, 187 ppm; Nov. 10, 806 ppm; Dec. 31, 3.6 ft.

Shaft 12. Pioneer Mill Co., Ltd. Ukumehame. Lat. 20°48'45", long. 156°35'50". Dug irrigation water-table well in basalt of Wailuku volcanic series, vertical depth of 30-degree inclined shaft 143 feet; one infiltration tunnel, length 428 feet. Land-surface datum is 79 feet above msl. Highest water level 6.7 above msl, Dec. 31, 1950; lowest 4.27 above msl, Dec. 31, 1943. Records available: 1937-55. Sept. 21, 416 ppm; Dec. 22, 195 ppm; Dec. 31, 5.7 ft.

Island of Molokai

11. Molokai Ranch. Kaunakakai Gulch. Lat. 21°06', long. 157°01'. Drilled unused basal water-table well in basalt of East Molokai volcanic series, diameter 12 inches, depth 59 feet, cased to 20. Land-surface datum is 51 feet above msl. Highest water level 2.62 above msl, Sept. 23, 1954; lowest 1.97 above msl, July 6, 1955. Records available: 1954-55. Jan. 8, 2.54 ft., 25 ppm; Mar. 10, 2.49 ft., 14 ppm; May 11, 2.13 ft., 23 ppm; July 6, 1.97 ft.; Sept. 7, 2.17 ft., 70 ppm; Nov. 11, 2.57 ft., 134 ppm.

Shaft 4. Molokai Ranch Co. Mouth of Kawela Gulch. Lat. 21°04'20", long. 157°57'00". Dug public-supply basal water-table well in basalt of East Molokai volcanic series, size 4 by 4 feet, depth 38 feet, lined with concrete, two infiltration tunnels, total length 229 feet. Land-surface datum is 37.64 feet above msl. Highest water level 2.57 above msl, Dec. 19, 1947; lowest 1.47 above msl, June 24, 1955. Records available: 1947-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	2.10	July 15	1.50	Aug. 31	1.81	Sept. 18	1.81
Mar. 16	2.06	21	1.55	Sept. 1	1.84	26	1.70
May 11	1.75	Aug. 2	1.61	2	1.82	Oct. 20	a1.81
June 6	1.52	22	1.84	5	1.86	Nov. 11	1.94
24	1.47	29	1.84	7	1.95	22	2.05
July 11	a1.44	30	1.86	14	1.79		

a Pumping.

Shaft 6. County of Maui. Ualapue. Lat. 21°04'00", long. 156°50'00". Dug public-supply basal water-table well in basalt of East Molokai volcanic series, size 4 by 6 feet, depth 42 feet, lined with concrete; two infiltration tunnels, total length 214 feet. Land-surface datum is 43.71 feet above msl. Highest water level 6.05 above msl, Jan. 19, 1950; lowest 4.57 above msl, June 21, 1955. Records available: 1938-55.

Jan. 22	5.00	July 11	a4.57	July 24	4.75	Sept. 7	5.18
Feb. 24	a5.37	12	4.69	26	4.75	15	5.13
Mar. 16	5.27	14	4.71	Aug. 5	4.89	23	5.08
May 11	4.87	15	4.64	15	5.02	Oct. 9	a5.02
June 10	4.62	18	4.70	24	5.15	Nov. 11	5.20
21	4.57	21	4.73	25	5.14		

a Pumping.

42. County of Maui. Kamalo. Lat. 21°03'30", long. 156° 52'25". Dug public-supply basal water-table well in basalt of East Molokai volcanic series, size 4 by 4 feet, depth 40 feet, lined with boulders. Land-surface datum is 43.23 feet above msl. Highest water level 5.40 above msl, Dec. 5, 1950; lowest 4.10 above msl, May 19, 1951. Records available: 1938-55. Jan. 7, 4.78; Mar. 16, 4.82; May 11, 4.45; July 11, 4.13; July 14, 4.20; Sept. 7, 4.69.

Island of Oahu

1A. B. P. Bishop Estate. Waialae Golf Links, Honolulu. Lat. 21°16'45", long. 157°46'45". Drilled unused artesian basal-water well in basalt of Koolau volcanic series, diameter 4 inches, depth 131 feet, cased to 100. Land-surface datum is 18 feet above msl. Highest water level 9.10 above msl, Feb. 4, 1940; lowest 7.55 above msl, June 14, 1946. Records available: 1933-55.

1A--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	....	....	7.98	7.88	8.05	8.20	8.28	....	8.14
2	....	....	8.62	....	....	7.97	7.90	8.05	8.20	8.29	....	8.15
3	....	....	....	....	....	7.98	7.95	8.05	8.23	8.28	....	8.17
4	....	....	....	....	....	7.97	7.98	8.03	8.28	8.29	....	8.20
5	....	....	....	....	....	8.03	7.96	8.03	8.28	8.30	....	8.17
6	8.10	....	....	....	....	7.99	7.95	8.03	8.27	8.30	....	8.17
7	8.09	....	....	....	....	7.97	7.95	8.06	8.27	8.30	....	8.19
8	8.08	....	....	....	....	7.96	7.95	8.05	8.27	8.31	....	8.20
9	8.07	8.01	8.23	....	....	7.95	7.98	8.05	8.26	8.34	....	8.20
10	8.07	8.02	....	....	....	7.95	7.99	8.04	8.26	8.32	....	8.21
11	8.07	8.03	....	....	....	7.95	7.98	8.03	8.29	8.33	....	8.22
12	8.07	8.03	....	....	7.95	7.97	7.98	8.05	8.27	8.33	....	8.20
13	8.09	8.02	....	....	7.95	7.94	7.98	8.09	8.27	8.32	....	8.21
14	8.05	8.03	....	....	7.97	7.93	7.99	8.12	8.27	8.30	....	....
15	8.03	....	....	....	8.01	....	7.98	8.10	8.21	8.30	....	....
16	8.06	....	....	....	7.98	7.89	8.00	8.09	8.22	8.34	....	....
17	8.05	....	....	....	7.99	7.87	8.03	8.08	8.26	8.34	....	....
18	8.04	....	....	....	7.98	7.90	8.00	8.08	8.29	8.30	....	....
19	8.00	....	....	....	7.97	7.94	8.00	8.09	8.27	8.32	8.00	....
20	8.00	....	....	....	7.97	7.90	8.04	8.11	8.25	8.30	7.99	....
21	....	....	....	....	7.99	7.89	8.03	8.14	8.28	8.29	7.96	....
22	....	....	....	....	8.03	7.89	8.03	8.13	8.28	8.28	7.93	....
23	....	....	....	....	7.99	7.89	8.05	8.13	8.28	8.28	7.90	....
24	....	....	....	....	7.97	7.88	8.08	8.13	8.29	8.25	8.00	....
25	....	....	....	....	7.95	7.89	8.06	8.12	8.31	8.25	8.04	....
26	....	....	....	....	7.96	7.92	8.06	8.13	8.28	8.25	8.05	....
27	....	....	....	....	8.00	7.90	8.04	8.14	8.27	8.23	8.10	....
28	....	....	....	....	8.00	7.87	8.03	8.18	8.24	8.20	8.09	....
29	....		....	....	8.02	7.88	8.04	8.15	8.24	8.19	8.11	....
30	....		....	....	8.04	7.88	8.05	8.15	8.25	....	8.14	....
31	....		....		7.99		8.08	8.17		....		....

1B. B. P. Bishop Estate. Waialae Golf Links, Honolulu. Lat. 21°16'45", long. 157°46'50". Drilled domestic and irrigation artesian basal-water well in basalt of Koolau volcanic series, diameter 8 inches, depth 120 feet, cased to 43. Land-surface datum is 18.22 feet above msl. Highest water level 8.94 above msl, Jan. 27, 1943; lowest 6.45 above msl, Oct. 20, 1933. Records available: 1919, 1929-34, 1936-55.

Date	Water level	Chloride ppm	Date	Water level	Chloride ppm
Jan. 26	8.02	175	July 28	7.79	227
Feb. 28	8.26	180	Aug. 30	7.94	240
Mar. 28	8.30	173	Sept. 28	7.99	265
Apr. 26	a7.82	208	Oct. 26	8.04	219
May 26	7.97	214	Nov. 22	7.72	191
June 29	7.70	212	Dec. 30	8.37	178

a Pumping.

2. B. P. Bishop Estate. Kalei Rd., Honolulu. Lat. 21°17'50", long. 157°48'55". Drilled unused artesian basal-water well in basalt of Koolau volcanic series, diameter 8 inches. Land-surface datum is 37 feet above msl. Highest water level 31.55 above msl, Jan. 28, 1940; lowest 19.66 above msl, Sept. 14, 1944. Records available: 1916, 1919, 1923, 1926, 1929-55.

Daily mean water level, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct	Nov.	Dec.
1	27.49	27.95	.....	29.21	29.37	29.14	28.70	28.70	28.43	28.37	28.60	.....
2	27.53	27.95	29.0	29.21	29.35	29.13	28.72	28.60	28.50	28.36	28.57	28.8
3	27.55	27.91	.....	29.25	29.34	29.12	28.76	28.59	28.48	28.40	28.58	.....
4	27.51	27.93	.....	29.27	29.36	29.10	28.79	28.52	28.48	28.39	28.58	.....
5	27.55	27.94	.....	29.29	29.39	29.13	28.75	28.48	28.53	28.37	28.55	.....
6	27.54	28.01	.....	29.26	29.41	29.12	28.60	28.45	28.51	28.39	28.54	.....
7	27.55	28.05	.....	29.24	29.38	29.07	28.48	28.49	28.38	28.39	28.52	28.8
8	27.46	28.06	.....	29.22	29.35	29.07	28.42	28.49	28.35	28.37	28.56	.....
9	27.52	28.05	28.9	29.19	29.35	28.99	28.40	28.48	28.40	28.34	28.64	.....
10	27.51	28.03	28.96	29.23	29.26	28.98	28.42	28.48	28.37	28.33	28.70	.....
11	27.53	28.07	28.9	29.21	29.17	28.99	.....	28.51	28.31	28.33	28.74	.....
12	27.51	28.10	.....	29.21	29.14	29.00	.....	28.50	28.30	28.40	28.78	.....
13	27.50	28.18	.....	29.21	29.15	29.00	.....	28.48	28.25	28.42	28.80	.....
14	27.54	28.24	.....	29.18	29.14	28.92	28.65	28.59	28.23	28.42	28.83	28.8
15	27.58	28.29	.....	29.18	29.14	28.90	28.68	28.64	28.24	28.42	28.88	.....

2--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
16	27.65	28.31	.....	29.27	29.11	28.87	28.68	28.66	28.24	28.42	28.90	.....
17	27.70	28.35	29.10	29.32	29.07	28.86	28.64	28.64	28.18	28.50	28.93	.....
18	27.70	28.38	29.05	29.37	29.04	28.83	28.66	28.66	28.14	28.53	28.94	.....
19	27.72	28.42	28.99	29.40	29.07	28.86	28.62	28.66	28.18	28.59	28.95	.....
20	27.74	28.52	29.05	29.42	29.06	28.86	28.66	28.64	28.21	28.66	28.97	.....
21	27.77	28.54	29.07	29.48	29.00	28.80	28.62	28.68	28.32	28.66	28.99	.....
22	27.71	28.60	29.10	29.46	28.99	28.70	28.55	28.66	28.43	28.66	.....	.....
23	27.77	.....	29.26	29.43	29.02	28.70	28.49	28.59	28.47	28.63	.....	.....
24	27.80	.....	29.22	29.45	29.01	28.81	28.51	28.64	28.52	28.63	.....	.....
25	27.83	.....	29.22	29.47	29.02	28.80	28.53	28.68	28.54	28.64	.....	.....
26	27.76	.....	29.20	29.48	29.08	28.82	28.51	28.66	28.51	28.66	.....	.....
27	27.79	.....	29.20	29.49	29.16	28.79	28.55	28.65	28.45	28.69	.....	.....
28	27.83	.....	29.22	29.38	29.19	28.72	28.70	28.61	28.38	28.68	.....	29.3
29	27.79		29.17	29.36	29.17	28.70	28.78	28.53	28.35	28.64	.....	.....
30	27.84		29.16	29.37	29.18	28.71	28.75	28.48	28.35	28.59	.....	.....
31	27.90		29.17		29.16		28.71	28.46		28.59		.....

9. J. J. Gouveia. Kapahulu Ave. and Olu St., Honolulu. Lat. 21°17'10", long. 157°49'00". Drilled industrial artesian basal-water well in basalt of Koolau volcanic series, diameter 6 inches, depth 270 feet, cased to 256. Land-surface datum is 16.08 feet above msl. Highest water level 30.92 above msl, Feb. 16, 1940; lowest 18.40 above msl, Aug. 17, 1926. Records available: 1921, 1923-55.

Date	Water level	Chloride ppm	Date	Water level	Chloride ppm
Jan. 26	27.52	56	July 26	28.97	59
Feb. 28	28.97	58	Aug. 29	28.47	58
Mar. 28	28.57	59	Sept. 28	28.17	58
Apr. 26	29.42	57	Oct. 26	28.57	56
May 26	29.17	57	Nov. 22	28.93	56
June 29	28.72	56	Dec. 30	29.32	57

36A. Honolulu Board of Water Supply. Wilder Ave. and Clement St., Honolulu. Lat. 21°18'10", long. 157°49'45". Drilled unused artesian basal-water well in basalt of Koolau volcanic series, diameter 12 inches, depth 395 feet. Land-surface datum is 43 feet above msl. Highest water level 33.35 above msl, Mar. 11, 1938; lowest 22.41 above msl, Oct. 13, 1945. Records available: 1924, 1929-32, 1934, 1938-55.

Daily mean water level, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	28.30	29.18	30.07	31.10	31.27	31.24	30.83	30.14	29.64	29.45	.....	29.87
2	28.30	29.17	30.09	31.10	31.29	31.21	30.82	30.09	29.64	29.47	.....	29.89
3	28.43	29.18	30.10	.....	31.31	31.18	30.81	30.08	29.68	29.48	29.42	29.90
4	28.47	29.18	30.15	.....	31.32	31.19	30.82	30.06	29.73	29.47	29.42	29.92
5	28.49	29.22	30.18	.....	31.31	31.23	30.81	30.01	29.74	29.47	29.40	29.92
6	28.53	29.26	30.27	31.1	31.31	31.18	30.75	29.96	29.75	29.47	29.44	29.93
7	28.52	29.27	30.29	.....	31.32	31.13	30.70	29.99	29.75	29.45	29.44	.....
8	28.53	29.28	30.32	.....	31.33	31.10	30.65	30.04	29.72	29.43	29.44	.....
9	28.58	29.33	30.34	.....	31.32	31.06	30.61	30.02	29.65	29.46	29.52	.....
10	28.63	29.37	30.41	.....	31.36	31.06	30.60	29.96	29.61	29.45	29.53	.....
11	28.65	29.35	30.44	.....	31.32	31.05	30.57	29.92	29.61	29.46	29.56	.....
12	28.66	29.36	30.47	.....	31.28	31.07	30.53	29.89	29.61	29.48	29.58	.....
13	28.67	29.39	30.53	31.1	31.27	31.07	30.50	29.86	29.58	29.42	29.64	.....
14	28.70	29.42	30.56	.....	31.23	31.09	30.47	29.89	29.56	29.38	29.61	.....
15	28.70	29.47	30.58	31.15	31.26	31.07	30.46	29.90	29.49	29.39	29.64	29.93
16	28.75	29.50	30.62	31.17	31.25	31.03	30.48	29.89	29.50	29.47	29.65	29.93
17	28.78	29.51	30.64	31.19	31.23	31.02	30.47	29.83	29.50	29.49	29.67	29.95
18	28.81	29.53	30.66	31.21	31.23	31.07	30.45	29.78	29.51	29.50	29.71	29.99
19	28.83	29.57	30.69	31.21	31.27	31.13	30.43	29.74	29.49	29.48	29.71	30.04
20	28.85	29.63	30.74	31.18	31.23	31.08	30.39	29.71	29.49	29.47	.....	30.08
21	28.88	29.64	30.79	31.23	31.20	31.08	30.36	29.74	29.49	29.46	.....	30.06
22	28.84	29.65	30.85	31.23	31.23	31.03	30.32	29.73	29.49	29.48	29.74	30.08
23	28.93	29.69	30.89	31.24	31.21	31.00	30.27	29.69	29.53	29.51	29.75	30.15
24	28.98	29.75	30.88	31.28	31.17	30.97	30.28	29.73	29.52	29.49	29.81	30.25
25	29.02	29.82	30.83	31.26	31.16	30.95	30.28	29.72	29.53	29.45	29.82	30.32
26	28.99	29.89	30.85	31.28	31.19	30.97	30.24	29.70	29.54	29.45	29.82	30.36
27	28.99	29.96	30.93	31.31	31.25	30.05	30.20	29.68	29.56	29.45	29.85	30.37
28	29.02	30.03	30.93	31.33	31.29	30.92	30.18	29.73	29.51	29.44	29.85	30.45
29	29.07		30.96	31.29	31.30	30.88	30.16	29.71	29.48	29.42	29.84	30.47
30	29.12		30.98	31.25	31.30	30.86	30.14	29.67	29.48	29.45	29.87	30.48
31	29.12		31.01		31.29		30.13	29.66		.....		30.52

81. R. Sakimoto. Young and Victoria Sts., Honolulu. Lat. 21°18'20", long. 157°50'55". Drilled domestic artesian basal-water well in basalt of Koolau volcanic series, diameter 8 inches, depth 505 feet, cased to 475. Land-surface datum is 18.04 feet above msl. Highest water level 33.04 above msl, Feb. 28, 1938; lowest 21.99 above msl, Aug. 28, 1946. Records available: 1916, 1923-24, 1926, 1929-55.

Date	Water level	Chloride ppm	Date	Water level	Chloride ppm
Jan. 26	28.68	35	July 26	30.53	36
Feb. 28	29.83	36	Aug. 29	29.53	36
Mar. 28	30.63	38	Sept. 28	29.33	38
Apr. 26	31.18	38	Oct. 26	29.23	38
May 26	30.63	35	Nov. 22	29.40	38
June 29	30.48	36	Dec. 30	30.18	36

83. City and County of Honolulu. Beretania and Kapiolani Sts. Lat. 21°18'20", long. 157°51'05". Drilled unused artesian basal-water well in basalt of Koolau volcanic series, diameter 8 to 6 inches, depth 509 feet, cased to 460. Land-surface datum is 27 feet above msl. Highest water level 33.29 above msl, Mar. 10, 1938; lowest 22.07 above msl, Aug. 10, 1946. Records available: 1923, 1925-48, 1952-54. No measurement made in 1955.

119. Honolulu Gas Co. Honolulu Gas Works, Honolulu. Lat. 21°19'05", long. 157°52'25". Drilled industrial artesian basal-water well in basalt of Koolau volcanic series, diameter 8 inches, depth 682 feet, cased to 613. Land-surface datum is 4.22 feet above msl. Highest water level 32.55 above msl, Mar. 16, 1933; lowest 19.96 above msl, July 28, 1945. Records available: 1923-55.

Jan. 26	26.04	450	July 26	25.74	435
Feb. 28	26.64	457	Aug. 29	25.24	420
Mar. 28	27.34	457	Sept. 28	25.44	430
Apr. 26	27.99	447	Oct. 26	26.84	429
May 26	28.04	423	Nov. 22	26.90	420
June 29	26.09	423	Dec. 30	26.79	430

132. B. P. Bishop Estate. Old Kamehameha School, Honolulu. Lat. 21°20'05", long. 157°52'25". Drilled unused artesian basal-water well in basalt of Koolau volcanic series, diameter 12 to 10 inches, depth 346 feet, cased to 265. Land-surface datum is 43 feet above msl. Highest water level 32.70 above msl, Mar. 7, 1938; lowest 21.57 above msl, July 2, 1946. Records available: 1924, 1926, 1928-55.

Daily mean water level, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	26.73	27.40	28.20	29.08	29.43	29.40	28.74	28.15	27.48	27.43	27.46	28.00
2	26.82	27.35	28.23	29.16	29.47	29.34	28.78	27.97	27.49	27.53	27.40	28.00
3	26.85	27.32	28.26	29.25	29.45	29.31	28.89	27.93	27.49	27.56	27.39	28.05
4	26.85	27.30	28.27	29.28	29.47	29.33	28.95	27.87	27.61	27.55	27.35	28.11
5	26.80	27.36	28.29	29.27	29.42	29.40	28.85	27.81	27.72	27.50	27.37	28.10
6	26.87	27.48	28.45	29.25	29.40	29.37	28.72	27.75	27.70	27.40	27.46	28.11
7	26.82	27.53	28.52	29.24	29.48	29.25	28.60	27.85	27.60	27.35	27.46	28.11
8	26.85	27.51	28.45	29.18	29.50	29.22	28.52	27.90	27.57	27.39	27.47	28.12
9	26.94	27.52	28.45	29.23	29.52	29.20	28.48	27.81	27.55	27.51	27.55	28.08
10	27.00	27.51	28.52	29.33	29.50	29.15	28.60	27.70	27.54	27.50	27.53	28.08
11	26.97	27.48	28.55	29.36	29.51	29.22	28.60	27.63	27.68	27.41	27.57	28.09
12	26.94	27.48	28.59	29.26	29.45	29.25	28.48	27.62	27.67	27.36	27.67	.....
13	26.93	27.57	28.68	29.20	29.42	29.26	28.40	27.62	27.55	27.33	27.72	.....
14	26.93	27.60	28.68	29.21	29.43	29.19	28.36	27.77	27.45	27.28	27.76	.....
15	27.02	27.61	28.71	29.21	29.47	29.14	28.40	27.80	27.43	27.37	27.68	.....
16	27.10	27.60	28.75	29.25	29.46	29.09	28.45	27.72	27.45	27.51	27.73	.....
17	27.18	27.60	28.76	29.34	29.40	29.08	28.50	27.74	27.45	27.48	27.79	.....
18	27.19	27.58	28.74	29.38	29.39	29.17	28.52	27.68	27.60	27.47	27.79	.....
19	27.18	27.63	28.76	29.30	29.35	29.24	28.43	27.66	27.59	27.43	27.87	.....
20	27.13	27.73	28.88	29.25	29.33	29.18	28.33	27.63	27.53	27.37	27.93	28.17
21	27.14	27.76	28.88	29.22	29.38	29.11	28.25	27.79	27.52	27.33	27.94	28.15
22	27.16	27.82	28.90	29.22	29.42	29.03	28.20	27.79	27.53	27.33	27.93	28.17
23	27.25	27.85	28.93	29.30	29.40	28.97	28.12	27.66	27.50	27.44	27.97	28.18
24	27.27	27.91	28.98	29.39	29.32	28.91	28.27	27.60	27.50	27.47	28.03	28.31
25	27.20	28.01	28.93	29.42	29.32	28.99	28.31	27.57	27.58	27.45	28.00	28.37
26	27.15	28.06	28.92	29.40	29.37	29.08	28.22	27.54	27.48	27.40	28.04	28.40
27	27.12	28.12	29.06	29.42	29.35	29.05	28.12	27.62	27.41	27.41	28.09	28.41
28	27.17	28.20	29.13	29.42	29.40	28.95	28.12	27.78	27.44	27.40	28.01	28.45
29	27.28		29.11	29.37	29.41	28.89	28.10	27.72	27.45	27.45	28.02	28.44
30	27.37		29.08	29.39	29.45	28.80	28.13	27.60	27.38	27.52	28.02	28.43
31	27.43		29.06		29.42		28.23	27.50		27.53		28.51

153. Sam Damon Estate. Moanalua Gardens, Honolulu. Lat. 21°21'05", long. 157°53'40". Drilled domestic and irrigation artesian basal-water well in basalt of Koolau volcanic series, diameter 10 inches. Land-surface datum is 20.38 feet above msl. Highest water level 31.88 above msl, April 1917; lowest 19.39 above msl, Sept. 26, 1945. Records available: 1910-55.

Date	Water level	Chloride ppm	Date	Water level	Chloride ppm
Jan. 27	24.39	58	July 28	25.31	70
Feb. 28	25.37	61	Aug. 29	24.97	61
Mar. 28	26.19	59	Sept. 28	24.63	65
Apr. 26	26.20	59	Oct. 28	24.49	63
May 26	25.48	59	Nov. 21	24.97	64
June 29	25.56	58	Dec. 27	25.40	66

187B. U. S. Navy. Aiea. Lat. 21°22'40", long. 157°56'05". Drilled industrial artesian basal-water well in basalt of Koolau volcanic series, diameter 12 inches, depth 173 feet, cased to 143. Land-surface datum is 9.93 feet above msl. Highest water level 27.10 above msl, Feb. 23, 1937; lowest 15.06 above msl, Aug. 19, 1945. Records available: 1923, 1928-55.

Feb. 4	21.37	122	July 26	21.99	131
24	22.25	130	Aug. 29	21.60	130
Mar. 28	23.64	135	Sept. 28	21.22	133
Apr. 27	23.06	129	Oct. 26	20.92	130
May 26	22.62	124	Nov. 23	21.90	130
June 28	22.48	126	Dec. 27	22.58	128

190. U. S. Navy. McGrew Peninsula. Lat. 21°22'47", long. 157°56'38". Drilled unused artesian basal-water well in basalt of Koolau volcanic series, diameter 6 inches, depth 300 feet, cased to 200. Land-surface datum is 22.73 feet above msl. Highest water level 25.41 above msl, Feb. 23, 1937; lowest 15.38 above msl, Aug. 24, 1945. Records available: 1910, 1918-19, 1929-55.

Jan. 27	21.43	260	Aug. 29	21.64	260
Mar. 28	23.57	264	Sept. 28	21.20	265
Apr. 27	23.00	264	Oct. 26	20.90	260
May 26	22.60	257	Nov. 23	21.84	258
June 29	22.29	257	Dec. 27	22.52	262
July 26	22.00	273			

193. L. L. McCandless Estate. Waimalu Valley. Lat. 21°23'37", long. 157°56'52". Drilled domestic artesian basal-water well in basalt of Koolau volcanic series, diameter 10 inches, depth 363 feet, cased to 61. Land-surface datum is 13.05 feet above msl. Highest water level 28.88 above msl, March 1916; lowest 14.65 above msl, Sept. 25, 1945. Records available: 1902, 1910-55.

Jan. 27	20.60	230	July 26	22.00	324
Feb. 24	21.64	234	Aug. 29	20.81	315
Mar. 28	22.81	244	Sept. 28	20.33	315
Apr. 27	22.24	264	Oct. 26	19.96	312
May 26	21.84	272	Nov. 23	20.79	334
June 29	21.51	287	Dec. 27	21.62	340

201. U. S. Navy. Pearl City. Lat. 21°23'35", long. 157°58'20". Drilled irrigation artesian basal-water well in basalt of Koolau volcanic series, diameter 12 inches, depth 336 feet, cased to 58. Land-surface datum is 9.17 feet above msl. Highest water level 31.21 above msl, February 1916; lowest 14.18 above msl, Aug. 28, 1946. Records available: 1910-55.

Jan. 27	18.67	1180	July 26	19.29	1300
Feb. 24	19.61	1270	Aug. 29	19.01	1280
Mar. 28	20.97	1360	Sept. 28	18.30	1270
Apr. 27	20.35	1320	Oct. 26	18.04	1240
May 26	19.97	1280	Nov. 23	18.84	1290
June 29	19.52	1280	Dec. 27	19.67	1400

244. B. P. Bishop Estate. Waipahu. Lat. 21°23'18", long. 158°00'32". Drilled domestic artesian basal-water well in basalt of Koolau volcanic series, diameter 12 inches, depth 225 feet, cased to 58. Land-surface datum is 10.47 feet above msl. Highest water level 30.02 above msl, February 1916; lowest 14.80 above msl, July 26, 1945. Records available: 1910-21, 1923-55.

Jan. 27	21.79	108	July 26	21.77	112
Feb. 24	22.87	108	Aug. 29	21.27	108
Mar. 28	24.77	110	Sept. 28	20.67	112
Apr. 27	23.43	107	Oct. 26	20.77	107
May 26	22.67	109	Nov. 23	22.20	110
June 26	22.13	107	Dec. 27	23.77	110

266. Hawaii Meat Co. Honouliuli. Lat. 21°21'55", long. 158°01'52". Drilled irrigation artesian basal-water well in basalt of Koolau volcanic series, diameter 12 inches. Land-surface datum is 12.66 feet above msl. Highest water level 29.16 above msl, April 1918; lowest 12.54 above msl, Sept. 24, 1945. Records available: 1910-55.

Date	Water level	Chloride ppm	Date	Water level	Chloride ppm
Jan. 27	21.97	175	July 26	20.24	210
Feb. 24	22.26	185	Aug. 29	20.02	225
Mar. 28	24.96	178	Sept. 28	19.03	225
Apr. 27	21.72	185	Oct. 26	19.21	219
May 26	20.86	192	Nov. 23	21.17	196
June 29	20.59	...	Dec. 27	23.56	195

276. Ewa Plantation Co. Gilbert. Lat. 21°20'16", long. 158°16'35". Drilled battery of four irrigation artesian basal-water wells in basalt of Waianae volcanic series, diameter 12 inches, average depth 160 feet. Land-surface datum is 40.58 feet above msl. Highest water level 16.7 above msl, February 1909; lowest 11.51 above msl, October 1945. Records available: 1905, 1908-55. Monthly averages furnished by owner.

Jan. 27	12.74	521	July 26	12.15	556
Feb. 24	12.67	530	Aug. 29	.....	560
Mar. 28	13.31	494	Sept. 28	12.19	561
Apr. 27	12.70	534	Oct. 26	12.13	571
May 26	12.16	548	Nov. 23	12.81	537
June 29	12.08	553	Dec. 27	12.90	554

286. Waialua Agricultural Co. Kawaihapai. Lat. 21°34'46", long. 158°10'49". Drilled unused artesian basal-water well in basalt of Waianae volcanic series, diameter 1 inch, depth 447 feet, cased to 447, perforations 410-447. Land-surface datum is 11.54 feet above msl. Highest water level 19.23 above msl, Oct. 30, 1952; lowest 16.34 above msl, June 26, 1936. Records available: 1929-55.

Jan. 28	17.21	147	July 27	16.88	...
Feb. 21	17.53	149	Aug. 30	16.97	147
Mar. 29	17.46	156	Sept. 29	16.98	160
Apr. 25	17.14	151	Oct. 27	17.29	156
May 25	16.83	144	Nov. 21	17.79	157
June 30	16.71	141	Dec. 28	17.77	160

308. J. F. Mendonca. Mokuleia. Lat. 21°34'35", long. 158°09'11". Drilled irrigation artesian basal-water well in basalt of Waianae volcanic series, diameter 10 to 8 inches, depth 548 feet, cased to 440 (10 to 8-inch). Land-surface datum is 8.46 feet above msl. Highest water level 20.64 above msl, Oct. 26, 1939; lowest 16.81 above msl, July 25, 1927. Records available: 1924-55.

Jan. 28	18.77	131	July 27	18.32	150
Feb. 21	18.92	140	Aug. 30	18.47	158
Mar. 29	18.93	135	Sept. 29	18.42	150
Apr. 25	18.42	136	Oct. 27	19.22	148
May 25	18.52	139	Nov. 21	19.52	143
June 30	18.09	141	Dec. 28	19.40	155

326. Waialua Agricultural Co. Waialua. Lat. 21°34'56", long. 158°06'52". Drilled irrigation artesian well in basalt of Koolau volcanic series, diameter 8 inches, depth 201 feet, cased to 114. Land-surface datum is 6.19 feet above msl. Highest water level 13.35 above msl, December 1914; lowest 9.19 above msl, Apr. 24, 1946. Records available: 1911-21, 1924-55.

Jan. 28	10.91	99	July 27	10.56	104
Feb. 21	11.19	100	Aug. 30	10.09	102
Mar. 29	11.34	97	Sept. 29	11.14	104
Apr. 25	11.00	99	Oct. 27	11.25	105
May 25	10.60	101	Nov. 21	12.12	105
June 30	9.75	97	Dec. 28	11.91	105

337. Territory of Hawaii. Waialee. Lat. 21°41'30", long. 158°01'25". Drilled unused artesian basal-water well in basalt of Koolau volcanic series, diameter 8 inches, depth 63 feet, cased to 36. Land-surface datum is 21.45 feet above msl. Highest water level 15.60 above msl, Nov. 14, 1932; lowest 11.70 above msl, May 27, 1947. Records available: 1929-55.

Jan. 28	12.50	110	July 27	13.25	115
Feb. 21	12.89	112	Aug. 30	13.53	110
Mar. 29	12.71	114	Sept. 29	13.26	118
Apr. 25	12.47	116	Oct. 27	13.33	81
May 25	12.66	108	Nov. 21	13.42	124
June 27	12.99	86	Dec. 28	13.29	130

356. Kahuku Plantation Co. Kahuku. Lat. 21°40'54", long. 157°57'04". Drilled industrial artesian basal-water well in basalt of Koolau volcanic series, diameter 12 inches, depth 420 feet, cased to 156. Land-surface datum is 8.83 feet above msl. Highest water level 17.12 above msl, January 1916; lowest 8.82 above msl, Sept. 29, 1955. Records available: 1908; 1911-18, 1921, 1924-55.

Date	Water level	Chloride ppm	Date	Water level	Chloride ppm
Jan. 28	11.84	340	July 27	9.28	350
Feb. 21	10.66	345	Aug. 30	9.41	370
Mar. 29	12.04	335	Sept. 29	8.82	...
Apr. 25	10.33	340	Oct. 27	9.89	348
May 25	9.61	333	Nov. 21	11.73	348
June 27	10.02	373	Dec. 28	11.84	360

396. Kahuku Plantation Co. Hauula. Lat. 21°36'22", long. 157°54'36". Drilled domestic and irrigation artesian basal-water well in basalt of Koolau volcanic series, diameter 8 inches. Land-surface datum is 10.36 feet above msl. Highest water level 24.98 above msl, June 1918; lowest 16.68 above msl, Sept. 23, 1953. Records available: 1911-19, 1921, 1924-55.

Jan. 28	19.46	75	July 27	18.86	88
Feb. 21	20.06	77	Aug. 30	18.65	88
Mar. 29	20.68	73	Sept. 29	18.46	88
Apr. 25	19.60	77	Oct. 27	a18.06	87
May 25	18.29	71	Nov. 21	18.37	87
June 27	18.28	85	Dec. 28	19.08	86

a Pumping.

405. M. E. Foster Estate. Kahana. Lat. 21°33'27", long. 157°52'44". Drilled domestic artesian basal-water well in basalt of Koolau volcanic series, diameter 10 inches, depth 441 feet, cased to 177. Land-surface datum is 5.76 feet above msl. Highest water level 21.07 above msl, July 25, 1938; lowest 14.80 above msl, Oct. 28, 1946. Records available: 1936-55.

Jan. 28	17.04	38	July 27	18.46	40
Feb. 21	18.46	39	Aug. 30	19.56	40
Mar. 29	19.36	40	Sept. 29	17.86	40
Apr. 25	19.36	39	Oct. 27	17.76	39
May 25	19.06	37	Nov. 21	17.36	38
June 27	16.76	37	Dec. 28	17.14	40

406. Mrs. F. M. Swanzy. Kaaawa. Lat. 21°32'41", long. 157°51'00". Drilled irrigation artesian basal-water well in basalt of Koolau volcanic series, diameter 9 inches. Land-surface datum is 10.27 feet above msl. Highest water level 18.37 above msl, July 25, 1938; lowest 12.35 above msl, Aug. 27, 1946. Records available: 1929-55.

Jan. 28	14.96	260	July 27	16.49	255
Feb. 21	15.61	267	Aug. 30	16.36	265
Mar. 29	16.72	259	Sept. 29	16.00	265
Apr. 25	17.00	259	Oct. 27	15.79	258
May 25	16.79	242	Nov. 21	15.56	277
June 27	16.74	247	Dec. 28	15.37	275

T-1. Waialua Agricultural Co. Kaukonahua Gulch. Lat. 21°32'15", long. 158°05'40". Drilled observation basal water-table well in basalt of Waianae volcanic series, diameter 1 inch, depth 292 feet, cased to 291, lower end perforated. Land-surface datum is 273.61 feet above msl. Highest water level 19.85 above msl, July 1, 1941; lowest 13.08 above msl, Feb. 28, 1949. Records available: 1938-55. June 2, 16.08 ft., 52 ppm; Nov. 1, 17.08 ft., 31 ppm; Nov. 30, 18.08 ft., 21 ppm.

T-2. Waialua Agricultural Co. Near Anahulu Canyon. Lat. 21°35'52", long. 158°05'16". Drilled observation basal water-table well in basalt of Koolau volcanic series, diameter $\frac{3}{4}$-inch, depth 344 feet, cased to 344, perforations 340-344. Land-surface datum is 341.88 feet above msl. Highest water level 14.08 above msl, Apr. 1, 1943; lowest 4.36 above msl, May 2, 1950. Records available: 1938-55. Mar. 3, 5.71 ft., 571 ppm; Apr. 4, 5.11 ft., 457 ppm; Nov. 1, 5.71 ft., 395 ppm; Nov. 30, 6.24 ft., 395 ppm.

T-5. Honolulu. Suburban Water System. Near Makaiwa Gulch. Lat. 21°20'55", long. 158°07'05". Drilled observation basal water-table well in basalt of Waianae volcanic series, diameter 6 inches, depth 100 feet, cased to 85. Land-surface datum is 79.13 feet above msl. Highest water level 5.48 above msl, Mar. 27, 1951; lowest 2.53 above msl, June 27, 1939. Records available: 1939-55.

Jan. 25	4.33	525	July 28	3.83	540
Feb. 25	4.96	518	Aug. 31	4.08	550
Mar. 30	4.58	533	Sept. 30	4.19	550
Apr. 28	4.27	523	Oct. 28	4.44	534
May 27	4.02	504	Nov. 25	4.53	549
June 30	3.84	514	Dec. 29	4.50	533

T-15. Honolulu Suburban Water System. Nanakuli Valley. Lat. 21°23'50", long. 158°07'20". Drilled observation basal water-table well in basalt of Waianae volcanic series, diameter ¾ inch, depth 489 feet, cased to 488, perforations 468-488. Land-surface datum is 478.64 feet above msl. Highest water level 3.14 above msl, Feb. 25, 1943; lowest 1.60 above msl, July 3, 1946. Records available: 1940-55. Mar. 30, 2.52 ft., 100 ppm; July 6, 2.15 ft., 101 ppm; Sept. 30, 2.05 ft., 103 ppm; Dec. 29, 2.12 ft., 103 ppm.

T-20. U. S. Navy. Near Ewa. Lat. 21°21'36", long. 158°03'45". Drilled observation artesian basal-water well in basalt of Koolau volcanic series, diameter 6 inches, depth 137 feet, cased to 9. Land-surface datum is 139.50 feet above msl. Highest water level 19.28 above msl, Jan. 28, 1943; lowest 15.87 above msl, Aug. 28, 1952. Records available: 1942-55.

Date	Water level	Chloride ppm	Date	Water level	Chloride ppm
Jan. 25	17.49	120	July 28	16.94	165
Feb. 25	17.74	114	Aug. 31	17.12	150
Mar. 30	18.28	142	Sept. 30	17.10	160
Apr. 28	17.80	140	Oct. 28	17.14	162
May 27	17.32	146	Nov. 25	17.63	167
June 30	16.85	146	Dec. 29	18.01	170

T-24. Honolulu Board of Water Supply. Manaiki Gulch. Lat. 21°21'27", long. 157°53'10". Drilled observation artesian basal-water well in basalt of Koolau volcanic series, diameter 12 inches, depth 115 feet, cased to 66. Land-surface datum is 58.40 feet above msl. Highest water level 26.25 above msl, Apr. 11, 1955; lowest 21.42 above msl, Oct. 8, 1954. Records available: 1945-55.

Daily mean water level, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	24.16	24.49	25.36	26.13	26.05	25.91	25.48	25.31	24.85	24.62	24.54	24.94
2	24.24	24.48	25.43	26.13	26.08	25.88	25.48	25.24	24.83	24.64	24.53	24.89
3	24.28	24.45	25.47	26.14	26.06	25.86	25.50	25.20	24.86	24.66	24.50	24.90
4	24.28	24.42	25.49	26.20	26.04	25.86	25.56	25.23	24.88	24.63	24.47	24.94
5	24.28	24.42	25.54	26.21	26.03	25.89	25.61	25.20	24.93	24.63	24.47	24.95
6	24.32	24.48	25.68	26.21	26.01	25.88	25.58	25.18	24.97	24.60	24.52	24.92
7	24.28	24.50	25.67	26.18	26.02	25.82	25.53	25.19	24.95	24.57	24.53	24.88
8	24.27	24.52	25.63	26.16	26.03	25.76	25.49	25.22	24.90	24.59	24.48	24.84
9	24.29	24.52	25.65	26.18	26.06	25.75	25.49	25.18	24.88	24.62	24.50	24.80
10	24.31	24.51	25.70	26.24	26.05	25.72	25.51	25.13	24.87	24.62	24.52	24.76
11	24.31	24.48	25.75	26.25	26.01	25.71	25.52	25.11	24.88	24.58	24.58	24.81
12	24.30	24.47	25.75	26.20	26.00	25.72	25.45	25.09	24.86	24.56	24.64	24.85
13	24.27	24.53	25.80	26.14	25.97	25.72	25.43	25.07	24.79	24.51	24.71	24.82
14	24.27	24.58	25.83	26.11	25.98	25.68	25.42	25.09	24.75	24.46	24.75	24.77
15	24.27	24.59	25.82	26.10	26.01	25.66	25.39	25.09	24.73	24.48	24.80	24.72
16	24.30	24.56	25.85	26.13	26.01	25.64	25.40	25.07	24.73	24.52	24.85	24.72
17	24.33	24.56	25.87	26.18	25.98	25.63	25.45	25.06	24.72	24.56	24.88	24.73
18	24.32	24.54	25.87	26.20	25.94	25.62	25.46	25.01	24.72	24.56	24.89	24.78
19	24.31	24.56	25.89	26.15	25.97	25.63	25.41	24.97	24.74	24.55	24.93	24.85
20	24.27	24.65	25.93	26.12	25.91	25.66	25.35	24.96	24.69	24.56	24.95	24.85
21	24.24	24.66	25.97	26.10	25.91	25.63	25.32	25.00	24.67	24.53	24.95	24.87
22	24.26	24.66	25.98	26.08	25.93	25.59	25.30	25.04	24.64	24.52	24.92	24.92
23	24.35	24.69	26.04	26.09	25.95	25.55	25.28	25.00	24.67	24.54	24.94	25.00
24	24.38	24.75	26.09	26.12	25.90	25.55	25.30	24.97	24.68	24.53	24.95	25.10
25	24.39	24.88	26.08	26.12	25.86	25.57	25.35	24.95	24.72	24.49	24.98	25.18
26	24.37	24.98	26.10	26.12	25.88	25.59	25.31	24.94	24.72	24.50	24.99	25.24
27	24.37	.....	26.15	26.09	25.87	25.60	25.26	24.94	24.70	24.49	25.02	25.34
28	24.42	25.30	26.16	26.09	25.90	25.58	25.26	24.97	24.65	24.47	25.02	25.39
29	24.44		26.13	26.04	25.93	25.54	25.27	24.97	24.63	24.48	25.00	25.41
30	24.48		26.13	26.03	25.96	25.52	25.27	24.92	24.62	24.53	24.98	25.42
31	24.49		26.13		25.95		25.29	24.88		24.55		25.46

T-25. Honolulu Board of Water Supply. Waimalu Valley, near Pearl Harbor. Lat. 21°23"35", long. 157°56'48". Drilled observation artesian basal-water well in basalt of Koolau volcanic series, diameter 12 inches, depth 177 feet, cased to 42. Land-surface datum is 24.40 feet above msl. Highest water level 21.10 above msl, Mar. 23, 1955; lowest 16.10 above msl, Sept. 25, 1953. Records available: 1945-55.

Daily mean water level, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	19.16	19.20	20.64	20.65	20.57	20.20	19.85	19.72	19.15	19.06	18.75	19.07
2	19.17	19.14	20.67	20.82	20.45	20.17	19.90	19.65	19.17	19.15	18.72	19.05
3	19.20	19.10	20.67	20.85	20.35	20.15	20.10	19.72	19.30	19.00	18.68	19.23
4	19.21	19.06	20.64	20.72	20.30	20.20	20.16	19.75	19.50	18.93	18.65	19.25
5	19.16	19.13	20.82	20.67	20.27	20.35	20.05	19.60	19.55	18.87	18.80	19.08

T-25--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
6	19.15	19.22	20.81	20.67	20.35	20.20	19.93	19.60	19.40	18.83	18.96	18.94
7	19.14	19.20	20.80	20.65	20.47	20.10	19.86	19.70	19.27	18.83	18.82	18.87
8	19.15	19.20	20.75	20.76	20.55	20.05	19.82	19.65	19.23	18.95	18.72	18.82
9	19.17	19.18	20.72	20.87	20.45	20.03	19.83	19.55	19.22	19.10	18.88	18.83
10	19.16	19.10	20.70	20.90	20.40	20.02	19.90	19.52	19.35	18.92	19.08	19.01
11	19.13	19.06	20.68	20.70	20.30	20.10	19.80	19.45	19.35	18.80	19.18	19.03
12	19.11	19.09	20.68	20.60	20.30	20.20	19.73	19.42	19.25	18.75	19.20	18.90
13	19.06	19.16	20.70	20.52	20.30	20.06	19.70	19.50	19.12	18.72	19.27	18.82
14	19.00	19.12	20.67	20.55	20.40	20.02	19.66	19.56	19.08	18.72	19.32	18.80
15	19.03	19.10	20.63	20.57	20.52	19.96	19.70	19.48	19.04	18.90	19.32	18.75
16	19.09	19.04	20.62	20.73	20.37	19.95	19.85	19.42	19.10	19.10	19.33	18.75
17	19.08	19.04	20.57	20.76	20.27	19.93	19.85	19.32	19.22	19.12	19.32	18.90
18	19.04	19.08	20.52	20.65	20.23	19.93	19.80	19.31	19.25	19.00	19.32	19.00
19	19.00	19.12	20.57	20.55	20.20	20.05	19.67	19.35	19.08	18.85	19.40	19.00
20	18.92	19.25	20.67	20.47	20.15	20.00	19.63	19.52	18.97	18.80	19.45	19.70
21	19.22	19.24	20.65	20.43	20.30	19.90	19.62	19.57	18.92	18.80	19.35	20.25
22	19.20	19.24	20.80	20.46	20.40	19.87	19.63	19.50	18.00	18.90	19.30	19.85
23	19.17	.....	21.10	20.65	20.25	19.85	19.77	19.37	19.20	19.00	19.30	19.80
24	19.18	21.0	21.00	20.67	20.12	19.85	19.92	19.36	19.27	18.80	19.42	19.80
25	19.20	20.86	20.87	20.57	20.11	19.90	19.76	19.32	19.30	18.70	19.35	19.85
26	19.17	20.7	20.85	20.50	20.12	20.03	19.70	19.28	19.15	18.72	19.45	19.87
27	19.13	20.64	20.87	20.43	20.16	19.93	19.62	19.36	19.05	18.65	19.45	19.92
28	19.14	20.63	20.87	20.45	20.33	19.95	19.60	19.42	19.00	18.75	19.30	19.95
29	19.20		20.85	20.45	20.42	19.93	19.65	19.32	18.91	18.92	19.20	19.94
30	19.25		20.75	20.57	20.30	19.87	19.80	19.22	18.93	18.90	19.12	19.97
31	19.24		20.62		20.23		19.85	19.17		18.85		19.98

T-27. Honolulu Board of Water Supply. Pearl City. Lat. 21°23'55", long. 157°58'30". Drilled observation basal water-table well in basalt of Koolau volcanic series, diameter 12 inches, depth 71 feet, cased to 60. Land-surface datum is 47 feet above msl. Highest water level 22.42 above msl, Mar. 29, 1955; lowest 16.02 above msl, July 1, 1954. Records available: 1946-55.

Daily mean water level, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	19.99	20.04	21.74	22.20	22.12	21.55	20.95	20.72	20.02	19.63	19.65	20.08
2	20.03	19.96	21.82	22.25	22.00	21.52	21.00	20.60	20.00	19.75	19.55	20.00
3	20.07	19.89	21.88	22.35	21.90	21.45	21.15	20.57	20.08	19.75	19.50	20.08
4	20.10	19.84	21.91	22.33	21.83	21.46	21.30	20.57	20.20	19.65	19.48	20.20
5	20.06	19.86	21.93	22.22	21.77	21.60	21.25	20.55	20.35	19.56	19.61	20.15
6	20.02	19.98	22.00	22.15	21.73	21.55	21.12	20.55	20.42	19.53	19.78	20.00
7	19.98	20.01	22.05	22.08	21.83	21.43	21.06	20.62	20.32	19.50	19.72	19.90
8	19.96	19.95	22.05	22.15	21.97	21.35	20.97	20.60	20.20	19.60	19.62	19.80
9	19.99	19.88	22.03	22.30	21.95	21.25	20.96	20.50	20.12	19.75	19.64	19.75
10	20.03	19.82	22.05	22.42	21.87	21.27	21.03	20.42	20.12	19.70	19.77	19.85
11	19.96	19.78	22.03	22.40	21.75	21.30	20.98	20.37	20.20	19.55	19.92	19.95
12	19.92	19.80	22.03	22.25	21.65	21.40	20.87	20.35	20.13	19.50	20.06	19.90
13	19.81	19.90	22.12	22.10	21.57	21.35	.....	20.40	19.98	19.45	20.16	19.80
14	19.80	19.91	22.06	22.05	21.70	21.25	.....	20.50	19.90	19.43	20.22	19.70
15	19.78	19.88	22.00	22.00	21.88	21.20	20.77	20.50	19.85	19.50	20.25	19.65
16	19.83	19.82	21.95	22.08	21.80	21.16	20.85	20.40	19.82	19.65	20.28	19.60
17	19.86	19.78	21.95	22.22	21.65	21.12	20.96	20.35	19.90	19.70	20.30	19.70
18	19.80	19.77	21.92	22.23	21.55	21.15	20.92	20.32	20.00	19.62	20.35	19.85
19	19.74	19.82	21.93	22.12	21.53	21.25	20.80	20.32	19.92	19.55	20.40	19.85
20	19.66	20.00	22.05	22.02	21.47	21.20	20.75	20.37	19.80	19.52	20.45	20.10
21	19.66	20.06	22.05	21.97	21.60	21.12	20.72	20.50	19.70	19.53	20.45	20.30
22	19.74	20.03	22.06	21.91	21.70	21.07	20.70	20.50	19.68	19.60	20.40	20.48
23	19.85	20.30	22.20	22.00	21.65	21.00	20.75	20.42	19.76	19.67	20.35	20.60
24	19.94	20.90	22.30	.....	.....	20.97	20.85	20.35	19.87	19.60	20.37	20.75
25	19.98	21.30	22.32	.....	.....	21.00	20.82	20.32	19.97	19.52	20.40	20.87
26	20.01	21.44	22.32	.....	21.40	21.08	20.75	20.27	19.92	19.45	20.40	20.97
27	19.99	21.54	22.40	.....	21.45	21.07	20.65	20.32	19.80	19.43	20.48	21.03
28	20.01	21.66	22.40	21.85	21.58	21.00	20.62	20.40	19.70	19.47	20.40	21.08
29	20.04		22.42	21.82	21.67	20.95	20.62	20.30	19.62	19.62	20.27	21.19
30	21.01		22.40	21.90	21.65	20.97	20.70	20.15	19.56	19.76	20.23	21.12
31	21.00		22.30		21.56		20.77	20.06		19.75		21.16

T-28. Honolulu Board of Water Supply. Halemano Gulch, near Waialua. Lat. 21°34'40", long. 158°06'07". Drilled observation basal water-table well in basalt of Koolau volcanic series, diameter 12 inches, depth 60 feet, cased to 39. Land-surface datum is 35 feet above msl. Highest water level 12.33 above msl, Jan. 23, 1952; lowest 9.53 above msl, June 12, 1947. Records available: 1947-55.

T-28--Continued.

Daily mean water level, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	11.41	10.97	.....	11.24	11.10	10.90	10.45	.....	11.17	11.45	11.40	12.06
2	11.41	10.95	.....	11.27	10.95	10.87	10.55	10.85	11.23	11.64	11.38	12.04
3	11.40	10.97	.....	11.36	10.77	10.85	10.81	10.80	11.39	11.58	11.30	12.02
4	11.39	10.94	11.42	11.33	10.74	10.95	11.00	10.79	11.60	11.40	11.27	12.00
5	11.35	10.95	11.49	11.27	10.68	11.15	10.93	10.76	11.70	11.33	11.38	11.97
6	11.34	11.04	11.55	11.25	10.66	11.11	10.76	10.90	11.65	11.33	11.58	11.90
7	11.32	11.02	11.52	11.25	10.75	10.86	10.74	.....	11.51	11.34	11.58	11.87
8	11.32	11.00	11.42	11.28	11.05	10.72	10.64	.....	11.45	11.53	11.47	11.85
9	11.31	10.95	11.35	11.36	11.00	10.63	10.74	11.00	11.40	11.73	11.62	11.80
10	11.29	11.00	11.30	11.41	10.84	10.59	10.95	10.94	11.52	11.68	11.80	11.85
11	11.24	11.00	11.26	11.34	10.75	10.68	10.86	10.90	11.68	11.50	.....	11.84
12	11.21	11.03	11.30	11.17	10.73	10.90	10.68	10.92	11.60	11.44	.....	11.75
13	11.16	11.08	11.39	11.01	10.73	10.92	10.58	11.06	11.43	11.40	.....	11.64
14	11.11	11.07	11.34	10.90	10.80	10.75	10.54	.....	11.32	11.40	.....	11.54
15	11.09	11.02	11.27	10.86	11.10	10.63	10.51	.....	11.24	11.60	.....	11.38
16	11.12	10.95	11.31	10.98	11.06	10.60	10.62	11.14	11.24	11.77	.....	11.38
17	11.11	10.93	11.32	11.10	10.88	10.53	10.92	11.10	11.46	11.68	.....	11.57
18	11.09	10.93	11.27	11.06	10.79	10.70	10.85	11.07	11.67	11.43	.....	11.64
19	11.05	11.00	11.33	.....	10.73	10.88	10.70	11.10	11.62	11.32	.....	11.65
20	10.99	11.08	11.42	.....	10.76	10.83	10.67	11.30	11.42	11.29	.....	11.74
21	10.98	11.15	11.45	10.89	10.90	10.67	10.63	11.48	11.29	11.26	.....	11.85
22	10.97	11.16	11.47	10.85	11.10	10.58	10.61	11.48	11.26	11.40	.....	.....
23	11.01	11.17	11.57	11.04	11.01	10.50	10.72	11.33	11.25	11.61	.....	11.92
24	10.98	.....	11.64	11.22	10.85	10.46	10.92	11.26	11.45	11.59	12.03	11.91
25	10.93	.....	.....	11.15	10.75	10.58	10.91	11.27	11.66	11.38	12.03	11.91
26	10.97	.....	.....	10.93	10.74	10.85	10.73	11.32	11.60	11.30	12.05	11.92
27	10.96	.....	.....	10.82	10.84	10.85	10.61	11.45	11.44	11.32	12.05	11.92
28	10.94	.....	11.50	10.74	11.00	10.62	10.60	11.62	11.36	11.28	12.06	11.93
29	10.98		11.44	10.78	11.23	10.53	10.65	11.59	11.25	11.45	12.06	11.92
30	11.03		11.37	10.90	11.17	10.47	10.82	11.39	11.22	11.64	.....	11.90
31	11.02		11.30		11.00		.....	11.28		11.56		11.90

T-41. Honolulu Board of Water Supply. Near Waipahu. Lat. 21°22'45", long. 158°01'50". Drilled observation artesian well in basalt of Koolau volcanic series, diameter 12 inches, depth 113 feet, cased to 92. Land-surface datum is 84 feet above msl. Highest water level 25.62 above msl, Mar. 28, 1955; lowest 15.06 above msl, Sept. 24, 1953. Records available: 1949-55.

Daily mean water level, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	22.40	21.25	24.80	24.15	23.95	22.45	21.35	21.25	20.16	20.05	20.50	21.15
2	22.57	20.95	24.97	24.50	23.40	22.15	21.70	20.90	20.15	20.35	20.40	21.05
3	22.70	20.65	.....	25.00	22.90	22.10	22.10	20.73	20.45	20.15	20.27	21.60
4	22.35	20.50	25.01	24.40	22.75	22.40	22.80	20.73	20.90	19.90	20.57	22.25
5	22.00	21.00	25.12	23.90	22.55	22.60	22.50	20.80	21.75	19.75	21.22	21.75
6	21.75	21.70	25.25	23.55	22.50	22.35	22.00	21.15	22.05	19.60	21.76	21.20
7	21.55	21.10	25.33	23.35	23.00	22.05	21.70	21.30	21.30	19.80	21.15	20.95
8	21.90	20.65	25.32	24.00	23.40	21.85	21.60	21.15	20.85	20.15	20.62	20.70
9	22.25	20.40	25.25	24.75	23.10	21.67	21.95	20.80	20.55	20.50	20.70	20.60
10	21.90	20.20	25.20	25.10	22.85	21.70	22.00	.....	20.45	20.30	21.45	21.40
11	21.45	20.15	25.16	24.40	22.55	22.10	21.75	.....	20.62	19.90	21.95	21.95
12	21.20	20.75	25.25	23.80	22.30	22.35	21.40	20.55	20.50	19.80	22.30	21.50
13	20.80	21.50	25.32	23.30	22.25	22.05	21.17	20.85	20.20	19.75	22.55	21.00
14	20.60	21.00	25.10	23.05	22.65	21.70	21.16	21.15	20.00	19.75	22.70	20.70
15	21.10	20.65	24.65	22.95	23.00	21.60	21.30	21.05	19.85	20.15	22.78	20.50
16	21.70	20.45	24.25	23.75	22.70	21.55	21.65	20.70	19.90	20.45	22.90	20.50
17	21.15	20.40	23.85	24.45	22.35	21.55	21.80	20.55	20.15	20.20	22.97	21.25
18	20.60	20.50	23.65	23.90	22.15	21.90	21.65	20.45	20.35	19.95	23.05	21.85
19	20.35	21.10	24.10	23.30	22.00	22.10	21.40	20.50	20.20	20.00	23.12	21.55
20	20.15	21.70	24.62	23.00	22.00	22.00	21.10	20.90	19.90	20.10	23.23	22.25
21	20.60	21.40	24.10	22.73	22.35	21.65	21.03	21.11	19.75	20.15	23.15	22.75
22	21.45	21.10	23.90	22.65	22.65	21.50	21.10	21.00	19.60	20.50	22.95	23.15
23	21.85	21.85	24.75	23.50	22.50	21.47	21.40	20.75	19.70	20.70	22.20	23.40
24	22.10	22.70	25.20	24.15	22.05	21.45	21.65	20.60	20.10	20.50	22.70	23.65
25	22.25	23.60	25.40	23.50	21.90	21.80	21.40	20.50	20.35	20.25	22.40	23.85
26	22.35	24.10	25.50	23.00	21.77	22.05	21.10	20.50	20.30	20.05	22.70	24.00
27	22.40	24.35	25.57	22.70	21.80	21.80	20.95	20.75	19.95	19.95	23.02	24.15
28	22.43	24.60	25.62	22.50	22.25	21.55	20.87	21.02	19.75	20.10	22.48	24.20
29	22.50		25.55	22.40	22.60	21.45	20.85	20.85	19.60	20.90	21.75	24.30
30	22.55		25.00	23.10	22.45	21.32	21.15	20.50	19.55	21.50	21.40	24.36
31	21.80		24.45		22.20		21.45	20.30		21.05		24.41

T-44. Honolulu Board of Water Supply. 16th Ave. and Claudine St., Honolulu. Lat. 21°17'17", long. 157°47'39". Drilled observation water-table well in basalt of Koolau volcanic series, diameter 1 inch, depth 171 feet, cased to 168, perforations 158, 163, 167. Land-surface datum is 152.04 feet above msl. Highest water level 11.07 above msl, Aug. 12, 1937; lowest 8.12 above msl, July 8, 1947. Records available: 1936-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	9.37	Apr. 11	9.67	July 11	9.42	Oct. 10	9.78
10	9.39	18	9.49	18	9.40	17	9.78
17	9.31	25	9.47	25	9.49	24	9.75
24	9.31	May 2	9.38	Aug. 1	9.47	31	9.69
Feb. 7	9.33	9	9.40	8	9.70	Nov. 7	9.65
14	9.31	16	9.42	15	9.71	14	9.50
21	9.36	23	9.43	22	9.58	21	9.60
28	9.60	31	9.46	29	9.58	28	9.65
Mar. 7	9.60	June 6	9.43	Sept. 6	9.90	Dec. 5	9.74
14	9.59	13	9.40	12	9.71	12	9.83
21	9.60	20	9.36	19	9.68	19	9.80
28	9.62	27	9.34	Oct. 6	9.78	27	9.97
Apr. 4	9.58	July 5	9.37				

T-45. Honolulu Board of Water Supply. Near North Halawa Valley. Lat. 21°22'34", long. 157°55'26". Drilled observation basal water-table well in basalt of Koolau volcanic series, diameter 12 inches, depth 85 feet, cased to 59. Land-surface datum is 57 feet above msl. Highest water level 23.99 above msl, Apr. 10, 1955; lowest 18.10 above msl, Sept. 24, 1954. Records available: 1954-55.

Daily mean water level, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	21.80	21.86	23.33	23.68	23.66	23.14	22.61	22.56	21.82	21.76	21.46	21.94
2	21.84	21.80	23.37	23.80	23.46	23.10	22.62	22.49	21.83	21.88	21.40	21.84
3	21.88	21.73	23.43	23.90	23.34	23.04	22.88	22.54	22.03	21.76	21.34	22.04
4	21.90	21.68	23.44	23.80	23.26	23.04	23.06	22.56	22.20	21.62	21.28	22.14
5	21.89	21.74	23.48	23.74	23.21	23.28	22.84	22.50	22.33	21.55	21.50	21.84
6	21.88	21.86	23.60	23.70	23.20	23.08	22.80	22.54	22.10	21.50	21.66	21.74
7	21.86	21.84	23.61	23.66	23.40	22.98	22.65	22.64	21.96	21.54	21.46	21.72
8	21.85	21.82	23.59	23.72	23.58	22.88	22.64	22.44	21.91	21.70	21.30	21.64
9	21.86	21.80	23.59	23.86	23.34	22.86	22.64	22.34	21.90	21.84	21.46	21.63
10	21.89	21.72	23.58	23.99	23.34	22.84	22.80	22.30	22.10	21.60	21.65	21.84
11	21.86	21.66	23.60	23.78	23.28	22.90	22.60	22.26	22.20	21.44	21.79	21.92
12	21.83	21.72	23.62	23.64	23.26	23.12	22.56	22.22	22.00	21.36	21.94	21.78
13	21.74	21.82	23.68	23.54	23.24	22.92	22.50	22.26	21.84	21.34	22.06	21.68
14	21.70	21.76	23.66	23.56	23.38	22.86	22.42	22.46	21.80	21.34	22.12	21.61
15	21.67	21.70	23.60	23.54	23.56	22.81	22.44	22.26	21.74	21.56	22.18	21.60
16	21.70	21.66	23.58	23.72	23.38	22.78	22.64	22.14	21.72	21.76	22.22	21.59
17	21.72	21.64	23.58	23.88	23.22	22.72	22.82	22.06	21.96	21.74	22.22	21.80
18	21.70	21.62	23.51	23.76	23.14	22.72	22.60	22.04	22.06	21.70	22.20	21.90
19	21.66	21.74	23.55	23.66	23.12	22.96	22.44	22.06	21.72	21.62	22.28	21.74
20	21.60	21.94	23.66	23.60	23.06	22.80	22.35	22.30	21.60	21.46	22.35	22.00
21	21.58	21.90	23.61	23.54	23.24	22.74	22.35	22.46	21.63	21.43	22.30	22.26
22	21.68	21.88	23.60	23.46	23.44	22.72	22.38	22.26	21.55	21.54	22.24	22.48
23	21.77	22.04	23.71	23.64	23.20	22.69	22.60	22.12	21.78	21.66	22.24	22.60
24	21.81	22.50	23.80	23.76	23.04	22.68	22.75	22.08	21.96	21.46	22.34	22.68
25	21.82	22.84	23.82	23.60	23.00	22.68	22.54	22.02	22.10	21.34	22.30	22.78
26	21.80	23.06	23.88	23.50	23.02	22.93	22.40	22.02	21.96	21.30	22.34	22.82
27	21.76	23.20	23.95	23.44	23.06	22.80	22.34	22.22	21.84	21.26	22.41	22.82
28	21.79	23.27	23.98	23.43	23.26	22.74	22.34	22.34	21.70	21.42	22.22	22.93
29	21.86		23.88	23.40	23.40	22.71	22.45	22.08	21.60	21.62	22.14	22.96
30	21.92		23.84	23.50	23.30	22.65	22.62	21.94	21.59	21.68	22.00	22.98
31	21.90		23.76		23.10		22.73	21.86		21.48		23.01

T-48. Honolulu Suburban Water System. At head of Maunawili Valley. Lat. 21°20'42", long. 157°47'14". Drilled observation high-level water-table well in basalt of Koolau volcanic series, diameter 2 inches, depth 452 feet, cased 0-60, 311-452. Land-surface datum is 1,272 feet above msl. Highest water level 1,170.1 above msl, Aug. 20, 1954; lowest 1,012.6 above msl, July 3, 1954. Records available: 1953-55. Jan. 6, 1,079.4; Mar. 30, 1,074.7.

T-48A. Honolulu Suburban Water System. At head of Maunawili Valley. Lat. 21°20'42", long. 157°47'14". Drilled observation high-level water-table well in basalt of Koolau volcanic series, diameter $\frac{3}{4}$ inch, depth 1,230 feet, cased to 1,120. Land-surface datum is 1,272 feet above msl. Highest water level 685.3 above msl, June 26, 1954; lowest 617.1 above msl, Aug. 20, 1954. Records available: 1953-55. Jan. 6, 622.8.

T-49. Honolulu Suburban Water System. At head of Maunawili Valley. Lat. 21°20'48", long. 157°46'57". Drilled observation high-level water-table well in basalt of Koolau volcanic series, diameter 1 inch, depth 805 feet, cased to 805, perforations 784-805. Land-surface datum is 777 feet above msl. Highest water level 635.9 above msl, Mar. 6, 1954; lowest 627.6 above msl, May 29, July 3, 1954. Records available: 1953-55. Jan. 6, 633.8; Mar. 30, 635.6.

T-50. Honolulu Suburban Water System. At head of Maunawili Valley. Lat. 21°20'33", long. 157°46'54". Drilled observation high-level water-table well in basalt of Koolau volcanic series, diameter 1 inch, depth 1,036 feet, cased to 1,015, perforations 994-1,015. Land-surface datum is 1,008 feet above msl. Highest water level 676.3 above msl, Mar. 30, 1955; lowest 666.8 above msl, Aug. 20, 1954. Records available: 1954-55. Jan. 6, 669.6; Mar. 30, 676.3.

Shaft 4. U. S. Army. Near Wahiawa. Lat. 21°29'30", long. 158°01'45". Dug domestic high-level water-table well in basalt of Koolau volcanic series, size 8 by 8 feet, vertical depth of 30-degree inclined shaft 563 feet, lined with concrete in upper part, pump chamber at bottom of shaft. Land-surface datum is 850 feet above msl. Highest water level 284.13 above msl, Sept. 4, 1937; lowest 273.17 above msl, Mar. 11, 1946. Records available: 1936-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	273.68	Mar. 27	275.52	July 2	280.80	Oct. 21	281.45
21	273.80	Apr. 3	276.09	31	281.34	Nov. 9	281.38
Feb. 1	274.03	18	277.13	Aug. 9	281.43	12	281.19
23	274.66	May 1	277.92	29	281.60	25	280.99
28	274.66	26	279.45	30	281.57	Dec. 5	280.78
Mar. 13	274.99	27	279.56	Oct. 1	281.65	23	280.51
22	275.48	28	279.55	20	281.52	31	280.39

NEVADA

By C. P. Zones

Scope of Water-Level Program

The observation-well program was continued in 1955 in cooperation with the Nevada State Engineer's Office. Measurements, usually in March and September, were made in 248 wells, 14 of which were equipped with recording gages. Quarterly or monthly measurements were made in areas where ground-water studies are being conducted or in areas of large ground-water withdrawals. Investigations in regard to the occurrence and movement of ground water were continued in various locations. Figures 63-68 show the location of observation wells in the State.

State of Nevada Water Resources Bulletin No. 13 which reports the results of an investigation of the geology and ground-water resources of Buena Vista Valley in Pershing County was published in 1955. The report includes a section on a reconnaissance land classification of Buena Vista Valley made by the University of Nevada Agricultural Experiment Station.

Precipitation

Precipitation was deficient during the first 11 months, especially during the first 6 months. However, heavy December rains, particularly in the western part of the State, brought the seasonal totals to above average at a number of stations. The driest stations were along the southwestern border of the State. As of April 1, 1955, the snowpack in the eastern part of the State was about normal. In the rest of the State the snowpack ranged from 60 to 70 percent of normal.

Runoff

Runoff was below normal during the water year beginning October 1, 1954, and ending September 30, 1955. A total runoff of 64,345 acre-feet, 31 percent of the median, was recorded for the Humboldt River at Palisade, Eureka County. The runoff at Palisade is considered to be representative for the northern part of the State. At Coleville, Calif., a total runoff of 133,420 acre-feet, 76 percent of the median, was recorded for the West Walker River. Runoff at this station is indicative of that along the east front of the Sierra Nevada.

Pumpage

A complete inventory of ground-water withdrawals for the State was not made. A partial inventory made by the State Engineer's Office indicates that the withdrawals in 1955 were at least as large as in 1953, estimated to be about 130,000 acre-feet. Withdrawals in Las Vegas Valley were larger than those of the previous year. An inventory indicates that 40,000 acre-feet of ground water was withdrawn from the aquifers underlying the valley. More accurate controls for estimating the withdrawals of ground water in Las Vegas Valley were used during 1955. As a result, it now appears that the estimates made for previous years were too high--perhaps by as much as 20 percent. An inventory of ground-water withdrawals from Pahrump Valley in Nye County was made by the State Engineer's Office. The inventory indicates that about 19,000 acre-feet was withdrawn from wells and springs. This is about the same as the withdrawals for 1954.

Interpretation of Water-Level Fluctuations

Water levels in September 1955 in general were below those of 1954, except in a few valleys scattered throughout the State. The decline in ground-water levels is the result of the continuing drought and increased pumping. In the Humboldt River valley where many record-low stages were noted, ground-water levels ranged from 1 foot to 2.5 feet below average. The decline was a result of deficient runoff in the river and its tributaries. In valleys adjacent to the Humboldt River, the average decline in ground-water stages ranged from less than 1 foot to more than 1.5 feet below average. In Las Vegas Valley, Clark County, the trend of declining artesian pressures and ground-water levels continued. The average levels in 15 selected observation wells in the valley was 2.2 feet lower in August 1955 than in August 1954. In the most heavily pumped areas, artesian pressures and water levels averaged more than 6 feet lower than in 1954. The amount of pumpage

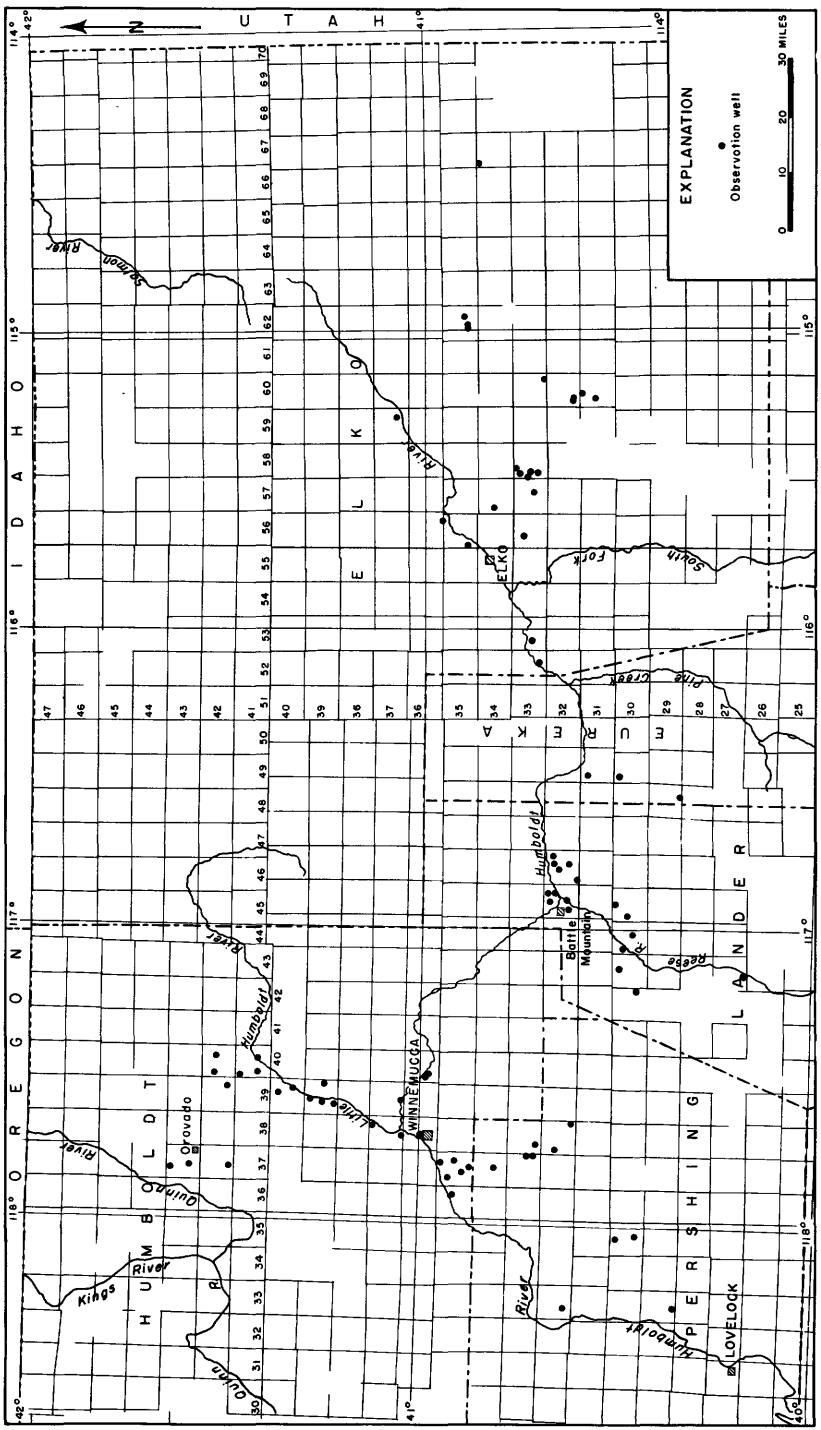


Figure 63.--Location of observation wells in Elko, Eureka, Humboldt, Lander, and Pershing Counties, Nev., 1955.

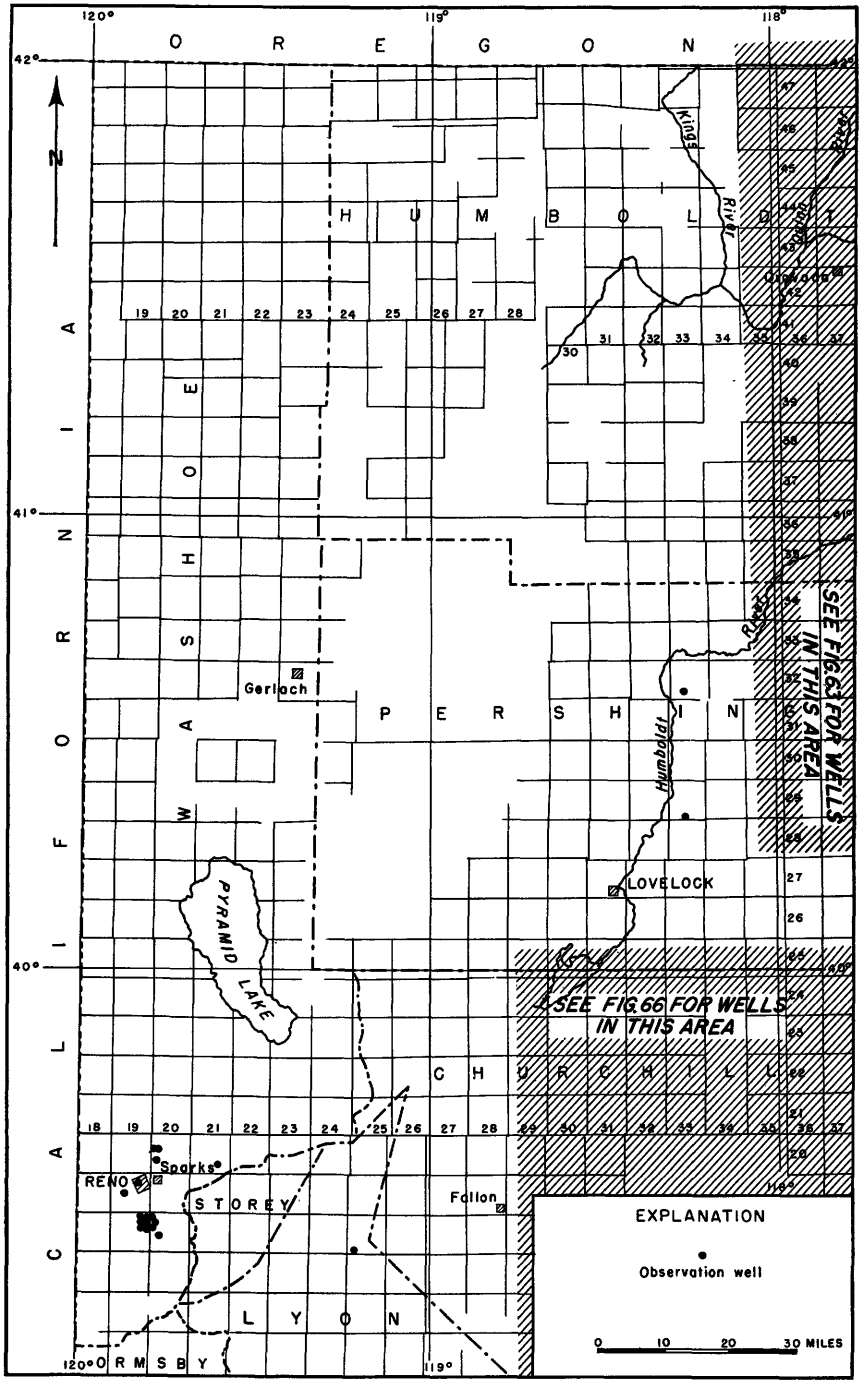


Figure 64.--Location of observation wells in Lyon, Pershing, and Washoe Counties, Nev., 1955.

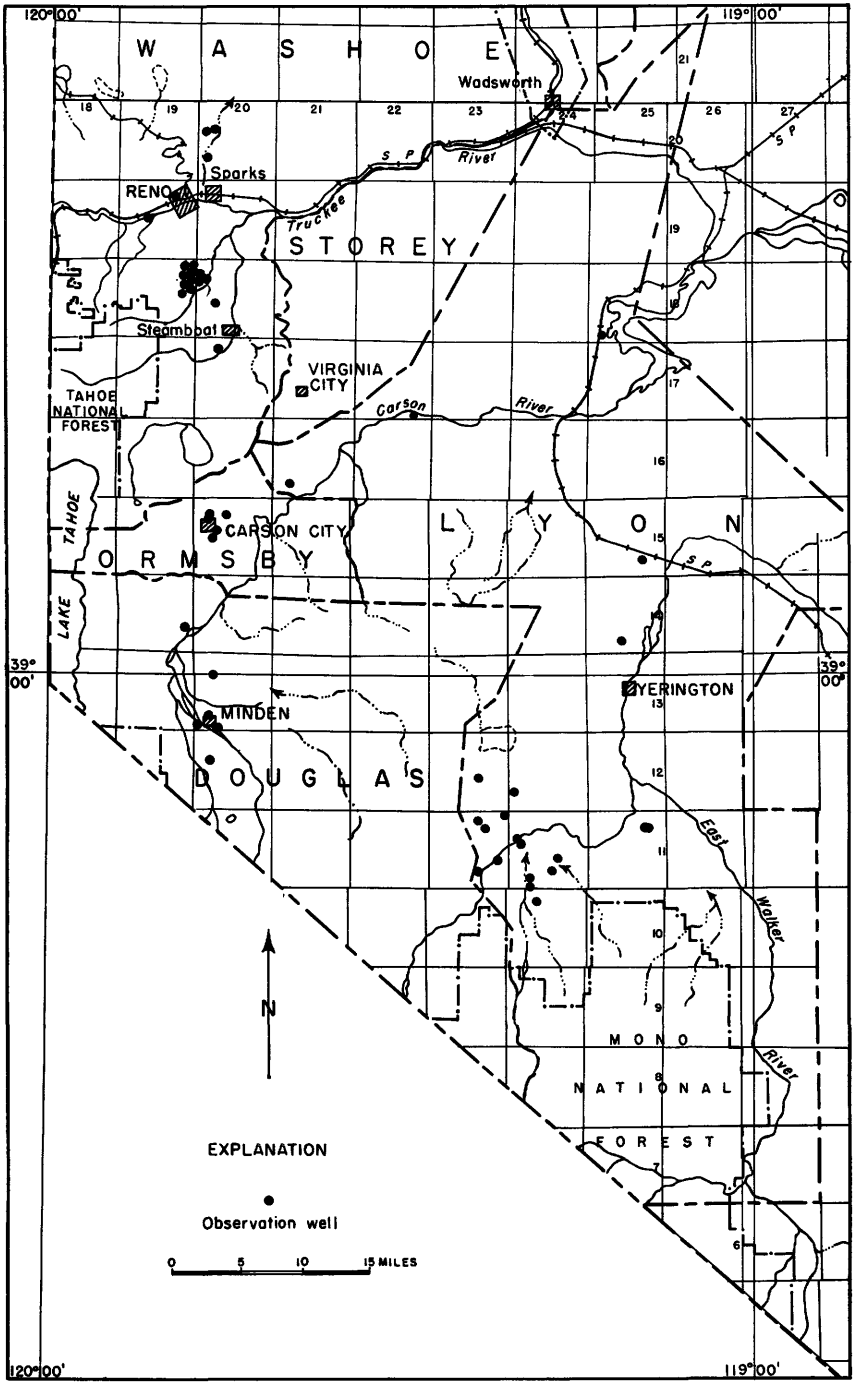


Figure 65. --Location of observation wells in Douglas, Lyon, Ormsby, and Washoe Counties, Nev., 1955.

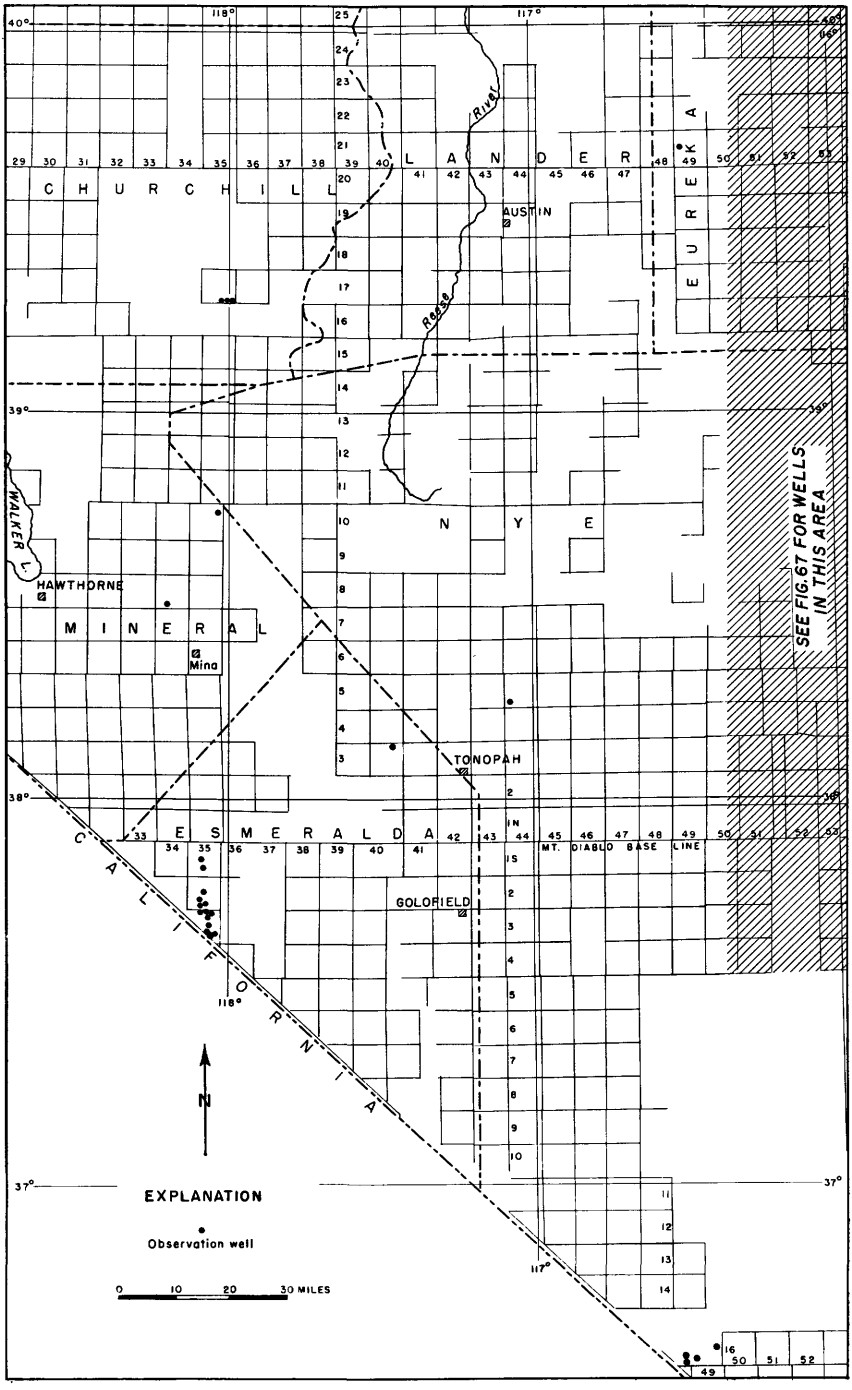


Figure 66.--Location of observation wells in Churchill, Esmeralda, Eureka, Mineral, and Nye Counties, Nev., 1955.

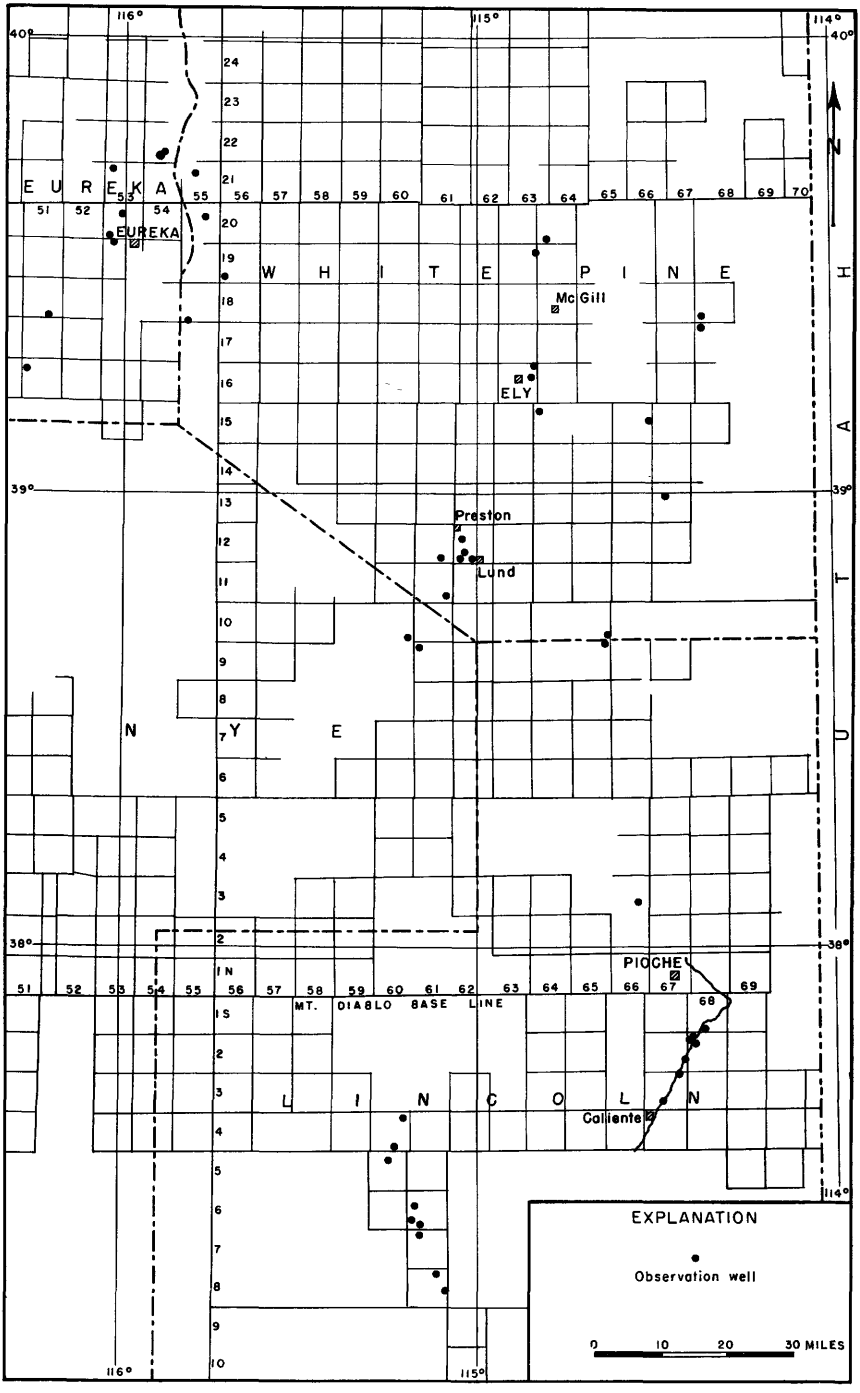


Figure 67.--Location of observation wells in Eureka, Lincoln, Nye, and White Pine Counties, Nev., 1955.

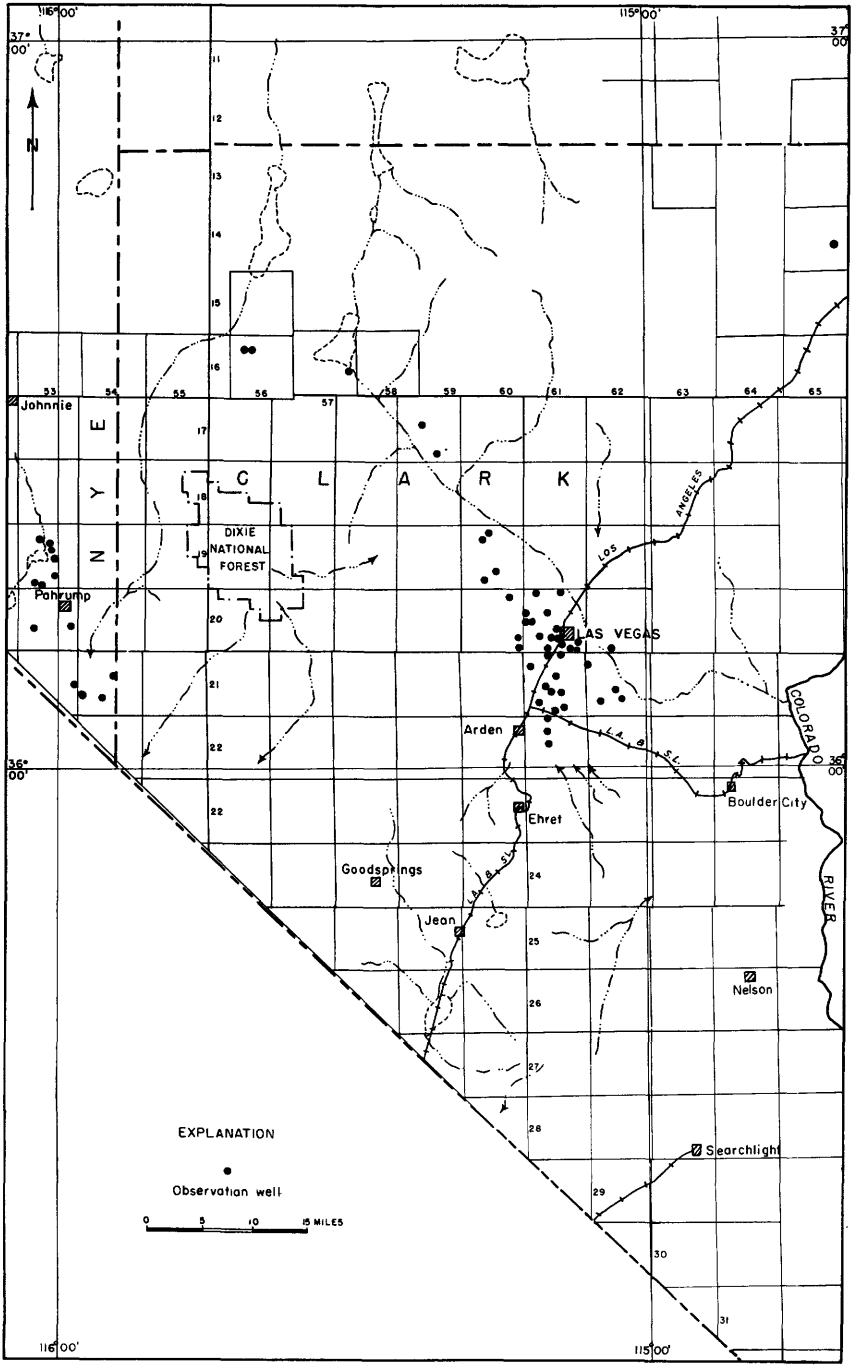


Figure 68. --Location of observation wells in Clark and Nye Counties, Nev., 1955.

in the Las Vegas Valley is in excess of the safe yield; water levels will continue to decline as long as the present high rate of withdrawals is maintained. In Pahrump Valley, Clark and Nye Counties, water levels in 1955 were lower than in 1954. In the heavily pumped areas water levels were, locally, as much as 4 feet below those of 1954. Water levels probably will continue to decline in Pahrump Valley as long as the present rate of pumping is maintained.

Well-Numbering System

Wells are numbered in accordance with the Bureau of Land Management system of land subdivision, based on the Mount Diablo base and meridian network of surveys established by the General Land Office (now Bureau of Land Management). The first segment of a well number indicates the township. If the township is south of Mount Diablo base, the letter "S" appears before the township number. The second segment, separated from the township number by a slant, indicates the range east of Mount Diablo meridian. The third segment, separated from the range designation by a hyphen, is the section number. The lowercase letters--a, b, c, and d--after the section number locate the well within the section. The first letter denotes the 160-acre tract, the second, the 40-acre tract, and the third, the 10-acre tract. The letters are assigned in a counterclockwise direction, beginning in the northeast quarter. Where more than one well is in the same subdivision, consecutive numbers beginning with "1" are assigned. Thus, well number S10/60-4dab1 is used to designate the first well selected in the $NW\frac{1}{4}NE\frac{1}{4}SE\frac{1}{4}$ sec. 4, T. 10 S., R. 60 E. Similarly, well number 12/23-22ac3 is used to designate the third well recorded in the $SW\frac{1}{4}NE\frac{1}{4}$ sec. 22, T. 12 N., R. 23 E.

Well Descriptions and Water-Level Measurements

Water levels are in feet below land-surface datum unless otherwise indicated. When some measurements in a table are above and others below the plane of reference, a plus (+) or minus (-) sign is placed immediately before the first entry in each column. Readings that are between plus signs are above the plane of reference, and those between minus signs are below.

Churchill County

Fairview Valley

17/35-32dc1. U. S. Government. Drilled unused well, diameter 6 inches, depth 99 feet. Highest water level 45.75 below lsd, Oct. 27, 1955; lowest 60.38 below lsd, Jan. 26, 1955. Records available: 1946-47, 1951, 1955.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Dec. 12, 1946	57.74	Dec. 11, 1951	56.92	Feb. 18, 1955	55.59	Apr. 22, 1955	48.48
Apr. 15, 1947	57.57	Jan. 26, 1955	k60.38	Mar. 18	51.45	June 13	46.58
June 14	57.36	Feb. 1	58.82	Apr. 13	48.88	Oct. 27	45.75

k Affected by Dixie-Fairview earthquake of December 1954.

Westgate Valley

17/35-34cc1. U. S. Government. Drilled stock well, diameter 6 inches. Highest water level 24.27 below lsd, Dec. 11, 1951; lowest 34.05 below lsd, Oct. 27, 1955. Records available: 1951, 1955. Dec. 11, 1951, 24.27; Feb. 1, 1955, 30.35, affected by Dixie-Fairview earthquake, December 1954; Feb. 18, 30.56; Mar. 18, 31.00; Apr. 13, 31.19; June 13, 31.42; Oct. 27, 34.05.

Middle Gate Valley

17/35-36ad1. Angus Dangberg. Drilled unused well, diameter 8 inches, reported depth 502 feet, cased to 156. Highest water level 27 below lsd, February 1950; lowest 52.79 below lsd, Oct. 27, 1955. Records available: 1950-55. February 1950, 27.00, reported by driller; Feb. 1, 1955, 37.10, affected by Dixie-Fairview earthquake, December 1954; Feb. 18, 38.22; Mar. 18, 40.24; Apr. 22, 42.88; June 13, 46.29; Oct. 27, 52.79.

Clark County

Indian Spring Valley

S16/56-9bc1. Tim Harnedy. Drilled domestic and irrigation well in alluvium of Quaternary age. Highest water level 12.45 below lsd, Feb. 15, 1950; lowest 14.22 below lsd, Aug. 24, 1953. Records available: 1947-55. Feb. 12, 12.97.

S16/56-9bc2. Tim Harnedy. Drilled domestic and irrigation well in alluvium of Quaternary age, diameter 8 inches, depth 582 feet. Highest water level 2.75 below lsd, Feb. 15, 1950; lowest 6.70 below lsd, Aug. 5, 1949. Records available: 1946-51, 1955. Feb. 11, 3.23.

Las Vegas Valley

S16/57-24c1. U. S. Bureau of Land Management. Drilled unused well in alluvium of Quaternary age, diameter 4 inches, depth 151 feet. Highest water level 122.43 below lsd, Feb. 24, 1954; lowest 124.09 below lsd, Mar. 18, 1946. Records available: 1946-54. No measurement made in 1955.

S17/59-16bc1. U. S. Bureau of Land Management. Drilled stock well in alluvium of Quaternary age, diameter 6 inches, depth 300 feet. Highest water level 27.04 below lsd, Feb. 12, 1954; lowest 31.01 below lsd, Sept. 12, 1944. Records available: 1944-55. Jan. 13, 29.68; Apr. 4, 29.02; July 6, 28.10; Oct. 3, 29.03.

S17/59-34a1. Desert Game Refuge. Drilled unused well in alluvium of Quaternary age, diameter 12 inches, depth 150 feet. Highest water level 22.78 below lsd, Jan. 13, 1955; lowest 24.19 below lsd, Aug. 9, 1945. Records available: 1945-52, 1955. Jan. 13, 22.78; Apr. 4, 22.95; July 6, 23.43; Oct. 3, 23.17. Measurement resumed.

S19/60-4dab1. P. J. Goumond (State Engineer No. 450). Drilled irrigation artesian well, diameter 16 inches, depth 780 feet. Highest water level 30.40 above lsd, Apr. 5, 1946; lowest 4.78 below lsd, Oct. 3, 1955. Records available: 1946, 1948-55. July 6, 1.01; Oct. 3, 4.78.

S19/60-9bcc1. P. J. Goumond (State Engineer No. 427). Drilled unused artesian well, diameter 10 inches, depth 830 feet, cased to 140. Highest water level 43.65 below lsd, June 3, 1944; lowest 89.92 below lsd, Nov. 5, 1955. Records available: 1944-55.

Daily noon water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	82.38	81.27	.....	86.21	85.55	87.82	88.45	89.80	89.20	89.73	89.85	85.61
2	82.38	81.25	.....	85.95	85.57	87.90	87.45	89.83	88.62	89.29	89.68	85.66
3	82.44	81.30	.....	85.57	85.61	87.92	86.75	89.19	88.16	89.34	89.88	85.69
4	82.45	81.35	.....	86.57	86.20	87.93	86.80	89.73	89.10	88.70	89.91	85.65
5	82.38	81.14	.....	86.76	86.40	87.96	88.27	89.20	89.30	89.06	89.92	86.07
6	82.23	81.30	.....	85.75	86.44	88.00	88.60	88.92	89.31	89.51	87.90	85.43
7	82.25	81.24	.....	85.68	86.20	87.05	88.13	88.84	89.32	88.41	88.39	85.48
8	82.94	81.53	.....	86.68	86.48	87.58	87.95	88.70	89.34	88.22	89.14	85.20
9	82.26	81.07	.....	86.86	86.55	88.00	87.87	89.76	88.85	88.07	88.50	85.24
10	82.23	81.30	.....	86.17	86.62	88.22	87.50	89.64	88.30	87.95	89.20	85.31
11	82.19	81.12	.....	86.12	86.61	88.04	87.72	88.00	88.49	87.99	89.20	85.27
12	81.99	81.01	.....	87.12	87.55	88.09	87.83	87.60	89.17	88.04	89.38	85.58
13	81.98	81.02	.....	87.11	86.71	88.06	88.99	86.95	88.32	87.95	88.62	85.81
14	81.94	80.96	.....	87.23	86.70	86.96	88.47	87.48	88.23	88.10	88.56	85.96
15	81.79	80.87	83.77	87.20	86.88	86.90	88.20	87.19	88.08	88.53	88.38	85.93
16	82.33	80.84	83.26	86.56	86.84	86.20	89.17	87.32	88.06	88.96	88.10	85.88
17	81.97	80.72	83.08	86.66	87.79	87.87	89.33	87.40	88.06	89.17	88.00	85.94
18	81.76	.....	83.62	86.75	87.49	88.07	88.26	87.38	88.05	89.34	88.08	86.00
19	81.71	.....	84.01	85.60	87.53	88.19	88.36	87.33	87.48	88.95	87.85	86.09
20	81.76	.....	84.36	85.59	87.53	88.27	89.02	87.25	87.66	89.35	87.87	86.79
21	81.70	.....	83.94	85.54	87.60	88.32	88.34	87.39	87.35	.....	86.62	86.92
22	81.67	.....	83.47	85.56	87.73	88.50	88.87	87.30	87.71	.....	86.63	86.89
23	81.60	.....	83.47	85.59	87.81	88.43	89.30	87.01	87.66	.....	86.42	85.80
24	81.55	.....	83.93	85.43	87.75	88.52	88.35	87.89	87.67	.....	86.44	87.23
25	81.47	.....	85.02	85.41	87.83	86.49	89.20	88.31	87.68	.....	86.27	86.43
26	81.57	.....	85.49	84.75	87.82	86.77	88.52	88.55	86.50	89.59	86.17	87.00
27	.....	.....	85.71	84.95	85.82	87.02	89.47	88.69	87.33	89.83	86.07	86.21
28	81.68	.....	85.05	86.19	86.10	88.07	89.56	88.20	88.38	89.79	85.96	86.30
29	81.46	.	84.90	85.72	86.18	88.19	89.01	87.87	88.66	89.79	86.59	86.29
30	81.31		85.78	85.58	87.18	88.36	89.49	88.89	88.90	89.67	85.88	86.30
31	81.34		86.20		87.41		89.68	89.10		89.58		86.23

S19/60-27bdc1. U. S. Geol. Survey (State Engineer No. 554). Drilled observation artesian well, diameter 5 inches, depth 905 feet, cased to 84. Land-surface datum is 2,360.8 feet above msl. Highest water level 46.9 above lsd, June 3, 1946; lowest 3.2 above lsd, Aug. 4, 1955. Records available: 1946-55.

Daily noon water level, above lsd, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	8.7	9.5	9.1	6.9	6.8	5.1	4.3	3.8	4.2	4.5	4.5	5.5
2	8.7	9.6	9.3	6.8	6.6	4.8	4.4	3.7	4.1	4.1	4.5	5.5
3	8.6	9.6	8.8	6.7	6.8	4.8	4.7	3.3	4.3	3.9	4.4	5.5
4	8.6	9.5	8.8	6.6	6.8	4.8	5.2	3.2	3.9	3.7	4.1	5.5
5	8.7	9.4	9.0	6.3	6.8	4.9	5.4	3.3	3.6	3.8	4.0	5.5

S19/60-27bdc1--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
6	8.7	9.2	8.9	7.0	6.8	4.9	4.7	3.7	3.5	3.6	4.1	5.5
7	8.7	9.0	9.0	7.2	6.7	4.3	4.3	3.8	3.4	3.9	4.1	5.6
8	8.9	9.2	9.5	7.2	5.8	5.2	4.6	4.3	3.3	3.9	4.1	5.5
9	8.9	9.6	9.2	6.8	6.0	5.5	4.7	4.2	3.4	4.0	4.5	5.5
10	8.9	9.0	9.5	6.3	6.3	5.4	5.0	4.4	3.6	4.1	4.9	5.5
11	8.9	8.7	9.5	5.8	6.4	5.4	4.8	4.5	3.7	4.4	5.1	5.5
12	9.2	9.2	9.6	6.3	6.4	5.3	5.1	4.8	3.8	4.5	4.8	5.6
13	9.2	8.7	9.2	6.4	6.4	5.2	5.1	4.8	3.8	4.6	4.6	5.8
14	9.2	8.7	9.1	6.4	6.3	5.2	4.6	4.9	3.7	5.0	4.3	5.6
15	9.3	9.2	8.3	6.3	6.2	5.5	4.4	5.1	3.8	5.0	4.4	5.7
16	9.1	9.0	8.2	6.4	6.2	5.4	4.5	5.3	3.7	4.7	4.1	5.7
17	...	9.0	8.3	6.5	6.0	5.2	4.5	5.2	3.7	4.5	4.8	5.7
18	9.2	9.2	8.8	6.4	5.9	4.8	4.4	5.3	3.7	4.3	5.0	5.6
19	9.2	9.0	8.8	6.5	6.1	4.9	4.4	5.3	3.9	4.4	5.0	5.5
20	9.2	8.7	7.4	6.6	6.3	5.1	4.4	5.4	3.8	4.3	4.8	5.6
21	9.2	8.9	7.8	6.6	5.4	5.2	4.3	5.5	3.9	4.1	4.6	5.6
22	9.3	9.2	8.2	6.5	5.3	4.8	4.3	5.2	3.9	4.1	4.7	5.7
23	9.3	8.3	8.3	6.8	5.1	4.7	4.3	5.0	3.8	4.0	4.9	...
24	9.3	8.8	8.3	6.8	4.8	4.6	4.3	5.1	3.8	4.1	5.4	5.7
25	9.3	9.2	8.2	6.8	4.8	4.4	4.3	5.0	3.8	4.4	5.5	5.6
26	9.2	8.8	8.0	6.5	5.4	4.5	4.3	5.0	3.9	4.5	5.5	5.6
27	9.4	8.8	7.3	6.8	5.7	4.4	4.1	5.1	4.1	4.4	5.5	5.7
28	9.3	8.8	7.3	7.0	5.9	4.3	4.2	4.8	4.5	4.4	5.3	5.7
29	9.4		6.9	6.9	5.8	4.3	4.2	4.7	4.3	4.5	6.0	5.5
30	9.4		7.3	6.8	5.8	4.3	3.9	4.6	4.2	4.5	6.1	...
31	9.2		7.3		5.3		...	4.3		4.6		...

S19/60-33baa1. U. S. Geol. Survey (State Engineer No. 555). Drilled observation artesian well, diameter 8 inches, depth 1,008 feet, cased to 93. Land-surface datum is 2,406.6 feet above msl. Highest water level 28.80 above lsd, Oct. 17, 1946; lowest 17.62 below lsd, Nov. 4-5, 1955. Records available: 1946-55.

Daily noon water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	11.74	.....	11.50	14.43	14.46	15.71	16.37	17.24	16.95	16.98	17.28	15.19
2	11.70	.....	11.40	14.66	14.47	16.02	16.14	17.29	16.97	17.41	17.49	15.20
3	11.73	.....	11.53	14.69	14.54	16.11	15.90	17.47	16.78	17.50	17.53	15.29
4	11.77	.....	11.51	14.52	14.47	16.12	15.40	17.41	17.04	17.54	17.62	15.27
5	11.74	.....	11.58	14.65	14.62	16.02	15.30	17.41	17.28	17.58	17.62	15.20
6	11.58	.....	11.82	.....	14.72	15.74	16.12	17.09	17.42	17.74	17.61	15.03
7	11.53	.....	11.68	14.64	14.67	15.96	16.47	16.96	17.51	17.58	17.36	15.07
8	11.50	.....	11.59	14.50	14.79	15.79	16.23	16.55	17.56	17.35	17.36	15.13
9	11.56	.....	11.46	14.69	14.84	15.59	15.82	16.77	17.37	17.23	17.22	15.11
10	11.42	.....	11.43	.....	14.92	15.56	15.92	16.66	17.29	17.13	16.97	15.10
11	11.51	.....	11.42	.....	14.69	15.66	15.86	16.68	17.20	16.81	16.81	15.03
12	11.54	.....	11.64	14.73	14.74	15.66	16.07	16.28	17.17	16.82	16.96	14.93
13	11.37	.....	11.83	14.69	14.76	15.61	16.43	16.20	17.15	16.75	17.07	14.91
14	11.30	.....	12.00	14.70	14.73	15.45	16.42	16.02	17.08	16.41	16.83	15.00
15	11.28	11.62	12.38	14.76	14.95	15.38	16.44	15.82	16.94	16.34	16.69	15.04
16	11.10	11.59	12.48	14.70	14.96	15.44	16.48	15.73	16.94	16.73	16.70	14.94
17	11.38	11.46	12.57	14.56	15.04	15.72	16.43	15.68	16.87	16.92	16.49	14.95
18	11.28	11.58	12.60	14.48	15.20	16.06	16.36	15.65	16.76	17.07	16.60	15.00
19	11.21	11.74	12.60	14.53	15.14	16.04	.....	15.62	16.52	17.12	16.48	15.19
20	11.30	11.71	12.99	14.34	15.16	15.98	.....	15.56	16.63	17.20	16.21	15.10
21	11.26	11.70	13.25	14.30	15.62	15.96	.....	15.49	16.69	17.34	15.97	15.15
22	11.29	11.70	13.14	14.35	15.84	16.19	.....	15.70	16.72	17.46	16.05	15.10
23	11.20	11.73	13.05	14.38	15.96	16.09	.....	15.70	16.71	17.59	15.94	14.91
24	11.14	11.63	13.06	14.29	15.96	16.14	.....	15.65	16.68	17.50	15.95	15.13
25	11.15	11.45	13.17	14.24	15.97	16.12	.....	15.85	16.56	17.33	15.89	15.20
26	11.20	11.49	13.44	14.24	15.60	15.87	.....	15.99	16.44	17.22	15.73	15.14
27	11.17	11.48	13.89	14.17	15.25	15.96	16.76	16.12	16.35	17.35	15.61	15.00
28	11.21	11.55	14.06	14.24	14.95	16.09	16.83	16.44	16.33	17.48	15.51	15.06
29	11.13		13.87	14.36	14.92	16.34	16.90	16.48	16.57	17.42	15.34	15.20
30	11.11		14.14	14.47	15.03	16.32	16.73	16.63	16.69	17.36	15.39	15.40
31	11.11		14.49		15.42		17.00	17.00		17.16		15.33

S20/60-2ddd1. Arthur E. Gray (State Engineer No. 553). Drilled unused artesian well, diameter 10 inches, depth 707 feet, 10-inch casing 0-92, 8-inch casing 0-700. Highest water level 59.58 below lsd, Apr. 21, 1947; lowest 89.15 below lsd, Oct. 1, 1955. Records available: 1947-55. Jan. 3, 84.02; Mar. 31, 84.34; July 5, 83.72; Oct. 1, 89.15.

S20/60-25adb1. Jones (State Engineer No. 602). Drilled irrigation and domestic artesian well, diameter 10 inches, depth 438 feet, 8-inch casing 0-318, 6-inch casing 318-430. Highest water level 30.81 below lsd, July 31, 1948; lowest 57.91 below lsd, Sept. 14, 1955. Records available: 1948-55.

Daily noon water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	46.05	45.35	45.63	.....	48.98	51.68	54.86	55.60	56.52	55.29	53.98	51.71
2	45.91	44.98	45.02	.....	49.30	52.30	55.07	55.94	56.98	54.96	54.34	51.70
3	45.44	44.91	44.97	.....	49.49	52.80	54.37	56.30	56.68	55.10	53.62	51.74
4	46.04	44.90	45.18	.....	49.45	53.20	54.67	55.44	56.38	55.16	53.59	51.73
5	46.10	44.60	45.29	.....	49.90	53.10	54.81	55.08	57.02	55.11	53.44	.....
6	45.82	44.84	45.48	47.54	50.50	53.08	55.57	54.38	57.27	55.24	53.52	51.45
7	45.72	44.89	45.60	47.59	49.96	53.48	55.33	55.25	56.80	55.55	53.52	51.68
8	45.44	45.52	45.81	47.94	49.85	53.40	55.42	55.56	57.24	54.26	53.77	51.60
9	45.28	45.14	45.74	47.96	50.00	53.76	55.06	56.51	57.36	54.15	53.58	51.40
10	45.53	45.36	45.77	47.37	50.48	54.40	55.10	55.39	57.71	54.00	53.77	51.82
11	45.58	44.94	45.96	47.44	50.78	54.34	55.70	56.30	57.00	54.25	53.24	51.43
12	45.23	44.88	45.98	48.10	50.56	54.60	56.16	55.94	57.10	54.48	53.32	51.36
13	45.34	44.80	46.06	48.20	50.40	53.96	56.43	54.76	57.60	54.46	53.18	51.37
14	45.35	45.22	46.11	48.53	50.16	52.00	55.93	54.20	57.91	54.97	52.84	51.20
15	45.06	46.08	46.67	48.18	49.82	51.53	56.17	54.95	57.69	54.67	52.98	51.20
16	45.28	45.84	46.15	48.51	50.52	52.08	55.96	55.93	57.65	54.90	52.84	50.92
17	45.03	45.42	45.94	47.96	50.46	52.70	56.18	55.62	57.71	54.85	52.58	50.90
18	45.27	45.20	46.23	48.12	50.73	52.66	56.01	55.80	57.30	54.93	62.86	50.84
19	45.02	45.05	46.40	58.68	51.35	52.66	56.46	55.78	57.37	54.10	52.69	50.96
20	45.32	.....	46.68	49.00	51.72	53.42	56.31	55.70	57.27	54.46	52.47	51.22
21	45.14	.....	.....	48.98	51.50	53.64	56.54	55.46	56.98	54.58	52.19	51.04
22	45.27	44.95	46.80	48.26	51.50	53.46	56.35	56.39	57.23	54.50	52.48	50.73
23	45.10	44.86	46.78	48.26	52.10	53.18	56.52	56.68	57.44	54.37	52.45	50.60
24	45.12	44.94	46.69	48.45	52.10	54.03	55.00	55.88	56.91	54.61	52.50	50.76
25	45.20	44.73	46.77	48.84	51.72	53.70	53.91	55.73	56.31	54.34	52.26	50.76
26	45.09	44.82	46.30	48.53	52.24	53.80	54.08	56.05	56.50	54.08	52.23	50.51
27	45.08	44.64	46.25	48.77	52.30	53.91	54.74	56.18	56.28	54.40	52.12	50.40
28	45.01	44.64	46.35	49.16	52.40	53.76	55.54	55.43	56.21	54.47	52.07	50.56
29	45.15		47.55	49.72	52.04	54.55	55.85	56.30	55.74	54.18	52.03	50.58
30	44.66		46.98	49.37	52.00	54.47	55.70	56.80	55.60	53.76	52.06	50.72
31	44.83		.....		51.62		56.05	56.40		54.00		50.49

S20/60-36dbb1. M. D. Kidder (State Engineer No. 18). Drilled artesian well, diameter 8 inches, depth 385 feet, 8-inch casing 9-262, 6-inch casing 262-345, 4-inch casing 345-381. Land-surface datum is 2,228 feet above msl. Highest water level 3.00 below lsd, summer 1925; lowest 70.60 below lsd, June 21, 1954. Records available: 1925, 1927, 1931-32, 1935-36, 1938-41, 1945-54. No measurement made in 1955.

S20/61-3acc1. Frank Allen (State Engineer No. 316). Drilled unused artesian well, diameter 8 inches, depth 300 feet. Highest water level 15.30 below lsd, Apr. 25, 1946; lowest 68.13 below lsd, Oct. 1, 1955. Records available: 1944-55. Jan. 3, 54.35; Mar. 31, 53.80; July 5, 65.35; Oct. 1, 68.13.

S20/61-5b1. M. Armstrong. Drilled irrigation and domestic well, diameter 10 inches, depth 267 feet. Highest water level 38.96 below lsd, Feb. 28, 1945; lowest 49.85 below lsd, Aug. 25, 1954. Records available: 1944-55. Jan. 3, 47.83; Mar. 31, 45.96; July 5, 46.58; Oct. 1, 46.83.

S20/61-16bdb1. J. R. Atwater (State Engineer No. 208). Drilled irrigation and domestic artesian well, diameter 8 inches, depth 386 feet. Highest water level 1.18 above lsd, Mar. 29, 1945; lowest 30.54 below lsd, Sept. 30, 1955. Records available: 1944-55. Jan. 4, 26.25; Mar. 31, 27.15; Sept. 30, 30.54.

S20/61-18bcc1. Sky Haven Airport (State Engineer No. 505). At southeast corner of hangar. Drilled irrigation and domestic artesian well, diameter 6 inches, depth 412 feet. Highest water level 1.84 below lsd, Jan. 23, 1945; lowest 41.06 below lsd, Sept. 30, 1955. Records available: 1944-52, 1955. Jan. 3, 31.37; Mar. 31, 34.06; July 5, 37.21; Sept. 30, 41.06. Measurement resumed.

S20/61-19abd1. Splane Estate (State Engineer No. 5). Drilled domestic and irrigation well, diameter 10 inches, depth 260 feet. Land-surface datum is 2,175.5 feet above msl. Highest water level 24.8 above lsd, Jan. 18, 1942; lowest 19.74 below lsd, Sept. 30, 1955. Records available: 1939-55. Jan. 3, 11.20; Mar. 31, 12.69; July 5, 18.82; Sept. 30, 19.74.

S20/61-22cbc1. Jack Moore and C. E. Bell (State Engineer No. 461). Drilled unused artesian well, diameter 8 inches, depth 385 feet, cased to 75. Highest water level 3.92 below lsd, Apr. 28, 1945; lowest 20.99 below lsd, Sept. 30, 1955. Records available: 1944-55. Jan. 4, 14.08; Mar. 31, 13.62; July 6, 20.58; Sept. 30, 20.99.

S20/61-27cbc1. Clyde Caskey (State Engineer No. 336). Drilled unused well, diameter 6 inches, depth 283 feet. Highest water level 5.60 below lsd, Feb. 26, 1946; lowest 26.52 below lsd, July 6, 1955. Records available: 1944-55. Jan. 4, 16.29; Mar. 31, 18.56; July 6, 26.52.

S20/61-28dac1. J. A. Haggard (State Engineer No. 199). Drilled domestic and irrigation well, diameter 6 inches, depth 805 feet. Land-surface datum is 2,044 feet above msl. Highest water level 57.3 above lsd, Jan. 18, 1942; lowest 1.25 above lsd, July 6, 1955. Records available: 1940-55. Jan. 4, +13.6; Mar. 31, +10.5; July 6, +1.25; Sept. 30, +3.1.

S20/61-28dac4. J. A. Haggard. Drilled unused artesian well, diameter 8 inches, reported depth 368 feet. Land-surface datum is 2,044 feet above msl. Highest water level 21.8 above lsd, Jan. 24, 1943, Jan. 17, 1944; lowest 2.6 above lsd, Sept. 28, 1953. Records available: 1940-54. No measurement made in 1955.

S20/61-29dbb1. John Papus (State Engineer No. 380). Drilled unused artesian well, diameter 8 to 6 inches, depth 475 feet, 8-inch casing to 400, 6-inch casing to 475. Land-surface datum is 2,094 feet above msl. Highest water level 36.8 above lsd, Jan. 28, 1946; lowest 9.6 above lsd, July 5, 1955. Records available: 1943-55. Jan. 4, +20.6; Mar. 31, +19.6; July 5, +9.6; Sept. 30, +16.6.

S20/61-33ccd1. Clark County Hospital (State Engineer No. 202). Drilled unused artesian well, diameter 8 inches, depth 386 feet. Highest water level 30.3 above lsd, Feb. 20, 1950; lowest 5.55 above lsd, Sept. 2, 1954. Records available: 1950-55. Jan. 4, +25.1; Mar. 31, +18.8; July 5, +5.6; Sept. 30, +6.2.

S20/61-34adc1. S. W. Craner (State Engineer No. 47). Drilled domestic and irrigation artesian well, diameter 8 inches, depth 354 feet, cased to 178. Highest water level 41.4 above lsd, Dec. 21, 1940; lowest 9.5 above lsd, July 6, 1955. Records available: 1939-55. July 6, +9.5.

S20/61-35ddc2. Estella Beam (State Engineer No. 368). Drilled unused artesian well, diameter 8 to 6 inches, depth 418 feet, 8-inch casing to 81, 6-inch casing to 310. Highest water level 38.4 above lsd, Feb. 16, 1951; lowest 11.7 above lsd, Sept. 18, 21, 1953. Records available: 1945-55.

Daily noon water level, above lsd, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	31.9	34.5	34.7	35.2	33.4	28.5	25.7	22.8	22.9	22.3	22.8	23.5
2	32.0	34.5	35.0	35.2	....	28.2	25.7	22.8	22.8	22.6	22.9	23.5
3	31.9	34.7	34.9	35.1	....	28.7	25.6	22.8	22.8	22.6	23.0	23.4
4	31.9	34.9	34.7	35.0	32.4	28.2	25.6	22.8	22.7	22.6	22.9	23.4
5	32.0	34.9	34.7	....	33.2	28.5	25.6	23.0	....	22.6	22.8	23.6
6	32.0	34.9	34.7	35.2	32.9	28.2	25.3	23.0	....	22.3	22.8	23.6
7	32.0	34.9	34.7	34.9	32.7	28.1	25.2	23.2	22.3	22.4	22.7	23.6
8	32.1	34.5	34.8	35.0	32.3	27.7	24.9	23.2	22.4	22.2	22.7	23.6
9	32.0	35.0	34.8	35.0	32.3	27.6	25.2	23.2	22.4	22.3	22.8	23.7
10	32.0	34.9	34.9	35.0	32.2	27.5	24.8	23.3	22.4	22.6	22.8	23.7
11	33.4	34.9	34.7	35.0	32.2	27.0	24.8	23.3	22.2	22.6	22.9	23.7
12	33.2	35.0	....	34.7	31.9	26.9	24.7	23.2	22.1	22.6	22.7	23.7
13	33.4	35.0	....	34.7	31.5	....	24.5	23.1	22.1	22.7	22.7	23.7
14	33.4	35.0	....	34.8	31.7	....	24.4	23.2	22.1	22.7	22.7	23.9
15	33.4	35.0	34.7	34.8	31.2	....	24.2	23.4	22.1	22.6	22.7	23.8
16	33.6	34.9	34.7	34.9	31.2	....	24.2	23.5	22.1	22.6	22.8	23.9
17	33.4	35.0	34.7	34.7	30.8	....	24.1	23.5	22.1	22.6	22.9	23.8
18	33.4	34.7	34.7	34.5	30.9	....	24.0	23.3	22.1	22.6	22.8	23.9
19	33.7	34.7	34.7	33.8	30.7	....	23.8	23.2	22.2	22.4	22.9	23.9
20	33.6	34.7	34.7	34.6	30.7	....	23.7	23.2	....	22.4	23.1	23.8
21	33.9	34.4	34.7	34.5	30.7	....	23.6	23.1	22.3	22.5	23.1	24.0
22	34.0	34.7	34.8	33.7	30.6	26.7	23.4	23.2	22.3	22.5	23.2	23.9
23	34.0	34.8	34.9	34.0	29.8	26.9	23.4	23.1	22.5	22.6	23.3	24.2
24	....	35.2	35.0	33.8	29.4	26.7	23.2	22.9	22.6	22.6	23.4	24.2
25	34.5	34.9	34.9	34.5	29.7	26.6	23.2	22.8	22.6	22.7	23.4	24.2

S20/61-35ddc2--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	34.2	34.8	34.9	33.9	28.7	26.4	23.6	22.9	22.7	22.9	23.6	24.2
27	34.2	34.9	35.0	33.6	29.2	26.3	23.6	....	22.8	22.8	23.4	24.5
28	34.0	34.9	35.2	33.7	29.2	26.2	23.5	....	23.1	22.8	23.4	24.3
29	34.2		34.7	33.7	29.1	25.9	23.2	....	23.2	22.8	23.6	24.3
30	34.4		35.2	33.5	28.8	25.8	23.1	....	22.3	22.8	23.5	23.5
31	34.4		35.2		....		22.8	23.1		22.8		23.5

S20/61-36bbb1. A. C. Delkin (State Engineer No. 393). Drilled domestic and irrigation well, diameter 8 inches, depth 325 feet, cased to 300. Highest water level 37.3 above lsd, Jan. 26, 1945; lowest 2.6 above lsd, Sept. 30, 1955. Records available: 1944-55. Jan. 4, +18.1; Mar. 31, +13.1; July 6, +5.9; Sept. 30, +2.6.

S20/62-33ccc1. U. S. Geol. Survey. Drilled test and observation water-table well, diameter 1 inch, depth 42 feet, cased to 42. Highest water level 13.67 below lsd, Mar. 31, 1955; lowest 25.32 below lsd, Dec. 28, 1945. Records available: 1945-55. Jan. 4, 14.48; Mar. 31, 13.67; July 6, 14.50; Oct. 4, 14.07.

S21/61-3abb2. W. S. Park (State Engineer No. 238). Drilled domestic and irrigation artesian well, diameter 4 inches, depth 807 feet. Highest water level 40.4 above lsd, Mar. 6, 1944; lowest 4.8 above lsd, Aug. 21, 1953. Records available: 1944-55. Jan. 4, +37.9; Mar. 30, +18.8; July 5, +8.7; Sept. 30, +15.5.

S21/61-4aad1. Opaco Lumber Co. (State Engineer No. 386). Drilled unused artesian well, diameter 10 inches, depth 793 feet, cased to 770, perforations 338-438, 642-770. Highest water level 46.5 above lsd, Feb. 19, 1948, Feb. 21, 1952; lowest 10.75 above lsd, July 5, 1955. Records available: 1944-55. Jan. 4, +30.02; Mar. 31, +26.2; July 5, +10.75; Sept. 30, +11.4.

S21/61-7acc2. Kimball & Williams (State Engineer No. 155). Drilled domestic and irrigation artesian well, diameter 6 inches, depth 355 feet. Land-surface datum is 2,179.4 feet above msl. Highest water level 20.6 above lsd, Jan. 24, 1943; lowest 27.57 below lsd, Sept. 30, 1955. Records available: 1940-55. Jan. 4, 17.86; Mar. 31, 18.83; July 5, 24.52; Sept. 30, 27.57.

S21/61-15bbb1. T. T. Schofield. Dug domestic and irrigation water-table well, diameter 5 feet, depth 9 feet. Highest water level 2.30 below lsd, Jan. 5, 1955; lowest 7.94 below lsd, Sept. 16, 1945. Records available: 1945-55. Jan. 5, 2.30; Mar. 30, 3.48; July 5, 4.22; Oct. 4, 3.35.

S21/61-21bbb1. Moe Sedway (State Engineer No. 123). Drilled domestic and irrigation artesian well, diameter 6 inches, depth 850 feet, cased to 600. Highest water level 61.1 above lsd, Dec. 20, 1942; lowest 21.10 below lsd, Sept. 29, 1955. Records available: 1940-55. Jan. 5, +0.10; Mar. 30, -4.03; July 5, -19.49; Sept. 29, -21.10.

21/61-21dcd1. W. N. Connell. Dug unused water-table well, diameter 5 feet, depth 24 feet. Highest water level 19.00 below lsd, Mar. 9, 1945; lowest dry at 21.75, June 19, 1953. Records available: 1944-53. Measurement discontinued.

S21/61-22ccc1. A. P. Baker (State Engineer No. 117). Drilled unused artesian well, diameter 6 inches, depth 500 feet. Land-surface datum is 2,070.8 feet above msl. Highest water level 35.7 above lsd, Dec. 20, 1942; lowest 5.93 below lsd, Aug. 27, 1954. Records available: 1940-55. Jan. 5, +8.6; Mar. 30, +7.1; July 5, -2.21; Sept. 29, -2.49.

S21/61-29dda1. F. M. Ferguson (State Engineer No. 93). Drilled unused artesian well, diameter 6 inches, depth 260 feet. Highest water level 2.75 above lsd, Feb. 24, 1945; lowest 12.63 below lsd, Aug. 23, 1954. Records available: 1944-46, 1950-55. Jan. 5, 10.80; Mar. 30, 11.47.

S21/61-33bac1. Clark County Airport (State Engineer No. 39). Drilled unused artesian well, diameter 6 inches, depth 222 feet. Land-surface datum is 2,189.8 feet above msl. Highest water level 2.80 above lsd, Feb. 18, 1939; lowest 13.67 below lsd, Sept. 29, 1955. Records available: 1938-55. Jan. 5, 9.68; Mar. 30, 11.40; July 5, 13.49; Sept. 29, 13.67.

S21/61-36adc2. U. S. Geol. Survey. Drilled test and observation water-table well, diameter $1\frac{1}{2}$ inches, depth 20 feet. Highest water level 9.79 below lsd, May 6, 1949; lowest 14.00 below lsd, Sept. 11, 1954. Records available: 1946-55. Jan. 6, 12.27; Mar. 30, 12.61; July 5, 11.83; Oct. 4, 12.72.

S21/62-7bac2. S. Barbee (State Engineer No. 286). Drilled domestic and irrigation artesian well, diameter 8 inches, depth 225 feet. Highest water level 4.20 above lsd, Feb. 26, 1949; lowest 8.13 below lsd, Aug. 26, 1954. Records available: 1945-54. No measurement made in 1955.

S21/62-21cbc2. L. E. Billman (State Engineer No. 430). Drilled unused artesian well, diameter 8 inches, depth 500 feet. Highest water level 61.2 above lsd, Dec. 22, 1944; lowest 4.45 below lsd, July 6, 1955. Records available: 1944-55. Jan. 6, +20.8; Apr. 4, +9.6; July 6, -4.45.

S21/62-27aad1. U. S. Geol. Survey. Drilled test and observation water-table well, diameter 3 inches, depth 12 feet. Highest water level 4.14 below lsd, May 13, 1952, May 5, 1954; lowest 5.05 below lsd, Aug. 19, 1947. Records available: 1945-54. No measurement made in 1955.

S21/62-29ccc1. J. R. Bond (State Engineer No. 134). Drilled domestic and irrigation artesian well, diameter 6 inches, depth 404 feet. Highest water level 19.8 above lsd, May 7, 1954; lowest 2.70 above lsd, Aug. 15, 1947. Records available: 1944-55. Mar. 30, +14.7; July 5, +18.1.

S22/61-4bcc1. Fitzpatrick (State Engineer No. 41). Drilled unused well, diameter 8 inches, depth 355 feet. Highest water level 74.4 below lsd, Jan.25, 1939; lowest 91.03 below lsd, Sept. 12, 1955. Records available: 1938-55.

Daily noon water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	87.37	87.00	87.37	88.09	89.54	89.40	90.69	90.57	90.62	90.28	.....	89.12
2	87.30	86.96	.....	88.12	89.62	89.37	90.41	90.31	90.58	90.18	90.06	89.14
3	87.29	87.02	.....	88.16	89.62	89.27	90.30	90.40	90.44	90.18	89.98	89.14
4	87.24	87.10	.....	88.42	89.71	89.14	90.38	90.76	90.49	90.12	89.92	89.10
5	87.22	87.01	.....	88.57	89.76	89.56	90.26	90.56	90.39	90.18	89.96	89.06
6	87.09	87.09	.....	89.04	89.73	89.64	90.22	90.31	90.54	90.23	89.99	88.97
7	87.08	87.15	.....	89.12	89.69	89.74	90.35	90.51	90.68	90.14	89.98	89.12
8	87.06	87.13	87.21	89.26	89.66	89.88	90.41	90.59	90.57	90.11	89.86	89.18
9	87.07	87.07	87.21	89.07	89.69	90.16	90.41	90.79	90.71	90.18	89.74	89.07
10	86.99	87.29	87.27	88.76	89.60	90.08	90.40	90.46	90.84	90.14	89.67	89.17
11	87.09	87.22	87.36	88.60	89.68	90.18	90.47	90.48	90.99	90.15	89.60	89.19
12	87.11	87.11	87.39	88.49	89.68	90.20	90.62	90.35	91.03	90.25	89.74	89.10
13	86.98	87.16	87.52	88.42	89.60	90.48	90.72	90.30	90.62	90.27	89.72	89.08
14	86.95	87.26	87.44	88.47	89.46	90.26	90.84	90.25	90.76	90.25	89.62	89.14
15	86.95	87.15	87.52	88.54	89.71	90.18	90.44	90.27	90.68	90.30	89.65	89.13
16	86.83	87.14	87.44	88.54	90.05	90.19	90.48	90.18	90.43	90.52	89.61	88.94
17	87.01	87.08	87.42	88.54	89.73	90.53	90.43	90.18	90.36	90.57	89.44	88.90
18	86.94	87.22	87.46	88.95	89.74	90.62	90.91	90.07	90.32	90.52	89.57	88.89
19	86.92	87.24	87.38	89.26	89.84	90.44	90.59	90.24	90.33	90.41	89.49	88.92
20	87.02	87.23	87.46	89.37	90.09	90.42	90.62	90.39	90.44	90.41	89.37	88.97
21	87.04	87.26	87.54	89.45	89.57	90.71	90.44	90.22	90.54	90.62	89.26	88.92
22	87.07	87.12	87.52	89.41	89.88	90.72	90.46	90.20	90.46	90.53	89.34	88.79
23	87.07	87.24	87.60	89.34	89.81	90.56	90.32	90.33	90.32	90.51	89.29	88.67
24	87.18	87.15	87.62	89.20	89.47	90.58	90.19	90.38	90.25	90.39	89.30	88.80
25	87.20	87.14	.....	88.99	89.25	90.48	90.34	90.33	90.26	90.49	89.24	88.89
26	87.34	87.20	.....	88.77	89.62	90.49	90.47	90.32	90.42	90.32	89.16	88.84
27	87.33	87.22	.....	88.78	89.76	90.66	90.53	90.37	90.38	90.45	89.16	88.73
28	87.19	87.33	.....	88.78	89.88	90.74	90.58	90.30	90.21	.....	89.24	88.80
29	87.11		87.84	89.01	89.76	90.89	90.47	90.42	90.27	.....	89.18	88.84
30	87.02		88.01	89.43	89.90	90.74	90.52	90.47	90.28	.....	89.17	88.86
31	87.01		88.20		89.42		90.73	90.52		.....		88.86

S22/61-9cbb1. Daisy Bell (State Engineer No. 42). Drilled unused water-table well, diameter 10 inches, depth 127 feet. Highest water level 92.62 below lsd, Jan. 24, 1945; lowest 101.55 below lsd, Sept. 29, 1955. Records available: 1944-55. Jan. 6, 100.86; Mar. 30, 101.08; July 5, 101.28; Sept. 29, 101.55.

S22/61-16ccc1. Dalton Buck. Drilled unused well, diameter 10 inches. Highest water level 83.63 below lsd, Sept. 22, 1944; lowest 90.13 below lsd, Aug. 27, 1954. Records available: 1944-55. Jan. 6, 90.08; Sept. 29, 89.80.

Pahrump Valley
[See also Nye County]

S21/54-10aac1. Bowman (State Engineer No. 22). Drilled unused well, diameter 14 inches, depth 800 feet, cased to 472, perforations 100-450. Highest water level 25.99 below lsd, Jan. 5, 1945; lowest 41.83 below lsd, Sept. 26, 1955. Records available: 1944-55.

Daily noon water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	36.06	35.25	.....	.....	39.82	.....	40.87	.....	41.14	41.50	40.36	.....
2	36.02	35.21	.....	.....	39.60	.....	40.89	41.18	.....	41.58	40.46	.....
3	.....	35.28	.....	.....	39.66	.....	40.92	41.05	.....	41.64	40.36	.....
4	36.16	35.33	.....	.....	39.67	.....	.....	41.19	.....	41.66	40.33	.....
5	36.06	35.43	.....	.....	.....	.....	.....	41.13	.....	41.65	40.29	.....
6	35.84	35.76	39.29	.....	.....	.....	.....	41.16	.....	41.78	40.25	.....
7	35.91	35.66	39.11	.....	.....	.....	.....	41.31	.....	41.67	.....	.....
8	35.89	35.56	39.19	.....	.....	.....	.....	41.25	.....	41.16	.....	.....
9	35.87	35.81	39.26	.....	39.62	.....	.....	41.11	.....	41.04	.....	.....
10	35.61	35.51	39.34	.....	39.81	.....	41.01	41.27	.....	.....	.....	.....
11	35.99	35.71	39.43	.....	39.80	.....	41.04	41.23	41.06	.....	.....	.....
12	.....	36.08	40.43	.....	39.55	.....	41.09	41.13	41.34	.....	.....	.....
13	.....	.....	38.63	.....	39.56	.....	41.06	41.23	41.28	41.06	.....	.....
14	35.61	.....	38.70	.....	39.19	40.83	41.03	41.33	41.26	40.89	39.97	.....
15	35.59	.....	38.92	.....	39.30	40.73	.....	41.21	41.30	40.82	40.10	.....
16	35.45	.....	38.82	.....	39.21	40.65	.....	41.16	41.38	40.84	40.15	.....
17	35.70	35.61	39.05	.....	39.68	40.76	.....	41.18	41.21	40.63	40.40	.....
18	35.43	35.78	39.05	.....	.....	40.80	.....	41.19	.....	40.80	40.62	.....
19	35.57	35.71	38.68	.....	.....	40.60	.....	41.14	.....	40.90	40.46	.....
20	35.67	35.70	37.95	.....	.....	.....	.....	41.13	.....	.....	40.37	.....
21	35.61	35.70	.....	.....	.....	.....	.....	.....	.....	.....	40.20	.....
22	.....	35.48	.....	.....	40.57	40.92	.....	.....	.....	.....	40.45	.....
23	.....	35.68	.....	.....	40.65	40.81	.....	.....	.....	.....	39.67	.....
24	.....	35.40	.....	.....	40.56	40.84	41.03	.....	.....	.....	.....	.....
25	.....	.....	.....	.....	40.64	40.60	41.06	41.30	.....	.....	39.65	.....
26	.....	.....	.....	.....	40.67	40.90	41.15	41.23	41.83	.....	39.60	.....
27	.....	.....	.....	39.50	40.72	41.02	41.00	41.10	41.68	.....	39.48	.....
28	.....	.....	.....	39.49	40.78	40.67	40.92	41.25	41.66	.....	.....	.....
29	.....		.....	39.57	40.31	40.82	41.06	41.26	41.65	.....	.....	.....
30	.....		.....	39.75	.....	40.80	41.06	41.22	41.49	40.28	.....	.....
31	35.30		.....		.....		41.06	41.24		40.19		.....

Muddy River Valley

S14/65-23ac2. V. V. Perkins. Drilled unused well, diameter 6 inches. Highest water level 0.82 below lsd, Feb. 15, 1955; lowest 7.27 below lsd, Sept. 23, 1948. Records available: 1948-53, 1955.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 15, 1948	5.77	Aug. 26, 1949	6.41	Mar. 28, 1951	3.61	Dec. 10, 1952	4.53
July 16	6.64	Sept. 21	5.71	June 6	4.48	Mar. 28, 1953	3.86
Aug. 11	7.04	Nov. 9	4.20	Sept. 13	6.62	July 18	6.18
Sept. 23	7.27	Mar. 21, 1950	2.95	Dec. 18	4.48	Sept. 19	6.16
Dec. 21	4.06	June 23	4.74	Mar. 30, 1952	2.59	Feb. 15, 1955	.82
Feb. 6, 1949	4.11	Sept. 12	6.07	Sept. 11	6.42	July 21	2.45
Apr. 20	3.32	Dec. 12	5.22	16	6.72	Dec. 8	.87
May 29	4.61						

Douglas County

Carson Valley

12/20-17ba1. John Helwinkel, Jr. Drilled irrigation water-table well in alluvium of Quaternary age, diameter 18 inches, depth 365 feet. Highest water level 8.82 below lsd, July 9, 1949; lowest 19.54 below lsd, Mar. 8, 1955. Records available: 1948-55. Mar. 8, 19.54; Sept. 27, 17.78.

13/20-8ca1. C. W. Godecke. Drilled irrigation well, diameter 18 to 12 inches, depth 300 feet. Highest water level flowing, Sept. 18, Dec. 23, 1952; lowest 6.36 below lsd, Sept. 27, 1954. Records available: 1942, 1948-52, 1954-55. Mar. 8, 1.38; Sept. 27, 3.65.

13/20-29aab1. H. F. Dangberg Co. Drilled irrigation artesian well, diameter 12 inches, reported depth 320 feet, reported plugged at 125. Highest water level 0.10 above lsd, May 11, 1948; lowest 4.04 below lsd, Aug. 15, 1950. Records available: 1948-55. Mar. 8, 2.14; Sept. 27, 2.39.

13/20-31bd1. H. Dangberg. Drilled irrigation water-table well in alluvium of Quaternary age, diameter 16 inches, depth 413 feet, cased to 400, perforations 60-400. Highest water level 2.12 below lsd, Dec. 19, 1950, Sept. 18, 1952; lowest 7.52 below lsd, Aug. 15, 1950. Records available: 1950-55. Mar. 8, 3.45; Sept. 27, 4.22.

13/20-32dc1. Mack Land & Cattle Co. Drilled irrigation water-table well in alluvium of Quaternary age, diameter 18 inches, reported depth 420 feet. Highest water level 7.83 below lsd, May 24, 1950; lowest 11.47 below lsd, Sept. 27, 1954. Records available: 1948-55. Mar. 8, 10.42; Sept. 27, 10.60.

14/19-25ba1. Carson Indian Agency. Drilled irrigation water-table well in alluvium of Quaternary age, diameter 12 inches, depth 239 feet. Highest water level 10.82 below lsd, Apr. 2, 1951; lowest 20.09 below lsd, Aug. 3, 1948. Records available: 1946, 1948-55. Apr. 6, 13.76.

Elko County

Clover Valley

34/63-21a1. Leslie Davis. Dug unused water-table well, diameter 9 feet, cribbed with concrete. Highest water level 12.06 below lsd, Sept. 15, 1954; lowest 12.58 below lsd, Aug. 25, 1948, Mar. 27, 1951. Records available: 1948-55. Measurement discontinued.

35/62-26b1. Lloyd Higley. Dug irrigation water-table well, size 6 by 7 feet, reported depth 10 feet, cribbed with wood. Highest water level 4.98 below lsd, Mar. 27, 1951; lowest 8.10 below lsd, Sept. 19, 1955. Records available: 1948-55. Sept. 19, 8.10.

35/62-27b1. U. S. Geol. Survey. Drilled test and observation well, diameter 6 inches, depth 286 feet, cased to 197. Highest water level 6.65 below lsd, Mar. 27, 1951; lowest 11.07 below lsd, May 3, 1955. Records available: 1949-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	9.74	May 3	11.07	July 12	9.56	Nov. 26	10.36
Mar. 9	9.70	June 1	9.57	Sept. 19	10.20	Dec. 27	10.22
28	9.75						

35/62-27b2. U. S. Geol. Survey. Adjacent to well 35/62-27b1. Drilled observation water-table well, diameter 1 inch, depth 15 feet. Highest water level 7.10 below lsd, Sept. 29, 1952; lowest 10.91 below lsd, May 3, 1955. Records available: 1949-55. Mar. 28, 9.13; May 3, 10.91; June 1, 9.15; July 12, 9.12; Nov. 26, 9.88; Dec. 27, 9.82.

Goshute-Antelope Valley

34/67-6a2. Western Pacific RR. Co. Shafter. Drilled industrial water-table well, diameter 16 inches, reported depth 250 feet. Highest water level 26.85 below lsd, Mar. 27, 1951; lowest 30.51 below lsd, Mar. 28, 1949. Records available: 1948-55. Mar. 10, 27.08; Sept. 20, 27.63.

Humboldt River Valley

[See also Humboldt, Lander, and Pershing Counties]

33/52-27d1. Carlin Town Government. Drilled unused water-table well, diameter 20 inches, depth 500 feet, cased to 125. Highest water level 2.77 below lsd, Feb. 20, 1951; lowest 8.88 below lsd, Jan. 20, 1955. Records available: 1938-55.

Jan. 20	8.88	Apr. 21	7.45	July 18	7.37	Oct. 19	7.69
Feb. 21	7.84	May 18	7.05	Aug. 19	7.39	Nov. 18	7.71
Mar. 19	7.75	June 18	7.15	Sept. 19	7.72	Dec. 19	7.52

33/53-20d2. C. E. Lee. Dug domestic water-table well, diameter 24 inches, depth 18 feet. Highest water level 10.60 below lsd, June 28, 1951; lowest 15.90 below lsd, Nov. 28, 1955. Records available: 1951-55.

Jan. 28	14.80	Apr. 28	13.80	July 28	13.50	Oct. 28	15.70
Feb. 28	14.20	May 28	13.60	Aug. 28	12.00	Nov. 28	15.90
Mar. 30	14.40	June 28	14.70	Sept. 28	13.90	Dec. 28	15.60

35/56-1b1. Moffat. Dug stock water-table well in alluvium of Quaternary age, diameter 36 inches, depth 10 feet. Highest water level 1.20 below lsd, July 1, 1944; lowest 7.80 below lsd, Jan. 28, 1948. Records available: 1944-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	3.90	Apr. 28	4.30	July 28	3.40	Oct. 28	5.20
Feb. 28	2.20	May 28	3.60	Aug. 28	5.60	Nov. 28	5.10
Mar. 30	2.20	June 28	4.40	Sept. 28	5.60	Dec. 28	5.10

35/56-30c1. Fernald. Dug unused water-table well, depth 20 feet. Highest water level 5.20 below lsd, May 28, 1950; lowest 17.00 below lsd, Sept. 28, 1954. Records available: 1938-55.

Mar. 30	16.10	June 28	13.80	Sept. 28	15.40	Nov. 28	15.30
Apr. 28	12.90	July 28	14.00	Oct. 28	14.30	Dec. 28	14.20
May 28	16.00	Aug. 28	16.00				

37/59-26a1. Deeth. Dug unused water-table well, diameter 4 feet, depth 14 feet. Highest water level 2.9 below lsd, May 28, 1952; lowest 10.8 below lsd, Mar. 30, Sept. 28, 1955. Records available: 1938-55.

Jan. 28	10.7	Apr. 28	6.6	July 28	7.0	Oct. 28	9.5
Feb. 28	10.5	May 28	6.6	Aug. 28	8.7	Dec. 28	10.3
Mar. 30	10.8	June 28	6.8	Sept. 28	10.8		

Lamoille Valley

33/56-8d1. Moffat. Ten Mile Well. Dug domestic water-table well, diameter 42 inches, reported depth 12 feet, cribbed with concrete. Highest water level 4.40 below lsd, May 28, 1945; lowest 10.60 below lsd, Sept. 28, 1953. Records available: 1944-55.

Jan. 28	9.1	Apr. 28	8.2	Aug. 28	10.3	Nov. 28	8.8
Feb. 28	9.2	May 22	8.4	Sept. 28	10.2	Dec. 28	9.3
Mar. 30	7.7	July 28	9.9				

33/57-22d1. Sutacha. Drilled unused water-table well, diameter 18 inches, depth 60 feet. Highest water level 33.40 below lsd, May 28, 1954; lowest 57.9 below lsd, Nov. 28, 1955. Records available: 1948-55.

Jan. 28	41.8	Apr. 28	42.5	July 28	53.7	Oct. 28	57.0
Feb. 28	38.9	May 28	50.7	Aug. 28	57.1	Nov. 28	57.9
Mar. 30	42.4	June 28	55.6	Sept. 28	56.2	Dec. 28	57.7

33/58-5a1. George Ogilvie. Dug domestic water-table well, diameter 24 inches, depth 10 feet. Highest water level 1.00 below lsd, July 1, 1942; lowest 9.70 below lsd, Jan. 15, 1942. Records available: 1934-55.

Jan. 28	4.6	May 28	4.3	Aug. 28	0.8	Nov. 28	5.4
Feb. 28	5.5	June 28	4.4	Sept. 28	2.2	Dec. 28	4.6
Mar. 30	4.4	July 28	6.4	Oct. 28	5.7		

33/58-7a1. No. 2 Lytton Lane. Drilled unused water-table well, diameter 3 inches, depth 8 feet. Highest water level flowing, June 1, 1935; lowest dry, Aug. 28, 1952, Sept. 28, 1953, Aug. 28, 1955. Records available: 1934-55.

Mar. 30	2.6	May 28	3.5	July 28	4.2	Oct. 28	5.7
Apr. 28	3.4	June 28	2.3	Aug. 28	(f)	Nov. 28	4.1

f Dry.

33/58-18c1. John Patterson. Dug unused water-table well, diameter 5 feet, depth 13 feet. Highest water level 0.17 above lsd, May 28, 1955; lowest 12.5 below lsd, Mar. 1, 1935. Records available: 1934-55.

Jan. 28	10.8	June 28	1.0	Sept. 28	4.2	Nov. 28	5.9
Feb. 28	12.3	July 28	3.6	Oct. 28	5.2	Dec. 28	6.2
May 28	+.17	Aug. 28	3.9				

33/58-19ad1. H. Conrad. Known as Lamoille Church. Dug domestic water-table well, diameter 4 feet, depth 16 feet. Highest water level 0.6 below lsd, July 1, 1936; lowest 15.1 below lsd, Dec. 15, 1940. Records available: 1934-55.

Jan. 28	13.4	Apr. 28	13.2	July 28	4.9	Oct. 28	12.5
Feb. 28	14.0	May 28	11.8	Aug. 28	7.7	Nov. 28	12.5
Mar. 30	14.4	June 28	2.9	Sept. 28	10.8	Dec. 28	12.2

33/58-30a1. Joe Sutacha. Known as Charles well. Dug unused water-table well, diameter 42 inches, depth 24 feet. Highest water level 1.50 below lsd, Apr. 28, 1947; lowest 26.0 below lsd, Feb. 1, 1941. Records available: 1934-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	23.4	June 28	6.3	Sept. 28	21.1	Nov. 28	21.3
Apr. 28	17.9	July 28	8.7	Oct. 28	23.0	Dec. 28	15.5
May 28	11.2	Aug. 28	16.7				

34/57-18a1. U. S. Bureau of Land Management. Known as Dry Lake well. Drilled stock water-table well, reported depth 148 feet. Highest water level 38.15 below lsd, Mar. 29, 1945; lowest 64.40 below lsd, July 28, 1952. Records available: 1944-55.

Jan. 28	43.3	Apr. 28	a54.14	Aug. 28	47.5	Oct. 28	44.4
Feb. 28	43.3	May 28	43.9	Sept. 28	46.3	Nov. 28	44.4
Mar. 30	43.3	July 28	48.1				

a Pumping.

Ruby Valley

31/60-4a1. Owner unknown. Drilled stock water-table well, diameter 8 inches, depth 20 feet. Highest water level 2.96 below lsd, June 14, 1950; lowest 9.25 below lsd, Sept. 20, 1955. Records available: 1948-55. Sept. 20, 9.25

31/60-16c1. Owner unknown. Drilled stock water-table well, diameter 8 inches, depth 35 feet. Highest water level 4.98 below lsd, June 14, 1950; lowest 12.07 below lsd, Sept. 15, 1954. Records available: 1948-54. No measurement made in 1955.

32/60-29c1. U. S. Geol. Survey. Drilled test and observation well, diameter 6 inches, depth 202 feet, cased to 137. Highest water level 1.38 below lsd, Mar. 28, 1951; lowest 4.81 below lsd, Sept. 15, 1954. Records available: 1949-55. Mar. 10, 4.60; Sept. 20, 5.21.

32/60-29c2. U. S. Geol. Survey. Driven observation water-table well, diameter $1\frac{1}{2}$ inches, depth 15 feet, cased to 15. Highest water level 3.65 below lsd, Mar. 28, 1951; lowest 7.35 below lsd, Sept. 20, 1955. Records available: 1949-55. Mar. 10, 6.88; Sept. 20, 7.35.

33/60-35d1. Owner unknown. Dug stock water-table well, diameter 14 inches, cased with oil drums. Highest water level 4.80 below lsd, June 10, 1949; lowest 8.86 below lsd, Sept. 15, 1954. Records available: 1948-55. Sept. 20, 8.18.

Esmeralda County

Fish Lake Valley

S1/35-21a1. Rex B. Clark. Drilled stock water-table well, diameter 13 inches. Highest water level 13.12 below lsd, Mar. 21, 1950; lowest 14.32 below lsd, Sept. 8, 1952. Records available: 1949-54. No measurement made in 1955.

S1/35-28a1. Rex B. Clark. Drilled stock water-table well, diameter 16 inches, depth 624 feet, cased to 600, perforations 150-600. Highest water level 25.45 below lsd, Jan. 21, 1948; lowest 30.89 below lsd, Sept. 30, 1955. Records available: 1945-55. Mar. 3, 30.11; Sept. 30, 30.89.

S2/35-15c1. O. Z. D. Davis. Drilled domestic water-table well, diameter 6 inches, depth 50 feet. Highest water level 44.57 below lsd, Nov. 11, 1949; lowest 46.54 below lsd, Sept. 30, 1955. Records available: 1949-55. Mar. 3, 46.36; Sept. 30, 46.54.

S2/35-28d1. E. L. Cord. Cord No. 3. Drilled irrigation water-table well, diameter 12 inches, reported depth 110 feet. Highest water level 46.2 below lsd, July 20, 1945; lowest 60.10 below lsd, Sept. 28, 1954. Records available: 1945, 1949-50, 1952-54. No measurement made in 1955.

S2/35-33a1. E. L. Cord. Cord No. 1. Drilled irrigation water-table well, diameter 12 inches, depth 120 feet. Highest water level 51.91 below lsd, Dec. 12, 1946; lowest 62.64 below lsd, Mar. 3, 1955. Records available: 1946-47, 1949, 1955. Mar. 3, 62.64.

S3/35-3b2. F. J. Willeman. Drilled domestic and irrigation water-table well, reported depth 720 feet. Highest water level 22.05 below lsd, Oct. 11, 1949; lowest 24.71 below lsd, Sept. 30, 1955. Records available: 1949-55. Mar. 3, 23.96; Sept. 30, 24.71.

S3/35-4a2. Sigurd Folwick. Drilled unused water-table well, diameter 14 to 8 inches, reported depth 124 feet, cased to 124, perforations 701-24. Highest water level 46.51 below lsd, Nov. 10, 1949; lowest 49.86 below lsd, Sept. 30, 1955. Records available: 1949-55. Mar. 3, 49.13; Sept. 30, 49.86.

S3/35-4a3. Sigurd Folwick. Drilled unused water-table well, diameter 13 inches, depth 76 feet. Highest water level 45.46 below lsd, Mar.16, 1951; lowest 49.23 below lsd, Sept. 30, 1955. Records available: 1949-55. Mar. 3, 48.58; Sept. 30, 49.23.

S3/35-4d3. Sigurd Folwick. Drilled irrigation water-table well, diameter 14 inches, reported depth 132 feet, perforations 70-132. Highest water level 44.95 below lsd, Mar. 22, 1950; lowest 48.11 below lsd, Sept. 30, 1955. Records available: 1950-55. Mar. 3, 47.53; Sept. 30, 48.11.

S3/35-14c2. C. Parkinson. Drilled irrigation water-table well, diameter 12 inches. Highest water level 23.26 below lsd, Sept. 14, 1953; lowest 30.45 below lsd, Sept. 10, 1951. Records available: 1950-53, 1955. Sept. 30, 24.02.

S3/35-14c4. U. S. Bureau of Land Management. Drilled unused water-table well, diameter 12 inches. Highest water level 38.60 below lsd, Jan.21, 1948; lowest 41.60 below lsd, Sept. 10, 1951. Records available: 1945, 1947-55. Mar. 3, 41.20; Sept. 30, 41.34.

S3/35-25b1. Bar 99 Ranch. Drilled irrigation water-table well, diameter 14 inches, reported depth 123 feet. Highest water level 3.30 below lsd, Mar. 21, 1950; lowest 11.46 below lsd, Sept. 10, 1951. Records available: 1949-55. Sept. 30, 6.83.

S3/35-26a3. Bar 99 Ranch. Drilled unused water-table well, diameter 12 inches, reported depth 125 feet. Highest water level 11.15 below lsd, Jan. 21, 1948; lowest 17.20 below lsd, Aug. 21, 1948. Records available: 1946-55. Mar. 3, 12.99; Sept. 30, 13.84.

Tonopah and Vicinity

3/40-2c1. Millers Mill. Dug unused water-table well, size 8 by 5 feet, depth 61 feet, cribbed with wood. Highest water level 39.11 below lsd, Sept. 8, 1952; lowest 39.36 below lsd, Sept. 17, 1955. Records available: 1948-55. Jan. 7, 39.19; Sept. 17, 39.36.

Eureka County

Antelope Valley

16/51-7d1. Bartholemae Corp. Dug stock water-table well, diameter 6 feet, depth 29 feet. Highest water level 24.86 below lsd, Oct. 1, 1952; lowest 25.54 below lsd, Sept. 19, 1950. Records available: 1949-52, 1955. Sept. 18, 25.04.

18/51-34d1. Bartholemae Corp. Drilled stock water-table well, diameter 6 inches, depth 134 feet. Highest water level 93.96 below lsd, Oct. 1, 1952; lowest 94.14 below lsd, Sept. 18, 1955. Records available: 1949-53, 1955. Sept. 18, 94.14.

Crescent Valley

29/48-34c1. Dan Filippini. Drilled stock water-table well, diameter 6 inches. Land-surface datum is 4,731.3 feet above msl. Highest water level 6.08 below lsd, Mar. 15, 1949; lowest 8.01 below lsd, Sept. 21, 1954. Records available: 1948-52, 1954-55. Mar. 10, 7.00; Sept. 20, 7.93.

30/49-6a1. U. S. Geol. Survey. Drilled observation water-table well, diameter 4 inches, depth 9 feet, cased to 9. Land-surface datum is 4,712.1 feet above msl. Highest water level 2.61 below lsd, Mar. 15, 1949; lowest 5.55 below lsd, Sept. 22, 1954. Records available: 1948-55. Mar. 10, 4.18; Sept. 20, 5.23.

31/49-5c1. Wm. Connelly. Beowawe. Dug domestic water-table well, diameter 4 feet, depth 10 feet. Land-surface datum is 4,698.3 feet above msl. Highest water level 6.58 below lsd, Mar. 29, 1951; lowest 8.33 below lsd, Sept. 22, 1954. Records available: 1948-55. Mar. 10, 8.17; Sept. 20, 8.32.

Diamond Valley

19/53-5a1. A. C. Florio. Drilled stock water-table well, diameter 6 inches. Highest water level 175.65 below lsd, Aug. 30, 1955; lowest 180.04 below lsd, Sept. 13, 1949. Records available: 1947-55. Aug. 30, 175.65; Oct. 27, 175.66.

20/53-15b1. U. S. Bureau of Land Management. Dug stock water-table well, diameter 4 feet, reported depth 99 feet, cribbed with concrete. Highest water level 71.75 below lsd, Apr. 30, 1948; lowest 76.49 below lsd, Mar. 24, 1949. Records available: 1947-55. Mar. 29, 74.46; Aug. 29, 74.73; Oct. 27, 75.28.

20/53-31d1. A. C. Florio. Drilled stock well, diameter 6 inches. Highest water level 156.95 below lsd, Mar. 9, 1954; lowest 165.90 below lsd, Sept. 13, 1949. Records available: 1947-55. Aug. 29, 157.53; Oct. 27, 157.60.

21/53-5c1. A. C. Florio. Drilled stock water-table well, diameter 4 feet, depth 42 feet. Highest water level 28.61 below lsd, Mar. 8, 1954; lowest 28.98 below lsd, Sept. 13, 1949. Records available: 1947-55. Aug. 29, 28.96.

22/54-27a1. Robert Stucki. Drilled domestic and irrigation well, diameter 12 inches, depth 94 feet, cased to 93, perforations 46-93. Highest water level 5.49 below lsd, Aug. 11, 1949; lowest 11.84 below lsd, Aug. 29, 1955. Records available: 1949-55. Aug. 29, 11.84.

22/54-28dc1. Formerly 22/54-33d1. A. L. Jones. Drilled irrigation well, diameter 12 inches, depth 191 feet, cased to 190, perforations 15-25, 144-190. Highest water level 5.93 below lsd, Dec. 16, 1949; lowest 9.75 below lsd, Aug. 29, 1955. Records available: 1949-55. Aug. 29, 9.75.

Kobeh Valley

21/49-17b1. Pete Etchegaray. Drilled stock water-table well, diameter 6 inches, depth 60 feet. Highest water level 39.15 below lsd, Mar. 2, 1953; lowest 42.85 below lsd, Sept. 11, 1951. Records available: 1948-51, 1953, 1955. Sept. 18, 41.65.

Humboldt County

Grass Valley
[See also Pershing County]

35/37-14d3. Kenneth Eddie. Ranch headquarters. Drilled irrigation water-table well, diameter 12 inches, depth 107 feet. Land-surface datum is 4,318 feet above msl. Highest water level 31.01 below lsd, Apr. 27, 1950; lowest 49.08 below lsd, Sept. 21, 1955. Records available: 1946-55. Sept. 21, 49.08.

35/37-28b1. U. S. Bureau of Land Management. Button sage well. Drilled unused water-table well, diameter 12 inches, depth 73 feet. Land-surface datum is 4,300 feet above msl. Highest water level 33.30 below lsd, Sept. 11, 1952; lowest 39.46 below lsd, Sept. 21, 1955. Records available: 1946-55. Sept. 21, 39.46.

35/37-34a2. Owner unknown. Drilled unused water-table well, diameter 10 inches, depth 83 feet. Land-surface datum is 4,301.5 feet above msl. Highest water level 17.68 below lsd, May 16, 1946; lowest 24.24 below lsd, Sept. 23, 1955. Records available: 1946-55. Sept. 23, 24.24.

Humboldt River Valley

[See also Elko, Lander, and Pershing Counties]

35/36-14c1. Charles Hilyer. Ranch headquarters. Drilled domestic and stock water-table well, diameter 12 inches, depth 18 feet. Land-surface datum is 4,236.3 feet above msl. Highest water level 7.38 below lsd, Mar. 29, 1951; lowest 13.40 below lsd, Sept. 22, 1955. Records available: 1947, 1949-55. Mar. 17, 13.22; Sept. 22, 13.40.

35/37-2b1. Henry Harrar. Drilled stock water-table well, diameter 8 inches, depth 21 feet. Land-surface datum is 4,257.8 feet above msl. Highest water level 2.05 below lsd, Mar. 29, 1951; lowest 8.67 below lsd, Sept. 21, 1955. Records available: 1947-55. Mar. 17, 7.74; Sept. 21, 8.67.

35/37-8d2. D. H. McNinch. Drilled unused water-table well, diameter 16 inches, depth 77 feet. Land-surface datum is 4,301 feet above msl. Highest water level 50.74 below lsd, Mar. 17, 1953; lowest 59.40 below lsd, Sept. 23, 1955. Records available: 1947-55. Sept. 23, 59.40.

36/38-16c1. George Hay Co. Drilled irrigation water-table well, diameter 12 inches, depth 55 feet. Land-surface datum is 4,291.6 feet above msl. Highest water level 15.08 below lsd, May 14, 1951; lowest 21.53 below lsd, Oct. 29, 1951. Records available: 1947-55. Mar. 16, 19.26; Sept. 21, 20.59.

36/40-19d1. Diamond S Ranch. Drilled irrigation water-table well, diameter 14 inches, depth 51 feet. Highest water level 12.27 below lsd, Sept. 11, 1952; lowest 23.90 below lsd, Apr. 8, 1949. Records available: 1949-55. Sept. 28, 22.93.

36/40-30aa1. Diamond S Ranch. Drilled unused water-table well, diameter 6 inches, depth 101 feet. Highest water level 23.63 below lsd, Sept. 11, 1952; lowest 36.90 below lsd, Mar. 16, 1955. Records available: 1949-55. Mar. 16, 36.90; Sept. 6, 33.89.

37/38-33d1. George Hay Co. Dug unused water-table well, diameter 36 inches, depth 16 feet. Land-surface datum is 4,294.6 feet above msl. Highest water level 9.86 below lsd, June 28, 1951; lowest 14.17 below lsd, Oct. 28, 1948. Records available: 1947-55. Mar. 17, 12.86; Sept. 21, 14.10.

37/39-33d1. Bullhead Ranch. Drilled stock water-table well, diameter 12 inches, depth 24 feet. Land-surface datum is 4,309.5 feet above msl. Highest water level 1.87 below lsd, Mar. 7, 1951; lowest 9.49 below lsd, Sept. 6, 1955. Records available: 1947, 1949-55. Sept. 6, 9.49.

Paradise Valley

37/38-2a1. U. S. Bureau of Land Management. Drilled stock well, diameter 6 inches, depth 79 feet. Land-surface datum is 4,335 feet above msl. Highest water level 26.88 below lsd, Mar. 18, 1953; lowest 36.67 below lsd, Nov. 24, 1950. Records available: 1945-55. Mar. 17, 32.27; Sept. 22, 32.97.

39/39-3c1. Gerhard Miller, Sr. Ranch headquarters. Dug stock and domestic water-table well, diameter 8 feet, depth 22 feet. Land-surface datum is 4,342 feet above msl. Highest water level 6.20 below lsd, Mar. 18, 1953; lowest 15.81 below lsd, Sept. 14, 1948. Records available: 1948-55. Mar. 17, 11.55; Sept. 22, 15.48.

39/39-16d1. Dwight C. Vedder. Drilled stock water-table well, diameter 12 inches, depth 46 feet. Land-surface datum is 4,331.7 feet above msl. Highest water level 3.82 below lsd, May 28, 1951; lowest 10.69 below lsd, Sept. 14, 1948. Records available: 1947-55. Mar. 17, 8.80; Sept. 22, 9.94.

39/39-24b1. Dwight C. Vedder. Drilled domestic water-table well, diameter 6 inches, depth 24 feet. Land-surface datum is 4,333.9 feet above msl. Highest water level 3.30 below lsd, Apr. 5, 1946; lowest 10.02 below lsd, Sept. 22, 1955. Records available: 1945-55. Mar. 17, 7.94; Sept. 22, 10.02.

39/39-33c1. Owner unknown. Drilled stock water-table well, diameter 12 inches, depth 37 feet. Land-surface datum is 4,318.2 feet above msl. Highest water level 4.15 below lsd, Apr. 25, 1946; lowest 9.60 below lsd, Sept. 13, 1949, Sept. 19, 1950. Records available: 1945-51, 1953-54. No measurement made in 1955.

40/39-10d1. Owner unknown. Drilled unused water-table well, diameter 12 inches, depth 55 feet. Land-surface datum is 4,422 feet above msl. Highest water level 39.60 below lsd, Sept. 10, 1952; lowest 55.02 below lsd, July 23, 1947. Records available: 1945-55. Mar. 17, 46.92; Sept. 22, 48.74.

40/39-26b1. Henry McCleary Timber Co. Drilled domestic well, diameter 16 inches, reported depth 300 feet. Land-surface datum is 4,360 feet above msl. Highest water level 3.43 below lsd, Apr. 25, 1946; lowest 12.12 below lsd, Jan. 30, 1951. Records available: 1945-55. Mar. 17, 9.36; Sept. 22, 10.74.

41/40-6c1. Joe Boggio. Drilled unused water-table well, diameter 16 inches, depth 55 feet. Land-surface datum is 4,458 feet above msl. Highest water level 2.20 below lsd, Feb. 12, 1951; lowest 12.39 below lsd, Sept. 22, 1955. Records available: 1945-55. Mar. 17, 11.44; Sept. 22, 12.39.

41/40-22d1. Ernest Gondra. Drilled domestic water-table well, diameter 7 inches, depth 41 feet. Highest water level 5.63 below lsd, June 16, 1950; lowest 11.82 below lsd, Jan. 31, 1949. Records available: 1947-55. Mar. 17, 9.30; Sept. 22, 9.68.

41/40-30a1. Shelton School. Drilled domestic water-table well, diameter 8 inches, depth 27 feet. Land-surface datum is 4,414 feet above msl. Highest water level 1.17 below lsd, Apr. 30, 1951; lowest 11.86 below lsd, Sept. 22, 1955. Records available: 1945-55. Mar. 17, 6.96; Sept. 22, 11.86.

42/39-25c1. U. S. Bureau of Land Management. Dug unused water-table well, diameter $5\frac{1}{2}$ feet, depth 18 feet. Land-surface datum is 4,523 feet above msl. Highest water level 2.50 below lsd, Apr. 30, 1951; lowest 10.80 below lsd, Sept. 23, 1955. Records available: 1945-55. Jan. 25, 10.30; Apr. 21, 10.29; Aug. 10, 9.68; Sept. 23, 10.80.

42/40-14c1. J. M. Freeman. Drilled domestic and stock water-table well, diameter 12 inches, depth 13 feet. Land-surface datum is 4,606 feet above msl. Highest water level 3.90 below lsd, Apr. 29, 1949; lowest 9.76 below lsd, Sept. 23, 1947. Records available: 1946-55. Mar. 17, 7.16; Sept. 22, 4.15.

42/40-18a1. E. C. Lye. Drilled irrigation water-table well, diameter 12 inches, depth 53 feet, reported cased to 64. Land-surface datum is 4,614 feet above msl. Highest water level 4.82 below lsd, Apr. 30, 1951; lowest 15.97 below lsd, Sept. 24, 1954, Mar. 17, 1955. Records available: 1945-55. Mar. 17, 15.97; Sept. 22, 10.08.

Quinn River Valley

42/37-33b2. Hassenyager. Drilled irrigation water-table well, diameter 18 inches, depth 95 feet. Highest water level 35.42 below lsd, Sept. 16, 1953; lowest 41.66 below lsd, Sept. 6, 1955. Records available: 1948-55. Mar. 17, 38.08; Sept. 6, 41.66.

43/37-4c2. Owner unknown. Drilled unused water-table well, diameter 6 inches, depth 42 feet. Land-surface datum is 4,230 feet above msl. Highest water level 30.41 below lsd, Sept. 10, 1952; lowest 34.93 below lsd, Sept. 8, 1955. Records available: 1947-55. Mar. 17, 34.03; Sept. 8, 34.93.

43/37-28a1. Elmo Bowly. Dug and drilled irrigation water-table well, size 5 by 6 feet to 12 feet, 12 inches to 57 feet. Land-surface datum is 4,234 feet above msl. Highest water level 8.13 below lsd, Nov. 5, 1947; lowest 12.29 below lsd, Mar. 17, 1955. Records available: 1946-55. Mar. 17, 12.29.

Lander County

Humboldt River Valley
[See also Elko, Humboldt, and Pershing Counties]

32/45-2a1. E. Marvel. Drilled unused water-table well, diameter 6 inches, depth 65 feet. Land-surface datum is 4,515 feet above msl. Highest water level 4.16 below lsd, May 22, 1947; lowest 6.36 below lsd, Aug. 25, 1948. Records available: 1946-55. Mar. 11, 5.51; Sept. 6, 5.98.

32/45-9ab1. Owner unknown. Drilled unused water-table well, diameter 4 inches. Land-surface datum is 4,509 feet above msl. Highest water level 6.47 below lsd, Apr. 9, 1946; lowest 10.43 below lsd, Mar. 11, 1955. Records available: 1946-53, 1955. Mar. 11, 10.43; Sept. 21, 10.01.

32/45-11d1. U. S. Geol. Survey. Drilled test and observation well, diameter 6 inches, depth 197 feet, cased to 171. Highest water level 4.08 below lsd, July 10, 1952; lowest 10.58 below lsd, Sept. 21, 1955. Records available: 1949-55. Mar. 11, 9.53; Sept. 21, 10.58.

32/45-20b1. R. M. Clark. Drilled domestic water-table well, diameter 6 inches, depth 14 feet. Land-surface datum is 4,509 feet above msl. Highest water level 5.93 below lsd, Mar. 20, 1947; lowest 8.64 below lsd, Sept. 19, 1951. Records available: 1946-55. Mar. 11, 7.20.

32/45-22c1. Owner unknown. Drilled observation water-table well, diameter 2 inches, depth 6 feet. Highest water level 3.07 below lsd, Mar. 16, 1951; lowest 6.11 below lsd, Sept. 21, 1955. Records available: 1946-55. Mar. 11, 4.89; Sept. 21, 6.11.

32/46-10d1. U. S. Bureau of Reclamation. Dug stock water-table well, size 8 by 10 feet, depth 10 feet, cribbed with wood. Highest water level 2.38 below lsd, Apr. 11, 1946; lowest 7.15 below lsd, Sept. 22, 1954. Records available: 1945-55. Mar. 11, 5.71; Sept. 6, 7.12.

32/46-11d1. U. S. Bureau of Reclamation. Dug stock water-table well, size 4 by 5 feet, depth 13 feet. Land-surface datum is 4,543 feet above msl. Highest water level 3.77 below lsd, Apr. 11, 1946; lowest 9.77 below lsd, Sept. 6, 1955. Records available: 1945-55. Mar. 11, 7.75; Sept. 6, 9.77.

32/46-16d1. U. S. Bureau of Reclamation. Drilled observation water-table well, diameter 2 inches, depth 11 feet. Land-surface datum is 4,538 feet above msl. Highest water level 5.07 below lsd, Apr. 11, 1946; lowest 7.61 below lsd, Sept. 14, 1950. Records available: 1946-51, 1953-55. Mar. 11, 6.34.

32/46-27ba1. Southern Pacific Co. Drilled unused well, diameter 12 inches, depth 431 feet. Land-surface datum is 4,560 feet above msl. Highest water level 18.95 below lsd, Mar. 19, 1953; lowest 20.18 below lsd, Sept. 14, 1954. Records available: 1947-55. Mar. 11, 19.86; Sept. 6, 19.86.

• 32/46-31bb1. Humboldt Petroleum Co. Drilled oil test well, diameter 6 inches, reported depth 126 feet. Land-surface datum is 4,529 feet above msl. Highest water level 10.75 below lsd, Apr. 3, 1952; lowest 12.19 below lsd, Sept. 19, 1949. Records available: 1947-55. Mar. 11, 10.89; Sept. 21, 11.68.

Reese River Valley

27/43-33cd1. Owner unknown. Watts. Drilled unused well, diameter 6 inches, depth 114 feet. Land-surface datum is 4,810 feet above msl. Highest water level 12.36 below lsd, Apr. 22, 1948; lowest 14.65 below lsd, Sept. 21, 1955. Records available: 1947-55. Mar. 11, 13.60; Sept. 21, 14.65.

30/42-24cc1. U. S. Bureau of Land Management. Drilled stock water-table well, diameter 6 inches, depth 54 feet. Land-surface datum is 4,634 feet above msl. Highest water level 10.30 below lsd, Mar. 16, 1949; lowest 13.25 below lsd, Sept. 21, 1955. Records available: 1947-55. Mar. 10, 12.12; Sept. 21, 13.25.

30/43-9aa1. Copper Canyon Mining Co. Drilled unused well, diameter 12 inches, depth 201 feet, cased to 192. Land-surface datum is 4,767 feet above msl. Highest water level 134.56 below lsd, May 22, 1947; lowest 138.27 below lsd, Mar. 16, 1951. Records available: 1947-55. Sept. 21, 136.61.

30/44-18ad1. Copper Canyon Mining Co. Drilled unused well, diameter 12 inches, depth 329 feet, cased to 300. Land-surface datum is 4,609 feet above msl. Highest water level 5.25 below lsd, Mar. 16, 1951; lowest 6.53 below lsd, Sept. 9, 1954. Records available: 1947-55. Mar. 11, 5.84; Sept. 21, 6.52.

30/44-22cb1. Owner unknown. Dillon. Drilled unused water-table well, diameter 6 inches depth 80 feet. Land-surface datum is 4,676 feet above msl. Highest water level 26.64 below lsd, Nov. 8, 1947; lowest 28.58 below lsd, Sept. 21, 1955. Records available: 1947-55. Sept. 21, 28.58.

30/45-4bd1. Martin Jenkins Ranch. Drilled domestic and stock well, diameter 6 inches, depth 40 feet. Land-surface datum is 4,613 feet above msl. Highest water level 18.17 below lsd, June 23, 1949; lowest 21.44 below lsd, Sept. 21, 1955. Records available: 1947-55. Sept. 21, 21.44.

30/45-18aa1. U. S. Bureau of Land Management. Dug stock water-table well, size 4 by 4 feet, reported depth 60 feet. Land-surface datum is 4,635 feet above msl. Highest water level 23.69 below lsd, Jan. 8, 1948; lowest 28.72 below lsd, Sept. 21, 1955. Records available: 1947-55. Mar. 11, 27.38; Sept. 21, 28.72.

Lincoln County

Lake Valley
[See also White Pine County]

3/66-23d1. U. S. Bureau of Land Management. Drilled stock well, diameter 6 inches. Highest water level 40.70 below lsd, Sept. 9, 1954; lowest 43.21 below lsd, Sept. 6, 1949. Records available: 1946-51, 1953-54. No measurement made in 1955.

9/65-1b1. Fred Twisselman. Drilled irrigation well, diameter 12 inches, depth 165 feet. Highest water level 23.64 below lsd, Apr. 16, 1947; lowest 37.93 below lsd, Mar. 14, 1951. Records available: 1947-55. Sept. 14, 37.78.

Meadow Valley

S1/68-33b1. Lafe Matthews Estate. Drilled irrigation well in alluvium of Quaternary age, diameter 10 inches, reported depth 120 feet, cased to 80, perforations 60-80. Land-surface datum is 4,784.7 feet above msl. Highest water level 30.32 below lsd, Apr. 25, 1946; lowest 37.23 below lsd, Sept. 12, 1950. Records available: 1946-55. Mar. 23, 32.04.

S2/67-24d1. Duffin. Dug unused water-table well in alluvium of Quaternary age, size 4 by 4 feet, depth 10 feet, cribbed with wood. Land-surface datum is 4,677.6 feet above msl. Highest water level 3.45 below lsd, Mar. 21, 1949; lowest 6.17 below lsd, Sept. 13, 1951. Records available: 1946-55. Mar. 23, 4.92; Sept. 15, 5.90.

• S2/68-7a2. P. Findlay. Drilled domestic water-table well in alluvium of Quaternary age, diameter 4 inches, reported depth 40 feet, cased to 40. Land-surface datum is 4,726.5 feet above msl. Highest water level 17.16 below lsd, Apr. 14, 1946; lowest 21.73 below lsd, Sept. 16 1953. Records available: 1946-54. No measurement made in 1955.

S2/68-8b1. Lory Free. Drilled irrigation well in alluvium of Quaternary age, diameter 10 inches, reported depth 88 feet. Land-surface datum is 4,721.7 feet above msl. Highest water level 12.09 below lsd, Apr. 14, 1946; lowest 18.57 below lsd, Sept. 12, 1950. Records available: 1946-55. Mar. 23, 13.46; July 12, 18.16.

S2/68-8b5. U. S. Geol. Survey. Drilled test and observation well in alluvium of Quaternary age, diameter 8 inches, depth 110 feet. cased to 110. Highest water level 10.72 below lsd, Mar. 20, 1950; lowest 17.38 below lsd, Sept. 1, 1954. Records available: 1949-55.

Daily noon water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	12.55	11.99	14.14	.....	.....	15.44	14.14	14.61	.....	.....
2	13.37	.....	12.51	11.97	14.08	.....	.....	15.44	14.15	14.61	.....	.....
3	.....	.....	12.47	11.98	.....	.....	.....	15.44	14.16	14.61	.....	.....
4	.....	.....	12.44	11.96	.....	.....	.....	15.39	14.19	.....	.....	.....
5	.....	.....	12.43	11.97	.....	.....	.....	.....	14.30	.....	.....	.....
6	.....	.....	12.42	11.96	.....	15.00	15.57	.....	14.40	.....	.....	.....
7	.....	12.86	12.37	12.02	.....	15.04	15.66	.....	14.39	.....	.....	.....
8	.....	.....	12.33	12.06	.....	15.14	15.75	.....	14.38	.....	.....	.....
9	.....	.....	12.30	12.06	14.09	15.23	15.82	.....	14.37	.....	.....	.....
10	13.24	.....	12.27	12.01	14.28	15.23	15.91	.....	14.37	.....	.....	.....
11	.....	.....	12.25	12.05	14.42	15.20	16.04	.....	14.30	.....	.....	.....
12	.....	.....	12.25	12.07	14.50	15.09	16.07	.....	14.28	.....	.....	.....
13	.....	.....	12.19	12.03	14.52	14.99	16.12	.....	14.26	.....	.....	.....
14	.....	12.78	12.16	12.07	14.62	14.88	16.03	.....	14.30	.....	.....	.....
15	.....	.....	12.16	12.12	14.68	14.87	15.93	14.76	14.30	.....	.....	.....
16	.....	.....	12.15	12.29	14.72	14.87	15.96	.....	14.34	.....	.....	.....
17	.....	.....	12.13	12.27	.....	14.82	16.05	.....	14.36	.....	.....	.....
18	.....	.....	.....	12.46	.....	.....	16.01	.....	14.55	.....	.....	.....
19	.....	.....	.....	13.10	.....	.....	15.84	.....	14.56	.....	.....	.....
20	.....	.....	.....	13.23	.....	14.69	15.84	.....	14.66	.....	.....	.....
21	.....	.....	.....	13.38	.....	14.61	15.91	.....	14.71	.....	.....	.....
22	.....	.....	12.05	13.49	.....	14.58	16.10	14.76	14.78	.....	.....	.....
23	.....	.....	12.05	13.57	14.81	14.58	16.21	.....	14.81	.....	.....	.....
24	.....	.....	12.04	.....	14.81	14.54	16.26	.....	14.81	.....	.....	.....
25	.....	.....	12.03	13.82	14.82	14.57	16.12	.....	14.75	.....	.....	.....
26	.....	.....	12.03	13.90	14.80	14.63	16.18	.....	14.68	.....	.....	.....
27	.....	.....	12.01	13.97	14.82	14.69	16.03	.....	14.62	.....	.....	.....
28	12.97	12.58	11.99	14.03	14.92	14.71	15.86	.....	14.61	.....	.....	.....
29	.....		11.99	14.10	14.95	.....	15.75	14.15	14.61	.....	.....	.....
30	.....		12.02	14.16	14.89	.....	15.62	14.14	14.61	.....	.....	.....
31	.....		12.02		14.94		15.52	14.14		.....		.....

S3/67-2a1. Grant Lee. Drilled irrigation well in alluvium of Quaternary age, diameter 10 inches, depth 220 feet, cased to 180. Land-surface datum is 4,605.1 feet above msl. Highest water level 16.03 below lsd, Mar. 16, 1946; lowest 21.57 below lsd, Apr. 27, 1948. Records available: 1946, 1948-52, 1954-55. Mar. 23, 1921; Sept. 15, 20.11.

S3/67-28c2. U. S. Geol. Survey. Drilled observation artesian well in alluvium of Quaternary age, diameter 6 inches, depth 172 feet, cased to 161. Highest water level 2.71 above lsd, Sept. 19, 1949; lowest 1.45 above lsd, Sept. 12, 1951. Records available: 1946-55. Mar. 22, +2.28; Sept. 15, +1.69.

Pahranagat Valley

S4/60-2d1. Wells-Stewart Land and Livestock Co. Drilled unused well, diameter 10 inches, reported depth 150 feet. Highest water level 40.77 below lsd, Dec. 17, 1946; lowest 48.72 below lsd, Sept. 8, 1954. Records available: 1946, 1948-55. Mar. 24, 47.40.

S4/60-34a2. W. U. Schofield, Jr. Drilled unused well, diameter 10 inches, reported depth 96 feet, cased to 96, perforations 60-96. Highest water level 58.12 below lsd, Aug. 8, 1946; lowest 64.31 below lsd, Feb. 19, 1948. Records available: 1946, 1948-55. Mar. 24, 61.59; Sept. 15, 60.39.

S5/60-10b1. Owner unknown. Drilled unused well, diameter 5 inches, depth 81 feet. Highest water level 63.82 below lsd, Mar. 22, 1949; lowest 74.19 below lsd, Dec. 17, 1946. Records available: 1945-46, 1948-53. No measurement made in 1955.

S6/61-18d2. Gardner Chism. Drilled unused well, diameter 6 inches, depth 41 feet. Highest water level 5.55 below lsd, Mar. 14, 1951; lowest 9.66 below lsd, Sept. 8, 1954. Records available: 1946-55. Mar. 24, 5.78; Sept. 16, 7.62.

S6/61-30d1. L. and E. Wadsworth. Drilled unused well, diameter 6 inches, depth 39 feet. Highest water level 12.90 below lsd, Mar. 25, 1952; lowest 16.82 below lsd, Mar. 22, 1949. Records available: 1946-55. Sept. 16, 15.03.

S6/61-32d4. Kirk Buffum. Drilled domestic well, diameter 6 inches, reported depth 57 feet. Highest water level 14.72 below lsd, Mar. 21, 1950; lowest 21.68 below lsd, Mar. 14, 1951. Records available: 1946, 1948-55. Mar. 24, 18.81; Sept. 16, 18.90.

S7/61-5d1. Harvey Frehner. Drilled unused well, diameter 6 inches. Highest water level 12.17 below lsd, Mar. 21, 1950; lowest 15.33 below lsd, Sept. 11, 1952. Records available: 1946-55. Mar. 24, 13.42; Sept. 16, 14.80.

S8/61-2c1. J. H. Hail. Drilled irrigation well, diameter 10 inches, depth 92 feet, sand-filled to 30 feet. Highest water level 19.37 below lsd, Mar. 21, 1950; lowest 26.98 below lsd, Mar. 24, 1955. Records available: 1946-55. Mar. 24, 26.98; Sept. 16, 23.53.

S8/61-24d1. Bill Grieves. Dug unused water-table well, size 4 by 4 feet. Highest water level 2.96 below lsd, Mar. 25, 1952; lowest 7.85 below lsd, Sept. 30, 1948. Records available: 1946-55. Mar. 24, 5.09; Sept. 16, 7.69.

Lyon County

Carson River Valley

17/22-35b1. R. H. Conklin. Drilled irrigation well, diameter 16 inches. Highest water level 17.49 below lsd, Apr. 1, 1952; lowest 27.80 below lsd, Aug. 15, 1949. Records available: 1949-50, 1952-55. Apr. 22, 22.51.

18/25-31a1. Southern Pacific Co. Appian. Drilled unused well, diameter 6 inches. Highest water level 30.32 below lsd, Mar. 3, 1954; lowest 36.05 below lsd, Mar. 30, 1950. Records available: 1949-55. Apr. 22, 34.17.

Mason Valley

11/25-11a1. McDonald. Drilled irrigation well, diameter 12 inches, reported depth 247 feet. Highest water level 62.33 below lsd, Aug. 19, 1948; lowest 67.75 below lsd, Mar. 30, 1950. Records available: 1948-51, 1954-55. Apr. 6, 64.90.

11/25-11b1. Judd. Drilled domestic and stock well, diameter 6 inches, reported depth 75 feet. Highest water level 25.22 below lsd, Sept. 11, 1953; lowest 39.27 below lsd, Mar. 30, 1950. Records available: 1948-55. Apr. 6, 36.82.

14/25-28d1. School District. Drilled unused well, diameter 6 inches, depth 38 feet. Highest water level 1.75 below lsd, July 13, 1953; lowest 6.00 below lsd, Mar. 26, 1951. Records available: 1947-55. Apr. 6, 5.67.

15/25-26c1. Mason Valley Ranch. Drilled unused well, diameter 8 inches, depth 49 feet. Highest water level 4.10 below lsd, Apr. 1, 1952; lowest 7.40 below lsd, Mar. 1, 1954. Records available: 1945, 1947-55. Apr. 6, 5.81.

Smith Valley

10/24-4cd1. Herb Rountree. Drilled irrigation well, diameter 14 to 12 inches, depth 250 feet. Land-surface datum is 4,910 feet above msl. Highest water level 59.61 below lsd, Nov. 2, 1948; lowest 75.91 below lsd, Oct. 6, 1955. Records available: 1948-55. Apr. 6, 66.48; Oct. 6, 75.91.

11/23-1ab1. C. G. Smith. Dug stock water-table well, diameter 4 feet, depth 30 feet. Highest water level 20.41 below lsd, Sept. 11, 1953; lowest 22.35 below lsd, May 26, 1950. Records available: 1949-55. Apr. 6, 21.83; Oct. 6, 21.55.

11/23-3dc1. R. B. Day. Drilled irrigation well, diameter 12 inches, depth 242 feet, cased to 164, perforations 0-164. Land-surface datum is 4,830 feet above msl. Highest water level 45.34 below lsd, Sept. 11, 1953; lowest 50.55 below lsd, Mar. 26, 1951. Records available: 1948-55. Apr. 6, 48.95.

11/23-11ba1. A. Bunkowski. Drilled domestic well, diameter 3 inches, reported depth 70 feet. Highest water level 8.37 below lsd, Aug. 9, 1950; lowest 12.18 below lsd, Mar. 30, 1950. Records available: 1949-55. Apr. 6, 11.92; Oct. 6, 10.46.

11/23-24cd1. Mrs. Kate Gallaner. Drilled domestic artesian well, diameter 3 inches. Highest water level 37.8 above lsd, Sept. 17, 1952; lowest 32.9 above lsd, Dec. 21, 1951. Records available: 1949-55. Apr. 6, +33.1; Oct. 6, +34.1.

11/23-27dc1. C. and M. Groso. Drilled unused well, diameter 4 inches, depth 88 feet. Highest water level 56.24 below lsd, Aug. 9, 1950; lowest 71.90 below lsd, Mar. 29, 1950. Records available: 1948-55. Apr. 6, 71.54; Oct. 6, 68.90.

11/24-18ad1. Mrs. W. E. Allen. Jetted unused artesian well, diameter 2 inches, reported depth 80 feet. Land-surface datum is 4,727.7 feet above msl. Highest water level 31.9 above lsd, Nov. 27-28, 1954; lowest 21.6 above lsd, Oct. 15, 1949. Records available: 1948-55.

Daily noon water level, above lsd, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	27.0	25.8	25.6	23.7	....	26.2	24.0	23.5	23.1	....	....	....
2	27.0	25.7	25.5	23.4	....	26.1	25.1	23.5	23.1	....	....	....
3	27.0	25.9	25.5	24.6	....	26.1	....	23.4	23.2	....	....	....
4	27.0	25.6	25.5	25.0	....	25.8	....	23.2	23.3	....	....	....
5	27.0	25.6	25.4	25.1	....	25.8	....	23.2	....	....	....	....
6	27.1	25.6	25.4	25.2	....	26.0	....	23.1	....	....	....	....
7	27.1	25.7	25.4	25.4	....	....	....	23.1	....	....	....	....
8	27.1	25.9	25.4	25.6	....	....	....	23.1	....	....	....	....
9	27.0	25.8	25.4	25.6	....	....	....	24.4	24.6	....	....	....
10	27.0	25.7	25.5	25.5	....	....	....	24.6	24.6	....	....	....
11	27.0	25.7	25.4	25.6	....	....	....	24.8	25.0	....	....	....
12	27.0	25.6	25.4	25.4	....	....	....	24.8	24.6	....	....	....
13	26.8	25.3	....	25.6	....	....	24.0	24.8	23.2	....	....	23.8
14	27.0	25.6	....	25.6	....	24.0	23.5	....	23.2	....	....	23.8
15	27.0	25.9	....	25.4	....	23.9	23.5	....	23.2	....	....	23.8
16	27.0	25.9	....	24.2	....	23.5	23.4	....	23.1	....	....	23.8
17	27.0	25.8	25.5	24.2	....	23.7	23.4	....	23.0	....	....	23.8
18	27.0	25.8	25.7	25.1	....	23.7	24.1	....	23.1	....	....	23.9
19	27.0	25.6	25.7	25.3	....	23.6	24.9	....	....	....	....	24.0
20	27.0	25.6	25.6	25.6	....	23.6	24.7	....	....	....	....	23.8
21	27.9	25.6	25.7	....	....	25.3	24.5	....	23.3	....	....	23.7
22	27.9	25.6	25.7	....	....	25.4	24.0	....	23.3	....	....	23.8
23	27.8	25.5	25.7	....	....	25.2	24.5	....	23.3	....	....	....
24	27.0	25.8	25.4	....	....	25.2	25.1	....	23.3	....	....	23.9
25	27.8	25.8	24.2	....	....	25.1	....	25.0	23.3	....	....	23.9
26	26.4	25.6	24.0	....	....	25.5	....	24.9	23.3	....	....	23.9
27	26.1	25.6	....	....	....	25.6	....	24.8	23.3	....	....	23.5
28	26.0	25.6	....	....	....	24.4	....	25.0	....	....	....	....
29	26.0		....	....	....	24.1	....	25.1	....	....	....	....
30	25.9		23.7	....	....	24.1	....	25.1	....	....	....	....
31	25.8		24.8	..	....		....	24.5		....		....

11/24-18da1. Mrs. Mary Harrison. Drilled domestic and irrigation artesian well, diameter 3 inches, reported depth 81 feet. Land-surface datum is 4,740.26 feet above msl. Highest water level 29.1 above lsd, Oct. 4, 1954; lowest 21.6 above lsd, Oct. 6, 1955. Records available: 1948-55. Apr. 6, +25.3; Oct. 6, +21.6.

11/24-22dc1. Fred Fulstone. Dug unused water-table well, size 18 by 30 inches, reported depth 130 feet, reported cased to 130, cribbed with concrete. Land-surface datum is 4,888.46 feet above msl. Highest water level 53.46 below lsd, Feb. 3, 1953; lowest 62.19 below lsd, Nov. 15, 1949. Records available: 1948-55.

Daily noon water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	57.74	57.15	56.49	56.20	57.03	57.66	58.13	58.62	59.09	.....	59.89	60.18
2	57.73	57.14	56.48	56.28	57.05	57.67	58.14	58.64	59.11	.....	59.90	60.19
3	57.71	57.12	56.46	56.33	57.07	57.68	58.16	58.65	59.12	.....	59.92	60.20
4	.....	57.10	56.43	56.38	57.08	57.70	58.17	58.68	59.13	....	59.90	60.21
5	.....	57.09	56.40	56.42	57.10	57.72	58.19	58.70	59.15	.....	59.92	60.22
6	.....	57.07	56.38	.....	57.13	57.73	58.20	58.72	59.16	.....	59.93	60.23
7	.....	57.05	56.35	.....	57.17	57.74	58.22	58.73	59.18	.....	59.93	60.23
8	.....	57.03	56.33	.....	57.21	57.76	58.23	58.74	.....	59.58	59.94	60.24
9	.....	57.00	56.30	56.47	57.24	57.78	58.25	58.76	.....	59.60	59.95	60.25
10	.....	56.97	56.27	56.50	.....	57.80	58.27	58.77	.....	59.62	59.96	60.25
11	.....	56.94	56.24	56.54	.....	57.82	58.28	58.79	.....	59.63	59.97	60.26
12	.....	56.92	56.21	56.56	.....	57.84	58.32	58.80	.....	59.64	59.98	60.27
13	57.41	56.89	56.15	56.59	.....	57.85	58.34	58.82	.....	59.66	59.99	60.28
14	57.40	56.86	56.12	56.62	.....	57.87	58.35	58.84	.....	59.67	60.00	60.28
15	57.39	56.83	56.08	56.64	.....	57.88	58.37	58.85	.....	59.69	60.02	60.29

11/24-22dc1--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
16	57.37	56.80	56.04	56.67	.....	57.90	58.38	58.86	.....	59.70	60.03	60.30
17	57.36	56.77	56.02	56.69	57.42	57.91	58.40	58.88	.....	59.71	60.04	60.31
18	57.35	56.75	56.01	56.71	57.44	57.93	58.41	58.89	.....	59.73	60.05	60.32
19	57.33	56.72	56.01	56.74	57.46	57.94	58.43	58.91	.....	59.74	60.06	60.32
20	57.32	56.69	56.01	56.77	57.47	57.96	58.44	58.92	.....	59.75	60.07	60.33
21	57.30	56.67	56.02	56.79	57.48	57.97	58.46	58.93	.....	59.76	60.08	60.34
22	57.29	56.64	56.03	56.82	57.49	57.99	58.47	58.95	.....	59.78	60.09	60.35
23	57.28	56.62	56.04	56.85	57.50	58.00	58.48	58.96	.....	59.79	60.10	60.35
24	57.26	56.49	56.06	56.87	57.53	58.02	58.50	58.98	.....	59.81	60.11	60.36
25	57.25	56.47	56.07	56.89	57.55	58.04	58.52	58.99	.....	59.82	60.12	60.37
26	57.24	56.45	56.08	56.92	57.56	58.05	58.53	59.01	.....	59.83	60.13	60.38
27	57.22	56.43	56.10	56.94	57.57	58.07	58.55	59.02	.....	59.85	60.14	60.39
28	57.21	56.41	56.11	56.97	57.59	58.09	58.56	59.03	.....	59.85	60.15	60.39
29	57.19		56.13	56.99	57.61	58.10	58.58	59.05	.....	59.86	60.16	60.40
30	57.18		56.14	57.01	57.62	58.11	58.59	59.06	.....	59.87	60.17	60.40
31	57.17		56.18		57.64		58.61	59.08		59.88		60.41

11/24-27cc1. A. A. Chisholm. Drilled domestic well, diameter 4 inches, reported depth 123 feet. Land-surface datum is 4,879.7 feet above msl. Highest water level 40.67 below lsd, Sept. 11, 1953; lowest 48.88 below lsd, Oct. 6, 1955. Records available: 1948-55. Apr. 4, 44.98; Oct. 6, 48.88.

11/24-32ab1. Nellie Albright. Drilled domestic well, diameter 3 inches, reported depth 130 feet. Land-surface datum is 4,824 feet above msl. Highest water level 0.94 below lsd, Mar. 29, 1948; lowest 11.69 below lsd, May 17, 1955. Records available: 1948-55. Apr. 6, 3.57; May 17, 11.69.

11/24-32dc1. A. Nuti. Drilled irrigation well, diameter 16 inches, reported depth 390 feet. Land-surface datum is 4,865 feet above msl. Highest water level 23.62 below lsd, Mar. 3, 1948; lowest 36.39 below lsd, Oct. 6, 1955. Records available: 1948-55. Apr. 6, 29.04; Oct. 6, 36.39.

12/23-22ac3. S. H. Hunnewill. Drilled stock artesian well, diameter 6 inches, reported depth 50 feet. Land-surface datum is 4,680 feet above msl. Highest water level 10.3 above lsd, Apr. 7, 1954; lowest 8.7 above lsd, Oct. 6, 1955. Records available: 1948-55. Apr. 6, +9.0; Oct. 6, +8.7.

12/24-30cd1. Owner unknown. Drilled unused well, diameter 8 inches, depth 70 feet. Land-surface datum is 4,797.66 feet above msl. Highest water level 46.45 below lsd, May 28, 1948; lowest 50.92 below lsd, Oct. 6, 1955. Records available: 1948-55. Apr. 6, 48.87; Oct. 6, 50.92.

Unnamed Valley

16/21-29c1. Owner unknown. Drilled unused water-table well, diameter 4 inches, depth 59 feet. Highest water level 51.31 below lsd, Nov. 13, 1947; lowest 52.30 below lsd, Sept. 6, 1951. Records available: 1947-54. No measurement made in 1955.

Mineral County

Gabbs Valley

10/35-11a1. U. S. Bureau of Land Management. Drilled stock well, diameter 6 inches, depth 265 feet. Highest water level 185.10 below lsd, Mar. 24, 1952; lowest 186.38 below lsd, Mar. 20, 1950. Records available: 1948-53. No measurement made in 1955.

Soda Spring Valley

8/34-28c1. Basic Magnesium Plant. Drilled unused well, diameter 8 inches. Highest water level 136.82 below lsd, Mar. 15, 1954; lowest 137.72 below lsd, Mar. 20, 1950. Records available: 1949-55. Mar. 3, 136.90; Sept. 30, 137.02.

Nye County

Amargosa Desert

S16/48-36aa1. Gordon Bettles. Drilled irrigation well, diameter 16 inches, reported depth 165 feet. Highest water level 62.88 below lsd, May 7, 1952; lowest 63.18 below lsd, July 26, 1954. Records available: 1952-55.

S16/48-36aa1--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 11, 1952	63.00	Dec. 9, 1952	63.07	Jan. 23, 1954	63.10	Oct. 23, 1954	63.06
May 7	62.88	Jan. 26, 1953	63.15	July 26	63.18	Feb. 12, 1955	63.09

S16/48-36dd1. Gordon Bettles. Drilled unused well, diameter 16 inches, depth 62 feet. Highest water level 49.58 below lsd, May 7, 1952; lowest 50.05 below lsd, July 26, 1954. Records available: 1952-55.

May 7, 1952	49.58	Jan. 26, 1953	49.85	Aug. 25, 1953	49.86	July 26, 1954	50.05
Sept. 9	49.82	Mar. 24	49.79	Jan. 23, 1954	49.90	Oct. 22	49.94
Dec. 9	49.85	July 23	49.85	Mar. 15	49.84	Feb. 12, 1955	49.89

S16/49-18dc1. U. S. Government. Drilled observation well, diameter 12 inches, depth 348 feet. Records available: 1953, 1955. Aug. 27, 1953, 103.98; Feb. 12, 1955, 103.10.

S16/49-31ba1. Gordon Bettles. Drilled unused well, diameter 16 inches, depth 162 feet. Highest water level 66.10 below lsd, May 7, 1952; lowest 66.74 below lsd, Dec. 6, 1955. Records available: 1952-55.

Jan. 1, 1952	66.60	Oct. 9, 1952	66.28	Aug. 25, 1953	66.47	Feb. 12, 1955	66.37
Feb. 11	66.14	Jan. 26, 1953	66.60	Jan. 23, 1954	66.38	July 18	66.73
May 7	66.10	Mar. 24	66.20	Mar. 16	66.27	Dec. 6	66.74
Sept. 9	66.65	July 23	66.44	Oct. 23	66.37		

Pahrump Valley

[See also Clark County]

S19/53-9bbc1. Van Horn & Stringfellow. Drilled irrigation well, diameter 14 inches, depth 746 feet, cased to 526. Highest water level 83.50 below lsd, July 2, 1947; lowest 91.77 below lsd, Sept. 21, 1953. Records available: 1947-53, 1955. Feb. 11, 88.20.

S19/53-10cbb1. Dickey & Harris. Drilled unused well, diameter 18 inches, depth 250 feet, casing removed. Highest water level 90.32 below lsd, Apr. 1, 1947; lowest 97.60 below lsd, Oct. 14, 1955. Records available: 1946-55.

Jan. 13	96.20	Apr. 15	96.40	July 15	97.00	Oct. 14	97.60
Feb. 13	96.40	May 16	96.60	Aug. 15	97.10	Nov. 13	97.37
Mar. 15	96.37	June 15	96.80	Sept. 15	97.40	Dec. 11	97.35

S19/53-15bd1. Larson Bros. (State Engineer No. 29). Drilled domestic well, diameter 16 inches, depth 64 feet. Highest water level 58.01 below lsd, June 3, 1947; lowest 69.70 below lsd, Dec. 11, 1955. Records available: 1947-55.

Jan. 13	67.64	Apr. 15	67.90	July 19	68.75	Oct. 14	69.30
Feb. 13	67.66	May 15	68.20	Aug. 15	68.70	Nov. 13	69.45
Mar. 13	67.60	June 15	68.45	Sept. 15	69.20	Dec. 11	69.70

S19/53-22acd1. Stavers (State Engineer No. 31). Drilled domestic and irrigation well, diameter 16 inches, reported depth 540 feet, cased to 280, perforations 112-124, cemented at 280. Highest water level 41.27 below lsd, Apr. 1, 1947; lowest 61.30 below lsd, Nov. 13, 1955. Records available: 1947-55.

Jan. 13	57.10	Apr. 13	59.60	July 15	60.38	Oct. 12	61.25
Feb. 13	58.60	May 16	59.90	Aug. 15	60.60	Nov. 13	61.30
Mar. 15	59.58	June 15	60.00	Sept. 15	60.95	Dec. 11	59.40

S19/53-27aaa1. Emma L. Oeder (State Engineer No. 55). Drilled unused well, diameter 10 inches, reported depth 425 feet, cased to 101. Highest water level 41.95 below lsd, May 19, 1948; lowest 71.0 below lsd, Sept. 3-5, 13, 1955. Records available: 1948-55.

Daily noon water level from recorder graph*

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	69.1	70.6	.....	64.9	61.2
2	.....	69.0	70.6	.....	68.7	61.1
3	.....	69.2	71.0	.....	65.0	61.1
4	.....	69.3	71.0	.....	68.6	61.1
5	.....	69.5	71.0	.....	69.0	61.0
6	.....	69.0	69.4	.....	69.0	60.8
7	.....	69.7	68.1	.....	69.0	60.9
8	.....	69.7	67.6	.....	69.1	60.6
9	.....	67.7	67.5	.....	69.1	60.5
10	.....	67.1	68.3	.....	64.1	60.5

S19/53-27aaa1--Continued.

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
11	.....	67.0	70.1	.....	67.4	60.3
12	.....	66.9	70.7	.....	67.8	60.2
13	.....	66.9	71.0	.....	67.9	60.2
14	.....	66.3	68.4	61.3	66.8	60.4
15	.....	66.3	64.5	61.0	68.0	60.4
16	.....	66.5	66.8	60.9	68.3	60.3
17	.....	68.6	65.6	60.6	67.9	60.3
18	.....	67.1	62.4	60.3	66.9	60.2
19	.....	67.0	64.2	60.2	67.4	59.3
20	.....	69.6	.....	60.2	67.0	60.3
21	.....	70.1	.....	60.0	65.1	60.2
22	69.60	67.9	.....	60.0	64.7	60.1
23	66.60	67.4	.....	59.9	62.6	60.1
24	66.30	70.1	.....	59.7	61.9	59.9
25	66.30	70.5	.....	62.6	61.4	59.9
26	66.20	70.6	.....	63.9	61.6	59.7
27	66.20	70.7	.....	63.3	61.6	59.7
28	66.10	69.9	.....	62.6	61.5	59.6
29	66.00	67.5	.....	63.9	61.4	59.6
30	65.90	69.3	.....	65.2	61.4	59.6
31	66.10	69.6		67.8		59.6

* No record for January, February, March, April, May, and June.

S19/53-32aaa1. Shurtliff (State Engineer No. 57). Drilled unused well, diameter 16 inches, depth 300 feet. Highest water level 23.86 below lsd, Dec. 30, 1955; lowest 26.89 below lsd, Feb. 17, 1949. Records available: 1949-55.

Daily noon water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	24.67	24.54	24.42	24.31	24.23	24.16	24.15	24.28	24.17	24.09	24.04	23.93
2	24.66	24.53	24.40	24.28	24.23	24.19	24.15	24.26	24.17	24.09	24.05	23.95
3	24.66	24.53	24.40	24.29	24.26	24.19	24.15	24.26	24.16	24.08	24.04	23.96
4	24.67	24.53	24.39	24.28	24.24	24.17	24.16	24.28	24.16	24.08	24.04	23.96
5	24.66	24.52	24.39	24.27	24.23	24.17	24.17	24.28	24.17	24.09	24.03	23.95
6	24.65	24.53	24.42	24.27	24.22	24.16	24.16	24.27	24.16	24.10	24.03	23.93
7	24.64	24.52	24.40	24.27	24.21	24.17	24.16	24.26	24.15	24.09	24.04	23.96
8	24.64	24.50	24.38	24.26	24.21	24.17	24.16	24.25	24.14	24.08	24.03	23.94
9	24.63	24.49	24.36	24.25	24.21	24.16	24.16	24.26	24.15	24.07	24.01	23.94
10	24.63	24.52	24.36	24.23	24.21	24.16	24.16	24.25	24.15	24.06	23.99	23.94
11	24.63	24.49	24.36	24.25	23.21	24.16	24.17	24.24	24.15	24.08	24.00	23.93
12	24.64	24.49	24.37	24.25	24.20	24.17	24.18	24.23	24.14	24.08	24.01	23.92
13	24.62	24.49	24.36	24.23	24.19	24.17	24.20	24.23	24.14	24.07	24.01	23.92
14	24.61	24.47	24.35	24.21	24.21	24.18	24.18	24.23	24.13	24.06	24.01	23.92
15	24.61	24.47	24.36	24.22	24.21	24.17	24.19	24.22	24.12	24.06	24.03	23.90
16	24.60	24.46	24.35	24.21	24.19	24.17	24.18	24.22	24.12	24.06	23.98	23.90
17	24.61	24.45	24.35	24.20	24.20	24.18	24.18	24.22	24.12	24.05	24.01	23.90
18	24.59	24.47	24.35	24.20	24.19	24.17	24.19	24.22	24.13	24.06	24.03	23.91
19	24.59	24.46	24.34	24.23	24.18	24.16	24.19	24.21	24.13	24.06	24.00	23.90
20	24.60	24.46	24.33	24.22	24.17	24.17	24.19	24.20	24.12	24.06	23.98	23.90
21	24.60	24.45	24.36	24.21	24.17	24.18	24.19	24.20	24.11	24.06	24.01	23.88
22	24.59	24.44	24.35	24.21	24.18	24.17	24.19	24.20	24.12	24.06	24.00	23.87
23	24.59	24.45	24.32	24.23	24.18	24.16	24.21	24.19	24.10	24.07	24.01	23.90
24	24.58	24.43	24.32	24.21	24.18	24.16	24.23	24.19	24.11	24.06	24.00	23.91
25	24.57	24.42	24.31	24.21	24.18	24.16	24.25	24.19	24.12	24.04	23.99	23.89
26	24.57	24.42	24.31	24.21	24.18	24.17	24.28	24.19	24.12	24.05	23.99	23.89
27	24.57	24.41	24.31	24.22	24.20	24.18	24.28	24.18	24.11	24.07	23.99	23.87
28	24.56	24.44	24.32	24.20	24.18	24.17	24.27	24.18	24.10	24.05	23.97	23.89
29	24.55		24.32	24.19	24.16	24.17	24.27	24.18	24.10	24.04	23.95	23.87
30	24.54		24.31	24.20	24.15	24.17	24.27	24.18	24.09	24.03	23.95	23.86
31	24.55		24.33		24.15		24.28	24.18		24.02		23.88

S19/53-33daa1. Hughes & Harmer (State Engineer No. 56). Drilled unused artesian well, diameter 12 inches. Highest water level 56.65 above lsd, June 17, 1948; lowest 23.55 above lsd, Feb. 11, 1955. Records available: 1948-53, 1955. Feb. 11, +23.55.

S20/53-5bc1. Owner unknown (State Engineer No. 34). Drilled unused well, diameter 6 inches, depth 471 feet. Highest water level 4.82 below lsd, Apr. 1, 1947; lowest 8.63 below lsd, Feb. 15, 1950. Records available: 1947-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	8.57	Apr. 16	8.30	July 15	8.55	Oct. 14	8.63
Feb. 28	8.20	May 16	8.35	Aug. 15	8.97	Nov. 13	8.55
Mar. 15	8.23	June 15	8.43	Sept. 15	8.65	Dec. 11	8.65

S20/53-20aaa1. Horgan. Dug domestic well, size 3 by 5 feet, depth 18 feet. Highest water level 14.30 below lsd, May 28, 1953; lowest 18.00 below lsd, Dec. 11, 1955. Records available: 1949-55.

Jan. 13	17.50	Apr. 15	16.50	July 15	16.75	Oct. 14	17.75
Feb. 13	17.60	May 16	16.40	Aug. 15	17.08	Nov. 13	17.45
Mar. 15	16.75	June 13	16.55	Sept. 15	17.18	Dec. 11	18.00

S20/53-24caa1. Ray Thomas (State Engineer No. 40). Drilled unused artesian well, diameter 10 inches, depth 570 feet. Highest water level 25.10 below lsd, Mar. 17, 1945; lowest 47.33 below lsd, Sept. 14, 1955. Records available: 1945, 1948-55.

Daily noon water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	39.79	39.64	41.56	44.10	45.06	.....	45.35	46.00	47.00	43.30	41.41	40.57
2	39.82	39.64	41.78	44.14	45.09	.....	45.43	46.07	47.03	43.25	41.41	40.58
3	39.85	39.65	42.09	43.69	45.13	.....	.....	46.12	47.06	43.18	41.33	40.62
4	39.81	39.67	42.27	43.89	45.02	.....	.....	46.17	47.10	43.14	41.28	40.62
5	39.76	39.65	42.48	44.03	44.84	.....	.....	46.07	47.12	43.11	41.23	40.59
6	39.80	39.65	42.67	44.30	44.76	.....	.....	46.04	47.14	43.10	41.19	40.53
7	39.78	39.63	42.78	44.41	44.70	.....	.....	.....	47.16	43.01	41.17	40.58
8	39.78	39.65	42.83	44.49	44.67	.....	.....	.....	47.17	42.92	41.16	40.57
9	39.74	39.71	42.85	44.57	44.64	.....	.....	46.16	47.19	42.95	41.06	40.51
10	39.82	.....	42.82	44.61	44.59	.....	.....	46.26	47.25	42.88	40.99	40.55
11	39.80	39.58	43.02	44.64	44.54	.....	.....	46.31	47.28	42.87	40.94	40.53
12	39.74	39.56	43.14	43.73	44.48	.....	42.87	46.43	47.29	42.70	40.97	40.48
13	39.76	39.58	43.05	43.13	44.32	.....	42.90	46.52	47.31	42.67	40.93	40.46
14	39.73	39.57	43.17	43.99	44.28	.....	42.90	46.58	47.33	42.44	40.88	40.48
15	39.70	39.56	43.29	44.24	44.40	.....	42.90	46.63	46.75	42.33	40.91	40.46
16	39.77	39.55	43.34	44.49	.....	.....	42.94	46.59	.....	42.23	40.87	40.42
17	39.68	39.53	43.43	44.60	.....	.....	43.88	46.68	.....	42.15	40.83	40.42
18	39.72	39.63	43.56	44.72	.....	.....	44.69	46.72	.....	42.13	40.89	40.42
19	39.74	39.60	43.62	44.65	.....	.....	45.00	46.62	.....	42.13	40.84	40.43
20	39.72	39.58	42.70	44.79	.....	.....	45.24	46.58	.....	42.18	40.78	40.43
21	39.70	39.57	42.78	44.86	.....	.....	45.41	46.73	.....	42.20	40.75	40.40
22	39.70	39.52	43.43	44.90	.....	.....	45.50	46.77	.....	42.20	40.80	40.34
23	39.68	39.56	43.67	44.96	.....	.....	45.62	46.82	.....	.....	40.75	40.31
24	39.67	39.53	43.78	44.98	.....	.....	45.67	46.77	.....	.....	40.80	40.36
25	39.71	39.85	43.85	45.01	.....	.....	45.74	46.71	.....	.....	40.74	40.37
26	39.68	40.98	43.92	45.05	.....	.....	45.82	46.67	.....	.....	40.72	40.32
27	39.66	41.24	43.97	45.09	.....	.....	45.85	46.66	.....	.....	40.70	40.28
28	39.65	41.47	44.02	44.83	.....	.....	45.35	46.56	.....	.....	40.66	40.32
29	39.64		44.00	44.82	.....	45.04	45.89	46.88	43.42	.....	40.61	40.30
30	39.65		44.16	44.98	.....	45.24	45.89	46.94	43.36	41.46	40.63	40.30
31	39.65		43.76		.....		45.94	46.98		41.42		40.27

S21/53-24aa1. Townsend (State Engineer No. 42). Drilled unused well, diameter 10 inches, depth 120 feet. Highest water level 21.27 below lsd, May 21, 1952; lowest 22.72 below lsd, Nov. 29, 1949. Records available: 1947-53. No measurement made in 1955.

S21/54-15aca1. Rooker (State Engineer No. 23). Drilled unused artesian well, diameter 20 to 14 inches, depth 506 feet, 20-inch casing to 130. Highest water level 27.42 below lsd, Apr. 1, 1947; lowest 39.20 below lsd, Oct. 13, 1954. Records available: 1946-55. Feb. 10, 35.47.

S21/54-19dd2. Turner (State Engineer No. 46). Drilled unused well, diameter 10 inches, depth 76 feet. Highest water level 35.12 below lsd, May 1, 1955; lowest 37.86 below lsd, Dec. 13, 1952. Records available: 1947-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	35.45	May 1	35.12	July 31	35.62	Oct. 30	35.83
Feb. 28	35.15	31	35.25	Aug. 31	35.70	Nov. 27	35.85
Mar. 31	35.13	June 30	35.45	Sept. 29	35.75	Dec. 26	35.65

S21/54-28bd1. Bowman (State Engineer No. 50). Drilled unused well, diameter 10 inches, depth 140 feet. Highest water level 18.65 below lsd, Nov. 18, 1948; lowest 20.93 below lsd, Aug. 1, 1955. Records available: 1947-55.

Daily noon water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	20.52	20.51	20.58	20.68	20.68	20.67	20.72	20.93	20.86	20.71	20.66	20.49
2	20.51	20.50	20.57	20.65	20.69	20.69	20.71	20.92	20.84	20.70	20.70	20.52
3	20.57	20.50	20.56	20.66	20.69	20.69	20.72	20.89	20.84	20.68	20.71	20.56
4	20.61	20.51	20.56	20.64	20.69	20.68	20.73	20.92	20.83	20.64	20.70	20.57
5	20.58	20.50	20.65	20.66	20.69	20.67	20.74	20.91	20.85	20.66	20.69	20.58
6	20.54	20.54	20.65	20.68	20.70	20.65	20.74	20.92	20.85	20.70	20.68	20.57
7	20.53	20.54	20.62	20.66	20.69	20.68	20.77	20.92	20.80	20.69	20.69	20.60
8	20.52	20.50	20.62	20.67	20.75	20.70	20.76	20.89	20.79	20.68	20.71	20.60
9	20.49	20.49	20.60	20.66	20.72	20.68	20.76	20.91	20.81	20.68	20.67	20.61
10	20.49	20.54	20.60	20.62	20.69	20.65	20.77	20.92	20.82	20.67	20.61	20.63
11	20.54	20.55	20.61	20.66	20.65	20.66	20.78	20.88	20.82	20.68	20.59	20.63
12	20.51	20.52	20.59	20.67	20.63	20.66	20.83	20.85	20.82	20.68	20.63	20.62
13	20.47	20.52	20.58	20.65	20.61	20.65	20.82	20.89	20.81	20.67	20.65	20.62
14	20.47	20.52	20.57	20.61	20.65	20.68	20.83	20.88	20.81	20.65	20.64	20.63
15	20.44	20.51	20.60	20.63	20.65	20.68	20.82	20.89	20.76	20.66	20.69	20.61
16	20.44	20.51	20.60	20.66	20.65	20.69	20.80	20.87	20.78	20.66	20.65	20.58
17	20.44	20.49	20.61	20.65	20.65	20.70	20.79	20.89	20.77	20.66	20.67	20.61
18	20.46	20.53	20.61	20.66	20.63	20.70	20.79	20.87	20.78	20.66	20.70	20.62
19	20.52	20.51	20.60	20.67	20.62	20.71	20.81	20.89	20.77	20.67	20.65	20.63
20	20.55	20.55	20.67	20.65	20.61	20.70	20.80	20.89	20.73	20.67	20.64	20.62
21	20.56	20.56	20.65	20.61	20.63	20.73	20.83	20.90	20.74	20.67	20.64	20.59
22	20.56	20.52	20.62	20.66	20.63	20.73	20.83	20.87	20.75	20.70	20.57	20.55
23	20.55	20.59	20.64	20.67	20.60	20.71	20.85	20.88	20.73	20.72	20.50	20.59
24	20.52	20.57	20.65	20.65	20.62	20.71	20.83	20.86	20.75	20.72	20.42	20.55
25	20.55	20.55	20.65	20.65	20.62	20.72	20.82	20.85	20.75	20.69	20.36	20.63
26	20.55	20.55	20.68	20.68	20.63	20.70	20.89	20.87	20.76	20.64	20.45	20.63
27	20.52	20.56	20.66	20.70	20.64	20.73	20.91	20.85	29.75	20.69	20.45	20.61
28	20.52	20.60	20.64	20.66	20.60	20.74	20.91	20.85	20.74	20.69	20.46	20.62
29	20.48		20.67	20.68	20.60	20.72	20.91	20.85	20.74	20.68	20.46	20.62
30	20.50		20.68	20.67	20.62	20.72	20.92	20.87	20.72	20.66	20.49	20.63
31	20.50		20.69		20.62		20.92	20.87		20.62		20.63

Ralston Valley

5/44-32bb1. Owner unknown. Dug unused water-table well, depth 18 feet, cribbed with wood. Highest water level 12.17 below lsd, May 12, 1948; lowest 12.85 below lsd, Sept. 11, 1951. Records available: 1948-55. Mar. 3, 11.98; Sept. 13, 12.48.

White River Valley
[See also White Pine County]

9/61-7b1. Lloyd Sorenson. Dug stock water-table well, diameter 4 feet, depth 43 feet. Highest water level 30.24 below lsd, May 22, 1952; lowest 31.1 below lsd, Sept. 15, 1945. Records available: 1945, 1947-55. Sept. 13, 30.42.

10/60-36b1. U. S. Bureau of Land Management. Drilled stock well, diameter 8 inches, reported depth 80 feet. Highest water level 41.07 below lsd, Sept. 14, 1954; lowest 41.62 below lsd, Sept. 18, 1953. Records available: 1947-55. Sept. 13, 41.21.

Ormsby County

Eagle Valley

15/20-8b10. M. W. Johnstone. Dug unused water-table well, diameter 5 feet, depth 18 feet, cased with brick. Highest water level 0.98 below lsd, Mar. 13, 1952; lowest 10.95 below lsd, Sept. 10, 1953. Records available: 1946, 1948-55. Mar. 9, 6.59; Sept. 27, 8.69.

15/20-8c1. J. Harrison. Dug domestic water-table well, diameter 36 inches, depth 10 feet, cased to 10. Highest water level 2.14 below lsd, Mar. 13, 1952; lowest 7.36 below lsd, Sept. 10, 1953. Records available: 1946, 1948-55. Mar. 9, 4.33; Sept. 27, 6.75.

15/20-9a7. Jesse James. Drilled unused well, diameter 6 inches, depth 63 feet. Highest water level 9.62 below lsd, Mar. 13, 1952; lowest 14.14 below lsd, Sept. 27, 1955. Records available: 1948-55. Sept. 27, 14.14.

15/20-17a1. Simone Lompa & Rinaldo Cremetti. Drilled unused well, diameter 10 inches, reported depth 590 feet, reported cased to 590. Highest water level 3.91 below lsd, Mar. 23, 1954; lowest 14.80 below lsd, Sept. 27, 1955. Records available: 1946, 1948-55. Sept. 27, 14.80.

15/20-17c1. State Childrens' Home. Drilled irrigation well, diameter 18 to 12 to 10 inches, depth 595 feet, cased to 595. Highest water level 1.84 below lsd, Mar. 13, 1952; lowest 12.77 below lsd, Sept. 18, 1952. Records available: 1946, 1948-52, 1955. Mar. 8, 5.24.

Pershing County

Buena Vista Valley

30/35-4c1. Gallio. Dug stock water-table well, size 4 by 4 feet, depth 46 feet, cribbed with wood. Highest water level 24.26 below lsd, Sept. 9, 1952; lowest 39.55 below lsd, Mar. 14, 1949. Records available: 1947-55. Sept. 23, 37.20.

30/35-27b1. Neill Talcott. Drilled well, diameter 8 inches, reported depth 100 feet, cased to 100, perforations 25-100. Highest water level 21.91 below lsd, Jan. 7, 1948; lowest 29.15 below lsd, Sept. 23, 1955. Records available: 1948-50, 1952-55. Mar. 17, 28.14; Sept. 23, 29.15.

Grass Valley
[See also Humboldt County]

32/38-18b1. U. S. Bureau of Land Management. Drilled stock well, diameter 6 inches, depth 125 feet, reported cased to 130. Land-surface datum is 4,529 feet above msl. Highest water level 75.98 below lsd, Sept. 22, 1955; lowest 76.48 below lsd, Sept. 20, 1951. Records available: 1946-55. Mar. 17, 76.03; Sept. 22, 75.98.

32/38-36b1. Fred Kerlee. Drilled unused well, diameter 12 inches, reported depth 110 feet, cased to 100, perforations 65-100. Land-surface datum is 4,604 feet above msl. Highest water level 78.10 below lsd, Oct. 25, 1947; lowest 80.53 below lsd, Sept. 22, 1955. Records available: 1947-55. Mar. 18, 80.31; Sept. 22, 80.53.

33/37-24a1. Lloyd Sweeney. Dug and drilled unused well, size 6 by $7\frac{1}{2}$ feet to 11 feet, 10 inches to 63 feet. Land-surface datum is about 4,400 feet above msl. Highest water level 1.80 below lsd, Apr. 24, 1946; lowest 14.74 below lsd, Sept. 22, 1955. Records available: 1945-55. Mar. 17, 13.53; Sept. 22, 14.74.

33/37-24d1. Lloyd Sweeney. Drilled irrigation well, diameter 14 inches, depth 73 feet. Land-surface datum is 4,414 feet above msl. Highest water level 9.99 below lsd, Apr. 24, 1946; lowest 16.73 below lsd, Sept. 22, 1955. Records available: 1945-55. Mar. 17, 15.97; Sept. 22, 16.73.

33/38-32b1. U. S. Bureau of Land Management. Drilled stock well, diameter 6 inches, depth 54 feet. Land-surface datum is 4,431 feet above msl. Highest water level 28.17 below lsd, Aug. 18, 1945; lowest 31.08 below lsd, Sept. 20, 1951. Records available: 1945-55. Sept. 21, 30.52.

34/37-22a1. J. Ballard. Drilled unused well, diameter 6 inches, depth 50 feet. Land-surface datum is 4,329 feet above msl. Highest water level 9.85 below lsd, Mar. 19, 1947; lowest 12.97 below lsd, Sept. 20, 1951. Records available: 1946-55. Mar. 17, 11.04; Sept. 23, 12.53.

Humboldt River Valley
[See also Elko, Humboldt, and Lander Counties]

29/33-33c1. Southern Pacific Co. Drilled industrial and municipal well, diameter 12 inches, reported depth 432 feet. Land-surface datum is 4,264 feet above msl. Highest water level 65.16 below lsd, May 19, 1947; lowest 73.30 below lsd, Oct. 21, 1953. Records available: 1945-54. No measurement made in 1955.

32/33-28d1. Cliff and Cecil Campbell. Humboldt. Drilled irrigation well, diameter 14 inches, reported depth 288 feet, reported cased to 236. Highest water level 34.37 below lsd, Apr. 26, 1950; lowest 35.72 below lsd, May 15, 1952. Records available: 1950-54. No measurement made in 1955.

Washoe County

Steamboat Valley

17/20-5d1. Feretto Estate. Dug domestic water-table well in weathered andesite, depth 17 feet. Highest water level 10.20 below lsd, Dec. 30, 1955; lowest 16.98 below lsd, Dec. 23, 1946. Records available: 1942-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	16.00	June 27	14.60	Sept. 30	16.59	Dec. 1	16.00
Mar. 22	15.97	July 28	15.35	Nov. 1	16.26	30	10.20
June 1	14.17	Sept. 1	16.35				

Sun Valley

20/20-17ba1. H. L. Gepford. Drilled unused well, diameter 6 inches, depth 187 feet. Highest water level 88.12 below lsd, Feb. 2, 1948; lowest 96.44 below lsd, Sept. 30, 1955. Records available: 1948-55. Mar. 22, 89.40; Sept. 30, 96.44.

20/20-18aa1. H. L. Gepford. Drilled unused well, diameter 6 inches, reported depth 164 feet. Highest water level 29.09 below lsd, Sept. 18, 1948; lowest 35.10 below lsd, Mar. 22, 1955. Records available: 1948-55. Mar. 22, 35.10.

20/20-30ab2. Frank Nelson. Drilled domestic well, diameter 6 inches, depth 50 feet. Highest water level 13.53 below lsd, June 24, 1952; lowest 20.20 below lsd, Oct. 23, 1950. Records available: 1948-55. Mar. 22, 18.13; Sept. 30, 19.40.

Truckee Meadows

18/19-1cd1. L. H. Pickens. Drilled domestic well, diameter 6 inches, reported depth 110 feet. Land-surface datum is 4,585.73 feet above msl. Highest water level 11.84 below lsd, Oct. 18, 1949; lowest 20.64 below lsd, May 27, 1949. Records available: 1948-55.

Jan. 27	19.11	June 1	18.30	Sept. 1	15.12	Nov. 1	14.12
Mar. 22	20.47	27	16.77	30	14.66	Dec. 1	16.04
Apr. 29	20.52	July 28	15.57				

18/19-12ad1. F. P. Quinn. Drilled unused well, diameter 6 inches, depth 26 feet. Land-surface datum is 4,580.1 feet above msl. Highest water level 14.18 below lsd, May 25, 1949; lowest dry, every spring. Records available: 1949-50, 1952-53. No measurement made in 1955.

18/19-12ad2. F. P. Quinn. Drilled domestic and irrigation well, diameter 6 inches, reported depth 135 feet. Land-surface datum is 4,580.1 feet above msl. Highest water level 15.35 below lsd, May 12, 1949; lowest 38.99 below lsd, Mar. 24, 1954. Records available: 1949-55. Mar. 22, 38.46; July 28, 33.27.

18/19-12bd2. Mrs. B. Menzi. Drilled domestic well, diameter 6 inches, depth 86 feet. Land-surface datum is 4,600 feet above msl. Highest water level 26.28 below lsd, Oct. 18, 1949; lowest 35.27 below lsd, Mar. 24, 1954. Records available: 1949-55. Mar. 22, 35.14; July 28, 33.16.

18/19-12cb1. Godschalk. Drilled domestic well, diameter 6 inches, reported depth 239 feet. Land-surface datum is 4,721 feet above msl. Highest water level 127.64 below lsd, Nov. 9, 19, 25, 27, 1949; lowest 140.97 below lsd, Apr. 29, 1954. Records available: 1949-55. Mar. 22, 134.01; July 28, 132.40.

18/19-12da1. W. W. Caffrey. Drilled domestic and stock well, diameter 8 inches, reported depth 100 feet. Land-surface datum is 4,604.5 feet above msl. Highest water level 13.10 below lsd, Sept. 12, 1950; lowest 28.35 below lsd, Mar. 14, 1950. Records available: 1949-50, 1953, 1955. Sept. 30, 13.36.

18/19-13aa1. W. W. Caffrey. Dug domestic water-table well, diameter 4 feet, depth 39 feet. Land-surface datum is 4,651.2 feet above msl. Highest water level 3.94 below lsd, Sept. 12, 1949; lowest 31.05 below lsd, Apr. 18, 1950. Records available: 1949-53, 1955. Sept. 30, 6.27.

18/19-13ab1. Kendrick Johnson. Dug irrigation water-table well, depth 11 feet. Highest water level 1.90 below lsd, Jan. 18, 1950; lowest 4.62 below lsd, Apr. 18, 1950. Records available: 1949-51, 1953-54. No measurement made in 1955.

18/20-7bc1. Paul Faulstick. Drilled domestic well, diameter 6 inches, reported depth 118 feet. Land-surface datum is 4,558.41 feet above msl. Highest water level 6.09 below lsd, Sept. 25, 1951; lowest 15.06 below lsd, Mar. 22, 1955. Records available: 1949-55. Mar. 22, 15.06; July 28, 8.50.

18/20-7cb1. Emery Kery. Drilled domestic well, diameter 6 inches, reported depth 109 feet. Land-surface datum is 4,589.95 feet above msl. Highest water level 19.69 below lsd, Dec. 7, 1948; lowest 32.60 below lsd, Mar. 22, 1955. Records available: 1948-55. Jan. 27, 29.85; Mar. 22, 32.60; Apr. 29, 31.97; June 1, 26.15; June 27, 25.38.

18/20-7dc1. Mrs. Martin Estate. Sierra Manor subdivision. Drilled unused well, diameter 12 inches, reported depth 203 feet. Land-surface datum is 4,568 feet above msl. Highest water level 8.12 below lsd, Sept. 25, 1951; lowest 15.88 below lsd, Apr. 18, 1950. Records available: 1949-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	13.16	June 1	13.85	Sept. 1	12.69	Dec. 1	11.07
Mar. 22	14.70	27	13.04	30	10.65	30	11.02
Apr. 29	15.49	July 28	12.68	Nov. 1	10.14		

18/20-20a1. Louis Damonte. Dug unused water-table well, diameter 36 inches, depth 23 feet. Highest water level 1.83 below lsd, Sept. 19, 1952; lowest 11.90 below lsd, Mar. 29, 1949. Records available: 1942-55.

Jan. 27	7.55	June 1	6.08	Sept. 1	6.19	Dec. 1	6.58
Mar. 22	9.10	27	5.72	30	6.32	30	5.82
Apr. 29	7.66	July 28	7.44	Nov. 1	5.85		

19/19-11b1. Reno High School. Drilled unused water-table well, diameter 4 inches, depth 49 feet. Highest water level 28.48 below lsd, Aug. 3, 1949; lowest 33.10 below lsd, Feb. 28, 1950. Records available: 1949-55.

Jan. 27	32.60	June 1	30.58	Sept. 1	29.29	Nov. 1	30.12
Mar. 22	32.78	27	29.38	30	29.45	Dec. 1	30.99
Apr. 29	32.82	July 28	29.24				

19/19-16c1. Chrissie Caughlin. Dug unused well, diameter 4 feet, depth 45 feet. Highest water level 35.74 below lsd, June 24, 1952; lowest dry, Mar. 22, 1955. Records available: 1942-55.

Jan. 27	41.50	June 1	37.22	Sept. 1	39.01	Nov. 1	40.34
Mar. 22	(f)	27	39.04	30	39.50	Dec. 1	41.11
Apr. 29	39.72						

f Dry.

White Pine County

Lake Valley
[See also Lincoln County]

10/65-36d2. McCulloch. Drilled unused well, diameter 10 inches, depth 58 feet. Highest water level 22.53 below lsd, Mar. 21, 1949; lowest 28.74 below lsd, Sept. 19, 1949. Records available: 1947-55. Sept. 14, 26.14.

Newark Valley

18/55-31d1. Owner unknown. Dug stock water-table well, diameter 36 inches, depth 43 feet. Highest water level 33.19 below lsd, Sept. 15, 1954, Sept. 15, 1955; lowest 34.65 below lsd, Dec. 21, 1946. Records available: 1946-55. Mar. 9, 33.20; Sept. 15, 33.19.

19/56-30d2. Don Eldridge. Dug stock water-table well, diameter 42 inches, depth 37 feet, cribbed with concrete. Highest water level 31.63 below lsd, Oct. 1, 1952; lowest 33.38 below lsd, June 19, 1950. Records available: 1948-55. Sept. 19, 31.90.

20/55-10d1. U. S. Bureau of Land Management. Dug stock water-table well, diameter 36 inches, depth 22 feet. Highest water level 8.08 below lsd, Mar. 24, 1949; lowest 9.43 below lsd, Sept. 19, 1955. Records available: 1948-55. Sept. 19, 9.43.

21/55-9b1. R. W. Hooper. Dug domestic water-table well, diameter 5 feet, depth 34 feet. Highest water level 11.75 below lsd, Mar. 24, 1949; lowest 19.15 below lsd, Sept. 19, 1950, Sept. 15, 1953. Records available: 1948-55. Sept. 19, 19.11.

Spring Valley

13/67-8d1. A. Schaurman. Dug stock water-table well, diameter 36 inches, reported depth 45 feet. Highest water level 11.70 below lsd, Mar. 29, 1949; lowest 15.11 below lsd, Sept. 10, 1952. Records available: 1947-55. Sept. 14, 14.42.

15/66-13d1. J. P. Johanson. Drilled domestic well, diameter 6 inches, depth 82 feet. Highest water level 13.68 below lsd, Sept. 10, 1952; lowest 22.15 below lsd, Sept. 12, 1951. Records available: 1947-55. Mar. 9, 19.40; Sept. 14, 20.78.

17/68-6d1. U. S. Bureau of Land Management. Dug stock water-table well, diameter 4 feet, depth 28 feet. Highest water level 21.69 below lsd, Mar. 18, 1950; lowest 24.68 below lsd, Sept. 14, 1955. Records available: 1948-55. Mar. 9, 23.26; Sept. 14, 24.68.

18/68-31a1. Delbert Eldridge. Drilled irrigation well, diameter 10 to 6 inches, reported depth 220 feet. Highest water level 41.46 below lsd, Aug. 6, 1948; lowest 45.26 below lsd, Mar. 9, 1955. Records available: 1948-53, 1955. Mar. 9, 45.26.

Steptoe Valley

15/64-7a1. Lloyd Sorenson. Drilled irrigation well, diameter 16 inches, reported depth 200 feet. Highest water level 32.70 below lsd, Mar. 4, 1953; lowest 39.06 below lsd, Mar. 14, 1951. Records available: 1948-55. Sept. 19, 35.74.

16/63-1b1. Owner unknown. Drilled unused well, diameter 6 inches. Highest water level 59.10 below lsd, Mar. 10, 1954; lowest 68.58 below lsd, Sept. 12, 1951. Records available: 1949-55. Mar. 9, 63.10; Sept. 19, 62.93.

16/63-14a1. Bill Goodman. Drilled unused well, diameter 10 inches, reported depth 130 feet. Highest water level 21.56 below lsd, Mar. 4, 1953; lowest 28.54 below lsd, Oct. 3, 1949. Records available: 1947, 1949-55. Mar. 9, 22.27; Sept. 19, 22.70.

19/63-12a1. U. S. Geol. Survey. Drilled test well, diameter 12 to 8 inches, reported depth 915 feet, reported cased to 540. Highest water level 13.81 below lsd, Mar. 4, 1953; lowest 21.20 below lsd, July 5, 1949. Records available: 1949-55. Mar. 9, 14.58; Sept. 19, 14.67.

20/64-32c2. U. S. Geol. Survey. Drilled test well, diameter 10 inches, depth 110 feet, reported cased to bottom. Highest water level 13.45 below lsd, Mar. 9, 1955; lowest 14.56 below lsd, Sept. 30, 1952. Records available: 1918, 1949-55. Mar. 9, 13.45; Sept. 19, 14.38.

White River Valley
[See also Nye County]

11/61-35a1. Public domain. Drilled stock well, diameter 6 inches. Highest water level 10.49 below lsd, Sept. 18, 1953; lowest 13.08 below lsd, Sept. 11, 1951. Records available: 1947-55. Sept. 13, 12.60.

12/61-34a1. U. S. Bureau of Land Management. Drilled stock well, diameter 7 inches, depth 72 feet. Highest water level 57.65 below lsd, Dec. 15, 1949; lowest 60.55 below lsd, Sept. 13, 1955. Records available: 1947-55. Sept. 13, 60.55.

12/62-18d1. U. S. Geol. Survey. Drilled test and observation well, diameter 6 inches, depth 108 feet, cased to 105. Highest water level 43.56 below lsd, Sept. 9, 1952; lowest 50.73 below lsd, Dec. 18, 1947. Records available: 1947-53, 1955. Sept. 13, 47.30.

12/62-29a1. Jim Oxborrow. Drilled stock well, diameter 6 inches. Land-surface datum is 5,546.29 feet above msl. Highest water level 20.16 below lsd, July 17, 1947; lowest 29.08 below lsd, Sept. 13, 1950. Records available: 1947-55. Mar. 22, 24.00; Sept. 13, 25.01.

12/62-31d2. Carter Bros. Dug stock water-table well, size 4 by 4 feet, depth 16 feet. Land-surface datum is 5,516.25 feet above msl. Highest water level 11.78 below lsd, Dec. 2, 1947; lowest dry at 18.5, Mar. 22, 1955. Records available: 1947-55. Mar. 22, dry at 18.5; Sept. 13, 16.30.

12/62-33a5. Wayne Gardner. Lund. Dug domestic water-table well, size 4 by 4 feet, depth 31 feet. Land-surface datum is 5,578.45 feet above msl. Highest water level 19.39 below lsd, Nov. 6, 1947; lowest 25.44 below lsd, Mar. 15, 1950. Records available: 1947-55. Mar. 22, 23.36; Sept. 13, 23.90.

NEW MEXICO

By H. O. Reeder, R. W. Mower, L. J. Bjorklund, G. C. Doty, C. F. Berkstresser, J. W. Hood, F. E. Busch, and U. N. Benge

Scope of Water-Level Program

The program of measuring water levels in observation wells in New Mexico, mainly in areas where ground water is used for irrigation, was continued in 1955 as part of the investigations of ground-water resources in cooperation with the Office of the State Engineer. Investigations have been in progress in certain of the irrigated areas since 1925. The observation-well program has been expanded from time to time to obtain information on changes in water level in newly developed areas.

Measurements made in January or February (before irrigation begins) are used for a comparison of the year-to-year net changes in water level and in preparing the maps showing changes in the various areas. Annual measurements for previous years are used, as indicated for the individual areas, in preparing maps of changes in water level for longer periods.

Measurements were made in about 1,510 wells in January or February 1955 and in about 1,490 wells during the same period in 1956. Measurements made only once during the year have not been tabulated in the water-level reports since 1950. About 1,885 additional measurements, mostly bimonthly, were made in about 434 wells to determine the seasonal changes in water level. Recording gages were maintained on 32 of these wells to obtain detailed records of water-level fluctuations. Bimonthly measurements and data obtained from recording gages are tabulated in this report. All measurements, except the mean monthly and mean annual artesian heads in 7 wells in the Roswell basin, are given in feet above or below land-surface datum, which approximates the land surface at the well. The mean artesian heads are given in feet above mean sea level. Measurements of water level in observation wells in the Virden Valley in Hidalgo County were made by the Arizona office of the U. S. Geological Survey.

Acreage Irrigated

It is estimated that about 870,000 acres was irrigated in 1955 in New Mexico, an increase of about 50,000 acres from 1954. An estimated 450,000 acres was irrigated entirely with ground water, an increase of 50,000 acres from 1954; and about 135,000 acres with a combination of ground water and surface water.

Within the 11 ground-water basins declared by the State Engineer, an estimated 345,000 acres was irrigated entirely with ground water in 1955. About 30,000 acres received supplemental irrigation with ground water. The declared basins are the Roswell artesian basin in Chaves and Eddy Counties, the Carlsbad basin in Eddy County, the Hondo basin in Lincoln County, the Penasco basin in Otero and Chaves Counties, the Lea County basin, the Portales basin in Roosevelt County, the Estancia Valley basin in Torrance and Santa Fe Counties, the Hot Springs artesian basin in Sierra County, the Mimbres basin in Luna County, and the Animas Valley basin and the Virden Valley basin in Hidalgo County.

Other important areas irrigated by ground water, but not declared by the end of 1955, include the Clovis area in Curry County, the Causey-Lingo area in southern Roosevelt County, the Tularosa Valley and the Crow Flats area in Otero County, the Playas, San Simon, and Lordsburg Valleys in Hidalgo County, the Grants-Bluewater area in Valencia County, the House area in Quay County, areas in Union County, the Hondo Valley in Lincoln County, the Sunshine Valley in Taos County, and areas in the middle and lower Rio Grande Valley. Altogether, an estimated 105,000 acres in these areas, 74,000 of which was in Curry County, was irrigated entirely with ground water in 1955. Additionally, more than 100,000 acres received supplemental ground water, including areas in the lower and middle Rio Grande Valley, the Tularosa area in Otero County, and the upper Mimbres and Gila Valleys in Grant County.

Precipitation and Pumpage

The year 1955 was the sixth consecutive year of general below-normal precipitation. However, the distribution and timing of the precipitation were more favorable for agricultural purposes, making the 1955 growing season (April to September) one of the best in several years.

Although rainfall in most of New Mexico is seldom sufficient for successful farming, it does supplement water applied to crops by irrigation and thus may reduce the amount of water required from ground- and surface-water supplies. In 1955, precipitation in the State, as a whole, averaged 11.21 inches, about 2.6 inches below normal.

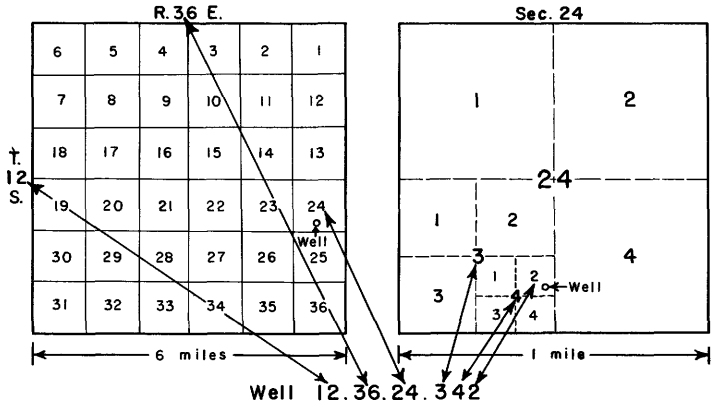
Because of more favorable precipitation, less ground water was applied to the land in 1955 than in 1954, so that there was a decrease in total pumpage in spite of the increase of irrigated acreage. It is estimated that in 1955 about 1,240,000 acre-feet of ground water was pumped.

Summary of Changes of Water Levels

Water levels continued to decline in 1955 in most areas where ground water is used for irrigation. In general, the declines were greater than in 1954 in the southwestern part of the State and smaller in the eastern and southeastern parts,where some rises were noted. Appreciable rises were noted in the Carlsbad area. Detailed discussions of the changes in water levels are included in this report under the various county headings.

Well-Numbering System

The system of numbering wells in New Mexico, used in all counties except for the thermal wells in the Truth or Consequences area in Sierra County, is based on the common subdivision of public lands into sections. The well number, in addition to designating the well, locates its position to the nearest 10-acre tract in the land net. The number is divided by periods into four segments. The first segment denotes the township north or south of the New Mexico base line; the second, the range east or west of the New Mexico principal meridian; and the third, the section. In a county such as Roosevelt County, where wells are situated both north and south of the base line, an N is added to the first segment of the well number if the well is north of the base line. Similarly, in a county where wells are both east and west of the meridian, an E is added to the second segment of the number if the well is east of the meridian. In counties entirely within one quadrant of the principal meridian and base line, the direction north or south of the base line or east or west of the meridian is not given. The fourth segment of the number, which consists of 3 digits, denotes the particular 10-acre tract in which the well is situated. For this purpose, the section is divided into quarters, numbered 1, 2, 3, and 4, in the normal reading order, for the northwest, northeast, southwest, and southeast quarters. The first digit of the fourth segment gives the quarter section. Similarly, the quarter section is divided into four 40-acre tracts numbered in the same manner, and the second digit denotes the 40-acre tract. Finally, the 40-acre tract is divided into four 10-acre tracts, and the third digit denotes the 10-acre tract. Thus, well 12.36.24.342 in Lea County is in the $NE\frac{1}{4}SE\frac{1}{4}SW\frac{1}{4}$ sec. 24, T. 12 S., R. 36 E. If a well cannot be located within a 10-acre tract, a zero is used as the third digit, and if it cannot be located within a 40-acre tract, zeros are used for both the second and third digits. If the well cannot be located more closely than the section, the fourth segment of the well number is omitted. When it becomes possible to locate more accurately a well in whose number zeros have been used, the proper digit or digits are substituted for the zeros. In Water-Supply Paper 911 and earlier reports, the digits corresponding to unknown 10-acre and 40-acre tracts were simply omitted; but this practice caused some confusion in cataloging the wells. In Water-Supply Paper 941 and subsequent reports, wells whose numbers end in one or two zeros correspond to wells whose numbers in earlier reports are the same except for the omission of such zeros. Letters a, b, c, ...are added to the last segment to designate the second, third, fourth, and succeeding wells recorded in the same 10-acre tract. The following diagrams show the method of numbering the tracts.



Water-Level Changes, Well Descriptions, and Water-Level Measurements by Counties

Chaves County

Roswell basin. --About three-fourths of the Roswell basin lies in Chaves County and one-fourth in the northern part of Eddy County. The Roswell artesian basin, as originally declared by the State Engineer on August 21, 1931, included about 760 square miles, extending from the Pecos River westward 8 to 12 miles and from an area about 8 miles north of Roswell to about 6 miles south of Lakewood in Eddy County. The basin has been extended from time to time until it now contains about 3,550 square miles, including the area from the original eastern boundary along the Pecos River westward about 25 to 50 miles and from about 25 miles north of Roswell to about 6 miles south of Lakewood, where it adjoins the Carlsbad basin. The Hondo and Peñasco basins, which extend westward from the Roswell basin along the Hondo and Peñasco Valleys, were declared on September 1, 1953. The area of the 3 declared basins is about 4,460 square miles.

Ground water is discharged from the Roswell basin by both natural and artificial means. Natural discharge is by springs, by seepage to the Pecos River and tributaries, and by evapotranspiration. Artificial discharge, by means of wells and drains, is about four times greater than natural discharge. The effect of discharge on ground water in storage is reflected by a lowering of water levels. Conversely, recharge by direct precipitation and flood runoff into sinkholes and over porous outcrops in the intake area of the artesian aquifer causes an increase in storage and a rise in water levels. The shallow-water aquifer in valley fill is recharged also by return irrigation water and by leakage from the artesian aquifer.

Ground water for irrigation is obtained from both shallow water-table wells (finished in the valley fill) and deeper artesian wells (finished in the San Andres formation of Permian age). The artesian water and shallow water are closely related hydrologically, but the two classes of water are considered separate sources by the State Engineer for administration purposes. Applications for further development in the original declared area have not been approved for artesian water since August 21, 1931, and for shallow water since August 1, 1937. As the declared area has been extended and closed to further appropriation of ground water from time to time, development for irrigation has become essentially stabilized in the extended areas.

Precipitation in 1955 at stations in the Roswell basin was from about 72 to 76 percent of normal and at stations in the plains and mountains to the west from about 87 to 119 percent of normal. Precipitation was 8.71 inches at Roswell, 3.36 inches below normal; 10.21 inches (estimated) at Hagerman, 3.32 inches below normal; and 9.39 inches at Artesia, 2.91 inches below normal. For the stations in the plains and mountains, precipitation was 17.51 inches at Mayhill, 2.67 inches below normal; 17.71 inches (estimated) at Elk, 0.30 inch above normal; 17.81 inches (estimated) at Felix, 2.89 inches above normal; 18.51 inches at Ruidoso; and 15.43 inches at Picacho. About 85 percent of the precipitation was in the period from July through October, more than 40 percent being in July. Most of the precipitation occurred as slow soaking rains, resulting in small flows of several days to several weeks' duration in the normally dry Pecos River tributaries.

Recharge to the basin, which is affected by the amount and rate of precipitation in the intake area, was below normal in 1954 and 1955. Precipitation throughout the area produced quantities and rates of runoff large enough to recharge the aquifer appreciably only in July. Recharge in 1954 and 1955, nevertheless, was probably greater than in any year since 1949.

Records of electric power used in 1955 to pump 1,200 wells indicate that about 440,000 acre-feet of water was pumped for irrigation in 1955, as compared with 470,000 acre-feet in 1954. Of this amount, an estimated 162,000 acre-feet was from the valley fill (shallow water) and 280,000 acre-feet from the limestone of the San Andres formation (artesian water). In addition, an estimated 28,000 acre-feet of ground water was used to irrigate lands in the Salt Creek-Macho Draw area of the northern extension of the Roswell basin.

The annual changes in storage of the shallow-water aquifer in 1955 were observed by measuring water levels in about 407 shallow wells in January 1955 and in January 1956. Measurements were also made bimonthly in 72 of these wells, 5 of which were equipped with recording gages. The January measurements were used in preparing the maps showing the changes in shallow-water levels in the Roswell basin from January 1955 to January 1956, from January 1950 to January 1955, and from January 1940 to January 1955. (See figs. 69-75.) Only bimonthly measurements are listed in this report. Measurements in wells in the Roswell basin in Eddy County appear under the heading Eddy County. Records of water-level measurements in the shallow wells have been published in the annual series of water-supply papers since 1938.

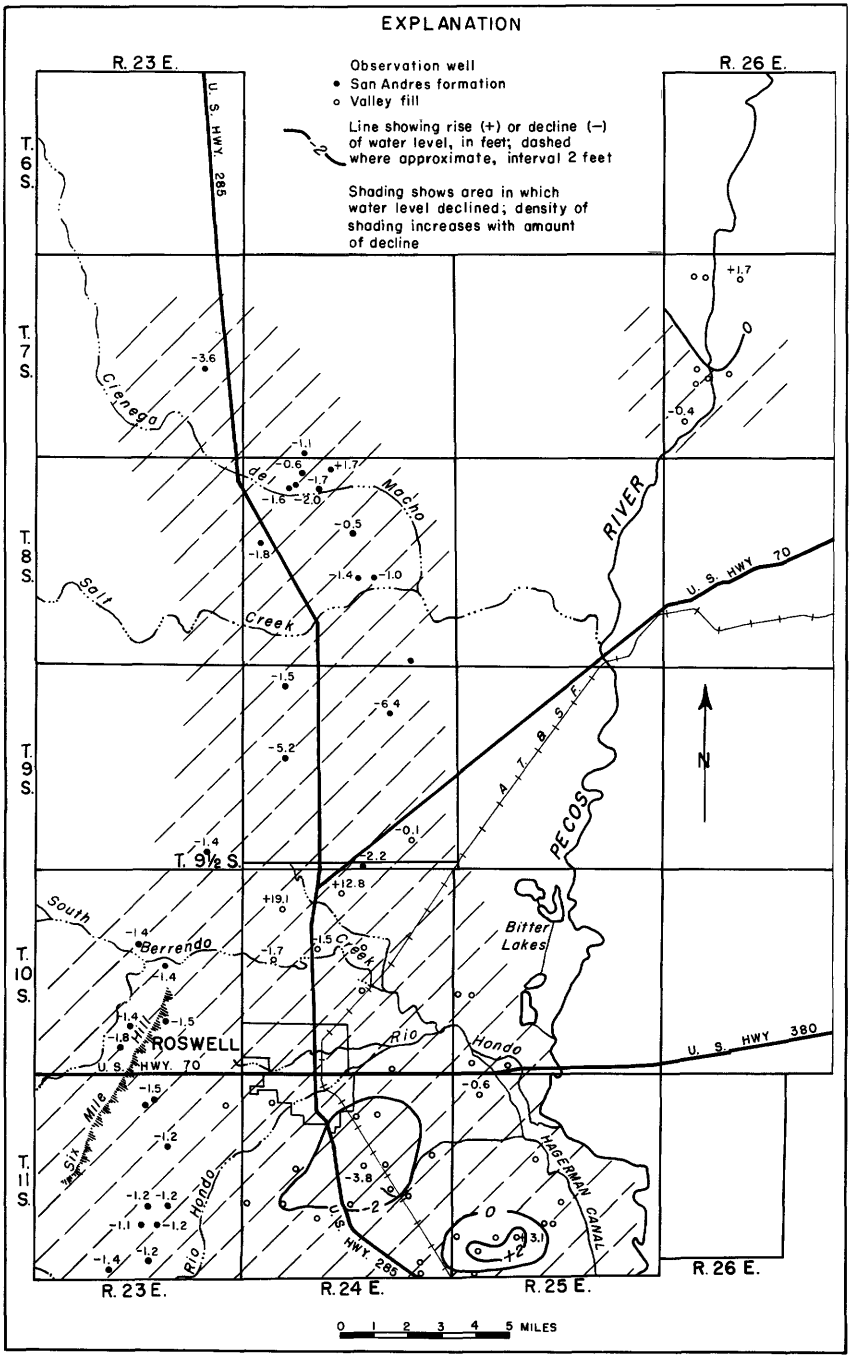


Figure 69. --Change in ground-water level from January 1955 to January 1956 in Salt Creek-Macho Draw area of northern extension of Roswell basin, Chaves County, N. Mex.

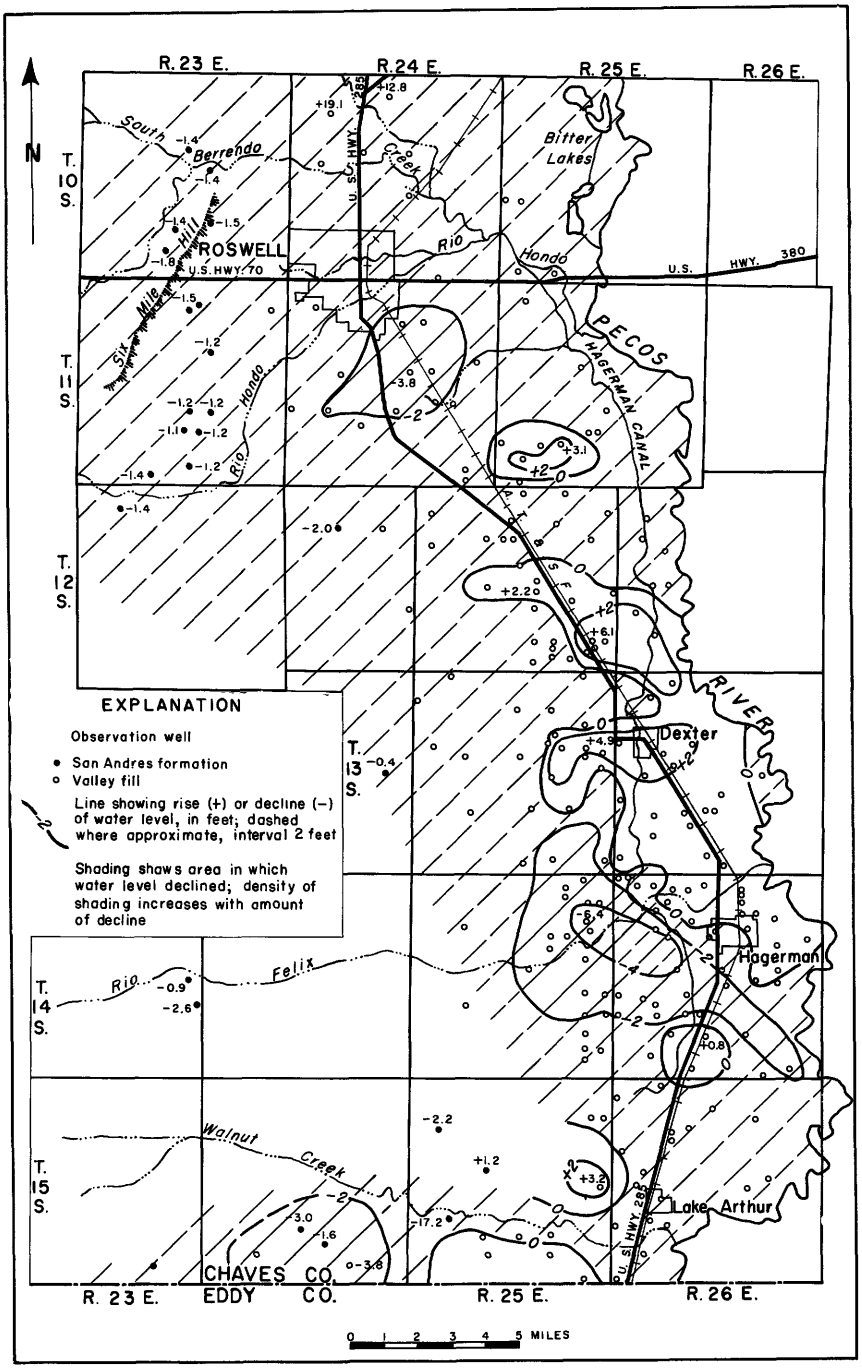


Figure 70. --Change in ground-water level from January 1955 to January 1956 in northern part of Roswell basin, Chaves County, N. Mex.

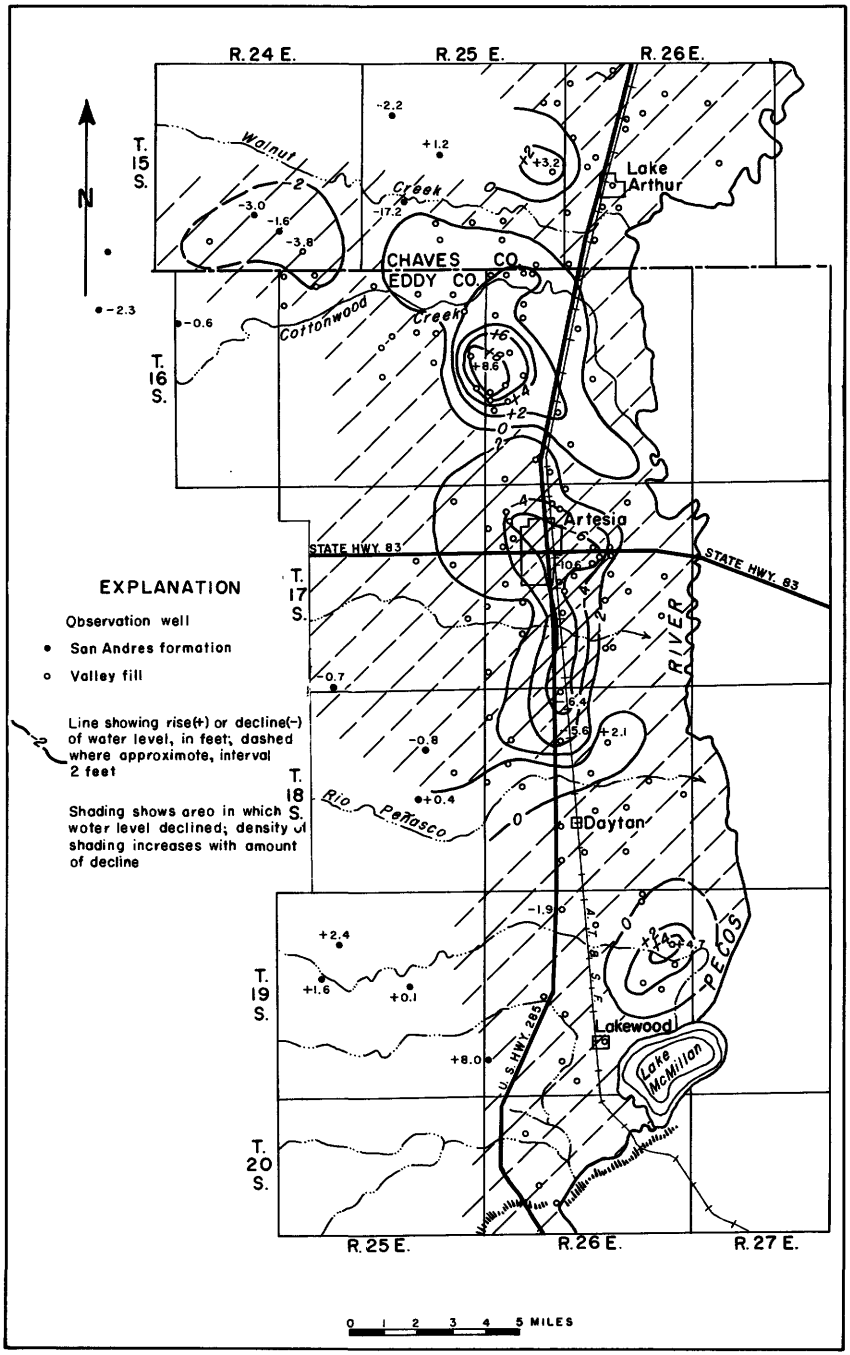


Figure 71. --Change in ground-water level from January 1955 to January 1956 in southern part of Roswell basin, Eddy County, N. Mex.

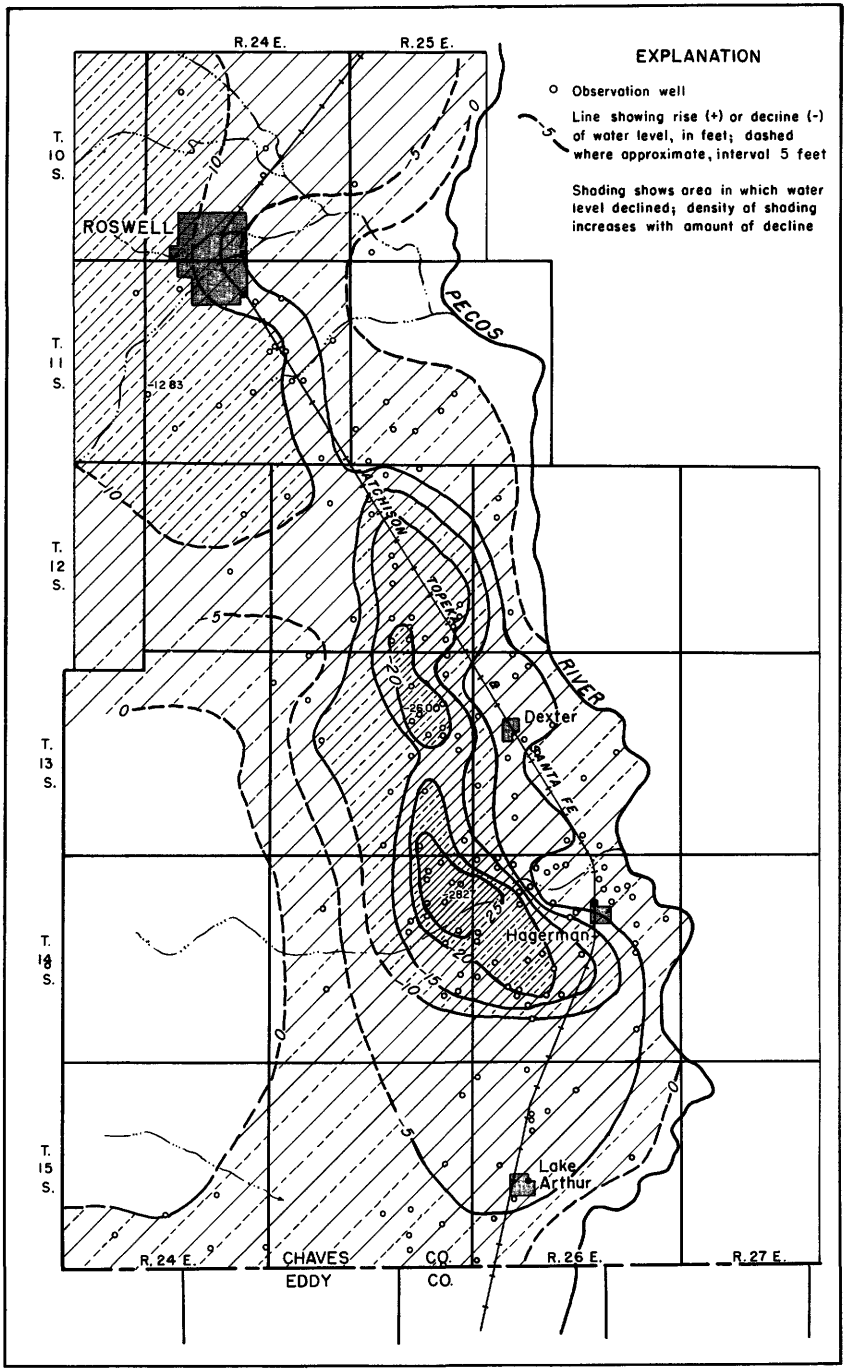


Figure 72. --Change in shallow ground-water level from January 1950 to January 1955 in northern part of Roswell basin, Chaves County, N. Mex.

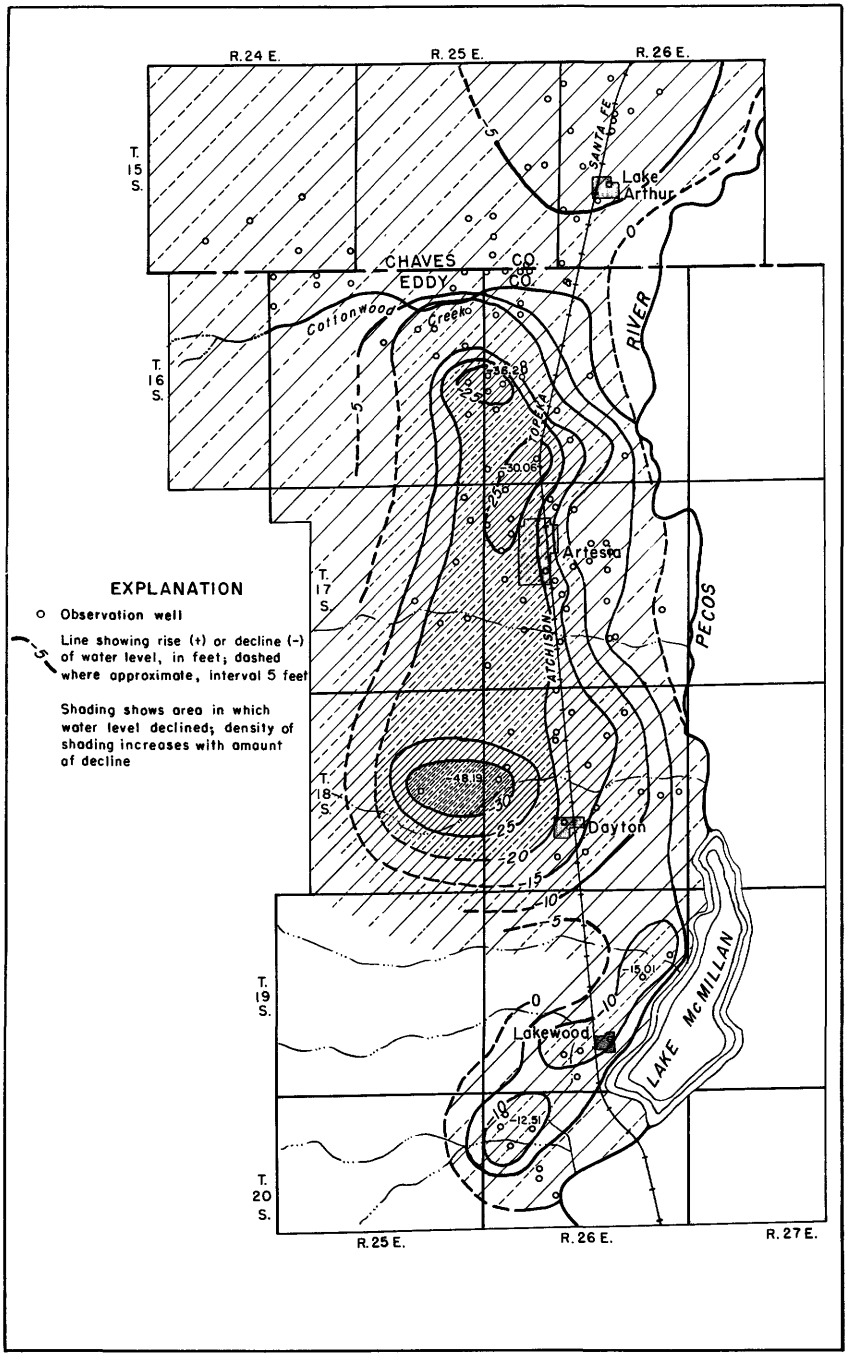


Figure 73. --Change in shallow ground-water level from January 1950 to January 1955 in southern part of Roswell basin, Eddy County, N. Mex.

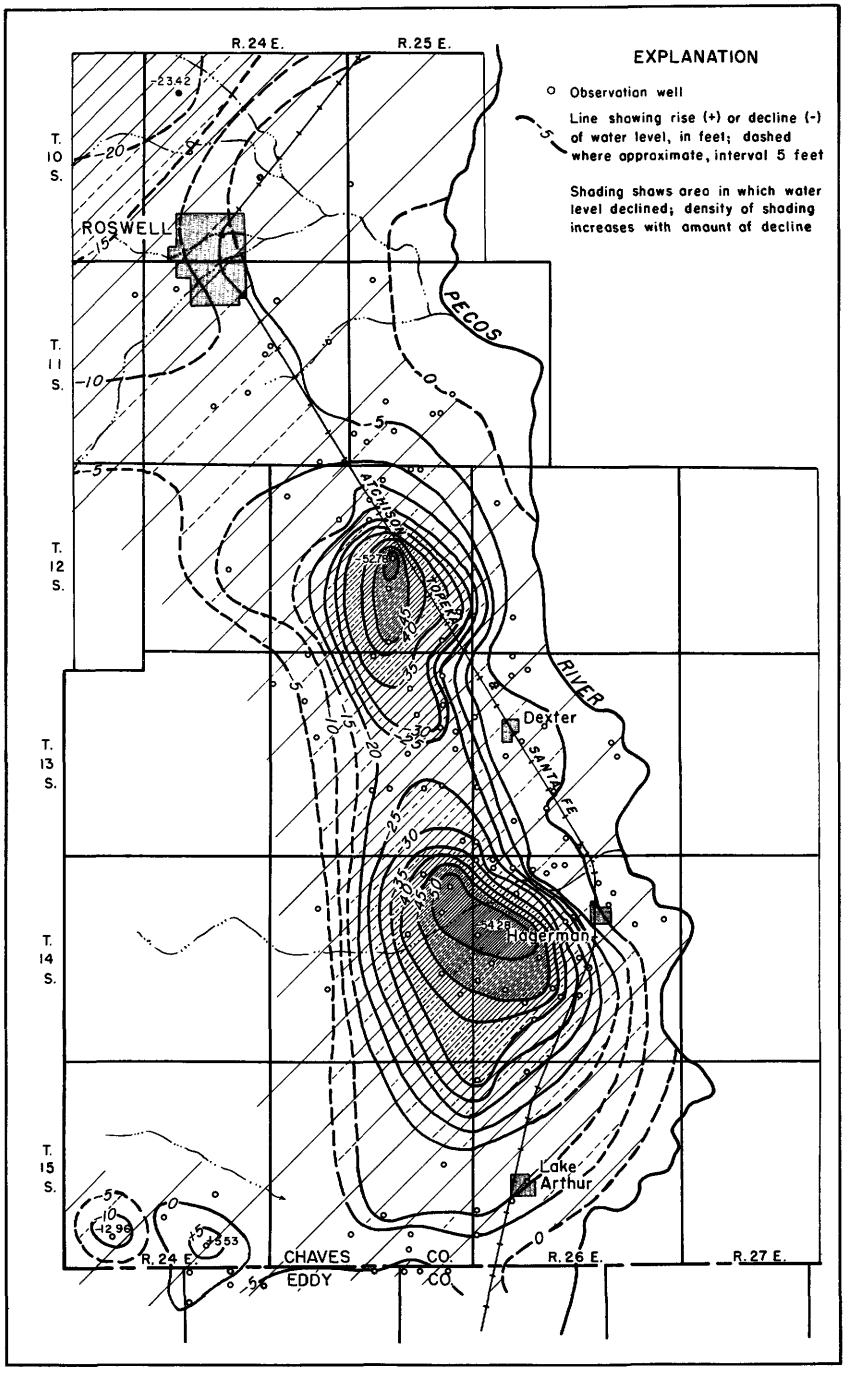


Figure 74. --Change in shallow ground-water level from January 1940 to January 1955 in northern part of Roswell basin, Chaves County, N. Mex.

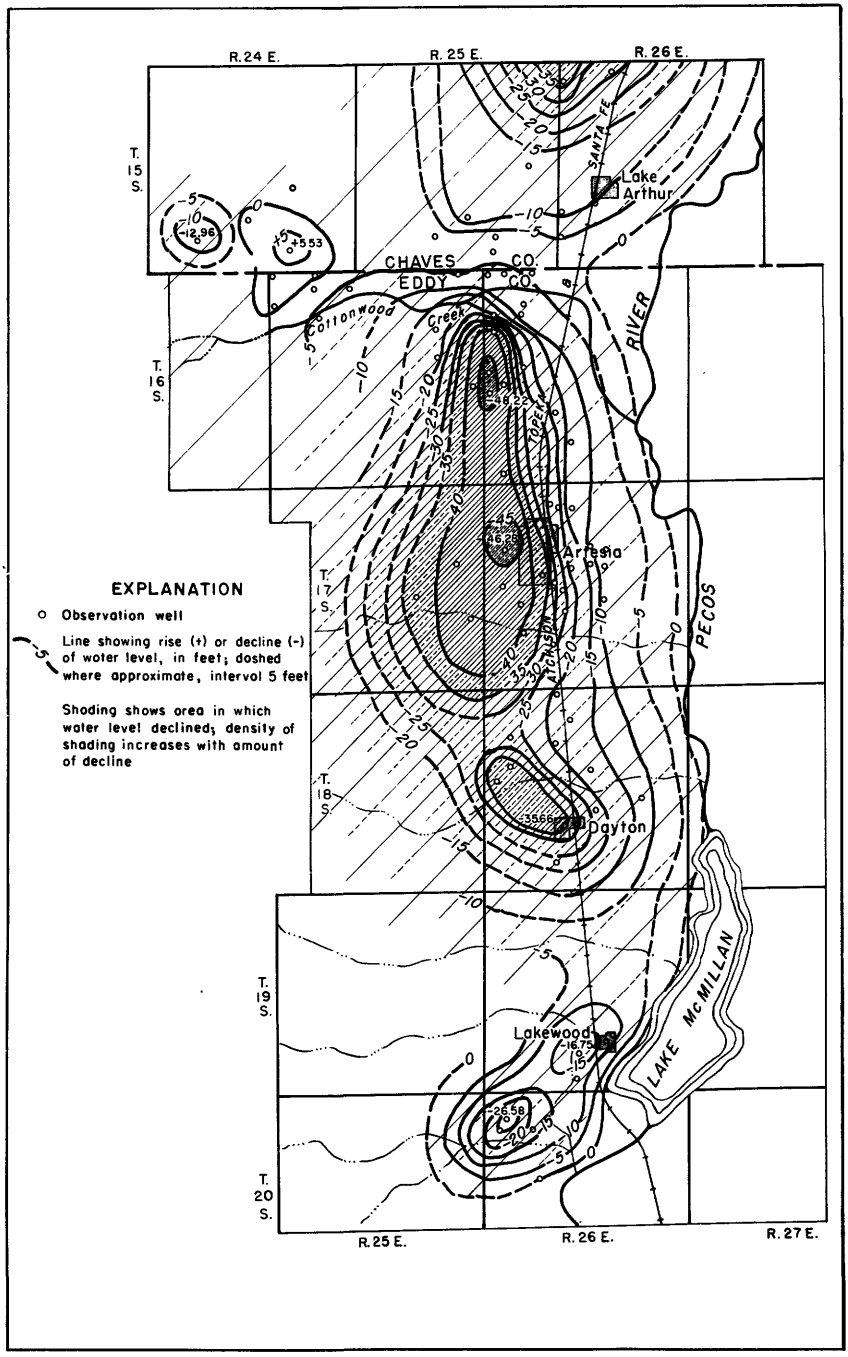


Figure 75. --Change in shallow ground-water level from January 1940 to January 1955 in southern part of Roswell basin, Eddy County, N. Mex.

Mean monthly and mean annual artesian heads in artesian wells in Roswell basin in 1955 and highest and lowest mean annual and mean monthly artesian heads, in feet above msl

Name of well	Berrendo		Berrendo-Smith		Mountain View		Orchard Park		Greenfield		Cottonwood		Artesia	
Location no.	10.24.9.333		10.24.21.212		11.24.29.242		12.25.23.113		13.25.27.211		16.25.11.113		18.26.5.330	
1955	Days of record	Head	Days of record	Head	Days of record	Head	Days of record	Head	Days of record	Head	Days of record	Head	Days of record	Head
January	31	3556.97	31	3555.48	31	3552.43	31	3525.87	27	e3518.73	27	e3393.13	31	3339.96
February	28	3556.76	28	3554.85	28	3551.72	28	3516.79	28	3504.95	28	3380.68	28	3335.53
March	31	3553.55	31	3551.47	25	e3547.15	27	e3482.69	28	e3463.23	27	e3352.49	26	e3313.89
April	30	3550.97	30	3548.10	30	3542.72	30	3468.61	24	e3443.42	13	e3345.90	30	3311.20
May	31	3550.44	31	3547.68	26	e3541.97	31	3475.46	31	3451.69	24	e3332.79	31	3310.01
June	30	3547.81	30	3544.32	2	e3538.43	30	3448.53	30	3422.15	30	3312.39	30	3286.88
July	31	3547.00	31	3544.46	18	e3537.98	31	3466.78	22	e3443.36	31	3313.81	31	3290.35
August	31	3545.65	31	3541.91	31	3534.70	31	3449.85	19	e3425.21	31	3310.18	31	3283.98
September	24	e3546.00	30	3542.83	30	3533.77	30	3445.85	30	3423.36	30	3303.83	27	e3278.37
October	31	3552.67	31	3549.96	31	3543.75	31	3510.68	31	3498.61	15	e3341.13	31	3318.75
November	30	3553.89	30	3552.17	30	3547.90	30	3519.81	24	e3510.48	18	e3355.80	30	3330.84
December	31	3554.96	31	3553.52	31	3550.21	31	3523.74	30	e3514.59	21	e3386.43	31	3336.32
Mean annual		3551.39		3548.90		3543.56		3486.22		3468.31		3344.05		3311.34
Mean annual	Year	Head	Year	Head	Year	Head	Year	Head	Year	Head	Year	Head	Year	Head
Highest	1942	3571.8	1942	3571.0	1942	3569.6	1942	3528.1	1941	3517.5	1952	3399.97	1942	3391.9
Lowest	1955	3551.39	1955	3548.90	1955	3543.56	1954	3485.82	1955	3468.31	1955	3344.05	1954	3310.58
First year of record	1927	3571.2	1941	3566.2	1941	3564.2	1926	3525.7	1941	3517.5	1952	3399.97	1932	3384.6
Mean monthly	Month	Head	Month	Head	Month	Head	Month	Head	Month	Head	Month	Head	Month	Head
Highest	Dec. '26	3574.2	Jan. '43	3574.4	Jan. '43	3573.7	Jan. '42	3544.0	Jan. '42	3535.4	Jan. '52	3413.06	Jan. '43	3402.1
Lowest	Aug. '54	3545.44	Aug. '55	3541.91	Aug. '54	3533.01	July '54	3444.18	July '54	3416.85	Sept. '55	3303.83	July '54	3274.20
First month of record	June '26	3571.7	June '40	3559.7	July '40	3556.2	Aug. '25	3525.9	June '40	3496.0	Apr. '51	3404.63	Apr. '31	3377.2

e Estimated.

Departure in 1955 from average and change from 1954 to 1955, in feet, of mean monthly and mean annual heads in artesian wells in Roswell basin

Name of well	Berrendo		Berrendo-Smith		Mountain View		Orchard Park		Greenfield		Cottonwood		Artesia	
Location no.	10.24.9.333		10.24.21.212		11.24.29.242		12.25.23.113		13.25.27.211		16.25.11.113		18.26.5.330	
Month	Departure from average	1954 to 1955	Departure from average	1954 to 1955	Departure from average	1954 to 1955	Departure from average	1954 to 1955	Departure from average	1954 to 1955	Departure from average	1954 to 1955	Departure from average	1954 to 1955
January	-11.8	+0.76	-11.6	-0.13	-12.3	+0.09	-6.8	+3.93	-6.5	+4.98	-15.0	-10.56	-41.0	+2.79
February	-11.8	+1.12	-12.1	+.35	-12.5	+.52	-11.2	+8.24	-11.1	+10.61	-23.0	-19.65	-42.1	+6.08
March	-13.9	-1.48	-13.2	-1.29	-14.3	-1.27	-33.2	-2.43	-29.4	-4.96	-49.4	-45.75	-55.9	-4.58
April	-14.3	-.13	-12.9	+.41	-14.2	+.49	-37.6	+1.53	-34.0	-.75	-52.6	-47.16	-51.9	+1.12
May	-14.9	-1.81	-14.4	-1.72	-15.6	-1.39	-35.7	-.77	-36.7	-5.48	-66.7	-58.91	-56.8	+.23
June	-17.0	-1.92	-16.1	-2.16	-17.7	-1.74	-59.9	-11.44	-60.4	-11.44	-84.0	-73.80	-76.0	-2.30
July	-16.6	+.42	-14.5	+1.63	-17.0	+2.94	-37.3	+22.60	-32.2	+26.51	-75.6	-62.58	-67.3	+16.15
August	-17.2	+.21	-15.7	-.10	-18.1	+1.69	-51.1	+1.17	-44.0	-.11	-75.1	-63.99	-67.8	+9.16
September	-18.0	-1.37	-16.7	-1.32	-20.7	-3.00	-63.2	-20.36	-59.0	-33.14	-81.6	-76.40	-80.5	-15.18
October	-13.5	+.55	-13.3	-.23	-15.8	-.64	-14.1	+3.61	-11.3	+3.11	-50.4	-45.37	-54.1	+.03
November	-13.5	-.66	-13.1	-.99	-14.7	-1.07	-12.1	-1.35	-12.0	-.94	-37.8	-17.02	-48.4	-1.70
December	-13.3	-1.12	-12.9	-1.10	-13.9	-.93	-10.0	+.12	-11.1	-2.08	-11.4	+13.87	-45.2	-2.98
Annual	-14.5	-.45	-13.9	-.55	-15.5	-.36	-30.9	+.40	-28.8	-.31	-51.7	-42.29	-56.8	+.76
Record began	June 1926		June 1940		July 1940		August 1925		June 1940		March 1951		April 1931	

From January 1955 to January 1956, water levels rose in the shallow ground-water aquifer in several areas of the Roswell basin. In Chaves County, including the Salt Creek-Macho Draw area, they rose under about 65 square miles and declined under about 735 square miles. Water levels rose more than 2 feet under 9 square miles; they declined more than 2 feet under about 43 square miles and more than 4 feet under about 4 square miles. Southward from Roswell to the Eddy County line, water levels declined under more than 380 square miles and rose under only about 4 square miles from 1940 to 1955. During this 15-year period, declines were more than 5 feet under 260 square miles and more than 40 feet under 21 square miles.

From January 1955 to January 1956, the shallow-water levels rose under about 30 square miles and declined under about 190 square miles in Eddy County. Water levels rose more than 2 feet under 12 square miles and more than 8 feet under 1 square mile; they declined more than 2 feet under about 21 square miles and more than 6 feet under about 4 square miles. During the 15-year period, water levels declined under more than 290 square miles, more than 5 feet under about 243 square miles, and more than 40 feet under 19 square miles. By the end of 1955, they were lower than in 1940 by as much as 60 feet in the area west of Hagerman and by 50 feet in the area northwest of Dexter and west of Artesia.

Recording gages were maintained in 9 wells finished in the artesian aquifer of which 6 have long periods of record. Record-low mean annual heads occurred in 4 of the 6 artesian wells having long records. Changes in mean annual head from 1954 to 1955 in the 6 wells ranged from a decline of 0.6 foot in the Berrendo-Smith well to a rise of 0.8 foot in the Artesia well. The average decline was less than 0.1 foot, as compared with a decline of about 5.1 feet in 1954. The departure from average in 1955 in the 6 artesian wells ranged from 13.9 feet below average in the Berrendo-Smith well to 56.8 feet below average in the Artesia well. The difference between the record-high mean annual artesian head (in 1941 in the Greenfield well and in 1942 in the others) and the 1955 mean annual head ranged from 20.4 feet in the Berrendo well to 80.6 feet in the Artesia well. The mean monthly and the mean annual heads, the departures from average in 1955, and the change in the mean monthly heads in 7 artesian wells (including the 6 having long records) are tabulated on pages 199 and 200. The fluctuations in mean monthly artesian heads since 1940 in the 6 artesian wells having long records are shown in figures 76, 77, 78, and 79. Measurements of artesian head in the Roswell basin have been published in the annual series of water-supply papers since 1935.

Bimonthly measurements were made in 7 wells in the intake area of the artesian aquifer, 15 to 25 miles west of the Pecos River. Water levels for 4 of the 7 wells are given with the well descriptions. Water levels in 5 of the 7 wells in the intake area reached record lows in 1955. Declines from January 1955 to January 1956 for wells in Chaves County ranged from 1.2 feet in well 11.22.1.312 to 1.6 feet in well 14.23.8.144. In Eddy County water levels ranged from a decline of 0.5 foot in well 16.23.15.323 to a rise of 1.2 feet in well 18.23.5.333. The average decline for 6 wells in the intake area in which January 1955 and January 1956 measurements were made was 0.8 foot.

Water levels in the Salt Creek-Macho Draw area in 27 wells with comparable measurements made in January 1955 and January 1956 ranged from rises of as much as 8.8 feet to declines of as much as 6.4 feet. Water-level changes are shown on figure 69. The average decline for the year in the 27 wells was 0.6 foot.

Roswell Basin

7.23.23.242. Jess Corn. Drilled irrigation artesian well in limestone member of San Andres formation, diameter 14 inches, depth 426 feet. Land-surface datum is 3,814 feet above msl. Highest water level 239.83 below lsd, May 26, 1951; lowest 252.43 below lsd, Sept. 12, 1955. Records available: 1951-55. Jan. 13, 246.54; Mar. 7, 248.17; May 9, 249.49; July 9, 251.27; Sept. 12, 252.43; Nov. 3, 251.56.

8.24.5.233. Jess Corn. Drilled irrigation artesian well in Chalk Bluff formation and limestone member of San Andres formation, diameter 12 inches, depth 446 feet. Land-surface datum is 3,645 feet above msl. Highest water level 65.34 below lsd, Jan. 25, 1950; lowest 80.48 below lsd, July 8, 1954. Records available: 1949-55. Jan. 13, 76.00; May 9, 73.37; July 9, 74.90; Nov. 3, 77.31.

8.24.15.111. Jess Corn. Drilled unused artesian well in Chalk Bluff formation and limestone member of San Andres formation, diameter 16 inches, depth 215 feet. Land-surface datum is 3,593 feet above msl. Highest water level 20.18 below lsd, Sept. 11, 1950; lowest 34.36 below lsd, July 8, 1954. Records available: 1949-55. Jan. 13, 30.02; July 9, 33.18; Sept. 12, 30.93; Nov. 3, 27.60.

8.24.18.144. Alex Hill. Drilled irrigation artesian well in Chalk Bluff formation and limestone member of San Andres formation, diameter 12 to 8 inches, depth 444 feet, cased to 417. Land-surface datum is 3,698 feet above msl. Highest water level 121.71 below lsd, Mar. 11, 1949; lowest 137.55 below lsd, Nov. 3, 1955. Records available: 1949-55. Jan. 13, 133.94; Mar. 7, 133.87; May 9, 137.35; Nov. 3, 137.55.

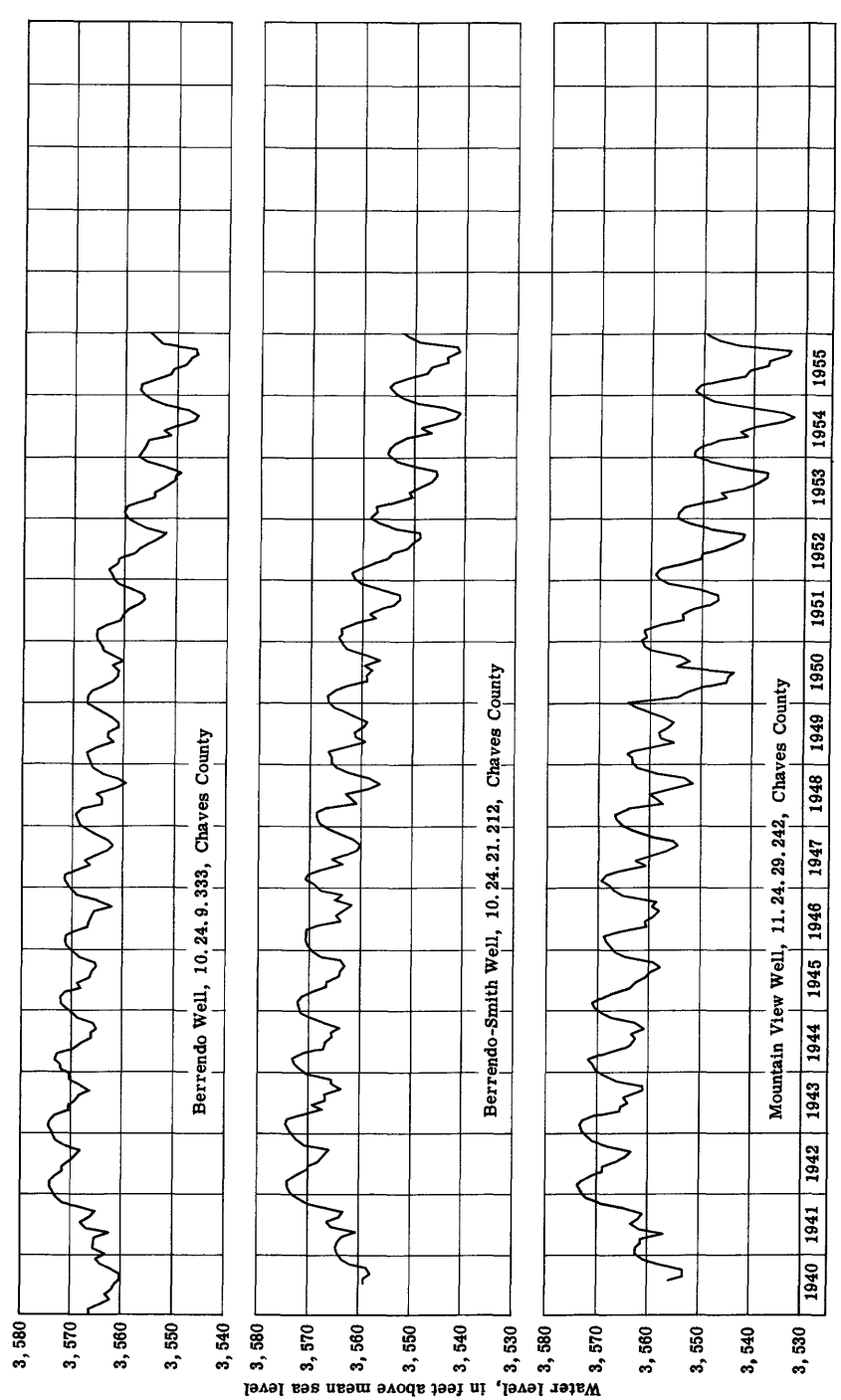


Figure 76.--Artesian water levels in wells 10.24.9.333, 10.24.21.212, and 11.24.29.242 in Roswell basin, Chaves County, N. Mex.

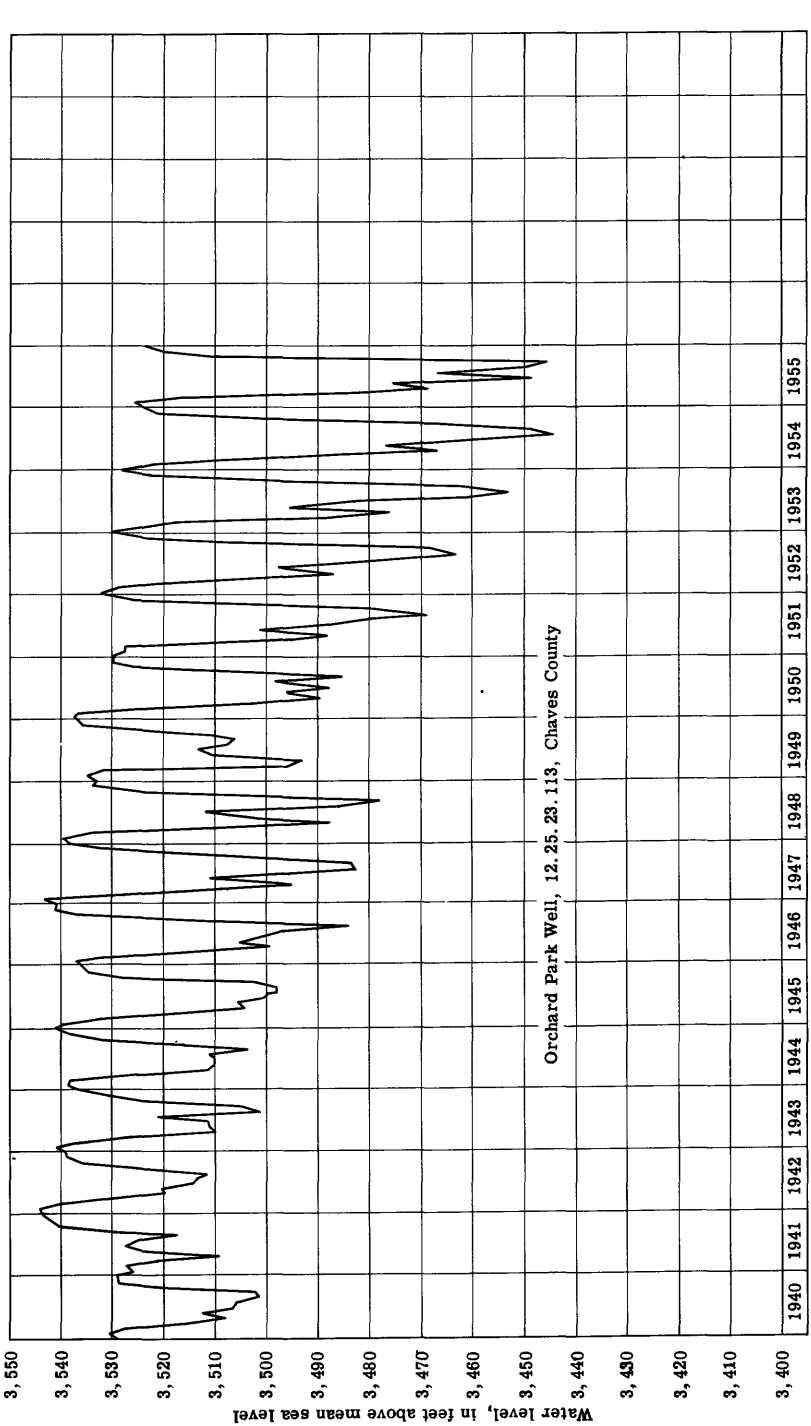


Figure 77. --Artesian water level in well 12. 25. 23. 113 in Roswell basin, Chaves County, N. Mex.

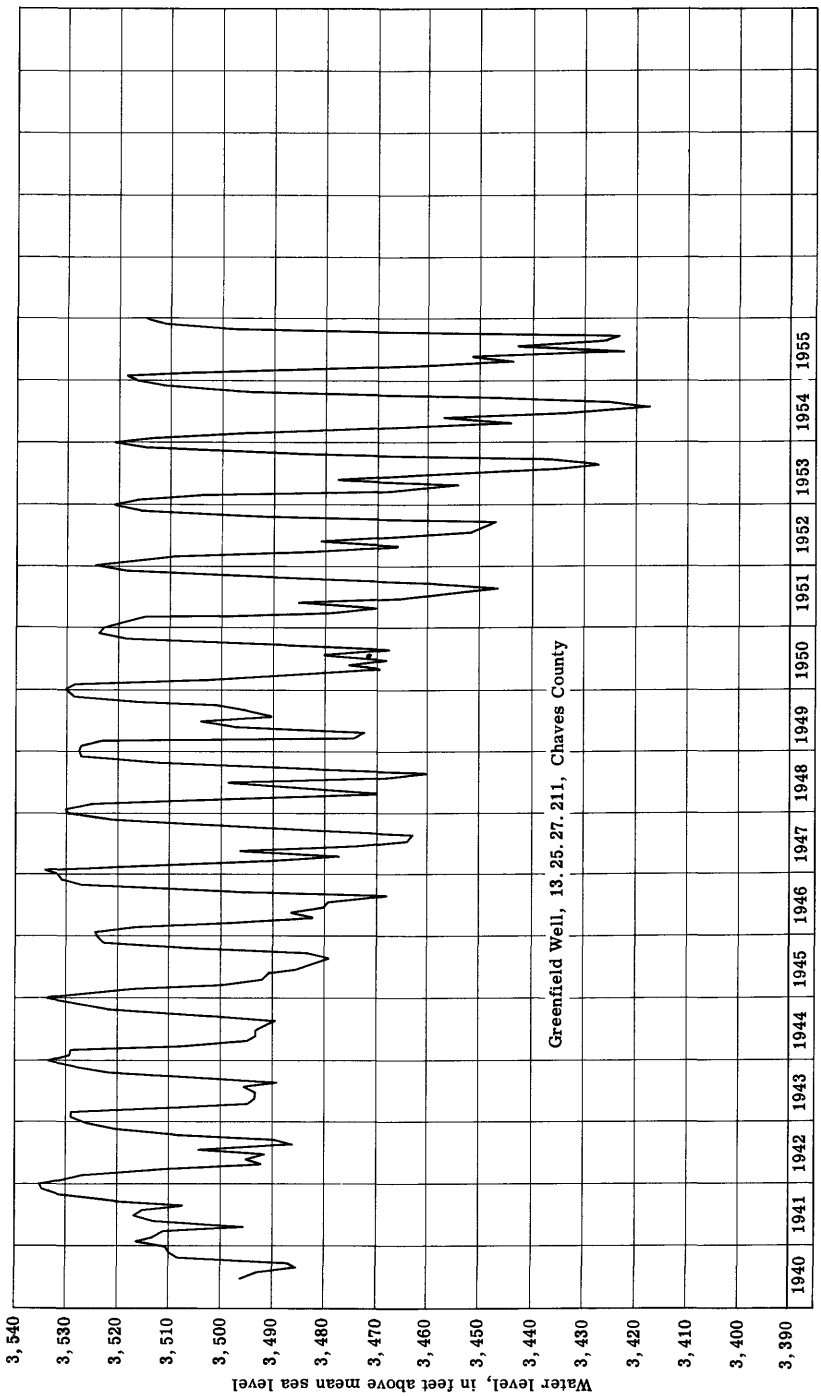


Figure 78. --Artesian water level in well 13. 25. 27. 211 in Roswell basin, Chaves County, N. Mex.

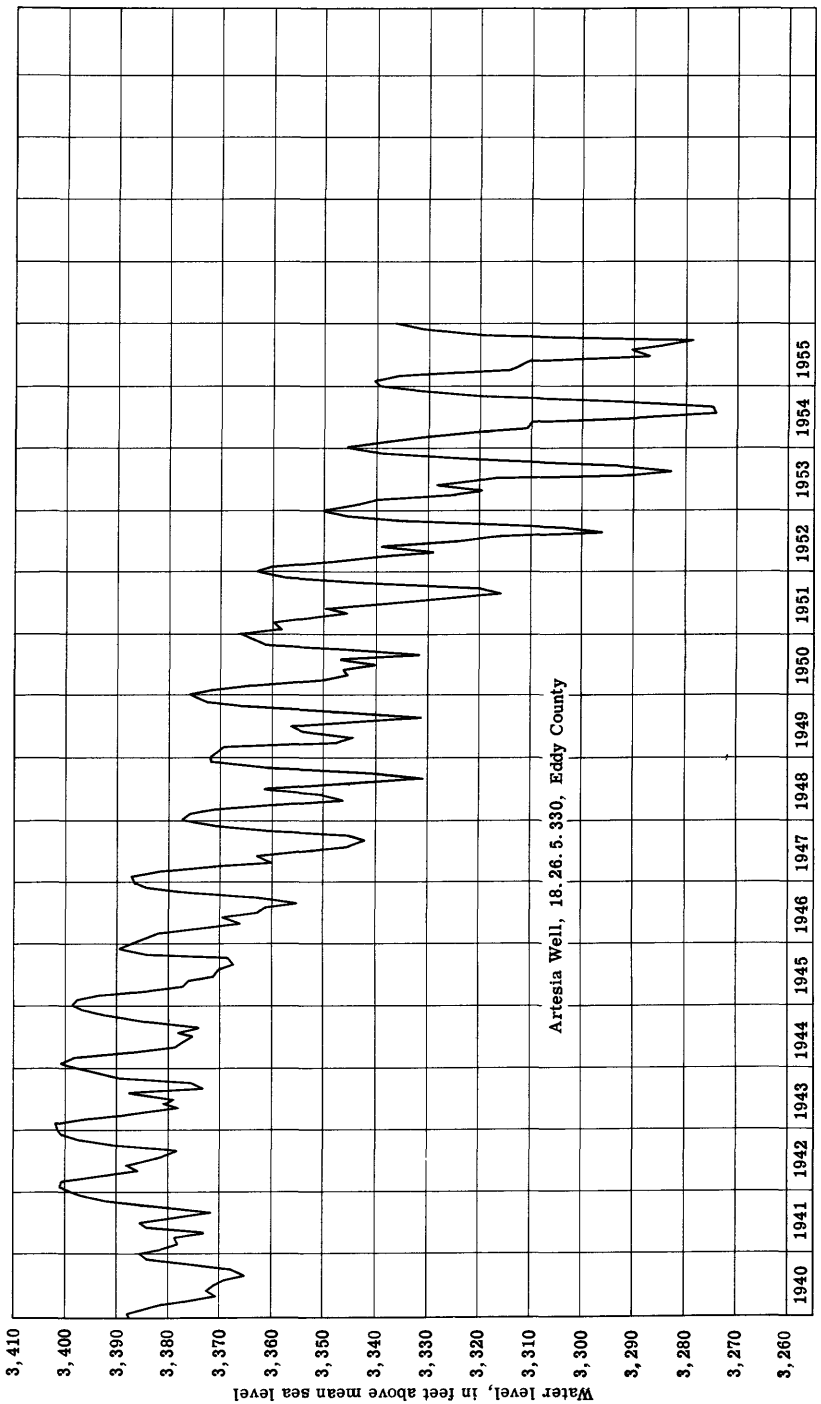


Figure 79.--Artesian water level in well 18.26.5.330 in Roswell basin, Eddy County, N. Mex.

8.24.22.143. Jess Corn. Drilled irrigation artesian well in limestone member of San Andres(?) formation, diameter 16 inches, depth 275 feet. Highest water level 26.33 below lsd, Mar. 11, 1949; lowest 43.60 below lsd, Sept. 12, 1955. Records available: 1949-55. Jan. 13, 38.23; Mar. 14, 38.43; July 9, 42.45; Sept. 12, 43.60; Nov. 3, 40.94.

8.24.35.432. W. L. Wiggins. Drilled unused water-table well in limestone member of San Andres(?) formation, diameter 6 inches, depth 75 feet. Land-surface datum is 3,616 feet above msl. Highest water level 50.66 below lsd, Mar. 7, 1950; lowest 66.30 below lsd, Sept. 8, 1954. Records available: 1949-55. Jan. 12, 62.44; Mar. 4, 62.15; May 9, 64.50; July 9, 64.85; Sept. 12, 65.75; Nov. 3, 63.37.

9.24.5.130. Lacy Shortridge. Drilled irrigation artesian well in limestone member of San Andres(?) formation, diameter 10 to 8 inches, depth 364 feet. Land-surface datum is 3,661 feet above msl. Highest water level 87.25 below lsd, Sept. 12, 1950; lowest 105.73 below lsd, July 8, 1954. Records available: 1948-55. Jan. 12, 101.45; Mar. 7, 102.57; May 5, 104.92, pumped recently; Nov. 3, 105.03.

9.24.17.331. Oscar White. Drilled unused artesian well in limestone member of San Andres formation. Land-surface datum is 3,699 feet above msl. Highest water level 94.79 below lsd, Aug. 17, 1950; lowest 134.04 below lsd, July 14, 1955. Records available: 1948-55.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	117.19	.....	125.56	129.06	131.37	133.47	120.74	124.22	111.64	.....	.....
2	.....	117.34	.....	125.70	129.16	131.41	133.55	120.53	124.40	109.30	.....	.....
3	.....	117.50	.....	125.83	129.22	131.47	133.63	120.42	124.59	107.52	103.23	.....
4	.....	117.66	.....	125.96	129.31	131.53	133.71	120.37	124.77	106.30	103.51	.....
5	.....	117.82	.....	126.09	129.41	131.60	133.78	120.37	124.97	105.35	103.81	.....
6	112.90	117.97	.....	126.24	129.50	131.66	133.85	120.37	125.17	104.60	104.10	.....
7	113.09	118.14h	122.43	126.38	129.59	131.72	133.76	120.42	125.39	103.97	104.38	.....
8	113.26	118.32	122.48	126.51	129.67	131.77	133.76	120.49	125.57	103.41	104.66	.....
9	113.45	118.48	122.62	126.63	129.75	131.83	133.77	120.56	125.76	102.93	104.95	.....
10	113.62	118.63	122.75	126.75	129.83	131.89	133.81	120.65	125.95	102.54	105.22	.....
11	113.80	118.79	122.88	126.87	129.93	131.96	133.87	120.78	126.13	102.21	105.48	.....
12	113.99	118.94	123.01	126.99	130.00	132.03	133.93	120.90	126.31	101.96	105.78	.....
13	114.18	.....	123.14	127.11	130.08	132.10	133.98	121.02	126.48	101.77	106.07	.....
14	114.39	.....	123.25	127.21	130.16	132.17	134.04	121.15	126.65	101.57	106.37	.....
15	114.55	.....	123.39	127.33	130.22	132.23	133.64	121.27	126.82	101.42	106.67	.....
16	114.76	.....	123.51	127.44	130.29	132.30	131.16	121.41	126.99	101.31	106.96	.....
17	.....	.....	123.64	127.57	130.36	132.38	.....	121.55	127.16	101.23	107.25	.....
18	.....	.....	123.77	127.66	130.46	132.47	.....	121.71	127.32	101.17	107.53	.....
19	.....	.....	123.89	127.78	130.54	132.55	.....	121.86	127.47	101.15	107.85	.....
20	.....	.....	124.02	127.88	130.60	.....	.....	122.00	127.63	101.15	108.17	.....
21	.....	.....	124.16	128.00	130.69	132.70	.....	122.14	127.80	101.15	108.47	.....
22	.....	.....	124.31	128.12	130.74	132.77	125.12	122.30	.....	101.19	108.75e	116.29
23	.....	.....	124.44	128.24	130.81	132.85	124.86	122.47	.....	101.26	109.05	116.46
24	.....	.....	124.57	128.36	130.87	132.92	124.65	122.65	.....	101.39	109.37	116.64
25	115.93	.....	124.69	128.46	130.93	133.00	124.49	122.82	.....	101.52	109.68	116.82
26	116.13	.....	124.83	128.56	130.99	133.09	124.39	123.02	.....	101.66	110.00	117.00
27	116.33	.....	124.97	128.66	131.06	133.17	124.31	123.21	119.90	101.82	110.30	117.16
28	116.51	.....	125.10	128.75	131.12	133.25	123.63	123.41	118.09	102.03	110.60	117.33
29	116.68		125.20	128.85	131.19	133.32	122.35	123.62	116.51	.....	110.90	117.51
30	116.85		125.32	128.94	131.25	133.39	121.52	123.83	114.22	.....	111.19	117.70
31	117.02		125.44		131.31		121.05	124.02		.....		117.88

e Estimated.
h Tape measurement.

10.24.8.333. Ira Lee. Drilled irrigation water-table well in valley fill, diameter 13 to 10 inches, depth 181 feet. Highest water level 40.67 below lsd, Feb. 5, 1947; lowest 65.36 below lsd, Sept. 11, 1954. Records available: 1946-55. Jan. 7, 57.00; Mar. 7, 57.72; May 11, 67.43, pumped recently; Sept. 9, 73.08, pumping; Nov. 3, 60.73.

10.24.9.333. Berrendo. Drilled observation artesian well in limestone member of San Andres formation, diameter 10 inches, depth 258 feet, depth to artesian aquifers 170 and 241. Land-surface datum is 3,586.16 feet above msl. Highest water level 11.29 below lsd, Dec. 19-20, 1926; lowest 41.84 below lsd, Aug. 20, 1954. Records available: 1926-55.

10.24.9.333--Continued.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	29.35	28.84	29.60	33.54	34.61	35.34	39.76	36.62	40.23	35.86	32.62	31.28
2	29.30	28.87	29.67	33.68	34.46	37.05	39.80	36.78	40.08	34.78	32.65	31.23
3	29.27	28.88	29.85	33.55	34.54	36.30	40.13	36.84	39.97	34.27	32.64	31.37
4	29.23	28.97	30.01	33.44	34.68	36.05	40.11	37.13	39.77	33.88	32.53	31.25
5	29.22	28.96	30.05	33.69	34.70	35.79	39.39	37.74	39.63	33.57	32.45	31.22
6	29.23	28.92	30.03	33.84	34.84	35.64	40.03	37.84	39.78	33.47	32.37	31.14
7	29.17	28.92	29.88	34.10	34.97	35.94	39.43	37.81	39.74	33.35	32.32	31.17
8	29.11	28.92	30.03	34.17	34.78	36.09	39.99	37.77	39.93	33.20	32.30	31.26
9	29.12	28.90	30.16	34.13	34.64	36.38	39.09	38.30	39.95	33.10	32.22	31.29
10	29.07	28.99	30.68	33.88	34.74	37.80	38.42	38.77	40.13	33.05	32.13	31.35
11	29.06	29.10	30.37	33.75	34.89	37.43	38.22	38.88	39.81	33.03	32.06	31.42
12	29.05	29.05	30.58	33.74	34.97	37.07	38.22	39.13	39.57	33.03	32.10	31.37
13	28.96	29.02	30.77	33.78	34.95	36.86	38.20	39.07	39.68	33.07	32.04	31.24
14	28.93	29.01	30.60	33.92	34.90	38.68	38.22	39.13	40.28	33.02	31.97	31.27
15	28.92	28.97	31.36	34.10	34.60	38.22	38.22	39.03	.....	32.98	31.93	31.27
16	28.86	29.08	31.27	34.10	34.53	37.95	38.13	39.42	.....	33.03	32.00	31.15
17	28.82	29.28	31.35	33.93	34.65	38.03	37.87	40.03	.....	33.02	31.97	31.09
18	28.93	29.17	31.63	33.79	34.59	38.21	37.71	39.72	.....	33.00	31.92	31.13
19	28.87	29.39	31.79	33.92	34.44	37.88	37.75	39.82	.....	32.97	31.88	31.12
20	28.82	29.32	31.90	34.12	34.46	37.65	37.63	40.27	39.28	32.96	31.73	31.09
21	28.86	29.22	31.89	34.20	34.54	37.60	37.47	39.78	39.29	32.97	31.70	31.00
22	28.86	29.26	31.67	34.24	34.42	37.50	37.40	39.49	39.15	32.92	31.64	30.85
23	28.82	29.26	31.97	33.97	34.31	37.68	37.38	41.07	39.18	32.89	31.74	30.78
24	28.78	29.40	32.33	33.80	34.58	37.62	37.15	41.20	39.17	32.87	31.65	30.72
25	28.82	29.42	32.58	33.88	34.79	37.55	37.04	41.39	38.98	32.77	31.63	30.63
26	28.82	29.43	32.87	34.27	34.87	37.62	37.08	40.57	37.53	32.69	31.57	30.60
27	28.88	29.42	32.89	34.45	35.31	37.47	37.15	40.34	36.90	32.66	31.49	30.52
28	28.90	29.32	34.06	34.61	35.39	37.65	37.10	41.45	36.48	32.78	31.47	30.48
29	28.88		34.45	34.78	35.43	37.95	37.00	41.32	36.12	32.80	31.44	30.52
30	28.83		34.60	35.02	35.29	38.23	36.90	41.72	36.02	32.72	31.35	30.53
31	28.79		33.58		36.03		36.70	40.56		32.63		30.38

10.24.21.212. Berrendo-Smith. Drilled observation artesian well in limestone member of San Andres formation, diameter 10 inches, depth 324 feet, depth to artesian aquifers 269 and 310. Land-surface datum is 3,580.65 feet above msl. Highest water level 6.06 below lsd, Jan. 19, 1943; lowest 39.14 below lsd, Aug. 31, 1955. Records available: 1940-55.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	25.43	24.88	25.84	30.51	31.56	33.09	36.72	33.55	38.70	33.53	28.87	27.26
2	25.36	24.87	25.92	30.74	31.31	33.08	37.02	34.45	38.33	32.89	28.95	27.21
3	25.31	24.89	26.15	30.44	31.57	33.56	36.82	34.30	37.92	32.71	28.89	27.45
4	25.26	25.07	26.34	30.28	31.87	33.51	36.68	34.57	37.66	32.48	28.82	27.25
5	25.27	25.05	26.44	30.98	31.77	33.13	36.69	35.42	37.34	31.82	28.73	27.20
6	25.29	25.00	26.22	31.14	32.14	32.80	36.19	35.80	37.64	31.67	28.62	27.10
7	25.15	24.85	26.02	31.56	32.35	33.35	35.99	35.62	37.48	31.57	28.53	27.28
8	25.03	24.95	26.30	31.57	31.77	33.59	36.03	35.33	37.78	31.17	28.43	27.18
9	25.06	24.95	26.43	31.50	31.58	33.87	35.83	36.79	37.77	30.92	28.39	27.44
10	25.00	25.20	26.61	31.39	31.77	33.89	35.23	37.75	37.95	30.78	28.32	27.44
11	25.00	25.25	26.68	30.90	32.18	34.89	34.98	37.67	37.48	30.65	28.22	27.40
12	25.00	25.20	26.93	30.87	32.25	34.79	35.29	37.75	37.29	30.57	28.24	27.03
13	24.85	25.16	27.01	31.17	32.25	34.44	35.44	37.59	37.60	30.43	28.17	26.91
14	24.81	25.13	27.03	31.45	32.12	35.24	35.59	37.39	37.68	30.28	28.04	27.00
15	24.82	25.13	28.00	31.55	31.58	35.86	35.69	37.23	37.94	30.18	28.03	27.00
16	24.77	25.28	28.13	31.16	31.44	36.37	35.28	38.08	37.63	30.10	28.10	26.83
17	24.67	25.58	28.02	31.04	31.78	36.46	34.78	38.13	37.57	30.00	28.07	26.72
18	24.82	25.35	28.40	30.72	31.53	36.43	34.56	38.50	37.02	29.91	28.01	26.75
19	24.78	25.47	28.60	30.90	31.27	35.75	34.74	38.56	36.77	29.82	28.01	26.69
20	24.70	25.36	28.72	31.05	31.29	35.32	34.57	38.33	36.73	29.74	27.81	26.66
21	24.75	25.23	28.35	31.06	31.45	35.57	34.33	37.89	36.84	29.69	27.73	26.62
22	24.75	25.33	28.10	31.30	31.28	35.47	34.22	37.30	36.57	29.58	27.73	26.53
23	24.74	25.35	28.65	30.72	31.04	36.07	34.20	37.84	36.65	29.50	27.84	26.47
24	24.65	25.55	29.31	30.45	31.72	36.05	33.93	37.89	36.56	29.42	27.72	26.45
25	24.73	25.44	29.69	30.80	31.88	35.68	33.86	38.48	36.06	29.27	27.68	26.35
26	24.77	25.54	30.00	31.33	31.95	35.48	34.19	38.43	35.03	29.18	27.60	26.30
27	24.87	25.54	29.94	31.69	32.62	34.92	34.35	38.53	34.60	29.13	27.48	26.27
28	25.00	25.38	29.64	31.81	32.68	35.18	34.35	38.24	34.43	29.21	27.44	26.24
29	24.89		30.32	32.09	32.65	36.04	34.20	38.16	33.98	29.16	27.43	26.35
30	24.80		30.29	32.24	32.29	36.20	34.04	38.94	33.80	29.06	27.37	26.42
31	24.74		30.59		32.67		33.72	39.14		28.83		26.28

10.25.19.331. E. H. Pugh. Drilled stock water-table well in valley fill, diameter 4 inches. Highest water level 30.76 below lsd, Feb. 12, 1942; lowest 40.53 below lsd, Jan. 20, 1955. Records available: 1942-55. Jan. 20, 40.53; Mar. 8, 37.43; July 5, 38.90; Sept. 9, 39.30; Nov. 4, 38.46.

11.23.1.433. S. M. Wiggins. Drilled irrigation water-table well in valley fill, diameter 14 inches. Highest water level 56.07 below lsd, Feb. 4, 1947; lowest 85.64 below lsd, Sept. 10, 1954. Records available: 1947-55. Jan. 7, 73.47; Mar. 8, 74.45; May 12, 80.03; July 17, 83.39; Sept. 9, 87.75, pumping; Nov. 4, 77.81.

11.23.3.342. J. L. Mask. Drilled unused irrigation artesian well in limestone member of San Andres formation, diameter 15 inches, depth 595 feet, black lime 170-175, gray lime 505-508, brown lime 540-595. Highest water level 159.59 below lsd, Jan. 6, 1953; lowest 172.60 below lsd, Sept. 17, 1955. Records available: 1952-55.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	.....	166.33	167.86	.....	.....	170.90	172.15	171.35	167.92	.....
2	.....	.....	.....	166.48	167.74	.....	.....	170.92	172.16	171.14	167.92	.....
3	.....	.....	.....	166.30	167.90	.....	.....	171.20	172.17	170.97	167.89	.....
4	.....	.....	.....	166.74	167.93	.....	.....	170.97	172.22	170.72	167.85	.....
5	164.13	.....	.....	166.59	167.99	.....	.....	171.00	172.20	170.55	167.76	.....
6	164.11	.....	.....	167.04	168.02	.....	.....	171.00	172.26	170.34	167.74	166.24
7	164.08	.....	.....	166.86	168.09	.....	.....	171.00	172.28	170.24	167.64	166.21
8	164.04	.....	.....	166.88	168.07	.....	.....	170.91	172.35	170.01	167.57	166.25
9	164.06	.....	164.04	167.00	168.04	.....	.....	171.00	172.58	169.79	167.56	166.28
10	164.04	.....	164.09	166.93	168.16	.....	.....	171.42	172.58	169.74	.....	.....
11	164.01	.....	164.16	166.88e	168.46	.....	.....	171.15	172.56	169.57	.....	.....
12	164.02	.....	164.28	166.96	168.28	.....	.....	171.14	172.49	169.54	.....	.....
13	163.91	.....	164.32	167.36	168.32	.....	170.76	171.15	172.52	169.35	.....	.....
14	163.90	.....	164.30	167.14	168.33	.....	170.71	171.15	172.54	169.20	.....	.....
15	163.90	.....	164.41	167.51	168.26	.....	171.01	171.13	172.53	169.14	.....	.....
16	163.79	.....	164.61	167.66	168.21	.....	171.11	171.19	172.58	169.10	.....	.....
17	163.77	.....	164.61	167.26	168.29	.....	170.73	171.26	172.60	168.98	.....	.....
18	163.91	.....	164.88	167.20	168.27	.....	170.73	171.55	172.55	168.90	.....	.....
19	163.77	.....	164.88	167.66	168.29	.....	171.03	171.54	172.44	168.85	.....	.....
20	163.74	.....	164.83	167.70	168.30	.....	171.12	171.56	172.28	168.81	.....	.....
21	163.76	.....	164.99	167.48	168.32	.....	171.00	171.57	172.34	168.74	.....	165.91
22	163.76	.....	165.10	167.65	168.29	.....	171.00	171.57	172.34	168.58	.....	165.83
23	.....	.....	165.11	167.49	168.29	.....	171.00	171.61	172.26	168.57	.....	165.86
24	.....	.....	.....	167.47	168.33	.....	170.96	171.67	172.28	168.52	.....	165.86
25	.....	.....	.....	167.47	168.31	.....	170.96	171.77	172.16	168.27	.....	165.85
26	.....	.....	.....	167.51	168.41	.....	171.00	171.94	171.98	168.20	.....	165.79
27	.....	.....	.....	167.66	168.64	.....	171.01	171.90	171.83	168.17	.....	165.74
28	.....	.....	.....	167.75	168.71	.....	171.04	171.91	171.73	168.14	.....	165.73
29	.....		.....	167.86	168.70	.....	171.00	171.90	171.57	168.13	.....	165.75
30	.....		.....	167.89	168.68	.....	171.00	172.05	171.42	167.98	.....	165.72
31	.....		.....		168.70		171.00	172.14		167.96		165.56

e Estimated.

11.23.15.222. C. E. Smith. Drilled irrigation artesian well in Chalk Bluff formation and limestone member of San Andres formation, diameter 16 inches, depth 649 feet. Highest water level 101.29 below lsd, Jan. 28, 1950; lowest 126.10 below lsd, July 17, 1955. Records available: 1950-55. Jan. 7, 114.74; July 17, 126.10; Sept. 9, 139.54, pumping; Nov. 4, 120.22.

11.23.22.343a. Byrum Brown. Drilled irrigation artesian well in Chalk Bluff formation and limestone member of San Andres formation, diameter 14 inches, depth 231 feet. Highest water level 164.36 below lsd, Jan. 28, 1953; lowest 180.60 below lsd, Sept. 10, 1954. Records available: 1952-55. Jan. 8, 169.10; Mar. 8, 168.50; May 12, 169.59; Nov. 4, 175.16.

11.24.10.224. C. E. Smith. Drilled stock water-table well in valley fill, diameter 8 inches, depth 129 feet. Land-surface datum is 3,563 feet above msl. Highest water level 11.14 below lsd, Dec. 10, 1941; lowest 47.01 below lsd, Sept. 11, 1953. Records available: 1937-55. Pressure pump operates intermittently. Jan. 20, 22.09; Mar. 8, 28.22, pumped recently; May 12, 36.55, pumped recently; July 5, 42.31; Sept. 9, 45.84; Nov. 4, 26.99.

11.24.14.331. G. C. Porter. Drilled irrigation water-table well in valley fill, diameter 8 inches. Highest water level 27.58 below lsd, Feb. 3, 1948; lowest 71.14 below lsd, Sept. 9, 1955. Records available: 1947-55. Jan. 20, 40.72; Mar. 8, 47.94; May 12, 60.16; July 5, 65.28; Sept. 9, 71.14; Nov. 4, 46.69.

11. 24. 28. 113. S. W. Skinner. Drilled domestic water-table well in valley fill, diameter 6 inches, depth 143 feet. Highest water level 50. 78 below lsd, Nov. 14, 1941; lowest 97. 93 below lsd, Sept. 9, 1955. Records available: 1938-55. Jan. 28, 77. 38; Mar. 8, 79. 91; May 12, 88. 37; Sept. 9, 97. 93; Nov. 4, 84. 19.

11. 24. 29. 242. Mountain View. Drilled observation artesian well in limestone member of San Andres formation, diameter 10 inches, depth 553 feet, depth to artesian aquifers 290, 410, 460, 505, and 545. Land-surface datum is 3, 627. 18 feet above msl. Highest water level 53. 18 below lsd, Jan. 18, 1943; lowest 95. 31 below lsd, Aug. 21, 1954. Records available: 1940-55.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	75. 25	74. 54	76. 10	83. 86	84. 10	.....	.....	86. 74	94. 21	87. 88	80. 55	77. 65
2	75. 14	74. 54	76. 33	83. 99	83. 82	.....	.....	87. 32	94. 09	87. 13	80. 59	77. 53
3	75. 09	74. 60	76. 49	83. 48	84. 72	.....	.....	87. 82	94. 02	86. 69	80. 63	77. 63
4	75. 08	74. 87	76. 74	83. 09	84. 97	.....	.....	88. 27	93. 62	86. 21	80. 50	77. 52
5	75. 02	74. 84	77. 14	84. 07	85. 22	.....	.....	88. 97	93. 25	85. 88	80. 40	77. 43
6	75. 05	74. 67	76. 77	84. 40	85. 52	86. 86	.....	89. 43	e93. 70	85. 68	80. 14	77. 25
7	74. 97	74. 52	76. 45	84. 75	85. 70	.....	.....	89. 57	e93. 80	85. 22	80. 00	77. 20
8	74. 85	74. 93	77. 15	84. 80	84. 65	.....	.....	89. 42	94. 04	84. 85	79. 75	77. 44
9	74. 91	74. 81	77. 34	84. 73	84. 39	.....	.....	90. 59	94. 18	84. 42	79. 63	77. 30
10	74. 76	75. 17	77. 51	83. 20	85. 02	.....	.....	91. 53	94. 25	84. 17	79. 47	77. 35
11	74. 77	75. 32	.....	82. 96	85. 27	.....	.....	92. 08	93. 77	83. 95	79. 33	77. 08
12	74. 75	75. 28	.....	83. 75	85. 35	.....	.....	91. 88	93. 38	83. 77	79. 38	76. 93
13	74. 65	75. 12	.....	83. 50	85. 72	.....	.....	92. 10	93. 93	83. 45	79. 22	76. 88
14	74. 55	75. 00	.....	84. 20	85. 26	.....	89. 50	91. 95	94. 23	83. 13	79. 05	77. 03
15	74. 54	75. 18	.....	84. 22	84. 45	.....	89. 82	91. 45	94. 51	82. 95	78. 93	77. 00
16	74. 30	75. 45	79. 31	84. 42	84. 19	.....	89. 72	92. 37	94. 60	82. 82	79. 09	76. 75
17	74. 25	75. 64	79. 51	83. 47	84. 73	.....	88. 79	92. 70	94. 53	82. 66	79. 01	76. 69
18	74. 48	75. 53	80. 35	83. 18	84. 59	.....	88. 57	93. 38	93. 20	82. 47	78. 92	76. 67
19	74. 48	75. 80	80. 47	83. 53	84. 32	.....	88. 83	93. 31	92. 84	82. 28	78. 95	76. 63
20	74. 30	75. 38	80. 55	83. 75	84. 27	.....	88. 50	93. 69	93. 15	82. 15	78. 58	76. 53
21	74. 39	75. 19	e79. 97	84. 07	84. 32	.....	88. 08	93. 67	93. 35	81. 97	78. 50	76. 57
22	74. 44	75. 54	e80. 06	84. 10	84. 48	.....	87. 83	93. 25	e93. 58	81. 77	78. 44	76. 39
23	74. 31	75. 66	81. 12	83. 32	83. 37	.....	87. 73	93. 85	93. 58	81. 67	78. 60	76. 32
24	74. 26	75. 97	81. 94	82. 90	83. 96	.....	87. 08	94. 05	92. 98	81. 58	78. 43	76. 40
25	74. 47	75. 83	82. 59	82. 83	84. 33	.....	86. 89	94. 18	91. 86	81. 32	78. 42	76. 18
26	74. 53	75. 96	83. 09	83. 83	e84. 40	.....	87. 47	94. 44	90. 38	81. 17	78. 12	76. 10
27	74. 70	75. 67	82. 33	84. 66	e84. 90	.....	87. 70	94. 42	89. 63	81. 15	77. 95	76. 03
28	74. 71	75. 43	81. 91	e84. 93	.....	e90. 45	87. 87	94. 12	89. 01	81. 18	77. 94	76. 10
29	74. 62		82. 82	85. 42	.....	.....	87. 42	93. 86	88. 61	81. 06	77. 90	76. 35
30	74. 40		83. 49	84. 90	.....	.....	87. 17	94. 45	88. 32	80. 63	77. 89	76. 50
31	74. 25		84. 03		.....		87. 02	94. 53		80. 43		76. 17

e Estimated.

11. 25. 6. 421a. W. M. Kent. Drilled unused water-table well in valley fill, diameter 8 inches, depth 85 feet. Highest water level 1. 05 below lsd, July 7, 1953; lowest 11. 14 below lsd, Sept. 15, 1948. Records available: 1941-54. Measurement discontinued.

11. 25. 29. 444. Glenn C. Wheeler. Drilled unused water-table well in valley fill, diameter 6 inches, depth 30 feet. Highest water level 3. 14 below lsd, Mar. 15, 1942; lowest 15. 49 below lsd, Nov. 3, 1948. Records available: 1937-55. Jan. 19, 13. 73; Mar. 8, 11. 27; May 12, 10. 48; July 5, 13. 01; Sept. 9, 14. 03; Nov. 4, 9. 46.

12. 24. 13. 111. W. T. Weldy. Drilled stock water-table well in valley fill, diameter 8 inches. Highest water level 62. 36 below lsd, Jan. 7, 1943; lowest dry at 90. 54, Sept. 12, 1953. Records available: 1942-55. Jan. 20, 83. 86; Mar. 9, 83. 30.

12. 25. 9. 422. Cumberland townsite. Drilled unused water-table well in valley fill, diameter 10 inches, reported depth 90 feet. Highest water level 38. 64 below lsd, Oct. 16, 1941; lowest 68. 88 below lsd, Sept. 9, 1954. Records available: 1937-55. Jan. 19, 62. 60; Mar. 8, 62. 90; May 12, 65. 69; July 5, 67. 54; Nov. 4, 65. 74.

12. 25. 22. 411. W. T. Clardy. Drilled unused water-table well in valley fill, diameter 18 inches, depth 147 feet. Highest water level 86. 86 below lsd, Mar. 11, 1948; lowest 120. 55 below lsd, Mar. 8, 1955. Records available: 1947-55. Jan. 28, 111. 69; Mar. 8, 120. 55; May 12, 119. 80; July 8, 115. 14; Sept. 8, 114. 79; Nov. 4, 111. 41.

12. 25. 23. 110. Orchard Park. Drilled unused artesian well in limestone member of San Andres formation, diameter 8 inches, depth 810 feet, depth to artesian aquifers 600-790. Land-surface datum is 3, 546. 19 feet above msl. Highest water level 1. 74 below lsd, Jan. 15, 1942; lowest 112. 89 below lsd, Sept. 3, 1955. Records available: 1925-55.

12. 25. 23. 110--Continued.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	18. 12	21. 17	32. 17	86. 18	71. 58	81. 09	95. 36	52. 72	110. 83	63. 26	28. 66	21. 75
2	18. 90	21. 92	36. 89	e85. 50	68. 34	85. 55	96. 78	54. 87	111. 58	52. 16	27. 88	21. 80
3	19. 59	22. 59	38. 80	81. 17	72. 66	87. 95	94. 70	57. 78	112. 89	46. 37	28. 94	22. 13
4	19. 39	23. 05	39. 22	76. 08	78. 00	92. 13	92. 99	63. 53	110. 75	43. 56	29. 13	22. 49
5	19. 52	23. 52	39. 77	81. 08	78. 77	87. 77	94. 08	67. 14	108. 14	41. 73	28. 89	21. 83
6	19. 87	23. 48	41. 21	81. 98	79. 63	87. 54	91. 37	71. 73	108. 00	40. 91	29. 00	21. 92
7	19. 80	23. 42	39. 73	80. 45	77. 72	94. 70	92. 55	78. 47	105. 51	39. 30	27. 58	21. 62
8	19. 32	25. 73	43. 75	77. 88	70. 00	96. 48	88. 45	81. 85	108. 02	37. 18	27. 31	21. 62
9	17. 47	26. 73	45. 29	77. 90	66. 22	96. 77	91. 31	87. 43	105. 89	35. 77	26. 98	21. 57
10	16. 91	27. 61	47. 71	68. 13	70. 25	100. 32	90. 60	90. 93	103. 78	34. 95	26. 98	21. 51
11	17. 50	28. 13	51. 88	64. 96	67. 34	101. 12	88. 79	95. 75	98. 12	34. 80	27. 07	21. 57
12	17. 43	27. 71	55. 35	69. 53	65. 32	99. 69	90. 30	95. 81	97. 18	34. 56	27. 48	21. 25
13	17. 64	27. 17	55. 48	69. 92	65. 18	99. 10	91. 70	98. 54	99. 80	34. 03	26. 78	21. 95
14	18. 09	26. 47	51. 60	70. 27	63. 67	102. 46	92. 17	98. 96	103. 68	33. 54	26. 08	22. 52
15	18. 02	29. 78	60. 47	70. 27	57. 67	102. 37	89. 70	99. 65	105. 00	32. 59	26. 70	22. 88
16	17. 42	31. 49	65. 96	72. 83	54. 90	101. 83	84. 05	103. 89	103. 28	32. 08	26. 08	22. 92
17	17. 05	32. 44	64. 76	67. 68	57. 59	101. 62	76. 63	105. 90	100. 24	31. 03	25. 58	23. 09
18	18. 17	32. 67	67. 91	66. 57	60. 48	102. 17	74. 07	106. 47	96. 70	30. 70	24. 78	22. 94
19	18. 45	33. 85	71. 23	69. 68	59. 90	97. 11	78. 00	103. 60	94. 34	30. 63	24. 68	22. 68
20	19. 12	31. 67	69. 52	71. 67	59. 52	94. 60	72. 20	104. 84	98. 61	30. 44	24. 75	22. 25
21	19. 08	30. 84	66. 09	74. 34	60. 15	94. 95	65. 08	101. 64	101. 00	30. 11	23. 60	22. 27
22	20. 48	32. 02	62. 63	74. 93	56. 29	96. 69	62. 93	99. 58	103. 43	30. 05	24. 13	21. 38
23	19. 32	32. 52	73. 14	69. 67	54. 93	96. 63	56. 98	104. 23	106. 20	29. 44	24. 23	22. 03
24	20. 26	32. 79	77. 16	63. 82	61. 17	97. 27	53. 53	105. 74	99. 40	28. 90	23. 98	21. 48
25	21. 40	32. 39	82. 77	65. 10	64. 77	95. 35	52. 18	103. 83	92. 88	27. 93	24. 12	21. 28
26	23. 07	33. 51	82. 98	74. 23	67. 53	90. 67	53. 92	109. 03	73. 77	27. 29	24. 38	20. 85
27	23. 28	31. 53	.....	79. 58	79. 10	87. 92	54. 15	107. 52	66. 97	27. 40	23. 20	20. 98
28	23. 98	29. 69	.....	84. 89	79. 56	87. 45	53. 33	108. 45	66. 10	28. 76	23. 20	22. 37
29	23. 80		.....	83. 05	77. 68	89. 52	52. 59	106. 12	70. 08	28. 80	22. 67	21. 78
30	21. 93		.....	76. 98	76. 55	91. 54	53. 69	108. 32	68. 07	28. 66	21. 88	22. 16
31	20. 17		85. 09		80. 79		53. 19	108. 62		27. 85		21. 63

e Estimated.

12. 25. 35. 411a. A. C. Stone. Drilled irrigation water-table well in valley fill, diameter 16 inches. Highest water level 40. 23 below lsd, Jan. 20, 1945; lowest 90. 57 below lsd, Sept. 14, 1954. Records available: 1945-55. Jan. 28, 77. 39; Mar. 8, 85. 52; May 13, 87. 25.

12. 26. 7. 421. Cecil Johnson. Drilled irrigation artesian well in valley fill, depth 150-160 feet. Highest water level 0. 72 above lsd, Jan. 25, 1951; lowest 10. 53 below lsd, Sept. 9, 1954. Records available: 1938-41, 1943-55. Jan. 19, 6. 47; Mar. 8, 7. 00; May 13, 8. 55; July 5, 9. 44; Sept. 8, 10. 34; Nov. 4, 9. 93.

12. 26. 18. 221a. Cecil Johnson. Drilled irrigation water-table well in valley fill, diameter 6 inches, depth 68 feet. Highest water level 14. 22 below lsd, Mar. 23, 1945; lowest 18. 16 below lsd, Sept. 9, 1954. Records available: 1944-55. Jan. 19, 17. 33; Mar. 8, 17. 51; May 13, 18. 10; July 5, 17. 42; Sept. 8, 17. 83; Nov. 4, 17. 76.

12. 26. 29. 333. T. S. Lawing. Drilled unused water-table well in valley fill, diameter 13 inches, reported depth 250 feet. Highest water level 14. 20 below lsd, Jan. 25, 1940; lowest 26. 85 below lsd, May 13, 1955. Records available: 1939-55. Jan. 28, 18. 34; Mar. 8, 18. 91; May 13, 26. 85; July 5, 18. 87; Sept. 8, 19. 48; Nov. 4, 19. 00.

13. 25. 14. 231. F. W. Pfeiffer. Drilled domestic water-table well in valley fill, diameter 12 inches, depth 152 feet. Highest water level 40. 12 below lsd, Jan. 28, 1942; lowest 89. 99 below lsd, Nov. 5, 1953. Records available: 1940-54. No measurement made in 1955.

13. 25. 14. 231a. F. W. Pfeiffer. Drilled irrigation well. Highest water level 89. 88 below lsd, Jan. 18, 1955; lowest 93. 33 below lsd, Nov. 12, 1954. Records available: 1954-55. Jan. 18, 89. 88; Sept. 8, 116. 70, pumping.

13. 25. 17. 411. R. Thaman. Drilled stock water-table well in valley fill, diameter 6 inches, depth 148 feet. Highest water level 55. 08 below lsd, Feb. 3, 1942; lowest 133. 67 below lsd, Nov. 5, 1953. Records available: 1939, 1941-55. Jan. 18, 77. 60; July 5, 122. 73.

13. 25. 27. 211. Greenfield well. Drilled observation artesian well in limestone member of San Andres formation, diameter 10 inches, depth 880 feet, depth to artesian aquifers 740, 795. Land-surface datum is 3, 523. 76 feet above msl. Highest water level 12. 94 above lsd, Jan. 13, 1942; lowest 117. 53 below lsd, Sept. 3, 1955. Records available: 1940-55.

13. 25. 27. 211--Continued.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	5.68	24.32	87.28	72.60	88.23	100.14	.....	115.87	54.05	16.50	....
2	.....	7.03	26.99	86.35	73.50	90.75	99.08	.....	116.33	42.50	15.66	8.12
3	.....	8.88	28.13	79.68	76.05	92.34	97.15	.....	117.53	37.73	.....	7.79
4	.....	7.07	30.26	77.43	81.60	95.22	96.94	.....	112.88	34.45	.....	7.25
5	3.98	6.53	31.96	83.93	82.06	90.12	100.69	.....	111.52	32.52	.....	6.69
6	4.53	8.14	29.51	85.35	81.51	93.63	99.38	69.06	115.00	31.17	14.90	7.61
7	4.73	7.75	28.32	81.90	74.65	103.43	94.34	78.18	111.69	28.90	13.88	7.42
8	2.68	9.77	30.00	83.40	63.33	104.64	92.78	81.08	113.08	26.78	14.12	8.32
9	.72	12.75	36.78	78.58	61.96	104.83	94.85	90.75	109.60	25.70	14.29	8.29
10	.23	15.13	42.97	69.00	68.49	107.19	92.60	92.00	102.82	24.25	14.53	8.54
11	.68	13.31	44.93	67.08	67.13	106.95	e91.35	.....	96.47	24.03	14.92	8.35
12	.82	13.14	49.64	69.26	61.65	104.42	89.82	.....	94.80	23.33	15.40	8.06
13	.87	12.00	46.98	68.18	62.73	103.47	91.35	.....	102.57	22.97	13.88	9.12
14	2.83	11.59	47.00	71.20	60.40	109.43	94.04	.....	102.67	22.72	13.42	9.93
15	2.21	18.30	56.14	76.07	60.40	109.18	94.45	.....	104.74	21.95	12.50	10.00
16	1.45	18.62	61.37	72.88	53.49	108.34	.....	.....	103.00	21.32	12.53	10.40
17	1.17	21.54	62.03	67.02	58.65	107.70	.....	.....	96.75	20.36	10.77	10.35
18	3.10	24.08	64.02	69.04	61.90	106.38	.....	111.83	86.90	19.66	10.00	9.65
19	3.47	23.43	67.49	72.47	61.72	103.68	.....	108.25	85.65	19.09	10.10	9.85
20	3.72	21.05	62.70	75.37	56.76	98.72	.....	107.53	93.84	19.36	9.18	8.75
21	3.48	20.42	56.79	77.16	56.63	95.65	.....	104.80	98.35	19.57	8.10	7.33
22	2.83	24.93	.....	77.79	49.54	101.62	.....	105.00	99.72	18.75	9.18	6.44
23	2.15	26.39	.....	66.26	52.18	101.70	.....	107.05	102.66	18.23	7.88	7.69
24	2.68	25.43	.....	62.08	61.39	99.13	.....	107.39	97.60	17.58	8.53	7.60
25	5.53	24.72	84.03	.....	63.89	90.65	h49.54	106.33	86.90	16.73	8.54	7.48
26	7.34	24.09	85.30	.....	68.78	85.86	.....	109.35	69.65	16.08	8.43	6.94
27	8.23	21.68	83.81	.....	78.32	84.96	.....	110.27	65.35	17.25	7.41	7.30
28	7.24	20.49	80.83	.....	82.57	85.00	.....	108.70	67.34	18.34	.....	8.94
29	6.46		86.13	.....	80.97	88.10	.....	106.18	67.00	19.19	.....	8.30
30	4.63		83.85	78.90	77.98	93.92	.....	111.47	64.15	18.70	.....	7.48
31	3.59		86.77		86.70		.....	114.00		17.88		7.89

e Estimated.
h Tape measurement.

13. 25. 34. 323. L. D. and W. F. Kerr. Drilled unused water-table well in valley fill, diameter 12 inches, depth 141 feet. Highest water level 86.31 below lsd, Mar. 12, 1948; lowest 102.08 below lsd, Nov. 8, 1955. Records available: 1948-55. Jan. 17, 100.34; Mar. 9, 100.51; July 8, 101.10; Sept. 8, 101.60; Nov. 8, 102.08.

13. 26. 7. 333. Howard Amason. Drilled unused water-table well in valley fill, diameter 6 inches, depth 118 feet. Highest water level 4.45 below lsd, Oct. 1, 1941; lowest 29.88 below lsd, Aug. 14, 1954. Records available: 1941-55.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	25.76	25.37	25.69	27.46	26.32	.....	26.89	25.90	25.65	25.21	.....	.....
2	25.77	.....	25.69	27.49	26.21	.....	.....	.....	25.66	24.91	.....	23.56
3	25.77	.....	25.71	26.93	26.34	.....	.....	25.79	25.63	24.29	.....	23.58
4	25.71	.....	25.79	26.68	26.65	.....	.....	25.79	25.64	23.91	h23.63	23.71
5	25.71	.....	25.87	h26.69	26.85	.....	26.56	25.92	25.62	23.74	23.57	23.76
6	25.73	.....	.....	.....	26.39	.....	26.49	25.90	.....	23.73	23.57	23.71
7	25.71	25.46	.....	.....	26.27	h26.73	26.63	25.88	.....	23.50	23.54	23.71
8	25.66	25.43	26.04	.....	26.14	26.92	26.49	25.87	.....	23.41	23.55	23.80
9	25.65	25.35	26.02	.....	26.09	27.08	26.44	25.88	26.67	23.34	23.45	23.88
10	25.63	25.35	26.06	.....	.....	27.15	26.36	25.92	26.76	23.20	23.39	23.88
11	e25.52	25.44	26.08	26.50	26.57	26.72	26.30	.....	26.40	23.20	23.43	23.96
12	e25.52	25.38	26.11	26.38	26.33	26.49	26.27	.....	26.30	23.20	.....	23.93
13	25.82	25.37	26.07	26.33	26.15	26.40	h26.27	.....	26.58	23.21	.....	23.92
14	25.89	25.38	26.00	26.34	26.10	26.44	26.32	.....	26.64	23.10	.....	23.93
15	25.76	25.42	26.06	26.38	25.98	.....	26.68	.....	26.74	.....	.....	24.03
16	25.66	25.43	.....	26.38	25.91	.....	26.51	h26.28	26.71	.....	.....	23.91
17	25.63	25.55	.....	26.42	26.04	.....	26.17	26.30	26.70	.....	23.59	23.91
18	25.63	25.64	.....	.....	25.92	.....	26.08	26.36	26.27	.....	23.59	24.03
19	25.64	25.82	.....	.....	.....	.....	26.47	26.10	26.08	.....	23.62	24.06
20	25.60	26.10	.....	.....	.....	.....	26.45	26.39	26.30	.....	23.62	24.06
21	25.60	26.15	.....	.....	.....	.....	.....	26.31	26.57	.....	23.56	24.00
22	25.60	.....	.....	.....	.....	.....	.....	26.23	26.48	.....	23.55	24.00
23	25.59	.....	.....	.....	.....	.....	.....	26.24	.....	.....	23.61	.....
24	25.59	.....	.....	.....	.....	h27.12	.....	h26.29	.....	23.30	23.66	.....
25	25.55	25.73	.....	26.21	.....	27.17	.....	26.32	.....	23.26	.....	.....

13. 26. 7. 333--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	25. 55	25. 71	.....	26. 24	.....	27. 20	26. 34	26. 33	.....	23. 26	.....	.....
27	25. 51	25. 67	.....	26. 56	.....	27. 20	26. 29	26. 36	.....	23. 33	.....	.....
28	25. 51	25. 67	.....	26. 98	.....	27. 01	26. 48	26. 00	.....	23. 47	.....	24. 18
29	25. 46		h27. 31	27. 16	.....	27. 21	26. 10	25. 67	.....	23. 52	.....	24. 18
30	25. 44		27. 33	26. 68	.....	27. 20	26. 00	25. 65	h25. 11	23. 59	.....	24. 22
31	25. 37		27. 43		.....		25. 96	25. 61		23. 54		24. 05

e Estimated.
h Tape measurement.

13. 26. 17. 321. Leo Nowak. Drilled domestic water-table well in valley fill, diameter 6 inches, depth 122 feet. Highest water level 6. 00 below lsd, Apr. 15, 1942; lowest 23. 05 below lsd, July 8, 1955. Records available: 1937-55. Jan. 18, 18. 21; Mar. 9, 16. 89; July 8, 23. 05; Sept. 8, 21. 85; Nov. 4, 18. 66.

13. 26. 23. 111. S. A. and L. A. Wasson. Drilled irrigation water-table well in valley fill, diameter 16 inches, depth 287 feet. Highest water level 3. 55 below lsd, Feb. 2, 1942; lowest 11. 16 below lsd, Sept. 10, 1951. Records available: 1938-55. Jan. 17, 6. 90; Mar. 9, 7. 63; July 8, 41. 12, pumping; Sept. 8, 39. 93, pumping; Nov. 4, 7. 82.

13. 26. 28. 121. G. L. Grassie. Drilled stock water-table well in valley fill, diameter 6 inches. Highest water level 13. 99 below lsd, Apr. 5, 1941; lowest 37. 23 below lsd, July 13, 1954. Records available: 1938-55. Jan. 17, 22. 52; Mar. 9, 29. 01; July 8, 32. 64; Sept. 8, 31. 97; Nov. 4, 23. 27.

14. 23. 8. 144. M. D. Kincaid. Drilled stock water-table well in limestone member of San Andres formation, diameter 8 inches, depth 460 feet. Land-surface datum is 3, 845 feet above msl. Highest water level 257. 55 below lsd, Feb. 9, 1943; lowest 285. 97 below lsd, Sept. 8, 1955. Records available: 1940-55. In intake area of artesian aquifer. Jan. 18, 281. 68; Mar. 9, 281. 28; May 24, 284. 87; July 8, 285. 65; Sept. 8, 285. 97; Nov. 7, 285. 20, pumping.

14. 23. 24. 444. Rosendo Casarez. Drilled stock water-table well in valley fill, diameter 6 inches, depth 178 feet. Highest water level 152. 15 below lsd, July 13, 1951; lowest 168. 75 below lsd, Sept. 8, 1955. Records available: 1951-55. Jan. 18, 161. 19; Mar. 9, 160. 71; Sept. 8, 168. 75; Nov. 7, 164. 86, pumping.

14. 25. 1. 344a. V. F. Flores Estate. Drilled domestic water-table well in valley fill, diameter 6 inches, depth 135 feet. Highest water level 71. 19 below lsd, Jan. 23, 1950; lowest 107. 10 below lsd, May 13, 1955. Records available: 1949-55. Jan. 26, 99. 46; Mar. 9, 98. 36; May 13, 107. 10; July 8, 105. 73; Nov. 8, 104. 68.

14. 25. 2. 233a. Massey & Dale. Drilled irrigation water-table well in valley fill, diameter 12 inches, depth 200 feet. Highest water level 52. 13 below lsd, Jan. 27, 1942; lowest 107. 57 below lsd, Nov. 8, 1955. Records available: 1940-55. Jan. 26, 103. 34; Mar. 9, 118. 90, pumping; May 13, 107. 04; July 8, 106. 61; Sept. 8, 111. 06, pumped recently; Nov. 8, 107. 57.

14. 25. 20. 443. Breeb Hurst. Drilled unused water-table well in valley fill, diameter 10 inches, depth 86 feet. Highest water level 71. 46 below lsd, Jan. 22, 1942; lowest 77. 99 below lsd, July 8, 1955. Records available: 1938-55. Jan. 18, 77. 18; Mar. 9, 77. 44; May 13, 77. 76; July 8, 77. 99; Sept. 8, 77. 26; Nov. 7, 76. 72.

14. 26. 7. 433. Henry Johnson. Drilled unused domestic water-table well in valley fill, diameter 10 inches, depth 126 feet. Highest water level 88. 15 below lsd, Jan. 21, 1953; lowest 113. 03 below lsd, July 8, 1955. Records available: 1953-55. Jan. 27, 103. 63, nearby well being pumped; Mar. 9, 102. 57; May 13, 109. 29; July 8, 113. 03; Sept. 8, 115. 98, nearby well being pumped; Nov. 8, 107. 32.

14. 26. 12. 433b. Commins. Drilled irrigation water-table well in valley fill. Highest water level 12. 50 below lsd, Jan. 22, 1942; lowest 20. 10 below lsd, Sept. 10, 1951. Records available: 1940-55. Jan. 28, 17. 10; Mar. 9, 17. 11; July 8, 17. 63; Sept. 7, 18. 59; Nov. 8, 16. 49.

14. 26. 15. 333. Dub Andrus. Drilled irrigation water-table well in valley fill, diameter 12 inches, depth 178 feet. Highest water level 13. 61 below lsd, Oct. 16, 1941; lowest 60. 68 below lsd, Sept. 7, 1955. Records available: 1938-55. Jan. 25, 50. 80; Mar. 9, 51. 17; May 24, 56. 33; Sept. 7, 60. 68; Nov. 8, 55. 06.

14. 26. 30. 111. State Engineer and Pecos Valley Artesian Conservancy District. Drilled observation water-table well in sands and gravels in Orchard Park terrace of Pecos Valley fill, diameter 9 inches, depth 210 feet, cased to 190, perforations 95-190. Highest water level 81. 36 below lsd, July 15, 1953; lowest 88. 59 below lsd, Dec. 29, 1955. Records available: 1953-55.

14. 26. 30. 111--Continued.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	86. 49	86. 35	86. 16	86. 49	86. 57	86. 90	87. 13	.....	87. 61	87. 95	88. 21	88. 47
2	86. 49	86. 33	86. 14	86. 47	86. 60	86. 91	85. 15	.....	87. 62	87. 97	88. 22	88. 47
3	86. 50	86. 34	86. 13	86. 51	86. 61	86. 91	87. 16	.....	87. 63	87. 98	88. 21	88. 50
4	86. 48	86. 34	86. 13	86. 53	86. 63	86. 92	87. 16	.....	87. 65	87. 99	88. 23	88. 50
5	86. 49	86. 32	86. 15	86. 54	86. 63	86. 96	87. 18	.....	87. 66	88. 01	88. 24	88. 50
6	86. 48	86. 34	86. 16	86. 55	86. 65	86. 96	87. 11	.....	87. 67	88. 03	88. 26	88. 49
7	86. 48	86. 31	86. 17	86. 55	86. 65	86. 95	87. 20	.....	87. 68	88. 03	88. 26	88. 52
8	86. 47	86. 28	86. 16	86. 55	86. 65	86. 95	87. 20	.....	87. 65	88. 04	88. 28	88. 53
9	86. 47	86. 28	86. 17	86. 57	86. 67	86. 95	87. 21	h87. 33	87. 65	88. 05	88. 29	88. 52
10	86. 46	86. 31	86. 17	86. 58	86. 66	86. 97	87. 22	.....	87. 67	88. 05	88. 28	88. 53
11	86. 47	86. 27	86. 20	86. 58	86. 67	86. 97	87. 23	.....	87. 68	88. 06	88. 31	88. 53
12	86. 48	86. 26	86. 21	86. 63	86. 71	87. 00	87. 25	.....	87. 68	88. 07	88. 32	88. 53
13	86. 43	86. 27	86. 22	86. 63	86. 71	87. 00	87. 24	.....	87. 70	88. 08	88. 34	88. 54
14	86. 45	86. 25	86. 23	86. 62	86. 71	86. 99	87. 26	.....	87. 71	88. 07	88. 33	88. 55
15	86. 45	86. 25	86. 24	86. 62	86. 73	87. 02	87. 27	.....	87. 72	88. 09	88. 34	88. 54
16	86. 44	86. 25	86. 24	86. 63	86. 74	87. 02	87. 27	.....	87. 74	88. 11	88. 36	88. 54
17	86. 43	86. 21	86. 26	86. 62	86. 74	87. 04	87. 29	.....	87. 76	88. 11	88. 36	88. 55
18	86. 45	86. 21	86. 26	86. 62	86. 76	87. 04	87. 30	.....	87. 78	88. 11	88. 39	88. 56
19	86. 40	86. 23	86. 29	86. 61	86. 78	87. 04	87. 31	.....	87. 78	88. 12	88. 40	88. 56
20	86. 42	86. 21	86. 29	86. 61	86. 78	87. 05	87. 31	.....	87. 79	88. 13	88. 40	88. 56
21	86. 41	86. 20	86. 33	86. 59	86. 79	87. 06	87. 32	.....	87. 82	88. 14	88. 40	88. 56
22	86. 41	86. 20	86. 34	86. 59	86. 80	87. 07	.....	.....	87. 83	88. 13	88. 42	88. 55
23	86. 39	86. 20	86. 36	86. 59	86. 82	87. 07	.....	.....	87. 85	88. 16	88. 44	88. 57
24	86. 41	86. 18	86. 38	86. 60	86. 82	87. 07	.....	h87. 51	87. 86	88. 15	88. 44	88. 58
25	86. 38	86. 16	86. 40	86. 59	86. 82	87. 10	.....	87. 52	87. 88	88. 15	88. 45	88. 58
26	86. 40	86. 17	86. 43	86. 57	86. 85	87. 10	.....	87. 53	87. 90	88. 16	88. 44	88. 58
27	86. 37	86. 15	86. 42	86. 60	86. 85	87. 10	.....	87. 54	87. 92	88. 17	88. 46	88. 56
28	86. 38	86. 16	86. 44	86. 59	86. 88	87. 11	.....	87. 55	87. 91	88. 17	88. 46	88. 58
29	86. 37		86. 46	86. 56	86. 88	87. 10	.....	87. 57	87. 93	88. 19	88. 46	88. 59
30	86. 37		86. 46	86. 56	86. 88	87. 12	.....	87. 58	87. 95	88. 19	88. 47	88. 58
31	86. 32		86. 49		86. 88		.....	87. 60		88. 19		88. 55

h Tape measurement.

14. 26. 35. 344a. J. Q. Mitchell. Drilled stock and domestic water-table well in valley fill, diameter 6 inches. Highest water level 73. 63 below lsd, Nov. 11, 1952; lowest 77. 54 below lsd, Nov. 8, 1955. Records available: 1952-55. Jan. 27, 76. 73; Mar. 9, 76. 80; May 24, 76. 88; July 8, 77. 18; Sept. 7, 77. 39; Nov. 8, 77. 54.

15. 24. 32. 211. Carl Mangum. Drilled stock water-table well in valley fill, diameter 10 inches, depth 200 feet. Highest water level 37. 63 below lsd, Jan. 9, 1945; lowest 71. 53 below lsd, Sept. 7, 1955. Records available: 1940-55. Jan. 22, 62. 44; Mar. 10, 63. 83; May 24, 66. 19; July 8, 68. 89; Sept. 7, 71. 53; Nov. 8, 65. 41.

15. 25. 35. 111. M. M. Spence. Drilled domestic water-table well in valley fill, diameter 6 inches. Highest water level 12. 48 below lsd, Oct. 15, 1941; lowest 35. 78 below lsd, Sept. 16, 1953. Records available: 1938-55. Jan. 21, 28. 30; Mar. 10, 26. 72; May 24, 32. 40; July 8, 29. 03; Sept. 7, 30. 02; Nov. 8, 27. 38.

15. 26. 4. 444. Mrs. H. B. Cowan. Drilled unused water-table well in valley fill, diameter 6 inches, depth 106 feet. Highest water level 32. 71 below lsd, Nov. 12, 1941; lowest 64. 01 below lsd, Sept. 7, 1955. Records available: 1939-55. Jan. 24, 50. 19; Mar. 9, 50. 78; May 24, 54. 99; July 8, 54. 44; Sept. 7, 64. 01; Nov. 8, 52. 98.

15. 26. 19. 212. Jim Revado. Drilled domestic and stock water-table well in valley fill, diameter 6 inches, depth 104 feet. Highest water level 39. 53 below lsd, Jan. 17, 1951; lowest 47. 03 below lsd, Sept. 7, 1955. Records available: 1951-55. Jan. 24, 46. 17; Mar. 9, 45. 94; May 24, 46. 30; July 8, 46. 62; Sept. 7, 47. 03; Nov. 8, 46. 99.

Curry County

Clovis area. --Curry County is in east-central New Mexico in the High Plains section of the Great Plains province. Measurements of water levels were begun in the Clovis area in 1954 to determine the effects of pumping and precipitation upon the principal ground-water reservoir, which is in the Ogallala formation of Pliocene age. Rapid development of irrigation, which is done exclusively with ground water, began in Curry County in 1953. By August 1955 more than 400 wells had been drilled. The observation-well program was continued in 1955 by measuring water levels in 52 wells in January and in 12 wells bimonthly. The January measurements, not all of which are included in this report, were used in preparing the map showing the change in water levels in 1955 and from 1954 to 1956. (See fig. 80.)

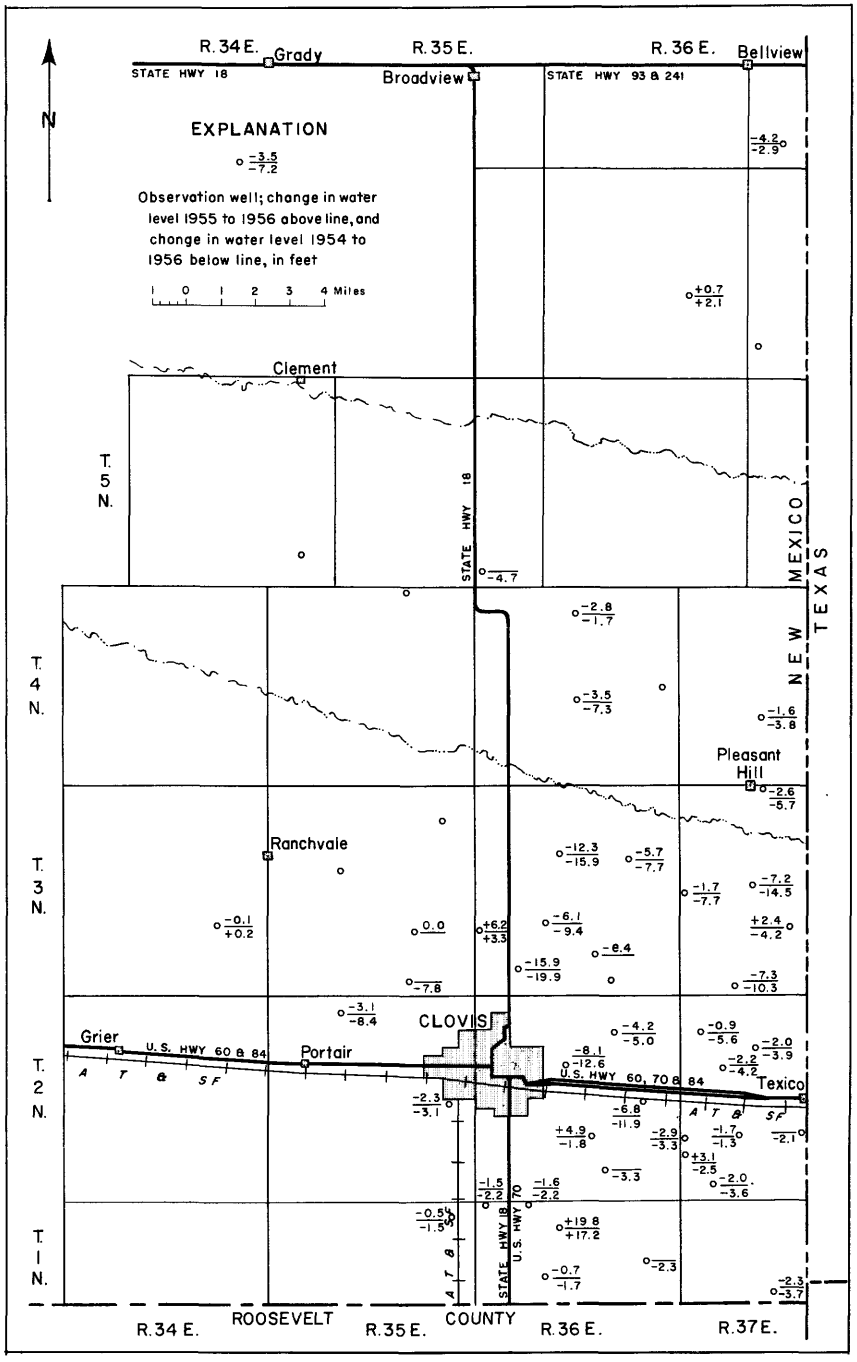


Figure 80. --Changes in ground-water level from January 1955 to January 1956 and from February, March, or April, 1954, to January 1956 in Clovis area, Curry County, N. Mex.

The acreage irrigated with ground water increased from about 40,000 acres in 1954 to about 74,000 acres in 1955, most of which is in the eastern part of Curry County in Tps. 1 to 6 N., Rs. 35 to 37 E. The amount of ground water that must be pumped for irrigation is partly governed by the amount and distribution of precipitation. Precipitation in the Clovis area ranged from about 70 to 80 percent of normal in 1955. According to records of the U.S. Weather Bureau, precipitation was 12.79 inches at Clovis, 5.40 inches below normal; 12.94 inches at Melrose, 3.53 inches below normal; and 15.52 inches at Frio Draw about 30 miles northeast of Clovis, 4.42 inches below normal. About 92 to 98 percent of the precipitation in 1955 occurred during the growing season, April to September.

Figure 80 shows changes in water levels in observation wells from January 1955 to January 1956 and from February, March, or April, 1954, to January 1956. The changes from 1955 to 1956 were irregular and ranged from a rise of 19.8 feet to a decline of 15.9 feet, indicating that they were mainly the result of pumping of individual wells rather than integration of effects from more distant wells. As irrigation in the county continues, a more uniform pattern of annual changes in water level should develop, and levels may be expected to decline at a fairly uniform rate. After the pumping becomes stabilized, the areas of water-level decline will continue to expand, but the magnitude of annual declines should become smaller.

Clovis Area

1.32.7.300. W. J. Crenshaw. Drilled stock water-table well in valley fill, diameter 14 inches, depth 50 feet. Highest water level 14.68 below lsd, May 11, 1944; lowest 18.89 below lsd, July 11, 1940. Records available: 1931-55. Jan. 17, 16.55, pumped recently; Mar. 15, 17.04, pumping; May 26, 16.55; July 23, 17.11; Sept. 21, 17.65; Nov. 21, 18.25, pumping.

1.36.6.121. R. W. Hyman. Drilled irrigation water-table well in Ogallala formation, diameter 16 inches, reported depth 317 feet. Highest water level 164.60 below lsd, Feb. 24, 1954; lowest 167.79 below lsd, Sept. 15, 1955. Records available: 1954-55. Jan. 30, 165.28; Mar. 22, 165.31; May 25, 166.85; July 25, 166.69; Sept. 15, 167.79; Nov. 16, 166.72.

1.36.16.111. H. E. Hathorn. Drilled irrigation water-table well in Ogallala formation, diameter 16 inches, reported depth 264 feet. Highest water level 156.56 below lsd, Feb. 23, 1954; lowest 159.19 below lsd, Sept. 15, 1955. Records available: 1954-55. Jan. 18, 157.52; Mar. 22, 158.56; May 25, 158.81; July 25, 158.77; Sept. 15, 159.19; Nov. 16, 158.33.

1.37.16.422. Sam McLarty, Jr. Drilled irrigation water-table well in Ogallala formation, diameter 16 inches, reported depth 338 feet. Highest water level 136.78 below lsd, Feb. 17, 1954; lowest 140.24 below lsd, Nov. 17, 1955. Records available: 1954-55. Jan. 18, 138.20; Mar. 22, 138.74; May 25, 139.67; July 25, 140.00; Nov. 17, 140.24.

2.36.11.111. Harold Holland. Drilled irrigation water-table well in Ogallala formation. Highest water level 238.65 below lsd, Mar. 4, 1954; lowest 247.77 below lsd, May 26, 1954. Records available: 1954-55. Jan. 25, 239.46; May 26, 244.75; July 25, 243.78; Sept. 16, 248.12, nearby well being pumped; Nov. 17, 244.19.

2.36.14.441. W. W. Bomar. Drilled irrigation water-table well in Ogallala formation, diameter 16 inches, reported depth 387 feet. Highest water level 230.04 below lsd, Jan. 20, 1955; lowest 238.30 below lsd, Nov. 16, 1955. Records available: 1954-55. Jan. 20, 230.04; Mar. 23, 237.92, pumped recently; May 25, 236.89; July 25, 233.62; Nov. 16, 238.30.

2.37.9.321. Gene Lovelace. Drilled irrigation water-table well in Ogallala formation, diameter 16 inches, reported depth 362 feet. Highest water level 191.90 below lsd, Mar. 1, 1954; lowest 196.19 below lsd, Nov. 17, 1955. Records available: 1954-55. Jan. 21, 193.80; Mar. 23, 193.98; May 26, 195.89; July 25, 196.06; Sept. 16, 222.78, pumping; Nov. 17, 196.19.

2.37.22.444. Frank Seale. Drilled irrigation water-table well in Ogallala formation, diameter 16 inches, reported depth 285 feet. Highest water level 191.01 below lsd, Nov. 24, 1954; lowest 195.87 below lsd, Sept. 16, 1955. Records available: 1954-55. May 25, 193.60; July 25, 194.43; Sept. 16, 195.87; Nov. 16, 193.80.

3.34.23.433. Archie Baker. Drilled unused irrigation water-table well in Ogallala formation, diameter 16 inches, reported depth 418 feet. Highest water level 340.75 below lsd, Jan. 29, Sept. 15, 1955; lowest 341.09 below lsd, Nov. 16, 1955. Records available: 1954-55. Jan. 29, 340.75; Mar. 23, 340.98; May 26, 341.01; July 25, 340.84; Sept. 15, 340.75; Nov. 16, 341.09.

4.36.10.111. O. E. Pattison. Drilled irrigation water-table well in Ogallala formation, diameter 18 inches, reported depth 411 feet. Highest water level 328.37 below lsd, July 26, 1954; lowest 336.81 below lsd, Sept. 16, 1955. Records available: 1954-55. Jan. 26, 329.12; May 26, 332.21; July 25, 334.33; Sept. 16, 336.81.

6.36.35.122. Paul Harrison. Drilled irrigation water-table well in Ogallala formation, diameter 16 inches, reported depth 373 feet. Highest water level 300.55 below lsd, Mar. 27, 1954; lowest 309.12 below lsd, Sept. 16, 1955. Records available: 1954-55. Sept. 16, 309.12; Nov. 17, 304.17.

7.37.32.131. Roy M. Potts. Drilled irrigation water-table well in Ogallala formation. Highest water level 224.54 below lsd, Jan. 27, 1955; lowest 231.54 below lsd, July 25, 1955. Records available: 1954-55. Jan. 27, 224.54; Mar. 23, 224.72; July 25, 231.54; Sept. 16, 230.44; Nov. 17, 225.49.

Eddy County

Roswell basin. --The general discussion of water-level changes in the Eddy County part of the Roswell basin has been included with Chaves County, as the areas are one continuous ground-water province. The tabulation of water-level measurements for Eddy County follows the discussion of the Carlsbad area.

Carlsbad area. --The Carlsbad area is the part of the Pecos River drainage basin that lies between the vicinity of the river and the Guadalupe mountain front from the vicinity of Lake Avalon to about 6 miles south of Malaga, including most of the Black River valley as far headward as the New Mexico-Texas State line. The principal part of the Carlsbad area was declared as a ground-water basin by the New Mexico State Engineer in October 1947, when indications of the over-development of ground-water resources had become evident. The declared area, extended to include the upper Black River valley in October 1952, now includes about 635 square miles.

The water resources in the Carlsbad area are confined largely to three sources: (1) streams, (2) the Capitan limestone of Permian age, and (3) the alluvium, or valley fill, of Quaternary age.

Water for irrigation is diverted from the Pecos River at Lake Avalon and at Harroun Dam and is pumped from the river in sec. 14, T. 22 S., R. 27 E. Water is diverted from Black River near Rattlesnake Springs and in an area 4 miles upstream from Malaga. Water from Rattlesnake Springs and Blue Springs, which are tributary to Black River, is also utilized for irrigation.

The Capitan limestone, a massive reef formation of Permian age, follows approximately the mountain front west and southwest of Carlsbad. The formation, ranging in width in outcrop from about 2 to 5 miles, plunges below the land surface near Carlsbad and underlies Happy Valley, West Carlsbad, and La Huerta. It then continues below the surface in a northeasterly direction. Many interconnected solution channels and caverns (including the famous Carlsbad Caverns) collect and transmit water in large quantities. Water enters these solution channels principally from abutting strata that dip toward the reef on the westerly side, from infiltration of flood water in Dark Canyon and other mountain arroyos, and from seepage at Lake Avalon. The natural discharge from the Capitan limestone occurs mostly in the Carlsbad Springs area along the Pecos River between the Southern Canal flume and Tansill Dam. Where solution channels are encountered below the static water level, the formation readily yields large quantities of water to wells.

The alluvium includes all the valley fill of Pleistocene and Recent age, consisting of unconsolidated to consolidated cobbles, gravel, sand, and silt. Water is contained and transmitted between particles of unconsolidated rocks and, locally, through solution channels in consolidated limestone gravels. The greatest thickness of alluvium, more than 300 feet, occurs a moderate distance from the mountain front where sinkholes are filled and masked by alluvial fans. The greatest saturated thickness, more than 150 feet, however, is near the river along old drainage courses. Generally, the formation yields the greatest quantities of water to wells where the saturated thickness is greatest. The formation is recharged by precipitation on the land surface, by floods in arroyos, and by seepage from irrigation systems. Natural discharge occurs in springs and seeps along and near the Pecos and Black Rivers. The points of largest discharge from the alluvium are Rattlesnake Springs and Blue Springs on the Black River and the general vicinity of Herradura Bend on the Pecos River about 9 miles southeast of Carlsbad.

Precipitation in the vicinity of Carlsbad has been deficient since 1950. At the U. S. Weather Bureau station, 4 miles south of Carlsbad, precipitation totals have been: 1951, 6.1 inches; 1952, 5.5 inches; 1953, 7.3 inches; 1954, 8.3 inches; and 1955, 10.4 inches. Normal annual precipitation at this station is 13.3 inches. Although the records indicate that precipitation at Carlsbad for 1955 was 2.9 inches below normal, the year was regarded by many residents as moist. Heavy rains during August and October 1954 and well-spaced rains during the 1955 growing season caused a rise in water levels. Water for irrigation was available in the Pecos River for the first time in several years.

During 1955 about 26,000 acres of land in the Carlsbad area was irrigated by water diverted from streams, including about 20,000 acres of land that receive large quantities of supplementary ground water during years of surface-water deficiency. The total acreage irrigated in the area is about 30,500 acres.

About 71,000 of the 109,000 acre-feet of water diverted from the Pecos and Black Rivers by the Carlsbad Irrigation District was delivered to farms. Application of surface water to the land in 1955 is estimated to have been 3.41 acre-feet per acre. About 90,000 of the 140,000 acre-feet of water diverted from streams and springs in the area was delivered to farms. The total of 161,000 acre-feet is more than double the surface water applied to the land during 1954.

During 1955 about 36,600 acre-feet of water was pumped from wells for irrigation, industrial, and public-supply purposes. Of this amount, about 15,200 acre-feet was pumped from the Capitan limestone and about 21,400 acre-feet from the alluvium. Water pumped from wells for irrigation amounted to about 27,500 acre-feet as compared to about 58,000 acre-feet in 1954. About 6,500 acre-feet was pumped from the limestone aquifer and 21,000 acre-feet from the alluvium. Pumpage from the two aquifers in areas of exclusive ground-water use was about the same for both 1955 and 1954. Pumpage in areas of supplementary use, however, was much less in 1955 than in 1954, because of the availability of surface water. Supplementary water pumped from the alluvium amounted to about 13,000 acre-feet in 1955, as compared to 42,500 acre-feet in 1954. Supplementary water pumped from the limestone amounted to about 1,500 acre-feet in 1955 and 2,500 acre-feet in 1954. The greater proportionate use of supplementary water from the limestone aquifer, in spite of available surface water, was probably due to the better quality of the water from the limestone as compared to the quality of that from the alluvium. Estimates of pumpage for irrigation given above are based on field measurements made during 1954 and data on the amount of electric power used annually to pump water.

About 6,000 acre-feet of water was pumped from the Capitan limestone by the city of Carlsbad in 1955, slightly less than in 1954, because of rains during the summer. Pumpage ranged from 192 acre-feet in January to 955 acre-feet in September; usually, the heaviest pumping occurs in August. Other communities using water from the Capitan limestone are Happy Valley and White City; communities deriving their water from the alluvium are Loving and Thayer Apartments. The estimated total amount of ground water pumped for public supply in the Carlsbad area during 1955 was about 6,660 acre-feet, about 6,230 acre-feet of which was from the Capitan limestone and about 430 acre-feet from the alluvium. Approximately 2,425 acre-feet of water was pumped from the Capitan limestone during 1955 for use in the production of potash from ores mined near Carlsbad. Ground water in the Carlsbad area from both the Capitan limestone and the alluvium is used for rural domestic and stock supplies. However, the quantities involved are small as compared to quantities for irrigation, public-supply, and industrial purposes and are not included in the above estimates.

Net changes in water levels in the Carlsbad area during 1955, based on measurements made in 94 observation wells, ranged from a decline of slightly more than 2 feet to a rise of almost 14 feet. For the second successive year, rises in water level predominated over declines.

Observed rises in water level during 1955 in 12 of the wells that tap the Capitan limestone ranged from 1.2 to 2.4 feet, averaging 1.6 feet. Water in the limestone aquifer in interconnected solution channels moves with relative ease; consequently, its upper surface, when not confined, stands at approximately the same level in large areas and rises or declines with relative uniformity. Areas underlain by the aquifer include La Huerta, the western half of Carlsbad, the vicinity of Happy Valley, and southward along the mountain front for several miles. The actual dimensions of the water-bearing parts of the Capitan limestone and adjacent limestone strata are not known, although they are believed to extend beyond the indicated areas, probably in northward and southward directions along the mountain front.

Changes in water level in the alluvium, or valley fill, during 1955 are shown in figure 81. Rises of more than 12 feet were observed under an area of 6 square miles, more than 10 feet under 13 square miles, more than 8 feet under 24 square miles, more than 6 feet under 39 square miles, more than 4 feet under 61 square miles, and more than 2 feet under 78 square miles. A decline of more than 2 feet was noted in an area of slightly more than 1 square mile. The greatest rises were in the vicinity of Otis; the greatest declines were in the southern part of a heavily pumped area, about 3 miles south of Carlsbad, that is dependent exclusively on the alluvium aquifer for irrigation water.

Substantial rises in water levels occurred in the entire area between the Southern Canal and the Pecos River. The rises were mainly due to recharge from infiltration of irrigation water diverted from the Pecos River and decrease in pumpage from wells because of the availability of surface water for irrigation during the growing season. The greatest rises occurred in irrigated areas north and south of Otis and east of Loving.

Water levels in wells deriving water from the alluvium in the vicinities of Carlsbad and La Huerta did not rise or decline significantly, although much of the land was irrigated throughout the growing season with water diverted from the Pecos River. Water levels in wells in the alluvium did not show large recharge effects because the Carlsbad Springs, along the river between Carlsbad and La Huerta, drain the alluvium and act as an overflow level. Alluvium in this area is also recharged from below by movement of water from the Capitan limestone. Recharge effects are not only shown by slight changes in water levels but also by changes in spring flow.

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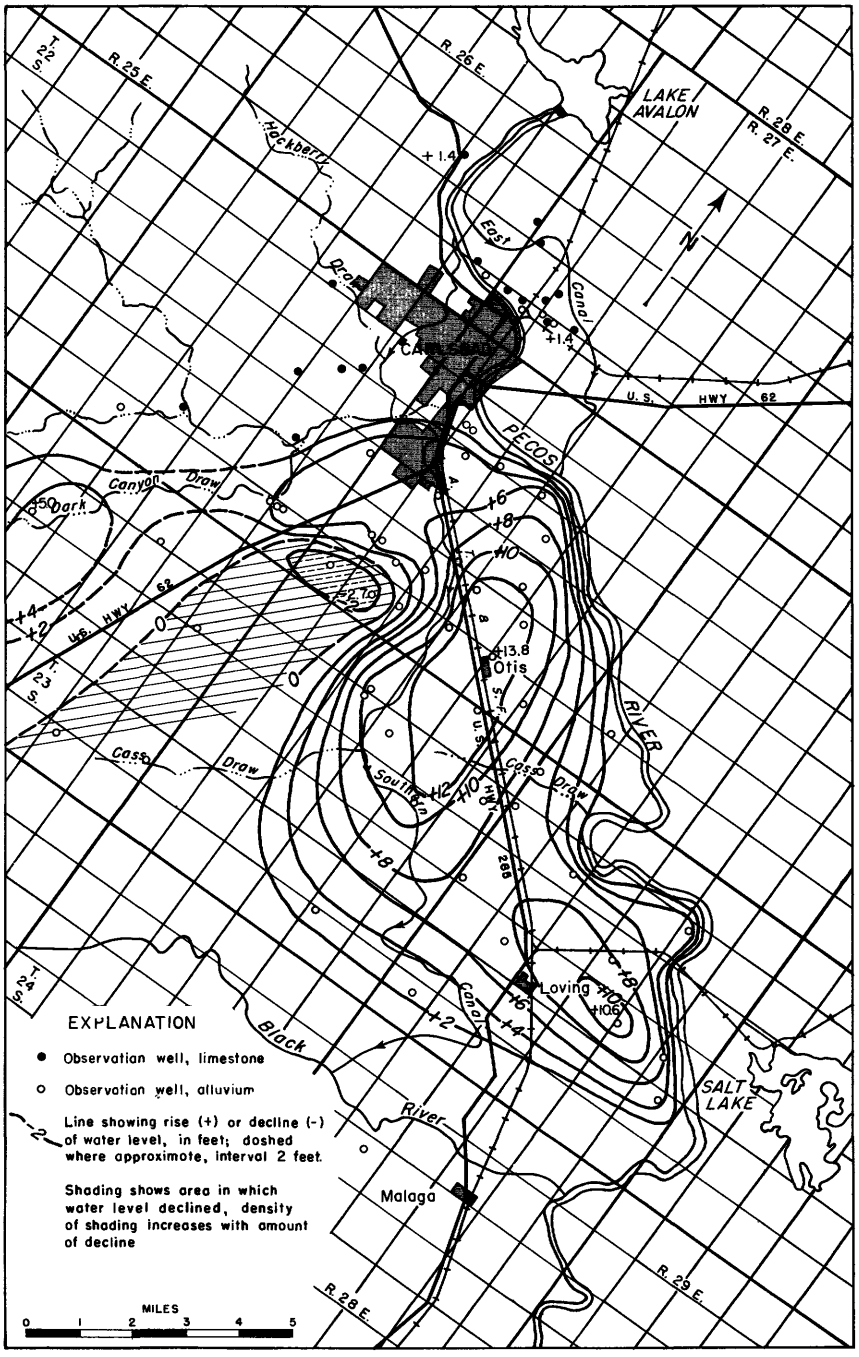

Figure 81. --Change in ground-water level from January 1955 to January 1956 in Carlsbad area, Eddy County, N. Mex.

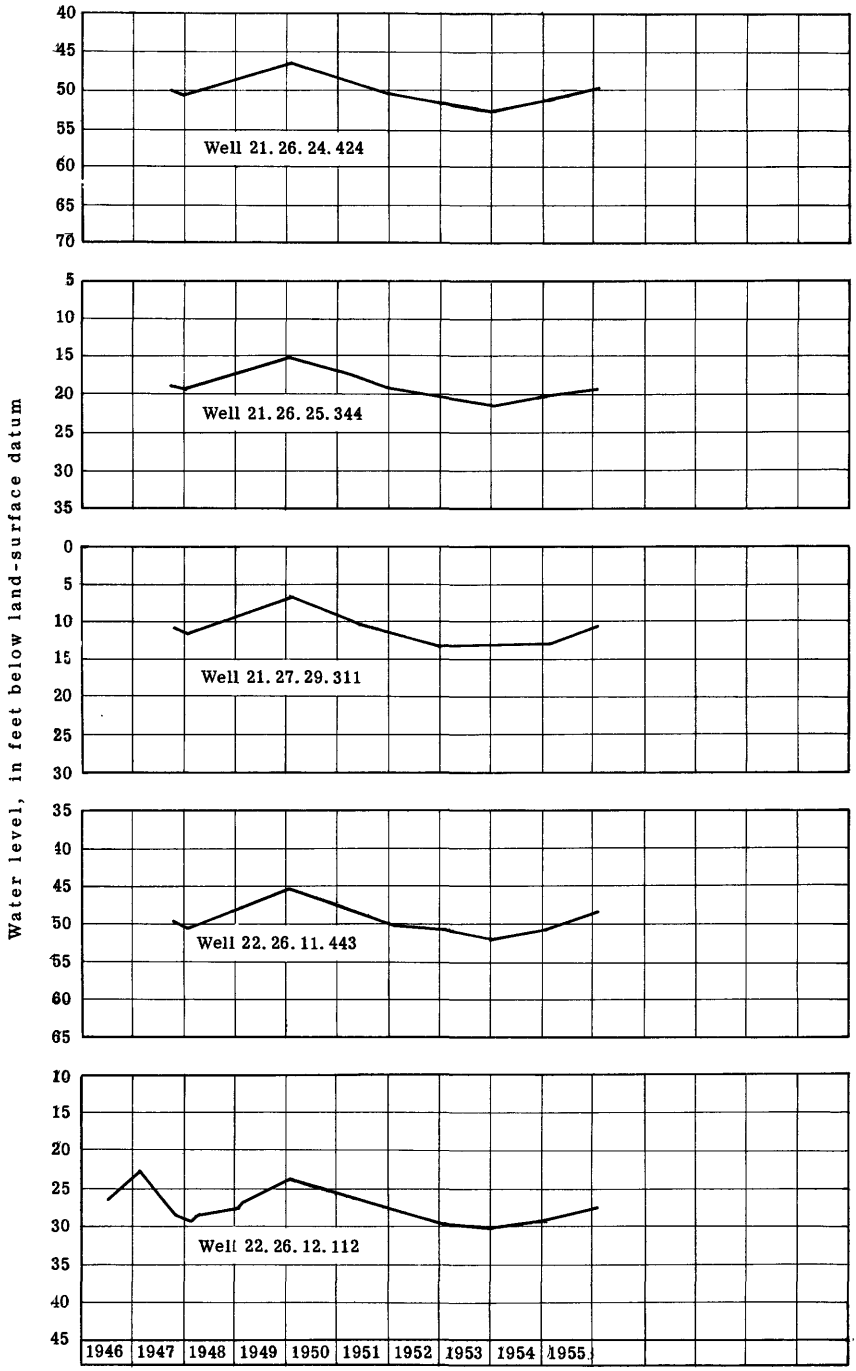

Figure 82. --Water levels in wells in the limestone aquifer near Carlsbad, Eddy County, N. Mex.

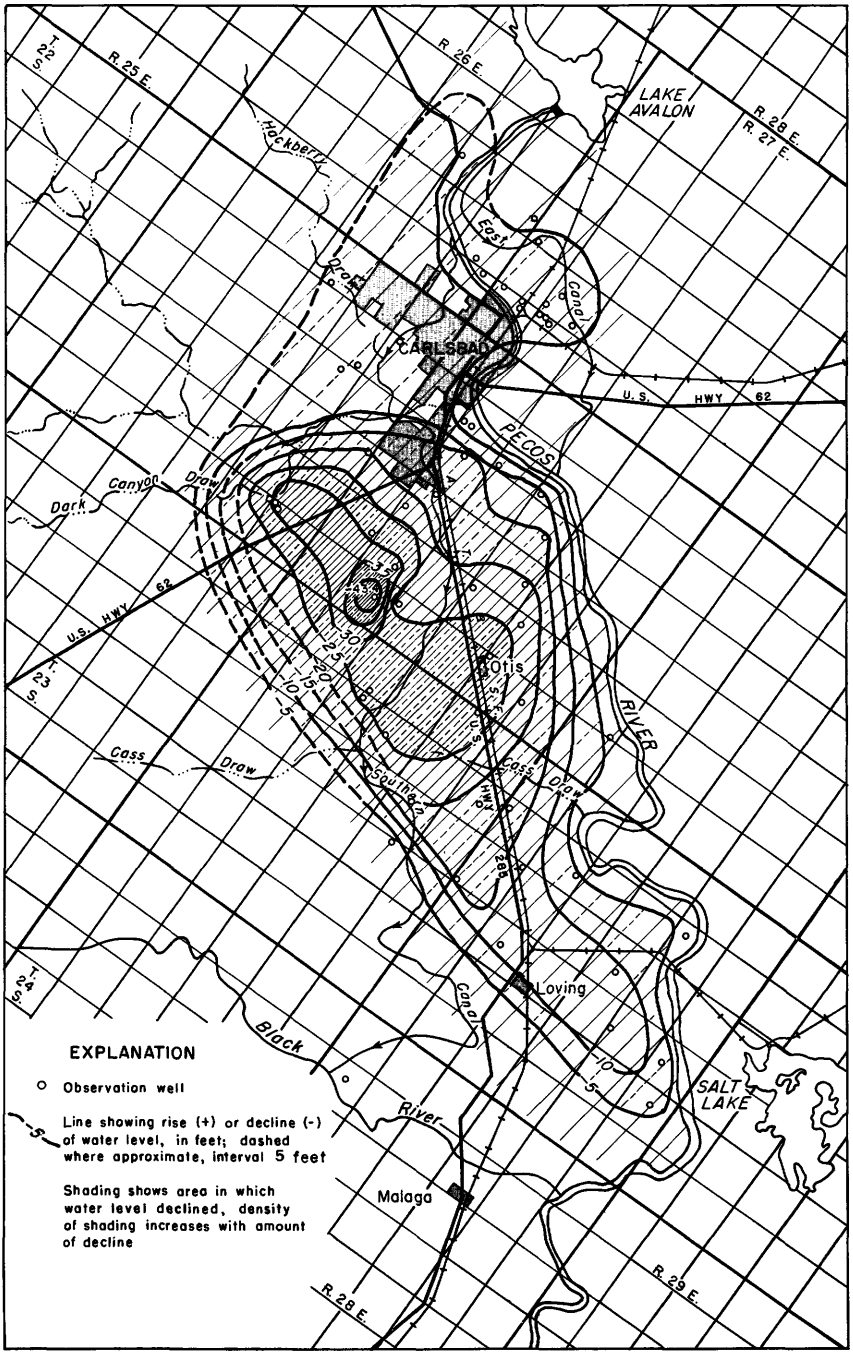

Figure 83. --Change in ground-water level from January 1950 to January 1955 in Carlsbad area, Eddy County, N. Mex.

In the farmed area west of the Southern Canal, 1 to 4 miles south of Carlsbad, water levels rose from 2 to 10 feet, although pumpage for irrigation was heavy and no surface water was used. Water levels in about 1 square mile, which is a small part of this heavily pumped area, declined a little more than 2 feet. Some recharge was caused by local precipitation and floods in Dark Canyon Draw, but most of the rise in water levels is believed to be due to the migration of ground waters from areas underlying the Southern Canal and areas east of the Southern Canal where the application of surface water replenished the reservoir.

In the vicinity of Dark Canyon Draw between the Guadalupe Mountains and the city of Carlsbad, water levels rose from less than 1 to about 4 feet during 1955. Part of this rise resulted from local precipitation, but most of it was due to several floods caused by precipitation farther upstream.

In the upper Black River valley, water levels rose during 1955 from less than 1 to more than 3 feet. No net declines for the year were recorded. The rises were smallest in the vicinity of Rattlesnake Springs where the average rise in 5 wells was 0.5 foot. The greatest rises were in the vicinity of Mayes ranch about 4 miles south of Rattlesnake Springs where the average rise in 4 wells was 2.3 feet.

During the 5-year period January 1950 to January 1955, water levels in most wells that penetrate the limestone aquifer declined about 5 feet. This decline was terminated and an upward trend started by heavy general rains in August and October 1954. Water levels in most of the wells in the limestone aquifer fluctuate with relative uniformity because of extremely high permeability, as shown by the hydrographs of several wells, figure 82.

There was a general decline of water level in the alluvium during the 5-year period. The decline was as much as 40 feet in a small area, whose center was about 3 miles west of Otis. (See fig. 83.) A decline of more than 35 feet was indicated under about 1 square mile, more than 30 feet under about 4 square miles, more than 20 feet under 24 square miles, more than 10 feet under 51 square miles, and more than 5 feet under about 87 square miles. The maximum declines were west of the Southern Canal, where surface water is not available for irrigation and where there is heavy pumping of ground water throughout the irrigation season. Large declines over the 5-year period were noted in the vicinity of Otis in an area where irrigation with ground water pumped from wells supplements irrigation with surface water.

Roswell Basin

16.23.15.323. D. W. Runyan. Drilled stock water-table well in limestone member of San Andres formation, diameter 10 inches, depth 1,485 feet. Highest water level 211.87 below lsd, Mar. 25, 1945; lowest 242.06 below lsd, Sept. 6, 1955. Records available: 1940-55. In intake area of artesian aquifer. Jan. 19, 237.23; May 12, 239.35; July 7, 240.74; Sept. 6, 242.06; Nov. 7, 239.88.

16.25.1.344. Noah Buck. Drilled domestic and stock water-table well in valley fill, diameter 6 inches, reported depth 120 feet. Highest water level 9.50 below lsd, Jan. 16, 1942; lowest 57.09 below lsd, Sept. 7, 1955. Records available: 1938-55. Jan. 21, 34.30; May 11, 41.32; July 7, 54.84; Sept. 7, 57.09; Nov. 8, 26.11.

16.25.6.Lot 4. F. M. Nelson. Drilled unused water-table well in valley fill, diameter 6 inches, depth 100 feet. Highest water level 9.35 below lsd, May 11, 1955; lowest 15.97 below lsd, Dec. 6, 1943. Records available: 1937-55. Jan. 21, 11.43; Mar. 10, 11.44; May 11, 9.35; July 7, 11.20; Sept. 7, 11.76; Nov. 8, 11.59.

16.25.6.313. Frank Childress. Drilled unused water-table well in valley fill, diameter 20 inches. Highest water level 27.06 below lsd, Apr. 23, 1942; lowest 30.59 below lsd, Aug. 9-10, 1954. Records available: 1937-55.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	29.46	.....	29.14	29.10	28.98	.....	29.15	29.39	.....	.....	.....	.....
2	29.46	29.23	29.15	28.97	28.93	.....	.....	.....	.....	.....	.....	28.69
3	29.46	.....	29.13	28.95	.....	.....	.....	.....	.....	.....	.....	28.69
4	29.45	.....	29.13	28.95	.....	.....	.....	.....	.....	.....	.....	28.87
5	29.45	.....	.....	29.01	.....	.....	.....	.....	.....	.....	.....	28.92
6	29.45	.....	.....	29.08	.....	.....	.....	.....	.....	.....	.....	28.77
7	29.46	29.39	.....	29.17	.....	h29.04	h29.24	.....	29.47	h29.48	.....	28.76
8	29.38	29.31	.....	29.08	.....	29.04	29.24	29.28	29.46	29.42	h29.22	28.83
9	29.38	29.18	.....	29.08	.....	29.07	29.24	29.29	29.42	29.36	.....	28.82
10	29.39	29.18	29.05	29.03	.....	29.12	29.28	29.31	29.42	29.31	.....	28.82
11	29.40	.....	29.05	28.93	28.99	29.11	29.32	29.37	29.42	29.26	.....	28.89
12	29.40	.....	29.07	28.93	28.96	29.09	29.32	29.39	29.53	29.26	.....	28.78
13	29.44	.....	29.11	29.02	28.92	29.07	29.34	29.35	29.50	29.26	.....	28.76
14	29.33	29.30	29.05	29.09	28.89	29.08	29.33	29.35	29.50	29.28	.....	28.76
15	29.33	29.19	29.05	29.06	28.86	.....	29.28	29.37	29.42	.....	.....	28.91

16. 25. 6. 313--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
16	29. 28	29. 19	29. 11	29. 06	28. 86	.....	29. 29	.....	29. 41	.....	.....	28. 70
17	29. 23	29. 16	.....	29. 03	28. 84	.....	29. 29	.....	29. 41	.....	28. 97	28. 68
18	29. 23	29. 05	.....	28. 96	28. 82	.....	29. 29	.....	29. 42	.....	28. 96	28. 69
19	.....	29. 05	.....	.....	.....	.....	29. 31	.....	29. 46	.....	28. 99	28. 83
20	.....	.....	.....	.....	.....	.....	29. 32	.....	29. 42	.....	28. 99	28. 84
21	29. 37	.....	.....	.....	.....	.....	.....	.....	29. 41	.....	28. 86	28. 80
22	29. 37	.....	.....	28. 91	.....	.....	.....	.....	29. 43	.....	28. 84	28. 66
23	29. 37	.....	.....	.....	.....	.....	.....	.....	29. 43	.....	28. 86	28. 65
24	29. 37	.....	.....	.....	.....	h29. 10	.....	h29. 35	29. 45	h29. 36	28. 98	.....
25	29. 37	29. 19	.....	28. 96	.....	29. 10	h29. 34	29. 35	29. 45	.....	.....	.....
26	29. 39	29. 19	.....	28. 92	.....	29. 10	29. 34	29. 35	29. 47	.....	.....	.....
27	29. 40	29. 19	.....	28. 91	.....	29. 14	29. 38	29. 35	29. 48	.....	.....	.....
28	29. 39	29. 14	.....	28. 91	.....	29. 17	29. 38	29. 35	29. 46	.....	.....	h28. 70
29	.....		29. 07	29. 00	.....	29. 15	29. 39	29. 35	29. 47	.....	.....	28. 71
30	.....		29. 03	29. 07	.....	29. 15	29. 36	29. 36	.....	.....	.....	28. 90
31	.....		29. 01		.....		29. 36	29. 48		.....		28. 71

h Tape measurement.

16. 25. 11. 113. Cottonwood. Drilled observation artesian well in limestone member of San Andres formation, diameter 7 to 4 inches, depth 800 feet, 526 feet of 7-inch casing, 155 feet of 4-inch casing, depth to artesian aquifers 226-230, 526-550, 770-790. Land-surface datum is 3, 454. 39 feet above msl. Highest water level 40. 44 below lsd, Jan. 16, 1952; lowest 158. 43 below lsd, Sept. 17, 1955. Records available: 1951-55.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	66. 32	87. 62	109. 16	126. 62	130. 63	e143. 80	123. 51	145. 27	126. 15	103. 75	94. 00
2	.....	66. 78	89. 54	108. 04	125. 37	132. 30	142. 85	123. 68	146. 53	120. 82	102. 97	93. 70
3	.....	67. 20	91. 33	106. 92	.....	133. 98	145. 00	123. 68	147. 43	124. 04	102. 57	93. 60
4	.....	67. 47	93. 17	105. 68	.....	135. 40	147. 41	123. 98	148. 48	121. 80	102. 43	93. 33
5	57. 54	67. 93	95. 18	105. 23	.....	137. 66	148. 12	125. 16	149. 20	119. 73	102. 38	92. 86
6	57. 97	67. 92	97. 28	105. 28	.....	137. 83	147. 28	128. 00	149. 92	118. 27	102. 22	.....
7	58. 07	67. 87	98. 23	105. 83	.....	e137. 84	147. 28	131. 77	151. 08	e117. 35	101. 82	.....
8	58. 21	68. 17	98. 46	105. 59	.....	e138. 37	148. 20	135. 47	152. 69	.....	.....	.....
9	58. 47	68. 89	99. 28	e105. 00	122. 28	e139. 19	148. 25	138. 72	153. 88	.....	.....	.....
10	58. 73	69. 82	100. 35	.....	122. 01	138. 75	148. 56	142. 54	154. 93	.....	.....	.....
11	58. 87	71. 08	101. 53	.....	122. 13	e137. 68	147. 70	144. 80	155. 52	.....	.....	.....
12	59. 28	72. 10	.....	.....	122. 30	137. 19	145. 73	145. 35	155. 34	.....	.....	.....
13	59. 72	72. 92	.....	.....	122. 28	137. 04	143. 90	148. 06	155. 78	.....	.....	.....
14	59. 84	72. 93	.....	.....	121. 72	e137. 89	143. 05	148. 27	156. 78	.....	.....	.....
15	60. 07	73. 04	.....	.....	119. 67	140. 00	142. 97	148. 08	157. 63	.....	.....	.....
16	60. 01	73. 32	93. 60	.....	118. 70	e142. 18	143. 33	148. 73	158. 18	.....	.....	55. 70
17	60. 00	74. 06	97. 62	.....	118. 23	e144. 10	144. 07	149. 10	158. 43	.....	.....	55. 55
18	60. 19	74. 67	100. 98	96. 93	117. 80	e145. 10	143. 71	149. 43	157. 10	.....	96. 39	55. 49
19	60. 73	75. 46	103. 40	97. 08	117. 14	e145. 46	143. 91	152. 13	155. 62	.....	96. 45	55. 51
20	61. 30	75. 99	105. 18	99. 47	116. 13	e146. 15	141. 69	153. 16	155. 06	.....	96. 28	55. 49
21	61. 68	76. 03	106. 10	104. 85	115. 56	146. 84	140. 56	153. 85	153. 90	.....	95. 63	55. 51
22	62. 08	76. 45	106. 94	.....	115. 15	146. 94	137. 28	153. 52	152. 51	.....	95. 36	55. 37
23	62. 44	77. 18	107. 78	.....	114. 42	147. 29	134. 96	153. 04	151. 22	.....	95. 43	55. 33
24	62. 66	78. 65	108. 88	.....	e114. 38	148. 21	132. 83	153. 00	148. 78	107. 65	95. 88	55. 35
25	63. 09	79. 83	109. 57	.....	e115. 12	148. 63	130. 80	153. 17	145. 31	106. 38	96. 27	55. 17
26	63. 53	81. 06	110. 32	.....	116. 54	147. 83	129. 25	153. 40	141. 45	105. 70	96. 07	55. 08
27	64. 38	83. 27	109. 02	.....	119. 07	147. 39	128. 01	153. 65	137. 54	105. 22	95. 63	55. 02
28	65. 26	86. 61	107. 90	.....	122. 78	146. 25	125. 82	154. 26	135. 47	104. 90	95. 16	55. 03
29	66. 02		107. 76	.....	126. 93	145. 78	123. 23	e144. 18	133. 40	104. 90	.....	55. 33
30	66. 29		107. 84	127. 55	129. 02	145. 89	122. 49	143. 60	132. 03	104. 38	.....	55. 50
31	66. 16		108. 45		129. 77		122. 75	143. 93		104. 16		e55. 32

e Estimated.

16.26.19.133a. E. Jeffries. Drilled unused water-table well in valley fill, diameter 13 inches, depth 71 feet. Highest water level 24.30 below lsd, Jan. 11, 1952; lowest dry at 58.87, July 23, 1953, 49.00, Mar. 18, 1954. Records available: 1951-55. Jan. 20, 44.97. Bimonthly measurements will not be made in the future. An annual measurement will be made but will not be published in the water-level reports.

16.26.28.431. Robert Horner. Drilled unused irrigation water-table well in valley fill, diameter 16 inches, depth 200 feet. Highest water level 8.72 below lsd, Jan. 15, 1942; lowest 49.12 below lsd, Sept. 15, 1954. Records available: 1938-55. Jan. 20, 27.85; Mar. 9, 28.55; May 11, 32.99; July 7, 55.61, pumping; Sept. 7, 48.05; Nov. 8, 32.00.

17.26.7.421. Charles Denton. Drilled irrigation water-table well in valley fill, diameter 8 inches, depth 150 feet. Highest water level 19.24 below lsd, Jan. 14, 1942; lowest 74.53 below lsd, July 16, 1954. Records available: 1938-39, 1942-55. Jan. 14, 71.76.

17.26.7.433. Joe Nunn. Drilled irrigation water-table well in valley fill, diameter 10 inches, depth 158 feet. Highest water level 26.90 below lsd, Jan. 14, 1942; lowest 90.72 below lsd, Sept. 6, 1955. Records available: 1938-55. Jan. 14, 80.13; Mar. 10, 84.74, nearby well being pumped; May 12, 82.54; July 7, 85.33; Sept. 6, 90.72; Nov. 8, 86.62.

17.26.10.433. D. D. Sullivan. Drilled irrigation water-table well in valley fill, diameter 12 inches, depth 210 feet. Highest water level 14.41 below lsd, Jan. 14, 1942; lowest 63.83 below lsd, Sept. 17, 1954. Records available: 1938-55. Jan. 13, 27.38; Sept. 7, 68.03, pumping; Nov. 8, 31.71.

17.26.16.333. Artesia Cemetery. Drilled municipal water-table well in valley fill, diameter 6 inches. Highest water level 6.14 below lsd, Jan. 13, 1942; lowest 74.94 below lsd, July 16, 1954. Records available: 1937-55. Jan. 13, 43.05; Mar. 9, 48.27; May 11, 53.95; July 7, 65.71; Sept. 6, 66.32; Nov. 8, 50.74.

17.26.24.333a. Mary E. Yates. Dug observation water-table well in valley fill, diameter 4 inches. Highest water level 2.14 below lsd, Mar. 10, 1955; lowest 6.16 below lsd, Sept. 6, 1952. Records available: 1951-55. Jan. 13, 2.50; Mar. 10, 2.14; May 11, 2.91; July 7, 4.31; Sept. 7, 4.24; Nov. 8, 2.84.

18.23.5.333. Joe Clements. Drilled stock water-table well in limestone member of San Andres formation, diameter 6 inches. Highest water level 385.50 below lsd, July 21, 1945; lowest 433.78 below lsd, Sept. 6, 1955. Records available: 1945-55. In intake area of artesian aquifer. Jan. 19, 430.05; May 12, 432.49; July 7, 438.07, pumping, measurement uncertain; Sept. 6, 433.78; Nov. 7, 434.69, pumping.

18.25.23.111. Mrs. G. M. Phelps. Drilled unused artesian(?) well in limestone member of San Andres(?) formation, diameter 8 inches, depth 300 feet. Highest water level 90.67 below lsd, Jan. 12, 1942; lowest 161.41 below lsd, July 7, 1955. Records available: 1942-55. Jan. 12, 150.39; Mar. 10, 154.45; May 11, 157.37; July 7, 161.41; Sept. 7, 161.00; Nov. 8, 151.17.

18.26.4.111b. T. A. Southard. Drilled domestic water-table well in valley fill, diameter 6 inches, reported depth 200 feet. Highest water level 18.19 below lsd, Jan. 28, 1943; lowest 70.08 below lsd, July 15, 1954. Records available: 1937-55. Jan. 12, 46.22; Mar. 10, 51.48; May 11, 57.44; July 7, 65.85; Sept. 6, 68.50; Nov. 7, 51.77.

18.26.5.330. Artesia. Drilled unused artesian well in limestone member of San Andres formation, diameter 8 inches, depth 1,056 feet, depth to artesian aquifers 750, 820, 905. Land-surface datum is 3,394.50 feet above msl. Highest water level 8.30 above lsd, Jan. 12, 1942; lowest 129.55 below lsd, Aug. 6, 1954. Records available: 1931-55.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	51.77	53.54	60.27	89.52	84.00	95.67	115.59	84.30	122.09	90.98	67.12	58.57
2	52.01	53.89	62.00	89.82	82.25	97.24	117.64	85.66	122.31	87.24	67.04	58.54
3	52.20	54.59	63.62	86.00	83.59	97.75	119.03	85.74	123.24	84.78	67.42	58.30
4	52.72	55.80	64.18	82.37	85.02	99.53	115.88	87.39	122.42	82.79	67.63	58.03
5	53.08	56.69	65.74	82.22	85.60	98.42	112.65	90.57	121.93	81.42	67.29	57.78

18. 26. 5. 330--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
6	53. 63	55. 28	.....	82. 80	84. 79	97. 86	110. 97	94. 58	122. 47	80. 50	66. 32	57. 43
7	53. 91	54. 52	.....	81. 94	85. 78	102. 01	109. 65	96. 60	123. 75	79. 40	65. 94	57. 30
8	54. 05	56. 98	.....	81. 47	81. 48	104. 13	108. 57	99. 90	123. 59	78. 62	64. 70	57. 65
9	54. 03	57. 23	.....	80. 95	80. 33	106. 08	108. 07	104. 53	122. 59	77. 63	63. 92	58. 02
10	53. 30	58. 48	.....	78. 10	80. 92	106. 28	107. 08	109. 37	122. 88	76. 83	63. 60	57. 74
11	53. 98	59. 28	71. 02	76. 75	79. 27	108. 88	106. 22	111. 70	122. 07	76. 15	63. 33	57. 32
12	54. 60	58. 98	72. 43	76. 75	78. 20	105. 00	107. 03	110. 50	120. 99	75. 53	63. 50	57. 00
13	55. 32	57. 85	73. 07	77. 06	78. 28	103. 97	108. 13	112. 37	120. 63	74. 92	63. 28	56. 93
14	54. 98	56. 57	73. 32	78. 04	77. 53	106. 75	109. 65	113. 18	121. 30	74. 05	63. 03	57. 58
15	53. 82	57. 75	77. 85	77. 21	75. 83	107. 63	110. 08	113. 32	120. 90	73. 59	62. 63	57. 91
16	53. 27	57. 91	81. 96	77. 29	75. 00	108. 07	110. 24	116. 03	120. 85	73. 26	62. 62	57. 43
17	52. 88	58. 89	83. 79	74. 50	76. 98	109. 07	108. 66	117. 90	120. 37	72. 78	62. 53	57. 57
18	53. 68	58. 56	86. 47	73. 28	77. 84	109. 63	106. 57	118. 52	115. 65	72. 83	62. 38	57. 84
19	53. 85	58. 22	88. 68	76. 92	78. 99	109. 30	107. 37	116. 60	114. 16	72. 68	62. 70	57. 53
20	53. 47	56. 95	90. 17	79. 44	78. 60	108. 24	102. 70	117. 12	113. 44	72. 86	62. 49	57. 45
21	53. 65	57. 05	88. 06	81. 69	79. 24	109. 74	96. 82	114. 68	112. 71	72. 74	61. 97	57. 42
22	53. 65	58. 25	90. 14	83. 24	79. 39	108. 29	94. 27	112. 99	111. 67	72. 68	61. 56	57. 73
23	53. 54	58. 77	90. 87	83. 07	78. 75	109. 93	91. 60e	114. 25	110. 05	72. 02	61. 93	58. 05
24	53. 46	59. 63	91. 40	80. 82	81. 08	108. 67	90. 32	114. 78	107. 05	71. 50	61. 44	57. 83
25	53. 74	59. 47	91. 52	79. 49	83. 77	109. 80	89. 95	116. 57	103. 72	71. 04	61. 42	57. 11
26	53. 30	60. 24	89. 85	81. 80	86. 48	108. 67	91. 28	118. 26e	100. 00	70. 26	60. 86	56. 63
27	54. 23	60. 00	86. 80	84. 39	89. 32	106. 60	88. 06	119. 89	.....	69. 95	60. 56	57. 52
28	54. 14	59. 32	85. 00	86. 62	91. 73	109. 62	85. 00	119. 26	.....	69. 28	60. 17	57. 59
29	54. 17		87. 87	87. 93	92. 10	110. 65	83. 38	118. 18	.....	68. 80	59. 67	58. 34
30	53. 99		88. 50	86. 48	90. 65	113. 53	82. 61	120. 72	92. 90	67. 82	59. 07	58. 58
31	53. 33		89. 04		93. 83		84. 29	120. 74		67. 38		57. 70

e Estimated.

18. 26. 7. 234a. C. H. Hutsonpiller. Drilled unused water-table well in valley fill, diameter 8 inches, depth 159 feet. Highest water level 43. 50 below lsd, Feb. 9, 1943; lowest 80. 74 below lsd, Sept. 25-28, 1955. Records available: 1937-55.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	78. 97	78. 81	78. 29	78. 98	79. 49	.....	80. 20	80. 41	80. 59	.....	.....	.....
2	78. 93	.....	78. 31	79. 00	79. 51	.....	80. 22	80. 42	80. 61	.....	.....	78. 87
3	78. 89	.....	78. 33	79. 02	79. 53	.....	.....	.....	80. 62	.....	.....	78. 87
4	78. 86	.....	78. 34	79. 04	.....	.....	.....	.....	80. 63	.....	.....	78. 86
5	78. 80	.....	.....	79. 05	.....	.....	.....	.....	80. 65	.....	.....	78. 85
6	78. 75	.....	.....	79. 07	.....	.....	.....	.....	80. 66	.....	.....	78. 79
7	78. 70	h77. 78	.....	79. 09	.....	h80. 01	.....	.....	80. 67	h80. 70	.....	78. 79
8	78. 66	.....	.....	79. 11	.....	80. 01	.....	h80. 47	80. 68	80. 66	h79. 48	78. 74
9	78. 62	.....	.....	79. 13	.....	80. 03	.....	80. 47	80. 68	80. 60	79. 46	78. 70
10	78. 57	.....	h78. 54	79. 15	.....	80. 05	.....	80. 47	80. 69	80. 52	79. 43	78. 70
11	78. 52	.....	78. 54	79. 17	h79. 65	80. 03	.....	80. 47	80. 69	80. 44	79. 42	78. 66
12	78. 49	.....	78. 56	79. 19	79. 65	80. 03	.....	80. 47	80. 69	80. 38	79. 39	78. 64
13	78. 45	.....	78. 57	79. 21	79. 65	80. 03	.....	80. 48	80. 70	80. 31	79. 38	78. 60
14	78. 42	h78. 00	78. 59	79. 24	79. 65	80. 07	h80. 32	80. 49	80. 70	80. 23	79. 34	78. 60
15	78. 39	78. 02	78. 61	79. 26	79. 67	80. 09	80. 32	80. 50	80. 70	.....	79. 30	78. 58
16	78. 35	78. 04	78. 63	79. 28	79. 68	.....	80. 35	.....	80. 71	.....	.....	78. 45
17	78. 32	78. 06	78. 68	79. 30	79. 70	.....	80. 35	.....	80. 71	.....	79. 24	78. 45
18	.....	78. 08	.....	79. 32	79. 70	.....	80. 35	.....	80. 71	.....	79. 24	78. 44
19	.....	78. 10	.....	79. 34	79. 72	.....	80. 35	.....	80. 72	.....	79. 24	78. 44
20	.....	78. 12	.....	.....	.....	.....	80. 35	.....	80. 72	.....	79. 22	78. 41
21	.....	78. 14	.....	.....	.....	.....	80. 35	.....	80. 73	.....	79. 18	78. 37
22	.....	.....	.....	.....	.....	.....	.....	.....	80. 73	.....	79. 16	78. 32
23	.....	.....	.....	.....	.....	.....	.....	.....	80. 73	.....	79. 15	78. 31
24	.....	.....	.....	.....	.....	h80. 17	.....	h80. 55	80. 73	h79. 77	79. 12	.....
25	h78. 03	h78. 23	.....	h79. 40	.....	80. 17	h80. 39	80. 55	80. 74	79. 74	.....	.....

18.26.7.234a--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	78.02	78.23	.....	79.41	.....	80.17	80.38	80.55	80.74	79.71	.....	.....
27	77.98	78.25	.....	79.43	.....	80.19	80.38	80.56	80.74	79.68	.....	.....
28	78.95	78.26	.....	79.45	.....	80.19	80.39	80.56	80.74	79.66	.....	78.18
29	78.91		h78.94	79.46	.....	80.19	80.39	80.57	.....	79.66	.....	78.18
30	78.88		78.95	79.48	.....	80.20	80.40	80.57	.....	79.63	.....	78.18
31	78.83		78.97		.....		80.41	80.58		79.60		78.15

h Tape measurement.

18.26.24.223a. Sanders Terry. Drilled irrigation water-table well in valley fill, diameter 12 inches, depth 63 feet. Highest water level 4.29 below lsd, Mar. 19, 1951; lowest 13.78 below lsd, Sept. 7, 1955. Records available: 1947-55. Jan. 12, 6.62; Mar. 10, 6.39; May 12, 7.36; July 7, 10.33; Sept. 7, 13.78; Nov. 7, 8.19.

18.26.28.121a. Town of Dayton. Drilled observation water-table well in valley fill, diameter 8 inches, depth 250 feet, cased to 182, casing slotted 92-182. Highest water level 59.79 below lsd, Feb. 5, 1952; lowest 81.15 below lsd, Nov. 23, Dec. 8, 1955. Records available: 1951-55.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	77.76	77.71	77.73	77.79	78.03	78.42	78.89	79.50	80.01	80.63	81.02	81.11
2	77.75	77.69	77.72	77.74	78.04	78.42	78.92	79.51	80.03	80.64	81.03	81.10
3	77.77	77.70	77.72	77.77	78.06	78.43	78.95	79.52	80.04	80.65	81.03	81.13
4	77.73	77.71	77.73	77.81	78.07	78.44	78.96	79.54	80.07	80.67	81.02	81.13
5	77.76	77.68	77.75	77.81	78.08	78.45	78.98	79.57	80.10	80.69	81.03	81.12
6	77.77	77.71	77.73	77.85	78.08	78.47	78.99	79.58	80.12	80.73	81.05	81.08
7	77.75	77.72	77.73	77.83	78.11	78.50	79.00	79.59	80.14	80.73	81.06	81.11
8	77.74	77.70	77.69	77.82	78.11	78.49	79.02	79.60	80.16	80.73	81.07	81.15
9	77.77	77.69	77.69	77.85	78.13	78.52	79.05	79.63	80.18	80.75	81.06	81.07
10	77.73	77.72	77.70	77.83	78.16	78.53	79.08	79.65	80.20	80.76	81.04	81.11
11	77.75	77.73	77.70	77.83	78.16	78.53	79.09	79.66	80.23	80.78	81.06	81.11
12	77.76	77.71	77.69	77.87	78.17	78.56	79.11	79.67	80.24	80.79	81.11	81.08
13	77.71	77.73	77.68	77.88	78.17	78.58	79.13	79.69	80.25	80.81	81.11	81.09
14	77.70	77.71	77.67	77.88	78.18	78.60	79.13	79.71	80.27	.....	81.07	81.13
15	77.71	77.70	77.69	77.90	78.20	78.60	79.15	79.73	80.28	.....	81.07	81.11
16	77.69	77.74	77.69	77.91	78.21	78.62	79.17	79.74	80.31	.....	81.12	81.07
17	77.70	77.69	77.67	77.90	78.20	78.64	79.20	79.76	80.35	.....	81.10	81.09
18	77.75	77.69	77.68	77.91	78.23	78.66	79.22	79.78	80.37	.....	81.11	81.13
19	77.69	77.72	77.66	77.93	78.25	78.68	79.24	79.79	80.37	.....	81.13	81.12
20	77.69	77.74	77.67	77.94	78.27	78.70	79.27	79.81	80.39	80.89	81.10	81.09
21	77.71	77.74	77.69	77.95	78.25	78.72	79.27	79.83	80.43	80.91	81.09	81.10
22	77.70	77.73	77.67	77.94	78.29	78.73	79.29	79.85	80.45	80.41	81.10	81.05
23	77.69	77.74	77.69	77.97	78.31	78.74	79.31	79.86	80.47	80.93	81.15	81.06
24	77.71	77.75	77.68	77.97	78.29	78.76	79.33	79.87	80.49	81.01	81.12	81.10
25	77.69	77.71	77.70	77.99	78.30	78.79	79.35	79.90	80.51	81.05	81.13	81.09
26	77.70	77.74	77.76	77.98	78.34	78.80	79.38	79.91	80.53	81.04	81.11	81.08
27	77.69	77.74	77.71	78.00	78.35	78.82	79.40	79.93	80.54	80.97	81.12	81.05
28	77.71	77.74	77.73	78.02	78.38	78.82	79.42	79.95	80.56	80.97	81.13	81.06
29	77.70		77.74	78.00	78.36	78.83	79.43	79.97	80.58	80.97	81.11	81.11
30	77.71		77.75	78.03	78.35	78.85	79.45	79.99	80.61	80.98	81.12	81.09
31	77.68		77.75		78.39		79.48	80.00		80.99		81.03

19.23.27.111. C. R. Coffin. Drilled stock water-table well in limestone member of San Andres formation, diameter 6 inches, depth 416 feet. Land-surface datum is 3,940 feet above msl. Highest water level 368.75 below lsd, Oct. 19, 1943; lowest 383.53 below lsd, Sept. 16, 1954. Records available: 1940-55. In intake area of artesian aquifer. Jan. 19, 383.53; Sept. 6, 384.16, measurement uncertain; Nov. 7, 359.40, measurement uncertain.

19.26.12.322. Forrest Lee. Drilled irrigation water-table well in valley fill. Highest water level 34.18 below lsd, Nov. 7, 1955; lowest 52.18 below lsd, Sept. 17, 1954. Records available: 1952-55. Jan. 12, 37.75; Mar. 10, 36.72; May 12, 38.94; July 7, 46.89; Sept. 6, 65.09, pumping, Nov. 7, 34.18.

19.26.13.333. U. S. Bureau of Reclamation. Drilled observation water-table well in valley fill, diameter 4 inches. Land-surface datum is 3,271.05 feet above msl. Highest water level 11.67 below lsd, May 18, 1953; lowest 14.70 below lsd, Nov. 13, 1952. Records available: 1952-55. Jan. 11, 13.34; Mar. 10, 13.39; May 12, 12.93; July 7, 13.43; Sept. 6, 13.82; Nov. 7, 12.51.

19.26.14.431a. Albert Lee. Drilled unused water-table well in valley fill, diameter 6 inches, depth 100 feet. Highest water level 11.75 below lsd, Jan. 4, 1945; lowest 71.00 below lsd, May 12, 1955. Records available: 1945-46, 1948-55. Jan. 11, 34.15; May 12, 71.00; July 7, 57.72, nearby well being pumped; Sept. 6, 58.94, nearby well being pumped; Nov. 7, 34.78.

19.26.27.233. E. C. McGonagill. Drilled domestic water-table well in valley fill, diameter 8 inches, depth 127 feet. Highest water level 37.63 below lsd, May 11, 1942; lowest 82.34 below lsd, July 17, 1954. Records available: 1937-39, 1941-55. Jan. 11, 61.83; Mar. 10, 62.81; May 12, 69.53; July 7, 78.47; Sept. 6, 74.77; Nov. 7, 61.53.

20.26.3.411. John Fanning. Drilled stock water-table well in valley fill, diameter 6 inches. Highest water level 44.25 below lsd, Nov. 17, 1954; lowest 52.30 below lsd, Jan. 22, 1954. Records available: 1954-55. Jan. 11, 46.54; Mar. 10, 47.39; May 12, 49.49; July 7, 50.09; Sept. 6, 48.53; Nov. 7, 45.44.

20.26.7.122. J. B. Moutry. Drilled domestic water-table well in valley fill, diameter 6 inches, depth 120 feet, cased to 120. Highest water level 35.48 below lsd, Nov. 12, 1941; lowest 90.22 below lsd, Sept. 6, 1955. Records available: 1937-55. Jan. 11, 69.65; Mar. 10, 72.68; May 12, 77.48; July 7, 89.68, pumped recently; Sept. 6, 90.22; Nov. 7, 75.41.

Carlsbad Area

21.27.19.334. F. R. Dickson. Drilled irrigation artesian(?) well in Carlsbad group, diameter 12 inches, depth 320 feet, cased to 94. Land-surface datum is 3,136 feet above msl. Highest water level 26.10 below lsd, Jan. 17, 1950; lowest 34.24 below lsd, July 8, 1955. Records available: 1946-55. Jan. 19, 31.22; Mar. 16, 32.20; May 18, 33.23; July 8, 34.24; Sept. 13, 33.85; Nov. 7, 30.99.

21.27.30.442. T. Ives. Drilled domestic and irrigation artesian(?) well in Carlsbad group, diameter 7 inches, reported depth 256 feet. Highest water level 7.80 below lsd, Sept. 21, 1949; lowest 18.61 below lsd, July 8, 1955. Records available: 1947-55. Jan. 11, 17.27; Mar. 16, 18.31; May 18, 16.78; July 8, 18.61; Sept. 13, 13.88; Nov. 7, 13.43.

21.27.32.112. L. E. Loman. Drilled domestic and irrigation artesian well in Carlsbad group, diameter 6 inches, reported depth 305 feet. Land-surface datum is 3,112 feet above msl. Highest water level 4.64 below lsd, Jan. 17, 1950; lowest 11.96 below lsd, July 8, 1955. Records available: 1947-55. Jan. 11, 8.55; Mar. 16, 10.00; May 18, 10.93; July 8, 11.96; Sept. 13, 11.47; Nov. 7, 8.55.

21.27.32.112a. S. Tracy. Drilled irrigation water-table well in alluvium, diameter 15 inches, reported depth 105 feet. Land-surface datum is 3,112 feet above msl. Highest water level 11.09 below lsd, Sept. 15, 1950; lowest 14.95 below lsd, Jan. 24, 1950. Records available: 1950-55. Jan. 11, 14.37; Mar. 16, 15.38; May 18, 14.51; July 8, 35.00, pumping; Sept. 13, 14.54; Nov. 7, 13.73.

22.26.3.344. I. O. Harris. Drilled irrigation artesian(?) well in Carlsbad group, diameter 14 inches, reported depth 360 feet. Land-surface datum is 3,180 feet above msl. Highest water level 72.45 below lsd, Jan. 17, 1950; lowest 86.65 below lsd, July 8, 1955. Records available: 1948-55. Jan. 11, 80.00; Mar. 16, 81.36; May 17, 80.67; July 8, 86.65; Sept. 13, 84.69; Nov. 7, 80.06.

22.26.14.213. H. E. Stevenson. Drilled irrigation artesian(?) well in Carlsbad(?) group and Rustler(?) formation, reported depth 200 feet. Land-surface datum is 3,180 feet above msl. Highest water level 63.87 below lsd, Jan. 17, 1950; lowest 72.42 below lsd, Aug. 30, 1954. Records available: 1947-55. Jan. 11, 69.33; Mar. 21, 70.63.

22.26.24.224. D. N. Vest. Drilled unused water-table well in alluvium, diameter 11 inches, depth 240 feet. Highest water level 72.24 below lsd, Oct. 21, 1950; lowest 108.04 below lsd, Sept. 4, 1954. Records available: 1948-55.

22.26.24.224--Continued.

Daily highest water level from recorder graph

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	99.43	Mar. 25	96.24	July 22	99.78	Dec. 2	91.12
2	99.35	Apr. 1	96.99	29	99.51	7	91.17
3	99.33	8	h97.46	Aug. 5	98.77	9	91.32
4	99.17	15	h97.81	12	98.18	13	91.27
5	99.22	23	h97.88	19	97.77	16	91.26
6	99.18	29	h98.28	26	97.35	19	91.67
7	98.94	May 6	98.39	Sept. 2	96.98	20	91.59
15	98.78	13	98.40	9	96.57	21	91.60
21	98.45	20	98.29	16	96.25	22	91.43
28	98.29	27	98.25	23	96.12	23	91.47
Feb. 4	97.66	June 3	98.47	30	95.63	24	91.61
11	97.32	10	98.67	Oct. 7	94.00	25	91.79
18	96.34	17	98.74	14	92.77	26	91.82
25	96.04	24	98.87	21	91.95	27	91.72
Mar. 4	95.75	July 1	99.12	29	91.36	28	91.79
11	95.81	8	99.40	Nov. 4	91.02	29	91.96
18	96.07	15	99.64	11	90.38	30	92.27

h Tape measurement.

22.26.36.111a. Carlsbad Airfield 2. Drilled unused water-table well in alluvium, diameter 12 inches, depth 260 feet. Highest water level 131.50 below lsd, Oct. 14, 1942; lowest 204.66 below lsd, Aug. 21, 1954. Records available: 1942-55.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	179.63	177.45	178.20	180.19	187.77	e188.85	193.00	195.42	196.66	191.88	178.30	175.23
2	179.53	177.38	178.14	180.41	187.74	e188.85	193.14	195.46	196.57	190.96	178.27	175.15
3	179.45	177.33	178.12	180.46	188.17	e189.16	193.43	195.62	196.35	190.00	178.24	175.12
4	179.34	177.42	178.20	180.46	188.29	189.46	193.43	195.54	196.12	188.88	178.06	174.98
5	179.32	177.33	178.28	180.84	188.38	189.58	193.46	195.63	196.02	188.88	177.89	174.87
6	179.33	177.23	178.45	181.30	188.52	189.57	193.80	195.93	.....	185.57	177.65	174.53
7	179.33	177.24	178.42	181.57	188.60	189.58	194.52	195.66	.....	185.02	177.58	174.53
8	179.20	177.25	178.68	181.68	188.70	189.83	194.35	195.56	.....	184.13	177.62	174.27
9	179.03	177.10	178.65	181.85	188.67	190.02	194.17	196.26	.....	183.78	177.45	174.25
10	178.97	177.09	178.72	182.13	188.68	190.07	194.05	196.62	e195.90	.....	177.22	174.25
11	178.94	177.40	178.70	182.10	188.75	190.13	194.00	196.83	195.69	.....	177.07	174.05
12	178.92	177.35	178.70	182.59	188.82	190.10	194.63	196.88	195.57	.....	177.12	173.90
13	178.92	177.33	178.65	182.87	188.83	190.02	194.89	196.70	195.82	.....	176.87	173.85
14	178.97	177.33	178.57	183.11	188.83	190.42	195.02	196.17	.....	.....	176.72	173.97
15	178.78	177.33	178.69	183.41	189.00	190.60	194.98	195.98	.....	180.62	176.57	173.95
16	178.67	177.38	178.82	183.62	188.97	190.83	195.30	196.40	.....	180.16	176.70	173.79
17	178.13	177.37	178.80	184.25	189.03	191.13	195.32	196.45	196.15	180.05	176.63	173.73
18	178.50	177.28	178.78	184.22	e189.22	191.37	195.27	196.63	195.95	179.95	176.62	173.80
19	178.27	177.35	178.62	184.62	e189.26	191.58	195.78	196.81	195.81	179.78	176.65	173.87
20	178.20	177.41	178.40	185.17	e189.30	191.58	196.00	196.70	195.99	179.68	176.38	174.03
21	178.14	177.41	178.40	185.28	189.34	191.62	196.08	196.28	196.10	179.64	176.28	174.09
22	178.13	177.70	178.72	185.52	e189.50	e192.02	196.05	196.20	196.15	179.48	176.25	174.00
23	177.85	177.65	178.65	185.80	e189.43	e192.06	196.09	195.56	196.07	179.22	176.27	173.94
24	177.82	177.92	178.75	186.23	e189.37	e192.10	196.04	196.70	195.85	179.18	176.18	174.06
25	177.76	177.87	178.96	186.23	e189.30	192.15	195.97	196.82	195.33	179.20	176.15	174.08
26	177.69	177.94	179.25	186.73	e189.24	192.26	196.24	197.02	195.25	178.95	176.03	174.07
27	177.68	178.04	179.30	186.93	e189.18	192.26	196.34	197.04	194.52	178.85	175.95	173.96
28	177.67	178.00	179.26	187.05	189.16	192.65	196.25	196.41	193.70	178.92	175.93	173.88
29	177.58		179.55	187.23	188.95	192.75	196.10	196.32	192.90	178.92	175.81	173.88
30	177.45		179.70	187.50	188.93	192.92	195.96	196.67	192.37	178.35	195.60	173.97
31	177.40		179.78		e188.85		195.52	196.65		178.26		173.84

e Estimated.

22.27.10.333. Mrs. M. Enifer. Drilled irrigation water-table well in alluvium, diameter 18 inches. Land-surface datum is 3,080 feet above msl. Highest water level 3.80 below lsd, Sept. 15, 1950; lowest 45.64 below lsd, July 8, 1954. Records available: 1947-55. Jan. 13, 17.94; Mar. 16, 16.64; May 17, 14.75; July 8, 14.69; Nov. 7, 9.96.

22.27.22.421. Enea Grandi. Drilled irrigation water-table well in alluvium, diameter 16 inches, reported depth 150 feet. Land-surface datum is 3,100 feet above msl. Highest water level 21.43 below lsd, Sept. 15, 1950; lowest 64.60 below lsd, Aug. 31, 1954. Records available: 1947-55. Jan. 13, 49.74; Mar. 16, 47.51; May 17, 47.08; July 8, 45.97; Sept. 13, 40.87; Nov. 7, 36.79.

22.27.28.133. Roy Thomason. Drilled irrigation water-table well in alluvium, diameter 16 inches, reported depth 205 feet. Land-surface datum is 3,137 feet above msl. Highest water level 57.05 below lsd, Jan. 18, 1950; lowest 103.67 below lsd, Aug. 30, 1954. Records available: 1947-55. May 17, 94.55; July 8, 100.51; Nov. 7, 90.64.

23.27.9.211. Jim Chadwick. Drilled irrigation water-table well in alluvium, diameter 16 inches, depth 200 feet. Highest water level 41.70 below lsd, Sept. 15, 1950; lowest 53.28 below lsd, Jan. 14, 1955. Records available: 1949-55. Jan. 14, 53.28; Mar. 17, 53.20; May 17, 52.44; July 8, 51.93; Sept. 13, 52.44; Nov. 7, 52.90.

23.27.23.211. W. H. Sweavingen. Drilled unused water-table well in alluvium, diameter 12 inches. Land-surface datum is 3,120 feet above msl. Highest water level 19.17 below lsd, Jan. 17, 1951; lowest 25.98 below lsd, July 7, 1954. Records available: 1947-55. Jan. 17, 23.90; Mar. 17, 24.08; May 17, 23.96; July 8, 24.20; Sept. 14, 24.88; Nov. 7, 24.90.

23.28.23.133. A. R. Donaldson. Drilled irrigation water-table well in alluvium, diameter 16 inches, depth 148 feet. Land-surface datum is 3,020 feet above msl. Highest water level 38.25 below lsd, Sept. 14, 1950; lowest 70.59 below lsd, Aug. 31, 1954. Records available: 1947-55. Jan. 18, 56.70; Mar. 17, 54.45; May 17, 53.28; July 8, 53.32; Sept. 13, 48.09; Nov. 7, 46.17.

25.24.26.121. State Department of Game and Fish. Dug unused well in alluvial conglomerate, diameter 24 inches, depth 15 feet. Highest water level 0.76 above lsd, Feb. 19, 1953; lowest 1.96 below lsd, July 26, 1954. Records available: 1953-55.

Daily highest water level, above and below lsd, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	+0.34	+0.37	+0.17	-0.95	-0.70	-0.56	-0.91	-0.76	....	....	....	....
2	.34	+.25	....	.82	.65	.51	1.16	.78	....	....	....	....
3	.34	+.08	....	.64	.68	.50	1.16	.80	....	....	....	....
4	.33	-.05	....	.54	.71	.50	1.32	.81	....	....	....	....
5	.34	-.07	-.04	.73	.76	.49	1.35	.85	....	....	....	....
6	.30	-.09	+.01	.85	.74	.53	1.42	.86	....	....	....	....
7	.31	+.02	+.01	.92	.90	.67	1.41	.76	....	....	....	....
8	.33	.11	-.03	.92	.85	.76	1.12	....	....	....	h+0.27	....
9	.32	.16	.09	.91	.96	.95	1.08	....	....	....	....	....
10	.32	.17	.10	.72	1.09	.89	1.29	....	....	....	....	+0.51
11	.32	.14	.11	.69	1.19	.96	1.32	....	....	....	....	.51
12	.31	.16	.09	.56	1.20	1.09	1.31	....	....	....	....	.52
13	.32	.17	.04	.63	1.26	.97	1.40	....	....	....	....	.46
14	....	.20	.03	.55	.98	.93	1.47	....	....	....	....	.40
15	....	.21	-.03	.47	.92	.87	1.49	....	....	....	....	.34
16	....	.21	.00	.38	1.07	.98	1.53	....	h-0.91	....	....	.46
17	....	.21	+.01	.33	1.09	1.07	1.68	....	....	....	....	.53
18	.34	+.09	.00	.46	1.19	1.00	1.33	....	....	....	....	.53
19	.41	.00	+.04	.56	1.06	.97	1.25	....	....	....	....	.51
20	.44	+.04	+.08	.61	.82	.84	1.34	....	....	....	....	.52
21	.44	.08	+.08	.62	.66	.76	1.47	....	....	....	....	.53
22	.45	.13	-.03	.59	.61	.75	1.57	....	....	....	....	.55
23	.45	.14	.15	.75	.57	.76	1.61	....	....	....	....	.53
24	.45	.13	.24	.57	.56	.75	1.54	....	....	....	....	.53
25	.45	.17	.28	.51	.75	.75	1.47	....	....	....	....	.53
26	.43	.17	.42	.80	.80	.75	1.68	....	....	....	....	.53
27	.39	.17	.40	.95	.78	.73	1.63	....	....	....	....	.55
28	.39	.16	.35	1.04	.75	.83	e1.47	....	....	....	....	.51
29	.40		.48	.91	.56	.89	.97	....	....	....	....	.48
30	.41		.82	.74	.53	.93	.75	....	....	....	....	.45
31	.43		.94		.57		.69	....		....		.51

e Estimated.
h Tape measurement.

25.24.27.124. McClure & Hellyer. Drilled irrigation well in alluvial conglomerate, reported depth 150 feet. Land-surface datum is 3,738.5 feet above msl. Highest water level 93.56 below lsd, Apr. 4, 1952; lowest 108.20 below lsd, Sept. 3, 1954. Records available: 1952-55. Jan. 18, 95.68; Mar. 18, 96.19; Nov. 8, 95.35.

25.24.27.141. George Smart. Drilled unused well in alluvium, diameter 22 inches, depth 165 feet. Land-surface datum is 3,749.3 feet above msl. Highest water level 104.84 below lsd, Mar. 5, 11, 1953; lowest 111.12 below lsd, Sept. 2, 1954. Records available: 1952-55. Jan. 18, 105.73; Mar. 18, 106.24; May 13, 110.79; July 11, 110.15; Sept. 15, 110.50.

25.24.27.421. McClure & Hellyer. Drilled irrigation well in alluvium, diameter 16 inches, depth 101 feet. Land-surface datum is 3,701 feet above msl. Highest water level 55.68 below lsd, Apr. 4, 1952; lowest 58.63 below lsd, Sept. 15, 1955. Records available: 1952-55. Jan. 18, 56.90; Mar. 18, 57.47; Sept. 15, 58.63.

25.24.34.112a. H. F. Ballard. Drilled irrigation well in alluvium, diameter 12 inches, depth 165 feet. Land-surface datum is 3,739.1 feet above msl. Highest water level 89.27 below lsd, Apr. 4, 1952; lowest 92.77 below lsd, July 22, 1953. Records available: 1952-55. Jan. 18, 90.84.

25.24.34.124. H. F. Ballard. Drilled irrigation well in alluvium, diameter 12 inches, depth 165 feet. Land-surface datum is 3,713.5 feet above msl. Highest water level 63.60 below lsd, Dec. 14, 1953; lowest 70.50 below lsd, Sept. 30, 1953. Records available: 1952-55. Jan. 18, 65.35; Mar. 18, 66.32.

26.24.9.421. "Old School House" well. Drilled domestic and stock well in alluvium, diameter 6 inches. Land-surface datum is 3,746.4 feet above msl. Highest water level 49.15 below lsd, Apr. 24, 1952; lowest 56.08 below lsd, July 11, 1955. Records available: 1952-55. Jan. 18, 52.44; Mar. 18, 52.87; May 13, 53.84; July 11, 56.08; Sept. 15, 54.76; Nov. 8, 49.75.

26.24.9.441. John Mayes. Drilled irrigation well in alluvium, diameter 12 inches, depth 100 feet. Land-surface datum is 3,749.4 feet above msl. Highest water level 42.29 below lsd, Nov. 8, 1955; lowest 47.22 below lsd, July 11, 1955. Records available: 1952-55. Jan. 18, 45.00; Mar. 18, 45.27; May 13, 46.43; July 11, 47.22; Sept. 15, 46.24; Nov. 8, 42.29.

26.24.10.131. Arthur Mayes. Drilled irrigation well in alluvium, diameter 12 inches, depth 129 feet. Land-surface datum is 3,726 feet above msl. Highest water level 30.3 below lsd, Apr. 2, 1952; lowest 38.48 below lsd, July 13, 1954. Records available: 1952-55. Jan. 18, 35.00; Mar. 18, 35.60; May 13, 36.35; Sept. 15, 36.48; Nov. 8, 32.43.

Hidalgo County

Animas, Playas, and Virden Valleys.--The Animas, Playas, and Virden Valleys of Hidalgo County in southwestern New Mexico are in the semiarid Basin and Range province. Animas and Playas Valleys are north-south-trending intermontane basins separated from each other by the Animas and Pyramid Mountains. Playas Valley is separated from the Hachita Valley to the east by the Big and Little Hatchet and Alamo Hueco Mountains. Animas Valley is bounded on the west by the Peloncillo Mountains. The Virden Valley, north of the Animas Valley, is the New Mexico part of the Duncan-Virden Valley along the Gila River in the northwestern corner of Hidalgo County. The Virden Valley ground-water basin, about 20 square miles, was declared by the State Engineer on December 5, 1938. The Animas ground-water basin, about 205 square miles, was declared on May 5, 1948, and closed to further appropriation June 14, 1948. The Playas Valley had not been declared as a ground-water basin by the end of 1955.

In Animas Valley, water levels were measured in 67 wells in January 1955 and in 34 wells bimonthly. About 225 measurements were made during the year. In Playas Valley, water levels were measured in 11 wells in January and in 7 wells bimonthly. About 41 measurements were made in 1955. Water levels were measured in 3 observation wells in Virden Valley. In 1955 as in 1954, a recording gage was maintained on well 25.20.34.241 in the heavily pumped area of Animas Valley. The water-level measurements made in January, not all of which are included in this report were used in preparing the map (fig. 84) showing changes in water level in Animas Valley from January 1955 to January 1956.

In Virden Valley, ground water is pumped mainly for irrigation as a supplement to the surface-water supply. The amount of surface water available for diversion was about the same in 1955 as in 1954. Water levels in wells showed a slight decline during the year. Precipitation at Duncan, Ariz., was 8.62 inches and at Virden it was 8.00 inches (estimated) in 1955.

Precipitation in Animas and Playas Valleys was below normal in 1955. The U. S. Weather Bureau stations in the area reported precipitation in the amount of 7.35 inches at Animas, 3.03 inches below normal; 14.37 inches at Eicks Ranch, 1.06 inches below normal; 8.09 inches at Lordsburg, 1.42 inches below normal; 7.18 inches at Rodeo CAA, 3.98 inches below normal; and 6.37 inches at Hachita, 4.04 inches below normal. Precipitation during the growing season, April to September, was above normal at Lordsburg and Hachita; it was below normal at the other stations.

The acreage irrigated with ground water (about 11,400 acres) and the pumpage (about 19,800 acre-feet) in Animas Valley were about the same during 1955 as in 1954, according to estimates based on power records. Water-level declines in 1955 were considerably greater than in 1954. Water levels declined more than 5 feet under about 2 square miles, more than 4 feet under about 9 square miles, more than 3 feet under about 26 square miles, and more than 2 feet under about 60 square miles. The area of greatest decline is centered along a line between secs. 9 and 25, T. 26 S., R. 20 W. (fig. 84). The pattern of decline for 1955 is similar to the pattern for the 5-year period (fig. 85). From January 1950 to January 1955, water levels declined more than 20 feet under about 1 square mile, more than 15 feet under about 25 square

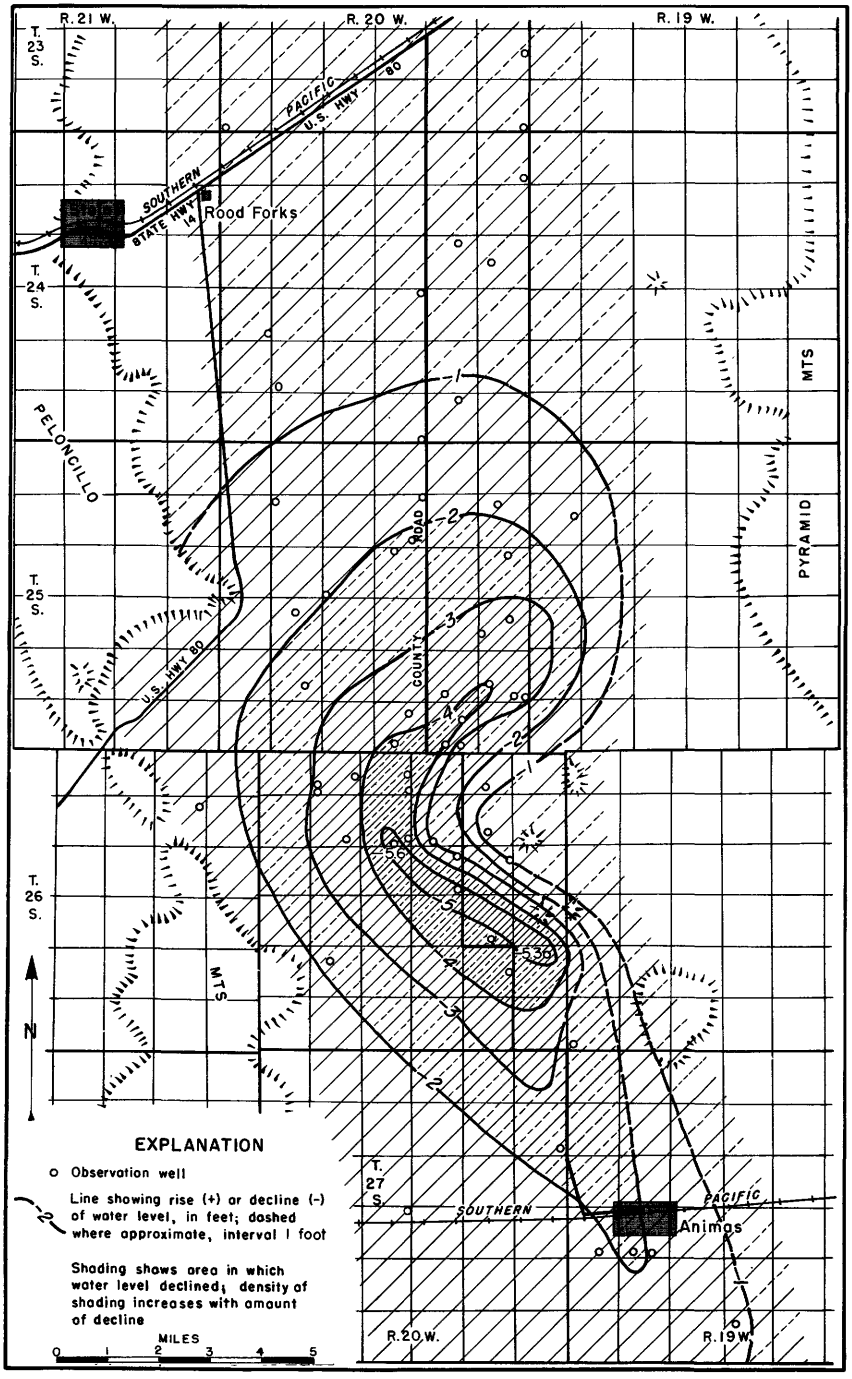

Figure 84. --Change in ground-water level from January 1955 to January 1956 in Animas Valley, Hidalgo County, N. Mex.

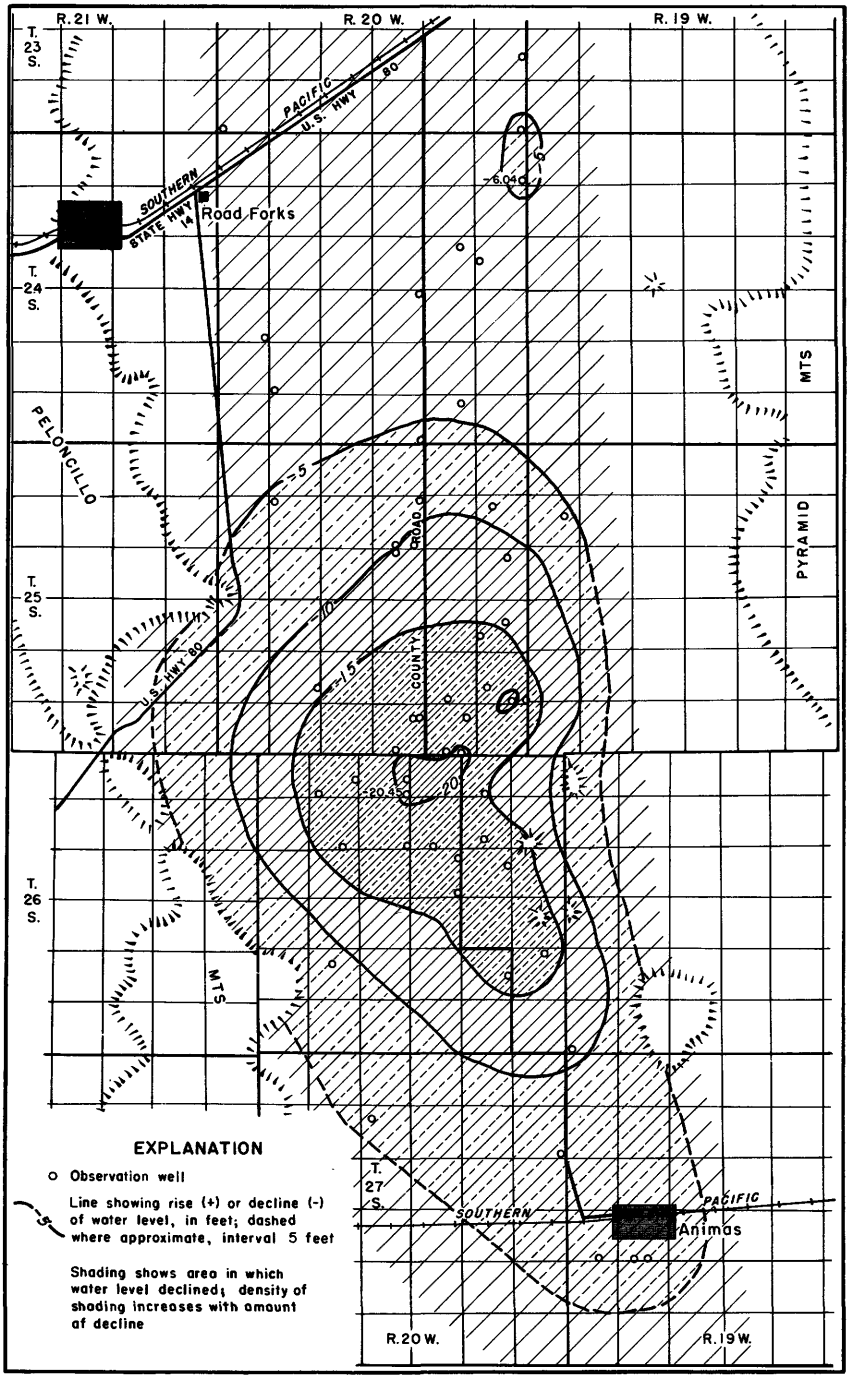

Figure 85. --Change in ground-water level from January 1950 to January 1955 in Animas Valley, Hidalgo County, N. Mex.

miles, more than 10 feet under about 55 square miles, and more than 5 feet under about 120 square miles. The declines in water level in 1955 probably are due in part to the below-normal precipitation during the growing season.

In Playas Valley, about 1,270 acres was irrigated in 1955 compared to about 900 acres in 1954. The pumpage is estimated to be about 2,200 acre-feet in 1955, based on the use of water in the Animas Basin. Water levels rose in 7 of the 10 wells measured in 1955. The greatest rise was 2.5 feet in well 30.16.14.233; the greatest decline was 0.9 foot in well 30.16.21.412; the average rise was 0.69 foot; and the average decline was 0.45 foot. The well in which the greatest rise in water level occurred was an unused irrigation well near the heavily pumped area.

Animas Valley

23.20.25.422. Kerr Cattle Co. Drilled irrigation water-table well in bolson deposits, diameter 16 inches, depth 150 feet. Highest water level 31.36 below lsd, May 21, 1948; lowest 37.76 below lsd, Sept. 8, 1955. Records available: 1948-55. Jan. 22, 35.02; Mar. 18, 35.09; May 21, 35.16; July 27, 35.78; Sept. 8, 37.76; Nov. 9, 35.81.

24.20.1.444. Fred Kerr. Drilled irrigation water-table well in bolson deposits, diameter 30 to 18 inches, depth 92 feet. Highest water level 29.75 below lsd, Apr. 4, 1948; lowest 40.86 below lsd, July 29, 1953. Records available: 1948-55. Jan. 22, 36.35; Mar. 18, 46.45, pumping; May 21, 46.34, pumping; July 27, 38.74; Sept. 8, 48.12, pumping; Nov. 9, 37.88.

24.20.13.133. P. Kerr. Drilled stock water-table well in bolson deposits, diameter 6 inches, depth 26 feet. Highest water level 14.02 below lsd, May 21, 1948; lowest 17.58 below lsd, Mar. 18, 1955. Records available: 1948-55. Jan. 22, 17.54; Mar. 18, 17.58.

24.20.14.214. Kerr Cattle Co. Dug unused water-table well in bolson deposits, diameter 10 feet, depth 32 feet. Highest water level 14.74 below lsd, May 21, 1948; lowest 18.31 below lsd, Sept. 8, Nov. 9, 1955. Records available: 1948-55. Jan. 22, 17.79; Mar. 18, 17.83; May 21, 17.90; July 27, 18.07; Sept. 8, 18.31; Nov. 9, 18.31.

24.20.19.444. R. E. Macow. Drilled irrigation water-table well in bolson deposits, diameter 16 inches, reported depth 140 feet. Highest water level 33.16 below lsd, Apr. 4, 1948; lowest 44.23 below lsd, Sept. 22, 1953. Records available: 1948-55. Jan. 23, 39.32; Mar. 19, 38.86; May 24, 39.70; July 26, 40.56; Sept. 8, 40.81; Nov. 9, 40.35.

24.20.22.222. W. W. Roark. Drilled unused water-table well in bolson deposits, diameter 6 inches, depth 28 feet. Highest water level 17.35 below lsd, May 21, 1948; lowest 21.53 below lsd, Nov. 9, 1955. Records available: 1948-55. Jan. 22, 20.79; Mar. 18, 20.85; May 21, 20.87; July 27, 21.20; Sept. 8, 21.35; Nov. 9, 21.53.

24.20.29.333. Mrs. May Smith. Drilled irrigation water-table well in bolson deposits, diameter 14 inches, depth 142 feet. Highest water level 37.39 below lsd, Apr. 6, 1948; lowest 47.20 below lsd, July 27, 1953. Records available: 1948-55. Jan. 23, 43.14; Mar. 19, 42.76; May 24, 43.76; July 26, 44.34; Sept. 8, 44.82; Nov. 9, 44.20.

24.20.34.444. Elmer L. Kerr. Drilled stock water-table well in bolson deposits, diameter 6 inches, depth 33 feet. Highest water level 25.77 below lsd, Mar. 16, 1951; lowest 31.34 below lsd, Nov. 9, 1955. Records available: 1951-55. Jan. 22, 30.19; Mar. 18, 30.22; May 21, 30.29; July 27, 30.71; Sept. 8, 30.94; Nov. 9, 31.34.

24.20.35.214. Elmer L. Kerr. Drilled irrigation water-table well in bolson deposits, diameter 12 inches, depth 79 feet. Highest water level 17.40 below lsd, Apr. 4, 1948; lowest 24.13 below lsd, Nov. 9, 1955. Records available: 1948-55. Jan. 22, 23.03; Mar. 18, 23.00; May 21, 39.07, pumping; July 27, 23.42; Sept. 8, 23.91; Nov. 9, 24.13.

25.19.7.143. R. I. Richins & G. A. McDonald. Drilled domestic water-table well in bolson deposits, diameter 6 inches, depth 31 feet. Highest water level 28.73 below lsd, Nov. 11, 1952; lowest dry at 31, May 26, July 26, Sept. 16, 1954, Jan. 26, 1955. Records available: 1952-55. Jan. 26, dry at 31. Measurement discontinued.

25.19.7.234. R. I. Richins & G. A. McDonald. Drilled water-table well in bolson deposits, diameter 18 inches, depth 95 feet. Highest water level 31.31 below lsd, May 21, 1949; lowest 39.91 below lsd, Sept. 8, 1955. Records available: 1948-55. Jan. 23, 37.49; Mar. 18, 37.47; May 21, 38.87; July 27, 39.88; Sept. 8, 39.91; Nov. 9, 36.10.

25.20.8.111. T. H. McCants. Dug domestic and stock water-table well in bolson deposits, diameter 36 inches, depth 80 feet. Land-surface datum is 4,220.39 feet above msl. Highest water level 57.46 below lsd, May 22, 1948; lowest 65.16 below lsd, Nov. 9, 1955. Records available: 1948-55. Jan. 25, 63.88; Mar. 19, 64.02; May 24, 64.30; July 26, 64.62; Sept. 8, 65.05; Nov. 9, 65.16.

25.20.10.222. Valley View Church. Drilled domestic water-table well in bolson deposits, diameter 4 inches. Land-surface datum is 4,189.88 feet above msl. Highest water level 27.44 below lsd, Apr. 6, 1948; lowest 40.35 below lsd, Sept. 8, 1955. Records available: 1948-55. Jan. 22, 37.99; Mar. 18, 37.88; May 21, 38.36; July 27, 39.14; Sept. 8, 40.35; Nov. 9, 39.73.

25.20.13.213. George Wright. Drilled irrigation water-table well in bolson deposits, diameter 18 inches, depth 123 feet. Land-surface datum is 4,195.64 feet above msl. Highest water level 28.05 below lsd, Mar. 21, 1949; lowest 49.92 below lsd, Sept. 8, 1955. Records available: 1948-55. Jan. 26, 41.58; Mar. 18, 41.58; May 21, 43.43; July 27, 65.20, pumping; Sept. 8, 49.92; Nov. 9, 44.69.

25.20.16.333. T. H. McCants. Drilled irrigation water-table well in valley fill, diameter 16 inches, depth 142 feet. Highest water level 57.04 below lsd, Mar. 19, 1955; lowest 59.06 below lsd, Sept. 8, 1955. Records available: 1955. Jan. 25, 57.14; Mar. 19, 57.04; May 24, 57.79; July 26, 58.34; Sept. 8, 59.06; Nov. 9, 58.99.

25.20.24.313. Rudiger & Jundt. Drilled irrigation water-table well in bolson deposits, diameter 16 inches, depth 97 feet. Land-surface datum is 4,221.43 feet above msl. Highest water level 42.43 below lsd, Apr. 1, 1948; lowest 74.14 below lsd, Sept. 8, 1955. Records available: 1948-55. Jan. 26, 63.14; Mar. 18, 63.10; May 21, 67.11; July 27, 70.44; Sept. 8, 74.14; Nov. 9, 68.32.

25.20.25.334. Richins Bros. Drilled irrigation water-table well in bolson deposits, diameter 18 inches, depth 115 feet. Land-surface datum is 4,239.18 feet above msl. Highest water level 54.94 below lsd, Apr. 1, 1948; lowest 82.87 below lsd, July 28, 1953. Records available: 1948-54. Measurement discontinued.

25.20.25.444. Richins Bros. Drilled water-table well in bolson deposits, diameter 16 inches, depth 204 feet. Land-surface datum is 4,261.29 feet above msl. Highest water level 69.00 below lsd, Apr. 1, 1948; lowest 95.43 below lsd, Sept. 8, 1955. Records available: 1948-55. Jan. 26, 88.85; Mar. 18, 108.84, pumping; May 21, 107.52, pumping; July 27, 93.52; Sept. 8, 95.43; Nov. 9, 92.77.

25.20.27.434. Geo. S. Tippetts. Drilled irrigation water-table well in bolson deposits, diameter 33 inches, depth 102 feet. Land-surface datum is 4,231.80 feet above msl. Highest water level 52.65 below lsd, Mar. 21, 1949; lowest 84.63 below lsd, Sept. 15, 1954. Records available: 1948-55. Mar. 18, 73.60.

25.20.29.424. Baer Farms. Drilled irrigation water-table well in bolson deposits, diameter 16 inches, depth 125 feet. Highest water level 53.80 below lsd, Jan. 18, Mar. 21, 1950; lowest 71.07 below lsd, Nov. 9, 1955. Records available: 1950-55. Jan. 25, 68.22; Mar. 19, 68.27; May 24, 76.33, pumping; July 26, 70.44; Sept. 8, 89.91, pumping; Nov. 9, 71.07.

25.20.34.241. H. H. Hatch. Drilled unused well in valley fill, diameter 36 inches, reported depth 120 feet, caved at 90. Land-surface datum is 4,235.37 feet above msl. Highest water level 51.44 below lsd, Apr. 2, 1948; lowest dry at 86.00 below lsd, June 30-July 7, Sept. 22-Oct. 6, 1955. Records available: 1948-55.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	74.16	75.35	.....	80.24	.....	f86.00	85.24	.....	(f)	78.76	76.00
2	75.22	73.96	75.34	.....	80.39	.....	f86.00	85.47	.....	(f)	78.96	75.48
3	75.18	74.15	75.44	.....	80.59	.....	f86.00	85.78	.....	(f)	79.06	75.40
4	75.14	74.16	75.63	.....	80.90	83.09	f86.00	.....	.....	(f)	79.17	75.35
5	75.05	74.01	75.80	.....	80.96	83.11	f86.00	.....	.....	(f)	79.24	75.50
6	74.90	74.02	75.98	.....	81.07	83.26	f86.00	.....	.....	(f)	79.14	75.58
7	74.92	.....	75.99	.....	81.13	83.39	f86.00	.....	.....	85.14	78.12	75.74
8	74.98	.....	75.90	.....	81.12	83.51	80.81	.....	.....	84.97	76.89	76.12
9	74.97	.....	75.53	.....	81.32	83.65	79.62	.....	79.97	85.01	.....	76.18
10	75.02	.....	75.53	.....	81.32	83.81	80.46	.....	81.37	85.26	.....	76.42
11	74.74	.....	.....	.....	81.46	84.01	80.19	.....	82.76	85.50	.....	76.80
12	74.54	.....	75.22	.....	81.58	84.00	80.10	.....	83.59	85.69	76.52	76.95
13	74.71	.....	75.27	.....	81.56	84.19	80.01	.....	84.07	85.92	76.69	77.07
14	.....	.....	75.25	.....	81.54	84.35	79.91	.....	84.25	85.87	76.86	77.35
15	.....	.....	74.98	78.92	81.53	.....	80.09	.....	84.14	85.88	77.19	77.59
16	74.57	.....	74.90	78.88	81.63	.....	80.97	.....	84.81	85.89	77.54	77.73
17	74.54	.....	74.90	78.99	81.88	84.78	82.07	.....	84.93	85.86	77.67	78.04
18	74.66	.....	75.05	79.10	.....	84.85	82.76	.....	85.02	85.75	78.03	78.45
19	74.44	.....	75.03	79.25	.....	84.91	83.33	.....	85.06	85.53	78.35	78.77
20	74.54	.....	75.13	79.43	81.96	85.09	83.63	.....	85.23	85.43	78.48	78.80

25.20.34.241--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
21	74.49	.....	75.39	79.61	81.96	85.14	83.71	.....	85.45	85.07	78.59	78.85
22	74.47	.....	75.51	79.65	81.94	85.27	83.79	.....	f86.00	84.44	78.80	78.83
23	74.59	.....	75.63	79.66	81.91	85.37	83.75	.....	(f)	83.45	79.06	78.87
24	74.59	.....	75.84	79.63	82.02	85.54	83.67	.....	(f)	82.86	79.20	78.98
25	74.56	.....	75.94	79.65	82.09	85.57	83.71	.....	(f)	82.38	79.48	79.04
26	74.56	.....	76.28	79.68	82.23	85.59	83.69	.....	(f)	82.03	79.55	78.89
27	74.49	.....	76.16	80.12	82.43	85.73	83.75	.....	(f)	81.53	79.60	78.83
28	74.47	75.43	76.18	80.23	82.44	85.86	83.88	.....	(f)	79.55	79.70	78.85
29	74.34		.....	80.33	82.57	85.98	84.43	.....	(f)	79.13	79.02	78.87
30	74.25		.....	80.37	82.63	f86.00	84.80	.....	(f)	78.82	77.00	78.87
31	74.16		.....		82.82		85.05	.....		78.76		78.72

f Dry.

25.20.35.241. W. Veck. Drilled irrigation water-table well in bolson deposits, diameter 16 inches, depth 120 feet. Land-surface datum is 4,238.81 feet above msl. Highest water level 53.25 below lsd, Apr. 2, 1948; lowest 91.52 below lsd, Sept. 23, 1953. Records available: 1948-55. Jan. 26, 77.68; Mar. 18, 90.35, pumping; May 21, 93.53, pumping; July 27, 89.29, pumping; Sept. 8, 88.93, pumping; Nov. 8, 86.52.

25.20.35.434. W. Veck. Drilled irrigation water-table well in bolson deposits, diameter 16 inches, depth 120 feet. Land-surface datum is 4,245.96 feet above msl. Highest water level 50.27 below lsd, Apr. 2, 1948; lowest 84.13 below lsd, Sept. 8, 1955. Records available: 1948-55. Jan. 26, 79.98; Mar. 18, 79.04; May 23, 80.17; July 27, 83.44, nearby well being pumped; Sept. 8, 84.13; Nov. 8, 84.00.

26.19.31.333. Luther Edwards. Drilled irrigation water-table well in bolson deposits, diameter 15 inches, depth 200 feet. Land-surface datum is 4,340.62 feet above msl. Highest water level 84.13 below lsd, Mar. 22, 1949; lowest 110.11 below lsd, Sept. 15, 1954. Records available: 1948-55. Jan. 25, 97.06; Mar. 19, 96.91; May 23, 101.86; July 25, 106.33; Sept. 7, 128.83, pumping; Nov. 8, 101.17.

26.20.2.344. R. H. Wamel. Drilled irrigation water-table well in bolson deposits, diameter 16 inches, depth 157 feet. Highest water level 66.33 below lsd, Mar. 22, 1949; lowest 92.25 below lsd, Jan. 26, 1954. Records available: 1948-55. Jan. 26, 85.75; Mar. 18, 119.58, pumping.

26.20.4.444a. W. W. Roark. Drilled irrigation water-table well in bolson deposits, diameter 16 inches. Highest water level 79.81 below lsd, Jan. 21, 1953; lowest 109.77 below lsd, Sept. 15, 1954. Records available: 1952-55. Jan. 26, 87.08; Mar. 21, 88.52.

26.20.5.334. D. A. Lee. Drilled irrigation water-table well in bolson deposits, diameter 40 to 12 inches, depth 100 feet. Land-surface datum is 4,240.81 feet above msl. Highest water level 54.05 below lsd, Apr. 3, 1948; lowest 79.69 below lsd, Nov. 8, 1955. Records available: 1948-55. Jan. 26, 75.47; Mar. 21, 74.75; May 24, 77.04; Sept. 8, 79.62; Nov. 8, 79.69.

26.20.9.444a. Mrs. H. K. Wood. Drilled irrigation water-table well in bolson deposits, diameter 18 inches, depth 140 feet. Land-surface datum is 4,259.56 feet above msl. Highest water level 72.52 below lsd, May 23, 1948; lowest 109.02 below lsd, Sept. 7, 1955. Records available: 1948-55. Jan. 26, 93.81; Mar. 21, 108.91, pumping; May 24, 102.15; July 25, 107.89; Sept. 7, 109.02; Nov. 8, 103.54.

26.20.10.344. S. O. Wright. Drilled irrigation water-table well in bolson deposits, diameter 16 inches, depth 144 feet. Land-surface datum is 4,266.12 feet above msl. Highest water level 63.08 below lsd, Mar. 22, 1949; lowest 94.42 below lsd, Sept. 7, 1955. Records available: 1948-55. Jan. 26, 78.40; Mar. 21, 78.88; May 24, 95.06, nearby well being pumped; July 25, 91.91; Sept. 7, 94.42; Nov. 8, 87.48.

26.20.14.242. R. H. Wamel. Drilled water-table well in bolson deposits, diameter 16 inches, depth 150 feet. Land-surface datum is 4,293.30 feet above msl. Highest water level 79.44 below lsd, Apr. 3, 1948; lowest 101.39 below lsd, Nov. 8, 1955. Records available: 1948-55. Jan. 23, 100.95; Mar. 21, 100.45; May 23, 100.24; Sept. 7, 99.40; Nov. 8, 101.39.

26.20.15.444. Crabtree. Drilled irrigation water-table well in bolson deposits, diameter 16 inches, depth 148 feet. Land-surface datum is 4,284.18 feet above msl. Highest water level 62.91 below lsd, Mar. 22, 1949; lowest 103.69 below lsd, Sept. 7, 1955. Records available: 1948-55. Jan. 25, 81.34; Mar. 21, 128.89, pumping; May 23, 93.51; July 25, 102.66; Sept. 7, 103.69; Nov. 8, 97.86.

26.20.25.211. R. H. Wamel. Dug unused water-table well in bolson deposits, diameter 36 inches, depth 112 feet. Highest water level 93.42 below lsd, Sept. 27, 1948; lowest 119.65 below lsd, Sept. 15, 1954. Records available: 1948-55. Jan. 25, 114.38; Mar. 21, 114.12.

26.20.26.422. Kate Washburn. Drilled water-table well in bolson deposits, diameter 16 inches, depth 151 feet. Land-surface datum is 4,311.09 feet above msl. Highest water level 75.65 below lsd, Apr. 5, 1948; lowest 107.84 below lsd, July 25, 1955. Records available: 1948-55. Jan. 25, 94.93; Mar. 21, 95.47; May 23, 100.23; July 25, 107.84; Sept. 7, 144.93, pumping; Nov. 8, 104.93.

26.20.29.142. Kate Washburn. Drilled irrigation water-table well in bolson deposits, diameter 14 inches, depth 132 feet. Highest water level 48.86 below lsd, May 23, 1948; lowest 59.50 below lsd, Jan. 25, 1955. Records available: 1948-55. Jan. 25, 59.50. Bimonthly measurements will not be made in the future. An annual measurement will be made but will not be published in the water-level report.

26.21.11.200. R. F. Robinson. Drilled stock water-table well in bolson deposits, diameter 6 inches, depth 89 feet. Highest water level 77.71 below lsd, July 23, 1948; lowest dry, May 24, 1955. Records available: 1948-55. Jan. 25, 86.53; Mar. 19, 86.73; May 24, dry. Measurement discontinued.

27.19.20.343. Felix Gauthier. Drilled water-table well in bolson deposits, diameter 16 inches. Highest water level 131.90 below lsd, July 29, 1949; lowest 142.49 below lsd, Nov. 8, 1955. Records available: 1949-55. Jan. 25, 139.51; Mar. 19, 139.14; May 23, 140.54; July 25, 141.58; Sept. 7, 141.99; Nov. 8, 142.49.

27.19.32.211. Herbert Strange. Drilled unused water-table well in bolson deposits, diameter 6 inches, depth 155 feet. Highest water level 144.84 below lsd, May 25, 1949; lowest 152.95 below lsd, Nov. 10, 1954. Records available: 1949-54. Measurement discontinued.

27.20.9.100. Kate A. Washburn. Dug stock water-table well in bolson deposits, diameter 36 to 6 inches, depth 86 feet. Highest water level 71.20 below lsd, Aug. 1, Sept. 3, 1949; lowest 79.82 below lsd, Sept. 15, 1954. Records available: 1949-54. Measurement discontinued.

27.20.12.444a. Mrs. Edna Curry. Drilled irrigation water-table well in bolson deposits, diameter 16 inches. Highest water level 111.67 below lsd, Mar. 21, 1953; lowest 119.00 below lsd, July 26, 1954. Records available: 1953-55. Jan. 25, 113.27; Mar. 19, 149.29, pumping; May 23, 140.59, pumping; Nov. 8, 117.19.

28.19.15.433. Joe G. Good. Dug unused water-table well in bolson deposits, diameter 36 inches, depth 35 feet. Highest water level 28.53 below lsd, Nov. 8, 1955; lowest 34.96 below lsd, Sept. 15, 1954. Records available: 1949-55. Jan. 25, 30.78; Mar. 19, 30.56; May 23, 30.77; Sept. 7, 30.26; Nov. 8, 28.53.

28.19.15.433a. Joe G. Good. Drilled stock water-table well in bolson deposits, diameter 6 inches, depth 306 feet. Highest water level 206.31 below lsd, Nov. 23, 1949; lowest 217.93 below lsd, May 23, 1955. Records available: 1949-55. Jan. 25, 217.52; Mar. 19, 220.04, pumping; May 23, 217.93; Sept. 7, 219.27, pumping; Nov. 8, 219.96, pumping.

28.19.20.244. U. S. Government. Drilled stock water-table well in bolson deposits, diameter 6 inches, depth 270 feet. Highest water level 255.54 below lsd, May 24, 1949; lowest 260.44 below lsd, Nov. 25, 1951. Records available: 1948-55. Jan. 25, 257.88; Mar. 19, 259.34, pumping; May 23, 258.37; July 25, 258.54; Sept. 7, 258.08, pumping.

29.19.3.100. T. B. Strickland. Dug stock water-table well in bolson deposits, diameter 36 inches, depth 30 feet. Highest water level 22.53 below lsd, Nov. 8, 1955; lowest 27.99 below lsd, May 26, 1954. Records available: 1949-55. Jan. 25, 25.37; Mar. 19, 25.76; May 23, 25.85; July 25, 26.23; Sept. 7, 23.77; Nov. 8, 22.53.

29.19.3.300. T. B. Strickland. Dug water-table well in bolson deposits, diameter 6 feet, depth 21 feet. Highest water level 12.74 below lsd, Nov. 8, 1955; lowest dry at 20.5, May 21, 1952. Records available: 1949-55. Jan. 25, 16.78; Mar. 19, 17.15; May 23, 17.62; Sept. 7, 13.11; Nov. 8, 12.74.

Playas Valley

30.16.11.331. Sim Smith. Drilled irrigation water-table well in bolson deposits, diameter 12 inches, depth 115 feet. Highest water level 40.88 below lsd, Mar. 15, 1951; lowest 48.42 below lsd, Sept. 17, 1954. Records available: 1951-55. Jan. 24, 44.41; Mar. 26, 44.18; May 25, 43.93; July 22, 44.72; Sept. 9, 44.91; Nov. 10, 44.54.

30.16.16.244. A. G. McMath. Drilled irrigation water-table well in bolson deposits, diameter 16 inches, depth 80 feet. Highest water level 37.48 below lsd, July 29, 1951; lowest 44.90 below lsd, Sept. 21, 1953. Records available: 1950-55. Jan. 24, 40.19; Mar. 26, 42.81; May 25, 53.32, pumped recently; July 22, 43.98.

30.16.21.412. A. C. Gillespie. Drilled irrigation water-table well in bolson deposits, diameter 16 inches, depth 160 feet. Highest water level 37.34 below lsd, July 30, 1948; lowest 49.21 below lsd, Sept. 9, 1955. Records available: 1948-55. Jan. 24, 46.29; Mar. 26, 46.09; May 25, 78.07, pumping; July 22, 79.43, pumping; Sept. 9, 49.21; Nov. 10, 48.14.

30.16.28.334. Myers Bros. Drilled irrigation water-table well in bolson deposits, diameter 16 inches. Highest water level 48.03 below lsd, Jan. 16, 1950; lowest 66.92 below lsd, Sept. 17, 1954. Records available: 1949-50, 1954-55. Jan. 24, 57.93; May 25, 61.88, pumped recently; Sept. 9, 59.09; Nov. 10, 59.58.

30.16.29.422. Myers Bros. Drilled irrigation water-table well in bolson deposits, diameter 16 inches, depth 160 feet. Highest water level 43.85 below lsd, Feb. 4, 1949; lowest 61.17 below lsd, Nov. 23, 1953. Records available: 1948-55. Jan. 24, 57.80; Mar. 26, 56.59; May 25, 56.47; July 22, 57.45; Sept. 9, 57.69; Nov. 10, 57.86.

32.16.30.Lot 2. C. C. Edwards. Drilled irrigation water-table well in bolson deposits, diameter 16 inches, depth 150 feet. Highest water level 85.11 below lsd, Mar. 27, 1952; lowest 86.78 below lsd, July 30, 1953. Records available: 1952-55. Jan. 24, 85.63; Mar. 26, 85.57; May 25, 85.94; Sept. 9, 125.68, pumping; Nov. 10, 86.05.

32.17.13.240. Victoria Land & Cattle Co. Drilled unused water-table well in bolson deposits, diameter 6 inches, depth 64 feet. Highest water level 57.92 below lsd, May 20, 1949; lowest 59.42 below lsd, July 22, 1955. Records available: 1949-55. Jan. 24, 59.13; Mar. 26, 59.14; May 25, 59.23; July 22, 59.42; Sept. 9, 59.29; Nov. 10, 59.39.

Virden Valley

18.21.32.130. P. Lunt. Drilled stock well, diameter 8 inches, depth 114 feet. Land-surface datum is about 3,757 feet above msl. Highest water level 35.30 below lsd, June 3, 1940; lowest 55.35 below lsd, Mar. 10, 1942. Records available: 1939-55. Mar. 29, 48.30; June 30, 43.15; Dec. 8, 46.72.

18.21.32.440. J. Pierce. Near Virden. Dug unused domestic well, diameter 36 inches, depth 40 feet. Land-surface datum is about 3,736 feet above msl. Highest water level 29.12 below lsd, Jan. 7, 1941; lowest dry, Aug. 27, Nov. 5, 1951. Records available: 1939-54. Measurement discontinued.

19.20.18.120. Floyd Johns. Drilled domestic well, diameter 8 inches, depth 60 feet. Land-surface datum is about 3,804 feet above msl. Highest water level 20.05 below lsd, Feb. 1, 1945; lowest 55.00 below lsd, July 23, 1947. Records available: 1939-55. Feb. 3, 31.40; Mar. 29, 31.57; June 30, 44.45, nearby well being pumped; Dec. 8, 30.75.

19.21.2.330a. Byron Echols. Drilled irrigation well, diameter 20 inches, depth 80 feet. Land-surface datum is about 3,755 feet above msl. Highest water level 14.50 below lsd, Dec. 8, 1955; lowest 23.19 below lsd, Nov. 5, 1951. Records available: 1948-55. Feb. 3, 14.96; Mar. 29, 16.39; Dec. 8, 14.50.

19.21.12.420. Nancy O. Pace. Dug domestic well, diameter 4 feet, depth 30 feet. Land-surface datum is 3,792 feet above msl. Highest water level 10.16 below lsd, May 6, 1952; lowest dry, Nov. 5, 1951, Nov. 9, 1954. Records available: 1939-54. No measurement made in 1955.

Lea County

Tatum-Lovington-Hobbs area.--Ground water in sufficient quantities for irrigation, industrial, and municipal use is obtained from the Ogallala formation in the Tatum-Lovington-Hobbs area, a part of the High Plains in southeastern New Mexico. The Lea County ground-water basin, as extended by order of the State Engineer on October 1, 1952, includes about 2,180 square miles. Water levels have been measured in the area since 1929 to determine the effects of pumping and precipitation upon the ground-water storage. Records of these measurements have been published annually since 1940. Measurements were made in 206 wells in January 1955 and bimonthly in about 41. Recording gages were maintained on well 16.36.4.Lot 12 about 1 mile northwest of Lovington, well 16.38.3.333 about 12 miles east of Lovington, and well 17.33.13.341 about 17 miles southwest of Lovington. The January measurements, not all of which are included in this report, were used in preparing the maps showing the net change in water levels (figs. 86-87).

Precipitation in 1955 in Lea County was near normal at Tatum, about 88 percent of normal at Lovington and Pearl (15 miles west of Hobbs), and about 77 percent of normal at Hobbs. The precipitation amounted to 16.37 inches at Tatum, 0.24 inch below normal; 13.73 inches at Lovington, 1.74 inches below normal; 11.87 inches at Pearl, 1.63 inches below normal; and 12.30 inches at Hobbs, 3.65 inches below normal. During the growing season (April through September) the precipitation was about 60 percent of normal at Tatum and Lovington, about 75 percent of normal at Hobbs, and about 93 percent of normal at Pearl. About 50 percent of the annual precipitation at Tatum and Lovington and about 75 percent at Hobbs and Pearl fell during the growing season.

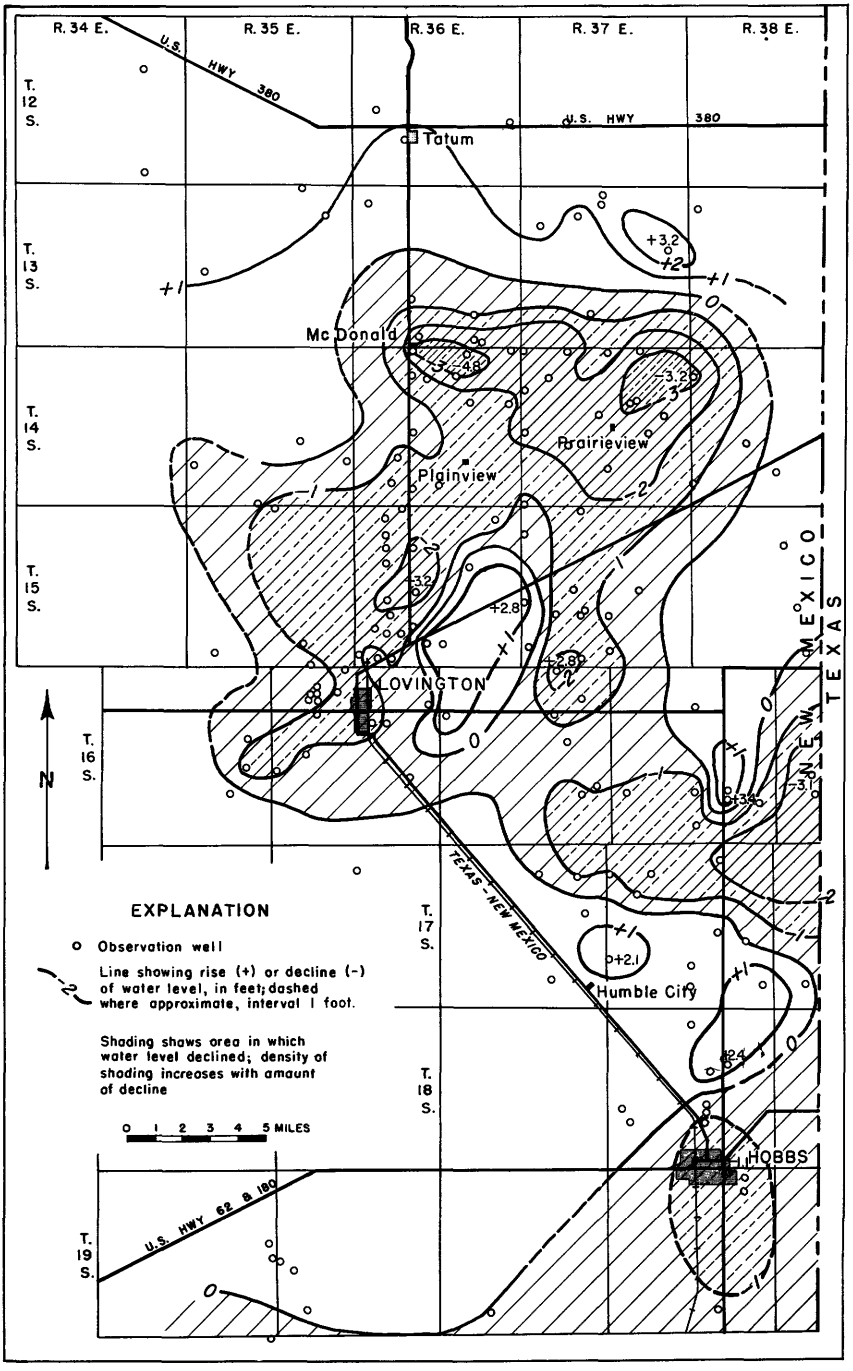

Figure 86. --Change in ground-water level from January 1955 to January 1956 in Tatum-Lovington-Hobbs area, Lea County, N. Mex.

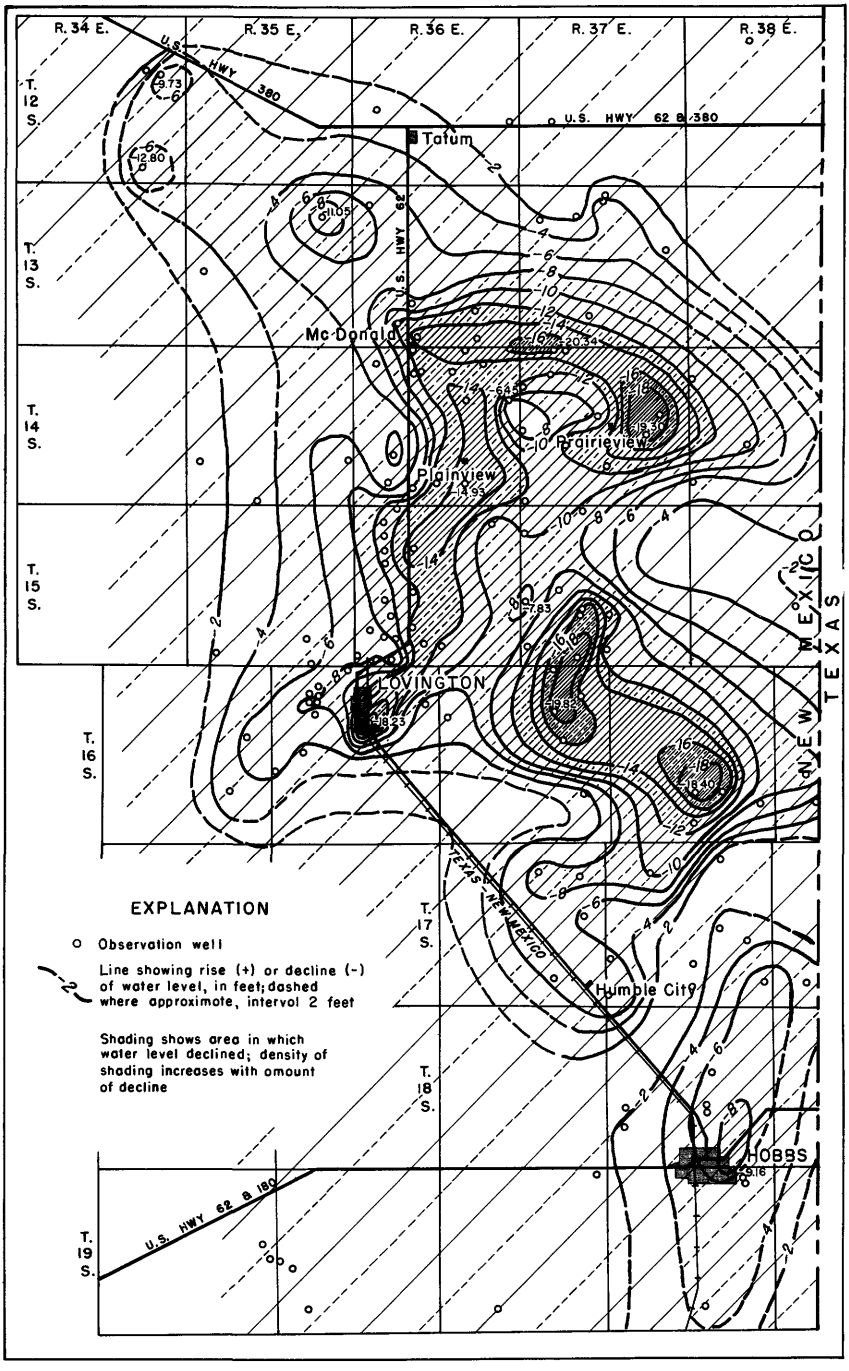

Figure 87. --Change in ground-water level from January 1950 to January 1955 in Tatum-Lovington-Hobbs area, Lea County, N. Mex.

In 1953 a survey showed that about 92,600 acres of land was irrigated in Lea County. It is estimated that in 1954 and 1955 about the same or slightly more land, 93,000 acres, was irrigated. On the basis of electric-power records of 221 wells and a number of pump ratings, it is estimated that about 170,000 acre-feet of water was used for irrigation in 1955, about 7,000 acre-feet more than in 1954. Pumpage for municipal use at Lovington increased from about 1,100 acre-feet in 1954 to an estimated 1,600 acre-feet in 1955. Pumpage for municipal use at Hobbs reportedly increased slightly from about 3,700 acre-feet in 1954 to about 3,800 acre-feet in 1955. The estimates of pumpage for these two places are based on metered use plus an estimate of unmetered use. The estimate of ground water used for municipal, stock, and industrial needs in 1955 is about 15,300 acre-feet, or about 1,300 acre-feet more than for 1954.

From January 1955 to January 1956, water levels declined more than 3 feet in the vicinity of McDonald and in an area about 3 miles northeast of Prairieview. In general, the declines in water levels were not so great as in 1953 and 1954. Figure 86 shows the areal changes in water levels from January 1955 to January 1956. In this period, net water-level declines of more than 1 foot occurred under about 220 square miles, more than 2 feet under about 45 square miles, and more than 3 feet under about 7 square miles. This is compared with declines of 1, 2, 3, and 4 feet in 1954 under 243, 78, 17, and 3 square miles, respectively. Above-normal precipitation in May 1955 at Tatum, Hobbs, and Pearl reduced the pumpage required for irrigation. Precipitation was above normal throughout the county in October 1955, exceptionally large amounts occurring at Tatum and Lovington. The October rains probably account for the rises in water levels near Tatum and northeast of Lovington as shown on figure 86.

From January 1950 to January 1955, water levels declined more than 6 feet under an area of about 360 square miles, more than 12 feet under about 96 square miles, and more than 18 feet under about 7 square miles. A decline of more than 18 feet occurred under 4 small areas--namely, 1 mile east of Prairieview, at Lovington, about 7 miles east of Lovington, and about 14 miles north of Hobbs. (See fig. 87.)

Tatum-Lovington-Hobbs Area

11.33.25.442. Owner unknown. Drilled water-table well in Ogallala formation, diameter 8 inches, depth 69 feet. Highest water level 33.60 below lsd, Nov. 30, 1955; lowest 33.97 below lsd, July 14, 1954. Records available: 1953-55. Jan. 10, 33.81; Mar. 23, 33.81; July 19, 33.92; Sept. 27, 33.94; Nov. 30, 33.60.

12.31.23.333. F. E. Dickson. Drilled unused water-table well in Ogallala formation, diameter 3 inches, depth 148 feet. Highest water level 130.15 below lsd, Nov. 13, 1953, Nov. 30, 1955; lowest 130.37 below lsd, May 12, 1954, Jan. 13, Mar. 18, 1955. Records available: 1953-55. Jan. 13, 130.37; Mar. 18, 130.37; July 19, 130.36; Sept. 27, 130.30; Nov. 30, 130.15.

12.31.26.333. F. E. Dickson. Drilled unused water-table well in Ogallala formation, diameter 6 inches, depth 145 feet. Highest water level 132.08 below lsd, Jan. 13, 1955; lowest 132.21 below lsd, Mar. 23, 1955. Records available: 1953-55. Jan. 13, 132.08; Mar. 23, 132.21.

12.31.26.333a. F. E. Dickson. Drilled unused water-table well in Ogallala formation, diameter 8 inches, depth 145 feet. Highest water level 130.40 below lsd, Jan. 15, July 21, 1954; lowest 130.78 below lsd, July 27, 1953. Records available: 1953-55. Jan. 13, 130.51; Mar. 23, 130.49; July 19, 130.63; Sept. 27, 130.64; Nov. 30, 130.66.

12.34.11.413. A. D. Jones Estate. Drilled unused water-table well in Ogallala formation, diameter 15 inches, depth 87 feet. Highest water level 29.57 below lsd, May 24, 1949; lowest 32.13 below lsd, Sept. 27, 1955. Records available: 1949-55. Jan. 10, 31.81; Mar. 23, 31.95; May 31, 32.00; July 19, 32.06; Sept. 27, 32.13; Nov. 30, 31.48.

12.36.24.434a. J. C. Clay. Drilled domestic water-table well in Ogallala formation, diameter 6 inches. Highest water level 22.85 below lsd, Jan. 15, 1948; lowest 25.08 below lsd, Sept. 16, 1954. Records available: 1947-55. Jan. 13, 24.85; Mar. 18, 24.77; May 31, 27.69, pumping; July 20, 25.40, pumping; Sept. 26, 25.83, pumping; Nov. 30, 24.85, pumping.

13.35.2.111a. Owner unknown. Drilled unused water-table well in Ogallala formation. Highest water level 26.43 below lsd, Nov. 30, 1955; lowest 28.69 below lsd, May 31, 1955. Records available: 1953-55. Jan. 13, 28.31; Mar. 18, 28.41; May 31, 28.69; July 19, 28.48; Sept. 26, 28.02; Nov. 30, 26.43.

13.37.7.234. W. D. Patton. Drilled unused water-table well in Ogallala formation, diameter 6 inches. Highest water level 29.56 below lsd, Mar. 27, Nov. 15, 1947; lowest 32.67 below lsd, May 31, 1955. Records available: 1945-55. Jan. 8, 32.55; Mar. 18, 32.62; May 31, 32.67; July 20, 32.57; Sept. 26, 32.66; Nov. 29, 32.27.

13.37.13.132. Taylor. Drilled unused water-table well in Ogallala formation, diameter 8 inches, depth 42 feet. Highest water level 25.46 below lsd, Aug. 12, 1941; lowest 32.34 below lsd, Sept. 26, 1955. Records available: 1930-55. Jan. 8, 31.78; May 18, 31.98; May 31, 31.97; July 20, 32.12; Sept. 26, 32.34; Nov. 29, 27.53.

14.35.33.433. W. A. Anderson. Drilled unused water-table well in Ogallala formation, diameter 6 inches, depth 62 feet. Land-surface datum is 4,013.59 feet above msl. Highest water level 39.65 below lsd, May 21, July 25, 1951, Jan. 9, May 24, 1952; lowest 43.56 below lsd, Nov. 29, 1955. Records available: 1929-55. Jan. 11, 42.70; Mar. 21, 42.66; May 30, 42.77; July 19, 42.92; Sept. 23, 43.24; Nov. 29, 43.56.

14.36.4.111. Lewis Beaman. Drilled domestic water-table well in Ogallala formation, diameter 6 inches. Highest water level 42.73 below lsd, Mar. 23, 1949; lowest 62.98 below lsd, Sept. 23, 1955. Records available: 1949-55. Jan. 10, 55.40; Mar. 18, 55.05; May 31, 56.63; July 19, 59.93; Sept. 23, 62.98; Nov. 29, 59.04.

14.36.13.211. Mrs. Mattie Field. Drilled unused water-table well in Ogallala formation, diameter 12 inches, depth 87 feet. Land-surface datum is 3,904.59 feet above msl. Highest water level 35.74 below lsd, Jan. 30, May 24, 1946; lowest 45.38 below lsd, Nov. 29, 1955. Records available: 1929-55. Jan. 11, 43.97; Mar. 18, 44.17; May 31, 44.40; July 19, 44.62; Sept. 23, 44.98; Nov. 29, 45.38.

14.37.15.222. O. A. Pope. Drilled unused irrigation water-table well in Ogallala formation, diameter 16 inches, depth 140 feet. Highest water level 53.89 below lsd, Mar. 23, 1953; lowest 81.69 below lsd, July 18, 1955. Records available: 1953-55. Jan. 8, 61.00; Mar. 18, 69.50; May 31, 85.14, nearby well being pumped; July 18, 81.69; Sept. 23, 79.47; Nov. 29, 65.87.

14.37.27.131. J. R. Fort. Drilled unused water-table well in Ogallala formation, diameter 7 inches, depth 52 feet. Highest water level 36.10 below lsd, May 22, 1947; lowest dry at 51.6, Sept. 16, Nov. 12, 1954. Records available: 1929-54. Measurement discontinued.

14.37.31.333. T. N. and E. N. Miller. Drilled irrigation water-table well in Ogallala formation, diameter 16 inches, reported depth 130 feet. Highest water level 43.59 below lsd, Mar. 21, 1949; lowest 71.96 below lsd, Sept. 10, 1953. Records available: 1949-55. Jan. 11, 56.75; Mar. 21, 55.65; May 30, 61.53; July 18, 92.53, pumping; Sept. 23, 66.93; Nov. 29, 58.71.

14.38.21.311. Claude Cox. Drilled irrigation water-table well in Ogallala formation, diameter 14 inches, depth 105 feet. Highest water level 32.48 below lsd, Jan. 21, 1949; lowest 48.62 below lsd, Sept. 23, 1955. Records available: 1949-55. Jan. 4, 45.02; Mar. 18, 44.36; May 31, 44.99; Sept. 23, 48.62; Nov. 29, 46.14.

15.36.8.111a. Gordon Gann. Drilled domestic water-table well in Ogallala formation, diameter 6 inches, depth 105 feet. Highest water level 41.33 below lsd, Mar. 23, 1949; lowest 62.05 below lsd, Sept. 23, 1955. Records available: 1949-55. Jan. 11, 54.73, pumped recently; Mar. 21, 56.32; May 30, 56.91; July 19, 77.80, nearby well being pumped; Sept. 23, 62.05; Nov. 29, 57.37, pumped recently.

15.37.21.334. R. W. Dean. Drilled stock water-table well in Ogallala formation, diameter 8 inches, reported depth 80 feet. Highest water level 29.10 below lsd, July 27, 1943; lowest 52.36 below lsd, July 18, 1955. Records available: 1930-55. Jan. 8, 48.50; Mar. 18, 48.75; May 30, 50.98; July 18, 52.36; Sept. 23, 57.73, pumping; Nov. 29, 56.80, pumping.

16.35.13.112. W. T. Zuber. Drilled irrigation water-table well in Ogallala formation, diameter 12 inches, reported depth 100 feet. Highest water level 42.36 below lsd, Mar. 26, 1948; lowest 54.68 below lsd, July 15, 1955. Records available: 1948-55. Jan. 7, 49.77; Mar. 19, 49.09; May 27, 51.45; July 15, 54.68; Sept. 23, 53.81; Nov. 28, 51.33.

16.36.4. Lot 12. E. H. Byers. Drilled unused water-table well in Ogallala formation, diameter 8 inches, depth 65 feet. Highest water level 43.35 below lsd, Mar. 14, 1943; lowest 58.88 below lsd, Nov. 20, 1955. Records available: 1934-55.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	56.26	56.03	55.73	55.90	56.65	.....	57.65	58.07	58.13	58.77	58.48	58.33
2	56.31	56.02	55.72	55.87	56.20	.....	57.64	58.05	58.13	58.75	58.56	58.31
3	56.35	56.01	55.71	55.85	56.25	.....	57.63	58.04	58.13	58.70	58.62	58.29
4	56.39	56.00	55.70	55.84	56.84	e57.24	57.63	58.02	58.14	58.69	58.65	58.25
5	56.43	55.98	55.70	55.83	56.88	57.31	56.63	.....	58.15	58.68	58.71	58.21
6	56.46	55.99	55.69	55.82	56.90	57.31	57.62	57.99	58.15	58.65	58.76	58.19
7	56.49	55.97	55.69	55.81	56.90	57.33	57.62	57.97	58.21	58.62	58.77	58.16
8	56.51	55.96	55.69	55.80	56.89	57.33	57.68	57.95	58.25	58.60	.....	58.13
9	56.48	55.95	55.69	55.82	56.87	57.38	57.72	57.95	58.30	58.57	.....	.....
10	56.45	55.95	55.76	55.81	56.86	57.41	57.76	57.94	58.35	58.54	.....	.....

16. 36. 4. Lot 12--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
11	56. 43	55. 93	55. 80	55. 81	56. 86	57. 43	57. 78	57. 95	58. 41	58. 51	.....	.....
12	56. 41	55. 91	55. 82	55. 81	56. 85	57. 47	57. 81	57. 95	58. 45	58. 50	.....	.....
13	56. 37	55. 91	55. 90	55. 80	56. 84	57. 49	57. 85	57. 96	58. 49	58. 49	.....	.....
14	56. 35	55. 89	55. 93	55. 81	56. 84	57. 52	57. 89	57. 97	58. 51	58. 47	.....	.....
15	56. 32	55. 88	55. 98	55. 89	56. 84	57. 54	57. 93	57. 97	58. 55	58. 45	58. 83	.....
16	56. 31	55. 87	56. 06	55. 93	56. 83	57. 57	58. 01	57. 97	58. 59	58. 43	58. 84	.....
17	56. 29	55. 85	56. 14	55. 93	56. 82	57. 59	58. 04	57. 97	58. 61	58. 41	58. 85	.....
18	56. 28	55. 84	56. 21	55. 95	56. 82	57. 60	58. 07	57. 97	58. 62	58. 39	58. 85	57. 93
19	56. 25	55. 84	56. 23	55. 94	56. 82	57. 63	58. 11	57. 98	58. 64	58. 37	58. 87	57. 91
20	.....	55. 83	56. 20	56. 00	56. 81	57. 63	58. 15	57. 99	58. 67	58. 35	58. 88	57. 90
21	.....	55. 81	56. 19	56. 05	56. 79	57. 64	58. 17	57. 99	58. 70	58. 34	58. 87	57. 88
22	.....	55. 80	56. 15	56. 12	56. 76	57. 71	58. 20	58. 00	58. 73	58. 31	58. 87	57. 87
23	.....	55. 79	56. 11	56. 21	56. 77	57. 72	58. 21	58. 01	58. 76	58. 29	58. 79	57. 85
24	.....	55. 78	56. 08	56. 29	56. 85	57. 73	58. 22	58. 06	58. 82	58. 27	58. 73	57. 85
25	.....	55. 76	56. 07	56. 28	56. 94	57. 71	58. 20	58. 10	58. 83	58. 25	58. 66	57. 82
26	.....	55. 75	56. 04	56. 27	57. 02	57. 69	58. 19	58. 11	58. 84	58. 24	58. 60	57. 82
27	.....	55. 74	56. 01	56. 33	57. 08	57. 67	58. 17	58. 11	58. 83	58. 22	58. 56	57. 80
28	.....	55. 73	55. 99	56. 37	57. 16	57. 66	58. 16	58. 11	58. 82	58. 22	58. 48	57. 79
29	.....		55. 96	56. 46	.....	57. 65	58. 14	58. 11	58. 80	58. 26	58. 43	57. 79
30	56. 07		55. 93	56. 56	.....	57. 65	58. 12	58. 12	58. 78	58. 35	58. 37	57. 77
31	56. 04		55. 92		.....		58. 10	58. 12		58. 41		.....

e Estimated.

16. 37. 11. 111. A. J. Birkshire. Drilled irrigation water-table well in Ogallala formation, diameter 16 inches, reported depth 118 feet. Highest water level 31. 93 below lsd, Jan. 23, 1949; lowest 63. 93 below lsd, Sept. 26, 1955. Records available: 1949-55. Jan. 4, 53. 80; Mar. 18, 51. 66; July 18, 60. 42; Sept. 26, 63. 93; Nov. 29, 57. 51.

16. 38. 3. 333. State of New Mexico. Drilled test hole water-table well in Ogallala formation, diameter 8 inches, depth 107 feet, cased to 100. Highest water level 24. 44 below lsd, May 29-June 25, 1954; lowest 25. 47 below lsd, Sept. 26- Oct. 2, 1955. Records available: 1953-55.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	e25. 03	.....	.....	.....	.....	25. 21	25. 25	.....	.....	25. 47	.....	24. 56
2	e25. 03	.....	.....	.....	.....	25. 21	25. 25	.....	.....	25. 47	.....	24. 56
3	e25. 03	.....	.....	.....	.....	25. 21	25. 25	.....	.....	25. 02	.....	24. 56
4	h25. 03	.....	.....	.....	.....	25. 21	25. 25	.....	.....	25. 02	.....	24. 56
5	e25. 03	.....	.....	.....	25. 17	25. 21	25. 25	.....	.....	24. 83	.....	24. 56
6	25. 03	.....	.....	.....	25. 17	25. 21	25. 25	.....	.....	24. 74	.....	24. 56
7	25. 03	.....	.....	.....	25. 17	25. 21	25. 26	.....	.....	24. 70	.....	24. 56
8	25. 03	.....	.....	.....	.....	25. 22	25. 27	.....	.....	24. 67	.....	24. 56
9	25. 03	.....	.....	.....	.....	25. 22	25. 27	.....	.....	24. 63	.....	24. 56
10	25. 03	.....	.....	.....	25. 18	25. 22	25. 27	.....	.....	24. 62	.....	24. 56
11	25. 03	.....	.....	.....	25. 18	25. 22	25. 27	.....	.....	24. 60	.....	24. 56
12	h25. 03	.....	.....	.....	25. 18	25. 22	25. 28	.....	.....	24. 59	.....	24. 56
13	.....	.....	.....	.....	25. 18	25. 23	25. 28	.....	.....	24. 58	.....	24. 56
14	.....	.....	.....	.....	25. 18	25. 23	25. 28	.....	.....	24. 57	.....	24. 56
15	.....	.....	.....	.....	25. 18	25. 23	25. 29	.....	.....	24. 55	.....	24. 56
16	.....	.....	.....	.....	25. 18	25. 23	25. 29	.....	.....	24. 55	.....	24. 57
17	.....	.....	.....	25. 14	25. 18	25. 23	25. 29	.....	.....	24. 54	.....	24. 57
18	.....	.....	h25. 08	25. 14	25. 18	25. 23	h25. 30	.....	.....	24. 54	.....	24. 57
19	.....	.....	25. 08	.....	25. 18	25. 24	.....	.....	.....	24. 54	.....	24. 57
20	.....	.....	25. 08	.....	.....	25. 24	.....	.....	.....	24. 53	.....	24. 57
21	.....	.....	25. 08	.....	.....	25. 24	.....	.....	.....	24. 53	.....	24. 57
22	.....	.....	25. 08	.....	25. 19	25. 24	.....	.....	.....	24. 53	.....	24. 57
23	.....	.....	25. 08	.....	25. 19	25. 24	.....	.....	.....	24. 53	.....	24. 57
24	.....	.....	25. 08	.....	25. 19	25. 24	.....	.....	.....	24. 53	.....	24. 57
25	.....	.....	25. 08	.....	.....	25. 25	.....	.....	.....	24. 53	.....	24. 57
26	.....	.....	25. 08	25. 15	.....	25. 25	.....	.....	25. 47	24. 53	.....	24. 57
27	.....	.....	.....	25. 15	25. 20	25. 25	.....	.....	25. 47	24. 52	.....	24. 57
28	.....	.....	.....	25. 15	25. 20	25. 25	.....	.....	25. 47	24. 52	.....	24. 57
29	.....		.....	25. 15	25. 20	25. 25	.....	.....	25. 47	24. 52	24. 56	24. 58
30	.....		.....	.....	h25. 21	25. 25	.....	.....	25. 47	24. 52	24. 56	24. 58
31	.....		.....		25. 21		.....	.....		.....		24. 58

e Estimated.
h Tape measurement.

16.38.34.131. Ralph Moe. Drilled irrigation water-table well in Ogallala formation, diameter 16 inches, reported depth 140 feet. Highest water level 35.06 below lsd, May 22, 1947; lowest 68.31 below lsd, Sept. 26, 1955. Records available: 1947-55. Jan. 4, 51.20; Mar. 19, 78.75, nearby well being pumped; May 30, 80.36, nearby well being pumped; July 18, 83.91, nearby well being pumped; Sept. 26, 68.31; Nov. 29, 57.19.

17.33.13.341. Potash Co. of America. Drilled water-table well in Ogallala formation, diameter 6 inches, depth 252 feet, cased to 252. Highest water level 146.00 below lsd, Jan. 21, 1953; lowest 151.42 below lsd, Dec. 30, 1955. Records available: 1952-55.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	150.12	150.07	150.38	150.07	149.97	149.90	150.36	150.52	150.47	150.53	150.99	151.09
2	150.07	150.05	150.32	149.96	150.01	149.87	150.40	150.46	150.43	150.58	151.04	151.12
3	150.16	150.08	150.30	149.87	150.00	149.87	150.39	150.48	150.50	150.63	150.92	151.22
4	150.07	150.11	150.31	150.04	149.96	149.82	150.40	150.49	150.63	150.62	150.91	151.13
5	150.19	150.03	150.32	150.01	149.91	149.84	150.33	150.48	150.59	150.68	150.91	151.09
6	150.24	150.10	150.27	150.05	149.90	149.87	150.31	150.44	150.61	150.73	150.94	151.03
7	150.19	150.15	150.24	149.93	149.91	149.83	150.28	150.39	150.59	150.75	150.94	151.14
8	150.23	150.13	150.20	149.92	149.87	149.82	150.30	150.39	150.59	150.77	150.90	151.22
9	150.32	150.14	150.21	149.96	149.87	.....	150.31	150.45	150.59	150.79	150.89	151.04
10	150.31	150.27	150.24	149.86	149.92	.....	150.26	150.48	150.61	150.77	150.88	151.19
11	150.37	150.25	150.27	149.85	149.87	149.76	150.25	150.42	150.64	150.78	151.02	151.18
12	150.39	150.31	150.28	149.96	149.90	149.78	150.28	150.42	150.56	150.82	151.10	151.15
13	150.30	150.35	150.27	149.97	149.88	149.81	150.30	150.51	150.56	150.83	151.12	151.22
14	150.30	150.31	150.23	149.92	149.87	149.78	150.29	150.52	150.54	150.78	150.95	151.34
15	150.39	150.33	150.27	149.95	149.89	149.79	150.33	150.53	150.50	150.80	150.98	151.20
16	150.41	150.40	150.21	149.97	149.88	149.80	150.34	150.49	150.50	150.89	151.09	151.13
17	150.41	150.25	150.16	149.90	149.80	149.87	150.41	150.51	150.50	150.89	150.99	151.28
18	150.48	150.27	150.16	149.95	149.87	149.91	150.43	150.54	150.50	150.91	151.05	151.40
19	150.31	150.38	150.09	149.97	149.90	149.89	150.47	150.53	150.44	150.95	151.10	151.34
20	150.30	150.30	150.12	150.03	149.89	149.99	150.43	150.56	150.42	150.98	151.02	151.29
21	150.35	150.27	150.27	150.00	149.79	150.03	150.39	150.64	150.43	150.98	151.05	151.29
22	150.28	150.29	150.05	149.97	149.80	150.04	150.41	150.55	150.39	150.96	151.07	151.21
23	150.23	150.30	150.07	150.04	149.89	150.07	150.40	150.53	150.39	150.98	151.17	151.29
24	150.28	150.33	150.00	150.10	149.81	150.15	150.38	150.53	150.34	.....	151.11	151.37
25	150.18	150.29	150.07	150.11	149.83	150.24	150.41	150.54	150.37	.....	151.14	151.29
26	150.19	150.38	150.06	150.07	149.92	150.22	150.43	150.49	150.38	.....	151.10	151.29
27	150.07	150.40	149.90	150.12	149.94	150.26	150.49	150.47	150.40	.....	151.16	151.25
28	150.09	150.39	149.96	150.12	149.98	150.30	150.49	150.45	150.39	.....	151.14	151.29
29	150.06		150.01	150.03	149.89	150.32	150.50	150.48	150.41	.....	151.09	151.42
30	150.05		149.98	150.04	149.83	150.36	150.50	150.49	150.48	.....	151.11	151.34
31	150.00		149.98		149.91		150.54	150.48		.....		151.21

17.33.13.434. Potash Co. of America. Drilled industrial water-table well in Ogallala formation, diameter 16 inches, depth 240 feet. Highest water level 144.18 below lsd, Nov. 17, 1948; lowest 171.23 below lsd, Nov. 18, 1952. Records available: 1948-55. Jan. 6, 160.88; Mar. 19, 188.83, pumping; May 28, 163.28; July 15, 164.64; Sept. 22, 188.60, pumping.

17.33.26.422. Phillips Petroleum Co. Drilled unused water-table well in Ogallala formation, diameter 8 inches, depth 200 feet. Highest water level 160.56 below lsd, Jan. 21, 1951; lowest 162.05 below lsd, Nov. 28, 1955. Records available: 1950-55. Jan. 6, 161.81; Mar. 19, 161.73; May 28, 161.93; July 15, 161.88; Sept. 22, 161.93; Nov. 28, 162.05.

17.34.21.143. Duval Sulphur & Potash Co. Drilled industrial water-table well in Ogallala formation, diameter 12 inches, depth 246 feet. Highest water level 112.71 below lsd, Jan. 21, 1951; lowest 123.74 below lsd, Mar. 2, 1954. Records available: 1951-55. Jan. 6, 122.21, pumped recently; Mar. 19, 123.17; May 28, 124.12, pumped recently; July 15, 123.16; Sept. 22, 123.49; Nov. 28, 123.48.

17.34.35.130. Phillips Petroleum Co. Drilled unused water-table well in Ogallala formation, diameter 8 inches, depth 132 feet. Highest water level 89.81 below lsd, July 21, 1953; lowest 91.98 below lsd, Jan. 26, 1941. Records available: 1940-55. Jan. 6, 90.18; Mar. 19, 90.17; May 27, 90.20; July 15, 90.25; Sept. 22, 90.19; Nov. 28, 90.17.

17.35.35.213. Phillips Petroleum Co. Drilled unused water-table well in Ogallala formation, diameter 9 inches, depth 129 feet. Highest water level 38.60 below lsd, Jan. 16, 1948; lowest 41.45 below lsd, Jan. 26, 1941. Records available: 1940-55. Jan. 6, 39.79; Mar. 19, 39.83; May 27, 39.90; July 15, 39.92; Sept. 23, 39.96; Nov. 28, 39.89.

17. 36. 3. 333. State of New Mexico. Drilled unused water-table well in Ogallala formation, diameter 2 inches, depth 85 feet. Highest water level 42. 00 below lsd, Mar. 24, May 15, 1944; lowest 45. 01 below lsd, June 18, 1939. Records available: 1939-55. Jan. 7, 42. 78; Mar. 19, 42. 77; May 27, 42. 98; July 15, 43. 14; Sept. 23, 43. 30; Nov. 28, 43. 10.

17. 36. 27. 131. Wallace Mitchell. Drilled irrigation water-table well in Ogallala formation, diameter 12 inches, depth 100 feet. Highest water level 33. 00 below lsd, Sept. 23, 1949; lowest 36. 52 below lsd, May 17, 1950. Records available: 1947-55. Jan. 6, 34. 52; Mar. 19, 34. 51; May 27, 34. 70; July 15, 34. 74; Sept. 23, 34. 86; Nov. 28, 34. 85.

17. 38. 7. 111a. Jim Cunningham. Drilled irrigation water-table well in Ogallala formation, diameter 16 inches, reported depth 135 feet. Highest water level 35. 59 below lsd, Mar. 21, 1952; lowest 51. 34 below lsd, Sept. 26, 1955. Records available: 1951-55. Jan. 5, 44. 70; Sept. 26, 51. 34; Nov. 29, 46. 97.

17. 38. 34. 113. W. E. Busby. Drilled irrigation water-table well in Ogallala formation, diameter 12 inches, depth 120 feet. Highest water level 24. 78 below lsd, Jan. 15, 1944; lowest 31. 66 below lsd, Sept. 3, 1953. Records available: 1943-55. Jan. 5, 29. 43; Mar. 19, 29. 66; May 30, 29. 96; July 18, 30. 14; Sept. 26, 30. 58; Nov. 29, 28. 84.

18. 35. 17. 144. International Mineral & Chemical Corp. Drilled industrial water-table well in Ogallala formation, diameter 13 inches, depth 190 feet. Highest water level 69. 41 below lsd, Sept. 14, 1954; lowest 69. 54 below lsd, Mar. 2, May 5, 1954. Records available: 1953-55. Jan. 6, 69. 52; Mar. 19, 69. 48; May 28, 69. 52; July 15, 69. 52; Sept. 22, 69. 49; Nov. 28, 69. 50.

18. 35. 20. 144. International Mineral & Chemical Corp. Drilled industrial water-table well in Ogallala formation, diameter 13 inches, depth 175 feet. Highest water level 75. 76 below lsd, Nov. 20, 1953, Mar. 19, 1955; lowest 75. 87 below lsd, May 5, 1954. Records available: 1953-55. Jan. 6, 75. 81; Mar. 19, 75. 76; May 28, 75. 85; July 15, 75.83; Sept. 22, 75. 79; Nov. 28, 75. 79.

18. 35. 20. 214. International Mineral & Chemical Corp. Drilled industrial water-table well in Ogallala formation, diameter 12 inches, depth 170 feet. Highest water level 72. 19 below lsd, Dec. 9, 1953; lowest 72. 26 below lsd, Mar. 2, May 5, 1954, May 28, 1955. Records available: 1953-55. Jan. 6, 72. 23; Mar. 19, 72. 20; May 28, 72. 26; July 15, 72. 25; Sept. 22, 72. 21; Nov. 28, 72. 21.

18. 36. 27. 111. State of New Mexico. Drilled unused water-table well in Ogallala formation, diameter 6 inches, depth 54 feet. Highest water level 38. 09 below lsd, Oct. 23, 1942; lowest 41. 75 below lsd, Mar. 15, 1941. Records available: 1939-55. Jan. 6, 41. 16; May 19, 41. 18; May 27, 41. 25; July 15, 41. 27; Sept. 22, 41. 35; Nov. 28, 40. 34.

18. 38. 15. 241. Glenn Staley. Drilled unused water-table well in Ogallala formation, diameter 6 inches, depth 107 feet. Highest water level 26. 65 below lsd, Nov. 4-7, 1942; lowest 42. 90 below lsd, July 13, 1954. Records available: 1940-55. Jan. 5, 36. 36; Mar. 18, 39. 53; May 30, 40. 00; July 18, 52. 97, nearby well being pumped; Sept. 26, 42. 39; Nov. 29, 33. 14.

18. 38. 27. 113. Hobbs. Drilled well, depth 212 feet. Highest water level 42. 94 below lsd, Mar. 1, 1954; lowest 60. 83 below lsd, July 15, 1954. Records available: 1954-55. Jan. 5, 44. 00; Mar. 19, 45. 10; May 30, 48. 23; July 19, 53. 43; Sept. 23, 54. 16; Nov. 26, 45. 84.

18. 38. 30. 223. Mrs. Sadie Davis. Drilled unused water-table well in Ogallala formation, diameter 6 inches, depth 50 feet. Highest water level 23. 01 below lsd, Nov. 17, 1947; lowest 29. 82 below lsd, November 1932. Records available: 1931-55. Jan. 5, 26. 29; Mar. 19, 26. 55; May 28, 26. 87; July 18, 27. 06; Sept. 22, 27. 13; Nov. 28, 25. 50.

19. 37. 32. 241. Mrs. E. A. Anderson. Dug unused water-table well in Ogallala formation, diameter 8 feet, depth 28 feet. Highest water level 10. 12 below lsd, Nov. 28, 1941; lowest 13. 89 below lsd, June 17, 1934. Records available: 1929-55. Jan. 6, 12. 19; Mar. 19, 12. 29; May 28, 12. 26; July 15, 12. 28; Sept. 22, 12. 17; Nov. 28, 12. 11.

20. 35. 1. 221. J. L. Wood. Dug unused water-table well in Ogallala formation, size 4 by 4 feet, depth 28 feet. Highest water level 19. 38 below lsd, July 28, 1943; lowest 25. 68 below lsd, Sept. 18, 1936. Records available: 1929-55. Jan. 6, 24. 98; Mar. 19, 25. 05; May 28, 25. 20; July 15, 25. 18; Sept. 22, 25. 29; Nov. 28, 25. 27.

20. 37. 9. 110. W. H. Laughlin. Dug and drilled water-table well in Ogallala formation, size 4 by 6 feet, depth 53 feet. Highest water level 26. 89 below lsd, Mar. 30, 1943; lowest 47. 54 below lsd, Aug. 12, 1935. Records available: 1929-55. Jan. 6, 32. 60; Mar. 19, 32. 40; May 28, 32. 43; July 15, 33. 09; Sept. 22, 33. 53; Nov. 28, 32. 93.

Luna County

Mimbres Valley.--The Mimbres Valley, a southward sloping bolson, is principally in Luna County in southwestern New Mexico. Many wells south, east, and west of Deming supply water for domestic, industrial, and irrigation needs from the permeable beds of the alluvial fill underlying the valley. The principal surface drainage of the region is to the Mimbres River and its tributary arroyos. The perennial flow of the river generally sinks into the ground northwest of Deming, but in times of unusually high precipitation it may continue southward along the eastern flank of the Florida Mountains as far as the Mexican border.

Five areas totaling 908 square miles compose the Mimbres ground-water basin at present. When originally declared by the State Engineer on July 29, 1931, the basin included the main (or Deming) area around and south of Deming, the Lewis Flats area about 12 miles east of Deming, and the area just north and east of Columbus. The basin was enlarged in April 1942 to include the Eastern Extension, east of the Florida Mountains, and the Red Mountain area, about 10 miles west of Deming. The Franklin area, principally in T. 25 S., R. 6 W., is included in the Eastern Extension. The basin was closed to further appropriation April 20, 1945. The Eastern Extension, Columbus area, and Red Mountain area were reopened April 26, 1950; the Columbus area was closed again on January 9, 1953. Investigation of the hydrology of the region was continued in 1955 to evaluate the effects of continued pumping on water levels.

Water levels were measured in 185 wells in January 1955 and recording gages were continued on the same two wells as in 1954. Bimonthly measurements were made in 60 observation wells in the area, a total of 493 measurements being made during the year. Not all the January measurements used in preparing the water-level change maps are included in this report.

Annual precipitation in the Mimbres Valley was below normal at all stations, except Columbus CAA which reported 11.95 inches, about 3 inches above normal for the year. Precipitation at Deming was 7.11 inches, 2.28 inches below normal. In all areas, 70 to 80 percent of the precipitation during the growing season occurred in characteristically heavy thundershowers of short duration. Precipitation at Mimbres Ranger Station, Gage, and Florida was below normal by about 28 percent.

About 33,500 acres of land, an increase of 1,500 acres from 1954, was irrigated in the Mimbres Valley in 1955, requiring about 84,000 acre-feet of ground water. Reinterpretation of data indicates the estimates of pumpage for 1954 should be increased by about 7 percent; thus, about 80,000 acre-feet of water is estimated to have been pumped in 1954 instead of the 74,000 acre-feet previously reported. In 1955 about 22,000 acres in the main area was irrigated with 55,000 acre-feet of water; about 3,000 acres in the Lewis Flats area, with 7,500 acre-feet; 1,700 acres in the Franklin area with 4,300 acre-feet; and 2,300 acres in the Red Mountain area with 5,900 acre-feet. The acreage in the Columbus area increased from about 2,900 acres in 1954 to about 4,400 acres in 1955; pumpage in 1955 was about 11,000 acre-feet. Acreage in other areas remained nearly the same from 1954 to 1955. Duty of water is estimated to have been about 2.5 acre-feet per acre for both 1954 and 1955. Municipal and domestic use of water for the village of Deming probably amounted to about 1,300 acre-feet during 1955.

Water-level declines in the Mimbres Valley were greater in 1955 than in 1954. (See figs. 88-89.) Water levels in wells in January 1956 in two parts of the Lewis Flats area, totaling about 1 square mile, centered in secs. 30 and 34 of T. 23 S., R. 7 W., were above those of January 1955 by about 1 foot. There was a decline of 6 feet or more under an area of about 2 square miles, 5 feet or more under an area of about 4 square miles, 4 feet or more under about 9 square miles, 3 feet or more under about 48 square miles, 2 feet or more under about 100 square miles, and 1 foot or more under about 225 square miles. Water levels in the Red Mountain area in 1955 as in 1954 declined more than 6 feet in a small area centered in sec. 11, T. 24 S., R. 11 W. The areas of decline in excess of 4 feet were centered in sec. 8, T. 24 S., R. 9 W. and sec. 18, T. 25 S., R. 9 W. A decline of more than 4 feet, centered in sec. 5, T. 25 S., R. 6 W., was noted in the Franklin area. A decline of more than 2 feet, centered in sec. 26, T. 23 S., R. 8 W., occurred in the Lewis Flats area. In the Columbus area, water levels declined more than 15 feet in 6 wells near the central western part of T. 28 S., R. 7 W., and more than 10 feet in 5 wells near sec. 30, T. 27 S., R. 7 W. Most of the wells in the Columbus area declined about 2.5 feet in 1955, about 1 foot more than in 1954.

The change in ground-water level from January 1950 to January 1955 is shown on figure 90. There were declines of more than 15 feet south of Deming in two areas centered in sec. 8, T. 24 S., R. 9 W. and sec. 9, T. 25 S., R. 9 W. A decline of 15 feet or more occurred in the Red Mountain area centered in sec. 11, T. 24 S., R. 11 W. The areas of lesser decline shown on the 5-year map of declines correspond generally to the areas of lesser change on the annual map. The general trend of water-level change in 1955, as in previous years, is downward, reflecting the removal of large quantities of ground water from storage.

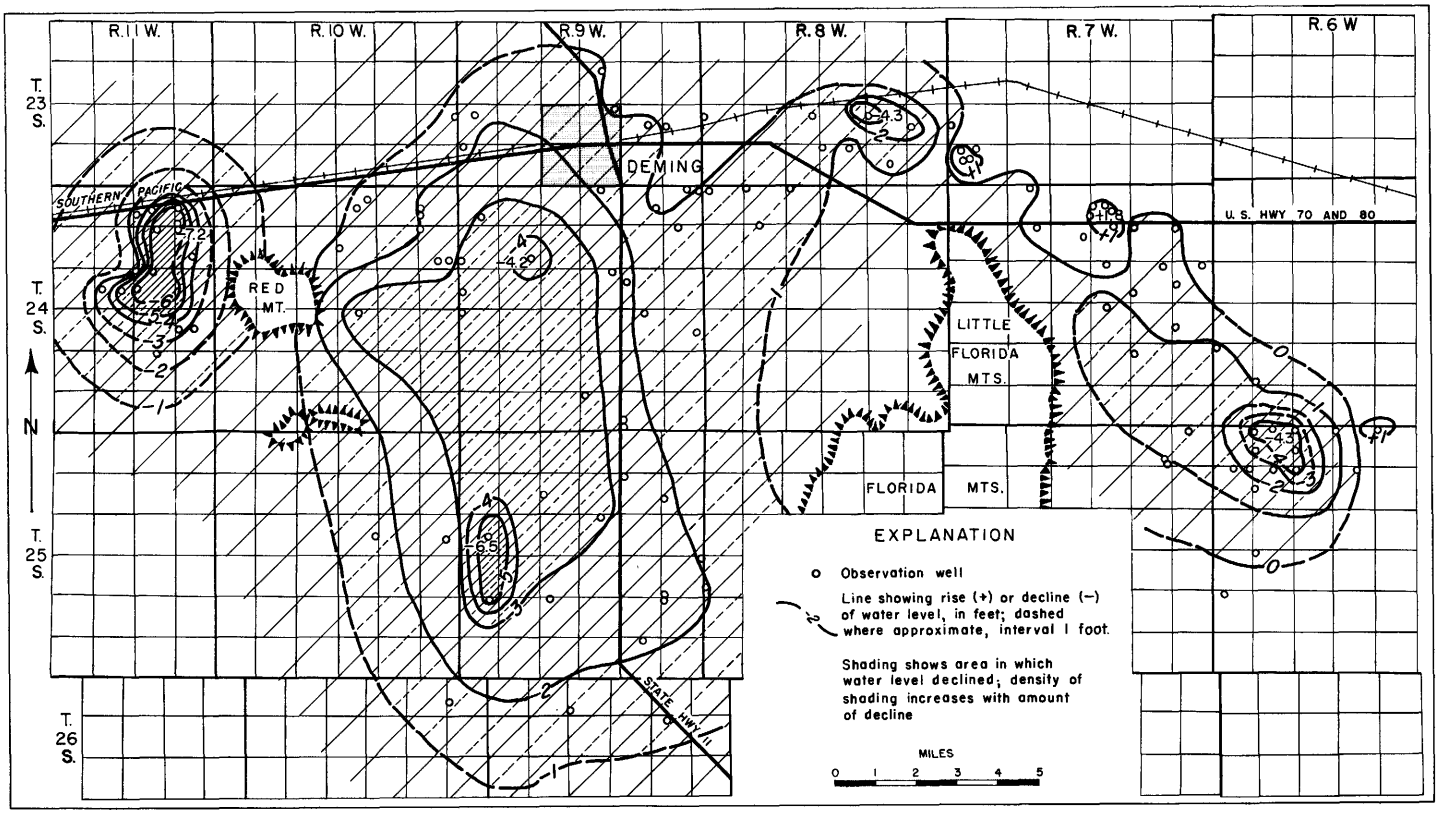

Figure 88.--Change in ground-water level from January 1955 to January 1956 in Deming area of Mimbres Valley, Luna County, N. Mex.

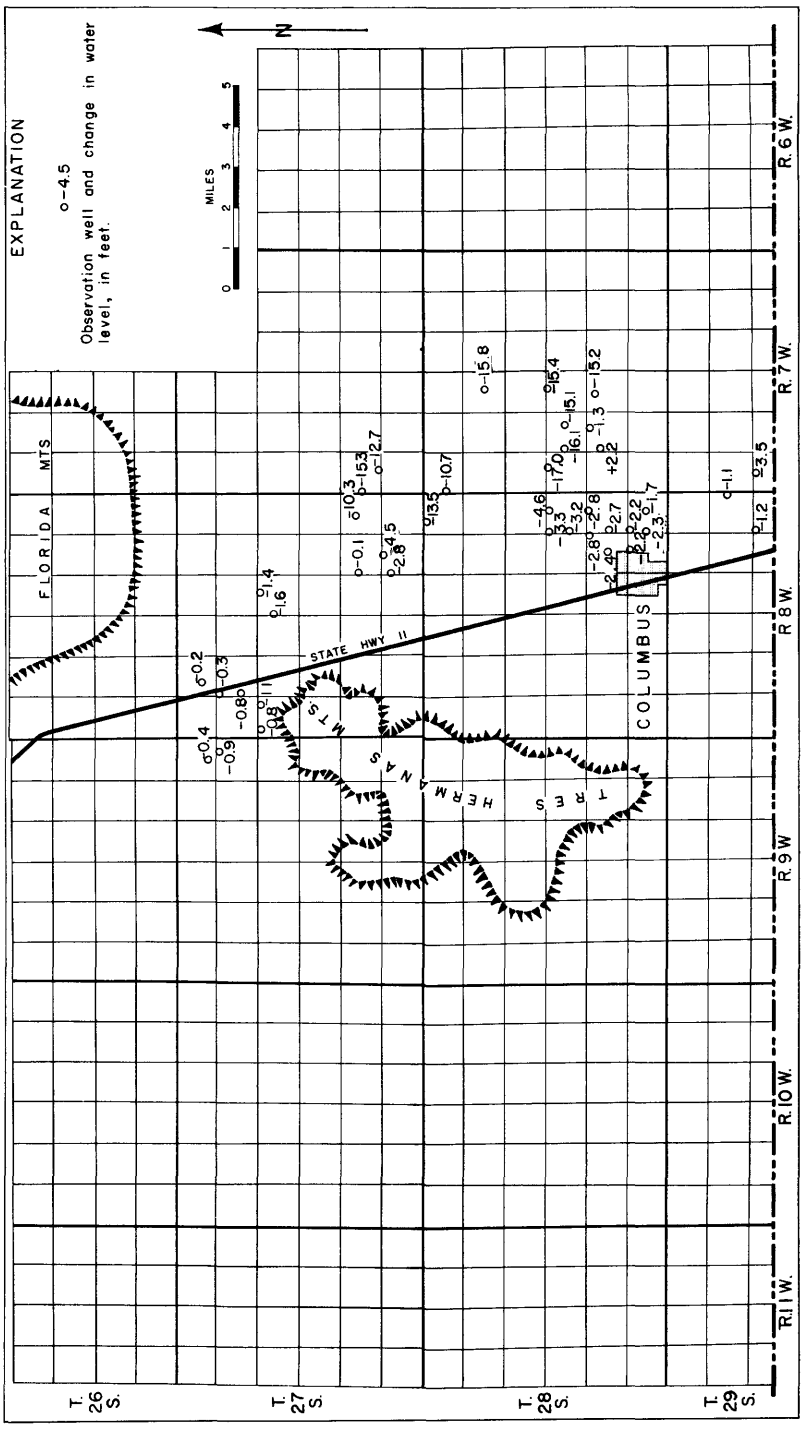

Figure 89.--Change in ground-water level from January 1955 to January 1956 in Columbus area of Mimbres Valley, Luna County, N. Mex.

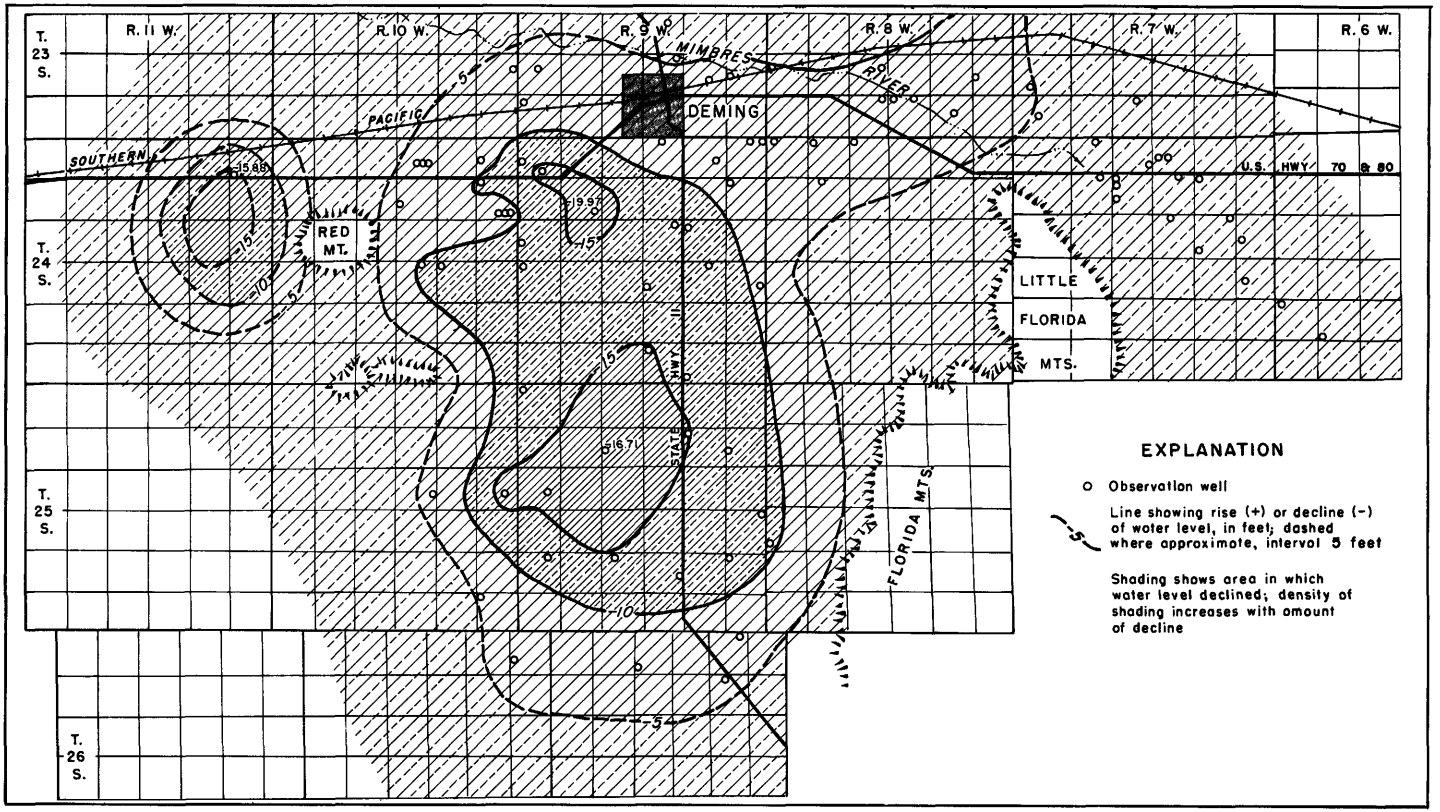

Figure 90. --Change in ground-water level from January 1950 to January 1955 in Mimbres Valley, Luna County, N. Mex.

Mimbres Valley

21.10.6.112. Fletcher Tigner. Dug unused water-table well in alluvium of Quaternary age, diameter 12 feet, depth 23 feet. Highest water level 6.57 below lsd, Feb. 25, 1933; lowest 10.97 below lsd, July 14, 1953. Records available: 1928-55. Jan. 12, 10.24; Mar. 16, 10.07; May 17, 10.05; July 19, 10.73; Sept. 12, 9.60; Nov. 15, 10.31.

21.11.35.310. State of New Mexico. Drilled unused water-table well in valley fill, diameter 28 inches, depth 179 feet. Highest water level 13.50 below lsd, Mar. 15, 1949; lowest 39.24 below lsd, July 19, 1955. Records available: 1929-55. Jan. 12, 38.44; Mar. 16, 38.88; May 17, 39.15; July 19, 39.24; Sept. 12, 31.74; Nov. 15, 35.48.

22.10.18.121. State of New Mexico. Drilled unused water-table well in valley fill, diameter 30 inches, depth 223 feet. Highest water level 68.00 below lsd, Sept. 30, 1929; lowest 80.41 below lsd, July 19, 1955. Records available: 1928-55. Jan. 12, 79.89; Mar. 16, 80.13; May 17, 80.24; July 19, 80.41; Sept. 12, 80.19; Nov. 15, 80.09.

22.11.2.210. State of New Mexico. Drilled unused water-table well in valley fill, diameter 28 inches, depth 200 feet. Highest water level 20.38 below lsd, Nov. 11, 1941; lowest 38.90 below lsd, July 19, 1955. Records available: 1929-55. Jan. 12, 38.24; Mar. 16, 38.52; May 17, 38.73; July 19, 38.90; Sept. 12, 35.32; Nov. 15, 36.72.

22.11.13.122. State of New Mexico. Drilled unused water-table well in valley fill, diameter 28 inches, depth 190 feet. Highest water level 58.00 below lsd, July 31, 1928; lowest 71.87 below lsd, July 19, 1955. Records available: 1928-55. Jan. 12, 71.21; Mar. 16, 71.45; May 17, 71.69; July 19, 71.87; Sept. 12, 71.21; Nov. 15, 71.19.

22.11.13.221. State of New Mexico. Drilled unused water-table well in valley fill, diameter 28 inches, depth 225 feet. Highest water level 65.14 below lsd, July 31, 1928; lowest 78.55 below lsd, July 19, 1955. Records available: 1928-55. Jan. 12, 77.93; Mar. 16, 78.17; May 17, 78.34; July 19, 78.55; Sept. 12, 78.06; Nov. 15, 78.03.

23.7.30. Lot 16. H. T. Foster. Dug and drilled unused water-table well in valley fill, diameter 36 inches, depth 157 feet. Highest water level 22.45 below lsd, May 22, 1933; lowest 36.98 below lsd, July 16, 1954. Records available: 1931-55. Jan. 10, 34.49; Mar. 16, 35.33; May 18, 36.20; Sept. 12, 36.84; Nov. 15, 35.37.

23.7.31.133. William Haas. Drilled unused water-table well in valley fill, diameter 14 inches, reported depth 450 feet. Highest water level 34.09 below lsd, Sept. 12, 1955; lowest 52.75 below lsd, Sept. 20, 1948. Records available: 1947-55. Jan. 11, 43.15; Mar. 16, 44.57; May 18, 45.26; July 29, 40.35; Sept. 12, 34.09; Nov. 15, 35.11.

23.8.34.211. E. B. Law. Drilled irrigation water-table well in valley fill, diameter 16 inches, depth 168 feet. Highest water level 27.22 below lsd, Sept. 2, 1929; lowest 66.67 below lsd, July 16, 1954. Records available: 1928-55. Jan. 10, 50.28; Mar. 16, 50.42; May 18, 60.32.

23.9.22.213. J. F. Hendricks. Dug and drilled unused water-table well in valley fill, diameter 36 inches, depth 150 feet. Highest water level 58.12 below lsd, Sept. 9, 1930; lowest 77.35 below lsd, Sept. 9, 1954. Records available: 1928-55. Jan. 11, 68.94; Mar. 16, 69.14; May 17, 74.10, nearby well being pumped.

23.9.25.311. Albert Ernst. Drilled irrigation water-table well in valley fill, diameter 36 inches, depth 150 feet. Highest water level 50.34 below lsd, June 16, 1928; lowest 78.23 below lsd, July 19, 1955. Records available: 1927-55. Jan. 11, 69.13; Mar. 16, 70.40; May 18, 73.86, pumped recently; July 19, 78.23; Sept. 12, 75.10; Nov. 15, 70.77.

24.7.4.424. G. D. Hatfield. Drilled stock and domestic water-table well in valley fill, diameter 10 inches, depth 107 feet. Highest water level 64.58 below lsd, Apr. 16, 1929; lowest 98.69 below lsd, Sept. 6, 1952. Records available: 1928-55. Jan. 10, 91.11; Mar. 16, 90.03; May 18, 91.69; July 29, 93.13; Sept. 13, 93.77; Nov. 15, 91.56.

24.7.5.211. R. M. Williamson. Dug and drilled stock and domestic water-table well in valley fill, diameter 12 inches, depth 123 feet. Highest water level 64.15 below lsd, Oct. 28, 1928; lowest 98.02 below lsd, Sept. 12, 1955. Records available: 1928-55. Jan. 10, 93.18; Mar. 16, 92.63; May 18, 95.09; Sept. 12, 98.02; Nov. 15, 94.72.

24.7.8.212. J. W. McDougall. Dug and drilled irrigation water-table well in valley fill, diameter 8 feet. Highest water level 78.47 below lsd, Jan. 5, 1940; lowest 90.53 below lsd, Jan. 9, 1951. Records available: 1940-55. Jan. 10, 85.60; Mar. 16, 85.48; May 18, 85.70; July 29, 86.02; Sept. 13, 85.57; Nov. 15, 84.84.

24. 7. 9. 111. Smyer Bros. Drilled irrigation water-table well in valley fill, diameter 14 inches, depth 125 feet. Highest water level 76. 91 below lsd, May 9, 1939; lowest 91. 85 below lsd, May 18, 1955. Records available: 1939-55. Mar. 16, 86. 29; May 18, 91. 85; July 29, 87. 87; Nov. 15, 85. 09.

24. 7. 9. 111a. Smyer Bros. Drilled irrigation water-table well in valley fill, diameter 14 inches, depth 285 feet. Highest water level 36. 41 below lsd, Mar. 27, 1946; lowest 94. 66 below lsd, July 21, 1951. Records available: 1946-55. Mar. 16, 86. 24; May 18, 92. 00; July 29, 88. 01; Nov. 15, 85. 20.

24. 7. 9. 241. G. D. Hatfield. Drilled unused water-table well in valley fill, diameter 40 inches, depth 132 feet. Highest water level 84. 60 below lsd, Jan. 5, 1940; lowest 96. 31 below lsd, Sept. 13, 1955. Records available: 1940-55. Jan. 10, 93. 80; Mar. 17, 93. 13; May 18, 94. 67; July 29, 95. 67; Sept. 13, 96. 31; Nov. 15, 94. 94.

24. 7. 9. 241a. G. D. Hatfield. Drilled irrigation water-table well in valley fill, diameter 16 inches, depth 375 feet. Highest water level 21. 48 below lsd, Mar. 21, 1945; lowest 119. 59 below lsd, Sept. 17, 1953. Records available: 1944-55. Jan. 10. 72. 05; Mar. 17, 73. 06; May 18, 94. 02.

24. 7. 14. 221. J. H. Winslow. Drilled unused water-table well in valley fill, diameter 28 inches, depth 118 feet. Highest water level 71. 15 below lsd, Apr. 19-20, 1939; lowest 90. 21 below lsd, Nov. 11, 1953. Records available: 1939-55. Jan. 10. 88. 81; Mar. 17, 88. 32; May 18, 88. 70; July 29, 89. 61; Sept. 13, 89. 66; Nov. 15, 89. 67.

24. 7. 24. 312. Bill Birchfield. Drilled unused water-table well in valley fill, diameter 30 inches, depth 89 feet. Highest water level 65. 83 below lsd, Mar. 14, 1940; lowest 79. 63 below lsd, Nov. 15, 1955. Records available: 1940-55. Jan. 10, 79. 02; Mar. 17, 79. 15; May 18, 79. 23; Sept. 13, 79. 47; Nov. 15, 79. 63.

24. 8. 4. 111. Foy Riley. Drilled unused water-table well in valley fill, diameter 24 inches, reported depth 100 feet. Highest water level 35. 06 below lsd, May 6, 1941; lowest 55. 80 below lsd, Oct. 2-4, 1955. Records available: 1941-55.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	53. 22	52. 88	52. 63	52. 92	53. 41	53. 91	54. 68	55. 06	55. 49	55. 79	55. 55	55. 23
2	53. 20	52. 86	52. 62	52. 88	53. 41	53. 93	54. 70	55. 07	55. 49	55. 80	55. 55	55. 20
3	53. 19	52. 86	52. 62	52. 90	53. 42	53. 98	54. 73	55. 07	55. 50	55. 80	55. 55	55. 20
4	53. 18	52. 87	52. 59	52. 93	53. 43	54. 03	54. 76	55. 07	55. 50	55. 80	55. 54	55. 19
5	53. 18	52. 85	52. 59	52. 96	53. 43	54. 04	54. 78	55. 08	55. 51	55. 79	55. 52	55. 17
6	53. 16	52. 84	52. 59	53. 01	53. 43	54. 10	54. 80	55. 09	55. 52	55. 78	55. 50	55. 15
7	53. 14	52. 85	52. 58	53. 06	53. 44	54. 14	54. 83	55. 10	55. 53	55. 77	55. 48	55. 13
8	53. 13	52. 83	52. 56	53. 09	53. 44	54. 17	54. 84	55. 11	55. 55	55. 77	55. 48	55. 13
9	53. 13	52. 80	52. 55	53. 13	53. 44	54. 20	54. 86	55. 13	55. 56	55. 76	55. 47	55. 10
10	53. 12	52. 80	52. 54	53. 16	53. 46	54. 24	54. 89	55. 14	55. 57	55. 76	55. 44	55. 09
11	53. 11	52. 81	52. 55	53. 16	53. 50	54. 28	54. 92	55. 15	55. 58	55. 75	55. 43	55. 07
12	53. 10	52. 79	52. 54	53. 17	53. 53	54. 31	54. 93	55. 17	55. 58	55. 74	55. 42	55. 05
13	53. 07	52. 78	52. 54	53. 18	53. 57	54. 34	54. 92	55. 19	55. 59	55. 72	55. 40	55. 03
14	53. 06	52. 76	52. 54	53. 18	53. 59	54. 37	54. 93	55. 21	55. 59	55. 71	55. 40	55. 02
15	53. 06	52. 74	52. 54	53. 18	53. 61	54. 39	54. 94	55. 21	55. 60	55. 69	55. 39	54. 98
16	53. 04	52. 74	52. 55	53. 19	53. 64	54. 39	54. 96	55. 23	55. 60	55. 69	55. 39	54. 94
17	53. 04	52. 72	52. 59	53. 20	53. 66	54. 40	54. 98	55. 25	55. 61	55. 68	55. 38	54. 92
18	53. 05	52. 69	52. 64	53. 20	53. 66	54. 41	54. 99	55. 26	55. 62	55. 67	55. 38	54. 92
19	53. 02	52. 71	52. 71	53. 22	53. 66	54. 42	55. 00	55. 30	55. 63	55. 66	55. 39	54. 89
20	53. 01	52. 70	52. 69	53. 24	53. 67	54. 43	55. 02	55. 32	55. 65	55. 66	55. 39	54. 87
21	53. 00	52. 70	52. 71	53. 27	53. 68	54. 44	55. 03	55. 33	55. 66	55. 65	55. 39	54. 86
22	52. 99	52. 69	52. 77	53. 28	53. 68	54. 46	55. 04	55. 34	55. 67	55. 65	55. 39	54. 84
23	52. 98	52. 68	52. 78	53. 30	53. 70	54. 46	55. 04	55. 36	55. 68	55. 65	55. 39	54. 84
24	52. 98	52. 68	52. 80	53. 32	53. 71	54. 48	55. 04	55. 39	55. 69	55. 64	55. 39	54. 87
25	52. 95	52. 65	52. 83	53. 34	53. 72	54. 49	55. 04	55. 41	55. 70	55. 63	55. 36	54. 88
26	52. 94	52. 65	52. 86	53. 36	53. 76	54. 50	55. 04	55. 44	55. 70	55. 62	55. 34	54. 86
27	52. 93	52. 64	52. 85	53. 37	53. 80	54. 52	55. 04	55. 47	55. 70	55. 61	55. 32	54. 86
28	52. 93	52. 63	52. 83	53. 37	53. 83	54. 54	55. 05	55. 48	55. 72	55. 60	55. 30	54. 88
29	52. 92		52. 85	53. 38	53. 84	54. 60	55. 06	55. 49	55. 73	55. 59	55. 28	54. 90
30	52. 90		52. 90	53. 39	53. 86	54. 64	55. 07	55. 49	55. 76	55. 58	55. 26	54. 89
31	52. 67		52. 93		53. 88		55. 07	55. 49		55. 57		54. 86

24. 9. 2. 421. Roscendo Trujillo. Dug domestic water-table well in valley fill, depth 74 feet. Highest water level 48. 02 below lsd, Dec. 19, 1931; lowest 72. 37 below lsd, Mar. 23, 1954. Records available: 1931-55. Jan. 19, 71. 81.

24. 9. 6. 431. State of New Mexico. Drilled irrigation water-table well in valley fill, diameter 12 to 6 inches, depth 1,000 feet, cased to 650, perforations 300(?)-440. Highest water level 57.28 below lsd, Feb. 15, 1942; lowest 116.29 below lsd, Nov. 16, 1955. Records available: 1941-55. Jan. 13, 94.34; Mar. 16, 115.19, pumped recently; May 19, 130.30, nearby well being pumped; July 19, 158.05, pumping; Sept. 11, 137.32, pumped recently; Nov. 16, 116.29.

24. 10. 10. 311. Jim Hurt. Drilled stock and domestic water-table well in valley fill, diameter 8 inches, depth 131 feet. Highest water level 74.82 below lsd, Oct. 23, 1928; lowest 99.41 below lsd, Nov. 16, 1955. Records available: 1927-55. Jan. 13, 98.03; Mar. 16, 110.98, nearby well being pumped; May 17, 99.94; Sept. 11, 121.22, nearby well being pumped; Nov. 16, 99.41.

24. 10. 12. 431. Steve Hrna. Dug and drilled unused water-table well in valley fill, diameter 36 to 12 inches, reported depth 132 feet. Highest water level 77.61 below lsd, May 6-13, 1940; lowest 107.97 below lsd, Sept. 11, 1955. Records available: 1939-55.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	98.00	97.16	98.18	103.07	101.80	104.66	106.80	105.00	107.66	106.16	102.23	.....
2	97.92	97.15	98.20	103.07	101.46	104.56	106.83	105.01	107.66	106.10	102.17	101.11
3	97.87	97.21	98.40	102.91	101.35	104.48	106.76	105.13	107.73	106.01	102.05	101.15
4	97.82	97.32	.....	102.78	101.35	104.52	106.73	105.27	107.81	105.85	101.95	101.11
5	97.78	97.42	.....	102.79	101.14	104.60	106.81	105.50	107.75	105.58	101.87	101.08
6	97.70	97.42	.....	102.79	101.09	104.73	.....	105.78	107.77	.....	101.86	101.03
7	97.68	97.62	.....	102.70	101.29	104.88	106.66	105.61	107.90	105.15	.....	101.01
8	97.67	97.63	.....	102.58	101.33	105.15	106.68	105.13	107.79	104.91	.....	100.97
9	97.64	98.01	.....	102.44	101.43	105.29	106.76	105.00	107.77	104.67	.....	100.80
10	97.67	.....	.....	102.20	101.52	105.51	106.92	105.15	.....	104.55	101.78	100.74
11	97.73	.....	99.70	101.97	101.59	105.81	107.07	105.25h	107.97	104.51	101.69	100.64
12	97.82	.....	100.80	101.86	101.74	106.11	107.24	105.05	.....	104.42	101.65	100.54
13	97.68	.....	100.28	101.92	101.98	106.21	107.15	105.07h	107.74	104.36	101.61	100.50
14	97.66	.....	100.63	102.02	102.23	106.26	106.89	105.18	.....	104.40	101.54	100.52
15	97.68	.....	100.87	102.05	102.36	106.25	106.67	105.42	.....	104.34	101.57	100.46
16	97.67	.....	101.11	102.10	.....	106.11	106.68	105.78	107.57	104.26	101.68	100.34
17	97.66	97.68	101.35	102.09	.....	105.87	106.78	106.35	107.52	104.06	101.69	100.34
18	97.71	97.48	101.44	101.98	103.26	105.70	106.90	106.69	107.25	103.82	101.77	100.41
19	97.63	97.42	101.80	101.92	103.59	105.63	106.98	106.96	107.04	103.61	101.82	100.42
20	97.55	97.35	102.35	101.84	104.14	105.63	107.18	107.11	106.87	103.47	101.73	100.43
21	97.46	97.31	102.35	101.87	104.46	105.62	107.09	107.24	106.83	103.35	101.58	100.45
22	97.40	97.22	102.35	101.89	104.71	105.65	106.94	107.25	106.86	103.25	101.52	100.57
23	97.39	97.24	102.52	101.67	104.76	105.76	106.64	107.34	106.94	103.15	101.44	100.67
24	97.35	97.49	102.56	101.53	104.81	105.89	106.10	107.48	107.13	103.03	101.37	100.81
25	97.26	97.59	102.62	101.42	104.75	105.91	105.68	107.53	106.85	102.92	101.35	100.64
26	97.23	97.70	102.84	101.39	104.58	105.99	105.65	107.69	106.46	102.95	101.31	100.50
27	97.32	97.90	102.67	101.48	104.58	106.03	105.65	107.80	106.24	102.87	101.32	100.57
28	97.37	97.95	102.40	101.88	104.79	106.18	105.67	107.82	106.18	102.62	101.50	100.59
29	97.49		102.46	102.14	104.73	106.63	105.67	107.80	106.18	102.50	101.31	.....
30	97.32		103.08	102.08	104.56	106.79	105.60	107.70	106.19	102.38	101.27	100.51
31	97.21		103.22		104.68		105.29	107.66		102.31		100.35

h Tape measurement.

24. 10. 22. 211. E. F. Hurt. Dug and drilled irrigation water-table well in valley fill, diameter 36 inches, reported depth 206 feet. Highest water level 69.27 below lsd, May 21, 1942; lowest 92.64 below lsd, Nov. 16, 1955. Records available: 1941-55. Jan. 13, 88.07; Mar. 16, 88.56; May 17, 112.74, pumping; July 19, 116.23, pumping; Sept. 11, 116.60, pumping; Nov. 16, 92.64.

24. 11. 8. 111. S. C. Phillips. Drilled stock water-table well in valley fill, diameter 5 inches, depth 160 feet. Highest water level 146.68 below lsd, Oct. 31, 1939; lowest 151.79 below lsd, May 17, 1955. Records available: 1939-55. Jan. 12, 150.66; Mar. 16, 150.97; May 17, 151.79; July 22, 151.05; Sept. 11, 156.08, pumping; Nov. 16, 151.39.

24. 11. 12. 111. C. L. Taylor. Drilled irrigation water-table well in valley fill, diameter 16 inches, reported depth 200 feet. Land-surface datum is 4,418 feet above msl. Highest water level 101.55 below lsd, Jan. 11, 1951; lowest 127.44 below lsd, Nov. 16, 1955. Records available: 1951-55. Jan. 12, 118.03; Mar. 16, 123.60, pumping; May 17, 128.57, pumping; July 20, 125.98; Nov. 16, 127.44.

24. 11. 12. 324. Lee Palayo. Drilled irrigation water-table well in valley fill, diameter 16 inches, depth 200 feet. Land-surface datum is 4,408 feet above msl. Highest water level 98.53 below lsd, Jan. 11, 1951; lowest 130.53 below lsd, Sept. 11, 1955. Records available: 1951-55. Jan. 12, 117.39; Mar. 16, 115.95; May 17, 145.28, pumping; July 20, 128.93, pumped recently; Sept. 11, 130.53; Nov. 16, 125.38.

24.11.13.311. Phillips. Drilled irrigation water-table well in valley fill, diameter 16 inches, depth 250 feet, cased to 250. Highest water level 95.48 below lsd, Jan. 23, 1952; lowest 119.21 below lsd, Nov. 16, 1955. Records available: 1952-55. Jan. 12, 110.60; Mar. 16, 141.45, pumping; May 17, 153.02, pumping; July 20, 121.88, pumped recently; Sept. 11, 157.46, pumping; Nov. 16, 119.21.

24.11.14.122. Charles Waldrop. Drilled irrigation water-table well in valley fill, diameter 12 inches, reported depth 210 feet. Land-surface datum is 4,405 feet above msl. Highest water level 107.66 below lsd, Jan. 23, 1952; lowest 139.84 below lsd, Nov. 16, 1955. Records available: 1951-55. Jan. 12, 124.98; May 17, 133.87; July 20, 191.90, pumping; Nov. 16, 139.84.

24.11.14.311. Charles Waldrop. Drilled irrigation and domestic water-table well in valley fill, diameter 16 inches, depth 250 feet. Located on north side of earthen tank. Highest water level 111.93 below lsd, Jan. 7, 1954; lowest 139.98 below lsd, July 20, 1955. Records available: 1954-55.. Jan. 12, 118.43; Mar. 16, 118.29; May 17, 200.55, pumping; July 20, 139.98; Sept. 11, 138.58; Nov. 16, 127.33.

24.11.15.312. Oliver Ruebush. Drilled irrigation and domestic water-table well in valley fill, diameter 16 inches, depth 250 feet. Highest water level 110.26 below lsd, Mar. 16, 1954; lowest 122.32 below lsd, July 20, 1955. Records available: 1954-55. Jan. 12, 113.71; Mar. 16, 132.03, pumping; May 17, 135.02, pumping; July 20, 122.32; Sept. 11, 135.38, pumping; Nov. 16, 119.28.

24.11.24.311. Madrid. Drilled irrigation water-table well in valley fill, diameter 16 inches, reported depth 200 feet. Highest water level 87.71 below lsd, Jan. 23, 1952; lowest 103.81 below lsd, Nov. 16, 1955. Records available: 1951-55. Jan. 13, 99.44; Mar. 16, 99.38; May 17, 102.45; July 20, 110.87, pumping; Nov. 16, 103.81.

25.6.2.111. C. W. Johnson, Jr. Drilled irrigation artesian well in valley fill, diameter 16 inches, depth 235 feet, cased to 235, perforations 180-235. Highest water level 0.45 below lsd, Mar. 14, 1953; lowest 36.86 below lsd, Nov. 12, 1953. Records available: 1952-55. Jan. 5, 26.76; Mar. 17, 25.50; May 18, 25.93; Sept. 13, 26.77; Nov. 15, 25.80.

25.6.3.111. E. C. Ross. Drilled irrigation artesian well in valley fill, diameter 16 inches, depth 232 feet. Highest water level 2.95 below lsd, Mar. 14, 1953; lowest 53.24 below lsd, July 18, 1953. Records available: 1952-55. Jan. 5, 15.40; Mar. 17, 14.19; May 18, 16.32; Sept. 13, 19.70; Nov. 15, 17.97.

25.6.4.111. W. O. Douglas. Drilled irrigation water-table well in valley fill, diameter 18 inches, depth 231 feet, cased to 230, perforations 100-225. Highest water level 68.22 below lsd, Mar. 14, 1953; lowest 82.11 below lsd, July 29, 1955. Records available: 1952-55. Jan. 5, 76.13; Mar. 17, 75.62; May 18, 79.74; July 29, 82.11; Sept. 13, 147.50, pumping; Nov. 15, 81.73.

25.6.5.111. Claud McDonald. Drilled irrigation water-table well in valley fill, diameter 18 inches, depth 231 feet, cased to 231, perforations 100-225. Highest water level 66.6 below lsd, Mar. 19, 1952; lowest 99.61 below lsd, Sept. 13, 1955. Records available: 1952-55. Jan. 5, 82.99; Mar. 17, 84.48; May 18, 83.75; July 29, 87.90; Sept. 13, 99.61; Nov. 15, 95.32.

25.6.7.211. H. C. Telles. Drilled irrigation water-table well in valley fill, diameter 16 inches, depth 230 feet. Highest water level 65.34 below lsd, Mar. 14, 1953; lowest 97.85 below lsd, May 20, 1954. Records available: 1953-55. Jan. 5, 72.30; Mar. 17, 72.10; May 18, 167.22, pumping; July 29, 74.93; Sept. 13, 74.82; Nov. 15, 73.54.

25.6.8.111. R. L. Womack. Drilled unused water-table well in valley fill, diameter 16 inches, reported depth 340 feet. Highest water level 64.08 below lsd, May 9, 1951; lowest 79.74 below lsd, July 17, 1953. Records available: 1950-55. Jan. 5, 71.68; Mar. 17, 72.39; May 18, 71.69; July 29, 72.58; Sept. 13, 74.47; Nov. 15, 73.98.

25.6.16.111. L. C. Williams. Drilled irrigation water-table well in valley fill, diameter 16 inches, depth 230 feet, perforations 134-230. Highest water level 62.72 below lsd, Jan. 5, 1954; lowest 73.77 below lsd, May 11, 1953. Records available: 1953-55. Jan. 5, 63.71; Mar. 17, 63.73; May 18, 64.01; July 29, 64.29; Sept. 13, 64.51. Measurement discontinued.

25.6.17.111. Von Glahn Farming Co. Drilled irrigation water-table well in valley fill, diameter 16 inches, depth 230 feet, perforations 134-230. Highest water level 64.67 below lsd, Jan. 13, 1953; lowest 68.81 below lsd, Nov. 12, 1953. Records available: 1953-55. Mar. 17, 67.45.

25. 6. 20. 111. Von Glahn Farming Co. Drilled unused irrigation water-table well in valley fill, diameter 16 inches, depth 234 feet, perforations 114-230. Highest water level 68. 80 below lsd, Mar. 14, 1953; lowest 86. 77 below lsd, July 17, 1953. Records available: 1953-55. Jan. 5, 72. 88; Mar. 17, 72. 26; May 18, 72. 04; July 29, 74. 50; Sept. 13, 75. 14; Nov. 15, 74. 03.

25. 6. 30. 121. Von Glahn Farming Co. Drilled unused irrigation well in valley fill, diameter 16 inches, depth 230 feet. Highest water level 75. 68 below lsd, May 18, 1955; lowest 86. 41 below lsd, Sept. 13, 1955. Records available: 1953-55. Jan. 5, 76. 24; Mar. 17, 75. 85; May 18, 75. 68; Sept. 13, 86. 41; Nov. 15, 76. 60.

25. 7. 1. 122. Claude Mizer. Drilled irrigation water-table well in valley fill, diameter 16 inches, depth 230 feet, perforations 130-230. Highest water level 69. 99 below lsd, Jan. 14, 1953; lowest 82. 70 below lsd, July 29, 1955. Records available: 1953-55. Jan. 5, 77. 31; Mar. 17, 83. 39, pumped recently; May 18, 129. 91, pumping; July 29, 82. 70; Sept. 13, 124. 54, pumping; Nov. 15, 80. 52.

25. 8. 19. 331. Tom Crawford. Drilled stock water-table well in valley fill, diameter 8 inches, depth 88 feet. Highest water level 59. 01 below lsd, Jan. 12, 1942; lowest 82. 11 below lsd, Nov. 16, 1955. Records available: 1942-43, 1945-55. Jan. 17, 78. 27; Mar. 17, 78. 72; May 19, 80. 37; Sept. 13, 81. 50; Nov. 16, 82. 11.

25. 9. 11. 111. R. J. Bishop. Dug and drilled irrigation water-table well in valley fill, diameter 4 feet, depth 220 feet. Highest water level 59. 69 below lsd, Mar. 17, 1939; lowest 98. 97 below lsd, Sept. 13, 1955. Records available: 1939-55. Jan. 18, 92. 50; Mar. 17, 93. 01; May 19, 96. 95; July 21, 100. 21, pumped recently; Sept. 13, 98. 97; Nov. 16, 97. 15.

25. 9. 28. 121. Leonard Zumwalt. Dug and drilled irrigation water-table well in valley fill, diameter 42 to 22 inches, depth 101 feet. Highest water level 65. 82 below lsd, Mar. 13, 1942; lowest 100. 35 below lsd, Nov. 16, 1955. Records available: 1941-55. Jan. 17, 94. 43; Mar. 17, 95. 53; May 19, 118. 4, pumping; Sept. 13, 129±, pumping; Nov. 16, 100. 35.

26. 9. 11. 211. State of New Mexico. Dug and drilled unused water-table well in valley fill, diameter 12 inches, depth 80 feet. Highest water level 36. 92 below lsd, Apr. 15, 1939; lowest 50. 81 below lsd, Nov. 16, 1955. Records available: 1939-55. Jan. 17, 49. 73; Mar. 17, 49. 91; May 19, 50. 10; Sept. 13, 50. 68; Nov. 16, 50. 81.

27. 7. 31. 211. Claude Irwin. Drilled irrigation well in valley fill, diameter 16 inches, depth 595 feet, perforations 305-590. Highest water level 51. 58 below lsd, Jan. 21, 1955; lowest 82. 66 below lsd, Nov. 17, 1955. Records available: 1954-55. Jan. 21, 51. 58; Mar. 17, 171. 81, pumping; May 19, 78. 35; Sept. 14, 190, pumping; Nov. 17, 82. 66.

27. 8. 5. 320. Inman. Dug stock water-table well in valley fill, diameter 40 inches, reported depth 60 feet. Highest water level 25. 61 below lsd, Mar. 13, 1951; lowest 28. 55 below lsd, Mar. 26, 1952. Records available: 1951-55. Jan. 21, 26. 42; May 19, 26. 45, pumping; Sept. 13, 27. 36; Nov. 7, 26. 80.

27. 8. 15. 131. Hilario Lopez. Drilled irrigation water-table well in valley fill, diameter 12 inches, depth 510 feet, cased to 430, perforations 280-430. Highest water level 32. 86 below lsd, Nov. 7, 1952; lowest 40. 68 below lsd, Sept. 18, 1953. Records available: 1952-55. Jan. 21, 36. 79; Mar. 17, 36. 62; May 19, 37. 24; Sept. 13, 114. 39, pumping; Nov. 17, 38. 34.

27. 8. 35. 122. Mrs. M. M. Gibson. Drilled water-table well in valley fill, diameter 12 to 8 inches, depth 550 feet, cased to 550, perforations 155-550. Highest water level 20. 84 below lsd, Mar. 16, 1953; lowest 42. 30 below lsd, Sept. 14, 1955. Records available: 1952-55. Jan. 20, 26. 75; Mar. 17, 29. 10; May 19, 31. 71; Sept. 14, 42. 30; Nov. 17, 32. 44.

27. 9. 1. 431. W. A. Prater. Drilled irrigation well in valley fill, diameter 16 inches, depth 62 feet. Highest water level 30. 61 below lsd, Jan. 19, 1954; lowest 41. 68 below lsd, Sept. 14, 1954. Records available: 1954-55. Jan. 21, 31. 28; Mar. 17, 31. 10; May 19, 31. 92; Sept. 13, 42. 69, pumping; Nov. 17, 31. 89.

28. 7. 9. 411. Paul J. Guame. Drilled irrigation water-table well in valley fill, diameter 14 to 12 inches, depth 720 feet, perforations 385-615. Highest water level 52. 14 below lsd, Mar. 19, 1954; lowest 111. 41 below lsd, Sept. 14, 1955. Records available: 1954-55. Jan. 20, 72. 81; Mar. 17, 70. 02; May 19, 84. 15; Sept. 14, 111. 41; Nov. 17, 98. 50.

28. 7. 20. 311. Joe Bain. Drilled irrigation water-table well in valley fill, diameter 16 to 12 inches, depth 630 feet, perforations 308-608. Highest water level 49. 58 below lsd, Mar. 19, 1954; lowest 94. 94 below lsd, Nov. 17, 1955. Records available: 1954-55. Jan. 20, 69. 21; Mar. 17, 68. 79; May 19, 106. 96, pumping; Sept. 14, 141. 37, pumping; Nov. 17, 94. 94.

28.7.28.124. Leon Telles. Drilled irrigation artesian well in valley fill, diameter 14 to 10 inches, depth 723 feet, cased to 723, perforations 95-100, 420-530, 537-723. Highest water level 10.92 below lsd, July 24, 1952; lowest 114.89 below lsd, Sept. 14, 1955. Records available: 1952-55. Jan. 20, 59.80; Mar. 17, 164.74, pumping; May 19, 83.09; Sept. 14, 114.89; Nov. 17, 84.87.

28.8.26.411. G. Espinoza. Drilled unused irrigation water-table well in valley fill, diameter 12 to 10 inches, depth 300 feet, cased to 300, perforations 70-90, 160-180, 200-300. Highest water level 54.79 below lsd, Mar. 19, 1954; lowest 71.91 below lsd, Sept. 14, 1955. Records available: 1954-55. Jan. 20, 57.88; Mar. 17, 56.69; May 19, 63.09; Sept. 14, 71.91; Nov. 17, 62.33.

28.8.36.111. M. R. Hemley. Drilled irrigation artesian well in valley fill, diameter 16 inches, depth 270 feet, cased to 250, gravel packed and casing perforated. Highest water level 22.61 below lsd, Jan. 26, 1953; lowest 44.52 below lsd, Sept. 14, 1955. Records available: 1952-55. Jan. 20, 30.97; Mar. 17, 30.08; May 19, 36.05; Aug. 1, 36.24; Sept. 14, 44.52; Nov. 17, 34.97.

29.7.4.111. Frances S. Counett. Drilled unused water-table well in valley fill, diameter 8 inches, depth 185 feet. Highest water level 0.59 below lsd, Sept. 13, 1954; lowest 3.82 below lsd, Nov. 17, 1955. Records available: 1940-55. Jan. 20, 1.36; Mar. 17, 1.37; May 19, 2.20; Sept. 14, 2.25; Nov. 17, 3.82.

29.8.12.244. A. G. Anderson. Drilled unused water-table well in valley fill, diameter 12 inches, depth 180 feet. Highest water level 7.07 below lsd, Mar. 17, 1940; lowest 14.90 below lsd, Sept. 14, 1955. Records available: 1940-55. Jan. 20, 10.91; Mar. 17, 10.56; May 19, 12.50; Aug. 1, 13.18; Sept. 14, 14.90; Nov. 17, 12.86.

Otero County

Tularosa-Alamogordo area.--The observation-well program, begun in April 1952, when it became apparent that the use of ground water was increasing and withdrawals were becoming significant, was continued in 1955. Ground water pumped in north-central Otero County is used principally for irrigation. Irrigated farms are scattered throughout the area, extending from T. 14 S., Rs. 9 and 10 E., southward into T. 17 S., R. 10 E. The greatest concentration of irrigation wells is in the vicinity of Tularosa. The principal aquifer in the area is bolson fill in the Tularosa Basin. Wells drilled into the bolson fill penetrate beds of sand and gravel, which contain ground water under water-table conditions, although artesian conditions occur locally. The principal source of recharge to the bolson fill is floodwater which discharges from canyons in the adjacent Sacramento Mountains to the east. Recharge results also from seepage from the Rio Tularosa, a perennial stream sustained by springflow in the mountains.

Although most of the precipitation in the area falls during the growing season, it is insufficient to support crops without irrigation. Precipitation in the mountain area to the east is the source of recharge to the bolson fill. Rain falling directly on the basin surface does not contribute substantially to recharge to the aquifer, but occasional heavy thunderstorms cause temporary cessation of pumping, which results in smaller declines of water level. During the past decade, precipitation has diminished from year to year; however, the prevailing trend was halted in 1953 and in 1955. Precipitation in 1955 was estimated to have been 9.75 inches at Tularosa, 0.18 inch above normal, and 10.46 inches at Alamogordo, 0.30 inch above normal. At nearby stations in the mountains, it amounted to 19.19 inches at Mescalero, 0.19 inch below normal, and 19.05 inches at Mountain Park, 0.77 inch above normal. An acreage inventory of the area, carried out jointly by the Geological Survey and the New Mexico State Engineer, indicates that more than 5,200 acres was being irrigated in the vicinity of Tularosa and Alamogordo in June 1955. About 3,000 acres was irrigated exclusively with ground water; the remaining acreage was irrigated with surface water from the Rio Tularosa, supplemented by ground water. The inventory showed that proposed additional acreage to be irrigated amounted to about 1,300 acres.

The total amount of ground water pumped for all purposes in the area is estimated to be about 12,000 acre-feet in 1955. About 800 acre-feet or more of the ground water was pumped for municipal supplies and the rest for irrigation purposes. About 95 large-capacity wells were available for use on irrigated farms in scattered areas. In addition, 15 or more large-capacity wells were available for pumping municipal and other water supplies. About a third of these wells are measured annually to determine the effect of pumping on water levels. About a tenth of the wells are measured bimonthly. In February 1955, measurements were made in 27 observation wells, 13 of which were also measured bimonthly.

Measurements of water level in observation wells in the Tularosa-Alamogordo area indicate a net decline of about half a foot in 1955. The changes range from a rise of 7.6 feet to a decline of 5.3 feet (fig. 91). Measurements in 11 observation wells indicate a net decline of 1.1 feet in the most heavily pumped area near Tularosa.

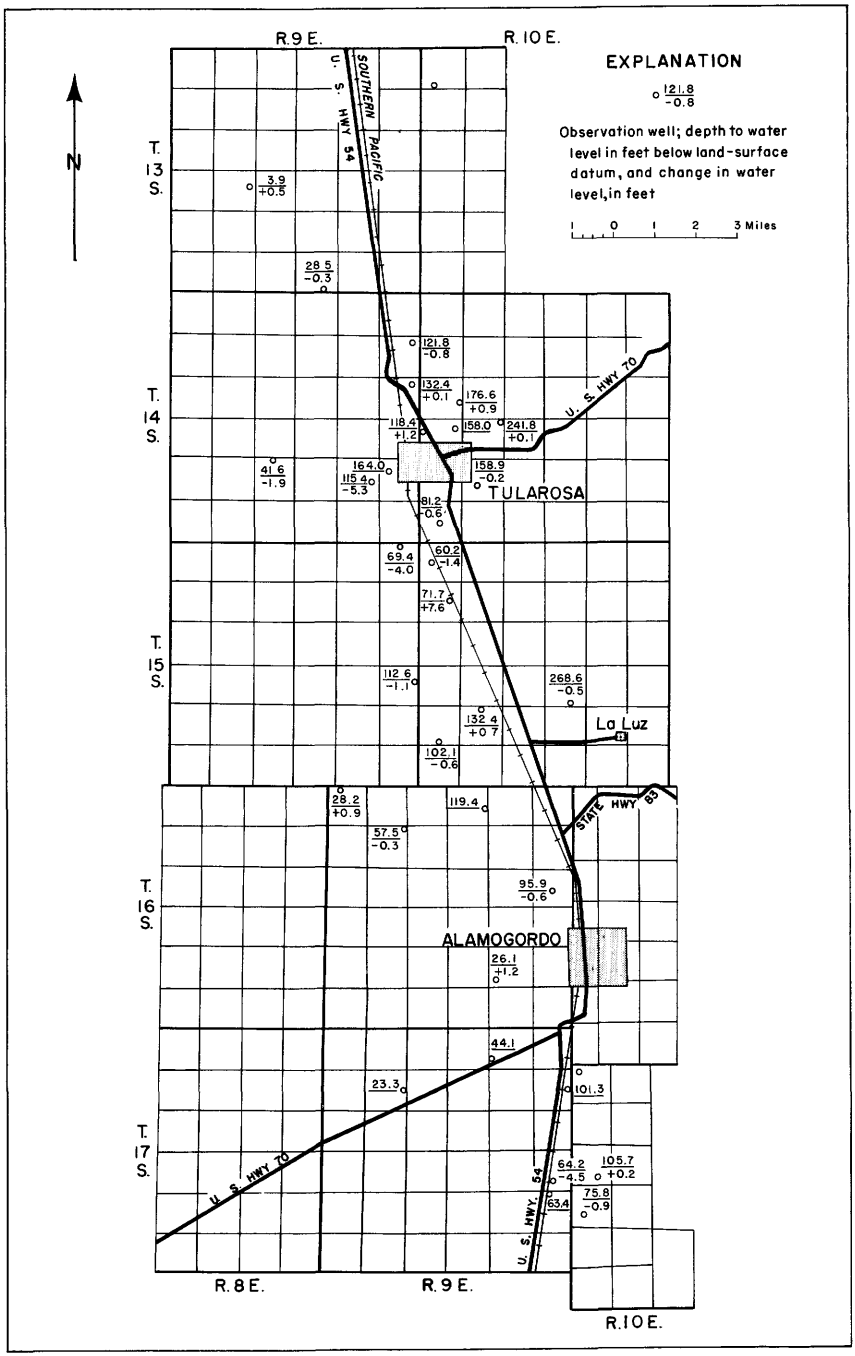

Figure 91. --Depth to ground-water level in February 1956 and change in ground-water level from February 1955 to February 1956 in Tularosa-Alamogordo area, Otero County, N. Mex.

Although changes in water level were small in 1955, significant changes were noted in three parts of the area. Continued declines were observed in most of the U. S. Air Force well field, about 5 miles south of Alamogordo. Southwest of Tularosa, declines continued beneath the lands irrigated only with ground water. In both of these areas, the greatest decline in 1955 was 5 feet or more. In both of the heavily pumped areas, the development of composite cones of depression indicates that the water is being pumped from storage. Before 1955, scattered small rises were noted from year to year. In 1955, however, a consistent pattern of water-level rise was observed in the area approximately coextensive with the surface-water irrigation district of Tularosa. Although the greatest rise in the small area northeast of Tularosa was only about a foot, the rises are significant because the center of the area is only about 3 miles from the center of the area of consistent declines southwest of Tularosa. The cause of the rise in water level probably is the combined effects of slightly increased surface-water supplies in August, above-normal precipitation in July and August 1955, and a decrease in pumping of ground water for supplemental use.

The trend of water levels in the Tularosa-Alamogordo area since the beginning of record in 1952 has been a decline because most of the ground water pumped has come from storage. The yearly increases in acreage irrigated with ground water have been accompanied by yearly increases in pumpage; consequently, there has been a decrease in stored ground water. In the heavily pumped areas, the declines have been more pronounced than in the less developed areas. The development of additional irrigated lands will be accompanied by continued declines. Water levels beneath the surface-water district also will continue to decline, except when significant amounts of surface water become available.

Tularosa-Alamogordo Area

14. 9. 12. 220. E. M. Silver. Drilled irrigation water-table well in bolson deposits. Highest water level 117. 81 below lsd, Mar. 27, 1953; lowest 133. 90 below lsd, Apr. 10, 1952. Records available: 1952-55. Feb. 21, 120. 99; Apr. 30, 121. 99; June 14, 122. 34; Aug. 24, 122. 69; Oct. 14, 122. 53; Dec. 13, 121. 84.

14. 9. 28. 121. Montie Gardenhire. Drilled irrigation and stock water-table well in bolson deposits, diameter 10 inches, depth 50 feet. Highest water level 33. 32 below lsd, Apr. 8, 1952; lowest 41. 26 below lsd, Dec. 13, 1955. Records available: 1952-55. Feb. 23, 39. 69; Apr. 30, 39. 64; June 14, 40. 08; Aug. 25, 39. 88; Dec. 13, 41. 26.

14. 10. 18. 424. R. D. Champion. Drilled irrigation water-table well in bolson deposits, diameter 16 inches, depth 336 feet. Highest water level 172. 38 below lsd, Mar. 27, 1953; lowest 184. 59 below lsd, Apr. 8, 1952. Records available: 1952-55. Feb. 21, 177. 49, nearby well being pumped; Apr. 30, 180. 21, nearby well.being pumped; June 14, 182. 25; Aug. 25, 182. 78, pumped recently, nearby well being pumped; Oct. 14, 179. 80, nearby well being pumped.

14. 10. 19. 130. J. C. Johnson. Drilled irrigation water-table well in bolson deposits, diameter 16 inches, depth 300 feet. Highest water level 113. 44 below lsd, Apr. 8, 1952; lowest 124. 42 below lsd, Aug. 25, 1955. Records available: 1952-55. Feb. 21, 119. 60; June 14, 124. 06; Aug. 25, 124. 42; Oct. 14, 121. 07; Dec. 13, 117. 82.

14. 10. 31. 144. Luther Watson. Drilled irrigation water-table well in bolson deposits, diameter 17 inches, depth 230 feet. Highest water level 73. 75 below lsd, Apr. 8, 1952; lowest 108. 26 below lsd, Apr. 16, 1954. Records available: 1952-55. Feb. 21, 80. 56; Aug. 25, 83. 37; Oct. 14, 83. 54; Dec. 13, 82. 33.

15. 9. 24. 242a. Fred Dale. Drilled unused water-table well in bolson deposits, diameter 12 inches, depth 214 feet. Highest water level 107. 89 below lsd, Apr. 9, 1952; lowest 117. 28 below lsd, June 15, 1955. Records available: 1952-55. Feb. 23, 111. 50; Apr. 30, 113. 17, nearby well pumped recently; June 15, 117. 28; Aug. 25, 126. 05, nearby well being pumped; Oct. 14, 113. 94; Dec. 13, 113. 14.

16. 9. 3. 422. Wade Maupin. Drilled irrigation water-table well in bolson deposits. Highest water level 118. 43 below lsd, Dec. 27, 1954; lowest 134. 75 below lsd, Apr. 17, 1954. Records available: 1952-55. Apr. 30, 122. 30; Dec. 12, 124. 23.

16. 9. 26. 341. R. J. Turner. Drilled irrigation and stock water-table well in bolson deposits, diameter 8 inches, depth 84 feet. Highest water level 24. 45 below lsd, Dec. 12, 1955; lowest 30. 09 below lsd, June 25, 1954. Records available: 1952-55. Feb. 21, 27. 20, pumped recently; Apr. 30, 27. 94; June 15, 28. 23; Oct. 14, 28. 96; Dec. 12, 24. 45.

17. 9. 24. 342. W. L. McCommon. Drilled unused water-table well in bolson deposits. Highest water level 56. 18 below lsd, Apr. 14, 1952; lowest 60. 81 below lsd, Oct. 26, 1954. Records available: 1952-55. Feb. 15, 59. 74. Bimonthly measurements will not be made in the future. An annual measurement will be made but will not be published in the water-level report.

17.10.18.432. Harold Striker. Near Holloman Air Force Base pumping station. Drilled unused well, diameter 10 inches, depth 260 feet. Land-surface datum is 4,187.26 feet above msl. Highest water level 104.55 below lsd, Apr. 6, 1954; lowest 108.91 below lsd, Oct. 2, 1954. Records available: 1954-55.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	106.66	Mar. 30	105.07	June 15	105.59	Oct. 14	107.81
Feb. 8	105.91	Apr. 28	104.82	Aug. 24	107.39	Dec. 12	106.32
Mar. 7	105.31						

Quay County

House area.--The House area is on the High Plains in the southwestern part of Quay County, about 40 miles south of Tucumcari. Irrigation in the area is done with water pumped from wells finished in the Ogallala formation. The observation-well program, begun in 1941, was continued in 1955. Water levels were measured in 63 wells in January and bimonthly in about 22 wells. A recording gage was maintained on well 5.29.17.133, about half a mile north of House. Only bimonthly measurements are given in this report, but annual measurements made in January 1955 and January 1956 were used in preparation of the map showing the net annual changes in ground-water storage.

The recharge to the ground-water reservoir is by direct precipitation and drainage into the Alamosa Creek valley. Precipitation in the House area was about 60 to 80 percent of normal in 1955. It amounted to 9.29 inches at House, 5.28 inches below normal; 12.08 inches at Ragland, 7.26 inches below normal; and 11.59 inches at Hassell, 3.15 inches below normal. About 90 to 95 percent of the total precipitation at the 3 stations occurred during the growing season, April through September.

About 3,575 acres of land was irrigated in 1955, 275 acres more than in 1954. About 380 acres of alfalfa was irrigated in 1955, as compared with about 500 acres in 1954. The remainder of the acreage was mostly in row crops. It is estimated that about 5,400 acre-feet of water was pumped for irrigation in 1955, as compared to 5,000 acre-feet in 1954.

Year-to-year net declines have resulted from below-normal precipitation and continued pumping of ground water from storage. However, the net declines in 1955 were less than in 1954. Figure 92 shows the areal changes in water levels from January 1955 to January 1956. In 1955, levels declined under most of the area where ground water is used for irrigation. Declines of more than 1 foot occurred under an area of about 3 square miles.

During the 5-year period from January 1950 to January 1955 (fig. 93), water levels declined more than 2 feet under an area of about 31 square miles and as much as 18 feet under 2 heavily pumped areas (totaling 0.2 square mile), 2.5 and 4 miles north of House.

House Area

5.28.1.221. D. C. Wyatt. Drilled irrigation water-table well in Ogallala formation, diameter 16 inches, depth 133 feet, cased to 133. Highest water level 46.63 below lsd, Mar. 29, 1946; lowest 56.42 below lsd, Sept. 15, 1955. Records available: 1946-55. Jan. 13, 53.21; Mar. 29, 53.12; May 19, 56.12; Sept. 15, 56.42; Nov. 15, 54.19.

5.29.5.342. William Martin. Drilled water-table well in Ogallala formation, depth 80 feet. Land-surface datum is 4,656 feet above msl. Highest water level 30.15 below lsd, Feb. 2, 1943; lowest 58.45 below lsd, Sept. 14, 1955. Records available: 1941-55. Jan. 14, 52.84; Mar. 29, 52.20; May 19, 51.61; July 26, 69.77, pumping; Sept. 14, 58.45; Nov. 15, 54.25.

5.29.6.222. L. L. Poe. Drilled irrigation water-table well in Ogallala formation, diameter 16 inches, depth 125 feet. Highest water level 51.51 below lsd, Mar. 28, 1946; lowest 79.06 below lsd, Sept. 15, 1955. Records available: 1945-55. Jan. 13, 72.92; Mar. 29, 71.83; July 26, 75.73; Sept. 15, 79.06; Nov. 15, 75.26.

5.29.8.232. G. W. Turner. Drilled irrigation water-table well in Ogallala formation, diameter 16 inches, depth 139 feet, cased to 98. Highest water level 34.19 below lsd, Feb. 2, Mar. 25, 1943; lowest 56.10 below lsd, Sept. 24, 1954. Records available: 1941-55. Jan. 14, 51.63; Mar. 29, 51.04; May 19, 54.43; July 26, 53.34; Sept. 14, 73.96, pumping; Nov. 15, 53.50.

5.29.9.400. J. M. Gollehon. Drilled stock water-table well in Ogallala formation, diameter 6 inches. Highest water level 21.33 below lsd, Jan. 21, 1942; lowest 33.71 below lsd, May 25, 1954. Records available: 1941-55. Jan. 14, 34.81, pumping; Mar. 29, 33.16, pumping; July 26, 53.70, pumping; Sept. 14, 54.20, pumping.

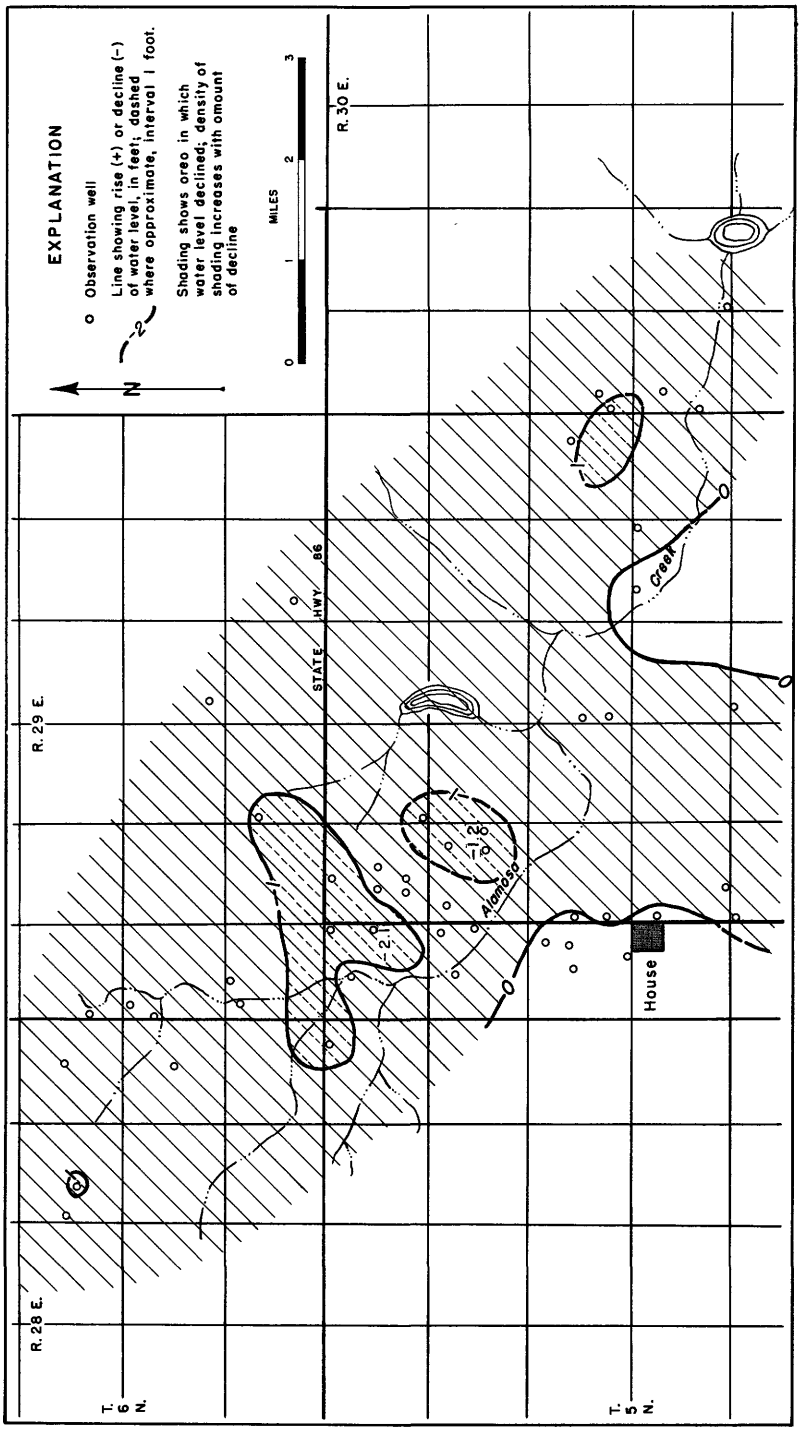

Figure 92. --Change in ground-water level from January 1955 to January 1956 in House area, Quay County, N. Mex.

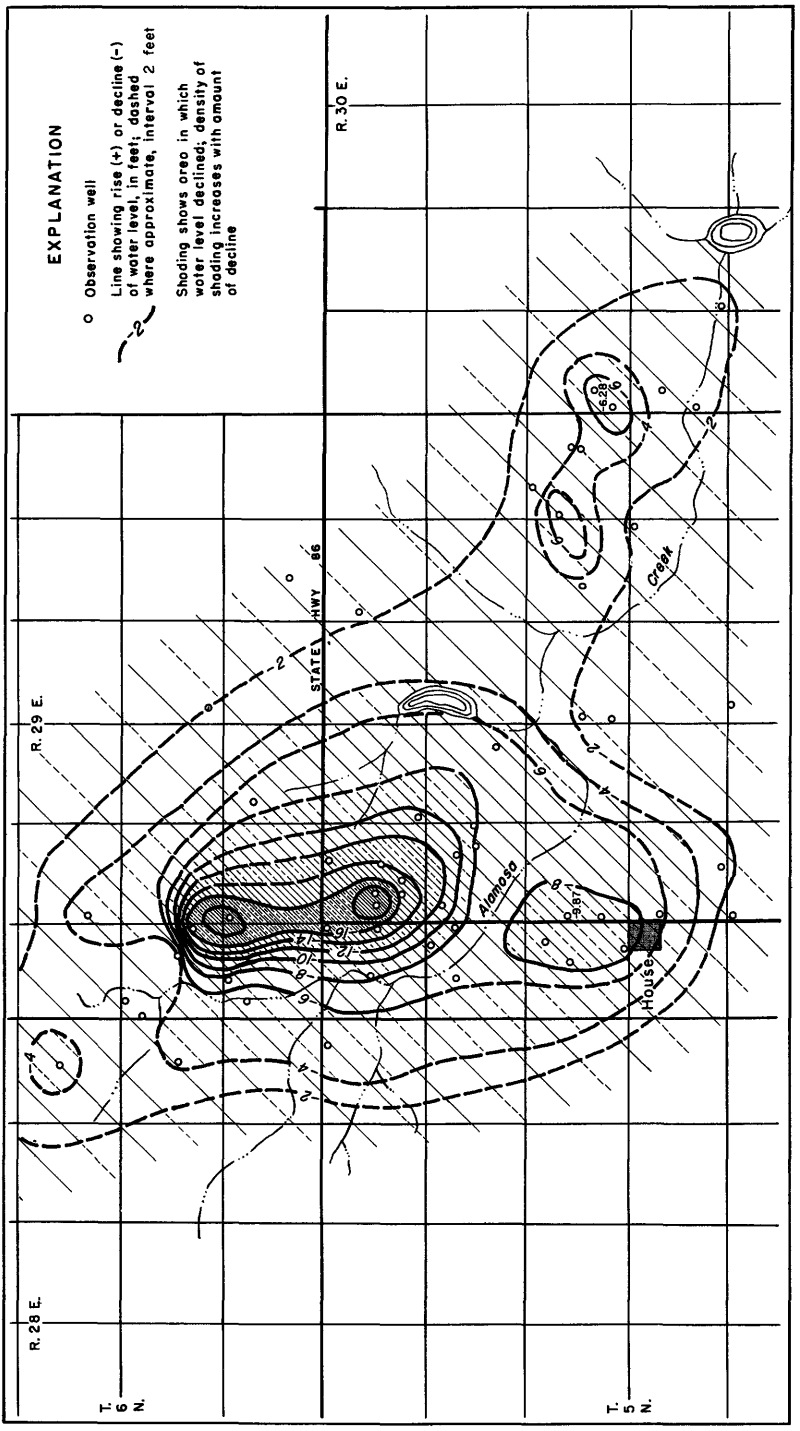

Figure 93. --Change in ground-water level from January 1950 to January 1955 in House area, Quay County, N. Mex.

5.29.13.131. J. C. Barron. Drilled irrigation water-table well in Ogallala formation. Highest water level 56.74 below lsd, Mar. 28, 1946; lowest 75.85 below lsd, Sept. 24, 1954. Records available: 1946-55. Jan. 12, 68.28, pumped recently; Mar. 29, 71.82, pumping; May 19, 73.09, pumping; July 26, 68.47; Sept. 14, 64.70; Nov. 16, 67.70.

5.29.15.311b. R. A. Tullis. Drilled unused water-table well in Ogallala formation, diameter 20 inches, reported depth 90 feet. Highest water level 17.52 below lsd, Sept. 23, 1942; lowest 23.15 below lsd, Nov. 16, 1955. Records available: 1942-55. Jan. 12, 22.83; Mar. 29, 22.98; May 19, 22.98; July 29, 23.08; Sept. 14, 23.13; Nov. 16, 23.15.

5.29.17.133. W. W. Kuykendall. Drilled unused water-table well in Ogallala formation, diameter 12 inches, depth 57 feet. Land-surface datum is 4,748 feet above msl. Highest water level 29.82 below lsd, Jan. 21, 1942; lowest 48.24 below lsd, Oct. 30-31, 1954. Records available: 1941-55.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	47.80	47.56	e47.30	47.04	46.89	47.05	47.31	47.70	47.84	48.14	48.16	47.97
2	47.78	47.55	e47.28	47.03	46.89	47.05	47.33	47.71	47.85	48.15	48.16	47.97
3	47.77	47.55	e47.27	47.03	46.89	47.06	47.34	47.72	47.86	48.16	48.15	47.96
4	47.76	47.54	e47.25	47.03	46.89	47.06	47.36	47.72	47.87	48.17	48.14	47.95
5	47.75	47.52	e47.23	47.03	46.89	47.07	47.37	47.72	47.87	48.18	48.14	47.94
6	47.75	47.52	e47.21	47.03	46.89	47.07	47.39	47.73	47.88	48.18	48.13	47.93
7	47.74	47.51	47.20	47.03	46.89	.....	47.40	47.73	47.89	48.19	48.13	47.93
8	47.73	47.50	47.19	47.00	46.89	47.07	47.41	47.73	47.90	48.19	48.13	47.92
9	47.73	47.49	47.18	47.00	46.89	47.08	47.42	47.74	47.90	48.20	48.12	47.92
10	47.72	47.49	47.17	46.98	46.89	47.09	47.43	47.75	47.92	48.20	48.12	47.91
11	47.72	47.48	47.17	46.95	46.90	47.09	47.44	47.75	47.93	48.21	48.11	47.90
12	47.71	47.47	47.16	46.95	46.90	47.09	47.46	47.75	47.93	48.21	48.10	47.90
13	47.70	47.47	47.16	46.95	46.91	47.10	47.46	47.76	47.94	48.21	48.09	47.88
14	47.70	47.44	47.16	46.94	46.91	47.11	47.48	47.76	47.97	48.22	48.09	47.88
15	47.70	47.44	47.15	46.93	46.91	47.12	47.50	47.77	47.99	48.22	48.08	47.87
16	47.69	47.44	47.14	46.92	46.92	47.13	47.51	47.77	48.00	48.22	48.07	47.86
17	47.68	47.42	47.13	46.91	46.92	47.14	47.51	47.78	48.01	48.22	48.06	47.85
18	47.68	47.41	47.12	46.91	46.92	47.15	47.53	47.78	48.02	48.20	48.06	47.84
19	47.68	47.40	47.11	46.91	46.93	47.16	47.54	47.78	48.03	48.20	48.05	47.84
20	47.66	47.39	47.11	46.91	46.95	47.17	47.55	47.78	48.04	48.20	48.04	47.83
21	47.65	47.39	47.11	46.91	46.97	47.19	47.56	47.79	48.05	48.20	48.04	47.84
22	47.64	47.38	47.10	46.89	46.97	47.20	47.58	47.79	48.06	48.20	48.03	47.83
23	47.63	47.37	47.10	46.89	46.98	47.20	47.59	47.80	48.07	48.20	48.03	47.82
24	47.62	47.36	47.09	46.90	46.99	47.21	47.60	47.80	48.08	48.18	48.03	47.81
25	47.61	47.35	47.09	46.89	46.99	47.22	47.62	47.81	48.09	48.18	48.02	47.81
26	47.61	47.34	47.08	46.89	47.00	47.24	47.63	47.81	48.10	48.18	48.01	47.80
27	47.60	47.33	47.07	46.89	47.04	47.26	47.66	47.82	48.10	48.18	48.01	47.79
28	47.59	47.32	47.06	46.89	47.04	47.27	47.67	47.82	48.11	48.18	48.00	47.79
29	47.59		47.06	46.89	47.04	47.29	47.68	47.83	48.12	48.17	47.99	47.78
30	47.58		47.06	46.89	47.04	47.30	47.69	47.84	48.13	48.17	47.98	47.77
31	47.57		47.05		47.04		47.70	47.84		48.17		47.76

e Estimated.

5.29.18.434. A. O. Norris. Drilled irrigation water-table well in Ogallala formation, diameter 16 inches, depth 87 feet, cased to 87. Highest water level 49.82 below lsd, Mar. 28, 1946; lowest 66.16 below lsd, Sept. 25, 1952. Records available: 1946-55. Jan. 13, 62.79; Mar. 29, 62.86; May 19, 63.34; July 26, 64.64; Sept. 14, 73.11, pumping; Nov. 15, 64.01.

5.29.23.222a. E. C. Harris. Drilled irrigation water-table well in Ogallala formation, diameter 16 inches. Highest water level 30.00 below lsd, Mar. 30, 1950; lowest 32.10 below lsd, Nov. 16, 1955. Records available: 1949-55. Jan. 12, 31.64; Mar. 29, 31.70; May 19, 31.80; Sept. 14, 32.02; Nov. 16, 32.10.

5.29.27.112. E. D. Gallehon. Drilled unused water-table well in Ogallala formation, diameter 16 inches, depth 152 feet, cased to 152. Highest water level 70.50 below lsd, May 28, 1951; lowest 72.14 below lsd, May 30, 1948. Records available: 1947-55. Jan. 13, 70.88; Mar. 29, 70.81; May 19, 70.86; July 26, 70.96; Sept. 14, 70.97; Nov. 15, 70.92.

5.29.29.111. C. A. Morrow. Drilled irrigation water-table well in Ogallala formation, diameter 16 inches, reported depth 91 feet. Highest water level 65.91 below lsd, Feb. 2, 1943; lowest 72.72 below lsd, Sept. 18, 1947. Records available: 1941-55. Jan. 13, 69.94; Mar. 29, 70.05; May 19, 70.15; July 26, 70.30; Sept. 14, 70.30; Nov. 15, 70.34.

5.30.18.331. W. M. Lee. Drilled irrigation water-table well in Ogallala formation, diameter 16 inches, depth 75 feet, cased to 60. Highest water level 34.76 below lsd, Mar. 28, 1946; lowest 50.03 below lsd, July 27, 1954. Records available: 1944-55. Jan. 12, 42.06; Mar. 29, 43.36; May 19, 44.03; July 26, 47.46; Sept. 14, 47.56; Nov. 16, 45.53.

5.30.20.333a. J. C. Barron. Drilled stock water-table well in Ogallala formation, diameter 6 inches. Highest water level 26.11 below lsd, Sept. 25, 1953; lowest 27.09 below lsd, Sept. 24, 1954. Records available: 1953-55. Jan. 12, 26.78; Mar. 29, 26.87; May 19, 27.46, pumping; July 26, 27.85, pumping; Sept. 14, 28.00, pumping; Nov. 16, 26.52.

5.30.31.442. T. W. Coleman. Drilled irrigation water-table well in Ogallala formation, diameter 16 inches, depth 129 feet, cased to 129. Highest water level 98.77 below lsd, May 25, 1954; lowest 100.12 below lsd, Oct. 1, 1948, Mar. 30, 1950. Records available: 1943-55. Jan. 12, 98.98; Mar. 29, 98.88; May 19, 99.58; July 26, 99.92; Sept. 14, 99.84; Nov. 16, 99.27.

6.28.1.232. H. A. Fitzgerald. Drilled stock and domestic water-table well in Ogallala formation, reported depth 98 feet. Highest water level 65.77 below lsd, Nov. 15, 1955; lowest 72.93 below lsd, Apr. 1, 1948. Records available: 1947-55. Jan. 15, 66.70, nearby well being pumped; Mar. 29, 66.50, nearby well being pumped; May 19, 66.30; July 26, 66.88; Sept. 15, 66.33; Nov. 15, 65.77.

6.28.24.233. Byers Irwin. Drilled irrigation water-table well in Ogallala formation, diameter 16 inches, reported depth 131 feet, cased 79-131. Highest water level 77.97 below lsd, Mar. 27, 1944; lowest 95.49 below lsd, Sept. 15, 1955. Records available: 1944-55. Jan. 15, 86.77, nearby well being pumped; Mar. 19, 88.24; May 19, 88.56; July 26, 95.33; Sept. 15, 95.49; Nov. 15, 90.12.

6.28.25.411. R. A. Davenport. Drilled irrigation water-table well in Ogallala formation, diameter 16 inches, depth 116 feet, cased to 116, perforations 76-116. Highest water level 51.87 below lsd, Mar. 27, 1944; lowest 63.56 below lsd, July 26, 1955. Records available: 1943-55. Jan. 15, 58.12; Mar. 29, 57.70; July 26, 63.56; Nov. 15, 60.00.

6.29.27.332. W. K. Kemp. Drilled unused water-table well in Ogallala formation, diameter 16 inches, depth 181 feet, cased to 100. Highest water level 43.43 below lsd, Nov. 30, 1950, Mar. 28, 1952; lowest 44.33 below lsd, Mar. 29, 1944. Records available: 1944-55. Jan. 14, 43.88, measurement uncertain; Mar. 29, 43.90; May 19, 43.93; Sept. 13, 43.99; Nov. 15, 43.93.

6.29.30.112. M. L. Griggs. Drilled unused water-table well in Ogallala formation. Highest water level 47.98 below lsd, Nov. 20, 1942; lowest 56.57 below lsd, Sept. 15, 1955. Records available: 1941-55. Jan. 15, 55.06; Mar. 29, 54.93; May 19, 55.38; July 26, 56.20; Sept. 15, 56.57; Nov. 15, 55.88.

6.29.30.412. R. W. Dean. Drilled irrigation water-table well in Ogallala formation, diameter 18 inches, depth 122 feet, cased to 122. Highest water level 73.63 below lsd, Apr. 1, 1947; lowest 83.05 below lsd, Sept. 15, 1955. Records available: 1946-55. Jan. 15, 80.16; Mar. 29, 80.23; May 19, 80.29; July 26, 81.17; Sept. 15, 83.05; Nov. 15, 81.27.

6.29.33.131. Frank Morrow. Drilled irrigation water-table well in Ogallala formation, diameter 20 inches, depth 139 feet, cased to 139. Highest water level 54.18 below lsd, Apr. 8, 1945; lowest 73.20 below lsd, May 19, 1955. Records available: 1942-55. Jan. 14, 62.83; Mar. 29, 62.48; May 19, 73.20; July 26, 65.47; Sept. 13, 69.51, pumped recently; Nov. 15, 64.86.

6.29.35.314. T. W. Coleman. Drilled irrigation water-table well in Ogallala formation, diameter 14 inches, depth 76 feet, cased from 28 to 76. Highest water level 38.24 below lsd, Apr. 1, 1947; lowest 47.20 below lsd, July 30, 1948. Records available: 1945-55. Jan. 14, 39.61; Mar. 29, 39.38; May 19, 39.31; July 26, 39.24; Sept. 13, 39.16; Nov. 15, 40.11.

Roosevelt County

Portales Valley.--Portales Valley, in northern Roosevelt County, is a broad depression in the High Plains, extending east-southeast from the western edge of the High Plains through Portales to the Texas State line. The Portales ground-water basin was declared by the State Engineer on May 1, 1950, extended on July 18, 1955, and the boundary revised November 3, 1955. The declared basin, as extended and revised, covers an area of about 618 square miles. Measurements of water levels have been made since 1931 to determine the effects of pumping and precipitation upon the ground-water storage. Records of these measurements have been published annually in water-level reports since 1938. In 1955 measurements were made in 185 wells in January and bimonthly in about 40. Recording gages were maintained on 4 wells: 1 about 7 miles northwest of Portales, 1 about a mile northeast of Portales, 1 about a mile south of Portales, and 1 about 11 miles southeast of Portales. The January measurements, not all of which are listed in this report, were used in preparing the map showing the change of water levels in 1955. (See fig. 94.)

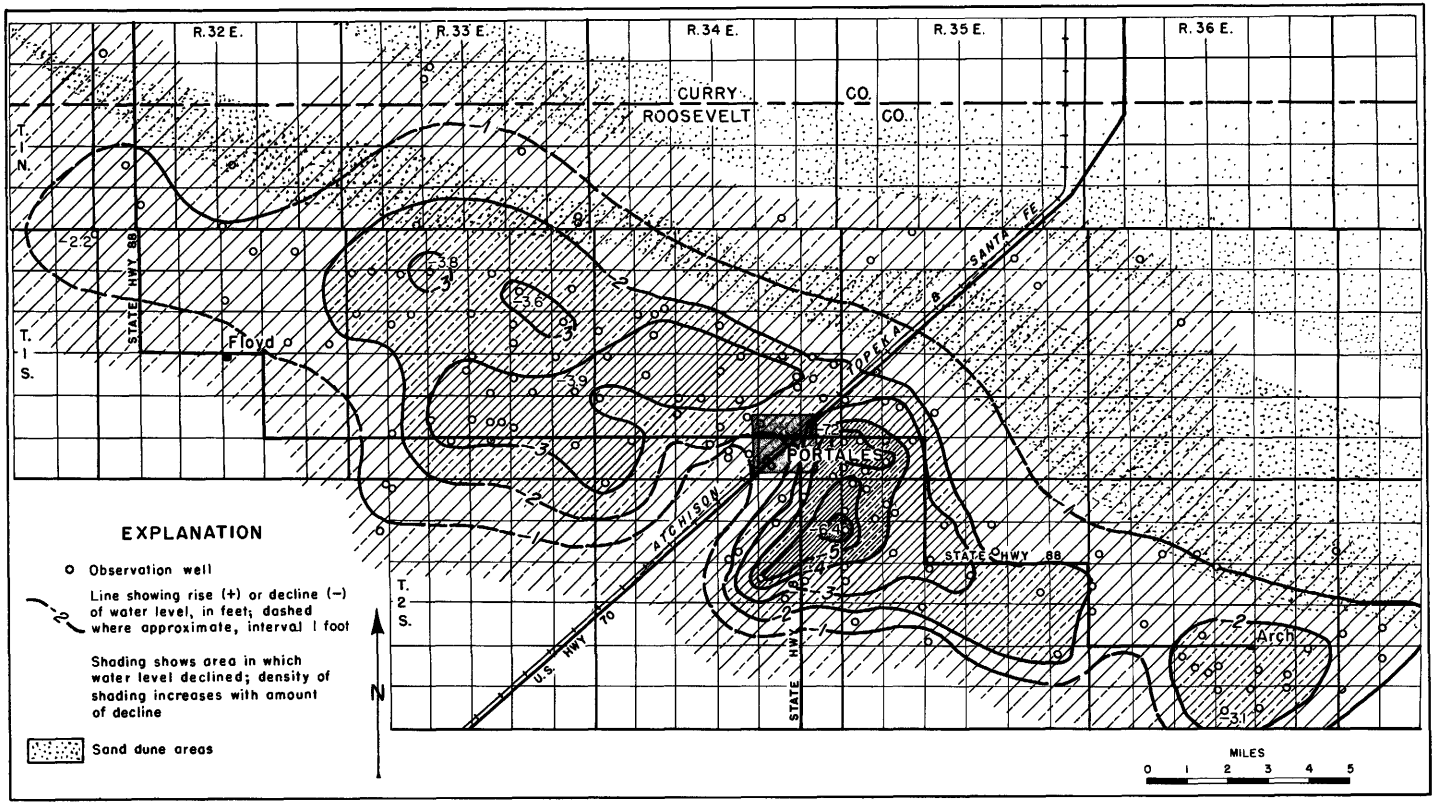

Figure 94. --Change in ground-water level from January 1955 to January 1956 in Portales Valley, Roosevelt County, N. Mex.

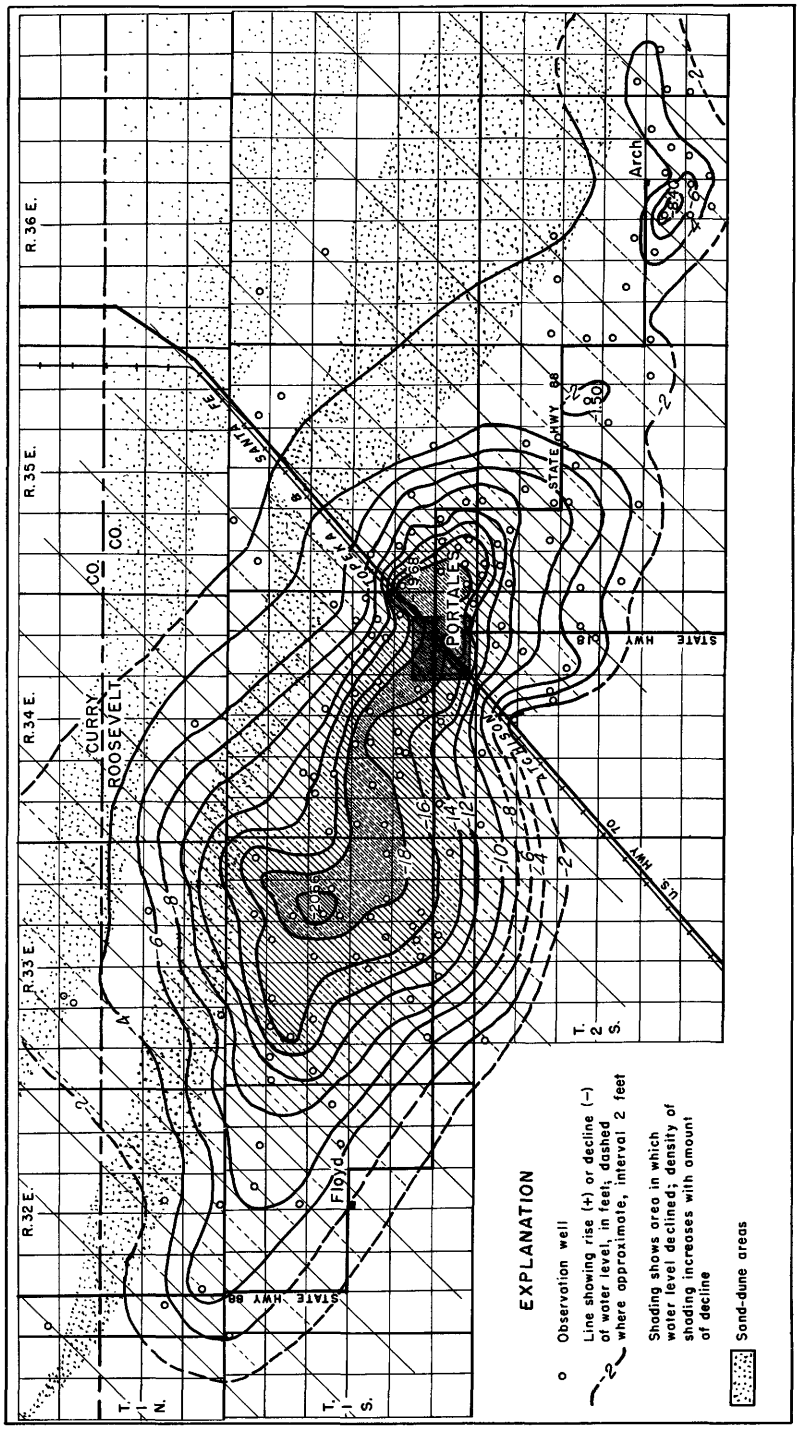

Figure 95.--Change in ground-water level from January 1950 to January 1955 in Portales Valley, Roosevelt County, N. Mex.

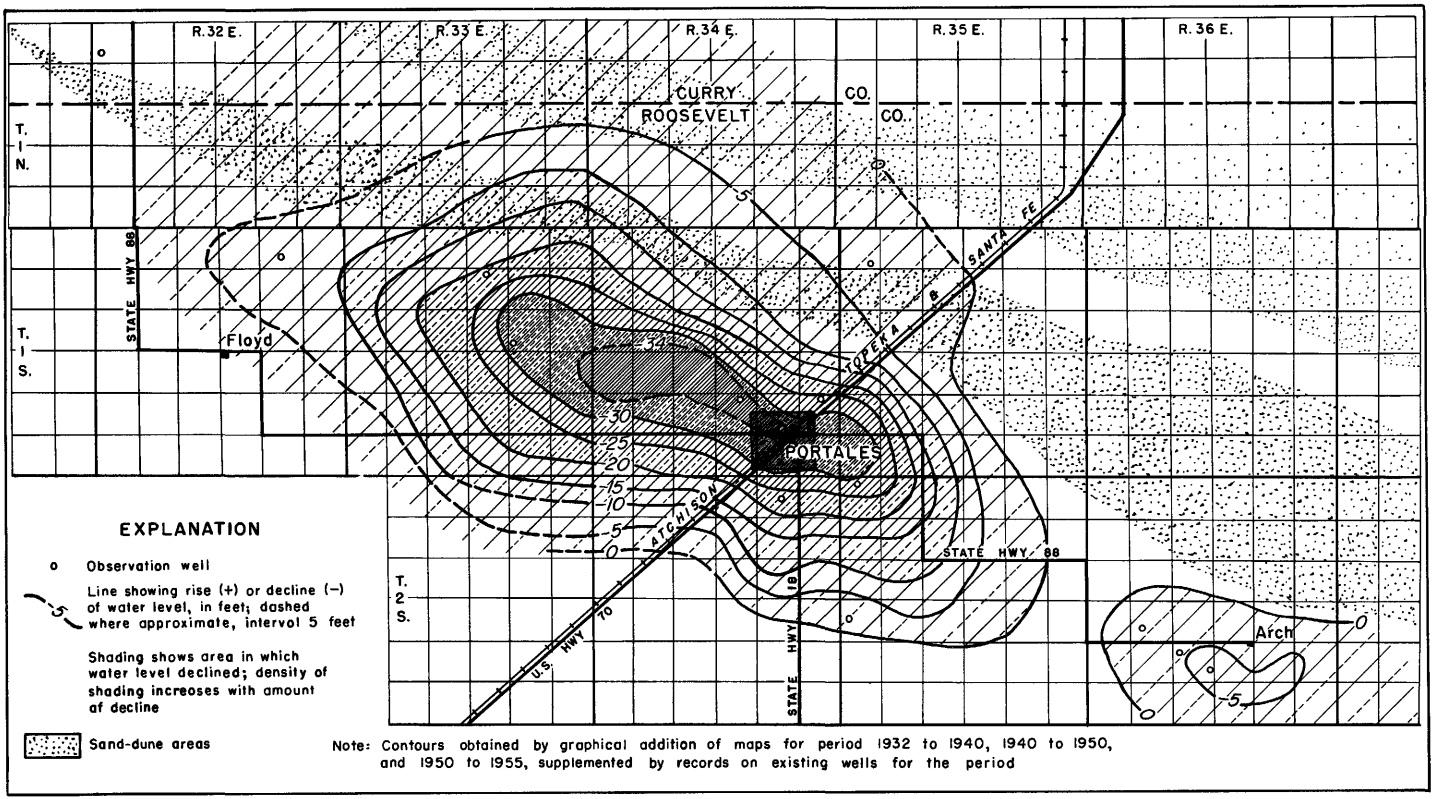

Figure 96. --Change in ground-water level from January 1932 to January 1955 in Portales Valley, Roosevelt County, N. Mex.

Fluctuations of water levels result partly from variations in the amount of recharge to the ground-water body by precipitation. In areas of heavy pumping, such as that southeast of Portales, fluctuations are mainly the result of large withdrawals of ground water for irrigation. Precipitation ranged from 5 percent above normal at Floyd in the northwestern part of the valley to 55 percent of normal at Portales in the central part. As reported by the U. S. Weather Bureau, precipitation was 10.01 inches at Portales, 8.06 inches below normal; 11.02 inches at a station 7 miles northwest of Portales, 6.99 inches below normal; and 16.09 inches at Floyd, 0.79 inch above normal. Precipitation during the growing season, April to September, was about 90 to 95 percent of the total, ranging from 65 to 133 percent. Total precipitation for 1955 was somewhat less than for 1954. However, a higher percentage of the 1955 total occurred during the growing season.

According to a survey made by the State Engineer, about 50,750 acres of land was irrigated in 1955. A revised estimate indicates that about 50,000 acres was irrigated in 1954 (instead of 49,000 acres as previously reported) with about 108,000 acre-feet of water. The amount of ground water required for irrigation in 1955 was somewhat less than in 1954. On the basis of a number of pump ratings and electric-power records of 630 irrigation pumps, it is estimated that about 95,000 acre-feet of water was used in 1955. Pumpage for municipal use at Portales in 1955 was reported to be almost 1,200 acre-feet.

Generally, the net declines in water levels were smaller in 1955 than in 1954 but larger in a small area southeast of Portales. From January 1955 to January 1956 the water levels declined more than 1 foot under about 190 square miles, more than 2 feet under about 95 square miles, more than 3 feet under about 36 square miles, more than 4 feet under 8 square miles, more than 5 feet under 3 square miles, and more than 6 feet under an area less than 1 square mile. In comparison, declines in the water levels in 1954 of 1, 2, 3, 4, and 5 feet occurred under 155, 74, 37, 8, and less than 1 square mile, respectively. The largest net decline in 1955, 7.2 feet, was in a well in a heavily pumped area 1 mile east of Portales where precipitation was below normal.

The magnitude and areal extent of changes in water levels from January 1950 to January 1955 and January 1932 to January 1955 are shown on figures 95 and 96. Comparison of these maps shows that most of the declines from 1932 to 1955 occurred after January 1950. From January 1950 to January 1955, water levels declined more than 10 feet under about 73 square miles and more than 20 feet under about 1 square mile centered about 7 miles west-northwest of Portales. From January 1932 to January 1955, water levels declined more than 10 feet under about 87 square miles, more than 20 feet under about 44 square miles, and more than 30 feet under about 17 square miles. The area in which the declines are more than 5 feet is approximately the same for both the 5-year and 23-year periods, indicating that outward from this area only small net changes occurred during the period 1932 to 1950. Along the axis of the valley in the center of the irrigated area, the net decline averaged 3 to 4 feet per year for the period 1950 to 1955, but about 1 foot per year for the period 1932 to 1955.

Portales Valley

1N. 33. 36. 400b. Woodburn Bros. Drilled stock water-table well in valley fill, diameter 4 inches, depth 28 feet. Highest water level 1.81 below lsd, Nov. 24, 1941; lowest 14.95 below lsd, Sept. 21, 1955. Records available: 1931-36, 1938-55. Jan. 24, 13.14; Mar. 16, 15.17, pumping; May 26, 14.96, pumping; July 22, 15.11, pumping; Sept. 21, 14.95; Nov. 21, 15.76, pumping.

1N. 33. 36. 400c. Woodburn Bros. Drilled observation water-table well in valley fill, diameter 8 inches, depth 43 feet, cased to 40, perforations 8-40. Highest water level 7.88 below lsd, Apr. 9, 1953; lowest 11.50 below lsd, Sept. 22, 1955. Records available: 1953-55.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	9.79	9.87	9.90	9.92	10.03	10.31	10.74	10.92	11.35	11.04	11.21	11.17
2	9.78	9.88	9.91	9.93	10.03	10.31	10.77	10.95	11.36	11.03	11.21	11.17
3	9.79	9.87	9.92	9.95	10.04	10.34	10.78	10.97	11.37	11.02	11.21	11.17
4	9.79	9.85	9.92	9.94	10.05	10.33	10.79	10.98	.....	11.01	11.20	11.17
5	9.81	9.86	9.92	9.95	10.06	10.38	10.80	11.01	11.39	11.02	11.21	11.17
6	9.81	9.88	9.92	9.98	10.08	10.38	10.82	11.01	11.39	11.04	11.21	11.16
7	9.80	9.86	9.90	9.95	10.09	10.40	10.84	11.03	11.41	11.06	11.20	11.17
8	9.80	9.86	9.91	9.95	10.12	10.41	10.85	11.04	11.41	11.07	11.20	11.17
9	9.81	9.87	9.91	9.95	10.11	10.43	10.87	11.05	11.41	11.07	11.19	11.17
10	9.81	9.86	9.91	9.95	10.14	10.42	10.89	11.08	11.42	11.09	11.19	11.17
11	9.81	9.90	9.92	9.95	10.09	10.43	10.90	11.09	11.43	11.11	11.18	11.17
12	9.82	9.87	9.92	9.95	10.09	10.44	10.88	11.11	11.44	11.13	11.18	11.17
13	9.82	9.87	9.92	9.96	10.10	10.46	10.91	11.12	11.45	11.14	11.19	11.17
14	9.82	9.87	9.91	9.96	10.15	10.46	10.93	11.13	11.47	11.14	11.19	11.17
15	9.83	9.87	9.91	9.97	10.15	10.47	10.94	11.14	11.46	11.15	11.18	11.17

1N. 33. 36. 400c--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
16	9.84	9.88	9.94	9.97	10.16	10.48	10.95	11.16	11.47	11.16	11.18	11.17
17	9.83	9.88	9.93	9.97	10.17	10.51	10.97	11.17	11.47	11.17	11.19	11.17
18	9.84	9.90	9.94	9.98	9.99	10.55	10.97	11.19	11.47	11.18	11.18	11.18
19	9.83	9.90	9.95	9.98	9.99	10.56	10.98	11.20	11.46	11.19	11.17	11.18
20	9.83	9.89	9.94	9.98	10.07	10.56	10.94	11.21	11.46	11.21	11.18	11.18
21	9.84	9.88	9.94	9.99	10.07	10.57	10.91	11.22	11.46	11.22	11.19	11.18
22	9.84	9.89	9.94	9.99	10.07	10.57	10.88	11.23	11.50	11.21	11.19	11.17
23	9.84	9.90	9.94	9.99	10.10	10.59	10.87	11.24	11.48	11.23	11.19	11.17
24	9.83	9.90	9.95	10.00	10.09	10.61	10.87	11.25	11.45	11.23	11.19	11.18
25	9.83	9.90	9.94	10.01	10.12	10.62	10.89	11.27	11.35	11.22	11.18	11.18
26	9.83	9.91	9.95	10.01	10.16	10.66	10.89	11.29	11.21	11.22	11.17	11.19
27	9.83	9.90	9.93	10.01	10.18	10.68	10.88	11.29	11.13	11.21	11.17	11.19
28	9.84	9.91	9.94	10.02	10.21	10.69	10.87	11.31	11.09	11.21	11.17	11.19
29	9.85		9.94	10.03	10.24	10.71	10.85	11.31	11.07	11.21	11.17	11.20
30	9.86		9.94	10.03	10.25	10.73	10.87	11.33	11.05	11.21	11.17	11.20
31	9.85		9.94		10.27		10.89	11.35		11.21		11.20

1. 31. 1. 222. W. G. Griffith. Drilled irrigation water-table well in valley fill, diameter 12 inches, reported depth 156 feet, cased to 135. Highest water level 74. 81 below lsd, May 29, 1947; lowest 83. 44 below lsd, July 23, 1955. Records available: 1944-55. Jan. 17, 80. 02; May 26, 82. 11; July 23, 83. 44; Nov. 21, 82. 33.

1. 32. 3. 431. M. Nall. Drilled irrigation water-table well in valley fill. Highest water level 35. 98 below lsd, Mar. 25, 1949; lowest 50. 52 below lsd, Sept. 22, 1954. Records available: 1948-55. Jan. 26, 45. 35; Mar. 16, 45. 59; May 26, 47. 55; July 23, 47. 91; Sept. 21, 49. 47; Nov. 21, 46. 69.

1. 32. 14. 431. Robert Morrison. Drilled unused water-table well in valley fill, diameter 12 inches, depth 104 feet. Highest water level 43. 55 below lsd, Apr. 6, 1945; lowest 60. 73 below lsd, Sept. 21, 1955. Records available: 1944-55. Jan. 26, 55. 92; Mar. 16, 55. 48; May 26, 58. 05; July 23, 57. 68; Sept. 21, 60. 73; Nov. 21, 57. 83.

1. 33. 14. 331c. A. L. Wooten. Drilled irrigation water-table well in valley fill. Highest water level 19. 37 below lsd, Jan. 16, 1945; lowest 54. 08 below lsd, Sept. 21, 1955. Records available: 1944-55. Jan. 25, 50. 03; Mar. 16, 49. 90; May 26, 52. 51; July 22, 52. 91; Sept. 21, 54. 08; Nov. 21, 53. 16.

1. 33. 17. 211. W. W. May. Drilled irrigation water-table well in valley fill, diameter 14 inches, depth 102 feet, cased to 92. Highest water level 17. 29 below lsd, Aug. 1, 1945; lowest 42. 55 below lsd, Nov. 21, 1955. Records available: 1945-55. Jan. 26, 39. 63; Mar. 16, 39. 34; July 22, 42. 22; Nov. 21, 42. 55.

1. 33. 28. 311. J. C. Jolley. Drilled irrigation water-table well in valley fill, diameter 15 inches, reported depth 116 feet, cased to 115. Highest water level 39. 21 below lsd, Mar. 26, 1943; lowest 66. 50 below lsd, Sept. 21, 1955. Records available: 1938-55. Jan. 26, 59. 33; May 26, 62. 54; July 23, 63. 05; Sept. 21, 66. 50; Nov. 21, 63. 12.

1. 33. 29. 333. M. H. Rea. Drilled stock water-table well in valley fill, diameter 7 inches, depth 51 feet. Highest water level 29. 48 below lsd, Nov. 24, 1942; lowest 41. 74 below lsd, Nov. 21, 1955. Records available: 1940-55. Jan. 26, 40. 23; Mar. 16, 40. 11; May 26, 40. 73; July 23, 41. 07; Sept. 21, 41. 73; Nov. 21, 41. 74.

1. 34. 15. 131. P. M. Marcus. Drilled irrigation water-table well in valley fill. Highest water level 49. 19 below lsd, Mar. 26, 1946; lowest 71. 44 below lsd, Sept. 20, 1955. Records available: 1945-55. Jan. 24, 63. 45; Mar. 16, 65. 55; May 25, 64. 59; July 22, 68. 62; Sept. 20, 71. 44; Nov. 21, 66. 32.

1. 34. 17. 411a. O. L. Spencer. Drilled unused water-table well in valley fill, diameter 12 inches, reported depth 70 feet. Highest water level 31. 74 below lsd, Mar. 29, 1947; lowest 62. 15 below lsd, Sept. 20, 1955. Records available: 1947-55. Jan. 24, 52. 23; Mar. 16, 53. 82; May 25, 55. 70; July 22, 59. 50; Sept. 20, 62. 15; Nov. 21, 57. 06.

1. 34. 22. 421a. R. C. Grunig. Drilled irrigation water-table well in valley fill, diameter 16 inches, reported depth 114 feet. Highest water level 42. 27 below lsd, July 30, 1949; lowest 65. 84 below lsd, Sept. 21, 1954. Records available: 1948-55. Jan. 25, 58. 84.

1. 34. 25. 211. J. B. H. Young. Drilled unused water-table well in valley fill, diameter 12 inches, reported depth 101 feet. Highest water level 31. 98 below lsd, May 16, 1933; lowest 61. 81 below lsd, Nov. 2, 1955. Records available: 1931-55.

1. 34. 25. 211--Continued.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	.....	58.01	58.90	.....	.....	60.31	60.87	61.50	61.79	61.62
2	.....	.....	.....	.....	58.92	.....	.....	60.32	60.88	61.52	61.81	61.62
3	.....	.....	.....	.....	58.94	.....	.....	60.34	60.89	61.55	61.79	61.63
4	.....	.....	.....	.....	58.97	.....	.....	60.35	60.93	61.56	61.80	61.64
5	.....	.....	.....	58.03	59.00	.....	.....	60.35	60.95	61.58	61.79	61.61
6	.....	.....	.....	58.03	59.02	.....	.....	60.37	60.96	61.61	61.80	61.59
7	.....	.....	.....	.....	59.04	.....	.....	60.38	60.99	61.62	61.79	61.59
8	.....	.....	.....	.....	59.05	.....	.....	60.38	61.01	61.62	61.77	61.59
9	.....	.....	.....	.....	59.03	.....	.....	60.41	61.02	61.64	61.77	61.57
10	.....	.....	.....	.....	59.06	.....	.....	60.42	61.03	61.65	61.76	61.58
11	.....	.....	.....	58.07	59.07	.....	.....	60.45	61.06	61.66	61.77	61.56
12	.....	.....	.....	58.11	59.07	.....	.....	60.47	61.07	61.67	61.77	61.56
13	.....	.....	.....	58.13	59.06	.....	.....	60.49	61.10	61.68	61.76	61.56
14	.....	.....	.....	58.16	.....	.....	.....	60.51	61.12	61.68	61.74	61.58
15	.....	.....	.....	58.20	.....	.....	.....	60.53	61.14	61.70	61.74	61.56
16	.....	.....	58.00	58.25	.....	.....	.....	60.55	61.17	61.71	61.74	61.56
17	.....	.....	57.98	58.30	.....	.....	.....	60.58	61.20	61.71	61.72	61.56
18	.....	.....	57.99	58.35	.....	.....	.....	60.61	61.22	61,72	61.72	61.55
19	.....	.....	57.98	58.40	.....	.....	.....	60.64	61.25	61.73	61.73	61.53
20	.....	.....	57.98	58.48	.....	.....	.....	60.66	61.26	61.74	61.72	61.54
21	.....	.....	.....	.....	.....	.....	h60.17	60.69	61.30	61.74	61.71	61.53
22	.....	.....	.....	58.63	.....	.....	60.19	60.71	61.34	61.75	61.71	61.54
23	.....	.....	.....	58.68	.....	.....	60.21	60.73	61.36	61.76	61.69	61.54
24	h58.53	.....	57.98	58.75	h59.08	.....	60.21	60.75	61.37	61.76	61.68	61.55
25	.....	.....	57.99	58.78	.....	.....	60.24	60.77	61.38	61.77	61.68	61.53
26	.....	.....	57.99	58.80	h59.10	.....	60.25	60.78	61.41	61.78	61.68	61.51
27	.....	.....	57.99	58.83	.....	.....	60.24	60.79	61.44	61.79	61.66	61.50
28	.....	.....	57.99	58.85	.....	.....	60.27	60.81	61.46	61.78	61.67	61.50
29	.....		57.99	58.86	.....	.....	60.27	60.83	61.48	61.80	61.65	61.49
30	.....		57.99	58.87	.....	.....	60.29	60.84	61.50	61.79	61.63	61.46
31	.....		58.01		.....		60.30	60.85		61.80		61.45

h Tape measurement.

1. 34. 30. 111. F. L. Corder. Drilled irrigation water-table well, diameter 16 inches, depth 114 feet. Highest water level 49. 58 below lsd, Jan. 25, 1954; lowest 59. 57 below lsd, Sept. 20, 1955. Records available: 1953-55. Jan. 25, 54. 38; Mar. 16, 55. 10; May 26, 56. 53; July 22, 58. 54; Sept. 20, 59. 57; Nov. 21, 57. 22.

1. 34. 33. 223a. Portales Municipal Airport. Drilled irrigation water-table well in valley fill, diameter 12 inches. Highest water level 28. 84 below lsd, Jan. 26, 1946; lowest 55. 29 below lsd, Sept. 20, 1955. Records available: 1946-55. Jan. 22, 52. 13; Mar. 16, 52. 14; May 25, 53. 13; July 21, 54. 37; Sept. 20, 55. 29; Nov. 19, 54. 93.

1. 35. 2. 300. Eastern New Mexico State College Park. Drilled irrigation water-table well in valley fill, depth 140 feet. Highest water level 42. 88 below lsd, May 12, 1944; lowest 48. 37 below lsd, July 11, 1940. Records available: 1935-55. Jan. 20, 45. 17; Mar. 17, 45. 19; May 26, 45. 28; July 23, 45. 46; Sept. 19, 45. 50; Nov. 21, 45. 45.

1. 35. 6. 400. J. C. Brown. Drilled unused water-table well in valley fill, diameter 6 inches, depth 23 feet. Highest water level 5. 13 below lsd, Nov. 25, 1941; lowest 15. 46 below lsd, Jan. 16, 1941. Records available: 1931-55. Jan. 20, 14. 55; Mar. 17, 14. 56; May 26, 14. 60; July 23, 14. 72; Sept. 19, 14. 83; Nov. 21, 14. 86.

1. 35. 11. 241. A. Hobbs Estate. Drilled unused water-table well in valley fill, diameter 6 inches, depth 51 feet. Highest water level 13. 98 below lsd, Mar. 27, 1943; lowest 20. 09 below lsd, Sept. 22, 1940. Records available: 1940-55. Jan. 20, 17. 45; Mar. 17, 17. 49; May 26, 17. 58; July 23, 17. 78; Sept. 19, 17. 95; Nov. 21, 17. 87.

1. 35. 27. 344a. Lawson Read. Drilled unused water-table well in valley fill, diameter 6 inches. Highest water level 29. 02 below lsd, Jan. 13, 1951; lowest 34. 27 below lsd, Mar. 17, 1955. Records available: 1945-55. Jan. 21, 34. 22; Mar. 17, 34. 27. Measurement discontinued.

1. 35. 28. 143. Travis Culpepper. Drilled irrigation water-table well in valley fill, diameter 12 inches, depth 151 feet. Highest water level 44. 08 below lsd, Mar. 27, 1943; lowest 56. 65 below lsd, Sept. 19, 1955. Records available: 1935-55. Jan. 19, 54. 80; Mar. 17, 55. 19; May 25, 55. 34; July 21, 56. 31; Sept. 19, 56. 65; Nov. 21, 56. 30.

2.34.2.233. Louisa Trout. Drilled unused water-table well in valley fill, diameter 12 inches, depth 89 feet. Highest water level 32.71 below lsd, Mar. 6-15, 1942; lowest 70.58 below lsd, Aug. 5, 1954. Records available: 1931-55.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	64.93	64.39	64.15	65.28	65.90	65.94	66.97	.....	.....	68.48	.....	67.86
2	64.88	64.37	64.14	65.15	65.88	66.03	66.98	.....	.....	.....	.....	67.83
3	64.85	64.36	64.12	65.10	65.85	66.04	66.99	.....	.....	.....	.....	67.85
4	64.83	64.36	64.15	65.20	65.92	66.38	66.99	.....	.....	.....	.....	67.82
5	64.85	64.29	64.22	65.18	65.88	66.58	66.98	.....	.....	.....	.....	67.79
6	64.83	64.31	64.20	65.12	65.91	69.00	67.00	.....	.....	.....	.....	67.76
7	64.79	64.28	64.20	65.04	68.68	69.22	66.99	.....	.....	.....	.....	67.78
8	64.78	64.25	64.13	65.04	68.62	67.39	67.09	.....	.....	.....	.....	67.78
9	64.78	64.22	64.20	65.30	68.89	67.16	67.11	.....	.....	.....	.....	67.73
10	64.73	64.30	64.20	65.15	68.95	67.06	67.11	.....	.....	.....	.....	67.75
11	64.72	64.25	64.26	65.08	66.69	66.95	67.20	.....	.....	.....	.....	67.81
12	64.73	64.27	64.30	65.07	66.52	66.82	67.20	.....	.....	.....	.....	67.75
13	64.69	64.26	64.23	65.05	66.40	66.78	67.47	.....	.....	.....	.....	67.74
14	64.69	64.25	64.27	67.24	66.30	66.78	67.61	.....	.....	.....	.....	67.73
15	64.64	64.22	64.35	67.58	66.22	67.02	69.19	.....	.....	.....	.....	67.68
16	64.60	64.28	64.38	66.40	66.10	67.21	68.12	.....	.....	.....	.....	67.66
17	64.59	64.20	64.38	65.99	66.05	67.20	67.94	.....	.....	68.45	.....	67.68
18	64.62	64.18	64.63	65.88	66.02	67.08	68.10	.....	.....	68.44	.....	67.80
19	64.56	64.19	64.56	65.88	66.00	66.98	67.92	.....	.....	68.41	67.98	67.77
20	64.55	64.18	64.68	66.04	65.98	66.97	67.86	e68.25	68.72	68.42	67.95	67.90
21	64.57	64.17	64.73	66.06	65.92	66.92	.....	.....	68.70	68.43	67.92	67.95
22	64.55	64.18	64.60	66.02	65.90	66.96	.....	.....	68.66	68.41	67.92	67.84
23	64.48	64.18	64.59	65.90	65.89	66.95	.....	.....	68.70	.....	67.92	67.79
24	64.52	64.16	64.90	65.78	65.80	66.92	.....	.....	68.68	.....	67.89	67.76
25	64.48	64.09	65.10	65.75	65.78	66.91	.....	.....	68.66	.....	67.90	67.70
26	64.49	64.15	65.20	65.73	65.78	66.90	.....	.....	68.60	.....	67.90	67.67
27	64.45	64.15	65.18	66.38	65.82	66.90	.....	.....	68.61	.....	67.91	67.60
28	64.44	64.11	65.82	66.27	65.91	66.90	.....	.....	68.58	.....	67.89	67.61
29	64.43		65.58	66.12	65.88	66.89	.....	.....	68.54	.....	67.88	67.60
30	64.42		65.61	65.98	65.85	66.95	.....	.....	68.52	.....	67.85	67.57
31	64.40		65.51		65.88		.....	.....		.....		67.52

e Estimated.

2.34.4.441. Maud Wallace. Dug observation water-table well in valley fill, diameter 2 inches, depth 15 feet. Highest water level 4.17 above lsd, Jan. 27, 1942; lowest dry at 15.00, Mar. 22, 1954. Records available: 1939-55. Jan. 20, 10.66; Mar. 16, 11.48; May 25, 12.96. Measurement discontinued.

2.34.10.431. B. G. Polk. Drilled irrigation water-table well in valley fill, diameter 14 inches, depth 100 feet, cased to 95. Highest water level 24.05 below lsd, July 31, 1945; lowest 45.12 below lsd, Sept. 20, 1955. Records available: 1945-55. Jan. 22, 39.51; Mar. 16, 40.25; May 25, 41.83; July 21, 43.65; Sept. 20, 45.12; Nov. 19, 42.02.

2.35.6.121. Dallas Clark. Drilled irrigation water-table well in valley fill, diameter 12 inches, depth 102 feet. Highest water level 16.73 below lsd, Jan. 28, 1942; lowest 58.15 below lsd, July 21, 1954. Records available: 1931-55. Jan. 22, 53.45; Mar. 17, 52.75; May 25, 55.59. Measurement discontinued.

2.35.6.121a. Dallas Clark. Drilled irrigation water-table well in valley fill, diameter 16 inches, depth 120 feet. Highest water level 59.71 below lsd, July 21, 1955; lowest 62.31 below lsd, Sept. 20, 1955. Records available: 1955. July 21, 59.71; Sept. 20, 62.31; Nov. 19, 60.10.

2.35.9.122. B. J. Powell. Drilled irrigation water-table well in valley fill. Highest water level 20.28 below lsd, Jan. 13, 1951; lowest 38.88 below lsd, July 21, 1955. Records available: 1946-55. Jan. 19, 31.15; Mar. 17, 30.14; May 25, 34.05; July 21, 38.88; Nov. 21, 35.33.

2.35.14.414. Portales First National Bank. Dug observation water-table well in valley fill, diameter 2 inches, depth 9 feet. Highest water level 0.07 above lsd, Jan. 30, 1943; lowest 5.83 below lsd, July 21, 1954. Records available: 1939-55. Jan. 18, 4.02; Mar. 17, 4.14; May 25, 4.61; July 22, 5.78; Sept. 19, 5.81.

2.35.15.131a. Portales First National Bank. Dug observation water-table well in valley fill, diameter 3 inches, depth 11 feet, cased to 10. Highest water level 6.11 below lsd, Sept. 21, 1954; lowest 9.22 below lsd, July 21, 1954. Records available: 1953-55. Jan. 18, 6.91; Mar. 7, 7.22; May 25, 7.45; July 21, 8.40.

2.35.18.211. State of New Mexico. Dug observation water-table well in valley fill, diameter 2 inches, depth 11 feet. Highest water level 1.99 below lsd, July 20, 1942; lowest dry at 11.24, Mar. 22, 1954. Records available: 1939-55. Jan. 19, 2.97; Mar. 17, 5.98; May 25, 4.07; July 21, 7.86. Measurement discontinued.

2.35.19.134. Ora Johnson. Drilled irrigation water-table well in valley fill, diameter 10 inches, depth 70 feet. Highest water level 25.87 below lsd, Nov. 27, 1950, Jan. 12, 1951; lowest 40.66 below lsd, May 27, 1953. Records available: 1946-55. Jan. 19, 30.75; Mar. 17, 31.98; July 21, 37.91; Sept. 20, 37.91; Nov. 19, 33.33.

2.35.20.222. O. M. Rodgers. Drilled unused water-table well in valley fill, diameter 4 inches, depth 35 feet. Highest water level 16.62 below lsd, Sept. 20, 1954; lowest 20.28 below lsd, Nov. 22, 1955. Records available: 1954-55. Jan. 19, 17.54; Mar. 17, 17.71; May 25, 18.56; July 21, 19.31; Sept. 19, 19.86; Nov. 22, 20.28.

2.35.23.111. P. O. Dozier. Drilled irrigation water-table well in valley fill. Highest water level 21.32 below lsd, Mar. 27, 1951; lowest 35.68 below lsd, July 21, 1955. Records available: 1949-55. Jan. 18, 25.69; Mar. 17, 25.45; May 25, 28.40; July 21, 35.68; Sept. 19, 52.67, pumping; Nov. 22, 28.77.

2.35.25.114a. Joe Caraway. Drilled irrigation water-table well in valley fill, diameter 12 inches, depth 96 feet. Highest water level 22.07 below lsd, Jan. 12, 1951; lowest 34.39 below lsd, July 21, 1955. Records available: 1948-55. Jan. 18, 28.00; Mar. 17, 48.60, pumping; May 25, 30.48; July 21, 34.39; Sept. 19, 33.66; Nov. 22, 30.93.

2.36.8.432a. S. W. Davis. Drilled irrigation water-table well in valley fill. Highest water level 15.66 below lsd, Nov. 28, 1950; lowest 22.64 below lsd, July 28, 1953. Records available: 1948-55. Jan. 19, 22.41; Mar. 17, 43.28, pumping; May 25, 43.18, pumping; July 21, 43.56, pumping; Sept. 20, 45.04, pumping; Nov. 22, 42.75, pumping.

2.36.20.321. W. O. Davis. Dug and drilled irrigation water-table well in valley fill, diameter 11 inches, depth 123 feet. Highest water level 8.12 below lsd, Jan. 30, 1942; lowest 21.97 below lsd, June 29, 1932. Records available: 1931-55. Jan. 18, 17.37; Mar. 17, 17.30; May 25, 17.86; July 22, 18.64; Sept. 19, 19.41; Nov. 22, 19.13.

2.36.27.311a. J. M. Riley. Drilled irrigation water-table well in valley fill, reported depth 105 feet. Highest water level 12.75 below lsd, Nov. 28, 1950; lowest 35.62 below lsd, Sept. 20, 1955. Records available: 1947-55. Jan. 18, 24.14; Mar. 17, 21.30; May 25, 49.76, pumping; July 22, 31.55; Sept. 20, 35.62; Nov. 22, 26.10.

2.36.28.114b. Morgan Trammel. Drilled unused water-table well in valley fill, diameter 12 inches, depth 44 feet. Highest water level 7.30 below lsd, Dec. 4, 1941; lowest 25.30 below lsd, Sept. 25, 1955. Records available: 1932-55.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	20.92	20.87	20.81	20.76	21.58	22.52	23.40	e23.64	.....	25.07	24.00	23.40
2	20.91	20.86	20.80	20.73	21.64	22.52	23.43	e23.62	.....	25.02	23.99	23.38
3	20.92	20.86	20.80	20.72	21.67	22.52	23.47	.....	.....	24.99	23.96	23.38
4	20.92	20.86	20.80	20.74	21.74	22.52	23.49	.....	.....	24.92	23.92	23.37
5	20.94	20.84	20.81	20.75	21.81	22.52	23.56	.....	.....	24.89	23.90	23.35
6	20.95	20.85	20.82	20.78	21.93	22.52	23.60	.....	.....	24.85	23.88	23.32
7	20.94	20.84	20.82	20.77	22.04	22.52	23.63	.....	.....	24.81	23.86	23.31
8	20.93	20.84	20.81	20.78	22.18	22.54	23.66	.....	.....	24.78	23.82	23.31
9	20.94	20.83	20.80	20.81	22.20	22.55	23.67	.....	.....	24.74	23.81	23.28
10	20.92	20.85	20.80	20.82	22.22	22.59	23.69	.....	.....	24.69	23.77	23.27
11	20.92	20.88	20.81	20.82	22.24	22.59	23.71	.....	.....	24.65	23.76	23.26
12	20.93	20.86	20.82	20.86	22.24	22.61	23.73	.....	.....	24.62	23.75	23.23
13	20.88	20.86	20.81	20.90	22.26	22.64	23.77	.....	.....	24.58	23.71	23.21
14	20.87	20.85	20.80	20.92	22.29	22.66	23.82	.....	.....	24.54	23.68	23.21
15	20.87	20.84	20.81	20.95	22.32	22.70	23.85	.....	.....	24.49	23.66	23.20
16	20.86	20.86	20.82	20.98	22.33	22.72	23.87	.....	.....	24.45	23.65	23.18
17	20.86	20.84	20.80	21.00	22.35	22.76	23.89	.....	.....	24.42	23.64	23.18
18	20.90	20.83	20.80	21.04	22.40	22.80	23.92	.....	.....	24.39	23.63	23.19
19	20.89	20.86	20.78	21.09	22.42	22.84	23.95	.....	h25.20	24.36	23.61	23.20
20	20.87	20.86	20.78	21.15	22.43	22.89	23.99	.....	25.21	24.34	23.57	23.19
21	20.89	20.85	20.80	21.17	22.45	22.94	23.98	.....	25.23	24.31	23.53	23.21
22	20.89	20.83	20.78	21.20	22.45	22.99	23.95	.....	25.26	24.28	23.53	23.21
23	20.87	20.83	20.78	21.26	22.46	23.04	23.95	.....	25.29	24.25	23.57	23.23
24	20.88	20.85	20.76	21.28	22.47	23.10	23.93	.....	25.29	24.23	23.54	23.29
25	20.87	20.82	20.78	21.32	22.48	23.16	23.90	.....	25.30	24.20	23.52	23.34

2. 36. 28. 114b--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	20. 88	20. 82	20. 80	21. 36	22. 48	23. 21	23. 87	.....	25. 27	24. 16	23. 49	23. 33
27	20. 88	20. 82	20. 77	21. 41	22. 48	23. 25	23. 83	.....	25. 27	24. 14	23. 49	23. 31
28	20. 90	20. 81	20. 76	21. 50	22. 49	23. 29	23. 79	.....	25. 22	24. 10	23. 47	23. 33
29	20. 88		20. 75	21. 56	22. 48	23. 32	e23. 75	.....	25. 16	24. 08	23. 45	23. 38
30	20. 88		20. 75	21. 57	22. 48	23. 36	e23. 72	.....	25. 11	24. 04	23. 43	23. 39
31	20. 86		20. 75		22. 50		e23. 68	.....		24. 03		23. 37

e Estimated.
h Tape measurement.

2. 36. 30. 111. L. B. Thornton. Dug observation water-table well in valley fill, diameter 2 inches, reported depth 10 feet. Highest water level 0. 45 below lsd, Nov. 26, 1941; lowest 9. 20 below lsd, July 22, 1954. Records available: 1941-55. Jan. 18, 6. 43. Measurement discontinued.

2. 36. 34. 312. L. W. Walker. Drilled irrigation water-table well in valley fill, diameter 12 inches, reported depth 65 feet, cased to 51. Highest water level 14. 10 below lsd, Nov. 28, 1950; lowest 26. 81 below lsd, May 22, 1954. Records available: 1947-55. Jan. 18, 21. 35; Mar. 18, 22. 54; May 25, 24. 21; July 22, 24. 33; Sept. 20, 25. 22; Nov. 22, 24. 27.

2. 36. 35. 212a. Mrs. Eunice Harrison. Drilled irrigation water-table well in valley fill. Highest water level 8. 24 below lsd, Jan. 12, 1951; lowest 23. 18 below lsd, Sept. 20, 1955. Records available: 1947-55. Jan. 18, 15. 77; Mar. 17, 15. 31; May 25, 17. 90; July 22, 22. 74; Sept. 20, 23. 18; Nov. 22, 19. 44.

2. 37. 30. 134. H. C. Nickels. Drilled irrigation water-table well in valley fill, diameter 16 inches, reported depth 115 feet, cased to 80. Highest water level 18. 06 below lsd, Nov. 28, 1950; lowest 36. 82 below lsd, Sept. 20, 1955. Records available: 1949-55. Mar. 17, 24. 41; May 25, 27. 20; July 22, 32. 50; Sept. 20, 36. 82; Nov. 22, 28. 56.

Sierra County

Truth or Consequences area.--The artesian basin that lies along the flood plain of the Rio Grande in the central part of Sierra County in south-central New Mexico contains both thermal and nonthermal water. Many health resorts in Truth or Consequences (formerly Hot Springs) utilize the hot mineral waters from wells drilled to the Magdalena group or from springs discharging from the overlying alluvium. Artesian wells in Mud Springs Draw, about a mile southwest of Truth or Consequences, supply nonthermal water for irrigation and municipal purposes from deposits of Tertiary and Quaternary age. The Hot Springs ground-water basin, about 38 square miles, was declared by the State Engineer on April 15, 1935. The basin was closed to further appropriation of mineral (thermal) water on July 1, 1937, and to further appropriation of fresh (nonthermal) artesian water in 1947. A part of the basin, about 1. 5 square miles, was reopened for the appropriation of mineral water in 1947 and in 1950. Water levels in thermal wells at Truth or Consequences have been measured at regular intervals since 1939. Measurements were made in 9 thermal wells and in 2 nonthermal wells in January 1955. Recording gages were maintained on wells 6 and 6a during 1955 as in previous years.

Water levels declined in 9 of the 10 wells measured in January 1955. One well showed a net rise of 0. 03 foot. The other wells showed an average net decline of 0. 23 foot, ranging from 0. 05 to 0. 47 foot. The seasonal change in head in the thermal artesian wells is caused primarily by the change in river stage; the natural discharge of this water is to the river. Daily fluctuations are the result of pumping water for the many health resorts in the area.

Hot Springs Area

6. Harry Dakos. Lot. 4, block 8 in Truth or Consequences. Drilled unused artesian well, diameter 7 inches, depth 105 feet. Land-surface datum is 4, 243. 75 feet above msl. Highest water level 1. 66 above lsd, Dec. 24, 1941; lowest 0. 68 below lsd, Sept. 21, 1954. Records available: 1940-55.

Daily highest water level, above and below lsd, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	-0. 07	-0. 09	+0. 24	+0. 09	-0. 10	+0. 08	-0. 13	+0. 17	-0. 21	-0. 25	-0. 18
2	....	. 06	. 07	. 26	. 10	. 09	. 09	. 08	. 19	. 16	. 27	. 16
3	-0. 03	. 05	. 06	. 23	. 07	. 08	. 07	. 09	. 19	. 16	. 29	. 20
4	. 03	. 08	. 07	. 22	. 08	. 07	. 09	. 10	. 19	. 18	. 27	. 20
5	. 06	. 06	. 08	. 21	. 08	. 05	. 11	. 10	. 16	. 20	. 27	. 20
6	. 05	. 08	. 07	. 20	. 05	. 04	. 12	. 09	. 17	. 23	. 25	. 18
7	. 02	. 10	. 07	. 20	. 03	. 05	. 12	. 10	. 18	. 25	. 24	. 18
8	. 03	. 09	. 07	. 18	+. 01	. 04	. 12	. 10	. 19	. 24	. 26	. 22
9	. 05	. 06	. 06	. 16	. 00	. 01	. 12	. 13	. 19	. 23	. 22	. 18
10	. 04	. 09	. 06	. 20	. 02	. 03	. 11	. 15	. 20	. 22	. 21	. 18

6--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
11	-0.05	-0.14	-0.08	+0.20	-0.04	0.00	+0.14	-0.14	+0.20	-0.23	-0.19	-0.20
12	.07	.11	.09	.19	.08	+.01	.14	.09	+.21	.24	.23	.19
13	.04	.10	.06	.17	.07	.05	.10	.08	+.14	.23	.20	.18
14	.02	.10	.07	.18	.08	.05	.08	.10	....	.23	.17	.18
15	-.04	.08	.07	.17	.10	.06	.05	.14	....	.23	.17	.18
16	.00	.09	.07	.16	.09	.07	.04	.15	....	.25	.22	.14
17	-.02	.05	.05	.17	.10	.02	.01	.12	....	.25	.20	.14
18	.08	.03	.06	.19	.10	+.01	+.01	.10	-.07	.25	.22	.18
19	.03	.10	.04	.19	.12	.00	-.02	-.07	.08	.26	.24	.19
20	.02	.09	-.04	.15	.14	-.02	.03	+.02	.09	.27	.20	.18
21	.07	.09	.00	.14	.14	.03	.03	.02	.12	.28	.18	.17
22	.06	.07	-.01	.16	.14	.03	.03	.08	.14	.27	.18	.16
23	.08	.06	+.05	.14	.18	.01	.03	.03	.15	.30	.21	.15
24	.06	.09	.09	.13	.17	-.01	.03	.13	.16	.29	.20	.15
25	.08	.06	.11	.13	.15	.00	.03	.15	.18	.27	.19	.13
26	.07	.07	.11	.12	.19	+.05	.06	.02	.17	.26	.18	.14
27	.06	.05	.14	.13	.20	.04	.04	.02	.20	.26	.20	.11
28	.07	.05	.18	.10	.22	.06	.03	.14	.20	.29	.19	.12
29	.08		.20	.10	.22	.08	.07	.17	.20	.26	.19	.15
30	.04		.23	.08	.20	.08	.07	.15	.21	.24	.19	.16
31	.02		.22		.12		.10	.15		.23		.13

6a. Harry Dakos. Lot 4, block 8 in Truth or Consequences. Dug unused water-table well in alluvium, diameter 24 inches, depth 6 feet. Land-surface datum is 4,240.71 feet above msl. Highest water level 1.26 above lsd, June 2, 1952; lowest 2.73 below lsd, Oct. 27-29, 1953. Records available: 1941-55.

Daily highest water level, above and below lsd, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	-2.25	-2.27	-2.01	-2.04	-2.35	-2.13	-0.97	-1.52	-2.30	-2.42	-2.55
2	....	2.26	2.27	2.01	2.06	2.34	2.12	1.15	1.56	.28	2.42	2.55
3	....	2.26	2.26	2.03	2.06	2.34	2.12	1.29	1.61	.43	2.42	2.55
4	....	2.26	2.26	2.05	2.07	2.33	2.11	1.43	1.64	.90	2.43	2.55
5	....	2.26	2.26	2.06	2.08	2.31	2.10	1.21	1.68	1.11	2.43	2.55
6	....	2.25	2.26	2.06	2.08	2.30	2.09	....	1.72	1.28	2.44	2.55
7	....	2.25	2.26	2.06	2.09	2.28	2.08	....	1.75	1.44	2.44	2.56
8	....	2.26	2.26	2.06	2.10	2.27	2.07	.44	1.77	1.58	2.47	2.56
9	-2.25	2.26	2.26	2.06	2.11	2.26	2.06	.78	1.79	1.70	2.48	2.56
10	2.25	2.26	2.25	2.04	2.12	2.25	-2.05	1.02	1.81	1.79	2.48	2.56
11	2.25	2.27	2.25	2.05	2.14	2.23	+.62	-1.22	1.82	1.86	2.49	2.56
12	2.25	2.27	2.25	2.05	2.15	2.22	-.10	+1.19	1.83	1.92	2.49	2.56
13	2.25	2.26	2.25	2.05	2.17	2.20	.60	+1.16	1.84	1.98	2.50	2.56
14	2.25	2.26	2.24	2.04	2.18	2.18	.92	+.26	1.86	2.04	2.50	2.56
15	2.25	2.26	2.23	2.04	2.19	2.16	1.10	-.38	1.89	2.09	2.51	2.57
16	2.24	2.26	2.21	2.04	2.20	2.15	1.25	.69	1.92	2.14	2.51	2.58
17	2.24	2.26	2.21	2.04	2.23	2.15	1.40	.97	1.95	2.17	2.51	2.58
18	2.24	2.26	2.20	2.04	2.25	2.15	1.50	1.17	1.98	2.20	2.51	2.58
19	2.25	2.26	2.20	2.04	2.26	2.16	1.59	-1.34	2.01	2.23	2.52	2.59
20	2.25	2.26	2.20	2.03	2.28	2.16	1.66	+1.18	2.04	2.26	2.52	2.59
21	2.25	2.26	2.22	2.02	2.29	2.16	-1.65	+1.16	2.08	2.28	2.52	2.59
22	2.25	2.26	2.20	2.02	2.30	2.17	+1.14	+.22	2.11	2.30	2.52	2.60
23	2.26	2.26	2.18	2.01	2.31	2.17	+.74	-.42	2.14	2.32	2.53	2.60
24	2.26	2.27	2.17	2.00	2.31	2.17	-.36	.72	2.17	2.35	2.53	2.61
25	2.26	2.27	2.14	2.00	2.32	2.17	-.61	.95	2.19	2.37	2.53	2.61
26	2.26	2.27	2.12	2.01	2.34	2.17	-.85	1.10	2.21	2.38	2.53	2.62
27	2.26	2.27	2.08	2.01	2.35	2.16	+1.22	1.18	2.23	2.39	2.54	2.62
28	2.26	2.27	2.07	2.02	2.36	2.15	+1.14	1.19	2.25	2.40	2.54	2.62
29	2.26		2.06	2.03	2.36	2.14	+.56	1.29	2.27	2.41	2.54	2.63
30	2.26		2.04	2.04	2.37	2.14	-.38	1.38	2.28	2.42	2.55	2.63
31	2.25		2.01		2.36		-.71	1.45		2.42		2.63

Torrance and Santa Fe Counties

Estancia Valley.--The Estancia Valley irrigation area lies within a closed physiographic and structural basin east of the Sandia and Manzano Mountains in central New Mexico. The basin, about 25 miles wide from east to west, extends southward about 50 miles from the southern part of Santa Fe County into the south-central part of Torrance County. About 80 percent of the irrigated land is in Torrance County. The Estancia ground-water basin, about 1,482 square miles, was declared by the State Engineer on January 31, 1950. Water levels in observation wells have been measured periodically since 1941. In 1955 measurements were made in 115 observation

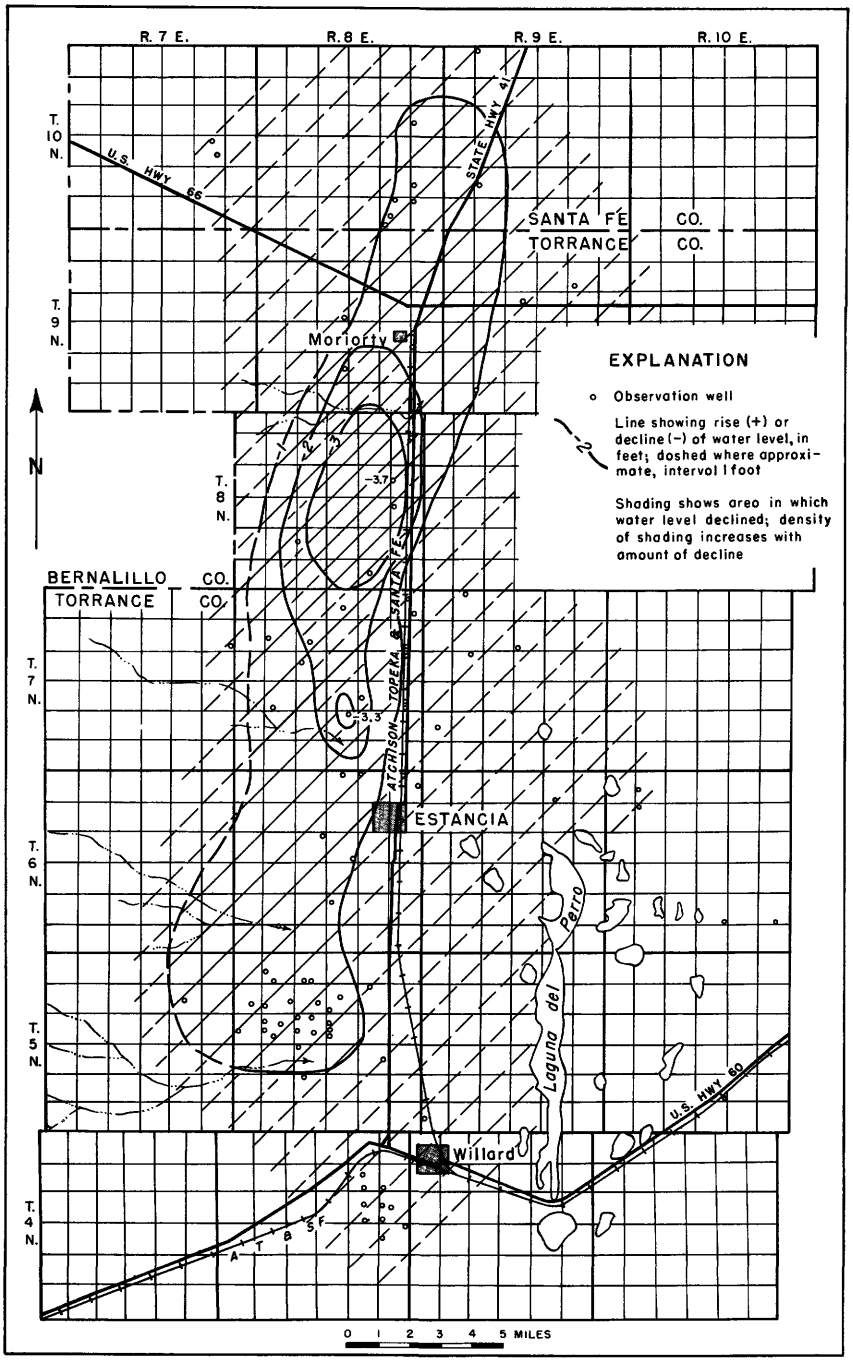

Figure 97. --Change in ground-water level from February 1955 to February 1956 in Estancia Valley, Torrance and Santa Fe Counties, N. Mex.

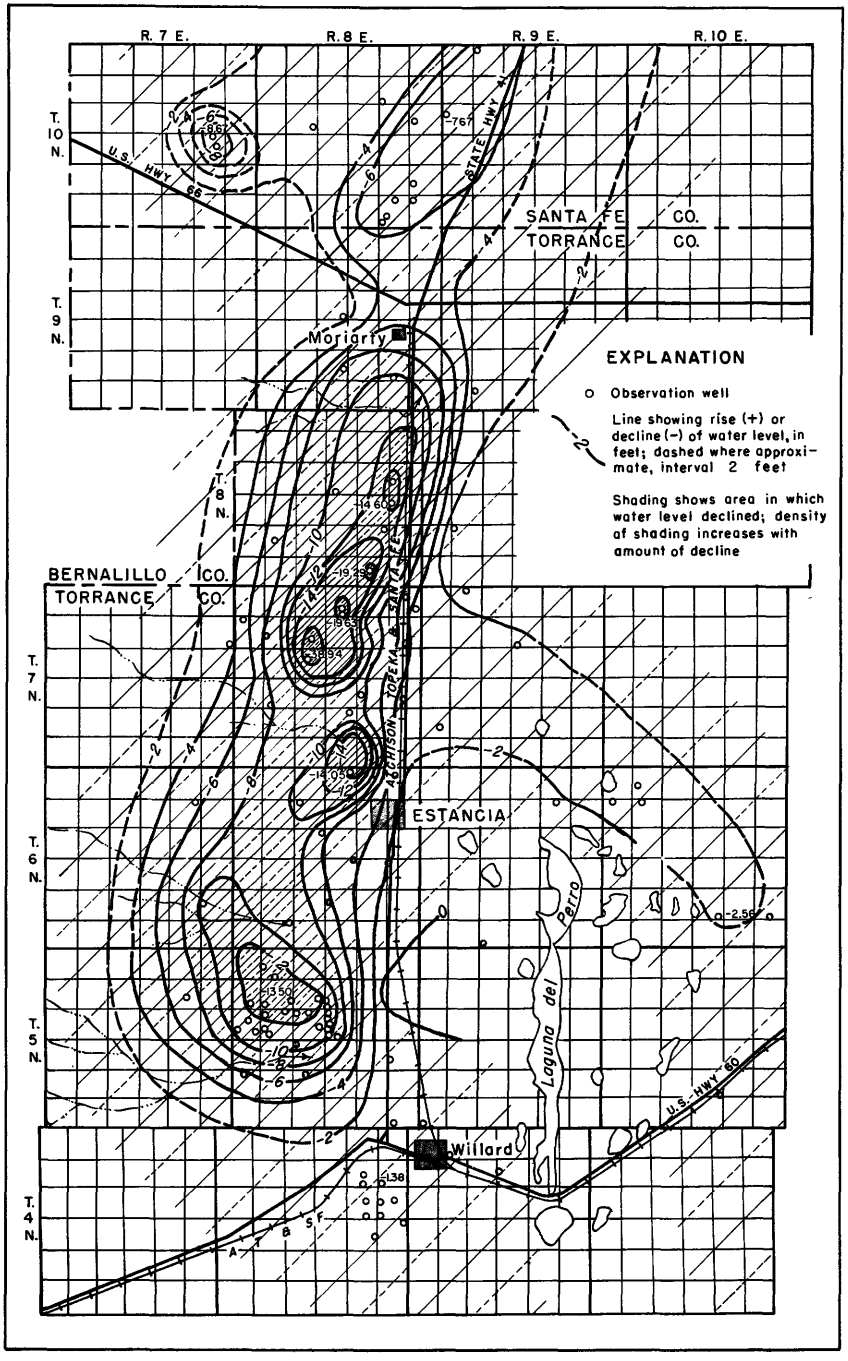

Figure 98. --Change in ground-water level from February 1950 to February 1955 in Estancia Valley, Torrance and Santa Fe Counties, N. Mex.

wells in February, about 39 of which were also measured in May, August, and November. A recording gage has been maintained on well 7. 8. 27. 221, about 3 miles northwest of Estancia, since 1945. The February measurements, not all of which are listed in this report, were used to prepare the map showing the net change in water level in 1955.

Precipitation within the drainage basin of the Estancia Valley is a source of recharge, either by direct penetration or by runoff from nearby mountains. The amount of ground water pumped for irrigation is governed largely by the amount, distribution, and intensity of precipitation, particularly during the growing season, April to September. Precipitation, as recorded by the U. S. Weather Bureau at 4 stations, ranged from about 40 to 75 percent of normal, averaging about 57 percent of normal. The precipitation at Estancia in the center of the area was 5. 21 inches, 7. 38 inches below normal; at McIntosh 9. 84 inches, 3. 40 inches below normal; at Mountainair 7. 97 inches, 7. 67 inches below normal; and at Tajique on the west edge of the valley 11. 88 inches, 7. 66 inches below normal. The records for 1955 thus indicate that the total recharge was probably less than average. An average of about 80 percent of the total precipitation in 1955 fell during the growing season.

A survey of irrigated lands in September 1955 indicated that about 25, 000 acres was irrigated (about 2, 000 acres more than in 1954) with about 36, 000 acre-feet of ground water from 221 wells. The declines in water levels in 1955 were smaller than in 1954, although the amount of precipitation received was less. Water levels declined more than 1 foot under about 144 square miles, more than 2 feet under about 38 square miles, and more than 3 feet under about 14 square miles. In comparison, like declines in 1954 occurred under 180, 37, and 19 square miles, respectively.

In 1955 the largest net decline, 3. 7 feet, was in an area about 10 miles north of Estancia. Southwest of Estancia, in an area where declines have been larger in previous years, water levels declined only about 1 foot. No appreciable change in levels was noted during 1955 in a small area southwest of Willard. Figure 97 shows the magnitude and areal extent of the changes in water levels in Estancia Valley from February 1955 to February 1956.

Water levels from February 1950 to February 1955 declined more than 2 feet under most of the area where ground water is used for irrigation. (See fig. 98.) A net decline of more than 19 feet occurred in a few wells in the heavily pumped area, about 5 to 7 miles north and north-northwest of Estancia. Water levels in 2 wells, about 5 miles north-northwest of Estancia, declined 35 to 39 feet during the 5-year period. However, these wells reflect unique conditions, as they were drilled into limestone cavities or solution channels and tap confined or partly confined water in a limestone of the Magdalena group which underlies the valley fill in that area. When the well was drilled, the artesian pressure caused the water level to rise about 53 feet to a point within 11 feet of the ground surface. Continued heavy pumping in this area caused the water levels to decline more rapidly than in areas in which artesian pressures were not encountered.

Torrance County

Estancia Valley

4. 8. 11. 233. R. B. Slease. Drilled unused water-table well in valley fill, diameter 14 inches. Highest water level 81. 31 below lsd, Feb. 15, May 2, 1951; lowest 83. 05 below lsd, Nov. 2, 1955. Records available: 1950-55. Feb. 3, 82. 50; Sept. 21, 82. 97; Nov. 2, 83. 05.

4. 8. 11. 433. R. B. Slease. Drilled unused water-table well in valley fill, diameter 16 inches, reported depth 180 feet, cased to 160. Highest water level 82. 93 below lsd, May 2, 1951; lowest 84. 88 below lsd, Sept. 21, 1955. Records available: 1950-55. Feb. 3, 84. 14; Sept. 21, 84. 88; Nov. 2, 84. 78.

4. 8. 12. 333. R. B. Slease. Drilled unused water-table well in valley fill, diameter 16 inches, reported depth 272 feet, cased to 212(?). Highest water level 70. 53 below lsd, Aug. 2, 1950; lowest 83. 43 below lsd, Aug. 21, 1954. Records available: 1950-55. Feb. 3, 72. 62; Sept. 21, 72. 55; Nov. 2, 72. 55.

4. 8. 13. 133. R. B. Slease. Drilled irrigation water-table well in valley fill, diameter 16 inches, reported depth 225 feet, cased to 197. Land-surface datum is 6, 140 feet above msl. Highest water level 79. 37 below lsd, Feb. 15, 1951; lowest 83. 65 below lsd, Aug. 21, 1954. Records available: 1949-55. Feb. 3, 80. 59; May 23, 115. 95, pumping, nearby well being pumped; Nov. 23, 81. 52.

4. 8. 13. 233. R. B. Slease. Drilled irrigation water-table well in valley fill, diameter 16 inches, reported depth 216 feet, cased to 216. Land-surface datum is 6, 130 feet above msl. Highest water level 70. 82 below lsd, Feb. 15, 1951; lowest 75. 46 below lsd, Aug. 7, 1952. Records available: 1950-55. Feb. 3, 72. 03; Nov. 2, 73. 06.

4.8.13.333. R. B. Slease. Drilled irrigation water-table well in valley fill, diameter 16 inches, reported depth 230 feet, cased to 230. Highest water level 79.62 below lsd, May 2, 1951; lowest 82.10 below lsd, Nov. 2, 1955. Records available: 1950-55. Feb. 3, 80.95; Sept. 21, 81.92; Nov. 2, 82.10.

4.8.14.233. R. B. Slease. Drilled unused water-table well in valley fill, diameter 16 inches. Highest water level 91.96 below lsd, Feb. 15, 1951; lowest 93.69 below lsd, Aug. 21, 1954. Records available: 1950-55. Feb. 3, 93.19; Nov. 2, 93.02.

4.8.14.433. R. B. Slease. Drilled unused water-table well in valley fill, diameter 16 inches, depth 211 feet, cased to 211(?). Highest water level 93.81 below lsd, May 19, 1950; lowest 95.97 below lsd, Nov. 2, 1955. Records available: 1950-55. Feb. 3, 95.06; Sept. 21, 95.94; Nov. 2, 95.97.

4.8.24.133. R. B. Slease. Drilled irrigation water-table well in valley fill, diameter 20 to 16 inches, reported depth 230 feet, cased to 100. Highest water level 84.46 below lsd, May 4, 1949; lowest 87.87 below lsd, Sept. 21, 1955. Records available: 1949-55. Feb. 3, 86.00; May 23, 86.26; Sept. 21, 87.87; Nov. 2, 113.60, pumping.

4.9.10.133. Homer Arnn. Drilled stock water-table well in valley fill, diameter 6 inches. Land-surface datum is 6,080 feet above msl. Highest water level 17.05 below lsd, May 2, 1951; lowest 18.46 below lsd, Oct. 25, 1948. Records available: 1941-55. Feb. 3, 17.87.

5.8.5.344. O. R. Ethridge. Drilled irrigation water-table well in valley fill, diameter 18 inches, reported depth 200 feet, cased to 118. Highest water level 51.14 below lsd, Feb. 18, 1947; lowest 75.22 below lsd, Sept. 23, 1955. Records available: 1947-55. Feb. 4, 69.12; May 23, 98.62, pumping; Sept. 23, 75.22.

5.8.8.424. A. T. Austin. Drilled irrigation water-table well in valley fill, diameter 20 inches, reported depth 204 feet, cased to 98. Highest water level 62.03 below lsd, Mar. 23, 1948; lowest 87.53 below lsd, Sept. 23, 1955. Records available: 1948-55. Feb. 4, 79.13; May 23, 82.32; Sept. 23, 87.53; Nov. 2, 84.87.

5.8.10.331a. Frank Craven. Drilled irrigation water-table well in valley fill, diameter 18 inches, reported depth 158 feet, cased to 91. Highest water level 19.79 below lsd, Mar. 22, 1948; lowest 43.41 below lsd, Sept. 23, 1955. Records available: 1947-55. Feb. 4, 34.64; May 23, 73.79, pumping, nearby well being pumped; Sept. 23, 43.41; Nov. 2, 41.12.

5.8.15.131. Joe Begley. Drilled irrigation water-table well in valley fill, diameter 16 inches, reported depth 125 feet, cased to 59. Highest water level 13.68 below lsd, May 8, 1945; lowest 46.40 below lsd, Sept. 22, 1955. Records available: 1945-55. Feb. 4, 30.09; May 23, 64.73, pumping; Sept. 22, 46.40; Nov. 2, 42.49.

5.8.17.113. Madison Davis. Drilled irrigation water-table well in valley fill, diameter 16 inches, reported depth 148 feet, cased to 59. Highest water level 43.29 below lsd, May 8, 1945; lowest 69.13 below lsd, Sept. 23, 1955. Records available: 1945-55. Feb. 4, 62.47; May 23, 65.33; Sept. 23, 69.13; Nov. 3, 66.42.

5.8.17.311a. Ray Brown. Drilled irrigation water-table well in valley fill. Highest water level 29.50 below lsd, Mar. 23, 1948; lowest 67.49 below lsd, Aug. 22, 1951. Records available: 1947-55. Feb. 4, 45.03, nearby well being pumped; Nov. 3, 48.21.

5.8.18.233. S. W. Hodgson. Drilled irrigation water-table well in valley fill, diameter 16 inches, reported depth 153 feet, cased to 80. Highest water level 38.69 below lsd, Feb. 18, 1947; lowest 58.34 below lsd, Aug. 17, 1953. Records available: 1946-55. Feb. 4, 54.86.

5.8.21.111. R. B. Ford. Drilled irrigation water-table well in valley fill, diameter 16 inches, reported depth 169 feet, cased to 60. Highest water level 27.23 below lsd, Feb. 18, 1947; lowest 46.60 below lsd, Nov. 2, 1955. Records available: 1946-55. Feb. 4, 43.56; May 23, 43.26; Sept. 2, 46.07; Nov. 2, 46.60.

5.8.24.311. E. B. Wallace. Drilled irrigation water-table well in valley fill, diameter 16 inches, reported depth 200 feet, cased to 150. Land-surface datum is 6,115 feet above msl. Highest water level 21.93 below lsd, Feb. 20, 1946; lowest 26.11 below lsd, May 28, 1952. Records available: 1946-55. Feb. 3, 23.99; May 23, 57.03, pumping; Nov. 2, 25.50.

5.9.31.331. Homer Arnn. Drilled unused water-table well in valley fill, diameter 24 inches, reported depth 210 feet, cased to 50. Land-surface datum is 6,108 feet above msl. Highest water level 32.12 below lsd, Nov. 2, 1950; lowest 34.10 below lsd, Feb. 13, 1941. Records available: 1941-55. Feb. 3, 33.63; May 23, 33.71; Sept. 21, 34.03; Nov. 2, 34.04.

6. 8. 1. 111. Pat Homan. Drilled unused water-table well in valley fill and Magdalena group, diameter 18 inches, reported depth 450 feet. Highest water level 21. 95 below lsd, Feb. 9, 1950; lowest 27. 68 below lsd, Aug. 10, 1948. Records available: 1948-55. Feb. 7, 25. 63; May 24, 25. 85; Sept. 23, 26. 30; Nov. 3, 26. 23.

6. 8. 3. 221. Ellison Timmins. Drilled unused water-table well in valley fill, diameter 18 to 20 inches, reported depth 195 feet, cased to 195. Land-surface datum is 6, 160 feet above msl. Highest water level 26. 09 below lsd, Apr. 8, Aug. 13, 1942; lowest 47. 80 below lsd, Sept. 23, 1955. Records available: 1941-55. Feb. 7, 43. 52; May 24, 45. 62; Sept. 23, 47. 80; Nov. 3, 46. 82.

6. 8. 15. 444. Estancia Cemetery. Drilled irrigation water-table well in valley fill. Land-surface datum is 6, 155 feet above msl. Highest water level 29. 90 below lsd, June 18, 1943; lowest 36. 65 below lsd, Nov. 3, 1955. Records available: 1941-55. Feb. 4, 35. 29; May 24, 35. 42; Sept. 23, 36. 34; Nov. 3, 36. 65.

6. 8. 27. 134. R. M. Spruill. Drilled stock water-table well in valley fill, diameter 6 inches, reported depth 100 feet, cased to 100. Land-surface datum is 6, 164 feet above msl. Highest water level 19. 47 below lsd, Apr. 8, 1942; lowest 34. 79 below lsd, Nov. 19, 1952. Records available: 1941-55. Feb. 4, 27. 96; May 24, 29. 09.

6. 8. 32. 212. O. R. Ethridge. Drilled irrigation water-table well in valley fill, diameter 18 inches, reported depth 209 feet, cased to 84. Highest water level 23. 22 below lsd, Feb. 18, 1947; lowest 36. 50 below lsd, Sept. 23, 1955. Records available: 1947-55. Feb. 4, 34. 62; May 24, 74. 56, pumping; Sept. 23, 36. 50; Nov. 3, 36. 23.

6. 9. 11. 211. H. E. Means. Drilled irrigation water-table well in valley fill, diameter 18 inches, reported depth 148 feet. Highest water level 5. 07 below lsd, May 4, 1949; lowest 9. 65 below lsd, Nov. 2, 1955. Records available: 1949-55. Feb. 2, 7. 78; May 24, 9. 25; Nov. 2, 9. 65.

6. 10. 5. 312. Berkshire Bros. Drilled unused water-table well in valley fill(?), diameter 16 inches, reported depth 186 feet. Highest water level 6. 18 below lsd, Aug. 22, 1951; lowest 11. 04 below lsd, Feb. 16, 1949. Records available: 1949-55. May 24, 10. 57. Measurement discontinued.

6. 10. 5. 312a. Berkshire Bros. Drilled irrigation water-table well in valley fill(?), diameter 20 inches. Highest water level 11. 54 below lsd, Feb. 8, 1950; lowest 17. 10 below lsd, May 26, 1953. Records available: 1950-55. Feb. 2, 13. 62; May 24, 14. 48; Nov. 2, 15. 33.

6. 10. 7. 112. Owner unknown. Stock water-table well in valley fill, diameter 6 inches. Land-surface datum is 6, 080 feet above msl. Highest water level 5. 74 below lsd, Feb. 16, 1949; lowest 11. 68 below lsd, May 27, 1952. Records available: 1949-55. Feb. 2, 8. 40, pumping; May 24, 9. 43, pumping; Nov. 4, 9. 78.

6. 10. 8. 112. J. M. Milburn & Son. Drilled irrigation water-table well in valley fill, diameter 16 inches, reported depth 169 feet, cased to 73. Highest water level 7. 90 below lsd, Sept. 2, 1948; lowest 15. 83 below lsd, Aug. 22, 1951. Records available: 1948-55. Feb. 2, 11. 19; May 24, 12. 10; Nov. 4, 12. 04.

7. 7. 12. 444. C. B. Roland. Drilled carbon dioxide test water-table(?) well in Magdalena group, diameter 7 inches, reported depth 1, 359 feet, cased to 60. Land-surface datum is 6, 349 feet above msl. Highest water level 41. 37 below lsd, Feb. 19, 1947; lowest 48. 96 below lsd, Sept. 23, 1955. Records available: 1941-55. Feb. 7, 48. 21; May 24, 48. 37; Sept. 23, 48. 96; Nov. 3, 48. 56.

7. 8. 1. 231. Myrtle Homan Estate. Drilled stock water-table well in valley fill, diameter 8 inches, reported depth 56 feet, cased to 20. Land-surface datum is 6, 142 feet above msl. Highest water level 25. 10 below lsd, Feb. 20, 1947; lowest 34. 20 below lsd, Nov. 4, 1955. Records available: 1941-55. Feb. 2, 32. 93; May 24, 33. 41; Sept. 23, 33. 72; Nov. 4, 34. 20.

7. 8. 12. 433a. Arthur Schmidt. Drilled unused water-table well in valley fill, diameter 12 inches, reported depth 103 feet. Highest water level 21. 09 below lsd, Feb. 15, 1951; lowest 30. 37 below lsd, Aug. 23, 1951. Records available: 1947-55. Feb. 2, 27. 70.

7. 8. 13. 212. H. J. Austin, owner; lessee, Amos Turner. Drilled irrigation well. Highest water level 27. 72 below lsd, Feb. 2, 1955; lowest 57. 17 below lsd, Sept. 13, 1955. Records available: 1954-55. Feb. 2, 27. 72; May 24, 68. 70, pumping; Sept. 13, 57. 17; Nov. 3, 34. 30.

7. 8. 24. 431. R. T. Floyd. Drilled irrigation water-table well in valley fill, diameter 12 inches, reported depth 300 feet. Highest water level 21. 77 below lsd, May 28, 1947; lowest 38. 30 below lsd, Sept. 23, 1955. Records available: 1947-55. Feb. 2, 25. 65; May 24, 75. 16, pumping; Sept. 23, 38. 30; Nov. 3, 29. 68.

7.8.27.221. F. C. Pace. Drilled unused water-table well in valley fill, diameter 6 inches. Land-surface datum is 6,185 feet above msl. Highest water level 19.06 below lsd, May 7-10, 1947; lowest 35.49 below lsd, Oct. 1, 1955. Records available: 1941-55.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	28.85	h28.48	28.43	28.12	28.39	31.13	.....	.....	.....	35.49	34.28	33.43
2	28.82	28.46	28.40	28.02	28.45	31.24	.....	.....	.....	35.47	34.29	33.42
3	28.82	28.47	28.37	28.05	28.53	31.34	.....	.....	.....	35.44	.....	33.41
4	28.80	28.47	28.37	28.09	28.61	31.43	.....	.....	.....	35.40	34.16	33.38
5	28.81	28.43	28.37	28.05	28.63	31.54	.....	.....	.....	35.36	34.17	33.33
6	28.79	28.45	28.38	28.07	28.65	31.58	.....	.....	.....	35.33	34.16	33.28
7	28.77	28.49	28.38	28.04	28.68	31.65	.....	.....	.....	35.28	34.16	33.27
8	28.76	28.51	28.35	28.03	28.74	.....	.....	.....	.....	35.23	34.13	33.19
9	28.76	28.50	28.31	28.05	28.80	.....	.....	.....	.....	35.18	34.09	33.17
10	28.75	28.52	28.31	28.01	28.89	.....	.....	.....	.....	35.15	34.07	33.16
11	28.74	28.58	28.31	27.98	28.97	.....	.....	.....	.....	35.11	34.06	33.10
12	28.75	28.55	28.30	28.00	29.06	.....	.....	.....	.....	35.07	34.05	33.05
13	28.71	28.56	28.29	28.01	29.15	.....	.....	.....	.....	e35.02	34.00	e33.03
14	28.71	28.54	28.27	28.00	29.22	.....	.....	.....	35.14	e34.92	34.00	e32.99
15	28.70	28.51	28.27	28.00	29.29	.....	.....	.....	.....	34.86	34.00	32.93
16	28.67	28.52	28.29	28.00	29.37	.....	.....	.....	.....	34.82	33.96	32.88
17	28.67	28.47	28.29	27.96	29.46	.....	.....	.....	.....	34.76	33.95	32.87
18	28.69	28.44	28.23	27.90	29.59	.....	.....	.....	.....	34.72	33.94	32.86
19	28.63	28.51	28.20	27.96	29.74	.....	.....	.....	.....	34.71	33.88	32.83
20	28.64	28.50	28.19	27.99	29.83	.....	.....	.....	.....	34.70	33.83	32.79
21	28.63	28.49	28.24	27.96	29.91	.....	.....	.....	35.23	34.68	33.81	32.74
22	28.62	28.46	28.20	28.00	29.99	.....	.....	.....	35.25	34.66	33.79	32.70
23	28.61	28.46	28.19	28.00	30.10	.....	.....	.....	35.27	34.65	33.76	32.69
24	28.62	28.46	28.16	28.06	30.16	.....	.....	.....	35.29	34.61	33.73	32.73
25	28.60	28.43	28.15	28.09	30.24	.....	.....	.....	35.33	34.57	33.66	32.73
26	28.62	28.45	28.21	28.12	30.37	.....	.....	.....	35.35	34.51	33.64	32.68
27	28.60	28.43	28.14	28.16	30.49	.....	.....	.....	35.38	34.48	33.60	32.66
28	28.60	28.44	28.15	28.24	30.63	.....	.....	.....	35.41	34.44	33.58	32.67
29	28.59		28.15	28.27	30.76	.....	.....	.....	35.43	34.38	33.55	32.75
30	28.56		28.12	28.34	30.87	.....	.....	.....	35.46	34.33	33.48	32.75
31	28.53		28.13		31.00		.....	.....		34.30		32.67

e Estimated.
h Tape measurement.

7.8.34.222. Lilburn Homan. Drilled irrigation water-table well in valley fill, diameter 18 inches, reported depth 129 feet, cased to 109. Highest water level 18.51 below lsd, May 29, 1947; lowest 38.93 below lsd, Feb. 25, 1954. Records available: 1947-54. Measurement discontinued.

8.8.12.212. Lawrence Groff. Drilled irrigation water-table well in valley fill, diameter 20 inches, reported depth 180 feet. Highest water level 29.74 below lsd, May 20, 1948; lowest 51.42 below lsd, Sept. 26, 1955. Records available: 1948-55. Feb. 2, 43.67; Sept. 26, 51.42; Nov. 3, 48.47.

8.8.15.343. Ed. W. Davis. Dug stock and domestic water-table well in valley fill, reported depth 102 feet. Highest water level 97.00 below lsd, Feb. 23, 1950; lowest 107.25 below lsd, Feb. 5, 1955. Records available: 1950-55. Feb. 5, 107.25. Measurement discontinued.

8.8.26.222. Owner unknown. Drilled stock water-table well in valley fill, depth 20 feet. Land-surface datum is 6,188 feet above msl. Highest water level 6.50 below lsd, Sept. 6, 1946; lowest 23.09 below lsd, Sept. 26, 1955. Records available: 1941-55. Feb. 5, 20.97; May 24, 22.18, pumping; Sept. 26, 23.09; Nov. 3, 23.54, pumping.

8.8.28.311. Cecil Thomas. Drilled irrigation water-table well in valley fill, diameter 16 inches, reported depth 275 feet, cased to 154. Highest water level 134.53 below lsd, Feb. 13, 1952; lowest 160.29 below lsd, Aug. 22, 1954. Records available: 1951-55. Feb. 5, 143.41; May 24, 148.26; Sept. 26, 160.14; Nov. 3, 154.37.

8.8.35.322. A. C. Hibner. Drilled irrigation water-table well in valley fill(?), diameter 16 inches, reported depth 228 feet, cased to 110. Land-surface datum is 6,240 feet above msl. Highest water level 50.12 below lsd, May 28, 1947; lowest 80.14 below lsd, Sept. 26, 1955. Records available: 1947-55. Feb. 5, 74.22; May 24, 78.81, pumped recently; Sept. 26, 80.14; Nov. 4, 79.20.

9.8.11.233. Manuel Lujan. Drilled irrigation water-table well in valley fill(?), reported depth 320 feet. Highest water level 56.80 below lsd, May 20, 1948; lowest 64.04 below lsd, Aug. 19, 1952. Records available: 1948-55. May 24, 105.20, pumping. Measurement discontinued.

9.9.32.131a. G. L. Dean. Drilled unused water-table well in valley fill(?), diameter 10 inches, reported depth 72 feet. Highest water level 5.70 below lsd, Feb. 20, 1947; lowest 12.00 below lsd, Sept. 26, 1955. Records available: 1943-55. Feb. 2, 10.35; May 24, 10.85; Sept. 26, 12.00; Nov. 4, 11.73.

Santa Fe County

Estancia Valley

10.7.23.212. G. F. Mosley. Drilled irrigation water-table(?) well in Magdalena(?) group, diameter 12 inches, reported depth 200 feet. Highest water level 137.18 below lsd, Feb. 17, 1949; lowest 148.20 below lsd, Nov. 5, 1954. Records available: 1948-55. Feb. 6, 146.20.

10.8.13.133. W. R. Irby. Drilled irrigation water-table well in valley fill, reported depth 518 feet. Highest water level 86.75 below lsd, Feb. 22, 1950; lowest 99.85 below lsd, Sept. 26, 1955. Records available: 1950-55. Feb. 6, 93.45; May 31, 100.83, pumped recently; Sept. 26, 99.83; Nov. 4, 97.20.

10.8.17.424. Kenneth Martin. Drilled unused water-table well in valley fill, diameter 6 inches, reported depth 150 feet. Highest water level 135.44 below lsd, May 3, 1949; lowest 140.13 below lsd, Nov. 20, 1951. Records available: 1949-55. Feb. 6, 138.68; May 31, 139.55. Measurement discontinued.

10.8.25.311. Floyd Irvin. Drilled irrigation water-table well in valley fill(?), diameter 16 inches, reported depth 238 feet, cased to 40. Highest water level 72.85 below lsd, Feb. 17, 1949; lowest 91.84 below lsd, Aug. 28, 1954. Records available: 1948-55. Feb. 5, 80.71; May 24, 91.14, nearby well being pumped; Sept. 26, 90.79; Nov. 4, 88.15.

10.8.35.312. Valley Irrigation Co. Drilled irrigation water-table well in valley fill. Highest water level 65.19 below lsd, May 20, 1948; lowest 81.40 below lsd, Sept. 26, 1955. Records available: 1948-55. Feb. 5, 72.47; Sept. 26, 81.40; Nov. 4, 80.06.

10.8.35.331. Valley Irrigation Co. Drilled irrigation water-table well in valley fill. Highest water level 65.12 below lsd, Feb. 7, 1950; lowest 82.18 below lsd, Sept. 26, 1955. Records available: 1948-55. Feb. 5, 71.70; May 24, 95.40, pumping; Sept. 26, 82.18; Nov. 4, 95.00, pumping.

10.8.36.111. Valley Irrigation Co. Drilled irrigation water-table well in Glorieta(?) sandstone, diameter 13 inches, reported depth 309 feet, cased to 231. Highest water level 34.91 below lsd, Sept. 15, 1947, Mar. 25, 1948; lowest 54.90 below lsd, Aug. 19, 1953. Records available: 1947-55. Feb. 5, 44.07; Sept. 26, 53.90; Nov. 4, 51.30.

10.9.29.130. Glen Terry. Drilled irrigation water-table well in Glorieta sandstone, diameter 14 inches, reported depth 200 feet, cased to 140. Highest water level 55.13 below lsd, Feb. 18, 1949; lowest 69.49 below lsd, Sept. 26, 1955. Records available: 1949-55. Feb. 6, 62.98; May 31, 69.18, nearby well being pumped; Sept. 26, 69.49; Nov. 4, 66.68.

Valencia County

Grants-Bluewater area.--The Grants-Bluewater area in north-central Valencia County is on the northeast flank of the Zuni Mountains about 80 miles west of Albuquerque. Water from the Bluewater-Toltec Reservoir has not been used for irrigation since 1952; consequently, irrigation is exclusively with ground water. The observation-well program was begun in 1946 in order to record the fluctuation of water levels. In 1955, measurements were made in 33 wells in February and in 25 bimonthly. About 133 measurements were made in 1955. A recording gage has been maintained since 1946 on well 12.11.9.222, about 2.5 miles north-northwest of Bluewater. The net changes in levels are determined by comparing measurements made in February of each year when most irrigation wells in the area have been idle for at least 3 months. The seasonal water-level fluctuations due to pumping are reflected in the bimonthly measurements.

Precipitation in 1955 was 7.34 inches at Bluewater; 2.76 inches below normal, and 8.43 inches at Grants. (A "normal" has not been established for precipitation at Grants.) About 80 to 90 percent of the precipitation in 1955 occurred during the growing season, April to September.

It is estimated that somewhat less acreage was irrigated in 1955 than the 1954 total of 5,000 acres. The pumpage of ground water for irrigation in 1955, on the basis of electric-power records for 22 irrigation wells and pump ratings, was less than in 1954. It is estimated that about 11,500 acre-feet was pumped in 1955, a decrease of 1,100 acre-feet from 1954.

Water levels in observation wells reached record lows throughout the area in 1955, the average declines being 3.8 feet. The decline in the area north of Bluewater to the county line was from 2 to 5 feet. In the area southeast of Bluewater to Grants, water levels showed a net decline of from 2 to 6 feet. The water level in well 12.11.9.222 (equipped with a recording gage) declined steadily from 160 feet in mid-February 1955 until June 20, when it reached a record low of 183. The water level rose from 170.1 on December 6, reaching 165.8 in February 1956.

A new industrial well was drilled for the Anaconda Copper Co. in sec. 24, T. 12 N., R. 11 E., to a depth of 386 feet in the San Andres formation.

Grants-Bluewater Area

10.8.26.324. Santa Fe Ry. Drilled industrial water-table well in alluvium, diameter 14 to 12 inches, depth 178 feet. Land-surface datum is 6,150 feet above msl. Highest water level 21.41 below lsd, Apr. 15, 1953; lowest 21.86 below lsd, Dec. 1, 1954. Records available: 1952-55. Feb. 9, 21.70; Apr. 11, 21.62; June 13, 21.67; Aug. 9, 21.72; Oct. 10, 21.79; Dec. 6, 21.75.

10.9.26.224. Robert Gottlieb. Drilled stock water-table well in basalt, diameter 6 inches, depth 100 feet. Land-surface datum is 6,274.97 feet above msl. Highest water level 7.79 below lsd, Aug. 26, 1954; lowest 9.00 below lsd, Feb. 9, 1955. Records available: 1946-55. Feb. 9, 9.00; Apr. 11, 9.06, pumped recently; June 13, 8.99, pumped recently; Dec. 6, 9.05, pumped recently.

10.10.26.331. Monico Mirabal. Drilled irrigation well in Glorieta sandstone, diameter 16 inches, depth 216 feet. Highest water level 22.18 below lsd, Feb. 21, 1952; lowest 25.34 below lsd, Aug. 10, Dec. 6, 1955. Records available: 1952-55. Feb. 10, 24.25, pumped recently; Apr. 15, 58.24, pumping; June 15, 49.50, pumping; Aug. 10, 25.34; Dec. 6, 25.34.

11.10.4.111. Buford Yarbo. Drilled unused water-table well in alluvium of Quaternary age, diameter 12 inches, depth 118 feet. Highest water level 67.68 below lsd, May 10, 1946; lowest 86.63 below lsd, Aug. 16, 1951. Records available: 1946-55. Feb. 10, 83.77; Apr. 15, 83.40. Measurement discontinued.

11.10.4.211. J. Church Co. Drilled irrigation artesian well in San Andres formation, diameter 16 inches, depth 150 feet. Highest water level 57.97 below lsd, Feb. 26, 1946; lowest 87.08 below lsd, Oct. 11, 1955. Records available: 1946-55. Feb. 10, 79.79; Apr. 15, 79.88; Oct. 11, 87.08; Dec. 7, 85.14.

11.10.4.222. J. Church Co. Drilled domestic water-table well in alluvium of Quaternary age, diameter 6 inches, depth 94 feet. Highest water level 58.70 below lsd, May 10, 1946; lowest 75.61 below lsd, Aug. 10, 1955. Records available: 1946-55. Feb. 10, 74.20; Apr. 15, 74.60; Aug. 10, 75.61.

11.10.8.222. Salvador Milan. Drilled irrigation artesian well in San Andres formation, diameter 16 inches, depth 165 feet. Highest water level 57.85 below lsd, Feb. 27, 1946; lowest 89.06 below lsd, Oct. 8, 1953. Records available: 1946-55. Feb. 10, 78.20; Apr. 15, 80.97, pumping; June 15, 92.79, pumping; Aug. 10, 92.53, pumping; Oct. 11, 86.23; Dec. 7, 83.16.

11.10.9.222. A. R. Card. Drilled irrigation artesian well in San Andres formation, diameter 20 inches, depth 480 feet. Highest water level 54.49 below lsd, Feb. 26, 1946; lowest 81.08 below lsd, June 15, 1955. Records available: 1946-55. Feb. 11, 73.04; June 15, 81.08; Oct. 11, 80.13; Dec. 7, 77.63.

11.10.16.121. Adams & Peterson. Drilled irrigation artesian well in San Andres formation, diameter 16 inches, depth 155 feet. Highest water level 46.47 below lsd, Feb. 27, 1946; lowest 86.11 below lsd, Aug. 31, 1954. Records available: 1946-55. Feb. 10, 64.71; Apr. 15, 64.66; June 15, 72.82; Oct. 10, 71.80; Dec. 7, 69.36.

11.10.26.411. City of Grants. Drilled public-supply water-table well in alluvium of Quaternary age, diameter 16 inches, depth 110 feet. Highest water level 7.40 below lsd, Mar. 11, 1947; lowest 26.18 below lsd, Aug. 10, 1955. Records available: 1946-55. Feb. 12, 18.24, pumped recently; Apr. 15, 16.95, pumped recently; June 15, 21.60, nearby well being pumped; Aug. 10, 26.18; Oct. 10, 25.90.

11. 10. 27. 242. Ice Plant. West of Grants. Drilled industrial water-table well, diameter 16 inches. Highest water level 19. 86 below lsd, Feb. 20, 1953; lowest 26. 31 below lsd, June 15, 1955. Records available: 1953-55. Feb. 10, 22. 28; Apr. 15, 21. 60; June 15, 26. 31; Dec. 7, 26. 08.

11. 10. 27. 410. McMain. Drilled unused water-table well in alluvium and basalt of Quaternary age, diameter 9 inches, depth 50 feet. Highest water level 35. 54 below lsd, Mar. 11, 1947; lowest 47. 50 below lsd, Oct. 10, 1955. Records available: 1946-55. Feb. 10, 42. 16; Apr. 15, 41. 40; June 15, 44. 80; Aug. 10, 46. 72; Oct. 10, 47. 50; Dec. 6, 45. 97.

12. 10. 29. 434. A. R. Card. Drilled unused artesian well in San Andres formation, diameter 18 inches, depth 205 feet. Highest water level 65. 46 below lsd, Oct. 14, 1944; lowest 98. 76 below lsd, June 11, 1954. Records available: 1944, 1946-55. Feb. 10, 91. 33; Apr. 15, 98. 74, nearby well being pumped; June 15, 98. 94, nearby well being pumped; Aug. 10, 98. 86, nearby well being pumped; Oct. 10, 97. 99, nearby well pumped recently; Dec. 7, 95. 49.

12. 10. 30. 242. Jack Freas. Drilled domestic water-table well in alluvium of Quaternary age, diameter 4 inches, depth 160 feet. Highest water level 88. 45 below lsd, May 10, 1946; lowest 112. 32 below lsd, June 15, 1955. Records available: 1946-55. Feb. 11, 106. 72; Apr. 15, 106. 41; June 15, 112. 32.

12. 10. 30. 412. Fred Freas. Drilled irrigation artesian well in San Andres formation, diameter 16 inches, depth 225 feet. Highest water level 90. 04 below lsd, Feb. 26, 1946; lowest 113. 21 below lsd, Dec. 17, 1953. Records available: 1946-55. Feb. 10, 112. 13; Apr. 14, 112. 06; June 15, 111. 57, measurement uncertain; Dec. 7, 112. 52.

12. 10. 30. 421. Milton Harding. Drilled irrigation artesian well in San Andres formation, diameter 16 inches, depth 245 feet. Highest water level 88. 38 below lsd, Feb. 26, 1946; lowest 124. 00 below lsd, Aug. 10, 1955. Records available: 1946-55. Feb. 10, 110. 32; Apr. 14, 110. 26; June 15, 123. 65; Aug. 10, 124. 00; Oct. 11, 119. 35, nearby well being pumped; Dec. 7, 115. 60.

12. 10. 32. 111. J. Church Co. Drilled irrigation artesian well in San Andres formation, diameter 20 inches, depth 253 feet. Highest water level 82. 09 below lsd, Feb. 26, 1946; lowest 112. 90 below lsd, Oct. 11, 1955. Records available: 1946-55. Oct. 11, 112. 90; Dec. 7, 109. 05.

12. 11. 5. 413. J. Church Co. Drilled unused artesian well in San Andres(?) formation, diameter 8 inches, depth 357 feet. Highest water level 183. 46 below lsd, Oct. 12, 1949; lowest 249. 54 below lsd, Aug. 27, 1954. Records available: 1948-55. Feb. 11, 225. 65; Apr. 14, 224. 20; June 14, 246. 13; Aug. 9, 246. 11; Oct. 10, 243. 60; Dec. 6, 235. 90.

12. 11. 9. 114a. J. Church Co. Drilled unused artesian well in San Andres(?) formation, diameter 16 inches, depth 523 feet. Highest water level 123. 30 below lsd, Aug. 19, 1949; lowest 175. 35 below lsd, Aug. 14, 1951. Records available: 1948-55. Feb. 11, 163. 95; Apr. 14, 165. 86; June 14, 172. 41; Aug. 9, 171. 81; Oct. 10, 172. 44; Dec. 6, 167. 62.

12. 11. 9. 222. J. Church Co. Drilled unused water-table well in San Andres(?) formation, diameter 18 inches, depth 500 feet. Highest water level 115. 70 below lsd, Feb. 27, 1946; lowest 183. 06 below lsd, June 20, 1955. Records available: 1946-55.

Daily highest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	161. 62	.....	159. 20	e158. 20	.....	.....	180. 08	.....	177. 47	179. 91	174. 00	170. 45
2	161. 56	.....	159. 20	e158. 20	.....	.....	179. 80	.....	177. 66	.....	174. 00	170. 33
3	161. 56	.....	159. 26	e158. 20	.....	.....	.....	.....	177. 97	.....	173. 81	170. 43
4	161. 54	.....	159. 24	e158. 20	.....	.....	.....	.....	178. 19	.....	173. 65	170. 39
5	161. 54	.....	159. 12	e158. 20	.....	.....	.....	.....	178. 34	.....	173. 46	170. 18
6	161. 47	.....	159. 04	e158. 20	.....	.....	.....	.....	178. 13	.....	173. 34	170. 08
7	161. 38	.....	159. 01	e158. 20	.....	.....	.....	.....	178. 05	.....	173. 19	170. 05
8	161. 29	.....	159. 01	e158. 20	.....	.....	.....	.....	178. 30	.....	173. 08	170. 15
9	161. 30	.....	159. 00	.....	.....	.....	.....	h181. 82	178. 64	.....	172. 85	169. 86
10	161. 24	.....	158. 98	.....	.....	.....	.....	181. 28	179. 12	h178. 68	172. 62	169. 82
11	161. 24	.....	158. 88	.....	.....	.....	.....	181. 71	179. 52	.....	172. 50	169. 76
12	161. 26	.....	158. 88	e158. 38	.....	.....	.....	181. 65	179. 69	.....	172. 43	169. 59
13	161. 14	.....	158. 84	e158. 38	.....	.....	.....	181. 66	180. 50	178. 51	172. 37	169. 45
14	161. 09	159. 94	158. 82	e158. 38	.....	182. 13	.....	181. 04	181. 31	178. 40	172. 18	169. 45
15	161. 05	159. 85	158. 80	161. 35	.....	182. 02	.....	181. 04	181. 73	178. 02	172. 11	169. 30
16	160. 85	159. 84	158. 66	161. 91	.....	182. 37	.....	181. 15	181. 11	177. 73	172. 10	169. 03
17	160. 83	159. 62	158. 57	162. 91	.....	182. 48	.....	181. 28	181. 32	177. 47	171. 99	168. 98
18	160. 83	159. 46	158. 60	163. 68	.....	181. 82	.....	181. 24	180. 69	177. 24	171. 99	168. 99
19	160. 78	159. 52	158. 66	164. 19	.....	182. 21	.....	181. 27	179. 86	177. 00	171. 89	169. 00
20	160. 74	159. 56	158. 63	164. 89	.....	183. 06	.....	180. 91	179. 63	176. 82	171. 65	168. 00

12. 11. 9. 222--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
21	160. 74	159. 52	158. 61	.....	.....	e183. 06	.....	180. 21	179. 80	176. 59	171. 41	168. 74
22	160. 71	159. 42	158. 55	.....	.....	182. 96	.....	179. 69	180. 10	176. 38	171. 39	168. 54
23	160. 71	159. 41	158. 57	.....	.....	e182. 80	.....	179. 22	180. 31	176. 24	171. 34	168. 44
24	.....	159. 36	158. 53	.....	.....	182. 61	.....	179. 13	180. 23	175. 95	171. 25	168. 43
25	.....	159. 36	158. 53	.....	.....	e182. 36	.....	179. 20	180. 15	175. 53	171. 19	168. 41
26	.....	159. 36	158. 50	.....	.....	e182. 42	.....	179. 19	180. 07	175. 19	171. 00	168. 30
27	.....	159. 27	158. 41	.....	.....	182. 06	.....	179. 18	180. 03	174. 97	170. 94	168. 15
28	.....	159. 25	158. 41	.....	.....	181. 70	.....	178. 71	179. 95	174. 78	170. 81	168. 10
29	.....		158. 38	.....	.....	181. 31	.....	178. 31	179. 86	174. 61	170. 67	168. 09
30	.....		158. 19	.....	.....	180. 68	.....	178. 00	179. 73	174. 37	170. 58	168. 08
31	.....		158. 20		.....		.....	177. 62		174. 12		167. 88

e Estimated.

h Tape measurement.

12. 11. 9. 424. George Rowley. Drilled unused artesian well in San Andres formation, diameter 16 inches, depth 505 feet. Highest water level 93. 75 below lsd, May 10, 1946; lowest 130. 42 below lsd, Dec. 7, 1955. Records available: 1946-55. Feb. 11, 123. 81; Apr. 14, 123. 74; Oct. 10, 126. 27; Dec. 7, 130. 42.

12. 11. 14. 213. Dyan Berryhill. Drilled unused water-table well in alluvium of Quaternary age, diameter 4 inches, depth 130 feet. Highest water level 98. 26 below lsd, Feb. 8, 1950; lowest 101. 39 below lsd, June 10, 1954. Records available: 1949-55. Feb. 11, 101. 16; Apr. 14, 101. 14; June 14, 101. 34; Aug. 9, 101. 38; Oct. 10, 101. 10; Dec. 6, 100. 84.

12. 11. 15. 341. Edward Freas. Drilled irrigation artesian well in San Andres formation, diameter 14 inches, depth 457 feet. Highest water level 99. 78 below lsd, Oct. 12, 1949; lowest 161. 53 below lsd, June 14, 1955. Records available: 1946-55. Feb. 11, 137. 05; Apr. 14, 141. 53; June 14, 161. 53; Aug. 9, 161. 00; Oct. 10, 156. 60; Dec. 7, 148. 18.

12. 11. 20. 424. J. F. Nielson. Drilled stock artesian well in San Andres formation, diameter 18 inches, depth 310 feet. Highest water level 236. 29 below lsd, Oct. 12, 1949; lowest 275. 86 below lsd, Oct. 11, 1955. Records available: 1946-55. Feb. 11, 265. 59, pumped recently; Apr. 14, 261. 35; June 14, 273. 02; Aug. 10, 274. 18; Oct. 11, 275. 86.

12. 11. 23. 233. Harmon & Read. Drilled domestic artesian well in San Andres formation, diameter 8 inches, depth 300 feet. Highest water level 67. 17 below lsd, June 25, 1952; lowest 71. 69 below lsd, June 10, 1954. Records available: 1946-54. Measurement discontinued.

12. 11. 24. 411. Anaconda Copper Co. Drilled industrial well in limestone member of San Andres formation, diameter 14 to 12 inches, depth 357 feet, cased to 357, perforations 249-357. Land-surface datum is 6, 612. 96 feet above msl. Highest water level 149. 31 below lsd, Feb. 18, 1953; lowest 167. 55 below lsd, June 15, 1954. Records available: 1952-55. Feb. 11, 155. 32, pumping; Apr. 15, 154. 87, pumping.

12. 11. 25. 223. J. C. Church. Drilled irrigation artesian well in San Andres formation, diameter 18 inches, depth 238 feet. Highest water level 100. 18 below lsd, Feb. 27, 1946; lowest 129. 95 below lsd, Oct. 8, 1953. Records available: 1946-55. Feb. 11, 123. 28; Apr. 14, 122. 76; June 14, 137. 05, pumping; Oct. 10, 132. 37, pumped recently; Dec. 7, 128. 53.

12. 11. 25. 223a. J. C. Church. Drilled irrigation artesian well in San Andres formation, diameter 18 inches, depth 236 feet. Highest water level 106. 82 below lsd, Feb. 3, 1947; lowest 131. 28 below lsd, Oct. 6, 1953. Records available: 1946-55. Feb. 11, 124. 41; Apr. 14, 123. 83; Dec. 7, 128. 91.

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