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WATER LEVELS AND ARTESIAN PRESSURE IN OBSERVATION WELLS IN THE UNITED STATES IN 1942

PART 3. NORTH-CENTRAL STATES

BY

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and others

Prepared in cooperation with the States of
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Part 3. NORTH-CENTRAL STATES

INTRODUCTION

By O. E. Meinzer and L. K. Wenzel

The rock formations of the earth are great natural reservoirs in which a part of the water derived from rain and snow is stored to supply wells and springs and to maintain the flow of streams during periods of fair weather. Water levels in wells register the stages of these natural reservoirs; they show the extent to which water supplies are depleted by drought or by heavy pumping for public waterworks, for irrigation, or for industrial uses and the extent to which they are replenished in seasons of abundant rainfall or melting snow. The changes in pressure recorded on flowing wells indicate depletion or replenishment of the artesian reservoirs.

The regular publication of records of water levels and artesian pressure in the United States was begun by the Geological Survey in 1935, and from that year through 1939 one volume containing these data was published each year. Beginning in 1940 the records have been published in six volumes, covering the northeastern, southeastern, north-central, south-central, northwestern, and southwestern sections of the country and Hawaii (See fig. 1 .) The following table gives the numbers of the water-supply papers for each section of the country. This series of water-supply papers ie in a sense an inventory, year by year, of the ground-water supplies of the parts of the country that are covered.

Water-supply papers on water levels and artesian pressure in observation wells

Year	North-eastern States	South-eastern States	North-central States	South-central States	North-western States	South-western States and Hawaii
1935	777	777	777	777	777	777
1936	817	817	817	817	817	817
1937	840	840	840	840	840	840
1938	845	845	845	845	845	845
1939	886	886	886	886	886	886
1940	906	907	908	909	910	911
1941	936	937	938	939	940	941
1942	944	945	946	947	948	949

This volume covers the north-central section and gives records of water levels and artesian pressure in about 1,390 observation wells of the Geological Survey and cooperating agencies in Wisconsin, Minnesota, Iowa, Illinois, Missouri, North Dakota, South Dakota, Nebraska, and Kansas. Of these wells, 28 are equipped with automatic water-stage recorders. For some wells not previously reported, complete records of water levels are given in this volume, including those for the years before 1942. For wells whose previous records have been published, however, this volume gives only current records. If complete descriptions of the wells were given in one of the previous reports, only the well numbers or the well numbers and brief identifying descriptions are given in this report. The numbers in parentheses immediately following a well number indicate the water-supply papers in which earlier records of that well are given and the pages on which they appear. An asterisk indicates that a description of the well is given in that paper. This report includes about 16,800 individual determinations of water level and artesian pressure.

The water levels in this report are given with reference to datum planes of different kinds. Some are given in depths below the measuring point, that is, below the recognized reference mark at or near the top of the well from which the depth to the water level is usually measured; some are given in height above an assumed datum plane; and some are given in feet below the land-surface datum, which is a precise plane that approximates the land surface in the vicinity of the well.

Acknowledgments for effective services in the preparation of this report are due Misses Dorothy Ireland, Bertha Niemi, and Thelma Walls, who typed the offset copy, and to Mrs. Bertha Dale and Rodney Hart, who prepared the illustrations.

Network of key observation wells

During 1942 the Geological Survey established a network of key observation wells in order that information would be available currently on general ground-water conditions over the country. The wells were selected because the fluctuations of water level in them are believed to be typical and repre-

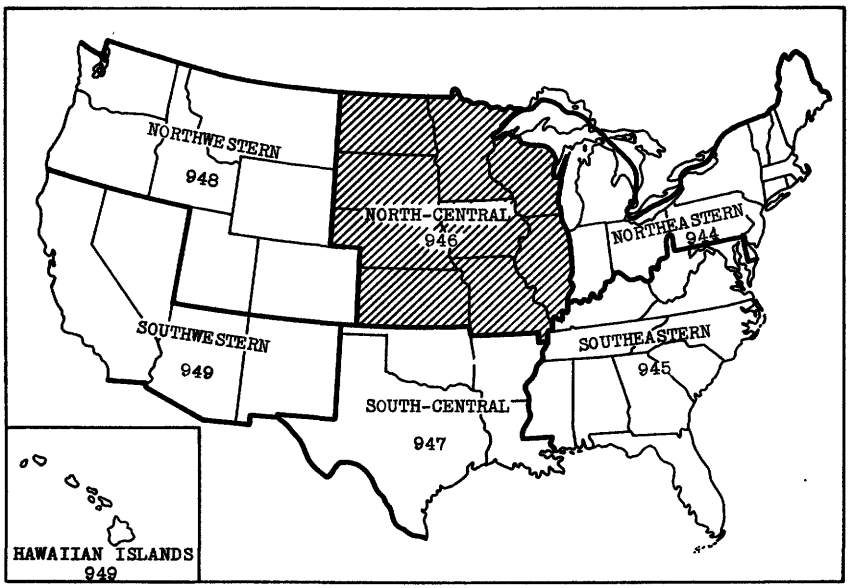

Figure 1.--Outline map of the United States showing sections of the country covered by the six water-supply papers on water levels and artesian pressure in observation wells in 1942. The shaded section represents the part of the country covered by this volume.

sentative of the general fluctuations that occur in the parts of the country in which the wells are situated. At the end of 1942 the network included about 130 wells in 40 States. About 40 of the wells were established expressly for the network in 1942; the other 90 wells were selected from those measured regularly in connection with cooperative ground-water investigation. The coverage of the country is still far from adequate, and it is expected that some wells not now included will be added to the network from time to time.

General summary of changes in ground-water level in 1942 in the north-central part of the United States

In 1942 the precipitation in all the States in the north-central region, except in South Dakota, was above normal and, as a result, the water levels in many wells of the region were maintained at comparatively

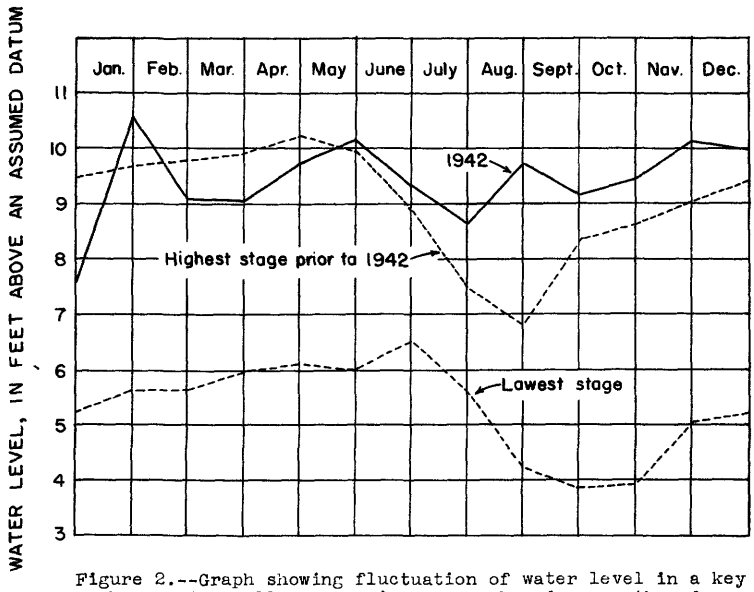

Figure 2.--Graph showing fluctuation of water level in a key observation well near Ionia, Kans., based on month-end measurements.

high stages. The fluctuations of water levels and artesian pressure in wells depend, however, on many factors besides the amount of precipitation. Consequently, it is usually not possible to find a simple relation between the changes in water level or artesian pressure and the departure from normal precipitation.

The following statements are taken chiefly from the interpretive text that precedes the water-level measurements in each of the several State sections in this volume. They are illustrated by the graphs of the water levels in key observation wells shown in figures 2-5.

Iowa.--In general the water levels in shallow wells showed net declines during 1942, but at end of the year they were still higher than they

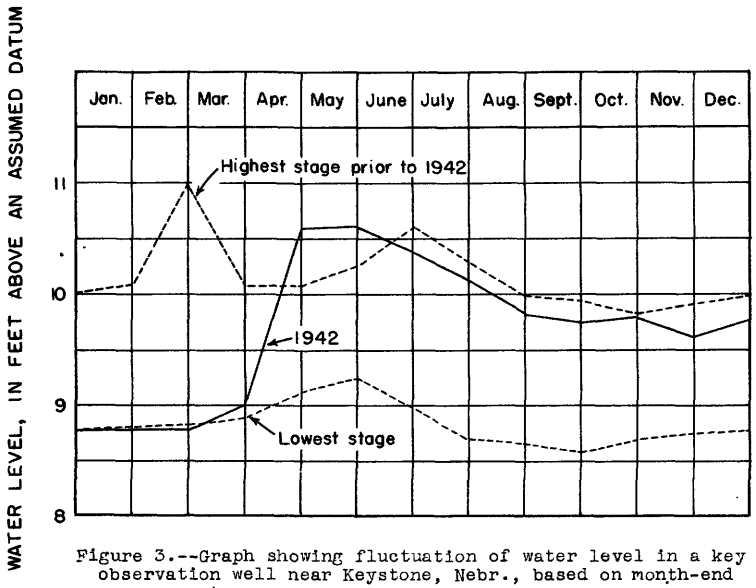

Figure 3.--Graph showing fluctuation of water level in a key observation well near Keystone, Nebr., based on month-end measurements.

were at the end of 1940. The average decline during 1942 in 78 representative wells, situated in 22 counties throughout the State, was about 1.2 feet. In the preceding year there was an average rise of 3.6 feet in 57 representative wells situated in 16 counties.

In the Tarkio Creek area, in adjacent parts of Iowa and Missouri, the water levels in 12 representative wells were about 8 feet higher at the beginning of 1942 than at the beginning of 1941, owing to heavy rains in the fall of 1941 that produced plentiful recharge to the shallow

subterranean reservoirs. After rising to unusually high stages in March 1942, the water levels in the wells declined more or less progressively until the end of the year, when they showed an average net decline of about 5 feet from the end of 1941. The water levels in these wells have been measured since 1934. They reached the lowest average stage on record

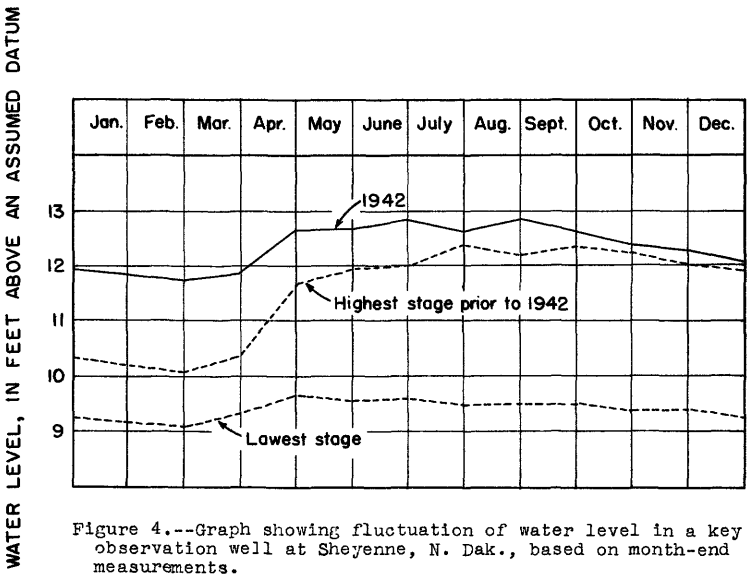

Figure 4.--Graph showing fluctuation of water level in a key observation well at Sheyenne, N. Dak., based on month-end measurements.

in March 1938. The net rise from this low stage to the record high stage of March 1942 amounted to about 12.4 feet.

Kansas.--In response to abundant precipitation in 1941 the water levels in most of the wells under observation in Kansas reached high stages by the end of the year, but because of the continuing abundant precipitation during 1942 still higher stages were reached in this year in many of the wells. Thus, new high stages were recorded in the majority of wells in 21 of the 25 counties in which records of a year or more are

available. In the other four counties most of the observation wells were pumped or were noticeably affected by pumping.

The relative stages of the water level in a key well near Ionia (No.30,

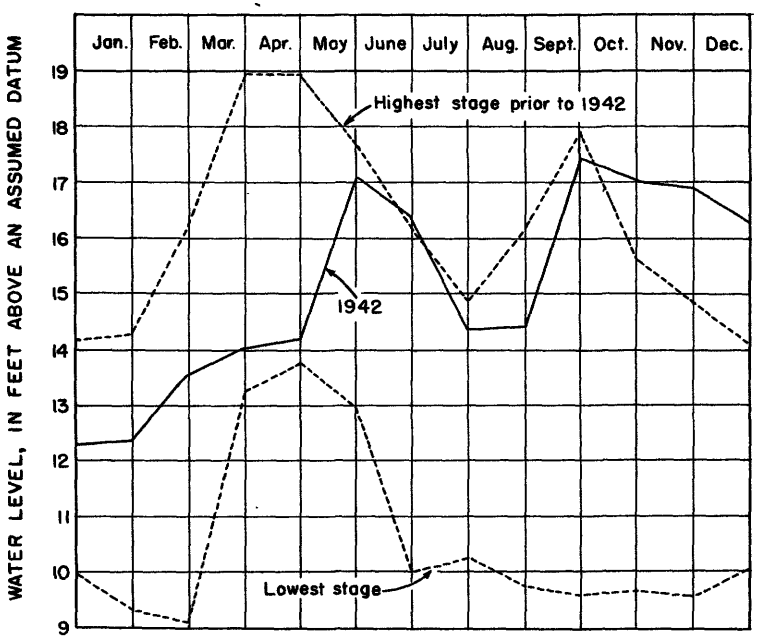

Figure 5.--Graph showing fluctuation of water level in a key observation well near Sparta, Wis., based on month-end measurements.

Jewell County) are shown in figure 2. Measurements have been made regularly in this well since 1934 and the water levels reflect natural conditions of recharge and discharge. In each month in 1942 the water level was above the average stage for that month, and from the end of May to the end of the year the water levels stood higher than at the same dates in any previous year.

Nebraska.--The water levels in most observation wells unaffected by pumping had net rises during 1942. Based on the records of 87 wells situated throughout the State, the water levels rose an average of 0.64 foot. If it is assumed that this average net rise represents the average net fluctuation of the water table over the entire State and that the specific yield of the formations in which the water occurs averages 15 percent, the amount of water in subterranean storage was increased in 1942 by about 4,760,000 acre-feet.

The fluctuations of water level in a shallow ksy observation well near Keystone (No. N-12, Keith County) are shown in figure 3 . The water level during January and February 1942 was the lowest on record (1936-42) for these months. A small amount of recharge took place during March,and abundant recharge occurred in April. As a result, the water level rose to the highest April stage on record and continued above the average for corresponding dates during the remainder of the year.

North Dakota.--The general rise in ground-water levels that began in 1941 continued through 1942, and the water levels in 22 representative wells distributed throughout the State reached their highest average in the 5-year period of record and probably the highest in the last 10 years. At the end of 1942 the water levels in all the observation wells averaged about 0.5 foot above the average stage of a year previous and about 0.7 foot above the year-end stage of 1937.

Figure 4 shows the fluctuations of water level in a key observation well at Sheyenne. The water level in this well was higher at the end of each month during 1942 than it was at any corresponding month end record (1937-42)

South Dakota.--The water levels in about 20 shallow observation wells in southeastern South Dakota rose about 5 feet from February to June 1942, and at the end of the year they were about 2.6 feet higher than at the end of 1941. During the summer of 1942 the water levels in these wells reached their highest stages since December 1939, when observations on them were begun. Much of the rise in ground-water levels in this part of South Dakota was caused by abundant recharge from heavy precipitation in March, May, and June 1942. In the other months the precipitation was below normal at most localities.

Wisconsin.--The fluctuations of water level in a typical well near Sparta (No. 2, Monroe County) are shown in figure 5 The water level at the beginning of 1942 was about normal, but it rose less than seasonally from January through April. Recharge was high, however, in May and again in September, and as a result the water level was above the average seasonal stage from May through December. During the last two months of the year the water level was higher than it was in the corresponding months of any of the previous years.

ILLINOIS

By T. W. Robinson

In order to obtain information on the fluctuations of ground-water level in Illinois, measurements were begun November 11 by the Geological Survey, United States Department of the Interior, in a well in Princeton. Eight measurements were made by T. W. Robinson and Nick Hansen from November 14 to December 26, the last date of observation in 1942. In this period the water level rose 2.16 feet, most of which occurred in the week of November 21-28.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Bureau County

16-9-9. R. E. Neff. Sec. 9, T. 16 N., R. 9 W. Unused dug well, diameter 32 inches, depth 29 feet. Measuring point, top of 2-inch plank cover at 1-inch hole, 0.2 foot above land surface. Equipped with lift pump. Direct reading float-tape gage installed on well Nov. 11, 1942. Taps water in glacial drift. Measurements by Nick Hansen since Nov. 14, 1942.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Nov. 11	16.78	Nov. 21	16.32	Dec. 5	14.61	Dec. 19	14.71
14	16.71	28	14.74	12	14.61	26	14.62

IOWA

By T. W. Robinson and W. E. Hale

Two programs of water-level measurements in observation wells in Iowa were in progress in 1942--the State-wide program and the Tarkio Creek area program. At the close of the year the State-wide program included 239 wells, and the program in the Tarkio Creek area, which is in southwestern Iowa and northwestern Missouri, included 49 wells in Iowa. The latter program is discussed on pages 51-61.

STATE-WIDE PROGRAM

The State-wide program, begun in 1938, was continued in 1942 by the Geological Survey, United States Department of the Interior, in cooperation with the Iowa Geological Survey.[1/] During the year 57 wells were added to the program and 17 were discontinued. About 1,525 individual measurements of water level were made. Of the 239 observation wells included, 10 were equipped with automatic water-level recorders, 2 of which were installed during the year. From the recorder charts of these instruments the water levels at noon or the highest and lowest levels for the day, depending on the daily range of fluctuation, were determined. They are given in the tabulated records that follow. The water level was measured weekly in about 10 wells and monthly in about 50. In most of the remaining wells it was measured quarterly, although in a few it was measured only once during the year. In addition to the measurements made under the regular observation-well program, numerous measurements of water level were made on individual wells throughout the State in connection with pumping test and on wells in Webster County in connection with the detailed investigation of ground-water resources in that county.

In general, the water levels in shallow wells were somewhat lower in December 1942 than in December 1941 but still higher than in December 1940. The average water levels reached a record high in March 1942, when

1/ For earlier reports on observation wells in this program see Water-Supply Papers 886 (pp. 113-120), 908 (pp. 6-28), and 938 (pp. 6-36).

they stood 1.5 feet higher than in December 1941. Copious rains in the fall of 1941 had saturated the soil and caused a record high at that time. Additional moisture from melting snow and from rains during February and March of 1942 caused an additional rise in the already high ground-water level.

The average net decline during the year in 78 representative wells, located both singly and in groups throughout the State, in 23 counties, was about 1.2 feet. From December 1940 to December 1941 the average water level in 57 representative wells, in 16 counties, rose 3.6 feet. Thus, the average water level in December 1942 was still 2.4 feet higher than in December 1940.

The average water level remained high during the first half of the year. From the high point of March it had declined 0.7 foot by the first of June but still stood 0.8 foot higher than in December 1941 From June to September the decline was greater, amounting to 1.4 feet, and from September to December it was about half of the summer decline or 0.8 foot.

The amount of the rise and fall of the water level varied in different counties. In some the average rise for the year was greater than the average decline, and in others it was less . Neither the counties in which the water level rose nor those in which it declined can be grouped according to location, for the counties that fall in each of these classes are scattered throughout the State. The following table shows the average net change in water levels in shallow wells, by counties , in 1942:

Average net change in water levels, in feet, in shallow wells in Iowa, 1942

County	Number of wells	Average net change	County	Number of wells	Average net change
Adair	3	-0.97	Johnson	2	-0.76
Buena Vista	6	+1.84	Linn	5	-.45
Calhoun	5	-1.66	Lyon	3	+4.04
Cerro Gordo	18	-2.29	Madison	1	+3.32
Clay-Palo Alto	5	-1.42	Marion	4	+.17
Dickinson	1	+1.26	Montgomery-Page	11	-4.72
Emmet	1	-3.25	Muscatine	2	+.12
Hardin	1	+2.22	Page	1	-1.89
Harrison	2	+.65	Polk	1	-1.77
Iowa	1	-.40	Sac	3	+1.40
Jasper	1	-1.95	Story	1	-8.38

Precipitation in the State to the end of November was 2.33 inches above the average. For January, February, and March it was slightly below the average, and for April it was 1.64 inches below the average. The

deficiency was more than offset during May, June, and July, when the total for the 3-month period was 3.13 inches above the average. In August the precipitation was 0.41 inch below the average, but the deficiency was again offset during the 3-month period September to November by precipitation that was 1.29 inches above the average. Freezing temperatures began the last week in November and continued almost without interruption until the end of December. As a result, there was little opportunity for ground-water recharge from melting snow and ice during the last week of November and all of December.

In Cerro Gordo County a study was made of the change in water level in wells of various depths. About 80 wells selected for the purpose were measured four times during the year. For convenience, they were divided into four groups on the basis of depth, as follows: Group 1, wells less than 25 feet deep; group 2, wells 25 to 50 feet deep; group 3, wells 50 to 100 feet deep; group 4, wells more than 100 but less than 300 feet deep. The following table shows the change in water level in each group, and also in the four groups taken as a whole, by periods of about 3 months each.

Net average change in water level, in feet, in wells in Cerro Gordo County grouped according to depth

	Group 1 1-25 ft.		Group 2 25-50 ft.		Group 3 50-100 ft.		Group 4 100-300 ft.		Groups 1-4 1-300 ft.	
	No. of wells	Change	No. of wells	Change	No. of wells	Change	No. of wells	Change	No. of wells	Change
Fall 1941 to Mar. 1942	19	+1.19	28	+1.87	14	+1.44	19	+0.92	80	+1.41
March to June 1942	17	-1.33	27	- .95	14	-.88	21	-1.38	79	-1.21
June to Sept. 1942	17	-1.11	27	-2.07	17	-2.96	21	-.37	82	-1.55
Sept. to Dec. 1942	18	-1.04	28	-.84	11	-1.57	19	-.90	76	-.93
Entire period	18	-2.29	28	-1.99	11	-3.97	19	-1.73	76	-2.28

A similar change of water level took place in the four groups of wells taken as a whole and in each of the groups taken separately. From the fall of 1941 the average water level for the groups taken as a whole rose steadily until it reached a high point in March 1942; then it declined until the end of the year. The greatest rise occurred in the wells of group 2, in which the average water level was 1.87 feet higher in March 1942 than in the fall of 1941; and the smallest rise, amounting to 0.92 foot, occurred in the wells of group 4. For the year, the greatest net average decline, 3.97 feet, occurred in the wells of group 3; and the smallest net average decline, 1.73 feet occurred in the wells of group 4. In the well of the

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greatest depth, 290 feet, the decline for the year was only 0.24 foot, but in the well of the second greatest depth, 230 feet, it was 4.04 feet. The greatest decline for the year, 10.71 feet, occurred in a well 64 feet deep. This well, which is near a large stream, is believed to be affected by the flow of that stream and may have had an unusually high water level in the fall of 1941 as the result of the stream being at a high stage.

The foregoing analysis of water levels by wells grouped according to depth seems to indicate that in Cerro Gordo County rainfall is effective in the recharge of aquifers 200 feet or less in depth. It does not necessarily indicate a secular decline of the water level, but rather a decline during the last 9 months of the year from the high water levels of March. Those high water levels were due in part to recharge form the heavy rains in the fall of 1941 and in part to the melting during the late winter, of the season's accumulation of snow and ice.

In most of the deep observation wells in which the water is under artesian pressure are in or near areas of heavy pumping and reflect the effect of seasonal pumping. In general, the water levels in these wells were highest during the winter and spring, declined sharply in the late spring to the low point reached in July and August, when pumping was heaviest, and then rose again during the fall.

The fluctuation of the water level in an unused well 195 feet deep at Cedar Rapids is shown in figure 6 . In this hydrograph the water level at noon is shown for the first 4 and the last 3 months of the year. For May, June, July, August, and September the highest and lowest water levels for each day are shown unless the change in level was less than 0.4 foot, in which event the water level at noon is shown. This well taps water in dolomite, and it is from this bed that most of the ground water in the Cedar Rapids area is pumped. Although Cedar Rapids obtains its municipal supply from the Cedar River, a large amount of ground water is pumped by private wells throughout the year for industrial use and in the summer months for air conditioning. The unused well just mentioned is about 3 miles from the heavily pumped industrial and air-conditioning district in downtown Cedar Rapids and but little more than half a mile from the nearest industrial and air-conditioning well.

Its water level is affected by pumping, by changes in barometric

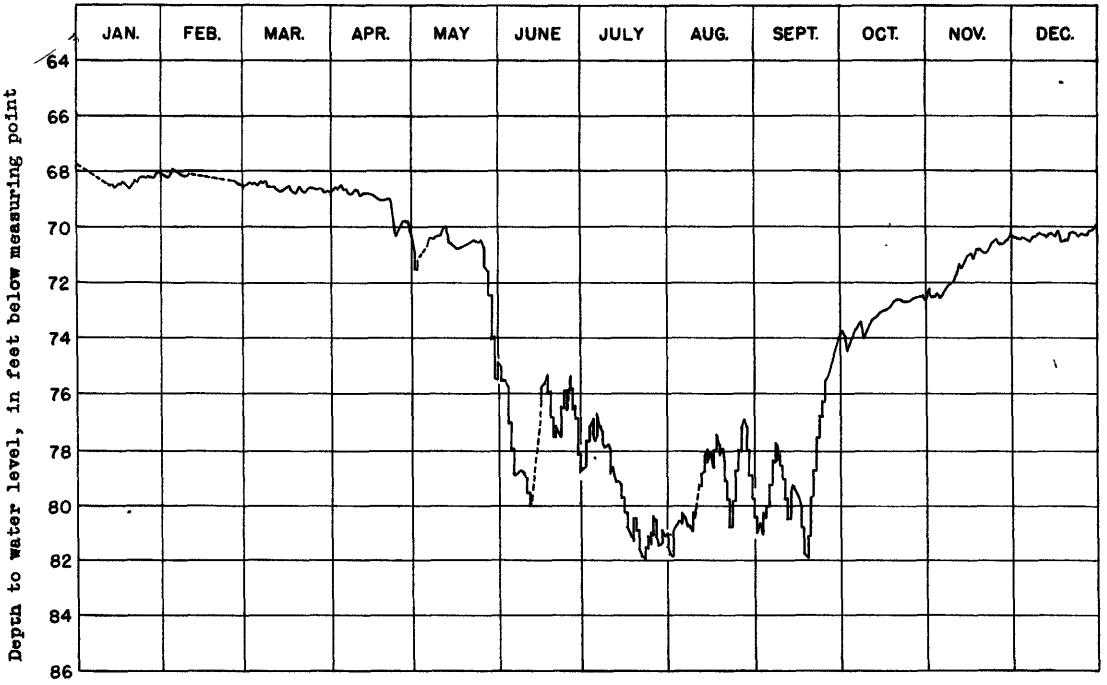

Figure 6.--Graph showing water-level fluctuations during 1942 in well 83-7-11E1 caused by pumping in the vicinity of Cedar Rapids, Iowa.

pressure, and possibly by variations in the rate of recharge. For the first 4 months of 1942 the water level declined slowly, although during the last part of April the decline was much more rapid. The effect of ground-water draft for air conditioning is shown by the abrupt decline of the water level during the last week in May and its sharp rise during the latter part of September. These periods coincide very closely with the beginning and the end of the warm summer season in 1942. The highest water level observed during the year occurred January 1, when it stood 67.76 feet below the land surface, and the lowest occurred July 23, when it stood 81.93 below the land surface. From the first of October until the end of the year, the water level recovered steadily from the effect of the summer pumping. At the end of December, however, it had not fully recovered but stood about 2 feet lower than on January 1.

Progress was made in the collection of records of pumpage from underground sources, especially in Webster County, where pumpage records or estimates were obtained from all the municipalities and from most private users of large amounts of ground water. During the year many pumping tests were made by the State and Federal Geological Surveys to determine the water-yielding capacity of wells and the transmissiblities of the water-bearing formations.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Observation wells in Iowa are listed alphabetically by counties and numerically within each county under each of the two programs conducted in the State. Complete descriptions are given for only newly added wells. The numbers in parenthesis immediately following a well number indicate the water-supply papers in which earlier records of that well are given and the pages on which they appear. An asterisk indicates that a description oi the well is given in that paper. The water level in each well is expressed in feet below the land-surface datum, which is the average land surface in the vicinity of the well. The measurements were made on the basis of central standard time prior to 2 a.m. February 9, 1942, and central war time thereafter.

Adair County

76-31-21R1 (*908,p.10; 938,p.9). John Breheny. SE¼SE¼ sec. 21, T. 76 N., R. 31 W. Measurements discontinued May 28, 1941.

76-31-25P1. SE¼SW¼ sec. 25, T. 76 N., R. 31 W. Bored stock well, diameter 14 inches, depth 17.6 feet. Measuring point, top of tile casing, 0.6 foot above land-surface datum. Taps water in glacial drift. Equipped with lift pump.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 30	1.98	June 29	1.56	Sept. 21	2.30	Nov. 25	3.77
Apr. 28	2.51	July 27	1.83	Oct. 27	3.28	Dec. 15	4.24
May 26	2.28	Aug. 25	3.35				

76-31-25R1 (*908,p.10; 938,p.9). Harold Bochart. SE¼SE¼ sec. 25, T. 76 N., R. 31 W. Measuring point 0.6 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Jan. 28, 4.37; Feb. 26, 4.24. Measurements discontinued after well was destroyed in March 1942.

76-31-29F1. SE¼NW¼ sec. 29, T. 76 N., R. 31 W. Unused dug well, diameter 36 inches, depth 20.9 feet. Measuring point, top of well platform, 0.3 foot above land-surface datum. Taps water in glacial drift. Equipped with lift pump.

Water level, in feet below land-surface datum, 1942

Mar. 30	4.17	June 29	5.90	Sept.21	8.69	Nov. 25	9.63
Apr. 28	5.06	July 27	6.41	Oct. 27	8.91	Dec. 15	10.16
May 26	3.96	Aug. 25	8.52				

75-31-15B1 (*908,p.10; 938,p.9). John E. Soderberg. NW¼NE¼ sec. 15, T. 75 N., R. 31 W. Measuring point 0.3 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 28	0.72	Apr. 29	1.68	July 27	0.46	Oct. 27	2.13
Feb. 26	2.05	May 27	.45	Aug. 25	2.22	Nov. 26	2.34
Mar. 31	.83	June 30	.36	Sept.22	1.59	Dec. 15	2.97

75-31-18B1 (*908,p.10; 938,p.9). Charles Gilham. NW¼NE¼ sec. 18, T. 75 N., R. 31 W. Measuring point level with land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 28	7.81	Apr. 29	9.29	July 27	8.04	Oct. 27	9.79
Feb. 26	9.05	May 27	8.40	Aug. 25	9.77	Nov. 26	9.99
Mar. 31	8.20	June 30	8.54	Sept.22	9.37	Dec. 15	9.94

75-30-3N1. Elmer Phillips. SW¼SW¼ sec. 3, T. 75 N., R. 30 W. Unused bored well, diameter 12 inches, depth 73.3 feet. Measuring point, top of inside lip of tile casing, 0.3 foot above land surface. Equipped with lift pump.

Water level, in feet below land-surface datum, 1942

May 27	3.52	July 27	6.67	Sept. 21	8.42	Nov. 25	12.13
June 29	6.30	Aug. 25	9.75	Oct. 27	11.10	Dec. 15	12.69

75-30-8A1 (*908,p.10; 938,p.10). Edward Snethen and Ernest Miller. NE¼NE¼ sec. 8, T. 75 N., R. 30 W. Measuring point 1.1 feet above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 28	2.42	Apr. 28	3.07	July 27	3.36	Oct. 27	6.84
Feb. 26	3.44	May 26	1.67	Aug. 25	5.54	Nov. 25	7.87
Mar. 30	2.69	June 29	2.45	Sept.21	4.81	Dec. 15	7.57

75-30-17E1. SW¼NW¼ sec. 17, T. 75 N., R. 30 W. Unused bored well, diameter 12 inches, depth 25.7 feet. Measuring point, top of plank pump support, 1.4 feet above land surface. Taps water in glacial drift. Equipped with lift pump.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 27	0.13	July 27	0.22	Sept.21	0.25	Nov. 25	0.16
June 30	.11	Aug. 25	1.94	Oct. 27	.25	Dec. 15	.46

Benton County

85-10-16M3. Owner's No. 3 (*886,p.116; 908,p.10; 938,p.10). City of Vinton. Measurement by R. G. Miller, water superintendent. Water level affected by pumping. Measuring point 1.0 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Dec. 9, a/ 42.21; b/ 30.75.

Buena Vista County

(Vicinity of Storm Lake)

91-37-32E1 (*908,p.10; 938,p.10). SW¼NW¼ sec. 32, T. 91 N., R. 37 W. Measuring point 1.0 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 19, 3.19; June 18, 3.13; Sept. 23, 3.14; Dec. 16, 3.75.

90-37-3E1 (*908,p.11; 938,p.10). Emil Schmitz. SW¼NW¼ sec. 3, T. 90 N., R. 37 W. Measuring point 0.2 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 19, 9.44; June 17, 6.90; Sept. 23, 7.88; Dec. 16, 10.63.

90-37-3M1 (*908,p.11; 938,p.10). L. B. Watt. NW¼SW¼ sec. 3, T. 90 N., R. 37 W. Measuring point 0.6 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 19, 15.26; June 17, 12.57; Sept. 23, 15.34; Dec. 16, 16.96.

90-37-11J1 (*908,p.11; 938,p.10). Geological Survey, United States Department of Interior. NE¼SE¼ sec. 11, T. 90 N., R. 37 W. Measuring point 0.55 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 19, 3.17; June 17, 3.75; Sept. 23, 1.78; Dec. 16, 2.34.

90-37-22J1 (*908,p.11; 938,p.10). William Monteful. NE¼SE¼ sec. 22, T. 90 N., R. 37 W. Measuring point 1.0 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 19, 29.16; June 17, 26.49; Sept. 23, 25.75.

90-37-23D1 (*908,p.11; 938,p.10). Biggins Bros. NW¼NW¼ sec. 23, T. 90 N., R. 37 W. Measuring point 1.3 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 19, 21.11; June 17, 19.37; Sept. 23, 18.85; Dec. 16, 18.62.

90-37-34B1 (*938,p.11). Ed Zinn. NE¼NW¼ sec. 34, T. 90 N., R. 37 W. Measuring point, top of concrete curb, 2.0 feet above land-surface datum. Incorrectly published in Water-Supply Paper 938 as 2.5 feet above land-surface. Water levels, in feet below land-surface datum, 1942: Mar. 19, 12.84; June 17, 7.21; Sept. 23, 12.29; Dec. 16, 10.80.

a Pumping.
b Pump shut down for half an hour.

Calhoun County

(Vicinity of Twin Lakes)

89-32-28N1 (*908,p.11; 938,p.11). SW¼SW¼ sec. 28, T. 89 N., R. 32 W. Measuring point 1.5 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: June 18, 5.21; Sept. 23, 7.42; Dec. 17, 7.48.

89-32-31R1 (*908,p.11; 938,p.11). E. F. Legg. SE¼SE¼ sec. 31, T. 89 N., R. 32 W. Measuring point 1.5 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 20, 8.78; June 18, 8.94; Sept. 23, 9.39; Dec. 17, 10.70.

89-32-33N1 (*908,p.11; 938,p.11). Ben Burns. SW¼SW¼ sec. 33, T. 89 N., R. 32 W. Measuring point 0.5 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 20, 2.03; June 18, 4.38; Sept. 23, 5.66; Dec. 17, 5.79.

88-33-1B1 (*908,p.12; 938,p.11). Mr. Burns. NW¼NE¼ sec. 1, T. 88 N., R. 33 W. Measuring point 0.3 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 20, 10.04; June 18, 8.50; Sept. 23, 11.60; Dec. 17, 17.12.

88-33-1D1 (*908,p.12; 938,p.11). George Voss. NW¼NW¼ sec. 1, T. 88 N., R. 33 W. Measuring point 0.7 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 20, 8.40; June 18, 7.31; Sept. 23, 9.90; Dec. 17, 11.38.

Carroll County

85-35-7N1. City of Breda. SW¼SW¼ sec. 7, T. 85 N., R. 35 W. Drilled municipal well, diameter 10 inches, depth 340 feet. Measuring point Mar. 19, 1942, top of 10-inch casing, 1.4 feet above land-surface datum. Measuring point beginning June 17, 1942, top of 2-inch slanting pipe, welded into casing, at lowest point 0.2 foot below top of casing, 1.6 feet above land-surface datum, and approximately 1,362 feet above mean sea level. Equipped with 25-horsepower turbine pump. Taps water in Dakota sandstone. Water levels, in feet below land-surface datum, 1942: Mar. 19, 193.16; June 16, 189.08; Sept. 25, 189.65; Dec. 15, 189.66.

85-35-18D1 (*908,p.12; 938,p.11). City of Breda. NW¼NW¼ sec. 18, T. 85 N., R. 35 W. Measuring point 0.8 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 19, 191.99; June 17, 192.06; Dec. 15, 192.27.

84-34-25F1 (*886,p.116; *908,p.12; 938,p.12). Owner's test hole 1, City of Carroll. SE¼NW¼ sec. 25, T. 84 N., R. 34 W. Measuring point 0.5 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 19, a/ 45.11; June 17, a/ 40.72; Sept. 23, a/ 38.56; Dec. 15, 41.43.

Cerro Gordo County

97-22-9R1 (*938,p.12, incorrectly published as 94-22-9R1). L. C. Zobel. SE¼SE¼ sec. 9, T. 97 N., R. 22 W. Measuring point 2.1 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 31.58; June 24, 31.92; Sept. 22, 34.00; Dec. 16, b/ 34.70.

97-22-16H1 (*938,p.12). Vern Hennis. SE¼NE¼ sec. 16, T. 97 N., R. 22 W. Measuring point 1.0 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 11.12; June 24, 11.83; Sept. 22, 17.08; Dec. 16, 18.11.

a Nearby wells pumping.
b Pumped shortly before measurement.

97-22-21J1 (*938,p.12). E. M. Fankell (incorrectly published in Water-Supply Paper 938, as E. M. Fanhill). NE¼SE¼ sec. 21, T. 97 N., R. 22 W. Measuring point 1.0 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 12.69; Sept. 22, a/ 16.11; Dec. 16, 14.83.

97-22-21J2 (*938,p.12). E. M. Fankell (incorrectly published in Water-Supply Paper 938, as E. M. Fanhill). NE¼SE¼ sec. 21, T. 97 N., R. 22 W. Measuring point 0.5 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 8.92; June 24, 8.45; Sept. 22, 18.02; Dec. 16, 17.15.

97-22-36H1 (*938,p.12). James Kern. SE¼NE¼ sec. 36, T. 97 N., R. 22 W. Measuring point level with land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 19.62; June 24, 20.43; Sept. 22, 23.06; Dec. 16, 24.54.

97-22-36H2 (*938,p.12). James Kern. SE¼NE¼ sec. 36, T. 97 N., R. 22 W. Measuring point 1.0 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 20.30; Sept. 22, 23.63; Dec. 16, 24.26.

97-21-9E1 (*938,p.12). E. H. Phillips. SW¼NW¼ sec. 9, T. 97 N., R. 21 W. Measuring point 3.4 feet below land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 95.10; June 24, 94.80; Sept. 22, 96.26.

97-219E2 (*938,p.12). E. H. Phillips. SW¼NW¼ sec. 9, T. 97 N., R. 21 W. Measuring point 0.8 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 30.15; June 24, 29.09; Sept. 22, 28.73; Dec. 16, 29.52.

97-21-18M1 (*938,p.13). W. D. Hurd. NW¼SW¼ sec. 18, T. 97 N., R. 21 W. Measuring point 1.2 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25,9.28; June 24, 7.79; Sept. 22, 11.10.

97-21-18M2 (*938,p.13). W. D. Hurd. NW¼SW¼ sec. 18, T. 97 N., R. 21 W. Measuring point 1.2 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 8.45; June 24, 7.96; Sept. 22, 8.63.

97-21-25R1 (*938,p.13). Etna Life Insurance Co. SE¼SE¼ sec. 25, T. 97 N., R. 21 W. Measuring point 0.2 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: June 23, 22.68; Sept. 22, 19.82.

97-20-11D2 (*938,p.13). C. H. Sloan. NW¼NW¼ sec. 11, T. 97 N., R. 20 W. Measuring point beginning Sept. 22, top of new well platform, 0.3 foot above old measuring point and land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 3.10; June 23, 4.48; Sept. 22, 8.25; Dec. 17, 7.58.

97-20-17N1 (*938,p.13). SW¼SW¼ sec. 17, T. 97 N., R. 20 W. Measuring point 0.3 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 8.78; June 23, 10.40; Sept. 22, 10.55; Dec. 17, 11.38.

97-20-24H1 (*938,p.13). Mrs. Vinnie Shanks. SE¼NE¼ sec. 24, T. 97 N., R. 20 W. Measuring point 0.4 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 26, 8.15; June 23, 5.88; Sept. 22, 6.19; Dec. 17, 6.45.

97-20-24H2 (*938,p.13). Mrs. Vinnie Shanks. SE¼NE¼ sec. 24, T. 97 N., R. 20 W. Measuring point 4.2 feet below land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 27, 55.55; June 23, 65.34; Sept. 22, 56.12; Dec. 17, 56.30.

a Pumped shortly before measurement.

97-20-27D1 (*938,p.13). Claude Quimby. NW¼NW¼ sec. 27, T. 97 N., R. 20 W. Measuring point beginning Sept. 22, bolt hole on east side of pump base, level with concrete 0.3 foot below old measuring point and level with land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 26, 9.55; June 23, 30.00; Sept. 22, 19.87; Dec. 17, 19.60.

97-20-32H1 (*938,p.13). SE¼NE¼ sec. 32, T. 97 N., R. 20 W. Measuring point 0.3 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 26, 14.23; June 23, 16.71; Sept.22,16.83;Dec. 16, 17.63.

97-19-5N1 (*938,p.13). Chicago, Milwaukee, St. Paul, & Pacific Railroad. SW¼SW¼ sec. 5, T. 97 N., R. 19 W. Measuring point 1.0 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 26, 17.14; June 23, 15.71; Sept. 22, 17.39; Dec. 17, 18.10.

97-19-16H1 (*938,p.13). SE¼NE¼ sec. 16, T. 97 N., R. 19 W. Measuring point beginning Sept. 22, flattened casing on south side near rivet hole 1.65 feet below old measuring point and 0.35 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 26, 3.71; June 23, 4.03; Sept. 22, 5.30; Dec. 17, 6.25.

97-19-21H2 (*938,p.13). Mrs. Oscar Engstrom. SE¼NE¼ sec. 21, T. 97 N., R. 19 W. Measuring point 0.8 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 26, 3.86; June 23, 4.67; Sept. 22, 6.80; Dec. 17, 7.45.

97-19-23H1 (*938,p.14). Jos. Senior. SE¼NE¼ sec. 23, T. 97 N., R. 19 W. Measuring point 0.7 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 26, 17.60; June 23, 22.90; Sept. 22, 21.77; Dec. 17, 24.93.

97-19-30R1 (*938,p.14). E. Stebens. SE¼SE¼ sec. 30, T. 97 N., R. 19 W. Measuring point 0.75 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 26, 7.19; June 23, 9.15; Sept. 22, a/ 12.32; Dec. 17, 13.75.

97-19-30R2 (*938,p.14). E. Stebens. SE¼SE¼ sec. 30, T. 97 N., R. 19 W. Measuring point 5.0 feet below land-surface datum. Water level, in feet below land-surface datum, 1942: Sept. 22, b/ 13.10.

96-22-7Q1 (*938,p.14). W. S. Overgaard. SW¼SE¼ sec. 7, T. 96 N., R. 22 W. Measuring point 0.4 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 1935; June 24, 20.87; Sept. 22, 22.30; Dec. 16, 22.96.

96-22-7Q2 (*938,p.14). W. S. Overgaard. SW¼SE¼ sec. 7, T. 96 N., R. 22 W. Measuring point 0.3 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 6.48; June 24, 8.20; Sept. 22, 10.19; Dec. 16, 10.55.

96-22-12P1 (*908,p.12; 938,p.14). Daughters of American Revolution Camp. SE¼SW¼ sec. 12, T. 96 N., R. 22 W. Measuring point 1.2 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 40.65; June 24, 40.78; Sept. 22, 41.41; Dec. 16, 42.20.

96-22-14B1 (*908,p.12; 938,p.14). A. A. Adams. NW¼NE¼ sec. 14, T. 96 N., R. 22 W. Measuring point 0.4 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 24.72; June 25, 26.06; Sept. 22, 27.21; Dec. 16, 28.00.

96-22-14C1 (*908,p.12; 938,p.14). Fred Stephens. NE¼NW¼ sec. 14, T. 96 N., R. 22 W. Measuring point 0.6 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 31.68; June 24, 31.99; Sept. 22, 30.14; Dec. 16, 33.18.

a 100 gallons pumped 2 hours before measurement.
b Windmill pumping slowly.

96-22-20C1 (*908,p.13; 938,p.14). The Willow Inn. NE¼NW¼ sec. 20, T. 96 N., R. 22 W. Measuring point 0.4 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 1.14; June 24, 5.23; Sept. 22, 6.17; Dec. 16, 5.63.

96-22-20L1 (*908,p.13; 938,p.15). NE¼SW¼ sec. 20, T. 96 N., R. 22 W. Measuring point 1.3 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 29.65; June 24, 36.94; Sept. 22, 31.62; Dec. 16, 31.15.

96-22-23Q1 (*908,p. 13; 938,p.15). H. R. Anderson. SW¼SE¼ sec. 23, T. 96 N., R. 22 W. Measuring point 0.8 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 17.77; June 25, 17.45; Sept. 22, 19.97; Dec. 17, 20.42.

96-22-25D2 (*908,p.13; 938,p.15). Geological Survey, United States Department of Interior. NW¼NW¼ sec. 25, T. 96 N., R. 22 W. Measuring point 0.5 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 4.38; June 25, 5.92; Sept. 22, 6.73; Dec. 17, 6.98.

96-22-30H1 (*938,p.15). Mrs. Francis Skene. SE¼NE¼ sec. 30, T. 96 N., R. 22 W. Measuring point level with land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 7.52; Sept. 23, 12.69; Dec. 16, 13.90.

96-22-30H2 (*938,p.15). Mrs. Francis Skene. SE¼NE¼ sec. 30 T. 96 N., R. 22 W. Measuring point 5.4 feet below land-surface datum. Water level, in feet below land-surface datum, 1942: June 24, 14.39.

96-21-2G1 (*938,p.15). S. P. Skovgaard. SW¼NE¼ sec. 2, T. 96 N., R. 21 W. Measuring point beginning June 24, 1942, top of casing, 4.4 feet below old measuring point and 1.8 feet below land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 26, 9.17; June 24, 12.44; Sept. 22, 12.14.

96-21-5G1 (*938,p.15). Farmers National Life Insurance Co. SW¼NE¼ sec. 5, T. 96 N., R. 21 W. Measuring point 1.5 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 22.58; June 24, 22.47; Sept. 22, 23.15; Dec. 16, 24.08.

96-21-13E1 (*908,p.13; 938,p.15). Mason City & Clear Lake Railway. SW¼NW¼ sec. 13, T. 96 N., R. 21 W. Measuring point 1.5 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 3.58; June 25,4.36; Sept. 23, 5.20; Dec. 17, 5.72.

96-21-17C1 (*908,p.13; 938,p.15). Clear Lake Sand & Gravel Co. NE¼NW¼ sec. 17, T. 96 N., R. 21 W. Measuring point 6.4 feet below land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 17.60; June 25, 17.36; Sept. 23, 17.92; Dec. 17, 20.17.

96-21-17M1 (*908,p.13; 938,p.16). NW¼SW¼ sec. 17, T. 96 N., R. 21 W. Measuring point 1.8 feet above land-surface datum. Water levels in feet below land-surface datum, 1942: Mar. 25, 2.34; June 25, 2.64; Sept. 23, 2.66; Dec. 17, 2.73.

96-21-18H1 (*908,p.13; 938,p.16). Sam Kennedy. SE¼NE¼ sec. 18, T. 96 N., R. 21 W. Measuring point 0.8 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 9.05; June 25, 9.27; Sept. 23, 9.64; Dec. 17, 10.30.

96-21-19N1 (*938,p.16). Mr. Harms. SW¼SW¼ sec. 19, T. 96 N., R. 21 W. Measuring point 0.3 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 5.61; June 25, 13.18; Sept. 23, 10.26; Dec. 17, 10.73.

96-21-22A1 (*938, p. 16). D. S. Mabb (incorrectly published in Water-Supply Paper 938 as D. S. Mott). NE¼NE¼ sec. 22, T. 96 N., R. 21 W. Measuring point 0.2 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 18.65; June 25, 18.99; Sept. 23, 26.98; Dec. 17, a/23.39.

a Pumped shortly before measurement.

96-21-23R1 (*938,p.16). Elmer and Willard Thrams. SE¼SE¼ sec. 23, T. 96 N., R. 21 W. Measuring point 1.0 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 4.10; June 25, 5.42; Sept. 23, 7.28; Dec. 17, 6.24.

96-21-33A1 (*938,p.16). Ivor Toft. NE¼NE¼ sec. 33, T. 96 N., R. 21 W. Measuring point level with land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 16.73; June 25, 17.87; Sept. 24, a/23.82; Dec. 17, 21.72.

96-20-3L2 (*938,p.16). Owner's No. 8. City of Mason City. NE¼SW¼ sec. 3, T. 96 N., R. 20 W. Measuring point 4.8 feet below land-surface datum. Highest water level observed from recorder charts in 1942 was 157.6 feet below land-surface datum Apr. 12; lowest water level observed was 204.4 feet below land-surface datum Sept. 1.

Daily high and low water levels, in feet below land-surface datum, 1941-42
(From recorder charts)

	1941				1942					
	November		December		January		February		March	
Day	High	Low	High	Low	High	Low	High	Low	High	Low
1	.....	.....	170.8	197.8	172.1	186.9	169.8	179.6	165.4	177.3
2	.....	.....	180.9	200.8	169.8	195.7	169.0	194.3	168.1	189.5
3	.....	.....	179.2	190.6	174.6	196.2	167.5	187.5	165.1	184.5
4	.....	.....	173.1	198.2	172.4	186.7	171.1	187.3	163.5	181.5
5	.....	.....	175.3	198.8	170.0	191.8	168.3	185.5	163.3	182.8
6	171.1	190.5	177.0	191.5	172.2	195.4	165.3	186.8	165.0	182.0
7	170.2	194.3	172.3	188.5	175.2	193.6	170.2	183.4	163.9	182.3
8	172.6	185.4	170.5	.....	179.7	197.0	165.5	180.1	173.5	174.1
9	172.3	184.1	.....	.....	181.3	197,3	163.3	179.9	163.0	184.0
10	171.5	185.0	.....	.....	180.3	191.1	159.1	182.8	164.2	190.5
11	170.7	185.0	173.6	198.0	171.4	186.3	167.5	183.1	166.3	184.2
12	170.3	184.9	179.0	198.8	168.1	196.3	165.0	182.5	164.6	180.8
13	171.5	185.4	177.2	199.4	169.5	193,2	170.5	184.4	165.2	182.5
14	176.2	185.9	174.2	189.6	173.5	190.9	168.0	184.9	162.8	181.9
15	172.5	193.1	171.0	196.8	173.8	192.3	165.0	175.1	165.9	174.8
16	173.5	193.6	180.4	198.0	181.5	195.1	160.9	179.9	162.6	188.1
17	170.2	194.4	178.0	199.1	175.5	196.6	162.7	183.7	165.1	179.7
18	179.4	197.7	171.5	199.3	172.3	195.8	164.1	183.8	166.1	173.8
19	173.6	190.7	175.7	199.3	167.2	196.5	163.7	183.4	173.2	182.1
20	177.6	195.4	173.5	199.0	170.1	188.9	168.5	184.6	173.1	173.6
21	172.8	194.3	181.3	193.8	167.8	188.6	163.5	179.8	164.6	173.2
22	173.2	190.0	170.6	198.0	170.4	191.7	164.5	174.7	165.0	173.1
23	174.6	188.5	180.8	197.3	175.7	193.8	163.1	179.4	161.3	177.7
24	170.8	198.1	184.3	193.6	179.0	191.9	162.8	178.8	163.3	186.3
25	172.4	199.4	170.8	190.8	170.6	187.7	163.0	184.0	165.6	180.9
26	176.2	199.0	165.6	192.9	167.3	194.0	164.1	184.2	174.3	183.6
27	172.2	188.6	176.9	191.3	170.0	187.6	166.6	184.7	167.1	183.8
28	170.9	198.0	170.3	183.5	166.7	193.1	172.6	185.4	173.5	173.9
29	177.2	198.0	168.4	198.9	175.6	192.4	.....	.....	163.9	173.5
30	174.0	189.7	179.9	197.9	174.0	186.9	.....	.....	161.4	172.9
31	.....	.....	180.6	198.0	176.4	188.2	.....	.....	172.8	181.8

a 100 gallons pumped shortly before measurement.

Daily high and low water levels, in feet below land-surface datum, 1941-42--Continued

	1941						1942			
	April		May		June		July		August	
Day	High	Low	High	Low	High	Low	High	Low	High	Low
1	166.3	174.6	169.1	180.9	170.1	193.1	172.1	194.0	183.3	198.6
2	166.9	172.8	166.4	185.3	171.0	194.0	171.6	196.0	170.9	188.4
3	163.7	178.3	165.6	175.2	174.1	195.8	171.5	188.7	169.8	197.1
4	172.3	172.6	163.8	189.4	171.1	197.3	165.9	183.2	171.7	197.6
5	165.8	172.8	172.8	182.6	184.8	198.5	166.2	182.5	172.8	197.8
6	159.4	172.2	165.2	186.8	174.8	198.4	165.6	192.1	178.8	198.6
7	172.2	172.8	171.0	182.4	168.8	187.0	165.7	191.8	183.6	199.8
8	172.8	172.9	169.1	186.7	167.2	197.7	177.2	195.9	184.8	199.8
9	166.3	172.8	167.4	186.8	171.5	199.1	170.5	195.6	171.6	184.8
10	164.7	172.6	166.1	176.5	170.5	189.0	167.0	194.1	170.8	197.3
11	163.3	172.6	162.7	188.5	168.7	198.9	168.5	199.4	170.5	198.0
12	157.6	176.0	166.6	185.7	175.1	197.7	171.8	183.0	170.7	193.6
13	159.3	171.8	168.1	192.3	171.0	189.0	166.8	191.0	168.9	192.6
14	168.4	177.9	.....	.....	178.0	180.6	176.4	189.8	171.3	195.3
15	161.6	.....	170.3	185.8	173.8	193.3	178.5	194.7	179.2	192.3
16	.....	.....	167.2	186.8	170.2	192.8	180.4	198.6	172.3	181.8
17	.....	.....	167.7	177.4	177.7	188.0	183.8	200.0	167.8	195.0
18	.....	.....	164.0	190.5	175.6	194.2	174.5	202.8	179.8	197.5
19	.....	.....	167.2	187.3	171.6	195.1	170.6	187.0	172.2	197.8
20	.....	.....	166.2	187.3	175.8	194.0	168.5	198.5	172.7	198.1
21	.....	.....	168.1	187.2	173.4	183.4	183.8	199.8	180.6	202.3
22	.....	.....	175.3	191.9	177.8	197.1	167.5	198.0	182.0	200.3
23	165.3	180.9	169.3	188.1	172.0	188.9	170.8	198.2	173.2	194.1
24	165.1	190.0	169.8	179.7	177.0	197.0	174.1	197.9	170.3	192.0
25	167.6	179.6	165.6	191.7	172.0	192.1	172.1	195.3	173.5	187.3
26	167.8	173.6	169.6	192.5	168.8	191.6	171.3	186.8	167.9	192.9
27	160.1	185.5	179.3	188.8	170.1	185.1	169.5	196.0	169.8	197.3
28	167.6	180.1	170.6	192.8	170.1	179.8	179.9	198.5	180.3	199.0
29	164.2	187.5	180.7	193.3	167.6	196.2	182.8	199.2	183.0	204.0
30	165.8	188.8	169.6	188.6	168.1	196.6	181.0	199.4	175.3	195.3
31	.....	.....	169.7	177.9	.....	.....	182.5	199.8	171.2	200.6

Daily high and low water levels, in feet below land-surface datum, 1941-42--Continued

	September		October		November		December	
Day	High	Low	High	Low	High	Low	High	Low
1	181.7	204.4	169.0	190.6	168.8	183.5	180.6	193.1
2	186.0	202.3	172.7	190.4	169.9	193.4	180.2	192.7
3	187.2	201.8	172.6	181.3	166.8	199.0	179.8	195.5
4	177.8	195.9	167.4	179.3	173.9	196.3	183.1	193.3
5	172.3	200.3	169.2	184.1	180.3	190.7	182.7	193.6
6	172.7	181.3	168.5	185.4	173.2	191.1	171.8	183.3
7	167.8	178.6	179.0	195.9	172.6	192.1	171.6	192.3
8	168.6	196.0	170.7	192.5	171.2	182.4	176.4	195.8
9	171.8	199.5	171.1	198.1	168.5	188.1	182.7	196.4
10	173.3	199.6	169.3	191.6	180.5	191.0	176.2	196.2
11	175.3	201.5	169.2	182.8	171.6	190.3	178.6	196.6
12	182.0	201.6	172.1	190.7	180.4	191.0	182.0	197.2
13	171.7	184.6	174.4	194.1	173.0	190.6	172.0	187.2
14	168.8	199.9	182.3	196.8	180.0	189.0	175.1	198.0
15	182.9	202.0	174.4	192.7	168.8	190.3	175.0	.....
16	180.3	194.6	182.0	197.4	169.0	189.1	.....	.....
17	172.6	202.1	174.0	191.1	181.5	192.5	.....	.....
18	174.1	196.5	170.2	184.1	181.7	190.6	.....	.....
19	174.0	185.6	172.1	190.8	176.1	198.4	.....	.....
20	170.0	181.6	181.0	195.5	175.4	196.8	.....	.....
21	165.8	184.9	181.3	192.5	177.4	199.8	.....	.....
22	167.2	183.9	175.2	197.5	170.0	183.1	.....	.....
23	166.5	184.8	172.6	195.1	171.7	195.6	.....	.....
24	165.9	187.8	173.0	191.1	182.4	197.4	.....	.....
25	166.7	188.7	181.3	183.9	181.2	192.8	.....	.....
26	168.2	183.9	172.0	192.1	170.3	182.9	.....	.....

Daily high and low water levels, in feet below land-surface datum, 1941-42--Continued.

	1941				1942			
	September		October		November			
Day	High	Low	High	Low	High	Low	High	Low
27	164.8	182.8	181.4	192.7	171.0	190.2	.....	.....
28	167.0	187.1	181.1	191.0	180.7	192.7	.....	.....
29	173.0	190.3	173.2	190.3	170.1	181.8	.....	.....
30	166.8	188.3	173.2	190.4	170.7	190.9	.....	.....
31	.....	.....	182.2	195.4	.....	.....	.....	.....

96-20-3P1 (*938,p.16). Minneapolis & St. Louis Railroad. SE¼SW¼ sec. 3, T. 96 N., R. 20 W. Measuring point 6.3 feet below land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 26, 41.57; Sept. 23, 41.89; Dec. 18, a/ 46.20.

96-20-5J1 (*938,p.16). NE¼SE¼ sec. 5, T. 96 N., R. 20 W. Measuring point 1.7 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 26, 8.11; June 25, 8.61; Sept. 24, 7.54; Dec. 18, 10.06.

96-20-10N1 (*938,p.17). Swift & Co. SW¼SW¼ sec. 10, T. 96 N., R. 20 W. Measuring point 0.8 foot above land-surface datum. Water level, in feet below land-surface datum, 1942: June 25, 31.58. Measurements discontinued June 25, 1942.

96-20-16J1 (*886,p.116 ; 908,p.14; 938,p.17). Owner's No. 11. City of Mason City. NE¼SE¼ sec. 16, T. 96 N., R. 20 W. Measuring point 1.5 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 26, 190.65; June 25, 162.23; Sept. 23, 197.48; Dec. 18, 200.27.

96-20-29A1 (*938,p.17). Roy Kirk. NE¼NE¼ sec. 29, T. 96 N., R. 20 W. Measuring point 0.1 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 26, 12.85; June 25, 14.23; Sept. 23, 15.67; Dec. 17, 17.29.

96-20-36N1 (*938,p.17). SW¼SW¼ sec. 36, T. 96 N., R. 20 W. Measuring point 0.7 foot above land-surface datum. Water levels, in feet above or below land-surface datum, 1942: Mar. 26 b/ 0.12; June 25, c/ 2.75; Sept. 23, c/ 3.44; Dec. 17, c/ 3.78.

96-19-3M1 (*938,p.17). NW¼SW¼ sec. 3, T. 96 N., R. 19 W. Measuring point 1.8 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: June 23, 58.18; Sept. 23, 59.05; Dec. 17, 59.72.

96-19-18R1 (*938,p.17). Chicago, Milwaukee, St. Paul, & Pacific Railroad. SE¼SE¼ sec. 18, T. 96 N., R. 19 W. Measuring point 0.8 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 26, 5.55; June 23, 8.64; Sept. 23, 9.27; Dec. 17, 10.05.

96-19-18R2 (*938,p.17). R. L. Billings. SE¼SE¼ sec. 18, T. 96 N., R. 19 W. Measuring point level with land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 26, 5.40; June 23, 7.12; Sept. 23, 9.12; Dec. 17, 9.80.

96-19-27E1 (*938,p.17). Independent Order of Foresters. SW¼NW¼ sec. 27, T. 96 N., R. 19 W. Measuring point 1.3 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: June 23, 9.04; Sept.23,10.50.

96-19-31P2 (*938,p.17). Fay Thompson. SE¼SW¼ sec. 31, T. 96 N., R. 19 W. Measuring point5.0feet below land-surface datum. Water level, in feet below land-surface datum, 1942: Mar. 26, 88.56. Measurements discontinued after well was destroyed in June 1942.

95-22-3B1 (*938,p.17). Knut Olson. NW¼NE¼ sec. 3, T. 95 N., R. 22 W. Measuring point 1.4 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 16.25; June 24, 16.14; Sept. 23, 17.19; Dec. 16, 17.36.

a Pumped about 2½ hours before measurement.
b Above land-surface datum.
c Below land-surface datum.

95-22-5M1 (*938,p.17). School district. NW¼SW¼ sec. 5, T. 95 N., R. 22 W. Measuring point 1.3 feet above land-surface datum. Water levels, in feet below land-surface datum,1942: Mar. 25,4.10; June 24,6.66; Sept.23, 7.89; Dec. 16, 8.22.

95-22-8C1 (*938,p.18). Jurgensen Bros. NE¼NW¼ sec. 8, T. 95 N., R. 22 W. Measuring point 0.5 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 14.05; June 24, 13.43; Sept. 23, a/16.20; Dec. 16, 16.44.

95-22-19R1 (*938,p.18). SE¼SE¼ sec. 19, T. 95 N., R. 22 W. Measurements discontinued Mar. 25, 1942.

95-22-22C1 (*938,p.18). John Miles. NE¼NW¼ sec. 22, T. 95 N., R. 22 W. Measuring point 0.3 foot above land-surface datum. Water level, in feet below land-surface datum, 1942: Mar. 25, 10.02. Measurements discontinued June 24, 1943.

95-22-34E1 (*938,p.18). J. G. Lindon. SW¼NW¼ sec. 34, T. 95 N., R. 22 W. Measuring point 1.1 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: June 24, 28.00; Sept. 23, 29.61; Dec. 16, 30.31.

95-21-2H1 (*938,p.18). Amy J. Houck. SE¼NE¼ sec. 2, T. 95 N., R. 21 W. Measuring point 2.2 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 32.58; June 25, 34.79; Sept.24, 35.07; Dec. 17, 35.89.

95-21-7D1 (*938,p.18). Commissioner of Insurance of Iowa. NW¼NW¼ sec. 7, T. 95 N., R. 21 W. Measuring point 2.2 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 10.70; June 24, 9.93; Sept. 23, 14.73; Dec. 17, 13.47.

95-21-7P1 (*938,p.18). Art Enobnit (incorrectly published as Art Enobit in Water-Supply Paper 938). SE¼SW¼ sec. 7, T. 95 N., R. 21 W. Measuring point 1.0 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 11.48; June 24, 11.46; Sept. 23, 12.80; Dec. 17, 15.95.

95-21-12D2 (*938,p.18). NW¼NW¼ sec. 12, T. 95 N., R. 21 W. Measuring point 0.3 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 1.52; June 25, 3.94; Sept. 24, 6.85; Dec. 17, 7.25.

95-21-27Q1 (*938,p.18). Dave Blankenship (formerly owned by John Hancock Insurance Co.). SW¼SE¼ sec. 27, T. 95 N., R. 21 W. Measuring point 2.4 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 15.80; June 24, 16.90; Sept. 24, 20.04; Dec.16, 21.23.

95-20-3B1 (*938,p.18). Farmers Co-op Society. NW¼NE¼ sec. 3, T. 95 N., R. 20 W. Measuring point 2.2 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 8.10; June 23, 10.24; Sept. 23, 11.19.

95-20-5J2 (*938,p.18). Will Hunt. NE¼SE¼ sec. 5, T. 95 N., R. 20 W. Measuring point, top of tile casing, 1.0 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 5.15; June 25, 6.04; Sept. 24, 9.39; Dec. 17, 10.00.

95-20-13N1 (*938,p.18). School district. SW¼SW¼ sec. 13, T. 95 N., R. 20 W. Measurements discontinued Mar. 25, 1943.

a Pressure pump running.

95-20-20C1 (*938,p.19). NE¼NW¼ sec. 20, T. 95 N., R. 20 W. Measuring point 2.0 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 4.28; June 25, 5.68; Sept. 24, 7.08; Dec. 17, 7.17.

95-20-27Q1 (*938,p.19). SW¼SE¼ sec. 27, T. 95 N., R. 20 W. Measuring point 2.0 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 0.96; June 23, 2.08; Sept. 24, 4.37; Dec. 15, 3.85.

95-20-33C1 (*938,p.19). Iowa State College. NE¼NW¼ sec. 33, T. 95 N., R. 20 W. Measuring point 1.0 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 6.50; June 25, 7.62; Sept.24,11.55.

95-19-9H1 (*938,p.19). SE¼NE¼ sec. 9, T. 95 N., R. 19 W. Measuring point 0.3 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 26, 9.08; June 23, 10.34; Sept. 23, 12.59; Dec. 17, 14.36.

95-19-18M1 (*938,p.19). NW¼SW¼ sec. 18, T. 95 N., R. 19 W. Measuring point 1.2 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 26, 0.78; June 23, 2.41; Sept. 23, 3.24; Dec. 17, 3.13.

95-19-26D2 (*938,p.19). National Life Insurance Co. (published in Water-Supply Paper 938 as H. F. Coyle). NW¼NW¼ sec. 26, T. 95 N., R. 19 W. Measuring point 1.0 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: June 23, 20.26; Sept. 24, 27.61; Dec. 17, 35.80.

95-19-30P1 (*938,p.19). SE¼SW¼ sec. 30,T. 95 N., R. 19 W. Measuring point 0.2 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 26, 2.68; June 23, 4.28; Sept. 24, 7.84; Dec. 17, 8.83.

95-19-30P2 (*938,p.19). SE¼SW¼ sec. 30, T. 95 N., R. 19 W. Measuring point 1.0 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 26, 0.91; Dec. 17, 6.32.

94-22-8D1 (*938,p.19). Mr. Dugan. NW¼NW¼ sec. 8, T. 94 N., R. 22 W. Measuring point 1.5 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 10.64; June 24, 9.71; Sept. 23, 11.04; Dec. 16, 12.28.

94-22-20D1 (*938,p.19). Pete Wohler. NW¼NW¼ sec. 20, T. 94 N., R. 22 W. Measuring point 1.0 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 0.36; Sept. 23, 2.49; Dec. 16, 4.00.

94-22-24J1 (*938,p.19). NE¼SE¼ sec. 24, T. 94 N., R. 22 W. Measuring point 1.0 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 10.55; June 24, 10.57; Sept. 23, 11.54; Dec. 16, 13.24.

94-22-24J2 (*938,p.19). Town of Thornton. NE¼SE¼ sec. 24, T. 94 N., R. 22 W. Measuring point 1.8 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 72.87; June 24, 75.05; Sept. 23, 74.40; Dec. 16, 73.19.

94-22-24J3 (*938,p.10). Mel Bowen. NE¼SE¼ sec. 24, T. 94 N., R. 22 W. Measuring point level with land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 18.74; June 24, 16.16; Sept. 23, 20.77; Dec. 16, 19.80.

94-21-5R1 (*938,p.20). Lauritz Schoneman. SE¼SE¼ sec. 5, T. 94 N., R 21 W. Measuring point 0.9 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 13.50; June 24, 10.25; Sept. 24, 18.21; Dec. 16, 19.25.

94-21-10D2 (*938,p.20). NW¼NW¼ sec. 10, T. 94 N., R. 21 W. Measuring point 0.4 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 16.14; June 24, 14.96; Sept. 24, 18.50; Dec. 16, 19.58.

94-21-24A1 (*938,p.20). Titus Management Co. NE¼NE¼ sec. 24, T. 94 N., R. 21 W. Measuring point 2.0 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 2.48; June 24, 3.26 Sept. 24, 6.23; Dec. 16, 6.09.

94-21-28R1 (*938,p.20). School District. SE¼SE¼ sec. 28, T. 94 N., R. 21 W. Measuring point 0.3 foot below land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 2.96; June 24, 5.31; Sept. 23, 8.09; Dec. 16, 10.00.

94-20-3K1 (*938,p.20). City of Rockwell. NW¼SE¼ sec. 3, T. 94 N., R. 20 W. Measuring point 2.0 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 25, 4.73; June 23, 5.58; Sept. 24, 8.21; Dec. 15, 9.80.

94-20-5P1 (*938,p. 20). James P. Conrin. SE¼SW¼ sec. 5, T. 94 N., R. 20 W. Measuring point 5.8 feet below land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 24, 16.02; June 25, 17.52; Sept. 24, 19.26; Dec. 15, 20.04.

94-20-22H2 (*938,p.20). Mike Curley. SE¼NE¼ sec. 22, T. 94 N., R. 20 W. Measuring point 0.5 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 24, 12.12; June 23, 13.96; Sept. 24, 19.22; Dec. 15, 22.62.

94-20-25J1 (*938,p.20). Equitable Life Assurance Society. NE¼SE¼ sec. 25, T. 94 N., R. 20 W. Measuring point 0.9 foot above land-surface datum, 1942: Mar. 24, 17.63. Measurements discontinued.

94-20-25J2 (*938,p.20). Equitable Life Assurance Society. NE¼SE¼ sec. 25, T. 94 N., R. 20 W. Measuring point beginning Mar. 24, 1942, high point on north side of casing 0.9 foot below old measuring point and 0.4 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 24, 3.28; June 23, 4.78; Sept. 24, 5.64; Dec. 15, 6.00.

94-19-3N1 (*938,p.20). SW¼SW¼ sec. 3, T. 94 N., R. 94 N., R. 19 W. Measuring point 0.2 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 24, 3.54; June 23, 4.90; Sept. 24, 8.20; Dec. 15, 6.60.

94-19-16R1 (*938,p.20). Edmond Kelsh. SE¼SE¼ sec. 16, T. 94 N., R. W. Measuring point 1.25 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 24, 7.98; June 23, 8.53; Sept.24, 13.53; Dec. 15, 15.94.

94-19-21P1 (*938,p.20). William Hogan Estate. SE¼SW¼ sec. 21, T. 94 N., R. 19 W. Measuring point 1.2 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 24, 29.49; Sept. 24, 30.83; Dec. 15, 32.84.

94-19-25N1 (*938,p.21). SW¼SW¼ sec. 25, T. 94 N., R. 19 W. Measuring point, top of casing, 0.3 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 24, 2.25; June 23, 3.20; Sept. 24, 4.06; Dec. 15, 5.85.

Cherokee County

92-40-26P1 (*886,p.116; 908,p.14; 938,p.21). Owner's No. 2 south (incorrectly published in Water-Supply Paper 938 as owner's No. 3 south). City of Cherokee. SE¼SW¼ sec. 26, T. 92 N., R. 40 W. Land surface and concrete floor of pump house appear to have lowered 0.06 foot during the year, owing to the land settling in immediate vicinity of well, but altitude of measuring point has remained unchanged. Measuring point, top edge of pump frame, on Mar. 20, 1942, was 0.8 foot above top of pump base, 1.01 feet above concrete floor (published in Water-Supply Paper 908 as 0.95 foot above concrete floor), and 0.2 foot below land-surface datum. Water-level measurements by D. Kennedy, Cherokee Water Works.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 16	16.1	Jan. 31	a23.6	June 4	15.1	Aug. 11	a25.7
	a23.5	Mar. 2	15.9		a23.6	Sept.28	14.4
23	16.1		a24.2	10	16.6		a21.9
	a22.8	Apr. 1	15.1		a24.5	Oct. 3	14.9
24	15.8		a23.6	July 10	16.2		a17.9
	a23.4	May 4	15.6		a24.2	Dec. 16	15.1
31	16.5		a22.2	Aug. 11	19.7		a22.6

Clay County

96-35-3R1 (*908,p.14; 938,p.21). Allis Wilson. SE¼SE¼ sec. 3, T. 96 N., R. 35 W. Measuring point 1.8 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: June 18, 3.32; Sept. 24, 3.04; Dec. 17, 3.81.

Clayton County

94-4-4L1 (*908,p.14; 938,p.21). Henry Drahn. NE¼SW¼ sec. 4, T. 94 N., R. 4 W. Measurements discontinued Dec. 28, 1940.

Clinton County

81-6E-22H1 (*908,p.14; 938,p.21). Owner's No. 2. E. I. duPont de Nemours & Co. b/ SE¼NE¼ sec. 22, T. 81 N., R. 6 E. Measuring point 2.0 feet above land-surface datum.

a Pumping.
b Measurements made by E. I. duPont de Nemours & Co.

81-6E-22H1--Continued.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level
Jan. 15	a43.7	May 7	a45.6	Oct. 12	a58.7
Feb. 9	a50.6	June 16	a49.2	27	a58.5
Mar. 5	a51.6	19	a45.3	Dec. 12	a56.4
31	a49.9	Aug. 18	a56.4	19	a53.2
Apr. 29	a49.2	Sept.15	b44.9	29	a54.1

81-7E-6K1 (*908,p.14; 938,p.21). W. Atlee Burpee Co. (formerly owned by National Biscuit Co.). NW¼SE¼ sec. 6, T. 81 N., R. 7 E. Measuring point level with land-surface datum. Water levels, in feet below land-surface datum, 1942: Apr. 8, 53.66; Nov. 10, 61.10.

Decatur County

69-25-29R1 (*908,p.14; 938,p.22). Sam Gasset. SE¼SE¼ sec. 29, T. 69 N.,R. 25 W. Measuring point level with land-surface datum. Water level, in feet below land-surface datum, 1942: Nov. 25, 13.91.

Dickinson County

99-36-6G1 (*938,p.22). SW¼NE¼ sec. 6, T. 99 N., R. 36 W. Measuring point 2.0 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: June 18, 0.68; Sept. 24, 0.24; Dec. 16, 1.34.

Emmet County

100-32-11R1 (*886,p.116; 908,p.15; 938,p.22). Okamanpedan State Park. SE¼SE¼ sec. 11, T. 100 N., R. 32 W. Measuring point 0.25 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Sept. 24, 62.08; Dec. 17, 61.68.

99-34-14B1 (*886,p.116; 908,p.15; 938,p.22). Owner's No. 3. City of Estherville. NW¼NE¼ sec. 14, T. 99 N., R. 34 W. No measurements made in 1942.

99-32-10E1 (*908,p.15; 938,p.22). C. E. Birney. SW¼NW¼ sec. 10, T. 99 N., R. 32 W. Measuring point 0.7 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: June 18, 2.33; Sept. 24, 5.97; Dec. 17, 6.64.

99-31-31J1 (*938,p.22). Chicago & North Western Railway. NE¼SE¼ sec. 31, T. 99 N., R. 31 W. Measuring point, top of plank covering of well pit, 0.2 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Sept. 24, 83.61; Dec. 17, 83.62.

Hamilton County

86-25-5E1 (*886,p.116; *908,p.15; 938,p.22). Owner's No. 3. City of Stanhope. SW¼NW¼ sec. 5, T. 86 N., R. 25 W. Measurements discontinued Apr. 26, 1940.

Hardin County

89-20-7E1 (*938,p.22). Wm. H. Gilbert. SW¼NW¼ sec. 7, T. 89 N., R. 20 W. Measuring point 0.2 foot above land-surface datum. Measurements by Wm. H. Gilbert.

a Well 2 pumping, well 1 idle.
b Well 2 idle, well 1 pumping.

89-20-7E1 (*938,p.22). Wm. H. Gilbert--Continued.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	16.35	Apr. 5	14.40	July 5	14.32	Oct. 4	13.48
11	16.22	12	15.92	12	14.56	11	13.68
18	16.15	19	15.04	19	14.68	18	13.76
25	15.71	26	15.55	26	15.00	25	13.98
Feb. 1	15.54	May 3	14.62	Aug. 2	14.05	Nov. 1	14.08
8	15.44	10	14.32	9	14.08	8	14.18
15	14.92	17	14.18	16	14.75	15	14.28
22	14.82	24	14.05	23	15.38	22	14.36
Mar. 1	16.05	31	a17.32	30	15.17	29	14.52
8	15.28	June 7	12.28	Sept. 6	14.65	Dec. 6	14.64
15	15.02	14	a16.03	14	14.40	13	14.72
22	14.32	21	13.42	20	14.18	20	15.08
29	14.10	28	13.78	27	14.08		

Harrison County

80-42-11Q1 (*908,p.15; 938,p.22). City of Woodbine. SW¼SE¼ sec. 11, T. 80 N., R. 42 W. Measuring point level with land-surface datum. Water levels, in feet below land-surface datum, 1942: Sept. 22, 15.10, b/43.43; Nov. 15, c/18.2,a/c/50.5; Dec. 15, 17.65.

80-41-20M1 (*886,p.117; *908,p.15; 938,p.22). Mutual Benefit Life Insurance Co. NW¼SW¼ sec. 20, T. 80 N., R. 41 W. Measurements discontinued Dec. 20, 1941.

79-41-34N1 (*886,p.117; 908,p.15; 938,p.23). Mutual Benefit Life Insurance Co. SW¼SW¼ sec. 34, T. 79 N., R. 41 W. Measuring point level with land-surface datum. Water levels, in feet below land-surface datum, 1942: June 16, 50.71; Sept. 22, 44.21; Dec. 15, 48.58.

78-42-11A1 (*886,p.117; 908,p.15; 938,p.23). Mutual Benefit Life Insurance Co. NE¼NE¼ sec. 11, T. 78 N., R. 42 W. Measuring point, top of brick curb of pump pit, 0.2 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: June 16, 26.41; Sept. 22, b/20.28; Dec. 15, b/26.90.

78-42-12Q1 (*886,p.117; 908,p.15; 938,p.23). Mutual Benefit Life Insurance Co. SW¼SE¼ sec. 12, T. 78 N., R. 42 W. Measuring point 0.3 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: June 16, 21.73; Sept. 22, 23.22; Dec. 15, 23.94.

Ida County

89-40-35D1 (*886,p.117; 908,p.15; 938,p.23). Owner's No. 3. City of Holstein. NW¼NW¼ sec. 35, T. 89 N., R. 40 W. No measurements made in 1942.

Iowa County

80-9-3L1. NW¼SE¼ sec. 3, T. 80 N., R. 9 W. Unused bored well, diameter 10 inches, depth 23.5 feet. Measuring point, top of tile casing, level with land-surface datum. Equipped with lift pump.

a Pumped shortly before measurement.

b Pumping.

c Computed pressure-gage reading by L. Brookhouser, waterworks superintendent.

80-9-3L1. NW¼SE¼ sec. 3, T. 80 N., R. 9 W--Continued.

Water level, in feet below land-surface datum, 1941-42

Date	Water level	Date	Water level	Date	Water level
Sept.18, 1941	5.60	Apr. 29, 1942	3.79	Sept.26, 1942	4.95
Dec. 5	3.65	May 27	3.93	Oct. 28	4.97
Feb. 27, 1942	3.38	June 16	3.25	Nov. 26	3.76
Mar. 18	2.50	30	3.79	Dec. 19	4.05
31	2.04	Aug. 29	5.53		

Jasper County

80-18-31C1 (*908,p.16; 938,p.23). Maynard Lust. NE¼NW¼ sec. 31, T. 80 N., R. 18 W. Measuring point 1.0 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 27	20.54	May 27	13.18	Aug. 29	17.42	Nov. 26	20.60
Mar. 31	20.18	June 16	12.12	Sept.26	18.85	Dec. 19	23.85
Apr. 29	22.25	Aug. 1	15.89	Oct. 28	21.10		

Jefferson County

72-10-26A1. Dr. Charles Carter. NE¼NE¼ sec. 26, T. 72 N., R. 10 W. Unused dug well, diameter 36 inches, depth 70.0 feet. Measuring point, top of well platform at 1-inch hole, 0.3 foot above land-surface datum and about 773 feet above mean sea level. Equipped with lift pump. Water-level recorder maintained on well since Dec. 10, 1942. Taps water in glacial drift. Water levels, in feet below land-surface datum, 1942: Dec. 10, 25.25; Dec. 23, 25.10; Dec. 27, a24.97.

Johnson County

80-5-9K2 (*908,p.16; 938,p.23). Geological Survey, United States Department of Interior. NW¼SE¼ sec. 9, T. 80 N., R. 5 W. Measuring point 2.3 feet above land-surface datum. Highest water level at noon observed from recorder charts for 1942 was 0.32 foot below land-surface datum Jan. 2; lowest water level at noon observed was 4.19 feet below land-surface datum on Aug. 25 and 26.

Water level at noon, in feet below land-surface datum, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	1.22	1.30	1.51	1.48	2.99	3.34	2.47	3.40	3.79	3.04	3.36	2.12
2	1.40	1.56	1.42	1.59	3.07	3.36	2.60	1.82	3.83	3.12	3.51	2.20
3	1.48	1.66	1.22	1.73	2.90	3.39	2.69	2.43	3.55	3.17	3.59	2.27
4	1.59	1.58	1.16	1.80	3.02	3.44	2.82	2.74	3.58	3.21	3.55	2.36
5	1.69	1.59	1.22	1.97	3.06	3.49	2.90	2.91	3.66	3.26	2.78	2.41
6	1.78	.82	1.13	1.98	2.44	3.42	.64	2.84	3.71	3.28	2.80	2.50
7	1.89	.84	1.05	1.99	2.61	3.23	1.11	2.97	3.69	3.34	2.85	2.54
8	1.91	1.00	.88	2.10	2.71	3.26	1.46	3.05	3.70	3.38	2.93	2.56
9	2.06	1.08	1.22	2.15	2.80	3.33	1.77	3.16	1.96	3.45	2.39	2.60
10	....	1.22	1.28	2.24	1.99	3.31	1.92	3.24	2.31	3.47	1.27	2.62

a Measurement by Dr. Charles Carter.

80-5-9K2--Continued.

Water level at noon, in feet below land-surface datum, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
11	....	1.27	1.05	2.35	1.86	(a)	2.16	3.35	2.58	3.48	1.52	2.65
12	2.22	1.36	1.44	2.39	1.97	.62	2.32	3.41	2.85	3.51	1.61	2.68
13	2.05	1.42	1.38	2.43	2.19	.84	2.49	3.48	2.98	3.56	1.82	2.79
14	2.03	1.45	.80	2.46	2.44	1.08	.79	3.53	3.07	3.58	1.90	2.76
15	1.91	1.47	.94	2.50	2.55	1.35	1.20	3.56	3.16	3.58	1.95	2.77
16	1.80	.44	.98	2.56	2.64	1.61	1.56	3.64	3.25	3.62	2.07	2.69
17	1.68	.48	.92	2.61	2.72	1.54	1.90	3.71	3.35	3.65	1.30	2.68
18	1.27	....	.82	2.64	2.73	1.79	2.17	3.76	3.42	3.67	1.54	2.88
19	.94	1.58	.69	2.69	2.78	1.94	2.11	3.81	2.28	3.67	1.60	2.90
20	.78	1.84	.54	2.72	2.83	.45	2.28	3.88	2.60	3.68	1.75	2.94
21	.72	1.95	.71	2.74	2.86	.68	2.48	3.95	2.70	3.69	1.84	2.91
22	.68	2.05	.94	2.75	2.89	.92	2.61	4.05	2.88	3.70	1.92	2.89
23	.43	2.08	1.10	2.77	2.94	1.28	2.73	4.12	2.90	3.75	1.86	2.94
24	.32	2.19	1.24	2.83	3.00	1.58	2.84	4.15	3.05	3.78	1.65	2.94
25	.38	2.26	1.39	2.85	3.03	1.35	2.93	4.19	3.08	3.81	1.69	2.88
26	.39	2.04	.83	2.90	3.04	1.67	3.02	4.19	2.85	3.82	1.87	2.26
27	.48	2.13	1.17	2.90	3.09	1.87	3.10	4.09	2.79	3.82	1.96	.43
28	.54	1.91	1.35	2.96	3.13	2.04	3.14	3.45	2.91	3.83	1.99	.49
29	.56	....	1.30	2.97	3.18	2.15	3.20	3.51	2.92	3.84	2.05	.59
30	.62	....	1.47	2.99	3.24	2.33	3.24	3.64	2.97	3.69	2.06	.69
31	.93	....	1.36	....	3.29	....	3.34	3.73	....	3.46	....	.76

80-5-22M1 (*938,p.24). Chicago, Rock Island, & Pacific Railway. NW¼SW¼ sec. 22, T. 80 N., R. 5 W. Measuring point 0.3 foot above land-surface datum. Highest water level at noon observed from recorder charts for 1942 was 8.82 feet below land-surface datum Mar. 21; lowest water level at noon observed was 16.71 feet below land-surface datum Oct. 31.

Water level at noon, in feet below land-surface datum, 1942
(From recorder charts)

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	11.21	9.73	b11.69	12.42	11.41	.....	.....	15.63	16.65	11.78
2	.....	11.12	9.67	11.82	12.56	11.64	.....	.....	15.66	16.67	11.93
3	.....	11.14	9.91	11.85	12.67	11.81	.....	.....	15.77	16.74	12.15
4	.....	11.08	9.95	12.00	12.79	12.10	.....	.....	.....	16.65	12.29
5	.....	11.13	10.10	12.04	12.91	12.33	.....	.....	.....	16.54	12.45
6	.....	11.15	10.18	11.88	12.99	12.18	15.18	.....	15.97	16.53	12.55
7	10.87	11.11	10.45	11.81	12.97	11.56	15.27	.....	15.99	16.39	12.72
8	10.94	11.19	10.59	b11.75	12.95	11.21	15.40	.....	15.97	16.30	12.80
9	10.89	11.16	10.59	b11.70	12.88	11.20	.....	.....	16.01	16.00	12.88
10	10.89	11.24	10.64	11.65	12.82	11.28	.....	.....	16.03	15.00	12.89
11	10.92	11.11	10.75	11.51	12.76	11.49	.....	.....	16.00	13.70	12.97
12	10.96	11.21	10.80	11.34	12.10	11.69	.....	.....	15.98	12.68	13.03
13	11.00	11.16	10.81	11.23	11.73	11.91	.....	14.64	16.02	12.42	13.14
14	10.97	11.10	10.82	11.27	11.49	.....	.....	14.49	16.05	12.23	13.27
15	10.87	10.95	10.81	11.36	11.34	11.68	.....	14.47	16.06	11.96	13.20
16	10.68	10.74	10.95	11.36	11.31	.....	.....	14.50	16.09	11.96	13.28
17	10.42	10.27	11.08	11.38	11.39	.....	.....	14.58	16.16	12.04	13.32
18	10.34	9.74	b11.12	11.41	11.46	.....	.....	14.67	16.19	11.83	13.36
19	10.27	9.39	b11.15	11.48	11.55	.....	.....	14.82	16.20	11.46	13.65
20	10.36	8.98	b11.18	11.47	11.59	.....	.....	15.00	16.21	11.38	13.70
21	10.46	8.82	b11.22	11.44	10.57	.....	.....	15.01	16.21	11.52	13.71
22	10.56	8.92	b11.25	11.44	10.02	.....	.....	15.03	16.19	11.52	13.52
23	10.55	8.96	b11.30	11.48	9.90	12.70	.....	15.05	16.34	11.39	13.60
24	10.69	8.92	b11.35	11.55	10.02	12.85	.....	15.23	16.48	11.31	13.72
25	10.84	9.04	11.39	11.64	10.22	13.02	.....	15.38	16.52	11.21	13.80
26	10.93	9.21	11.45	11.67	10.37	13.21	.....	15.36	16.58	11.48	13.79
27	11.03	9.40	11.50	11.82	10.54	13.42	.....	15.47	16.60	11.70	11.92
28	11.15	9.42	11.57	11.91	10.71	13.62	.....	15.63	16.61	11.64	10.42
29	.....	9.56	11.62	12.04	10.91	.....	.....	15.65	16.62	11.76	9.85
30	.....	9.66	b11.66	12.15	11.17	.....	.....	15.61	16.59	11.77	9.81
31	.....	9.75	.....	12.27	.....	.....	.....	.....	16.71	.....	9.84

a Cloudburst. Nearby creek overflowed and flooded well.
b Estimated.

80-5-22M2 (*938,p.24). Chicago, Rock Island, & Pacific Railway. NW¼SW¼ sec. 22, T. 80 N., R. 5 W. Measuring point 0.3 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 6	15.91	Apr. 28	16.23	June 8	16.51	July 4	16.22
7	15.75	May 1	16.18	9	16.47	5	16.21
10	15.82	3	16.36	10	16.50	15	15.69
20	16.73	6	16.15	11	16.47	22	16.33
26	16.34	12	15.80	12	15.76	Aug. 1	17.23
Mar. 3	15.99	16	16.00	13	15.86	4	17.03
8	16.25	18	16.09	14	15.93	5	17.09
11	16.04	21	16.03	17	16.04	Sept.12	17.01
17	15.26	23	16.14	21	15.36	16	18.60
22	15.87	26	16.22	22	15.50	Oct. 2	17.75
24	15.42	27	16.33	24	15.66	5	18.07
26	15.76	29	16.53	26	15.70	7	16.94
31	15.45	30	16.73	27	15.77	9	17.45
Apr. 4	15.64	June 1	16.80	29	15.92	12	17.31
12	16.03	5	17.05	July 1	16.07	27	17.71
17	16.13	6	16.64	2	16.04	Nov. 30	15.83
22	16.06	7	16.32	3	16.12		

Linn County

(Indian Creek project of Soil Conservation Service, U.S. Dept. of Agriculture

85-6-19J1, formerly 85-6-19A1 (*908,p.17; 938,p.24). Geological Survey, U. S. Dept. of Interior. NE¼SE¼ sec. 19, T. 85 N., R. 6 W. (incorrectly published in Water-Supply Paper 908 as NE¼NE¼ sec. 19, T. 85 N., R. 6 W.). Measuring point 0.8 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 26	3.93	Apr. 27	4.50	July 27	4.45	Oct. 26	4.15
Feb. 23	4.42	May 25	4.28	Aug. 31	3.79	Nov. 30	4.02
Mar. 23	4.11	June 29	3.49	Sept.28	3.80	Dec. 26	3.97

85-6-26D1 (*908,p.17; 938,p.24). Geological Survey, U. S. Dept. of Interior. NW¼NW¼ sec. 26, T. 85 N., R. 6 W. Measuring point 0.3 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 26	1.09	Apr. 27	3.87	July 27	4.40	Oct. 26	3.96
Feb. 23	3.30	May 25	3.84	Aug. 31	2.25	Nov. 30	1.87
Mar. 23	2.13	June 29	2.59	Sept.28	2.44	Dec. 26	2.40

85-6-29B1 (*908,p.17; 938,p.25). Earl Balderson. NW¼NE¼ sec. 29, T. 85 N., R. 6 W. Measuring point 0.9 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 26	59.32	Apr. 27	59.54	July 27	59.84	Oct. 26	58.27
Feb. 23	59.60	May 25	60.39	Aug. 31	59.03	Nov. 30	57.80
Mar. 23	59.69	June 29	60.83	Sept.28	58.51	Dec. 26	58.62

85-6-30D1. NW¼NW¼ sec. 30, T. 85 N., R. 6 W. Unused drilled well, diameter 4 inches, depth 52 feet. Measuring point, top of casing, 0.7 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

May 25	13.00	July 27	13.18	Sept.28	11.78	Nov. 30	12.22
June 29	11.16	Aug. 31	12.15	Oct. 26	13.07	Dec. 26	13.04

84-7-13E1 (*908,p.18; 938,p.25). Alfred Rinderknecht. SW¼NW¼ sec. 13, T. 84 N., R. 7 W. Measuring point 0.2 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	3.72	Apr. 27	4.33	July 27	5.16	Oct. 26	4.86
Feb. 23	4.06	May 25	4.33	Aug. 31	4.80	Nov. 30	3.71
Mar. 23	3.35	June 29	4.80	Sept.28	4.31	Dec. 26	4.57

84-6-20N1 (*908,p.18; 938,p.35). Geological Survey, United States Department of Interior. SW¼SW¼ sec. 20, T. 84 N., R. 6 W. Measuring point 1.0 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 26	3.04	Apr. 27	4.39	July 27	4.53	Oct. 26	5.47
Feb. 23	3.89	May 25	4.38	Aug. 31	5.07	Nov. 30	4.34
Mar. 23	3.42	June 29	4.19	Sept.28	4.42	Dec. 26	4.84

84-6-22F1 (*908,p.18; 938,p.25). C. A. Wissler. SW¼NW¼ sec. 22 T. 84 N., R. 6 W. Measuring point 0.5 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Feb. 23	4.20	June 29	5.42	Sept. 28	4.42	Nov. 30	3.92
Mar. 23	3.65	July 27	5.73	Oct. 26	4.92	Dec. 26	4.76
May 25	4.72	Aug. 31	4.94				

(Cedar Rapids project)

83-7-1B1 (*938,p.25). City of Marion. NW¼NE¼ sec. 1, T. 83 N., R. 7 W. Measuring point 1.1 feet above land-surface datum.

Water level, in feet below land-surface datum, 1942

Apr. 27	6.17	July 27	5.99	Sept. 28	b9.51	Nov. 30	5.33
May 25	6.40	Sept.28	a55.04	Nov. 30	a40.90	Dec. 26	7.10
June 30	6.11						

83-7-2P1 (*908,p.18; 938,p.26). Mr. Hollenbeck. SE¼SW¼ sec. 2, T. 83 N., R. 7 W. Measuring point 0.5 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 26	29.89	Apr. 27	30.48	July 27	30.92	Oct. 26	31.13
Feb. 23	29.89	May 25	30.75	Aug. 31	31.36	Nov. 30	29.63
Mar. 23	30.43	June 30	31.20	Sept.28	30.83	Dec. 26	30.73

83-7-6B1 (*908.p.19; 938,p.26). Schrimper Estate. NW¼NE¼ sec. 6, T. 83 N., R. 7 W. Measuring point 0.25 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 26	58.24	Apr. 27	57.90	July 27	56.78	Oct. 26	58.57
Feb. 23	58.70	May 25	61.55	Aug. 31	56.62	Nov. 30	56.17
Mar. 23	58.79	June 30	57.97	Sept.28	56.55	Dec. 26	57.75

83-7-11E1 (*938,p.26). Louis Maresh. SW¼NW¼ sec. 11, T. 83 N., R. 7 W. Measuring point level with land-surface datum. Highest water level observed from recorder charts was 67.76 feet below land-surface datum Jan. 1; lowest observed water level was 81.93 feet below land-surface datum July 23.

a Pumping.
b Pump shut down 2 hours.

83-7-11E1 (*938,p.26). Louis Maresh. SW¼NW¼ sec. 11, T. 83 N., R. 7 W-- Continued.

Water level at noon, in feet below land-surface datum, 1942
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	67.76	Feb. 4	67.86	Mar. 14	68.65	Apr. 7	68.74
12	68.47	5	67.97	15	68.57	8	68.74
13	68.44	6	67.97	16	68.45	9	68.61
14	68.57	7	68.13	17	68.66	10	68.66
15	68.44	8	68.17	18	68.66	11	68.84
16	68.47	9	68.05	19	68.73	12	68.76
17	68.34	24	68.27	20	68.47	13	68.77
18	68.45	25	68.29	21	68.63	14	68.76
19	68.53	26	68.30	22	68.71	15	68.79
20	68.48	27	68.39	23	68.64	16	68.89
21	68.31	28	68.46	24	68.54	17	68.94
22	68.39	Mar. 1	68.46	25	68.54	18	68.93
23	68.25	2	68.38	26	68.58	19	69.02
24	68.18	3	68.44	27	68.63	20	68.98
25	68.21	4	68.39	28	68.59	21	68.98
26	68.15	5	68.43	29	68.69	22	68.94
27	68.22	6	68.33	30	68.69	23	69.64
28	68.21	7	68.47	31	68.73	24	70.28
29	67.98	8	68.40	Apr. 1	68.60	25	70.07
30	68.00	9	68.53	2	68.52	26	69.91
31	68.11	10	68.50	3	68.63	27	69.69
Feb. 1	68.15	11	68.48	4	68.42	28	69.73
2	68.19	12	68.64	5	68.64	29	69.69
3	68.07	13	68.61	6	68.62	30	70.26

Daily high and low water levels, in feet below land-surface datum, 1942
(From recorder charts)

	May		June		July		August		September	
Day	High	Low	High	Low	High	Low	High	Low	High	Low
1	70.88	71.45	74.91	75.45	a78.61	.....	a81.68	.....	80.35	80.95
2	.....	71.42	a75.43	.....	77.58	78.56	80.83	81.73	a80.60	.....
3	.....	.....	a75.44	.....	77.10	77.58	a80.68	.....	80.22	80.95
4	.....	.....	75.71	76.97	76.80	77.40	a80.43	.....	79.90	80.38
5	a70.62	.....	76.97	77.93	a77.62	.....	80.17	80.60	79.22	79.94
6	a70.33	.....	77.93	78.82	76.64	77.40	a80.34	.....	78.30	79.22
7	a70.39	.....	a78.87	.....	a77.09	.....	a80.69	.....	77.63	78.30
8	a70.29	.....	a78.79	.....	77.23	77.69	a80.71	.....	77.71	78.21
9	a70.24	.....	a78.64	.....	a77.81	.....	.....	80.80	78.03	78.44
10	a70.22	.....	a78.74	.....	a77.68	.....	.....	.....	78.44	78.94
11	a69.94	.....	78.94	79.48	77.91	78.80	a79.12	.....	78.94	79.69
12	69.93	70.48	79.48	79.96	a78.55	.....	78.73	79.19	79.69	80.40
13	70.48	71.54	.....	.....	a79.08	.....	78.04	78.73	79.41	80.40
14	a71.54	.....	.....	.....	a79.07	.....	77.85	78.40	a79.14	.....
15	.....	.....	.....	.....	79.15	79.71	a78.06	.....	.....	a79.46
16	.....	.....	75.67	76.39	79.71	80.26	77.92	78.54	a79.66	.....
17	a70.71	.....	a75.51	.....	80.26	80.71	77.35	77.92	79.99	80.72
18	a70.64	.....	75.24	75.86	a80.92	.....	77.69	78.11	80.72	81.65
19	a70.61	.....	75.86	76.81	80.43	81.21	a77.91	.....	80.99	81.81
20	a70.52	.....	76.81	77.46	80.43	80.84	78.28	79.06	79.57	80.99
21	a70.45	.....	77.04	77.48	80.84	81.51	79.06	79.73	78.64	79.57
22	a70.40	.....	a77.30	.....	a81.76	.....	79.73	80.72	77.49	78.64
23	a70.48	.....	76.41	77.47	81.37	81.93	79.75	80.72	76.81	77.49
24	a70.50	.....	75.86	76.42	81.05	81.50	78.66	79.75	76.18	76.81
25	a70.38	.....	75.78	76.48	80.89	81.31	77.88	78.66	75.47	76.18
26	70.67	71.42	75.28	75.78	80.35	81.07	77.14	77.99	a75.26	.....
27	a71.58	.....	75.68	76.51	80.44	81.10	a76.86	.....	a74.93	.....
28	71.51	72.40	76.36	76.83	a81.42	.....	77.11	77.93	a74.63	.....
29	72.40	73.92	76.83	78.12	80.82	81.36	77.93	78.84	a74.17	.....
30	73.92	75.37	78.12	78.81	a81.02	.....	78.84	79.72	a73.88	.....
31	74.80	75.37	.....	.....	80.94	81.41	79.72	80.35	.....	.....

a Water level at noon; daily fluctuation less than 0.4 foot.

83-7-11E1-- Continued.

Water level at noon, in feet below land-surface datum, 1942
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 1	73.65	Oct. 24	72.58	Nov. 17	71.02	Dec. 10	70.16
2	73.86	25	72.56	19	70.69	11	70.15
3	74.31	26	72.46	20	70.76	12	70.19
4	73.96	27	72.44	21	70.84	13	70.34
5	73.80	28	72.42	22	70.71	14	70.18
6	73.55	29	72.40	23	70.50	15	70.13
7	73.44	30	72.36	24	70.44	16	70.25
8	73.30	31	72.49	25	70.32	17	70.01
9	73.99	Nov. 1	72.15	26	70.53	18	70.45
10	73.72	2	72.44	27	70.49	19	70.40
11	73.41	3	72.50	28	70.37	20	70.41
12	73.19	4	72.31	29	70.38	21	70.17
13	73.13	5	72.43	30	70.18	22	70.08
14	73.03	6	72.41	Dec. 1	70.24	23	70.09
15	72.92	7	72.13	2	70.31	24	70.23
16	72.92	8	72.00	3	70.29	25	70.16
17	72.87	10	71.79	4	70.33	26	70.15
18	72.74	11	71.55	5	70.30	27	70.21
19	72.62	12	71.21	6	70.38	28	70.04
20	72.53	13	71.40	7	70.37	29	70.03
21	72.50	14	71.15	8	70.26	30	70.00
22	72.50	15	70.91	9	70.24	31	69.82
23	72.61	16	70.87				

83-7-16D1 (*908,p.19; 938,p.27). City of Cedar Rapids (Shaver Park). NW¼NW¼ sec. 16, T. 83 N., R. 7 W. Measuring point 0.5 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 26	85.62	Apr. 27	86.21	July 27	87.45	Oct. 26	88.57
Feb. 23	86.09	May 25	86.52	Aug. 31	88.15	Nov. 30	86.65
Mar. 23	86.04	June 30	87.36	Sept.28	88.43	Dec. 26	86.73

83-7-16J1 (*908,p.19; 938,p.27). City of Cedar Rapids (Daniels Park). NE¼SE¼ sec. 16, T. 83., R. 7 W. Measuring point 1.4 feet above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 26	30.97	Apr. 27	30.39	July 27	31.17	Oct. 26	31.16
Feb. 23	32.78	May 25	30.51	Aug. 31	31.16	Nov. 30	30.72
Mar. 23	30.80	June 30	a32.98	Sept.28	31.45	Dec. 26	30.82

83-7-17L1 (*908,p.19; 938,p.27). City of Cedar Rapids (Ellis Park). NE¼SW¼ sec. 17, T. 83 N., R. 7 W. Measuring point 0.6 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 26	18.96	Apr. 27	19.39	July 27	19.37	Oct. 26	19.80
Feb. 23	19.27	May 25	19.29	Aug. 31	19.48	Nov. 30	19.52
Mar. 23	18.46	June 30	19.39	Sept.28	19.72	Dec. 26	19.74

83-7-21L1 (*908,pp.19-20; 938,p.28). City of Cedar Rapids. NE¼SW¼ sec. 21, T. 83 N., R. 7 W. Measuring point about 2.3 feet above original land-surface datum. Highest water level observed from recorder charts was 23.64 feet below land-surface datum Jan. 18 and lowest water level observed was 54.40 feet below land-surface datum July 11.

a Pumped shortly before measurement.

83-7-21L1 (*908, pp.19-20; 938, p.28)--Continued.

Daily high and low water levels, in feet below land-surface datum, 1942
(From recorder charts)

Day	January		February		March		April		May		June	
	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
1	23.42	27.03	23.00	28.73	24.62	26.20	27.57	33.02	32.03	37.98	32.76	45.60
2	23.15	27.57	22.30	28.62	24.32	30.53	27.20	33.47	31.05	34.95	35.68	46.07
3	25.25	27.80	26.48	30.26	28.48	32.35	27.98	32.97	29.00	31.12	36.38	46.70
4	23.25	25.85	26.68	30.03	29.11	33.36	25.77	28.92	28.47	34.97	37.39a	48.2
5	22.32	29.65	27.50	31.45	29.10	33.64	24.90	27.12	29.77	35.87	38.17a	47.8
6	27.10	30.60	27.70	30.47	28.93	32.94	24.59	32.99	29.34	34.80	36.63	42.79
7	28.75	30.46	25.00	28.88	26.67	30.66	27.87	34.32	28.44	34.53	35.26	40.69
8	28.92	30.66	22.86	25.00	25.42	27.95	28.40	34.40	28.62	33.80	33.03	39.98
9	28.66	31.56	22.57	29.43	24.87	32.26	28.25	33.95	28.24	35.80	33.27	45.73
10	24.54	31.02	27.12	30.27	28.30	32.90	28.01	33.97	27.80	30.54	34.90	44.61
11	22.40	24.67	27.49	30.29	28.50	32.39	26.69	30.52	27.19	35.79	36.33	45.21
12	21.82	30.75	27.28	30.64	28.53	33.50	25.91	27.77	30.05	36.88	36.18	43.67
13	25.80	32.19	28.08	30.62	28.78	32.84	25.18	32.70	30.56	39.74	32.50	39.53
14	25.40	32.41	24.78	29.70	26.02	29.65	28.89	35.04	31.44	36.35	30.15	35.17
15	25.55	32.31	23.00	25.58	24.94	26.71	29.50	36.12	29.91	35.07	29.92	38.76
16	26.08	32.01	22.42	30.04	24.17	32.22	29.74	35.36	28.77	32.40	33.04	39.39
17	23.87	28.44	28.77	30.76	30.62	33.23	29.73	35.02	27.74	30.33	33.86	40.25
18	21.34	23.87	28.54	31.25	30.49	32.74	27.82	31.90	27.99	36.13	36.02	45.13
19	22.35	30.10	28.61	31.80	30.23	33.31	25.75	28.22	29.48	36.54	38.44	.....
20	25.20	28.74	29.44	32.11	30.16	32.98	25.11	35.65	30.03	36.40	38.16	44.98
21	23.94	29.29	25.20	30.25	26.80	31.54	28.58	36.90	29.30	38.64	36.15	42.99
22	23.93	29.80	23.50	25.73	25.84	28.52	31.60	36.13	30.34	36.64	34.45	43.18
23	24.17	29.41	23.10	31.08	25.70	32.23	32.04	36.66	29.74	32.75	36.84	42.52
24	23.59	27.80	28.81	32.37	28.44	34.19	33.62	36.86	28.30	30.93	36.94	43.57
25	22.84	24.11	29.45	32.90	29.19	33.94	30.04	34.24	28.13	36.57	37.84	42.50
26	22.26	29.14	29.03	31.95	29.12	33.78	27.91	30.18	30.17	39.96	36.20	39.69
27	25.88	30.15	28.45	32.24	29.11	32.97	26.97	36.52	32.51	38.67	34.57	46.32
28	23.97	31.63	26.00	30.02	26.82	30.32	30.79	36.74	32.37	.....	38.10	44.12
29	26.19	30.49	.....	.....	25.57	27.68	31.13	37.31	35.32	.....	37.00	49.37
30	26.37	30.76	.....	.....	24.60	32.04	32.11a	41.57	34.57	39.53	40.90	49.38
31	26.11	29.87	.....	.....	27.43	32.29	.....	.....	31.83	36.08	.....	.....

Daily high and low water levels, in feet below land-surface datum, 1942
(From recorder charts)

Day	July		August		September		October		November		December	
	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
1	40.27	44.30	42.84	48.18	43.97	51.02	34.40	40.04	31.94	34.17	34.70	.....
2	38.08	43.66	40.87	46.26	44.74	51.55	36.27	43.49	31.02	36.77	35.70a	37.90
3	37.18	45.69	39.02	47.47	46.01	48.24	38.72	43.33	34.92	38.00	35.36a	38.53
4	36.50	40.99	40.66	47.78	43.54	46.36	36.59	40.98	35.16	36.97	35.21	37.70
5	34.55	38.62	39.96	48.53	42.51	46.93	38.55	42.12	34.93	38.36	.....	37.01
6	34.25	44.56	41.76	49.76	40.97	46.61	39.80	43.02	36.20	37.57	.....	.....
7	39.27	46.73	43.05	48.91	39.61	42.78	41.02	43.57	34.32	36.73	29.62	37.31
8	40.70	49.42	41.71	47.95	40.63	46.99	40.62	44.36	29.26	37.63	34.08	37.28
9	41.42	49.05	40.82	45.97	42.41	48.03	40.51	43.42	30.85	35.49	35.01	38.04
10	41.80	48.72	39.15	49.55	43.07	49.29	37.20	41.40	32.11	36.23	34.55	37.88
11	41.28	52.10	43.54	49.23	43.47	51.36	34.58	41.03	31.98	36.74	34.00	36.70
12	39.40	45.20	44.52	48.88	45.02	49.21	34.78	42.20	31.77	35.76	34.27	36.52
13	37.73	49.89	43.43	48.03	40.78	48.31	39.67	43.00	31.85	35.17	.....	.....
14	42.41	50.29	44.10	49.42	39.28	47.93	40.61	44.18	30.58	34.19	31.18	37.01
15	41.87	51.40	42.69	47.04	42.62	49.10	40.89	43.70	28.35	32.12	34.81	37.72
16	42.33	50.99	40.04	45.26	44.04	50.32	41.21	43.51	29.01	36.20	35.27	38.04
17	42.30	51.90	37.64	47.21	44.23	50.79	39.81	42.19	33.62	37.50	34.01	38.13
18	42.21	49.35	42.11	47.99	.....	.....	37.58	41.05	33.50	36.55	35.55	.....
19	39.69	44.80	41.43	49.18	.....	.....	34.70	42.77	33.63	37.42	34.90	37.00
20	37.02	49.45	42.50	50.55	.....	.....	39.44	41.76	34.15	37.09	.....	.....
21	40.20	50.41	43.26	50.26	.....	.....	39.27	42.75	32.87	38.85	31.20	35.69
22	40.88	48.09	42.40	48.63	.....	.....	38.62	42.35	31.15	36.96	33.22	36.50
23	39.96	50.82	41.04	46.13	.....	.....	36.87	40.00	31.73	37.20	33.64	37.20
24	42.28	50.85	38.70	44.25	.....	.....	34.77	39.03	35.19	37.76	32.33	35.29
25	41.90	48.06	39.42	44.61	.....	.....	31.43	35.73	34.64	37.74	32.06	34.16
26	39.76	45.25	40.52	44.26	35.95	40.31	30.93	37.70	27.87	37.67	31.82	35.00

a Estimated from partial record.

83-7-21L1--Continued.

Daily high and low water levels, in feet below land-surface datum, 1942
(From recorder charts)

	July		August		September		October		November		December	
Day	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
27	39.55	50.26	39.25	49.64	33.09	35.95	34.76	37.05	27.11	36.52	31.52	34.15
28	41.03	50.97	42.65	49.55	32.65	39.91	33.85	37.12	34.82	37.31	30.50	35.79
29	44.36	50.66	41.73	49.08	36.45	40.07	34.41	36.82	32.12	34.82	31.99	35.78
30	41.99	50.30	41.07	46.58	33.10	39.80	35.44	37.59	31.29	37.63	33.20	35.76
31	41.79	50.69	39.83	50.34	.....	.....	34.17	36.00	.....	.....	32.94	34.50

83-7-21P1 (*938,p.28). Kresge Co. SE¼SW¼ sec. 21, T. 83 N., R. 7 W. Measuring point, top of 3/4-inch hole in pump base, 6.41 feet below manhole cover and about 5.8 feet below land-surface datum.

Water level, in feet below land-surface datum, 1942

Date	Hour	Water level	Date	Hour	Water level
Feb. 23	4:30 p.m.	38.98	May 25	4:20 p.m.	57.99
Mar. 23	4:15 p.m.	43.40	Nov. 30	6:00 p.m.	46.54
Apr. 27	4:45 p.m.	59.68	Dec. 26	3:40 p.m.	44.57

83-7-21Q1 (*938,p.28). Iowa Theatre. SW¼SE¼ sec. 21, T. 83 N., R. 7 W. Measuring point, top of pump base, 5.65 feet below manhole cover and 5.6 feet below land-surface datum.

Water level, in feet below land-surface datum, 1942

Mar. 23	4:10 p.m.	36.53	Nov. 30	6:30 p.m.	43.13
Apr. 27	4:15 p.m.	50.71	Dec. 26	3:30 p.m.	41.97
May 25	4:02 p.m.	54.55			

83-7-23G1 (*908,p.20; 938,p.29). City of Cedar Rapids (Bever Park). SW¼NE¼ sec. 23, T. 83 N., R. 7 W. Measuring point 1.0 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	3.12	Apr. 27	3.44	July 27	3.63	Oct. 26	3.35
Feb. 23	3.16	May 25	3.11	Aug. 31	3.92	Nov. 30	3.14
Mar. 23	2.99	June 30	3.35	Sept.28	3.63	Dec. 26	3.22

83-7-24A1 (*908,p.20; 938,p.29). John Zrudsky. NE¼NE¼ sec. 24, T. 83 N., R. 7 W. Measuring point 0.3 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 26	27.51	Apr. 27	28.46	July 27	28.85	Oct. 26	27.43
Feb. 23	28.14	May 25	28.54	Aug. 31	31.65	Nov. 30	28.17
Mar. 23	28.49	June 30	29.34	Sept.28	28.20	Dec. 26	28.64

83-7-28G2 (*908,p.20;938,pp.28-29). Cedar Rapids Gas Co. SW¼NE¼ sec. 28, T. 83 N., R. 7 W. Measuring point level with land-surface datum. Highest water level, estimated from recorder charts, was 29.90 feet below land-surface datum Feb. 1; lowest water level observed was 75.80 feet below land-surface datum July 11.

Daily high and low water levels, in feet below land-surface datum, 1942
(From recorder charts)

	January		February		March		April		May		June	
Day	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
1	38.90	48.60	a29.90	33.57	39.90	45.50	46.17	50.29	56.82	.....	55.88	.....
2	37.72	45.19	.....	36.47	39.31	46.29	45.10	50.58	55.70	.....	66.38	.....
3	42.90	47.12	32.81	44.32	42.92	49.20	45.88	49.95	48.50	56.87	68.25	.....
4	41.98	45.50	39.16	44.62	45.24	51.05	45.62	49.06	48.06	52.38	63.54	.....
5	41.75	46.77	41.03	46.50	45.38	50.55	42.83	47.95	49.95	52.74	.....	.....
6	44.38	48.42	39.10	48.14	45.01	50.42	42.22	50.65	49.22	53.09	.....	.....

a Estimated.

83-7-28G2 (*908, p. 20; 938,pp. 28-29)--Continued.

Daily high and low water levels, in feet below land-surface datum, 1942
(From recorder charts)

	January		February		March		April		May		June	
Day	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
7	45.31	54.60	35.82	39.10	44.08	48.20	47.20	52.80	49.23	52.34	60.55	.....
8	46.75	51.45	34.04	36.04	39.58	44.45	49.35	55.77	49.56	59.29	57.77	70.00
9	48.50	52.04	36.04	42.73	38.81	46.10	50.17	56.43	48.14	53.55	61.52	73.82
10	48.59	52.00	39.15	43.82	40.74	46.72	48.93	54.18	45.75	50.80	64.41	74.05
11	51.82	54.54	40.01	48.25	41.40	46.95	49.39	53.42	44.97	53.72	65.73	73.97
12	50.59	55.17	40.34	45.13	40.16	45.66	46.00	51.28	47.60	53.89	66.58	73.80
13	46.40	51.90	40.73	45.89	38.65	45.73	44.92	52.70	50.37	63.47	59.12	71.53
14	42.89	47.52	41.85	45.81	37.41	43.37	49.10	58.99	52.46	57.65	54.04	59.12
15	40.21	44.78	38.00	42.60	41.23	43.35	49.18	54.09	50.37	53.60	53.37	58.74
16	38.56	42.00	37.32	46.73	40.69	49.40	48.86	53.90	48.51	56.50	54.65	60.18
17	36.06	43.74	40.55	44.49	45.87	50.72	49.53	53.29	46.82	50.70	55.81	61.83
18	37.20	40.24	40.09	49.55	46.49	51.26	47.80	51.36	46.35	52.25	57.52	67.20
19	.....	.....	42.62	48.53	45.02	50.61	39.50	47.60	48.97	56.68	60.95	73.72
20	.....	.....	37.36	42.62	47.47	53.84	38.32	48.96	51.00	54.58	62.24	68.37
21	.....	.....	34.93	38.77	50.54	53.46	45.26	51.39	50.85	56.05	57.89	66.88
22	.....	.....	33.30	36.44	47.11	52.32	47.03	53.34	52.82	58.31	55.57	68.66
23	.....	.....	34.97	43.45	46.71	53.54	47.69	57.39	54.23	58.10	57.91	62.23
24	.....	.....	40.86	49.69	43.83	50.50	50.40	59.31	51.43	56.01	57.90	65.96
25	.....	.....	43.52	49.10	42.72	52.11	50.28	54.73	51.35	59.30	59.63	64.71
26	.....	37.70	45.43	50.49	49.18	53.68	45.57	51.61	54.38	63.60	57.90	64.40
27	33.10	37.88	45.31	49.56	50.85	54.96	45.16	57.58	57.44	60.98	57.64	66.16
28	33.00	38.68	44.07	48.10	49.75	53.52	54.72	58.91	57.63	66.61	57.18	65.33
29	33.77	41.03	.....	.....	42.65	51.00	54.15	.....	60.07	68.61	54.36	71.54
30	35.03	39.30	.....	.....	40.48	46.82	55.78	.....	58.10	65.70	60.95	73.38
31	33.57	36.40	.....	.....	44.60	49.76	.....	.....	56.48	59.09	.....	.....

Daily high and low water levels, in feet below land-surface datum, 1942
(From recorder charts)

	July		August		September		October		November		December	
Day	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
1	60.66	71.15	61.33	72.18	58.81	71.35	50.34	56.43	41.83	44.36	44.79	48.36
2	59.35	71.15	56.96	65.98	62.35	.....	51.70	57.60	41.26	47.17	45.61	50.98
3	60.99	69.29	55.42	68.40	.....	.....	54.33	57.55	44.28	48.22	48.57	51.31
4	58.46	66.53	57.52	69.02	.....	.....	48.71	55.40	45.41	51.90	48.99	51.25
5	54.82	59.19	58.43	69.79	.....	.....	48.05	58.36	45.75	48.93	48.20	50.99
6	55.19	64.08	58.78	71.08	.....	.....	49.41	53.36	46.16	53.53	45.62	49.20
7	59.01	72.20	60.11	70.58	.....	58.16	50.70	55.04	45.84	52.61	44.70	49.68
8	61.60	74.38	59.57	68.82	54.90	61.30	50.82	59.88	42.50	45.64	48.32	52.46
9	63.20	74.66	55.72	64.57	56.50	64.86	50.30	53.89	41.93	46.70	46.03	50.90
10	62.69	74.60	56.42	69.79	58.50	65.51	49.18	52.01	44.90	51.17	44.86	50.97
11	64.43	75.80	60.17	70.81	59.54	71.12	43.24	49.18	44.77	50.86	47.40	51.50
12	60.54	69.11	59.77	70.15	60.61	66.02	44.21	51.73	45.08	48.06	48.67	50.78
13	58.40	74.07	58.63	67.96	55.89	64.40	49.83	56.29	45.04	47.64	46.90	49.39
14	.....	75.27	58.89	70.45	53.70	68.20	49.84	54.92	44.30	50.43	46.73	52.28
15	.....	.....	60.57	68.88	58.63	66.30	50.66	54.04	41.23	44.26	46.87	50.88
16	.....	.....	57.88	65.93	59.91	71.35	50.56	53.27	41.88	48.51	46.21	52.56
17	.....	.....	55.67	68.72	60.55	68.42	50.34	52.54	46.16	49.48	45.69	52.61
18	.....	.....	59.50	71.10	60.80	71.22	46.24	50.99	46.40	49.10	50.03	52.29
19	.....	.....	60.61	72.42	58.70	66.80	45.37	51.45	46.52	50.67	49.40	51.60
20	.....	72.57	61.26	72.47	51.80	58.70	49.08	.....	47.57	50.06	48.21	50.61
21	61.82	73.60	62.17	72.05	50.88	55.76	.....	.....	46.23	53.01	47.75	51.81
22	62.11	72.36	62.86	69.48	51.83	55.10	48.68	51.95	42.18	46.23	47.46	49.80
23	60.84	73.06	57.20	67.03	50.45	57.58	48.71	55.16	42.05	46.40	46.38	48.86
24	62.00	73.40	54.89	62.90	50.18	53.69	47.38	53.55	44.82	50.61	46.04	50.95
25	62.33	72.77	54.93	60.53	49.49	56.00	43.02	47.38	45.91	48.41	41.57	48.60
26	58.92	67.17	55.71	59.84	49.78	52.70	42.38	50.23	46.10	49.85	41.34	45.01
27	57.34a	73.0	56.10	66.80	45.77	49.78	45.78	49.99	43.69	47.86	43.84	44.95
28	62.13	73.69	60.15	71.89	45.22	54.36	46.02	51.43	45.21	47.68	43.70	.....
29	63.04	68.93	60.80	67.59	47.87	51.13	46.58	49.18	41.71	45.44	.....	.....
30	61.75	72.55	56.80	65.00	48.78	56.00	45.76	49.19	41.63	46.52	.....	.....
31	61.12	73.28	55.07	69.77	.....	.....	44.36	49.64	.....	.....	.....	48.06

a Estimated.

83-7-32G1 (*908, p. 21; 938, pp. 29-30). Floyd Felter. SW¼NE¼ sec. 32, T. 83 N., R. 7 W. Measuring point 0.5 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	75.88	Apr. 27	76.94	July 27	79.37	Oct. 26	78.88
Feb. 23	75.94	May 25	77.35	Aug. 31	79.45	Nov. 30	77.74
Mar. 23	76.50	June 30	78.79	Sept.28	79.40	Dec. 26	77.95

83-7-33F1 (*908,p.21; 938,p.30). SE¼NW¼ sec. 33, T. 83 N., R. 7 W. Measuring point 0.7 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 26	71.16	Apr. 27	71.33	July 27	71.56	Oct. 26	71.62
Feb. 23	71.21	May 25	71.41	Aug. 31	71.58	Nov. 30	71.50
Mar. 23	71.27	June 30	71.52	Sept.28	71.68	Dec. 26	71.64

83-6-30B1 (*908,pp.21-22; 938,p.30). Mr. Katz. NW¼NE¼ sec. 30, T. 83 N., R. 6 W. Measuring point 0.5 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 26	50.48	Apr. 27	50.79	July 27	50.84	Oct. 26	51.06
Feb. 23	50.68	May 25	50.90	Aug. 31	50.51	Nov. 30	50.77
Mar. 23	50.53	June 30	53.30	Sept.28	50.71	Dec. 26	50.96

Lyon County

99-44-26R1 (*908,p.22; 938,p.30). SE¼SE¼ sec. 26, T. 99 N., R. 44 W. Measuring point 2.0 feet below land-surface datum. Water levels, in feet below land-surface datum, 1942: Sept. 24, 2.57; Dec. 16, 4.44.

99-43-11H1 (*908,p.22; 938,p.31). SE¼NE¼ sec. 11, T. 99 N., R. 43 W. Measuring point 1.5 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: Sept. 24, 0.82; Dec. 16, 1.94.

98-48-24M1 (*886,p.118; 908, p. 22; 938, p. 31). A. C. Hanson. NW¼SW¼ sec. 24, T. 98 N., R. 48 W. Measuring point 1.8 feet above land-surface datum.

Water level, in feet below land-surface datum, 1942

Mar. 3	15.86	June 10	11.57	July 3	11.20	Sept.17	13.03
June 2	12.20	20	11.45	30	11.95	Dec. 22	10.95

Madison County

76-28-2B1 (*908,p.22; 938,p.31). Glen Newton. NW¼NE¼ sec. 2, T. 76 N., R. 28 W. Measuring point prior to Feb. 26, top of plank platform, 0.5 foot above land-surface datum. Measuring point beginning Feb. 26, top of concrete curb, 0.1 foot below plank platform and 0.4 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 28	15.82	Apr. 28	15.04	July 27	17.55	Oct. 27	16.01
Feb. 26	15.55	May 26	15.30	Aug. 24	18.06	Nov. 26	15.66
Mar. 30	13.08	June 29	18.51	Sept.21	16.75	Dec. 14	15.13

76-26-26F1 SE¼NW¼ sec. 26, T. 76 N., R. 26 W. Unused dug well, 7 feet square and 9.9 feet deep. Measuring point, top of plank platform, level with land-surface datum.

76-26-26F1--Continued.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 27	2.79	July 27	2.65	Oct. 27	3.29	Dec. 14	3.95
June 29	3.23	Aug. 24	3.57	Nov. 26	3.53		

Marion County

77-18-34C1 (*886, p. 118; 908, p. 22; 938, p. 31). Rich Launpebaugh. NE¼NW¼ sec. 34, T. 77 N., R. 18 W. Measurements discontinued July 13, 1939.

75-20-22H1 (*908, p. 22; 938, p. 31). Union Central Life Insurance Co. SE¼NE¼ sec. 22, T. 75 N., R. 20 W. Measuring point 0.8 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 27	2.69	Apr 28	3.94	July 27	4.44	Oct. 27	6.47
Feb. 26	3.71	May 26	3.70	Aug. 24	5.55	Nov. 26	5.39
Mar. 30	3.85	June 29	4.10	Sept.21	6.04	Dec. 14	6.05

75-20-31C2 (*908,p.23; 938,p.31). Miss Amanda Elliot. NE¼NW¼ sec. 31, T. 75 N., R. 2 W. Measuring point 0.3 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 27	5.08	Apr. 28	8.37	July 27	7.02	Oct. 27	10.67
Feb. 26	7.06	May 26	7.24	Aug. 24	8.96	Nov. 26	9.05
Mar. 30	7.24	June 29	8.30	Sept.21	9.40	Dec. 14	9.64

74-21-11A1. Mr. Riddel. NE¼NE¼ sec. 11, T. 74 N., R. 21 W. Unused bored well, diameter 12 inches, depth 25.9 feet. Measuring point, top of tile casing, east side, 0.1 foot above land-surface datum. Taps water in glacial drift.

Water level, in feet below land-surface datum, 1942

May 25	6.66	July 27	7.04	Sept. 21	9.89	Nov. 26	8.92
June 29	8.71	Aug. 24	10.49	Oct. 27	11.42	Dec. 14	9.19

74-21-15H1. SE¼NE¼ sec. 15, T. 74 N., R. 21 W. Unused bored well, diameter 12 inches, depth 34.6 feet. Measuring point, top of tile casing, 1.0 foot above land-surface datum. Equipped with lift pump. Taps water in glacial drift.

Water level, in feet below land-surface datum, 1942

Apr. 28	3.35	June 29	3.75	Aug. 24	6.98	Nov. 26	4.77
May 26	3.07	July 27	3.45	Sept.21	6.98	Dec. 14	5.80

74-21-26E1 (*908,p.23; 938,p.32). Griesbaum Estate. SW¼NW¼ sec. 26, T. 74 N., R. 21 W. Measuring point 0.8 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 27	3.19	Mar. 30	3.77	May 26	4.02	June 29	(a)
Feb. 26	4.29	Apr. 28	4.81				

74-20-2M1 (*908,p.23; 938,p.32). NW¼SW¼ sec. 2, T. 74 N., R. 20 W. Measuring point 0.3 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 27	3.16	Apr. 28	3.23	July 27	3.20	Oct. 27	3.44
Feb. 26	3.33	May 26	3.30	Aug. 24	3.00	Nov. 26	3.32
Mar. 30	3.27	June 29	3.24	Sept. 21	4.00	Dec. 14	3.34

a Well destroyed; measurements discontinued.

74-20-16M1 (*908,p.23; 938,p.32). C. Wendall. NW¼SW¼ sec. 16, T. 74 N., R. 20 W. Measuring point 0.2 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	21.16	Apr. 28	22.69	July 27	20.90	Oct. 27	22.32
Feb. 26	22.85	May 26	21.31	Aug. 24	22.13	Nov. 26	22.30
Mar. 30	23.07	June 29	22.23	Sept.21	22.24	Dec. 14	22.40

74-20-22C1. Grant Dewitt. NE¼NW¼ sec. 22, T. 74 N., R. 20 W. Dug stock well, diameter 4.5 feet, depth 32.1 feet. Measuring point, top of plank well platform, 0.4 foot above land-surface datum. Equipped with lift pump.

Water level, in feet below land-surface datum, 1942

Apr. 28	7.67	July 27	7.48	Sept.21	10.05	Nov. 26	9.67
May 26	6.76	Aug. 24	9.10	Oct. 27	11.34	Dec. 14	9.97
June 29	8.27						

74-20-33D1 (*908,p.23; 938,p.32). T. V. Beebout. NW¼NW¼ sec. 33, T. 74 N., R. 20 W. Measuring point 0.2 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 27	25.78	Apr. 28	24.20	July 27	22.52	Oct. 27	21.82
Feb. 26	25.24	May 26	23.60	Aug. 24	22.24	Nov. 26	21.65
Mar. 30	24.69	June 29	22.90	Sept.21	22.02	Dec. 14	21.54

Montgomery County

71-36-21R1 Owner's well No. 1. City of Villisca. SE¼SE¼ sec. 21, T. 71 N., R. 36 W. Unused municipal well, diameter 18 inches, reported depth 44 feet. Measuring point, top of well curb, 2.0 feet below land-surface datum. Water level affected by pumping of city wells 2 and 3. Water levels, in feet below land-surface datum, 1942: Sept. 22, 10.55; Dec. 1, ab/ 14.40.

Muscatine County

76-2-14D1 (*886,p.118; 908,p.24; 938,p.32). Owner's test well 4. City of Muscatine. NW¼NW¼ sec. 14, T. 76 N., R. 2 W. Measuring point, top of casing, 1.5 feet above land-surface datum (incorrectly published in Water-Supply Paper 886, as 1.9 feet above land surface).

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level
Nov. 11	10.58	Dec. 4	a11.01	Dec. 18	a11.16
27	a10.53	11	a10.95	26	a11.14

76-2-15A1 (*908,p.24; 938,p.32). Owner's test well 5. City of Muscatine. NE¼NE¼ sec. 15, T. 76 N., R. 2 W. Measuring point, top of reducing nipple, 0.11 foot above lip of casing and 2.1 feet above land-surface datum (incorrectly published in Water-Supply Paper 908 as 2.8 feet above land surface).

Water level, in feet below land-surface datum, 1942

Nov. 11	7.94	Dec. 4	c8.23	Dec. 18	c9.34
27	c8.12	11	c8.43	26	c9.30

a Wells 2 and 3 pumping for 2 hours.
b Measurement by C. J. Sandquist, water superintendent.
c Measurement by P. J. Havercamp, Muscatine Water & Electric Plant.

O'Brien County

94-40-22G1. A. F. Meier. SW¼NE¼ sec. 22, T. 94 N., R. 40 W. Unused bored well, diameter 10 inches, depth 16.5 feet. Measuring point, top of concrete casing, 0.6 foot above land-surface datum. Equipped with lift pump. Water levels, in feet below land-surface datum, 1942: June 18, 7.66; Sept. 25, 10.97; Dec. 16, 11.95.

94-40-22J1 (*938,p.32). Illinois Central Railroad. NE¼SE¼ sec. 22, T. 94 N., R. 40 W. Measuring point about level with land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 20, 235.45; June 18, 235.47; Sept. 25, 235.58; Dec. 16, 235.55.

Osceola County

99-41-18C1 (*886,p.119; 908,p.24; 938,p.33). City of Sibley. NE¼NW¼ se 18, T. 99 N., R. 41 W. Measuring point 3.95 feet below land-surface datum. Water level, in feet below land-surface datum, 1942: Mar. 25, 20.44. Well destroyed; measurements discontinued.

99-41-18C2 (*908,p.24; 938,p.33). City of Sibley. NE¼NW¼ sec. 18, T. 99 N., R. 41 W. Measuring point, top of manhole cover, level with land-surface datum. Water levels, in feet below land-surface datum, 1942: Sept. 24, 18.27; Dec. 16, 17.80.

Page County

69-36-31K1(*908,p.24; 938,p.33). City of Clarinda. NW¼SW¼ sec. 31, T. 69 N., R. 36 W. Measuring point 0.85 foot above land-surface datum. Highest water level at noon observed from recorder charts was 15.32 feet below land-surface datum Apr. 2; lowest noon water level observed was 20.30 feet below land-surface datum on Dec. 20.

Water level at noon, in feet below land-surface datum, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	17.21	17.04	18.07	15.43	17.51	16.26	16.35	18.58	19.94	18.79	18.57	19.47
2	17.45	17.00	17.93	15.32	17.85	16.32	16.37	18.78	20.04	18.88	19.05	19.71
3	17.63	16.97	17.81	15.69	17.86	16.42	16.37	18.89	20.00	18.86	19.20	19.66
4	17.83	16.75	17.64	15.48	17.98	16.52	16.35	18.92	19.60	18.35	18.78	19.82
5	17.81	16.92	17.59	15.80	17.81	16.60	16.78	18.93	19.50	.....	19.05	19.73
6	17.72	17.12	17.08	15.91	17.66	16.68	16.94	18.89	19.33	.....	19.34	19.95
7	17.93	17.32	17.22	16.22	17.72	.....	16.98	18.98	18.98	.....	19.17	19.90
8	17.59	17.32	17.19	16.29	17.60	16.98	16.99	18.90	18.89	.....	19.11	19.83
9	.....	17.26	17.15	.....	17.52	17.06	17.12	18.89	18.88	18.04	18.73	19.82
10	17.73	17.47	17.00	16.33	17.54	17.05	17.38	18.95	18.88	18.04	19.37	19.82
11	17.78	17.33	17.08	16.53	16.96	17.06	17.48	19.05	18.92	17.91	19.29	19.83
12	17.96	17.46	17.12	16.43	16.22	17.33	17.52	19.03	19.00	17.96	18.97	19.94
13	17.92	17.59	17.10	16.50	.....	17.59	17.66	19.07	18.98	18.13	19.31	20.10
14	18.09	17.47	17.17	16.57	16.24	17.63	17.82	19.18	19.00	18.18	19.12	19.98
15	17.83	17.27	17.06	16.57	16.23	17.53	17.81	19.29	18.79	18.15	18.83	19.74
16	17.72	17.33	16.93	16.86	16.16	17.61	17.90a	19.4	18.41	18.25	18.83	20.08
17	17.40	17.78	16.96	17.03	16.23	17.67	18.09	19.39	18.32	18.37	19.34	19.69
18	17.41	17.81	16.57	16.87	.....	17.72	18.24	19.39	18.29	18.34	19.39	20.26
19	17.40	17.56	16.35	17.13	16.07	17.74	18.35	19.41	18.65	18.28	19.13	20.24
20	.....	17.81	.....	17.24	16.00	17.54	18.52	19.47	.....	18.28	19.34	20.30
21	17.00	17.67	16.23	17.21	15.92	17.13	18.67	19.55	.....	18.34	19.62	19.89

a Estimated.

69-36-31K1 (*908,p.24; 938,p.33)--Continued.

Water level at noon, in feet below land-surface datum, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
22	16.88	17.71	16.17	17.13	15.83	17.03	18.71	19.73	.....	18.26	19.56	19.76
23	16.66	17.55	.....	17.11	15.65	16.98	18.71	20.01	.....	18.63	19.35	19.86
24	16.62	17.94	.....	17.28	15.55	16.93	18.71	20.00	.....	18.72	19.16	20.04
25	16.69	17.90	.....	17.21	15.42	16.75	18.58	19.91	.....	18.83	19.09	19.93
26	16.58	17.91	.....	17.39	15.35	.....	18.52	19.87	18.71	18.80	19.68	19.95
27	16.79	18.05	.....	17.31	15.48	.....	18.52	19.92	18.86	18.65	19.55	19.84
28	16.83	18.10	.....	17.60	15.70	.....	18.43	19.92	19.11	18.61	19.35	19.51
29	16.51	.....	.....	17.55	15.81	16.13	18.47	19.88	18.83	18.62	19.64	19.27
30	16.69	.....	15.58	17.53	16.00	16.30	18.49	19.92	18.79	18.67	19.25	19.35
31	16.94	.....	15.63	.....	16.18	.....	18.66	19.97	.....	19.06	.....	19.07

Palo Alto County
(Vicinity of Lost Island Lake)

97-34-29N1 (*908,p.24; 938,p.33). SW¼SW¼ sec. 29, T. 97 N., R. 34 W. Measuring point 0.5 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 20, 1.51; June 18, 1.84; Sept. 24, 1.58; Dec. 17, a/1.90.

97-34-29N2 (*908,p.24; 938,p.34). SW¼SW¼ sec. 29, T. 97 N., R. 34 W. Measuring point 1.5 feet above land-surface datum. Well flowing during 1942.

97-34-30Q1 (*908,p.24; 938,p. 34). Norman Broadwell. SW¼SE¼ sec. 30, T. 97 N., R. 34 W. Measuring point 0.5 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: June 18, 16.89; Sept. 24, 16.85; Dec. 17, 17.48.

97-34-32P1 (*908,p.24; 938,p.34). Lost Island State Park. SE¼SW¼ sec. 32, T. 97 N., R. 34 W. Measuring point 1.3 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 20, 0.27; June 18, 2.19; Sept. 24, 9.48; Dec. 17, 9.37.

96-34-6J1 (*908.p.25; 938.p.34). "Electric Park." NE¼SE¼ sec. 6, T. 96 N., R. 34 W. Measuring point 3.1 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 20, 0.93; June 18, 0.75; Sept. 24, 0.95; Dec. 17, 1.09.

Plymouth County

91-48-19M1 (*886,p.119; 908,p.25; 938,p.34). Joe Tracy. NW¼SW¼ sec. 19, T. 91 N., R. 48 W. Measuring point 2.1 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: Aug. 25, 53.51; Sept. 24, 52.95; Nov. 24, 54.56.

Polk County

79-22-22A1 (*908,p.25; 938,p.34). J. G. Reed. NE¼NE¼ sec. 22, T. 79 N., R. 22 W. Measuring point 0.2 foot above land-surface datum.

a Depth to ice.

79-22-22A1 (*908,p.25; 938,p.34)--Continued.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 27	3.05	May 27	2.54	Aug. 29	5.28	Nov. 26	5.02
Mar. 31	2.23	June 30	2.96	Sept.26	5.23	Dec. 19	5.14
Apr. 29	3.49	Aug. 1	4.99	Oct. 27	5.48		

Sac County

89-38-11J1 NE¼SE¼ sec. 11, T.89 N., R. 38 W. Unused bored well, diameter 27 inches, depth 39.35 feet. Measuring point, top of concrete casing, 2.0 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: June 17, 3.28; Sept. 25, 3.68; Dec. 16, 4.72.

89-38-26A2 (*908,p.25; 938,p.34). City of Schaller. NE¼NE¼ sec. 26, T. 84 N., R. 38 W. Measuring point 1.8 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 19, 219.90; June 17, 219.99; Sept. 25, 220.12; Dec. 16, 220.25.

86-36-2C1 (*908,p.25; 938,p.25). John Christian. NE¼NW¼ sec. 2, T. 86 N., R. 36 W. Measuring point 0.6 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 19, 3.10; June 17, 3.07; Sept. 25, 2.55; Dec. 15, 3.51.

86-36-2E1 (*908,p.25; 938,p.35). Albert Culver, Jr. SW¼NW¼ sec. 2, T. 86 N., R. 36 W. Measuring point 0.2 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 19, 0.24; June 17, 0.09; Sept. 25, 0.45; Dec. 15, 0.58.

86-36-3H1 (*886,p.119; 908,p.25). Blackhawk Lake Preserve. SE¼NE¼ sec. 3, T. 86 N., R. 36 W. Measurements discontinued Apr. 19, 1940.

86-36-4N1 (*908,p.25; 938,p.35). Iowa State Conservation Commission. SW¼SW¼ sec. 4, T. 86 N., R. 36 W. Measuring point 2.5 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 19, 5.39; June 17, 5.07; Sept. 25, 4.04; Dec. 15, 4.88.

Sioux County

95-45-5A1 (*886,p.119; 908,p.26; 938,p.35). City of Sioux Center. NE¼NE¼ sec. 5, T. 95 N., R. 45 W. Measuring point 3.75 feet below land-surface datum. Water levels, in feet below land-surface datum, 1942: Mar. 26, 267.18; Sept. 24, 267.83; Dec. 16, 267.62.

95-45-17A1 (*886,p.119; 908,p.26; 938,p.35). City of Maurice. NE¼NE¼ sec. 17, T. 95 N., R. 45 W. Measurements discontinued Aug. 26, 1941.

Story County

83-24-4Q1 (*886,p.119; 908,p.26; 938,pp.35-36). Iowa State College. SW¼SE¼ sec. 4, T. 83 N., R. 24 W. Measuring point 3.3 feet above land-surface datum. Highest water level at noon observed from recorder charts was 39.19 feet below land-surface datum May 13; lowest water level at noon observed was 42.34 feet below land-surface datum Sept. 2.

83-24-4Q1 (*886,p.119; 908,p.26; 938,pp.35-36)--Continued.

Water level at noon, in feet below land-surface datum, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	39.61	39.54	39.50	39.39	40.85	40.15	41.70	42.15	40.56	40.22	40.36
2	.....	39.62	39.46	39.36	39.54	40.80	40.12	41.41	42.34	40.53	40.49	40.46
3	.....	39.53	39.43	39.47	39.54	40.81	39.96	41.07	41.90	40.50	40.63	40.46
4	.....	39.36	39.39	39.29	39.66	41.00	40.13	41.73	41.52	40.49	40.41	40.56
5	.....	39.39	39.42	39.47	39.63	41.11	39.95	41.64	41.34	40.56	40.48	40.56
6	.....	39.43	39.24	39.43	39.52	41.14	39.94	41.73	41.19	40.52	40.68	40.66
7	.....	39.54	39.38	39.59	39.61	40.83	40.02	42.04	40.99	40.55	40.60	40.69
8	.....	39.57	39.40	39.64	39.56	40.81	40.31	41.41	40.96	40.51	40.57	40.64
9	.....	39.50	39.46	39.54	39.52	40.92	40.76	41.74	40.89	40.63	40.28	40.62
10	39.84	39.54	39.42	39.57	39.54	41.07	40.82	41.73	40.84	40.64	40.60	40.57
11	39.87	39.49	39.43	39.68	39.32	40.74	41.16	41.54	40.87	40.54	40.60	40.59
12	39.92	39.54	39.52	39.61	39.31	40.73	40.83	41.72	41.57	40.50	40.40	40.63
13	39.83	39.58	39.52	39.59	39.19	40.52	40.96	41.72	41.09	40.56	40.62	40.77
14	39.94	39.50	39.56	39.54	39.44	40.37	41.30	41.54	40.93	40.56	40.48	40.68
15	39.84	39.34	39.47	39.50	39.46	40.16	41.26	41.59	41.05	40.51	40.27	40.58
16	39.86	39.30	39.37	39.62	39.43	40.05	41.46	41.27	41.18	40.53	40.22	40.64
17	39.70	39.54	39.42	39.73	39.42	39.92	.....	41.29	41.65	40.56	40.46	40.65
18	39.58	39.54	39.47	39.67	39.48	39.83	.....	41.38	41.94	40.53	40.51	40.82
19	39.50	39.42	39.50	39.81	39.54	39.79	41.54	41.53	41.62	40.46	40.38	40.84
20	39.51	39.55	39.34	39.84	39.52	39.84	41.54	41.87	41.44	40.37	40.50	40.89
21	39.60	39.48	39.49	39.82	39.49	39.85	.....	42.11	41.10	40.31	40.69	40.65
22	39.60	39.49	39.56	39.73	39.48	39.84	41.46	42.32	41.03	40.22	40.67	40.49
23	39.67	39.38	39.46	39.68	39.47	39.82	41.14	41.96	40.80	40.38	40.49	40.49
24	39.58	39.48	39.38	39.74	39.48	39.76	40.94	41.63	40.93	40.45	40.37	40.63
25	39.60	39.47	39.34	39.66	39.40	39.63	40.73	41.35	40.83	40.49	40.29	40.56
26	39.56	.....	39.37	39.58	39.34	39.65	40.76	41.06	40.70	40.49	40.39	40.55
27	39.64	.....	39.48	39.51	39.36	39.64	41.01	41.18	40.74	40.44	40.50	40.70
28	.....	39.54	39.46	39.58	39.38	39.61	41.02	41.30	40.88	40.38	40.44	40.66
29	.....	.....	39.53	39.55	39.87	39.97	41.19	41.75	40.70	40.31	40.51	40.62
30	39.48	.....	39.59	39.50	39.93	40.15	41.32	41.62	40.62	40.23	40.32	40.70
31	39.56	.....	39.62	.....	39.80	.....	.....	41.69	.....	40.45	.....	40.53

83-24-17R1 (*886,p.120; 908,p.26; 938,p.36). Agronomy Farm. SE¼SE¼ sec. 17, T. 83 N., R. 24 W. Measurements discontinued Sept. 15, 1939.

83-24-20J1 (*886,p.120; 908,p.26; 938,p.36). Agricultural Engineering Experiment Station. Measuring point 0.3 foot above land-surface datum. NE¼SE¼ sec. 20, T. 83 N., R. 24 W.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 18	11.07	June 10	a13.95	July 1	a9.45	Oct. 31	a13.5
May 4	a10.75	19	11.00	Aug. 10	a12.5	Dec. 19	16.48
22	a10.0						

83-24-4R1. Iowa State College. SE¼SE¼ sec. 4, T. 83 N., R. 24 W. Unused dug well, diameter 36 inches, depth 33.4 feet. Measuring point, top of wood curb, at south side, 0.2 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Sept. 26, 14.02; Dec. 19, 16.07.

Warren County

77-25-12R1. SE¼SE¼ sec. 12, T. 77 N., R. 25 W. Unused dug well, diameter 36 inches, depth 12.2 feet. Measuring point, top of steel rim, on east side, 1.6 feet above land-surface datum.

a Measurement by D. E. Lagenbacker.

77-25-12R1. SE¼SE¼ sec. 12, T. 77 N., R. 25 W--Continued.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 27	1.86	July 27	1.83	Sept. 21	2.10	Nov. 26	2.23
June 30	1.85	Aug. 24	2.07	Oct. 27	2.49	Dec. 14	2.39

76-25-8Q1 (*908,p.26; 938,p.36). Iowa State College. SW¼SE¼ sec. 8, T. 76 N., R. 25 W. Measuring point 0.3 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Feb. 26	7.48	May 27	4.84	Aug. 24	8.92	Nov. 26	11.69
Mar. 31	6.19	June 30	7.23	Sept.21	10.52	Dec. 14	12.15
Apr. 29	7.44	July 27	6.52	Oct. 27	11.79		

Wayne County

67-23-20Q1 (*908,p.26; 938,p.36). L. P. Bryan. SW¼SE¼ sec. 20, T. 67 N., R. 23 W. Measuring point 0.25 foot above land-surface datum. Water level, in feet below land-surface datum, 1942: Nov. 24, 6.69.

Webster County

90-30-26A1. County of Webster. NE¼NE¼ sec. 26, T. 90 N., R. 30 W. Bored domestic well, depth 37.0 feet. Measuring point, top of plank pump platform at drilled hole, 0.3 foot above land-surface datum. Taps water in glacial drift. Equipped with lift pump. Water levels, in feet below land-surface datum, 1942: Oct. 21, 10.85; Dec. 17, 12.45.

90-30-32D2. William J. Jondle. NW¼NW¼ sec. 32, T. 90 N., R. 30 W. Dug stock well, diameter 24 inches, depth 15.1 feet. Measuring point, top of tile casing, 2.2 feet above land-surface datum. Taps water in glacial drift. Equipped with lift pump. Water levels, in feet below land-surface datum, 1942: Oct. 21, 4.38; Dec. 17, 5.18.

90-29-25E1. School district. SW¼NW¼ sec. 25, T. 90 N., R. 29 W. Unused bored well, diameter 5 inches, depth 19.5 feet. Measuring point, top of tile casing, 0.6 foot above land-surface datum. Taps water in glacia drift. Water levels, in feet below land-surface datum, 1942: Oct. 23, 4.76 Dec. 17, 5.59.

90-28-1B1. Ed Askland. NW¼NE¼ sec. 1, T. 90 N., R. 28 W. Unused bore well, diameter 18 inches, depth 43.3 feet. Measuring point, top of casing,le with concrete platform and 1.3 feet above land-surface datum. Taps water i glacial drift. Equipped with lift pump. Water levels, in feet below land-surface datum, 1942: Aug. 13, 4.56; Dec. 18, 5.69.

90-28-8Q1. Mr. Hovey. SW¼SE¼ sec. 8, T. 90 N., R. 28 W. Domestic bored well, diameter unknown, depth 31.5 feet. Measuring point, top of plank pump platform at drilled hole, 0.2 foot above land-surface datum. Taps water in glacial drift. Equipped with lift pump. Water levels, in feet below land-surface datum, 1942: Aug. 14, 7.05; Dec. 18, 7.36.

90-28-15D4. L. O. Myrland. NW¼NW¼ sec. 15, T. 90 N., R. 28 W. Bored domestic well, diameter 16 inches, depth 29.5 feet. Measuring point, top of concrete platform, 1.1 feet above land-surface datum. Taps water in glacial drift. Equipped with lift pump. Water levels, in feet below land-surface datum, 1942: Aug. 12, 10.13; Dec. 18, 12.23.

90-28-34Q1. McGill. SW¼SE¼ sec. 34, T. 90 N., R. 28 W. Unused bored well, diameter 12 inches, depth 49.4 feet. Measuring point, top of casing, 0.9 foot above land-surface datum. Taps water in glacial drift. Equipped with lift pump. Water levels, in feet below land-surface datum, 1942: Aug. 20, 5.66; Dec. 18, 6.15.

90-27-4D1. Ole Maage. NW¼NW¼ sec. 4, T. 90 N., R. 27 W. Bored domestic well, diameter 18 inches, depth 38.9 feet. Measuring point, top of plank pump platform, 1.6 feet above land-surface datum. Taps water in glacial drift. Equipped with lift pump. Water levels, in feet below land-surface datum, 1942: Aug. 13, 4.92; Dec. 18, 5.36.

90-27-22K1. Joe Riechert. NW¼SE¼ sec. 22, T. 90 N., R. 27 W. Drilled domestic well, diameter 3 inches, reported depth 96.5 feet. Measuring point, top of concrete platform, on east side, 1.0 foot above land-surface datum. Taps water in gravel. Equipped with jet pump. Water level, in feet below land-surface datum, 1942: Aug. 20, 14.93.

90-27-31N1. C. S. Knudson. SW¼SW¼ sec. 31, T. 90 N., R. 27 W. Bored stock well, diameter 15 inches, depth 53.0 feet. Measuring point, top of plank pump platform, 1.0 foot above land-surface datum. Taps water in glacial drift. Equipped with lift pump. Water levels, in feet below land-surface datum, 1942: Aug. 19, 7.68; Dec. 18, 8.17.

89-30-18J1. Dan Cain. NE¼SE¼ sec. 18, T. 89 N., R. 30 W. Unused bored well, diameter 15 inches, depth 35.2 feet. Measuring point, top of inner tile casing, level with land-surface datum. Taps water in glacial drift. Water levels, in feet below land-surface datum, 1942: Oct. 21, 7.26; Dec. 17, 7.40.

89-30-23R1. Johnson Township Consolidated School. SE¼SE¼ sec. 23, T. 89 N., R. 30 W. Unused drilled well, diameter 4 inches, depth 202.5 feet. Measuring point, top of concrete pump base 0.65 foot above basement floor and 6.4 feet below land-surface datum. Water levels, in feet below land-surface datum, 1942: Oct. 21, 30.36; Dec. 17, 31.54.

89-29-16N1. Stromberg. SW¼SW¼ sec. 16, T. 89 N., R. 29 W. Drilled domestic and stock well, diameter 5 inches, reported depth 429 feet. Measuring point, top of concrete well-pit cover, 0.5 foot above land-surface datum. Equipped with lift pump. Water levels, in feet below land-surface datum, 1942: Nov. 12, 79.50; Dec. 19, 79.92.

89-28-21Q1. Lietchfield Real Estate Co. SW¼SE¼ sec. 21, T. 89 N., R. 28 W. Unused bored well, diameter 12 inches, depth 48.7 feet. Measuring point, top of casing, 1.0 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: Nov. 6, 8.09; Dec. 18, 8.66.

89-28-21Q2. Lietchfield Real Estate Co. SW¼SE¼ sec. 21, T. 89 N., R. 28 W. Drilled stock well, diameter 5 inches, depth 150 feet. Measuring point, top of drilled hole in pump base, 0.5 foot above land-surface datum. Equipped with windmill. Water levels, in feet below land-surface datum, 1942: Nov. 6, 85.30; Dec. 18, 85.02.

89-27-19N1. Henry Scharf. SW¼SW¼ sec. 19, T. 89 N., R. 27 W. Unused bored well, diameter 18 inches, depth 51.6 feet. Measuring point, top of platform at pump base, 1.0 foot above land-surface datum. Taps water in glacial drift. Equipped with lift pump. Water levels, in feet below land-surface datum, 1942: Nov. 7, 8.11; Dec. 18, 8.96.

88-30-5R1. J. F. Kusterer Estate. SE¼SE¼ sec. 5, T. 88 N., R. 30 W. Unused bored well, diameter 12 inches, depth 62.6 feet. Measuring point, top of casing, 1.5 feet above land-surface datum. Taps water in glacial drift. Water levels, in feet below land-surface datum, 1942: Nov. 12, 20.10; Dec. 17, 20.77.

88-29-6H1. SE¼NE¼ sec. 6, T. 88 N., R. 29 W. Unused drilled well, diameter 5 inches, depth 69.8 feet. Measuring point, top of casing, 0.5 foot above land-surface datum. Equipped with lift pump and windmill. Water levels, in feet below land-surface datum, 1942: Oct. 23, 47.15; Dec. 19, 47.44.

88-29-11C1. Charles Matson. NE¼NW¼ sec. 11, T. 88 N., R. 29 W. Bored domestic well, diameter 14 inches, depth 54.6 feet. Measuring point, top of casing, 0.5 foot above land surface datum. Taps water in glacial drift. Equipped with lift pump. Water levels, in feet below land-surface datum, 1942: Oct. 21, 5.97; Dec. 18, 6.84.

88-29-23A1. NE¼NE¼ sec. 23, T. 88 N., R. 29 W. Bored domestic and stock well, diameter 12 inches, depth 66.4 feet. Measuring point, top of pump platform at drilled hole, 0.3 foot above land surface datum. Taps water in glacial drift. Equipped with lift pump. Water levels, in feet below land-surface datum, 1942: Oct. 20, 5.49; Dec. 18, a/ 7.01.

88-28-12D2. Lou E. Hivelay. NW¼NW¼ sec. 12, T. 88 N., R. 28 W. Unused bored well, diameter 12 inches, depth 22.8 feet. Measuring point, top of casing, 1.4 feet above land-surface datum. Taps water in glacial drift. Equipped with lift pump. Water levels, in feet below land-surface datum, 1942: Nov. 11, 4.24; Dec. 18, 4.69.

88-27-4A2. Jones. NE¼NE¼ sec. 4, T. 88 N., R. 27 W. Unused bored well, diameter 14 inches, depth 40.0 feet. Measuring point, top of concrete platform, 0.2 foot above land-surface datum. Taps water in glacial drift. Equipped with lift pump. Water levels, in feet below land-surface datum, 1942: Aug. 21, 9.02; Dec. 18, 7.95.

87-30-9A1. D. Click. NE¼NE¼ sec. 9, T. 87 N., R. 30 W. Unused bored well, diameter 15 inches depth 42.7 feet. Measuring point, top of casing, 0.3 foot above land-surface datum. Taps water in glacial drift. Water levels, in feet below land-surface datum, 1942: Oct. 15, 5.63; Dec. 18, 6.69.

87-30-12L1. Town of Callender. NE¼SW¼ sec. 12, T. 87 N., R. 30 W. Drilled municipal well, diameter 6 inches, depth 90.2 feet. Measuring point, top of wood pump platform, level with land-surface datum. Taps water in glacial drift. Equipped with lift pump. Water levels, in feet below land-surface datum, 1942: Oct. 15, 14.57; Dec. 18, 14.60.

87-30-30R1. School District No. 9. SE¼SE¼ sec. 30, T. 87 N., R. 30 W. Unused bored well, diameter 14 inches, depth 41.5 feet. Measuring point, top of wood pump platform, level with land-surface datum. Taps water in glacial drift. Equipped with lift pump. Water levels, in feet below land-surface datum, 1942: Sept. 14, 7.72; Dec. 18, 8.45.

87-29-2P2. Otto Blomquist. SE¼SW¼ sec. 2, T. 87 N., R. 29 W. Abandoned bored well, diameter 24 inches, depth 28.8 feet. Measuring point, top of casing, 0.2 foot above land-surface datum. Taps water in glacial drift. Water levels, in feet below land-surface datum, 1942: Oct. 19, 2.80; Dec. 18, 3.58.

87-29-24D1. School district. NW¼NW¼ sec. 24, T. 87 N., R. 29 W. Bored domestic well, diameter 14 inches, depth 49.8 feet. Measuring point, top of casing, 0.8 foot above land-surface datum. Taps water in glacial drift. Equipped with lift pump. Water levels, in feet below land-surface datum, 1942: Oct. 21, 5.11; Dec. 18, 5.14.

87-29-30D1. Otto Norberg. NW¼NW¼ sec. 30, T. 87 N., R. 29 W. Unused bored well, diameter 18 inches, depth 32.4 feet. Measuring point, top of pump platform, 1.0 foot above land-surface datum. Taps water in glacial drift. Equipped with lift pump. Water levels, in feet below land-surface datum, 1942: Oct. 15, 4.25; Dec. 18, 4.43.

87-28-5Q1. SW¼SE¼ sec. 5, T. 87 N., R. 28 W. Unused dug well, diameter 36 inches, depth 26.8 feet. Measuring point, top of well cover, 0.3 foot above land-surface datum. Taps water in glacial drift. Water levels, in feet below land-surface datum, 1942: Oct. 19, 3.82; Dec. 18, 4.00.

87-28-12H1. SE¼NE¼ sec. 12, T. 87 N., R. 28 W. Unused dug well, diameter 24 inches, depth 18.6 feet. Measuring point, top of wood pump platform at drilled hole, 0.6 foot above land-surface datum. Taps water in alluvium. Equipped with lift pump. Water levels, in feet below land-surface datum, 1942: Oct. 16, 12.44; Dec. 19, 14.62.

87-28-12Q1. Thomas Timmons, Jr. SW¼SE¼ sec. 12, T. 87 N., R. 28 W. Bored stock well, diameter 24 inches, depth 57.5 feet. Measuring point, top of pump platform at drilled hole, 1.0 foot above land-surface datum. Taps water in glacial drift. Equipped with lift pump. Water levels, in feet below land-surface datum, 1942: Oct. 19, 5.61; Dec. 18, 6.83.

a Pumped shortly before measurement.

87-28-29N1. Grant Spangler. SW¼SW¼ sec. 29, T. 87 N., R. 28 W. Unused bored well, diameter 12 inches, depth 41.8 feet. Measuring point, top of casing, 1.0 foot above land-surface datum. Taps water in glacial drift. Water-level recorder maintained on well since Oct. 23, 1942.

Water level at noon, in feet below land-surface datum, 1942
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 23	7.34	Nov. 10	7.65	Nov. 28	7.78	Dec. 15	8.14
24	7.35	11	7.65	29	7.83	16	8.16
25	7.38	12	7.60	30	7.78	17	8.14
26	7.39	13	7.70	Dec. 1	7.84	18	8.29
27	7.39	14	7.66	2	7.90	19	8.31
28	7.39	15	7.60	3	7.86	20	8.35
29	7.39	16	7.61	4	7.92	21	8.25
30	7.42	17	7.71	5	7.93	22	8.25
31	7.48	18	7.73	6	7.95	23	8.28
Nov. 1	7.42	19	7.69	7	7.96	24	8.37
2	7.52	20	7.76	8	7.97	25	8.34
3	7.55	21	7.82	9	7.99	26	8.37
4	7.42	22	7.81	10	8.02	27	8.37
5	7.51	23	7.75	11	8.06	28	8.32
6	7.60	24	7.69	12	8.09	29	8.31
7	7.57	25	7.71	13	8.13	30	8.35
8	7.58	26	7.83	14	8.13	31	8.31
9	7.51	27	7.78				

87-27-4N1. Mrs. W. H. Goodrich. SW¼SW¼ sec. 4, T. 87 N., R. 27 W. Unused bored well, diameter 16 inches, depth 51.7 feet. Measuring point, top of casing, 0.1 foot above land-surface datum. Taps water in glacial drift. Equipped with lift pump. Water levels, in feet below land-surface datum, 1942: Nov. 9, 5.69; Dec. 19, 6.12.

87-27-18M1. J. B. Marsh. NW¼SW¼ sec. 18, T. 87 N., R. 27 W. Drilled domestic and stock well, diameter 6 inches, depth 355.8 feet. Measuring point, top of ⅜-inch drilled hole in pump base, 1.4 feet above land-surface datum. Equipped with lift pump. Water levels, in feet below land-surface datum, 1942: Oct. 17, 123.63; Dec. 18, 123.07.

86-30-5C1. E. C. Monson. NE¼NW¼ sec. 5, T. 86 N., R. 30 W. Drilled domestic and stock well, diameter 6¼ inches, reported depth 225 feet. Measuring point, top of timber level with concrete platform, and 0.8 foot above land-surface datum. Equipped with windmill. Water levels, in feet below land-surface datum, 1942: Sept. 14, 56.61; Dec. 18, 56.94.

86-30-12B1. Frank Schwartz. NW¼NE¼ sec. 12, T. 86 N., R. 30 W. Bored domestic well, diameter 12 inches, depth 76.5 feet. Measuring point, top of drilled hole in wood pump platform, 0.7 foot above land-surface datum. Taps water in glacial drift. Equipped with lift pump. Water levels, in feet below land-surface datum, 1942: Sept. 14, 4.82; Dec. 18, 6.35.

86-29-14A1. F. E. Castenson. NE¼NE¼ sec. 14, T. 86 N., R. 29 W. Bored stock well, diameter 12 inches, depth 38.6 feet. Measuring point, top of wood pump platform, 1.0 foot above land-surface datum. Taps water in glacial drift. Equipped with lift pump. Water levels, in feet below land-surface datum, 1942: Sept. 9, 4.47; Dec. 18, 5.88.

86-28-9R1. W. Van Bloom. SE¼SE¼ sec. 9, T. 86 N., R. 28 W. Bored domestic and stock well, diameter 14 inches, depth 31.0 feet. Measuring point, top of inner lip of tile casing, 0.8 foot above land-surface datum. Taps water in glacial drift. Equipped with force pump. Water levels, in feet below land-surface datum, 1942: Sept. 17, 5.80; Dec. 18, 8.02.

86-28-14H1. Town of Dayton. SE¼NE¼ sec. 14, T. 86 N., R. 28 W. Drilled municipal well, diameter 13 inches, reported depth 1,240 feet. Measuring point, top of drilled hole in pump base, 0.06 foot above concrete floor of pump house and 0.6 foot above land-surface datum. Taps water in Wapsipinicon formation. Equipped with deep-well turbine pump powered with 20-horsepower electric motor. Water levels, in feet below land-surface datum, 1942: Sept. 17, 70.14; Nov. 17, 69.93.

86-27-4D1. Davis. NW¼NW¼ sec. 4, T. 87 N., R. 27 W. Drilled domestic and stock well, diameter 5 inches, depth 225.4 feet. Measuring point, top of drilled hole in pump base, 1.4 feet above land-surface datum. Equipped with pump jack driven by electric motor. Water levels, in feet below land-surface datum, 1942: Oct. 19, 105.51; Dec. 18, 106.00.

Woodbury County

89-48-23B1 (*886,p.120; *908,p.27; 938,p.36). Owner's Riverside Station well. City of Sioux City. NW¼NE¼ sec. 23, T. 89 N., R. 48 W. Measuring poir 8.0 feet below land-surface datum. Water-level measurements by Ed. Harbeck, Sioux City Water Works.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level
Jan. 3	15.92	Mar. 2	15.75	May 2	14.33
Feb. 2	15.92	Apr. 2	14.00	June 2	13.25

89-47-22B1 (*886,p.120; 908,p.27; 938,p.36). Owner's Lowell 4. City of Sioux City. NW¼NE¼ sec. 23, T. 89 N., R. 47 W. Measuring point level with land-surface datum. Water-level measurements by N. L. Nelson and Tim Kemper, Sioux City Water Works. Water levels affected by nearby pumping wells.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	36.83	Apr. 2	35.50	July 2	34.83	Oct. 2	36.62
Feb. 2	36.33	May 2	34.67	Aug. 2	36.83	Nov. 3	36.58
Mar. 2	36.00	June 2	34.50	Sept. 3	36.75	Dec. 2	36.08

TARKIO CREEK AREA PROGRAM

The observation-well program in the Tarkio Creek area, begun in 1934, was continued in 1942 by the Geological Survey, United States Department of the Interior.[1/] This area includes parts of Montgomery and Page Counties, Iowa, and Atchison County, Mo. Of the 69 wells in the area under observation at the beginning of 1942, 50 were in Iowa and 19 in Missouri. Measurements in 2 wells (Nos. 26 and 48) were discontinued during the year. The wells in the area as a whole are discussed in this section of the present report, but records of the water levels in wells in the Missouri part of the area are given in the section that deals with that State. The water levels were measured monthly, usually between the 25th and the last day of the month. In all, 788 individual measurements were made during the year. The work was done by D. W. Knox until September 1 and by D. L. Hummel during the remainder of the year.

Water-level measurements in 10 to 12 wells (Nos. 1, 2, 5, 6,7,10,11, 12, 14, 15, 16, 17) were used in computing the average water levels in

1/ For earlier reports on this program see Water-Supply Papers 777 (pp. 62-65). 817 (pp. 55-61), 840 (pp.89-100), 845 (pp.85-92), 886 (pp.121-137), 908 (pp.28-37), and 938 (pp.37-47).

1942, which are given in the following tables.

Average water levels, in feet above assumed datum planes, in 10 to 12 observation wells in the Tarkio Creek area, 1942

Date	Water level	Date	Water level	Date	Water level
Jan. 26, 29	18.82	May 28, 29	18.29	Sept.26, 27	14.32
Feb. 25, 26	17.38	June 22,23	17.36	Oct. 29, 30	13.81
Mar. 27, 30	20.62	July 23,24	15.98	Nov. 28, 29	13.45
Apr. 27, 29	17.71	Aug. 28,29	13.70	Dec. 28, 29	13.62

The average water level was 8.17 feet higher in January 1942 than in January 1941, owing to heavy rains in the fall of 1941. Although the precipitation, largely in the form of snow, was above normal in January and February, freezing temperatures prevented melting, and as a result a slight decline of the water level occurred in February. Because of above-freezing temperatures in March, the accumulated snow and ice melted, resulting in considerable ground-water recharge and a rise of the average water level at the end of the month to a record high--2.02 feet above the previous high of November 1941. During April, as the result of subnormal precipitation, the average water level declined 2.91 feet; but in May, when the rainfall was above normal, it rose 0.58 foot. From the last of May to the last of August, which is the growing season, the water levels declined steadily, and the average level was 4.59 feet lower in August than in May. The rainfall during this 3-month period was somewhat below normal. During September the average water level rose 0.62 foot, after which it declined until, near the end of November, it reached its lowest point for the year, which was 7.17 feet lower than the record high reached in March. It rose slightly during December, and at the end of the year, although it was 4.68 feet below the average water level in December 1941, it was still about 2 feet higher than the average year-end water level for the period of record, 1934-42.

Figure 7 shows the fluctuation of the average water level and the precipitation for each month since August 1934. The lowest average water level during the period of record occurred in March 1938. The net rise from the record low of March 1938 to the record high of March 1942 amounted to 12.38 feet.

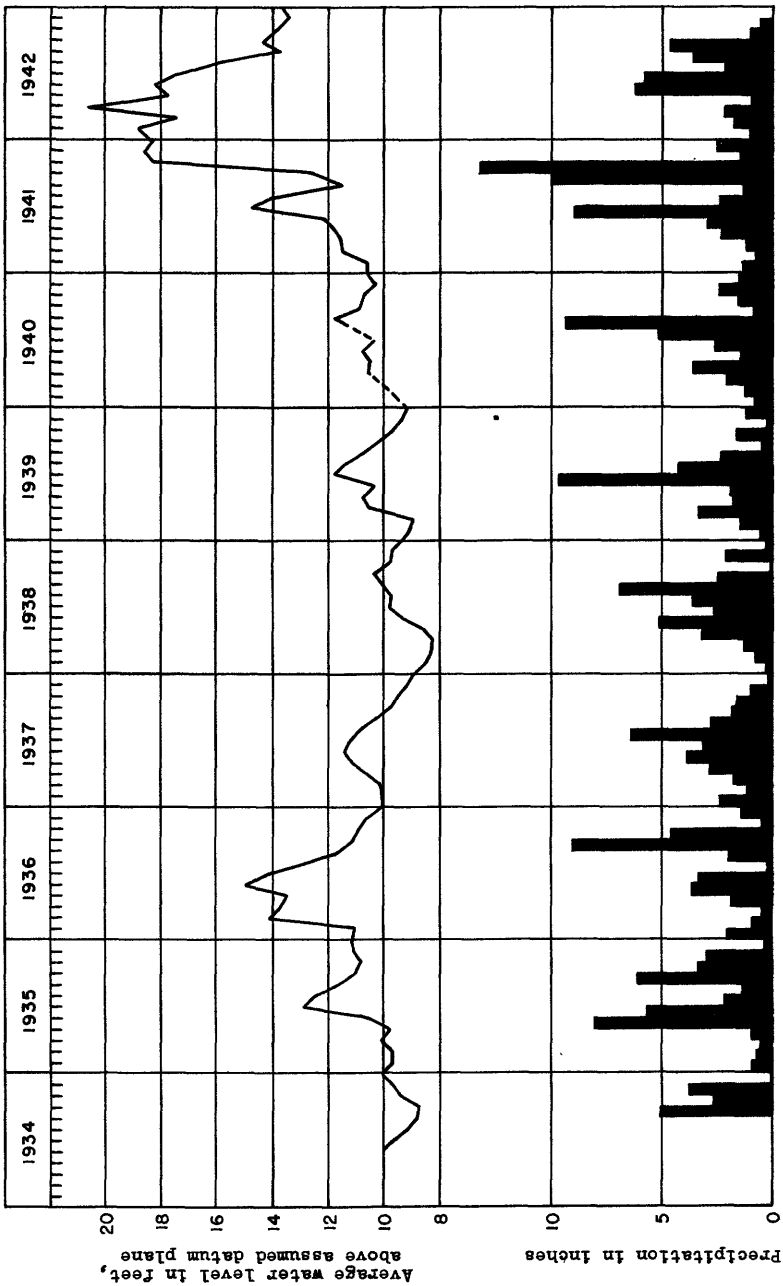

Figure 7.--Graph showing average water level in 9 to 12 wells and precipitation at Shenandoah in the Tarkio Creek area, Iowa-Mo.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

The plan follows in listing the observation wells in the part of the Tarkio Creek area that lies in Iowa is the same as that followed in listing the wells in the State-wide program. It is explained on page 11.

Montgomery County

7 (*777,pp.63-64;*817,p.56,57-59; *840,pp.91,94-95; 845,pp.86-87; 886, p. 122; 908,p.36; 938,p.39). E. F. Holquist. SE¼SE¼ sec. 11, T. 71 N., R. 38 W. Measuring point 1.2 feet above land-surface datum. To convert previous records to land-surface datum subtract water level in feet above assumed datum from 33.45 feet.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	5.78	Apr. 29	11.38	July 24	15.94	Oct. 30	22.26
Feb. 26	6.17	May 29	12.04	Aug. 29	22.06	Nov. 29	22.86
Mar. 27	5.04	June 23	12.44	Sept.27	21.03	Dec. 29	23.40

72 (*840,p.93, 98-99;845,p.92; 886,p.133; 908,p.36; 938,p.45). O. A. Milner. SE¼SW¼ sec. 24. T. 72 N., R. 38 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 23.59 feet.

Water level, in feet below land-surface datum, 1942

Jan. 27	1.96	Apr. 29	4.69	July 24	9.15	Oct. 30	10.11
Feb. 26	3.30	May 29	4.88	Aug. 29	13.76	Nov. 29	11.20
Mar. 30	2.00	June 23	4.89	Sept.27	9.21	Dec. 29	10.39

73 (*840,pp.93,98-99;845,p.92;886,p.133; 908,p.36; 938,p.46). NW¼NW¼ sec. 25, T. 72 N., R. 38 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 28.60 feet.

Water level, in feet below land-surface datum, 1942

Jan. 27	7.04	Apr. 29	13.02	July 24	14.77	Oct. 30	15.45
Feb. 26	9.07	May 29	12.46	Aug. 29	19.12	Nov. 29	15.86
Mar. 30	6.90	June 23	13.88	Sept.27	15.00	Dec. 29	16.02

78 (*840,pp.93,98-99; 845,p.92; 886,p.134; 908,p.36; 938,p.46). Mr. Mainquist. NW¼NE¼ sec. 35, T. 71 N., R. 38 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 17.52 feet.

Water level, in feet below land-surface datum, 1942

Jan. 27	2.88	Apr. 29	3.80	July 24	3.11	Oct. 30	7.08
Feb. 26	3.53	May 29	4.08	Aug. 29	5.16	Nov. 29	7.26
Mar. 30	3.06	June 23	3.19	Sept.27	6.86	Dec. 29	6.68

79 (*840,p.93,98-99; 845,p.92; 886,p.134; 908,p.36; 938,p.46). SW¼NW¼ sec. 35,T. 71 N., R. 38 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 28.45 feet.

Water level, in feet below land-surface datum, 1942

Jan. 27	2.48	Apr. 29	6.61	July 24	7.98	Oct. 30	13.56
Feb. 26	4.41	May 29	6.44	Aug. 29	12.02	Nov. 29	15.77
Mar. 30	2.64	June 23	5.48	Sept.27	10.93	Dec. 29	16.39

81 (*840,pp. 93,98-99; 845,p. 92; 886,p.135; 908,p.37; 938,p.46). L. G. Bergren. NW¼NE¼ sec. 24, T. 71 N., R. 38 W. To convert previous records to land-surface datum, subtract water level above assumed datum from 19.38 feet.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	2.43	Apr. 29	6.18	July 24	6.47	Oct. 30	8.24
Feb. 26	3.26	May 29	6.34	Aug. 29	11.36	Nov. 29	8.34
Mar. 30	3.30	June 23	5.58	Sept.27	7.87	Dec. 29	7.14

82 (*840, pp. 93, 98-99; 845, p. 92; 886, p. 135; 908, p. 37; 938, p. 47). NW¼NW¼ sec. 29, T. 72 N., R. 37 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 34.09 feet.

Water level, in feet below land-surface datum, 1942

Jan. 27	6.38	Apr. 29	10.50	July 24	15.48	Oct. 30	20.43
Feb. 26	8.56	May 29	10.56	Aug. 29	20.94	Nov. 29	20.97
Mar. 30	5.86	June 23	11.29	Sept.27	19.05	Dec. 29	21.48

Page County

5 (*777,pp.63,64; *817,pp.56-59; *840,pp.91,93-94;845,p.86; 886,p.122; 908,p.31; 938,p.39). John Toft. SW¼SW¼ sec. 7, T. 68 N., R. 38 W. Measuring point 1.0 foot above land-surface datum. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 25.20 feet.

Water level, in feet below land-surface datum, 1942

Jan. 26	8.66	Apr. 27	10.82	July 23	13.24	Oct. 29	15.92
Feb. 25	10.24	May 28	7.34	Aug. 28	16.29	Nov. 28	15.98
Mar. 27	7.16	June 22	10.70	Sept.26	15.97	Dec. 28	15.19

6 (*777,pp. 63-64; *817,pp.56-59; *840,pp.91, 94-95; 845,pp.86-87; 886,p.122; 908,p.31; 938,p.39). T. Slickerveer. SW¼SW¼ sec. 18, T. 69 N., R. 38 W. Measuring point 2.0 feet above land-surface datum. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 18.48 feet.

Water level, in feet below land-surface datum, 1942

Jan. 27	1.04	Apr. 29	2.24	July 24	4.74	Oct. 30	4.61
Feb. 26	1.95	May 29	2.16	Aug. 29	6.38	Nov. 29	4.19
Mar. 27	1.73	June 23	2.90	Sept.27	5.13	Dec. 29	3.66

10 (*777; pp.63-65; *817,pp.56-59; *840,pp.91, 94-95; 845,pp.86-87; 886,p.123; 908,p.31; 938,p.39). R. Palmquist. NE¼SE¼ sec. 17, T. 70 N., R. 37 W. Measuring point level with land-surface datum. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 36.94. 36.94 feet.

Water level, in feet below land-surface datum, 1942

Jan. 27	11.78	Apr. 29	19.58	July 24	22.80	Oct. 30	25.65
Feb. 26	13.43	May 29	18.92	Aug. 29	27.10	Nov. 29	25.29
Mar. 30	11.12	June 23	22.32	Sept.27	24.67	Dec. 29	25.47

11 (*777,pp.64-65; *817,pp.56,59 61; *840,pp.91,94-95; 845,pp.86-87; 886,p.123; 908,p.31; 938,p.40). R. Palmquist. SE¼SE¼ sec. 17, T. 70 N., R. 37 W. Measuring point 0.9 foot above land-surface datum. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 16.71 feet.

Water level, in feet below land-surface datum, 1942

Jan. 27	1.22	Apr. 29	5.33	July 24	6.99	Oct. 30	8.17
Feb. 26	2.72	May 29	4.94	Aug. 29	11.32	Nov. 29	8.18
Mar. 30	1.94	June 23	6.20	Sept.27	(a)	Dec. 29	7.55

a Well dry.

12 (*777,pp.64-65; *817,pp.56,59-61; *840,pp.92, 94-95; 845,pp. 86-87; 886,p.123; 908,p.31; 938,p.40). Amil Windhorst. NW¼SW¼ sec. 20, T. 69 N., R. 37 W. Measuring point level with land-surface datum. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 47.76 feet.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	a22.42	Apr. 29	18.29	July 24	18.20	Oct. 30	20.33
Feb. 26	b32.90	May 29	17.78	Aug. 29	26.82	Nov. 29	21.17
Mar. 30	16.28	June 23	17.74	Sept.27	20.95	Dec. 29	21.76

13 (*817,pp.57,59-61; *840,pp.92,94-95; 845,pp.86-87; 866,p.123; 908, p.31; 938,p.40). Amil Windhorst. NW¼SW¼ sec. 20, T. 69 N., R. 37 W. Measuring point 1.0 foot above land-surface datum. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 34.75 feet.

Water level, in feet below land-surface datum, 1942

Jan. 27	16.58	Apr. 29	17.38	July 24	16.04	Oct. 30	19.78
Feb. 26	19.86	May 29	16.96	Aug. 29	24.46	Nov. 29	21.64
Mar. 30	a23.09	June 23	17.23	Sept.27	18.73	Dec. 29	20.42

14 (*777,pp.64-65; *817,pp.57, 59-61; *840,pp.92-94; 845,p. 86; 886, p.123;908,p.31; 938,p.14). Floyd Hoskins. SE¼SE¼ sec. 19, T. 68 N., R. 38 W. Measuring point 0.5 foot above land-surface datum. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 38.74 feet.

Water level, in feet below land-surface datum, 1942

Jan. 26	16.46	Apr. 27	14.55	July 23	14.16	Oct. 29	17.98
Feb. 26	18.22	May 28	14.88	Aug. 28	16.79	Nov. 28	19.32
Mar. 27	12.19	June 22	15.05	Sept.26	17.03	Dec. 28	20.57

15 (*777,pp.64-65; *817,pp.57,59-61; *840,pp.92-94; 845,p.86; 886,p.124; 908,p.32; 938,p.40). Metropolitan Life Insurance Co. NE¼NW¼ sec. 21, T. 67 N., R. 38 W. Measuring point 2.2 feet above land-surface datum. To convert previous records to land-surfce datum, subtract water level in feet above assumed datum from 17.98 feet.

Water level, in feet below land-surface datum, 1942

Jan. 26	6.74	Apr. 27	2.77	July 23	3.82	Oct. 29	6.24
Feb. 25	7.13	May 28	2.62	Aug. 28	5.62	Nov. 28	6.48
Mar. 27	.76	June 22	1.92	Sept.26	6.05	Dec. 28	5.65

16 (*777,pp.64-65; *817,pp.57, 59-61; *840,pp.92-94; 845,p.86; 886,p.124; 908,p.32; 938,p.40). Metropolitan Life Insurance Co. NE¼SE¼ sec. 20, T. 67 N., R. 38 W. Measuring point 0.7 foot above land-surface datum. To convert previous records to land-surface datum, subtract water level in feet above aesumed datum from 25.20 feet.

Water level, in feet below land-surface datum, 1942

Feb. 25	8.24	May 28	6.46	Aug. 28	12.94	Nov. 28	(c)
Mar. 27	6.90	June 22	8.52	Sept.26	15.96	Dec. 28	(c)
Apr. 27	9.30	July 23	10.58	Oct. 29	17.78		

17 (*777,pp.64-65;*817,pp.57,59-61; *840,pp.92-94; 845,p.86; 886,p.124; 908,p.32; 938,p.40). Albert Nordholm. SW¼SE¼ sec. 20, T. 67 N., R. 38 W. Measuring point level with land-surface datum. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 27.52 feet.

Water level, in feet below land-surface datum, 1942

Jan. 26	13.46	Apr. 27	15.10	July 23	14.66	Oct. 29	17.00
Feb. 25	13.46	May 28	12.82	Aug. 28	15.43	Nov. 28	17.28
Mar. 27	11.97	June 22	13.85	Sept.26	16.66	Dec. 28	17.30

a Pumping.
b Well may have been pumped before measurement.
c Well dry.

38 (*840,p.92, 96-97; 845,pp.89-90; 886,p.128; 908,p.32; 938,p.42). Elsie Nordstrom. NW¼NE¼ sec. 35, T. 69 N., R. 39 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 97.43 feet.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	(a)	Apr. 29	15.57	July 23	16.48	Oct. 29	20.94
Feb. 25	(a)	May 28	14.26	Aug. 28	18.88	Nov. 28	21.88
Mar. 27	17.12	June 22	15.36	Sept.26	19.80	Dec. 28	22.82

39 (*840,pp.92, 96-97; 845,pp.89-90; 886,p.128; 908,p.32; 938,p.42). Elsie Nordstrom. NW¼NE¼ sec. 35, T. 69 N., R. 39 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 95.58 feet.

Water level, in feet below land-surface datum, 1942

Feb. 25	20.09	May 28	11.65	Aug. 28	18.92	Nov. 28	21.03
Mar. 27	13.06	June 22	13.87	Sept.26	18.75	Dec. 28	21.98
Apr. 29	13.59	July 23	15.26	Oct. 29	20.02		

40 (*840,pp. 92, 96-97; 845,pp.89-90; 886,p.128; 908,p.32; 938,p.43). Elsie Nordstrom. NW¼NE¼ sec. 35,T. 69 N., R. 39 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 93.09 feet.

Water level, in feet below land-surface datum, 1942

Jan. 27	14.13	Apr. 29	11.95	July 23	13.98	Oct. 29	18.47
Feb. 25	18.76	May 28	9.80	Aug. 28	17.64	Nov. 28	19.37
Mar. 27	11.14	June 22	12.45	Sept.26	17.26	Dec. 28	18.32

41 (*840,pp. 92,96-97; 845,pp.89-90; 886,p.128; 908,p.32; 938,p.43). Elsie Nordstrom. NW¼NE¼ sec. 35, T. 69 N., R. 39 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 90.61 feet.

Water level, in feet below land-surface datum, 1942

Jan. 27	14.02	Apr. 27	10.28	July 23	12.40	Oct. 29	17.46
Feb. 25	17.73	May 28	8.00	Aug. 28	16.82	Nov. 28	18.54
Mar. 27	11.08	June 22	10.93	Sept.26	16.07	Dec. 28	19.46

42 (*840,pp. 92,96-97; 845,pp.89-90; 886,p. 129; 908,p.32; 938,p.43) Elsie Nordstrom. NW¼NE¼ sec. 35, T. 69 N., R. 39 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 90.25 feet.

Water level, in feet below land-surface datum, 1942

Jan. 27	11.94	Apr. 29	11.19	July 23	13.13	Oct. 29	19.08
Feb. 25	16.21	May 28	8.72	Aug. 28	15.79	Nov. 28	20.07
Mar. 27	10.12	June 22	11.97	Sept.26	17.66	Dec. 28	19.34

43 (*840,pp.92,96-97; 845,pp.89-90; 886,p.129; 908,p.33; 938,p.43). Elsie Nordstrom. NW¼NE¼ sec. 35, T. 69 N., R. 39 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 87.13 feet.

Water level, in feet below land-surface datum, 1942

Jan. 27	10.84	Apr. 29	8.52	July 23	11.38	Oct. 29	16.51
Feb. 25	14.82	May 28	6.24	Aug. 28	14.60	Nov. 28	17.31
Mar. 27	9.60	June 22	9.59	Sept.26	15.45	Dec. 28	17.98

44 (*840,pp.92,96-97; 845,pp.89-90; 886,p.129; 908,p.33; 938,p.43). Elsie Nordstrom. NW¼NE¼ sec. 35, T. 69 N., R. 39 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 85.11 feet.

a Well dry.

44 (*840,pp.92, 96-97; 845,pp.89-90; 886,p.129; 908,p.33; 938,p.43)--Continued.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	7.92	Apr. 29	8.04	July 23	10.32	Oct. 29	15.88
Feb. 25	11.29	May 28	5.71	Aug. 28	12.92	Nov. 28	17.07
Mar. 27	7.69	June 22	8.34	Sept.26	14.73	Dec. 28	16.13

44A(*886,p.130; 908,p.33; 938,p.43). Elsie Nordstrom. NW¼NE¼ sec. 35, T. 69 N., R. 39 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 82.94 feet.

Water level, in feet below land-surface datum, 1942

Jan. 27	7.88	Apr. 29	7.58	July 23	10.34	Oct. 29	16.19
Feb. 25	10.34	May 28	6.02	Aug. 28	14.24	Nov. 28	16.88
Mar. 27	6.58	June 22	8.89	Sept.26	15.00	Dec. 28	14.49

45 (*840,pp.92,96-97; 845,pp.89-90; 886,p.130; 908,p.33; 938,p.43). Elsie Nordstrom. NW¼NE¼ sec. 35, T. 69 N., R. 39 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 82.07 feet.

Water level, in feet below land-surface datum, 1942

Jan. 27	6.54	Apr. 29	6.99	July 23	9.40	Oct. 29	15.87
Feb. 25	9.82	May 28	5.46	Aug. 28	13.00	Nov. 28	16.57
Mar. 27	5.92	June 22	8.38	Sept.26	14.73	Dec. 28	13.58

46(*840,pp.92, 96-97; 845,pp.89-90; 886,p.130; 908,p.33; 938,p.44). Elsie Nordstrom. NW¼NE¼ sec. 35, T. 69 N., R. 39 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 76.86 feet.

Water level, in feet below land-surface datum, 1942

Jan. 27	4.62	Apr. 29	6.76	July 23	8.76	Oct. 29	14.22
Feb. 25	7.80	May 28	5.12	Aug. 28	11.26	Nov. 28	15.03
Mar. 27	4.12	June 22	7.02	Sept.26	13.03	Dec. 28	13.70

47 (*840,pp.92, 96-97; 845,pp.89-90; 886,p.130; 908,p.33; 938,p.44). Elsie Nordstrom. NW¼NE¼ sec. 35, T. 69 N., R. 39 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 70.73 feet.

Water level, in feet below land-surface datum, 1942

Jan. 27	3.38	Apr. 29	5.66	July 23	6.72	Oct. 29	13.13
Feb. 25	5.48	May 28	4.19	Aug. 28	10.38	Nov. 28	14.14
Mar. 27	2.94	June 22	5.19	Sept.26	11.76	Dec. 28	14.64

48 (*840,pp.92, 97; 845,p.90; 886,p.131; 908,p.33; 938,p.44). Elsie Nordstrom. NW¼NE¼ sec. 35, T. 69 N., R. 39 W. Water levels, in feet below land-surface datum, 1942: Apr. 29, 10.77; May 28, 9.06. Well destroyed; measurements discontinued. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 55.21 feet.

49 (*840,pp.92, 97; 845,p.90; 886,p.131; 908,p.33; 938,p.44). Elsie Nordstrom. NW¼NE¼ sec. 35, T. 69 N., R. 39 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 98.34 feet.

Water level, in feet below land-surface datum, 1942

Jan. 27	15.60	Apr. 29	15.40	July 23	15.74	Oct. 29	20.50
Feb. 25	21.26	May 28	16.24	Aug. 28	20.30	Nov. 28	21.38
Mar. 27	13.18	June 22	14.50	Sept.26	19.60	Dec. 28	21.45

50 (*840,pp.92,97; 845,p.90; 886,p.131; 908,p.34; 938,p.44). Elsie Nordstrom. NW¼NE¼ sec. 35 T. 69 N., R. 39 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 89.36.

50 (*840,pp.93,97; 845,p.90; 886,p.131; 908,p.34; 938,p.44). Elsie Nordstrom--Continued.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	10.12	Apr. 29	5.72	July 23	13.16	Oct. 29	18.97
Feb. 25	13.42	May 28	6.64	Aug. 28	17.50	Nov. 28	19.92
Mar. 27	9.06	June 22	11.37	Sept.26	17.67	Dec. 28	20.71

51 (*840,pp.92, 97; 845,p. 90; 886,p.131; 908,p.34; 938,p.44). Elsie Nordstrom. NW¼NE¼ sec. 35, T. 69 N., R. 39 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 82.86 feet.

Water level, in feet below land-surface datum, 1942

Jan. 27	9.72	Apr. 29	9.58	July 23	12.28	Oct. 29	18.20
Feb. 25	9.08	May 28	8.86	Aug. 28	16.20	Nov. 28	19.05
Mar. 27	8.87	June 22	10.60	Sept.26	17.00	Dec. 28	19.86

52(*840,pp.92,97; 845,p.90; 886,p.131; 908,p.34; 938,p.44). Elsie Nordstrom. NW¼NE¼ sec. 35, T. 69 N., R. 39 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 87.69 feet.

Water level, in feet below land-surface datum, 1942

Jan. 27	12.96	Apr. 29	12.24	July 23	12.00	Oct. 29	20.80
Feb. 25	13.74	May 28	11.49	Aug. 28	16.14	Nov. 28	22.33
Mar. 27	10.87	June 22	12.40	Sept.26	18.87	Dec. 28	23.63

54 (*840,pp.93,97; 845,p.90; 886,p.131; 908,p.34; 938,p.44). Elsie Nordstrom. NW¼NE¼ sec. 35, T. 69 N., R. 39 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 93.78 feet.

Water level, in feet below land-surface datum, 1942

Jan. 27	15.68	Apr. 29	15.74	July 23	16.62	Oct. 29	21.85
Feb. 25	16.30	May 28	13.98	Aug. 28	21.10	Nov. 28	23.74
Mar. 27	13.46	June 22	15.68	Sept.26	19.06	Dec. 28	25.58

55 (*840,pp.93,97; 845,p.90; 886,p.131; 908,p.34; 938,p.45). Elsie Nordstrom. NW¼NE¼ sec. 35, T. 69 N., R. 39 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 91.30 feet.

Water level, in feet below land-surface datum, 1942

Jan. 27	14.26	Apr. 29	14.86	July 23	16.40	Oct. 29	23.57
Feb. 25	15.62	May 28	11.84	Aug. 28	20.36	Nov. 28	25.51
Mar. 27	12.57	June 22	15.34	Sept.26	20.44	Dec. 28	26.74

56 (*840,pp.93,97; 845,p.90; 886,p.132; 908,p.34; 938,p.45). Elsie Nordstrom. NW¼NE¼ sec. 35, T. 69 N., R. W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 89.02 feet.

Water level, in feet below land-surface datum, 1942

Jan. 27	11.08	Apr. 29	16.82	July 23	17.80	Oct. 29	25.18
Feb. 25	11.79	May 28	14.74	Aug. 28	21.82	Nov. 28	26.83
Mar. 27	8.44	June 22	16.94	Sept.26	22.57	Dec. 28	26.96

57 (*840,pp.93,97; 845,p.90; 886,p.132; 908,p.34; 938,p.45). Elsie Nordstrom. NW¼NE¼ sec. 35, T. 69 N., R. 39 W. To convert previous records to land-surface datum,subtract water level in feet above assumed datum from 68.62 feet.

Water level, in feet below land-surface datum, 1942

Jan. 27	7.20	Apr. 29	8.74	Aug. 28	9.92	Nov. 28	16.92
Feb. 25	8.14	May 28	8.08	Sept.26	14.56	Dec. 28	17.87
Mar. 27	5.72	July 23	6.40	Oct. 29	15.91		

58 (*840,pp.93, 97; 845,p.90; 886,p.132; 908,p.34; 938,p.45). Elsie Nordstrom. NW¼NE¼ sec. 35, T. 69 N., R. 39 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 56.06 feet.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	7.02	Apr. 29	16.18	Aug. 28	13.24	Nov. 28	13.40
Feb. 25	7.89	May 28	10.36	Sept.26	13.68	Dec. 28	13.13
Mar. 27	4.86	July 23	9.58	Oct. 29	13.38		

59 (*840,pp.97-98; 845,p.91; 886,p.132; 908,p.34; 938,p.45). Frank Goodner. SE¼SE¼ sec. 25, T. 69 N., R. 39 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 62.17 feet.

Water level, in feet below land-surface datum, 1942

Jan. 27	15.48	Apr. 27	9.39	June 22	11.91	Aug. 28	18.86
Feb. 26	18.07	May 28	11.13	July 23	15.10	Sept.26	(a)
Mar. 30	12.48						

70 (*840,pp.93, 98; 845,p.91; 886,p.133; 908,p.34; 938,p.45). John Snyder. SE¼NE¼ sec. 30, T. 69 N., R. 38 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 18.03 feet.

Water level, in feet below land-surface datum, 1942

Jan. 27	5.06	Apr. 27	4.70	July 23	5.69	Oct. 29	8.91
Feb. 26	6.34	May 29	3.53	Aug. 28	8.70	Nov. 28	9.11
Mar. 30	1.81	June 22	5.06	Sept.26	8.51	Dec. 28	7.50

71 (*840,pp. 93,98; 845,p.91; 886,p.133; 908,p.35; 938,p.45). John Snyder. SW¼NE¼ sec. 30, T. 69 N., R. 38 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 17.38 feet.

Water level, in feet below land-surface datum, 1942

Jan. 26	3.98	May 29	4.62	Aug. 28	9.59	Oct. 29	6.94
Mar. 30	3.40	June 22	6.40	Sept.26	6.89	Nov. 28	7.27
Apr. 27	6.46	July 23	7.06				

74 (*840,pp.93, 98; 845,p.91; 886,p.133; 908,p.35; 938,p.46). Fred Miller. SE¼NW¼ sec. 33, T. 69 N., R. 38 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 37.44 feet.

Water level, in feet below land-surface datum, 1942

Jan. 26	13.23	Apr. 27	12.94	July 23	16.33	Oct. 29	18.65
Feb. 25	13.43	May 29	13.89	Aug. 28	20.68	Nov. 28	19.19
Mar. 30	11.06	June 22	14.97	Sept.26	18.21	Dec. 28	19.99

75 (*840,pp.93,98; 845,p.91; 886,p.134; 908,p.35; 938,p.46). I. W. Runyon. NW¼SE¼ sec. 17, T. 68 N., R. 38 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 50.08 feet.

Water level, in feet below land-surface datum, 1942

Jan. 26	22.55	Apr. 27	29.58	July 23	25.73	Oct. 29	36.51
Feb. 25	26.50	May 28	15.12	Aug. 28	33.38	Nov. 28	37.60
Mar. 27	13.08	June 22	22.58	Sept.26	34.27	Dec. 28	37.04

76 (*840,pp.93,98; 845,p.91; 886,p.134; 908,p.35; 938,p.46). Metropolitan Life Insurance Co. SE¼SW¼ sec. 29, T. 68 N., R. 38 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 23.48 feet.

Water level, in feet below land-surface datum, 1942

Jan. 26	8.29	Apr. 27	8.08	July 23	11.33	Oct. 29	12.06
Feb. 25	8.79	May 28	6.90	Aug. 28	12.04	Nov. 28	12.22
Mar. 27	4.82	June 22	9.08	Sept.26	11.68	Dec. 28	12.18

a Well dry.

80 (*840, pp. 93, 98; 845, p. 92; 886, p. 135; 908, p. 35; 938, p. 46). Mr. Burton. NW¼NE¼ sec. 34, T. 69 N., R. 38 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 42.82 feet.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	12.79	Apr. 29	15.47	Aug. 29	23.88	Nov. 29	24.93
Feb. 25	16.19	May 29	15.24	Sept.27	20.78	Dec. 29	24.94
Mar. 30	11.68	June 23	15.49	Oct. 30	23.02		

83 (*886, p. 135; 908, p. 35; 938, p. 47). Elsie Nordstrom. NW¼NW¼ sec. 35, T. 69 N., R. 39 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 99.10 feet.

Water level, in feet below land-surface datum, 1942

Jan. 27	15.34	Apr. 29	20.82	July 23	20.96	Oct. 29	21.80
Feb. 26	17.99	May 28	18.97	Aug. 28	25.00	Nov. 28	22.58
Mar. 30	14.52	June 22	18.45	Sept.26	20.97	Dec. 28	23.43

84 (*886, p. 136; 908, p. 35; 938, p. 47). Elsie Nordstrom. NW¼NW¼ sec. 35, T. 69 N., R. 39 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 97.70 feet.

Water level, in feet below land-surface datum, 1942

Jan. 27	18.02	Apr. 29	19.36	July 23	18.84	Oct. 29	20.65
Feb. 26	20.04	May 28	17.84	Aug. 28	22.12	Nov. 28	21.45
Mar. 30	16.37	June 22	17.41	Sept.26	19.91	Dec. 28	22.16

85 (*886, p. 136; 908, p. 35; 938, p. 47). Elsie Nordstrom. NW¼NW¼ sec. 35, T. 69 N., R. 39 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 94.47 feet.

Water level, in feet below land-surface datum, 1942

Jan. 27	14.26	Apr. 29	15.20	July 23	15.86	Oct. 29	17.74
Feb. 26	16.08	May 28	15.18	Aug. 28	18.68	Nov. 28	18.58
Mar. 30	11.36	June 22	14.15	Sept.26	16.85	Dec. 28	19.24

86 (*886, p. 136; 908, p. 36; 938, p. 47). Elsie Nordstrom. NW¼NW¼ sec. 35, T. 69 N., R. 39 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 91.10 feet.

Water level, in feet below land-surface datum, 1942

Jan. 27	11.38	Apr. 29	11.51	July 23	12.32	Oct. 29	16.64
Feb. 26	12.79	May 28	11.40	Aug. 28	15.42	Nov. 28	15.46
Mar. 30	8.34	June 22	10.85	Sept.26	13.71	Dec. 28	16.23

87 (*886, p. 137; 908, p. 36; 938, p. 47). Elsie Nordstrom. NW¼NW¼ sec. 35, T. 69 N., R. 39 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 87.40 feet.

Water level, in feet below land-surface datum, 1942

Jan. 27	8.48	Apr. 29	6.62	July 23	7.58	Oct. 29	9.74
Feb. 26	10.47	May 28	6.44	Aug. 28	11.64	Nov. 28	10.58
Mar. 30	6.08	June 22	6.26	Sept.26	8.95	Dec. 28	10.73

KANSAS

INTRODUCTION

By S. W. Lohman

The Kansas section of the report on water levels in the north-central States for 1941 (Water-Supply Paper 938) contained records for 25 counties. The Kansas section of the present report, which covers the same group of States for 1942, contains records for 35 counties. (See fig. 8.) The 10 counties included for the first time are Barton, Bourbon, Cherokee, Labette, Logan, Republic, Stafford, Stevens, and Thomas Counties. Observation-well programs in each of the 35 counties are being conducted by the Geological Survey, United States Department of the Interior, and the State Geological Survey of Kansas, in cooperation with the Division of Water Resources of the Kansas State Board of Agriculture and the Division of Sanitation of the Kansas State Board of Health. The program in Jewell County is being carried on in cooperation also with the Soil Conservation Service, United States Department of Agriculture, and the programs in Harvey, McPherson, and Sedgwick Counties are being conducted in cooperation also with the city of Wichita.

Results of cooperative ground-water investigations published in 1942 by the State Geological Survey of Kansas include a detailed report on Morton County [1] and brief reports, indicating the availability of ground-water supplies for war plants and military bases in the south-central part of the State [2] and on the State as a whole.[3] In addition, an article on deep-seated solution in western Kansas and Oklahoma was published by the American Geophysical Union.[4]

1/ McLaughlin, T. G., Geology and ground-water resources of Morton County, Kans.: Kansas Geol. Survey Bull. 40, 126 pp., 9 pls., 6 figs., March 1942.

2/ Lohman, S. W., Ground-water supplies available for national defense industries in south-central Kansas: Kansas Geol. Survey Bull. 41, p. 1, pp. 1-20, figs. 1-5, February 28, 1942.

3/ Lohman, S. W., Frye, J. C., Waite, H. A., Fishel, V. C., McLaughlin, T. G., Latta, B. F., and Abernathy, G. E., Ground-water supplies in Kansas available for national defense industries, with a chapter on stream flow in Kansas by G. S. Knapp and J. B. Spiegel: Kansas Geol. Survey Bull. 41, p. 2, pp. 21-68, pls. 1-4, figs. 1-3, April 24, 1942.

4/ Frye, J. C., and Schoff, S. L., Deep-seated solution in the Meade basin and vicinity, Kans. and Okla.: Am. Geophysical Union Trans. 1942, part 1, pp. 35-39, figs. 1-3, 1942.

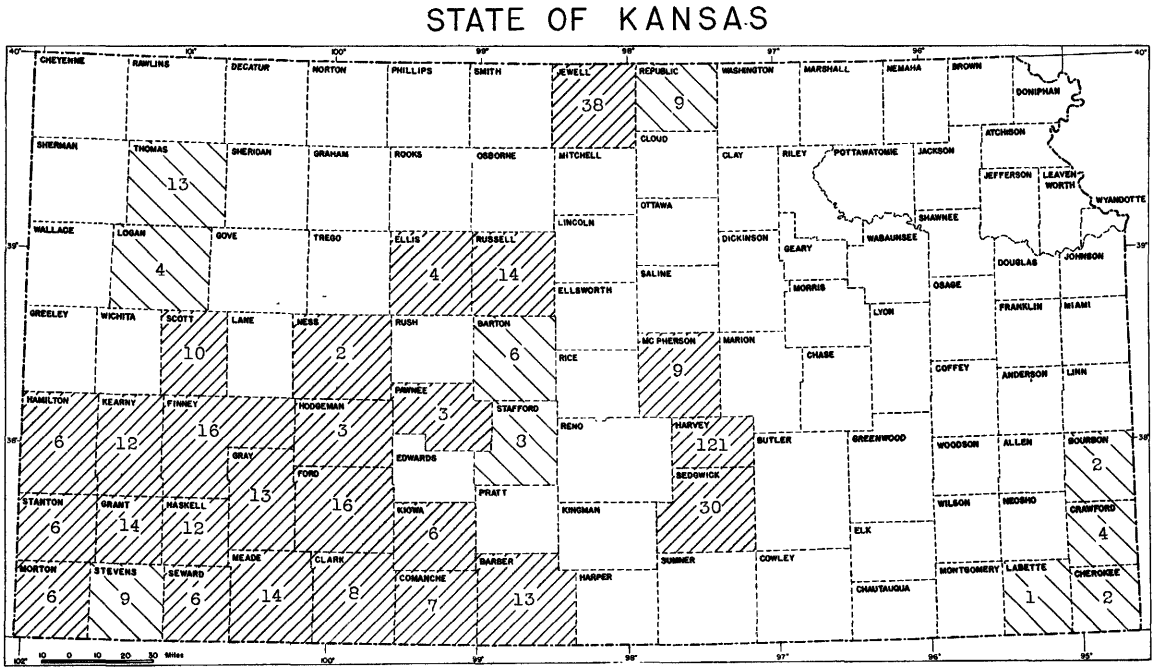

Figure 8.--Map of Kansas showing counties in which observation-well programs were being maintained at the close of 1942. Number of wells under observation at close of year indicated by figures. Programs established prior to 1942 indicated by closely spaced lines; those established during 1942, by widely spaced lines.

Ground-water investigations were made during 1942 in the following counties and areas in Kansas by the individuals named: In Barton and Stafford Counties, by B.F. Latta; in Cloud and Republic Counties, by V. C. Fishel; in Stevens County, by T. G. McLaughlin; in Thomas County, by J. C. Frye; and in the deep-water area in the southeastern part of the State, by G. E. Abernathy and C. C. Williams. Also, a large amount of work was done by members of the cooperative staff in developing ground-water supplies for war industries and military establishments throughout the State.

At the beginning of 1942, periodic water-level measurements were being made in 461 observation wells. During the year, 84 wells were discontinued and measurements were begun or resumed in 71 others. At the end of the year, water-level measurements were being made in 448 wells; of these, 9 were observed quarterly, 315 monthly, 89 wells semimonthly, and 24 weekly and 11 were equipped with automatic water-stage recorders. Three recorders in Scott County and one in Finney County are maintained by the Division of Water Resources, Kansas State Board of Agriculture, and the records of these wells are published through the courtesy of George S. Knapp, chief engineer. A total of 6,959 wetted-tape water-level measurements was made during the year. In the two tables that follow herewith these data are arranged by counties.

Names of observers and changes in number of wells observed for all observation wells in Kansas, by counties, during 1942

County	Name of observer	Measured at beginning of 1942	Discontinued during 1942	Added during 1942	Measured at end of 1942
Barber	a W.W.Wilson	14	1	0	13
Barton	W.W.Wilson	0	0	6	6
Bourbon	Local observers	0	0	2	2
Cherokee	Local observers	0	0	2	2
Clark	W.W.Wilson	9	2	1	8
Comanche	W.W.Wilson	6	0	1	7
Crawford	Local observers	0	0	4	4
Ellis	J. C. McFarland	6	2	0	4
Finney	W.W.Wilson	25	11	2	16
Ford	W.W.Wilson	15	2	3	16
Grant	W.W.Wilson	14	0	0	14
Gray	W.W.Wilson	22	9	0	13
Hamilton	W.W.Wilson	16	10	0	6
Harvey	G.H.von Hein	118	1	4	121
Haskell	W.W.Wilson	14	2	0	12
Hodgeman	W.W.Wilson	3	0	0	3
Jewell	J.H.Diamond	36	0	2	38
Kearny	W.W.Wilson	18	6	0	12
Kiowa	W.W.Wilson	6	0	0	6
Labette	Local observers	0	0	1	1
Logan	W.W.Wilson	0	0	4	4

a During certain periods Melvin Scanlan took W. W. Wilson's place as observer in several counties.

Names of observers and changes in number of wells observed for all observation wells in Kansas, by counties, during 1942

County	Name of observer	Measured at beginning of 1942	Discontinued during 1942	Added during 1942	Measured at end of 1942
McPherson	G.H. von Hein	9	0	0	9
Meade	W.W. Wilson	25	10	0	15
Morton	W.W. Wilson	6	0	0	6
Ness	W.W. Wilson	2	0	0	2
Pawnee	W.W. Wilson	3	0	0	3
Republic	Local observers	0	0	9	9
Russell	J.C. McFarland	19	5	0	14
Scott	W.W. Wilson	31	21	0	10
Sedgwick	G.H. von Hein	31	1	0	30
Seward	W.W. Wilson	7	1	0	6
Stafford	W.W. Wilson	0	0	8	8
Stanton	W.W. Wilson	6	0	0	6
Stevens	W.W. Wilson	0	0	9	9
Thomas	W.W. Wilson	0	0	13	13
Total		a 461	b 84	71	448

Frequency of measurement and number of wetted-tape measurements for all observation wells in Kansas, by counties, during 1942

County	Number of observation wells					Number of measurements made in 1942
	Observed quarterly	Observed monthly	Observed semi-monthly	Observed weekly	Equipped with recorders	
Barber	0	14	0	0	0	124
Barton	0	6	0	0	0	26
Bourbon	0	2	0	0	0	8
Cherokee	0	2	0	0	0	7
Clark	0	10	0	0	0	76
Comanche	0	7	0	0	0	66
Crawford	0	4	0	0	0	13
Ellis	0	6	0	0	0	38
Finney	0	26	0	0	1	225
Ford	0	18	0	0	0	175
Grant	0	14	0	0	0	157
Gray	0	22	0	0	0	181
Hamilton	0	16	0	0	0	107
Harvey	1	13	89	17	2	2,889
Haskell	0	14	0	0	0	145
Hodgeman	0	3	0	0	0	33
Jewell	0	38	0	0	0	407
Kearny	0	18	0	0	0	170
Kiowa	0	6	0	0	0	61
Labette	0	1	0	0	0	4
Logan	0	4	0	0	0	14
McPherson	8	1	0	0	0	43
Meade	0	24	0	0	1	245
Morton	0	6	0	0	0	70
Ness	0	2	0	0	0	24
Pawnee	0	3	0	0	0	35
Republic	0	8	0	0	1	68
Russell	0	19	0	0	0	118
Scott	0	28	0	0	3	213
Sedgwick	0	21	0	7	3	918

a Of the 467 wells under observation at the close of 1941, 6 were discontinued before any measurements were made in January 1942.
b Exclusive of the 6 wells mentioned in footnote a.

Frequency of measurement and number of wetted-tape measurements for all observation wells in Kansas, by counties, during 1942--Continued.

County	Observed quarterly	Observed monthly	Observed semi-monthly	Observed weekly	Equipped with recorders	Number of measurements made in 1942
Seward	0	7	0	0	0	75
Stafford	0	8	0	0	0	46
Stanton	0	6	0	0	0	69
Stevens	0	9	0	0	0	53
Thomas	0	13	0	0	0	56
Total	9	a399	89	24	11	6,959

The following table summarizes the trends in ground-water levels and in precipitation during 1942 in the 25 counties of Kansas in which water-level records are available for a year or longer. Detailed records of water-level trends are tabulated elsewhere in this report under each of these counties.

Relation between the percentage of wells in which the highest water levels of record were recorded in 1942, the percentage of wells in which there was a net rise in water level during 1942, and the precipitation during 1942, by counties

County	Number of wells observed entire year	Percentage of wells in which highest water levels of record were reached	Percentage of wells having a net rise in water level	Precipitation at nearest Weather Bureau station: Percentage of normal	Station	Remarks
Barber	13	79	54	99	Medicine Lodge	
Barton	0	0	0	133	Great Bend	Record begun in 1942
Bourbon	0	0	0	110	Fort Scott	Do.
Cherokee	0	0	0	104	Columbus (near)	Do.
Clark	9	89	78	106	Ashland	
Comanche	7	86	86	144	Coldwater	
Crawford	0	..	..	115	Pittsburg	Do.
Ellis	4	100	75	125	Hays	
Finney	14	79	57	103	Garden City	
Ford	13	62	46	120	Dodge City	
Grant	12	83	83	128	Ulysses	
Gray	12	66	75	122	Cimarron	
Hamilton	6	83	67	112	Syracuse	
Harvey	121	83	96	124	Newton	97 wells pumped or affected by pumping not included.
Haskell	11	46	33	107	Sublette	
Hodgeman	3	33	100	129	Jetmore	Irrigation wells.
Jewell	36	78	61	113	Burr Oak (near)	
Kearny	12	67	67	149	Lakin (near)	
Kiowa	5	66	80	127	Greensburg	Record for one well incomplete.

a Including 84 wells in which measurements were discontinued during 1942.

Relation between the percentage of wells in which the highest water levels of record were recorded in 1942, the percentage of wells in which there was a net rise in water level during 1942, and the precipitation during 1942, by counties--Continued.

County	Number of wells observed entire year	Percentage of wells in which highest water levels of record were reached	Percentage of wells having a net rise in water level	Precipitation at nearest Weather Bureau station		Remarks
				Percentage of normal	Station	
Labette	0	0	0	111	Parsons	Record begun in 1942
Logan	0	0	0	114	Oakley	Do.
McPherson	9	67	55	126	McPherson	
Meade	15	67	60	118	Plains	
Morton	4	67	67	164	Elkhart	
Ness	2	0	0	105	Ness City	Irrigation well
Pawnee	3	100	100	115	Larned	Do.
Republic	0	...	...	120	Belleville	Record begun in 1942.
Russell	15	93	60	103	Russell	
Scott	10	10	40	112	Scott City	Many wells pumped or affected by pumping
Sedgwick	30	83	83	140	Wichita	
Seward	6	50	67	118	Liberal	
Stafford	0	..	..	136	Hudson	Record begun 1942.
Stanton	6	100	100	99	Johnson	
Stevens	0	0	0	138	Hugoton	Do.
Thomas	0	0	0	115	Colby	Do.

As indicated in the preceding table, the precipitation in 1942 was above normal in 33 of the 35 counties and ranged from 99 percent of normal in Barber and Stanton Counties to 164 percent of normal in Morton County. In response to abundant precipitation the water levels in most of the wells in 1941 reached the highest stages of their period of record. Because of the continuing abundant precipitation the following year, many of the high stages reached in 1941 were exceeded in 1942, and new high stages were reached in the majority of wells in 22 of the 25 counties in which records of a year or more are available. In 21 of the 25 counties there was a net rise in water level during the year in 54 to 100 percent of the wells. In most of the 4 counties in which the number of wells showing net rises was less than 50 percent, most of the observation wells were pumped or were affected noticeably by nearby pumping during the year. Water-level trends in such wells, therefore, particularly those in Ness County and in the shallow-water basin of Scott County, reflect the extent of nearby pumping rather than the amount of recharge.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Observation wells in Kansas are listed alphabetically by counties and numerically within each county. Complete descriptions are given only for newly added wells. The numbers in parenthesis immediately following a well number indicate the water-supply papers in which earlier records of that well are given and the pages on which they appear. An asterisk indicated that a description of the well is given in that paper. The water level in each well is expressed in feet below a fixed measuring point or in feet above an assumed datum plane.

Barber County

By W. W. Wilson

Highest and lowest recorded water levels, in feet below measuring point, in 14 wells in Barber County

Well	Length of record (years)	Highest recorded water level (feet)	Date	Lowest recorded water level (feet)	Date
1	2	76.88	Oct. 22, 1942	83.99	Oct. 17, 1940
2	2	12.94	Apr. 22, 1942	14.22	Sept.24, 1941
3	2	12.05	May 26, 1942	18.42	Oct. 21, 1940
4	2	16.45	Nov. 20, 1941	18.19	Nov. 26, 1940
5	2	23.85	May 26, 1942	31.65	Sept.24, 1941
6	2	37.31	Oct. 22, 1942	40.06	Mar. 22, 1941
7	2	17.94	May 26, 1942	20.32	Oct. 21, 1940
8	2	9.37	Nov. 21, 1941	17.98	Mar. 21, 1941
9	2	5.47	May 8, 1941	7.26	Oct. 22, 1940
10	2	103.38	Nov. 25, 1942	104.35	Oct. 22, 1940
11	2	46.21	June 10, 1942	48.72	Oct. 22, 1940
12	2	5.09	Apr. 22, 1942	13.18	Oct. 22, 1940
13	2	10.03	Oct. 22, 1942	18.49	Oct. 22, 1940
15	2	39.85	Mar. 23, 1942	40.88	Aug. 9, 1941

Difference between highest and lowest water levels and net change in water level, in 1942 and for period of record, in 14 wells in Barber County

Well	Difference between highest and lowest water levels (feet)	Net rise (+) or net decline (-) in 1942 a/ (feet)	Net rise (+) or net decline (-) for period of record (feet)
1	7.11	+0.62	+6.97
2	1.28	-.44	+.21
3	6.37	-3.22	+2.87
4	1.74	-.86	+.47
5	7.80	+.04	+4.42
6	2.75	b+.74	+2.42
7	2.38	+.65	+1.38
8	8.61	-5.69	+2.24
9	1.79	-.04	+1.33
10	.97	+.54	+.97
11	2.51	+.33	+2.27

a For period Dec. 22, 1941, to Nov. 25, 1942.
b For period Nov. 20, 1941, to Oct. 22, 1942.

Difference between highest and lowest water levels and net change in water level, in 1942 and for period of record, in 14 wells in Barber County--Cont.

Well	Difference between highest and lowest water levels (feet)	Net rise (+) or net decline (-) in 1942 a/ (feet)	Net rise (+) or net decline (-) for period of record (feet)
12	8.09	-.04	+7.00
13	8.46	+1.60	+8.38
15	1.03	(a)	+.03

1 (*908,p.39; 938,p.53). D. S. Shaw. SE¼NW¼ sec. 19, T. 31 S.,R.15 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 21	78.30	Apr. 22	78.21	July 17	77.23	Oct. 22	76.88
Feb. 23	78.42	May 26	77.92	Sept.28	76.91	Nov. 25	77.02
Mar. 23	77.74	June 8	76.99				

2 (*908,p.39; 938,p.53). Russell Lake. SW¼SW¼ sec. 14, T. 31 S., R. 14 W.

Water level, in feet below measuring point, 1942

Jan. 21	13.23	Apr. 22	12.94	July 17	13.48	Oct. 22	13.12
Feb. 23	13.41	May 26	13.10	Sept.28	13.53	Nov. 25	13.69
Mar. 23	13.39	June 8	13.34				

3 (*908,p.40; 938,p.53). Mrs. Griever. SW¼NE¼ sec. 12, T. 32 S. R. 12 W.

Water level, in feet below measuring point, 1942

Jan. 21	13.03	Apr. 22	12.06	July 17	15.10	Oct. 22	15.54
Feb. 23	13.56	May 26	12.05	Sept.28	16.16	Nov. 25	15.56
Mar. 23	13.60	June 8	13.02				

4 (*908,p.40; 938,p.53). Madge Evans. SW¼SE¼ sec. 4, T. 32 S., R. 12 W.

Water level, in feet below measuring point, 1942

Jan. 21	16.96	Apr. 22	16.98	July 17	17.31	Oct. 22	17.51
Feb. 23	17.13	May 26	16.72	Sept.28	17.81	Nov. 25	17.63
Mar. 23	17.26	June 8	16.96				

5 (*908,p.40; 938,p.53). R. Kenney. NE¼NW¼ sec. 1, T. 33 S., R. 12 W.

Water level, in feet below measuring point, 1942

Jan. 21	25.94	Apr. 22	24.70	July 17	25.12	Oct. 22	25.14
Feb. 23	27.06	May 26	23.85	Sept.28	26.56	Nov. 25	25.93
Mar. 23	27.34	June 8	24.64				

6 (*908,p.40; 938,p.54). F. H. Boggs and Ben Barthlow. NW¼NW¼ sec. 4, T. 33 S., R. 12 W. Water levels, in feet below measuring point, 1942: Mar. 23, 37.55; July 17, 37.36; Oct. 22, 37.31.

7 (*938,p.54). E. B. Moots. SE¼SE¼ sec. 33, T. 32 S., R. 12 W.

Water level, in feet below measuring point, 1942

Jan. 21	19.37	Apr. 22	18.59	July 17	18.72	Oct. 22	18.50
Feb. 23	19.02	May 26	17.94	Sept.28	18.65	Nov. 25	18.94
Mar. 23	18.93						

a For period Dec. 22, 1941, to Nov. 25, 1942.

8 (*908,p.40; 938,p.54). P. Brock. SE¼NE¼ sec. 17, T. 34 S., R. 15 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 22	11.57	Apr. 23	9.87	July 18	13.33	Oct. 23	14.75
Feb. 24	12.45	May 27	10.90	Sept.29	15.02	Nov. 25	15.37
Mar. 24	13.18	June 11	11.78				

9 (*908,p.40; 938,p.54). V. D. Wells. SE¼SE¼ sec. 18, T. 34 S., R. 15 W.

Water level, in feet below measuring point, 1942

Jan. 22	5.71	Mar. 24	5.69	June 11	6.02	Sept. 29	6.73
Feb. 24	5.74	May 27	6.18	July 18	6.16	Nov. 25	5.93

10 (*908,p.40; 938,p.54). G. H. Davis. NW¼SW¼ sec. 11, T. 35 S., R. 15 W.

Water level, in feet below measuring point, 1942

Jan. 22	103.76	Apr. 23	103.47	July 18	103.80	Oct. 23	103.68
Feb. 24	103.79	May 27	103.57	Sept.29	103.70	Nov. 25	103.38
Mar. 24	103.57	June 11	103.62				

11 (*908,p.40; 938,p.54). A. Achenbach. NE¼SE¼ sec. 9, T. 35 S., R. 12 W.

Water level, in feet below measuring point, 1942

Jan. 22	46.53	Apr. 23	46.47	July 18	46.32	Oct. 23	46.41
Feb. 24	46.40	May 27	46.45	Sept.29	46.38	Nov. 25	46.45
Mar. 24	46.49	June 10	46.21				

12 (*908,p.40; 938,p.54). B. Mills. SW¼SW¼ sec. 34, T. 33 S., R. 10 W.

Water level, in feet below measuring point, 1942

Jan. 21	6.77	Apr. 22	5.09	July 17	6.80	Oct. 22	5.43
Feb. 23	7.08	May 26	5.64	Sept.28	7.01	Nov. 25	6.18
Mar. 23	7.14	June 10	6.13				

13 (*908,p.40; 938,p. 54). J. A. Hrencher. SW¼SE¼ sec. 17, T. 32 S. R. 10 W.

Water level, in feet below measuring point, 1942

Jan. 21	12.17	Apr. 22	11.06	July 17	12.77	Oct. 22	10.03
Feb. 23	12.25	May 26	11.47	Sept.28	10.79	Nov. 25	10.11
Mar. 24	12.25	June 10	11.94				

15 (*938,p.54). Anna Ruggles. SE.corner NE¼SE¼ sec. 16, T. 31 S., R. 11 W. Measurements discontinued after July 1942.

Water level, in feet below measuring point, 1942

Jan. 21	39.88	Mar. 23	39.85	May 26	39.86	July 17	39.87
Feb. 23	39.87	Apr. 22	39.87	June 10	39.86		

Barton County

By B. F. Latta

An investigation of the ground-water resources of southern Barton County was begun in 1942 in connection with the investigation of the geology and ground-water resources of Stafford County, which adjoins Barton County on the south. The results of the investigation are set forth briefly in the section of this report that deals with Stafford County.

1. F. Panning. SE. corner sec. 3, T. 20 S., R. 11 W. Unused driven stock well, diameter 1¼ inches, depth 12.5 feet. Measuring point, top of 1¼-inch pipe, 0.4 foot above land surface. No pump on well.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Aug. 7	3.35	Oct. 24	3.15	Dec. 15	3.78
Sept.29	3.64	Nov. 24	3.72		

2. W. Otte. NW¼NW¼ sec. 16, T. 19 S., R. 14 W. Unused drilled stock well, diameter 5.5 inches, depth 59.1 feet. Measuring point, top of 5.5-inch galvanized-iron casing, southwest side, 0.3 foot above land surface. No pump on well.

Water level, in feet below measuring point, 1942

Aug. 7	34.03	Oct. 27	33.80	Dec. 14	33.91
Sept.25	33.84	Nov. 24	33.98		

5. L. C. Miller. SW¼SW¼SW¼ sec. 29, T. 19 S., R. 13 W., north side of wash house. Unused driven well, diameter 1¼ inches, depth 18.2 feet. Measuring point, top of coupling on 1¼-inch pipe, 0.4 foot above land surface. Equipped with lift pump and windmill. Water levels, in feet below measuring point, 1942: Oct. 5, 9.93; Oct. 27, 10.13; Nov. 24, 10.47; Dec.15, 10.47.

16. Teichmann. NE¼SE¼NE¼ sec. 12, T. 20 S., R. 13 W., about 100 yards west of section road. Unused drilled well, originally used to supply water for drilling oil well, diameter 6.5 inches, depth 48.6 feet. Measuring point, top of 6.5-inch oil-well-type casing, northwest side, 1.1 feet above land surface. No pump on well. Water levels, in feet below measuring point, 1942: Oct. 7, 30.43; Oct. 27, 30.44; Nov. 24, 30.48; Dec. 15, 30.51.

35. Lario Oil Co. SW¼SE¼SW¼ sec. 15, T. 19 S., R. 11 W., midway between oil well and tank battery. Unused drilled well, originally used to supply water for drilling oil well, diameter 5 inches, depth 24.5 feet. Measuring point, top of 5-inch casing, east side 1.5 feet above land surface. No pump on well. Water levels, in feet below measuring point, 1942: Oct. 9, 22.65; Oct. 24, 22.68; Nov. 24, 22.57; Dec. 15, 22.50.

43. M. Hagen. SW¼SW¼SW¼ sec. 20, T. 20 S., R. 11 W., about 75 feet west of oil well. Unused drilled well, originally used to supply water for drilling oil well, diameter 6.5 inches, depth 46.5 feet. Measuring point, top of 6.5-inch oil-well-type casing, west side, 0.5 foot above land surface. No pump on well. Water levels, in feet below measuring point, 1942: Oct. 12, 21.03; Oct. 24, 20.94; Nov. 24, 20.71; Dec. 15, 20.69.

Bourbon County

By C. C. Williams

A survey of the geology and ground-water resources of the pre-Pennsylvanian rocks in an area made up of parts of Bourbon, Cherokee, Crawford, and Labette Counties, was begun in the summer of 1942 by the Geological Survey, United States Department of the Interior, and the State Geological Survey of Kansas in cooperation with the Division of Sanitation of the Kansas State Board of Health, and the Division of Water Resources of the Kansas State Board of Agriculture. The investigation was made by G. E. Abernathy,

of the State Geological Survey, and Charles C. Williams, of the Federal Geological Survey, under the supervision of S. W. Lohman, Federal geologist in charge of ground-water investigations in Kansas. This investigation was concerned only with the ground water contained in artesian aquifers of pre-Pennsylvanian (principally Ordovician) age and was undertaken primarily because of the actual and potential importance of these rocks in supplying water for war industries.

Bourbon, Crawford, and Cherokee Counties are situated in the order named from north to south along the eastern boundary of Kansas, Cherokee being the southeasternmost county in the State. Labette County is situated just to the west of Cherokee County along the southern boundary of the State. The area made up of parts of these four counties is a gently rolling plain except along the escarpment formed by the Fort Scott limestone and in a few places where beds of resistant sandstone in the Cherokee shale crop out. Most of this area has been designated the Cherokee Lowland by Moore.[5/]

In all, 9 observation wells were established in the area--2 in Bourbon County, 2 in Cherokee County, 4 in Crawford County, and 1 in Labette County. Of these 6 are deep wells that obtain their water from Ordovician rocks and 3 are shallow wells that obtain their water from alluvium or the Cherokee shale (Pennsylvanian) or both. Water-level measurements are being made monthly in the 6 deep wells by G. E. Abernathy in the 3 shallow wells by local observers.

1. City of Fort Scott. NE¼SE¼SE¼ sec. 29, T. 25 S., R. 25 E. Unused well drilled by the Kansas Emergency Relief Committee, diameter 8 inches, depth not known. Water is reported to come from the Jefferson City dolomite. Measuring point, top of threaded opening in casing head, 0.5 foot above land surface, 973.12 feet above sea level. Water levels, in feet below measuring point, 1942: Sept. 10, 180.80; Nov. 12, 181.22; Dec. 24, 181.18.

2. City of Fort Scott. SW¼NW¼ sec. 30, T. 25 S., R. 25 E. Drilled industrial well, used in summer for filling swimming pool, diameter 6 inches, depth reported to be 621 feet. Measuring point, top of lower half of union in air line, 4.5 feet above land surface, 807.78 feet above sea level. Equipped with air-lift pump. Water levels, in feet below measuring point, 1942: July 29, 60.40; Sept. 10, 62.71; Nov. 12, 62.71; Dec. 24, 62.49.

5/ Moore, R. C., The surface features of Kansas (map with descriptive text, scale 1 inch about 40 miles, Kansas Geol. Survey, 1930.

Cherokee County

By C. C. Williams

The observation-well program begun during 1942 in an area made up of parts of Bourbon, Cherokee, Crawford, and Labette Counties, is discussed in the section of this report that deals with Bourbon County.

1. W. L. Stiles. NE¼NW¼NE¼ sec. 2, T. 34 S., R. 23 E. Dug domestic well, diameter 6 feet, depth 26.8 feet. Water is obtained from the Bluejacket sandstone member of the Cherokee shale. Measuring point, top inside edge of opening in concrete well cover, west side, 0.8 foot above land surface.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Aug. 26	13.25	Oct. 25	10.80	Dec. 26	9.50
Sept.25	11.84	Nov. 26	11.40		

105A. Barnsdall Zinc Co. SE¼NE¼ sec. 22, T. 29 N., R. 34 W. Abandoned industrial well located about 100 feet east of the eastern boundary line of Kansas in Jasper County, Mo. Diameter 8 inches, depth 901 feet. Well penetrated the Roubidoux formation. Measuring point, bottom edge of opening in Y-fitting in air line, 1.0 foot below land surface, 877.93 feet above sea level. Water levels, in feet below measuring point, 1942: Aug. 21, 157.90; Dec. 30, 157.90.

Clark County

By W. W. Wilson

Highest and lowest recorded water levels, in feet below measuring point, in 10 wells in Clark County

Well	Length of record (years)	Highest recorded water level (feet)	Date	Lowest recorded water level (feet)	Date
1	2	22.16	June 11, 1942	24.85	May 7, 1941
a3	2	62.59	June 11, 1942	63.17	Oct. 21, 1941
b4	2	92.92	Dec. 29, 1940	97.80	July 22, 1941
5	2	26.38	Nov. 26, 1942	29.60	May 7, 1941
6	2	26.73	June 20, 1941	27.58	Oct. 14, 1940
7	2	36.15	Sept.29, 1942	37.48	Aug. 27, 1941
10	2	16.05	May 8, 1942	17.98	Aug. 26, 1941
11	2	28.60	May 8, 1942	29.97	Sept.23, 1941
12	2	67.52	Nov. 26, 1942	69.09	Oct. 21, 1941
13	2	32.10	July 18, 1942	33.39	May 7, 1941

a Measurements discontinued after Oct. 23.
b Measurements discontinued after Feb. 25.

Difference between highest and lowest water levels and net change in water level in 1942 and for period of record in 10 wells in Clark County

Well	Difference between highest and lowest water levels (feet)	Net rise (+) or net decline (-) in 1942 (feet)	Net rise (+) or net decline (-) for period of record (feet)
1	2.69	a+1.41	+2.05
3	.58	a+ .24	+ .50
4	4.88	(b)	+1.00
5	3.22	c+2.85	+2.85
6	.85	d-.13	+.67
7	1.33	d+.79	+1.01
10	1.93	e-.42	+.81
11	1.37	c+.60	+.79
12	1.57	c+.97	+1.18
13	1.29	f+.54	+.99

1 (*908,p.41; 938,p.55). Central Life Assurance Co. SE¼NW¼ sec. 17, T. 34 S., R. 25 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 23	24.06	Mar. 25	24.22	June 11	22.16	Oct. 23	22.54
Feb. 25	24.12	May 8	22.51	July 18	22.35		

2 (*908,p.41; 938,p.55). George F. Batt. NW¼SW¼ sec. 5, T. 30 S., R. 23 W. Measurements discontinued after Dec. 1941.

3 (*908,p.41; 938,p.56). T. L. Blair. SW¼NW¼ sec. 17, T. 30 S., R. 24 W. Measurements discontinued after October 1942.

Water level, in feet below measuring point, 1942

Jan. 23	62.96	Mar. 24	62.85	June 11	62.59	Sept.29	62.66
Feb. 25	62.84	May 8	62.71	July 18	62.63	Oct. 23	62.67

4 (*908.p.42; 938,p.56). N. B. Estes. NE¼NE¼ sec. 5, T. 31 S., R. 25 W. Measurements resumed Feb. 25, 1942, but discontinued thereafter. Water level, in feet below measuring point, 1942: Feb. 25, 93.06.

5 (*908,p.42; 938,p.56). Winnie Floyd. NW¼NW¼ sec. 12, T. 33 S., R. 25 W.

Water level, in feet below measuring point, 1942

Jan. 23	29.26	Apr. 24	29.23	July 18	26.98	Oct. 23	(g)
Feb. 25	29.28	May 8	27.77	Sept.29	27.31	Nov. 26	26.38
Mar. 25	29.27	June 11	26.59				

6 (*908,p.42; 938,p.56). District school. NE¼NE¼ sec. 7, T. 35 S., R. 21 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Jan. 22	26.81	Mar. 24	26.90	Oct. 23	26.91
Feb. 24	26.84	Sept.29	27.10	Nov. 25	26.91

7 (*908,p.42; 938,p.56). M. C. Harper. SW¼SE¼ sec. 32, T. 33 S., R. 21 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 22	36.96	May 9	36.75	July 18	36.41	Oct. 23	36.21
Feb. 24	37.10	June 11	36.23	Sept.29	36.15	Nov. 25	36.24
Mar. 24	36.92						

a For period Dec. 29, 1941, to Oct. 23, 1942.
b Measurements discontinued after Feb. 1942.
c For period Dec. 29, 1941, to Nov. 26, 1942.
d For period Dec. 30, 1941, to Nov. 25, 1942.
e For period Dec. 30, 1941, to Nov. 26, 1942.
f For period Dec. 30, 1941, to Oct. 23, 1942.
g Windmill pumping.

8 (*908,p.42; 938,p.56). W. H. Rogers. NE¼NE¼ sec. 7, T. 32 S., R. 21 W. Measurements discontinued after Dec. 1941.

10(*908,p.42; 938,p.56). J. F. Folks Estate. SE¼SE¼ sec. 24, T. 32 S R. 23 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 22	16.75	Apr. 23	16.82	July 18	16.93	Oct. 23	16.69
Feb. 24	16.90	May 8	16.05	Sept.28	16.78	Nov. 26	17.03
Mar. 24	16.85	June 11	16.56				

11 (*908,p.42; 938,p.56). James O. Folks. NE¼SE¼ sec. 26, T. 33 S., R. 24 W.

Water level, in feet below measuring point, 1942

Jan. 23	29.32	June 11	28.66	Sept.29	28.64	Nov. 26	(a)
May 8	28.60	July 18	28.68	Oct. 23	28.66		

12 (*908,p.42; 938,p.57). Ralph Gardner. SW¼SW¼ sec. 11, T. 33 S., R. 24 W.

Water level, in feet below measuring point, 1942

Jan. 23	68.52	Apr. 24	68.39	July 18	68.15	Oct. 23	67.68
Feb. 25	68.61	May 8	68.20	Sept.29	67.69	Nov. 26	67.52
Mar. 25	68.43	June 11	67.97				

13 (*938,p.57). W. H. Shattock. NE¼NE¼ sec. 16, T. 31 S., R. 21 W.

Water level, in feet below measuring point, 1942

Jan. 22	32.54	Mar. 24	32.48	May 9	32.43	July 18	a 32.10
Feb. 24	32.46	Apr. 23	32.44	June 11	32.41	Oct. 23	32.40

Cloud County

The northern part of Cloud County was included with Republic County in an investigation of ground-water resources begun in 1942. This investigation is discussed under the section of this report that deals with Republic County. No observation wells were established in Cloud County.

Comanche County

By W. W. Wilson

Highest and lowest recorded water levels, in feet below measuring point, in 7 wells in Comanche County

Well	Length of record (years)	Highest recorded water level (feet)	Date	Lowest recorded water level (feet)	Date
1	2	40.23	Oct. 23, 1942	41.52	June 20, 1941
2	2	16.80	June 11, 1942	17.92	Nov. 20, 1940
3	2	84.67	Dec. 27, 1940	91.50	Jan. 22, 1942
6	2	79.18	May 27, 1942	80.36	Nov. 27, 1940
7	2	37.00	May 27, 1942	59.53	Jan. 22, 1941
8	2	31.18	June 11, 1942	41.16	Dec. 30, 1941
9	2	89.08	Apr. 23, 1942	90.59	Sept.23, 1941

a Measured quarterly after July 18.

Difference between highest and lowest water levels and net change in water level in 1942, for period of record, in 7 wells in Comanche County

Well	Difference between highest and lowest water levels (feet)	Net rise (+) or net decline (-) in 1942 (feet) a/	Net rise (+) or net decline (-) for period of record (feet)
1	1.29	+0.07	+0.90
2	1.12	b/ +.73	+.96
3	6.83	-.09	-1.39
6	1.18	+.25	+.75
7	22.53	+9.12	+13.17
8	9.98	+8.68	+2.45
9	1.51	+.40	-.34

1 (*908,p.43; 938,p.58). A. A. Carpenter. NE¼NE¼ sec. 8, T. 33 S., R. 20 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 22	40.45	Apr. 23	40.72	July 18	40.75	Oct. 23	40.23
Feb. 24	40.56	May 27	40.66	Sept.29	40.26	Nov. 25	40.27
Mar. 24	40.65	June 11	40.72				

2 (*908,p.43; 938,p.58). Nina Clark. SW¼SW¼ sec. 27, T. 31 S., R. 20 W. d/

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 22	17.07	Apr. 23	17.01	July 18	16.96	Oct. 23	16.91
Feb. 24	17.11	May 27	17.06	Sept.29	16.95	Nov. 25	(c)
Mar. 24	17.14	June 11	16.80				

3 (*908,p.44; 938,p.58). E. Deewall. SW¼NE¼ sec. 19, T. 31 S., R. 18 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 22	91.50	May 27	86.55	July 18	(c)	Oct. 23	86.75
Feb. 24	86.75	June 11	86.74	Sept.29	86.72	Nov. 25	86.73
Mar. 24	86.93						

6 (908,p.44; 938,p.58). Christopher Nickolson. NW¼NE¼ sec. 6, T. 35 S., R. 18 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 22	79.79	Apr. 23	79.65	July 18	79.41	Oct. 23	79.41
Feb. 24	80.07	May 27	79.18	Sept.29	79.38	Nov. 25	79.42
Mar. 24	79.39	June 11	79.32				

7 (*908,p.44; 938,p.58). W. D. Aitken. NW¼NE¼ sec. 35, T. 34 S., R. 17 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 22	48.15	Apr. 23	45.27	June 11	37.56	Sept.29	39.63
Feb. 24	48.18	May 27	37.00	July 18	38.21	Nov. 25	38.22
Mar. 24	47.65						

8 (*908,p.44; 938,p.58). Christopher Beitler. NW¼NE¼ sec. 34, T. 33 S., R. 17 W. Measurements resumed Jan. 22.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 22	32.62	Apr. 23	31.97	June 11	31.18	Sept.29	32.09
Feb. 24	32.51	May 27	32.04	July 18	31.86	Nov. 25	32.48
Mar. 24	32.06						

9 (*908;p. 44; 938,p. 58). H. R. Burnette. NW¼NE¼ sec. 13, T. 32 S., R. 17 W.

a For period Dec. 30, 1941, to Nov. 25, 1942.
b For period Nov. 21, 1941, to Nov. 25, 1942.
c Windmill pumping.
d Given as "SW¼SW¼ sec. 27, T. 31 S., R. 30 W." in Water-Supply Papers 908 and 938.

9 (*908,p.44; 938,p.58). H. R. Burnette--Continued.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 22	89.42	Apr. 23	89.08	July 18	89.56	Oct. 23	89.43
Feb. 24	89.78	May 27	89.23	Sept.29	89.49	Nov. 25	89.48
Mar. 24	89.21	June 11	89.44				

Crawford County

By C. C. Williams

The observation-well program begun during 1942 in an area made up of parts of Bourbon, Cherokee, Crawford, and Labette Counties is discussed in the section of this report that deals with Bourbon County.

1. John P. Biddle. NE¼SE¼ sec. 5, T. 31 S., R. 25 E. Dug stock well, diameter 4 feet, depth 23.8 feet. Water is obtained from the Cherokee shale. Measuring point, top of opening in concrete well curb, west side, 0.5 foot above land surface. Water levels, in feet below measuring point, 1942: Sept. 12, 4.75; Sept. 25, 4.88; Oct. 25, 4.93; Nov. 25, 3.60.

24. City of Girard. SW¼SW¼NE¼ sec. 24, T. 29 S., R. 23 E. Drilled stand-by municipal-supply well, diameter 8 inches, depth 900 feet. Water obtained from the Roubidoux sandstone and other Ordovician formations. Measuring point, inside edge of valve face, north side, 3.0 feet above land surface, 992.44 feet above sea level.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
July 14	266.51	Sept.10	265.10	Dec. 14	266.99
25	266.26	Nov. 12	266.40		

74. City of Pittsburg. SE¼SE¼ sec. 19, T. 30 S., R. 25 E. Drilled municipal-supply well (known as the south well), diameter 12 inches, depth 1,420 feet. Water obtained from the Roubidoux sandstone and other Ordovician formations. Measuring point, top of opening in concrete well curb, 1.1 feet above land surface, 944.60 feet above sea level. Measurements made through air line, top of which is 6.22 feet below measuring point. All water-level measurements probably are influenced by pumping of nearby well. Water levels, in feet below measuring point, 1942: July 8, 247.62; Dec. 24, 236.50.

75. City of Pittsburg. SE¼SE¼ sec. 19, T. 30 S., R. 25 E. Drilled municipal-supply well (known as the north well), diameter 12 inches, depth 1,420 feet. Water obtained from the Roubidoux sandstone and other Ordovician formations. Measuring point, top of opening in concrete well curb, 0.6 foot above land surface, 938.70 feet above sea level. Measurements made through air line, top of which is 5.80 feet below measuring point. All water-level measurements are probably influenced by pumping of nearby well. Water levels, in feet below measuring point, 1942: July 11, 226.80; Dec. 24, 221.46.

Ellis County

By W. W. Wilson

Highest and lowest recorded water levels, in feet below measuring point, in 7 wells in Ellis County

Well	Length of record (years)	Highest recorded water level (feet)	Date	Lowest recorded water level (feet)	Date
a182	1	132.79	July 3, 1942	151.05	Oct. 16, 1941
190	1	13.06	July 3, 1942	14.50	Oct. 1, 1942 Nov. 24, 1942
a197	1	25.70	Apr. 15, 1942	26.42	Dec. 2, 1941
215	1	15.35	Apr. 15, 1942	16.42	Nov. 13, 1941
218	1	29.10	July 3, 1942	54.24	Nov. 14, 1941
225	1	43.86	July 3, 1942	54.22	Nov. 15, 1941

Difference between highest and lowest water levels, and net change in water level in 1942, and for period of record, in 7 wells in Ellis County

Well	Difference between highest and lowest water levels (feet)	Net rise (+) or net decline (-) in 1942 (feet) b/	Net rise (+) or net decline (-) for period of record (feet)
182	18.26	(c)	+18.26
190	1.44	-.48	-.50
197	.72	(c)	+.22
215	1.07	+.64	+.92
218	25.14	+6.13	+8.27
225	10.36	+4.43	+4.55

182 (*938,p.60). Polcyn and others. NE¼NE¼ sec. 10, T. 14 S., R. 16 W. Measurements discontinued after July 3.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Jan. 10	149.70	Mar. 5	148.70	July 3	132.79
Feb. 5	149.80	Apr. 15	149.00		

190 (*938,p.60). Ben Schulte. NE¼NE¼ sec. 8, T. 14 S., R. 16 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	14.20	Mar. 5	13.90	July 3	13.06	Nov. 24	14.50
Feb. 5	13.50	Apr. 15	13.60	Oct. 1	14.50		

197 (*938,p.60). A. P. Graff. NE¼NE¼ sec. 14, T. 13 S., R. 17 W. Measurements discontinued after July 3.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Jan. 10	26.30	Mar. 5	26.10	July 3	26.08
Feb. 5	26.20	15	25.70		

215 (*938,p.60). A. H. Romine. NE¼NW¼ sec. 7, T. 11 S., R. 16 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	16.30	Mar. 5	16.20	July 3	15.79	Nov. 24	d15.50
Feb. 5	16.10	Apr. 15	15.35	Oct. 7	15.79		

a Measurements discontinued after July 3, 1942.
b For period Dec. 2, 1941, to Nov. 24, 1942.
c Measurements through July 1942.
d Pumping.

218 (*938,p.60). W. W. Bemis. NE¼NE¼ sec. 16, T. 12 S., R. 17 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	49.20	Mar. 5	50.20	July 3	29.10	Nov. 24	45.97
Feb. 5	48.90	Apr. 15	50.40	Oct. 7	36.50		

225 (*938,p.60). Ray Smith. NW¼NW¼ sec. 30, T. 12 S., R. 17 W.

Water level, in feet below measuring point, 1942

Jan. 10	53.70	Mar. 5	51.50	July 3	43.86	Nov. 24	49.67
Feb. 5	54.00	Apr. 15	50.50	Oct. 7	48.06		

Finney County

By B. F. Latta

Highest and lowest recorded water levels, in feet below measuring point, in 25 wells in Finney County

Well	Length of record (years)	Highest recorded water level (feet)	Date	Lowest recorded water level (feet)	Date
1	6.5	a12.53	Aug. 29, 1942	a8.14	Mar. 8, 1941
			Sept. 2, 1942		
			Sept. 3, 1942		
2	3	109.12	Oct. 8, 1942	109.71	Oct. 26, 1939
			Dec. 3, 1942		
b3	3	44.64	Mar. 22, 1940	61.78	Aug. 21, 1940
c4	3	33.95	July 9, 1942	36.53	Sept.20, 1939
5	3	22.73	July 9, 1942	23.54	Jan. 28, 1940
6	3	17.25	June 21, 1940	20.46	Aug. 10, 1942
7	3	77.56	Mar. 2, 1942	78.22	June 22, 1940
8	3	75.92	Sept.20, 1940	76.75	June 21, 1940
d9	3	72.84	Jan. 5, 1942	73.74	Aug. 22, 1940
10	3	e6.63	Aug. 1, 1942	14.73	Sept.20, 1940
d12	3	107.49	Apr. 24, 1941	108.13	Nov. 3, 1941
13	3	.24	May 5, 1942	5.63	Sept.23, 1939
14	3	46.73	Mar. 2, 1942	48.15	Dec. 3, 1942
15	3	10.91	Dec. 25, 1942	15.40	Sept.20, 1940
16	3	35.55	Nov. 15, 1942	43.42	May 19, 1941
17	3	2.71	May 5, 1942	9.81	Oct. 26, 1939
b18	3	10.15	Apr. 11, 1942	12.31	Feb. 17, 1940
d19	3	30.62	Oct. 2, 1939	32.66	June 3, 1941
b20	3	67.60	Jan. 30, 1941	68.99	Oct. 2, 1941
b21	3	100.27	Jan. 30, 1941	100.82	Oct. 2, 1941
f22	3	120.14	Sept.28, 1939	120.96	Oct. 2, 1941
			Oct. 2, 1939		
23	3	43.98	Nov. 15, 1942	45.80	Feb. 17, 1940
26	3	69.95	June 21, 1940	71.60	Apr. 24, 1941
d27	3	76.07	Mar. 22, 1940	77.19	Aug. 4, 1941
			Sept.20, 1940		
b28	2	36.59	Oct. 28, 1940	37.06	Apr. 24, 1940
			Dec. 24, 1940		May 23, 1940

a In feet above datum.
b Measurements discontinued April 1942.
c Measurements discontinued August 1942.
d Measurements discontinued May 1942.
e Below new measuring point.
f Measurements discontinued March 1942.

Difference between highest and lowest water levels and net change in water level in 1942, and for period of record, in 25 wells in Finney County

Well	Difference between highest and lowest water levels (feet)	Net rise (+) or net decline (-) in 1942 (feet)	Net rise (+) or net decline (-) for period of record (feet)
1	4.39	a+2.16	+2.13
2	.59	b+.21	+.54
3	17.14	(c)	+.32
4	2.58	(c)	+.74
5	.81	d+.08	+.41
6	3.21	e-.65	-1.58
7	.66	b-.06	+.41
8	.83	b-.09	+.34
9	.90	(c)	+.36
10	6.10	f+2.21	+3.63
12	.64	(c)	-.29
13	5.39	g-.22	+2.30
14	1.42	b-1.26	-.62
15	6.05	h+2.71	+3.95
16	7.87	i+1.03	+3.03
17	7.1	i+.75	+5.0
18	2.16	(c)	+1.56
19	2.04	(c)	-1.19
20	1.39	(c)	+.18
21	.55	(c)	+.03
22	.82	(c)	-.72
23	1.82	i+1.22	+1.46
26	1.65	i-.16	+1.5
27	1.12	(c)	+.04
28	.47	(c)	+.27

1 (*886,p.139; 908,p.49; 938,p.62). Mrs. A. M. Reid. NE¼NE¼ sec. 9, T. 24 S., R. 33 W. Water levels supplied through courtesy of Division of Water Resources of Kansas State Board of Agriculture.

Mean daily water level, in feet above datum, 1942

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	10.32	10.44	10.59	10.75	11.86	12.03	12.24	12.36	12.46	12.47	.....	.....
2	10.33	10.45	10.59	10.76	11.89	12.03	12.24	12.35	12.53	12.47	.....	.....
3	10.33	10.46	10.60	10.78	11.87	12.03	12.26	12.35	12.53	12.46	.....	.....
4	10.32	10.47	10.60	10.83	11.90	12.04	12.27	12.36	12.50	12.45	.....	.....
5	10.33	10.48	10.61	10.82	11.89	12.05	12.28	12.37	12.47	12.43	.....	.....
6	10.33	10.46	10.62	10.83	11.87	12.04	12.28	12.37	12.46	12.45	.....	.....
7	10.33	10.48	10.60	10.83	11.90	12.04	12.29	12.36	12.45	12.46	.....	.....
8	10.34	10.49	10.61	10.85	11.91	12.04	12.29	12.36	12.43	12.46	.....	.....
9	10.32	10.49	10.62	10.86	11.92	12.05	12.29	12.36	12.44	12.43	.....	.....
10	10.33	10.49	10.63	10.87	11.93	12.06	12.29	12.37	12.45	12.44	.....	j12.45
11	10.34	10.50	10.62	10.88	11.93	12.08	12.30	12.38	12.45	12.46	.....	12.45
12	10.34	10.51	10.63	10.89	11.94	12.06	12.31	12.38	12.45	12.46	.....	12.45
13	10.35	10.52	10.62	10.90	11.91	12.05	12.30	12.38	12.47	12.45	.....	12.44
14	10.34	10.53	10.63	10.91	11.90	12.09	12.30	12.37	12.48	12.44	.....	12.44
15	10.35	10.54	10.63	10.92	11.92	12.10	12.30	12.37	12.48	j12.48	.....	12.45
16	10.36	10.54	10.63	10.91	11.94	12.11	12.30	12.39	12.49	.....	.....	12.45
17	10.37	10.53	10.63	10.93	11.93	12.11	12.28	12.41	12.50	.....	.....	12.47
18	10.37	10.53	10.64	11.01	11.93	12.12	12.28	12.42	12.45	.....	.....	12.46

a For period Dec. 31, 1941, to Dec. 31, 1942.
b For period Dec. 11, 1941, to Dec. 3, 1942.
c 1942 records incomplete.
d For period Dec. 11, 1941, to Dec. 15, 1942.
e For period Dec. 4, 1941, to Dec. 15, 1942.
f For period Nov. 2, 1941, to Dec. 3, 1942.
g For period Dec. 11, 1941, to Dec. 19, 1942.
h For period Nov. 30, 1941, to Dec. 25, 1942.
i For period Dec. 7, 1941, to Dec. 3, 1942.
j Record not complete for entire day.

1 (*886,p.139; 908,p.49; 938,p.62). Mrs. A. M. Reid--Continued.

Mean daily water level, in feet above datum, 1942

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
19	10.37	10.54	10.65	11.47	11.94	12.13	12.28	12.43	12.42	.....	.....	12.44
20	10.37	10.55	10.64	11.66	11.94	12.13	12.28	12.43	12.45	.....	.....	12.44
21	10.37	10.56	10.64	11.69	11.96	12.13	12.25	12.44	12.47	.....a	12.43	12.49
22	10.38	10.57	10.65	11.72	11.97	12.14	12.28	12.42	12.47	.....	12.45	12.47
23	10.39	10.56	10.66	11.73	11.97	12.18	12.31	12.42	12.47	.....	12.48	12.49
24	10.40	10.55	10.68	11.74	11.99	12.20	12.32	12.44	12.45	.....	12.52	12.49
25	10.40	10.57	10.67	11.76	12.01	12.21	12.31	12.45	12.47	.....	12.49	12.50
26	10.41	10.56	10.65	11.78	12.02	12.22	12.32	12.44	12.44	.....	12.45	12.48
27	10.41	10.57	10.66	11.81	12.03	12.23	12.33	12.46	12.44a	12.51	12.51	12.44
28	10.43	10.58	10.68	11.84	12.03	12.23	12.33	12.49	12.45	12.51a	12.48	12.47
29	10.43	.....	10.69	11.86	12.04	12.23	12.35	12.53	12.46a	12.52	.....a	12.48
30	10.43	.....	10.70	11.87	12.03	12.24	12.35	12.47	12.47	.....	.....	.....
31	10.43	.....	10.72	.....	12.03	.....	12.35	12.43	.....	.....	.....	.....

2 (*886,p.141; 908,p. 49; 938,p.62). Maggie B. Smith. NE. corner NW¼NE¼ sec. 30, T. 26 S., R. 32 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	109.32	Apr. 6	109.25	July 6	109.17	Oct. 8	109.12
Feb. 2	109.46	May 5	109.22	Aug. 1	109.19	Nov. 14	109.19
Mar. 2	109.35	June 1	109.20	Sept. 1	109.15	Dec. 3	109.12

3(*886,p.142; 908,p.49; 938,p.62). Nora Will. SW¼SW¼ sec. 35, T. 23 S., R. 33 W. Measurements discontinued after Apr. 6, 1942. Water levels, in feet below measuring point, 1942: Jan. 3, 47.37; Feb. 2, 46.06; Mar. 2, 45.66; Apr. 6, 45.27.

4(*886,p.142; 908,p. 49; 938,p.62). Garden City Co. SW¼SW¼ sec. 18, T. 22 S.,R. 33 W.Measurements discontinued after Aug. 1, 1942.

Water level, in feet below measuring point, 1942

Jan. 3	34.58	Mar. 2	34.53	May 5	34.21	July 9	33.95
Feb. 2	34.50	Apr. 15	34.17	June 1	34.40	Aug. 1	34.16

5(*886,p.142; 908,p.49; 938,p.63). E. Alberta Reeves. SE¼NW¼NW¼ sec. 19, T. 21 S., R. 32 W.

Water level, in feet below measuring point, 1942

Jan. 2	23.12	Apr. 20	23.17	July 9	22.73	Oct. 7	22.97
Feb. 5	23.14	May 4	22.83	Aug. 12	22.79	Nov. 20	23.02
Mar. 1	23.16	June 25	22.76	Sept.17	22.76	Dec. 15	23.04

6(*886,p.142; 908,p.50; 938,p.63). T. A. Meakel. NW¼SW¼SW¼ sec. 36, T. 21 S., R. 29 W.

Water level, in feet below measuring point, 1942

Jan. 5	19.27	Apr. 15	19.86	July 18	19.86	Oct. 7	19.91
Feb. 3	19.45	May 30	19.05	Aug. 10	20.46	Nov. 23	19.53
Mar. 9	19.64	June 28	19.54	Sept.15	19.67	Dec. 15	19.72

a Record not complete for entire day.

7 (*886,p.142; 908,p.50; 938,p.63). Marion Russell. NE¼NW¼ sec. 2, T. 26 S., R. 33 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	77.59	Apr. 6	77.61	July 6	77.60	Oct. 8	77.63
Feb. 2	77.61	May 5	77.61	Aug. 1	77.59	Nov. 14	77.61
Mar. 2	77.56	June 1	77.60	Sept. 1	77.58	Dec. 3	77.68

8 (*886,p.142; 908,p.50; 938,p.63). O. G. Reeve. SW¼NE¼SE¼ sec. 13, T. 25 S., R. 33 W.

Water level, in feet below measuring point, 1942

Jan. 5	76.06	Apr. 6	76.15	July 6	76.21	Oct. 8	76.18
Feb. 2	76.17	May 5	76.27	Aug. 1	76.17	Nov. 14	76.15
Mar. 2	76.07	June 1	76.20	Sept. 1	76.17	Dec. 3	76.20

9 (*886,p.142; 908,p.50; 938,p.63). L. L. Jones. NW¼NE¼NW¼ sec. 2, T. 26 S., R. 34 W. Measurements discontinued after May 5, 1942.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Jan. 5	72.84	Mar. 2	72.88	May 5	72.87
Feb. 2	73.00	Apr. 6	72.89		

10(*886, p.143; 908,p.50; 938,p.63). L. R. McBeth. NW¼NE¼ sec. 9, T. 24 S., R. 33 W. New measuring point beginning May 5, 1942, top of concrete curb, level with land surface, 2.0 feet below measuring point established in September 1939, 2,864.5 feet above sea level.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	10.49	Apr. 6	9.75	July 9	7.28	Oct. 9	7.21
Feb. 2	10.01	May 5	a 7.00	Aug. 1	6.63	Nov. 15	6.94
Mar. 2	9.91	June 1	6.70	Sept. 1	7.15	Dec. 3	6.99

12 (*886,p.143; 908,p.50; *938,p.63). Nellie Handy. NW¼SE¼NE¼ sec. 3, T. 25 S., R. 31 W. Measurements discontinued May 5, 1942.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Jan. 5	108.06	Mar. 2	107.98	May 5	108.01
Feb. 2	107.71	Apr. 6	108.02		

13 (*886,p.143; 908,p.50; 938,p.64). Edwin Wehrley. NE¼SE¼SW¼ sec. 13, T. 25 S., R. 31 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	3.10	Apr. 6	3.16	July 9	2.08	Oct. 19	3.39
Feb. 2	2.89	May 5	b .24	Aug. 3	2.98	Nov. 26	3.56
Mar. 2	2.89	June 17	1.84	Sept. 2	3.60	Dec. 19	3.33

14 (*886,p.143; 908,p.50; 938,p.64). John A. Hunter. NE¼SE¼NE¼ sec. 4, T. 26 S., R. 32 W.

Water level, in feet below measuring point, 1942

Jan. 5	46.90	Apr. 6	46.94	July 6	46.91	Oct. 8	47.12
Feb. 2	46.92	May 5	46.93	Aug. 1	47.13	Nov. 14	47.14
Mar. 2	46.73	June 1	46.92	Sept. 1	47.09	Dec. 3	48.15

a Below new measuring point.
b Well had been covered by floodwaters.

15(*886,p.143; 908,p.51; 938,p.64). Floyd A. Edwards. SW¼SW¼ sec. 2, T. 24 S., R. 33 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	13.73	Apr. 6	13.08	July 25	11.44	Oct. 25	11.10
Feb. 2	13.28	May 5	12.14	Aug. 25	11.23	Nov. 25	10.99
Mar. 2	13.21	June 1	11.77	Sept.25	11.01	Dec. 25	10.91

16 (*886,p.143; 908,p.51; 938,p.64). George L. Meeker. NW¼NE¼NE¼ sec. 6, T. 24 S., R. 34 W.

Water level, in feet below measuring point, 1942

Jan. 3	37.78	Apr. 11	38.18	July 9	39.05	Oct. 19	37.76
Feb. 2	38.57	May 5	40.25	Aug. 1	37.69	Nov. 15	35.55
Mar. 2	38.22	June 1	39.01	Sept. 1	37.82	Dec. 3	36.02

17 (*886,p.144; 908,p.51; 938,p.64). SE¼SW¼NW¼ sec. 7, T. 24 S., R. 33 W.

Water level, in feet below measuring point, 1942

Jan. 3	5.36	Apr. 6	5.29	July 9	4.05	Oct. 9	5.59
Feb. 2	5.16	May 5	a 2.71	Aug. 1	5.92	Nov. 15	4.79
Mar. 2	5.10	June 1	3.89	Sept. 1	5.45	Dec. 3	4.73

18 (*886,p.144; 908,p.51; 938,p.64). A. Finnup. NW¼NW¼ sec. 17, T. 24 S., R. 34 W. Measurements discontinued after Apr. 11, 1942. Water levels, in feet below measuring point, 1942: Jan. 3, 10.42; Feb. 2, 10.35; Mar. 2, 10.40; Apr. 11, 10.15.

19 (*886,p.144; 908,p.51; 938,p.64). H. E. Ramsey. SE¼SE¼ sec. 10, T. 23 S., R. 34 W. Measurements discontinued after May 15, 1942.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Jan. 3	31.63	Mar. 2	31.76	May 15	31.82
Feb. 2	31.93	Apr. 15	31.84		

20 (*886,p.144; 908,p.51; 938,p.64). C. R. Rixon. SW¼SW¼ sec. 12, T. 23 S., R. 27 W. Measurements discontinued after Apr. 30, 1942.

Water level, in feet below measuring point, 1942

Jan. 5	68.66	Mar. 9	68.64	Apr. 30	68.65
Feb. 3	68.64	Apr. 7	68.68		

21 (*886,p.144; 908,p.51; 938,p.65). Lena Ramsey. NE¼NE¼ sec. 18, T. 23 S., R. 28 W. Measurements discontinued after Apr. 30, 1942.

Water level, in feet below measuring point, 1942

Jan. 5	100.34	Mar. 9	100.35	Apr. 30	100.30
Feb. 3	100.36	Apr. 15	100.44		

22 (*886,p.144; 908,p.51; 938,p.65). Jacob Eickhorn. NW¼SW¼SW¼ sec. 18, T. 24 S., R. 31 W. Measurements discontinued after Mar. 2, 1942. Water levels, in feet below measuring point, 1942: Jan. 5, 120.76; Feb. 2, 120.88; Mar. 2, 120.86.

23 (*886,p.144; 908,p.51; 938,p.65). J. E. Ely. SE¼SW¼SE¼ sec. 4, T. 23 S., R. 32 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	45.39	Apr. 15	45.29	July 9	45.17	Oct. 25	44.52
Feb. 2	45.37	May 4	45.25	Aug. 1	44.83	Nov. 15	43.98
Mar. 2	45.39	June 17	45.21	Sept. 1	44.15	Dec. 3	44.23

a Well surrounded by floodwater.

26 (*886,p.145;*908,p.52; 938,p.65). Garden City Experiment Station. SW¼NE¼SE¼ sec. 3, T. 24 S., R. 32 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	70.59	Apr. 6	70.35	July 9	70.53	Oct. 9	70.22
Feb. 2	70.57	May 4	70.14	Aug. 1	70.18	Nov. 15	69.83
Mar. 2	70.40	June 17	70.44	Sept. 1	70.71	Dec. 3	69.96

27 (*886,p.145; 908,p.52; 938,p.65). Farmers & Bankers Life Insurance Co. SE¼SW¼SE¼ sec. 34, T. 26 S., R. 31 W. Measurements discontinued after May 5, 1942.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Jan. 5	76.11	Mar. 2	76.13	May 5	76.13
Feb. 2	76.14	Apr. 6	76.15		

28 (*886,p.145; 908,p.52; 938,p.65). Andrew Layman. SW¼SE¼SE¼ sec. 36, T. 24 S., R. 34 W. Measurements discontinued after Apr. 11, 1942. Water levels, in feet below measuring point, 1942: Jan. 3, 36.61; Feb. 2, 36.70; Mar. 2, 36.67; Apr. 11, 36.71.

1002. United States Army. SW¼ sec. 27, T. 24 S., R. 31 W., about 0.3 mile west of U. S. Highway 50S. Drilled public-supply well, diameter 16 inches, depth 295 feet. Measuring point, top of 16-inch casing, west side, 0.8 foot above land surface, 2,883.3 feet above sea level. Equipped with turbine pump and 40 hp. electric motor. Water levels, in feet below measuring point, 1942: Nov. 30, 113.80; Dec. 29, 113.02.

1005. United States Army. SW¼ sec. 27, T. 24 S., R. 31 W., west side of U. S. Highway 50S. Drilled public-supply well, diameter 16 inches, depth 170 feet. Measuring point, top edge of opening in pump base, east side. 0.9 foot above land surface. Equipped with turbine pump and 30 hp. electric motor. Water levels, in feet below measuring point, 1942: Nov. 30, 115.94; Dec. 29, [a]/117.16.

Ford County

By W. W. Wilson

Highest and lowest recorded water levels, in feet below measuring point, in 15 wells in Ford County

Well	Length of record (years)	Highest recorded water level (feet)	Date	Lowest recorded water level (feet)	Date
2	4	27.35	Mar. 20, 1940	28.78	Sept. 5, 1939
8	4	1.66	May 13, 1942	8.97	Nov. 7, 1939
11	4	8.69	June 3, 1942	13.31	Jan. 24, 1940
15	4	34.72	July 1, 1942	36.92	Sept. 5, 1939
38	4	39.87	Oct. 6, 1941	42.08	May 16, 1940
41	4	46.49	July 22, 1940	47.53	July 1, 1939
48	4	4.98	June 3, 1942	10.85	Oct. 2, 1939
57	4	5.74	May 15, 1942	10.93	Oct. 2, 1939
59	4	15.49	May 15, 1942	18.21	Sept. 5, 1939
65	4	14.71	May 13, 1942	18.70	Oct. 2, 1939
79B	4	7.45	Jan. 20, 1941	16.09	Aug. 1, 1939
79C	4	4.25	July 2, 1942	10.69	Oct. 2, 1939
96	4	8.40	July 2, 1942	11.02	Sept. 5, 1939
237	4	85.93	July 2, 1942	86.92	Nov. 8, 1939
343	4	76.24	Dec. 4, 1941	76.85	Apr. 22, 1941

a Measurement made half hour after pump was shut off.

Difference between highest and lowest water levels, net changes in water level in 1942 and for period of record in 15 wells in Ford County

Well	Difference between highest and lowest water levels (feet)	Net rise (+) or net decline (-) in 1942 a/(feet)	Net rise (+) or net decline (-) for period of record (feet)
2	1.43	-0.39	+0.64
8	7.31	+.14	+1.38
11	4.62	+.29	+1.77
15	2.20	b +.32	+.75
38	2.21	-.51	+.83
41	1.04	-.16	+.20
48	5.87	b +2.72	+5.18
57	5.19	+.17	+.74
59	2.72	-.06	+.82
65	3.99	+.32	+1.10
79B	8.64	-.69	+1.09
79C	6.44	+1.55	+3.10
96	2.62	-.12	+1.28
237	.99	+.15	+.31
343	.61	-.44	-.03

2 (*845,p.96; 886,p.151; 908,p.57; 938,p.66). L. A. Lamb. SW¼SW¼ sec. 4, T. 28 S., R. 22 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	27.56	Apr. 2	27.55	July 2	27.39	Oct. 24	27.98
Feb. 4	27.53	May 13	27.37	Aug. 4	27.41	Nov. 24	27.89
Mar. 4	27.52	June 3	27.43	Sept. 2	27.75	Dec. 18	27.85

8 (*845,p.96; 886,p.151; 908,p.57; 938,p.67). F. H. Diehl. NW¼NW¼ sec. 34, T. 26 S., R. 25 W.

Water level, in feet below measuring point, 1942

Jan. 7	5.95	Apr. 2	5.65	July 2	3.31	Oct. 21	5.73
Feb. 4	5.87	May 13	c 1.66	Aug. 4	5.16	Nov. 23	5.70
Mar. 4	5.73	June 3	4.03	Sept. 2	5.89	Dec. 30	5.81

11 (*845,p.96; 886,p.151; 908,p.58; 938,p.67). G. W. Molitor. SW¼NW¼ sec. 36, T. 26 S., R. 21 W. d/

Water level, in feet below measuring point, 1942

Jan. 7	11.30	Apr. 2	11.36	Aug. 4	10.21	Nov. 24	10.89
Feb. 4	11.34	June 3	8.69	Sept. 2	10.32	Dec. 18	11.01
Mar. 4	11.36	July 2	9.54	Oct. 22	10.79		

15 (*845,p.100; 886,p.157; 908,p.60; 938,p.67). George Lutz. SW¼NW¼ sec. 24, T. 29 S., R. 26 W. Measurements discontinued after July 1, 1942.

Water level, in feet below measuring point, 1942

Jan. 6	35.04	Mar. 3	34.82	May 12	34.74	July 1	34.72
Feb. 3	34.78	Apr. 1	34.79	June 3	34.74		

38 (*845,p.95; 886,p.150; 908,p.56; 938,p.67). F. Burns. SE¼NE¼ sec. 1, T. 26 S., R. 24 W.

Water level, in feet below measuring point, 1942

Jan. 7	40.09	Apr. 2	40.21	July 2	40.17	Oct. 22	40.49
Feb. 4	40.09	May 13	40.27	Aug. 4	40.22	Nov. 24	40.54
Mar. 4	40.15	June 3	40.19	Sept. 2	40.21	Dec. 18	40.60

a For the period Dec. 4, 1941, to Dec. 30, 1942.
b Measurements incomplete for 1942.
c Well surrounded by floodwaters.
d Given as "SW¼NW¼ sec. 36, T. 21 S., R. 21 W" in Water-Supply Papers 845, 886, 908, and 938.

41(*845,p.96; 886,p.150; 908,p.57; 938,p.67). J. J. Burghardt. NW¼SW¼ sec. 11, T. 25 S., R. 21 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	46.69	Apr. 2	46.63	July 2	46.58	Oct. 22	46.92
Feb. 4	46.67	May 13	46.59	Aug. 4	46.60	Nov. 24	46.89
Mar. 4	46.65	June 3	46.62	Sept. 2	46.79	Dec. 18	46.85

48 (*845,p.97; 886,p.152; 908,p.58; 938,p.67). G. D. Cochran. NE¼SE¼ sec. 16, T. 27 S., R. 23 W. Well destroyed by flood, measurements discontinued after June 3, 1942.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Jan. 7	7.70	Mar. 4	7.67	June 3	4.98
Feb. 4	7.19	Apr. 2	7.80		

57 (*845,p.98; 886,p.153; 908,p.58; 938,p.67). Andrew Bogner. NW¼SE¼ sec. 22, T. 26 S., R. 26 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	8.19	Apr. 2	7.91	July 2	5.83	Oct. 24	7.84
Feb. 4	8.12	May 15	5.74	Aug. 4	7.67	Nov. 26	7.98
Mar. 4	8.02	June 3	6.92	Sept. 2	8.08	Dec. 30	8.02

59 (*845,p.98; 886,p.153; 908,p. 58; 938,p.67). Ward Byers Estate NE¼NE¼ sec. 21, T. 26 S., R. 26 W.

Water level, in feet below measuring point, 1942

Jan. 7	16.78	Apr. 2	16.82	July 2	15.61	Oct. 24	16.69
Feb. 4	16.76	May 15	15.49	Aug. 4	16.61	Nov. 26	16.73
Mar. 4	16.72	June 3	16.08	Sept. 2	16.75	Dec. 30	16.84

65 (*845,p.98; 886,p.154; 908,p.59; 938,p.67). John N. Clark. SW¼SW¼ sec. 33, T. 26 S., R. 25 W.

Water level, in feet below measuring point, 1942

Jan. 7	17.21	Apr. 1	16.88	July 2	15.23	Oct. 21	17.03
Feb. 3	16.93	May 13	14.71	Aug. 4	16.95	Nov. 23	16.99
Mar. 3	16.49	June 3	16.04	Sept. 2	17.23	Dec. 17	16.89

79B (*845,p.98; 886,p.155; 908,p.59; 938,p.68). A. N. Nevins. SW¼SW¼ sec. 33, T. 26 S., R. 24 W. b/

Water level, in feet below measuring point, 1942

Jan. 7	10.31	Apr. 2	10.52	July 2	8.25	Oct. 21	10.39
Feb. 4	10.01	May 13	8.05	Aug. 4	10.02	Nov. 23	10.35
Mar. 4	10.26	June 3	9.23	Sept. 2	10.18	Dec. 17	11.00

79C (*845,p.99; 886,p.155; 908,p.59; 938,p.68). O. N. Nevins. SW¼SW¼ sec. 33, T. 26 S., R. 24 W. b/

Water level, in feet below measuring point, 1942

Jan. 7	7.97	Apr. 2	7.55	July 2	4.25	Oct. 21	5.98
Feb. 4	7.67	May 13	4.34	Aug. 4	5.17	Nov. 23	6.30
Mar. 4	7.58	June 3	4.86	Sept. 2	5.86	Dec. 17	6.42

96 (*845,p.99; 886,p.155; 908,p.60; 938,p.68). Henry Hattrup. SE¼NE¼ sec. 23, T. 26 S., R. 21 W.

Water level, in feet below measuring point, 1942

Jan. 7	9.06	Apr. 2	9.04	Aug. 4	8.92	Nov. 24	9.13
Feb. 4	9.04	June 3	(a)	Sept. 2	8.97	Dec. 18	9.18
Mar. 4	9.07	July 2	8.40	Oct. 22	9.13		

a Irrigation well, pumping.

b Given as "SW¼SW¼ sec. 23, T. 26 S., R. 24 W", in Water-Supply Papers 845,886,908 and 938.

237 (*886,p.150; 908,p.57; 938,p.68). Atchison, Topeka & Santa Fe Railway. NW¼NW¼ sec. 28, T. 25 S., R. 22 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	86.33	Apr. 2	86.24	July 2	85.93	Oct. 22	86.10
Feb. 4	86.32	May 13	86.01	Aug. 4	85.96	Nov. 24	86.09
Mar. 4	86.31	June 3	86.00	Sept. 2	86.06	Dec. 18	86.18

343 (*886,p.150; 908,p.57; 938,p.68). B. A. Schuette. NE¼NE¼ sec. 1, T. 26 S., R. 26 W.

Water level, in feet below measuring point, 1942

Jan. 7	76.27	Apr. 2	76.71	July 2	76.71	Nov. 26	76.72
Feb. 4	76.69	May 13	76.72	Sept. 2	76.76	Dec. 30	76.71
Mar. 4	76.73	June 3	76.74				

1002. U. S. Army. Center SE¼ sec. 12, T. 26 S., R. 26 W. Drilled public supply well, diameter 16 inches, depth 260.5 feet. Measuring point, top edge of hole on east side of pump base, 1.18 feet above land surface. Equipped with turbine pump and electric motor. Water levels, in feet below measuring point, 1942: Sept. 29, 105.77; Oct. 24, 105.19; Nov. 26, [a] 185.18; Dec. 30, 107.68.

1003. U. S. Army. NE¼NE¼ sec. 13, T. 26 S., R. 26 W. Drilled public supply well, diameter 13 inches, depth 250 feet. Measuring point, top edge of hole in northeast side of pump base, 0.5 foot above land surface. Equipped with turbine pump and electric motor. Water levels, in feet below measuring point, 1942: Sept. 29, 103.00; Oct. 24, 102.04; Nov. 26, 103.38.

1004. U. S. Army. Center NE¼ sec. 13, T. 26 S., R. 26 W. Drilled public supply well, diameter 12 inches, depth 253 feet. Measuring point, top edge of hole in east side of pump base, 1.09 feet above land surface. Equipped with turbine pump and electric motor. Water levels, in feet below measuring point, 1942: Sept. 29, 103.15; Oct. 24, 102.86; Nov. 26, 99.63; Dec. 30, 99.87.

Grant County

By T. G. McLaughlin

Highest and lowest recorded water levels, in feet below measuring point, in 14 wells in Grant County

Well	Length of record (years)	Highest recorded water level (feet)	Date	Lowest recorded water level (feet)	Date
1	2	43.60	Nov. 16, 1942	45.51	Sept.16, 1941
2	2	43.30	Nov. 16, 1942	46.07	July 14, 1941
3	2	46.11	July 14, 1941	46.78	Nov. 17, 1941
			Jan. 8, 1942		
4	2	85.73	Dec. 2, 1942	88.22	May 14, 1941
5	2	66.94	Oct. 16, 1941	67.42	June 12, 1941
6	2	175.65	Aug. 11, 1941	175.83	Oct. 16, 1941
			Dec. 2, 1941		
7	2	82.96	Jan. 8, 1942	83.25	Nov. 16, 1942
8	2	59.59	Aug. 11, 1941	59.96	June 4, 1942
9	2	72.20	Apr. 16, 1942	72.49	Nov. 17, 1941
10	2	7.24	May 11, 1942	12.19	Sept.16, 1941
11	2	47.17	Dec. 2, 1942	47.43	May 28, 1941
13	2	106.54	Dec. 2, 1942	107.08	July 14, 1941
14	2	131.01	Dec. 2, 1942	131.57	May 30, 1941
15	2	74.03	Jan. 8, 1942	74.28	Aug. 11, 1941
			Apr. 16, 1942		

a Well pumping.

Difference between highest and lowest water levels, net changes in water level in 1942 and for period of record in 14 wells in Grant County

Well	Difference between highest and lowest water levels (feet)	Net rise (+) or net decline (-) in 1942 a/ (feet)	Net rise (+) or net decline (-) for period of record (feet)
1	1.91	+1.20	+1.27
2	2.77	+1.52	+2.02
3	.67	(b)	-.01
4	2.49	+1.52	+2.49
5	.48	+.21	+.42
6	.18	(b)	+.06
7	.29	-.04	-.07
8	.37	-.02	+.10
9	.29	+.17	+.03
10	4.95	+3.33	+2.94
11	.26	+.10	+.26
13	.54	+.34	+.51
14	.56	+.32	+.56
15	.25	+.06	+.05

1 (*938, p. 69). F. C. Williams. SE¼SE¼ sec. 30, T. 27 S., R. 37 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	44.35	Apr. 16	44.33	July 15	43.89	Oct. 2	43.74
Feb. 5	44.19	May 11	44.21	Aug. 5	43.89	Nov. 16	43.60
Mar. 8	44.39	June 4	44.26	Sept. 8	43.86	Dec. 2	43.61

2 (*938, p. 69). J. B. Shorior. NE¼NE¼ sec. 26, T. 27 S., R. 38 W.

Water level, in feet below measuring point, 1942

Jan. 8	45.29	Mar. 8	45.35	Oct. 2	43.72	Dec. 2	44.03
Feb. 5	45.38	Sept. 8	43.64	Nov. 16	43.30		

3 (*938, p. 69). A. G. Dyck. SW¼SE¼ sec. 8, T. 28 S., R. 38 W.

Water level, in feet below measuring point, 1942

Jan. 8	46.11	Apr. 16	46.21	July 15	46.43	Sept. 8	46.35
Feb. 5	46.43	May 11	46.13	Aug. 5	46.38	Oct. 2	46.31
Mar. 8	46.49	June 4	46.42				

4 (*938, p. 70). F. J. Andes. SE¼SE¼ sec. 9, T. 27 S., R. 38 W.

Water level, in feet below measuring point, 1942

Jan. 8	87.06	Apr. 16	86.65	July 15	86.22	Oct. 2	85.87
Feb. 5	86.81	May 11	86.61	Aug. 5	86.11	Nov. 16	85.81
Mar. 8	86.76	June 4	86.43	Sept. 8	85.94	Dec. 2	85.73

5 (*938, p. 70). C. L. Jury. NE¼SE¼ sec. 4, T. 27 S., R. 37 W.

Water level, in feet below measuring point, 1942

Jan. 8	67.22	Apr. 16	67.20	July 15	67.07	Oct. 2	67.02
Feb. 5	67.21	May 11	67.09	Aug. 5	67.05	Nov. 16	66.99
Mar. 8	67.19	June 4	67.16	Sept. 8	67.03	Dec. 2	66.98

6 (*938, p. 70). Craig Howard. NW¼SW¼ sec. 16, T. 27 S., R. 35 W.

Water level, in feet below measuring point, 1942

Jan. 8	175.67	Mar. 8	175.69	May 11	175.74	July 15	175.73
Feb. 5	175.71	Apr. 16	175.76	June 5	175.71	Oct. 2	175.69

a For period Dec. 2, 1941, to Dec. 2, 1942.
b Record for 1942 incomplete.

7 (*938, p. 70). Ethel W. Hoffman. SE¼SW¼ sec. 36, T. 28 S., R. 36 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	82.96	Apr. 16	83.33	July 15	83.21	Oct. 2	83.17
Feb. 5	83.05	May 11	83.13	Aug. 5	83.17	Nov. 16	83.25
Mar. 8	83.21	June 4	83.19	Sept. 8	83.15	Dec. 2	83.10

8 (*938, p. 70). E. O. Stuart. NW¼NE¼ sec. 33, T. 29 S., R. 35 W.

Water level, in feet below measuring point, 1942

Jan. 8	59.79	Apr. 16	59.94	July 15	59.94	Oct. 2	59.71
Feb. 5	59.77	May 11	59.93	Aug. 5	59.74	Nov. 16	59.72
Mar. 8	59.78	June 4	59.96	Sept. 8	59.76	Dec. 2	59.73

9 (*938, p. 70). Mr. Robinson. NE¼SW¼ sec. 27, T. 28 S., R. 37 W.

Water level, in feet below measuring point, 1942

Jan. 8	72.43	Apr. 16	72.20	July 15	72.24	Oct. 2	72.25
Feb. 5	72.23	May 11	72.25	Aug. 5	72.27	Nov. 16	72.25
Mar. 8	72.29	June 4	72.22	Sept. 8	72.23	Dec. 2	72.23

10 (*938, p. 70). E. F. Fowler and Harry Joyce. NW¼SW¼ sec. 27, T. 30 S., R. 37 W.

Water level, in feet below measuring point, 1942

Jan. 8	12.11	Apr. 16	11.94	July 15	7.59	Oct. 2	7.42
Feb. 5	12.00	May 11	7.24	Aug. 5	7.73	Nov. 16	8.35
Mar. 8	12.06	June 4	7.36	Sept. 8	7.55	Dec. 2	8.55

11 (*938, p. 71). J. A. Hoffman. SE¼SW¼ sec. 26, T. 28 S., R. 38 W.

Water level, in feet below measuring point, 1942

Jan. 8	47.19	Apr. 16	47.28	July 15	47.21	Oct. 2	47.21
Feb. 5	47.25	May 11	47.23	Aug. 5	47.23	Nov. 16	47.24
Mar. 8	47.24	June 4	47.23	Sept. 8	47.20	Dec. 2	47.17

13 (*938, p. 71). Fred Powell. NW¼NE¼ sec. 5, T. 29 S., R. 36 W.

Water level, in feet below measuring point, 1942

Jan. 8	106.92	Apr. 16	106.31	July 15	106.66	Oct. 2	106.59
Feb. 5	106.90	May 11	106.75	Aug. 5	106.56	Nov. 16	106.57
Mar. 8	106.87	June 4	106.81	Sept. 8	106.56	Dec. 2	106.54

14 (*938, p. 71). Mr. Hall. NE¼SW¼ sec. 31, T. 28 S., R. 36 W.

Water level, in feet below measuring point, 1942

Jan. 8	131.24	Apr. 16	131.26	July 15	131.24	Oct. 2	131.11
Feb. 5	131.24	May 11	131.25	Aug. 5	131.05	Nov. 16	131.09
Mar. 8	131.31	June 4	131.27	Sept. 8	131.08	Dec. 2	131.01

15 (*938, p. 71). Perry Campbell. SE¼SW¼ sec. 20, T. 29 S., R. 37 W.

Water level, in feet below measuring point, 1942

Jan. 8	74.03	Apr. 16	74.03	July 15	74.11	Oct. 2	74.13
Feb. 5	74.13	May 11	74.11	Aug. 5	74.08	Nov. 16	74.11
Mar. 8	74.09	June 4	74.13	Sept. 8	74.06	Dec. 2	74.11

Gray County

By B. F. Latta

Highest and lowest recorded water levels, in feet below measuring point, in 21 wells in Gray County

Well	Length of record (years)	Highest recorded water level (feet)	Date	Lowest recorded water level (feet)	Date
1	3	4.48	June 13, 1941	8.56	Oct. 8, 1940
3	3	164.62	Nov. 23, 1942	165.24	Aug. 29, 1940
a 4	2.5	15.94	Dec. 4, 1941	18.75	Aug. 29, 1940

a Measurements discontinued March 1942.

Highest and lowest recorded water levels, in feet below measuring point, in 21 wells in Gray County--Continued

Well	Length of record (years)	Highest recorded water level (feet)	Date	Lowest recorded water level (feet)	Date
a 6	2.5	88.12	Dec. 30, 1940 Sept.10, 1940 Oct. 9, 1941	88.37	Oct. 8, 1940
7	3	77.98	Oct. 8, 1940	78.70	May 22, 1940
8	3	3.53	Sept. 2, 1942	10.70	Oct. 7, 1939
9	3	90.05	May 24, 1941	90.93	May 22, 1940
11	3	59.17	Oct. 21, 1942	59.83	Mar. 21, 1940 May 22, 1940
a12	2.5	133.65	Nov. 13, 1939	134.26	Mar. 18, 1941
a14	3	45.47	Sept.10, 1941	46.49	Nov. 13, 1939
b16	3	138.22	Nov. 15, 1941	139.03	Oct. 12, 1939
17	3	83.88	Sept. 9, 1942	85.35	May 24, 1941
18	3	48.91	Oct. 21, 1942	50.05	Aug. 29, 1940
19	3	11.43	July 2, 1942	15.02	Aug. 29, 1940
20	3	18.05	May 15, 1942	22.03	Nov. 4, 1940
a22	2.5	126.87	Mar. 18, 1941	127.25	July 21, 1941
23	3	111.31	Mar. 22, 1940	113.28	Nov. 4, 1940
c26	3.5	108.84	Nov. 12, 1941	113.72	Dec. 14, 1939
27	3	57.79	Mar. 18, 1941	60.84	Feb. 15, 1940
28	3	81.86	Oct. 21, 1942	82.60	Dec. 14, 1939 Jan. 26, 1940 July 23, 1940
a29	2.5	110.77	June 21, 1940	112.50	Oct. 8, 1940

Difference between highest and lowest water levels, net changes in water level in 1942 and for period of record in 21 wells in Gray County

Well	Difference between highest and lowest water levels (feet)	Net rise (+) or net decline (-) in 1942 (feet)	Net rise (+) or net decline (-) for period of record (feet)
1	4.08	d-1.00	+1.91
3	.62	e+.09	+.27
4	2.81	(f)	+1.96
6	.25	(f)	-.02
7	.72	e+.36	+.4
8	7.17	d+3.43	+6.97
9	.88	(f)	+.01
11	.66	e+.24	+.45
12	.61	(f)	+.52
14	1.02	(f)	+.33
16	.81	(f)	+.59
17	1.47	e+.71	+.94
18	1.14	e+.32	+.57
19	3.59	d+.08	+2.07
20	3.98	d+.48	+1.03
22	.38	(f)	-.03
23	1.97	e-.44	+.13
26	4.88	(f)	+3.51
27	3.05	e-.63	+.98
28	.74	e+.21	+.47
29	1.73	(f)	+1.45

1 (*886,p.158; 908,p.63; 938,p.73). G. A. Hard. NW¼SE¼SW¼ sec. 20, T. 25 S., R. 29 W.

a Measurements discontinued March 1942.
b Measurements discontinued June 1942.
c Measurements discontinued April 1942.
d For period Dec. 4, 1941, to Dec. 19, 1942.
e For period Dec. 26, 1941, to Dec. 17, 1942.
f Record for 1942 incomplete.

1 (*886,p.158; 908,p.63; 938,p.73). G. A. Hard--Continued.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 19	5.45	Mar. 31	5.79	July 2	5.06	Oct. 27	6.34
Feb. 3	5.19	May 15	4.62	Aug. 4	5.36	Nov. 26	6.43
Mar. 4	4.87	June 3	5.45	Sept. 2	6.31	Dec. 19	6.43

3 (*886,p.159; 908,p.63; 938,p.73). N. A. Mans. NE¼SW¼NW¼ sec. 7, T. 28 S., R. 27 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 19	164.91	Mar. 31	164.75	July 1	164.74	Oct. 27	164.83
Feb. 7	164.76	May 12	164.78	Aug. 3	164.86	Nov. 23	164.62
Mar. 12	164.72	June 2	164.82	Sept. 9	164.82	Dec. 17	164.76

4 (*886,p.159; 908,p.64; 938,p.73). F. Luther. NW¼SW¼NE¼ sec. 10, T. 26 S., R. 28 W. Measurements discontinued after Mar. 31, 1942. Water levels, in feet below measuring point, 1942: Jan. 19, 16.24; Feb. 3, 15.95; Mar. 4, 16.09; Mar. 31, 16.41.

6 (*886,p.159; 908,p.64; 938,p.73). S. Dirks. SE¼NE¼NE¼ sec. 5, T. 28 S., R. 29 W. Measurements discontinued after Mar. 31, 1942. Water levels, in feet below measuring point, 1942: Jan. 19, 88.21; Feb. 7, 88.25; Mar. 12, 88.19; Mar. 31, 88.21.

7 (*886,p.159; 908,p.64; 938,p.73). P. Brietenbach and others. SE¼SW¼SE¼ sec. 36, T. 26 S., R. 29 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 19	78.42	Mar. 31	78.39	July 1	78.39	Oct. 21	78.23
Feb. 7	78.42	May 12	78.32	Aug. 3	78.41	Nov. 23	78.13
Mar. 12	78.32	June 2	78.38	Sept. 9	78.24	Dec. 17	78.08

8 (*886,p.159; 908,p.64; 938,p.73). NW¼NE¼SE¼ sec. 11, T. 26 S., R. 28 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 19	7.30	Mar. 31	6.71	July 2	3.75	Oct. 27	3.83
Feb. 3	7.35	May 12	4.94	Aug. 4	3.59	Nov. 26	4.28
Mar. 4	7.01	June 3	4.58	Sept. 2	3.53	Dec. 19	3.73

9 (*886,p.159; 908,p.64; 938,p.73). L. Naftziger. NE¼SE¼NE¼ sec. 24, T. 24 S., R. 29 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 19	90.86	Mar. 4	90.82	May 15	90.89	July 2	90.87
Feb. 3	90.84	Apr. 2	90.87	June 3	90.86		

11 (*886,p.159; 908,p.64; 938,p.74). J. D. Wetmore. NE¼NE¼ sec. 35, T. 29 S., R. 28 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	59.39	Mar. 31	59.43	July 1	59.24	Oct. 21	59.17
Feb. 3	59.46	May 12	59.32	Aug. 3	59.26	Nov. 23	59.18
Mar. 3	59.36	June 2	59.32	Sept. 9	59.18	Dec. 17	59.19

12 (*886;159; 908,p.64; 938,p.74). Mary Hill. SE¼SE¼SE¼ sec. 26, T. 28 S., R. 27 W. Measurements discontinued after Mar. 31, 1942. Water levels, in feet below measuring point, 1942: Jan. 19, 133.74; Feb. 7, 133.71 Mar. 12, 133.69; Mar. 31, 133.72.

14 (*886,p.159; 908,p.64; 938,p.74). Sarah Marney. SE. corner SW¼SE¼ sec. 25, T. 29 S., R. 27 W. Measurements discontinued after Mar. 31, 1942. Water levels, in feet below measuring point, 1942: Jan. 19, 45.75; Feb. 7, 45.84; Mar. 12, 45.73; Mar. 31, 45.83.

16 (*886,p.160; 908,p.65; 938,p.74). Ed Wallace. NE. corner NW¼ sec. 19, T. 29 S., R. 30 W. Well destroyed in May 1942.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Jan. 19	138.43	Mar. 12	138.45	May 12	138.44
Feb. 7	138.39	31	138.43		

17 (*886,p.160; 908,p.65; 938,p.74). V. E. Yeager. NE. corner NW¼NE¼ sec. 31, T. 28 S., R. 29 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 19	84.75	Mar.31	84.86	July 1	84.30	Oct. 21	84.06
Feb. 7	84.83	May 12	84.36	Aug. 3	83.92	Nov. 23	84.10
Mar. 12	84.75	June 2	84.69	Sept. 9	83.88	Dec. 17	84.08

18 (*886,p.160; 908,p.65; 938,p.74). W. H. Mace. SE¼NE¼ sec. 25, T. 29 S., R. 29 W.

Water level, in feet below measuring point, 1942

Jan. 19	49.50	Mar. 31	49.61	July 1	49.47	Oct. 21	48.91
Feb. 7	49.58	May 12	49.55	Aug. 3	49.45	Nov. 23	49.06
Mar. 12	49.48	June 2	49.45	Sept. 9	49.42	Dec. 17	49.22

19 (*886,p.160; 908,p.65; 938,p.74). M. E. Kraushaar. NW¼NW¼ sec. 35, T. 25 S., R. 29 W.

Water level, in feet below measuring point, 1942

Jan. 19	13.06	Mar. 31	13.07	Aug. 4	13.04	Nov. 26	12.72
Feb. 3	12.81	June 3	11.65	Sept. 2	13.21	Dec. 19	12.80
Mar. 4	12.91	July 2	11.43	Oct. 27	13.02		

20 (*886,p.160; 908,p.65; 938,p.74). R. and E. Fischer. SE¼SW¼NE¼ sec. 23, T. 25 S.,R. 30 W.

Water level, in feet below measuring point, 1942

Jan. 19	21.38	Mar. 31	20.91	July 2	18.29	Oct. 27	20.19
Feb. 3	21.26	May 15	18.05	Aug. 4	20.16	Nov. 26	20.84
Mar. 4	21.01	June 3	18.55	Sept. 9	20.33	Dec. 19	20.87

21 (*886,p.160; 908,p.65; 938,p.75). C. M. Davis. NW¼SW¼ sec. 7, T. 26 S., R. 29 W. Measurements discontinued in January 1942.

22 (*886,p.160; 908,p.65; 938,p.75). C. Salem. SW¼SE¼SE¼ sec. 15, T. 27 S., R. 27 W. Measurements discontinued in March 1942. Water levels, in feet below measuring point, 1942: Jan. 19, 127.10; Feb. 7, 127.06; Mar. 12, 127.04.

23 (*886,p.160; 908,p.65; 938,p.75). ---Fry. NW¼SE¼ sec. 24, T. 28 S., R. 29 W., in Montezuma.

Water level, in feet below measuring point, 1942

Jan. 19	111.57	Mar.31	111.41	July 1	111.47	Oct. 27	111.45
Feb. 7	112.83	May 21	111.42	Aug. 3	111.48	Nov. 23	111.41
Mar. 12	112.88	June 2	112.74	Sept. 9	112.93	Dec. 17	111.86

26 (*886,p.161; 908,p.66; 938,p.75). Arthur Adams. NE¼SE¼ sec. 2, T. 26 S., R. 27 W. Measurements discontinued after Apr. 2, 1942. Water levels, in feet below measuring point, 1942: Jan. 19, 109.28; Feb. 3, 109.89; Mar. 4, 109.83; Apr. 2, 109.85.

27 (*886,p.161; 908,p.66; 938,p.75). H. E. Hettrick. NW¼SE¼NW¼ sec. 36, T. 26 S., R. 28 W.

27 (*886, p.161; 908, p.66; 948, p.75)--Continued.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 19	59.03	Mar. 31	57.91	Aug. 4	59.95	Nov. 23	59.59
Feb. 3	59.08	May 12	58.05	Sept. 2	59.84	Dec. 17	59.60
Mar. 3	59.06	July 2	58.46	Oct. 27	59.69		

28 (*886, p.161; 908, p.66; 938, p.75). W. H. McLaughton. SE¼SE¼ sec. 14 T. 27 S., R. 29 W.

Water level, in feet below measuring point, 1942

Jan. 19	82.31	Mar. 31	82.19	July 1	82.18	Oct. 21	81.86
Feb. 7	82.41	May 12	81.99	Aug. 3	82.16	Nov. 23	82.14
Mar. 12	82.26	June 2	82.23	Sept. 9	82.12	Dec. 17	82.09

29 (*886, p.161; 908, p. 66; 938, p.75). A. F. Hohner. SE¼NW¼ sec. 2, T. 28 S., R. 30 W. Measurements discontinued after Mar. 31, 1942. Water levels, in feet below measuring point, 1942: Jan. 19, 110.91; Feb. 7, 110.82; Mar. 12, 110.86; Mar. 31, 110.80.

Hamilton County

By T. G. McLaughlin

Highest and lowest recorded water levels, in feet below measuring point, in 16 wells in Hamilton County

Well	Length of record (years)	Highest recorded water level (feet)	Date	Lowest recorded water level (feet)	Date
a 1	3	25.35	Apr. 17, 1942	26.93	May 15, 1940
b 2	3	25.44	July 7, 1942	28.14	Nov. 22, 1940
3	3	11.82	July 7, 1942	14.92	Nov. 16, 1939
a 4	3	16.88	June 22, 1940	21.67	Dec. 19, 1939
c 5	3	15.70	June 22, 1940	17.88	Nov. 16, 1939
6	3	51.04	May 20, 1942	55.04	Nov. 16, 1939
7	3	44.19	Nov. 12, 1942	46.00	Nov. 27, 1940
8	3	147.18	Dec. 23, 1940	147.97	Mar. 15, 1941
a 9	3	190.18	Dec. 23, 1940 Nov. 16, 1941	190.60	Oct. 10, 1939
a13	3	56.61	Dec. 16, 1941 Mar. 5, 1942	57.52	June 17, 1940
16	3	84.74	Jan. 11, 1942	85.83	Feb. 19, 1940
17	3	40.87	Dec. 4, 1942	44.48	May 15, 1940 July 18, 1940
c19	3	128.94	Jan. 11, 1942	129.30	Feb. 1, 1942
b22	3	102.71	Mar. 5, 1942	118.16	May 1, 1941
d27	3	171.14	Mar. 5, 1942	171.85	Jan. 11, 1942
c28	3	221.48	Apr. 20, 1940	222.48	Feb. 1, 1942

Difference between highest and lowest water levels, net changes in water level in 1942 and for period of record in 16 wells in Hamilton County

Well	Difference between highest and lowest water levels (feet)	Net rise (+) or net decline (-) in 1942 (feet)	Net rise (+) or net decline (-) for period of record (feet)
1	1.58	(e)	+0.80
2	2.70	(e)	+1.55
3	3.10	f-.26	+1.20
4	4.79	(e)	+1.51
5	2.18	(e)	+1.44
6	4.00	f-.35	+1.74

a Measurements discontinued April 1942.
b Measurements discontinued August 1942.
c Measurements discontinued March 1942.
d Measurements discontinued January 1942.
e Record incomplete for 1942.
f For period Nov. 29, 1941, to Dec. 4, 1942.

Difference between highest and lowest water levels, net changes in water level in 1942 and for period of record in 16 wells in Hamilton County--Continued

Well	Difference between highest and lowest water levels (feet)	Net rise (+) or net decline (-) in 1942 (feet)	Net rise (+) or net decline (-) for period of record (feet)
7	1.81	a+.84	+1.45
8	.79	a+.10	-.16
9	.42	(b)	-.12
13	.91	(b)	+.61
16	1.09	c+.07	+.87
17	3.61	c+.37	+3.39
19	.36	(c)	-.01
22	15.45	(b)	+5.32
27	.71	(b)	+.16
28	.98	(b)	-.68

1 (*886,p.162; 908,p.69; 938,p.76). R. E. Bray, Jr. NE¼NE¼ sec. 32, T. 23 S., R. 41 W. Measurements discontinued after April 1942. Water levels, in feet below measuring point, 1942: Jan. 15, 25.75; Feb. 1, 25.63; Mar. 5, 25.74; Apr. 17, 25.35.

2 (*886,p.162; 908,p.69; 938,p.77). R. Holdren. NW¼NW¼ sec. 22, T. 23 S., R. 43 W.d/Measurements discontinued after August 1942.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	26.70	Mar. 5	26.64	May 20	25.71	July 7	25.44
Feb. 1	26.66	Apr. 17	26.46	June 16	25.46	Aug. 19	25.66

3 (*886,p.162; 908,p.69; 938,p.77). B. Rees. SW¼NW¼ sec. 8, T. 24 S., R. 40 W.

Water level, in feet below measuring point, 1942

Jan. 12	13.08	Apr. 17	13.23	July 7	11.82	Oct. 12	13.29
Feb. 1	13.15	May 20	12.14	Aug. 18	12.65	Nov. 12	13.23
Mar. 5	13.18	June 16	12.10	Sept.11	12.90	Dec. 4	13.22

4 (*886,p.162; 908,p.69; 938,p.77). Continental Life Insurance Co. Measurements discontinued after April 1942. Water levels, in feet below measuring point, 1942: Jan. 12, 19.49; Feb. 1, 19.61; Apr. 17, 19.58.

5 (*886,p.164; 908,p.69; 938,p.77). W. A. Dunn. SE¼NE¼ sec. 20, T. 24 S., R. 39 W. Measurements discontinued after March 1942. Water level, in feet below measuring point, 1942: Jan. 17, 15.87.

6 (*886,p.163; 908,p.69; 938,p.77). Belle Heinlein. SW¼SE¼ sec. 24, T. 24 S., R. 39 W.

Water level, in feet below measuring point, 1942

Jan. 12	52.65	Apr. 17	52.55	July 7	51.10	Oct. 12	53.19
Feb. 1	52.46	May 20	51.04	Aug. 19	52.62	Nov. 12	53.05
Mar. 5	52.44	June 16	51.06	Sept.11	52.84	Dec. 4	53.00

7 (*886,p.163; 908,p.69; 938,p.77). I. E. Martin. NW¼SW¼ sec. 16, T. 23 S., R. 40 W.

Water level, in feet below measuring point, 1942

Jan. 12	45.16	Apr. 17	45.06	July 7	44.90	Oct. 12	44.71
Feb. 1	45.14	May 20	45.02	Aug. 19	44.93	Nov. 12	44.19
Mar. 5	45.11	June 16	45.01	Sept.11	44.60	Dec. 10	44.32

8(*886,p.163; 908,p.69; 938,p.77). R. D. Woodman. SW¼NW¼ sec. 28, T. 22 S., R. 40 W.(given in Water-Supply Papers 845, 886, 908, and 938, as SW¼NW¼ sec. 21).

Water level, in feet below measuring point, 1942

Jan. 12	147.48	Apr. 17	147.54	July 7	147.45	Oct. 12	147.41
Feb. 1	147.47	May 20	147.50	Aug. 9	147.47	Nov. 12	147.39
Mar. 5	147.49	June 16	147.48	Sept.11	147.38	Dec. 10	147.38

a For period Dec. 16, 1941, to Dec. 10, 1942.
b Record incomplete for 1942.
c For period Dec. 31, 1941, to Dec. 4, 1942.
d Given in Water-Supply Papers 845, 886, 908, and 938 as NW¼NW¼ sec. 23.

9 (*886, p. 163; 908, p. 69; 938, p. 77). Inez Dikeman. SE¼SE¼ sec. 21, T. 21 S., R. 40 W. Measurements discontinued after April 1942. Water levels, in feet below measuring point, 1942: Jan. 12, 190.48; Feb. 1, 190.51; Mar. 5, 190.45; Apr. 17, 190.44.

13 (*886, p. 163; 908, p. 70; 938, p. 78). Carl Lewis. SE¼SW¼ sec. 13, T. 21 S., R. 42 W. Measurements discontinued after April 1942. Water levels in feet below measuring point, 1942: Feb. 1, 56.64; Mar. 5, 56.61; Apr. 17, 56.63.

16 (*886, p. 163; 908, p. 70; 938, p. 78). Charles H. Miller. SE¼SW¼ sec. 22, T. 25 S., R. 39 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	84.74	May 29	84.76	Aug. 17	85.48	Nov. 17	85.10
Feb. 1	84.94	June 26	84.81	Sept.21	85.24	Dec. 4	84.95
Mar. 5	84.89	July 16	84.83	Oct. 10	85.20		

17 (*886, p. 163; 908, p. 70; 938, p. 78). Thomas A. Wells. NW¼NW¼ sec. 11, T. 25 S., R. 39 W.

Water level, in feet below measuring point, 1942

Jan. 11	42.40	May 29	41.96	Sept.21	40.98	Nov. 12	40.91
Feb. 1	42.36	June 26	42.11	Oct. 10	40.91	Dec. 4	40.87
Mar. 5	42.41	July 16	42.32				

19 (*886, p. 163; 908, p. 70; 938, p. 78). W. E. Bereman. NW¼NE¼ sec. 26, T. 26 S., R. 39 W. Measurements discontinued after March 1942. Water levels, in feet below measuring point, 1942: Jan. 11, 128.94; Feb. 1, 129.30; Mar. 5, 129.14.

22 (*886, p. 164; 908, p. 70; 938, p. 78). T. J. Crist. NW¼SW¼ sec. 26, T. 24 S., R. 43 W. Measurements discontinued after August 1942.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Mar. 5	102.71	May 20	107.09	July 17	106.21
Apr. 17	103.34	June 16	108.22	Aug. 19	110.85

27 (*886, p. 164; 908, p. 71; 938, p. 78). B. M. Rupert. SE¼SE¼ sec. 24, T. 25 S., R. 40 W. Measurements discontinued after January 1942. Water levels, in feet below measuring point, 1942: Jan. 11, 171.85; Feb. 1, 171.63; Mar. 5, 171.14.

28 (*886, p. 164; 908, p. 71; 938, p. 78). A. S. and F. J. Gilliam. SE¼SE¼ sec. 13, T. 22 S., R. 39 W. Measurements discontinued after March 1942. Water levels, in feet below measuring point, 1942: Jan. 12, 222.45; Feb. 1, 222.48; Mar. 5, 222.45.

Harvey County

By D. C. Gilkison, C. C. Williams, and G. H. von Hein

Highest and lowest recorded water levels, in feet below measuring point, in 24 wells in Harvey County that are not affected by pumping a/

Well	Length of record (years)	Highest recorded water level (feet)	Date	Lowest recorded water level (feet)	Date
72	5	21.39	Oct. 1, 1942	25.85	Oct. 7, 1937
294	5	37.00	Nov. 2, 1942	43.92	Apr.3-5, 1938
325	5	10.49	Dec. 2, 1942	14.21	June 4, 1939
701	5	35.30	Dec. 2, 1942	44.75	Nov. 2, 1938

a Well 136 destroyed; measurements discontinued Sept. 1, 1942.

Highest and lowest recorded water levels, in feet below measuring point, in 24 wells in Harvey County that are not affected by pumping a/--Cont.

Well	Length of record (years)	Highest recorded water level (feet)	Date	Lowest recorded water level (feet)	Date
817	4	12.40	Oct. 9, 1942	17.92	Oct. 25, 1940
824	4	12.58	May 4, 1942	20.76	Nov. 5, 1940
831	4	16.35	May 4, 1942	21.54	Nov. 5, 1940
832	4	15.94	May 4, 1942	20.85	Nov. 5, 1940
833	4	7.58	May 4, 1942	11.63	June 4, 1941
852	4	13.24	July 7, 1942	17.66	Nov. 5, 1940
853	4	7.62	June 26, 1942	11.51	May 29, 1941
854	4	9.62	June 26, 1942	15.37	Nov. 1, 1940
875	4	2.03	Dec. 31, 1942	7.74	Oct. 25, 1940
876	4	26.93	Dec. 31, 1942	30.53	Nov. 8, 1940
877	4	14.86	Oct. 29, 1942	17.65	Jan.27-28,1941
880	4	4.06	July 5, 1941	8.10	Nov. 19, 1940
881	4	4.54	July 5, 1941	8.02	Nov. 11, 1940
888	4	.49	July 5, 1941	9.65	Oct. 27, 1939
889	4	3.87	May 24, 1940	8.79	Nov. 29, 1940
890	4	1.76	Oct. 1, 1942	7.37	Nov. 5, 1940
891	4	.24	May 11, 1942	4.92	Sept. 3, 1941
892	4	.91	May 11, 1942	5.72	Oct. 3, 1940
893	4	1.03	May 4, 1942	5.67	Nov. 5, 1940
1174	2	5.99	Oct. 29, 1942	10.51	Jan. 27, 1941

Difference between highest and lowest water levels and net change in water level, in 1942 and for period of record, of 24 wells in Harvey County that are not affected by pumping a/

Well	Difference between highest and lowest water levels (feet)	Net rise (+) or net decline (-) in 1942 (feet)	Net rise (+) or net decline (-) for period of record (feet)
72	4.46	+1.07	+4.46
294	6.92	+2.58	+6.36
325	3.72	+1.63	+3.48
701	9.45	+2.55	+5.19
817	5.52	+.60	+1.65
824	8.18	+1.24	+3.26
831	5.19	+.27	+1.65
832	4.91	+.45	+1.36
833	4.05	+.46	+.30
852	4.42	+.50	+1.90
853	3.89	-.25	+.88
854	5.75	+1.06	+2.07
875	5.71	+3.67	+4.29
876	3.60	+1.27	+.72
877	2.79	+1.63	+2.51
880	4.04	+.03	+1.08
881	3.48	+.03	+.68
888	9.16	+3.69	+4.55
889	4.92	+.91	+.21
890	5.61	+2.31	+3.04
891	4.68	+.10	+1.42
892	4.81	+.17	+1.59
893	4.64	+.55	+2.09
1174	4.52	+.97	+3.08

a Well destroyed; measurements discontinued Sept. 1, 1942.

Highest and lowest recorded water levels, in feet below measuring point, in 97 wells in Harvey County that are pumped or affected by pumping

Well	Length of record (years)	Highest recorded water level (feet)	Date	Lowest recorded water level (feet) a/	Date
2	5	2.40	Apr. 26, 1942	7.13	Mar. 30, Apr. 3 Apr. 17, 1942
506	4	11.60	Oct. 7, 1942	19.46	Aug. 11, 1941
507	4	7.06	May 24, 1940	15.86	Oct. 3, 1941
821	4	13.03	Aug. 21, 1939	18.08	Dec. 31, 1942
839	4	10.62	Aug. 21, 1939	16.78	Oct. 6, 1941
872	4	18.15	Mar. 11, 1939	28.55	Sept.30, 1942
873	4	18.11	Mar. 11, 1939	29.05	Sept.30, 1942
874	4	20.54	May 27, 1940	41.18	Sept.30, 1942
878	4	16.55	June 3, 1940	22.10	Dec. 31, 1942
879	4	18.02	May 27, 1940 June 3, 1940	25.02	Dec. 4, 1942
883	4	14.05	Aug. 21, 1939	20.62	Sept.30, 1942
884	4	13.94	Aug. 21, 1939	20.64	Sept.30, 1942
885	4	13.82	Aug. 21, 1939	21.53	Aug. 10, 1942
886	4	3.14	Aug. 21, 1939	11.83	Mar. 23, 1942
887	4	3.52	May 27, 1940	13.04	Nov. 12, 1942
894	4	12.66	May 27, 1940	20.26	Dec. 17, 1942
895	4	12.74	May 27, 1940	22.30	Dec. 1, 1942
1112	3	18.55	July 6, 1942	19.69	Nov. 4, 1940
1186	2	10.89	June 19, 1942	13.11	May 23, 1941
1188	2	4.69	June 26, 1942	7.28	Nov. 27, 1942
1189	2	8.50	Apr. 26, 1942	10.34	Dec. 24, 1942
1192	2	16.61	Dec. 1, 1942	17.42	May 28, 1941
M-1	4	20.56	Apr. 13, 1939	34.84	Jan. 28, 1941
M-1a	4	18.17	June 3, 1940	35.29	Oct. 29, 1942
M-1b	4	16.64	June 3, 1940	30.72	Oct. 8, 1941
M-2	4	20.33	May 4, 1939	45.53	Apr. 13, 1942
M-2a	4	18.54	June 3, 1940	41.60	Sept. 9, 1940
M-2b	4	20.75	May 27, 1940	38.50	Apr. 13, 1942
M-3	4	25.20	May 8, 1939	42.57	Aug. 25, 1941
M-3a	4	20.83	May 27, 1940	38.62	Aug. 25, 1941
M-3b	4	24.13	May 27, 1940	42.90	Aug. 25, 1941
M-4	4	25.12	May 27, 1940	45.60	Apr. 13, 1942
M-4a	4	23.67	May 27, 1940	42.09	Apr. 13, 1942
M-4b	4	24.71	May 27, 1940	42.08	Apr. 13, 1942
M-5	4	22.33	May 16, 1939	40.46	Oct. 8, 1940
M-5a	4	18.59	June 3, 1940	28.26	Aug. 31, 1942
M-5b	4	18.82	May 27, 1940	28.05	Aug. 31, 1942
M-6	4	21.05	May 27, 1940	29.01	Dec. 1, 1942
M-6a	4	19.63	June 3, 1940	27.80	Dec. 1, 1942
M-6b	4	19.46	June 3, 1940	27.50	Oct. 15, 1942
M-7	4	13.03	June 13, 1939	20.46	Sept.10, 1941
M-7a	4	12.10	Aug. 21, 1939	19.30	Sept.10, 1941
M-7b	4	12.04	Aug. 21, 1939	19.12	Sept.10, 1941
M-8	4	17.93	May 27, 1940	28.34	Dec. 17, 1942
M-8a	4	15.62	June 3, 1940	24.97	Dec. 17, 1942
M-8b	4	14.30	June 3, 1940	23.77	Dec. 17, 1942
M-9	4	12.82	May 27, 1940	22.53	Nov. 12, 1942
M-9a	4	11.30	May 27, 1940	20.74	Nov. 12, 1942
M-9b	4	10.22	May 27, 1940	19.64	Nov. 12, 1942
M-10	4	14.05	May 27, 1940	26.02	Dec. 1, 1942
M-10a	4	12.04	May 27, 1940	22.90	Dec. 1, 1942
M-10b	4	11.24	May 27, 1940	21.98	Dec. 17, 1942
M-11	4	9.11	May 27, 1940	19.20	Oct. 29, 1942
M-11a	4	7.38	May 27, 1940	17.29	Oct. 15, 1942
M-11b	4	8.47	May 27, 1940	20.79	July 21, 1942
M-12	4	13.41	Aug. 21, 1939	23.96	Sept.14, 1942
M-12a	4	11.73	May 27, 1940	22.15	Sept.14, 1942

a Measurements made when these or nearby wells were not pumping.

Highest and lowest recorded water levels, in feet below measuring point, in 97 wells in Harvey County that are pumped or affected by pumping-Cont.

Well	Length of record (years)	Highest recorded water level (feet)	Date	Lowest recorded water level (feet) a/	Date
M-12b	4	12.40	Aug. 21, 1939 May 27, 1940	22.92	Sept.14, 1942
M-13	4	10.27	Aug. 21, 1939	19.60	Oct. 15, 1942
M-13a	4	8.69	May 27, 1940	17.50	Oct. 15, 1942
M-13b	4	8.43	May 27, 1940	18.15	Oct. 15, 1942
M-14	4	11.07	May 27, 1940	22.84	Aug. 10, 1942
M-14a	4	9.11	Apr. 4, 1939	21.41	Dec. 18, 1942
M-14b	4	8.96	May13,27,1940 June 3, 1940	21.17	Aug. 10, 1940
M-15	4	14.92	Apr. 17, 1939	23.24	Nov. 12, 1942
M-15a	4	13.19	May 27, 1940	21.44	Nov. 12, 1942
M-15b	4	14.25	May 27, 1940	22.57	Nov. 12, 1942
M-16	4	12.71	Aug. 21, 1939	19.92	Apr. 17, 1941
M-16a	4	11.93	Aug. 21, 1939	18.64	Apr. 17, 1941
M-16b	4	11.52	May 27, 1940	17.68	Dec. 17, 1942
M-17	4	8.58	Aug. 21, 1939	14.67	Dec. 1, 1941
M-17a	4	6.26	Aug. 21, 1939	12.05	Aug. 24, 1942
M-17b	4	6.01	Aug. 21, 1939	11.87	Aug. 24, 1942
M-18	4	12.00	Aug. 21, 1939	19.49	Sept.10, 1941
M-18a	4	11.32	Aug. 21, 1939	18.44	Sept.10, 1941
M-18b	4	10.58	Aug. 21, 1939	17.50	Sept.10, 1941
M-19	4	12.82	Aug. 21, 1939	18.85	May 18, 1941
M-19a	4	13.81	Aug. 21, 1939	19.29	Aug. 24, 1942
M-19b	4	12.47	Aug. 21, 1939	19.46	June 1, 1942
M-20	4	11.74	May 27, 1940	23.62	Oct. 29, 1942
M-20a	4	10.08	May 27, 1940	20.91	Oct. 29, 1942
M-20b	4	9.29	May 27, 1940	19.90	Oct. 29, 1942
M-21	4	10.32	Aug. 21, 1939	16.09	May 26, 1941
M-21a	4	9.30	Aug. 21, 1939	14.95	May 26, 1941
M-21b	4	8.88	Aug. 21, 1939	14.61	May 26, 1941
M-22	4	11.20	Aug. 21, 1939	18.69	Apr. 13, 1942
M-22a	4	9.29	Aug. 21, 1939	16.87	Apr. 13, 1942
M-22b	4	10.18	Aug. 21, 1939	17.90	Apr. 13, 1942
M-23	4	9.85	Aug. 21, 1939	19.03	Dec. 23, 1940
M-23a	4	9.17	Aug. 21, 1939	16.20	Dec. 23, 1940
M-23b	4	8.60	Aug. 21, 1939	15.37	Dec. 23, 1940
M-24	4	10.71	Aug. 21, 1939	16.17	Jan. 13, 1941
M-24a	4	9.88	Aug. 21, 1939	15.31	Jan. 13, 1941
M-24b	4	12.17	Aug. 28, 1939	17.76	Jan. 13, 1941
M-25	4	7.54	Aug. 21, 1939	12.93	June 3, 1941
M-25a	4	6.11	Aug. 21, 1939	11.82	June 3, 1941
M-25b	4	7.69	Aug. 21, 1939	13.80	Aug. 25, 1941

Difference between highest and lowest water levels and net change in water level, in 1942 and for period of record, in 97 wells in Harvey County that are pumped or affected by pumping

Well	Difference between highest and lowest water levels (feet)	Net rise (+) or net decline (-) in 1942 (feet) b/	Net rise (+) or net decline (-) for period of record (feet) c/
2	4.73	-0.05	-0.66
506	7.86	+.29	+1.20
507	8.80	-.43	-1.83
821	5.05	-1.01	-4.82
839	6.16	-.21	-2.45

a Measurements made when these or nearby wells were not pumping.
b Calculated from last measurement each of the years 1941 and 1942 made when these or nearby wells were not pumping.
c Calculated from first water level and last measurement of 1942 made when these or nearby wells were not pumping.

Difference between highest and lowest water levels and net change in water level, in 1942 and for period of record, in 97 wells in Harvey County that are pumped or affected by pumping--Continued

Well	Difference between highest and lowest water levels (feet)	Net rise (+) or net decline (-) in 1942 (feet) a/	Net rise (+) or net decline (-) for period of record (feet) b/
872	10.40	-3.43	-9.83
873	10.94	-3.61	-10.27
874	20.64	-6.54	-15.16
878	5.55	-1.14	-5.32
879	7.00	-1.23	-6.32
883	6.57	-.53	-4.29
884	6.70	-.47	-4.30
885	7.71	-.32	-5.35
886	8.69	-2.29	-6.56
887	9.52	-2.45	-7.31
894	7.60	-1.64	-5.96
895	9.56	-2.60	-8.01
1112	1.14	+.28	+.40
1186	2.22	+.24	+.87
1188	2.59	+.26	-.04
1189	1.84	-1.35	-.49
1192	.81	+.26	+.78
M-1	14.28	-6.40	-7.91
M-1a	17.12	-5.40	-7.77
M-1b	14.08	-5.83	-8.39
M-2	25.20	-11.39	-20.44
M-2a	23.06	-6.71	-9.75
M-2b	17.75	-7.33	-10.03
M-3	17.37	-8.06	-13.61
M-3a	17.79	-9.44	-10.81
M-3b	18.77	-7.75	-10.60
M-4	20.48	-8.93	-13.66
M-4a	18.42	-8.49	-11.41
M-4b	17.37	-8.82	-10.85
M-5	18.13	-3.87	-10.35
M-5a	9.67	-1.92	-7.11
M-5b	9.23	-1.72	-6.89
M-6	7.96	-1.74	-4.82
M-6a	8.17	-1.61	-7.52
M-6b	8.04	-1.60	-7.30
M-7	7.43	-1.60	-4.57
M-7a	7.20	-1.68	-4.69
M-7b	7.08	-1.75	-4.86
M-8	10.41	-2.57	-8.22
M-8a	9.35	-2.97	-8.77
M-8b	9.47	-2.55	-8.96
M-9	9.71	-1.59	-9.03
M-9a	9.44	-1.78	-8.86
M-9b	9.42	-1.83	-8.80
M-10	11.97	-2.95	-9.41
M-10a	10.86	-2.99	-10.07
M-10b	10.74	-2.84	-10.03
M-11	10.09	-2.16	-9.04
M-11a	9.91	-2.26	-8.79
M-11b	12.32	-2.15	-8.72
M-12	10.55	-2.37	-8.03
M-12a	10.42	-2.65	-8.52
M-12b	10.52	-2.89	-8.74
M-13	9.33	-2.77	-7.87
M-13a	8.81	-1.94	-7.76
M-13b	9.72	-1.96	-8.55
M-14	11.77	-4.83	-11.95
M-14a	12.30	-5.16	-12.30

a Calculated from last measurement of each of the years 1941 and 1942 made when these or nearby wells were not pumping.

b Calculated from first water level and last measurement of 1942 made when these or nearby wells were not pumping.

Difference between highest and lowest water levels and net change in water level, in 1942 and for period of record, in 97 wells in Harvey County that are pumped or affected by pumping--Continued.

Well	Difference between highest and lowest water level (feet)	Net rise (+) or net decline (-) in 1942 (feet) a/	Net rise (+) or net decline (-) for period of record (feet) b/
M-14b	12.21	- 4.51	- 12.07
M-15	8.32	-.01	- 6.59
M-15a	8.25	+.16	- 5.60
M-15b	8.32	+.08	- 5.67
M-16	7.21	- 1.01	- 5.81
M-16a	6.71	-1.25	- 5.74
M-16b	6.16	-2.08	- 5.40
M-17	6.09	- .46	- 3.68
M-17a	5.79	- .79	- 2.94
M-17b	5.86	- .70	- 2.19
M-18	7.49	+ .36	- 3.21
M-18a	7.12	+ .26	- 3.07
M-18b	6.92	+ .19	- 2.76
M-19	6.03	- .64	- 3.80
M-19a	5.48	- .70	- 2.73
M-19b	6.99	- .07	- 2.36
M-20	11.88	- 3.39	- 10.39
M-20a	10.83	- 2.33	- 9.27
M-20b	10.61	- 2.38	- 9.12
M-21	5.77	+ .34	- 1.71
M-21a	5.65	+ .24	- 1.77
M-21b	5.73	+ .17	- 1.81
M-22	7.49	+ .14	- 1.53
M-22a	7.58	+ .20	- 1.53
M-22b	7.72	+ .39	- 1.46
M-23	9.18	+ 1.73	+ .51
M-23a	7.03	+ 1.51	+ .25
M-23b	6.77	+ 1.50	+ .24
M-24	5.46	+ .99	- .47
M-24a	5.43	+ .96	- .81
M-24b	5.59	+ 1.19	- .20
M-25	5.39	+ 1.22	+ .48
M-25a	5.71	+ 1.05	+ 1.53
M-25b	6.11	+ 1.11	- 1.30

Pumpage in new municipal wells of city of Wichita (M-1-to M-25) from beginning of pumping on Sept. 1, 1940, to Dec. 31, 1942

Well	Pumpage in millions of gallons			
	1940 c/	1941	1942	Total
M-1	48.0	207.2	240.5	495.7
M-2	47.3	130.8	134.6	312.7
M-3	53.6	173.0	181.7	408.3
M-4	14.2	98.0	90.7	202.9
M-5	28.2	168.4	147.8	344.4
M-6	52.8	161.6	181.1	395.5
M-7	57.0	195.0	241.3	493.3
M-8	56.8	187.3	214.3	458.4
M-9	64.8	166.7	237.9	469.4
M-10	56.2	181.0	171.3	408.5
M-11	62.9	174.2	215.3	452.4
M-12	71.3	166.5	199.1	436.9
M-13	41.8	205.4	195.9	443.1
M-14	50.4	166.7	214.0	431.1
M-15	59.5	141.0	156.1	356.6
M-16	55.7	153.8	204.7	414.2
M-17	54.2	187.5	245.6	487.3

a Calculated from last measurement of the years of 1941 and 1942 made when these or nearby wells were not pumping.

b Calculated from first water level and last measurement of 1942 made when these or nearby wells were not pumping.

c Pumping began Sept. 1, to Dec. 31, 1940.

Pumpage in new municipal wells of city of Wichita (M-1 to M-25 from beginning of pumping on Sept. 1, 1940, to Dec. 31, 1942--Continued

Well	Pumpage in millions of gallons			
	1940 a/	1941	1942	Total
M-18	58.9	200.3	349.2	608.4
M-19	31.6	97.9	139.5	269.0
M-20	46.6	155.0	178.9	380.5
M-21	63.8	250.2	321.1	635.1
M-22	32.3	87.7	108.0	228.0
M-23	59.8	182.8	195.5	438.1
M-24	53.3	219.9	186.5	459.7
M-25	58.3	187.5	212.2	458.0
Total	1,279.3	4,245.4	4,962.8	10,487.5

72 (*840,p.102; 845,p. 118; 886, p. 202; 908,p.77; 938,p.83). Anna Hertzler. SW¼NE¼SE¼ sec. 16, T. 22 S., R. 1 W. Water levels, in feet below measuring point, 1942: Jan. 16, 22.27;Apr. 1, 22.32; Oct. 1, 21.39.

136 (*840, p. 102; 845, p. 118; 886, p. 202; 908, p. 77; 938, p. 83). Ada M. Day. NW. corner sec. 19, T. 23 S., R. 3 W. Well destroyed; measurements discontinued after Sept. 1, 1942.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	12.36	Apr. 1	12.42	June 2	11.64	Aug. 3	10.73
Feb. 3	12.36	May 4	11.97	July 7	9.47	Sept. 1	10.02
Mar. 3	12.40						

294 (*840, p. 103; 845, p. 119; 886, p. 202; 908, p. 77; 938, p. 84). Owner of well, J. B. Schmidt; lessee, Hollow Oil Co. SE¼NW¼ sec. 17, T. 22 S., R. 3 W.

Water level, in feet below measuring point, 1942

Jan. 16	40.05	Apr. 1	40.34	July 7	37.96	Oct. 1	37.74
Feb. 3	40.10	May 4	40.04	Aug. 3	38.31	Nov. 2	37.00
Mar. 3	40.31	31	38.80	Sept. 1	38.11	Dec. 2	37.28

325 (*840, p. 103; 845, p. 120; 886, p. 203; 908, p. 78; 938, p. 84). A. L. Gouldner. SW. corner SE¼ sec. 19, T. 23 S., R. 3 W.

Water level, in feet below measuring point, 1942

Jan. 5	12.20	Apr. 1	12.20	July 7	11.44	Oct. 2	10.86
Feb. 3	12.18	May 4	11.94	Aug. 3	11.48	Nov. 2	10.57
Mar. 3	12.22	31	11.86	Sept. 1	11.33	Dec. 2	10.49

701 (*845, p. 121; 886, p. 204; 908, p. 79; 938, p. 85). Arkansas Valley Interurban Railway Co. NE. corner NW¼ sec. 3, T. 23 S., R. 1 W.

Water level, in feet below measuring point, 1942

Jan. 5	37.71	Apr. 1	37.48	July 7	37.08	Oct. 1	36.55
Feb. 3	37.64	May 4	37.44	Aug. 3	36.93	Nov. 2	36.45
Mar. 3	37.54	June 2	37.28	Sept. 1	36.71	Dec. 2	35.30

817,(*845, p. 121; 886, p. 204; 908, p. 79; 938, p. 85). City of Wichita. NW. corner sec. 1, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 2	14.97	Feb. 27	15.69	Apr. 24	13.26	June 19	13.67
9	15.29	Mar. 6	15.54	May 1	12.58	26	12.96
16	15.23	13	15.93	8	13.14	July 3	12.88
23	15.12	20	15.69	15	13.00	10	13.93
30	15.34	30	15.80	22	13.60	17	14.68
Feb. 6	15.51	Apr. 3	15.74	29	14.13	24	14.76
13	15.75	10	15.90	June 5	14.56	31	15.45
20	15.62	17	15.90	12	14.61	Aug. 7	15.01

a Pumping began Sept. 1, to Dec. 31, 1940.

817 (*845, p.121; 886,p.204; 908,p.79; 938,p.85). City of Wichita-Cont.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 14	15.42	Sept. 25	14.69	Oct. 30	13.43	Dec. 4	14.70
21	15.47	Oct. 2	15.06	Nov. 6	13.87	11	14.76
28	15.23	9	12.40	13	14.01	18	14.71
Sept. 4	15.43	16	12.97	20	14.38	24	14.70
11	13.80	23	12.83	27	14.40	31	14.39
18	14.39						

824 (*845,p.122; 886,p.205; 908,p.80; 938,p.86). City of Wichita. SE. corner sec. 22, T. 24 S., R. 1 W.

Water level, in feet below measuring point, 1942

Jan. 5	15.28	Apr. 1	15.29	July 7	13.80	Oct. 1	14.45
Feb. 3	15.27	May 4	12.58	Aug. 5	14.70	Nov. 2	13.57
Mar. 3	15.35	June 12	13.42	Sept. 1	15.27	Dec. 2	13.68

831 (*886,p.205; 908,p.80; 938,p.86). City of Wichita. NE. corner sec. 19, T. 24 S., R. 1 W.

Water level, in feet below measuring point, 1942

Jan. 5	18.65	Apr. 1	19.71	July 7	16.42	Oct. 1	18.13
Feb. 3	19.06	May 4	16.35	Aug. 5	17.88	Nov. 2	17.26
Mar. 3	19.50	June 2	17.86	Sept. 1	18.44	Dec. 2	18.20

832 (*886,p.205; 908,p.80; 938,p.86). City of Wichita. NE. corner sec. 19, T. 24 S., R. 1 W.

Water level, in feet below measuring point, 1942

Jan. 5	18.46	Apr. 1	19.27	July 7	16.24	Oct. 1	17.88
Feb. 3	18.85	May 4	15.94	Aug. 5	17.56	Nov. 2	17.01
Mar. 3	19.13	June 3	17.74	Sept. 1	18.14	Dec. 2	17.82

833 (*886,p.205; 908,p.80; 938,p.86). City of Wichita. SW. corner sec. 19, T. 24 S., R. 1 W.

Water level, in feet below measuring point, 1942

Feb. 3	15.25	May 4	7.58	Aug. 5	8.41	Nov. 2	8.11
Mar. 3	10.20	June 2	8.97	Sept. 1	9.27	Dec. 2	8.96
Apr. 1	10.05	July 7	7.66	Oct. 1	8.77		

852 (*886,p.206; 908,p.80; 938,p.86). City of Wichita. NE. corner sec. 29, T. 24 S., R. 1 W.

Water level, in feet below measuring point, 1942

Feb. 3	15.25	May 4	13.31	Aug. 5	15.04	Nov. 2	13.48
Mar. 3	15.74	June 2	14.40	Sept. 1	14.63	Dec. 2	14.25
Apr. 1	15.87	July 7	13.24	Oct. 1	14.12		

853 (*845,p. 122; 886,p.206; 908,p.80; 938,p.87). City of Wichita. NW. corner sec. 13, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 2	9.03	Apr. 10	10.20	July 10	8.65	Oct. 9	8.14
9	9.37	17	10.46	17	9.04	16	8.53
16	9.44	24	8.77	24	9.15	23	7.97
23	9.49	May 1	8.14	31	9.45	30	8.36
30	9.62	8	8.38	Aug. 7	8.90	Nov. 6	8.82
Feb. 6	9.82	15	8.41	14	9.26	13	8.95
13	9.96	22	8.78	21	9.45	20	9.22
20	10.03	29	9.12	28	9.23	27	9.37
27	10.14	June 5	9.43	Sept. 4	9.37	Dec. 4	9.52
Mar. 6	10.03	12	9.50	11	8.35	11	9.59
13	10.19	19	8.81	18	8.81	18	9.54
20	10.20	26	7.62	25	9.14	24	9.48
30	10.31	July 3	8.09	Oct. 2	9.42	31	9.26
Apr. 3	10.29						

854 (*845,p.122; 886,p.206; 908,p.81; 938,p.87). City of Wichita. SW.corner sec. 23, T. 23 S., R. 2 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	12.05	Apr. 10	12.87	July 10	10.90	Oct. 9	10.78
9	12.40	17	12.95	17	11.28	16	11.13
16	12.24	24	10.16	24	11.43	23	10.64
23	12.24	May 1	10.00	31	11.81	30	10.89
30	12.43	8	9.72	Aug. 7	11.90	Nov. 6	11.18
Feb. 6	12.66	15	10.01	14	12.07	13	11.35
13	12.71	22	10.53	21	12.07	20	11.44
20	12.74	29	10.93	28	12.10	27	11.35
27	12.83	June 5	11.27	Sept. 4	12.21	Dec. 4	11.65
Mar. 6	12.53	12	11.37	11	11.78	11	11.64
13	12.81	19	10.62	18	11.98	18	11.60
20	12.80	26	9.62	25	12.03	24	11.51
30	12.85	July 3	10.27	Oct. 2	12.22	31	11.07
Apr. 3	12.73						

875 (*886,p.208; 908,p.82; 938,p.). Owner of well, city of Wichita; owner of property, A. B. Havely. SE.corner sec. 17, T. 23 S., R. 3 W.

Water level, in feet below measuring point, 1942

Jan. 2	5.40	Apr. 3	5.21	July 3	2.78	Oct. 9	2.44
9	5.72	10	5.30	10	3.52	16	2.57
16	5.35	17	5.38	17	3.98	23	2.18
23	5.19	24	4.09	24	4.11	30	2.42
30	5.36	May 1	3.54	31	4.69	Nov. 6	2.77
Feb. 6	5.60	8	3.79	Aug. 7	4.55	13	2.92
13	5.56	15	3.99	14	4.71	20	2.94
20	5.56	22	4.10	21	4.60	27	2.75
27	5.71	29	4.38	28	3.28	Dec. 4	3.20
Mar. 6	5.08	June 5	4.61	Sept.11	2.45	11	2.93
13	5.50	12	4.48	18	2.97	18	2.53
20	5.40	19	3.19	25	3.06	24	2.37
30	5.44	26	2.70	Oct. 2	3.45	31	2.03

876 (*886,p.208; 908,p.82; 938,p.88). Owner of well, city of Wichita; owner of property, A. B. Havely. SE.corner sec. 17, T. 23 S., R. 3 W.

Water level, in feet below measuring point, 1942

Jan. 2	28.20	Apr. 3	28.24	July 3	27.44	Oct. 9	27.44
9	28.21	10	28.20	10	27.94	16	27.29
16	28.22	17	29.64	17	27.85	23	27.20
23	28.22	24	28.27	24	27.81	30	27.17
30	28.21	May 1	27.92	31	27.82	Nov. 6	27.17
Feb. 6	28.22	8	27.75	Aug. 7	27.81	13	27.18
13	28.27	15	27.63	14	27.80	20	27.12
20	28.28	22	27.61	21	27.75	27	27.11
27	28.28	29	27.60	28	27.62	Dec. 2	27.09
Mar. 6	28.25	June 5	27.67	Sept.11	27.48	11	27.02
13	28.28	12	27.70	18	27.43	18	27.05
20	28.24	19	27.65	25	27.43	24	27.00
30	28.23	26	27.59	Oct. 2	27.42	31	26.93

877(*836,p.208; 908,p.82; 938,p.88). Owner of well, city of Wichita; owner of property, A. B. Havely. SE.corner sec. 17, T. 23 S., R. 3 W.

Lowest daily water level, in feet below measuring point, 1942

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	16.55	16.67	16.81	16.79	16.47	16.40	15.87	15.94	15.66	15.24	14.92	14.92
2	16.55	16.67	16.81	16.76	16.47	16.41	15.85	15.95	15.64	15.24	14.94	14.94
3	16.58	16.67	16.81	16.78	16.47	16.41	15.83	15.95	15.57	15.24	14.95	14.96
4	16.59	16.66	16.81	16.76	16.47	16.41	15.82	15.94	15.54	15.18	14.91	14.97
5	16.60	16.66	16.82	16.77	16.45	16.41	15.82	15.92	15.50	15.17	14.92	14.93
6	16.59	16.69	16.80	16.78	16.45	16.40	15.82	15.93	.....	15.16	14.94	14.96
7	16.63	16.69	16.83	16.81	16.45	16.40	15.82	15.95	.....	15.11	14.94	14.96

877 (*886,p.208; 908,p.82; 938,p.88). Owner of well, city of Wichita; owner of property, A. B. Havely. SE.corner sec. 17, T. 23 S., R. 3 W.

Lowest daily water level, in feet below measuring point, 1942

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
8	16.63	16.68	16.84	16.82	16.44	16.40	15.81	15.95	....	15.09	14.92	14.97
9	16.63	16.71	16.84	16.83	16.41	16.40	15.81	15.95	....	15.10	14.90	14.97
10	16.62	16.73	16.83	16.85	16.40	16.37	15.82	15.95	....	15.10	14.95	14.97
11	16.58	16.73	16.84	16.86	16.37	16.37	15.82	15.96	15.30	15.09	14.96	14.98
12	16.62	16.73	16.84	16.85	16.35	16.39	15.82	15.96	15.29	15.07	14.95	14.99
13	16.62	16.73	16.83	16.85	16.39	16.39	15.84	15.95	15.28	15.08	14.94	15.01
14	16.63	16.73	16.83	16.85	16.41	16.39	15.85	15.94	15.25	15.08	14.94	15.02
15	16.63	16.69	16.81	16.86	16.41	16.36	15.86	15.90	15.24	15.08	14.88	15.01
16	16.59	16.72	16.80	16.88	16.39	16.34	15.87	15.92	15.22	15.05	14.88	15.01
17	16.58	16.76	16.82	16.89	16.38	16.28	15.88	15.91	15.22	15.05	14.91	14.98
18	16.61	16.78	16.81	16.86	16.41	16.25	15.88	15.91	15.23	15.04	14.91	15.00
19	16.64	16.78	16.80	16.80	16.40	16.18	15.89	15.91	15.24	14.96	14.90	15.01
20	16.64	16.81	16.81	16.81	16.41	16.15	15.89	15.91	15.24	14.95	14.93	15.03
21	16.64	16.80	16.83	16.78	16.40	16.11	15.90	15.91	15.24	14.94	14.96	15.02
22	16.60	16.78	16.82	16.76	16.37	16.11	15.91	15.90	15.23	14.93	14.96	14.93
23	16.59	16.79	16.80	16.69	16.38	16.10	15.91	15.83	15.23	14.95	14.95	14.93
24	16.59	16.81	16.77	16.67	16.38	16.10	15.90	15.82	15.24	14.95	14.91	14.93
25	16.60	16.81	16.74	16.58	16.38	15.93	15.91	15.79	15.24	14.96	14.91	14.92
26	16.60	16.81	16.80	16.58	16.35	15.92	15.92	15.70	15.23	14.96	14.96	14.91
27	16.62	16.82	16.81	16.57	16.36	15.92	15.92	15.69	15.25	14.91	14.96	14.94
28	16.62	16.81	.....	16.53	16.37	15.92	15.92	15.68	15.27	14.88	14.91	14.95
29	16.60	.....	.....	16.50	16.39	15.88	15.92	15.67	15.25	14.86	14.94	14.96
30	16.61	.....	16.82	16.47	16.40	15.88	15.93	15.67	15.24	14.91	14.92	14.96
31	16.66	.....	16.82	.....	16.40	.....	15.94	15.67	.....	14.94	.....	14.95

880 (*886,p.210; 908,p.83; 938,p.90). Owner of well, city of Wichita; owner of property, Peter Miller. SE.corner sec. 11, T. 24 S., R. 3 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	6.52	Apr. 3	6.61	June 26	5.44	Sept.18	5.88
16	6.43	10	6.71	July 3	5.90	Oct. 2	6.30
23	6.41	17	6.77	10	6.26	9	4.65
30	6.50	26	5.57	17	6.65	16	5.94
Feb. 6	6.60	May 1	5.77	24	6.72	23	5.34
13	6.67	8	6.02	31	6.95	30	5.65
20	6.69	15	6.16	Aug. 7	6.49	Nov. 6	5.90
27	6.72	22	6.36	14	6.76	13	6.00
Mar. 6	6.57	29	6.55	21	6.84	20	6.10
13	6.71	June 5	6.80	28	6.10	27	6.09
20	6.57	12	6.82	Sept.11	5.36	Dec. 4	6.27
30	6.60						

881 (*886,p.210; 908,p.83; 938,p.90). Owner of well, city of Wichita; owner of property, Peter Miller. SE.corner sec. 11, T. 24 S., R. 3 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	6.65	Apr. 3	6.76	June 26	5.74	Sept. 18	6.08
16	6.60	10	6.85	July 3	6.10	Oct. 2	6.48
23	6.56	17	6.91	10	6.49	9	4.92
30	6.64	26	5.86	17	6.80	16	6.14
Feb. 6	6.74	May 1	6.03	24	6.86	23	5.65
13	6.80	8	6.24	31	7.09	30	5.89
20	6.82	15	6.35	Aug. 7	6.70	Nov. 6	6.10
27	6.86	22	6.53	14	6.93	13	6.20
Mar. 6	6.71	29	6.71	21	6.98	20	6.27
13	6.84	June 5	6.92	28	6.33	27	6.29
20	6.70	12	7.01	Sept.11	5.68	Dec. 4	6.44
30	6.76						

888 (*886,p.212; 908,p.85; 938,p.91). Owner of well, city of Wichita; owner of property, C. K. Ellis. NW.corner sec. 17, T. 23 S., R. 2 W.

888 (*886, p. 212; 908, p. 85; 938, p. 91)--Continued.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	5.10	Apr. 10	3.95	July 10	3.29	Oct. 9	2.92
16	5.00	17	4.10	17	4.10	16	3.15
23	4.80	24	1.57	24	4.35	23	2.17
30	4.86	26	1.38	31	5.12	30	2.38
Feb. 6	5.08	May 1	2.03	Aug. 7	5.32	Nov. 6	2.57
13	5.16	8	2.03	14	5.63	13	2.73
20	5.00	15	2.26	21	5.44	20	2.78
27	4.87	22	2.45	28	5.19	27	2.60
Mar. 6	4.29	29	3.30	Sept. 4	5.43	Dec. 4	2.84
13	4.43	June 5	3.87	11	3.66	11	1.97
20	3.71	19	1.10	18	4.18	18	1.60
30	3.57	26	1.80	25	4.28	24	1.41
Apr. 3	3.64	July 3	2.20	Oct. 2	4.75	31	1.18

889 (*886,p.212; 908,p.85; 938,p.91). Owner of well, city of Wichita; owner of property, C. K. Ellis. NW. corner sec. 17, T. 23 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 9	5.83	Apr. 10	7.27	July 10	5.18	Oct. 9	4.57
16	5.92	17	7.63	17	5.84	16	5.14
23	6.11	24	5.66	24	6.07	23	4.89
30	6.51	26	5.25	31	6.30	30	4.34
Feb. 6	6.92	May 1	4.80	Aug. 7	6.42	Nov. 6	5.06
13	7.10	8	5.16	14	6.30	13	5.44
20	7.06	15	5.30	21	6.45	20	5.38
27	6.72	22	5.88	28	6.49	27	5.39
Mar. 6	7.15	29	6.40	Sept. 4	6.69	Dec. 4	5.75
13	6.58	June 5	6.60	11	5.02	11	6.15
20	6.08	19	5.38	18	4.94	18	5.80
30	6.28	26	4.49	25	5.34	24	5.22
Apr. 3	6.71	July 3	4.29	Oct. 2	5.83	31	5.19

890 (*886,p.212; 908,p.85; 938,p.92). Owner of well, city of Wichita; owner of property, J. F. Jorgenson. NE. corner SE¼SE¼ sec. 21, T. 24 S., R. 3 W.

Water level, in feet below measuring point, 1942

Jan. 5	4.84	Apr. 1	4.67	July 7	4.05	Oct. 1	1.76
Feb. 3	4.75	May 4	4.31	Aug. 3	4.73	Nov. 2	2.31
Mar. 3	4.70	June 2	4.74	Sept. 1	3.30	Dec. 2	2.63

891 (*886,p.213; 908,p.85; 938,p.92). Owner of well, city of Wichita; owner of property, Arthur McMurray. SE. corner sec. 31, T. 24 S., R. 3 W.

Water level, in feet below measuring point, 1942

Jan. 5	2.83	Apr. 1	2.88	July 7	1.89	Oct. 1	2.49
Feb. 3	2.80	May 11	.24	Aug. 3	2.69	Nov. 2	2.23
Mar. 3	2.65	June 2	2.41	Sept. 1	2.33	Dec. 2	2.48

892 (*886,p.213; 908,p.86; 938,p.92). Owner of well, city of Wichita; owner of property, Arthur McMurray. SE. corner sec. 31, T. 24 S., R. 3 W.

Water level, in feet below measuring point, 1942

Jan. 5	3.72	Apr. 1	3.74	July 7	2.59	Oct. 1	3.28
Feb. 3	3.68	May 11	.91	Aug. 3	3.65	Nov. 2	2.97
Mar. 3	3.56	June 2	3.21	Sept. 1	3.09	Dec. 2	3.28

893 (*886,p.213; 908,p.86; 938,p.92). Owner of well, city of Wichita; owner of property, Arthur McMurray. SE. corner sec. 31, T. 24 S., R. 3 W.

Water level, in feet below measuring point, 1942

Jan. 5	3.48	Apr. 1	3.56	July 7	1.82	Oct. 1	2.71
Feb. 3	3.52	May 4	1.03	Aug. 3	3.37	Nov. 2	2.54
Mar. 3	3.50	June 2	4.86	Sept. 1	2.66	Dec. 2	2.71

1174 (*908, p. 87; 938, p. 93). City of Wichita. SW. corner sec. 32, T. 24 S., R. 1 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	7.41	Apr. 28	6.64	Aug. 10	7.01	Oct. 15	6.27
26	7.50	May 18	6.79	24	7.38	29	5.99
Mar. 2	8.43	June 1	7.47	31	7.67	Nov. 12	6.44
23	8.31	July 6	6.17	Sept.14	6.55	Dec. 1	6.81
30	8.26	21	6.82	30	6.83	17	7.20
Apr. 13	8.73						

Wells Pumped or Affected by Pumping

2. Owner, Langwalter Estate; tenant, Stewart Roebuck. NW¼SW¼NW¼ sec. 23, T. 24 S., R. 2 W. Unused drilled well, diameter 6 inches, depth depth 24.6 feet. Measuring point, top of casing, east side, level with land surface, 8.34 feet below bench mark, 1,388.92 feet above sea level. Bench mark 18-A, square cut in top of west handrail of highway bridge, situated about 50 feet north and 50 feet west of well, 1,397.26 feet above sea level.

Water level, in feet below measuring point, 1937, 1942

Date	Water level	Date	Water level	Date	Water level
Aug. 25, 1937	5.89	May 8, 1942	5.82	Sept. 4, 1942	6.27
Jan. 23, 1942	6.45	15	6.04	11	4.65
30	6.50	22	6.36	18	5.88
Feb. 6	6.60	29	6.62	Oct. 2	6.68
13	6.58	June 5	6.86	6	4.29
20	6.51	12	6.84	9	5.16
27	6.47	19	3.43	16	6.00
Mar. 6	6.51	26	3.83	23	4.97
13	6.77	July 3	5.14	30	5.69
20	6.90	10	5.67	Nov. 6	5.93
30	7.13	17	5.97	13	6.17
Apr. 3	7.13	24	6.03	20	6.21
10	7.05	31	6.31	27	6.30
17	7.13	Aug. 7	4.96	Dec. 4	6.48
24	5.91	14	6.06	11	6.60
26	2.40	21	6.45	18	6.64
May 1	5.47	28	5.25	24	6.55

506 (*845, p. 120; 886, p. 203; 908, p. 78; 938, p. 84). Owner of well, city of Wichita; owner of property, W. G. Backhaus. NW¼NE¼ sec. 28, T. 23 S., R. 2 W.

Lowest daily water level, in feet below measuring point, 1942

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	16.83	17.47	17.73	17.86	13.70	16.62	13.82	17.88	17.77	17.36	15.18	17.03
2	16.83	17.48	17.74	17.93	13.89	16.67	13.63	17.86	17.78	17.38	15.39	17.05
3	16.93	17.50	17.73	17.95	14.19	16.71	13.96	17.61	17.75	17.38	15.43	17.10
4	16.97	17.58	17.76	17.97	14.20	16.75	14.26	17.50	17.73	16.89	15.51	17.11
5	16.98	17.63	17.76	18.03	14.24	16.78	14.36	17.34	17.08	15.65	15.72	17.13
6	16.97	17.71	17.73	18.06	14.39	16.92	14.50	17.12	15.87	13.44	15.90	17.16
7	17.01	17.71	17.75	18.11	14.55	16.84	14.74	17.05	14.97	11.60	15.88	17.17
8	17.00	17.67	17.75	18.12	14.69	16.74	15.02	17.07	14.98	11.62	15.92	17.17
9	17.03	17.64	17.75	18.15	14.83	16.73	15.25	17.16	15.20	12.00	16.08	17.16
10	17.03	17.65	17.72	18.18	14.94	16.63	15.46	17.24	15.38	12.31	16.18	17.12
11	17.00	17.62	17.72	18.20	14.93	16.61	15.61	17.29	15.51	12.58	16.21	17.12
12	17.04	17.62	17.70	18.21	14.48	16.66	15.78	17.28	15.63	12.87	16.24	17.11
13	17.05	17.63	17.68	18.23	14.16	16.49	15.91	17.25	15.73	13.14	16.35	17.11
14	17.10	17.62	17.68	18.24	14.42	16.51	16.00	17.31	15.85	13.33	16.35	17.10
15	17.10	17.59	17.65	18.23	14.68	16.64	16.18	17.28	16.00	13.50	16.34	17.02
16	17.05	17.64	17.64	18.22	14.89	16.70	16.50	17.24	16.19	13.71	16.46	17.02
17	16.99	17.69	17.66	18.22	15.14	16.60	16.71	16.98	16.35	13.95	16.53	17.00
18	16.97	17.71	17.63	18.04	15.32	15.93	16.86	17.00	16.50	13.86	16.57	17.02
19	16.98	17.70	17.54	17.77	15.49	15.35	16.84	17.09	16.68	13.33	16.62	17.04
20	16.98	17.72	17.45	17.05	15.61	14.83	16.71	17.21	16.73	12.82	16.72	17.06
21	16.97	17.71	17.46	15.70	15.70	14.70	16.64	17.32	16.71	12.72	16.79	17.04

506 (*845, p. 120; 886, p. 203; 908, p. 78; 938, p. 84)--Continued.

Lowest daily water level, in feet below measuring point, 1942

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
22	17.01	17.69	17.43	14.43	15.87	14.58	16.68	17.37	16.76	13.11	16.80	17.03
23	17.09	17.69	17.39	14.44	16.00	13.98	16.96	17.42	16.91	13.45	16.81	17.03
24	17.22	17.71	17.37	14.67	16.10	13.68	17.10	17.45	16.98	13.68	16.80	17.05
25	17.27	17.70	17.48	14.66	16.14	13.63	17.19	17.46	17.01	13.99	16.88	17.05
26	17.35	17.69	17.65	13.88	16.20	13.72	17.16	17.43	17.12	14.11	16.91	17.04
27	17.43	17.69	17.70	12.79	16.29	13.92	17.30	17.37	17.22	14.29	16.90	17.05
28	17.43	17.72	.....	12.23	16.37	14.25	17.47	17.34	17.25	14.49	16.91	16.75
29	17.39	.....	.....	12.91	16.48	14.33	17.46	17.47	17.30	14.67	16.95	16.65
30	17.44	.....	17.85	13.31	16.55	14.24	17.66	17.62	17.35	14.94	16.95	16.57
31	17.47	.....	17.87	.....	16.60	.....	17.80	17.72	.....	15.04	.....	16.51

507 (*845, p. 120; 886, p. 203; 908, p. 79; 938, p. 85). Owner of well city of Wichita; owner of property, W. G. Backhaus. NW¼NE¼ sec. 28, T. 23 S., R. 2 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	11.01	Apr. 10	15.59	July 10	11.42	Oct. 9	9.40
9	10.67	17	15.11	17	14.53	16	10.72
16	11.46	24	10.55	24	12.41	23	10.51
23	12.49	May 1	9.73	31	12.75	30	12.17
30	12.67	8	9.94	Aug. 7	12.03	Nov. 6	13.19
Feb. 6	14.08	15	10.50	14	12.34	13	13.79
13	12.55	22	12.22	21	12.77	20	13.38
20	13.13	29	12.90	28	14.26	27	13.45
27	12.37	June 5	12.21	Sept. 4	13.94	Dec. 4	13.75
Mar. 6	12.78	12	11.33	11	11.19	11	13.12
13	11.65	19	10.95	18	12.18	18	12.72
20	10.93	26	9.05	25	13.18	25	12.50
30	13.25	July 3	9.57	Oct. 2	13.47	31	12.06
Apr. 3	14.13						

821 (*886, p. 204; 908, p. 79; 938, p. 86). City of Wichita. NW. corn sec. 6, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Date		Date		Date		Date	
Jan. 9	17.07	Apr. 10	17.41	July 10	17.43	Oct. 16	17.80
16	17.07	17	17.50	17	17.55	23	17.78
23	17.05	24	17.57	24	17.59	30	17.77
30	17.09	May 1	17.57	31	17.60	Nov. 6	17.75
Feb. 6	17.13	8	17.52	Aug. 7	17.64	13	17.81
13	17.19	15	17.47	14	17.57	20	17.83
20	17.23	22	17.43	21	17.60	27	17.84
27	17.29	29	17.42	28	17.65	Dec. 4	17.87
Mar. 6	17.34	June 5	17.46	Sept. 11	17.72	11	17.90
13	17.35	12	17.53	18	17.71	18	17.98
20	17.30	19	17.53	25	17.74	24	18.01
30	17.27	26	17.37	Oct. 2	17.78	31	18.08
Apr. 3	17.32	July 3	17.30	9	17.80		

839 (*845, p. 122; 886, p. 206; 908, p. 80; 938, p. 86). City of Wichita. NE. corner sec. 35, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Date		Date		Date		Date	
Jan. 6	14.63	Apr. 28	15.18	Aug. 10	14.52	Oct. 15	13.93
26	14.30	May 18	14.97	24	14.71	29	14.10
Mar. 2	16.15	June 1	14.95	31	14.86	Nov. 12	14.79
23	15.70	July 6	13.10	Sept. 14	14.30	Dec. 1	15.20
30	15.54	21	14.08	30	14.20	17	15.44
Apr. 13	15.98						

872 (*886, p. 207; 908, p. 81; 938, p. 87). Owner of well, city of Wichita; owner of property, D. C. Buller. SE. corner sec. 31, T. 23 S., R. 2 W.

872 (*886, p. 207; 908, p. 81; 938, p. 87). Owner of well, city of Wichita; owner of property, D. C. Buller--Continued.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	26.37	Apr. 28	27.12	Aug. 10	24.79	Oct. 15	26.00
26	24.56	May 18	24.38	24	25.44	29	25.71
Mar. 2	27.40	June 1	24.36	31	27.53	Nov. 12	26.08
23	23.93	July 6	26.85	Sept.14	27.18	Dec. 1	26.14
Apr. 13	27.78	21	25.40	30	28.55	17	28.03

873 (*886, p. 207; 908, p. 81; 938, p. 87). Owner of well, city of Wichita; owner of property, D. C. Buller. SE.corner sec. 31, T. 23 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 5	26.71	Apr. 28	27.46	Aug. 10	24.93	Oct. 15	26.22
26	24.71	May 18	24.60	24	25.74	29	25.97
Mar. 2	27.80	June 1	24.49	31	27.89	Nov. 12	26.30
23	24.08	July 6	27.16	Sept.14	27.48	Dec. 1	26.39
Apr. 13	28.19	21	25.59	30	29.05	17	28.41

874 (*886, p. 207; 908, p. 81; 938, p. 88). Owner of well, city of Wichita; owner of property, D. C. Buller. SE.corner sec. 31, T. 23 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 5	33.93	Apr. 28	35.52	Aug. 10	29.45	Oct. 15	34.92
26	33.47	May 18	28.70	24	32.09	29	34.70
Mar. 2	37.05	June 1	29.19	31	37.19	Nov. 12	32.20
23	27.44	July 6	35.82	Sept.14	33.88	Dec. 1	33.02
Apr. 13	40.58	21	31.32	30	41.18	17	36.84

878 (*886, p. 209; 908, p. 83; 938, p. 89). Owner of well, city of Wichita; owner of property, C. Cadwell. SE.corner sec. 1, T. 24 S., R. 3 W.

Water level, in feet below measuring point, 1942

Jan. 9	21.00	Apr. 10	21.38	July 10	21.46	Oct. 16	21.83
16	21.02	17	21.40	17	21.52	23	21.83
23	21.04	24	21.38	24	21.54	30	21.86
30	20.98	May 1	21.34	31	21.57	Nov. 6	21.86
Feb. 6	21.10	8	21.36	Aug. 7	21.59	13	21.89
13	21.15	15	21.32	14	21.63	20	21.91
20	21.19	22	21.30	21	21.66	27	21.95
27	21.24	29	21.38	28	21.70	Dec. 4	21.98
Mar. 6	21.26	June 5	21.42	Sept.11	21.70	11	22.04
13	21.30	12	21.45	18	21.75	18	22.07
20	21.30	26	21.32	Oct. 2	21.81	24	22.06
30	21.33	July 3	21.38	9	21.83	31	22.10
Apr. 3	21.32						

879 (*886, p. 209; 908, p. 83; 938, p. 89). Owner of well, city of Wichita; owner of property, C. Cadwell. SE.corner sec. 1, T. 24 S., R. 3 W.

Water level, in feet below measuring point, 1942

Jan. 9	23.66	Apr. 10	23.97	July 10	24.28	Oct. 16	24.41
16	23.62	17	23.86	17	24.25	23	24.70
23	23.95	24	23.71	24	24.28	30	24.60
30	23.70	May 1	23.77	31	24.36	Nov. 6	24.51
Feb. 6	23.32	8	23.55	Aug. 7	24.32	13	24.51
13	24.09	15	23.49	14	24.35	20	24.75
20	24.21	22	23.57	21	24.52	27	24.78
27	24.02	29	23.89	28	24.54	Dec. 4	25.02
Mar. 6	23.76	June 5	24.18	Sept.11	24.65	11	24.97
13	23.64	12	23.97	18	24.74	18	24.94
20	23.46	26	23.95	Oct. 2	24.73	24	24.80
30	23.80	July 3	23.96	9	24.58	31	24.70
Apr. 3	23.80						

883 (*886, p. 210; 908, p. 84; 938, p. 90). Owner of well, city of Wichita; owner of property, Maggie Holle. NW. corner sec. 26, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	a19.76	Apr. 28	a18.79	Aug. 10	a19.60	Oct. 15	a18.95
26	a19.78	May 18	a19.43	24	a19.55	29	a18.79
Mar. 2	17.92	June 1	a19.44	31	a18.96	Nov. 12	a20.04
23	a20.17	July 6	a19.39	Sept.14	a19.23	Dec. 1	a19.98
Apr. 10	19.06	21	a18.60	30	a20.62	17	a20.12
13	18.97						

884 (*886, p. 211; 908, p. 84; 938, p. 90). Owner of well, city of Wichita; owner of property, Maggie Holle. NW. corner sec. 26, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 6	a19.76	Apr. 28	a18.71	Aug. 10	a19.49	Oct. 15	a18.90
26	a19.45	May 18	a19.35	24	a19.50	29	a18.76
Mar. 2	17.83	June 1	a19.42	31	a18.56	Nov. 12	a20.10
23	a20.13	July 6	a19.30	Sept.14	a19.16	Dec. 1	a19.94
Apr. 10	18.98	21	a18.20	30	a20.64	17	a20.06
13	18.89						

885 (*886, p. 211; 908, p. 84; 938, p. 91). Owner of well, city of Wichita; owner of property, Maggie Holle. NW. corner sec. 26, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 6	a20.81	Apr. 28	a18.66	Aug. 10	a21.53	Oct. 15	a18.83
26	a20.73	May 18	a19.16	24	a18.67	29	a20.63
Mar. 2	17.68	June 1	a19.25	31	a21.96	Nov. 12	a21.06
23	a21.12	July 6	a20.55	Sept.14	a19.00	Dec. 1	a21.04
Apr. 10	18.82	21	a19.49	30	a21.50	17	a21.01
13	18.73						

886 (*886, p. 211; 908, p. 84; 938, p. 91). Owner of well, city of Wichita; owner of property, E. H. Haiber. NE. corner NW¼ sec. 16, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 6	a 9.63	Apr. 28	a 8.80	Aug. 10	a12.20	Oct. 15	a11.29
26	a 9.52	May 18	a 9.15	24	a 9.93	29	a11.51
Mar. 3	7.58	June 1	a11.53	31	a 9.68	Nov. 12	a11.71
23	a11.83	July 6	a 9.30	Sept.14	a10.15	Dec. 1	a10.91
Apr. 13	8.20	21	a 9.49	30	a10.80		

887 (*886, p. 211; 908, p. 85; 938, p. 91). Owner of well, city of Wichita; owner of property, F. H. Haiber. NE. corner NW¼ sec. 16, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 6	a10.48	Apr. 28	a 9.29	Aug. 10	a13.56	Oct. 15	a12.31
26	a10.12	May 18	a 9.70	24	a10.32	29	a12.60
Mar. 3	7.80	June 1	a12.70	31	a 9.98	Nov. 12	a13.04
23	a12.94	July 6	a10.05	Sept.14	a10.86	Dec. 1	a11.59
Apr. 13	8.44	21	a10.17	30	a11.56		

894 (*886, p. 213; 908, p. 86; 938, p. 92). Owner of well, city of Wichita; owner of property, H. A. Lawrence. NE. corner sec. 18, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 6	a18.67	Apr. 28	a18.35	Aug. 10	a11.12	Oct. 15	a19.93
26	a19.15	May 8	18.56	24	a16.73	29	a20.02
Mar. 3	a18.77	June 1	a19.20	31	a17.86	Nov. 12	a20.14
23	a18.95	July 6	a19.39	Sept.14	a19.10	Dec. 1	a20.20
Apr. 13	18.61	21	a 8.09	30	a19.77	17	a20.26

a Nearby well pumping.

895 (*886, p. 213; 908, p. 86; 938, p. 92). Owner of well, city of Wichita; owner of property, H. A. Lawrence. NE. corner sec. 18, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	a19.63	Apr. 28	a19.08	Aug. 10	a21.40	Oct. 15	a20.75
26	a20.33	May 18	19.04	24	a20.67	30	a21.43
Mar. 3	a19.39	June 1	a20.30	31	a21.09	Nov. 12	a21.60
23	a19.88	July 6	a20.74	Sept.14	a22.02	Dec. 1	a22.30
Apr. 13	18.81	21	a21.05	30	a21.09	17	a21.91

1112 (*886, p. 214; 908, p. 87; 938, p. 93). Owner, M. H. Miller; tenant, A. C. Unruh. NW. corner NE¼ sec. 31, T. 23 S., R. 2 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	19.02	Apr. 28	18.90	Aug. 10	18.95	Oct. 15	18.84
26	19.00	May 18	18.74	24	19.03	29	18.63
Mar. 2	a19.07	June 1	18.75	31	19.04	Nov. 12	a18.69
23	19.08	July 6	18.55	Sept.14	18.97	Dec. 1	18.77
Apr. 13	19.10	21	18.80	30	19.04	18	a18.80

1186. City of Wichita. SW. corner sec. 13, T. 24 S., R. 2 W. On right-of-way of township road. Driven observation well, diameter, 1¼ inches, depth 18.8 feet. Measuring point, top of pipe, 1.0 foot above land surface, 1,389.84 feet above sea level.

Water level, in feet above measuring point, 1941-42

Date	Water level	Date	Water level	Date	Water level
May 23, 1941	13.11	May 29, 1942	12.34	Sept.18, 1942	11.10
Feb. 6, 1942	11.53	June 5	12.46	25	12.21
13	12.56	12	12.48	Oct. 2	12.36
20	12.58	19	10.89	9	11.40
27	12.60	26	10.90	16	12.05
Mar. 6	12.54	July 3	11.74	23	11.30
13	12.63	10	12.04	30	11.93
20	12.70	17	12.25	Nov. 6	12.10
30	12.73	24	12.17	13	12.16
Apr. 3	12.72	31	12.37	20	12.27
10	12.77	Aug. 7	11.66	27	12.27
17	12.80	14	12.21	Dec. 4	12.38
24	11.90	21	12.31	11	12.43
May 1	11.79	28	11.34	18	12.35
8	11.98	Sept.4	12.11	24	12.41
15	12.03	11	11.34	31	12.24
22	12.18				

1188. City of Wichita. NE. corner sec. 21, T. 24 S., R. 2 W. On right-of-way of township road. Driven observation well, diameter 1¼ inches, depth 20.8 feet. Measuring point, top of pipe, 1.0 foot above land surface, 1,394.97 feet above sea level.

Water level, in feet above measuring point, 1941-42

May 22, 1941	6.58	May 8, 1942	5.21	Aug. 28, 1942	6.04
Jan.30, 1942	6.38	15	5.32	Sept.11	5.78
Feb. 6	6.62	22	5.65	18	6.34
13	6.44	29	5.93	Oct. 2	6.54
20	6.31	June 5	6.46	9	6.08
27	6.22	12	6.78	16	6.58
Mar. 6	6.13	19	5.34	23	5.79
13	6.35	26	4.69	30	6.03
20	6.61	July 3	5.25	Nov. 6	6.40
30	6.69	10	5.77	13	6.78
Apr. 3	6.63	17	6.29	20	7.09
10	6.50	24	6.59	27	7.28
17	6.45	31	6.92	Dec. 4	7.06
21	5.95	Aug. 7	6.34	11	6.90
26	4.86	14	7.04	18	6.71
May 1	5.10	21	7.20	24	6.62

a Nearby well pumping.

1189. City of Wichita. SW. corner sec. 16, T. 24 S., R. 2 W. On right-of-way of township road. Driven observation well, diameter 1¼ inches depth 18.8 feet. Measuring point, top of pipe, 2.0 feet above land surface 1,408.21 feet above sea level.

Water level, in feet below measuring point, 1941-42

Date	Water level	Date	Water level	Date	Water level
May 27, 1941	9.85	May 8, 1942	8.89	Aug. 28, 1942	9.25
Jan.30, 1942	8.99	15	8.82	Sept.11	9.16
Feb. 6	9.70	22	8.88	18	9.63
13	9.55	29	9.18	Oct. 2	10.29
20	9.52	June 5	9.72	9	9.49
27	9.32	12	9.76	16	9.73
Mar. 6	9.19	19	8.77	23	9.27
13	9.59	26	8.69	30	9.49
20	9.79	July 3	9.06	Nov. 6	9.62
30	10.17	10	9.44	13	9.69
Apr. 3	10.05	17	9.81	20	9.76
10	9.80	24	9.80	27	9.93
17	9.80	31	10.11	Dec. 4	9.94
21	9.30	Aug. 7	9.64	11	10.06
26	8.50	14	10.25	18	10.03
May 1	8.81	21	10.15	24	10.34

1192 (*938, p. 93). City of Wichita. SE¼SE¼ sec. 30, T. 23 S., R. 2 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	16.87	Apr. 28	16.83	Aug. 10	16.89	Oct. 15	16.80
26	16.83	May 18	16.75	24	16.92	29	16.64
Mar. 2	a16.86	June 1	16.74	31	16.94	Nov. 12	a16.63
23	16.88	July 6	16.62	Sept.14	16.89	Dec. 1	a16.61
Apr. 13	16.94	21	16.75	30	16.95	18	a16.64

M-1 (*908, p. 88; 938, p. 93). City of Wichita. NW. corner sec. 29, T. 23 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 5	25.47	Apr. 28	33.58	Aug. 10	28.12	Oct. 15	b73.51
26	27.88	May 18	b73.74	24	30.41	29	28.60
Mar. 2	b73.28	June 1	b74.49	31	32.14	Nov. 12	30.04
23	24.30	July 6	28.38	Sept.14	25.95	Dec. 1	b63.90
Apr. 13	b74.00	21	33.43	30	27.89	18	30.47

M-1a (*908, p. 89; 938, p. 94). City of Wichita. NW. corner sec. 29, T. 23 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 5	22.57	Apr. 28	29.79	Aug. 10	24.55	Oct. 15	c37.65
26	24.53	May 18	c36.55	24	26.51	29	35.29
Mar. 2	c37.21	June 1	c37.28	31	28.16	Nov. 12	26.17
23	21.42	July 6	24.90	Sept.14	22.75	Dec. 1	c27.48
Apr. 13	c38.74	21	29.55	30	24.55	18	26.63

M-1b (*908, p. 89; 938, p. 94). City of Wichita. NW. corner sec. 29, T. 23 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 5	21.23	Apr. 28	28.64	Aug. 10	23.28	Oct. 15	c37.86
26	23.31	May 18	c33.54	24	25.30	29	24.05
Mar. 2	c34.31	June 1	c34.32	31	27.07	Nov. 12	25.00
23	20.01	July 6	23.76	Sept.14	21.40	Dec. 1	c25.33
Apr. 13	c35.89	21	28.39	30	23.32	18	25.67

a Nearby well pumping.
b Well pumping.
c Well M-1 pumping.

M-2 (*908.p.89; 938,p.94). City of Wichita. NW¼SW¼ sec. 29, T. 23 S., R. 2 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	31.63	Apr. 28	a98.95	Aug. 10	a95.43	Oct. 15	41.57
26	38.71	May 18	36.78	24	a95.91	29	38.95
Mar. 2	40.73	June 1	38.01	31	a92.44	Nov. 12	a95.71
23	29.43	July 6	a77.28	Sept.14	a91.30	Dec. 1	40.77
Apr. 13	45.53	21	a98.06	30	39.59	18	a93.03

M-2a (*908,p. 90; 938,p. 94). City of Wichita. NW¼SW¼ sec. 29, T. 23 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 5	23.90	Apr. 28	b34.05	Aug. 10	b28.40	Oct. 15	35.94
26	26.20	May 18	32.71	24	b30.99	29	27.79
Mar. 2	35.04	June 1	33.79	31	b33.57	Nov. 12	b30.87
23	22.17	July 6	b29.31	Sept.14	b25.24	Dec. 1	28.78
Apr. 13	37.01	21	b34.08	30	27.56	18	b31.70

M-2b (*908,p.90; 938,p. 94). City of Wichita. NW¼SW¼ sec. 29, T. 23 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 5	26.86	Apr. 28	b36.21	Aug. 10	b29.25	Oct. 15	37.95
26	31.70	May 18	31.54	24	b33.05	29	32.41
Mar. 2	37.02	June 1	33.74	31	b37.78	Nov. 12	b33.15
23	24.70	July 6	b32.75	Sept.14	b27.80	Dec. 1	31.81
Apr. 13	38.50	21	b35.38	30	32.33	18	b35.00

M-3 (*908,p. 91; 938, p. 94). City of Wichita. SE¼SE¼SW¼ sec. 29, T. 23 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 5	32.51	Apr. 28	37.47	Aug. 10	35.54	Oct. 15	a64.00
26	a74.43	May 18	a70.23	24	a75.41	29	a73.83
Mar. 2	38.16	June 2	35.63	31	a75.91	Nov. 12	a75.35
23	31.26	July 6	36.98	Sept.14	a66.64	Dec. 1	a71.80
Apr. 13	a74.70	21	38.87	30	a73.91	18	38.81

M-3a (*908,p. 91; 938, p. 95). City of Wichita. SE¼SE¼SW¼ sec. 29, T. 23 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 5	27.77	Apr. 28	33.73	Aug. 10	29.56	Oct. 15	c36.48
26	c38.09	May 18	a31.79	24	c38.44	29	c38.72
Mar. 2	35.05	June 2	30.98	31	c42.98	Nov. 12	c39.02
23	25.65	July 6	32.77	Sept.14	c29.28	Dec. 1	c37.83
Apr. 13	c43.12	21	34.69	30	c39.83	18	34.81

M-3b (*908,p. 92; 938, p. 95). City of Wichita. SE¼SE¼SW¼ sec. 29, T. 23 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 5	31.31	Apr. 28	37.42	Aug. 10	33.22	Oct. 15	c40.74
26	c42.67	May 18	c34.94	24	c41.69	29	c42.29
Mar. 2	39.03	June 2	34.52	31	c46.34	Nov. 12	c42.13
23	29.14	July 6	36.58	Sept.14	c32.91	Dec. 1	c40.93
Apr. 13	c46.45	21	38.39	30	c43.39	18	38.60

M-4 (*908, p. 92; 938, p. 95). City of Wichita. SE. corner sec. 30, T. 23 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 5	32.73	Apr. 28	a78.33	Aug. 10	35.04	Oct. 15	a78.33
26	40.57	May 18	34.16	24	40.13	29	40.91
Mar. 2	a75.09	June 1	a76.35	31	a78.83	Nov. 12	40.19
23	30.07	July 3	a73.83	Sept.14	33.00	Dec. 1	38.84
Apr. 13	45.60	13	a79.33	30	41.59	18	a78.83

a Well pumping.
b Well M-2 pumping.
c Well M-3 pumping.

M-4a (*908,p.93; 938,p.95). City of Wichita. SE. corner sec. 30, T. 23 S., R. 2 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	30.60	Apr. 28	a40.58	Aug. 10	32.42	Oct. 15	a42.77
26	36.95	May 18	32.81	24	37.06	29	37.54
Mar. 2	a41.28	June 1	a35.80	31	a43.91	Nov. 12	37.36
23	28.03	July 6	a38.11	Sept.14	30.24	Dec. 1	36.39
Apr. 13	42.09	21	a40.93	30	38.23	18	a40.37

M-4b (*908,p.93; 938,p.95). City of Wichita. SE. corner sec. 30, T. 23 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 5	31.40	Apr. 28	a40.43	Aug. 10	32.98	Oct. 15	a42.55
26	37.19	May 18	33.55	24	37.51	29	37.77
Mar. 2	a41.20	June 1	a36.00	31	a43.52	Nov. 12	37.61
23	28.98	July 6	a38.20	Sept.14	31.14	Dec. 1	36.67
Apr. 13	42.08	21	a40.81	30	38.47	18	a40.30

M-5 (*908,p.94; 938,p.96). City of Wichita. NW¼SW¼ sec. 32, T. 23 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 5	28.46	Apr. 28	31.25	Aug. 10	28.73	Oct. 15	b90.91
26	b93.91	May 18	29.33	24	30.56	29	b93.30
Mar. 2	b92.41	June 1	28.18	31	38.69	Nov. 12	31.53
23	26.29	July 6	30.95	Sept.14	29.78	Dec. 1	30.71
Apr. 13	b93.91	21	33.09	30	b91.91		

M-5a (*908,p.94; 938,p.96). City of Wichita. NW¼SW¼ sec. 32, T. 23 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 5	26.27	Apr. 28	27.40	Aug. 10	24.83	Oct. 15	c26.98
26	c25.57	May 18	24.51	24	25.68	29	c26.54
Mar. 2	c28.23	June 1	24.62	31	28.26	Nov. 12	26.30
23	23.84	July 6	26.95	Sept.14	26.96	Dec. 1	26.27
Apr. 13	c28.64	21	25.85	30	c29.11		

M-5b (*908,p.95; 938,p.96). City of Wichita. NW¼SW¼ sec. 32, T. 23 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 5	26.44	Apr. 28	27.44	Aug. 10	26.00	Oct. 15	c26.77
26	c25.44	May 18	24.76	24	25.60	29	c26.40
Mar. 2	c27.94	June 1	24.82	31	28.05	Nov. 12	26.36
23	24.12	July 6	27.05	Sept.14	27.10	Dec. 1	26.34
Apr. 13	c28.30	21	25.92	30	c28.85		

M-6 (*908,p.95; 938,p.96). City of Wichita. SW¼SW¼ sec. 32, T. 23 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 5	b80.39	Apr. 28	b78.55	Aug. 10	27.27	Oct. 15	28.98
26	27.55	May 18	26.84	24	b75.91	29	28.71
Mar. 2	b78.38	June 1	26.88	31	b75.23	Nov. 12	28.97
23	26.30	July 6	b59.28	Sept.14	b74.45	Dec. 1	29.01
Apr. 13	b76.91	21	28.73	30	b74.58	17	b75.01

M-6a (*908.p.96; 938,p.96). City of Wichita. SW¼SW¼ sec. 32, T. 23 S., R. 2 W.

a Well M-4 pumping.
b Well pumping.
c Well M-5 pumping.

M-6a (*908,p.96; 938,p.96). City of Wichita--Continued.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	a28.27	Apr. 28	a29.06	Aug. 10	26.38	Oct. 15	27.70
26	26.29	May 18	25.94	24	a27.10	29	27.41
Mar. 2	a29.40	June 1	25.95	31	a29.46	Nov. 12	27.70
23	25.50	July 6	a28.67	Sept.14	a28.97	Dec. 1	27.80
Apr. 13	a29.80	21	27.06	30	a30.54	17	a30.95

M-6b (*908,p.96; 938,p.97). City of Wichita. SW¼SW¼ sec. 32, T. 23 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 5	a27.85	Apr. 28	a28.68	Aug. 10	26.11	Oct. 15	27.50
26	26.05	May 18	25.70	24	a26.99	29	27.20
Mar. 2	a29.10	June 1	25.77	31	a29.11	Nov. 12	27.40
23	25.23	July 6	a28.30	Sept.14	a28.57	Dec. 1	27.45
Apr. 13	a29.45	21	26.83	30	a30.14	17	a29.55

M-7 (*908,p.97; 938,p.97). City of Wichita. NW. corner SW¼ sec. 16, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 6	b26.03	Apr. 28	17.73	Aug. 10	b27.48	Oct. 15	19.07
26	b27.00	May 18	17.40	24	b27.41	29	18.21
Mar. 2	17.45	June 1	b26.20	31	b27.42	Nov. 12	18.64
23	b26.68	July 6	b20.32	Sept.14	18.91	Dec. 1	18.83
Apr. 13	18.12	21	19.81	30	b27.59	18	b26.45

M-7a (*908,p.97; 938,p.97). City of Wichita. NW. corner SW¼ sec. 16, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 6	c20.15	Apr. 28	16.58	Aug. 10	c20.90	Oct. 15	17.90
26	c20.68	May 18	16.43	24	c20.75	29	17.47
Mar. 2	16.19	June 1	c19.91	31	c20.68	Nov. 12	17.48
23	c20.32	July 6	c18.52	Sept.14	17.75	Dec. 1	17.66
Apr. 13	16.88	21	18.71	30	c20.71	18	c19.81

M-7b (*908,p.98; 938,p.97). City of Wichita. NW. corner SW¼ sec. 16, T. 24 S., R. 2 W.

Water levels, in feet below measuring point, 1942

Jan. 6	c18.80	Apr. 28	16.74	Aug. 10	c19.80	Oct. 15	18.00
26	c19.44	May 18	16.71	24	c19.55	29	17.76
Mar. 2	16.27	June 1	c18.74	31	c19.49	Nov. 12	17.70
23	c19.15	July 6	c18.03	Sept.14	17.94	Dec. 1	17.81
Apr. 13	16.94	21	18.80	30	c19.60	18	c18.78

M-8 (*908,p.98; 938,p.97). City of Wichita. SE¼NE¼ sec. 6, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 6	26.17	Apr. 28	26.70	Aug. 10	25.96	Oct. 15	25.65
26	25.78	May 18	25.23	24	26.25	29	26.90
Mar. 2	27.61	June 1	25.38	31	27.69	Nov. 12	b82.41
23	24.87	July 6	b69.11	Sept.14	27.18	Dec. 1	b78.78
Apr. 13	b79.78	21	26.60	30	b81.13	17	28.34

M-8a (*908,p.99; 938,p.98) City of Wichita. SE¼NE¼ sec. 6, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 6	22.86	Apr. 28	23.41	Aug. 10	23.44	Oct. 15	24.15
26	22.35	May 18	22.63	24	23.38	28	23.95
Mar. 2	23.84	June 1	22.59	31	23.97	Nov. 12	d24.64
23	22.54	July 6	d24.95	Sept.14	24.15	Dec. 1	d23.83
Apr. 13	d24.13	21	23.63	30	d25.14	17	24.97

a Well M-6 pumping.
b Well pumping.
c Well M-7 pumping.
d Well M-8 pumping.

M-8b (*908,p.99; 938,p.98). City of Wichita. SE¼NE¼ sec. 6, T. 24 S. R. 2 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	21.68	Apr. 28	22.27	Aug. 10	22.01	Oct. 15	22.82
26	21.02	May 18	21.30	24	21.99	29	22.60
Mar. 2	22.60	June 1	21.23	31	22.77	Nov. 12	a23.28
23	21.12	July 6	a22.83	Sept.14	22.90	Dec. 1	a23.56
Apr. 13	a23.08	21	22.36	30	a24.10	18	23.77

M-9 (*908,p.99; 938,p.98). City of Wichita. NW¼NW¼ sec. 8, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 6	20.23	Apr. 28	20.40	Aug. 10	b47.54	Oct. 15	b48.86
26	20.63	May 18	20.96	24	b48.64	29	b48.67
Mar. 3	21.66	June 1	b50.28	31	b48.66	Nov. 12	22.53
23	21.00	July 6	21.73	Sept.14	b48.87	Dec. 1	b47.11
Apr. 13	20.74	21	b50.48	30	b48.00	18	b47.69

M-9a (*908,p.100; 938,p.98). City of Wichita. NW¼NW¼ sec. 8, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 6	18.72	Apr. 28	18.89	Aug. 10	c21.37	Oct. 15	c21.05
26	18.95	May 18	19.12	24	c21.64	29	c21.80
Mar. 3	20.00	June 1	c20.35	31	c21.78	Nov. 12	20.74
23	19.20	July 6	19.75	Sept.14	c22.06	Dec. 1	c22.01
Apr. 13	19.18	21	c20.82	30	c21.71	18	c22.20

M-9b (*908,p.100; 938,p.98). City of Wichita. NW¼NW¼ sec. 8, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 6	17.64	Apr. 28	17.78	Aug. 10	c19.97	Oct. 15	c19.86
26	17.95	May 18	18.02	24	c20.27	29	c20.41
Mar. 3	18.95	June 1	c19.00	31	c20.37	Nov. 12	19.64
23	18.10	July 6	18.76	Sept.14	c20.71	Dec. 1	c20.70
Apr. 13	18.04	21	c19.45	30	c20.36	18	c20.90

M-10 (*908,p.101; 938,p.98). City of Wichita. NE¼NW¼ sec. 8, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 6	21.87	Apr. 28	22.27	Aug. 10	b66.42	Oct. 15	25.07
26	22.75	May 18	b66.54	24	b66.83	29	b64.66
Mar. 2	23.03	June 1	24.02	31	b64.19	Nov. 12	25.15
23	23.03	July 6	23.61	Sept.14	b64.76	Dec. 1	26.02
Apr. 13	22.64	21	b66.60	30	25.56	17	25.23

M-10a (*908,p.101; 938,p.99). City of Wichita. NE¼NW¼ sec. 8, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 6	19.71	Apr. 28	19.98	Aug. 10	d25.30	Oct. 15	22.27
26	20.26	May 18	d23.55	24	d25.41	29	d25.20
Mar. 2	20.96	June 1	21.02	31	d25.28	Nov. 12	22.30
23	20.40	July 6	21.01	Sept.14	d25.60	Dec. 1	22.90
Apr. 13	20.13	21	d24.58	30	22.50	17	22.83

M-10b (*908,p.102; 938,p.99). City of Wichita. NE¼NW¼ sec. 8, T. 24 S., R. 2 W.

a Well M-8 pumping.
b Well pumping.
c Well M-9 pumping.
d Well M-10 pumping.

M-10b (*908,p.102; 938,p.99). City of Wichita--Continued.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	19.00	Apr. 28	19.18	Aug. 10	a22.32	Oct. 15	21.12
26	19.23	May 18	a20.61	24	a22.51	29	a22.37
Mar. 2	20.42	June 1	20.07	31	a21.63	Nov. 12	21.19
23	19.51	July 6	19.93	Sept.14	a22.84	Dec. 1	21.80
Apr. 13	19.38	21	a21.56	30	21.50	17	21.98

M-11 (*908,p.102; 938,p.99). City of Wichita. SW¼NW¼ sec. 8, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 6	16.46	Apr. 28	16.43	Aug. 10	18.90	Oct. 15	19.02
26	17.11	May 18	16.65	24	b37.65	29	19.20
Mar. 3	b36.73	June 1	b37.08	31	b37.32	Nov. 12	18.71
23	b37.79	July 6	b32.43	Sept.14	b38.05	Dec. 1	b37.21
Apr. 13	16.55	21	18.58	30	b37.36	18	b37.36

M-11a (*908,p.103; 938,p.99). City of Wichita. SW¼NW¼ sec. 8, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 6	14.67	Apr. 28	14.82	Aug. 10	16.74	Oct. 15	17.29
26	15.27	May 18	15.03	24	c18.25	29	17.25
Mar. 3	c17.30	June 1	c17.43	31	c18.26	Nov. 12	16.87
23	c16.64	July 6	c17.40	Sept.14	c19.09	Dec. 1	c19.01
Apr. 13	15.03	21	16.76	30	c18.61	18	c19.04

M-11b (*908,p.103; 938,p.99). City of Wichita. SW¼NW¼ sec. 8, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 6	15.88	Apr. 28	15.93	Aug. 10	17.85	Oct. 15	18.32
26	16.35	May 18	16.14	24	c17.98	29	19.12
Mar. 3	c17.54	June 1	c17.58	31	c18.83	Nov. 12	17.94
23	c16.74	July 6	c17.71	Sept.14	c19.25	Dec. 1	c19.23
Apr. 13	16.06	21	20.79	30	c18.80	18	c19.30

M-12 (*908,p.104; 938,p.99). City of Wichita. NW¼SW¼ sec. 9, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 6	20.85	Apr. 28	20.95	Aug. 10	b50.73	Oct. 15	b49.32
26	21.78	May 18	22.41	24	22.73	29	b49.85
Mar. 3	19.39	June 1	b49.16	31	22.51	Nov. 12	b50.13
23	b49.76	July 6	b38.41	Sept.14	23.96	Dec. 1	b47.84
Apr. 13	19.55	21	23.53	30	b48.66	18	23.18

M-12a (*908,p.104; 938,p.100). City of Wichita. NW¼SW¼ sec. 9, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 6	19.09	Apr. 28	19.24	Aug. 10	d28.04	Oct. 15	d27.15
26	20.11	May 18	20.52	24	20.97	29	d27.70
Mar. 3	17.81	June 1	d26.25	31	20.84	Nov. 12	d27.72
23	d26.19	July 6	d23.22	Sept.14	22.15	Dec. 1	d27.04
Apr. 13	18.34	21	21.80	30	d26.02	18	21.49

M-12b (*908,p.104; 938,p.100). City of Wichita. NW¼SW¼ sec. 9, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 6	19.87	Apr. 28	20.12	Aug. 10	d28.38	Oct. 15	d27.64
26	20.90	May 18	21.30	24	21.70	29	d28.10
Mar. 3	18.56	June 1	d26.63	31	21.54	Nov. 12	d28.10
23	26.55	July 6	d23.83	Sept.14	22.92	Dec. 1	d27.45
Apr. 13	19.09	21	22.61	30	d26.51	18	22.39

a Well M-10 pumping.
b Well pumping.
c Well M-11 pumping.
d Well M-12 pumping.

M-13 (*908,p.105; 938,p.100). City of Wichita. NW¼NE¼ sec. 17, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	a39.30	Apr. 28	a38.97	Aug. 10	a40.87	Oct. 15	19.60
26	a40.03	May 18	17.53	24	18.57	29	a41.55
Mar. 3	16.39	June 1	18.62	31	a39.63	Nov. 12	a42.52
23	18.36	July 6	a33.80	Sept.14	a40.45	Dec. 1	a40.98
Apr. 13	16.58	21	a41.27	30	19.09		

M-13a (*908,p.105; 938,p.100) City of Wichita. NW¼NE¼ sec. 17, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	b17.17	Apr. 28	b17.05	Aug. 10	b18.78	Oct. 15	17.50
26	b17.51	May 18	16.39	24	17.27	29	b18.98
Mar. 3	15.06	June 1	16.53	31	b18.07	Nov. 12	b18.90
23	16.32	July 6	b17.81	Sept.14	b18.30	Dec. 1	b18.58
Apr. 13	15.51	21	b18.53	30	17.20		

M-13b (*908,p.106; 938,p.100). City of Wichita. NW¼NE¼ sec. 17, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	b16.50	Apr. 28	b17.02	Aug. 10	b18.71	Oct. 15	18.15
26	b16.87	May 18	17.25	24	17.93	29	b18.98
Mar. 3	15.35	June 1	17.01	31	b17.93	Nov. 12	b18.84
23	16.80	July 6	b17.96	Sept.14	b17.96	Dec. 1	b18.36
Apr. 13	15.95	21	b18.36	30	17.55		

M-14 (*908,p.106; 938,p.101). City of Wichita. NW. corner NW¼ sec. 16, T. 24 S.. R. 2 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	18.51	Apr. 28	a37.37	Aug. 10	22.84	Oct. 15	a38.40
26	18.98	May 18	a38.02	24	20.73	29	a27.91
Mar. 3	17.36	June 1	a37.60	31	20.05	Nov. 12	21.34
23	a37.25	July 6	a28.50	Sept.14	19.99	Dec. 1	20.71
Apr. 13	18.13	21	a38.98	30	a35.66	18	22.63

M-14a (*908,p.107; 938,p.101). City of Wichita. NW¼NW¼ sec. 16, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	16.90	Apr. 28	c26.40	Aug. 10	21.27	Oct. 15	c27.38
26	17.14	May 18	c27.05	24	19.19	29	c25.97
Mar. 3	15.83	June 1	c22.30	31	18.46	Nov. 12	19.58
23	c26.63	July 6	c23.18	Sept.14	18.25	Dec. 1	18.88
Apr. 13	16.69	21	c27.44	30	c24.13	18	21.41

M-14b (*908,p.107; 938,p.101). City of Wichita. SW¼SW¼ sec. 9, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	16.61	Apr. 28	c22.72	Aug. 10	21.17	Oct. 15	c24.05
26	16.98	May 18	c23.50	24	19.24	29	c24.45
Mar. 3	15.80	June 1	c22.30	31	18.54	Nov. 12	19.62
23	c22.93	July 6	c21.60	Sept.14	18.24	Dec. 1	18.87
Apr. 13	16.70	21	c23.74	30	c17.55	17	21.05

M-15 (*908,p.108; 938, 101). City of Wichita. SE. corner NE¼ sec. 9, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	21.54	Apr. 28	a37.90	Aug. 10	a44.55	Oct. 15	20.67
26	19.62	May 18	a40.96	24	21.28	29	22.66
Mar. 2	18.83	June 1	23.15	31	a43.16	Nov. 12	23.24
23	a41.78	July 6	20.47	Sept.14	22.33	Dec. 1	21.15
Apr. 13	20.02	21	20.87	30	20.99	17	a43.48

a Well pumping.
b Well M-13 pumping.
c Well M-14 pumping.

M-15a (*908,p.108; 938,p.101). City of Wichita. SE¼NE¼ sec. 9, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	19.68	Apr. 28	a24.50	Aug. 10	a26.28	Oct. 15	18.93
26	17.85	May 18	a25.19	24	19.50	29	20.87
Mar. 2	17.05	June 1	21.32	31	a23.11	Nov. 12	21.44
23	a27.30	July 6	18.69	Sept.14	20.53	Dec. 1	19.48
Apr. 13	18.16	21	19.10	30	19.28	17	a24.72

M-15b (*908,p.109; 938,p.101). City of Wichita. SE¼NE¼ sec. 9, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 6	20.72	Apr. 28	a24.36	Aug. 10	a26.12	Oct. 15	19.94
26	18.95	May 18	a24.86	24	19.60	29	21.98
Mar. 2	18.20	June 1	22.41	31	a22.78	Nov. 12	22.57
23	a27.07	July 6	19.78	Sept.14	21.60	Dec. 1	20.62
Apr. 13	19.31	21	20.25	30	20.34	17	a24.49

M-16 (*908,p.109; 938,p.102). City of Wichita. SE. corner SE¼ sec. 9, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 6	b45.66	Apr. 28	18.75	Aug. 10	b47.45	Oct. 15	18.59
26	17.82	May 18	18.93	24	18.77	29	b47.75
Mar. 2	16.40	June 1	b47.25	30	18.47	Nov. 12	b48.31
23	b47.06	July 6	b36.00	Sept.14	b48.80	Dec. 1	18.64
Apr. 13	17.11	21	18.70	30	18.10	17	19.36

M-16a (*908,p.110; 938,p.102). City of Wichita. SE¼SE¼ sec. 9, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 6	c23.89	Apr. 28	17.80	Aug. 10	c25.66	Oct. 15	17.84
26	17.10	May 18	17.96	24	17.99	29	c24.29
Mar. 2	15.70	June 1	c24.81	31	17.71	Nov. 12	c25.12
23	c25.83	July 6	c20.36	Sept.14	c24.43	Dec. 1	18.00
Apr. 13	16.44	21	17.80	30	17.52	17	18.60

M-16b (*908,p.110; 938,p.102). City of Wichita. SE¼SE¼ sec. 9, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 6	c16.48	Apr. 28	16.07	Aug. 10	c17.82	Oct. 15	16.31
26	15.58	May 18	15.98	24	16.56	29	c17.05
Mar. 2	15.06	June 1	c17.09	31	16.46	Nov. 12	c17.41
23	c17.68	July 6	c15.97	Sept.14	c17.33	Dec. 1	16.62
Apr. 13	15.69	21	16.25	30	16.39	17	17.68

M-17 (*908,p.111; 938,p.102). City of Wichita. NE¼SE¼ sec. 16, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 6	b35.09	Apr. 28	11.71	Aug. 10	b36.20	Oct. 15	b35.45
26	b35.55	May 18	11.68	24	13.97	29	12.97
Mar. 2	11.74	June 1	b35.01	31	13.31	Nov. 12	b35.89
23	13.99	July 1	11.80	Sept.14	13.35	Dec. 1	13.58
Apr. 13	12.24	21	b36.43	30	12.73	17	12.98

M-17a (*908,p.111; 938,p.102). City of Wichita. NE¼SE¼ sec. 16, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 6	d11.90	Apr. 28	9.32	Aug. 10	d12.40	Oct. 15	d11.77
26	d12.40	May 18	9.10	24	12.05	29	10.09
Mar. 2	9.74	June 1	d11.51	31	11.34	Nov. 12	d12.28
23	11.07	July 6	9.30	Sept.14	10.75	Dec. 1	11.63
Apr. 13	10.19	21	d12.18	30	10.39	17	10.71

a Well M-15 pumping.
b Well pumping.
c Well M-16 pumping.
d Well M-17 pumping.

M-17b (*908,p.112; 938,p.103). City of Wichita. NE¼SE¼ sec. 16, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	a11.16	Apr. 28	9.28	Aug. 10	a11.97	Oct. 15	a11.13
26	a11.67	May 18	8.97	24	11.87	29	10.09
Mar. 2	9.53	June 1	a10.87	31	11.31	Nov. 12	a11.68
23	11.09	July 6	9.26	Sept.14	10.77	Dec. 1	11.54
Apr. 13	10.00	21	a11.50	30	10.27	17	10.57

M-18 (*908,p.112; 938,p.103). City of Wichita. SE¼SW¼ sec. 22, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 6	b42.04	Apr. 28	b42.49	Aug. 10	b39.91	Oct. 15	b42.23
26	b41.67	May 18	b41.84	24	b43.91	29	16.64
Mar. 2	15.57	June 1	b40.46	31	b41.65	Nov. 12	16.23
23	b40.47	July 6	b42.63	Sept.14	b40.77	Dec. 1	15.98
Apr. 10	16.70	21	b38.28	30	b39.88	17	16.08
13	16.58						

M-18a (*908,p.113; 938,p.103). City of Wichita. SE¼SW¼ sec. 22, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 6	c29.20	Apr. 28	c29.34	Aug. 10	c27.94	Oct. 15	c29.36
26	c28.95	May 18	c29.09	24	c30.02	29	15.97
Mar. 2	14.86	June 1	c28.53	31	c29.15	Nov. 12	15.54
23	c28.66	July 6	c29.01	Sept.14	c28.70	Dec. 1	15.32
Apr. 10	15.98	21	c26.96	30	c28.48	17	15.41
13	15.87						

M-18b (*908,p.113; 938,p.103). City of Wichita. SE¼SW¼ sec. 22, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 6	c21.79	Apr. 28	c21.85	Aug. 10	c21.20	Oct. 15	c22.25
26	c20.75	May 18	c21.68	24	c22.38	29	15.01
Mar. 2	14.09	June 1	c21.71	31	c22.24	Nov. 12	15.52
23	c21.87	July 6	c21.40	Sept.14	c21.98	Dec. 1	14.44
Apr. 10	15.11	21	c20.50	30	c22.03	17	14.49
13	14.97						

M-19 (*908,p.113; 938,p.103). City of Wichita. NE¼NE¼ sec. 27, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 6	b33.61	Apr. 28	17.86	Aug. 10	b33.26	Oct. 15	17.87
26	b34.21	May 18	18.23	24	18.22	29	b32.36
Mar. 2	16.65	June 1	18.34	31	b34.22	Nov. 12	b34.59
23	b33.47	July 6	b42.63	Sept.14	18.09	Dec. 1	b35.58
Apr. 10	17.80	21	b31.01	30	b33.19	17	b34.05
13	17.71						

M-19a (*908,p.114; 938,p.104). City of Wichita. NE¼NE¼ sec. 27, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 6	d21.25	Apr. 28	18.64	Aug. 10	d21.00	Oct. 15	18.83
26	d21.32	May 18	19.24	24	19.29	29	d21.15
Mar. 2	17.65	June 1	19.28	31	d21.45	Nov. 12	d21.39
23	d21.58	July 6	d21.05	Sept.14	19.04	Dec. 1	d21.52
Apr. 10	18.81	21	d20.00	30	d22.00	17	d21.46
13	18.72						

a Well M-17 pumping.
b Well pumping.
c Well M-18 pumping.
d Well M-19 pumping.

M-19b (*908,p.114; 938,p.104). City of Wichita. NE¼NE¼ sec. 27, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	a18.29	Apr. 28	17.93	Aug. 10	a18.11	Oct. 15	17.20
26	a18.44	May 18	18.24	24	18.41	29	a18.10
Mar. 2	16.55	June 1	19.46	31	a18.67	Nov. 12	a19.10
23	a18.62	July 6	a17.84	Sept.14	18.33	Dec. 1	a17.93
Apr. 10	17.84	21	a17.36	30	a19.00	17	a18.07
13	17.74						

M-20 (*908,p.115; 938,p.104). City of Wichita. NW¼SE¼ sec. 8, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	19.91	Apr. 28	20.00	Aug. 10	b46.98	Sept.30	22.59
26	b45.83	May 18	20.66	24	23.30	Oct. 15	b48.52
Mar. 3	19.60	June 1	21.56	31	22.40	29	23.62
23	21.16	July 6	b39.08	Sept.14	b47.11	Nov. 12	b48.49
Apr. 13	19.37	21	22.23				

M-20a (*908,p.115; 938,p.104). City of Wichita. NW¼SE¼ sec. 8, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	18.14	Apr. 28	18.55	Aug. 10	c21.07	Sept.30	20.50
26	c19.32	May 18	19.36	24	20.90	Oct. 15	c21.27
Mar. 3	18.42	June 1	19.17	31	20.58	29	20.91
23	18.93	July 6	c20.05	Sept.14	c21.23	Nov. 12	c21.53
Apr. 13	18.20	21	20.14				

M-20b (*908,p.116; 938,p.104). City of Wichita. NW¼SE¼ sec. 8, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	17.31	Apr. 28	17.70	Aug. 10	c19.81	Sept.30	19.50
26	c18.18	May 18	18.34	24	19.89	Oct. 15	c20.08
Mar. 3	17.47	June 1	18.21	31	19.56	29	19.90
23	17.90	July 6	c19.00	Sept.14	c19.90	Nov. 12	c20.36
Apr. 13	17.39	21	19.15				

M-21 (*908,p.116; 938,p.104). City of Wichita. SW¼SW¼ sec. 26, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	14.82	May 18	b28.77	Aug. 24	15.40	Oct. 29	b29.97
26	14.10	June 1	15.35	31	15.37	Nov. 12	15.53
Mar. 2	b29.13	July 6	b30.00	Sept.14	b27.70	Dec. 1	14.67
23	b28.35	21	b28.54	30	b29.25	17	14.26
30	15.94	Aug.10	15.94	Oct. 15	b30.34		

M-21a (*908,p.117; 938,p.105). City of Wichita. SW¼SW¼ sec. 26, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	13.70	May 18	d18.94	Aug. 24	14.38	Oct. 29	d20.23
26	13.10	June 1	14.41	31	14.32	Nov. 12	14.55
Mar. 2	d19.97	July 6	d19.78	Sept.14	d19.59	Dec. 1	13.64
23	d20.59	21	d19.68	30	d20.13	17	13.25
30	13.86	Aug.10	14.92	Oct. 15	d20.55		

a Well M-19 pumping.
b Well pumping.
c Well M-20 pumping.
d Well M-21 pumping.

M-21b (*908,p.117; 938,p.105). City of Wichita. SW¼SW¼ sec. 26, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	13.32	May 18	a16.50	Aug. 24	14.04	Oct. 29	a17.95
26	12.73	June 1	14.04	31	13.97	Nov. 12	14.20
Mar. 2	a17.45	July 6	a17.22	Sept.14	a17.40	Dec. 1	13.38
23	a18.19	21	a17.45	30	a17.85	17	13.00
30	13.57	Aug.10	14.60	Oct. 15	a17.88		

M-22 (*908,p.118; 938,p.105). City of Wichita. SW¼SE¼ sec. 26, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	b32.87	Apr. 28	18.06	Aug. 10	b36.13	Oct. 15	16.99
26	15.31	May 18	17.75	24	b36.22	29	16.91
Mar. 2	17.40	June 1	b33.51	31	b37.83	Nov. 12	b36.78
23	18.06	July 6	16.10	Sept.14	16.77	Dec. 1	16.08
30	16.13	21	b33.88	30	17.03	17	15.87
Apr. 13	18.69						

M-22a (*908,p.118; 938,p.105). City of Wichita. SW¼SE¼ sec. 26, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	c20.48	Apr. 28	16.36	Aug. 10	c21.13	Oct. 15	15.25
26	13.39	May 18	15.85	24	c20.87	29	15.15
Mar. 2	15.53	June 1	c19.79	31	c21.30	Nov. 12	c21.30
23	16.24	July 6	14.29	Sept.14	14.09	Dec. 1	14.19
30	13.71	21	c20.83	30	15.26	17	13.88
Apr. 13	16.87						

M-22b (*908,p.119; 938,p.105). City of Wichita. SE¼SW¼ sec. 26, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	c17.04	Apr. 28	17.43	Aug. 10	c17.71	Oct. 15	16.37
26	14.09	May 18	16.75	24	c17.44	29	16.25
Mar. 2	16.40	June 1	c16.38	31	c17.58	Nov. 12	c17.54
23	17.21	July 6	15.30	Sept.14	16.13	Dec. 1	14.93
30	15.08	21	c18.05	30	16.35	17	14.48
Apr. 13	17.90						

M-23 (*908,119; 938,p.106). City of Wichita. SE¼NE¼ sec. 35, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	13.33	Apr. 28	13.95	Aug. 10	13.54	Oct. 15	13.01
26	13.01	May 18	b39.66	24	13.80	29	b41.49
Mar. 2	b40.00	June 1	14.44	31	14.60	Nov. 12	b42.40
23	14.28	July 6	12.09	Sept.14	13.58	Dec. 1	b43.76
30	14.07	21	13.34	30	12.98	17	b42.03
Apr. 13	15.52						

M-23a (*908,p.120; 938,p.106). City of Wichita. SE¼NE¼ sec. 35, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	12.89	Apr. 28	13.25	Aug. 10	13.00	Oct. 15	12.54
26	12.58	May 18	d16.34	24	13.31	29	d15.10
Mar. 2	d17.73	June 1	13.48	31	13.81	Nov. 12	d15.94
23	13.85	July 6	11.60	Sept.14	12.84	Dec. 1	d16.35
30	13.15	21	12.64	30	12.50	17	d16.65
Apr.13	14.72						

a Well M-21 pumping.
b Well pumping.
c Well M-22 pumping.
d Well M-23 pumping.

M-23b (*908,p.120; 938,p.106). City of Wichita. SE¼NE¼ sec. 35, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	12.44	Apr. 28	12.78	Aug. 10	12.55	Oct. 15	12.02
26	12.10	May 18	a14.56	24	12.82	29	a13.49
Mar. 2	a15.98	June 1	13.05	31	13.26	Nov. 12	a14.20
23	13.45	July 6	11.14	Sept.14	12.38	Dec. 1	a14.68
30	13.26	21	12.18	30	12.07	17	a15.06
Apr. 13	14.25						

M-24 (*908,p.121; 938,p.106). City of Wichita. SE¼SE¼ sec. 35, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 6	13.96	Apr. 28	14.39	Aug. 10	14.23	Oct. 15	b34.77
26	13.28	May 18	13.96	24	b34.53	29	13.59
Mar. 2	b34.93	June 1	14.03	31	b35.84	Nov. 12	13.34
23	14.33	July 6	13.00	Sept.14	13.66	Dec. 1	13.33
30	14.06	21	b29.79	30	13.13	17	13.68
Apr. 13	b35.53						

M-24a (*908,p.121; 938,p.106). City of Wichita. SE¼SE¼ sec. 35, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 6	13.10	Apr. 28	13.39	Aug. 10	13.43	Oct. 15	c17.98
26	12.43	May 18	13.09	24	c17.95	29	12.80
Mar. 2	c18.96	June 1	13.15	31	c18.41	Nov. 12	12.53
23	13.48	July 6	12.18	Sept.14	12.87	Dec. 1	12.50
30	13.20	21	c15.47	30	12.35	17	12.82
Apr. 13	c18.92						

M-24b (*908,p.122; 938,p.107). City of Wichita. SE¼SE¼ sec. 35, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 6	15.42	Apr. 28	15.66	Aug. 10	15.43	Oct. 15	c16.70
26	14.64	May 18	15.13	24	c16.62	29	15.00
Mar. 2	c17.52	June 1	15.20	31	c17.01	Nov. 12	14.64
23	15.69	July 6	14.44	Sept.14	14.98	Dec. 1	14.50
30	15.43	21	c14.71	30	14.60	17	14.65
Apr. 13	c17.61						

M-25 (*908,p.122; 938,p.107). City of Wichita. SW¼SE¼ sec. 36, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 6	9.79	Apr. 28	b34.35	Aug. 10	10.05	Oct. 15	9.14
26	9.63	May 18	10.01	24	b33.96	29	9.18
Mar. 2	12.00	June 1	b34.79	31	b36.01	Nov. 12	9.64
23	10.61	July 6	b30.11	Sept.14	b35.43	Dec. 1	10.03
30	10.46	21	b31.93	30	9.23	17	b34.90
Apr. 13	b37.49						

M-25a (*908,p.123; 938,p.107). City of Wichita. SW¼SE¼ sec. 36, T. 24 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 6	8.78	Apr. 28	d10.65	Aug. 10	9.08	Oct. 15	8.31
26	8.57	May 18	9.00	24	d10.67	29	8.23
Mar. 2	10.91	June 1	d11.39	31	d11.76	Nov. 12	8.66
23	9.67	July 6	d 8.14	Sept.14	d10.80	Dec. 1	9.07
30	9.50	21	d10.17	30	8.35	17	d11.41
Apr. 13	d12.75						

a Well M-23 pumping.
b Well pumping.
c Well M-24 pumping.
d Well M-25 pumping.

M-25b (*908,p.123; 938,p.107). City of Wichita. NE¼NW¼ sec. 1, T. 25 S., R. 2 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	10.23	Apr. 28	a11.74	Aug. 10	10.50	Oct. 15	9.78
26	10.00	May 18	10.46	24	a11.72	29	9.67
Mar. 2	12.35	June 1	a12.38	31	a12.86	Nov. 12	10.11
23	11.07	July 6	a9.40	Sept.14	a11.79	Dec. 1	10.47
30	10.93	21	a11.27	30	9.97	17	a12.55
Apr. 13	a13.75						

Haskell County

By T. G. McLaughlin

Highest and lowest recorded water levels, in feet below measuring point, in 14 wells in Haskell County

Well	Length of record (years)	Highest recorded water level (feet)	Date	Lowest recorded water level (feet)	Date
1	1.5	109.78	Dec. 11, 1942	110.28	Nov. 1, 1941
b3	1.5	191.64	Dec. 2, 1941	191.84	Feb. 6, 1942
4	1.5	198.31	Apr. 10, 1942	198.58	Sept.17,1941
5	1.5	161.20	Dec, 3, 1941	161.47	Mar. 11,1942
6	1.5	156.56	July 29, 1941	157.35	Jan. 14,1942
7	1.5	188.51	Aug. 13, 1941	188.91	Feb. 6,1942
c8	1.5	198.57	July 29, 1941	210.56	Feb. 6,1942
9	1.5	207.68	June 30, 1941	208.03	Mar. 11,1942
10	1.5	53.98	Sept.12, 1942	56.53	Sept.17,1941
11	1.5	184.51	Aug. 13, 1941	184.82	Feb. 6,1942
12	1.5	179.70	Nov. 3, 1941	182.35	Nov. 13,1942
13	1.5	85.84	May 11, 1942	86.08	July 24,1941
14	1.5	151.72	July 15, 1942 Aug. 5, 1942	152.02	Sept.17,1941
15	1.5	221.94	Oct. 1, 1942	222.82	July 31,1941 Aug. 13,1941

Difference between highest and lowest water levels, net changes in water level in 1942 and for period of record in 14 wells in Haskell County

Well	Difference between highest and lowest water levels (feet)	Net rise (+) or net decline (-) in 1942 (feet)	Net rise (+) or net decline (-) for period of record (feet)
1	0.50	d+0.11	+ 0.16
3	.20	(e)	-.05
4	.27	f+.01	-.01
5	.27	f-.16	-.05
6	.79	g-.01	-.50
7	.40	f-.09	-.16
8	11.99	(e)	- 9.68
9	.35	f-.08	-.15
10	2.55	f+.51	+1.26
11	.31	f-.09	-.02
12	2.65	f-1.57	-1.53
13	.24	(e)	+.21
14	.30	d+.10	+.17
15	.88	h-.40	-.09

a Well M-25 pumping.
b Measurements discontinued July 1942.
c Measurements discontinued August 1942.
d For period Dec. 2, 1941 to Dec. 11, 1942.
e Record for 1942 incomplete.
f For period Dec. 3, 1941, to Dec. 11, 1942.
g For period Dec. 3, 1941, to Nov. 13, 1942.
h For period Dec. 2, 1941, to Jan. 4, 1943.

1 (*938, p. 108). E. A. Davis. NE¼NW¼ sec. 13, T. 27 S., R. 33 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	109.96	Apr. 10	109.95	July 15	109.85	Oct. 13	109.89
Feb. 6	109.93	May 11	109.93	Aug. 5	109.87	Nov. 16	109.87
Mar. 11	109.92	June 6	109.89	Sept. 8	109.91	Dec. 11	109.78

3 (*938,p. 108). Harry B. Lyman. NE¼NE¼ sec. 31, T. 27 S., R. 33 W. Measurements discontinued after July 1942.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Feb. 6	191.84	Apr.10	191.31	June 4	191.79
Mar. 11	191.79	May 11	191.78	July 15	191.77

4 (*938, p. 108). Dean Nelson. SE¼NE¼ sec. 29, T. 28 S., R. 32 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	198.54	Apr. 10	198.31	July 8	198.50	Oct. 13	198.50
Feb. 6	198.55	May 11	198.47	Aug. 17	198.52	Nov. 13	198.52
Mar. 11	198.53	June 6	198.50	Sept.12	198.53	Dec. 11	198.46

5 (*938,p. 108). C. D. Jennings. NE¼NE¼ sec. 20, T. 29 S., R. 31 W.

Water level, in feet below measuring point, 1942

Jan. 14	161.45	Apr. 10	161.44	July 8	161.37	Oct. 13	161.35
Feb. 6	161.41	May 11	161.38	Aug. 7	161.42	Nov. 13	161.38
Mar. 11	161.47	June 6	161.41	Sept.12	161.41	Dec. 11	161.36

6 (*938,p. 108). Copeland State Bank. NE¼NE¼ sec. 11, T. 29 S., R. 31 W.

Water level, in feet below measuring point, 1942

Jan. 14	157.35	Apr. 10	157.32	July 8	157.25	Oct. 13	157.24
Feb. 6	157.31	May 11	157.22	Aug. 7	157.26	Nov. 13	157.25
Mar. 11	157.32	June 6	157.31	Sept.12	157.25		

7 (*938,p. 109). Etta McCoy. NW¼NW¼ sec. 2, T. 30 S., R. 32 W.

Water level, in feet below measuring point, 1942

Jan. 14	188.57	Apr. 10	188.77	July 8	188.60	Oct. 13	188.77
Feb. 6	188.91	May 11	188.72	Aug. 7	188.76	Nov. 13	188.74
Mar. 11	188.85	June 6	188.74	Sept.12	188.73	Dec. 11	188.76

8 (*938, p. 109). Connecticut Life Insurance Co. NE¼SE¼ sec. 21, T. 28 S., R. 33 W. Measurements discontinued after August 1942.

Water level, in feet below measuring point, 1942

Jan. 14	204.31	Mar. 11	210.03	May 11	209.93	July 15	209.98
Feb. 6	210.56	Apr. 10	210.06	June 6	209.96	Aug. 7	209.86

9 (*938, p. 109). Bessie Custer. NW¼SE¼ sec. 13, T. 30 S., R. 34 W.

Water level, in feet below measuring point, 1942

Jan. 14	207.91	Apr. 10	207.81	July 15	207.93	Oct. 1	207.92
Feb. 6	207.89	May 11	207.94	Aug. 7	207.91	Nov. 13	207.90
Mar. 11	208.03	June 6	207.91	Sept.12	207.86	Dec. 11	207.83

10 (*908,p. 109). Eli Stoops. SE¼NW¼ sec. 33, T. 30 S., R. 34 W.

Water level, in feet below measuring point, 1942

Jan. 14	55.58	Apr. 10	55.51	July 8	54.18	Oct. 1	54.08
Feb. 6	55.80	May 11	55.37	Aug. 7	54.76	Nov. 13	54.28
Mar. 10	55.96	June 6	55.42	Sept.12	53.98	Dec. 11	54.41

11 (*938,p.109). L. C. Leonard. SE¼SW¼ sec. 20, T. 30 S., R. 32 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	184.79	Apr. 10	184.71	July 8	184.55	Oct. 13	184.69
Feb. 6	184.82	May 6	184.65	Aug. 7	184.65	Nov. 13	184.68
Mar. 11	184.75	June 6	184.73	Sept.12	184.68	Dec. 11	184.66

12 (*938,p.109). Sybol Smith. SW¼SW¼ sec. 11, T. 30 S., R. 32 W.

Water level, in feet below measuring point, 1942

Jan. 14	181.30	Apr. 10	181.35	July 8	181.32	Oct. 13	182.04
Feb. 6	181.36	May 11	181.29	Aug. 7	181.84	Nov. 13	182.35
Mar. 11	181.38	June 6	181.31	Sept.12	181.96	Dec. 11	182.29

13 (*938,p.109). School district. NE¼NE¼ sec. 14, T. 27 S., R. 32 W.

Water level, in feet below measuring point, 1942

Jan. 14	85.87	Mar. 11	85.88	May 11	85.84	July 8	85.86
Feb. 6	85.89	Apr. 10	85.87	June 6	85.90	Oct. 13	85.87

14 (*938,p.110). William Dreyer. NW¼NW¼ sec. 21, T. 27 S., R. 34 W.

Water level, in feet below measuring point, 1942

Jan. 14	151.89	Apr. 10	151.77	July 15	151.72	Oct. 1	151.76
Feb. 6	151.88	May 11	151.75	Aug. 5	151.72	Nov. 16	151.78
Mar. 11	151.83	June 4	151.74	Sept. 8	151.81	Dec. 2	151.75

15 (*938,p.110). M. H. Eubank. NW¼NW¼ sec. 33, T. 28 S., R. 34 W. Water levels, in feet below measuring point, 1942: May 11, 222.40; Sept. 8, 221.98; Oct. 1, 221.94; Nov. 16, 221.97.

Hodgeman County

By V. C. Fishel

Highest and lowest recorded water levels, in feet below measuring point, in 3 wells in Hodgeman County

Well	Length of record (years)	Highest recorded water level (feet)	Date	Lowest recorded water level (feet)	Date
3	2	33.78	Aug. 2, 1941	35.77	Sept. 20, 1940
4	2	26.27	July 12,1941	28.52	Oct. 2, 1941
5	2	31.72	Nov. 23,1942	33.88	Oct. 29, 1940

Difference between highest and lowest water levels and net rise in water level, in 1942 and for period of record, in 3 wells in Hodgeman County

Well	Difference between highest and lowest water levels (feet)	Net rise in 1942 (feet)	Net rise for period of record (feet)
3	1.99	a 0.33	1.74
4	2.25	b .65	1.24
5	2.16	b 1.01	1.06

3 (*908,p.125; 938,p.110). W. J. Fox. SW¼NW¼ sec. 12, T. 21 S., R. 22 W.

Water level, in feet below measuring point, 1942

Jan. 5	34.24	Apr. 7	34.07	July 18	34.06	Oct. 5	33.95
Feb. 3	34.10	30	34.57	Aug. 10	34.21	Nov. 23	(c)
Mar. 9	(c)	June 22	34.43	Sept.15	34.16	Dec. 14	(c)

a For period Dec. 4, 1941, to Oct. 5, 1942.
b For period Dec. 4, 1941, to Dec. 15, 1942.
c Well plugged.

4 (*908,p.125; 938,p.111). William Macey. SW¼SW¼ sec. 13, T. 22 S., R. 22 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	27.32	Apr. 7	27.13	July 18	27.19	Oct. 5	27.12
Feb. 3	27.15	30	26.67	Aug. 10	26.62	Nov. 24	26.75
Mar. 9	27.08	June 22	27.08	Sept.15	26.86	Dec. 15	26.79

5 (*908,p.125; 938,p.111). Roy Klein. NW¼NE¼ sec. 36, T. 21 S., R. 21 W.

Water level, in feet below measuring point, 1942

Jan. 5	32.65	Apr. 7	32.24	July 18	32.10	Oct. 5	32.13
Feb. 3	32.45	30	31.92	Aug. 10	32.41	Nov. 23	31.72
Mar. 9	32.34	June 22	32.17	Sept.15	32.00	Dec. 15	31.77

Jewell County

By V. C. Fishel and R. W. McCall

The following table lists by number the observation wells in Jewell County. It shows for each the previously published water-supply papers in which earlier records are given and the pages on which the records appear. An asterisk before a page number indicates that the description of the well is given on that page.

Well	Water-Supply Paper						
	777	817	840	845	886	908	938
4	*67, 68	*65, 67	*110, 112	*104, 109	170	129	114
6	*67, 68	*65, 67	*110, 112	*104, 109	170	129	114
8	*67, 68	*65, 67	*110, 112	*104, 109	170	129	114
12	*67, 68	*65, 67	*110, 112	*104, 109	170	129	114
14	*67, 68	*65, 67	*110, 112	*104, 109	170	129	114
18	*68	*65, 67	*110, 112	*105, 109	170	129	114
22	*68, 69	*65, 69	*110,114,117	*105,111,114	172	130	114
25	*68, 69	*65, 69	*110, 112	*105, 109	170	129	114
30	*68, 69	*65, 69	*110,114,117	*105,111,114	172	130	114
34	.....	*65, 77	*110,114,118	*105, 111	172	130	114
34A	.....	*65, 77	*110, 114	*105,111,114	172	130	114
34B	.....	*65, 77	*111, 114	*105, 111	172	130	114
34C	.....	*65, 77	*111, 114	*105, 111	172	130	114
40	*68, 69	*65, 69	*111, 113	*106, 110	170	129	114
41	*68, 69	*65, 69	*111, 113	*106, 110	170	129	114
42	*68, 69	*65, 69	*111, 113	*106, 110	170	129	114
43		*65, 69	*111, 113	*106, 110	170	129	114
44	*68, 69	*66, 71	*111, 113	*106, 110	170	129	114
45	*68, 69	*66, 71	*111, 113	*106, 110	170	129	114
46	.....	*66, 71	*111, 113	*106, 110	170	129	*113,114
47	.....	*66, 71	*111, 114	*106, 110	170	129	*113,114
48	*68, 69	*66, 71	*111, 114	*107, 110	171	130	115
49	*68, 69	*66, 71	*111, 114	*107, 110	171	130	115
50	*68, 69	*66, 71	*111, 114	*107, 110	171	130	114
51	.....	*66, 76	*111,116,119	*107,113,115	173	131	*113,114
52	.....	*66, 74	*111, 115	*107, 112	172	130	*113,115
53	.....	*66, 74	*111, 115	*107, 112	172	130	115
54	.....	*66, 74	*111, 115	*107, 112	172	130	*113,115
55	.....	*66, 74	*111, 115	*107, 112	172	130	*113,115

Well	Water-Supply Paper						
	777	817	840	845	886	908	938
57	.....	*66, 74	*111,115	*107, 112	172	130	*113,115
61	.....	*66, 76	*111,116	*107, 113	173	131	*113,114
62	.....	*66, 76	*111,116	*107, 113	173	131	*113,114
63	.....	*66, 76	*111,116	*107, 113	173	131	*113,114
64	.....	.....	*111,114	*108, 110	171	130	115
65	.....	.....	*111,114	*108, 110	171	130	114
66	.....	.....	*111,114	*108, 110	171	130	115
67	.....	.....	*111,114	*108, 110	171	130	115
69	.....	.....	*111,119	*109, 115	171	130	115

Highest and lowest recorded water levels, in feet above datum, in 38 wells in Jewell County

Well	Length of record (years)	Highest recorded water level (feet)	Date	Lowest recorded water level (feet)	Date
4	9	22.70	Sept.25, 1942	5.88	Apr. 2, 1936
6	9	14.34	Sept.25, 1942	7.77	Oct. 13, 1937
8	9	67.87	June 22, 1942	8.02	Aug. 23, 1934
12	9	22.11	Sept.25, 1942	7.91	June 8, 1938
14	9	39.23	May 26, 1942	8.79	Mar. 20, 1934
18	9	20.82	Nov. 23, 1942	9.51	May 2, 1935
22	9	21.51	Sept.25, 1942	9.48	Aug. 10, 1934
25	9	15.14	Jan. 26, 1942	9.15	Mar. 2, 1935
30	9	13.91	Jan. 26, 1942	7.20	Sept.20, 1940
34	9	101.11	Feb. 19, 1942	77.44	Aug. 19, 1940
34A	8	104.35	June 28, 1935	91.68	Mar. 2, 1935
34B	8	105.31	June 24, 1938	88.09	Mar. 2, 1935
34C	8	107.14	June 28, 1935	93.57	Sept.20, 1940
40	9	13.81	Oct. 28, 1942	9.45	Oct. 6, 1937
41	8	17.58	Oct. 28, 1942	8.69	May 23, 1941
42	8	15.62	June 21, 1935	9.76	May 11, 1935
43	8	22.28	June 22, 1942	9.16	Mar. 28, 1935
44	8	25.20	Nov. 23, 1942	8.43	May 9, 1935
45	8	15.53	May 21, 1936	6.64	Dec. 21, 1940
46	8	25.61	Jan. 26, 1942	8.82	Aug. 30, 1934
47	8	21.25	Aug. 28, 1942	9.48	May 9, 1935
48	8	27.42	July 28, 1942	8.87	Oct. 25, 1934
49	8	33.31	Sept.25, 1942	3.07	Nov. 24, 1934
50	8	29.46	Nov. 23, 1942	9.97	Nov. 28, 1934
51	8	101.93	Jan. 28, 1942	84.75	Sept.26, 1934
52	8	115.45	Dec. 30, 1941	94.76	May 3, 1935
53	8	107.83	Sept.13, 1935	94.89	May 3, 1935
54	8	110.10	Sept.13, 1935	93.81	Oct. 23, 1940
55	8	110.23	Jan. 28, 1942	95.28	May 3, 1935
57	8	105.37	Feb. 19, 1942	95.63	May 3, 1935
61	8	104.15	Aug. 28, 1942	83.17	Sept.27, 1935
62	8	90.44	Mar. 21, 1942	83.10	May 3, 1935
63	8	96.87	May 26, 1942	87.96	July 15, 1935
64	7	19.66	Jan. 26, 1942	10.42	Jan. 19, 1938
65	7	31.60	Nov. 23, 1942	4.04	Aug. 20, 1940
66	7	18.88	Oct. 28, 1942	6.06	Oct. 23, 1940
67	8	20.36	July 28, 1942	4.56	Dec. 2, 1940
69	6	16.19	Sept.25, 1942	5.82	Aug. 19, 1940

Difference between highest and lowest water levels, and net change in water level, in 1942 and for period of record, in 38 wells in Jewell County

Well	Difference between highest and lowest water levels (feet)	Net rise (+) or net decline (-) in 1942 (feet) a/	Net rise (+) or net decline (-) for period of record (feet) b/
4	16.82	+1.35	9.51
6	6.57	+1.40	1.19
8	59.85	+13.04	46.28
12	14.20	+2.83	6.66
14	30.44	+9.34	25.22
18	11.31	+10.32	8.99
22	12.03	+2.00	10.13
25	5.99	+1.06	3.61
30	6.71	+2.47	-.53
34	23.67	-.13	10.48
34A	12.67	-.77	5.39
34B	17.22	-2.05	7.93
34C	13.57	-1.92	5.94
40	4.36	+3.38	3.63
41	8.89	(c)	6.52
42	5.86	-.12	3.46
43	13.12	(d)	8.58
44	16.77	+7.38	8.06
45	8.89	+3.29	3.10
46	16.79	-.06	15.03
47	11.77	-.03	6.72
48	18.55	+1.90	9.87
49	30.24	+2.32	17.18
50	19.49	+7.34	19.40
51	17.18	-.71	15.46
52	20.69	-2.68	6.58
53	12.94	-3.32	7.58
54	16.29	e-6.59	7.30
55	14.95	e-7.93	5.80
57	9.84	-2.30	5.74
61	20.98	+2.85	9.45
62	7.34	+1.73	2.23
63	8.91	+.60	6.73
64	9.14	f-1.68	4.73
65	27.56	+10.56	20.01
66	12.82	+3.15	7.53
67	15.80	+8.74	7.61
69	10.37	+1.72	3.91

Corrections of water levels given erroneously in previously published water-supply papers

Well	Date	Water-supply Paper	Page	Water level, in feet: Erroneously given as	Water level, in feet: Correct level
12	Aug. 30, 1934	817	67	10.30	10.90
	Sept. 24, 1936	817	69	12.30	11.30
22	June 19, 1936	817	71	14.17	13.17
30	July 24, 1936	817	71	10.10	11.10
	Jan. 15, 1937	840	114	10.07	11.11
	22	840	114	10.29	11.29
	Feb. 1	840	114	10.27	11.31
	5	840	114	10.50	11.54
	19	840	114	10.55	11.59
	26	840	114	10.52	11.56
	Mar. 5	840	114	10.57	11.61
	12	840	114	10.63	11.67
	19	840	114	10.89	11.93
	26	840	115	10.56	11.60
	Apr. 2	840	115	10.89	11.93
	9	840	115	10.76	11.80
	16	840	115	11.00	12.04

a From Dec. 29-30, 1941, to Jan. 6, 1943.
b From initial measurement to Jan. 6, 1943.
c No measurements from Aug. 1941, to Sept. 1942.
d No measurements from May 1941 to Feb. 1942.
e From Jan. 28, 1942, to Jan. 6, 1943.
f From Dec. 29, 1941, to Nov. 23, 1942.

Corrections of water levels given erroneously in previously published Water-Supply papers--Continued.

Well	Date	Water-supply paper	Page	Water level, in feet: Erroneously given as	Water level, in feet: Correct level
30	Apr. 23, 1937	840	115	10.95	11.99
	30	840	115	10.86	11.90
	May 7	840	115	11.03	12.07
	14	840	115	11.08	12.14
	21	840	115	10.94	11.98
	28	840	115	10.74	11.78
	June 4	840	115	10.60	11.64
	11	840	115	10.41	11.45
	18	840	115	10.36	11.40
	25	840	115	10.01	11.05
	July 2	840	115	9.82	10.86
	9	840	115	9.54	10.58
	16	840	115	9.25	10.29
	23	840	115	9.01	10.05
	30	840	115	8.76	9.80
	Aug. 6	840	115	8.45	9.49
	13	840	115	8.18	9.22
	20	840	115	7.98	9.02
	27	840	115	7.80	8.84
	Sept. 3	840	115	7.65	8.69
	10	840	115	7.66	8.70
	17	840	115	7.53	8.57
	24	840	115	7.43	8.47
	Oct. 1	840	115	7.40	8.44
41	Aug. 3, 1938	845	110	11.97	10.97
	10	845	110	11.79	10.79
	17	845	110	11.86	10.86
	24	845	110	11.68	10.68
	31	845	110	11.56	10.56
	Sept. 7	845	110	11.52	10.52
42	May 25	845	110	10.08	11.08
43	Mar. 5, 1936	817	71	12.27	13.27
	12	817	71	12.26	13.26
	Aug. 20	817	71	12.04	13.04
44	Dec. 26, 1935	817	72	12.60	13.60
50	Aug. 17, 1938	845	111	14.41	13.41

Corrections of dates of measurements for wells 40 to 46 given erroneously in Water-Supply paper 845, page 110

Date given	Correct date	Date given	Correct date
Jan. 7	Jan. 5-6	Apr. 15	Apr. 13
14	12	22	20
21	19	29	28
28	26	May 6	May 5
Feb. 4	Feb. 2	13	11
11	9	20	19
18	16-17	27	25-26
25	23-24	June 3	June 1-2
Mar. 4	Mar. 2	10	8
11	10-11	17	15-16
18	16	24	22
25	23	29	29
Apr. 1	30	Dec. 1	Nov. 30-Dec. 1
	Apr. 6-7		

Average water levels in 11 observation wells (6, 12, 18, 22, 25, 30, 40, 42, 45, 48, and 59) in Jewell County, in feet datum, 1942

Date	Water level	Date	Water level	Date	Water level
Jan. 26, 28	15.56	May 26	17.23	Sept. 25	18.04
Feb. 19	15.55	June 22	16.90	Oct. 28	18.09
Mar. 21	15.45	July 28	17.23	Nov. 23	17.90
Apr. 22	15.65	Aug. 26, 28	17.51		

Water level, in feet above datum, 1942

Date	4	6	8	18	25	41	45
Jan. 26	19.16	13.84	50.59	12.34	15.14	.....	11.27
Feb. 19	19.21	13.19	a64.77	14.07	14.41	.....	11.64
Mar. 21	18.99	12.77	61.91	13.84	13.91	.....	11.78
Apr. 22	18.63	12.87	62.69	14.29	13.46	.....	12.14
May 26	19.43	12.75	67.49	15.79	13.88	.....	12.82
June 22	19.59	12.82	67.87	16.16	13.59	.....	12.29
July 28	20.57	13.16	66.86	18.29	13.18	.....	12.19
Aug. 26	20.72	13.14	67.64	17.85	15.05	.....	11.89
Sept.25	22.70	14.34	64.59	18.49	14.37	b17.12	12.00
Oct. 28	22.03	13.34	58.79	20.22	14.46	17.58	12.70
Nov. 23	21.82	13.68	58.27	20.82	13.76	17.29	12.49

Water level, in feet above datum, 1942

Date	12	14	22	30	40	42	43	44
Jan. 28	16.06	34.63	c19.68	c13.91	11.29	c14.61	.....	20.57
Feb. 19	16.71	37.77	19.97	12.36	11.67	14.48	d20.44	21.55
Mar. 21	17.02	36.94	19.98	12.34	11.09	14.35	20.48	22.72
Apr. 22	17.59	36.79	19.99	13.06	12.94	14.45	19.53	.....
May 26	19.21	39.23	20.30	13.46	12.79	15.19	21.73	23.95
June 22	18.45	38.07	20.76	12.63	12.82	14.96	22.28	23.52
July 28	18.09	38.10	20.79	11.96	13.39	14.87	21.53	23.77
Aug. 28	18.80	37.24	20.80	13.04	13.59	15.35	.....	24.15
Sept.25	22.11	37.81	21.51	12.46	13.53	15.44	20.83	24.83
Oct. 28	20.60	36.93	21.47	12.78	13.81	15.01	21.04	25.10
Nov. 23	20.00	35.59	21.37	13.47	13.60	14.77	20.46	25.20

Water level, in feet above datum, 1942

Date	34	34A	34B	34C	Pond staff gage	46
Jan. 26	100.27	101.28	101.30	104.50	118.60	25.61
Feb. 19	101.11	100.68	99.07	103.67	118.20	24.60
Mar. 21	99.20	100.13	99.92	103.57	117.90	24.26
Apr. 22	97.54	99.13	98.86	102.65	117.50	24.47
May 26	96.69	99.21	99.19	102.88	118.20	24.67
June 22	96.55	98.68	98.56	102.13	118.40	23.37
July 28	94.87	99.01	96.49	101.30	118.30	23.37
Aug. 26	94.00	98.61	98.04	100.70	118.70	24.68
Sept.25	94.77	98.71	98.45	100.65	118.20	25.43
Oct. 28	94.85	98.56	97.64	100.78	117.80	24.87
Nov. 23	95.14	98.24	97.69	100.35	117.70	23.87

Water level, in feet above datum, 1942

Date	47	50	51	61	62	63	e 65
Jan. 28	c 19.82	20.38	101.93	87.78	87.59	96.19	25.20
Feb. 19	18.26	20.13	100.72	88.22	88.71	96.48	26.68
Mar. 21	17.49	20.03	101.11	87.89	90.44	96.60	27.95
Apr. 22	17.23	20.21	101.61	87.77	89.54	96.52	24.35
May 26	19.76	26.83	100.96	88.47	88.76	96.87	30.40
June 22	17.43	24.43	99.36	91.57	86.05	96.32	30.55
July 28	19.17	26.14	100.06	101.39	87.37	95.84	30.84
Aug. 28	21.25	26.01	100.81	104.15	87.25	95.74	30.95
Sept.25	20.02	27.43	101.01	96.77	87.35	95.68	31.39
Oct. 28	18.46	29.30	100.52	95.94	87.34	96.26	31.52
Nov. 23	18.50	29.46	100.41	94.05	87.28	96.13	31.60

a High water level may be caused by surface inflow.

b Measurements discontinued in 1941; resumed in 1942; well partly caved and dry, during intervening period.

c Measurement made on Jan. 26.

d Well has some surface inflow. Measurements discontinued in 1941; resumed in 1942.

e Well used throughout 1942.

Water level, in feet above datum, 1942

Date	52	53	54	Pond staff gage	55	57
Jan. 28	105.92	107.75	109.99	110.80	110.23	104.30
Feb. 19	106.12	107.19	108.17	110.50	108.02	105.37
Mar. 21	105.57	106.51	108.43	110.10	106.62	104.77
Apr. 22	105.17	106.01	108.22	109.50	106.06	104.37
May 26	104.96	105.71	108.15	109.40	104.82	103.97
June 22	104.13	104.71	107.70	109.20	104.18	103.20
July 28	103.92	104.58	106.65	108.90	103.44	102.87
Aug. 28	103.82	104.40	106.68	109.70	104.00	102.51
Sept.25	103.60	105.10	106.46	.....	103.52	102.36
Oct. 28	103.75	104.11	104.95	109.10	103.24	102.29
Nov. 23	103.42	103.69	105.15	.....	103.72	101.97

Water level, in feet above datum, 1942

Date	48	49	64a	66	67	69
Jan. 26	22.62	29.56	19.66	17.67	12.80	14.23
Feb. 19	23.38	28.69	18.84	18.19	13.29	13.77
Mar. 21	22.87	29.56	18.34	15.27	16.84	13.58
Apr. 22	21.11	29.31	18.14	15.10	16.98	13.68
May 26	26.54	29.81	18.73	17.37	19.88	14.18
June 22	26.97	31.02	19.29	16.97	19.39	14.32
July 28	27.42	31.95	18.89	18.58	20.36	14.44
Aug. 26	27.08	30.79	19.03	17.93	19.60	14.73
Sept.25	26.71	33.31	19.61	18.80	19.82	16.19
Oct. 28	25.33	33.23	18.69	18.88	19.43	15.10
Nov. 23	23.50	31.58	16.23	18.74	19.34	14.75

Kearny County

By T. G. McLaughlin

Highest and lowest recorded water levels, in feet below measuring point, in 18 wells in Kearny County

Well	Length of record (years)	Highest recorded water level (feet)	Date	Lowest recorded water level (feet)	Date
1	3	6.18	May 2, 1942	12.81	July 20, 1941
2	3	52.74	Sept.21,1942	59.94	Sept.20, 1940
3	3	92.34	Dec. 30,1939	95.43	Nov. 10, 1941
b 4	3	106.81	Jan. 28,1940	107.04	Dec. 19, 1941
					Jan. 12, 1942
					May 2, 1942
c 6	3	154.55	Dec. 20,1939	155.85	Apr. 23, 1941
			June 22,1940		
7	3	49.91	May 9,1942	53.87	Oct. 16, 1939
11	3	13.06	June 26,1942	15.87	Mar. 15, 1941
12	3	8.24	June 26,1942	15.46	Nov. 21, 1940
13	3	1.07	May 9,1942	8.53	Dec. 20, 1939
d14	3	226.98	Oct. 25,1939	227.98	Apr. 23, 1941
16	3	44.22	Dec. 4,1942	48.11	July 3, 1941
b17	3	89.97	Aug. 22,1940	91.99	May 23, 1940
e18	3	72.17	Mar. 25,1940	73.39	Feb. 1, 1942
19	3	130.58	Dec. 23,1940	131.30	Nov. 23, 1940
e22	3	182.85	June 5,1941	183.39	Sept. 3, 1941
23	3	174.63	Oct. 24,1939	175.43	Sept.21, 1942
26	3	86.30	Oct. 24,1939	86.95	May 6, 1941
28	3	121.93	May 5,1941	124.35	Feb. 19, 1940
			Dec. 4,1942		Oct. 22, 1940

a Well used throughout 1942.
b Measurements discontinued May 1942.
c Measurements discontinued October 1942.
d Measurements discontinued August 1942.
e Measurements discontinued March 1942.

Difference between highest and lowest water levels and net change in water level in 1942 and for period of record in 18 wells in Kearny County

Well	Difference between highest and lowest water levels (feet)	Net rise (+) or net decline (-) in 1942 (feet)	Net rise (+) or net decline (-) for period of record (feet)
1	6.63	a-1.00	+2.46
2	7.20	b+.48	+2.66
3	3.09	c+.25	+.78
4	.23	(d)	-.07
6	1.30	(d)	-.83
7	3.96	e+.02	+2.65
11	2.81	a+.88	+1.19
12	7.22	f+.86	+4.95
13	7.46	g-.12	+3.00
14	1.00	(d)	-.79
16	3.89	b+.48	+1.56
17	2.02	(d)	-.34
18	1.22	(d)	-.26
19	.72	h-.13	-.18
22	.54	(d)	-.17
23	.80	h-.31	-.67
26	.65	h+.14	-.05
28	2.42	b+.12	+2.34

1 (*886,p.164; 908,p.133; *938,p.116). R. T. Beatty. NW¼NE¼ sec. 34, T. 24 S., R. 36 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	8.51	May 2	6.18	July 10	8.06	Oct. 10	10.18
Feb. 1	8.36	28	7.99	Aug. 17	9.82	Nov. 17	9.40
Mar. 5	8.71	June26	7.04	Sept.21	9.73	Dec. 4	9.37

2 (*886,p.164; 908,p.133; *938,p.116). C. E. Worthen. SE¼SE¼ sec. 16, T. 24 S., R. 36 W.

Water level, in feet below measuring point, 1942

Jan. 12	56.67	May 2	54.93	July 10	54.24	Oct. 10	53.88
Feb. 5	56.47	29	54.34	Aug. 17	53.05	Nov. 17	54.10
Mar. 6	56.27	June 26	53.68	Sept.21	52.74	Dec. 4	56.02

3 (*886,p.164; 908,p.133; *938,p.116). F. G. Worthen. SE¼NW¼ sec. 10, T. 23 S., R. 36 W.

Water level, in feet below measuring point, 1942

Jan. 12	94.80	May 2	93.86	July 10	94.19	Oct. 10	93.73
Feb. 5	93.87	29	94.21	Aug. 17	93.83	Nov. 17	93.85
Mar. 6	93.77	June 26	94.33	Sept.21	93.87		

4 (*886,p.164; 908,p.133; *938,p.116). C. W. Walker. NW¼NW¼ sec. 11, T. 21 S., R. 37 W. Measurements discontinued after May 1942. Water levels, in feet below measuring point, 1942: Jan. 12, 107.04; Feb. 5, 107.02; Mar. 6, 107.03; May 2, 107.04.

6 (*886,p.164; 908,p.133; *938,p.117). Meta Kettler. NW¼NW¼ sec. 26, T. 24 S., R. 37 W. Measurements discontinued after October 1942.

a For period Dec. 6, 1941, to Dec. 4, 1942.
b For period Dec. 19, 1941, to Dec. 4, 1942.
c For period Dec. 19, 1941, to Nov. 17, 1942.
d Record for 1942 incomplete.
e For period Dec. 20, 1941, to Dec. 12, 1942.
f For period Dec. 6, 1941, to Dec. 10, 1942.
g For period Dec. 20, 1941, to Dec. 5, 1942.
h For period Dec. 31, 1941, to Dec. 4, 1942.

6 (*886,p.164; 908,p.133; *938,p.117). Meta Kettler--Continued.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	155.52	May 2	155.09	July 16	155.16	Sept.21	155.80
Feb. 1	155.12	29	155.03	Aug. 17	155.21	Oct. 12	155.71
Mar. 5	155.13	June 26	155.20				

7 (*886,p.164; 908,p.134; *938,p.117). C. H. Browne. NW¼SW¼ sec. 8, T. 25 S., R. 37 W.

Water level, in feet below measuring point, 1942

Jan. 10	51.45	Apr. 4	51.02	July 7	51.08	Oct. 3	51.15
Feb. 7	50.99	May 9	49.91	Aug. 1	50.81	Nov. 7	51.00
Mar. 7	51.26	June 6	50.85	Sept. 5	50.79	Dec. 12	51.26

11 (*886,p.165; 908,p.134; *938,p.117). P. J. Fichter. SW¼SW¼ sec. 11, T. 25 S., R. 36 W.

Water level, in feet below measuring point, 1942

Jan. 11	14.44	May 2	14.01	July 10	13.07	Oct. 10	13.24
Feb. 1	14.49	28	13.39	Aug. 17	13.18	Nov. 17	13.43
Mar. 5	14.54	June 26	13.06	Sept.21	13.21	Dec. 4	13.49

12 (*886,p.165; 908,p.134; *938,p.117). J. E. Beymer. SE¼SW¼ sec. 22, T. 24 S., R. 35 W.

Water level, in feet below measuring point, 1942

Jan. 3	10.72	May 28	8.87	Aug. 17	8.66	Nov. 17	9.75
Feb. 2	10.68	June 26	8.43	Sept.21	9.60	Dec. 10	9.86
Mar. 2	10.61	July 16	9.61	Oct. 12	9.84		

13 (*886,p.165; 908,p.134; *938,p.117). D. S. Nickolson. NW¼NW¼ sec. 15, T. 25 S., R. 37 W.

Water level, in feet below measuring point, 1942

Jan. 10	5.22	Apr. 4	5.28	July 4	2.29	Oct. 3	5.45
Feb. 7	4.97	May 9	1.07	Aug. 1	5.15	Nov. 7	4.64
Mar. 7	5.34	June 6	3.02	Sept. 5	4.66	Dec. 5	5.16

14 (*886,p.165; *908,p.134; 938,p.117). W. H. Ploeger. SW¼SW¼ sec. 32, T. 22 S., R. 38 W. Measurements discontinued after August 1942.

Water level, in feet below measuring point, 1942

Jan. 12	227.83	Mar. 5	227.85	June 26	227.67	Aug. 17	227.91
Feb. 1	227.83	May 29	227.70	July 16	227.65		

15 (*886,p.165; *908,p.134; 938,p.118). Joseph McNellis. SW¼SW¼ sec. 36, T. 22 S., R. 35 W. Measurements discontinued after December 1941.

16 (*886,p.165; *908,p.134; 938,p.118). C. B. Campbell. SE¼SE¼ sec. 15, T. 23 S., R. 35 W.

Water level, in feet below measuring point, 1942

Jan. 12	47.71	May 2	47.17	July 10	46.41	Oct. 10	44.87
Feb. 5	47.57	29	46.99	Aug. 17	45.78	Nov. 17	44.32
Mar. 6	47.57	June 26	46.35	Sept.21	45.17	Dec. 4	44.22

17 (*886,p.165; 908,p. 135; *938,p.118). A. G. Campbell. NE¼NW¼ sec. 15, T. 21 S., R. 35 W. Measurements discontinued after May 1942. Water levels, in feet below measuring point, 1942: Feb. 5, 91.92; Mar. 6, 91.90; May 2, 91.82.

18 (*886,p.165; 908,p.135; *938,p.118). G. H. Cook. SW¼SE¼ sec. 28, T. 24 S., R. 38 W. Measurements discontinued after March 1942. Water levels, in feet below measuring point, 1942: Jan. 12, 73.12; Feb. 1, 73.39; Mar. 5, 72.56.

19 (*886, p. 165; 908,p.135; *938,p.118). E. M. Beymer. NE¼NW¼ sec.8, T. 26 S., R. 38 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	131.19	May 29	130.90	Aug. 17	131.17	Nov. 17	130.94
Feb. 1	131.07	June 26	130.92	Sept.21	131.18	Dec. 4	131.05
Mar. 5	131.11	July 16	130.91	Oct. 10	131.25		

22 (*886,p.166; *908,p.135; 938,p.118). J. A. Denslow. NE¼SE¼ sec. 6, T. 22 S., R. 38 W. Measurement discontinued after March 1942. Water levels, in feet below measuring point, 1942: Jan. 12, 182.99; Feb. 1, 182.95; Mar. 5, 182.97.

23 (*886,p.166; 908,p.135; *938,p.118). James Coghill. NW¼NW¼ sec. 18, T. 26 S., R. 37 W.

Water level, in feet below measuring point, 1942

Jan. 11	175.33	May 29	175.15	Aug. 17	175.29	Nov. 17	175.13
Feb. 1	174.89	June 26	175.11	Sept.21	175.43	Dec. 4	175.30
Mar. 5	174.91	July 16	175.09	Oct. 10	175.40		

26 (*886,p.166; 908,p.135; *938,p.118). Anna Davidson. SE¼SE¼ sec. 22, T. 26 S., R. 37 W.

Water level, in feet below measuring point, 1942

Jan. 11	86.63	May 2	86.72	July 16	86.55	Oct. 10	86.34
Feb. 1	86.65	29	86.42	Aug. 17	86.36	Nov. 17	86.34
Mar. 5	86.75	June 26	86.51	Sept.21	86.43	Dec. 4	86.35

28 (*886,p.166; 908,p.135; *938,p.118). Harry Tate. NW¼NW¼ sec. 26, T. 22 S., R. 37 W.

Water level, in feet below measuring point, 1942

Jan. 12	122.07	May 2	122.05	July 10	122.02	Oct. 10	122.05
Feb. 5	122.04	29	122.09	Aug. 17	122.05	Nov. 17	122.05
Mar. 6	122.05	June 26	122.04	Sept.21	122.06	Dec. 4	121.93

Kiowa County

By B. F. Latta

Highest and lowest recorded water levels, in feet below measuring point, in 6 wells in Kiowa County

Well	Length of record (years)	Highest recorded water level (feet)	Date	Lowest recorded water level (feet)	Date
2	2	145.53	Aug. 4, 1941	145.84	Oct. 18, 1940
4	2	76.45	Dec.27, 1940	76.87	June 8, 1942
5	2	41.18	Dec.18, 1942	41.57	July 28, 1941 Nov. 20, 1941
7	2	33.39	Dec.18, 1942	34.51	Mar. 22, 1941
8	2	26.49	Sept.28,1942	27.62	Apr. 28, 1941
10	2	105.64	Nov.24, 1942	107.27	Oct. 24, 1940

Difference between highest and lowest water levels, and net change in water level in 1942 and for period of record in 6 wells in Kiowa County

Well	Difference between highest and lowest water levels (feet)	Net rise (+) or net decline (-) in 1942 (feet)	Net rise (+) or net decline (-) for period of record (feet)
2	0.31	(a)	+0.03
4	.42	b+.04	-.07
5	.39	b+.33	+.05
7	1.12	c+.68	+.86
8	1.13	b-.1	+.23
10	1.63	b+.09	+1.55

2 (*938,p.119). D. McLaughlin. SE¼SE¼ sec. 20, T. 29 S., R. 20 W. Measuring point, 2,394.7 feet above sea level.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 21	145.76	Mar. 23	145.81	May 26	145.82	Sept.28	145.81
Feb. 23	145.83	Apr. 22	145.79	July 17	145.78		

4 (*908,p.137; 938,p.119). H. E. Davis. SE¼NE¼ sec. 4, T. 28 S., R. 16 W.

Water level, in feet below measuring point, 1942

Jan. 21	76.73	Apr. 22	76.82	July 17	76.77	Nov. 24	76.55
Feb. 23	76.83	May 26	76.80	Sept.28	76.76	Dec. 18	76.59
Mar. 23	76.83	June 8	76.87	Oct. 22	76.74		

5 (*908,p. 137; 938,pp. 119, 120). L. W. Grimes. NW¼NW¼ sec. 34, T. 27 S., R. 17 W.

Water level, in feet below measuring point, 1942

Jan. 21	41.52	Apr. 22	41.53	July 17	41.50	Nov. 24	41.28
Feb. 23	41.52	May 26	41.52	Sept.28	41.33	Dec. 18	41.18
Mar. 23	41.54	June 8	41.51	Oct. 22	41.29		

7 (*908,p.137; 938,p.120). A. C. Weaver. SW¼NW¼ sec. 23, T. 27 S., R. 18 W.

Water level, in feet below measuring point, 1942

Jan. 21	33.93	Apr. 22	33.89	July 17	33.74	Nov. 24	33.43
Feb. 23	33.92	May 26	33.80	Sept.28	33.66	Dec. 18	33.39
Mar. 23	33.90	June 8	33.69	Oct. 22	33.50		

8 (*908,p.137; 938,p.120). E. E. Miller. SW¼SE¼ sec. 18, T. 27 S., R. 18 W.

Water level, in feet below measuring point, 1942

Jan. 21	26.86	Apr. 22	27.05	July 17	26.55	Nov. 24	26.68
Feb. 23	26.77	May 26	26.65	Sept.28	26.49	Dec. 18	26.73
Mar. 23	26.82	June 8	26.68	Oct. 22	26.59		

10 (*908,p.137; 938,p.120). J. E. Ely. SW¼NW¼ sec. 23, T. 30 S., R. 18 W. Measuring point, 2,205.5 feet above sea level.

Water level, in feet below measuring point, 1942

Jan. 21	105.79	Apr. 22	105.79	Sept.28	106.31	Nov. 24	105.64
Feb. 23	105.75	May 26	105.78	Oct. 22	106.25	Dec. 18	105.72
Mar. 23	105.81	July 17	105.75				

a Record incomplete for 1942.
b For period Dec. 22, 1941, to Dec. 18, 1942.
c For period Nov. 20, 1941, to Dec. 18, 1942.

Labette County

By C. C. Williams

The observation-well program begun during 1942 in an area made up of parts of Bourbon, Cherokee, Crawford, and Labette Counties is discussed in the section of this report that deals with Bourbon County.

1. Ralph A. Grove. NW¼NE¼NE¼ sec. 33, T. 31 S., R. 21 E. Driven stock well, diameter 1¼ inches, depth 20.0 feet. Water obtained from alluvium in Neosho River Valley. Measuring point, top of pitcher pump with plunger removed, 3.0 feet above land surface and 835.01 feet above sea level. Water levels, in feet below measuring point, 1942: Oct. 12, 11.31; Oct. 25, 10.34; Nov. 25, 12.36; Dec. 26, 6.87.

Logan County

By S. W. Lohman and W. W. Wilson

An observation-well program in Logan County was begun in the fall of 1942 by the Geological Survey, United States Department of the Interior, and the State Geological Survey of Kansas in cooperation with the Division of Water Resources of the Kansas State Board of Agriculture and the Division of Sanitation of the Kansas State Board of Health.

Most of Logan County lies in the High Plains section of the Great Plains physiographic province, but the southeastern part is in the Plains Border section. The northern and southwestern parts of the county are relatively flat. The Smoky Hill River, which traverses the county from west to southeast, has cut considerably below the Plains surface, notably in the southeastern part of the county, where it occupies a wide valley. The entire county is drained by Smoky Hill River and its tributaries, all of which are intermittent streams.

The geology of the county has been described briefly by Landes and Keroher, 1/ but no detailed ground-water study has been made. About half of the county, including most of the stream valleys, is underlain by the Niobrara formation and the Pierre shale, of Cretaceous age. The upland surface is capped by the Ogallala formation, of Tertiary age. Silt and sand of the Sanborn formation overlie the older deposits over much of the upland surface. Alluvium occurs along the valleys of the Smoky Hill River and its larger tributaries. The Niobrara formation and Pierre shale are relatively impermeable and yield little or no water to wells.

1/ Landes, K.K., and Keroher, R. P., Geology and oil and gas resources of Logan, Gove, and Trego Counties, Kans. Kans. Geol. Survey Min. Resources Circ. 11, 45 pp., 4 pls., 8 figs., February 1939.

Water supplies, generally adequate for domestic or stock use, are obtained in the uplands from sand or gravel of the Ogallala formation and, in the larger valleys, from alluvium.

Four wells in the northeastern part of the county, all of which tap the Ogallala formation, were selected for monthly observation of water levels. W. W. Wilson selected the wells and made all the water-level measurements. In all, 14 wetted-tape measurements were made in 1942.

1. Octon Estate. SW¼SW¼ sec. 2, T. 11 S., R. 32 W. Unused drilled domestic and stock well, diameter 5½ inches, depth 107 feet. Measuring point, top of casing, north side, 0.4 foot above land surface. No pump on well. Water levels, in feet below measuring point, 1942: Sept. 17, 97.62; Oct. 7, 97.58; Nov. 27, 97.46; Dec. 14, 97.50.

2. J. J. Schultz. SE corner sec. 34, T. 11 S., R. 32 W. Unused drilled stock well, diameter 4 inches, depth 69.0 feet. Measuring point, top of casing, east side, 1.0 foot above land surface. Equipped with lift pump and partly dismantled windmill. Water levels, in feet below measuring point, 1942: Sept. 17, 60.77; Oct. 7, 60.74; Nov. 27, 60.79; Dec. 14, 60.82.

3. Mamie L. Landon. NE¼NW¼ sec. 27, T. 12 S., R. 32 W. Unused domestic and stock well, diameter 6 inches, depth 86.0 feet. Measuring point, top of casing, east side, 0.7 foot above land surface. Equipped with lift pump and partly dismantled windmill. Water levels, in feet below measuring point, 1942: Oct. 7, 81.45; Nov. 27, 81.31; Dec. 14, 81.36.

4. L. L. Garrison Estate. SE¼SE¼ sec. 10, T. 13 S., R. 32 W. Unused domestic and stock well, diameter 8 inches, depth 38.0 feet. Measuring point, top of casing, north side, level with land surface. No pump on well. Water levels, in feet below measuring point, 1942: Oct. 7, 33.59; Nov. 27, 33.56; Dec. 14, 33.64.

McPherson County

By C. C. Williams and G. H. von Hein

Highest and lowest recorded water levels, in feet below measuring point, in 9 wells in McPherson County

Well	Length of record (years)	Highest recorded water level (feet)	Date	Lowest recorded water level (feet)	Date
19	4	69.40	Aug. 11, 1939	71.42	Oct. 1, 1942
243	5	82.49	Sept. 2, 1938	83.49	Oct.28, 1937
249	5	29.72	Oct. 1, 1942	a40.13	Apr. 2, 1940
250	5	39.61	Dec. 16, 1942	a46.67	July 29,1938
260	5	22.68	Oct. 1, 1942	29.35	Nov. 4, 1937
262	5	23.42	Oct. 1, 1942	b41.35	Nov. 2, 1938
309	5	24.70	Dec. 2, 1942	c37.28	Mar.26, 1938
310	5	8.41	Dec. 16, 1942	19.39	Nov. 4, 1937
311	5	10.14	July 4, 1938	14.26	Dec.31, 1939

a Measured after well had been pumped.
b Measured while pumping.
c Adjusted to new measuring point.

Difference between highest and lowest water levels, and net change in water level in 1942 and for period of record in 9 wells in McPherson County

Well	Difference between highest and lowest water level (feet)	Net rise (+) or net decline (-) in 1942 (feet)	Net rise (+) or net decline (-) for period of record (feet)
19	2.02	+0.14	-1.63
243	1.00	-.16	+.21
249	10.41	-1.55	+5.68
250	7.06	+2.97	+3.89
260	6.67	-.14	+6.07
262	17.93	-.22	+7.14
309	12.58	a+1.67	a +11.94
310	10.98	+.75	+10.90
311	4.12	+.40	+2.76

19 (*840,p.103; 845,p.123; 886,p.214; 908,p.139; 938,p.121). Scott Montgomery. NW¼NE¼ sec. 29, T. 19 S., R. 3 W. Water levels, in feet below measuring point, 1942: Jan. 16, 71.36; Apr. 1, 71.38; Oct. 1, 71.42; Dec. 16, 71.23.

243 (*840,p.104; 845,p.123; 886,p.214; 908,p.139; 938,p.121). Emma Bergstrom. SE¼SW¼SE¼ sec. 5, T. 19 S., R. 3 W. Water levels, in feet below measuring point, 1942: Jan. 16, 83.17; Apr. 1, 83.21; Oct. 1, 83.21; Dec. 16, 83.28.

249 (*840,p.104; 845,p.123; 886,p.215; 908,p.139; 938,p.121). Prudential Life Insurance Co. SE.corner sec. 5, T. 18 S., R. 3 W. Water levels, in feet below measuring point, 1942: Jan. 16, 30.93; Apr. 1, 31.23; Oct. 1, 29.72; Dec. 16, 32.01.

250 (*840,p.104; 845,p.124; 886,p.215; 908,p.139; 938,p.121). John Weed. NE¼NE¼SE¼ sec. 30, T. 19 S., R. 4 W. Water levels, in feet below measuring point, 1942: Jan. 16, 42.46; Apr. 1, 41.46; Oct. 1, 39.86; Dec. 16, 39.61.

260 (*840,p.104; 845,p.124; 886,p.215; 908,p.139; 938,p.121). John Rawson. SE¼SE¼ sec. 33, T. 17 S., R. 4 W. Water levels, in feet below measuring point, 1942: Jan. 16, 23.61; Apr. 1, 24.41; Oct. 1, 22.68; Dec. 16, 23.28.

262 (*840,p.104; 845,p.124; 886,p.215;908,p.139; 938,p.121). P. A. Olsen. NE¼NW¼NE¼ sec. 1, T. 18 S., R. 5 W. Water levels, in feet below measuring point, 1942: Jan. 16, 25.95; Apr. 1, 25.78; Oct. 1, 23.42; Dec. 16, 23.94.

309 (*840,p.104; 845,p.124; 886,p.215; 908,p.139; 938,p.122). Mrs. Ida Tuxhorn. SW¼SW¼ sec. 9, T. 21 S., R. 4 W. New measuring point beginning Aug. 3, 1942, top edge of opening in concrete floor, 3.01 feet below old measuring point, 0.06 foot above bench mark, level with land surface and 1,522.42 feet above sea level.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 16	29.26	Apr. 1	28.89	Aug. 3	b26.61	Nov. 2	24.93
Feb. 3	29.13	May 4	30.00	Sept. 1	26.24	Dec. 2	24.70
Mar. 3	28.53	July 7	29.24	Oct. 1	24.93		

310 (*845,p.125; 886,p.216; 908,p.140; 938,p.122). City of Moundridge. SW¼NE¼SW¼ sec. 23, T. 21 S., R. 2 W. Water levels, in feet below measuring point, 1942: Jan. 16, 9.06; Apr. 1, 9.00; Oct. 1, 8.69; Dec. 16, 8.41.

a Aljusted for change in measuring point.
b Below new measuring point beginning this date.

311 (*845, p. 125; 886, p. 216; 908, p. 140; 938, p. 122). City of Moundridge. SW¼NE¼SW¼ sec. 23, T. 21 S., R. 2 W. Land description erroneously published in Water-Supply Paper 938 as SW¼SE¼SW¼ sec. 23, T. 21 S., R. 2 W. Water levels, in feet below measuring point, 1942: Jan. 16, 10.64; Apr. 1, 10.50; Oct. 1, 11.34; Dec. 16, 10.64.

Meade County

By W. W. Wilson

Highest and lowest recorded water levels, in feet below measuring point, in 24 wells in Meade County

Well	Length of record (years)	Highest recorded water level (feet)	Date	Lowest recorded water level (feet)	Date
2	3.5	19.97	May 12, 1942	22.18	Sept.29, 1939
a3	3.5	29.27	July 15, 1939	30.68	Aug. 17, 1940
10	3.5	14.10	June 10, 1941 May 12, 1942	19.91	Aug. 3, 1939
b11	3.5	10.40	July 17, 1939	14.56	Sept.20, 1940
b16	3.5	12.43	Jan. 6, 1942	16.90	Oct. 28, 1940
b23	3.5	10.25	Feb. 3, 1942	12.32	Oct. 29, 1940 Jan. 21, 1941
27	3.5	18.09	Dec. 17, 1942	20.54	Oct. 29, 1939
33	3.5	38.03	Nov. 23, 1942	38.48	May 16, 1941
34	3.5	147.32	May 12, 1942	151.19	Oct. 29, 1939
36	3.5	157.07	Jan. 21, 1941	160.46	Sept.20, 1940
b37	3.5	34.31	July 20, 1939	41.72	Sept.29, 1939
40	3.5	130.40	Feb. 14, 1940	133.11	Sept.14, 1940
42	3.5	133.13	Feb. 14, 1940	133.82	Jan. 6, 1942
45	3.5	3.04	July 1, 1942	4.90	Aug. 31, 1939
b47	3.5	43.10	Jan. 21, 1941	44.39	July 22, 1939
55	3.5	85.47	Sept.30, 1939	86.52	Sept.20, 1940
57	3.5	169.94	Aug. 2, 1939	172.97	Sept. 9, 1941
61	3.5	60.80	Nov. 23, 1942	61.37	May 17, 1940
b62	3.5	25.45	Jan. 6, 1942	26.66	Aug. 17, 1940
b73	3.5	33.14	Jan. 6, 1942	34.55	Aug. 19, 1940
76	3.5	27.70	Sept. 1, 1939	38.20	May 17, 1941
77	3.5	65.19	Oct. 21, 1942	66.03	Sept.20, 1940
88	3.5	41.95	May 12, 1942	46.20	July 1, 1942
234	3.5	13.66	Nov. 30, 1942 Dec. 25, 1942	15.72	Aug. 31, 1939

Difference between highest and lowest water levels, and net change in water level in 1942 and for period of record in 24 wells in Meade County

Well	Difference between highest and lowest water level (feet)	Net rise (+) or net decline (-) in 1942 (feet) c/	Net rise (+) or net decline (-) for period of record (feet)
2	2.21	+0.32	+1.34
3	1.41	(b)	-.12
10	5.81	-.33	+4.17
11	4.16	(d)	-1.61
16	4.47	(d)	+.91
23	2.07	(d)	+1.26
27	2.45	f+2.18	+2.37
33	.45	+.09	+.24
34	3.87	-.32	-.27
36	3.39	+2.01	+1.18
37	7.41	(c)	-.11

a Through July 1942. b Through February 1942.
c For period Dec. 3, 1941, to Dec. 17, 1942.
d Measurements discontinued after July 1, 1942.
e Measurements discontinued after Feb. 3, 1942.
f For period Nov. 7, 1941, to Dec. 17, 1942.

Difference between highest and lowest water levels, and net change in water level in 1942 and for period of record in 24 wells in Meade County--Continued

Well	Difference between highest and lowest water level (feet)	Net rise (+) or net decline (-) in 1942 (feet) a/	Net rise (+) or net decline (-) for period of record (feet)
40	2.71	b-0.04	+0.11
42	.69	c-.05	-.15
45	1.86	+.59	+.92
47	1.29	(d)	+.74
55	1.05	+.24	+.34
57	3.03	(e)	-2.67
61	.57	+.14	+.34
62	1.21	(d)	+1.07
73	1.41	(d)	+.30
76	10.50	-2.22	-5.19
77	.84	+.68	+.50
88	4.25	-.08	+1.68
234	2.06	f+.40	+2.05

2 (*886, p. 175; 908, p. 143; 938, p. 123). William A. Ellison. NW¼SW¼ sec. 5, T. 30 S., R. 26 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	20.37	Apr. 1	20.34	July 1	20.09	Oct. 21	20.19
Feb. 3	20.36	May 12	19.97	Aug. 3	20.31	Nov. 23	20.11
Mar. 3	20.40	June 3	20.76	Sept. 9	20.25	Dec. 17	20.06

3 (*886, p. 175; 908, p. 143; 938, p. 123). H. L. Salmon. NW¼SE¼ sec. 4, T. 30 S., R. 27 W. Measurements discontinued after July 1942.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	29.53	Mar. 3	29.44	May 12	29.45	July 1	29.39
Feb. 3	29.47	Apr. 1	29.48	June 3	29.44		

10 (*886, p. 176; 908, p. 143; 938, p. 124). Fred Borchers. SW¼NW¼ sec. 29, T. 33 S., R. 28 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	14.32	Apr. 1	14.44	July 1	14.48	Oct. 21	15.06
Feb. 3	14.35	May 12	14.10	Aug. 3	15.12	Nov. 23	15.06
Mar. 3	14.29	June 2	14.57	Sept. 9	15.25	Dec. 17	14.98

11 (*886, p. 176; 908, p. 143; 938, p. 124). J. E. Lutz. NW¼SW¼ sec. 4, T. 30 S., R. 26 W. Measurements discontinued after February 1942. Water levels, in feet below measuring point, 1942: Jan. 6, 11.97; Feb. 3, 12.01.

16 (*886, p. 176; 908, p. 143; 938, p. 124). B. A. Cordes. SW¼SW¼ sec. 25, T. 33 S., R. 29 W. Measurement discontinued after February 1942. Water levels, in feet below measuring point, 1942: Jan. 6, 12.43; Feb. 3, 12.47.

23 (*886, p. 176; 908, p. 143; 938, p. 124). L. L. Ming. SE¼SE¼ sec. 18, T. 30 S., R. 26 W. Measurements discontinued after February 1942. Water levels, in feet below measuring point, 1942: Jan. 6, 10.69; Feb. 3, 10.25.

27 (*886, p. 176; 908, p. 143; 938, p. 124). Ira C. Rees. SW¼NW¼ sec. 9, T. 30 S., R. 26 W. New measuring point beginning Jan. 6, 1942, top of casing, north side, 0.87 foot above land surface, 1.13 feet below old measuring point.

a For period Dec. 3, 1941, to Dec. 17, 1942.
b For period Dec. 3, 1941, to Oct. 21, 1942.
c For period Dec. 3, 1941, to Nov. 23, 1942.
d Measurements discontinued after Feb. 3, 1942.
e Measurements discontinued after Aug. 3, 1942.
f For period Dec. 31, 1941, to Dec. 31, 1942.

27. Ira C. Rees--Continued.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	a18.48	Apr. 1	18.44	July 1	18.24	Oct. 21	18.17
Feb. 3	18.43	May 12	18.28	Aug. 3	18.23	Nov. 23	18.19
Mar. 3	18.55	June 3	18.25	Sept. 9	18.18	Dec. 17	18.09

33 (*886, p. 176; 908, p. 143; 938, p. 124). H. L. Woodruff. NE¼NW¼ sec. 34, T. 33 S., R. 26 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	38.18	Apr. 1	38.14	July 1	38.08	Oct. 21	38.08
Feb. 3	38.13	May 12	38.10	Aug. 3	38.11	Nov. 23	38.03
Mar. 3	38.15	June 2	38.09	Sept. 9	38.06	Dec. 17	38.05

34 (*886, p. 176; 908, p. 143; 938, p. 124). District school. SE¼SE¼ sec. 17, T. 33 S., R. 27 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	147.67	Apr. 1	147.51	July 1	147.61	Oct. 21	147.72
Feb. 3	147.70	May 12	147.32	Aug. 3	147.76	Nov. 23	147.73
Mar. 3	147.49	June 2	147.77	Sept. 9	147.78	Dec. 17	147.75

36 (*886, p. 177; 908, p. 143; 938, p. 124). Tony Steinke. NW¼NE¼ sec. 24, T. 32 S., R. 27 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	159.94	Apr. 1	157.70	July 1	157.89	Oct. 21	157.61
Feb. 3	158.65	May 12	157.16	Aug. 3	157.63	Nov. 23	157.66
Mar. 3	158.59	June 2	157.72	Sept. 9	157.59	Dec. 17	157.63

37 (*886, p. 177; 908, p. 144; 938, p. 124). J. H. Clay. SE¼SE¼ sec. 11, T. 33 S., R. 26 W. Measurements discontinued after February 1942. Water levels, in feet below measuring point, 1942: Jan. 6, 34.42; Feb. 3, windmill pumping.

40 (*886, p. 177; 908, p. 144; 938, p. 124). J. A. and D. F. Collingwood. SE¼SE¼ sec. 30, T. 31 S., R. 29 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	130.86	Apr. 1	130.67	June 2	130.65	Sept. 9	130.72
Feb. 3	130.75	May 12	130.62	July 1	130.66	Oct. 21	130.68
Mar. 3	130.53						

41 (*886, p. 177; 908, p. 144; 938, p. 125). D. L. Shranner. NW¼NW¼ sec. 20, T. 30 S., R. 30 W. Measurements discontinued after December 1941.

42 (*886, p. 177; 908, p. 144; 938, p. 125). H. Jenkinson. SW¼SW¼ sec. 23, T. 30 S., R. 29 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	133.82	Apr. 1	133.51	July 1	133.59	Oct. 21	133.59
Feb. 3	133.48	May 12	133.51	Aug. 3	133.56	Nov. 23	133.58
Mar. 3	133.52	June 2	133.63	Sept. 9	133.62		

45 (*886, p. 177; 908, p. 144; 938, p. 125). Joseph Rocke. SE¼NE¼ sec. 31, T. 30 S., R. 27 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	3.57	Apr. 1	3.60	July 1	3.04	Oct. 21	3.36
Feb. 3	3.37	May 12	3.13	Aug. 3	3.19	Nov. 23	3.11
Mar. 3	3.21	June 3	3.14	Sept. 9	3.15	Dec. 17	3.25

47 (*886, p. 177; 908, p. 144; 938, p. 125), C. A. Horner. SE¼SW¼ sec. 18, T. 30 S., R. 27 W. Measurements discontinued after February 1942. Water levels, in feet below measuring point, 1942: Jan. 6, 43.68; Feb. 3, 43.65.

55 (*886, p. 178; 908, p. 144; 938, p. 125). C. W. Farris. SE¼SE¼ sec. 15, T. 30 S., R. 28 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	86.29	Apr. 1	86.19	July 1	86.15	Oct. 21	85.99
Feb. 3	86.28	May 12	86.20	Aug. 3	86.12	Nov. 23	86.03
Mar. 3	86.26	June 2	86.13	Sept. 9	86.08	Dec. 17	86.03

a Below new measuring point.

57 (*886,p.178; 908,p.144; 938,p.125). Plains State Bank. SW¼SE¼ sec. 18, T. 33 S., R. 30 W. Measurements discontinued after Aug. 1942.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	172.73	Mar. 3	172.56	May 12	172.54	July 1	172.71
Feb. 3	172.70	Apr. 1	172.65	June 2	172.74	Aug. 3	172.65

61 (*886,p.178; 908,p.144; 938,p.125). John Meyer. NW¼NW¼ sec. 26, T. 31 S., R. 27 W.

Water level, in feet below measuring point, 1942

Jan. 6	60.99	Apr. 1	60.93	July 1	60.90	Oct. 21	60.86
Feb. 3	61.02	May 12	60.97	Aug. 3	60.89	Nov. 23	60.80
Mar. 3	60.99	June 2	60.91	Sept. 9	60.88	Dec. 17	60.82

62 (*886,p.178; 908,p.144; 938,p.125). H. L. Salmon. NE¼NE¼ sec. 7, T. 31 S., R. 26 W. Measurements discontinued after February 1942. Water levels, in feet below measuring point, 1942: Jan. 6, 25.45; Feb. 3, 25.54.

73 (*886,p.178; 908,p.145; 938,p.125). A. M. and O. M. Eubank. SE¼ NE¼ sec. 11, T. 34 S., R. 28 W. Measurements discontinued after February 1942. Water levels, in feet below measuring point, 1942: Jan. 6, 33.14; Feb. 3, 33.19.

76 (*886,p.178; 908,p.145; 938,p.125). R. L. L. Barnstable. NE¼NE¼ sec. 3, T. 34 S., R. 28 W.

Water level, in feet below measuring point, 1942

Jan. 6	34.02	Apr. 1	35.44	July 1	32.77	Oct. 21	36.11
Feb. 3	34.21	May 12	33.08	Aug. 3	34.65	Nov. 23	36.59
Mar. 3	34.93	June 2	32.49	Sept. 9	35.61	Dec. 17	36.66

77 (*886,p.178; 908,p.145; 938,p.126). J. W. Wood. SE¼NE¼ sec. 4, T. 32 S., R. 28 W.

Water level, in feet below measuring point, 1942

Jan. 6	65.94	May 12	65.59	Aug. 3	65.24	Nov. 23	65.22
Feb. 3	65.91	June 2	65.21	Sept. 9	65.21	Dec. 17	(a)
Apr. 1	65.61	July 7	65.26	Oct. 21	65.19		

88 (*886,p.179; 908,p.145; 938,p.126). H. V. Gulick. SE¼SE¼ sec. 14, T. 31, S., R. 28 W.

Water level, in feet below measuring point, 1942

Jan. 6	42.23	Apr. 1	42.40	July 1	46.20	Oct. 21	43.00
Feb. 3	42.29	May 12	41.95	Aug. 3	42.54	Nov. 23	42.68
Mar. 3	42.34	June 3	42.38	Sept. 9	43.17	Dec. 17	42.76

101 (*886,p.179; 908,p.145; 938,p.126). West and Higenbotham. NE¼NE¼ sec. 29, T. 34 S., R. 26 W. Measurements discontinued after December 1941.

234 (*886,p.179; 908,p.145; 938,p.126). Christopher Sobba. NW¼NE¼ sec. 23. T. 30 S., R. 27 W.

Lowest daily water level, in feet below measuring point, 1942

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	14.15	14.18	14.01	13.95	13.89	14.05	13.86	13.82	13.71	13.94	.....	13.67
2	14.15	14.16	14.02	13.91	13.88	14.06	13.85	13.84	13.74	13.93	.....	13.67
3	.....	14.16	14.00	13.92	13.91	14.06	13.82	13.85	13.74	13.92	.....	13.70
4	.....	14.13	14.02	13.89	13.90	14.07	13.83	13.80	13.74	13.94	.....	13.70
5	.....	14.14	14.02	13.90	13.92	14.07	13.83	13.80	13.74	13.98	.....	13.68
6	.....	14.18	13.97	13.90	13.93	14.05	13.82	13.80	13.75	13.97	13.77	13.67
7	.....	14.17	14.02	13.91	13.92	14.03	13.82	13.81	13.74	13.93	13.76	13.67
8	.....	14.17	14.03	13.89	13.89	13.99	13.81	13.80	13.76	13.92	13.75	13.67
9	.....	14.21	14.02	13.90	13.87	13.94	13.82	13.76	13.78	13.93	13.75	13.67
10	.....	14.21	13.97	13.91	13.86	13.90	13.85	13.75	13.79	13.92	13.79	13.67
11	.....	14.15	13.95	13.91	13.82	13.89	13.86	13.75	13.80	13.90	13.80	13.67

a Windmill pumping.

234 (*886,p.179; 908,p.145; 938,p.126). Christopher Sobba--Continued.

Lowest daily water level, in feet below measuring point, 1942

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
12	.....	14.13	13.93	13.90	13.81	13.91	13.88	13.80	13.81	13.88	13.77	13.68
13	.....	14.15	13.93	13.92	13.87	13.95	13.89	13.79	13.80	13.88	13.76	13.69
14	.....	.....	13.92	13.92	13.89	13.93	13.90	13.81	13.79	13.88	13.76	13.69
15	.....	.....	13.92	13.91	13.88	13.90	13.91	13.80	13.78	13.81	13.71	13.70
16	.....	.....	13.94	13.96	13.83	13.88	13.88	13.80	13.80	13.76	13.71	13.70
17	.....	.....	13.97	13.95	13.88	13.89	13.89	13.79	13.81	13.77	13.72	13.67
18	.....	.....	13.96	13.88	13.89	13.90	13.90	13.79	13.87	13.77	13.72	13.69
19	.....	.....	13.94	13.88	13.89	13.86	13.92	13.79	13.90	13.76	13.72	13.72
20	.....	14.03	13.98	13.90	13.89	13.87	13.93	13.79	13.90	13.78	13.77	13.73
21	.....	14.02	14.00	13.90	13.88	13.89	13.93	13.78	13.88	13.78	13.76	13.67
22	.....	14.00	13.99	13.89	13.92	13.87	13.84	13.79	13.89	13.78	13.76	13.67
23	14.12	14.03	13.94	13.86	13.93	13.88	13.83	13.79	13.89	13.80	13.73	13.67
24	14.14	14.05	13.91	13.78	13.94	13.85	13.82	13.71	13.93	.....	13.69	13.67
25	14.13	14.03	13.91	13.80	13.92	13.83	13.80	13.71	13.95	.....	13.71	13.66
26	14.14	14.05	13.98	13.81	13.91	13.85	13.82	13.71	13.96	.....	13.72	13.70
27	14.14	14.05	13.98	13.84	13.95	13.86	13.81	13.71	13.97	.....	13.71	13.72
28	14.14	14.02	13.97	13.84	13.97	13.87	13.81	13.71	13.97	.....	13.70	13.71
29	14.11	.....	13.98	13.84	14.00	13.89	13.81	13.72	13.95	.....	13.70	13.69
30	14.15	.....	13.98	13.85	14.02	13.87	13.80	13.72	13.95	.....	13.56	13.69
31	14.18	.....	13.98	.....	14.04	.....	13.84	13.72	.....	.....	.....	13.67

304 (*886,p.179; 908,p.146; 938,p.126). A. W. Adams. NW¼SE¼ sec. 27, T. 34 S., R. 30 W. Measurements discontinued after February 1942. Water level , in feet below measuring point, 1942: Feb. 3, 220.19.

Morton County

By T. G. McLaughlin

Highest and lowest recorded water levels, in feet below measuring point, in 6 wells in Morton County

Well	Length of record (years)	Highest recorded water level (feet)	Date	Lowest recorded water level (feet)	Date
22	3.5	74.33	May 12, 1941	76.65	Jan. 6, 1941
54	3.5	67.78	Aug. 19, 1942	76.90	July 25, 1939
65	3.5	52.85	Aug. 19, 1942 Nov. 12, 1942	54.15	Mar. 13, 1941
93	3.5	158.92	Nov. 12, 1942	160.14	Oct. 27, 1939
114	3.5	226.62	Aug. 25, 1939	226.94	Apr. 13, 1942
117	3.5	166.47	Dec. 10, 1942	167.39	July 26, 1939

Difference between highest and lowest water levels, and net change in water level in 1942 and for period of record in 6 wells in Morton County

Well	Difference between highest and lowest water level (feet)	Net rise (+) or net decline (-) in 1942 (feet)	Net rise (+) or net decline (-) for period of record (feet)
22	2.32	a0.00	-0.08
54	9.12	a+6.61	+8.99
65	1.30	a+.20	+.63
93	1.22	b+.49	+1.02
114	.32	b-.09	.00
117	.92	a+.40	+.92

a For period Dec. 16, 1941, to Dec. 10, 1942.
b For period Dec. 16, 1941, to Nov. 12, 1942.

22 (*886,p.181; 908,p.148; 938,p.127). E. A. Wilcox. SE¼SE¼ sec. 14, T. 31 S., R. 43 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	74.57	Apr. 13	75.35	July 7	74.96	Oct. 12	74.76
Feb. 19	74.95	May 20	75.35	Aug. 19	74.79	Nov. 12	74.78
Mar. 9	75.01	June 16	74.83	Sept.11	74.81	Dec. 10	74.83

54 (*886,p.181; 908,p.149; 938,p.127). V. W. Dickinson. SW¼SW¼ sec. 13, T. 33 S., R. 40 W.

Water level, in feet below measuring point, 1942

Jan. 15	74.69	Apr. 13	74.49	July 7	70.26	Oct. 12	67.93
Feb. 19	74.12	May 20	74.37	Aug. 19	67.78	Nov. 12	69.16
Mar. 9	74.16	June 16	69.74	Sept.11	68.21	Dec. 10	67.91

65 (*886,p.181; 908,p.149; 938,p.127). John Hentschel. SE¼SE¼ sec. 8, T. 33 S., R. 42 W.

Water level, in feet below measuring point, 1942

Jan. 15	53.23	Apr. 13	53.45	July 7	52.92	Oct. 12	52.87
Feb. 19	53.38	May 20	53.32	Aug. 19	52.85	Nov. 12	52.85
Mar. 9	53.31	June 20	53.04	Sept.11	52.86	Dec. 10	52.96

93 (*886,p.182;*908,p.149; 938,p.127). Ira Webb. NE¼SE¼ sec. 28, T. 34 S., R. 41 W.

Water level, in feet below measuring point, 1942

Jan. 15	159.41	Apr. 13	159.49	July 7	159.08	Oct. 12	159.07
Feb. 19	159.37	May 20	159.48	Aug. 19	159.11	Nov. 12	158.92
Mar. 9	159.39	June 16	159.20	Sept.11	159.05		

114 (*886.p.183; *908,p.150; 938,p.128). J. L. Kniffen. SE¼SE¼ sec. 13, T. 35 S., R. 41 W.

Water level, in feet below measuring point, 1942

Jan. 15	226.79	Apr. 13	226.94	July 7	226.84	Oct. 12	226.92
Feb. 19	226.84	May 20	226.85	Aug. 19	226.88	Nov. 12	226.88
Mar. 9	226.89	June 16	226.81	Sept.11	226.90		

117 (*886,p.183; 908,p.150; 938,p.128). W. C. Washburn. SW¼SW¼ sec. 4, T. 35 S., R. 42 W.

Water level, in feet below measuring point, 1942

Jan. 15	166.78	Apr. 13	166.89	July 7	166.71	Oct. 12	166.57
Feb. 19	166.81	May 20	166.89	Aug. 19	166.76	Nov. 12	166.49
Mar. 9	166.81	June 16	166.73	Sept.11	166.73	Dec. 10	166.47

Ness County

By V. C. Fishel

Highest and lowest recorded water levels, in feet below measuring point, in 2 wells in Ness County

Well	Length of record (years)	Highest recorded water level (feet)	Date	Lowest recorded water level (feet)	Date
1	2	35.16	June 6, 1941	36.91	Aug. 27, 1940
2	2	24.76	Aug. 2, 1941	25.90	Sept.20, 1940

Difference between highest and lowest water levels, and net change in water level in 1942 and for period of record in 2 wells in Ness County

Well	Difference between highest and lowest water level (feet)	Net rise (+) or net decline (-) in 1942 a/ (feet)	Net rise (+) or net decline (-) for period of record (feet)
1	1.75	0.18	0.51
2	1.14	.14	.65

1 (*908,p.151; 938,p.128). J. E. Ficken. SE¼SW¼ sec. 32, T. 20 S., R. 23 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	36.17	Apr. 15	36.32	July 18	36.14	Oct. 5	36.38
Feb. 3	36.21	Apr. 30	36.16	Aug. 10	36.20	Nov. 23	36.38
Mar. 9	36.19	June 22	36.18	Sept.15	36.22	Dec. 14	36.40

2 (*908,p.151; 938,p.128). C. L. Whitley. SW. corner sec. 20, T. 20 S. R. 22 W.

Water level, in feet below measuring point, 1942

Jan. 5	25.05	Apr. 15	25.02	July 18	24.93	Oct. 5	25.30
Feb. 3	25.08	Apr. 30	24.81	Aug. 10	24.98	Nov. 23	25.21
Mar. 9	25.07	June 22	25.03	Sept.15	24.94	Dec. 14	25.25

Pawnee County

By V. C. Fishel

Highest and lowest recorded water levels, in feet below measuring point, in 3 wells in Pawnee County

Well	Length of record (years)	Highest recorded water level (feet)	Date	Lowest recorded water level (feet)	Date
6	2	23.02	Nov. 24, 1942	25.02	Nov. 28, 1940
7	2	25.68	Nov. 24, 1942	28.00	Nov. 29, 1940
8	2	15.18	Dec. 15, 1942	19.82	Sept.20, 1940

Difference between highest and lowest water levels, and net rise in water level in 1942 and for period of record in 3 wells in Pawnee County

Well	Difference between highest and lowest water level (feet)	Net rise in 1942 (feet) b/	Net rise for period of record (feet)
6	2.00	0.73	1.17
7	2.32	.44	2.31
8	4.64	.65	4.11

6 (*908, p. 151; 938, p. 129). Frank Elmore. SW. corner sec. 27, T. 21 S., R. 19 W.

Water level, in feet below measuring point, 1942

Jan. 5	23.99	Apr. 7	24.09	July 18	23.96	Oct. 5	23.30
Feb. 3	24.06	30	23.78	Aug. 10	24.03	Nov. 24	23.02
Mar. 9	24.03	June 22	23.84	Sept.15	23.30	Dec. 15	23.42

a For period Dec. 4, 1941, to Dec. 14, 1942.
b For period Dec. 4, 1941, to Dec. 15, 1942.

7 (*908, p. 151; 938, p. 129). Ralph Lupfer. NE¼NE¼ sec. 18, T. 22 S., R. 17 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	26.20	Apr. 7	26.24	July 18	27.26	Oct. 5	25.75
Feb. 3	26.18	30	25.93	Aug. 10	27.11	Nov. 24	25.68
Mar. 9	26.03	June 22	26.02	Sept.15	25.70	Dec. 15	25.69

8 (*908, p. 151; 938, p. 129). F. B. Reed. NW¼NW¼ sec. 6, T. 22 S., R. 16 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	15.76	Apr. 7	15.77	July 18	(a)	Oct. 5	15.46
Feb. 3	15.62	30	15.36	Aug. 10	15.63	Nov. 24	15.19
Mar. 9	15.53	June 22	15.49	Sept.15	15.58	Dec. 15	15.18

Republic County

By V. C. Fishel

An investigation of the ground-water resources of Republic County and the northern part of Cloud County, was begun in 1942 by the United States Department of the Interior, Geological Survey and the State Geological Survey of Kansas in cooperation with the Division of Sanitation of the Kansas State Board of Health and the Division of Water Resources of the Kansas State Board of Agriculture. The Bureau of Reclamation, United States Department of the Interior, also cooperated in a special investigation of the Republican River Valley between the Nebraska-Kansas State line and Concordia in Cloud County, in order to determine the possibility of irrigation by wells. The investigation was made by the writer under the supervision of S. W. Lohman, Federal geologist in charge of ground-water investigations in Kansas.

The geology of Republic and Cloud Counties was studied by Wing [1/] in 1930. Republic County is situated near the eastern edge of the Great Plains province. It is drained by the Republican River and by tributaries of the Republican and Little Blue Rivers. All of the county is underlain by Cretaceous rocks. The Cretaceous rocks are covered by alluvium in the larger valleys and by Pleistocene or Tertiary deposits or both in the northern part of the county.

Nine observation wells were established in Republic County in 1942. One well is equipped with an automatic water-stage recorder; monthly water-level measurements are being made in the other wells by the wetted-tape method. In all, 68 wetted-tape measurements were made in 1942, all by local observers.

a Pumping.

1/ Wing, M.E., The geology of Cloud and Republic Counties, Kans.: Kans. Geol. Survey Bull. 15, pp. 1-51, figs. 1-2, pls. 1-18, 1930.

40. City of Republic. SW¼NW¼ sec. 31, T. 1 S., R. 4 W. Used drilled municipal well, diameter 18 inches, depth 63 feet. Measuring point, top edge of 1-inch hole beside pump, 0.6 foot above land surface, 1,510.55 feet above sea level. Equipped with electrically driven turbine pump. Observed by Jacob King. Water levels, in feet below measuring point, 1942: Sept. 6, 36.06; Oct. 25, 35.40; Nov. 25, 35.70; Dec. 25, 34.90.

95. H. E. Nixon. SW¼NW¼ sec. 14, T. 2 S., R. 3 W. Used dug domestic well, diameter 36 inches, depth 47.6 feet. Measuring point, top edge of rock in east wall of well, 1.2 feet above land surface, 1,625.80 feet above sea level. Equipped with lift pump and windmill. Observed by owner.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
June 11	46.19	Oct. 27	46.70	Dec. 24	46.56
Sept 6	46.27	Nov. 27	46.40		

158. A. J. Dickerman. SE¼SE¼ sec. 1, T. 3 S., R. 4 W. Unused bored well, diameter 4 inches, depth 19.3 feet. Measuring point, top of tile, 0.3 foot above land surface. No pump on well. Observed by owner.

Water level, in feet below measuring point, 1942

June 6	16.25	Oct. 25	15.95	Dec. 25	15.70
Sept.25	15.85	Nov. 25	15.61		

172. City of Scandia. SW¼NE¼ sec. 17, T. 3 S., R. 4 W. Unused dug municipal well, diameter 48 inches, depth 11.3 feet. Measuring point, top edge of 1-inch hole in platform beside recorder, 2.7 feet above land surface, 1,435.23 feet above sea level. Equipped with 8-day automatic water-stage recorder. Observed by Milton Ward prior to Nov. 9 and by Walter A. Anderson thereafter.

Lowest daily water level, in feet below measuring point, 1942

Day	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	9.33	8.47	9.07	9.44	9.60
2	.....	.....	9.40	8.64	9.11	9.45	9.59
3	.....	.....	9.41	8.58	9.11	9.46	9.60
4	.....	.....	9.46	6.70	9.16	9.46	9.62
5	a8.70	.....	9.49	5.31	9.18	9.48	9.65
6	.....	.....	9.40	6.16	9.22	9.49	9.65
7	.....	.....	9.28	6.60	9.24	9.50	9.65
8	.....	.....	9.13	6.91	9.26	.....	9.64
9	.....	.....	9.02	8.12	9.27	9.51	9.60
10	.....	.....	9.00	7.39	9.28	9.52	9.57
11	.....	.....	8.91	7.60	9.31	9.53	9.55
12	.....	a8.42	8.90	7.75	9.33	9.53	9.52
13	.....	.....	8.97	7.94	9.35	9.54	9.48
14	.....	.....	9.03	8.09	9.37	9.54	9.46
15	.....	.....	9.09	7.40	9.40	9.55	9.41
16	.....	.....	9.08	8.32	9.42	9.55	9.39
17	.....	.....	8.88	7.71	9.43	9.56	9.37
18	.....	.....	....	8.06	9.44	9.56	9.36
19	.....	8.61	8.56	8.19	9.45	9.57	9.38
20	.....	8.72	8.71	8.28	9.46	9.57	9.40
21	.....	.....	8.89	8.40	9.46	9.59	9.40
22	.....	.....	8.99	8.51	9.46	9.60	9.39
23	a6.44	.....	9.11	8.61	9.44	9.60	9.37
24	.....	.....	9.19	8.71	9.43	9.60	9.35
25	.....	.....	9.19	8.78	9.41	9.60	9.34
26	.....	8.97	9.13	8.85	9.41	9.60	9.33
27	.....	9.02	6.48	8.90	9.41	9.60	9.33
28	.....	9.02	7.24	8.95	9.41	9.60	9.33
29	a5.88	9.11	7.79	9.00	9.41	9.60	9.30
30	.....	9.19	7.93	9.03	9.43	9.60	9.18
31	.....	9.24	8.22	....	9.44	....	9.05

a Wetted-tape measurements.

188. City of Courtland. SW¼SW¼ sec. 16, T. 3 S., R. 5 W. 100 feet east of pumphouse. Unused dug well, diameter 120 inches, depth 53.2 feet. Measuring point, top edge of manhole, west side, 0.5 foot above land surface. No pump on well; originally pumped by suction from pump house. Observed by Albert E. Haney.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
June 10	18.82	Oct. 25	17.06	Dec. 25	18.20
Sept.25	16.90	Nov. 24	18.10		

202. C. E. Erickson. SE¼NW¼ sec. 36, T. 4 S., R. 5 W. Used dug domestic well, diameter 42 inches, depth 38.4 feet. Measuring point, top edge of 2 by 12-inch board in platform, 1.6 feet above land surface. Equipped with lift pump and windmill. Observed by Charles Earl Erickson.

Water level, in feet below measuring point, 1942

Aug. 23	36.15	Oct. 25	36.07	Dec. 29	36.10
Sept.25	36.09	Nov. 25	36.04		

204. Chicago, Burlington & Quincy Railroad. SW¼SE¼ sec. 9, T. 4 S., R. 2 W., 300 feet south of Wayne depot. Used dug domestic well, formerly used to supply water for locomotives. Diameter 120 inches, depth 52.3 feet. Measuring point, top of wooden platform, 2.0 feet above land surface. Equipped with lift pump and windmill. Observed by J. W. Close, ticket agent.

Water level, in feet below measuring point, 1942

July 13	39.64	Sept. 24	39.60	Nov. 23	39.55
Aug. 24	39.65	Oct. 24	39.50	Dec. 29	39.50

209. Glenn B. Snapp. SE¼NE¼ sec. 1, T. 4 S., R. 3 W. Used dug stock well, diameter 42 inches, depth 42.9 feet. Measuring point, top edge of 3 by 12-inch board in platform, 0.8 foot above land surface. Equipped with lift pump and electric motor. Observed by owner. Water levels, in feet below measuring point, 1942: Aug. 21, 33.53; Sept. 25, 33.7; Oct. 25, 33.74; Nov. 25, 33.63.

230. Lloyd Blosser. NE¼SW¼ sec. 21, T. 4 S., R. 4 W. Unused irrigation well, diameter 24 inches, depth 48 feet. Equipped with turbine pump and Diesel engine. Measuring point, top of casing, south side, 0.2 foot above land surface. Observed by Walter W. Guiot.

Water level, in feet below measuring point, 1942

June 22	6.65	Oct. 25	7.61	Dec. 28	7.98
Sept.25	4.98	Nov. 25	7.88		

Russell County

By W. W. Wilson

Highest and lowest recorded water levels, in feet below measuring point, in 19 wells in Russell County

Well	Length of record (years)	Highest recorded water level (feet)	Date	Lowest recorded water level (feet)	Date
8	1	94.20	Oct. 3, 1941	121.3	Nov. 20, 1942
27	1	164.49	Sept. 1, 1942	168.10	Aug. 14, 1941
45	1	19.6	Apr. 14, 1942	24.98	Aug. 20, 1941
49	1	136.69	July 1, 1942	138.45	Oct. 2, 1941
a69	1	13.18	Nov. 7, 1941	14.0	Mar. 6, 1942
80	1	4.2	Apr. 14, 1942	6.84	Oct. 2, 1941
81	1	102.15	Aug. 29, 1941	131.25	Nov. 7, 1941
95	1	7.9	Mar. 5, 1942	11.53	Nov. 21, 1942

a Measurements discontinued after July 1942.

Highest and lowest recorded water levels, in feet below measuring point, in 19 wells in Russell County--Continued.

Well	Length of record (years)	Highest recorded water level (feet)	Date	Lowest recorded water level (feet)	Date
116	1	132.53	July 1, 1942	156.17	Sept. 6, 1941
117	1	5.0	Apr. 13, 1942	7.22	Dec. 2, 1941
a121	1	160.8	Mar. 5, 1942	164.20	Dec. 2, 1941
126	1	32.2	Feb. 4, 1942	35.32	Sept.10, 1941
b145	1	40.9	Feb. 4, 1942	42.24	June 30, 1942
146	1	15.54	June 30, 1942	16.80	Sept. 1, 1942
148	1	6.58	June 30, 1942	9.22	Oct. 2, 1941
149	1	21.5	Jan. 9, 1942 Feb. 5, 1942	22.2	Apr. 13, 1942
151	1	132.39	Sept. 1, 1942	173.48	Feb. 4, 1942
152	1	15.19	June 30, 1942	27.25	Sept.22, 1941
a154	1	6.4	Apr. 15, 1942	a15.28	July 3, 1942

Difference between highest and lowest water levels, and net change in water level in 1942, and for period of record in 19 wells in Russell County

Well	Difference between highest and lowest water levels (feet)	Net rise (+) or net decline (-) in 1942 c/ (feet)	Net rise (+) or net decline (-) for period of record (feet)
8	27.10	-3.44	-24.30
27	3.61	d+2.71	+3.61
45	5.38	-1.19	+2.02
49	1.76	e- .19	-.07
69	.82	(f)	+.60
80	2.64	+.05	+.70
81	29.10	e-1.98	-27.33
95	3.63	-2.51	-1.75
116	23.64	+9.83	+15.33
117	2.22	e+.56	+.22
121	3.40	(f)	+.39
126	3.12	d+1.90	+2.52
145	1.34	d+.05	-.18
146	1.26	+.93	+.80
148	2.64	(g)	+2.60
149	.70	d-.28	+.36
151	41.09	+7.76	+7.07
152	12.06	+7.60	+7.93
154	8.88	(f)	-7.68

8 (#938,p.130). F. C. and A. Ptacek. NW¼NW¼ sec. 16, T. 15 S., R. 12 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Feb. 4	118.1	Apr. 13	118.5	Sept. 1	120.35
Mar. 6	118.2	June 30	118.3	Nov. 20	121.3

a Measurements discontinued after July 1942.
b Measurements discontinued after September 1942.
c For period Dec. 1, 1941, to Nov. 21, 1942.
d For period Dec. 1, 1941, to Sept. 1, 1942.
e For period Dec. 1, 1941, to Oct. 1, 1942.
f Not measured after July 1, 1942.
g Not measured after June 30, 1942.

27 (*938,p.130). G. M. and A. C. Rogg. NW¼NW¼ sec. 9, T. 15 S., R. 13 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Jan. 9	166.3	Apr. 13	165.3	Sept. 1	164.49
Feb. 5	166.9	June 30	165.36	Nov. 20	(a)
Mar. 6	166.1				

45 (*938,p.130). Jacob Flegler. NW¼NW¼ sec. 11, T. 15 S., R. 14 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	21.4	Mar. 6	20.8	June 30	19.9	Nov. 20	22.96
Feb. 5	20.7	Apr. 14	19.6	Sept. 1	22.29		

49 (*938,p.130). Benjamin Boxberger. NW¼NW¼ sec. 36, T. 15 S., R.15 W.Measurements discontinued after October 1942.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Jan. 9	137.7	Mar. 6	137.5	July 1	136.69
Feb. 5	138.2	Apr. 14	137.2	Oct. 1	138.06

69 (*938,p.130). Ferdinand Steinert. Center NE¼ sec. 21, T. 15 S., R. 15 W. Measurements discontinued after July 1942. Water levels, in feet below measuring point, 1942: Feb. 5, 13.6; Mar. 6, 14.0; Apr. 14, 13.4; July 1, 13.19.

80 (*938,p.130). Joseph Furthmyer,Jr. SE¼SE¼ sec. 9, T. 14 S., R. 15 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	5.2	Mar. 6	5.2	July 1	5.31	Nov. 20	4.81
Feb. 5	4.9	Apr. 14	4.2	Oct. 1	4.46		

81 (*938,p.130). Joseph Furthmyer,Jr. SE¼SE¼ sec. 9, T. 14 S., R. 15 W.

Water level, in feet below measuring point, 1942

Jan. 9	127.3	Mar. 6	126.3	July 1	129.7	Nov. 20	a132.53
Feb. 5	127.0	Apr. 14	125.2	Oct. 1	129.48		

95 (*938,p.131). George J. Gobleman. SW¼NE¼ sec. 28, T. 11 S., R. 15 W.

Water level, in feet below measuring point, 1942

Jan. 9	9.2	Mar. 5	7.9	July 3	8.23	Nov. 21	11.53
Feb. 5	8.2	Apr. 15	8.4	Oct. 7	10.74		

116 (*938,p.131). George P. Bender. NW¼NW¼ sec. 16, T. 13 S., R. 14 W.

Water level, in feet below measuring point, 1942

Jan. 10	151.1	Mar. 5	144.6	July 1	132.53	Nov. 21	140.84
Feb. 5	151.0	Apr. 15	151.0	Oct. 1	135.80		

117 (*938,p.131). Marie Dutt and others. SE¼NE¼ sec. 18, T. 13 S., R. 14 W. Measurements discontinued after October 1942.

a Pumping.

117 (*938,p.131). Marie Dutt and others--Continued.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Jan. 9	7.15	Mar. 5	6.2	July 1	6.25
Feb. 5	6.5	Apr. 13	5.0	Oct. 1	6.66

121 (*938,p.131). A. D. Jellison. SE¼NW¼ sec. 30, T. 13 S., R. 14 W. Measurements discontinued after July 1942. Water levels, in feet below measuring point, 1942: Feb. 5, 161.7; Mar. 5, 160.8; Apr. 13, 162.2; July 1, 162.54.

126 (*938,p.131). Bertha Dewald. NW¼SW¼ sec. 19, T. 13 S., R. 13 W.

Water level, in feet below measuring point, 1942

Jan. 9	34.18	Apr. 13	33.3	Sept. 1	32.8
Feb. 4	32.2	June 30	33.2	Nov. 20	a36.51
Mar. 6	33.9				

145 (*938,p.131). Tony Hraik. SE¼SW¼ sec. 14, T. 14 S., R. 11 W. Measurements discontinued after September 1942.

Water level, in feet below measuring point, 1942

Jan. 9	41.6	Mar. 6	41.4	June 30	42.24
Feb. 4	40.9	Apr. 13	41.0	Sept. 1	41.64

146 (*938,p.131). D. P. Steinle. NW¼NE¼ sec. 24, T. 14 S., R. 12 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	16.5	Mar. 6	16.5	June 30	15.54	Nov. 20	15.60
Feb. 4	16.5	Apr. 13	16.6	Sept. 1	16.80		

148 (*938,p.131). John Penix. NE¼SE¼ sec. 13, T. 14 S., R. 13 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Jan. 9	9.1	Mar. 6	8.0	June 30	6.58
Feb. 4	8.3	Apr. 13	6.9	Nov. 20	a7.26

149 (*938,p.131). George Boxberger, Jr. NE¼NE¼ sec. 22, T. 14 S., R. 14 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	21.5	Mar. 6	22.1	July 1	21.74	Nov. 20	a22.25
Feb. 5	21.5	Apr. 13	22.2	Sept. 1	21.80		

151 (*938,p.131). D. D. Beisel. SW¼SE¼ sec. 10, T. 14 S., R. 12 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Jan. 9	171.5	Mar. 6	136.0	Sept. 1	132.39
Feb. 4	173.48	Apr. 13	149.3	Nov. 20	163.26

152 (*938,p.132). D. D. Beisel. SW¼SE¼ sec. 10, T. 14 S., R. 12 W.

Water level, in feet below measuring point, 1942

Jan. 9	26.8	Mar. 6	17.7	June 30	15.19
Feb. 4	16.8	Apr. 13	17.0	Nov. 20	19.32

154 (*938,p.132). E. Stielow. SE¼SE¼ sec. 33, T. 11 S., R. 14 W. Measurements discontinued after July 1942.

a Pumping.

154 (*938, p. 132). E. Stielow--Continued.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Jan. 9	8.2	Mar. 5	6.7	July 3	15.28
Feb. 5	6.6	Apr. 15	6.4		

Scott County

By W. W. Wilson

Highest and lowest recorded water levels, in feet below measuring point, in 31 wells in Scott County

Well	Length of record (years)	Highest recorded water level (feet)	Date	Lowest recorded water level (feet)	Date
1	11	a14.12	May 14, 16, 1934	a5.66	Sept. 13, 1940
a1	2	a7.06	Aug. 16-18, 1940	a5.84	Nov.2,5-7,1942
2	9	a13.85	Apr. 25, 1939	a9.57	Oct. 2-4, 1941
3	3	68.94	May 30, 1934	72.16	Oct. 26, 1940
b4	3	91.44	May 20, 1940	92.05	Nov. 16, 1940
			June 24, 1940		
b5	3	39.79	May 30, 1934	47.93	Dec. 9, 1941
b6	3	71.00	Apr. 13, 1936	82.18	Sept. 25, 1941
b8	3	49.42	Sept. 8, 1939	54.46	Mar. 1, 1942
9	3	48.07	Sept. 8, 1939	52.29	Oct. 27, 1941
b13	3	51.56	Sept. 9, 1939	55.14	Nov. 26, 1941
b17	3	34.19	Feb. 22, 1940	38.40	Oct. 1, 1941
19	3	46.38	Apr. 18, 1940	49.60	Aug. 26, 1940
b23	3	43.35	Apr. 18, 1940	47.15	Oct. 25, 1940
b27	3	58.39	Sept. 18, 1939	59.57	Apr. 29, 1942
32	3	37.79	Sept. 20-22,1939	41.08	Nov. 20, 1942
					Dec. 14, 1942
b33	3	73.23	Sept.25-27, 1939	76.71	Mar. 21, 1942
b34	3	83.84	Nov. 26, 1941	84.03	Mar. 12, 1941
b35	3	117.59	Jan. 15, 1940	117.90	Apr. 29, 1942
b36	3	126.14	Sept. 22, 1939	126.43	Jan. 24, 1942
b37	3	97.76	Apr. 29, 1942	99.96	Oct. 1, 1941
c38	3	72.24	Apr. 18, 1940	72.98	Feb. 22, 1941
39	3	69.22	June 24, 1940	69.44	Dec. 15, 1942
			Sept. 21, 1940		
d40	3	110.96	Oct. 27, 1941	111.38	Mar. 12, 1941
b41	3	123.60	Apr. 28, 1942	131.86	June 25, 1941
b42	3	53.02	Sept. 23, 1939	62.10	Sept. 25, 1941
b44	3	68.36	Mar. 19, 1940	69.73	Sept. 25, 1941
b47	3	32.50	Sept. 28, 1939	35.15	Oct. 25, 1940
48	3	32.16	June 25, 1941	32.97	May 25, 1941
50	3	98.12	Nov. 19, 1942	98.48	Apr. 18, 1940
b54	3	38.34	Mar. 1, 1942	38.59	June 24, 1940
b55	3	17.73	May 20, 1940	20.72	Oct. 1, 1941

Difference between highest and lowest water levels, and net changes in water level in 1942 and for period of record in 31 wells in Scott County

Well	Difference between highest and lowest water level (feet)	Net rise (+) or net decline (-) in 1942 (feet)	Net rise (+) or net decline (-) for period of record (feet)
1	8.46	d-0.52	-5.16
1A	1.22	d-.1	-1.14
2	4.28	d+.09	-3.29
3	3.22	e-.16	-1.84
4	.61	(f)	+.12
5	8.14	(f)	-7.41

a Water level in feet above datum.
b Measurements discontinued after Apr. 29, 1942.
c Measurements discontinued after Jan. 24, 1942.
d Measurements discontinued after Aug. 12, 1942.
e For period Dec. 31, 1941, to Dec. 31, 1942.
f For period Nov. 26, 1941, to Dec. 15, 1942.

Difference between highest and lowest water levels, and net changes in water level in 1942 and for period of record in 31 wells in Scott County--Continued.

Well	Difference between highest and lowest water level (feet)	Net rise (+) or net decline (-) in 1942 (feet)	Net rise (+) or net decline (-) for period of record (feet)
6	11.18	(a)	-4.31
8	5.04	(a)	-4.96
9	4.22	c+.05	-3.23
13	3.58	(a)	-2.22
17	4.21	(a)	-2.12
19	3.22	b-.46	- .05
23	3.80	(a)	-.56
27	1.18	(a)	-1.18
32	3.29	c-.25	-3.29
33	3.48	(a)	-3.42
34	.19	(a)	-.10
35	.31	(a)	-.20
36	.29	(a)	-.26
37	2.20		+.02
38	.74	(d)	-.42
39	.22	b-.08	-.21
40	.42	(e)	-.19
41	8.26		+8.16
42	9.08	(a)	-5.07
44	1.37	(a)	-.32
47	2.65	(a)	-2.00
48	.81	b+.09	-.19
50	.36	c+.05	+.30
54	.25	(a)	+.19
55	2.99	(a)	-.77

1 (*886,p.187; 908,p.157; 938,p.133). Mrs. Rosine Smith. NW. corner sec. 9, T. 20 S., R. 33 W.

Mean daily water level, in feet above datum, 1942

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	9.05	9.11	9.15	9.22	9.21	7.78	8.74	8.87	7.29	8.18	8.43	8.22
2	9.06	9.12	9.15	9.21	9.21	7.90	8.74	8.87	7.37	8.19	8.41	8.24
3	9.05	9.13	9.18	9.21	9.22	8.00	8.75	8.87	7.44	8.20	8.42	8.25
4	9.04	9.13	9.17	9.22	9.21	8.10	8.76	8.88	7.51	8.21	8.43	8.26
5	9.05	9.13	9.17	9.21	9.22	8.17	8.77	8.89	7.57	8.22	8.41	8.28
6	9.06	9.16	9.19	9.20	9.23	8.22	8.78	8.42	7.64	8.23	8.41	8.28
7	9.06	9.13	9.17	9.19	9.22	8.27	8.79	7.06	7.68	8.24	8.41	8.29
8	9.08	9.13	9.17	9.19	9.22	8.33	8.80	....	7.72	8.25	8.42	8.30
9	9.05	9.12	9.18	9.20	9.23	8.36	8.80	....	7.76	8.24	8.43	8.31
10	9.06	9.12	9.20	9.20	9.24	8.40	8.81	.....	7.80	8.26	8.42	8.32
11	9.07	9.13	9.19	9.20	9.25	8.43	8.81	....	7.84	8.27	8.42	8.32
12	9.06	9.13	9.21	9.21	9.26	8.44	8.82	....	7.87	8.28	8.44	8.34
13	9.07	9.12	9.20	9.20	9.27	8.46	8.82	....	7.89	8.28	8.44	8.34
14	9.06	9.13	9.21	9.22	9.27	8.51	8.83	....	7.93	8.29	8.46	8.34
15	9.08	9.15	9.21	9.21	9.25	8.54	8.83	....	7.95	8.31	8.48	8.35
16	9.09	9.14	9.20	9.18	9.24	8.56	8.84	....	7.98	8.30	8.40	8.36
17	9.09	9.13	9.18	9.18	9.26	8.57	8.83	....	8.00	8.30	8.07	8.38
18	9.07	9.12	9.19	9.18	9.25	8.60	8.83	....	8.00	8.30	7.02	8.38
19	9.07	9.14	9.21	9.18	9.24	8.62	8.82	....	8.01	8.30	7.45	8.40
20	9.07	9.14	9.18	9.16	8.88	8.64	8.82	6.91	8.03	8.31	7.70	8.40
21	9.08	9.14	9.17	9.17	7.37	8.65	8.82	....	8.05	8.33	7.84	8.44
22	9.09	9.15	9.19	9.20	6.54	8.67	8.83	....	8.07	8.34	7.93	8.44
23	9.10	9.14	9.21	9.18	6.22	8.69	8.84	6.00	8.08	8.35	8.01	8.45
24	9.10	9.12	9.22	9.18	6.65	8.70	8.84	6.17	8.09	8.36	8.06	8.46
25	9.11	9.15	9.21	9.18	6.85	8.71	8.84	....	8.12	8.37	8.10	8.47
26	9.11	9.13	9.13	9.19	6.33	8.72	8.84	....	8.13	8.38	8.11	8.48
27	9.10	9.14	9.17	9.20	7.07	8.72	8.85	6.10	8.13	8.40	8.16	8.48
28	9.12	9.16	9.19	9.19	7.00	8.72	8.86	6.58	8.15	8.41	8.18	8.50
29	9.12	....	9.19	9.18	6.86	8.73	8.86	6.85	8.16	8.41	8.19	8.51
30	9.11	....	9.18	9.19	7.35	8.73	8.86	7.03	8.17	8.40	8.22	8.52
31	9.10	....	9.19	....	7.62	....	8.85	7.17	....	8.40	....	8.53

a Measurements discontinued after April 1942.
b For period Nov. 26, 1941, to Dec. 15, 1942.
c For period Dec. 9, 1941, to Dec. 15, 1942.
d Measurements discontinued after January 1942.
e Measurements discontinued after August 1942.

1A (*908,p.157; 938,p.134). Division of Water Resources, Kansas State Board of Agriculture. NW¼SW¼ sec. 3, T. 20 S., R. 33 W.

Mean daily water level, in feet above datum, 1942

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	6.04	6.11	6.02	6.13	6.22	6.26	5.91	6.00	6.00	5.91	5.85	5.88
2	6.04	6.11	6.02	6.13	6.23	6.24	5.91	6.00	6.00	5.91	5.84	5.88
3	6.05	6.12	6.02	6.14	6.23	6.22	5.91	6.00	5.99	5.90	5.85	5.88
4	6.05	6.12	6.03	6.15	6.24	6.20	5.91	6.00	5.99	5.90	5.85	5.88
5	6.05	6.12	6.03	6.15	6.24	6.16	5.92	6.01	5.99	5.90	5.84	5.88
6	6.05	6.11	6.04	6.16	6.24	6.14	5.92	6.01	5.98	5.90	5.84	5.88
7	6.06	6.10	6.04	6.16	6.23	6.11	5.93	6.01	5.98	5.90	5.84	5.88
8	6.06	6.10	6.05	6.16	6.23	6.10	5.93	6.02	5.97	5.90	5.85	5.88
9	6.06	6.08	6.05	6.16	6.24	6.08	5.93	6.02	5.96	5.90	5.85	5.88
10	6.06	6.07	6.06	6.16	6.24	6.06	5.93	6.02	5.96	5.90	5.85	5.89
11	6.06	6.06	6.05	6.17	6.25	6.04	5.94	6.02	5.96	5.90	5.85	5.89
12	6.06	6.05	6.06	6.17	6.26	6.01	5.94	6.02	5.95	5.90	5.85	5.89
13	6.06	6.04	6.07	6.17	6.25	6.00	5.94	6.03	5.95	5.89	5.85	5.89
14	6.06	6.03	6.08	6.18	6.25	5.99	5.95	6.03	5.95	5.89	5.86	5.89
15	6.06	6.02	6.08	6.18	6.26	5.98	5.95	6.02	5.95	5.89	5.87	5.89
16	6.07	6.02	6.09	6.18	6.27	5.97	5.95	6.02	5.95	5.89	5.87	5.89
17	6.07	6.01	6.09	6.18	6.26	5.96	5.96	6.02	5.95	5.88	5.87	5.89
18	6.07	6.00	6.10	6.19	6.26	5.95	5.96	6.02	5.94	5.88	5.87	5.89
19	6.07	6.00	6.10	6.18	6.26	5.94	6.96	6.02	5.93	5.88	5.87	5.89
20	6.08	6.00	6.10	6.18	6.26	5.94	5.96	6.02	5.93	5.87	5.87	5.90
21	6.08	6.00	6.10	6.19	6.27	5.93	5.96	6.02	5.93	5.87	5.87	5.90
22	6.09	6.00	6.11	6.20	6.27	5.93	5.97	6.02	5.93	5.87	5.87	5.90
23	6.09	6.00	6.11	6.21	6.28	5.93	5.97	6.02	5.92	5.87	5.87	5.90
24	6.10	6.00	6.12	6.21	6.27	5.92	5.98	6.02	5.92	5.86	5.88	5.90
25	6.10	6.00	6.13	6.21	6.27	5.92	5.98	6.02	5.92	5.86	5.88	5.90
26	6.10	6.01	6.12	6.21	6.29	5.92	5.98	6.02	5.92	5.86	5.87	5.91
27	6.10	6.01	6.12	6.21	6.30	5.92	5.98	6.02	5.92	5.86	5.87	5.91
28	6.10	6.01	6.12	6.21	6.30	5.92	5.99	6.02	5.91	5.86	5.87	5.91
29	6.10	....	6.12	6.21	6.29	5.91	5.99	6.01	5.91	5.86	5.88	5.91
30	6.10	....	6.12	6.23	6.28	5.91	6.00	6.01	5.91	5.85	5.88	5.91
31	6.10	....	6.12	....	6.27	....	6.00	6.00	....	5.85	....	5.92

2 (*886,p.191; 908,p.158; 938,p.134). E. E. Coffin. NE¼SE¼ sec. 25, T. 18 S., R. 33 W.

Mean daily water level, in feet above datum, 1942

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	9.97	10.11	10.22	10.37	10.47	10.29	9.95	9.92	9.90	9.81	9.77	9.90
2	9.98	10.11	10.23	10.37	10.47	10.27	9.95	9.93	9.89	9.81	9.77	9.91
3	9.98	10.12	10.24	10.38	10.47	10.26	9.95	9.93	9.89	9.80	9.78	9.91
4	9.99	10.13	10.24	10.39	10.48	10.24	9.94	9.93	9.89	9.80	9.78	9.92
5	10.00	10.13	10.25	10.39	10.48	10.21	9.95	9.94	9.88	9.80	9.78	9.92
6	10.01	10.13	10.25	10.39	10.49	10.20	9.95	9.95	9.88	9.80	9.79	9.92
7	10.01	10.14	10.26	10.39	10.49	10.19	9.95	9.94	9.81	9.80	9.79	9.92
8	10.01	10.14	10.26	10.40	10.49	10.17	9.96	9.94	9.86	9.80	9.80	9.93
9	10.02	10.15	10.27	10.40	10.49	10.16	9.96	9.94	9.86	9.79	9.81	9.93
10	10.02	10.15	10.27	10.41	10.49	10.16	9.96	9.95	9.86	9.79	9.81	9.93
11	10.02	10.15	10.28	10.41	10.50	10.15	9.96	9.96	9.85	9.78	9.81	9.94
12	10.02	10.15	10.29	10.41	10.51	10.13	9.97	9.96	9.85	9.78	9.82	9.94
13	10.03	10.16	10.29	10.41	10.51	10.12	9.97	9.96	9.85	9.77	9.82	9.94
14	10.03	10.16	10.30	10.42	10.52	10.11	9.97	9.95	9.85	9.77	9.83	9.94
15	10.04	10.16	10.30	10.42	10.52	10.10	9.97	9.94	9.84	9.77	9.84	9.94
16	10.04	10.16	10.31	10.42	10.52	10.09	9.97	9.95	9.84	9.77	9.84	9.95
17	10.05	10.16	10.31	10.43	10.53	10.08	9.97	9.95	9.84	9.76	9.85	9.96
18	10.05	10.17	10.32	10.43	10.54	10.08	9.96	9.95	9.84	9.76	9.85	9.97
19	10.06	10.17	10.32	10.43	10.54	10.07	9.95	9.95	9.84	9.76	9.86	9.98
20	10.06	10.18	10.32	10.44	10.54	10.06	9.95	9.95	9.84	9.76	9.86	9.98
21	10.07	10.19	10.32	10.44	10.53	10.05	9.95	9.96	9.84	9.76	9.87	9.99
22	10.07	10.19	10.33	10.45	10.51	10.05	9.94	9.96	9.83	9.76	9.86	10.00
23	10.08	10.20	10.34	10.45	10.49	10.05	9.93	9.96	9.83	9.76	9.87	10.01
24	10.08	10.20	10.34	10.45	10.45	10.04	9.93	9.97	9.83	9.76	9.87	10.02
25	10.08	10.21	10.36	10.46	10.43	10.03	9.93	9.96	9.83	9.75	9.88	10.02
26	10.08	10.21	10.35	10.46	10.42	10.02	9.92	9.97	9.83	9.75	9.88	10.03
27	10.08	10.22	10.35	10.46	10.39	10.00	9.92	9.97	9.82	9.75	9.89	10.03
28	10.09	10.22	10.36	10.46	10.36	9.98	9.92	9.96	9.81	9.75	9.90	10.04
29	10.09	.....	10.36	10.46	10.33	9.97	9.92	9.95	9.81	9.76	9.90	10.04
30	10.10	.....	10.37	10.46	10.32	9.96	9.92	9.93	9.81	9.76	9.90	10.05
31	10.10	.....	10.37	.....	10.30	.....	9.92	9.91	.....	9.76	....	10.06

3 (*886,p.194; 908,p.158; 938,p.135). Claude Hughes. SW¼SW¼ sec. 21, T. 18 S., R. 33 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	70.39	Apr. 29	70.06	July 25	70.60	Oct. 7	70.79
24	70.39	May 25	69.99	Aug. 12	70.85	Nov. 19	70.81
Mar. 1	70.24	June 25	70.30	Sept.17	70.77	Dec. 15	70.78
21	70.23						

4 (*886,p.195; *908,p.159; 938,p.135). W. N. Robinson. SE¼NW¼ sec. 31, T. 18 S., R. 34 W. Measurements discontinued after April 1942.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Jan. 2	91.95	Mar. 1	91.76	Apr. 29	91.72
24	91.83	28	91.78		

5 (*886,p.195; 908.p.159; 938.p.135). Mrs. Rosine Smith. SW¼NW¼ sec. 25, T. 19 S., R. 33 W. Measurements discontinued Apr. 26, 1942. Water levels, in feet below measuring point, 1942: Jan. 13, 47.24; Mar. 1, 47.30; Mar. 21, 47.32; Apr. 26, 47.20.

6 (*886,p.195; 908,p.159; 938,p.135). American Life Insurance Co. NW¼SW¼ sec. 29, T. 19 S., R. 33 W. Measurements discontinued after Apr. 28, 1942. Water levels, in feet below measuring point, 1942: Jan. 17, 80.14; Mar. 1, 79.84; Mar. 21, 79.76; Apr. 28, 79.51.

8 (*886, p.195; 908,p.59; 938,p.135). Mrs. Rosine Smith. NW¼NW¼ sec. 35, T. 19 S., R. 33 W. Measurements discontinued after Apr. 26, 1942. Water levels, in feet below measuring point, 1942: Jan. 13, 54.31; Mar. 1, 54.46; Mar. 21, 54.45; Apr. 26, 54.38.

9 (*886,p.195; 908,p.159; 938,p.135). Mrs. Rosine Smith. SW¼SW¼ sec. 35, T. 19 S., R. 33 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	51.20	Apr. 28	50.94	July 25	51.58	Oct. 7	51.65
Mar. 1	51.03	May 25	51.57	Aug. 12	51.63	Nov. 20	51.53
21	51.02	June 25	51.81	Sept.17	51.38	Dec. 14	51.30

13 (*886,p.195; 908,p.159; 938,p.136). Mrs. Rosine Smith. SW¼SW¼ sec. 2, T. 20 S., R. 33 W. Measurements discontinued after Apr. 28, 1942. Water levels, in feet below measuring point, 1942: Jan. 13, 54.17; Mar. 1, 53.77; Mar. 21, 53.81; Apr. 28, 53.78.

17 (*886,p.195; *908,p.159; 938,p.136). H. E. Trout. NE¼NW¼ sec. 30, T. 19 S., R. 32 W. Measurements discontinued after Apr. 28, 1942. Water levels, in feet below measuring point, 1942: Jan. 13, 37.28; Mar. 1, 37.27; Mar. 21, 37.32; Apr. 28, 36.48.

19 (*886,p.195; 908,p.160; 938,p.136). J. Dyer. SE¼NE¼ sec. 12, T. 18 S., R. 33 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	47.55	Mar. 21	47.30	July 25	47.94	Oct. 7	48.48
13	47.72	Apr. 28	47.18	Aug. 12	47.64	Nov. 19	48.20
Mar. 1	47.32	June 25	48.07	Sept.17	49.24	Dec. 15	48.14

23 (*886,p.195; 908,p.160; 938,p.136). SE¼SE¼ sec. 24, T. 18 S., R. 33 W. Measurements discontinued after Apr. 28, 1942. Water levels, in feet below measuring point, 1942: Jan. 13, 45.18; Mar. 1, 44.82; Mar. 21, 44.82; Apr. 28, 44.55.

27 (*886,p.196; 908,p.160; 938,p.136). Anson Mark. NE¼NW¼ sec. 15, T. 18 S., R. 33 W. Measurements discontinued after April 1942.

27 (*886,p.196; 908,p.160; 938,p.136). Anson Mark--Continued.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Jan. 2	59.54	Mar. 1	59.55	Apr. 29	59.57
24	59.55	21	59.57		

32 (*886,p.196; 908,p.160; 938,p.136). E. J. Roark. NW¼SE¼ sec. 25, T. 19 S., R. 33 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	40.87	Apr. 28	40.78	July 25	40.60	Oct. 7	41.02
Mar. 1	40.87	May 25	40.50	Aug. 12	40.56	Nov. 20	41.08
21	40.88	June 25	40.54	Sept.17	40.93	Dec. 14	41.08

33 (*886,p.196; 908,p.161; 938,p.137). American Life Insurance Co. NE¼SW¼ sec. 31, T. 19 S., R. 33 W. Measurements discontinued after Apr. 28, 1942. Water levels, in feet below measuring point, 1942: Jan. 17, 76.42; Mar. 1, 76.61; Mar. 21, 76.71; Apr. 28, 76.65.

34 (*886,p.197; 908,p.161; 938,p.137). H. M. A. Hess and others. SW¼SW¼ sec. 19, T. 18 S., R. 34 W. Measurements discontinued after Apr. 29, 1942. Water levels, in feet below measuring point, 1942: Jan. 24, 83.92; Mar. 1, 83.96; Mar. 28, 83.94; Apr. 29, 84.00.

35 (*886,p.197; 908,p.161; 938,p.137). Mrs. Lily Miller. SE¼SE¼ sec. 18, T. 16 S., R. 34 W. Measurements discontinued after April 1942.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Jan. 2	117.84	Mar. 1	117.83	Apr. 29	117.90
24	117.82	28	117.81		

36 (*886,p.197; 908,p.161; 938,p.137). Henry S. Mix. SE¼NE¼ sec. 11, T. 16 S., R. 34 W. Measurements discontinued after April 1942.

Water level, in feet below measuring point, 1942

Jan. 2	126.41	Mar. 1	126.39	Apr. 29	126.40
24	126.43	28	126.38		

37 (*886,p.197; 908,p.161; 938,p.137). Joseph Hickey Estate. NE¼SW¼ sec. 16, T. 17 S., R. 33 W. Measurements discontinued after April 1942.

Water level, in feet below measuring point, 1942

Jan. 2	98.00	Mar. 1	98.29	Apr. 29	97.76
24	98.38	28	98.32		

38 (*886,p.197; 908,p.162; 938,p.137). Brandt. NE¼SE¼ sec. 24, T. 17 S., R. 33 W. Measurements discontinued after Jan. 24, 1942. Water levels, in feet below measuring point, 1942: Jan. 2, 72.73; Jan. 24, 72.75.

39 (*886,p.197; 908,p.162; 938,p.138). Henry F. Poos Estate. NE¼NE¼ sec. 26, T. 18 S., R. 31 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	69.42	Mar. 28	69.33	June 25	59.31	Sept.17	69.34
24	69.34	Apr. 28	69.40	July 25	69.33	Nov. 19	69.36
Mar. 1	69.31	May 25	69.41	Aug. 12	69.36	Dec. 15	60.44

40 (*886,p.197; 908,p.162; 938,p.138). Michael McLaughlin. SW¼NW¼ sec. 2, T. 17 S., R. 31 W. Measurements discontinued after August 1942.

40 (*886,p.197; 908,p.162; 938,p.138). Michael McLaughlin--Continued.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Jan. 2	111.09	June 25	111.37	Aug. 12	111.34
May 25	111.05	July 25	111.35		

41 (*886,p.197; 908,p.162; 938,p.138). Almada King. NW¼NW¼ sec. 12, T. 17 S., R. 32 W. Measurements discontinued after April 1942.

Water level, in feet below measuring point, 1942

Jan. 2	129.22	Mar. 1	128.40	Apr. 28	123.60
24	128.02	28	128.35		

42 (*886,p.198; 908,p.162; 938,p.138). Mrs. Rosine Smith. SW¼NW¼ sec. 26, T. 19 S., R. 33 W. Measurements discontinued after Apr. 28, 1942. Water levels, in feet below measuring point, 1942: Jan. 13, 58.11; Mar. 1, 58.22; Mar. 21, 58.13; Apr. 28, 58.09.

44 (*886,p.198; 908,p.162; 938,p.138). Melchoir Lang. SW¼NE¼ sec. 2, T. 20 S., R. 34 W. Measurements discontinued after Apr. 28, 1942. Water levels, in feet below measuring point, 1942: Jan. 17, 69.25; Mar. 1, 69.21; Mar. 21, 69.21; Apr. 28, 69.19.

47 (*886,p. 198; 908,p.162; 938,p.138). V. M. Harris (Federal Land Bank). SE¼NW¼ sec. 29, T. 18 S., R. 32 W. Measurements discontinued after Apr. 28, 1942. Water levels, in feet below measuring point, 1942: Jan. 17, 34.87; Mar. 1, 34.80; Mar. 21, 34.82; Apr. 28, 34.50.

48 (*886,p. 198; 908,p.162; 938,p.138). P. Roark. NE¼NE¼ sec. 25, T. 20 S., R. 33 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	32.84	Apr. 26	32.71	July 25	32.50	Oct. 7	32.62
13	32.86	May 25	32.49	Aug. 12	32.52	Nov. 19	32.70
Mar. 1	32.96	June 25	32.45	Sept.17	32.65	Dec. 15	32.71
21	32.94						

50 (*886,p.198; 908,p.163; 938,p.138). F. M. Houston. SW¼SE¼ sec. 28, T. 19 S., R. 32 W.

Water level, in feet below measuring point, 1942

Jan. 13	98.14	Apr. 28	98.17	July 25	98.19	Oct. 7	98.17
Mar. 1	98.19	May 25	98.26	Aug. 12	98.21	Nov. 19	98.12
21	98.20	June 25	98.20	Sept.17	98.23	Dec. 15	98.14

54 (*908,p.163; 938,p.138). B. B. Harkness. SE. corner sec. 10, T. 20 S., R. 31 W. Measurements discontinued after Apr. 28, 1942.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Jan. 2	38.41	Mar. 1	38.34	Apr. 28	38.40
24	38.37	28	38.35		

55 (*908,p.163; 938,p.139). J. U. Hushaw. NW. corner sec. 7, T. 19 S. R. 32 W. Measurements discontinued after Apr. 28, 1942. Water levels, in feet below measuring point, 1942: Jan. 13, 19.87; Mar. 1, 19.83; Mar. 21, 19.90; Apr. 28, 18.50.

Sedgwick County

By C. C. Williams and G. H. von Hein

Highest and lowest recorded water levels, in feet below measuring point, in 30 wells in Sedgwick County a/

Well	Length of record (years)	Highest recorded water level (feet)	Date	Lowest recorded water level (feet)	Date
11	5	57.80	Aug. 3, 1942	61.84	July 4, 1938
12	5	17.58	Oct. 28, 1942	21.98	Apr. 1-2, 1938
					Apr. 8-9, 1938
					Apr. 11-12, 1938
26	5	9.60	May 15, 1942	26.18	Jan. 29, 1940
28	5	14.83	Nov. 2, 1942	20.78	Feb. 1, 1938
307	5	12.59	June 15, 1940	15.68	June 4-5, 1941
800	4	14.81	Nov. 2, 1942	20.69	Apr. 3, 1940
802	4	2.71	May 11, 1942	7.71	Nov. 2, 1939
804	4	1.39	May 11, 1942	4.78	Dec. 5, 1939
805	4	5.31	Feb. 3, 1942	8.98	Dec. 3, 1940
806	4	15.61	July 7, 1942	18.11	Nov. 5, 1940
807	4	21.30	July 7, 1942	24.04	Jan. 2, 1941
808	4	21.04	Nov. 2, 1938	24.47	Mar. 4, 1941
809	4	12.52	Nov. 2, 1942	18.28	Jan. 2, 1941
810	4	8.39	Oct. 9, 1942	14.68	Aug. 30, 1940
811	4	4.85	June 26, 1942	9.96	Nov. 22, 1940
812	4	8.80	Oct. 23, 1942	13.42	Jan. 10, 1941
814	4	12.12	Nov. 2, 1942	18.11	Dec. 3, 1940
					Jan. 2, 1941
					Feb. 3, 1941
					Mar. 4, 1941
					May 1, 1941
815	4	11.08	Oct. 30, 1942	15.54	Jan. 24-31, 1941
816	4	8.64	Oct. 23-30, 1942	13.51	Jan. 24-31, 1941
825	4	10.48	Nov. 2, 1942	15.53	Nov. 5, 1940
826	4	9.47	Apr. 28, 1942	14.01	Nov. 5, 1940
830	4	26.12	Sept. 9, 1938	30.62	Oct. 3, 1940
834	4	8.71	May 11, 1942	13.20	Oct. 3, 1940
838	4	23.58	Nov. 2, 1942	27.91	Nov. 5, 1940
840	4	2.97	July 5, 1941	b9.05	Nov. 22, 1940
842	4	4.45	July 8, 1941	8.57	Nov. 5, 1940
845	4	13.95	July 7, 1942	16.95	Apr. 3, 1940
846	4	15.31	July 7, 1942	18.35	Apr. 3, 1940
847	4	14.37	July 7, 1942	18.59	Apr. 3, 1940
					May 1, 1941
870	4	6.87	May 4, 1942	10.80	Nov. 5, 1940

Difference between highest and lowest water levels, and net change in water level in 1942 and for period of record in 30 wells in Sedgwick County a/

Well	Difference between highest and lowest water level (feet)	Net rise (+) or net decline (-) in 1942 (feet)	Net rise (+) or net decline (-) for period of record (feet)
11	4.04	+1.99	+2.34
12	4.40	+ .55	+3.27
26	16.58	+ .97	+3.72
28	5.95	+ .78	+4.83
307	3.09	+1.08	+2.29
800	5.88	+3.33	+3.81
802	5.00	- .95	-1.42
804	3.39	- .29	- .04
805	3.67	+ .04	+ .30

a Well 813 destroyed Mar. 18, 1942.
b Adjusted for change in measuring point.

Difference between highest and lowest water levels, and net changes in water level in 1942 and for period of record in 30 wells in Sedgwick County--Continued [a/]

Well	Difference between highest and lowest water level (feet)	Net rise (+) or net decline (-) in 1942 (feet)	Net rise (+) or net decline (-) for period of record (feet)
806	2.50	+.54	+2.06
807	2.74	+.69	+1.87
808	3.43	+1.37	+2.46
809	5.76	+2.11	+3.23
810	6.29	-.19	0
811	5.11	-.08	+1.37
812	4.62	+.54	+2.73
814	5.99	+2.30	+4.27
815	4.46	+1.43	+3.04
816	4.87	+1.52	+2.99
825	5.05	+2.01	+3.57
826	4.54	+.38	+1.01
830	4.50	+.94	-1.02
834	4.49	+.65	+1.97
838	4.33	+2.16	+2.62
840	6.08	+.55	b+2.68
842	4.12	-.11	+2.45
845	3.00	+.19	+.99
846	3.04	+.36	+.34
847	4.22	+.90	+.65
870	3.93	+.02	+1.59

11 (*840,p. 105; 845,p.126; 886,p.217; 908,p.165; 938,p.140). J. H. Heim. SE.corner sec. 22, T. 26 S., R. 3 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	60.05	Apr. 1	60.23	July 7	59.05	Oct. 1	58.49
Feb. 3	59.87	May 11	59.43	Aug. 3	57.80	Nov. 2	58.51
Mar. 3	59.70	June 2	59.34	Sept. 1	58.71	Dec. 2	58.40

12 (*840,p.105; 845,p.126; 886,p.217; 908,p.166; 938,p.140). Dr. A. D. Updegraph. NW¼SE¼ sec. 26, T. 25 S., R. 1 W.

Lowest daily water level, in feet below measuring point, 1942

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	18.88	19.18	19.45	19.66	.....	18.68	18.36	18.55	18.74	18.14	17.65	18.07
2	18.88	19.19	19.46	19.68	.....	18.69	18.35	18.57	18.75	18.16	17.72	18.09
3	18.89	19.19	19.45	19.69	.....	18.71	18.32	18.58	18.76	18.18	17.72	18.11
4	18.90	19.20	19.47	.....	.....	18.72	18.31	18.58	18.75	18.19	17.67	18.13
5	18.92	19.21	19.48	.....	.....	18.73	18.30	18.57	18.70	18.18	17.75	18.15
6	18.94	19.24	19.47	.....	.....	18.73	18.29	18.56	.....	18.12	17.76	18.16
7	18.94	19.25	19.50	.....	.....	18.74	18.28	18.56	.....	18.05	17.77	18.17
8	18.93	19.25	19.51	.....	.....	18.76	18.26	18.57	.....	17.99	17.77	18.19
9	18.99	19.27	19.51	.....	.....	18.77	18.27	18.57	.....	17.93	17.80	18.19
10	18.99	19.29	19.52	.....	.....	18.76	18.29	18.59	.....	17.88	17.83	18.20
11	19.00	10.28	19.52	.....	.....	18.76	18.29	18.60	18.26	17.83	17.85	18.20
12	19.01	19.30	19.52	.....	.....	18.79	18.30	18.60	18.23	17.80	17.82	18.22
13	19.02	19.31	19.54	.....	.....	18.81	18.31	18.61	18.20	17.78	17.86	18.24
14	19.04	19.31	19.54	.....	.....	18.81	18 32	18.62	18.17	17.76	17.86	18.24
15	19.04	19.30	19.54	.....	.....	18.77	18.32	18.63	18.14	17.74	17.81	18.26
16	19.03	19.33	19.57	.....	.....	18.78	18.34	18.63	18.12	17.74	17.88	18.26
17	19.04	19.35	19.58	.....	.....	18.79	18.36	18.64	18.11	17.74	17.90	18.28
18	19.06	19.36	19.58	.....	.....	18.77	18.37	18.64	18.13	17.72	17.91	18.29
19	19.07	19.37	19.57	.....	.....	18.74	18.40	18.64	18.15	17.71	17.92	18.30
20	19.08	19.38	19.61	.....	.....	18.68	18.41	18.64	18.15	17.69	17.95	18.31
21	19.08	19.38	19.61	.....	.....	18.64	18.43	18.65	18.11	17.67	17.97	18.29

a Well 813 destroyed Mar. 18, 1942.
b Adjusted for change in measuring point.

12 (*840,p.105; 845,p.126; 886,p.217; 908,p.166; 938,p.140)--Continued.

Lowest daily water level, in feet below measuring point, 1942

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
22	19.08	19.38	19.62	.....	.....	18.60	18.43	18.68	18.12	17.64	17.98	18.30
23	19.09	19.40	19.59	.....	.....	18.56	18.42	18.69	18.13	17.64	17.98	18.31
24	19.11	19.41	19.59	.....	.....	18.51	18.43	18.69	18.15	17.63	17.96	18.32
25	19.11	19.42	19.62	.....	18.60	18.46	18.46	18.69	18.12	17.64	18.02	18.32
26	19.12	19.44	19.64	.....	18.60	18.42	18.47	18.70	18.14	17.64	18.09	18.34
27	19.14	19.44	19.65	.....	18.62	18.39	18.48	18.71	18.16	17.59	18.09	18.35
28	19.14	19.45	19.65	.....	18.62	18.37	18.49	18.71	18.18	17.58	18.04	18.35
29	19.14	.....	19.66	(a)	18.63	18.37	18.51	18.72	18.14	17.59	18.06	18.32
30	19.16	.....	19.67	18.78	18.65	18.36	18.53	18.73	18.15	17.66	18.04	18.36
31	19.18	.....	19.68	.....	18.66	.....	18.54	18.73	.....	17.69	.....	18.32

26 (*840,p.105; 845,p.127; 886,p.217; 908,p.166; 938,p.141). Wichita Water Co. SW¼ sec. 18, T. 27 S., R. 1 W.

Lowest daily water level, in feet below measuring point, 1942

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	14.79	14.83	14.85	15.01	11.66	11.54	9.64	13.24	12.77	13.40	12.96	13.40
2	14.75	14.83	14.89	15.05	11.55	11.54	9.37	13.31	12.85	13.45	13.00	13.42
3	14.80	14.83	14.89	15.06	11.44	11.57	9.59	13.35	12.88	13.46	13.00	13.43
4	14.83	14.83	14.93	15.09	11.33	11.58	9.85	.....	12.80	13.46	12.90	13.44
5	14.86	14.83	14.94	15.12	11.04	11.57	10.07	.....	12.52b	13.89	13.01	13.45
6	14.89	14.84	14.97	15.15	10.44	11.59	10.39	.....	12.31	12.36	13.03	13.45
7	14.92	14.85	15.00	15.17	10.02	11.60	10.57	13.21	12.19	12.08	13.06	13.46
8	14.95	14.83	14.99	15.17	9.83	11.63	10.75	13.21	12.20	12.01	13.06	13.48
9	14.97	14.80	14.93	15.19	9.74	11.69	10.88	13.17	12.24	12.01	13.12	13.48
10	14.99	14.82	14.89	15.22	9.70	11.73	11.00	13.27	12.07	12.12	13.14	13.49
11	15.03	14.84	14.92	15.24	9.65	11.79	11.12	13.33	11.83	12.34	13.15	13.47
12	15.10	14.83	14.92	15.25	9.62	11.88	11.20	13.39	11.85	12.54	13.15	13.49
13	15.17	14.85	14.97	15.27	9.63	11.91	11.34	13.46	12.01	12.70	13.17	13.49
14	15.23	14.84	14.97	15.28	9.63	11.86	11.49	13.48	12.16	12.82	13.17	13.49
15	15.25	14.81	14.98	15.28	9.60	11.46	11.64	13.49	12.27	12.92	13.16	13.47
16	15.26	14.86	15.01	15.28	9.74	11.27	11.80	13.43	12.37	13.00	13.22	13.47
17	15.25	14.89	15.01	15.26	9.88	11.11	11.95	13.50	12.48	13.06	13.24	13.47
18	15.18	14.89	14.98	15.20	10.01	10.90	12.10	13.55	12.59	13.07	13.24	13.48
19	15.15	14.58	14.94	15.19	10.12	10.71	12.23	13.59	12.64	13.04	13.26	13.50
20	15.13	14.16	15.02	15.15	10.25	10.42	12.33	13.63	12.64	12.86	13.29	13.51
21	15.11	13.87	15.01	15.00	10.40	10.12	12.38	13.67	12.72	12.86	13.30	13.49
22	15.08	13.96	14.84	14.90	10.56b	11.63	12.45	13.68	12.81	12.98	13.29	13.51
23	15.06	14.24	14.74	14.80	10.69b	12.25	12.55	13.32	12.92	13.06	13.28	13.51
24	15.04	14.46	14.76	14.61	10.80	10.65	12.63	12.81	12.99	13.09	13.28	13.52
25	15.02	14.57	14.83	14.21	10.86	10.25	12.72	12.54	13.05	13.12	13.34	13.53
26	14.97	14.67	14.88	13.71	10.96	10.05	12.81	12.12	13.12	13.02	13.35	13.55
27	14.95	14.73	14.89	12.98	11.05	9.96	12.90	12.92	13.21	12.72	13.34b	14.21
28	14.93	14.80	.....	12.54	11.15	9.90	12.97	12.22	13.25	12.76	13.37	13.57
29	14.86	.....	.....	12.16	11.27	9.86	13.04	12.38	13.31	12.79	13.38	13.36
30	14.82	.....	14.99	11.86	11.39	9.81	13.11	12.53	13.35	12.87	13.38	13.34
31	14.86	.....	15.01	.....	11.51	.....	13.18	12.66	.....	12.93	.....	13.34

28 (*840,p.106; 845,p.127; 886,p.218; 908,p.167; 938,p.141). Ada M. Davis. NE¼NW¼NE¼ sec. 1, T. 25 S., R. 1 W.

Water level, in feet below measuring point, 1941

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	16.08	Apr. 1	16.40	July 7	15.80	Oct. 1	15.23
Feb. 3	16.25	May 4	14.90	Aug. 3	16.70	Nov. 2	14.83
Mar. 3	16.33	June 2	15.74	Sept. 1	16.96	Dec. 2	15.16

a Wetted tape measurement. Recorder temporarily discontinued Apr. 4 to May 24 at owner's request.

b Water level influenced by nearby pumped wells.

307 (*840,p.107; 845,p.128; 886,p.218; 908,p.167; 938,p.142). J. R. Clark. NW¼NW¼SW¼ sec. 1, T. 25 S., R. 2 W.

Lowest daily water level, in feet below measuring point, 1942

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	14.12	13.98	14.38	14.25	13.87	13.66	12.91	13.54	13.86	13.23	13.04	13.00
2	14.10	14.03	14.39	14.32	13.87	13.71	12.88	13.54	13.88	13.30	13.09	13.01
3	14.08	14.03	14.39	14.36	13.74	13.75	12.87	13.56	13.86	13.30	13.09	13.02
4	14.09	14.07	14.44	14.40	13.57	13.79	12.88	13.52	13.84	13.19	13.02	13.04
5	14.08	14.07	14.42	14.45	13.51	13.82	12.88	13.44	13.67	13.12	13.06	13.03
6	14.06	14.15	14.38	14.48	13.53	13.85	12.95	13.44	13.48	13.08	13.06	13.04
7	14.06	14.18	14.38	14.52	13.53	13.88	12.98	13.46	13.38	13.08	13.04	13.04
8	14.05	14.20	14.37	14.53	13.55	13.91	13.01	13.49	13.35	13.12	13.03	13.06
9	14.04	14.22	14.37	14.56	13.55	13.94	13.03	13.52	13.34	13.16	13.05	13.06
10	14.03	14.22	14.35	14.59	13.54	13.97	13.05	13.54	13.30	13.17	13.07	13.09
11	13.99	14.21	14.35	14.60	13.53	14.00	13.04	13.55	13.30	13.19	13.05	13.10
12	13.99	14.22	14.34	14.61	13.49	14.04	13.06	13.50	13.31	13.22	13.02	13.12
13	13.98	14.24	14.35	14.63	13.53	14.08	13.12	13.51	13.30	13.26	13.03	13.13
14	13.96	14.23	14.35	14.66	13.53	14.03	13.16	13.52	13.30	13.28	13.02	13.13
15	13.94	14.21	14.33	14.63	13.52	14.00	13.16	13.52	13.30	13.30	12.96	13.16
16	13.90	14.24	14.34	14.61	13.49	14.00	13.15	13.55	13.31	13.34	13.00	13.16
17	13.88	14.25	14.34	14.61	13.50	13.95	13.18	13.57	13.31	13.35	13.01	13.16
18	13.88	14.25	14.42	14.58	13.51	13.72	13.19	13.58	13.30	13.35	13.01	13.17
19	13.87	14.23	14.30	14.57	13.51	13.47	13.20	13.59	13.31	13.18	12.99	13.20
20	13.87	14.21	14.31	14.52	13.51	13.30	13.19	13.60	13.31	13.08	13.02	13.22
21	13.84	14.19	14.34	14.47	13.49	13.25	13.19	13.61	13.28	13.08	13.03	13.18
22	13.82	14.17	14.33	14.39	13.48	13.06	13.20	13.65	13.27	13.06	13.03	13.17
23	13.81	14.19	14.29	14.34	13.48	12.81	13.24	13.66	13.28	13.07	13.00	13.17
24	13.79	14.22	14.25	14.33	13.48	12.78	13.26	13.68	13.28	13.07	12.97	13.17
25	13.78	14.24	14.24	14.26	13.48	12.78	13.29	13.69	13.25	13.07	13.03	13.16
26	13.76	14.31	14.26	14.01	13.54	12.80	13.31	13.66	13.24	13.07	13.05	13.15
27	13.78	14.33	14.26	13.91	13.60	12.84	13.34	13.70	13.25	13.01	13.03	13.13
28	13.79	14.36	.....	13.89	13.64	12.87	13.36	13.74	13.25	13.00	13.00	13.10
29	13.83	.....	.....	13.88	13.64	12.89	13.40	13.78	13.22	13.00	13.02	13.05
30	13.92	.....	14.20	13.87	13.63	12.90	13.45	13.81	13.22	13.08	12.97	13.07
31	13.96	.....	14.22	.....	13.65	....	13.51	13.83	.....	13.09	.....	13.04

800 (*845,p.129; 886,p.219; 908,p.167; 938,p.142). City of Wichita. SW. corner sec. 33, T. 26 S., R. 1 E.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	18.34	Apr. 1	18.39	July 7	15.70	Oct. 1	14.87
Feb. 3	18.35	May 4	17.00	Aug. 3	15.97	Nov. 2	14.81
Mar. 3	18.39	June 2	16.84	Sept. 1	15.77	Dec. 2	14.95

802 (*886,p.219; 908,p.167; 938,p.142). City of Wichita. NW. corner sec. 1, T. 27 S., R. 1 W.

Water level, in feet below measuring point, 1942

Jan. 5	6.42	Apr. 1	6.74	July 7	4.59	Oct. 1	6.74
Feb. 3	6.50	May 11	2.71	Aug. 6	6.87	Nov. 2	6.43
Mar. 3	6.69	June 2	5.89	Sept. 1	6.95	Dec. 2	6.90

804 (*845,p.130; 886,p.219; 908,p.167; 938,p.142). City of Wichita. SE. corner sec. 16, T. 26 S., R. 1 W.

Water level, in feet below measuring point, 1942

Jan. 5	2.86	Apr. 1	3.02	July 7	2.30	Oct. 1	2.76
Feb. 3	2.78	May 11	1.39	Aug. 6	3.12	Nov. 2	2.38
Mar. 3	2.67	June 2	2.91	Sept. 1	3.74	Dec. 2	2.73

805 (*845,p.130; 886,p.219; 908,p.168; 938,p.142). City of Wichita. NW. corner NE¼ sec. 19, T. 26 S., R. 1 W.

805 (*845,p.130; 886,p.219; 908,p.168; 938,p.142). City of Wichita--Continued.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	6.14	Apr. 1	6.56	July 7	6.03	Oct. 1	6.30
Feb. 3	5.31	May 11	5.97	Aug. 6	6.80	Nov. 2	5.89
Mar. 3	6.32	June 2	6.82	Sept. 1	7.09	Dec. 2	6.11

806 (*845,p.130; 886,p.220; 908,p.168; 938,p.143). City of Wichita. NW. corner SW¼ sec. 15, T. 26 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 5	16.34	Apr. 1	16.46	July 7	15.61	Oct. 1	15.79
Feb. 3	16.34	May 11	16.08	Aug. 6	15.95	Nov. 2	15.74
Mar. 3	16.37	June 2	16.26	Sept. 1	16.14	Dec. 2	15.74

807 (*845,p.130; 886,p.220; 908,p.168; 938,p.143). City of Wichita. NW. corner sec. 10, T. 26 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 5	22.09	Apr. 1	22.19	July 7	21.30	Oct. 1	21.51
Feb. 3	22.07	May 11	21.90	Aug. 6	21.68	Nov. 2	21.43
Mar. 3	22.10	June 2	21.87	Sept. 1	21.82	Dec. 2	21.42

808 (*845,p.130; 886,p.220; 908,p.168; 938,p.143). City of Wichita. SW. corner NW¼ sec. 18, T. 26 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 5	23.21	Apr. 1	23.11	July 7	22.47	Oct. 1	22.20
Feb. 3	23.14	May 11	22.87	Aug. 6	22.48	Nov. 2	22.11
Mar. 3	23.10	June 2	22.89	Sept. 1	22.42	Dec. 2	21.98

809 (*845,p.131; 886,p.220; 908,p.168; 938,p.143). City of Wichita. NW. corner sec. 21, T. 26 S., R. 1 E. (erroneously given in Water-Supply Papers 908 and 938 as R. 1 W).

Water level, in feet below measuring point, 1942

Jan. 5	15.40	Apr. 3	15.43	July 7	13.00	Oct. 1	12.81
Feb. 3	15.42	May 4	13.64	Aug. 3	14.04	Nov. 2	12.52
Mar. 3	15.39	June 2	13.97	Sept. 1	14.22	Dec. 2	13.03

810 (*845,p.131; 886,p.220; 908,p.168; 938,p.143). City of Wichita. NE. corner SE¼ sec. 35, T. 26 S., R. 1 W.

Water level, in feet below measuring point, 1942

Jan. 2	12.15	Apr. 3	13.10	July 3	10.35	Oct. 9	8.39
9	12.42	10	13.14	10	11.27	16	10.35
16	12.44	17	13.20	17	11.77	23	10.18
23	12.43	24	10.45	24	11.98	30	10.82
30	12.57	May 1	9.80	31	12.30	Nov. 6	11.27
Feb. 6	12.60	8	10.77	Aug. 7	12.19	13	11.56
13	12.80	15	10.78	14	12.48	20	11.74
20	12.84	22	11.51	21	12.50	27	11.88
27	12.91	29	11.92	28	12.55	Dec. 4	12.07
Mar. 6	12.87	June 5	12.29	Sept. 11	9.87	11	12.16
13	12.98	12	12.36	18	10.88	18	12.17
20	13.03	19	11.12	25	11.40	24	12.20
30	13.07	26	10.03	Oct. 2	11.75		

811 (*845,p.131; 886,p.221; 908,p.168; 938,p.143). City of Wichita. SE. corner sec. 33, T. 25 S., R. 1 W.

811 (*845,p.131; 886,p.221; 908,p.168; 938,p.143). City of Wichita--Continued.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	7.05	Apr. 3	7.83	July 3	5.45	Oct. 9	6.43
9	7.31	10	7.87	10	6.09	16	6.61
16	7.31	17	7.93	17	6.55	23	6.06
23	7.37	24	7.45	24	6.87	30	6.25
30	7.43	May 1	6.67	31	7.23	Nov. 6	6.51
Feb. 6	7.55	8	6.70	Aug. 7	7.18	13	6.67
13	7.58	15	6.42	14	7.46	20	6.67
20	7.62	22	6.56	21	7.55	27	6.91
27	7.69	29	6.80	28	7.67	Dec. 4	7.10
Mar. 6	7.60	June 5	7.20	Sept.11	5.78	11	7.18
13	7.74	12	7.29	18	6.23	18	7.08
20	7.76	19	6.03	25	6.47	24	7.10
30	7.83	26	4.85	Oct. 2	6.77		

812 (*845,p.132; 886,p.221; 908,p.169; 938,p.144). City of Wichita. NW. corner sec. 27, T. 25 S., R. 1 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	10.06	Apr. 3	10.85	July 3	9.32	Oct. 9	9.03
9	10.23	10	10.91	10	9.49	16	9.12
16	10.22	17	10.95	17	9.68	23	8.80
23	10.26	24	10.24	24	9.72	30	8.86
30	10.35	May 1	9.57	31	9.87	Nov. 6	9.07
Feb. 6	10.48	8	9.69	Aug. 7	9.73	13	9.15
13	10.54	15	9.71	14	9.95	20	9.21
20	10.60	22	9.80	21	9.85	27	9.30
27	10.66	29	9.93	28	9.99	Dec. 4	9.46
Mar. 6	10.58	June 5	10.07	Sept.11	9.14	11	9.53
13	10.72	12	10.17	18	9.27	18	9.56
20	10.75	19	9.50	25	9.33	24	9.54
30	10.87	26	9.19	Oct. 2	9.50		

813 (*845,p.132; 886,p.221; 908,p.169; 938,p.144). City of Wichita. SW¼SW¼ sec. 24, T. 25 S., R. 1 W. Well destroyed Mar. 18, 1942; observation discontinued. Water levels, in feet below measuring point, 1942: Jan. 5, 16.07; Feb. 3,16.16; Mar. 3, 16.30; Mar. 18, 16.40.

814 (*845,p.132; 886,p.221; 908,p.169; 938,p.144). City of Wichita. SE. corner sec. 14, T. 25 S., R. 1 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	15.11	Apr. 1	15.45	July 7	13.89	Oct. 1	12.56
Feb. 3	15.13	May 4	14.42	Aug. 5	13.87	Nov. 2	12.12
Mar. 3	15.32	June 2	14.30	Sept. 1	13.91	Dec. 2	12.56

815 (*845,p.132; 886,p.221; 908,p.169; 938,p.144). City of Wichita. NE. corner sec. 17, T. 25 S., R. 1 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	13.04	Apr. 3	13.50	July 3	12.02	Oct. 9	11.35
9	13.11	10	13.52	10	11.99	16	11.29
16	13.10	17	13.55	17	12.05	23	11.16
23	13.10	24	13.23	24	12.03	30	11.08
30	13.14	May 1	13.01	31	12.11	Nov. 6	11.16
Feb. 6	13.20	8	12.83	Aug. 7	11.97	13	11.25
13	13.26	15	12.70	14	11.99	20	11.30
20	13.32	22	12.67	21	11.82	27	11.38
27	13.35	29	12.69	28	11.84	Dec. 4	11.47
Mar. 6	13.34	June 5	12.72	Sept.11	11.47	11	11.55
13	13.42	12	12.77	18	11.39	18	11.61
20	13.43	19	12.51	25	11.40	24	11.67
30	13.48	26	12.14	Oct. 2	11.52		

816 (*845,p.133; 886,p.222; 908,p.169; 938,p.144). City of Wichita. SW. corner sec. 7, T. 25 S., R. 1 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	10.53	Apr. 3	10.95	July 3	9.14	Oct. 9	9.01
9	10.59	10	11.00	10	9.29	16	9.01
16	10.58	17	11.01	17	9.45	23	8.64
23	10.59	24	10.77	24	9.51	30	8.64
30	10.63	May 1	10.06	31	9.66	Nov. 6	8.78
Feb. 6	10.69	8	9.97	Aug. 7	9.49	13	8.95
13	10.75	15	9.97	14	9.63	20	8.89
20	10.81	22	10.01	21	9.60	27	8.95
27	10.85	29	10.07	28	9.70	Dec. 2	9.07
Mar. 6	10.81	June 5	10.17	Sept.11	9.00	11	9.13
13	10.90	12	10.25	18	9.05	18	9.19
20	10.92	19	9.65	25	9.12	24	9.17
30	10.97	26	9.02	Oct. 2	9.24		

825 (*845,p.133; 886,p.222; 908,p.170; 938,p.145). City of Wichita. NE. corner sec. 3 T. 25 S., R. 1 W.

Water level, in feet below measuring point, 1942

Jan. 5	12.49	Apr. 1	12.38	July 7	11.08	Oct. 1	10.97
Feb. 3	12.40	May 4	11.22	Aug. 3	11.72	Nov. 2	10.48
Mar. 3	12.43	June 2	11.32	Sept. 1	11.76	Dec. 2	10.63

826 (*886,p.222; 908,p.170; 938,p.145). City of Wichita. NE. corner sec. 5, T. 25 S., R. 1 W.

Water level, in feet below measuring point, 1942

Jan. 6	11.68	Apr. 13	12.40	July 21	10.90	Oct. 15	9.83
26	11.80	28	9.47	Aug. 10	11.33	29	10.14
Mar. 2	12.21	May 18	10.67	24	11.52	Nov. 12	10.73
23	12.26	June 1	11.31	31	11.58	Dec. 1	11.15
30	12.30	July 6	10.10	Sept. 30	10.97	17	11.25

830 (*845,p.133; 886,p.222; 908,p.170; 938,p.145). City of Wichita. NW. corner sec. 30, T. 25 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 5	28.12	Apr. 1	28.26	July 7	27.16	Oct. 1	27.32
Feb. 3	28.13	May 11	27.42	Aug. 3	28.04	Nov. 2	27.02
Mar. 3	28.14	June 2	27.97	Sept. 1	27.60	Dec. 2	27.14

834 (*845,p.133; 886,p.223; 908,p.170; 938,p.145). City of Wichita. NW. corner sec. 9, T. 25 S., R. 3 W.

Water level, in feet below measuring point, 1942

Jan. 5	10.79	Apr. 1	10.95	July 7	9.12	Oct. 1	9.63
Feb. 3	10.81	May 11	8.71	Aug. 3	10.50	Nov. 2	9.31
Mar. 3	10.90	June 2	10.01	Sept. 1	9.45	Dec. 2	9.83

838 (*845,p.133; 886,p.223; 908,p.170; 938,p.145). City of Wichita. NE. corner NW¼ sec. 33, T. 25 S., R. 3 W.

Water level, in feet below measuring point, 1942

Jan. 5	25.90	Apr. 1	26.07	July 7	24.04	Oct. 1	23.74
Feb. 3	25.91	May 11	25.49	Aug. 3	24.69	Nov. 2	23.58
Mar. 3	25.97	June 2	25.57	Sept. 1	23.89	Dec. 2	23.74

840 (*908,p.170; 938,p.145). Owner of well, city of Wichita; owner of property, C. A. Berger. NE. corner sec. 9, T. 25 S., R. 2 W. New measuring point, beginning Feb. 21, 1941 (not reported in Water-Supply Paper 938), top of pipe, 4.62 feet below old measuring point, 1.50 feet above bench mark, 1.30 feet above land surface, 1,396.92 feet above sea level.

840 (*908,p.170; 938,p.145). Owner of well, city of Wichita--Continued

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	5.59	Apr. 3	6.20	July 3	4.46	Oct. 9	4.83
9	5.90	10	6.27	10	5.05	16	5.17
16	5.87	17	6.33	17	5.56	23	4.21
23	5.84	24	5.43	24	5.57	30	4.55
30	5.91	May 1	4.47	31	6.04	Nov. 6	4.92
Feb. 6	6.06	8	4.30	Aug. 7	5.21	13	5.10
13	6.12	15	4.71	14	5.66	20	5.23
20	6.17	22	5.10	21	5.95	27	5.24
27	6.22	29	5.42	28	5.97	Dec. 4	5.47
Mar. 6	6.10	June 5	5.80	Sept.11	4.50	11	5.51
13	6.25	12	6.00	18	5.05	18	5.14
20	6.18	19	3.99	25	5.30	24	5.12
30	6.17	26	3.48	Oct. 2	5.57		

842 (*886,p.223; 908,p.171; 938,p.145). City of Wichita. SW. corner sec. 16, T. 25 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 5	5.09	Apr. 1	5.55	July 7	4.94	Oct. 1	5.41
Feb. 3	5.27	May 4	4.87	Aug. 3	6.10	Nov. 2	4.67
Mar. 3	5.29	June 2	5.54	Sept. 1	5.71	Dec. 2	5.10

845 (*886,p.223;908,p.171; 938,p.146). City of Wichita. SW¼SW¼ sec. 5, T. 27 S., R. 1 E.

Water level, in feet below measuring point, 1942

Jan. 5	15.41	Apr. 1	15.28	July 7	13.95	Oct. 1	14.50
Feb. 3	15.81	May 8	14.20	Aug. 6	14.40	Nov. 2	14.43
Mar. 3	15.79	June 2	14.69	Sept. 1	14.66	Dec. 2	14.68

846 (*886,p.223; 908,p.171; 938,p.146). City of Wichita. SW¼SE¼ sec. 6, T. 27 S., R. 1 E.

Water level, in feet below measuring point, 1942

Jan. 5	17.56	Apr. 1	17.51	July 7	15.31	Oct. 1	16.45
Feb. 3	17.79	May 8	15.66	Aug. 6	16.23	Nov. 2	16.37
Mar. 3	17.81	June 2	15.25	Sept. 1	16.44	Dec. 2	16.74

847 (*886,p.223; 908,p.171; 938,p.146). City of Wichita. SW. corner SE¼ sec. 6, T. 27 S., R. 1 E.

Water level, in feet below measuring point, 1942

Jan. 5	17.75	Apr. 1	18.01	July 7	14.37	Oct. 1	16.10
Feb. 3	18.00	May 8	15.54	Aug. 6	16.01	Nov. 2	16.00
Mar. 3	18.09	June 2	15.65	Sept. 1	16.10	Dec. 2	16.50

870 (*908,p.171; 938,p.146). W. Williams. NW¼NE¼NE¼ sec. 18, T. 25 S., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 5	7.39	Apr. 1	7.73	July 7	7.08	Oct. 1	7.69
Feb. 3	7.46	May 4	6.87	Aug. 3	8.09	Nov. 2	7.12
Mar. 3	7.52	June 2	7.46	Sept. 1	7.93	Dec. 2	7.34

Seward County

By W. W. Wilson

Highest and lowest water levels, in feet below measuring point, in 7 wells in Seward County

Well	Length of record (years)	Highest recorded water level (feet)	Date	Lowest recorded water level (feet)	Date
15	2	a17.06	Aug. 20, 1942	18.20	Aug. 26, 1940
66	2	216.88	Nov. 1, 1941	218.99	Dec. 17, 1941
106	2	208.60	May 13, 1941	209.22	July 19, 1941
108	2	107.07	Nov. 13, 1942	111.78	Apr. 21, 1941
122	2	204.08	July 19, 1941	205.63	Aug. 5, 1940
159	2	96.14	Jan. 7, 1941	97.25	Dec. 19, 1940
165	2	142.68	June 17, 1942	168.28	Dec. 18, 1941

Difference between highest and lowest water levels, and net change in water level in 1942 and for period of record in 7 wells in Seward County

Well	Difference between highest and lowest water levels (feet)	Net rise (+) or net decline (-) in 1942 (feet) b/	Net rise (+) or net decline (-) for period of record (feet)
15	1.14	c-0.31	+0.20
66	2.11	(d)	+.24
106	.62	+.12	+.34
108	4.71	+1.56	+4.20
122	1.55	+.23	+.87
159	1.11	+.11	+.25
165	25.60	e-5.15	+12.21

15 (*908,p.173; 938,p.147). R. H. Hitch. SE¼SW¼ sec. 21, T. 32 S., R. 33 W. Casing cut down in July 1942. New measuring point, beginning July 8, 1942, top of casing, north side, 1.1 feet below old measuring point, level with land surface.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 16	17.46	Apr. 14	17.40	July 8	a16.55	Oct. 12	16.96
Feb. 20	17.57	May 21	17.77	Aug. 20	15.96	Nov. 13	16.77
Mar. 10	17.62	June 17	17.71	Sept.12	16.22	Dec. 11	16.72

52 (*908,p.173; 938,p.147). Federal Farm Mortgage Co. NW¼NW¼ sec. 22, T. 34 S., R. 32 W. Measurements discontinued after November 1941.

66 (*908,p.173; 938,p.147). Federal Land Bank. NW¼SW¼ sec. 35, T. 34 S., R. 31 W. Measurements discontinued after July 1942.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Jan. 16	217.86	Mar. 10	217.35	May 21	217.42
Feb. 20	217.27	Apr. 14	217.46	July 8	217.21

106 (*908,p.173; 938,p.147). Kansas City Life Insurance Co. SW¼SW¼ sec. 8, T. 32 S., R. 34 W.

a Below new measuring point.
b For period Dec. 17, 1941, to Dec. 11, 1942.
c New measuring point beginning July 1942.
d Measurements discontinued after July 1942.
e Measurements may not be accurate.

106 (*908,p.173; 938,p.147). Kansas City Life Insurance Co.--Continued

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 16	208.78	Apr. 14	208.85	July 8	208.68	Oct. 12	208.73
Feb. 20	208.98	May 21	208.78	Aug. 20	208.69	Nov. 13	208.67
Mar. 10	208.87	June 17	208.71	Sept.12	208.71	Dec. 11	208.70

108 (*908,p.173; 938,p.147). C. D. Day. NE¼SE¼ sec. 6, T. 31 S., R. 34 W.

Water level, in feet below measuring point, 1942

Jan. 16	108.49	Apr. 14	108.75	July 8	107.30	Oct. 12	107.42
Feb. 20	108.68	May 21	108.73	Aug. 20	107.63	Nov. 13	107.07
Mar. 10	108.71	June 17	107.88	Sept.12	107.35	Dec. 11	107.13

122 (*908,p.173; 938,p.148). Mrs. Flora Atwell. NE¼SE¼ sec. 9, T. 33 S., R. 31 W.

Water level, in feet below measuring point, 1942

Jan. 16	204.88	Apr. 14	204.95	July 8	204.87	Nov. 13	204.74
Feb. 20	204.87	May 21	204.96	Sept.12	204.89	Dec. 11	204.76
Mar. 10	204.98	June 17	204.92	Oct. 13	204.71		

159 (*908,p.174; 938,p.148). Liberal Gas Co. NW¼NE¼ sec. 3, T. 35 S., R. 34 W.

Water level, in feet below measuring point, 1942

Jan. 16	96.98	Apr. 14	96.87	July 8	96.87	Nov. 13	96.84
Feb. 20	97.04	May 21	96.98	Sept.12	96.89	Dec. 11	96.83
Mar. 10	97.02	June 17	96.95	Oct. 13	96.81		

165 (*908,p.174; 938,p.148). Griffith & Baughman. SE¼SW¼ sec. 14, T. 31 S., R. 33 W.

Water level, in feet below measuring point, 1942 a/

Jan. 16	154.16	Apr. 14	153.19	July 8	151.33	Oct. 13	153.75
Feb. 20	156.55	May 21	153.31	Aug. 20	149.63	Nov. 13	154.97
Mar. 10	157.42	June 17	142.68	Sept.12	152.63	Dec. 11	155.90

Stafford County

By B. F. Latta

An investigation of the geology and ground-water recources of Stafford County and southern Barton County, was begun in 1942 by the United States Department of the Interior, Geological Survey, and the State Geological Survey of Kansas in cooperation with the Division of Water Resources of the Kansas State Board of Agriculture and the Division of Sanitation of the Kansas State Board of Health. The work is being done by the writer under the supervision of S. W. Lohman, Federal geologist in charge of ground-water investigations in Kansas. No previous studies of the ground-water resources of this area have been made.

a Measurement may not be accurate.

The area under investigation is within the great bend of the Arkansas River in central Kansas. It is a part of the Plains Border section of the Great Plains province and has in general, a gently rolling surface, although it includes some hummocky areas of sand dunes. Drainage is by the Arkansas River, which crosses the northern part of the area, and by three tributaries of the Arkansas--Rattlesnake and Walnut Creeks, and North Fork of Ninnescah River. With the exception of Walnut Creek, all these are gaining streams at least in parts.

Most of Stafford County is underlain by Quaternary dune sand, but there are two relatively small areas in the southern half of the county underlain by Pleistocene sand and gravel and one small area in the northeastern part underlain by the Dakota formation of Cretaceous age. Southern Barton County is underlain by the Dakota formation, Pleistocene terrace deposits, Quaternary dune sand, and alluvium.

Supplies of ground water adequate for most purposes are available at relatively shallow depths over most of the area. The most productive water-bearing beds in the area are sand and gravel of Pleistocene(?) age and alluvium. Most domestic and stock wells and a few irrigation wells obtain water from the Pleistocene(?) sands and gravels. Alluvium supplies water to domestic, stock, and irrigation wells in the Arkansas Valley, and the Dakota formation supplies water to a few domestic and stock wells north of that valley.

At the end of 1942, measurements of water-level were being made once a month by the wetted-tape method in 8 wells in Stafford County and in 6 wells in southern Barton County. All observation wells in Stafford County tap Pleistocene(?) sand and gravel. In southern Barton County wells 1 and 5 tap alluvium in the Arkansas Valley, wells 16 and 43 tap Pleistocene(?) sand and gravel, well 35 taps Pleistocene terrace gravel, and well 2 taps the Dakota formation. In all, 72 wetted-tape measurements were made in 1942 in the 14 observation wells in the area made up of Stafford County and southern Barton County. All water-level measurements prior to November were made by the writer; those during and after November were made by W. W. Wilson or M.S. Scanlan.

The descriptions and water-level measurements for the wells in Stafford County are given on the following pages. The numbers given for the wells are the field numbers. Descriptions and water-level measurements for the wells in southern Barton County are given in the chapter on Barton County.

3. B. Fritzmeyer. SW. corner SW¼ sec. 12, T. 23 S., R. 12 W. Unused drilled well, originally used to supply water for drilling oil well, diameter 8 inches, depth 31.2 feet. Measuring point, top of 8-inch oil-well-type casing, west side, 0.5 foot above land surface. No pump on well.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
July 29	18.89	Sept. 28	18.94	Nov. 24	17.67
Aug. 26	18.87	Oct. 21	17.13	Dec. 18	17.40

19. Atlantic Refining Co. SE¼SE¼ sec. 27, T. 21 S., R. 13 W. Unused drilled well originally used to supply water for drilling oil well, diameter 6 inches, depth 63.3 feet. Measuring point, top of 6-inch oil-well-type casing, west side, 0.4 foot above land surface. No pump on well.

Water level, in feet below measuring point, 1942

Aug. 1	11.44	Sept. 28	11.10	Nov. 24	10.38
27	11.32	Oct. 21	10.70	Dec. 15	10.32

25. Continental Oil Co. NW¼NE¼ sec. 12, T. 25 S., R. 13 W. Unused drilled well originally used to supply water for drilling oil well, diameter 6 inches, depth 64.0 feet. Measuring point, top of 6-inch oil-well-type casing, north side, 0.4 foot above land surface. No pump on well.

Water level, in feet below measuring point, 1942

Aug. 1	25.75	Sept. 28	24.93	Nov. 24	21.96
26	25.53	Oct. 21	22.89	Dec. 18	22.09

26. Stanolind Oil Co. SW¼SW¼ sec. 3, T. 22 S., R. 12 W. Unused drilled well, originally used to supply water for drilling oil well, diameter 6 inches, depth 85.2 feet. Measuring point, top of 6-inch oil-well-type casing, west side, 0.7 foot above land surface. No pump on well.

Water level, in feet below measuring point, 1942

Aug. 3	20.81	Sept. 28	20.32	Nov. 24	18.91
27	20.63	Oct. 21	19.50	Dec. 15	18.76

29. Atlantic Refining Co. NE¼NE¼ sec. 28, T. 24 S., R. 13 W. Unused drilled well, originally used to supply water for drilling oil well, diameter 6.5 inches, depth 74.9 feet. Measuring point, top of 6.5-inch oil-well-type casing, west side, 0.4 foot above land surface. No pump on well.

Water level, in feet below measuring point, 1942

Aug. 4	23.24	Sept. 28	21.96	Nov. 24	19.47
26	22.14	Oct. 21	19.95	Dec. 18	19.71

38. H. F. Cornwell. SE¼SE¼ sec. 27, T. 23 S., R. 14 W. Unused driven well, diameter 1¼ inches, depth 39.7 feet. Measuring point, lower edge of wooden plank over well pit, 0.5 foot above land surface. No pump on well.

Water level, in feet below measuring point, 1942

Aug. 6	23.28	Sept. 26	23.02	Nov. 24	22.20
27	22.92	Oct. 25	22.51	Dec. 18	22.40

40. W. Nagel. SE¼SW¼ sec. 3, T. 24 S., R. 15 W. Unused drilled well, originally used to supply water for drilling oil well, diameter 7 inches, depth 74.1 feet. Measuring point, top of 7-inch galvanized-iron casing, southwest side, 0.5 foot above land surface. No pump on well.

Water level, in feet below measuring point, 1942

Aug. 8	18.26	Oct. 25	17.29	Dec. 18	17.04
Sept.28	17.55	Nov. 24	16.91		

63. G. W. Buckles. NE¼NE¼NE¼ sec. 16, T. 24 S., R. 11 W. Unused drilled well, originally used to supply water for drilling oil well, diameter 6.5 inches, depth 58.0 feet. Measuring point, top of 6.5-inch oil-well-type casing, west side, 0.6 foot above land surface. No pump on well.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Aug. 26	21.26	Oct. 21	20.46	Dec. 18	20.15
Sept.28	21.04	Nov. 24	20.14		

Stanton County

By B. F. Latta

Highest and lowest water levels, in feet below measuring point, in 6 wells in Stanton County

Well	Length of record (years)	Highest recorded water level (feet)	Date	Lowest recorded water level (feet)	Date
13	3.5	50.02	Oct. 12, 1942	52.83	Apr. 23, 1940
47	3.5	70.79	Dec. 2, 1942	71.38	May 12, 1941
62	3.5	131.30	Aug. 19, 1942	144.32	Mar. 13, 1941
68	3.5	137.22	Sept.11, 1942	138.03	Aug. 8, 1939
93	3.5	176.02	Nov. 12, 1942	176.60	Oct. 9, 1939
a146	3.5	41.75	Dec. 10, 1942	46.80	Apr. 22, 1940
					May 14, 1940
					June 18, 1940

Difference between highest and lowest water levels, and net rise in water level in 1942 and for period of record in 6 wells in Stanton County

Well	Difference between highest and lowest water level (feet)	Net rise in 1942 (feet)	Net rise for period of record (feet)
13	2.81	b0.55	2.19
47	.59	c.49	.12
62	13.02	d9.18	6.37
68	.81	e.25	.7
93	.58	b.16	.38
146	4.55	b3.04	4.98

13 (*886,p.225; 908,p.177; 938,p.149). L. Y. Carrithers. NE¼SE¼ sec. 21, T. 27 S., R. 40 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	50.78	Apr. 13	50.93	July 7	50.23	Oct. 12	50.02
Feb. 19	50.89	May 20	50.64	Aug. 19	50.20	Nov. 12	50.09
Mar. 9	50.82	June 16	50.42	Sept.11	50.08	Dec. 10	50.14

47 (*886,p.225; 908,p.177; 938,p.149). Southwestern College. NW¼NE¼ sec. 35, T. 28 S., R. 39 W.

a Measuring point lowered 0.5 foot Oct. 25, 1940.
b For period Dec. 16, 1941, to Dec. 10, 1942.
c For period Dec. 2, 1941, to Dec. 2, 1942.
d For period Dec. 16, 1941, to Nov. 12, 1942.
e For period Dec. 16, 1941, to Oct. 12, 1942.

47 (*886,p.225; 908,p.177; 938,p.149). Southwestern College--Continued

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	71.32	Apr. 13	70.89	July 7	70.86	Oct. 2	70.86
Feb. 19	71.37	May 11	70.86	Aug. 5	70.84	Nov. 16	70.83
Mar. 9	71.37	June 4	70.98	Sept. 8	70.86	Dec. 2	70.79

62 (*886,p.226; 908,p.178; 938,p.149). H. Bearman. SW¼SW¼ sec. 29, T. 28 S., R. 41 W.

Water level, in feet below measuring point, 1942

Jan. 15	143.06	Apr. 13	142.73	July 7	139.65	Oct. 12	133.21
Feb. 19	142.72	May 20	142.75	Aug. 19	131.30	Nov. 12	134.16
Mar. 9	142.70	June 16	139.08	Sept.11	132.61		

68 (*886,p.226; 908,p.178; 938,p.149). C. D. Wartman. SW¼SW¼ sec. 29, T. 28 S., R. 42 W.

Water level, in feet below measuring point, 1942

Jan. 15	137.68	Apr. 13	137.40	July 7	137.25	Sept.11	137.22
Feb. 19	137.28	May 20	137.42	Aug. 19	137.24	Oct. 12	137.28
Mar. 9	137.43	June 16	137.26				

93 (*886,p.226; 908,p.178; 938,p.149). J. Plummer. Center NE¼ sec. 11, T. 29 S., R. 41 W.

Water level, in feet below measuring point, 1942

Jan. 15	176.25	Apr. 13	176.20	July 7	176.08	Oct. 12	176.05
Feb. 19	176.28	May 20	176.22	Aug. 19	176.10	Nov. 12	176.02
Mar. 9	176.22	June 16	176.20	Sept.11	176.11	Dec. 10	176.07

146 (*886,p.227; *908,p.178; 938,p.149). C. M. Harrison. SW¼SE¼ sec. 27, T. 30 S., R. 43 W.

Water level, in feet below measuring point, 1942

Jan. 15	44.83	Apr. 13	44.67	July 7	43.92	Oct. 12	43.98
Feb. 19	44.82	May 20	44.33	Aug. 19	43.96	Nov. 12	43.96
Mar. 9	44.73	June 16	43.88	Sept.11	43.92	Dec. 10	41.75

Stevens County

By T. G. McLaughlin

A survey of the geology and ground-water resources of Stevens County, was begun in July 1942 by the Geological Survey, United States Department of the Interior and the State Geological Survey of Kansas in cooperation with the Division of Sanitation of the Kansas State Board of Health, and the Division of Water Resources of the Kansas State Board of Agriculture. The investigation was made under the supervision of S. W. Lohman, Federal geologist in charge of ground-water investigations in Kansas.

Stevens County is the second county in Kansas along the Oklahoma State line east of the Colorado State line. It is bounded by Morton, Grant, and Seward Counties on the west, north, and east, respectively, and by

Texas County, Okla., on the south. This area is a relatively flat and nearly featureless plain, interrupted only by the Cimarron River Valley, in the northwestern part. The southern half is slightly rolling because of scattered sand dunes. The whole area is underlain principally by dune sand and undifferentiated Pliocene and Pleistocene deposits, which form the principal water-bearing beds and which supply water to more than 98 percent of the wells in the county. A few stock wells, however, obtain water from the alluvium of the Cimarron River Valley.

Water levels in 107 wells in Stevens County were measured at least once as a part of the investigation. Nine of these wells were selected for periodic observation, and, beginning July 1, the water levels in them were measured once each month during the remainder of 1942. In all, 53 individual measurements of water level were made in the observation wells in 1942. The measurements were made by Woodrow W. Wilson.

10. T. P. Patterson. NW¼SW¼ sec. 21, T. 33 S., R. 37 W. Drilled irrigation well, diameter 16 inches, reported depth 375 feet. Measuring point, top edge of hole in base of turbine pump, north side, level with land surface. Equipped with turbine pump operated by natural-gas engine.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
July 28	81.68	Sept. 11	80.83	Nov. 12	81.36
Aug. 19	80.39	Oct. 12	81.57	Dec. 10	83.85

12. Mack Greenwood. NW¼NE¼ sec. 28, T. 33 S., R. 38 W. Unused drilled domestic and stock well, diameter 4 inches, depth 153 feet. Measuring point, top of casing, north side, 0.8 foot above land surface. Equipped with windmill and lift pump.

Water level, in feet below measuring point, 1942

July 28	114.23	Sept. 11	114.16	Nov. 12	114.09
Aug. 19	114.18	Oct. 12	114.11	Dec. 10	114.06

15. F. H. Crump. NW¼NE¼ sec. 15, T. 33 S., R. 37 W. Unused drilled domestic well, diameter 5 inches, depth 84 feet. Measuring point, top of casing, west side, 0.5 foot above land surface. Equipped with lift pump.

Water level, in feet below measuring point, 1942

July 28	80.70	Sept. 12	79.57	Nov. 13	79.76
Aug. 20	79.19	Oct. 12	79.61	Dec. 10	79.64

21. B. W. Parsons. NE¼NE¼ sec. 9, T. 31 S., R. 37 W. Drilled stock well, diameter 7 inches, depth 121 feet. Measuring point, top of casing, north side, level with land surface. Equipped with lift pump, operated by gasoline engine.

Water level, in feet below measuring point, 1942

July 29	87.16	Sept. 24	87.37	Nov. 16	87.18
Aug. 5	87.08	Oct. 2	87.26	Dec. 2	87.21

26. Panhandle Eastern Pipeline Co. NW¼NW¼ sec. 4, T. 33 S., R. 38 W. Unused drilled domestic well, diameter 7 inches, depth 101 feet. Measuring point, top of casing, north side, 0.6 foot above land surface.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
July 28	92.11	Sept.11	92.10	Nov. 12	92.10
Aug. 19	92.05	Oct. 2	92.07	Dec. 10	92.12

27. Carrie Winter. NW¼NE¼ sec. 17, T. 32 S., R. 36 W. Unused drilled stock well, diameter 5 inches, depth 123 feet. Measuring point, top of casing, east side, level with land surface.

Water level, in feet below measuring point, 1942

July 28	118.74	Sept. 12	118.76	Nov. 13	119.27
Aug. 20	118.74	Oct. 12	118.75		

28. C. E. Dudley. NW¼NE¼ sec. 34, T. 31 S., R. 36 W. Unused drilled domestic and stock well, diameter 5 inches, depth 136 feet. Measuring point, top of casing, south side, level with land surface. Equipped with windmill and lift pump.

Water level, in feet below measuring point, 1942

July 28	132.44	Sept.12	132.55	Nov. 13	132.59
Aug. 20	132.51	Oct. 12	132.53	Dec. 10	132.56

29. Eunice Batman. NE¼NE¼ sec. 10, T. 32 S., R. 36 W. Unused drilled domestic and stock well, diameter 5 inches, depth 153 feet. Measuring point, top of casing, east side, level with land surface. Equipped with lift pump.

Water level, in feet below measuring point, 1942

July 28	121.78	Sept.12	121.93	Nov. 13	121.88
Aug. 20	121.81	Oct. 12	121.90	Dec. 10	121.91

30. Central Life Assurance Co. SE¼SE¼ sec. 15, T. 33 S., R. 36 W. Unused drilled domestic and stock well, diameter 4.5 inches, depth 121 feet. Measuring point, top of casing, northeast side, 0.3 foot above land surface. Equipped with lift pump.

Water level, in feet below measuring point, 1942

July 28	106.30	Sept.12	106.44	Nov. 13	106.42
Aug. 20	106.36	Oct. 12	105.72	Dec. 10	106.33

Thomas County

By J. C. Frye

An investigation of the geology and ground-water resources of Thomas County, was begun in 1942 by the Federal Geological Survey and the State Geological Survey of Kansas, in cooperation with the Division of Water Resources of the Kansas State Board of Agriculture and the Division of Sanitation of the Kansas State Board of Health. Approximately 6 weeks were spent in the field by the writer during the summer of 1942, under the direction of S. W. Lohman, Federal geologist in charge of ground-water investigations in Kansas.

Thomas County is located in the High Plains section of the Great Plains physiographic province. It is drained by forks of the Saline and Solomon River and Sappa Creek and by Prairie Dog Creek, all of which flow to the east or northeast across the county and are a part of the Kansas River drainage system. There are no permanent streams; water flows in those listed above only during and after rains.

Most of the county is underlain by silt and sand of the Sanborn formation, of Pleistocene age. Sand, gravel, silt and caliche of the Ogallala formation occur below the Sanborn in all of Thomas County, and thin alluvium occurs along the larger valleys. The Ogallala formation unconformably overlies rocks of Cretaceous age, principally the Pierre shale. Most wells in the county obtain adequate domestic or stock supplies from the Ogallala formation, and a few obtain meager supplies from the sand at the base of the Sanborn formation and from the shallow alluvium along Prairie Dog and Sappa Creeks. In the southwestern part of the county, where well-water supplies are difficult to obtain, a few wells have been drilled into the Pierre shale, but these yield little or no water.

At the end of 1942, measurements of water level were being made once a month by the wetted-tape method in 13 wells in Thomas County, all of which obtain water from the Ogallala formation. The first measurement in each well was made by the writer, and the subsequent measurements were made by W. W. Wilson. In all, 56 individual water-level measurements were made from July 13 to the end of the year.

1. Earl W. Dawes. NW¼SW¼ sec. 9, T. 9 S., R. 36 W. Unused drilled domestic and stock well, diameter 6 inches, depth 130.5 feet. Measuring point, top of concrete curbing, west side, 1.5 feet above land surface. No pump on well.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
July 13	127.67	Oct. 7	125.78	Dec. 14	125.74
Sept. 9	125.99	Nov. 28	125.94		

2. Lem Fulwider. SE¼SE¼ sec. 30, T. 8 S., R. 36 W. Unused drilled stock well, diameter 6 inches, depth 57.8 feet. Measuring point, hole in pipe clamp, northeast side, 0.2 foot above land surface. Equipped with lift pump and windmill.

Water level, in feet below measuring point, 1942

July 13	48.51	Oct. 7	48.64	Dec. 14	48.73
Sept.17	48.61	Nov. 28	48.70		

7. George Strait. NW¼NE¼ sec. 18, T. 8 S., R. 36 W. Unused domestic well, diameter 6 inches, depth 139.4 feet. Measuring point, top of galvanized-iron casing, west side, 0.3 foot above land surface. No pump on well.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
July 13	124.82	Oct. 7	125.71	Dec. 14	125.26
Sept.17	124.74	Nov. 28	124.80		

8.---Sloan. SW¼SE¼ sec. 34, T. 7 S., R. 33 W. Unused stock well, diameter 6 inches, depth 161.8 feet. Measuring point, top of wooden cover over casing, 0.3 foot below land surface. No pump on well.

Water level, in feet below measuring point, 1942

July 14	145.77	Oct. 7	145.87	Dec. 14	145.80
Sept.16	145.79	Nov. 27	145.69		

12. W. A. Atha. NW¼SE¼ sec. 2, T. 7 S., R. 31 W. Unused domestic well, diameter 6 inches, depth 93.5 feet. Measuring point, top of concrete curb, south side of casing, 0.4 foot above land surface. Well equipped with hand-operated lift pump.

Water level, in feet below measuring point, 1942

July 14	90.56	Oct. 6	90.43	Dec. 14	90.83
Sept.16	90.62	Nov. 27	90.33		

13. H. V. Christensen. SW¼NE¼ sec. 13, T. 8 S., R. 31 W. Unused domestic well, diameter 6 inches, depth 73.8 feet. Measuring point, top of concrete curb, south side of casing, 0.3 foot above land surface. No pump on well.

Water level, in feet below measuring point, 1942

July 14	63.34	Oct. 6	63.43	Dec. 14	63.47
Sept.16	63.38	Nov. 27	63.60		

21. W. J. Campbell. NE¼SE¼ sec. 36, T. 7 S., R. 34 W. Unused domestic well, diameter 6 inches, depth 110.5 feet. Measuring point, top of galvanized-iron casing, east side, 0.4 foot above land surface. Well equipped with hand-cperated lift pump.

Water level, in feet below measuring point, 1942

July 15	107.76	Oct. 7	105.57	Dec. 14	107.24
Sept.17	107.93	Nov. 27	107.13		

25. Roy Zeiglemeyer. NW¼SW¼ sec. 12, T. 6 S., R. 32 W. Unused drilled irrigation well, diameter 16 inches, depth 168.5 feet. Measuring point, top of iron casing, west side, 0.3 foot above land surface. No pump on well. Water levels, in feet below measuring point, 1942: July 16, 115.83; Nov. 27, 115.83.

26. T. A. Ryan. NE¼SE¼ sec. 27, T. 8 S., R. 32 W. Unused drilled well, formerly used to supply water for drilling oil test, diameter 8 inches depth, 158.8 feet. Measuring point, top of casing, west side, 0.6 foot above land surface. No pump on well.

Water level, in feet below measuring point, 1942

July 16	112.38	Oct. 6	112.36	Dec. 14	112.34
Sept.16	112.42	Nov. 27	112.34		

29. Leo Murphy. SW¼SE¼ sec. 29, T. 9 S., R. 31 W. Unused drilled stock well, diameter 6 inches, depth 124.5 feet. Measuring point, top of casing and concrete curb, east side, 1.4 feet above land surface. Well equipped with lift pump and windmill.

29. Leo Murphy. SW¼SE¼ sec. 29, T. 9 S., R. 31 W.--Continued.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
July 16	118.26	Oct. 6	119.07	Dec. 14	117.16
Sept.16	119.10	Nov. 27	118.38		

32. F. D. Hoover. NE¼SW¼ sec. 2, T. 8 S., R. 35 W. Unused drilled domestic well, diameter 6 inches, depth 156.8 feet. Measuring point, top of tin cover over concrete basement, north side, 1.5 feet above land surface. No pump on well.

Water level, in feet below measuring point, 1942

July 17	149.98	Oct. 7	150.05	Dec. 14	149.89
Sept.17	150.10	Nov. 28	150.08		

33. Arch Ball. NW¼NW¼ sec. 7, T. 9 S., R. 33 W. Unused drilled stock well, diameter 6 inches, depth 136.8 feet. Measuring point, top edge of cylinder in motor block, south side, 1.6 feet above land surface. Well equipped with lift pump and windmill. Water levels, in feet below measuring point, 1942: July 18, 118.71; Nov. 27, 118.63.

62. H. A. Hills. NE¼NE¼ sec. 27, T. 10 S., R. 34 W. Unused drilled stock well, diameter 6 inches, depth 113.8 feet. Measuring point, top of casing, west side, 0.4 foot above land surface. No pump on well. Water levels, in feet below measuring point, 1942: Sept. 14, 98.14; Nov. 27, 98.05.

MINNESOTA

By A. L. Greenlee and T. W. Robinson

Periodic measurements of the water levels in 7 wells in Clay County, Minn., were continued in 1942 by the Geological Survey, United States Department of the Interior, in cooperation with the North Dakota Geological Survey and the city of Fargo, N. Dak.[1/] During the year observations were begun by the Federal Geological Survey on a well near Hanska, Brown County, in the south-central part of the State, in order to obtain information on the fluctuations of the water table in that area. At the end of the year, therefore, there were 8 wells under observation in the State. In all, about 282 individual measurements were made during 1942, 263 of which were on the wells in Clay County and 19 on the well in Brown County.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Observation wells in Minnesota are listed alphabetically by the two counties in which they are situated and numerically within each county. Complete descriptions are given only for newly added wells. The numbers in parentheses immediately following a well number indicate the water-supply papers in which earlier records of that well are given and the pages on which they appear. An asterisk indicates that a description of the well is given in that paper. The water level in each of the Clay County wells is expressed in feet above assumed datum planes. In the Brown County well, the water level is expressed in feet below land-surface datum.

Brown County

The first measurement of water level in the one well under observation in this county was made by T. W. Robinson on July 31. The measurements during the remainder of the year, the last on December 28, were made by the owner, Erwin Kjelshus. The water level in the well declined 0.66 foot during the period of measurement.

108-30-9. Erwin Kjelshus. Sec. 9, T. 108 N., R. 30 W., near Hanska. Abandoned bored well, diameter 16 inches, depth 32 feet. Measuring point, top of concrete cover over well, 0.4 foot above land-surface datum. Measurements by Erwin Kjelshus beginning Aug. 28, 1942.

1/For further information on this investigation see the North Dakota section of this paper, under Cass County (pp. 235), and Water-Supply Paper 908 (pp. 244-245).

108-30-9--Continued.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 31	5.03	Sept. 27	3.92	Nov. 4	4.69	Dec. 7	5.38
Aug. 28	6.14	Oct. 4	4.14	8	4.72	14	5.49
Sept. 5	5.42	12	4.27	18	5.08	21	5.53
12	5.49	19	4.44	23	5.09	28	5.69
19	4.03	26	4.60	30	5.17		

Clay County

The 263 measurements in the 7 Clay County wells were made by Ralph Mader, W. C. Rasmussen, Frank Tappen, William Tarbell, and A. L. Greenlee. The average of the water levels in 4 wells (Nos. 3, 24, 25, and 26a) rose 1.55 feet during 1942. In the other 3 wells (Nos. 5, 7, and 8) the average of the water levels declined 0.36 foot. So far as known, no water was pumped for irrigation from wells or gravel pits during the year.

3 (*908, p. 180; 938, p. 151). City of Moorhead. NW¼SW¼ sec. 32, T. 140 N., R. 48 W.

Water level, in feet above assumed datum, 1942

Jan. 4	91.19	Feb. 21	95.94	Apr. 5	96.55	May 17	95.93
10	96.30	28	95.94	12	96.55	June 7	95.94
17	94.74	Mar. 7	95.08	18	96.68	21	95.93
Feb. 1	95.26	15	95.74	25	95.58	27	95.94
8	94.88	21	96.07	May 2	97.13	July 27	94.60
15	95.59	28	97.01	9	95.94		

5 (*908, p. 180; 938, p. 151). W. M. Bailey, 1203 Eighth Street South, Moorhead.

Water level, in feet above assumed datum, 1942

Jan. 4	95.26	Apr. 5	95.12	July 4	95.22	Sept. 27	95.14
10	95.24	11	95.13	12	95.20	Oct. 4	95.14
17	95.39	18	95.04	19	95.20	11	95.14
25	95.35	25	95.14	26	95.19	17	95.12
31	95.37	May 2	95.11	Aug. 2	95.14	25	95.18
Feb. 7	95.29	9	95.19	8	95.11	Nov. 12	95.66
15	95.27	17	95.19	16	95.10	21	95.14
21	95.25	23	95.19	23	95.11	28	95.58
28	95.22	31	95.19	30	95.11	Dec. 5	95.07
Mar. 7	95.04	June 7	95.21	Sept. 5	95.12	12	95.10
14	95.14	14	95.24	13	95.11	19	95.11
21	95.05	21	95.24	20	95.13	26	95.15
28	95.11	27	95.25				

7 (*908, p. 180; 938, p. 152). Andrew Gunderson. SE¼SE¼ sec. 23, T. 140 N., R. 48 W.

Water level, in feet above assumed datum, 1942

Jan. 10	95.15	Apr. 18	95.08	July 12	95.09	Oct. 4	94.49
17	95.17	25	95.16	19	95.11	11	94.57
25	95.13	May 9	95.36	26	94.97	17	95.09
Feb. 1	95.05	17	95.36	Aug. 2	94.77	25	94.59
7	95.22	23	95.39	9	94.71	Nov. 12	94.81
15	95.16	30	95.36	15	94.41	21	94.65
21	95.20	June 7	95.38	23	94.49	28	94.96
28	95.06	14	95.41	Sept. 6	95.13	Dec. 7	94.75
Mar. 7	95.13	21	95.08	13	94.50	12	94.75
14	95.19	27	95.11	20	94.49	19	94.71
21	95.11	July 4	95.13	27	94.57	26	94.80

8 (*908, p. 180; 938, p. 152). NW¼SW¼ sec. 4, T. 140 N., R. 48 W.

Water level, in feet above assumed datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	95.34	Apr. 5	95.10	July 4	95.27	Sept. 27	95.31
10	95.33	11	95.27	12	95.29	Oct. 4	95.00
17	95.39	18	95.01	19	95.12	11	94.98
25	95.35	25	94.98	26	95.12	17	94.97
Feb. 1	95.30	May 2	95.52	Aug. 2	94.99	25	95.00
7	95.33	9	95.66	9	94.91	Nov. 12	94.86
15	95.36	17	95.43	15	94.87	21	94.75
21	95.35	23	95.49	23	94.96	28	94.83
28	95.24	30	95.37	30	94.66	Dec. 5	94.96
Mar. 7	95.21	June 7	95.45	Sept. 6	94.87	12	94.85
14	95.17	14	95.49	13	94.79	19	94.92
21	95.15	21	95.44	20	95.37	26	94.90
28	95.09	27	95.47				

24 (*938, p. 152). SE¼SW¼ sec. 29, T. 139 N., R. 47 W.

Water level, in feet above assumed datum, 1942

May 9	99.17	June 27	99.56	Aug. 16	100,06	Sept. 29	100.57
17	99.22	July 4	99.76	23	100.06	Oct. 4	100.59
23	99.19	12	99.84	30	99.47	11	101.75
31	99.41	19	99.85	Sept. 6	100.50	17	101.69
June 7	99.54	26	99.85	13	100.51	25	101.74
14	99.52	Aug. 2	99.60	20	100.57	Nov. 12	100.91
21	99.64	8	100.03				

25 (*938, p. 153). SW¼NE¼ sec. 32, T. 139 N., R. 47 W.

Water level, in feet above assumed datum, 1942

Apr. 18	99.03	June 14	99.57	Aug. 9	100.02	Sept. 27	100.45
25	99.03	21	99.62	16	100.05	Oct. 4	100.45
May 2	99.18	27	99.60	23	100.03	11	100.73
9	99.17	July 4	99.75	30	100.65	17	100.73
17	99.19	12	99.83	Sept. 6	100.56	25	100.72
23	99.39	19	99.89	13	100.50	Nov. 12	100.86
31	99.42	26	99.86	20	100.47	21	100.86
June 7	99.63	Aug. 2	99.95				

26a (*938,p. 153). NW¼SE¼ sec. 32, T. 139 N., R. 47 W.

Water level, in feet above assumed datum, 1942

Jan. 4	98.80	Mar. 21	98.71	June 7	99.31	Aug. 23	99.89
10	98.71	28	98.67	14	99.38	30	(a)
18	98.86	Apr. 5	98.65	21	99.42	Sept. 6	(a)
24	98.76	11	98.78	27	99.40	13	(a)
31	98.79	18	98.79	July 4	99.56	20	100.41
Feb. 7	98.79	25	98.79	12	99.64	27	100.38
15	98.77	May 2	98.85	19	99.70	Oct. 4	100.34
21	98.73	9	98.92	26	98.91	11	100.55
28	98.68	17	98.95	Aug. 2	99.76	17	100.56
Mar. 7	98.70	23	98.96	9	99.78	25	100.54
14	98.72	31	98.95	16	99.86		

a Pit full of water.

MISSOURI

At the end of 1942 the network of observation wells maintained by the Geological Survey, United States Department of the Interior, was represented in Missouri by 21 wells. Of these, 18 are in Atchison County and are included in the Tarkio Creek program, begun in 1934. The 3 remaining wells, 1 of which is in Grundy County and 2 in Phelps County, were added during the year.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Observation wells in Missouri are listed alphabetically by counties and numerically within each county. Complete descriptions are given for only newly added wells. The numbers in parentheses immediately following a well number indicate the water-supply papers in which earlier records of that well are given and the pages on which they appear. An asterisk indicates that a description of the well is given in that paper. The water level in each well is expressed in feet below the land-surface datum, which is the average land surface in the vicinity of the well.

Atchison County

Tarkio Creek area

By T. W. Robinson and W. E. Hale

The observation-well program for the entire Tarkio Creek area, which lies partly in northwestern Missouri and partly in southwestern Iowa, is discussed in the section of this paper that deals with Iowa. (See pp. 52 &53). In the part of the area that lies in Missouri, 19 wells, all in Atchison County, were under observation at the beginning of the year. Measurements in 1 well (No. 26) were discontinued during the year, leaving 18 wells under observation at the end of the year. The measurements were made by D. W. Knox until September 1 and by D. L. Hummel during the remainder of the year.

1 (*777, pp. 63-64; *817, pp. 56-59; *840, pp. 91,93-94; 845,p.86; 886, p. 122; 908, p. 181; 938, p. 39). W. R. Marshall. NW¼NE¼ sec. 13, T. 66 N., R. 40 W. Measuring point 0.7 foot above land-surface datum. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 26.83 feet.

1. W. R. Marshall--Continued.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	7.70	Apr. 27	5.94	July 23	10.22	Oct. 29	10.91
Feb. 25	6.80	May 28	7.42	Aug. 28	9.70	Nov. 28	11.71
Mar. 27	6.30	June 22	7.57	Sept.26	10.16	Dec. 28	11.15

2(*777,pp.63-64; *817,pp.56-59; *840,pp.91, 93-94; 845,p.86; 886,p.122; 908,p.181; 938,p.39). H.W. Klutas. SW¼SW¼ sec. 1, T. 66 N., R. 40 W. Measuring point level with land-surface datum. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 20.73 feet.

Water level, in feet below land-surface datum, 1942

Jan. 26	8.05	Apr. 27	9.56	July 23	8.39	Oct. 29	9.48
Feb. 25	8.68	May 28	8.23	Aug. 28	9.02	Nov. 28	9.59
Mar. 27	8.79	June 22	8.02	Sept.26	9.31	Dec. 28	9.48

20 (*840,pp.92,95; 845,pp.87-88; 886,p.124; 908,p.181; 938,p.40). SE¼SE¼ sec. 10, T. 65 N., R. 40 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 34.73 feet. Measuring point 1.0 feet above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 26	14.72	Apr. 27	20.72	July 23	20.53	Oct. 29	22.06
Feb. 25	14.98	May 28	19.80	Aug. 28	17.32	Nov. 28	22.74
Mar. 27	18.37	June 22	19.66	Sept.26	21.76	Dec. 28	21.47

21 (*840,pp.92,95; 845,pp.87-88; 886,p.124; 908,p. 181; 938,p.41). SW¼NW¼ sec. 11, T. 65 N., R. 40 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 36.83 feet. Measuring point 1.3 feet above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 26	21.87	Apr. 27	16.78	July 23	15.74	Nov. 28	20.35
Feb. 25	20.40	May 28	17.14	Sept.26	18.93	Dec. 28	20.07
Mar. 27	16.56	June 22	15.90	Oct. 29	19.58		

22 (*840,pp.92,95; 845,pp.87-88; 886,p.125; 908,p.182; 938,p.41). J. A. McAllister. SE¼NE¼ sec. 35, T. 66 N., R. 40 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 22.99 feet. Measuring point 1.2 feet above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 26	9.10	Apr. 27	9.24	July 23	10.22	Oct. 29	10.82
Feb. 25	9.82	May 28	4.29	Aug. 28	20.21	Nov. 28	11.10
Mar. 27	8.40	June 22	9.55	Sept.26	10.57	Dec. 28	10.98

23 (*840,pp.92,95; 845,pp.87-88; 886,p.125; 938,p.41). J. A. McAllister. NW¼NE¼ sec. 35, T. 66 N., R. 40 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 26.15 feet. Measuring point 1.2 feet above land-surface datum.

Water level, in feet below land-surface datum, 1942

Feb. 25	11.20	May 28	9.60	Aug. 28	11.77	Nov. 28	11.12
Mar. 27	9.90	June 22	9.05	Sept.26	10.38	Dec. 28	11.38
Apr. 27	10.20	July 23	10.35	Oct. 29	11.70		

24 (*840,pp.92,95; 886,p.125; 908,p.182; 938,p.41). SE¼SE¼ sec. 26, T. 66 N., R. 40 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 17.74 feet. Measuring point 1.2 feet above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 26	5.09	Apr. 27	5.50	July 23	2.93	Oct. 29	4.47
Feb. 25	7.28	May 28	4.29	Aug. 28	5.88	Nov. 28	4.55
Mar. 27	6.68	June 22	4.23	Sept.26	4.42	Dec. 28	4.50

25 (*840,pp.92,95; 845,pp. 87-88; 886,p. 125; 908,p. 182; 938,p.41). Edwin Rolf. SW¼SW¼ sec. 12, T. 66 N., R. 40 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 81.07 feet. Measuring point 1.0 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	40.76	Apr. 27	40.77	July 23	40.81	Oct. 24	45.14
Feb. 25	29.68	May 28	38.85	Aug. 28	43.05	Nov. 28	46.06
Mar. 27	39.26	June 22	39.98	Sept.26	44.30	Dec. 28	46.05

26 (*840,pp.92,95; 845,pp.87-88; 886,p. 125; 908, p.182; 938,p. 41). Edwin Rolf. SW¼SW¼ sec. 12, T. 66 N., R. 40 W. Measurements discontinued May 28, 1942.

27 (*840,pp.92, 95; 845,pp. 87-88; 886,p. 126; 908,p.182; 938,p.41). Edwin Rolf. SW¼SW¼ sec. 12, T. 66 N., R. 40 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 74.12 feet. Measuring point 0.9 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 26	40.24	Apr. 27	41.77	July 23	43.22	Oct. 29	42.71
Feb. 25	34.37	May 28	40.06	Aug. 28	47.26	Nov. 28	43.08
Mar. 27	42.21	June 22	39.76	Sept.26	42.16	Dec. 28	42.93

28 (*840,pp. 92,95; 845,pp. 87-88; 886,p. 126; 908,p.182; 938,p. 41). Edwin Rolf. SW¼SW¼ sec. 12, T. 66 N., R. 40 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 67.57 feet. Measuring point 1.2 feet above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 26	12.01	Apr. 27	12.18	July 23	12.30	Oct. 29	17.64
Feb. 25	13.23	May 28	9.66	Aug. 28	15.59	Nov. 28	18.33
Mar. 27	7.79	June 22	11.97	Sept.26	15.44	Dec. 28	18.79

29 (*840,pp. 92, 95-96; 845,pp.88-89; 886, p. 126; 908,p. 182; 938, p. 41). Edwin Rolf. SW¼NW¼ sec. 12, T. 66 N., R. 40 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 44.86 feet. Measuring point 1.1 feet above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 26	9.10	Apr. 27	8.86	July 23	9.37	Oct. 29	11.76
Feb. 25	9.84	May 28	5.56	Aug. 28	11.30	Nov. 28	12.03
Mar. 27	7.09	June 22	9.24	Sept.26	11.79	Dec. 28	12.84

30 (*840,pp. 92, 95-96; 845,pp. 88-89; 886,p. 126; 908,p.182; 938,p. 41). W. F. Marshall. NW¼NW¼ sec. 13, T. 66 N., R. 40 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 32.92 feet. Measuring point 1.2 feet above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 26	7.08	Apr. 27	8.82	July 23	10.67	Oct. 29	11.20
Feb. 25	9.89	May 28	8.07	Aug. 28	10.57	Nov. 28	11.84
Mar. 29	6.99	June 22	8.62	Sept.26	10.74	Dec. 28	11.48

31 (*840,pp.92, 95-96; 845,pp.88-89; 886,p.126; 908,p.183; 938,p.42). W. F. Marshall. NW¼NW¼ sec. 13, T. 66 N., R. 40 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 21.55 feet. Measuring point 1.5 feet above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 26	2.53	Apr. 27	3.13	July 23	3.48	Oct. 29	3.52
Feb. 25	2.60	May 28	2.84	Aug. 28	3.94	Nov. 28	3.94
Mar. 27	2.26	June 22	2.45	Sept.26	3.44	Dec. 28	3.21

32 (*840,pp.92, 95-96; 845,pp. 88-89; 886,p.127; 908,p.183; 938,p.42). W. F. Marshall. NE¼NW¼ sec. 13, T. 66 N., R. 40 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 19.32 feet. Measuring point 1.2 feet above land-surface datum.

32. W. F. Marshall--Continued.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	6.40	Apr. 27	11.79	July 23	12.27	Nov. 28	15.19
Feb. 25	10.12	May 28	9.50	Aug. 28	13.78	Dec. 28	12.18
Mar. 27	5.31	June 22	10.02	Oct. 29	13.89		

33 (*840, pp. 92, 95-96; 845, pp. 88-89; 886, p. 127; 908, p. 183; 938, p. 42). W.F. Marshall. NE¼NW¼ sec. 13, T. 66 N., R. 40 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 16.13 feet. Measuring point 1.2 feet above assumed datum.

Water level, in feet below land-surface datum, 1942

Jan. 26	13.58	Apr. 27	15.92	July 23	14.51	Oct. 29	17.30
Feb. 25	15.12	May 28	14.08	Aug. 28	17.87	Nov. 28	17.57
Mar. 27	13.31	June 22	14.96	Sept.26	17.02	Dec. 28	15.71

34 (*840,pp. 92, 95-96; 845,pp. 88-89; 886,p.127; 908,p. 183; 938, p. 42). W. F. Marshall. NW¼NE¼ sec. 13, T. 66 N., R. 40 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 19.03 feet. Measuring point 1.0 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 26	2.94	Apr. 27	4.54	July 23	4.18	Oct. 29	7.77
Feb. 25	3.76	May 28	3.98	Aug. 28	8.00	Nov. 28	7.99
Mar. 27	2.07	June 22	2.86	Sept.26	6.85	Dec. 28	5.64

35 (*840, pp. 92, 95-96; 845,pp. 88-89; 886, p. 127; 908,p. 183; 938,p. 42). W. F. Marshall. NW¼NE¼ sec. 13, T. 66 N., R. 40 W. To convert previous records to land-surface datum, subtract water level in feet above assumed datum from 71.32 feet. Measuring point 1.2 feet above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 26	15.24	Apr. 27	14.84	July 23	15.96	Oct. 29	20.20
Feb. 25	16.70	May 28	11.90	Aug. 28	18.22	Nov. 28	21.08
Mar. 27	12.30	June 22	13.48	Sept.26	17.57	Dec. 28	20.48

36 (*840, pp. 92, 95-96; 845, pp. 88-89; 886, p. 127; 908, p. 183; 938, p. 42). George Rolf. NE¼NE¼ sec. 13, T. 66 N., R. 40 W. To convert previous records to land-surface datum, subtract water levels in feet above assumed datum from 119.46 feet. Measuring point 1.1 feet above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 26	27.94	Apr. 27	26.12	July 23	25.96	Oct. 29	28.06
Feb. 25	30.20	May 28	21.82	Aug. 28	27.22	Nov. 28	28.87
Mar. 27	25.46	June 22	23.89	Sept.26	27.22	Dec. 28	29.45

Grundy County

By T. W. Robinson

An observation well was established at Trenton on November 24, 1942. On that day T. W. Robinson made a measurement of the water level in the well, and during December the owner, Wiley H. Estes, made three measurements.

US 113. Wiley H. Estes, 105 E. 4th Street, Trenton. Sec. 17, T. 61 N., R. 24 W. Unused dug well, diameter 36 inches, depth 21.0 feet. Measuring point, top of plank cover, at 1-inch hole, level with land-surface datum. Water levels, in feet below land-surface datum, 1942: Nov. 24, 6.28; Dec. 1, 5.98; Dec. 8, 6.40; Dec. 16, 6.28.

Phelps County

By S. W. Lohman

Two observation wells were established in Phelps County in the fall of 1942. Both are on sloping, well-drained land in the Gasconade River Valley and obtain water from dolomite. They are near the stream-gaging station on the Gasconade River at Jerome, which will make it possible to study the relation between the ground-water levels and the stage of the river.

The wells were selected by the author with the aid of C. J. Eyberg, office engineer in the Rolla office of the division of surface water, Geological Survey, U. S. Department of the Interior. The water levels were measured monthly by engineers of the Rolla office through the courtesy of H. C. Beckman, district engineer. In all, 8 wetted-tape measurements were made during the year.

US 98. S. V. Allen. NW¼SE¼ sec. 13, T. 37 N., R. 10 W., across from Jerome post office, on north side of road, between house and grocery store. Unused drilled well, diameter 6 inches, depth 33.6 feet. Measuring point, top of galvanized-iron casing at south side, 0.5 foot above land surface. Discharge pipe in well; hand pump broken and lying on side. Water levels, in feet below land-surface datum, 1942: Oct. 21, 9.03; Nov. 6, 6.42; Dec. 1, 7.23; Dec. 10, 7.02.

US 98a. Fred Pillman. NE¼NE¼ sec. 24, T. 37 N., R. 10 W., across from Arlington post office, on east side of street, in sidewalk. Unused dug well, deepened by drilling, diameter 6 inches, depth 15.2 feet. Measuring point, top of galvanized-iron casing, 0.5 foot above concrete base, 1.0 foot above land-surface datum. No pump on well. Water levels, in feet below land-surface datum, 1942: Oct. 21, 12.02; Nov. 6, 10.29; Dec. 1, 7.88; Dec. 10, 8.70.

NEBRASKA

By H. A. Waite and G. D. Jones

The State-wide program of water-level measurements in observation wells in Nebraska, begun in 1934 by the Geological Survey, United States Department of the Interior, in cooperation with the Conservation and Survey Division of the University of Nebraska, was continued in 1942. Records of water level in the wells and some interpretation of the fluctuations of the water level are given in the annual reports of the Geological Survey on water levels and artesian pressure. The reports already published are Water-Supply Papers 777, 817, 840, 845, 886, 908, and 938.

Measurements of water levels made in 375 observation wells are given in the present report. Included in the group are 80 wells in the observation of which the following organizations are cooperating informally: Grand Island Water Department, 30 wells in Hall County and 2 in Merrick County; Fish and Wildlife Service, United States Department of the Interior, 9 wells in Garden County; Central Nebraska Public Power and Irrigation District, 7 wells in Dawson County, 1 in Garden County, 1 in Gosper County, and 30 in Keith County. The daily tape measurements given for well 85 in Morrill County were furnished by the Nebraska Department of Roads and Irrigation.

In August 1942 monthly measurements of water level were begun in 7 key wells in the State, each selected on account of its strategic location. The water-level records of 4 of these, namely, wells 123, 203, 211, and Garden County 4, are included in this report. The data obtained from these records forms the basis of the concise factual statements concerning water-level conditions in the State that appear currently in the Geological Survey Monthly Water Resources Review. In all, 1,373 individual measurements of water level were made in Nebraska in 1942.

The precipitation in Nebraska in 1942 was 25.17 inches, 2.63 inches above normal and 0.72 inch above that of 1941. As a result, the water levels in most of the observation wells had net rises for the year. The following tables summarize the fluctuations in key wells throughout the State. The average water levels have been recomputed for the entire period

of record, using a total of 87 wells for each year. The levels of only those wells that have been measured without interruption since the observation-well program was begun in 1934 were used in computing the averages. The average water levels shown in the corresponding table published in the report for 1941 (see Water-Supply Paper 938, p. 155) differ slightly, therefore, from those given in the following table.

Summary of average water levels, in feet above assumed datum planes, in observation wells in Nebraska, October-December 1934-42

Section of State	Number of wells	1934 average level	1935 average level	1936 average level	1937 average level
Northeast	10	99.78	99.58	99.32	99.47
Southeast	19	99.74	100.43	99.45	99.13
North-central	20	99.78	99.93	99.64	99.33
South-central	22	99.84	100.10	99.62	99.69
Northwest	10	100.02	100.63	100.04	99.58
Southwest	6	100.06	100.07	100.21	100.12
Entire State	87	99.85	100.13	99.64	99.48

Section of State	Number of wells	1938 average level	1939 average level	1940 average level	1941 average level	1942 average level
Northeast	10	100.05	98.98	99.06	99.85	100.85
Southeast	19	100.13	99.08	98.87	99.34	101.03
North-central	20	99.30	99.58	99.30	99.64	100.17
South-central	22	99.74	99.77	99.55	100.07	100.43
Northwest	10	100.39	99.86	99.68	99.78	100.01
Southwest	6	100.47	100.26	99.95	100.00	100.46
Entire State	87	99.89	99.53	99.33	99.86	100.50

Summary of changes in average water levels, in feet, in observation wells in Nebraska, 1934-42

Section of State	1935	1936	1937	1938	1939	1940	1941	1942	1934-42
Northeast	-0.20	-0.26	+0.15	+0.58	-1.07	+0.08	+0.79	+1.00	+1.07
Southeast	+.69	-.98	-.32	+1.00	-1.05	-.21	+.47	+1.69	+1.29
North-central	+.06	-.29	-.31	-.03	+.28	-.28	+.34	+.53	+.30
South-central	+.26	-.48	+.07	+.05	+.03	-.22	+.52	+.36	+.59
Northwest	+.61	-.59	-.46	+.81	-.53	-.18	+.10	+.23	-.01
Southwest	+.01	+.14	-.09	+.35	-.21	-.31	+.05	+.46	+.40
Entire State	+.28	-.49	-.16	+.41	-.36	-.20	+.53	+.64	+.65

The tables show that in 1942 the averages of the water levels in the observation wells increased in all 6 sections of the State. There was an average net rise of 0.64 foot in the 87 wells during the year. At the end of 1942, the averages in all sections of the State except the northwest were higher than at the end of 1934. In northwest Nebraska there was an average decline of 0.01 foot in water level in the 8-year period. For the entire State there was an average net rise of 0.65 foot during the 8-year period. If it is assumed that the average net rise of 0.64 foot recorded

in the 87 key wells in 1942 represents the average net fluctuation of the water table over the entire State and that the specific yield of the formations in which the water occurs in Nebraska averages 15 percent, that is, that each cubic foot of material will yield or store 0.15 cubic foot of water, then the records indicate a net increase in ground-water storage in 1942 of about 4,760,000 acre-feet. On the same basis, the increase in ground-water storage in the 8-year period ending with 1942 may be computed to be about 4,800,000 acre-feet. The precipitation in Nebraska during the 8-year period was about 20 inches below average--adeficiency equivalent to about 81,800,000 acre-feet of water.

During 1942, the water levels in 16 of the 87 observation wells reached new high stages, and those in 3 of the wells reached new low stages.

Water levels in wells in the vicinity of Grand Island rose during 1942 as a result of an increase in precipitation. The precipitation for the year at Grand Island was 25.58 inches, 1.48 inches below normal, but 0.35 inch more than in 1941 and 13.67 inches more than in 1940. As a result, the water levels in 25 wells showed net rises during the period November 12, 1941, to December 6, 1942, ranging from 0.41 foot to 2.58 feet and averaging 1.5 feet. The water level in one well (GI 241) showed a net decline of 0.45 foot during this same period. The water level in this well, however, was affected by pumpage from the new city well on South Harrison Street, which is situated less than a quarter of a mile to the north. The water level in GI 241 is probably affected also by pumpage from four irrigation wells that are situated in the same quarter section.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Observation wells in Nebraska are listed alphabetically by counties and numerically within each county. Complete descriptions are given only for newly added wells. The numbers in parentheses immediately following a well number indicate the water-supply papers in which earlier records of that well are given and the pages on which they appear. An asterisk indicates that a description of the well is given in that paper. For most wells the water levels are expressed in feet above an assumed datum, which is 100 feet below the water level on January 1, 1935. The height of the measuring point above datum for wells established since January 1, 1935, has been interpolated from the average water level on a selected date in a group of wells subject to similar conditions. The records of the water levels are

directly comparable even though the measuring point has been changed, because a level is given as a height above a datum that has been referred to one or more bench marks.

Adams County

193 (*817, p. 92; 840, p. 190; 845, p. 169). H. Fricke. NW¼NE¼ sec. 23, T. 7 N., R. 10 W. No measurements made in 1942.

448 (*886, p. 289; 908, p. 188). University of Nebraska. NW¼NW¼ sec. 23, T. 6 N., R. 10 W. Water level, in feet above datum, 1942: Nov. 25, 99.48.

Antelope County

111 (*817, p. 92; 840, p. 190; 845, p. 169; 886, p. 289; 908, p. 188). A. Hopkins. NW¼NW¼ sec. 10, T. 27 N., R. 7 W. Well destroyed; measurements discontinued after Nov. 27, 1939.

202 (*817, p. 92; 840, p. 190; 845, p. 169; 886, p. 289; 908, p. 188; 938, p. 157). University of Nebraska. NW¼NW¼ sec. 1, T. 24 N., R. 6 W. Water level, in feet above datum, 1942: Oct. 29, 99.82.

Arthur County

250 (*840, p. 190; 845, p. 169; 886, p. 289; 908, p. 188; 938, p. 157). University of Nebraska. SE¼NW¼ sec. 21, T. 17 N., R. 38 W. Water level, in feet above datum, 1942: Nov. 18, 99.46.

251 (*817, p. 92; 840, p. 191; 845, p. 169; 886, p. 289; 908, p. 188). University of Nebraska. SW¼NW¼ sec. 4, T. 18 N., R. 38 W. Well destroyed; measurements discontinued after July 26, 1940.

Banner County

238 (*817, p. 93; 840, p. 191; 845, p. 169; 886, p. 289; 908, p. 188; 938, p. 157). F. Grant. SW¼NE¼ sec. 29, T. 19 N., R. 55 W. Water level, in feet above datum, 1942: Nov. 17, 99.62.

354 (*817, p. 93; 840, p. 191; 845, p. 169; 886, p. 289; 908, p. 188). A. Andersen. SE¼SE¼ sec. 6, T. 17 N., R. 55 W. Water level, in feet above datum, 1942: Nov. 17, a/100.77.

Blaine County

210 (*817, p. 93; 840, p. 191; 845, p. 169; 886, p. 289; 908, p. 188; 938, p. 157). University of Nebraska. SW¼SW¼ sec. 22, T. 23 N., R. 22 W. Water level, in feet above datum, 1942: Nov. 2, 99.24.

211 (*817, p. 93; 840, p. 191; 845, p. 169; 886, p. 289; 908, p. 188; 938, p. 157). University of Nebraska. NE¼SW¼ sec. 33, T. 22 N., R. 24 W.

Water levels, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 25	98.87	Sept.28	99.59	Nov. 2	99.65	Dec. 29	99.84
29	98.87	Oct. 29	99.59	29	99.72		

237 (*817, p. 93; 840, p. 191; 845, p. 169; 886, p. 289; 908, p. 188; 938, p. 157). Cox & Sons. NE¼SW¼ sec. 7, T. 24 N., R. 25 W. Water level, in feet above datum, 1942: Nov. 12, b/98.16.

a Highest observed stage in period of record.
b Lowest observed stage in period of record.

433 (*886, p. 290; 908, p. 189; 938, p. 157). University of Nebraska. NE¼NE¼ sec. 7, T. 24 N., R. 25 W. Water level, in feet above datum: Nov. 1[illegible] 99.54.

434 (*886, p. 290; 908, p. 189; 938, p. 157). University of Nebraska. NW¼SW¼ sec. 22, T. 23 N., R. 22 W. Water level, in feet above datum, 1942: Nov. 12, 99.04.

Boone County

200 (*817, p. 94; 840, p. 191; 845, p. 169; 886, p. 290; 908, p. 189; 938, p. 157). University of Nebraska. NW¼SE¼ sec. 12, T. 18 N. R. 5 W. Well destroyed; measurements discontinued after Oct. 14, 1941.

201 (*817, p. 94; 840, p. 191; 845, p. 169; 886, p. 290; 908, p. 189; 938, p. 157). University of Nebraska. NE¼SE¼ sec. 26, T. 21 N., R. 7 W. Water level, in feet above datum, 1942: Oct. 30, 100.53.

207 (*817, p. 94; 840, p. 191; 845, p. 169; 886, p. 290; 908, p. 189; 938, p. 157). University of Nebraska. SE¼NE¼ sec. 5, T. 18 N., R. 7 W. Water level, in feet above datum, 1942: Oct. 31, 100.00.

425 (*886, p. 290; 908, p. 189; 938, p. 157). University of Nebraska. NE¼SW¼ sec. 26, T. 21 N., R. 7 W. Water level, in feet above datum, 1942: Oct. 30, 102.50.

426 (*886, p. 290; 908, p. 189; 938, p. 157). University of Nebraska. NE¼SW¼ sec. 4, T. 18 N., R. 7 W. Water level, in feet above datum, 1942: Oct. 31, 99.88.

Box Butte County

129 (*817, p. 94; 840, p. 191; 845, p. 172; 886, p. 291; 908, p. 189; 938, p. 158). M. Jacobson. NW¼NE¼ sec. 31, T. 25 N., R. 50 W. Water level in feet above datum, 1942: Nov. 13, 99.61.

338 (*817, p. 95; 840, p. 192; 845, p. 172; 886, p. 291; 908, p. 189; 938, p. 158). E. Wildy. NW¼SW¼ sec. 21, T. 27 N., R. 49 W. Water level, in feet above datum, 1942: Nov. 14, a/ 100.09.

378 (*817, p. 95; 840, p. 192; 845, p. 172; 886, p. 291; 908, p. 189; 938, p. 158). University of Nebraska. SE¼SE¼ sec. 6, T. 28 N., R. 51 W. Water levels, in feet above datum, 1942: Aug. 22, 99.08; Nov. 14, 99.77.

472 (Box Butte 1 in *845, p. 169 and 886, p. 290). Mrs. C. H. Devee. SW¼NE¼ sec. 35, T. 25 N., R. 48 W. Measuring point destroyed; measurements discontinued after June 8, 1939.

473 (Box Butte 2 in *845, p. 169 and 886, p. 290). Mrs. E. A. Wells. SE¼NE¼ sec. 30, T. 25 N., R. 48 W. Water levels, in feet above datum: July 22, 1940, 99.07; Nov. 2, 1940, 99.38; Oct. 20, 1941, dry; Nov. 14, 1942, b/ 100.94.

474 (Box Butte 3 in *845, p. 170 and 886, p. 290). John Nolan. NE¼NE¼ sec. 10, T. 24 N., R. 50 W. Water levels, in feet above datum: July 22, 1940, 98.94; Nov. 2, 1940, 98.87; Oct. 20, 1941, 98.90; Nov. 13, 1942, b/ 100.53.

475 (Box Butte 5 in *845, p. 170; and 886, p. 290). Dr. G. D. Shepard. NW¼SW¼ sec. 13, T. 25 N., R. 52 W. New measuring point beginning Nov. 13, 1942, top of inside edge of 4-inch hole in flat steel casting, 0.2 foot above land surface, 0.1 foot below old measuring point, and 177.46 feet above datum. Water level, in feet above datum, 1942: Nov. 13, 99.35.

476 (Box Butte 6 in *845, p. 170 and 886, p. 291). Mr. Bailey. NE¼NE¼ sec. 35, T. 24 N., R. 52 W. Water levels, in feet above datum: Nov. 2, 1940, 99.76; Oct. 21, 1941, 99.42; no measurements made in 1942.

a Equal to highest stage previously observed, that of Apr. 2, 1937.
b Highest observed stage in period of record.

477 (Box Butte 7 in *845, p. 170 and 886, p. 291). C. A. Allen. SE¼NE¼ sec. 14, T. 25 N., R. 51 W. Water levels, in feet above datum: July 22, 1940, a/ 100.13; Nov. 2, 1940, 99.22; Oct. 21, 1941 b/ 99.11; Nov. 13, 1942, 99.26.

478 (Box Butte 8 in *845, p. 170 and 886, p. 291). O. J. Wilkens. NW¼SW¼ sec. 25, T. 26 N., R. 51 W. Water levels, in feet above datum: July 22, 1940, a/ 99.57; Nov. 2, 1940, 99.30; Oct. 21, 1941, b/ 99.06; Nov. 13, 1942, 99.47.

479 (Box Butte 9 in *845, p. 170 and 886, p. 291). Lew Bauer. NW¼NE¼ sec. 10, T. 26 N., R. 52 W. Water levels, in feet above datum: July 22, 1940, 99.29; Nov. 2, 1940, 98.95; Oct. 21, 1941, b/ 98.75; Nov. 13, 1942, 99.29.

480 (Box Butte 10 in *845, p. 171). Mrs. L. A. Rosenberg. SW¼SE¼ sec. 12, T. 26 N., R. 50 W. Water level, in feet above datum, 1942: Nov. 14, a/ 99.38.

481 (Box Butte 12 in *845, p. 171). NE¼NE¼ sec. 20, T. 27 N., R. 50 W. Water levels, in feet above datum: Nov. 2, 1940, 99.05; Oct. 20, 1941, 99.03; Nov. 14, 1942, a/ 99.62.

482 (Box Butte 13 in *845, p. 171 and 886, p. 291). W. J. Gregg. SW¼NW¼ sec. 8, T. 28 N; R. 51 W. Pump removed. New measuring point, beginning Nov. 14, 1942, top of 6-inch galvanized-iron casing, northeast side, 1.4 feet above land surface, 0.1 foot below old measuring point, and 186.33 feet above datum. Water levels, in feet above datum: July 20, 1940, 99.21; Nov. 1, 1940, 98.96; Oct. 20, 1941, 98.89; Nov. 14, 1942, a/ 99.55.

483.(Box Butte 15 in *845, p. 171 and 886, p. 291). Mr. Shremik. NE¼NW¼ sec. 24, T. 27 N., R. 47 W. Water levels, in feet above datum: July 22, 1940, 98.52; Nov. 2, 1940, b/ 98.06; Oct. 20, 1941, 98.86; Nov. 14, 1942, c/ 106.25.

484 (Box Butte 16 in *845, p. 171; 886, p. 291). Herman Bauer. NE¼SE¼ sec. 34, T. 26 N., R. 47 W. Water levels, in feet above datum: Nov. 2, 1940, 99.49; Oct. 20, 1941 99.63. Well sealed completely by new concrete platform; measurements discontinued Nov. 14, 1942.

Boyd County

74 (*817, p. 95; 840, p. 192; 845, p. 172; 886, p. 291; 908, p. 189; 938, p. 158). A. Christman. SE¼NE¼ sec. 10, T. 34 N., R. 13 W. Water level, in feet above datum, 1942: Oct. 29, 100.96.

75 (*817, p. 95; 840, p. 192; 845, p. 172; 886, p. 291; 908, p. 189; 938, p. 158). E. Engelhaupt. NE¼SW¼ sec. 9, T. 33 N., R. 13 W. Water level, in feet above datum, 1942: Oct. 29, 99.98.

209 (*817, p. 95, 96; 840, p. 192; 845, p. 172; 886, p. 291; 908, p. 189; 938, p. 158). University of Nebraska. SW¼SW¼ sec. 1, T. 32 N., R. 10 W. Water level, in feet above datum, 1942: Oct. 29, 100.13.

Brown County

243 (*817, p. 96; 840, p. 192; 845, p. 172; 886, p. 291; 908, p. 189; 938, p. 158). T. Bower. SW¼SE¼ sec. 27, T. 30 N., R. 22 W. No measurements made in 1942.

a Highest observed stage in period of record.
b Lowest observed stage in period of record.
c Accuracy questionable.

Buffalo County

52 (*817, p. 96; 840, p. 192; 845, p. 172). W. Starks. NW¼SW¼ sec. 2, T. 12 N., R. 14 W. Water level, in feet above datum, 1942: Nov. 26, 99.41.

232 (*817, p. 96; 840, p. 192; 845, p. 172; 886, p. 291; 908, p. 190; 938, p. 158). W. Buettner. SE¼SW¼ sec. 21, T. 10 N., R. 17 W. Water level, in feet above datum, 1942; Nov. 26, a/ 102.34.

263 (*817. p. 97; 840, p. 192: 845 p. 172; 886, p. 291; 908, p. 190; 938, p. 158). E. Stubblefield. NW¼SW¼ sec. 22. T. 9 N., R. 13 W. Water level, in feet above datum, 1942: Nov. 9, 100.48.

264 (*817, p. 97; 840, p. 192; 845, p. 172; 886, p. 291; 908, p. 190). B. Smith. SW¼SW¼ sec. 9 T. 9,N., R. 15 W. No measurements made in 1942; pumphouse locked.

265 (817, p. 98; 840, p. 193; 845, p. 172; 886, p. 291; 908, p. 190; 938, p. 158). F. Scott. NW¼SW¼ sec. 5, T. 9 N., R. 13 W. Water level, in feet above datum, 1942: Nov. 9, 98.29.

267 (*817, p. 98; 840, p. 193; 845, p. 172; 886, p. 292; 908, p. 190; 938, p. 158). M. Davis. NW¼SW¼ sec. 13, T. 9 N., R. 14 W. Water level, in feet above datum, 1942: Nov. 9, 99.87.

268 (*817, p. 98; 840, p. 193; 845, p. 172; 886, p. 292; 908, p. 190; 938, p. 158). C. Nicholson. NW¼NW¼ sec. 34, T. 9 N., R. 14 W. Water level in feet above datum, 1942: Nov. 9, 101.08.

269 (*817, p. 99; 840, p. 193; 845, p. 172; 886, p. 292; 908, p. 190). W. Adair. SW¼SW¼ sec. 21, T. 9 N., R. 14 W. Water level, in feet above datum, 1942: Nov. 9, 100.50.

270 (*817, p. 99; 840, p. 193; 845, p. 172; 886, p. 292; 908, p. 190; 938, p. 158). T. Lewis. SE¼SE¼ sec. 19, T. 9 N., R. 14 W. Water level, in feet above datum, 1942: Nov. 9, 98.18.

272 (*817, p. 100; 840, p. 193; 845, p. 172; 886, p. 292; 908, p. 190; 938, p. 158). C. Aldeen. NW¼SW¼ sec. 11, T. 9 N., R. 15 W. Water level, in feet above datum, 1942: Nov. 9, 97.97.

273 (*817, p. 100; 840, p. 193; 886, p. 292). J. Wolford. NW¼NW¼ sec. 34, T. 9 N., R. 15 W. No measurements made in 1942.

274 (*817, p. 101; 840, p. 193; 845, p. 172; 886, p. 292; 908, p. 190; 938, p. 158). M. Garvin. SW¼SW¼ sec. 12, T. 8 N., R. 16 W. Water level, in feet above datum, 1942: Nov. 9, 101.37.

278 (*817, p. 101; 840, p. 193; 845, p. 172; 886, p. 292; 908, p. 190; 938, p. 158). University of Nebraska. NE¼SE¼ sec. 1, T. 8 N., R. 17 W. Water level, in feet above datum, 1942: Nov. 9, 103.38.

279 (*817, p. 102; 840, p. 193; 845, p. 172; 886, p. 292; 908, p. 190; 938, p. 158). University of Nebraska. SE¼SE¼ sec. 12, T. 8 N., R. 17 W. Water level, in feet above datum, 1942: Nov. 9 99.22.

Burt County

63 (*817, p. 102; 840, p. 193; 845, p. 172; 886, p. 292; 908, p. 190; 938, p. 158). J. Calnon. SE¼SE¼ sec. 35, T. 24 N., R. 10 E. Well filled up by owner; measurements discontinued Oct. 26.

64 (*817, p. 102; 840, p. 193; 845, p. 172). G. Ott. NW¼NE¼ sec. 34, T. 21 N., R. 11 E. Old well destroyed in May 1939. Measurements were started on another well located about 200 yards northeast of old well on May 8, 1940. Altitude of measuring point of new well has not been determine New owner, Tom Turk. NW¼NE¼ sec. 34, T. 21 N., R. 11 E. Dug well, diameter 48 inches, depth 20 feet. Measuring point, top of platform under pump, 0.3 foot above land surface.

a Highest observed stage in period of record.

64 (*817, p. 102; 840, p. 193; 845, p. 172)--Continued.

Water level, in feet below measuring point, 1940-42

Date	Water level	Date	Water level	Date	Water level
May 8, 1940	18.03	Oct. 23, 1940	14.50	Oct. 26, 1942	12.64
July 11	16.59	10, 1941	14.84		

402 (*886, p. 292; 908, p. 190; 938, p. 158). University of Nebraska. SE¼SE¼ sec. 35, T. 22 N., R. 8 E. Water level, in feet above datum, 1942: Oct. 26, 97.99.

Butler County

170 (*817, p. 102; 840, p. 194; 845, p. 173; 886, p. 292; 908, p. 190). Helgoth Estate. NE¼NW¼ sec. 8, T. 14 N., R. 3 E. Well filled in spring of 1940. New well (508) installed May 4, 1940, at point about 528 feet north and 560 feet west of old well. Measuring point of new well (508) is 8.76 feet lower than measuring point of old well (170).

508. University of Nebraska. NE¼NW¼ sec. 8, T. 14 N., R. 3 E. Augered well, diameter 1¼ inches, depth 29.5 feet. Measuring point, top of pipe, 1.7 feet above land surface, 8.76 feet below measuring point of abandoned well 170, and 118.61 feet above datum. Water level, May 16, 1940, 18.33 feet below measuring point. Water levels, in feet above datum: July 5, 1940, 99.88; Oct. 15, 1940, 98.28; Oct. 6, 1941, 98.85; Oct. 22, 1942, 99.01.

Cass County

16 (*817, p. 103; 840, p. 194; 845, p. 173; 886, p. 292; 908, p. 190; 938, p. 159). J. Wiedeman. NE¼SW¼ sec. 32, T. 12 N., R. 9 E. No measurements made in 1942.

18 (*817, p. 103; 840, p. 194; 845, p. 173; 886, p. 292; 908, p. 190; 938, p. 159). W. Stine. NE¼NW¼ sec. 26, T. 10 N., R. 13 E. Water level, in feet above datum, 1942: Oct 20, a/ 106.46.

Cedar County

65 (*817, p. 103; 840, p. 194; 845, p. 173; 908, p. 191). University of Nebraska. NE¼SW¼ sec. 4, T. 28 N., R. 3 E. Water level, in feet above datum, 1942: Oct. 27, 101.28.

66 (*817, p. 103; 840, p. 194; 845, p. 173; 886, p. 293; 908, p. 191) J. Leise. NW¼NE¼ sec. 31, T. 31 N., R. 2 E. Water level, in feet above datum, 1942: Oct. 27, 99.53.

369 (*817, p. 104; 840, p. 194; 845, p. 173; 886, p. 293; 908, p. 191; 938, p. 159). H. Kleinberg. SE¼NW¼ sec. 23, T. 32 N., R. 2 E. Water level in feet above datum, 1942: Oct. 27, 101.09.

Chase County

152 (*817, p. 104; 840, p. 194; 845, p. 173; 886, p. 293; 908, p. 191; 938, p. 159). A. Banks. SE¼SE¼ sec. 20, T. 7 N., R. 38 W. Water level, in feet above datum, 1942: Nov. 19, b/ 98.03.

153 (*817, p. 104; 840, p. 194; 845, p. 173; 886, p. 293; 908, p. 191). J. Redden. SW¼SE¼ sec. 11, T. 5 N., R. 36 W. Water level, in feet above datum, 1942: Nov. 19, 100.38.

a Highest observed stage in period of record.
b Lowest observed stage in period of record.

Cherry County

115 (*817, p. 104; 840, p. 194; 845, p. 173; 886, p. 293; 908, p. 191; 938, p. 159). Nebraska Agricultural College. NE¼SE¼ sec. 31, T. 34 N., R. 27 W. No measurements made in 1942.

116 (*840, p. 195; 845, p. 173; 886, p. 293; 908, p. 191; 938, p. 159). University of Nebraska. SE¼NE¼ sec. 20, T. 31 N., R. 25 W Water level, in feet above datum, 1942: Aug. 23, 100.24.

118 (*840, p. 104; 845, p. 195; 886, p. 293; 908, p. 191; 938, p. 159) A. Nielson. SE¼NW¼ sec. 28, T. 33 N., R. 39 W. Measurements discontinued; casing has been pulled.

256 (*817, p. 105; 840, p. 195; 845, p. 173; 886, p. 293; 908, p. 191; 938, p. 159). University of Nebraska. SW¼SE¼ sec. 1, T. 34 N., R. 36 W. Water level, in feet above datum, 1942: Aug. 23, 99.71.

257(*817, p. 105; 840, p. 195; 845, p. 173; 886, p. 293; 908, p. 191; 938, p. 159). University of Nebraska. SE¼NE¼ sec. 3, T. 34 N., R. 31 W. Measurements discontinued; pipe has been pulled.

312 (*817, p. 105; 840, p. 195; 845, p. 173; 886, p. 293; 908, p. 191; 938, p. 159). R. Osborne. SE¼NE¼ sec. 28, T. 26 N., R. 32 W. Water level, in feet above datum, 1942: Nov. 12, a/ 96.34.

399 (*840, p. 195; 845, p. 173; 886, p. 293; 908, p. 191; 938, p. 159). University of Nebraska. NW¼NE¼ sec. 8, T. 33 N., R. 27 W. No measurements made in 1942.

431 (*886, p. 293; 908, p. 191; 938, p. 159). University of Nebraska. NW¼SE¼ sec. 14, T. 34 N., R. 38 W. No measurements made in 1942.

Cheyenne County

87 (*777, p. 92; 817, p. 105; 840, p. 195; 845, p. 173; 886, p. 293; 908, p. 191; 938, p. 159). A. Linn. NW¼NW¼ sec. 2, T. 15 N., R. 49 W. Water level, in feet above datum, 1942: Nov. 17, a/b/100.79.

90 (*817, p. 106; 840, p. 195; 845, p. 173; 886, p. 293; 908, p. 191). W. Goding. NE¼SW¼ sec. 5, T. 14 N., R. 52 W. No measurements made in 1942.

91 (*817, p. 106; 840, p. 195; 845, p. 173; 886, p. 293; 908, p. 191; 938, p. 159). F. Mather Estate. SW¼NE¼ sec. 35, T. 14 N., R. 50 W. New measuring point beginning Oct. 27, 1938, after pump was installed, top of 1-inch bolthole in northeast corner of steel pump base, 1.5 feet above land surface, level with old measuring point, and 131.87 feet above datum. Water level, Oct. 27, 1938, 32.49 feet below measuring point. Water level, in feet above datum, 1942: Nov. 17, 99.08.

92 (*817, p. 106; 840, p. 196; 845, p. 173; 886, p. 293; 908, p. 192; 938, p. 159). G. Fay. NE¼NE¼ sec. 22. T. 12 N., R. 51 W. Water level, in feet above datum, 1942: Nov. 17, a/c/100.89.

444a (*938, p. 159). University of Nebraska. NW¼NW¼ sec. 26, T. 14 N., R. 47 W. Water level, in feet above datum, 1942: Nov. 17, a/c/95.87.

Colfax County

37 (*817, p. 106; 840, p. 196; 845, p. 173; 886, p. 294; 908, p. 192; 938, p. 160). H. Schlemmer. SE¼SE¼ sec. 2, T. 17 N., R. 4 E. Water level, in feet above datum, 1942: Oct. 31, 99.96.

332 (*817, p. 107; 840, p. 196; 845, p. 173; 886, p. 294; 908, p. 192; 938, p. 160). University of Nebraska. NE¼NE¼ sec. 7, T. 20 N., R. 4 E. Water level, in feet above datum, 1942: Oct. 28, 96.40.

a Highest observed stage in period of record.
b "Blowing" well expelling air noticeably at time of measurement.
c Well now being used.

343a (*938, p. 160). University of Nebraska. SE¼SE¼ sec. 2, T. 20 N., R. 2 E. Water level, in feet above datum. 1942: Oct. 28, 102.98.

Cuming County

61 (*817, p. 107; 840, p. 196; 845, p. 173; 886, p. 294; 908, p. 192; 938, p. 160). University of Nebraska. NW¼NW¼ sec. 6, T. 23 N., R. 7 E. Water level, in feet above datum, 1942: Oct. 28, 101.10.

69 (*817, p. 107; 840, p. 196; 845, p. 173; 886, p. 294; 908, p. 192; 938, p. 160). University of Nebraska. NW¼NW¼ sec. 23, T. 21 N., R. 6 E. Water level, in feet above datum, 1942: Oct. 26, 98.28.

Custer County

53 (*817, p. 107; 840, p. 196; 845, p. 173; 886, p. 294; 908, p. 192; 938, p. 160). L. Owen. NE¼NE¼ sec. 9, T. 19 N., R. 18 W. Water level, in feet above datum, 1942: Nov. 11, a/ 101.25.

195 (*817, p. 108; 840, p. 196; 845, p. 173; 886, p. 294; 908, p. 192; 938, p. 160). C. Cooper. SE¼NE¼ sec. 16, T. 15 N., R. 18 W. Water level, in feet above datum, 1942: Nov. 12, 99.40.

196 (*817, p. 108; 840, p. 196; 845, p. 173; 886, p. 294; 908, p. 192). W. Crouch. NE¼SE¼ sec. 17, T. 19 N., R. 22 W. No measurements made in 1942

219 (*817, p. 108; 840, p. 197; 845, p. 173; 886, p. 294; 908, p. 192; 938, p. 160). University of Nebraska. NW¼NW¼ sec. 2, T. 15 N., R. 23 W. Water level in feet above datum, 1942: Nov. 6, 100.96.

220 (*817, p. 108; 840, p. 197; 845, p. 173; 886, p. 294; 908, p. 192). University of Nebraska. NE¼SE¼ sec. 28, T. 17 N., R. 25 W. No meaasurements made in 1942.

325 (*817, p. 108; 840, p. 197; 845, p. 173; 886, p. 294; 908, p. 192; 938, p. 160). C. Cooper. SW¼SW¼ sec. 10, T. 15 N., R. 18 W. Water level, in feet above datum, 1942: Nov. 12, 100.02.

435 (*886, p. 295; 908, p. 192; 938, p. 160). University of Nebraska. SE¼SE¼ sec. 27, T. 17 N., R. 25 W. Water level, in feet above datum, 1942: Nov. 6, a/ 100.15.

436 (*886, p. 295; 908, p. 192; 938, p. 160). University of Nebraska. NW¼SE¼ sec. 35. T. 16 N., R. 23 W. Water level, in feet above datum, 1942: Nov. 6, 100.41.

Dakota County

104 (*777, p. 92; 817, p. 109; 840, p. 197; 845, p. 174; 886, p. 295; 908, p. 192). R. Nelson. NE¼SE¼ sec. 28, T. 27 N., R. 8 E. No measurements made in 1942.

453 (*886, p. 295; 908, p. 192; 938, p. 160). John Boyle. SE¼ sec. 21, T. 29 N., R. 5 E. No measurements made in 1942.

Dawes County

123 (*817, p. 109; 840, p. 197; 845, p. 174; 886, p. 295; 908, p. 193; 938, p. 160). T. Moody. SW¼SE¼ sec. 3, T. 31 N., R. 52 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 22	104.24	Sept. 29	103.19	Nov. 14	103.81	Dec. 31	103.19
27	104.23	Oct. 30	103.19	Nov. 28	103.20		

a Highest observed stage in period of record.

315 (*817, p. 109; 840, p. 197; 845, p. 174; 886, p. 295; 908, p. 193; 938, p. 160). A. McIntyre. NE¼NW¼ sec. 21, T. 33 N., R. 48 W. No measurement made in 1942.

396 (*817, p. 109; 840, p. 197; 845, p. 174; 886, p. 295; 908, p. 193; 938, p. 160). W. Howard. NW¼SE¼ sec. 1, T. 32 N., R. 51 W. Water level, in feet above datum, 1942: Nov. 14, 100.31.

Dawson County

99 (*817, p. 110; 840, p. 197; 845, p. 174; 886, p. 295; 908, p. 193; 938, p. 160). L. Tell Estate. NW¼SE¼ sec. 31, T. 9 N., R. 25 W. Water level, in feet above datum, 1942: Nov. 23, 99.58.

280 (*817, p. 110; 840, p. 197; 845, p. 174; 886, p. 295; 908, p. 193; 938, p. 160). J. Brick. SW¼NW¼ sec. 13, T. 9 N., R. 20 W. Water level, in feet above datum, 1942: Nov. 9, 102.63.

283 (*817, p. 110; 840, p. 197; 845, p. 174; 886, p. 295, 908, p. 193; 938, p. 160). University of Nebraska. NE¼NE¼ sec. 7, T. 10 N., R. 21 W. Water level, in feet above datum, 1942: Nov. 5, 101.00.

284 (*817, p. 111; 840, p. 197; 845, p. 174; 886, p. 295; 908, p. 193; 938, p. 160). NE¼SE¼ sec. 7, T. 10 N., R. 21 W. Water level, in feet above datum, 1942: Nov. 5, 100.89.

285 (*817, p. 111; 840, p. 198; 908, p. 193; 938, p. 160). University of Nebraska. NE¼NE¼ sec. 18, T. 10 N., R. 21 W. Water level, in feet above datum, 1942: Nov. 5, 100.64.

286 (*817, p. 112; 840, p. 198; 845, p. 174; 886, p. 245; 908, p. 193; 938, p. 161). SE¼SE¼ sec. 18, T. 10 N., R. 21 W. Water level, in feet above datum, 1942: Nov. 5, 100.20.

287 (*817, p. 112; 840, p. 198; 845, p. 174; 886, p. 295; 908, p. 193; 938, p. 161). University of Nebraska. NE¼NE¼ sec. 19, T. 10 N., R. 21 W. Water level, in feet above datum, 1942: Nov. 5, 99.72.

288 (*817, p. 112; 840, p. 198; 845, p. 174; 886, p. 296; 908, p. 193; 938, p. 161). University of Nebraska. NE¼SE¼ sec. 19, T. 10 N., R. 21 W. Water level, in feet above datum, 1942: Nov. 5, 99.37.

289 (*817, p. 113; 840, p. 198; 845, p. 174; 886, p. 296; 908, p. 193; 938, p. 161). University of Nebraska. NE¼NE¼ sec. 30, T. 10 N., R. 21 W. Water level, in feet above datum, 1942: 99.77.

290 (*817, p. 113; 840, p. 198; 845, p. 174; 886, p. 296; 908, p. 193; 938, p. 161). University of Nebraska. NE¼SE¼ sec. 30, T. 10 N., R. 21 W. Water level, in feet above datum, 1942: 100.12.

291 (*817, p. 114; 840, p. 198; 845, p. 174; 886, p. 296; 908, p. 193; 938, p. 161). University of Nebraska. NE¼NE¼ sec. 31, T. 10 N., R. 21 W. Water level, in feet above datum, 1942: Nov. 5, 100.56.

292 (*817, p. 114; 840, p. 198; 845, p. 174; 886, p. 296; 908, p. 193; 938, p. 161). NE¼SE¼ sec. 31, T. 10 N., R. 21 W. Water level, in feet above datum, 1942: Nov. 5, 100.85.

293 (*817, p. 114; 840, p. 198; 845, p. 174; 908, p. 193; 938, p. 161). University of Nebraska. NE¼NE¼ sec. 6, T. 9 N., R. 21 W. Water level in feet above datum, 1942: Nov. 5, 100.79.

294 (*817, p. 115; 840, p. 198; 845, p. 174; 886, p. 296; 908, p. 193; 938, p. 161). University of Nebraska. NE¼SE¼ sec. 6, T. 9 N., R. 21 W. Water level, in feet above datum, 1942: Nov. 5, 100.66.

295 (*817, p. 115; 840, p. 198; 845, p. 174; 886, p. 296; 908, p. 193; 938, p. 161). NE¼NE¼ sec. 7, T. 9 N., R. 21 W. Water level, in feet above datum, 1942: Nov. 5, 99.94.

296 (*817, p. 116; 840, p. 198; 845, p. 174; 886, p. 296; 908, p. 193; 938, p. 161). University of Nebraska. NE¼SE¼ sec. 7, T. 9 N., R. 21 W. Water level, in feet above datum, 1942: Nov. 5, 99.09.

297 (*817, p. 116; 840, p. 198; 845, p. 174; 886, p. 296; 908, p. 193; 938, p. 161). University of Nebraska. NE¼NE¼ sec. 18, T. 9 N., R. 21 W. Water level, in feet above datum, 1942: Nov. 5, 100.61.

298 (*817, p. 116; 840, p. 199; 845, p. 174; 886, p. 296; 908, p. 193; 938, p. 161). University of Nebraska. NE¼SE¼ sec. 18, T. 9 N., R. 21 W. Water level, in feet above datum, 1942: Nov. 5, 100.78.

299 (*817, p. 117; 840, p. 199; 845, p. 174; 886, p. 296; 908, p. 194). NE¼NE¼ sec. 19, T. 9 N., R. 21 W. Water level, in feet above datum, 1942: Nov. 5, 100.00.

300 (*817, p. 117; 840, p. 199; 845, p. 174; 886, p. 296; 908, p. 194; 938, p. 161). University of Nebraska. NE¼NE¼ sec. 19, T. 9 N., R. 21 W. Water level, in feet above datum, 1942: Nov. 5, 99.83.

301 (*817, p. 118; 840, p. 199; 845, p. 174; 886, p. 296; 908, p. 194; 938, p. 161). University of Nebraska. NE¼SE¼ sec. 19, T. 9 N., R. 21 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	a98.53	Apr. 29	a99.45	Aug. 4	a97.87	Nov. 5	98.90
Feb. 2	a98.53	June 1	a99.22	Sept 4	a99.97	6	a98.87
Mar. 3	a98.99	July 10	a99.20	Oct. 2	a98.84	Dec. 3	a98.98
Apr. 7	a98.63						

302 (*817, p. 118; 840, p. 199; 945, p. 174; 886, p. 296; 908, p. 194; 938, p. 161). University of Nebraska. SE¼SE¼ sec. 19, T. 9 N., R. 21 W.

Water level, in feet above datum, 1942

Jan. 5	a98.63	Apr. 29	a99.67	Aug. 4	a98.13	Nov. 5	98.97
Feb. 2	a98.90	June 1	a100.00	Sept. 4	a99.80	6	a98.97
Mar. 3	a99.13	July 10	a99.35	Oct. 2	a98.92	Dec. 3	a99.09
Apr. 7	a98.90						

303 (*817, p. 118; 840, p. 199; 845, p. 174; 886, p. 296; 908, p. 194; 938, p. 161). NW¼NW¼ sec. 29, T. 9 N., R. 21 W.

Water level, in feet above datum, 1942

Jan. 5	a98.83	Apr. 7	a99.59	July 10	ab99.96	Nov. 5	99.38
Feb. 2	a99.09	29	a99.39	Aug. 4	a98.86	6	a99.43
Mar. 3	a99.36	June 1	ab101.12	Oct. 2	a99.35	Dec. 3	a99.57

304 (*817, p. 119; 840, p. 199; 845, p. 174; 886, p. 296; 908, p. 194; 938, p. 161). University of Nebraska. NE¼SE¼ sec. 30, T. 9 N., R. 21 W.

Water level, in feet above datum, 1942

Jan. 5	a98.80	Apr. 29	a100.03	Aug. 4	a99.30	Nov. 5	99.59
Feb. 2	a99.59	June 1	a100.17	Sept. 4	a100.19	6	a99.64
Mar. 3	a98.69	July 10	a100.32	Oct. 2	a99.60	Dec. 3	a99.74
Apr. 7	a99.49						

305 (*817, p. 119; 840, p. 199; 845, p. 174; 886, p. 297; 908, p. 194; 938, p. 161). University of Nebraska. NE¼NE¼ sec. 31, T. 9 N., R. 21 W.

Water level, in feet above datum, 1942

Jan. 5	a98.82	Apr. 29	a99.86	Aug. 4	(ac)	Nov. 5	100.68
Feb. 2	a98.98	June 1	a100.66	Sept. 4	a99.98	6	a100.71
Mar. 3	a99.18	July 10	a101.38	Oct. 2	a100.71	Dec. 3	a100.86
Apr. 7	a99.66						

a Measurement supplied through courtesy of Central Nebraska Public Power and Irrigation District.
b Water in road ditch.
c Dry; pumping nearby.

306 (*817, p. 120; 840, p. 199; 845, p. 174; 886, p. 297; 908, p. 194 938, p. 161). University of Nebraska. NE¼SE¼ sec. 31, T. 9 N., R. 21 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	a97.16	Apr. 29	a99.16	Aug. 4	ab97.04	Nov. 5	100.78
Feb. 2	a98.37	June 1	a99.69	Sept. 4	a98.84	6	a100.83
Mar. 3	a98.64	July 10	a100.56	Oct. 2	a100.46	Dec. 3	a100.92
Apr. 7	a98.94						

308 (*817, p. 120; 840, p. 199; 845, p. 174; 886, p. 297; 908, p. 194; 938, p. 162). E. Fleming. NE¼NE¼ sec. 9, T. 10 N., R. 23 W. Water level, in feet above datum, 1942: Nov. 7, 101.40.

309 (*817, p. 120; 840, p. 199; 845, p. 174; 886, p. 297; 908, p. 194; 938, p. 162). J. Owings. NE¼SW¼ sec. 20, T. 11 N., R. 24 W. Water level, in feet above datum, 1942: Nov. 7, 101.59.

310 (*817, p. 121; 840, p. 199; 845, p. 174; 886, p. 297; 908, p. 194). J. Block. SW¼SW¼ sec. 34, T. 12 N., R. 25 W. Water level, in feet above datum, 1942: Nov. 7, c/100.88.

311 (*817, p. 121; 840, p. 199; 845, p. 174; 886, p. 297; 908, p. 194; 938, p. 162). E. Clark. SW¼SW¼ sec. 21, T. 11 N., R. 25 W. Water level, in feet above datum, 1942: Nov. 7, 103.87.

314 (*817, p. 121; 840, p. 200; 845, p. 174; 886, p. 297; 908, p. 194). C. Myers. NW¼SW¼ sec. 12, T. 9 N., R. 21 W. No measurements made in 1942.

317 (*817, p. 121; 840, p. 200; 845, p. 174; 886, p. 297; 908, p. 194; 938, p. 162). University of Nebraska. NE¼NE¼ sec. 24, T. 9 N., R. 21 W. Water level, in feet above datum, 1942: Nov. 26. 101.04.

318 (*817, p. 122; 840, p. 200; 845, p. 174; 886, p. 297; 908, p. 195; 938, p. 162). University of Nebraska. SE¼SE¼ sec. 17, T. 9 N., R. 22 W.

Water level, in feet above datum, 1942

Feb. 2	a100.17	Apr. 29	a100.57	Aug. 4	a101.12	Nov. 6	a101.32
Mar. 3	a100.28	June 4	a100.99	Sept. 1	a100.66	26	101.28
Apr. 7	a100.49	July 10	a101.72	Oct. 2	a101.28	Dec. 3	a101.34

319 (*817, p. 122; 840, p. 200; 845, p. 174; 886, p. 297; 908, p. 195; 938, p. 162). University of Nebraska. NE¼NE¼ sec. 29, T. 10 N., R. 22 W. Water level, in feet above datum, 1942: Nov. 7, 102.34.

Deuel County

94 (*817, p. 122; 840, p. 200; 886, p. 297; 908, p. 195). W. Kimball. NW¼NW¼ sec. 1, T. 12 N., R. 42 W. No measurements made in 1942.

130 (*817, p. 123; 840, p. 200; 845, p. 174; 886, p. 297; 908, p. 195) Mrs. Jacobson. SE¼NE¼ sec. 28, T. 13 N., R. 45 W. Water level, in feet above datum, 1942: Nov. 18, 100.01.

Dixon County

107 (*817, p. 123; 840, p. 200; 845, p. 174; 886, p. 297). F. Beyeler. SE¼NE¼ sec. 7, T. 31 N., R. 4 E. No measurement made in 1942.

333 (*817, p. 123; 840, p. 200; 845, p. 174; 886, p. 297; 908, p. 195; 938, p. 162). F. Mille. SW¼SW¼ sec. 23, T. 30 N., R. 6 E. Water level, in feet above datum, 1942: Oct 27, 100.61.

340 (*817, p. 123; 840, p. 200; 845, p. 174; 886, p. 297; 908, p. 195; 938, p. 162). P. Lamb. NW¼SW¼ sec. 19. T. 31 N., R. 5 E. Well dry Oct. 27.

a Measurement supplied through courtesy of Central Nebraska Public Power and Irrigation District.

b Pumping nearby.

c Highest observed stage in period of record.

Dodge County

31 (*817, p. 124; 840, p. 200; 845, p. 174; 886, p. 297; 908, p. 195). J. Wieser. SW¼SE¼ sec. 24, T. 17 N., R. 9 W. Water level, in feet above datum, 1942: Oct. 20, 102.36.

34 (*817, p. 124; 840, p. 201; 845, p. 174; 886, p. 297; 908, p. 195; 938, p. 162). R. Mahaffey, NW¼SW¼ sec. 8, T. 17 N., R. 6 E. No measurement made in 1942.

401 (*840, p. 201; 845, p. 174; 886, p. 298; 908, p. 195; 938, p. 162). University of Nebraska. NW¼SE¼ sec. 18, T. 18 N., R. 9 E. Water level, in feet above datum, 1942: Oct. 20, 99.70.

420 (*886, p. 298; 908, p. 195; 938, p. 162). University of Nebraska. NE¼NE¼ sec. 6, T. 17 N., R. 6 E. Water level, in feet above datum, 1942: Oct. 31, a/ 101.36.

Douglas County

24 (*817, p. 124; 840, p. 201; 845, p. 175; 886, p. 298; 908, p. 195; 938, p. 162). Robinson Seed Co. SE¼NW¼ sec. 4, T. 15 N., R. 10 E. Water level, in feet above datum, 1942: Oct. 20, 100.79.

Dundy County

177 (*817, p. 124; 840, p. 201; 845, p. 175; 886, p. 298; 908, p. 196; 938, p. 162). G. Russell. NW¼SW¼ sec. 21, T. 3 N., R. 37 W. No measurement made in 1942.

361 (*817, p. 125; 840, p. 201; 845, p. 175; 886, p. 298; 908, p. 196). O. Scrivner. SE¼NE¼ sec. 34, T. 1 N., R. 41 W. Water level, in feet above datum, 1942: Nov. 27, 101.28.

380 (*817, p. 125; 840, p. 201; 845, p. 175; 886, p. 298; 908, p. 196; 938, p. 162). L. Krutsinger. SW¼NE¼ sec. 21, T. 1 N., R. 39 W. Water level, in feet above datum, 1942: Nov. 27, 99.91.

445 (*886, p. 298; 908, p. 196; 938, p. 163). University of Nebraska. NW¼SW¼ sec. 21, T. 1 N., R. 38 W. Water level, in feet above datum, 1942: Nov. 27, 101.39.

Fillmore County

174 (*817, p. 125; 840, p. 202; 845, p. 175; 886, p. 298; 908, p. 196). G. Taylor. SW¼SW¼ sec. 29, T. 7 N., R. 2 W. No measurement made in 1942.

191 (*817, p. 125; 840, p. 202; 845, p. 175; 886, p. 298; 908, p. 196; 938, p. 163). E. Zelenke. NE¼SE¼ sec. 26, T. 7 N., R. 2 W. No measurement made in 1942.

Franklin County

156 (*817, p. 126; 840, p. 202; 845, p. 175; 886, p. 298; 908, p. 198; 938, p. 163). J. Wessels. SE¼NW¼ sec. 36, T. 2 N., R. 15 W. Water level, in feet above datum, 1942: Nov. 25, a/ 100.46.

221 (*817, p. 126; 840, p. 202; 845, p. 175; 886, p. 299; 908, p. 196; 938, p. 163). University of Nebraska. SE¼SE¼ sec. 36, T. 3 N., R. 14 W. Water level, in feet above datum, 1942: Nov. 25, 99.84.

224 (*817, p. 126; 840, p. 202; 845, p. 174; 886, p. 299; 908, p. 196). Gilgen Bros. NE¼SE¼ sec. 10, T. 4 N., R. 14 W. Water level, in feet above datum, 1942: Nov. 25, 100.38.

a Highest observed stage in period of record.

Frontier County

136 (*817, p. 127; 840, p. 202; 845, p. 175; 886, p. 299; 908, p. 196; 938, p. 163). O. Worley. NW¼SW¼ sec. 34, T. 7 N., R. 27 W. Water level, in feet above datum, 1942: Nov. 23, a/ 96.10.

Furnas County

145 (*817, p. 127; 840, p. 202; 845, p. 175; 886, p. 299; 908, p. 196; 938, p. 163). G. Sayer. NW¼NW¼ sec. 26, T. 4 N., R. 25 W. Water level, in feet above datum, 1942: Nov. 21, 100.11.

147 (*817, p. 127; 840, p. 202; 845, p. 175; 886, p. 299; 908, p. 196; 938, p. 147). H. Lambert. SW¼SW¼ sec. 34, T. 3 N., R. 23 W. No measurement made in 1942.

148 (*817, p. 127; 840, p. 202; 845, p. 175; 886, p. 300; 908, p. 196; 938, p. 163). E. Stockton. SE¼NE¼ sec. 19, T. 2 N., R. 22 W. No measurement made in 1942.

149 (*817, p. 127; 840, p. 203; 845, p. 175; 886, p. 300; 908, p. 196). S. Shoemaker. NE¼NW¼ sec. 6, T. 1 N., R. 25 W. Water level, in feet above datum, 1942: Dec. 22, 100.65.

180 (*817, p. 128; 840, p. 203; 845, p. 175; 886, p. 300; 908, p. 196; 938, p. 163). A. Askey. NE¼NE¼ sec. 1, T. 3 N., R. 21 W. Water level, in feet above datum, 1942: Nov. 24, 99.56.

387 (*817, p. 128; 840, p. 203; 845, p. 175; 886, p. 300; 908, p. 197). J. Loar. SW¼SE¼ sec. 28, T. 2 N., R. 25 W. Water level, in feet above datum, 1942: Nov. 21, 100.06.

388 (*817, p. 128; 840, p. 203; 845, p. 175; 886, p. 300; 908, p. 197; 938, p. 163). E. Hunt. SW¼SW¼ sec. 27, T. 2 N., R. 25 W. Water level, in feet above datum, 1942: Nov. 21, 99.94.

395 (*840, p. 203; 845, p. 175; 886, p. 300; 908, p. 197; 938, p. 163). O. V. Moore. SE¼NW¼ sec. 23, T. 4 N., R. 23 W. Water level, in feet above datum, 1942: Nov. 24, 100.03.

Gage County

199 (*840, p. 203; 845, p. 175; 886, p. 300; 908, p. 197). SE¼NE¼ sec. 27, T. 6 N., R. 8 E. New measuring point beginning Oct. 16, 1942, top of 10-inch tile casing, west side, level with land surface, 3.0 feet below old measuring point, and 114.04 feet above datum. Water level, Oct. 16, 1942, 15.26 feet below measuring point. Water level, in feet above datum, 1942: Oct. 16, 98.78.

230 (*817, p. 128; 840, p. 203; 845, p. 175; 886, p. 300; 908, p. 197; 938, p. 163). J. Witzenburg. SW¼NW¼ sec. 10, T. 2 N., R. 6 E. Water level, in feet above datum, 1942: Oct. 23, b/ 102.47.

231 (*817, p. 128; 840, p. 203; 845, p. 175; 866, p. 300; 908, p. 197). E. Miller. NE¼NW¼ sec. 31, T. 5 N., R. 5 E. No measurement made in 1942.

Garden County

3 (*777, p. 93; 817, p. 129; 840, p. 203; 845, p. 175; 886, p. 300). Crescent Lake Migratory Bird Refuge. North side of Crescent Lake. Measurements supplied through courtesy of Fish and Wildlife Service, U.S. Dept. of the Interior. Water level, in feet above sea level minus 3,000, 1942: Sept. 10, 785.29.

4 (*886, p. 300; 908, p. 197; 938, p. 163). Crescent Lake Migratory Bird Refuge. North side of Island Lake. Measurements supplied through courtesy of Fish and Wildlife Service, U. S. Dept. of the Interior.

a Lowest observed stage in period of record.
b Highest observed stage in period of record.

4 (*886, p. 300; 908, p. 197; 938, p. 163)--Continued.

Water level, in feet above sea level minus 3,000, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	799.59	Apr. 22	800.79	July 28	799.54	Oct. 19	798.89
15	799.59	30	801.39	Aug. 7	799.29	30	799.09
28	799.54	May 1	801.14	13	798.99	Nov. 11	799.19
Feb. 4	799.39	11	801.14	22	798.69	16	799.29
14	799.79	23	801.24	29	798.49	23	799.29
25	799.79	31	801.09	31	798.29	30	799.39
Mar. 4	799.69	June 10	800.89	Sept. 9	798.39	Dec. 4	799.59
12	799.95	23	800.59	23	798.59	11	799.59
30	800.29	30	800.34	30	798.79	23	799.59
Apr. 3	800.39	July 10	800.59	Oct. 5	798.59	31	799.69
13	800.49	20	799.89	13	798.74		

5 (*908, p. 197; 938, p. 164). Crescent Lake Migratory Bird Refuge. Northwest of Smith Lake. Measurements supplied through courtesy of Fish and Wildlife Service, U. S. Dept. of the Interior. Water level, in feet above sea level minus 3,800, 1942: Sept. 11, 36.88.

12 (*908, p. 199; 938, p. 164). Crescent Lake Migratory Bird Refuge. Northwest of corner of refuge. Measurements supplied through courtesy of Fish and Wildlife Service, U. S. Dept. of the Interior.

Water level, in feet above sea level minus 3,800, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	44.57	Apr. 22	45.12	July 28	46.07	Oct. 19	46.77
15	44.67	30	45.67	Aug. 7	46.22	30	46.77
26	44.62	May 1	46.57	13	45.97	Nov. 11	46.57
Feb. 4	44.72	11	46.32	22	45.77	16	46.77
21	44.77	23	46.92	29	45.77	23	46.77
25	44.77	31	46.92	Sept.10	46.07	30	46.87
Mar. 4	44.82	June 10	46.72	23	46.47	Dec. 4	46.77
11	44.82	20	46.62	30	46.57	11	46.87
30	44.87	30	46.32	Oct. 5	46.47	23	46.77
Apr. 3	44.82	July 10	46.52	13	46.67	31	46.67
13	44.92	20	46.22				

17 (*886, p. 301; 908, p. 200; 938, p. 164). Crescent Lake Migratory Bird Refuge. Half a mile south of Bean Lake. Measurements supplied through courtesy of Fish and Wildlife Service, U. S. Dept. of the Interior. Water level, in feet above sea level minus 3,800, 1942: Sept. 10, 28.13.

19 (*886, p. 302; 908, p. 200; 938, p. 164). Crescent Lake Migratory Bird Refuge. 1 mile southwest of Swan Lake. Measurements supplied through courtesy of Fish and Wildlife Service, U. S. Dept. of the Interior. Water level, in feet above sea level minus 3,800, 1942: Sept. 10, 9.11.

21 (*886, p. 303; 908, p. 200; 938, p. 165). Crescent Lake Migratory Bird Refuge. West of Blue Lake. Measurements supplied through courtesy of Fish and Wildlife Service, U. S. Dept. of the Interior. Water level, in feet above sea level minus 3,700, 1942: Sept. 10, 91.89.

25 (*886, p. 304; 908, p. 200; 938, p. 165). Crescent Lake Migratory Bird Refuge. Half a mile south of Goose Lake. Measurements supplied through courtesy of Fish and Wildlife Service, U. S. Dept. of the Interior. Water level, in feet above sea level minus 3,800, 1942: Sept. 11, 25.04.

27 (*908, p. 200; 938, p. 165) Crescent Lake Migratory Bird Refuge. West of Island Lake. Measurements supplied through courtesy of Fish and Wildlife Service, U. S. Dept. of the Interior. Water level, in feet above sea level minus 3,700, 1942: Sept. 10, 91.27.

96 (*817, p. 129; 840, p. 204; 845, p. 176; 886, p. 305; 908, p. 202; 938, p. 165). Village of Lewellen. SE¼NW¼ sec. 28, T. 16 N., R. 42 W. Pump removed and pipe filled with trash. Measurements discontinued after June 1. Water level, in feet above datum, 1942: Feb. 2, a/ 100.89; Feb. 26, a/ 100.74; Apr. 2, a/ 100.72; May 7, a/ 101.79.

218 (*817, p. 129; 840, p. 204; 845, p. 176; 886, p. 305; 908, p. 202; 938, p. 165). University of Nebraska. NW¼NW¼ sec. 34, T. 17 N., R. 46 W. Water level, in feet above datum, 1942: Nov. 18, 99.77.

326 (*817, p. 129; 840, p. 204; 845, p. 176; 886, p. 305; 908, p. 202; 938, p. 165). G. Morris. SW¼SW¼ sec. 22, T. 17 N., R. 44 W. Water level, in feet above datum, 1942: Nov. 18, 94.62.

Garfield County

55 (*817, p. 129; 840, p. 204; 845, p. 176; 886, p. 305; 908, p. 202; 938, p. 165). F. Robke. SW¼NE¼ sec. 31, T. 21 N., R. 16 W. Water level, in feet above datum, 1942: Nov. 11, 106.22.

Gosper County

183 (*817, p. 130; 840, p. 204; 845, p. 176; 886, p. 305; 908, p. 202; 938, p. 165). M. Berntson. NW¼NE¼ sec. 12, T. 5 N., R. 22 W. Water level, in feet above datum, 1942: Nov. 24, 100.56.

307 (*817, p. 130; 840, p. 204; 845, p. 176; 886, p. 305; 908, p. 202; 938, p. 165). NE¼NW¼ sec. 6, T. 8 N., R. 21 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	a97.17	Apr. 29	a98.51	Aug. 4	a99.97	Nov. 5	101.03
Feb. 2	a97.47	June 1	a98.98	Sept. 4	a100.02	6	a101.03
Mar. 3	a97.79	July 10	a99.87	Oct. 2	a100.60	Dec. 3	a101.38
Apr. 7	a98.22						

447 (*886, p. 305; 908, p. 202; 938, p. 166). University of Nebraska. NW¼NW¼ sec. 12, T. 5 N., R. 22 W. Water level, in feet above datum, 1942: Nov. 24, 101.17.

Grant County

215 (*817, p. 130; 840, p. 204; 845, p. 176; 886, p. 306; 908, p. 202; 938, p. 166). University of Nebraska. SW¼NE¼ sec. 25, T. 24 N., R. 37 W. Water level, in feet above datum, 1942: Nov. 13, 98.87.

216 (*817, p. 131; 840, p. 204; 845, p. 176; 886, p. 306; 908, p. 202; 938, p. 166). University of Nebraska. NW¼NW¼ sec. 36, T. 24 N., R. 40 W. Water level, in feet above datum, 1942: Nov. 13, 99.54.

Greeley County

206 (*817, p. 131; 840, p. 204; 845, p. 176; 886, p. 306; 908, p. 202; 938, p. 166). University of Nebraska. SW¼SW¼ sec. 20, T. 20 N., R. 9 W. Water level, in feet above datum, 1942: Oct. 31, 99.96.

347 (*817, p. 131; 840, p. 204; 845, p. 176; 886, p. 306; 908, p. 202; 938, p. 166). University of Nebraska. NW¼SW¼ sec. 10, T. 17 N., R. 10 W. Water level, in feet above datum, 1942: Oct. 31, b/ 97.73.

a Measurement supplied through courtesy of Central Nebraska Public Power and Irrigation District.

b Lowest observed stage in period of record.

423 (*886, p. 306; 908, p. 202; 938, p. 166). University of Nebraska. NW¼SE¼ sec. 20, T. 20 N., R. 9 W. Well has been destroyed; measurements discontinued.

Hall County

244 (*817, p. 131; 840, p. 205; 845, p. 176; 886, p. 306; 908, p. 203; 938, p. 166). C. Cole. NW¼NW¼ sec. 27, T. 10 N., R. 9 W. Water level, in feet above datum, 1942: Nov. 10, 101.21.

245 (*817, p. 131; 840, p. 205; 845, p. 176; 886, p. 306; 908, p. 203; 938, p. 166). University of Nebraska. NW¼SW¼ sec. 27, T. 11 N., R. 9 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level
Jan. 28	a99.32	Sept. 9	a102.32	Nov. 17	a100.74
Mar. 11	a99.32	Nov. 10	100.82	Dec. 6	a100.07

246 (*817, p. 132; 840, p. 205; 845, p. 176; 886, p. 306; 908, p. 203; 938, p. 166). F. Dahlstrom. SW¼SW¼ sec. 8, T. 10 N., R. 10 W. Water level, in feet above datum, 1942: Nov. 9, 100.52.

247 (*817, p. 132; 840, p. 205; 845, p. 176; 886, p. 306; 908, p. 203). E. Batie. NW¼SW¼ sec. 36, T. 11 N., R. 11 W. No measurements made in 1942.

249 (*817, p. 133; 840, p. 205; 845, p. 176; 886, p. 306; 908, p. 203; 938, p. 166). F. Hughes. NW¼SW¼ sec. 32, T. 11 N., R. 11 W. No measurements made in 1942.

258 (*817, p. 133; 840, p. 205; 845, p. 176; 886, p. 306; 908, p. 203; 938, p. 166). J. Weldon. SW¼NW¼ sec. 30, T. 10 N., R. 11 W. Water level, in feet above datum, 1942: Nov. 9, 97.31.

259 (*817, p. 133; 840, p. 205; 845, p. 176; 886, p. 306; 908, p. 203; 938, p. 166). J. Kipp. SW¼SE¼ sec. 1, T. 9 N., R. 12 W. Water level, in feet above datum, 1942: Nov. 9, 100.32

260 (*817, p. 134; 840, p. 205; 845, p. 176; 886, p. 306; 908, p. 203; 938, p. 166). S. Spahr. NE¼NW¼ sec. 9, T. 9 N., R. 12 W. Water level, in feet above datum, 1942: Nov. 9, 99.12.

261 (*817, p. 134; 840, p. 205; 845. p. 134; 886. p. 306; 908, p. 203). J. Barron. SE¼SE¼ sec. 20, T. 10 N., R. 12 W. No measurements made in 1942.

GI202 (*886, p. 306; 908, p. 203; 938, p. 166). City of Grand Island. NW¼SW¼ sec. 27, T. 12 N., R. 9 W. Water level, in feet above datum, 1942: June 18, a/100.67; July 17, a/100.92; Dec. 6, a/100.92.

GI203 (*886, p. 307; 908, p. 203; 938, p. 166). City of Grand Island. NE¼NE¼ sec. 32, T. 12 N., R. 9 W.

Water level, in feet above datum, 1942

Feb. 20	a100.53	June 18	a100.53	Dec. 6	a100.87
Apr. 9	a100.45	July 17	a100.95		

GI204 (*886, p. 307; 908, p. 203; 938, p. 166). City of Grand Island. SW¼SW¼ sec. 32, T. 12 N., R. 9 W.

Water level, in feet above datum, 1942

Feb. 20	a99.52	June 18	a99.70	Dec. 6	a101.46
Apr. 9	a99.62	July 17	a100.04		

a Measurement supplied through courtesy of Grand Island Water Department.

GI206 (*886, p. 307; 908, p. 203; 938, p. 166). City of Grand Island. NE¼NE¼ sec. 2, T. 11 N., R. 9 W. Pipe removed; measurements discontinued after July 17. Water level, in feet above datum, 1942: Feb. 20, a/99.96; a/100.10; June 18, a/100.26; July 17, a/100.02.

GI207 (*886, p. 307; 908, p. 203; 938, p. 166). City of Grand Island. SW¼NW¼ sec. 3, T. 11 N., R. 9 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level
Jan. 28	a97.75	May 13	a98.25	Nov. 17	a98.98
Mar. 11	a97.98	Sept. 9	a98.73		

GI208 (*886, p. 308; 908, p. 203; 938, p. 166). City of Grand Island. SE¼SW¼ sec. 4, T. 11 N., R. 9 W. Water level, in feet above datum, 1942: Jan. 28: b/ 104.28; Mar. 11, 98.62; Sept. 9, 99.37; Nov. 17, 99.77.

GI209 (*886, p. 308; 908, p. 203; 938, p. 166). City of Grand Island. SW¼SW¼ sec. 4, T. 11 N., R. 9 W.

Water level, in feet above datum, 1942

Jan. 28	a100.74	May 13	a101.25	Nov. 17	a102.15
Mar. 11	ac100.90	Sept. 9	a101.82		

GI210 (*886, p. 308; 908, p. 203; 938, p. 166). City of Grand Island. NE¼SE¼ sec. 8, T. 11 N., R. 9 W.

Water level, in feet above datum, 1942

Jan. 28	a98.50	May 13	a99.00	Nov. 17	a100.00
Mar. 11	a98.67	Sept. 9	a99.50		

GI211 (*886, p. 308; 908, p. 203; 938, p. 166). City of Grand Island. NW¼SE¼ sec. 8, T. 11 N., R. 9 W. Water level, in feet above datum, 1942: Mar. 11, a/ 98.27; May 13, a/ 98.52; Sept. 9, a/ 99.35; Nov. 17, a/ 99.60.

GI212 (*886, p. 309; 908, p. 203; 938, p. 167). City of Grand Island. NE¼NE¼ sec. 9, T. 11 N., R. 9 W.

Water level, in feet above datum, 1942

Jan. 28	a98.55	May 13	a99.20	Nov. 17	a99.80
Mar. 11	a98.89	Sept. 9	a99.30		

GI214 (*886, p. 309; 908, p. 203; 938, p. 167). City of Grand Island. SE¼NW¼ sec. 9, T. 11 N., R. 9 W. Water level, in feet above datum, 1942: Mar. 11, a/ 97.05; May 13, a/ 97.45; Sept. 9, a/ 97.80; Nov. 17, ac/ 98.22.

GI215 (*886, p. 309; 908, p. 204; 938, p. 167). City of Grand Island. SW¼SW¼ sec. 9, T. 11 N., R. 9 W.

Water level, in feet above datum, 1942

Jan. 28	a98.68	May 13	a99.45	Nov. 17	a100.27
Mar. 15	a99.10	Sept. 9	a99.69		

GI216 (*886, p. 309; 908, p. 204; 938, p. 167). City of Grand Island. NE¼SE¼ sec. 9, T. 11 N., R. 9 W.

Water level, in feet above datum, 1942

Jan. 28	a98.97	May 13	a100.07	Nov. 17	a100.12
Mar. 11	a99.45	Sept. 9	a99.79		

a Measurement supplied through courtesy of Grand Island Water Department.

b Highest observed stage in period of record.

c Lowest observed stage in period of record.

GI217 (*886, p. 310; 908, p. 204; 938, p. 167). City of Grand Island. SE¼SE¼ sec. 9, T. 11 N., R. 9 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level
Feb. 20	a100.47	June 18	ab101.05	Dec. 6	ab101.05
Apr. 9	a100.97	July 17	a100.55		

GI218 (*886, p. 310; 908, p. 204; 938, p. 167). City of Grand Island. NE¼NE¼ sec. 10, T. 11 N., R. 9 W.

Water level, in feet above datum, 1942

Feb. 20	a99.10	June 18	a99.60	Dec. 6	a100.44
Apr. 9	a99.35	July 17	a99.68		

GI219 (*886, p. 310; 908, p. 204; 938, p. 167). City of Grand Island. SW¼SE¼ sec. 12, T. 11 N., R. 9 W.

Water level, in feet above datum, 1942

Feb. 20	a101.77	June 18	a102.27	Dec. 6	102.69
Apr. 9	a102.10	July 17	a102.77		

GI220 (*886, p. 310; 908, p. 204; 938, p. 167). City of Grand Island. NW¼NE¼ sec. 14, T. 11 N., R. 9 W.

Water level, in feet above datum, 1942

Feb. 20	a100.60	June 18	a101.10	Dec. 6	a101.93
Apr. 9	a100.93	July 17	a101.35		

GI221 (*886, p. 311; 908, p. 204; 938, p. 167). City of Grand Island. NW¼NW¼ sec. 15, T. 11 N., R. 9 W.

Water level, in feet above datum, 1942

Feb. 20	a101.30	June 18	a101.58	Dec. 6	a101.17
Apr. 9	a101.83	July 17	a101.13		

GI222 (*886, p. 311; 908, p. 204; 938, p. 167). City of Grand Island. NW¼NW¼ sec. 15, T. 11 N., R. 9 W.

Water level, in feet above datum, 1942

Feb. 20	a99.75	June 18	a100.41	Dec. 6	a100.59
Apr. 9	a102.17	July 17	a100.17		

GI223 (*886, p. 311; 908, p. 204; 938, p. 167). City of Grand Island. SW¼SW¼ sec. 15, T. 11 N., R. 9 W. Water levels, in feet above datum, 1942: Jan. 28, a/b/103.67; Mar. 11, a/102.75; May 13, a/102.17; Nov. 17, a/c/109.26.

GI224 (*886, p. 311; 908, p. 204). City of Grand Island. NW¼SE¼ sec. 15, T. 11 N., R. 9 W. Water levels, in feet above datum, 1942: Mar.11, a/99.87; May 13, a/100.10; Sept. 9, a/100.95; Nov. 17, a/100.78.

GI225 (*886, p. 312; 908, p. 204; 938, p. 167). City of Grand Island. SE¼SE¼ sec. 15, T. 11 N., R. 9 W.

Water level, in feet above datum, 1942

Feb. 20	a101.12	June 18	a100.45	Dec. 6	a101.45
Apr. 9	a100.35	July 17	a100.45		

a Measurement supplied through courtesy of Grand Island Water Department.
b Highest observed stage in period of record.
c Accuracy questionable.

GI226 (*886, p. 312; 908, p. 204; 938, p. 167). City of Grand Island. SE¼NE¼ sec. 16, T. 11 N., R. 9 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level
Jan. 28	a101.68	May 13	a102.34	Nov. 17	a100.27
Mar. 11	a102.25	Sept. 9	a99.35		

GI227 (*886, p. 312; 908, p. 204; 938, p. 167). City of Grand Island. SW¼NW¼ sec. 16, T. 11 N., R. 9 W.

Water level, in feet above datum, 1942

Jan. 28	a100.62	May 18	a100.97	Nov. 17	a101.05
Mar. 11	a100.39	Sept. 9	a99.89		

GI228 (*886, p. 312; 908, p. 204; 938, p. 167). City of Grand Island. SE¼NW¼ sec. 16, T. 11 N., R. 9 W.

Water level, in feet above datum, 1942

Jan. 28	a98.57	May 13	a98.15	Nov. 17	a99.07
Mar. 11	a99.25	Sept. 9	a98.15		

GI229 (*886, p. 313; 908, p. 204; 938, p. 167). City of Grand Island. NE¼SW¼ sec. 16, T. 11 N., R. 9 W.

Water level, in feet above datum, 1942

Jan. 28	a100.52	May 13	a101.12	Nov. 17	a101.19
Mar. 11	a100.94	Sept. 9	a100.35		

GI230 (*886, p. 313;908, p. 204; 938, p. 167). City of Grand Island. NW¼SW¼ sec. 16, T. 11 N., R. 9 W.

Water level, in feet above datum, 1942

Jan. 28	a100.12	May 13	a100.97	Nov. 17	a101.04
Mar. 11	a100.62	Sept. 9	a101.04		

GI231 (*886, p. 313; 908, p. 205; 938, p. 167). City of Grand Island. NW¼SE¼ sec. 16, T. 11 N., R. 9 W.

Water level, in feet above datum, 1942

Jan. 28	a100.17	May 13	a100.40	Nov. 17	a100.42
Mar. 11	a100.66	Sept. 9	a99.50		

GI232 (*886, p. 313; 908, p. 205; 938, p. 167). City of Grand Island. NE¼NW¼ sec. 17, T. 11 N., R. 9 W.

Water level, in feet above datum, 1942

Jan. 16	a99.24	May 13	a98.92	Nov. 17	a100.24
Mar. 11	a98.57	Sept. 9	a100.49		

GI233 (*886, p. 314; 908, p. 205; 938, p. 167). City of Grand Island. SE¼NW¼ sec. 17, T. 11 N., R. 9 W.

Water level, in feet above datum, 1942

Jan. 28	a99.30	May 13	a100.45	Nov. 17	a100.44
Mar. 11	a99.85	Sept. 9	a100.60		

GI234 (*886, p. 314; 908, p. 205; 938, p. 167). City of Grand Island. SE¼SW¼ sec. 17, T. 11 N., R. 9 W.

Water level, in feet above datum, 1942

Jan. 28	a105.75	May 13	a107.55	Nov. 17	a100.85
Mar. 11	a106.76	Sept. 9	a102.27		

a Measurement supplied through courtesy of Grand Island Water Department.

GI236 (*886, p. 314; 908, p. 205; 938, p. 167). City of Grand Island. NW¼NW¼ sec. 20, T. 11 N., R. 9 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level
Jan. 28	a98.80	May 13	a100.70	Nov. 17	a100.64
Mar. 11	a99.80	Sept. 9	a101.80		

GI237 (*886, p. 314; 908, p. 205; 938, p. 167). City of Grand Island. NW¼NW¼ sec. 21, T. 11 N., R. 9 W.

Water level, in feet above datum, 1942

Jan. 28	a98.77	May 13	a99.47	Nov. 17	a99.65
Mar. 11	a99.24	Sept. 9	a99.65		

GI238 (*886, p. 315; 908, p. 205; 938, p. 167). City of Grand Island. SE¼NW¼ sec. 21, T. 11 N., R. 9 W.

Water level, in feet above datum, 1942

Jan. 28	a98.17	May 13	a98.65	Nov. 17	a99.17
Mar. 11	a98.42	Sept. 9	a99.09		

GI239 (*886, p. 315; 908, p. 205; 938, p. 167). City of Grand Island. NW¼SW¼ sec. 22, T. 11 N., R. 9 W.

Water level, in feet above datum, 1942

Feb. 20	a99.33	June 18	a99.33	Dec. 6	a100.33
Apr. 9	a99.43	July 17	a99.16		

GI240 (*886, p. 315; 908, p. 205; 938, p. 168). City of Grand Island. NE¼NE¼ sec. 20, T. 11 N., R. 9 W.

Water level, in feet above datum, 1942

Feb. 20	a101.00	June 18	a101.58	Dec. 6	ab98.58
Apr. 9	a101.25	July 17	a102.25		

GI241 (*886, p. 315; 908, p. 205; 938, p. 168). City of Grand Island. NE¼NW¼ sec. 28, T. 11 N., R. 9 W.

Water level, in feet above datum, 1942

Feb. 20	a96.62	June 18	a95.92	Dec. 6	a96.76
Apr. 9	ac95.84	July 17	a97.07		

GI242 (*886, p. 316; 908, p. 205; 938, p. 168). City of Grand Island. NW¼NW¼ sec. 29, T. 11 N., R. 9 W.

Water level, in feet above datum, 1942

Feb. 20	a98.65	June 18	a99.82	Dec. 6	a99.15
Apr. 9	a101.32	July 17	a100.32		

GI243 (*886, p. 316; 908, p. 205). City of Grand Island. SW¼SW¼ sec. 32, T. 11 N., R. 9 W.

Water level, in feet above datum, 1942

Feb. 20	a101.23	June 18	a101.68	Dec. 6	a102.35
Apr. 9	a101.77	July 17	a102.68		

GI244 (*886, p. 316; 908, p. 205; 938, p. 168). City of Grand Island. NE¼NE¼ sec. 34, T. 11 N., R. 9 W.

Water level, in feet above datum, 1942

Feb. 20	a101.23	June 18	a101.68	Dec. 6	a102.35
Apr. 9	a101.77	July 17	a102.68		

a Measurement supplied through courtesy of Grand Island Water Department.
b Accuracy questionable.
c Lowest observed stage in period of record.

GI246 (*886, p. 316; 908, p. 205; 938, p. 168). City of Grand Island. NE¼SW¼ sec. 34, T. 11 N., R. 9 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level
Feb. 20	a100.67	June 18	a100.94	Dec. 6	a102.10
Apr. 9	a100.86	July 17	a101.69		

GI247 (*886, p. 317; 908, p. 205; 938, p. 168). City of Grand Island. SW¼SE¼ sec. 35, T. 11 N., R. 9 W.

Water level, in feet above datum, 1942

Feb. 20	a101.28	June 18	a102.26	Dec. 6	a102.93
Apr. 9	a101.85	July 17	a102.26		

GI248 (*886, p. 317; 908, p. 205; 938, p. 168). City of Grand Island. NW¼SW¼ sec. 3, T. 10 N., R.9 W.

Water level, in feet above datum, 1942

Feb. 20	a101.17	June 18	a101.92	Dec. 6	a102.42
Apr. 9	a101.58	July 17	a101.83		

GI249 (*886, p. 317; 908, p. 206; 938, p. 168). City of Grand Island. NW¼SW¼ sec. 4, T. 10 N., R. 9 W.

Water level, in feet above datum, 1942

Feb. 20	a101.40	June 18	a101.81	Dec. 6	a102.82
Apr. 9	a101.65	July 17	a102.23		

GI250 (*886, p. 317; 908, p. 206; 938, p. 168). City of Grand Island. SW¼SW¼ sec. 8, T. 10 N., R. 9 W.

Water level, in feet above datum, 1942

Feb. 20	a101.18	June 18	a102.18	Dec. 6	a102.60
Apr. 9	a101.77	July 17	a102.18		

GI251 (*886, p. 318; 908, p. 206; 938, p. 168). City of Grand Island. SW¼SW¼ sec. 1, T. 12 N., R. 10 W.

Water level, in feet above datum, 1942

Feb. 20	a98.94	June 18	a99.27	Dec. 6	a99.77
Apr. 9	a98.94	July 17	a100.18		

GI252 (*886, p. 318; 908, p. 206; 938, p. 168). City of Grand Island. SW¼SE¼ sec. 11, T. 12 N., R. 10 W.

Water level, in feet above datum, 1942

Feb. 20	a98.42	June 18	a98.83	Dec. 6	a99.67
Apr. 9	a98.42	July 17	a99.75		

GI253 (*886, p. 318; 908, p. 206; 938, p. 168). City of Grand Island. NW¼NE¼ sec. 13, T. 11 N., R. 10 W.

Water level, in feet above datum, 1942

Feb. 20	a98.25	June 18	a98.65	Dec. 6	a99.82
Apr. 9	a98.40	July 17	a99.48		

GI254 (*886, p. 318; 908, p. 206; 938, p. 168). City of Grand Island. NW¼SW¼ sec. 24, T. 11 N., R. 10 W.

Water level, in feet above datum, 1942

Feb. 20	a97.65	June 18	a98.07	Dec. 6	a99.23
Apr. 9	a97.74	July 17	a98.98		

GI255 (*886, p. 319). City of Grand Island. SE¼SE¼ sec. 26, T. 11 N., R. 10 W.

a Measurement supplied through courtesy of Grand Island Water Department.

GI255 (*886, p. 319)--Continued.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level
Feb. 20	a100.55	June 18	a100.73	Dec. 6	a101.90
Apr. 9	a100.73	July 17	a101.15		

Hamilton County

158 (*817, p. 135; 840, p. 205; 845, p. 176; 938, p. 168). O. Swedberg. NW¼SW¼ sec. 13, T. 11 N., R. 6 W. Water level, in feet above datum, 1942: Nov. 10, 94.64.

160 (*817, p. 135; 840, p. 205; 845, p. 176; 886, p. 319; 908, p. 206; 938, p. 168). R. Phillips. SW¼SE¼ sec. 9, T. 9 N., R. 8 W. Water level, in feet above datum, 1942: Nov. 10, 97.26.

173 (*817, p. 135; 840, p. 206; 845, p. 176; 886, p. 319; 908, p. 206; 938, p. 168). T. Wild. NW¼NW¼ sec. 34, T. 9 N., R. 6 W. Water level, in feet above datum, 1942: Nov. 10, 101.29.

330 (*817, p. 135; 840, p. 206; 845, p. 176; 886, p. 319; 908, p. 206). H. Lock. SW¼SW¼ sec. 27, T. 13 N., R. 6 W. Water level, in feet above datum, 1942: Nov. 10, 98.83.

Harlan County

155 (*817, p. 135; 840, p. 206; 845, p. 177; 886, p. 319; 908, p. 206; 938, p. 168). C. Feese. SE¼SW¼ sec. 33, T. 2 N., R. 18 W. Water level, in feet above datum, 1942: Nov. 24, 102.99.

222 (*817, p. 136; 840, p. 206; 845, p. 177; 886, p. 319; 908, p. 206). University of Nebraska. NW¼NW¼ sec. 27, T. 3 N., R. 17 W. Water level, in feet above datum, 1942: Nov. 24, 100.33.

329 (*817, p. 136; 840, p. 206; 845, p. 177; 886, p. 319; 908, p. 206; 938, p. 168). G. Remke. NE¼SE¼ sec. 21, T. 3 N., R. 17 W. Water level, in feet above datum, 1942: Nov. 24, 99.99.

389 (*817, p. 136; 840, p. 206; 845, p. 177; 886, p. 319; 908, p. 206; 938, p. 168). H. McArthur. SE¼SE¼ sec. 15, T. 2 N., R. 18 W. Water level, in feet above datum, 1942: Nov. 24, 99.66

Hayes County

141 (*817, p. 136; 840, p. 206; 845, p. 177; 886, p. 319; 908, p. 207; 938, p. 269). E. Joy. SW¼NW¼ sec. 25, T. 5 N., R. 32 W. Water level, in feet above datum, 1942: Nov. 23 b/ 101.20.

142 (*817, p. 136; 840, p. 206; 845, p. 177; 886, p. 319; 908, p. 207; 938, p. 169). Laird & Ward. SW¼NE¼ sec. 4, T. 7 N., R. 32 W. No measurements made in 1942.

446 (*886, p. 320; 908, p. 207; 938, p. 169). University or Nebraska. SW¼SE¼ sec. 31, T. 5 N., R. 33 W. Water levels, in feet above datum, 1942: Nov. 19, 99.83; Nov. 25, 99.80

Hitchcock County

140 (*817, p. 137; 840, p. 206; 845, p. 177; 886, p. 320; 908, p. 207; 938, p. 169). A. Nowka. SE¼SW¼ sec. 26, T. 4 N., R. 32 W. No measurements made in 1942.

178 (*817, p. 137; 840, p. 206; 845, p. 177; 886, p. 320; 908, p. 207; 938, p. 169). O. Brownfield. SW¼NW¼ sec. 21, T. 2 N., R. 35 W. No measurements made in 1942.

a Measurement supplied through courtesy of Grand Island Water Department.

b Highest observed stage in period of record.

362 (*817, p. 137; 840, p. 206; 845, p. 177; 886, p. 320; 908, p. 207; 938, p. 169). S. Lawrence. SW¼SE¼ sec. 35, T. 3 N., R. 33 W. Water level, in feet above datum, 1942: Dec. 3, 100.95.

Holt County

112 (*817, p. 137; 840, p. 207; 845, p. 177; 886, p. 320; 908, p. 207). G. Shoemaker. NE¼NW¼ sec. 14, T. 29 N., R. 12 W. Water level, in feet above datum, 1942: Oct. 30, 101.57.

113 (*817, p. 137; 840, p. 207; 845, p. 177; 886, p. 320; 908, p. 207). F. Juracek. NW¼NE¼ sec. 10, T. 29 N., R. 14 W. No measurements made in 1942:

203 (*817, p. 137; 840, p. 207; 845, p. 177; 886, p. 320; 908, p. 207; 938, p. 169). University of Nebraska. NE¼SE¼ sec. 34, T. 27 N., R. 9 W. Water level, in feet above datum, 1942: Aug. 24, 99.00; Aug. 28, 99.00; Sept. 30, 99.38; Dec. 29, 99.75.

373 (*817, p. 138; 840, p. 207; 845, p. 177; 886, p. 320; 908, p. 207; 938, p. 169). University of Nebraska. NE¼NE¼ sec. 29, T. 28 N., R. 14 W. Water level, in feet above datum, 1942: Oct. 30, 101.46.

374 (*817, p. 138; 840, p. 207; 845, p. 177; 886, p. 320; 908, p. 207; 938, p. 169). L. Nessen. SW¼NW¼ sec. 28, T. 27 N., R. 14 W. Water level, in feet above datum, 1942: Oct. 30, a/ 101.48.

424 (*886, p. 320; 908, p. 207; 938, p. 169). University of Nebraska. NE¼NE¼ sec. 24, T. 26 N., R. 12 W. Water level, in feet above datum, 1942: Oct. 30, 101.45.

428 (*886, p. 320; 908, p. 207; 938, p. 169). University of Nebraska. SE¼SE¼ sec. 27, T. 27 N., R. 9 W. Water levels, in feet above datum, 1942: Aug. 24, 100.43; Aug. 28, 100.37.

Hooker County

214 (*817, p. 138; 840, p. 207; 845, p. 177; 886, p. 320; 908, p. 207; 938, p. 169). University of Nebraska. SE¼SE¼ sec. 23, T. 24 N., R. 35 W. Water level, in feet above datum, 1942: Nov. 13, 95.92.

Howard County

46 (*817, p. 138; 840, p. 207; 845, p. 177; 886, p. 321; 908, p. 207; 938, p. 169). University of Nebraska. NW¼NW¼ sec. 14, T. 14 N., R. 10 W. Water level, in feet above datum, 1942: Oct. 31, 100.61.

51 (*817, p. 138; 840, p. 207; 845, p. 177; 886, p. 321; 908, p. 207; 938, p. 169). Placke Estate. NE¼SW¼ sec. 27, T. 13 N., R. 9 W. Water level, in feet above datum, 1942: Nov. 11, 99.16.

59 (*817, p. 139; 840, p. 207; 845, p. 177; 886, p. 321; 908, p. 207; 939, p. 169). M. Augustyn. SW¼SE¼ sec. 27, T. 16 N., R. 11 W. Water level, in feet above datum, 1942: Nov. 11, 99.33.

98 (*817, p. 139; 840, p. 207; 845, p. 177; 886, p. 321; 908, p. 208; 938, p. 169). O. Young. NE¼NW¼ sec. 29, T. 13 N., R. 12 W. Water level, in feet above datum, 1942: Nov. 26, 101.19.

346 (*817, p. 139; 840, p. 207; 845, p. 177; 886, p. 321; 908, p. 209; 938, p. 169). University of Nebraska. SW¼SE¼ sec. 15, T. 15 N., R. 10 W. No measurements made in 1942.

Jefferson County

226 (*817, p. 139; 840, p. 208; 845, p. 177; 886, p. 321; 908, p. 208; 938, p. 169). C. Ellis. SE¼SE¼ sec. 26, T. 2 N., R. 4 E. Water level, in feet above datum, 1942: Oct. 23, 104.98.

a Highest observed stage in period of record.

227 (*817, p. 139; 840, p. 208; 845, p. 177; 886, p. 321; 908, pl 208). R. Garrett. SW¼NE¼ sec. 19, T. 1 N., R. 4 E. No measurements made in 1942.

228 (*817, p. 139; 840, p. 208; 845, p. 177; 886, p. 321; 908, p. 208; 938, p. 169). A. Knispel. NE¼NW¼ sec. 14, T. 3 N., R. 1 E. Water level, in feet above datum, 1942: Oct. 22, 100.08.

229 (*817, p. 140; 840, p. 208; 845, p. 177; 886, p. 321; 908, p. 208; 938, p. 169). E. Simpkins. NW¼SW¼ sec. 18, T. 4 N., R. 2 E. New measuring point beginning Oct. 23, 1942, top of casing, level with land surface, 1.3 feet below old measuring point, and 244.65 feet above datum. Watdr level, Oct. 23, 1942, 145.16 feet below measuring point. Water level, in feet above datum, 1942: Oct. 23, 99.49.

Johnson County

2 (*817, p. 140; 840, p. 208, 845, p. 177; 886, p. 321; 908, p. 208; 938, p. 169). L. Miller. NW¼NW¼ sec. 26, T. 6 N., R. 9 E. Water level, in feet above datum, 1942: Oct. 16, 98.99.

31 (817, p. 140; 840, p. 208; 845, p. 177; 886, p. 321; 908, p. 208; 938, p. 169). E. Graf. SW¼NW¼ sec. 25, T. 4 N., R. 11 E. No measurements made in 1942.

Kearney County

181 (*817, p. 140; 840, p. 208; 845, p. 177; 886, p. 321; 908, p. 208; 938, p. 170). E. Carlson. NW¼NW¼ sec. 20, T. 6 N., R. 16 W. Water level, in feet above datum, 1942: Nov. 25, a/ 104.03.

266 (*817, p. 140; 840, p. 208; 845, p. 177; 886, p. 321; 908, p. 208; 938, p. 170). H. Jensen. NW¼SE¼ sec. 13, T. 8 N., R. 14 W. Water level, in feet above datum, 1942: Nov. 9, 100.86.

Keith County

93 (*817, p. 141; 840, p. 208; 845, p. 177; 908, p. 208; 938, p. 170). D. Thiessen. SW¼SW¼ sec. 5, T. 13 N., R. 35 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level
Feb. 2	b101.51	May 8	b103.91	Oct. 5	b101.32
Mar. 2	b101.69	Aug. 8	b102.32	Nov. 13	b101.24
Apr. 7	b102.28	Sept. 7	b101.73	Dec. 15	b101.26

255 (*817, p. 141; 840, p. 208; 845, p. 177; 886, p. 321; 908, p. 208; 938, p. 170). University of Nebraska. NW¼NE¼ sec. 30, T. 16 N., R. 38 W. Water level, in feet above datum, 1942: Nov. 18, 99.62.

348 (*817, p. 141; 840, p. 208; 845, p. 177; 886, p. 321; 908, p. 208). E. Pueppke. SW¼SE¼ sec. 12, T. 13 N., R. 35 W. No measurements made in 1942.

350 (*817, p. 142; 840, p. 209; 845, p. 177; 886, p. 321; 908, p. 208; 938, p. 170). NW¼NE¼ sec. 3, T. 13 N., R. 37 W.

Water level, in feet above datum, 1942

Feb. 2	b101.18	Aug. 12	b101.69	Nov. 13	b100.90
Mar. 2	b101.28	Sept.10	b101.36	18	b100.94
Apr. 7	b102.15	Oct. 8	b100.84	Dec. 15	b100.88
May 8	b104.23				

351 (*817, p. 142; 840, p. 209; 845, p. 177; 886, p. 321; 908, p. 209; 938, p. 170). S. Hilliard. NW¼NE¼ sec. 16, T. 13 N., R. 37 W. Well destroyed; measurements discontinued after Nov. 18.

Water level, in feet above datum, 1942

Feb. 2	b99.36	Apr. 7	b99.45	Aug. 12	b100.11
Mar. 2	b99.33	May 8	b99.76		

a Highest observed stage in period of record.

b Measurement supplied through courtesy of Central Nebraska Public Power and Irrigation District.

358 (*817, p. 143; 840, p. 209; 845, p. 178; 886, p. 322; 908, p. 209; 938, p. 170). G. McGinely. SE¼SW¼ sec. 19, T. 13 N., R. 39 W. No measurements made in 1942.

360 (*817, p. 143; 840, p. 209; 845, p. 178; 886, p. 322; 908, p. 209; 938, p. 170). G. Peters Estate. SE¼SE¼ sec. 34, T. 13 N., R. 39 W. Water level, in feet above datum, 1942: Nov. 19, 99.51.

N1 (*938, p. 170). Central Nebraska Public Power and Irrigation District. NE¼SE¼ sec. 30, T. 15 N., R. 38 W. Bored observation well, diameter 4 inches, depth 18 feet. Measuring point, top of casing, 3,157.67 feet above sea level. Water level, in feet below measuring point, 1936: June 26, 10.90. Measurement supplied through courtesy of Central Nebraska Public Power and Irrigation District. No measurements made in 1942.

N4 (*908, p. 209; 938, p. 170). Central Nebraska Public Power and Irrigation District. NE¼NE¼ sec. 20, T. 15 N., R. 38 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 30	a19.13	Aug. 6	a19.00	Oct. 6	a19.09	Dec. 11	a18.79
May 4	a19.04	Sept. 8	a19.11	Nov. 10	a18.62		

N5 (*908, p. 209; 938, p. 170). Central Nebraska Public Power and Irrigation District. NW¼ sec. 16, T. 15 N., R. 38 W.

Water level, in feet below measuring point, 1942

Mar. 30	a10.05	Aug. 6	a9.50	Oct. 6	a9.46	Dec. 11	a9.45
May 4	a8.49	Sept. 8	a9.88	Nov. 10	a9.46		

N6 (*908, p. 210; 938, p. 170). Central Nebraska Public Power and Irrigation District. SE¼ sec. 4, T. 15 N., R. 38 W.

Water level, in feet below measuring point, 1942

Mar. 30	a5.58	Aug. 6	a5.11	Oct. 6	a4.98	Dec. 11	4.91
May 4	a3.42	Sept. 8	a5.10	Nov. 10	a4.92		

N7 (*908, p. 210; 938, p. 170). Central Nebraska Public Power and Irrigation District. NW¼ sec. 34, T. 16 N., R. 38 W.

Water level, in feet below measuring point, 1942

Mar. 30	a10.64	Aug. 6	a9.61	Oct. 6	a9.66	Dec. 11	a9.66
May 4	a9.86	Sept. 8	a9.67	Nov. 10	a9.69		

N9 (*908, p. 211; 938, p. 171). Central Nebraska Public Power and Irrigation District. SE¼NE¼ sec. 28, T. 16 N., R. 38 W.

Water level, in feet below measuring point, 1942

Mar. 30	a13.68	Aug. 6	a12.77	Oct. 6	a12.92	Dec. 11	a12.88
May 4	a10.95	Sept. 8	a12.88	Nov. 10	a12.88		

N11 (*886, p. 322; 908, p. 211; 938, p. 171). Central Nebraska Public Power and Irrigation District. SE¼SE¼ sec. 9, T. 16 N., R. 38 W.

Water level, in feet below measuring point, 1942

Mar. 30	a16.78	Aug. 6	a14.36	Oct. 6	a14.47	Dec. 11	a14.83
May 4	a16.28	Sept. 8	a14.46	Nov. 10	a14.75		

N18 (*908, p. 211; 938, p. 171). Central Nebraska Public Power and Irrigation District. SE¼ sec. 21, T. 15 N., R. 38 W.

Water level, in feet below measuring point, 1942

Mar. 30	a33.78	Aug. 6	a32.68	Oct. 6	a31.70	Dec. 11	a30.72
May 4	a33.42	Sept. 8	a32.13	Nov. 10	a31.20		

a Measurement supplied through courtesy of Central Nebraska Public Power and Irrigation District.

N25 (*908, p. 212; 938, p. 171). Central Nebraska Public Power and Irrigation District. NW¼ sec. 5, T. 15 N., R. 39 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 2	a36.57	May 7	a36.64	Sept. 9	a36.50	Nov. 11	a36.39
Mar. 26	a36.62	Aug. 7	a36.53	Oct. 7	a36.43	Dec. 16	a36.29
Apr. 2	a36.63						

N35 (*886, p. 322; 908, p. 212; 938, p. 171). Central Nebraska Public Power and Irrigation District. SW¼SW¼ sec. 17, T. 16 N., R. 40 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Feb. 2	a7.85	Apr. 2	a7.85	Nov. 11	a6.75
26	a7.88	May 7	a6.64		

N37 (*886, p. 323; 938, p. 171; 908, p. 212). Central Nebraska Public Power and Irrigation District. NW. corner SW¼SE¼ sec. 34, T. 16 N., R.41 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 2	a11.35	May 7	ab8.63	Sept. 9	a13.95	Nov. 11	a12.62
26	a11.23	Aug. 7	a13.04	Oct. 7	a13.30	Dec. 16	a12.36
Apr. 2	a11.20						

N41 (*908, p. 213; 938, p. 171). Central Nebraska Public Power and Irrigation District. SE¼ sec. 24, T. 15 N., R. 39 W.

Water level, in feet below measuring point, 1942

Mar. 5	a83.46	May 7	a83.01	Sept. 8	a69.25	Nov. 11	a67.05
Apr. 2	a83.45	Aug. 6	a71.59	Oct. 6	a68.17	Dec. 16	ab65.53

N42(*908, p. 213; 938, p. 172). Central Nebraska Public Power and Irrigation District. NE¼ sec. 28, T. 15 N., R. 38 W.

Water level, in feet below measuring point, 1942

Mar. 30	a91.85	Aug. 6	a82.85	Oct. 6	a78.92	Dec. 11	ab77.33
May 4	a88.78	Sept. 8	a80.40	Nov. 10	a77.34		

S10 (*908, p. 213; 938, p. 172). Central Nebraska Public Power and Irrigation District. SW¼ sec. 3, T. 14 N., R. 38 W.

Water level, in feet below measuring point, 1942

Mar. 5	a22.44	Aug. 5	a19.66	Oct. 8	a19.62	Dec. 11	ab19.34
30	a21.84	Sept.10	a19.55	Nov. 14	a19.47		

S16 (*908, p. 214; 938, p. 172). Central Nebraska Public Power and Irrigation District. SE¼ sec. 10, T. 14 N., R. 38 W.

Water level, in feet below measuring point, 1942

Mar. 5	a188.19	May 4	a188.77	Sept.10	a188.66	Nov. 14	a188.39
30	a188.16	Aug. 5	a188.52	Oct. 8	a188.79	Dec. 16	a188.56

S18 (*886, p. 323; 908, p. 214; 938, p. 172). Central Nebraska Public Power and Irrigation District. NE¼NW¼ sec. 17, T. 14 N., R. 38 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Mar. 30	a163.15	Aug. 12	a162.64	Oct. 6	a162.88
May 4	a162.95	Sept. 8	a162.78	Nov. 11	a162.36

S19 (*908, p. 214; 938, p. 172). Central Nebraska Public Power and Irrigation District. SW¼NE¼ sec. 7, T. 14 N., R. 38 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 30	a167.85	Aug. 12	a167.30	Oct. 6	a168.70	Dec. 16	ab165.45
May 4	a168.00	Sept. 8	a167.18	Nov. 14	a165.85		

a Measurement supplied through courtesy of Central Nebraska Public Power and Irrigation District.

b Highest observed stage in period of record.

S20 (*908, p. 215; 938, p. 172). Central Nebraska Public Power and Irrigation District. SW¼SW¼ sec. 2, T. 14 N., R. 39 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Feb. 2	a183.28	Apr. 2	a183.12	Dec. 20	a182.65
26	a183.20	Nov. 11	a182.72		

S21 (*886, p. 323; 908, p. 215; 938, p. 172). Central Nebraska Public Power and Irrigation District. SW¼SW¼ sec. 4, T. 14 N., R. 34 W.

Water level, in feet below measuring point, 1942

Feb. 2	a105.59	Apr. 2	a105.75	Dec. 16	a105.15
26	a105.50	Nov. 11	a105.68		

S22 (*908, p. 215; 938, p. 172). Central Nebraska Public Power and Irrigation District. NW¼ sec. 31, T. 15 N., R. 39 W.

Water level, in feet below measuring point, 1942

Feb. 2	a107.70	May 7	a107.04	Dec. 16	ab99.40
Apr. 2	a107.54	Nov. 14	a100.35		

S23 (*886, p. 323; 908, p. 216; 938, p. 173). C. Samuelson. SE¼SE¼ sec. 27, T. 15 N., R. 40 W. Water levels, in feet below measuring point, 1942: Apr. 2, a/113.26; May 7, a/113.66; Nov. 14, a/112.56; Dec. 16, a/112.69.

S24 (*908, p. 216; 938, p. 173). Central Nebraska Public Power and Irrigation District. NW¼ sec. 20, T. 15 N., R. 40 W.

Water level, in feet below measuring point, 1942

Feb. 2	a61.15	May 7	a61.08	Nov. 14	a60.41
Apr. 2	a61.35	Aug. 7	a60.80	Dec. 16	a60.51

S26 (*908, p. 216; 938, p. 173). Central Nebraska Public Power and Irrigation District. NE¼NW¼ sec. 3, T. 13 N., R. 38 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 2	a15.53	May 8	ab11.37	Sept.10	a16.76	Nov. 13	a14.40
26	a15.73	Aug. 12	a15.95	Oct. 8	a16.93	Dec. 15	a14.22
Apr. 7	a14.99						

S27 (*908, p. 217; 938, p. 173). Central Nebraska Public Power and Irrigation District. NE¼NE¼ sec. 5, T. 13 N., R. 37 W.

Water level, in feet below measuring point, 1942

Feb. 2	a12.40	May 8	ab8.84	Sept.10	a13.02	Nov. 13	a12.75
Mar. 2	a12.86	Aug. 12	a12.78	Oct. 8	a12.97	Dec. 15	a12.65
Apr. 7	a11.89						

S31 (*908, p. 217; 938, p. 173). Ellen Kelly. SW¼NW¼ sec. 4, T. 14 N., R. 39 W. No measurements made in 1942.

S32 (*908, p. 217; 938, p. 173). Ellen Kelly. T.14 N., R. 39 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Feb. 2	a58.85	Apr. 2	a57.60	Dec. 16	ab32.71
26	a59.00	Nov. 11	a34.67		

S35 (*908, p. 218; 938, p. 173). M. Robohm. NE¼SE¼ sec. 36, T. 14 N. R. 38 W. Water level, in feet below measuring point, 1942: Mar. 30, a/167.51.

Keyapaha County

375 (*817, p. 143; 840, p. 209; 845, p. 178; 886, p. 324; 908, p. 218; 938, p. 174). University of Nebraska. SW¼SE¼ sec. 19, T. 32 N., R. 20 W. No measurements made in 1942.

a Measurement supplied through courtesy of Central Nebraska Public Power and Irrigation District.

b Highest observed stage in period of record.

Kimball County

88 (*817, p. 143; 840, p. 208; 845, p. 178; 886, p. 324; 908, p. 218; 938, p. 174). W. Settlemire. NW¼NW¼ sec. 32, T. 15 N., R. 57 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 19	99.96	Apr. 28	100.11	Aug. 19	99.95	Nov. 29	99.81
Feb 26	99.97	June 19	100.34	Sept.21	99.71	Dec. 29	99.85
Mar. 24	100.02	July 20	100.12	Oct. 23	99.79		

89 (*817, p. 144; 840, p. 210; 845, p. 178; 886, p. 324; 908, p. 218; 938, p. 174). H. McGowan. NE¼NE¼ sec. 12, T. 16 N., R. 54 W. Water level, in feet above datum, 1942: Nov. 17, 100.39.

327 (*817, p. 144; 840, p. 210; 845, p. 178; 886, p. 324; 908, p. 218; 938, p. 174). Kimball Irrigation District. SW¼SW¼ sec. 17, T. 15 N., R. 55 W. Water level, in feet above datum, 1942: Nov. 17, a/97.64.

Knox County

67 (*817, p. 144; 840, p. 210; 845, p. 178; 886, p. 324; 908, p. 218; 938, p. 174). W. Krohn. NE¼NE¼ sec. 11, T. 30 N., R. 3 W. Water level, in feet above datum, 1942: Oct. 27, 100.29.

71 (*817, p. 144; 840, p. 210; 845, p. 178; 886, p. 324; 908, p. 218; 938, p. 174). F. Stingley. SE¼NE¼ sec. 28, T. 29 N., R. 5 W. No measurements made in 1942.

335 (*817, p. 145; 840, p. 210; 845, p. 178; 886, p. 324; 908, p. 218; 938, p. 174). University of Nebraska. NW¼SW¼ sec. 30, T. 33 N., R. 7 W. Water level, in feet above datum, 1942: Oct. 29, 98.14.

336 (*817, p. 145; 840, p. 210; 845, p. 178; 886, p. 324; 908, p. 218; 938, p. 174). W. MacGraw. SE¼SE¼ sec. 8, T. 32 N., R. 6 W. Water level, in feet above datum, 1942: Oct. 29, 102.50.

370 (*817, p. 145; 840, p. 211; 845, p. 178; 886, p. 324; 908, p. 218; 938, p. 174). Lunberg Bros. SE¼SE¼ sec. 27, T. 29 N., R. 2 W. Platform removed. New measuring point, beginning Oct. 27, 1942, top of wooden casing, east side 1.23 feet above land surface, 0.17 foot below old measuring point, and 109.19 feet above datum. Water level Oct. 27, 1942, 8.35 feet below measuring point. Water level, in feet above datum, 1942: Oct. 27, 100.84.

429 (*886, p. 324; 908, p. 218; 938, p. 174). University of Nebraska. SW¼NW¼ sec. 30, T. 33 N., R. 7 W. Water level, in feet above datum, 1942: Oct. 29, 99.95.

Lancaster County

1 (*817, p. 145; 840, p. 210; 845, p. 178; 886, p. 325; 908, p. 219; 938, p. 174). Mrs. Burling. NE¼SE¼ sec. 34, T. 7 N., R. 7 E. No measurements made in 1942.

13 (*817, p. 145; 840, p. 210; 845, p. 178; 886, p. 325; 908, p. 219; 938, p. 174). Miss Brady. NE¼NE¼ sec. 21, T. 9 N., R. 5 E. New measuring point, beginning Oct. 23, 1942, top of round brick curb west side, 0.18 foot above land surface, 0.12 foot below old measuring point, and 123.30 feet above datum. Water level, Oct. 23, 1942, 24.21 feet below measuring point. Water level, in feet above datum, 1942: Oct. 23, 99.09.

14 (*817, p. 145; 840, p. 210; 845, p. 178; 886, p. 325; 908, p. 219; 938, p. 174). W. Brightenburg. NW¼NE¼ sec. 6, T. 11 N., R. 6 E. No measurements made in 1942.

366 (*817, p. 146; 840, p. 210; 845, p. 178; 886, p. 325; 908, p. 219; 938, p. 174). H. Hollan. SW¼SW¼ sec. 28, T. 9 N., R. 7 E. Water level, in feet above datum, 1942: Oct. 20, b/104.99.

a Lowest observed stage in period of record.
b Highest observed stage in period of record.

367 (*817, p. 146; 840, p. 211; 845, p. 178; 886, p. 325; 908, p. 219). F. Jappert. SW¼SW¼ sec. 35, T. 10 N., R. 6 E. No measurements made in 1942:

Lincoln County

131 (*817, p. 146; 908, p. 219; 938, p. 174). Great Western Sugar Co. NW¼NW¼ sec. 21, T. 14 N., R. 32 W. No measurements made in 1942.

133 (*817, p. 146; 840, p. 211; 845, p. 178; 886, p. 325; 908, p. 219; 938, p. 174). R. Larson. SW¼SW¼ sec. 32, T. 10 N., R. 29 W. No measurements made in 1942.

134 (*817, p. 146; 840, p. 211; 845, p. 178; 886, p. 325; 908, p. 219; 938, p. 174). G. Roethemeyer. NW¼SW¼ sec. 4, T. 9 N., R. 29 W. Water level, in feet above datum, 1942: Nov. 23, [a] 101.06.

143 (*817, p. 146; 840, p. 211; 845, p. 178; 886, p. 325; 908, p. 219; 938, p. 174). G. Connealy. SE¼NE¼ sec. 18, T. 10 N., R. 34 W. Water level, in feet above datum, 1942: Nov. 23, [a] 102.36.

144 (*817, p. 147; 840, p. 211; 845, p. 178; 886, p. 325; 908, p. 219; 938, p. 174). J. Fristo. SW¼SW¼ sec. 17, T. 10 N., R. 32 W. Water level, in feet above datum, 1942: Nov. 23, 99.85.

241 (*817, p. 147; 840, p. 211; 845, p. 178; 886, p. 325; 908, 219; 938, p. 174). University of Nebraska. NE¼NE¼ sec. 14, T. 12 N., R. 27 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 3	b99.14	Apr. 30	b100.78	July 30	b99.67	Nov. 7	98.66
Mar. 2	b99.13	June 2	b100.24	Sept.14	b99.52	Dec. 1	b98.68
Apr. 8	b99.46	July 15	b100.65	Oct. 1	b98.92		

242 (*817, p. 147; 840, p. 211; 845, p. 178; 886, p. 325; 908, p. 219; 938, p. 175). Nebraska Agricultural College. NW¼NW¼ sec. 21, T. 13 N., R. 30 W.

Water level, in feet above datum, 1942

Feb. 4	b103.37	May 1	b104.71	July 8	b105.12	Oct. 1	b104.89
Mar. 5	b103.61	11	b105.11	Aug. 3	b104.47	Nov. 6	104.52
Apr. 8	b103.95	June 2	b104.93	Sept.11	ab105.16	Dec. 2	b104.82

252 (*817, p. 147; 840, p. 211; 845, p. 178; 886, p. 325; 908, p. 219; 938, p. 175). University of Nebraska. SE¼SE¼ sec. 13, T. 15 N., R. 31 W. Water level, in feet above datum, 1942: Nov. 6, 99.82.

253 (*817, p. 147; 840, p. 211; 845, p. 178; 886, p. 325; 908, p. 219; 938, p. 175). University of Nebraska. NW¼NE¼ sec. 4, T. 16 N., R. 31 W. Water level, in feet above datum, 1942: Nov. 6, 98.91.

383 (*817, p. 147; 840, p. 211; 845, p. 178; 886, p. 325; 908, p. 219) Lech. Bros. NW¼NE¼ sec. 4, T. 16 N., R. 31 W. No measurements made in 1942.

384 (*817, p. 148; 840, p. 211; 845, p. 178; 886, p. 325; 908, p. 219; 938, p. 175). A. Howard. SE¼NW¼ sec. 14, T. 11 N., R. 30 W. Water level, in feet above datum, 1942: Nov. 5, 100.89.

385 (*817, p. 148; 840, p. 211; 845, p. 178; 886, p. 325; 908, p. 219; 938, p. 175). E. Kugler. SE¼SW¼ sec. 33, T. 10 N., R. 30 W. Water level, in feet above datum, 1942: Nov. 5, 100.64.

405 (*886, p. 325; 908, p. 220; 938, p. 175). University of Nebraska. NE¼SE¼ sec. 17, T. 14 N., R. 33 W.

a Highest observed stage in period of record.

b Measurement supplied through courtesy of Central Nebraska Public Power and Irrigation District.

405 (*886, p. 325; 908, p. 220; 938, p. 175)--Continued.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level
Mar. 2	a99.53	Aug. 5	a100.74	Nov. 13	a100.20
Apr. 9	a100.19	Oct. 5	a101.05	Dec. 15	a100.02

406 (*886, p. 327; 908, p. 220; 938, p. 175). University of Nebraska. SE¼SW¼ sec. 32, T. 14 N., R. 33 W. No measurements made in 1942.

E26 (*908, p. 220; 938, p. 175). Central Nebraska Public Power and Irrigation District. NE¼NE¼ sec. 27, T. 14 N., R. 33 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 2	a10.88	May 8	a8.69	Sept. 10	a8.66	Nov. 13	a10.01
Apr. 7	a10.38	Aug. 8	a8.93	Oct. 8	a9.41	Dec. 15	a10.38

E27 (*908, p. 220; 938, p. 175). Central Nebraska Public Power and Irrigation District. NE¼SW¼ sec. 32, T. 13 N., R. 34 W.

Water level, in feet below measuring point, 1942

Mar. 2	a10.24	May 8	a8.05	Sept. 10	ab7.37	Nov. 13	a9.08
Apr. 7	a9.83	Aug. 8	a8.57	Oct. 8	a8.47	Dec. 15	a9.37

E38 (*908, p. 220; 938, p. 175). Central Nebraska Public Power and Irrigation District. NE¼SE¼ sec. 32, T. 13 N., R. 34 W.

Water level, in feet below measuring point, 1942

Mar. 2	a12.59	May 8	ab10.37	Sept. 10	a12.30	Nov. 13	a12.91
Apr. 7	a12.33	Aug. 8	a12.96	Oct. 8	a12.80	Dec. 15	a12.95

JS1 (*908, p. 221; 938, p. 175). Central Nebraska Public Power and Irrigation District. NW¼SW¼ sec. 35, T. 12 N., R. 27 W.

Water level, in feet above measuring point, 1942

Feb. 3	a29.43	May 1	a28.64	Aug. 5	a29.33	Oct. 1	a28.37
Mar. 2	a29.40	June 3	a28.35	Sept. 11	ab28.12	Dec. 1	a28.25
Apr. 8	a28.98	July 6	a29.66				

JS2 (*908, p. 221; 938, p. 175). Central Nebraska Public Power and Irrigation District. NW¼NW¼ sec. 35, T. 12 N., R. 27 W.

Water level, in feet below measuring point, 1942

Feb. 3	a18.95	May 1	a18.30	Aug. 3	a19.36	Oct. 1	a18.27
Mar. 2	a18.95	June 3	ab18.06	Sept. 11	a18.07	Dec. 1	a18.38
Apr. 8	a18.55	July 6	a18.93				

JS3 (*908, p. 221; 938, p. 176). Central Nebraska Public Power and Irrigation District. NE¼SE¼ sec. 35, T. 12 N., R. 27 W.

Water level, in feet below measuring point, 1942

Feb. 3	a26.73	May 1	a25.97	Aug. 3	a26.25	Oct. 2	ab25.16
Mar. 2	a26.60	June 3	a25.57	Sept. 11	a25.17	Dec. 1	ab25.16
Apr. 8	a26.23	July 6	a26.12				

JS4 (*908, p. 221; 938, p. 176). Central Nebraska Public Power and Irrigation District. NE¼NE¼ sec. 35, T. 12 N., R. 27 W.

Water level, in feet below measuring point, 1942

Feb. 3	a17.06	May 1	a16.45	Aug. 3	a17.15	Oct. 2	a16.17
Mar. 2	a17.01	June 3	ab16.14	Sept. 11	a16.18	Dec. 1	a16.30
Apr. 8	a16.67	July 6	a16.65				

a Measurement supplied through courtesy of Central Nebraska Public Power and Irrigation District.
b Highest observed stage in period of record.

U12 (*908, p. 222; 938, p. 176). Central Nebraska Public Power and Irrigation District. SE¼SE¼ sec. 13, T. 13 N., R. 30 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 4	a12.85	May 1	a11.47	July 8	a11.64	Oct. 1	a11.55
Mar. 5	a12.70	11	a11.29	Aug. 3	a13.22	Dec. 4	a12.01
Apr. 18	a12.47	June 2	a11.79	Sept.11	ab10.99		

U14 (*908, p. 222; 938, p. 176). Central Nebraska Public Power and Irrigation District. NW¼NW¼ sec. 20, T. 13 N., R. 29 W.

Water level, in feet below measuring point, 1942

Feb. 3	a7.44	May 1	a5.80	July 8	a6.42	Oct. 1	a6.26
Mar. 5	a7.42	11	a5.79	Aug. 3	a7.02	Dec. 4	a6.87
Apr. 8	a7.02	June 2	a6.21	Sept.11	ab5.35		

U21 (*908, p. 222; 938, p. 176). A. E. Wheeler, NW¼NE¼ sec. 35, T. 13 N R. 29 W.

Water level, in feet below measuring point, 1942

Feb. 3	a11.71	May 1	a11.01	Aug. 3	a11.34	Oct. 1	a10.80
Mar. 5	a11.79	June 2	a11.10	Sept.11	ab9.95	Dec. 4	a11.58
Apr. 8	a11.63	July 8	a10.74				

U22 (*908, p. 223; 938, p. 176). Central Nebraska Public Power and Irrigation District. SW¼SW¼ sec. 31, T. 13 N., R. 28 W.

Water level, in feet below measuring point, 1942

Feb. 3	a6.74	May 1	a5.82	Aug. 3	a6.65	Oct. 1	a6.49
Mar. 5	a6.71	June 2	a6.45	Sept.11	a5.99	Dec. 4	a7.05
Apr. 8	a6.54	July 8	a6.24				

U32 (*908, p. 223; 938, p. 176). Central Nebraska Public Power and Irrigation District. NE¼NW¼ sec. 15, T. 12 N., R. 28 W.

Water level, in feet below measuring point, 1942

Feb. 4	a14.49	May 1	a13.77	Aug. 3	a14.14	Oct. 1	a13.77
Mar. 5	a14.29	June 2	a14.12	Sept.11	a13.28	Dec. 4	a14.04
Apr. 8	a14.21	July 8	ab13.25				

U33 (*908, p. 223; 938, p. 177). Central Nebraska Public Power and Irrigation District. SE¼SE¼ sec. 14, T. 12 N., R. 28 W.

Water level, in feet below measuring point, 1942

Feb. 4	a33.34	May 1	a32.48	Aug. 3	a32.02	Oct. 1	a31.61
Mar. 5	a33.04	June 2	a32.25	Sept.11	a31.75	Dec. 4	a31.27
Apr. 8	a32.73	July 8	a31.96				

U34 (*908, p. 223; 938, p. 177). Central Nebraska Public Power and Irrigation District. SE¼SE¼ sec. 20, T. 12 N., R. 27 W.

Water level, in feet below measuring point, 1942

Feb. 4	a17.10	May 1	a16.34	Aug. 3	a16.68	Oct. 1	a16.24
Mar. 3	a16.97	June 2	a16.63	Sept.11	ab15.90	Dec. 4	a16.26
Apr. 8	a16.90	July 8	a16.11				

U35 (*908, p. 224; 938, p. 177). Central Nebraska Public Power and Irrigation District. NE¼SE¼ sec. 28, T. 12 N., R. 27 W.

Water level, in feet below measuring point, 1942

Feb. 4	a6.25	May 1	a4.92	Aug. 3	a4.99	Oct. 1	a3.92
Mar. 5	a5.95	June 2	a5.04	Sept.11	ab3.69	Dec. 4	a4.35
Apr. 8	a5.57	July 8	a4.08				

a Measurement supplied through courtesy of Central Nebraska Public Power and Irrigation District.

b Highest observed stage in period of record.

U38 (*908, p. 224; 938, p. 177). Dr. Schneider. SW¼SE¼ sec. 26, T. 12 N., R. 27 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 3	a8.27	May 1	a7.27	Aug. 3	a8.35	Oct. 2	a7.52
Mar. 2	a8.21	June 3	a7.46	Sept.11	a7.26	Dec. 1	a7.72
Apr. 8	a7.87	July 6	ab6.97				

U40 (*908, p. 224; 938, p. 177). Central Nebraska Public Power and Irrigation District. NW¼NW¼ sec. 16, T. 11 N., R. 26 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	a17.64	May 1	a16.62	July 6	a14.83	Sept.11	a13.50
Feb. 3	a17.36	June 2	a16.07	15	a14.69	Oct. 2	ab13.35
Mar. 2	a17.19	17	a15.71	Aug. 3	a14.32	Dec. 4	a14.03
Apr. 8	a16.89						

U42 (*908, p. 224; 938, p. 177). Sheldon. SW¼SW¼ sec. 15, T. 11 N., R. 26 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	a17.65	Apr. 8	a16.65	July 6	a13.93	Oct. 2	a13.02
Feb. 3	a17.28	May 1	a16.22	Aug. 3	a12.98	Dec. 4	a14.19
Mar. 2	a17.12	June 3	a15.67	Sept.11	ab12.68		

U43 (*908, p. 225; 938, p. 177). SE¼SE¼ sec. 22, T. 11 N., R. 26 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	a36.94	Apr. 8	a35.78	July 6	a34.41	Oct. 2	ab33.10
Feb. 3	a36.45	May 1	a35.49	Aug. 3	a34.03	Dec. 4	a33.30
Mar. 2	a36.12	June 3	a34.95	Sept.11	a33.31		

U50 (*908, p. 225; 938, p. 177). Dr. Schneider. SW¼SE¼ sec. 26, T. 12 N., R. 26 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 3	a7.55	Apr. 8	a6.94	June 3	a6.69	Aug. 3	a7.74
Mar. 2	a7.49	May 1	a6.40	July 6	ab5.96		

Logan County

404 (*886, p. 326; 908, p. 225; 938, p. 178). University of Nebraska. NE¼NE¼ sec. 5, T. 17 N., R. 27 W. Water level, in feet above datum. 1942: Nov. 6, 99.86.

Loup County

234 (*817, p. 148; 840, p. 211; 845, p. 178; 886, p. 326; 908, p. 225). University of Nebraska. NW¼SE¼ sec. 25, T. 24 N., R. 19 W. Water level, in feet above datum, 1942: Nov. 11, 98.50.

345 (*817, p. 148; 840, p. 212; 845, p. 178; 886, p. 326; 908, p. 225; 938, p. 178). University of Nebraska. NE¼NE¼ sec. 22, T. 21 N., R. 18 W. Water level, in feet above datum, 1942: Nov. 11, 99.91.

422 (*886, p. 326; 908, p. 225; 938, p. 178). University of Nebraska. SW¼NW¼ sec. 26, T. 21 N., R. 18 W. Water level, in feet above datum, 1942: Nov. 11, 102.27.

McPherson County

254 (*817, p. 148; 840, p. 212; 845, p. 178; 886, p. 326; 908, p. 225; 938, p. 178). University of Nebraska. SE¼SE¼ sec. 16, T. 18 N., R. 31 W. Water level, in feet above datum, 1942: Nov. 6, 98.73.

a Measurement supplied through courtesy of Central Nebraska Public Power and Irrigation District.

b Highest observed stage in period of record.

Madison County

108 (*817, p. 148; 840, p. 212; 845, p. 178; 886, p. 326; 908, p. 225; 938, p. 178). F. Prauner. SW¼SE¼ sec. 32, T. 24 N., R. 2 W. Water level, in feet above datum, 1942: Oct. 29, 99.98.

109 (*817, p. 149; 840, p. 213; 908, p. 226; 938, p. 178). J. Bredehoft. NE¼NE¼ sec. 5, T. 23 N., R. 2 W. Water level, in feet above datum, 1942: Oct. 29, 100.14.

110 (*817, p. 149; 840, p. 212; 845, p. 178; 886, p. 326; 908, p. 226; 938, p. 178). A. Christian. NW¼SW¼ sec. 33, T. 22 N., R. 1 W. Water level, in feet above datum, 1942: Oct. 28, 100.23.

334 (*817, p. 149; 840, p. 212; 845, p. 178; 908, p. 226; 938, p. 178). O. Engelsgard. NW¼SW¼ sec. 34, T. 21 N., R. 4 W. Water level, in feet above datum. 1942: Oct. 30, 104.82.

Merrick County

42 (*817, p. 149; 840, p. 212; 845, p. 179; 886, p. 326; 908, p. 226; 938, p. 178). P. Pearson. SW¼SW¼ sec. 27, T. 16 N., R. 3 W. Water level, in feet above datum, 1942: Oct. 30, 101.58.

48 (*817, p. 149; 840, p. 212; 845, p. 179; 886, p. 326; 908, p. 226; 938, p. 178). H. Abel. NW¼NW¼ sec. 16, T. 14 N., R. 5 W. Water level, in feet above datum, 1942: Nov. 10, 101.12.

49 (*817, p. 149; 840, p. 212; 845, p. 179; 886, p. 326; 908, p. 226; 938, p. 178). H. Tsudy. NW¼SW¼ sec. 21, T. 14 N., R. 7 W. Water level, in feet above datum, 1942: Oct. 31, 100.20.

50 (*817, p. 150; 840, p. 212; 845, p. 179; 886, p. 326; 908, p. 226; 938, p. 178). C. Reeves. NE¼NW¼ sec. 33, T. 13 N., R. 7 W. Water level, in feet above datum, 1942: Nov. 10, 101.18.

GI200 (*886, p. 327; 908, p. 226; 938, p. 178). City of Grand Island. NW¼NE¼ sec. 18, T. 11 N., R. 8 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level
Feb. 20	a102.17	June 18	a102.67	Dec. 6	a103.08
Apr. 9	a102.50	July 17	a102.67		

GI201 (*886, p. 327; 908, p. 226; 938, p. 178). City of Grand Island. SW¼SE¼ sec. 19, T. 11 N., R. 9 W.

Water level, in feet above datum, 1942

Feb. 20	a101.67	June 18	a102.75	Dec. 6	ab103.42
Apr. 9	a102.34	July 17	a103.09		

Morrill County

84 (*817, p. 150; 840, p. 212; 845, p. 179; 886, p. 327; 908, p. 226; 938, p. 178). J. Jensen. SW¼NW¼ sec. 28, T. 22 N., R. 50 W. Water level, in feet above datum, 1942: Nov. 16, 100.36.

85 (*817, p. 150; 840, p. 213; 845, p. 179; 886, p. 327; 908, p. 226; 938, p. 178). State of Nebraska, Department of Roads and Irrigation. NE¼NE¼ sec. 32, T. 20 N., R. 50 W.

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a Measurement supplied through courtesy of Grand Island Water Department.

b Highest observed stage in period of record.

85. State of Nebraska, Department of Roads and Irrigation--Continued.

Water level, in feet above datum, 1942

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	.....	100.10	101.42	100.61	.....	99.25	99.42	99.65	.....	.....
2	.....	.....	.....	100.08	101.15	100.51	99.69	99.21	99.52	99.65	.....	.....
3	.....	100.17	.....	100.07	101.05	100.48	99.65	99.22	99.48	99.65	.....	.....
4	.....	.....	.....	100.03	100.90	100.43	99.64	99.45	99.45	99.62	.....	.....
5	.....	.....	99.97	100.05	101.00	100.40	99.63	99.49	99.45	99.63	.....	.....
6	.....	.....	.....	100.00	101.13	100.35	99.58	99.50	.....	99.62	.....	.....
7	100.07	.....	.....	100.02	100.98	100.27	99.53	99.49	99.44	99.63	.....	.....
8	.....	.....	.....	100.01	100.85	100.25	99.51	99.48	99.43	99.62	.....	.....
9	.....	.....	.....	99.95	100.75	100.58	99.45	99.46	99.48	99.62	.....	.....
10	.....	.....	.....	99.97	101.10	100.55	99.42	99.45	99.50	99.63	99.71	99.75
11	.....	.....	.....	99.93	101.08	100.45	99.42	99.44	99.52	99.63	.....	.....
12	100.05	.....	100.07	99.90	101.12	100.33	99.41	99.44	99.51	99.65	.....	.....
13	.....	.....	.....	99.93	101.93	100.27	99.41	99.44	99.51	99.67	.....	.....
14	.....	.....	.....	99.92	102.15	100.23	99.40	99.43	99.50	99.65	.....	.....
15	100.10	.....	.....	99.86	101.93	100.20	99.40	99.43	99.52	99.65	.....	.....
16	.....	.....	.....	99.87	101.65	100.15	99.37	99.42	99.48	99.69	.....	.....
17	.....	.....	.....	99.83	101.47	100.10	99.33	99.43	99.46	99.80	.....	.....
18	.....	.....	.....	99.81	101.31	100.07	99.30	99.42	99.47	99.81	.....	.....
19	100.15	.....	.....	99.92	101.22	100.05	99.27	99.41	99.47	99.80	.....	99.73
20	.....	.....	.....	99.99	101.15	100.04	99.27	99.42	99.53	99.80	99.73	.....
21	.....	.....	.....	100.03	101.10	99.90	99.26	99.42	99.55	99.78	.....	.....
22	.....	.....	.....	100.02	101.00	99.89	99.26	99.42	99.54	99.79	.....	.....
23	.....	.....	.....	99.99	100.92	99.90	99.25	99.45	99.55	99.77	.....	.....
24	.....	.....	.....	100.01	100.87	99.89	99.25	99.44	99.57	99.76	.....	.....
25	.....	.....	.....	100.50	100.18	99.88	99.25	99.45	99.61	99.75	.....	.....
26	.....	.....	.....	100.50	100.05	99.84	99.24	99.45	99.60	99.75	.....	.....
27	.....	.....	.....	100.57	100.87	99.83	99.28	99.43	99.60	99.75	.....	.....
28	.....	.....	.....	100.62	100.75	99.81	99.27	99.44	99.61	.....	.....	.....
29	.....	.....	.....	100.51	100.66	.....	99.25	99.44	99.63	.....	99.75	.....
30	.....	.....	.....	100.45	100.59	100.03	99.23	.....	99.62	.....	.....	.....
31	.....	.....	100.10	.....	100.67	.....	.....	.....	.....	99.76	.....	99.64

97 (*817, p. 151; 840, p. 214; 845, p. 180; 886, p. 328; 908, p. 227; 938, p. 179). F. Smith. NW¼NW¼ sec. 28, T. 20 N., R. 50 W. Water level, in feet above datum, 1942: Nov. 16, 100.29.

Nance County

43 (*817, p. 151; 840, p. 214; 845, p. 180; 886, p. 328; 908, p. 227; 938, p. 179). Greek Estate. NW¼SE¼ sec. 24, T. 17 N., R. 4 W. Water level, in feet above datum, 1942: Oct. 30, 101.21.

371 (*817, p. 151; 840, p. 214; 845, p. 180; 886, p. 328; 908, p. 228; 938, p. 179). W. Christiansen. SE¼NE¼ sec. 34, T. 17 N., R. 6 W. Water level, in feet above datum, 1942: Oct. 31, 98.22.

Nemaha County

11 (*817, p. 151; 840, p. 214; 845, p. 180; 886, p. 328; 908, p. 228; 938, p. 179) Mrs. Horm. NW¼SW¼ sec. 23, T. 5 N., R. 14 E. Water level, in feet above datum, 1942: Oct. 16, 107.32.

Nuckolls County

164 (*817, p. 152; 840, p. 215; 845, p. 180; 886, p. 329; 908, p. 228; 938, p. 179). F. Hornbussel. SE¼SE¼ sec. 2, T. 1 N., R. 7 W. No measurements made in 1942.

165 (*817, p. 152; 840, p. 215; 845, p. 180; 886, p. 329; 908, p. 228; 938, p. 179). E. Dillon. SE¼SE¼ sec. 8, T. 2 N., R. 5 W. No measurements made in 1942.

393 (*817, p. 152; 840, p. 215; 845, p. 180; 886, p. 329; 908, p. 228; 938, p. 179). W. Statz NE¼NE¼ sec. 26, T. 4 N., R. 7 W. No measurements made in 1942.

407 (*886, p. 329; 908, p. 228). University of Nebraska. SW¼SW¼ sec. 36, T. 1 N., R. 7 W. No measurements made in 1942.

Otoe County

8a (Replaces well 8 listed in 817, 840, 845, 886, 908, and 938, which was filled in August 1937). University of Nebraska. NW¼NW¼ sec. 3, T. 8 N., R. 10 E. Unused bored observation well situated about 200 feet west of old well 8, diameter 1½ inches, depth 22 feet. Measuring point, top of pip 2 feet above land surface, 1.12 feet below measuring point, and 111.02 feet above datum. Water level, July 6, 1940, 11.73 feet below measuring point. Water level, in feet above datum: July 6, 1940, 99.29; Oct. 17, 1940, 100. Oct. 7, 1941, 101.77; Oct. 20, 1942, a/ 102.92.

9 (*817, p. 152; 840, p. 215; 845, p. 181; 886, p. 330; 908, p. 228; 938, p. 180). W. Gellerman. SE¼SE¼ sec. 7, T. 8 N., R. 11 E. Water level in feet above datum, 1942: Oct. 16, 103.91.

10 (*817, p. 153; 840, p. 215; 845, p. 181; 886, p. 330; 908, p. 228; 938, p. 180). L. Damme. NE¼NE¼ sec. 35, T. 7 N., R. 12 E. Water level, in feet above datum, 1942: Oct. 16, a/ 103.19.

Pawnee County

4 (*777, p. 92; 817, p. 153; 840, p. 215; 845, p. 181; 886, p. 330; 908, p. 228; 938, p. 180). E. Hunzeker. NE¼NE¼ sec. 8, T. 2 N., R. 11 E. Water level, in feet above datum, 1942: Oct. 16, 105.92.

Perkins County

151 (*817, p. 153; 840, p. 215; 845, p. 181; 886, p. 330; 908, p. 228; 938, p. 180). A. Lagler, SE¼SE¼ sec. 35, T. 11 N., R. 39 W. Water level, in feet above datum, 1942: Nov. 19, 103.20.

Phelps County

157 (*817, p. 153; 840, p. 215; 845, p. 181; 886, p. 330; 908, p. 228; 938, p. 180). Western Public Service Co. NW¼NE¼ sec. 4, T. 5 N., R. 18 W. No measurements made in 1942.

275 (*817, p. 154; 840, p. 216; 845, p. 181; 886, p. 330; 908, p. 229; 938, p. 180). F. Skiles. SW¼NW¼ sec. 24, T. 8 N., R. 17 W. Water level, in feet above datum, 1942: Nov. 9, 101.26.

276 (*817, p. 154; 840, p. 216; 886, p. 330; 908, p. 229; 938, p. 180). W. Bamford. NW¼SE¼ sec. 19, T. 8 N., R. 17 W. Water level, in feet above datum, 1942: Nov. 9, 102.04.

a Highest observed stage in period of record.

277 (*817, p. 155; 840, p. 216; 845, p. 181; 886, p. 330; 908, p. 229; 938, p. 180). University of Nebraska. SW¼SE¼ sec. 9, T. 8 N., R. 18 W. Water level, in feet above datum, 1942: Nov. 9, 100.62.

Pierce County

70 (817, p. 155; 840, p. 216; 845, p. 181; 886, p. 330; 908, p. 229; 938, p. 180). Village of Foster. SE¼NE¼ sec. 33, T. 27 N., R. 3 W. Water level, in feet above datum, 1942: Oct. 27, 99.94.

Platte County

39 (*817, p. 155; 840, p. 216; 845, p. 181; 886, p. 330; 908, p. 229; 938, p. 180). A. Grossnicklaus. NE¼NW¼ sec. 29, T. 18 N., R. 1 W. No measurements made in 1942.

40 (*817, p. 156; 840, p. 216; 845, p. 181; 886, p. 330; 908, p. 229; 938, p. 180). E. Schacher. SE¼SW¼ sec. 2, T. 17 N., R. 2 W. Water level, in feet above datum, 1942: Oct. 28, 100.39.

41 (*817, p. 156; 840, p. 216; 845, p. 181; 886, p. 330; 908, p. 229; 938, p. 180). H. Ernst. NW¼NE¼ sec. 12, T. 16 N., R. 2 W. Water level, in feet above datum, 1942: Oct. 30, 100.59.

342 (*817, p. 156; 840, p. 216; 845, p. 181; 886, p. 330; 908, p. 229; 938, p. 180). University of Nebraska. NW¼SW¼ sec. 18, T. 20 N., R. 1 E. Water level, in feet above datum, 1942: Oct. 28, 99.64.

368 (*817, p. 156; 840, p. 216; 845, p. 181; 886, p. 330; 908, p. 229; 938, p. 180). L. Hither. SE¼SE¼ sec. 13, T. 20 N., R. 2 W. Water level, in feet above datum, 1942: Oct. 28, 104.58.

Redwillow County

137 (*817, p. 156; 840, p. 217; 845, p. 181; 886, p. 330; 908, p. 229; 938, p. 180). F. Duckworth. SW¼NE¼ sec. 8, T. 3 N., R. 27 W. Water level, in feet above datum, 1942: Nov. 19, 100.58.

139 (*817, p. 157; 840, p. 217; 845, p. 181; 886, p. 330; 908, p. 229; 938, p. 180). F. Cain. NE¼NW¼ sec. 19, T. 3 N., R. 30 W. No measurement made in 1942.

179 (*817, p. 157; 840, p. 217; 845, p. 181; 886, p. 331; 908, p. 229; 938, p. 180). J. Clamp. NE¼SW¼ sec. 33, T. 2 N., R. 29 W. No measurements made in 1942.

Richardson County

1 (*908, p. 229). Fred Metzner. SE¼SE¼ sec. 29, T. 1 N., R. 17 E. No measurements made in 1942.

2 (*908, p. 230). Approximately center of sec. 16, T. 1 N., R. 16 E. No measurements made in 1942:

3 (*908, p. 230). Clarence Schatz. SE¼SE¼ sec. 10, T. 3 N., R. 16 E. No measurements made in 1942.

4 (*908, p. 230). Mrs. Della Goolsley. SE¼SE¼ sec. 10, T. 3 N., R. 16 E. No measurements made in 1942.

5 (*817, p. 157; 840, p. 217; 845, p. 181; 886, p. 331; 908, p. 230; 938, p. 181). W. Hogue. NW¼NE¼ sec. 27, T. 2 N., R. 14 E. Water level, in feet above datum, 1942: Oct. 16, 103.84.

6 (*908, p. 230). Will Yoesel. NE¼SW¼ sec. 3, T. 1 N., R. 17 E. No measurements made in 1942.

7 (*817, p. 157; 840, p. 217; 845, p. 181; 908, p. 230; 938, p. 181). University of Nebraska. NW¼NW¼ sec. 16, T. 1 N., R. 17 E. No measurements made in 1942.

8 (*908, p. 231). F. W. Burgett. SE¼SE¼ sec. 19 (may be SW¼SW¼ sec. 20) T. 1 N., R. 14 E. No measurements made in 1942.

9 (*908, p. 231). Fowle Realty Co. SW¼SE¼ sec. 19, T. 1 N., R. 16 E. No measurements made in 1942.

10 (*908, p. 231). Ben Stalder. NW¼NW¼ sec. 27, T. 1 N., R. 15 E. No measurements made in 1942.

11 (*908, p. 231). George Riden. NE¼SE¼ sec. 32, T. 1 N., R. 15 E. No measurements made in 1942.

12 (*908, p. 231). E. J. Ahearn. NE¼NW¼ sec. 24, T. 3 N., R. 15 E. No measurements made in 1942.

13 (*908, p. 232). Warren Gergens. SE¼SE¼ sec. 23, T. 3 N., R. 13 E. No measurements made in 1942.

14 (*908, p. 232). L. Heineman. NW¼SE¼ sec. 16, T. 2 N., R. 15 E. No measurements made in 1942.

15 (*908, p. 232). Mrs. Martna Remmers. NW¼NW¼ sec. 29, T. 3 N., R. 17 E. No measurements made in 1942.

408 (*886, p. 331; 908, p. 232; 938, p. 181). S. A. Miles. NW¼SW¼ sec. 11, T. 1 N., R. 14 E. Water level, in feet above datum, 1942: Oct. 16, 103.04.

410 (*908, p. 232). University of Nebraska. SE¼SW¼ sec. 4, T. 2 N., R. 13 E. Water level, in feet above datum, 1942: Oct. 16, a/ 104.52

416 (*886, p. 331; 908, p. 233; 938, p. 180). Mrs. Wittler. NW¼NE¼ sec. 22, T. 2 N., R. 14 E. Water level, in feet above datum, 1942: Oct. 16, 112.44.

417 (*908, p. 233). University of Nebraska. NW¼NW¼ sec. 19, T. 1 N., R. 16 E. No measurements made in 1942.

418 (*886, p. 331; 908, p. 233; 938, p. 181). University of Nebraska. SE¼NE¼ sec. 13, T. 1 N., R. 15 E. Well destroyed; measurements discontinued.

419 (*886, p. 331; 908, p. 233; 938, p. 181). University of Nebraska. SE¼SE¼ sec. 12, T. 1 N., R. 15 E. Water level, in feet above datum, 1942: Oct. 16, a/ 103.21.

Rock County

117 (*817, p. 158; 840, p. 217; 845, p. 181; 886, p. 331; 908, p. 233; 938, p. 181). University of Nebraska. NW¼SE¼ sec. 8, T. 30 N., R. 17 W. No measurements made in 1942.

198 (*817, p. 158; 840, p. 217; 908, p. 233). H. Gallagher. SE¼SE¼ sec. 3, T. 30 N., R. 19 W. No measurements made in 1942.

Saline County

194 (*817, p. 158; 840, p. 217; 845, p. 181; 886, p. 332; 908, p. 233; 938, p. 181). Prybl Estate. NE¼NE¼ sec. 24, T. 6 N., R. 1 E. Water level, in feet above datum, 1942: Oct. 22 a/ 104.82.

341 (*817, p. 158; 840, p. 217; 845, p. 181; 886, p. 332; 908, p. 233; 938, p. 181). A. Kohout. NE¼NE¼ sec. 30, T. 7 N., R. 3 E. Water level, in feet above datum, 1942: Oct. 22, 98.62.

Sarpy County

26a (*938, p. 181). Replaces old well 26. University of Nebraska. NE¼NW¼ sec. 26, T. 13 N., R. 13 E. No measurements made in 1942.

a Highest observed stage in period of record.

27 (*817, p. 159; 840, p. 218; 845, p. 182; 886, p. 332; 908, p. 234). Chicago, Burlington & Quincy Railroad. NE¼SW¼ sec. 27, T. 13 N., R. 13 E. Water level, in feet above datum, 1942: Oct. 20, 100.04.

323 (*817, p. 159; 840, p. 218; 845, p. 182; 886, p. 332; 908, p. 234; 938, p. 181). S. Arbuthnot. SW¼SW¼ sec. 26, T. 14 N., R. 12 E. Water level, in feet above datum, 1942: Oct. 20, 96.18.

Saunders County

19 (*817, p. 159; 840, p. 218; 845, p. 182; 886, p. 332; 908, p. 234; 938, p. 181). Chicago, Burlington & Quincy Railroad. SW¼NW¼ sec. 29, T. 14 N., R. 8 E. No measurements made in 1942.

21 (*817, p. 159; 840, p. 218; 845, p. 182; 886, p. 332; 908, p. 234; 938, p. 181). City of Lincoln. SE¼SE¼ sec. 11, T. 13 N., R. 9 E. Water level, in feet above datum, 1942: Oct. 22, 101.52.

22 (*817, p. 159; 840, p. 218; 845, p. 182; 886, p. 332; 908, p. 234; 938, p. 181). City of Lincoln. SE¼SE¼ sec. 11, T. 13 N., R. 9 E. Water level, in feet above datum, 1942: Oct. 22, 99.37.

331 (*817, p. 160; 840, p. 218; 845, p. 182; 886, p. 332; 908, p. 234; 938, p. 181). Union Pacific Railroad. SE¼SW¼ sec. 35, T. 14 N., R. 5 E. Water level, in feet above datum, 1942: Oct. 22, 102.93.

Scotts Bluff County

438 (*840, p. 228; 845, p. 190; 886, p. 332; 908, p. 234; 938, p. 181). University of Nebraska. NE¼SE¼ sec. 21, T. 23 N., R. 56 W. Water level, in feet above datum, 1942: Nov. 15, 100.94.

439 (*840, p. 228; 845, p. 191; 886, p. 332; 908, p. 234; 938, p. 181). University of Nebraska. SE¼NE¼ sec. 28, T. 23 N., R. 56 W. Water level, in feet above datum, 1942: Nov. 15, 100.62.

440 (*840, p. 228; 845, p. 191; 886, p. 332; 908, p. 234; 938, p. 181). University of Nebraska. SE¼SE¼ sec. 28, T. 23 N., R. 56 W. Water level, in feet above datum, 1942: Nov. 15, 100.55.

441 (*840, p. 229; 845, p. 191; 886, p. 332; 908, p. 234; 938, p. 181). University of Nebraska. NE¼NE¼ sec. 4, T. 22 N., R. 56 W. Well destroyed; measurements discontinued.

442 (*840, p. 229; 845, p. 191; 886, p. 332; 908, p. 234; 938, p. 181) University of Nebraska. SE¼SE¼ sec. 4, T. 22 N., R. 56 W. Water level, in feet above datum, 1942: Nov. 15 a/ 104.66.

502. Harry Long. NW¼SW¼ sec. 22, T. 23 N., R. 57 W. Drilled well, diameter 24 inches, depth 42 feet. Old measuring point, top of 4-by-6 sill across curb, 0.3 foot above land surface. Water level, Nov. 8, 1940, 11.91 feet below measuring point. New measuring point beginning Nov. 16, 1942, top of small hole in wooden plank in platform southeast of pump base, 0.75 foot above land surface and 0.45 foot above old measuring point. Water level, Nov. 16, 1942, 15.02 feet below measuring point.

Seward County

171 (*817, p. 160; 840, p. 229; 845, p. 192; 886, p. 332; 908, p. 234; 938, p. 182). Kilpatrick Estate. NE¼NE¼ sec. 22, T. 11 N., R. 3 E. Water level, in feet above datum, 1942: Oct. 22, 100.01.

172 (*817, p. 160; 840, p. 229; 845, p. 192; 886, p. 332; 908, p. 234; 938, p. 182). W. Langworthy. SE¼NE¼ sec. 30, T. 11 N., R. 2 E. Water level, in feet above datum, 1942: Oct. 22, 100.45.

a/ Irrigation waste water in nearby road ditch.

Sheridan County

120 (*817, p. 161; 840, p. 229; 845, p. 192; 908, p. 235; 938, p. 182). C. Johnson. SE¼SE¼ sec. 5, T. 31 N., R. 46 W. No measurements made in 1942.

217 (*817, p. 161; 840, p. 229; 845, p. 192; 886, p. 333; 908, p. 235; 938, p. 182). University of Nebraska. NE¼SE¼ sec. 34, T. 24 N., R. 41 W. Water level, in feet above datum, 1942: Nov. 13, 98.48.

376 (*817, p. 161; 840, p. 230; 845, p. 192; 886, p. 333; 908, p. 235; 938, p. 182). University of Nebraska. SE¼SE¼ sec. 10, T. 31 N., R. 44 W. Water level, in feet above datum, 1942: Aug. 23, 99.63.

379 (*817, p. 161; 840, p. 230; 845, p. 192; 886, p. 333; 908, p. 235; 938, p. 182). University of Nebraska. SE¼SE¼ sec. 8, T. 24 N., R. 45 W. Water level, in feet above datum, 1942: Nov. 13, a/ 101.38.

432 (*886, p. 333; 908, p. 235; 938, p. 182). University of Nebraska. SE¼NE¼ sec. 8, T. 31 N., R. 46 W. Water level, in feet above datum, 1942: Aug. 23, 101.74.

Sherman County

58 (*817, p. 162; 840, p. 230; 845, p. 192; 886, p. 333; 908, p. 235; 938, p. 182). J. Kociemba. NE¼SE¼ sec. 24, T. 15 N., R. 15 W. New measuring point beginning Nov. 12, 1942, after 4-foot length of pipe was installed at land surface, top of 1¼-inch pipe, 4.7 feet above land surface, 4.1 feet above old measuring point, and 111.20 feet above datum. Water level, Nov. 12, 1942, 9.70 feet below measuring point. Water level, in feet above datum, 1942: Nov. 12 a/ 101.50.

Sioux County

81 (*817, p. 162; 840, p. 230; 845, p. 192; 886, p. 333; 908, p. 235; 938, p. 182). J. Cook. SW¼SW¼ sec. 33, T. 29 N., R. 55 W. Water level, in feet above datum, 1942: Nov. 15, 99.74.

125 (*817, p. 162; 840, p. 230; 845, p. 192; 886, p. 333; 908, p. 235). Village of Harrison. NE¼SE¼ sec. 10, T. 31 N., R. 56 W. Water level, in feet above datum, 1942: Nov. 15, 98.35.

377 (*817, p. 163; 840, p. 231; 845, p. 192; 886, p. 333; 908, p. 235; 938, p. 182). University of Nebraska. NW¼SW¼ sec. 6, T. 28 N., R. 55 W. Water level, in feet above datum, 1942: Nov. 15, 100.91.

Stanton County

421 (*886, p. 333; 908, p. 235; 938, p. 182). University of Nebraska. NW¼NW¼ sec. 11, T. 23 N., R. 3 E. Water level, in feet above datum, 1942: Oct. 28, 100.17.

Thayer County

166 (*817, p. 163; 840, p. 231; 845, p. 193; 886, p. 334; 908, p. 235; 938, p. 182). H. Eggert. SE¼NE¼ sec. 31, T. 3 N., R. 2 W. No measurements made in 1942.

187 (*817, p. 163; 840, p. 231; 845, p. 193; 886, p. 334; 908. p. 235; 938, p. 182). L. Williams. SW¼SW¼ sec. 4, T. 4 N., R. 4 W. No measurements made in 1942.

452 (*886, p. 334; 908, p. 235; 938, p. 182). University of Nebraska. NW¼NE¼ sec. 22, T. 4 N., R. 4 W. No measurements made in 1942.

Thomas County

212 (*817, p. 163; 840, p. 231; 845, p. 193; 886, p. 334; 908, p. 236). University of Nebraska. NE¼SE¼ sec. 9, T. 23 N., R. 28 W. Water level, in feet above datum, 1942: Nov. 12, 99.91.

a Highest observed stage in period of record.

213 (*817, p. 164; 840, p. 231; 845, p. 193; 886, p. 334; 908, p. 236; 938, p. 182). University of Nebraska. NW¼NE¼ sec. 20, T. 24 N., R. 30 W. Water level, in feet above datum, 1942: Nov. 12, 99.88.

Thurston County

60 (*817, p. 164; 840, p. 231; 908, p. 236; 938, p. 182). S. French. SW¼SE¼ sec. 26, T. 25 N., R. 6 E. Water level, in feet above datum, 1942: Oct. 28, 98.63.

102 (*817, p. 164; 840, p. 232, 845, p. 193; 886, p. 334; 908, p. 236). University of Nebraska. NW¼NW¼ sec. 12, T. 26 N., R. 5 E. No measurements made in 1942.

103 (*817, p. 164; 840, p. 232; 845, p. 193; 886, p. 334; 908, p. 236; 938, p. 182). D. Leap. SW¼NW¼ sec. 13, T. 26 N., R. 8 E. Water level, in feet above datum, 1942: Oct. 26, 99.01.

Valley County

54 (*817, p. 164; 840, p. 232; 845, p. 193; 886, p. 334; 908, p. 236; 938, p. 183). E. Esterbrook. NW¼NE¼ sec. 26, T. 17 N., R. 16 W. No measurements made in 1942.

56 (*817, p. 165; 840, p. 232; 845, p. 193; 886, p. 334; 908, p. 236; 938, p. 183). C. Verzal. SW¼SE¼ sec. 6, T. 19 N., R. 14 W. Water level, in feet above datum, 1942: Nov. 11, a/ 105.07.

57 (*817, p. 165; 840, p. 232; 845, p. 193; 886, p. 334; 908, p. 236; 938, p. 183). W. T. Hutchins (formerly owned by I. A. Manchester). SE¼SE¼ sec. 23, T. 18 N., R. 13 W. New measuring point beginning July 12, 1938, top of steel "I" beam under base of pump, 1.65 feet above land surface, 1.65 feet above old measuring point, and 124.22 feet above datum, Water level, July 12, 1938, 24.89 feet below measuring point. Water level, in feet above datum, 1942: a,b/ 110.16.

Washington County

32 (*817, p. 165; 840, p. 232; 845, p. 193; 886, p. 334; 908, p. 236; 938, p. 183). A. Matzen. NE¼SE¼ sec. 5, T. 17 N., R. 11 E. Water level, in feet above datum, 1942: Oct. 20, 102.04.

33 (*817, p. 165; 840, p. 232; 845, p. 193; 886, p. 334; 908, p. 236; 938, p. 183). E. Jensen. NE¼NE¼ sec. 3, T. 18 N., R. 11 E. Water level, in feet above datum, 1942: Oct. 20 a/ 101.05.

Wayne County

100 (*817, p. 165; 840, p. 232; 845, p. 193; 886, p. 334; 908, p. 236; 938, p. 183). W. Andrews. NW¼SW¼ sec. 13, T. 26 N., R. 3 E. Water level, in feet above datum, 1942: Oct. 27, 103.36.

Webster County

161 (*817, p. 166; 840, p. 232; 845, p. 193; 886, p. 336; 908, p. 236; 938, p. 183). R. Adams. NW¼SW¼ sec. 34, T. 3 N., R. 10 W. Water level, in feet above datum, 1942: Nov. 25, 98.29.

162 (*817, p. 166; 840, p. 233; 845, p. 193). H. Somerhalder. NW¼SE¼ sec. 36, T. 2 N., R. 10 W. Old well abandoned and new irrigation well installed about 100 feet southeast in 1939. Measuring point beginning Dec. 11, 1939, top of egg-shaped hole in base of turbine pumphead, east side; 0.5 foot above land surface, 2.44 feet above old measuring point on original well, and 127.36 feet above datum, Water level, Dec. 11, 1939, 27.78 feet below measuring point. Water levels, in feet above datum: Dec. 11, 1939, 99.58; Apr. 10, 1940, 99.70; Nov. 25, 1942, 99.62.

a Highest observed stage in period of record.

b Water level in well affected by operation of North Loup River Public Power and Irrigation District Project.

163 (*817, p. 166; 840, p. 233; 845, p. 193; 886, p. 336; 908, p. 236; 938, p. 183). H. Pedersen. SE¼NW¼ sec. 24, T. 2 N., R. 9 W. Water level, in feet above datum, 1942: Nov. 25, 99.56.

Wheeler County

204 (*817, p. 166; 840, p. 233; 845, p. 193; 886, p. 336; 908, p. 237; 938, p. 183). University of Nebraska. NW¼NW¼ sec. 12, T. 23 N., R. 11 W. Water level, in feet above datum, 1942: Oct. 30, 100.36.

205 (*817, p. 167; 840, p. 233; 845, p. 193; 886, p. 336; 908, p. 237; 938, p. 183). University of Nebraska. SE¼NE¼ sec. 22, T. 21 N., R. 12 W. No measurements made in 1942.

York County

167 (*817, p. 167; 840, p. 233; 845, p. 193; 908, p. 237; 938, p. 183). H. Moore. NW¼SE¼ sec. 32, T. 11 N., R. 3 W. New measuring point beginning Jan. 21, 1941, top of iron flange on collar 12 inches in diameter, west side 2.15 feet above land surface, 1.15 feet above old measuring point, and 163.[illegible] feet above datum. Water level, Jan. 21, 1941, 64.11 feet below measuring point. Water level, in feet above datum: Jan. 21, 1941, [a] 99.30; Oct. 30, 1941, [b] 99.44; Nov. 10, 1942, 99.51.

225 (*817, p. 167; 840, p. 233; 845, p. 193; 908, p. 237; 938, p. 183). C. Miller. SW¼NW¼ sec. 15, T. 19 N., R. 2 W. No measurements made in 1942

a Erroneously published in Water-Supply Paper 938 (p. 183) as 98.15.
b Erroneously published in Water-Supply Paper 938 (p. 183) as 98.29.

NORTH DAKOTA

By A. L. Greenlee

PROGRAM OF WORK

The cooperative ground-water investigation of the Geological Survey, United States Department of the Interior, and the North Dakota Geological Survey carried on during the years 1937-41, [1] was continued in 1942. Periodic observations were made on 176 wells, of which 7 were equipped with automatic recorders, 60 were measured weekly or semimonthly by local observers (7 of the 60 through the courtesy of city, State, and Federal agencies) and 109 were measured once, twice or three times during the year. A total of about 5,931 individual determinations of water level are included in this report. The distribution of the wells is shown in figure 9.

The detailed ground-water investigation of the area south of Oakes, in Dickey County, was continued, and a reconnaissance was made of an area in the vicinity of Camp Grafton-Fort Totten, in Ramsey and Benson Counties. A preliminary report of this reconnaissance is filed in typewritten form in the offices of the Federal Geological Survey in Washington, D. C., and the North Dakota Geological Survey in Grand Forks. The ground-water investigation of Pembina County, which was begun in 1941, was also continued in 1942. A discussion of the investigation in the Fargo area will be found under Cass County.

WATER LEVELS IN 1942

The following table shows the average monthly water levels from September 1937 to December 1942. The averages for 1942, were computed from the records of 22 wells. Figure 10, shows that the rise in water levels that began in March 1941 continued during 1942. The average of the stages reached in 1942 is the highest in the 5-year period of record and is probably the highest in the last 10 years. This is suggested by the records of wells near Denbigh, which have been observed since 1933. (See Water-Supply Paper 938, p. 186). The precipitation in North Dakota in 1942 was about 111 percent of normal.

1/ See Water-Supply Papers 840, 845, 886, 908, and 938.

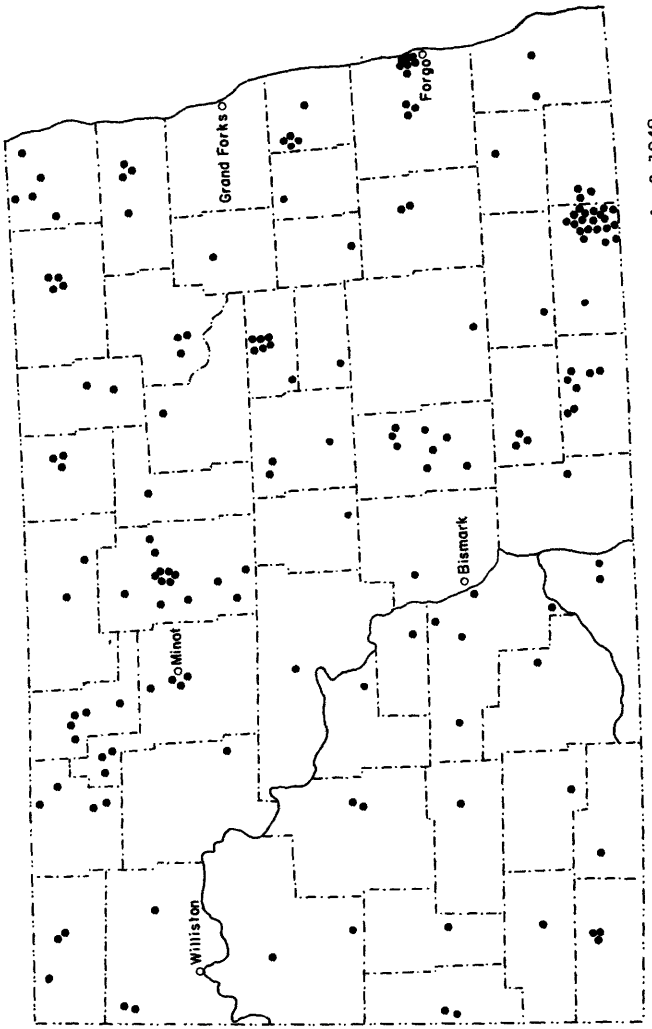

Figure 9.--Distribution of observation wells in North Dakota at end of 1942.

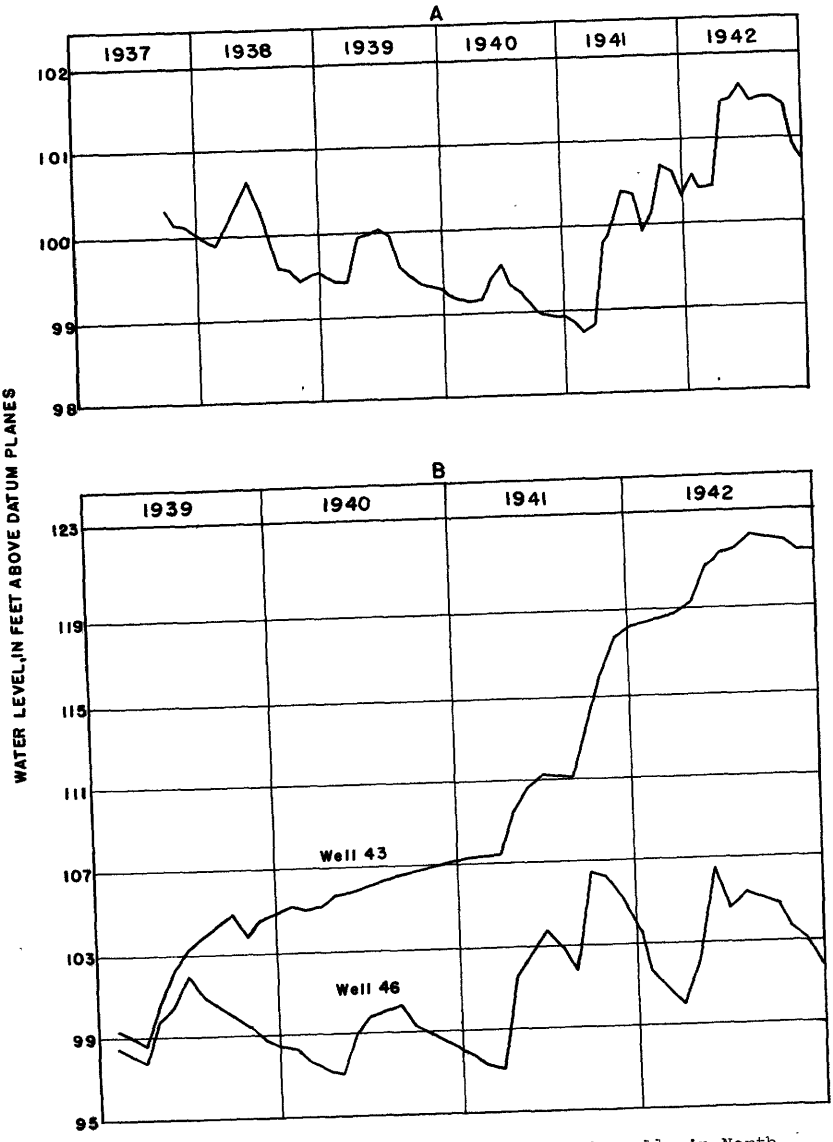

Figure 10.--A, Average of the water levels in wells in North Dakota; B, Water levels in wells at Langdon, N. Dak.

Average monthly water levels, in feet above assumed datum planes, in observation wells in North Dakota, 1937-42

Year	Jan.	Feb.	Mar.	Apr.	May	June
1937	.....	.....	.....	.....	.....	.....
1938	99.97	99.93	100.12	100.41	100.68	100.35
1939	99.49	99.38	99.38	99.95	99.98	100.07
1940	99.24	99.14	99.13	99.16	99.43	99.52
1941	98.84	98.74	98.83	99.76	99.97	100.43
1942	100.68	100.41	100.43	101.40	101.45	101.67

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.
1937	.....	.....	100.31	100.19	100.13	100.05
1938	99.99	99.61	99.59	99.44	99.51	99.54
1939	99.89	99.62	99.41	99.37	99.34	99.31
1940	99.34	99.24	99.07	98.96	98.95	98.92
1941	100.39	99.89	100.16	100.73	100.64	100.26
1942	101.42	101.48	101.48	101.35	100.98	100.73

The recovery of the water levels in wells near Langdon, Cavalier County, since pumping stopped is particularly impressive. Rises of water level of as much as 23 feet have occurred in some of the wells in the last few years, as shown by the graphs of wells 43 and 46 (fig. 10, B). Further information on these wells is given under Cavalier County.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Observation wells included in this report are listed alphabetically by counties and numerically within each county. Complete descriptions are given only for newly added wells. The water level in each well has been expressed in feet below a fixed measuring point or in feet above an assumed datum plane.

The numbers in parentheses immediately following the numbers of the wells refer to the water-supply papers in which earlier records appear and the appropriate pages in those papers. An asterisk before the number of a water-supply paper indicates that the well is described in that paper.

Adams County

1 (*908,p.240; 938,p.187). Mrs. Halverson, SW¼SW¼ sec. 14, T. 130 N., R. 97 W. Water level, in feet below measuring point, 1942: Aug. 13, 51.66.

Barnes County

97 (*886,p.531; 908,p.240; 938,p.187). H. H. Wilkins. NW¼SW¼ sec. 5, T. 138 N., R. 57 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	98.40	Feb. 7	98.50	Mar. 7	98.43	Apr. 4	98.50
10	98.45	14	98.55	14	98.41	11	98.46
17	98.41	21	98.24	21	98.50	18	98.42
24	98.40	28	98.43	28	98.52	25	98.41
31	98.41						

97 (*886,p.531; 908,p.240; 938,p.187). H. H. Wilkins--Continued.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 2	98.43	July 4	98.49	Sept. 5	98.58	Nov. 7	98.57
9	98.42	11	98.52	12	98.54	14	98.56
16	98.41	18	98.51	19	98.60	21	98.53
23	98.45	25	98.46	26	98.58	28	98.53
30	98.46	Aug. 1	98.41	Oct. 3	98.56	Dec. 5	98.54
June 6	98.52	8	98.45	10	98.53	12	98.54
13	98.51	15	98.45	17	98.53	19	98.55
20	98.48	22	98.44	24	98.54	26	98.55
27	98.48	29	98.48	31	98.58		

98 (*886,p.531; 908,p.240; 938,p.188). H. H. Wilkins. NW¼SW¼ sec. 5, T. 138 N., R. 57 W.

Water level, in feet above datum, 1942

Jan. 3	103.23	Apr. 4	103.99	July 4	103.40	Oct. 3	102.68
10	103.42	11	103.85	11	102.27	10	102.64
17	103.52	18	103.77	18	103.19	17	102.63
24	103.48	25	102.72	25	102.90	24	102.60
31	103.29	May 2	102.81	Aug. 1	102.69	31	102.58
Feb. 7	103.23	9	102.69	8	102.77	Nov. 7	102.60
14	103.42	16	102.60	15	103.02	14	102.43
21	103.57	23	102.81	22	103.06	21	102.38
28	103.56	30	103.58	29	103.13	28	102.36
Mar. 7	103.63	June 6	103.40	Sept. 5	102.10	Dec. 5	102.36
14	103.67	13	103.27	12	102.33	12	102.38
21	103.77	20	103.22	19	102.58	19	102.37
28	103.90	27	103.27	26	102.63	26	102.36

Benson County

111 (*908,p.240; 938,p.188). H. Biltingsrud. NE¼SE¼ sec. 36, T. 156 N., R. 69 W. Water level, in feet below measuring point, 1942: Aug. 18, 16.68.

Billings County

88 (*845,p.347; 886,p.531; *908,p.240; 938,p.188). Roosevelt National Park. SW¼SE¼ sec. 32, T. 140 N., R. 100 W.

Water level, in feet above datum, 1942

Jan. 3	99.92	Feb. 21	99.90	Apr. 11	99.93	May 30	100.19
10	99.90	28	99.89	18	99.93	June 6	100.31
17	99.90	Mar. 7	99.90	25	99.95	13	100.44
24	99.90	14	99.91	May 2	99.98	20	100.02
31	99.90	21	99.91	9	100.00	27	100.54
Feb. 7	99.90	28	99.91	16	100.09		
14	99.90	Apr. 4	99.92	23	100.15		

Bottineau County

60 (*840,p.320; 845,p.347; 886,p.531; 908,p.241; 938,p.188). Federal Land Bank. SE¼NE¼ sec. 23, T.160 N., R.76 W. Water level, in feet above datum, 1942: Aug. 19, 101.55.

112 (*908,p.241; 938,p.188) Frank Churchill. SE¼SE¼ sec. 25, T. 161 N., R. 78 W. Water level, in feet below measuring point, 1942: Aug. 19, 15.02.

Bowman County

83 (*908,p.241; 938,p.189). City of Bowman. NE¼NW¼ sec. 11, T. 131 N., R. 102 W. Water levels, in feet above datum, 1942: Feb. 8, 101.10; Feb. 15, 101.08.

84 (*908,p.242; 938,p.189). City of Bowman. NE¼SW¼ sec. 11, T. 131 N., R. 102 W. Water levels, in feet above datum, 1942: Feb. 8, 102.38; Feb. 15, 102.39.

85 (*908,p.242; 938, p. 189). City of Bowman. NE¼SW¼ sec. 11, T. 131 N., R. 102 W. Water levels, in feet above datum, 1942: Feb. 8 102.32; Feb. 15, 102.34.

Burke County

52 (*938, p. 189). Fish and Wildlife Service, U. S. Department of the Interior. SW¼SE¼ sec. 1, T. 163 N., R. 89 W. Water level, in feet below measuring point, 1942: Aug. 16, 13.60.

66 (*840,p. 320; 845,p. 348; 886,p. 532; 908, p. 243; 938, p. 189). Mrs. P. M. Peterson. SE¼SE¼ sec. 5, T. 162 N., R. 89 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	100.55	Apr. 4	100.64	July 4	100.67	Oct. 3	100.38
10	100.55	11	100.64	11	100.63	12	100.36
17	100.55	18	100.66	18	100.59	17	100.37
24	100.55	25	100.67	25	100.53	24	100.34
31	100.55	May 2	100.67	Aug. 1	100.49	31	100.34
Feb. 7	100.55	10	100.66	8	100.46	Nov. 7	100.34
14	100.56	18	100.66	17	100.53	14	100.34
24	100.57	25	100.62	22	100.50	21	100.38
28	100.57	30	100.63	29	100.50	28	100.32
Mar. 7	100.59	June 5	100.65	Sept. 5	100.45	Dec. 5	100.32
14	100.58	13	100.64	14	100.42	12	100.32
21	100.61	20	100.63	19	100.41	19	100.32
28	100.62	27	100.66	26	100.40	26	100.33

115 (*908, p. 243; 938, p. 190). Fish and Wildlife Service, U. S. Department of the Interior. SE¼SW¼ sec. 21, T. 160 N., R. 91 W. Water level, in feet above datum, 1942: Aug. 16, 99.46.

116 (*908, p. 243; 938, p. 190) Fish and Wildlife Service, U. S. Department of the Interior. SE¼SE¼ sec. 4, T. 159 N., R. 91 W. Water level, in feet above datum, 1942: Aug. 16, 99.67.

Burleigh County

1 (*908, p.244; 938, p. 190). Celia De Long. SW¼SW¼ sec. 35, T.141 N., R. 80 W. Water level, in feet below measuring point, 1942: Aug. 12, 15.63

Cass County

Fargo area

The investigation of the ground-water resources of the Fargo area, begun in 1940 in cooperation with the North Dakota Geological Survey and the city of Fargo [2/] was continued in 1942. Field work was completed in the fall of 1941, but measurements in the observation wells have been continued A preliminary report of this investigation was released in 1942 and copies were filed at the offices of the City Engineer of Fargo, the Geological Survey, United States Department of the Interior, at Washington, D.C., and the State Geologist, Grand Forks, N. Dak. All wells reported under Cass County are measured as part of the detailed investigation of the Fargo area except wells 8, 10, and 29, which are included in the program of the

2/ See Water-Supply Papers 908 and 938.

State as a whole. Seven wells in the Fargo area are in Minnesota and these are included in the section of this paper that deals with that State. Automatic water-stage recorders were maintained on 6 wells during the year. A total of 2,465 individual determinations of water level are given in this report. The measurements were made by W. C. Rasmussen, Ralph Mader, William Tarbell, H. G. Palmer, and A. L. Greenlee.

The well used by the city of Fargo to supplement its surface-water supply was pumped daily from 5 p.m. to 9 p.m. during the period July 23 to August 30, inclusive. The pumpage for this period totaled about 8,842,000 gallons.

At the end of 1942 the water levels in wells 3, 5, 12, 28, and 127, all of which reflect the pumping of the city well, showed an average rise of 4.19 feet above the levels in these wells at the end of 1941. This average is, however, 4.86 feet below the average level at the end of 1940. The average rise in 1942 can be attributed to a decrease in pumpage during the year; for example, the pumpage from well 14 in 1942 was only about one-sixth of the pumpage in 1941.

The water level in well 58, which is affected by the pumping of well 57, continued the decline in 1942 that had been in progress for several years. At the end of 1942, its water level was 6.05 feet below its year-end level in 1941 and 10.96 feet below its year-end level in 1940.

Shallow wells (Nos. 8, 10, 29, 43, and 122) that tap water in the Lake Agassiz silt under water-table conditions had an average net rise in water level of 0.88 foot in 1941, and at the end of 1942 the average of their water levels was 1.71 feet above their average year-end level in 1940.

1 (*908,p.246; 938,p.191). H. Benson, 201 Sixteenth Street South, Fargo.

Water level, in feet above assumed datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	88.83	Mar. 7	89.39	May 2	89.93	June 27	91.45
10	88.95	14	89.44	9	90.94	July 4	91.44
17	89.01	21	89.46	17	91.11	12	90.20
24	89.08	28	89.64	23	91.08	19	89.86
31	89.11	Apr. 4	89.66	31	91.07	26	89.50
Feb. 7	89.15	11	89.63	June 7	91.94	Aug. 2	89.22
21	89.26	18	89.61	14	91.88	9	89.04
28	89.29	25	89.63	21	91.53	15	89.90

1 (*908,p.246; 938,p.191). H. Benson--Continued.

Water level, in feet above assumed datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 21	88.61	Sept.20	90.09	Oct. 17	90.51	Dec. 4	89.82
30	88.90	27	90.24	Nov. 12	88.15	12	89.87
Sept. 6	90.09	Oct. 4	90.24	21	89.14	19	89.80
13	90.12	11	90.53	28	89.94	26	89.91

3 (*908,p.246; 938,p.191). The Pierce Co., 1019 First Avenue North, Fargo.

Lowest daily water level, in feet above assumed datum, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	90.17	91.17	91.77	92.38	92.84	93.14	.....	92.66	89.57	.....	91.86	.....
2	90.23	91.19	91.81	92.43	92.90	93.15	.....	92.51	89.51	.....	91.88	.....
3	90.31	91.22	91.83	92.45	92.94	93.15	a93.38	92.38	89.49	.....	91.87	.....
4	90.33	91.26	91.88	92.47	92.93	93.17	.....	92.24	89.50	.....	91.88	.....
5	90.35	91.31	91.90	92.47	92.92	93.17	.....	92.13	89.52	91.11	91.94	92.41
6	90.39	91.34	91.92	92.48	92.92	93.22	.....	92.00	89.54	91.12	91.92	92.41
7	90.41	91.34	91.96	92.48	92.92	93.25	.....	91.87	89.58	91.14	91.92	92.41
8	90.44	91.35	91.97	92.48	92.93	93.25	.....	91.76	89.63	91.19	91.92	92.42
9	90.50	91.36	91.97	.....	92.94	93.25	.....	91.62	89.68	91.19	91.97	92.43
10	90.51	91.39	91.98	.....	92.94	93.26	.....	91.49	89.74	91.21	92.01	92.44
11	90.57	91.41	92.02	92.52	92.94	93.29	a93.39	91.37	89.81	91.24	92.01	92.45
12	90.63	91.44	92.03	92.53	92.97	93.30	.....	91.27	89.86	91.28	92.02	92.46
13	90.64	91.46	92.03	92.56	92.99	93.29	.....	91.18	89.91	91.33	92.05	92.47
14	90.69	91.48	92.04	92.58	93.02	93.29	.....	91.02	89.99	91.34	92.05	92.48
15	90.69	91.50	92.05	92.61	93.01	93.29	.....	90.95	90.07	91.35	92.11	92.50
16	90.72	91.55	92.08	92.61	93.01	93.30	.....	90.84	90.15	91.38	92.18	92.51
17	90.77	91.57	92.11	92.59	93.02	93.32	.....	90.73	90.20	91.40	92.19	92.53
18	90.81	91.57	92.14	92.59	93.02	93.33	a93.39	90.63	90.26	91.42	92.17	92.53
19	90.83	91.59	92.15	92.58	93.04	93.34	.....	90.54	90.30	91.45	92.17	92.52
20	90.85	91.61	92.16	92.58	93.03	93.33	.....	90.46	90.33	91.51	92.17	92.52
21	90.86	91.63	92.18	92.59	93.03	.....	.....	90.37	90.38	91.57	92.15	92.54
22	90.90	91.64	92.19	92.60	93.03	.....	a93.34	90.22	90.45	91.60	92.15	92.62
23	90.94	91.65	92.19	92.65	93.03	.....	.....	90.11	90.52	91.65	92.16	92.66
24	90.98	91.67	92.21	92.68	93.05	.....	.....	.....	90.57	91.67	92.21	92.66
25	91.00	91.68	92.23	92.68	93.06	.....	a93.34	.....	90.59	91.68	92.28	92.66
26	91.04	91.71	92.28	92.70	93.09	.....	.....	.....	90.65	91.69	92.28	92.67
27	91.06	91.73	92.33	92.71	93.10	.....	.....	.....	.....	91.71	92.28	92.65
28	91.07	91.75	92.36	92.73	93.13	.....	.....	.....	.....	91.73	.....	92.65
29	91.10	.....	92.37	92.78	93.14	.....	.....	89.67	.....	91.76	.....	92.68
30	91.14	.....	92.36	92.79	93.14	.....	.....	89.67	.....	91.80	.....	92.70
31	91.15	.....	92.36	.....	93.14	.....	.....	89.62	.....	91.85	.....	92.70

4 (*908, p. 247; 938, p. 192). City of Fargo, Island Park.

Lowest daily water level, in feet, above assumed datum, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	94.45	94.50	94.50	94.68	94.90	94.83	94.65	94.12	94.19	94.28	94.34	.....
2	.....	94.50	94.54	94.68	94.93	94.85	94.67	94.09	94.15	94.29	94.28	.....
3	a94.46	94.53	94.58	94.70	94.92	94.81	94.66	94.06	94.15	94.29	94.28	.....
4	.....	94.53	94.57	94.69	94.91	94.78	94.66	94.06	94.18	94.31	94.33	94.32
5	.....	94.56	94.56	94.66	94.89	94.83	94.63	94.09	94.17	94.28	94.26	94.30
6	.....	94.52	94.61	94.70	94.87	94.82	94.63	94.06	94.18	94.28	94.24	.....
7	.....	a94.50	94.56	94.64	94.85	94.82	94.65	94.03	94.19	94.29	94.25	.....
8	.....	94.50	94.56	94.64	94.82	94.83	94.63	94.00	94.18	94.24	94.26	.....
9	.....	94.50	94.57	94.65	94.80	94.87	94.57	93.99	94.18	94.23	94.28	.....
10	a94.55	94.50	94.61	94.64	94.80	94.93	94.54	93.96	94.18	94.25	94.28	.....

a Tape measurement.

4. City of Fargo, Island Park--Continued.

Lowest daily water level, in feet above assumed datum, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
11	94.51	94.50	94.57	94.63	94.81	94.97	94.54	93.97	94.17	94.27	94.27	.....
12	94.48	94.50	94.56	94.65	94.82	94.87	94.48	93.99	94.17	94.26	94.28	.....
13	94.49	94.50	94.56	94.66	94.84	94.82	94.43	94.02	94.18	94.24	94.25	.....
14	94.46	94.52	94.58	94.67	94.79	94.80	94.41	94.06	94.24	94.24	94.29	94.29
15	94.48	94.53	94.58	94.67	94.80	94.78	94.41	94.03	94.24	94.24	94.37	94.28
16	94.48	94.55	94.60	94.60	94.81	94.78	94.40	94.01	94.22	94.23	94.36	94.28
17	94.52	.....	94.61	94.57	94.82	94.78	94.35	93.99	94.22	94.20	94.30	94.32
18	94.51	.....	94.60	94.58	94.85	94.78	94.35	93.99	94.22	94.21	94.29	94.22
19	94.49	.....	94.59	94.55	94.81	94.78	94.30	93.98	94.20	94.24	94.27	94.24
20	94.49	.....	94.59	94.56	94.80	94.75	94.22	93.97	94.21	94.28	94.24	.....
21	94.49	94.50	94.58	94.57	94.80	94.72	94.20	93.95	94.24	94.28	94.21	94.30
22	94.51	94.50	94.56	94.60	94.79	94.71	94.19	93.89	94.25	94.31	94.21	94.38
23	94.53	94.50	94.57	94.65	94.78	94.70	94.19	93.85	94.23	94.30	94.25	94.34
24	94.54	94.50	94.59	94.60	94.78	94.70	94.19	93.87	94.23	94.30	94.32	94.32
25	94.55	94.51	94.60	94.60	94.80	94.71	94.18	93.92	94.23	94.28	94.30	94.33
26	94.53	94.51	94.68	94.62	94.81	94.70	94.17	93.93	94.27	94.28	94.30	94.29
27	94.51	94.51	94.69	94.62	94.81	94.70	94.15	93.95	94.25	94.28	94.28	94.27
28	94.51	94.50	94.68	94.71	94.81	94.71	94.15	93.95	94.23	94.29	94.27	94.29
29	94.54	.....	94.65	94.70	94.79	94.71	94.16	94.00	94.26	94.31	.....	94.32
30	94.51	.....	94.64	94.82	94.80	94.67	94.18	94.10	94.26	94.34	.....	.....
31	94.50	.....	94.64	.....	94.82	.....	94.15	94.21	.....	94.34	.....	.....

5 (*908, p. 248; 938, p. 193). Gardner Hotel, First Street North and Roberts Street, Fargo.

Lowest daily water level, in feet above assumed datum, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	89.80	90.92	91.57	92.15	92.59	92.99	93.24	93.21	90.94	90.73	91.61	92.18
2	89.84	90.94	91.58	92.17	92.62	93.00	93.24	93.16	90.87	90.77	91.64	92.19
3	89.89	90.97	91.60	92.18	92.65	93.00	93.25	93.12	90.81	90.80	91.66	92.21
4	89.85	90.99	91.62	92.20	92.66	93.01	93.26	93.07	90.75	90.82	91.68	92.23
5	89.98	91.02	91.64	92.23	92.67	93.02	93.26	93.02	90.70	90.85	91.70	.....
6	90.02	91.05	91.67	92.25	92.69	93.03	93.27	92.96	90.65	90.88	91.73	.....
7	90.06	91.08	91.70	92.27	92.70	93.05	93.28	92.90	90.61	90.91	91.75	.....
8	90.09	91.10	91.73	92.29	92.71	93.06	93.28	92.82	90.58	90.94	91.76	.....
9	90.13	91.13	91.74	92.30	92.73	93.07	93.29	92.80	90.55	90.97	91.78	.....
10	90.17	91.15	91.76	92.31	92.75	93.08	93.30	92.68	90.53	91.00	91.80	.....
11	90.22	91.17	91.78	92.33	92.76	93.09	93.30	92.60	90.52	91.03	91.83	92.35
12	90.26	91.19	91.80	92.34	92.77	93.11	93.31	92.52	90.50	91.06	91.84	92.37
13	90.30	91.22	91.82	92.36	92.79	93.12	93.31	92.45	90.50	91.09	91.87	92.38
14	90.34	91.24	91.84	92.36	92.80	93.13	93.32	92.38	90.50	91.12	91.89	92.39
15	90.37	91.27	91.86	92.38	92.82	93.14	93.32	92.31	90.50	91.15	91.90	92.39
16	90.40	91.29	91.87	92.40	92.83	93.14	93.32	92.23	90.50	91.17	91.93	92.39
17	90.44	91.32	91.89	92.41	92.84	93.15	93.32	92.14	90.50	91.19	91.95	92.40
18	90.48	91.35	91.91	92.42	92.85	93.15	93.32	92.06	90.50	91.22	91.98	92.43
19	90.51	91.36	91.93	92.43	92.86	93.16	93.32	91.99	90.50	91.24	91.99	.....
20	90.54	91.38	91.95	92.44	92.87	93.18	93.33	91.90	90.51	91.27	92.01	.....
21	90.58	91.41	91.96	92.44	92.88	93.19	93.33	91.82	90.52	91.30	92.02	.....
22	90.61	91.43	91.98	92.45	92.89	93.20	93.33	91.71	90.54	91.34	92.03	.....
23	90.64	91.44	91.99	92.46	92.90	93.20	93.33	91.62	90.55	91.37	92.05	.....
24	90.68	91.46	92.00	92.48	92.91	93.20	93.33	91.54	90.58	91.40	92.06	.....
25	90.70	91.48	92.02	92.49	92.92	93.20	93.33	91.46	90.60	91.42	92.08	.....
26	90.73	91.50	92.04	92.51	92.92	93.21	93.33	91.38	90.62	91.45	92.10	92.52
27	90.76	91.52	92.06	92.52	92.93	93.21	93.33	91.29	90.64	91.47	92.11	92.53
28	90.79	91.54	92.08	92.53	92.95	93.22	93.31	91.22	90.66	91.50	92.13	92.54
29	90.82	.....	92.11	92.55	92.96	93.23	93.29	91.15	90.68	91.52	92.15	92.55
30	90.85	.....	92.12	92.57	92.98	93.23	93.27	91.08	90.71	91.55	92.16	92.56
31	90.88	.....	92.13	.....	92.99	.....	93.25	91.01	.....	91.59	.....	92.57

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6 (*908, p. 248; 938, p. 194), Merchants National Bank & Trust Co., Eighth Avenue South and Seventeenth Street, Fargo.

Water level, in feet above assumed datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	95.96	Apr. 4	96.05	July 4	98.12	Sept. 27	96.66
10	97.23	11	98.06	12	92.27	Oct. 4	94.70
17	97.01	18	99.77	19	92.35	11	93.43
24	97.67	25	98.92	26	91.92	17	93.73
31	97.52	May 2	99.29	Aug. 2	96.47	24	89.22
Feb. 7	98.57	9	97.82	8	97.66	Nov. 12	99.39
14	93.98	17	92.35	15	95.63	21	98.36
21	98.40	31	97.00	23	95.86	28	98.13
28	96.87	June 7	96.86	30	99.70	Dec. 5	94.45
Mar. 7	98.49	14	98.72	Sept. 6	97.66	12	96.27
14	98.03	21	99.11	13	97.64	21	100.09
21	97.39	27	98.28	20	97.83	26	100.18
28	96.08						

8 (*840, p. 320; 845, p. 348; 886, p. 532; 908, p. 249; 938, p. 194). Mrs. Arthur D. South. SE¼SE¼ sec. 14, T. 140 N., R. 52 W. Water level, in feet above datum, 1942: Sept. 4, 99.59.

10 (*840, p. 321; 845, p. 349; 886, p. 532; 908, p. 249; 938, p. 194). Mrs. Arthur D. South. SE¼SE¼ sec. 14, T. 140 N., R. 52 W. Water level, in feet above datum, 1942: Sept. 4, 98.04.

12 (*840, p. 321; 845, p. 349; 886, p. 532; 908, p. 249; *938, p. 195). City of Fargo. SW¼ SW¼ sec. 1, T. 139 N., R. 49 W.

Lowest daily water level, with reference to assumed datum, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	80.50	83.21	84.89	86.34	87.51	88.13	88.62	53.62	58.22	80.22	.....	85.47
2	80.70	83.29	84.97	86.39	87.54	88.16	88.64	63.82	61.22	80.42	.....	85.49
3	80.79	83.40	85.03	86.42	87.55	88.18	88.60	63.82	63.62	80.62	.....	85.54
4	.....	83.47	85.11	86.48	87.54	88.19	88.62	51.42	65.62	80.82	.....	85.53
5	.....	83.58	85.15	86.46	87.53	88.26	88.62	50.52	67.22	80.97	.....	85.54
6	.....	83.58	85.22	86.54	87.56	88.33	88.62	51.42	68.42	81.12	84.12	85.55
7	.....	83.63	85.24	86.54	87.59	88.33	88.63	50.52	69.62	81.27	84.13	85.56
8	.....	83.70	85.27	86.55	87.62	88.33	88.64	48.62	70.62	81.42	84.18	85.60
9	.....	83.77	85.32	86.61	87.62	88.35	88.60	61.20	71.32	81.52	84.30	85.64
10	a81.57	83.82	85.37	86.65	87.67	88.39	88.55	59.97	72.22	81.62	84.29	85.70
11	81.57	83.89	85.42	86.66	87.71	88.42	88.54	59.97	73.02	81.82	84.37	85.73
12	81.67	83.95	85.44	86.71	87.73	88.39	88.55	60.38	73.62	82.02	84.51	85.76
13	81.75	84.00	85.48	86.77	87.76	88.38	88.52	57.61	74.22	82.09	84.52	85.77
14	81.83	84.09	85.52	86.81	87.75	88.41	88.51	57.61	74.82	82.17	84.54	85.83
15	81.92	84.16	85.55	86.85	87.77	88.45	88.52	58.12	75.32	82.32	84.63	85.85
16	81.98	84.25	85.62	86.81	87.78	88.47	88.53	58.12	75.82	82.42	84.77	85.87
17	82.15	84.26	85.68	86.81	87.80	88.52	88.46	56.87	76.22	82.52	84.87	85.90
18	82.19	84.32	85.71	86.87	87.85	88.52	88.45	60.44	76.62	82.62	84.85	85.87
19	82.26	84.41	85.75	86.86	87.84	88.54	88.37	60.44	77.02	82.72	84.85	85.84
20	82.32	84.44	85.77	86.89	87.85	88.53	88.35	60.44	77.32	82.87	84.95	85.90
21	82.41	84.49	85.82	86.94	87.85	88.53	88.35	60.44	77.72	82.94	84.88	86.02
22	82.51	84.51	85.83	87.01	87.89	88.52	88.40	57.04	78.02	83.13	84.91	86.10
23	82.62	84.59	85.88	87.08	87.91	88.52	.....	.....	78.42	83.18	85.03	86.07
24	82.70	84.62	85.93	87.02	87.94	88.54	.....	.....	78.52	83.23	85.14	86.07
25	82.76	84.69	85.97	87.02	88.00	88.57	b80.58	.....	78.82	83.32	85.16	86.12
26	82.83	84.75	86.12	87.09	87.97	88.57	64.42	.....	79.12	83.38	85.16	86.13
27	82.88	84.78	86.16	87.10	87.99	88.60	.....	.....	79.37	83.49	85.21	86.11
28	82.93	84.84	86.19	87.28	88.02	88.65	.....	.....	79.52	83.58	85.25	86.17
29	83.07	.....	86.22	87.29	88.01	88.66	.....	41.27	79.82	83.69	85.32	86.23
30	83.10	.....	86.23	87.42	88.07	88.62	.....	c51.22	80.02	83.80	85.43	86.23
31	83.15	.....	86.25	.....	88.10	.....	.....	51.42	.....	.....	.....	.....

a Tape measurement.
b Pumping of well 28 started.
c Pumping of well 28 stopped.

28 (*840, p. 321; 845, p. 350; 886, p. 533; 908, p. 250; *938, p. 195). City of Fargo. NW¼SW¼ sec. 1, T. 139 N., R. 49 W.

Water level, in feet above assumed datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	80.75	Apr. 4	86.50	July 3	88.56	Oct. 3	80.66
10	81.52	11	86.64	11	88.51	10	81.73
17	82.15	18	86.85	18	88.44	17	82.51
24	82.68	25	87.04	25	88.40	23	83.17
31	83.14	May 2	87.54	Aug. 1	a68.61	30	83.83
Feb. 7	83.61	9	87.61	8	a63.01	Nov. 6	84.08
14	84.07	16	87.75	15	a59.77	13	84.50
21	84.45	23	87.89	22	a57.09	20	84.88
28	84.81	29	87.99	29	a55.65	27	85.20
Mar. 7	85.20	June 6	88.30	Sept. 5	a67.62	Dec. 4	85.50
14	85.49	13	88.34	12	73.84	11	85.71
21	85.81	20	88.51	19	77.07	18	85.84
28	86.19	27	88.57	26	79.21	26	86.12

29 (*840, p. 321; 845, p. 350; 886, p. 533; 908, p. 251; 938, p. 196). Mrs. Arthur D. South. SE¼SE¼ sec. 14, T. 140 N., R. 52 W. Used daily for stock. Water level, in feet above datum, 1942: Sept. 4, 101.07.

43 (*908, p. 351; 938, p. 196). North Dakota State College. NE¼SW¼ sec. 35, T. 140 W., R. 49 W.

Water level, in feet above assumed datum, 1942

Jan. 4	99.91	Apr. 4	99.75	June 27	102.02	Sept. 27	101.48
10	99.92	11	99.71	July 4	102.02	Oct. 4	101.47
17	99.67	18	100.11	12	101.64	11	101.63
24	99.48	25	100.30	19	101.42	17	101.57
30	99.44	May 2	100.38	26	100.96	24	101.75
Feb. 7	99.34	9	102.31	Aug. 9	100.90	Nov. 12	101.63
14	99.37	16	102.17	15	101.00	21	101.57
21	99.33	23	102.26	23	100.62	28	101.58
28	99.38	30	102.07	30	99.88	Dec. 5	101.48
Mar. 7	99.15	June 7	102.58	Sept. 6	101.53	11	101.37
14	99.13	14	102.33	13	101.56	19	(b)
21	99.18	21	102.36	20	101.46	26	(b)
28	99.19						

57 (*845, p. 351; 886, p. 533; *908, p. 251; 938, p. 197). Union Stockyards. NW¼NE¼ sec. 6, T. 139 N., R. 49 W.

Water level, in feet above assumed datum, 1942

Jan. 4	83.25	Apr. 4	83.05	July 4	77.08	Sept. 27	78.73
10	a72.72	11	82.86	12	81.94	Oct. 4	77.90
17	81.05	18	74.88	19	79.01	11	a70.42
24	81.52	25	82.37	26	80.86	17	76.17
31	80.94	May 2	82.88	Aug. 1	78.47	24	76.02
Feb. 7	81.67	9	82.74	8	79.19	Nov. 12	74.53
14	81.84	16	83.51	15	76.48	21	74.98
21	a74.12	23	83.49	23	a70.00	28	73.83
28	81.74	30	83.64	30	78.84	Dec. 5	73.53
Mar. 7	81.90	June 6	81.95	Sept. 6	76.29	12	73.16
14	82.11	14	83.12	13	80.18	19	72.50
21	82.34	21	a75.29	20	78.00	26	74.26
28	82.95	27	81.91				

a Pumping.
b Well frozen over.

58 (*845, p. 351; 886, p. 533; 908, p. 251; 938, p. 197). Union Stockyards. SE¼NE¼ sec. 6, T. 139 N., R. 49 W.

Lowest daily water level, in feet above assumed datum, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	82.20	82.25	82.15	82.42	82.27	83.04	80.51	77.63	a....	76.37	a....	74.80
2	a....	81.40	81.15	82.57	82.85	82.63	80.39	78.40	.....	76.48	.....	74.22
3	a....	81.44	81.39	82.71	83.29	82.48	80.38	76.92	.....	76.49	.....	74.22
4	b82.24	81.19	81.38	82.86	82.87	82.38	81.75	77.87	.....	77.92	.....	74.27
5	.....	81.18	81.45	83.09	82.66	82.50	82.01	76.92	.....	77.43	.....	73.98
6	.....	80.88	81.59	82.98	82.71	83.09	80.86	76.97	77.09	76.71	.....	74.63
7	.....	81.09	81.62	82.48	82.63	83.64	79.72	76.97	76.02	76.99	.....	73.95
8	.....	82.02	81.92	82.24	82.34	82.72	79.92	77.77	76.30	76.80	.....	73.99
9	.....	81.75	81.44	82.44	82.45	83.21	79.36	78.85	76.42	76.84	.....	73.99
10	b80.18	81.66	81.14	82.32	82.41	82.14	79.26	78.67	76.74	76.75	.....	74.15
11	.....	81.41	81.62	82.47	82.95	82.07	79.28a	.....	76.62	78.87	.....	73.92
12	b80.16	81.29	81.70	83.25	82.84	81.80a	.....	.....	76.66	76.57	.....	73.77
13	79.71	81.14	81.75	82.20	82.85	83.21	79.16	.....	77.97	76.40	.....	74.72
14	79.89	81.57	81.87	82.41	83.01	82.87	78.67	.....	77.12	76.42	75.47	74.32
15	79.89	82.41	82.81	82.23	82.74	82.09	78.58	.....	77.12	76.42	77.64	73.90
16	79.97	82.11	82.47	82.20	83.00	81.80	78.04	.....	76.69	76.52	75.47	73.84
17	80.35	81.94	82.45	82.13	83.80	81.36	77.89	.....	76.75	76.62	75.37	73.84
18	81.00	81.14	82.03	82.15	83.55	80.98	78.82	.....	76.85	75.62	75.29	73.52
19	80.25	81.75	82.03	82.90	83.43	81.17a	.....	.....	77.05	76.37	75.50	73.47
20	80.40	81.30	81.88	82.43	83.24	81.57	78.82	.....	78.61	76.32	75.07	74.12
21	80.12	81.70	81.79	82.30	83.18a	.....	78.23	.....	76.57	76.07	75.46	73.77
22	80.25	82.65	82.59	82.36	82.87	81.76	77.88	.....	76.87	76.12	76.19	73.72
23	80.50	81.95	81.70	82.28	83.23	81.08	77.55	77.26	76.94	75.67	75.37	73.77
24	81.01	81.68	81.76	81.61	83.72	80.89	77.19	75.97	76.66	75.32	75.43	73.82
25	81.91	81.57	82.12	82.18	83.02	81.14	78.04	76.17	76.42	76.32	75.03	74.52
26	80.89	81.46	82.43	82.81	82.71	80.89	79.11	76.32	76.52	75.09	75.65	74.97
27	80.70	81.19	82.65	82.46	82.57	81.31	77.94	76.49	77.64	75.45	74.92	75.07
28	80.90	81.41	82.85	82.08	82.47	81.89	77.61	76.19	76.11	75.17	74.79	73.99
29	81.01	.....	83.19	81.86	82.82	81.22	77.61	76.05	76.08	75.37	75.72	73.92
30	80.83	.....	82.30	82.10	83.47	80.72	76.89	77.68	76.40	75.24	74.84	73.77
31	81.40	.....	82.44	.....	83.50	.....	77.01a	.....	.....	75.24	.....	74.06

67 (*845, p. 352; 886, p. 533; *908, p. 252; 938, p. 197). City of Fargo. NW¼NE¼ sec. 18, T. 139 N., R. 48 W.

Lowest daily water level, in feet above assumed datum, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	96.54	96.79	96.92	97.21	97.51	97.55	97.41	97.05	96.91	97.04	97.14	97.18
2	96.62	96.80	96.95	97.21	97.53	97.57	97.44	97.01	96.85	97.04	97.08	97.19
3	96.58	96.84	96.97	97.23	97.51	97.52	97.43	96.97	96.85	97.05	97.09	97.17
4	96.57	96.84	96.99	97.20	97.50	97.50	97.43	96.96	96.88	97.06	97.15	97.17
5	96.58	96.85	96.99	97.18	97.49	97.57	97.40	96.99	96.86	97.04	97.05	97.14
6	96.58	96.82	97.02	97.22	97.48	97.56	97.40	96.96	96.86	97.04	97.05	97.13
7	96.58	96.81	97.00	97.17	97.47	97.56	97.42	96.95	96.85	97.05	97.06	97.13
8	96.64	96.81	97.00	97.17	97.43	97.58	97.42	96.93	96.84	97.01	97.07	97.15
9	96.63	96.83	97.01	97.19	97.41	97.63	97.36	96.91	96.84	97.01	97.09	97.15
10	96.69	96.83	97.03	97.17	97.40	97.70	97.31	96.89	96.85	97.03	97.09	97.18
11	96.69	96.84	97.03	97.16	97.42	97.73	97.31	96.89	96.83	97.05	97.09	97.17
12	96.67	96.81	97.03	97.18	97.44	97.62	97.28	96.88	96.84	97.04	97.09	97.16
13	96.69	96.81	97.02	97.19	97.46	97.56	97.25	96.88	96.84	97.02	97.09	97.16
14	96.66	96.84	97.02	97.20	97.40	97.55	97.25	96.85	96.92	97.01	97.13	97.17
15	96.69	96.86	97.03	97.19	97.40	97.53	97.27	96.82	96.92	97.03	97.21a	.....
16	96.69	96.87	97.07	97.14	97.43	97.52	97.29	96.81	96.90	97.02	97.19	.....
17	96.75	96.86	97.09	97.13	97.46	97.53	97.27	96.79	96.90	97.00	97.13	.....
18	96.75	96.86	97.08	97.13	97.50	97.51	97.26	96.77	96.91	97.01	97.13	97.13
19	96.74	96.89	97.08	97.11	97.45	97.52	97.24	96.76	96.90	97.05	97.10	97.12
20	96.73	96.89	97.08	97.12	97.45	97.47	97.20	96.75	96.92	97.07	97.06	97.15
21	96.76	96.88	97.07	97.14	97.45	97.45	97.19	96.68	96.95	97.07	97.04	97.24
22	96.79	96.88	97.07	97.18	97.45	97.45	97.20	96.62	96.95	97.11	97.05	97.29
23	96.82	96.88	97.09	97.16	97.44	97.44	97.21	96.59	96.95	97.10	97.11	97.24
24	96.82	96.88	97.10	97.15	97.44	97.43	97.18	96.61	96.95	97.09	97.18	97.23

a No measurement made.
b Tape measurements.

67. City of Fargo--Continued.

Lowest daily water level, in feet above assumed datum, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
25	96.83	96.90	97.11	97.18	97.45	97.45	97.17	96.63	96.96	97.08	97.14	97.26
26	96.82	96.90	97.21	97.17	97.50	97.43	97.14	96.63	97.00	97.08	97.13	97.22
27	96.79	96.90	97.22	97.17	97.50	97.44	97.13	96.66	96.97	97.10	97.12	97.21
28	96.91	96.90	97.22	97.28	97.50	97.46	97.16	96.66	97.97	97.11	97.12	97.25
29	96.82	.....	97.18	97.26	97.48	97.45	97.16	96.71	97.02	97.14	97.14	97.27
30	96.79	.....	97.17	97.41	97.52	97.42	97.12	96.79	97.02	97.14	97.19	97.27
31	96.79	.....	97.17	.....	97.53	.....	97.10	96.94	.....	97.13	.....	97.32

73 (*908, p. 253; 938, p. 198). Sam Chesley. NE¼SE¼ sec. 24, T. 139 N., R. 49 W. Measurement discontinued Dec. 5, 1942.

Water level, in feet above assumed datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	94.55	Mar. 28	94.49	June 21	95.26	Sept. 9	94.53
10	94.50	Apr. 4	94.93	27	95.23	13	94.83
17	94.28	11	94.79	July 4	95.15	20	94.72
24	94.29	18	94.81	12	94.73	27	94.50
31	94.33	25	95.73	19	94.92	Oct. 4	94.30
Feb. 7	94.54	May 2	96.23	26	94.81	11	93.89
14	94.31	9	95.15	Aug. 2	94.42	17	94.06
21	94.28	23	94.78	9	93.83	24	94.96
28	94.55	31	97.67	15	94.66	Nov. 12	94.91
Mar. 7	94.63	June 7	95.08	23	94.49	21	94.70
14	94.73	14	95.03	30	94.19	28	93.93
21	94.71						

109 (*908, p. 253; *938, p. 198). Elmer Sukat. NE¼NW¼ sec. 8., T. 139 N., R. 49 W.

Water level, in feet above assumed datum, 1942

Jan. 4	90.07	Apr. 4	92.26	July 4	91.36	Sept. 27	86.14
10	88.99	11	92.22	12	90.56	Oct. 4	86.09
17	89.06	18	92.30	19	90.58	11	86.12
24	89.35	25	91.89	26	89.10	17	86.09
31	89.75	May 2	91.97	Aug. 1	88.55	24	85.88
Feb. 7	90.14	9	91.93	9	88.00	Nov. 12	85.08
14	89.94	17	91.96	15	88.06	21	84.90
21	90.36	23	91.91	23	86.83	28	84.72
28	90.21	30	91.99	30	86.68	Dec. 5	84.45
Mar. 7	90.34	June 6	91.99	Sept. 6	86.84	12	84.09
14	90.53	14	91.86	13	86.22	19	83.83
21	91.54	21	91.86	20	86.18	26	83.57
28	91.57	27	91.32				

122 (*908,p. 253; 938, p. 199). Leonard Hobbs. NE¼NE¼ sec. 2, T. 139 N., R. 49 W.

Water level, in feet above assumed datum, 1942

Jan. 4	103.31	Apr. 4	102.72	July 4	106.51	Sept. 27	106.72
10	103.41	11	102.69	12	106.21	Oct. 4	106.81
17	103.49	18	102.71	19	a105.99	11	106.69
24	103.45	25	102.96	26	105.77	17	106.80
31	103.24	May 2	104.19	Aug. 1	105.84	24	107.60
Feb. 7	103.16	9	105.23	8	105.46	Nov. 12	106.28
14	103.03	16	105.61	15	106.38	21	105.95
21	102.97	23	105.81	23	105.11	28	105.98
28	102.86	30	105.86	30	106.52	Dec. 5	105.94
Mar. 7	102.89	June 7	106.39	Sept. 6	106.35	12	105.83
14	102.77	14	106.53	13	106.36	19	105.67
21	102.74	21	106.51	20	106.72	26	105.84
28	102.76	27	106.49				

a Interpolated.

127 (*908, p. 253; 938, p. 199). City of Fargo. NW¼SE¼ sec. 2, T. 139 N., R. 49 W.

Water level, in feet above assumed datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	74.18	Apr. 4	78.19	July 4	79.77	Sept. 27	73.21
10	74.65	11	78.29	12	79.68	Oct. 4	74.13
17	75.05	18	78.43	19	79.61	11	74.73
24	75.42	25	78.57	26	79.62	17	74.81
31	75.83	May 2	79.02	Aug. 1	72.29	24	75.51
Feb. 7	76.09	9	79.15	8	68.93	Nov. 12	76.41
14	76.44	16	77.16	15	67.08	21	76.48
21	76.68	23	79.30	23	65.10	28	75.92
28	76.94	30	79.42	30	64.19	Dec. 5	76.87
Mar. 7	77.02	June 7	79.60	Sept. 6	67.95	12	76.98
14	77.59	14	79.63	13	69.45	19	77.09
21	77.65	21	79.77	20	72.18	26	77.21
28	77.99	27	79.77				

Cavalier County

Langdon area

The shallow ground-water supply of the city of Langdon, in Cavalier County, has not been adequate during dry seasons. An attempt has been made to supplement this supply with water from deep wells tapping the Dakota sandstone, but the artesian water encountered is unsatisfactory because of its high mineral content. Construction of a surface reservoir on a nearby intermittent stream and of a filtration-chlorination plant was completed in 1941, since which time the surface-water supply has been adequate and the ground-water supply has, therefore, not been used. The precipitation during the period of use of the reservoir has been above normal, however, and it is not yet known whether the runoff will be sufficient during dry years. The graphs of wells 43 and 46 (fig. 10, B) indicate that the storage of ground water has been greatly increased and that this storage may be drawn on in subsequent years if the supply of surface water should prove inadequate.

43. (*840, p. 322; *845, p. 352; 886, p. 534; 908, p. 254; 938, p. 200). City of Langdon. SE¼SW¼ sec. 14, T. 161 N., R. 60 W. Affected by impounded water.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	118.31	Mar. 7	118.62	May 9	119.94	July 11	121.85
10	118.54	14	118.64	16	120.39	18	121.85
17	118.60	21	118.69	23	120.81	25	121.85
24	118.64	28	118.75	30	121.10	Aug. 1	121.85
31	118.56	Apr. 4	118.83	June 6	121.40	8	122.40
Feb. 7	118.56	11	118.79	13	121.52	15	122.60
14	118.54	18	119.00	20	121.73	22	122.64
21	118.58	25	119.35	27	121.77	29	122.62
28	118.54	May 2	119.60	July 5	121.79	Sept. 5	122.58

43. City of Langdon--Continued.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept.12	122.56	Oct. 10	122.42	Nov. 7	122.19	Dec. 5	122.10
19	122.50	17	122.27	14	122.40	12	122.02
26	122.50	24	122.38	21	122.06	19	121.89
Oct. 3	122.52	31	122.40	28	121.90	26	121.89

44(*840,p. 322; *845,p. 353; 886,p. 534; 908,p. 254; 938,p.200). City of Langdon. SW¼SE¼ sec. 14, T. 161 N., R. 60 W. Affected by impounded water.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	131.08	Apr. 4	131.75	July 5	132.08	Oct. 3	128.33
10	125.45	11	130.00	11	132.50	10	128.00
17	131.49	18	128.91	18	130.25	17	126.69
24	131.41	25	131.41	25	a122.33	24	130.08
31	132.91	May 2	133.41	Aug. 1	132.33	31	129.37
Feb. 7	131.50	9	132.08	8	131.16	Nov. 7	128.16
14	130.91	16	132.00	15	131.50	14	130.83
21	129.41	23	130.04	22	a128.33	21	129.75
28	132.16	30	128.08	29	128.04	28	a125.33
Mar. 7	128.91	June 6	129.83	Sept. 5	127.69	Dec. 5	130.00
14	129.41	13	129.04	12	131.25	12	a128.33
21	128.58	20	131.75	19	130.83	19	132.00
28	129.00	27	131.50	26	129.18	26	130.81

45 (*840,p.322; *845,p.353; 886,p.534; 908,p.254; 938,p.200). City of Langdon. SW¼NW¼ sec. 23, T. 161 N., R. 60 W. Affected by impounded water.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	133.84	Apr. 4	134.00	July 5	134.34	Oct. 3	132.61
10	133.15	11	132.67	11	130.30	10	131.34
17	132.00	18	131.08	18	132.34	17	129.30
24	131.38	25	130.92	25	133.42	24	127.32
31	132.34	May 2	130.92	Aug. 1	135.50	31	128.63
Feb. 7	133.04	9	130.67	8	135.82	Nov. 7	125.25
14	132.92	16	130.59	15	135.82	14	127.11
21	132.92	23	a115.27	22	135.79	21	126.34
28	133.46	30	a129.04	29	135.57	28	128.00
Mar. 7	134.17	June 6	130.71	Sept. 5	135.75	Dec. 5	126.30
14	134.73	13	130.69	12	135.25	12	126.65
21	135.19	20	130.34	19	135.19	19	127.34
28	134.17	27	a127.94	26	133.52	26	127.67

46 (*840,p.322; *845,p.354; 886,p.534; 908,p.254; 938,p.200). City of Langdon. NE¼SE¼ sec. 14, T. 161 N., R. 60 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	103.37	Apr. 4	100.67	July 5	105.46	Oct. 3	104.65
10	102.75	11	101.16	11	a103.17	10	104.38
17	101.35	18	102.08	18	104.94	17	103.90
24	101.83	25	102.21	25	105.33	24	103.71
31	101.62	May 2	103.19	Aug. 1	106.71	31	103.73
Feb. 7	101.46	9	103.71	8	106.38	Nov. 7	103.64
14	101.25	16	104.42	15	106.00	14	103.63
21	101.00	23	106.29	22	105.46	21	103.42
28	100.74	30	106.54	29	105.17	28	103.23
Mar. 7	100.42	June 6	106.10	Sept. 5	105.75	Dec. 5	102.94
14	100.25	13	105.54	12	105.13	12	102.54
21	100.17	20	105.02	19	105.04	19	102.13
28	100.08	27	104.67	26	104.90	26	101.94

a Pumped recently.

Dickey County

72A (*886,p.535; 908,p.255; 938,p.201). State of North Dakota. NE¼ sec. 36, T. 131 N., R. 64 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	99.92	Apr. 4	100.22	July 4	100.42	Oct. 3	100.53
10	99.94	11	100.19	11	100.41	10	100.51
17	99.96	18	100.19	18	100.40	17	100.48
24	99.96	25	100.19	25	100.38	24	100.47
31	99.94	May 2	100.40	Aug. 1	100.40	31	100.42
Feb. 7	99.94	9	100.34	8	100.42	Nov. 7	100.44
14	99.94	16	100.38	15	100.44	14	100.42
21	99.95	23	100.36	22	100.42	21	100.41
28	99.94	30	100.38	29	100.51	28	100.50
Mar. 7	99.98	June 6	101.34	Sept. 5	100.50	Dec. 5	100.60
14	99.98	13	101.34	12	100.48	12	100.65
21	99.98	20	100.44	19	100.50	19	100.69
28	99.98	27	100.44	26	100.53	26	100.86

92 (*845,p.354; 886,p.535; 908,p.255; 938,p.201). S. A. Reko. NE¼NW¼ sec. 27, T. 131 N., R. 60 W.

Water level, in feet above datum, 1942

Jan. 3	99.78	Jan. 24	99.83	Feb. 14	99.76	Mar. 7	99.76
10	99.82	31	99.84	21	99.76	Sept. 3	101.35
17	99.84	Feb. 7	99.83	28	99.77		

97. Measurement discontinued. Well was plugged July 1942.

98 (*908,p.255; *938,p.201). Albert M. Schmit. NE¼NE¼ sec. 20, T. 131 N., R. 59 W. Water levels, in feet below measuring point, 1942: May 27, 21.12; Sept. 3, 20.18.

100. Measurement discontinued. Pipe pulled May 25, 1942.

101 (*908,p.256; *938,p.202). D. C. Botts. NE¼NW¼ sec. 7, T. 129 N., R. 59 W.

Water level, in feet above datum, 1942

Jan. 3	100.45	Apr. 4	100.34	July 4	101.80	Oct. 3	103.57
10	100.45	11	100.46	11	101.89	10	103.78
17	100.40	18	100.54	18	101.93	19	103.78
24	100.37	25	100.66	25	101.89	25	103.76
31	100.37	May 3	100.76	Aug. 3	101.82	31	103.92
Feb. 7	100.35	9	100.84	8	101.80	Nov. 7	104.05
14	100.35	16	101.05	15	101.96	14	104.08
21	100.33	23	101.14	22	102.09	21	104.09
28	100.31	30	101.22	29	102.30	28	104.00
Mar. 7	100.31	June 6	101.31	Sept. 5	102.79	Dec. 5	103.76
14	100.30	13	101.55	12	102.98	12	103.62
21	100.29	20	101.64	19	103.17	19	103.72
28	100.38	27	101.76	26	103.35	26	103.47

a Pumped during week.

102 (*908, p. 256; 938, p. 202). State of North Dakota. SE¼SE¼ sec. 16, T. 131 N., R. 59 W. Water levels, in feet below measuring point, 1942: May 26, 24.29; Sept. 3, 25.08.

103 (*908, p. 256; 938, p. 202). Floyd Ferguson. W½SW¼ sec. 27, T. 131 N., R. 59 W. Water level, in feet below measuring point, 1942: May 27, 10.97.

104 (*938, p. 202). Lynus Sitts, Jr. SW¼SW¼ sec. 33, T. 131 N., R. 59 W. Water levels, in feet below measuring point, 1942: May 26, 10.24; Sept. 3, 9.75.

105 (*908, p. 256; 938, p. 202). H.G. Martin, administrator. SW¼NW¼ sec. 9, T. 130 N., R. 59 W. Water levels, in feet below measuring point, 1942: May 28, 12.66; Sept. 3, 11.64.

106 (*908, p. 256; 938, p. 202). Frank Elliott. NE¼NW¼ sec. 28, T. 131 N., R. 59 W. Water levels, in feet below measuring point, 1942: May 27, 13.49; Sept. 3, 12.60.

111. Measurement discontinued. Piped directly into house.

113 (*908, p. 256; 938, p. 203). Union Central Life Insurance Company. NW¼NW¼ sec. 30, T. 130 N., R. 59 W. Water levels, in feet below measuring point, 1942: May 28, 12.79; Sept. 3, 11.24.

115 (*908, p. 256; 938, p. 203). Heine Holling. SW¼SW¼ sec. 21, T. 130 N., R. 59 W. Water levels, in feet below measuring point, 1942: May 28, 9.18; Sept. 3, 6.74.

117 (*908, p. 256; 938, p. 203). E. P. Wilson. NW¼NE¼ sec. 22, T. 130 N., R. 59 W. Water levels, in feet below measuring point, 1942: May 28, 9.98; Sept. 3, 7.51.

120 (*938, p. 203). Esterby Estate. SW¼SE¼ sec. 3, T. 129 N., R. 59 W. Water levels, in feet below measuring point, 1942: May 28, 6.36; Sept. 3, 3.98.

121 (*938, p. 203). M. J. Reinhart. SW¼NW¼ sec. 3, T. 130 N., R. 59 W. Water levels, in feet below measuring point, 1942: May 27, 11.13; Sept. 3, 10.04.

123. Mike Antone. NW¼SE¼ sec. 29, T. 131 N., R. 59 W. Used driven domestic well, diameter 1¼ inches, depth 22 feet. Measuring point, top of pitcher pump, 1,315.29 feet above sea level, and 3.0 feet above land surface. Water levels, in feet below measuring point, 1942: May 27, 14.90; Sept. 3, 12.67.

124. Mrs. W. Koski. NW¼SW¼ sec. 19, T. 129 N., R. 59 W. Used driven well, diameter 1¼ inches, depth 14 feet. Measuring point, top of pitcher pump, 1,299.47 feet above sea level, and 2.5 feet above land surface. Water levels, in feet below measuring point, 1942: May 28, 9.09; Sept. 3, 8.17.

127 (*908, p. 256; 938, p. 203). City of Oakes. NE¼NW¼ sec. 28, T. 131 N., R. 59 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	100.40	Feb. 14	100.40	Mar. 21	100.42	Apr. 25	100.38
17	100.40	21	100.40	28	100.42	May 2	100.58
24	100.40	28	100.41	Apr. 4	100.43	9	100.80
31	100.40	Mar. 7	100.41	11	100.38	16	100.74
Feb. 7	100.40	14	100.41	18	100.41	23	100.99

128 (*908,p.257; 938,p.203). City of Oakes. NE¼NW¼ sec. 28, T. 131 N., R. 59 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	100.27	Mar. 14	100.12	May 16	100.68	July 20	101.30
17	100.27	21	100.16	23	100.83	27	101.30
24	100.27	28	100.16	29	100.83	Aug. 6	101.27
31	100.27	Apr. 4	100.33	June 8	101.41	10	101.20
Feb. 7	100.26	11	100.40	15	101.47	17	101.24
14	100.24	18	100.33	22	101.67	24	101.27
21	100.24	25	100.31	29	101.52		
28	100.24	May 2	100.47	July 6	101.50		
Mar. 7	100.20	9	100.70	13	101.35		

129 (*908,p.257; *938,p.204). A. M. Dahlbeck. SW¼NW¼ sec. 21, T. 131 N., R. 59 W. Water levels, in feet below measuring point, 1942: May 26, 13.67; Sept. 3, 12.86.

134 (*908,p.257; *938,p.204). A. F. Hankel. NW¼NE¼ sec. 9, T. 129 N., R. 59 W. Water levels, in feet below measuring point, 1942: May 28, 5.53; Sept. 3, 4.24.

135 (*908,p.258; 938,p.204). V.S.Doyen. SW¼SW¼ sec. 24, T. 129 N., R. 60 W.

Water level, in feet above datum, 1942

Jan. 3	98.87	Feb. 21	99.33	Mar. 21	99.35	May 2	99.37
24	99.36	Mar. 7	99.35	Apr. 11	99.35	16	99.37
Feb. 7	99.33	14	99.35	25	99.37	23	99.37
14	99.33						

Divide County

68 (*845,p.354; 886,p.536; 908,p.258; 938,p.204). J. M. Johnson. SE¼SW¼ sec. 22, T. 163 N., R. 97 W. Well dry Aug. 15, 1942. Measurements discontinued.

70 (*845,p.355; 886,p.536; 908,p.259; 938,p.204). J. M. Johnson. SE¼SW¼ sec. 22, T. 163 N., R. 67 W. Water-Supply Paper 938 erroneously lis measurements as below measuring point. Water level, in feet above datum, 1942: Aug. 15, 100.73.

117 (*908,p.259; 938,p.204). A. U. Anderson, overseer. NE¼NE¼ sec. 34, T. 163 N., R. 100 W. Water level, in feet below measuring point, 1942: Aug. 15, 14.63.

Dunn County

89 (*845,p.355; 886,p.536; 908,p.259; 938,p.205). Knute Haugen. NW¼NW¼ sec. 18, T. 145 N., R. 91 W. Well plugged at depth of 72 feet Aug. 11, 194 Measurements discontinued.

Water level, in feet above datum, 1942

Jan. 5	98.78	Feb. 7	98.82	Mar. 14	98.89	Apr. 18	99.08
10	98.69	14	99.02	21	99.08	25	99.08
17	99.09	21	98.79	30	98.94	Aug. 11	(a)
24	98.88	28	99.18	Apr. 4	99.18		
31	98.98	Mar. 7	99.09				

90. S. F. Lesmeister. SE¼NE¼ sec. 25, T. 145 N., R. 92 W. Newly dug domestic well, diameter 48 inches, depth 17 feet. Measuring point, painte arrow on wood curbing, 2 feet above land surface.

a Well plugged.

90. S. F. Lesmeister--Continued.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 18	10.08	Sept.25	10.25	Oct. 30	10.29	Dec. 4	10.25
25	10.29	Oct. 2	9.96	Nov. 6	10.50	11	10.21
Sept. 4	10.06	9	10.21	13	10.87	19	10.17
11	10.29	16	10.21	20	10.83	25	10.67
18	9.96	23	10.25	27	10.75		

Eddy County

17 (*817,p.230; *845,p.355; 886,p.537; 908,p.259; 938,p.205). L. S. Rude. SE¼NW¼ sec. 9, T. 150 N., R. 66 W. Water levels, in feet below measuring point, 1942: May 22, 9.00; Aug. 10, 8.95.

18 (*817,p.230; *840,p.323; 845,p.356; 886,p.537; 908,p.259; 938,p.205) Stockyards. NW¼SW¼ sec. 9, T. 150 N., R. 66 W.

Water level, in feet above datum, 1942

Jan. 5	101.94	Apr. 4	102.04	July 18	102.77	Oct. 10	102.48
10	101.91	11	102.33	25	102.63	17	102.44
17	101.86	18	102.69	Aug. 1	102.60	24	102.39
24	101.87	25	102.66	8	103.02	31	103.36
31	101.85	May 9	102.63	15	102.95	Nov. 7	102.30
Feb. 7	101.80	16	102.66	22	102.84	14	102.30
14	101.79	June 6	102.85	29	102.78	21	102.29
21	101.75	13	102.85	Sept. 5	102.74	28	102.27
28	101.72	20	102.80	12	102.68	Dec. 5	102.25
Mar. 7	101.68	27	102.81	19	102.61	12	102.08
14	101.75	July 4	102.75	26	102.55	19	102.10
21	101.81	11	102.71	Oct. 3	102.52	26	102.06
28	101.87						

19 (*817,p.230; *845,p.356; 886,p.537; 908,p.260; 938,p.205). Gilbert Olson. SE¼NW¼ sec. 9, T. 150 N., R. 66 W. Water levels, in feet below measuring point, 1942: May 22, 14.35; Aug. 10, 13.90.

20 (*817,p.230; *845,p.356; 886,p.537; 908,p.260; 938,p.205) Knute Egger. SE¼NW¼ sec. 9, T. 150 N., R. 66 W. Water levels, in feet below measuring point, 1942: May 22, 18.43; Aug. 10. 17.77.

21 (*817,p.230; *845,p.356; 886,p.537; 908,p.260; 938,p.205) Elmer Moe. NE¼NW¼ sec. 9, T. 150 N., R. 66 W. Water levels, in feet below measuring point, 1942: May 22, 20.12; Aug. 10, 19.62.

22 (*817,p.230; *845,p.356; 886,p.537;908,p.260;938,p.205). John R.Warsing. SE¼NW¼ sec. 9, T. 150 N., R. 66 W. Water levels, in feet below measuring point, 1942: May 22, 14.97; Aug. 10, 14.37.

154 (*908,p.260; 938,p.205) Pfau Estate. NE¼SE¼ sec. 28, T. 148 N., R. 67 W. Unreduced flow, in gallons a minute, 1942: May 22, 8.18.

Emmons County

123 (*938,p.206) State of North Dakota. NE¼NE¼ sec. 8, T. 132 N., R. 74 W. Water levels, in feet above measuring point, 1942: May 24, 15.67; Sept. 2, 15.06.

Foster County

125 (*908,p.260; *938,p.206) J. W. Wampler. NW¼NE¼ sec. 22, T. 145 N., R. 66 W. Water level, below new measuring point at top of curbing, 1942: Sept. 1, 9.97.

Golden Valley County

1 (*908,p.260; 938,p.206). Mrs. Tangen. SE¼SE¼ sec. 2, T. 139 N., R. 106 W. Measurement discontinued. Well plugged with disconnected pipe on Aug. 14, 1942.

2. City of Beach. NW¼SW¼ sec. 25, T. 140 N., R. 106 W. Abandoned bored well, diameter 12 inches, depth 45 feet. Measuring point, painted arrow on concrete platform, 0.34 foot above land surface. Water level, in feet below measuring point, 1942: Aug. 14, 25.37.

Grant County

121 (*908,p.260; 938,p.206). R. O. Ozbun. NE¼NE¼ sec. 10, T. 134 N., R. 85 W. Water level, in feet below measuring point, 1942: Aug. 13, 22.72.

Griggs County

1. (*908,p.260; 938,p.206). Griffith Loan & Investment Co. SW¼NW¼ sec. 20, T. 144 N., R. 59 W. Water level, in feet below measuring point, 1942: May 28, 25.40; Aug. 30, 25.54.

Hettinger County

82. (*845,p.357; 886,p.538; 908,p.260; 938,p.206). L. F. Everhart. SE¼NW¼ sec. 5, T. 133 N., R. 93 W. Water level, in feet above datum, 1942: Aug. 13, dry hole, bottom measures about 50.4 feet.

Kidder County

50. (*840.p.323; 845.p.357; 886.p.538; 908,p.260; 938,p.206). Herman Peterson. SW¼SW¼ sec. 9, T. 138 N., R. 73 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	100.06	Apr. 4	100.05	July 4	100.78	Oct. 3	100.87
10	100.05	11	100.06	11	100.85	10	100.85
17	99.87	18	99.04	18	100.98	17	100.84
24	99.85	25	100.06	25	100.85	24	100.87
31	99.93	May 2	100.17	Aug. 1	100.84	31	100.88
Feb. 7	99.85	9	100.16	8	100.85	Nov. 7	100.80
14	99.91	16	100.31	15	100.77	14	100.88
23	99.91	23	100.38	22	100.74	21	100.89
28	99.88	30	100.36	29	100.66	28	100.88
Mar. 7	99.88	June 6	100.62	Sept. 5	100.73	Dec. 5	100.88
14	99.90	14	100.68	12	100.80	12	100.90
21	99.90	20	100.67	19	100.74	19	100.83
28	100.01	27	100.87	26	100.79	26	100.80

147. (*908,p.261; 938,p.207). Phillip Mitteleider. Center of S½ sec. 27, T. 139 N., R. 71 W. Water levels, in feet below measuring point, 1942: May 23, 3.51; Sept. 1, 5.90, pumping.

148 (*908,p.261; 938,p.207). Chas. Woesnner NE¼SW¼ sec. 10, T. 139 N., R. 72 W. Water levels, in feet below measuring point, 1942: May 22, 13.58; Sept. 1, 14.17.

149 (*908,p.261; 938,p.207). Village of Tappen. SW¼NW¼ sec. 10, T. 139 N., R. 71 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	100.49	Mar. 14	100.38	May 30	101.48	Aug. 22	101.82
10	100.49	21	100.38	June 6	101.48	Sept. 5	101.75
18	100.49	Apr. 4	100.43	13	101.76	12	101.68
24	100.37	11	100.43	20	101.78	Oct. 3	101.67
31	100.37	18	100.71	27	101.99	10	101.67
Feb. 7	100.37	May 2	100.71	July 11	101.92	17	101.56
14	100.38	9	100.92	Aug. 1	101.86	31	101.50
21	100.38	16	100.93	15	101.92	Nov. 7	101.46
28	100.39	23	101.47				

150 (*908,p.261; 938,p.207). Ramon Grimm. SW¼NW¼ sec. 14, T. 142 N., R. 70 W. Water levels, in feet below measuring point, 1942: May 23, 38.50; Sept. 1, 38.14.

151 (*908,p.261; 938,p.207). Mrs. Fagereng. NW¼NE¼ sec. 23, T. 142 N., R. 70 W. Water levels, in feet below measuring point, 1942: May 23, 20.47; Sept. 1, 20.81.

152 (*908,p.261; 938,p.207). Northern Pacific Railway. SW¼NE¼ sec. 12, T. 142 N., R. 70 W. Water levels, in feet below measuring point, 1942: May 23, 36.70; Sept. 1, 36.90.

166 (*908,p.261; 938,p.207). Jake Schaurer. SW¼SW¼ sec. 3, T. 139 N., R. 71 W. New measuring point, 0.83 foot above old one. Water levels, in feet below measuring point, 1942: May 22, 17.21; Sept. 1, 15.68.

La Moure County

1 (*908,p.261; 938,p.207). Town of Edgeley. SW¼NW¼ sec. 3, T. 133 N., R. 64 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level
Jan. 3	100.93	Jan. 31	100.16	Feb. 14	99.83
17	99.87	Feb. 7	100.15		

2A (*886,p.538; 908,p.262; 938,p.207). Mrs. Fidela Davis. SW¼SE¼ sec 24, T. 134 N., R. 64 W. Water level, in feet above datum, 1942: Sept. 2, 101.57.

Logan County

142 (*908,p.262; 938,p.208). Measurement discontinued.

143 (*908,p.262; 938,p.208). Oscar France. W½SW¼ sec. 17, T. 135 N., R. 72 W. Water levels, in feet below measuring point, 1942: May 24, 13.05; Sept. 1, 13.10.

144 (*908,p.262; 938,p.208). Pete Draeger. SW¼NW¼ sec. 21, T. 135 N., R. 72 W. Water levels, in feet below measuring point, 1942: May 24, 10.75; Sept. 1, 10.41.

145 (*908,p.262; 938,p.208). Measurement discontinued.

146 (*908,p.262; 938,p.208). George Dummland. NW¼NW¼ sec. 27, T. 135 N., R. 72 W. Water levels, in feet below measuring point, 1942: May 24, 31.04; Sept. 1, 30.20.

McHenry County

1 (*908,p.262; 938,p.208). Measurement discontinued.

101. (*886,p.539; 908,p.262; 938,p.208) Denbigh Forest Experiment Station well 1. United States Forest Service. No measurement taken.

102 (*886,p.540; 908,p.263; 938,p.208). Denbigh Forest Experiment Station well 2. United States Forest Service. NW cor. SW¼NW¼ sec. 36, T. 156 N., R. 78 W. Measurements furnished by Harold A. Stewart. Water levels in feet above datum, 1942: Aug. 25, 101.92; Sept. 15, 101.79; Sept. 25, 101.76.

103 (*886,p.541; 908,p.263; 938,p.208). Denbigh Forest Experiment Station well 3. United States Forest Service. No measurement taken.

104 (*886,p.542; 908,p.263; 938,p.209). Denbigh Forest Experiment Station well 4. United States Forest Service. No measurement taken.

105 (*886,p.543; 908,p.263; 938,p.209). Denbigh Forest Experiment Station well 5. United States Forest Service. No measurement taken.

106 (*886,p.544; 908,p.263; 938,p.209). Denbigh Forest Experiment Station well point 1. United States Forest Service. No measurement taken.

113. (*908,p.263; 938,p.209) Mrs. M. Notbohm. SW¼SE¼ sec. 1, T. 151 N., R. 77 W. Water level, in feet below measuring point, 1942: Aug. 18, 12.01.

156 (*908,p.263; *938,p.209). Minneapolis, St. Paul, and Sault Saint Marie Railway. SW¼NW¼ sec. 6, T. 152 N., R. 79 W. Water level, in feet below measuring point, 1942: Aug. 18, 20.31.

157 (*908,p.263; 938,p.210). Federal Land Bank. SE¼SE¼ sec. 9, T. 153 N., R. 78 W. Water level, in feet below measuring point, 1942: Aug. 18, 25.59, pumped recently.

158. (*908,p.263; 938,p.210) Cities Service. NE¼NE¼ sec. 8, T. 155 N., R. 79 W. Water level, in feet below measuring point, 1942: Well pumped dry Aug. 17.

159 (*908,p.263; 938,p.210). Harold H. Sullwold. NW¼SE¼ sec. 33, T. 156 N., R. 79 W. Water level, in feet below measuring point, 1942: Aug. 17, 11.64.

160 (*908,p.263; 938,p.210). U.S. Forest Service. SE¼SW¼ sec. 31, T. 157 N., R. 75 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	6.67	Feb. 10	6.56	Apr. 6	6.52	June 9	6.15
13	6.58	17	6.56	15	6.48	16	6.19
20	6.54	24	6.54	21	6.33	23	6.21
27	6.56	Mar. 17	6.56	May 12	6.10	Aug. 25	6.42
Feb. 3	6.56	24	6.56	June 2	6.14		

161 (*908,p.264; 938,p.210). Village of Towner. SE¼NW¼ sec. 11, T. 156 N., R. 76W. Water level, in feet below measuring point, 1942: Aug. 17, 12.14.

162 (*908,p.264; 938,p.210). Walter Arneson. SW¼SE¼ sec. 3, T. 158 N., R. 78 W. Water level, in feet below measuring point, 1942: Aug. 19, 29.03.

McIntosh County

93 (*845,p.357; 886,p.545; 908,p.264; 938,p.210) Freida Forrest. SE¼SW¼ sec. 7, T. 130 N., R. 69 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	97.62	Mar. 28	97.56	June 6	104.79	Aug. 15	102.46
17	97.65	Apr. 4	108.85	13	104.79	22	102.71
31	97.49	11	109.01	20	103.54	29	105.85
Feb. 7	97.47	18	106.68	27	105.13	Nov. 21	101.31
14	97.60	25	105.64	July 4	105.01	28	100.91
21	97.60	May 2	105.35	11	102.64	Dec. 5	100.82
28	97.53	9	105.18	18	102.47	12	100.83
Mar. 7	98.10	16	104.51	25	102.62	19	100.55
14	92.89	23	104.97	Aug. 1	104.26	26	100.43
21	95.02	30	104.97	8	103.73		

94 (*845,p.358; 886,p.545; 908,p.264; 938,p.210) Freida Forrest. SE¼SW¼ sec. 7,T. 130 N., R. 69 W.

Water level, in feet above datum, 1942

Jan. 10	90.02	Mar. 28	88.86	June 6	95.53	Aug. 15	100.73
17	89.80	Apr. 4	92.28	13	93.54	22	100.95
31	87.63	11	93.03	20	93.00	29	101.23
Feb. 7	88.69	18	93.06	27	98.81	Nov. 21	100.56
14	88.12	25	92.95	July 4	98.89	28	100.32
21	88.78	May 2	93.95	11	100.11	Dec. 5	100.33
28	88.21	9	92.38	18	97.63	12	100.46
Mar. 7	87.28	16	95.20	25	99.47	19	100.48
14	87.71	23	94.82	Aug. 1	101.07	26	100.33
21	88.78	30	94.24	8	101.11		

136 (*908,p.264; 938,p.211) State of North Dakota. SE¼NW¼ sec. 36, T. 132 N., R. 71 W. Water levels, in feet below measuring point, 1942: May 24, 3.03; Sept. 2, 2.97, nearby creek flowing.

137 (*908,p.264; 938, p.211) Federal Land Bank. SE¼NE¼ sec. 24, T. 132 N., R. 71 W. Water levels,in feet below measuring point, 1942: May 24, 9.79; Sept. 2, 9.67.

138 (*908,p.265; 938,p.211) C. Hiller. NE¼NE¼ sec. 32, T. 132 N., R. 70 W. Water level, in feet below measuring point, 1942: May 24, 15.97.

139 (*908,p.265; 938,p.211) Dan Nigisch. NE¼SE¼ sec. 28, T. 132 N., R. 70 W. Water levels, in feet below measuring point, 1942: May 24, 16.92; Sept. 2, 12.67.

141 (*908,p.265; *938,p.211) Town of Wishek. NE¼NE¼ sec. 15, T. 132 N., R. 71 W.

Water level, in feet above datum, 1942

Jan. 3	99.58	Apr. 4	99.47	July 7	100.73	Oct. 3	101.35
10	99.62	11	99.55	11	100.71	10	101.29
17	99.60	18	99.54	18	99.75	19	101.21
24	100.45	25	98.71	25	100.62	24	100.62
31	100.45	May 2	99.66	Aug. 1	100.54	31	101.37
Feb. 7	100.47	9	99.71	8	100.58	Nov. 7	101.08
14	99.54	16	99.87	16	100.54	16	101.42
21	99.04	23	99.87	22	101.04	21	101.40
28	99.46	30	100.00	28	101.04	28	101.42
Mar. 7	99.48	June 6	100.01	Sept. 5	101.04	Dec. 5	101.46
14	99.46	13	100.02	12	101.29	12	101.21
21	99.45	20	100.46	19	100.83	19	100.71
28	99.44	27	100.58	26	100.79	26	100.87

McKenzie County

81 (*845,p.358; 886,p.545; 908,p.265; 938,p.211). Chas. E. Fleck. SW¼SW¼ sec. 12, T. 150 N., R. 100 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	99.75	Apr. 4	99.60	July 4	99.80	Oct. 3	99.87
10	99.86	11	99.60	11	100.06	10	99.88
17	99.75	18	99.76	18	99.76	17	99.80
24	99.90	25	100.10	25	99.77	24	99.90
31	99.86	May 2	99.80	Aug. 1	99.74	31	99.87
Feb. 7	99.88	9	99.81	8	99.86	Nov. 7	99.84
14	99.85	16	99.76	15	99.78	14	100.70
21	99.75	23	99.95	22	99.63	21	99.74
28	99.92	30	99.81	29	99.82	28	99.83
Mar. 7	99.80	June 6	99.79	Sept. 5	99.88	Dec. 5	99.73
14	99.85	13	99.76	12	99.83	12	99.86
21	99.89	20	99.75	19	99.82	19	99.84
28	99.84	27	99.80	26	100.04	26	99.36

119 (*908,p.265; 938,p.211). Federal Land Bank. NE¼NW¼ sec. 8, T. 145 N., R. 98 W. Water level, in feet below measuring point, 1942: Aug. 14 97.75.

McLean County

27 (*840,p.323; 845,p.358; 886,p.546; 908,p.266; 938,p.212). State of North Dakota. SW¼NW¼ sec. 15, T. 149 N., R. 84 W.

Water level, in feet above datum, 1942

Jan. 3	100.18	Apr. 4	100.35	July 4	100.43	Oct. 3	100.52
10	100.23	11	100.18	11	100.52	10	100.50
18	100.23	18	100.27	18	100.52	17	100.39
24	100.31	25	100.35	25	100.43	24	100.44
31	100.18	May 2	100.35	Aug. 1	100.52	31	100.50
Feb. 7	100.14	9	100.31	8	100.50	Nov. 7	100.48
14	100.23	16	100.35	15	100.44	14	100.50
21	100.27	23	100.39	22	100.39	21	100.48
28	100.27	30	100.35	29	100.43	28	100.44
Mar. 7	100.27	June 6	100.48	Sept. 5	100.46	Dec. 5	100.44
14	100.31	13	100.37	12	100.44	12	100.48
21	100.27	20	100.46	19	100.44		
28	100.23	27	100.48	26	100.52		

Mercer County

118 (*908,p.266; 938,p.212). Maichel Bros. SE¼NE¼ sec. 22, T. 144 N., R. 85 W. Water level, in feet below measuring point, 1942: Aug. 11, 25.39.

Morton County

1 (*938,p.212). Fred Lehde. SW¼SW¼ sec. 15, T. 139, N., R. 85 W.

Water level, in feet above datum, 1942

Jan. 3	104.78	Mar. 14	103.35	May 23	105.42	Aug. 1	105.83
10	104.74	21	103.38	30	105.68	8	105.75
17	104.64	28	103.33	June 6	105.88	15	105.89
24	104.53	Apr. 4	104.84	13	105.96	22	105.85
31	104.46	11	104.31	20	105.96	29	105.83
Feb. 7	104.33	18	104.54	27	106.01	Sept. 5	105.76
14	104.35	25	104.86	July 4	105.98	13	105.73
21	104.11	May 2	104.88	11	106.00	19	105.64
28	103.98	9	105.11	18	105.92	26	105.60
Mar. 7	103.87	16	105.23	25	105.84	Oct. 3	105.54

1 (*938,p.212) Fred Lehde--Continued.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 10	105.46	Nov. 7	105.23	Nov. 30	105.12	Dec. 19	104.94
18	105.39	14	105.23	Dec. 5	105.04	26	104.88
24	105.36	21	105.11	12	104.95		

2 (*938,p.212). Henry Polenberg. NW¼NE¼ sec. 32, T. 139 N., R. 88 W. Water level, in feet below measuring point, 1942: Aug. 10, 2.29.

3 (*938,p.212) Joe Lanz, Jr. SW¼SE¼ sec. 6, T. 161 N., R. 81 W. Water level, in feet below measuring point, 1942: Aug. 12, 24.29.

4 (*938,p.212) Albrecht and Johnson. NW¼SW¼ sec. 36, T. 134 N., R. 82 W. Water level, in feet below measuring point, 1942: Aug. 12, 17.38.

49 (*840,p.324; *845,p.359; 886,p.546; 908,p.266; 938,p.213) Soil Conservation Service, U. S. Department of Agriculture. NW¼NW¼ sec. 4, T. 138 N., R. 81 W.

Water level, in feet above datum, 1942

Feb. 3	100.21	Mar. 30	99.31	June 1	102.79	Aug. 30	101.11
7	100.29	Apr. 5	100.94	8	103.04	Sept. 20	100.63
14	100.17	13	100.42	14	103.04	Oct. 23	100.04
21	100.04	26	101.50	20	102.96	Nov. 20	99.59
28	99.79	May 2	101.92	July 5	102.59	Dec. 14	99.25
Mar. 7	99.71	9	102.25	18	102.29	29	99.04
14	99.59	18	102.32	25	102.11	30	99.46
21	99.52	25	102.48	Aug. 8	101.71		

Mountrail County

90 (*845,p.359; 886,p.546; 908,p.266; 938,p.213). Emil Molter. NE¼NE¼ sec. 6, T. 152 N., R. 89 W. Old measuring point was base of pump; pump now removed and new measuring point is top of curbing. 0.17 foot lower. Water levels, in feet above datum, 1942: Mar. 7, 100.31; July 4, 100.41; Aug. 19, 100.31.

Nelson County

47 (*886,p.546; 908,p.267; *938,p.213). Tom Miller. NE¼NE¼ sec. 5, T. 152 N., R. 59 W. Water levels, in feet below measuring point, 1942: May 22, 10.58; Aug. 8, 9.70.

Oliver County

1 (*908,p.267; 938,p.213). Otis Tye. NE¼NW¼ sec. 10, T. 141 N., R. 82 W. Water level, in feet below measuring point, 1942: Aug. 11, 18.57.

Pembina County

1 (*938,p.213). E. J. Landers & Co. NW¼NW¼ sec. 22, T. 161 N., R. 56 W.

Water level, in feet above datum, 1942

Jan. 3	101.96	Apr. 4	103.06	July 4	104.59	Oct. 3	104.25
10	102.94	10	103.46	11	104.27	10	104.17
17	102.93	18	103.87	18	104.25	18	104.18
24	102.93	24	104.30	25	104.12	24	104.14
31	102.71	May 2	104.73	Aug. 1	104.38	31	104.08
Feb. 7	102.71	9	105.03	8	104.93	Nov. 7	104.05
14	102.69	16	105.21	15	104.83	14	104.12
21	102.58	23	105.37	22	104.51	21	103.95
28	102.52	30	105.39	29	104.32	28	103.93
Mar. 7	102.48	June 6	105.39	Sept. 5	104.72	Dec. 5	104.89
14	102.45	13	105.10	12	104.33	12	104.87
21	102.49	20	104.87	19	104.44	19	104.84
28	102.73	27	104.75	26	104.37	26	103.76

5 (*938,p.214). Garnett A. Snell. SW¼SW¼ sec. 31, T. 162 N., R. 53 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	103.81	Apr. 4	103.83	July 4	103.43	Oct. 3	103.13
10	103.83	11	103.89	11	102.75	10	103.12
17	103.77	18	103.94	18	102.16	17	103.42
24	103.14	25	103.42	25	102.23	24	103.75
31	103.69	May 2	103.62	Aug. 1	102.64	31	103.72
Feb. 7	103.51	9	103.14	8	102.71	Nov. 7	104.12
14	103.32	16	103.83	15	102.72	14	104.24
23	103.29	23	103.43	22	102.15	21	103.95
28	103.44	30	103.65	29	102.87	28	103.99
Mar. 7	103.45	June 6	103.36	Sept. 5	103.12	Dec. 5	104.37
14	103.36	13	103.53	12	103.17	12	104.44
21	103.62	20	103.26	19	103.43	19	104.37
28	103.77	27	103.53	26	103.75	26	104.44

41 (*840,p.324; 845,p.360; 886,p.547; 908,p.267; 938,p.214). George Harris. NW¼NW¼ sec. 27, T. 163 N., R. 51 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	101.44	Feb. 28	99.83	May 2	100.30	Aug. 21	100.64
10	101.40	Mar. 7	99.66	9	101.26	22	100.39
17	101.31	14	99.66	16	100.23	29	100.56
24	101.26	21	99.52	23	102.10	Sept.19	101.13
31	100.83	28	a99.85	31	102.53	Oct. 17	100.99
Feb. 7	100.53	Apr. 3	(a)	July 4	102.02	24	100.96
14	100.27	18	a104.25	25	101.11	30	100.82
21	100.01	25	100.83	Aug. 1	101.03	Nov. 7	100.75

50 **938,p.214). Albert C. McCurdy. SE¼SE¼ sec. 3, T. 162 N., R. 55 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	100.83	Mar. 28	99.46	July 4	102.00	Oct. 10	101.79
3	100.79	Apr. 4	99.81	11	101.83	17	101.71
10	100.39	11	100.15	18	101.60	24	101.62
17	100.02	18	100.87	25	101.50	31	101.54
24	99.87	25	101.31	Aug. 1	101.53	Nov. 7	101.46
31	99.81	May 2	101.80	8	101.74	14	101.43
Feb. 7	99.80	9	102.28	15	101.85	21	101.33
14	99.70	23	102.70	22	101.90	28	101.30
21	99.52	30	102.75	29	101.75	Dec. 5	101.21
28	99.32	June 6	102.79	Sept. 5	101.94	12	101.06
Mar. 7	99.16	13	102.53	12	102.18	19	100.92
14	99.12	20	102.30	19	102.04	26	100.89
21	99.22	27	102.03	Oct. 3	101.88		

72 (*938,p.215). Herman Tesmer. NE¼NE¼ sec. 9, T. 163 N., R. 56 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	100.83	Apr. 4	99.91	July 4	102.00	Oct. 3	101.29
10	100.56	11	100.08	11	101.83	10	101.12
17	100.20	18	100.83	18	101.62	17	101.00
24	100.12	25	101.50	25	101.41	24	100.95
31	100.04	May 2	102.41	Aug. 1	101.33	31	100.91
Feb. 7	100.00	9	102.79	8	101.29	Nov. 7	100.87
14	100.05	16	102.37	15	101.00	14	100.91
21	99.84	23	103.00	22	100.83	23	100.91
28	99.81	30	102.91	29	101.04	28	100.83
Mar. 7	99.79	June 6	102.75	Sept. 5	101.54	Dec. 5	100.75
14	99.70	13	102.41	12	101.46	12	100.66
21	99.77	20	102.08	19	101.41	19	100.66
28	99.83	27	102.04	26	101.33	26	100.50

a Surface water running into well.

Pierce County

1 (*908,p.267; 938,p.215). Eric Harmmel. NE¼NW¼ sec. 10, T. 156 N., R. 72 W. Water level, in feet below measuring point, 1942: Aug. 18, 26.29.

Ramsey County

48 (*840,p.324; 845,p.360; 886,p.547; 908,p.267; 938,p.215). Mrs. Bonnie Boland. SW¼NE¼ sec. 14, T. 153 N., R. 65 W. Water levels, in feet above datum, 1942: Jan. 24, 99.78; Apr. 8, 99.87; Aug. 10, 100.11.

110. Ray Young. NE¼NE¼ sec. 5, T. 153 N., R. 64 W. Infrequently used dug well, diameter 48 inches, depth 45 feet. Measuring point, top of casing, 1.5 feet above land surface. Bench mark 1 is painted red X on concrete foundation of granary, 3.13 feet below measuring point; bench mark 2, painted red X on boulder 2.65 feet below measuring point. Water levels, in feet below measuring point, 1942: Sept. 11, 29.04; Oct. 14, 29.67.

111. W. H. Summers. SW¼SW¼ sec. 20, T. 153 N., R. 64 W. Unused bored well, diameter 4 inches, depth 100 feet. Measuring point, top of iron casing, 1 foot above land surface. Water level, in feet below measuring point, 1942: Nov. 7, 51.82.

Ransom County

1 (*908,p.268; 938,p.215). Melfird Skramstad. NW¼NE¼ sec. 3, T. 136 N., R. 56 W. Water levels, in feet below measuring point, 1942: May 25, 22.37; Sept. 4, 19.90.

Renville County

26 (*840,p.324; 845,p.361; 886,p.548; 908,p.268; 938,p.215). Minnesota Trust Co. NE¼NE¼ sec. 20, T. 161 N., R. 85 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	90.27	Apr. 4	90.41	July 3	90.34	Oct. 3	90.14
10	90.20	11	90.36	11	90.35	10	90.13
17	90.27	18	90.43	18	90.25	17	90.07
24	90.24	25	90.47	25	90.27	26	90.07
31	90.28	May 2	90.35	Aug. 1	90.45	Nov. 2	90.17
Feb. 7	90.27	9	90.39	8	90.28	9	90.16
14	90.24	16	90.36	15	90.34	14	90.23
21	90.23	23	90.34	22	90.24	Dec. 5	90.24
28	90.24	30	90.40	29	90.23	12	90.23
Mar. 7	90.36	June 6	90.36	Sept. 5	90.26	19	90.13
14	90.33	13	90.35	12	90.19	26	90.12
21	90.33	20	90.36	19	90.20		
28	90.32	27	90.38	26	90.14		

75 (*840,p.325; 845,p.361; 886,p.548; 908,p.268; 938,p.216). Fish and Wildlife Service, U. S. Department of the Interior. NW¼NW¼ sec. 31, T. 158 N., R. 84 W. Water levels, in feet above datum, 1942: Jan. 10, a105.83; Feb. 9, 105.83.

167 (*908,p.268; 938,p.216). Town of Mohall. SE¼SW¼ sec. 13, T. 161 N., R. 84 W. Water level, in feet below measuring point, 1942: Aug. 16, 24.24.

168 (*908,p.268; 938,p.216). J. Dighton Taylor. NW¼NE¼ sec. 24, T. 161 N., R. 84 W. Water level, in feet below measuring point, 1942: Aug. 16, 9.95.

a Measurement to ice.

169 (*908,p.269; 938,p.216). Fred Paris. SE¼SW¼ sec. 13, T. 161 N., R. 84 W. Water level, in feet below measuring point, 1942: Aug. 16, 7.11.

Richland County

2 (*845,p.361; 886,p.548; 908,p.269; 938,p.216). Ira Madden. NE¼SE¼ sec. 12, T. 132 N., R. 49 W. Water level, in feet above datum, 1942: Sept. 4, 101.63.

5 (*840,p.325; 845,p.362; 886,p.548; 908,p.269; *938,p.216) John Liljemark. SW¼SE¼ sec. 33, T. 133 N., R. 52 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	101.50	Apr. 4	102.79	July 11	104.58	Oct. 17	104.77
10	100.96	11	104.35	18	103.77	24	104.63
17	101.00	18	105.46	26	101.92	31	105.03
24	101.16	26	104.96	Aug. 2	103.35	Nov. 7	105.02
31	101.27	May 2	106.06	8	103.16	14	104.96
Feb. 7	101.08	10	105.67	15	102.50	21	105.57
14	100.85	16	106.19	22	102.04	27	105.08
21	100.71	23	106.44	29	105.29	Dec. 5	104.38
28	100.54	30	106.52	Sept.13	104.94	12	104.00
Mar. 7	100.65	June 13	106.17	19	105.56	19	103.71
14	100.85	20	105.83	26	105.77	26	103.50
21	101.10	27	105.81	Oct. 3	105.15		
28	101.58	July 5	105.79	10	104.96		

Rolette County

164 (*908,p.269; 938,p.216). Owner's No. 3. Town of Rolla. NE¼ sec. 17, T. 162 N., R. 69 W. No measurement taken in 1942.

165 (*908,p.269; *938,p.217). Owner's No. 4. Town of Rolla. NE¼ sec. 17, T. 162 N., R. 69 W. Well now 38 feet deep.

Water level, in feet below measuring point, 1942

Jan. 4	19.49	Feb. 25	19.47	Aug. 20	a16.70	Aug. 21	c27.00
Feb. 17	19.52	Mar. 4	19.58	20	b21.10	22	d16.40

Sargent County

1 (*908,p.269; 938,p.217). Nick Klinkheimer. SW¼SW¼ sec. 25, T. 131 N., R. 58 W. Water levels, in feet below measuring point, 1942: May 25, 28.75; Sept. 3, dry hole.

2 (*908,p.270; 938,p.217). Nick Klinkheimer. SW¼SW¼ sec. 25, T. 131 N., R. 58 W. Water levels, in feet below measuring point, 1942: May 25, 29.84; Sept. 3, pipe pulled, well filled in. Measurement discontinued.

116 (*908,p.270; *938,p.217). Reko Realty. NE¼NW¼ sec. 19, T. 130 N., R. 58 W. Water level, in feet below new measuring point, 1942: May 28, 6.78.

Sheridan County

95 (*845,p. 362; 886,p.549; 908,p.270; 938,p.217). Bank of North Dakota. NW¼NW¼ sec. 28 T. 145 N., R. 75 W.

a Pumped 4 hours.
b Pumped 7 hours.
c Pumped 17 hours.
d After 8 hours recovery following 17 hours pumping.

95. (*845,p.362; 886,p.549; 908,p.270; 938,p.217). Bank of North Dakota--Continued.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	100.27	Apr. 4	100.15	July 11	100.20	Oct. 10	100.15
10	100.31	11	100.22	18	100.20	17	100.22
17	100.30	18	100.15	25	100.20	24	100.18
24	100.22	25	100.14	Aug. 1	100.21	31	100.18
31	100.23	May 2	100.17	8	100.21	Nov. 7	100.21
Feb. 7	100.21	9	100.14	15	100.22	14	100.20
14	100.21	16	100.22	22	99.80	21	100.21
21	100.22	23	100.25	29	100.21	28	100.20
28	100.22	30	100.21	Sept. 5	100.23	Dec. 5	100.21
Mar. 7	100.22	June 6	100.20	12	100.22	12	100.21
14	100.23	20	100.14	19	100.21	19	100.18
24	100.12	27	100.20	26	100.23	26	100.21
28	100.14	July 4	100.22	Oct. 3	100.22		

Sioux County

1 (*908,p.270; 938,p.217). Mrs. Lookingout. SW¼ sec. 7, T. 130 N., R. 79 W. Water level, in feet below measuring point, 1942: Aug. 12, 10.67.

2 (*938,p.217). Mrs. Mulache. NE¼SE¼ sec. 23, T. 130 N., R. 80 W. Water level, in feet below measuring point, 1942: Aug. 12, 25.59.

Slope County

1 (*908,p.270; 938,p.218). Arthur Nesseth. SE¼NE¼ sec. 14, T. 134 N., R. 100 W. Water level, in feet below measuring point, 1942: Aug. 13, 15.97.

Stark County

120 (*908,p.270; 938,p.218). Roland and George Funk. NE¼NW¼ sec. 2, T. 139 N., R. 91 W. Water level, in feet below measuring point, 1942: Aug. 11, 5.30.

Steele County

1 (*908,p.270; 938,p.218). Mrs. Snortland. NE¼NE¼ sec. 15, T. 148 N., R. 57 W. Water levels, in feet below measuring point, 1942: May 28, 20.24; Aug. 30, 15.46.

Stutsman County

124 (*908,p.270; 938,p. 218). Union Central Life Insurance Co. SW¼SW¼ sec. 33, T. 137 N., R. 64 W. Water levels, in feet below measuring point, 1942. May 25, 53.31; Sept. 2, 53.26.

Towner County

59 (*840,p.325; 845,p.363; 886,p.549; 908,p.271; 938,p.218). Bank of North Dakota. NE¼NW¼ sec. 28, T. 160 N., R. 66 W.

Water level, in feet above datum, 1942

Jan. 3	102.35	Apr. 4	102.52	July 4	102.70	Oct. 3	102.86
10	102.38	11	102.57	11	102.69	10	102.87
17	102.37	18	102.61	18	102.69	17	102.87
24	102.36	25	102.62	25	102.71	24	102.87
31	102.34	May 2	102.63	Aug. 1	102.77	31	102.87
Feb. 7	102.34	9	102.63	8	102.80	Nov. 7	102.88
14	102.32	16	102.66	15	102.80	14	102.89
21	102.38	23	102.69	22	102.80	21	102.90
28	102.37	30	102.72	29	102.81	28	102.91
Mar. 7	102.38	June 6	102.73	Sept. 5	102.82	Dec. 5	102.93
14	102.39	13	102.72	12	102.83	12	102.95
21	102.40	20	102.71	19	102.84	19	102.97
28	102.45	27	102.70	26	102.85	26	102.99

170. S. L. Isaacson. Lot 12, block 16, Town of Cando. Dug domestic well, diameter 48 inches, depth 30 feet. Measuring point, red arrow at top of platform, bored hole, 0.0 foot above land surface. Bench mark 1, southeast corner of concrete foundation of house at red cross, 1.22 feet above measuring point. Bench mark 2, nail and washer on corner pole, 0.54 foot below measuring point. Water level, in feet below measuring point, 1942: Aug. 20, 21.98.

Traill County

15 (*840,p.326; 845,p.363; 886,p.549; 908,p.271; 938,p. 218). A. C. Skyberg. SE¼SW¼ sec. 24, T. 146 N., R. 51 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	101.93	Apr. 4	101.96	July 4	102.18	Oct. 3	102.39
10	101.95	11	101.93	11	102.22	10	102.41
17	101.95	18	101.91	18	102.24	17	102.43
24	101.97	25	101.91	25	102.29	24	102.43
31	101.97	May 2	101.95	Aug. 1	102.33	31	102.45
Feb. 7	101.97	9	101.97	8	102.37	Nov. 7	102.45
14	101.97	16	101.99	15	102.37	14	102.48
21	101.97	23	102.04	22	102.37	21	102.48
28	101.97	30	102.06	29	102.37	28	102.48
Mar. 7	101.96	June 6	102.14	Sept. 5	102.39	Dec. 5	102.48
14	101.95	13	102.12	12	102.39	12	102.48
21	101.95	20	102.14	19	102.39	19	102.48
28	101.95	27	102.16	26	102.39	26	102.48

31 (*845,p.364; 886,p.550; 908,p.271; 938,p.219). City of Hatton. SW¼NE¼ sec. 18, T. 148 N., R. 53 W.

Water level, in feet above datum, 1942

Mar. 21	107.16	May 9	113.04	June 21	112.85	Aug. 1	111.60
Apr. 5	110.75	17	113.00	28	112.70	8	111.91
12	110.04	23	113.18	July 4	112.78	15	111.92
19	111.16	30	113.08	12	112.16	22	111.56
25	112.46	June 6	113.08	20	112.14	29	111.57
May 2	112.69	14	112.94	25	111.34	Sept. 5	(a)

32 (*845,p.364; 886,p.550; 908,p.271; 938,p.219). City of Hatton. SE¼NE¼ sec. 18, T. 148 N., R. 53 W.

Water level, in feet above datum, 1942

Mar. 21	108.11	May 30	113.98	Aug. 1	112.55	Oct. 3	111.21
Apr. 5	110.33	June 6	114.11	8	112.22	11	111.21
12	110.56	14	113.88	15	111.35	18	111.33
19	111.77	21	113.90	22	110.72	24	111.62
25	111.84	28	113.84	29	110.78	31	111.75
May 2	112.41	July 4	113.56	Sept. 5	110.81	Nov. 7	111.71
9	112.94	12	112.57	12	110.35	14	112.07
17	113.48	20	112.75	19	110.57	21	111.78
23	113.50	25	112.06	26	110.93		

33 (*840, p.326; 845, p. 366; 908,p.272; 938,p.219). City of Hatton. NE¼NE¼ sec. 18, T. 148 N., R. 53 W.

Water level, in feet above datum, 1942

Mar. 21	110.05	May 30	117.58	Aug. 1	114.75	Oct. 3	112.08
Apr. 5	113.29	June 6	117.44	8	114.39	11	112.44
12	113.43	14	117.15	15	114.16	18	112.44
19	114.41	21	116.97	22	113.19	24	112.84
25	114.63	28	116.77	29	112.87	31	112.94
May 2	115.46	July 4	116.48	Sept. 5	112.49	Nov. 7	112.94
9	117.49	12	115.81	12	111.99	14	112.27
17	117.54	20	115.38	19	111.92	21	113.00
23	117.66	25	114.98	26	111.96	28	(b)

a Well caved in.
b All manholes covered and frozen down.

34 (*845,p.365; 886,p.550; 908,p.272; 938,p.219). City of Hatton. NW¼NE¼ sec. 18, T. 148 N., R. 53 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 21	108.32	May 30	111.88	Aug. 1	110.64	Oct. 3	109.13
Apr. 5	108.50	June 6	111.93	8	110.39	11	109.31
12	108.76	14	111.86	15	110.26	18	109.23
19	109.80	21	111.84	22	109.81	24	109.24
25	110.09	28	111.72	29	109.44	31	109.33
May 2	112.84	July 4	111.52	Sept. 5	109.47	Nov. 7	109.25
9	111.39	12	111.25	12	109.10	14	109.38
17	111.76	20	110.85	19	109.06	21	109.18
23	111.77	25	110.79	26	b105.10	28	(a)

Walsh County

38 (*840,p.326; 845,p.366; 886,p.551; 908,p.272; 938,p.219). Henry Dipple. SW¼SE¼ sec. 16, T. 157 N., R. 51 W.

Water level, in feet above datum, 1942

Jan. 3	100.01	Apr. 4	100.11	July 4	99.49	Oct. 3	99.62
10	99.85	11	100.50	11	99.42	10	99.15
17	100.07	18	100.50	18	99.30	17	99.23
24	99.99	25	(b)	25	99.25	24	99.23
31	100.08	May 2	(b)	Aug. 1	99.63	31	99.25
Feb. 7	99.94	9	(b)	8	99.64	Nov. 7	99.23
14	100.11	16	(b)	15	99.80	14	99.23
21	99.75	23	100.93	22	99.61	21	98.77
28	99.93	30	100.91	29	99.79	28	99.07
Mar. 7	99.75	June 6	100.02	Sept. 5	99.56	Dec. 5	98.93
14	100.33	13	100.03	12	99.51	12	98.93
21	100.21	20	99.85	19	99.49	19	98.96
28	100.24	27	99.83	26	99.52	26	98.93

39 (*840,p.327; 845,p.366; 886,p.551; 908,p.272; 938,p.220). Henry Dipple. SW¼SE¼ sec. 16, T. 157 N., R. 51 W.

Water level, in feet above datum, 1942

Jan. 3	103.34	Apr. 4	106.13	July 4	104.91	Oct. 3	104.42
10	103.17	11	(b)	11	105.36	10	105.17
17	102.23	18	(b)	18	104.75	17	105.32
24	102.40	25	(b)	25	103.86	24	102.84
31	101.74	May 2	(b)	Aug. 1	106.75	31	105.01
Feb. 7	101.85	9	(b)	8	106.79	Nov. 7	105.65
14	101.64	16	(b)	15	106.82	14	102.54
21	101.82	23	(b)	22	105.10	21	102.97
28	101.28	30	106.59	29	105.08	28	102.42
Mar. 7	101.36	June 6	106.56	Sept. 5	106.44	Dec. 5	102.40
14	101.26	13	105.43	12	105.91	12	102.29
21	101.38	20	106.09	19	103.67	19	102.25
28	104.92	27	104.94	26	104.18	26	102.29

40 (*840,p.327; 845,p.366; 886,p.551; 908,p.273; 938,p.220) Henry Dipple. SW¼SE¼ sec. 16, T. 157 N., R. 51 W.

a All manholes covered and frozen down.
b Well flooded with surface water.

40 (*840,p.327; 845,p.366; 886,p.551; 908,p.273; 938,p.220). Henry Dipple--Continued.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	103.84	Apr. 4	106.42	July 4	103.45	Oct. 3	103.89
10	103.84	11	(a)	11	103.43	10	102.92
17	103.84	18	(a)	18	103.53	17	103.92
24	103.84	25	(a)	25	102.06	24	103.86
31	103.84	May 2	(a)	Aug. 1	105.34	31	103.90
Feb. 7	104.17	9	(a)	8	105.35	Nov. 7	103.91
14	104.17	16	(a)	15	105.38	14	102.00
21	104.17	23	(a)	22	103.96	21	102.00
28	104.17	30	102.53	29	103.82	28	102.00
Mar. 7	104.17	June 6	103.74	Sept. 5	104.79	Dec. 5	101.90
14	104.17	13	103.67	12	105.67	12	101.98
21	104.17	20	103.73	19	105.54	19	101.97
28	104.17	27	103.67	26	104.66	26	101.97

96 (*886,p.551; 908,p.273; 938,p.220). C. D. Lewis. SW¼SW¼ sec. 17, T. 157 N., R. 55 W.

Water level, in feet above datum, 1942

Jan. 3	102.15	Apr. 4	102.78	July 4	103.33	Oct. 3	102.48
10	101.99	11	103.05	12	103.04	10	102.41
17	101.81	18	103.31	19	102.77	17	102.33
24	101.79	25	103.54	25	102.63	24	102.27
31	101.78	May 2	103.94	Aug. 1	102.81	31	102.24
Feb. 7	101.77	9	104.23	8	102.91	Nov. 7	102.21
14	101.72	17	104.31	15	102.82	15	102.22
21	101.66	23	104.35	22	102.57	22	102.21
28	101.58	30	104.31	29	102.39	29	102.17
Mar. 7	101.62	June 7	104.12	Sept. 5	102.77	Dec. 5	102.10
14	101.64	13	103.87	12	102.82	12	102.10
21	101.78	20	103.65	20	102.67	19	101.94
28	102.29	28	103.49	26	102.59	27	101.92

Ward County

25 (*886,p.552; 908,p.273; 938,p.221). Rural Rehabilitation Corporation. NE¼NE¼ sec. 2, T. 155 N., R. 84 W.

Water level, in feet above datum, 1942

Jan. 4	101.21	Apr. 5	101.60	July 12	101.77	Oct. 11	101.02
11	101.21	12	102.48	19	102.06	18	101.02
18	101.27	19	102.54	26	102.10	25	101.02
25	101.27	26	102.50	Aug. 2	102.12	31	101.02
Feb. 1	101.06	May 3	102.40	9	102.56	Nov. 8	101.02
8	101.02	10	102.27	15	101.81	15	101.02
15	100.96	17	102.31	23	101.56	22	101.02
22	100.91	31	102.27	30	101.35	29	101.04
Mar. 1	100.89	June 7	102.14	Sept. 6	101.21	Dec. 6	100.98
8	100.87	14	102.10	13	101.06	13	100.96
15	100.85	21	101.98	20	100.98	20	100.94
22	100.85	28	101.89	27	100.96	27	100.92
29	101.27	July 5	101.83	Oct. 5	100.94		

a Well flooded with surface water.

50. Fish and Wildlife Service, U. S. Department of the Interior. NW¼ NE¼ sec. 31, T. 160 N., R. 89 W. Infrequently used dug well, diameter 60 inches, depth 28 feet. Measuring point, edge of flange of metal cover, 1 foot above land surface. Bench mark 1 is painted X on top of rock foundation at base of post marked with nail and washer at southeast corner of shelter house, 6.32 feet above measuring point. Water level, in feet below measuring point, 1942: Aug. 16, 11.93.

53 (*886,p.552; 908,p.273; 938,p.221). Chas. O'Neill. SW¼SE¼ sec. 30 T. 160 N., R. 88 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	100.47	Apr. 4	104.33	July 4	100.87	Oct. 3	96.24
10	100.25	11	104.45	11	100.91	10	94.37
17	100.41	18	103.58	18	100.87	17	94.41
24	100.41	25	103.58	25	99.66	24	93.49
31	99.58	May 2	102.51	Aug. 1	99.66	31	93.51
Feb. 7	99.51	9	102.56	8	99.58	Nov. 7	98.58
14	99.59	16	102.93	15	99.87	14	98.50
21	99.49	23	102.49	22	98.41	21	98.58
28	100.85	30	102.53	29	98.37	28	98.58
Mar. 7	100.24	June 6	102.54	Sept. 5	97.33	Dec. 5	98.53
14	100.33	13	102.62	12	97.24	12	98.66
21	102.37	20	101.41	19	97.29	26	98.91
28	102.35	27	101.24	26	97.33		

71 (*840,p.327; 845,p.367; 886,p.553; 908,p.274; 938,p.221). Fish and Wildlife Service, U. S. Department of the Interior. SE¼SW¼ sec. 5, T. 157 N., R. 84 W.

Water level, in feet above datum, 1942

Jan. 10	103.08	Apr. 18	104.15	Sept. 25	105.16	Nov. 30	105.31
Feb. 9	103.33	Aug. 17	105.19	Oct. 24	105.21	Dec. 18	104.87
Mar. 7	103.52	25	105.21				

73 (*840,p.327; 845,p.367; 886,p.553; 908,p.274; 938,p.221). Fish and Wildlife Service, U. S. Department of the Interior. SE¼SE¼ sec. 21, T. 157 N., R. 84 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level
Jan. 10	a95.25	Mar. 7	94.75	Aug. 17	100.97
Feb. 9	94.62	Apr. 18	96.62		

74 (*840,p.328; 845,p.367; 886,p.553; 908,p.274; 938,p.222). Fish and Wildlife Service, U. S. Department of the Interior. NE¼SW¼ sec. 21, T. 157 N., R. 84 W. Water levels, in feet above datum, 1942: Jan. 10, 100.89; Feb. 9, 100.60; Mar. 7, 100.34; Apr. 18, 100.02.

114 (*908,p.274; 938,p.222). Fish and Wildlife Service, U. S. Department of the Interior. SW¼NE¼ sec. 32, T. 160 N., R. 88 W. Well found dry and caved in Aug. 17, 1942. Measurement discontinued.

Wells County

23 (*817,p.229; *840,p.328; 845,p.368; 886,p.554; 908,p.274; 938,p. 222). City of Harvey. SE¼SW¼ sec. 20 T. 150 N., R. 72 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	105.30	Feb. 8	104.53	Mar. 15	104.37	Apr. 12	105.95
11	105.18	15	104.53	22	104.91	Dec. 14	105.39
18	104.85	22	104.09	29	105.18	21	105.35
23	104.83	Mar. 1	104.28	Apr. 5	105.70	28	105.20
Feb. 1	104.70	8	104.03				

a Unit 96 (a reservoir with water level maintained by dam on Souris River) drained.

24 (*840,p.328; 845,p.368; 886,p.554; 908,p.274; 938,p.222). City of Harvey. NE¼NW¼ sec. 28, T. 150 N., R. 72 W.

Water level, in feet above datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	106.61	Feb. 8	105.81	Mar. 15	105.65	Apr. 12	107.25
11	106.48	15	105.83	22	106.21	Dec. 14	106.73
18	106.12	22	105.56	29	106.48	21	106.65
25	106.10	Mar. 1	105.37	Apr. 5	107.06	28	106.44
Feb. 1	106.00	8	105.37				

153. (*908,p.275; 938,p.222). Hayden Jones. NE¼NE¼ sec. 23, T. 147 N., R. 70 W. Water levels, in feet below measuring point, 1942: May 5, well covered; Aug. 10, well pumped dry.

Williams County

77 (*886,p.554; 908,p.275; 938,p.223). Hans O. Lottestad. NE¼SE¼ sec. 24, T. 159 N., R. 103 W.

Water level, in feet above datum, 1942

Jan. 3	91.99	Apr. 4	91.89	July 4	93.82	Oct. 3	92.27
10	91.90	11	93.66	11	93.68	10	92.20
17	91.92	18	94.63	18	93.29	17	92.09
24	91.84	25	95.15	25	93.22	24	92.11
31	91.78	May 2	95.28	Aug. 1	93.09	31	92.02
Feb. 7	91.75	9	95.24	8	92.93	Nov. 7	91.97
14	91.70	16	95.19	15	92.82	14	91.93
21	91.66	23	95.03	22	92.70	21	91.88
28	91.60	30	94.84	29	92.66	28	91.87
Mar. 7	91.59	June 6	94.64	Sept. 5	92.51	Dec. 5	91.82
14	91.60	13	94.47	12	92.45	12	91.78
21	91.57	20	94.31	19	92.38	19	91.74
28	91.55	27	94.11	26	92.30	26	91.71

78 (*845,p.368; 886,p.555; 908,p.275; 938,p.223). Hans O. Lottestad. NE¼SE¼ sec. 24, T. 159 N., R. 103 W.

Water level, in feet above datum, 1942

Jan. 3	86.09	Apr. 4	92.98	July 4	91.09	Oct. 3	87.93
10	85.61	11	93.97	11	90.84	10	87.71
17	85.58	18	94.39	18	90.43	17	87.53
24	85.48	25	94.61	25	90.14	24	87.36
31	85.37	May 2	94.29	Aug. 1	89.92	31	87.34
Feb. 7	85.23	9	93.95	8	89.58	Nov. 7	87.09
14	85.17	16	93.57	15	89.35	14	87.10
21	85.15	23	93.23	22	89.06	21	86.75
28	85.12	30	92.80	29	88.90	28	86.77
Mar. 7	85.07	June 6	92.38	Sept. 5	88.63	Dec. 5	86.64
14	85.08	13	91.98	12	88.43	12	86.48
21	86.90	20	91.77	19	88.28	19	86.47
28	90.79	27	91.47	26	87.99	26	86.44

79 (*845,p.369; 886,p.555; 908,p.276; 938,p.223). Mrs. Gus B. Swanson Estate. SW¼SW¼ sec. 29, T. 157 N., R. 96 W.

Water level, in feet above datum, 1942

Jan. 3	77.55	Apr. 6	88.70	July 4	93.41	Oct. 4	80.59
10	76.28	11	91.05	11	94.53	11	79.64
17	74.30	18	92.13	18	95.28	17	81.53
24	75.59	25	93.86	25	89.32	24	80.77
31	76.70	May 2	95.84	Aug. 2	87.51	31	81.88
Feb. 7	77.47	9	93.32	8	86.61	Nov. 7	86.51
15	75.76	17	95.61	16	85.51	15	85.78
21	78.47	24	96.34	22	77.95	22	84.45
28	80.51	30	97.34	29	80.57	29	82.95
Mar. 7	79.28	June 7	98.43	Sept. 5	78.84	Dec. 6	80.72
14	85.59	13	97.34	13	78.70	13	81.37
21	84.95	20	98.64	19	82.74	20	79.82
28	85.89	27	99.51	26	81.95	26	83.61

SOUTH DAKOTA

By T. W. Robinson and W. E. Hale

PROGRAM OF OBSERVATIONS

The observation-well program in South Dakota, begun in 1939 in the southeastern part of the State, was continued in 1942 by the Geological Survey, United States Department of the Interior, in cooperation with the South Dakota Geological Survey. During the year 1 well was dropped from the program and 7 were added to it. At the end of the year 50 wells were under observation. Of the 7 added wells, 1 was established in the Brookings city field and 3 in the Sioux Falls city field. Wells in the city fields are discussed, under the names of the cities they serve, in the section of this report headed "Well descriptions and water-level measurements," in which all wells under observation in the State are listed. The water level was measured once a week in each of 2 wells, once a month in each of 35 wells, and two, three, four, or five times during the year in each of 6 wells; in 7 wells no measurements were made. A float-tape gage was installed on 1 well. In all, about 400 individual measurements were made during the year.

GENERAL CONDITIONS IN SOUTHEASTERN PART OF STATE

Water-level measurements in 19 to 23 wells (Nos. 1, 3-5, 7, 8, 21, 22, 24, 25, 27, 29, 30, 31, 33-38, and 40-42) were used in computing the monthly averages for the period of record given in the following table. It will be noted that there was an average rise from February to June 1942 of more than 5 feet, and that in December 1942 the average level was 2.59 feet higher than in December 1941 and 3.68 feet higher than in December 1939. During the summer of 1942 the water levels in these shallow wells reached their highest average stage since December 1939, when the measurements were begun.

Average water level, in feet above assumed datum planes, in 19 to 23 shallow wells, 1939-42

Year	Jan.	Feb.	Mar.	Apr.	May	June
1939	.....	.....	.....	.....	.....	.....
1940	100.10	99.74	100.11	101.89	102.08	102.70
1941	100.97	100.87	102.92	104.44	a103.81	103.52
1942	101.29	100.73	101.50	103.09	b104.09	106.01

a Average of 11 wells.
b Average of 14 wells.

Average water level, in feet above assumed datum planes, in 19 to 23 shallow wells, 1939-42--Continued.

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.
1939	.....	.....	.....	.....	.....	100.00
1940	102.76	102.00	100.63	100.02	.....	100.98
1941	102.72	101.79	101.49	101.24	101.00	101.09
1942	105.31	105.08	104.33	103.74	103.26	103.68

Figure 11 shows graphically the fluctuation of the average water level since measurements were begun in December 1939. During the period December 1941 to January 1942 the average water level first rose slightly and then declined. Beginning in February 1942 it rose steadily until it reached its record high in June, after which it declined more or less steadily until about the end of the year. The water levels in all the wells, however, did not reach their highest stage in June. Of the group of 23 wells used in determining the average level, 13 reached a record high in June, 4 in July, 3 in May, 2 in September, and 1 in August. The precipitation was below normal in January and February, above normal in March, below normal in April, decidedly above normal in May, and about normal in June. In general, during the period July to December the precipitation was below normal, although in some localities it was above normal.

The fluctuations of the water level since December 1939 in 5 representative water-table wells are also shown in figure 11 . The fluctuations in these wells are similar to the average fluctuation, shown near the bottom of the figure, in the 23 wells that make up the group used in determining the average water level. In wells 1 and 5 the water level in 1942 reached both its lowest stage on record and its highest stage on record. The rapid rise in that year of the water level in well 5 from its low in April to its high in September, amounting to 8.86 feet, was due to heavy rains in May and June and again late in August. A float-tape gage was installed in this well and weekly observations have been made on it since August 29. In well 24, also, the water level rose to a record high in 1942, but it declined so much during the later part of the year that at the end of December it was below its stage of December 1939. This 3-year decline may be due in part to seasonal pumping for watering stock and in part to the fact that the well is in hilly terrain, where the recharge is generally not as great as on flatter land. The low water level in this well in April 1941 may be the result of pumping shortly before the measurement was made.

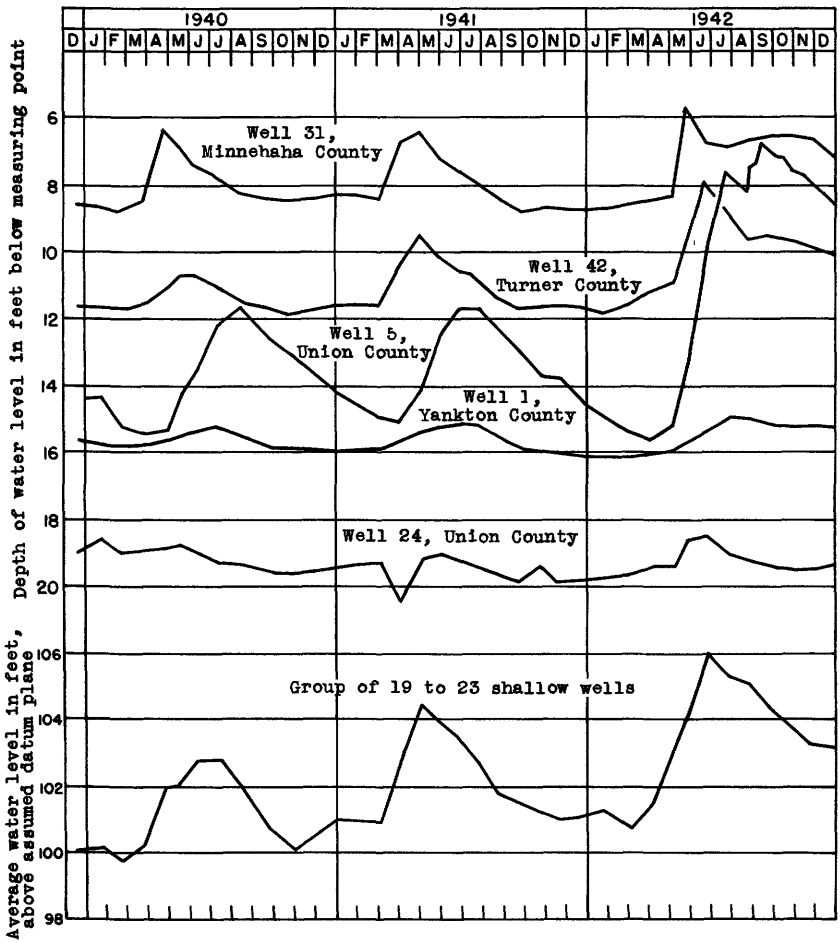

Figure 11.--Graphs showing fluctuation of water level since December 1939 in 5 shallow wells in southeastern South Dakota and average water level in a group of 19 to 23 shallow wells.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Following is a list of the observation wells in South Dakota included in the program just discussed. With the exception of those in the three city fields, the wells are listed alphabetically by counties and numerically within each county. The wells in the city fields included are listed under the names of the appropriate cities, which precede the names of the counties. Complete descriptions are given for only newly added wells. The numbers in parentheses immediately following a well number indicate the water-supply papers in which earlier records of that well are given and the pages on which they appear. An asterick indicated that a description of the well is given in that paper. The water level in each well is expressed in feet below the land-surface datum, which is the average land surface in the vicinity of the well.

Municipal wells

Brookings

The city of Brookings is in Brookings County, in T. 110 N., R. 50 W. In 1940 it had a population of 5,346. Its water supply is obtained from 3 wells, 62 feet deep, situated about 1½ miles north of the city and tapping water in a valley train in the glacial drift.

Prior to 1930 Brookings obtained its water supply from 3 shallow dug wells, 18 feet in diameter, situated about a mile west of the city. At first the yield was about 200 gallons a minute from each well, but during the period 1925-30 it diminished and at the end of the period the combined yield of all 3 wells was only about 200 gallons a minute. Because of this low yield an exploratory test-drilling program was carried out in 1930 to determine the best location for additional wells. As a result, a site was selected 1½ miles north of Brookings, in the NW¼SW¼ sec. 13, T. 110 N., R. 50 W., where a sand-and-gravel bed about 41 feet thick was encountered at a depth of 21 feet. Wells 1 and 2, 32 and 24 inches, respectively, in diameter, were jetted to a depth of 62 feet. The static depth to water was from 5 to 6 feet below the land surface. Well 1, when tested, yielded about 1,250 gallons a minute, and well 2, about 1,000 gallons a minute. Well 1 is pumped at the rater of about 625 gallons a minute and well 2 at about 750 gallons a minute. On the completion of these two drilled wells the old dug wells were abandoned. In 1942 a third well, 22 inches in diameter, was drilled to a depth of 62 feet. This well will yield 1,000 gallons a minute with a drawdown of 14 feet, but it is pumped at the rate of about 625 gallons a minute.

The pumpage for the Brookings municipal supply in each year of the period 1937-42 and in each month of 1942 is given in the two following tables.

Yearly pumpage, in millions of gallons, from the municipal wells at Brookings, 1937-42

Year	Pumpage	Year	Pumpage	Year	Pumpage
1937	196.8	1939	199.4	1941	199.6
1938	212.6	1940	188.5	1942	160.4

Monthly pumpage, in millions of gallons, from the municipal wells at Brookings, 1942

Month	Pumpage	Month	Pumpage	Month	Pumpage
Jan.	13.2	May	12.6	Sept.	13.7
Feb.	11.5	June	13.9	Oct.	13.8
Mar.	12.8	July	17.1	Nov.	10.8
Apr.	13.8	Aug.	16.0	Dec.	11.2

Beginning in July 1942 weekly measurements of the water level in well 1 were made by the Brookings Water Works through the courtesy of Tom Newell, superintendent. The measurements were made when all the wells were idle.

110-50-13M1. Owner's No. 1. City of Brookings. A jetted municipal well, diameter 32 inches, depth 62 feet. Measuring point, drilled hole in pump base, 1.5 feet above pump-house floor and 5.0 feet above land-surface datum. Equipped with turbine pump.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 30	7.00	Sept. 11	9.00	Oct. 23	7.83	Nov. 27	8.33
Aug. 7	7.75	18	8.33	30	8.17	Dec. 4	8.17
14	8.17	Oct. 2	8.58	Nov. 6	8.50	11	7.66
21	8.75	9	7.75	13	8.75	18	7.42
28	9.17	16	7.58	20	8.58	24	8.58
Sept. 4	9.58						

Huron

The recording of water-level measurements in gage hole 1 in the city field near Huron, Beadle County, which was begun in 1934, was continued by the city in 1942. During most of the year Huron obtained its water supply from the James River, but for a period of 22 days, December 8-29, the city well field provided the supply, which amounted to 11,528,000 gallons. The measurements for the Huron well field were furnished by H. M. Pierce, city engineer.

There was a gradual rise in the water level from the beginning of the year until the last measurement was made, in October, probably due in part to the recovery from previous pumping and in part to unusually heavy rains in May, June, and July. No measurements were made in December, the only month during which there was pumping from the well field.

110-62-9E1 (*817, p. 314; 840, p. 373; 845, p. 436; 886, p. 640, 908, p. 277; 938, p. 231). City of Huron. Owner's gage hole 1. SW¼NW¼ sec. 9, T. 110 N., R. 62 W. Measuring point level with land-surface datum. Water levels, in feet below land-surface datum, 1942: May, 10.97; July, 10.43; Oct., 9.54.

Sioux Falls

Sioux Falls is in Minnehaha County, in southeastern South Dakota. In 1940 it had a population of 40,832. Its water supply is obtained from 9 dug wells of large diameter situated just north of the city limits. In addition to supplying its own needs the city furnishes the water required by an Army technical school established there in the summer of 1942.

The city well field is in the valley of the Big Sioux River, in the S½ secs. 5 and 6, T. 101 N., R. 49 W. Altogether, 13 wells have been constructed, but 4 of these have been abandoned. The wells obtain water from a deposit of fine to medium sand that overlies a bed of clay. The depth to the clay bed ranges from 30 to 45 feet below the land surface, as does also the depth of the wells. It is reported that there is about 6 feet of soil and that the underlying sand contains a few boulders. Brief information about the wells is given in the following table.

Municipal wells at Sioux Falls

Well	Date completed	Diameter (feet)	Depth (feet)	Pumping rate in gallons a minute (Nov. 23, 1942)	Reported capacity in gallons a day
1	1906	20	26	.....	Not used
2	1909	35	31	.....	Not used
3	1911	50	33	350	1,235,000
4	1913	50	38	725	2,158,000
5	1921	18	34	.....	Filled in
6	1922	18	40	.....	Filled in
7	1922	18	40	250	1,185,000
8	1926	18	45	800	2,076,000
9	1926	18	45	1,000	2,505,000
10	1934	20	45	600	1,500,000
11	1934	20	45	(a)	1,500,000
12	1941	20	45	(a)	1,500,000
13	1942	40	45	930	2,000,000
14	(b)	..	..	.....	.....

The two tables that follow show the pumpage, by years, during the period 1908-42 and by months during the period 1941-42.

Yearly pumpage, in millions of gallons, from municipal wells at Sioux Falls, 1908-42

Year	Pumpage	Year	Pumpage	Year	Pumpage
1908	297.8	1920	853.1	1932	1,481.9
1909	355.1	1921	845.9	1933	1,197.1
1910	407.2	1922	921.6	1934	1,366.1
1911	358.6	1923	941.8	1935	1,328.0
1912	400.8	1924	1,014.2	1936	1,529.0
1913	479.1	1925	1,153.6	1937	1,674.3
1914	541.0	1926	1,104.2	1938	1,611.8
1915	579.6	1927	1,086.2	1939	1,685.7
1916	647.8	1928	1,208.5	1940	1,717.2
1917	692.5	1929	1,353.6	1941	1,965.6
1918	686.4	1930	1,544.1	1942	2,205.8
1919	834.1	1931	1,641.9		

a Not in operation. b Under construction.

Monthly pumpage, in millions of gallons, from municipal wells at Sioux Falls, 1941-42

Month	Pumpage	Month	Pumpage	Month	Pumpage	Month	Pumpage
Jan. 1941	141.5	July 1941	204.7	Jan. 1942	161.0	July 1942	226.5
Feb.	134.7	Aug.	221.9	Feb.	141.2	Aug.	221.4
Mar.	134.8	Sept.	172.1	Mar.	146.6	Sept.	200.9
Apr.	131.4	Oct.	167.7	Apr.	164.5	Oct.	201.4
May	177.2	Nov.	142.0	May	161.2	Nov.	186.5
June	175.2	Dec.	162.6	June	181.3	Dec.	213.4

Because of the heavy draft on the ground-water supply it was considered desirable to obtain information on the fluctuations of water level in the vicinity of the well field, and to this end, 3 observation wells were established in November 1942 by the Geological Survey, United States Department of the Interior, in the vicinity of the well field.

101-49-4C1. State of South Dakota. Driven well, diameter 1¼ inches, depth 16.2 feet. Measuring point, top of 1¼-inch pipe, 2.8 feet below land-surface datum. Water levels, in feet below land-surface datum, 1942: Nov. 23, 13.96; Dec. 21, a/15.6; Dec. 28, a/15.6.

101-49-5F1. Owner's No. 7 test, 1933. City of Sioux Falls. SE¼NW¼ sec. 5, T. 101 N., R. 49 W. Drilled observation well, diameter 6 inches, depth 33.3 feet. Measuring point, top of casing, level with land-surface datum. Water level affected by pumping of nearby wells.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level
Nov. 23	8.50	Dec. 7	a 8.66	Dec. 28	a 8.80
30	a 8.66	21	a 8.80		

101-49-9C1. Morrell Co. NE¼NW¼ sec. 9, T. 101 N., R. 49 W. Drilled test well, diameter 6 inches, depth 32.1 feet. Measuring point, top of casing, 3.3 feet above land-surface datum. Water levels, in feet below land-surface datum, 1942: Nov. 23, 9.13; Dec. 21, a/9.5; Dec. 28, a/9.5.

Beadle County

(See also records under Huron)

11 (*886, p. 642; 908, p. 278; 938, p. 226). SE¼SW¼ sec. 36, T. 110 N., R. 62 W. No measurements made in 1942.

12 (*886, p. 642; 908, p. 278; 938, p. 226). SE¼SE¼ sec. 3, T. 109 N., R. 62 W. No measurements made in 1942.

13 (*886, p. 642; 908, p. 278; 938, p. 226). Mrs. Hildur Erickson. SE¼NE¼ sec. 9, T. 109 N., R. 62 W. No measurements made in 1942.

14 (*886, p. 642; 908, p. 279; 938, p. 226). Mrs. Ella Johnson. NE¼NE¼ sec. 7, T. 109 N., R. 62 W. No measurements made in 1942.

15 (*886, p. 642; 908, p. 279; 938, p. 226). Nels Christensen. NW¼NE¼ sec. 1, T. 109 N., R. 63 W. No measurements made in 1942.

16 (*938, p. 226). P. J. Murphy. SE¼SE¼ sec. 31, T. 111 N., R. 59 W. No measurements made in 1942.

Bon Homme County

7 (*886, p. 642; 908, p. 279; 938, p. 226). T. V. Dugovic. SE¼SW¼ sec. 14, T. 94 N., R. 58 W. Measuring point, top of 3-inch galvanized iron casing, level with land-surface datum.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 24	21.77	May 10	21.23	Aug. 26	12.14	Nov. 22	15.66
Mar. 4	22.43	June 24	12.06	Sept. 26	13.72	Dec. 29	16.23
Apr. 10	22.53	July 29	10.89	Oct. 27	14.72		

a Measurement by Carl Dahlund, Sioux Falls Water Works.

8 (*886, p. 643; 908, p. 279; 938, p. 226). Jake Berndt. SW¼NW¼ sec. 8, T. 95 N., R. 60 W. Measuring point, 0.7 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 24	11.80	May 10	7.13	Aug. 26	a 14.16	Dec. 29	a 19.20
Mar. 4	11.95	June 24	6.04	Sept.26	8.9		
Apr. 10	8.76	July 29	7.04	Nov. 22	8.44		

9 (*886, p. 643;*908, p. 279; 938, p. 227). SE¼SE¼ sec. 31, T. 96 N., R. 60 W. Measuring point, 0.9 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level
Jan. 24	(b)	Apr. 10	(b)	June 24	4.85
Mar. 4	8.10	May 10	3.59	July 29	(c)

34 (*886, p. 643; 908, p. 279; 938, p. 227). Joseph Krejci. NW¼NE¼ sec. 6, T. 94 N., R. 59 W. Measuring point 1.0 foot above land-surface datum. Measurements discontinued after July 28.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 24	12.66	May 10	4.79	Aug. 26	d 4.73	Nov. 22	11.02
Mar. 4	11.47	June 24	6.17	Sept.26	9.53	Dec. 29	11.39
Apr. 10	8.48	July 29	e 8.62	Oct. 27	10.30		

52. NW¼SW¼ sec. 32, T. 96 N., R. 60 W. Abandoned dug well, diameter 15 inches, depth 16.5 feet. Measuring point, top of tile casing on south side, level with land-surface datum.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level
Aug. 26	9.99	Oct. 27	9.88	Dec. 29	10.42
Sept. 26	9.62	Nov. 22	10.14		

Brookings County

(See records under Brookings)

Clay County

(The following wells in Clay County were incorrectly listed in Water-Supply Paper 938 under Brookings County.)

38 (*886, p. 643; 908, p. 279; 938, p. 227). Ed Yusten. SE¼NW¼ sec. 35, T. 94 N., R. 52 W. Measuring point 1.0 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 24	6.54	May 10	4.38	Aug. 26	5.02	Nov. 22	5.70
Feb. 28	6.84	June 23	3.60	Sept.26	5.02	Dec. 29	5.85
Apr. 11	5.02	July 28	4.62	Oct. 27	5.42		

43 (*908, p. 280; 938, p. 227). University of South Dakota. NE¼SE¼ sec. 13, T. 92 N., R. 52 W. Measuring point until June 25, 1942, 0.5 foot above land-surface datum. Measuring point on and after June 25, 1942, top of casing, 0.1 foot below land-surface datum.

a Pumped short time before measurement.
b Dry.
c Well caved in.
d Garden nearby being irrigated.

43 (*908, p. 280; 938, p. 227). University or South Dakota--Continued.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 24	7.89	June 25	10.03	Aug. 27	11.98	Nov. 27	13.08
Apr. 11	7.63	July 28	10.99	Nov. 5	12.63	Dec. 29	12.43
May 10	8.74						

47 (*908, p. 280; 938, p. 227). Geological Survey, U. S. Dept. of Interior. NW¼SW¼ sec. 23, T. 95 N., R. 52 W. Measuring point 0.4 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 24	8.61	May 10	8.48	Aug. 26	5.38	Nov. 22	6.23
Feb. 28	8.68	June 23	3.32	Sept.26	5.40	Dec. 29	6.65
Apr. 11	8.60	July 28	4.46	Oct. 27	5.85		

48 (*908, p. 280; 938, p. 227). Geological Survey, U. S. Dept. of Interior. At Vermillion, 1.3 miles south of Chicago, Milwaukee, St. Paul & Pacific Railroad depot. T. 92 N., R. 52 W. Measuring point 1.1 feet above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 24	16.99	May 10	16.50	Aug. 27	15.60	Nov. 22	16.06
Feb. 28	16.90	June 24	15.84	Nov. 4	15.99	Dec. 29	16.23
Apr. 11	16.62	July 29	15.40				

Hutchinson County

35 (*886, p. 643; 908, p. 280; 938, p. 227). Herman Krause. NE¼SW¼ sec. 8, T. 97 N., R. 60 W. Measuring point 1.4 feet above land-surface datum.

Water level, in feet below land-surface datum, 1942

June 24	2.41	Aug. 26	9.32	Oct. 27	11.34	Dec. 29	11.62
July 29	6.49	Sept.26	10.52	Nov. 22	11.32		

36 (*886, p. 643; 908, p. 280; 938, p. 228). NW¼NE¼ sec. 10, T. 97 N., R. 58 W. Measuring point 1.6 feet above land-surface datum.

Water level, in feet below land-surface datum, 1942

Mar. 4	4.84	June 24	2.21	Sept.26	4.7	Nov. 22	5.63
Apr. 10	4.13	July 29	4.38	Oct. 27	5.64	Dec. 29	5.60
May 10	2.98	Aug. 26	(a)				

37 (*886, p. 643; 908, p. 280; 938, p. 228). Ed. C. Mettler. NW¼NW¼ sec. 10, T. 97 N., R. 57 W. Measuring point 0.4 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 24	14.59	May 10	11.07	Aug. 26	9.76	Nov. 22	11.64
Mar. 4	14.34	June 24	6.00	Sept.26	10.66	Dec. 29	11.82
Apr. 10	12.91	July 29	7.75	Oct. 27	11.20		

45 (*908, p. 280; 938, p. 228). Christ. Harnisch. NE¼NW¼ sec. 11, T. 97 N., R. 56 W. Measuring point 0.3 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 24	14.05	May 10	13.15	Aug. 26	10.89	Nov. 22	11.44
Mar. 4	14.06	June 24	10.79	Sept.26	11.15	Dec. 29	11.15
Apr. 10	13.84	July 29	10.73	Oct. 27	11.23		

51. Art A. Bietz. NW¼NE¼ sec. 7, T. 97 N., R. 59 W. Drilled stock well, diameter 3 inches, depth 24 feet. Measuring point, top of wood timber, 0.6 foot above land-surface datum. Reported as originally drilled to a depth of 360 feet but now caved in, with sand to present depth. Water reported to be coming from sand at a depth of 30 feet. Equipped with windmill. Water levels, in feet below land-surface datum, 1942: July 29, 19.15; Nov. 22, 19.41; Dec. 29, 19.18.

a Dry.

Kingsbury County

(The following well was incorrectly listed in Water-Supply Papers 886, 908, and 938 under Brookings County.)

18a (*886, p. 643; 908, p. 279; 938, p. 227). NE¼NE¼ sec. 12, T. 109 N., R. 53 W. Measuring point, 0.15 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: May 29, 2.05; Nov. 2, 4.55.

Lincoln County

27 (*886, p. 644; 908, p. 281; 938, p. 228). Andrew Lenna. NW¼NE¼ sec. 5, T. 97 N., R. 50 W. Measuring point 1.0 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 23	16.80	May 9	13.57	July 28	6.65	Nov. 2	12.41
Feb. 28	17.26	29	15.90	Aug. 27	8.98	25	16.40
Apr. 11	17.23	June 25	10.81	Sept.29	8.57	Dec. 31	11.73

28 (*886, p. 644; 908, p. 281; 938, p. 228). H. J. Rolfe. SE¼SW¼ sec. 15, T. 98 N., R. 50 W. Measuring point 0.2 foot below land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 23	(a)	May 9	20.50	July 28	18.38	Nov. 2	(a)
Feb. 28	(a)	29	(a)	Aug. 27	18.18	25	18.08
Apr. 11	(a)	June 25	19.45	Sept.29	18.14	Dec. 31	18.26

29 (*886, p. 644; 908, p. 281; 938, p. 228). Ed. Devitt. SW¼SW¼ sec. 26, T. 100 N., R. 50 W. Measuring point 1.2 feet above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 23	9.87	May 9	6.44	July 28	3.39	Nov. 2	1.01
Feb. 28	8.78	29	.75	Aug. 27	2.06	29	1.75
Apr. 11	7.74	June 25	.60	Sept.29	.04	Dec. 31	3.98

44 (*908, p. 281;*938, p. 228). Geological Survey, United States Department of Interior. NE¼SE¼ sec. 20, T. 96., R. 50 W. Measuring point, 0.36 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 23	8.34	May 9	4.23	July 28	3.91	Nov. 2	4.92
Feb. 28	8.13	29	4.23	Aug. 27	5.22	25	5.16
Apr. 11	5.59	June 25	3.69	Sept.29	3.85	Dec. 31	5.34

Minnehaha County

(See also records under Sioux Falls)

21 (*886, p. 644; 908, p. 281; 938, p. 229). Killeaney. NE¼NE¼ sec. 21, T. 101 N., R. 51 W. Measuring point, 0.5 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 23	10.60	May 9	9.32	July 28	7.55	Nov. 4	8.26
Feb. 28	10.69	29	6.23	Aug. 27	8.42	27	8.47
Apr. 11	10.57	June 25	6.30	Sept.29	8.09	Dec. 31	8.59

30 (*886, p. 644; 908, p. 281; 938, p. 229). Renner Baseball Park. NW¼NW¼ sec. 16, T. 102 N., R. 49 W. Measuring point, 1.7 feet above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 23	7.50	May 9	5.57	July 30	2.51	Nov. 25	5.47
Feb. 28	7.49	29	4.14	Sept.29	4.07	Dec. 31	5.56
Apr. 11	7.23	June 25	4.69	Nov. 2	5.22		

a Dry.

31 (*886, p. 644; 908, p. 281; 938, p. 229). NW¼NE¼ sec. 6, T. 103 N., R. 49 N. Measuring point 0.2 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 23	8.53	May 9	7.15	July 30	6.64	Nov. 25	6.41
Feb. 28	8.41	29	5.47	Sept.29	6.33	Dec. 31	6.88
Apr. 11	8.25	June 25	6.52	Nov. 2	6.38		

Moody County

19 (*886, p. 644; 908, p. 282; 938, p. 229). Carl B. Jensen. SW¼SW¼ sec. 16, T. 106 N., R. 50 W. Measuring point 1.0 foot above land-surface datum. Water levels, in feet below land-surface datum, 1942: May 29, 35.45; Nov. 2, 33.39.

20 (*886, p. 644; 908, p. 282; 938, p. 229). SW¼NW¼ sec. 33, T. 106 N., R. 49 W. Measuring point 1.8 feet above land-surface datum. Water levels, in feet, with reference to land-surface datum, 1942: May 29, +0.06; June 25, -0.08; July 30, +0.21; Nov. 2, -1.86.

Turner County

4 (*886, p. 645; *908, p. 282; 938, p. 229). J. H. Shaw. SW¼SW¼ sec. 32, T. 96 N., R. 53 W. Measuring point 0.44 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 24	11.25	June 23	5.90	Sept.26	6.72	Nov. 22	7.98
Mar. 4	11.69	July 29	6.39	Oct. 27	7.41	Dec. 29	8.69
May 10	8.46	Aug. 26	7.14				

22 (*886, p. 645; 908, p. 282; 938,p. 229). NE¼NE¼ sec. 29, T. 99 N., R. 53 W. Measuring point, 1.6 feet above land-surface datum.

Water level, in feet below land-surface datum, 1942

Feb. 28	9.10	May 29	5.05	Aug. 26	6.30	Nov. 27	7.04
Apr. 11	7.34	June 23	4.56	Sept.29	6.26	Dec. 31	7.45
May 9	6.03	July 28	5.39	Nov. 4	6.86		

32 (*886, p. 645; 908, p. 282; 938, p. 229). Otto Kraemer. SW¼SW¼ sec. 9, T. 100 N., R. 53 W.Measuring point, 0.8 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 24	40.30	May 9	40.09	Aug. 26	40.00	Nov. 27	39.85
Feb. 28	40.36	June 23	39.30	Sept.29	39.59	Dec. 31	39.95
Apr. 11	40.4	July 28	39.88	Nov. 4	39.74		

39 (*886, p. 645; 908, p. 282; 938, p. 229). C. E. Johnson. Sec. 23, T. 96 N., R. 52 W., in Centerville, 0.35 mile east of Ford garage. Measuring point, 2.5 feet above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 24	3.13	May 10	3.10	Aug. 26	3.07	Nov. 22	3.08
Feb. 28	3.10	June 23	3.07	Sept.29	3.12	Dec. 29	3.08
Apr. 11	3.1	July 28	3.08	Oct. 27	3.08		

40 (*886, p. 645; 908, p. 282; 938, p. 230). W. C. Olson. SE¼SE¼ sec. 27, T. 96 N., R. 53 W. Measuring point, 1.0 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 24	25.51	May 10	24.56	Aug. 26	26.24	Nov. 22	24.74
Feb. 28	26.25	June 23	23.61	Sept.26	26.55	Dec. 29	23.73
Apr. 11	26.64	July 29	a24.54	Nov. 4	25.44		

a Pumped shortly before measurement.

41 (*886, p. 645; 908, p. 282; 938, p. 230). Jorgenson Studio. SW¼SW¼ sec. 35, T. 97 N., R. 53 W. Measuring point 2.0 feet above land-surface datum.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 24	13.91	May 9	14.34	July 28	11.44	Nov. 4	12.83
Feb. 28	16.21	29	11.43	Aug. 26	14.66	27	13.93
Apr. 11	18.17	June 23	10.80	Sept.29	13.23	Dec. 31	14.67

42 (*886, p. 645; 908, p. 282; 938, p. 230). SE¼SE¼ sec. 26, T. 98 N., R. 53 W. Measuring point 0.2 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 24	11.61	May 9	10.74	July 28	8.68	Nov. 4	9.58
Feb. 28	11.42	29	9.41	Aug. 26	9.46	27	9.70
Apr. 11	10.99	June 23	7.67	Sept.29	9.30	Dec. 31	9.96

50. A. M. Fisher. SE¼SW¼ sec. 8, T. 99 N., R. 53 W. Abandoned bored well, diameter 8 inches, depth 38.9 feet. Measuring point, top of tile casing, 0.2 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level
June 23	18.42	Aug. 26	19.31	Nov. 27	19.93
July 28	18.89	Nov. 4	19.71	Dec. 31	20.48

Union County

5 (*886, p. 645; 908, p. 283; 938, p. 230). J. J. Dolan. NW¼NE¼ sec. T. 95 N., R. 50 W. Equipped with direct-reading float-tape gage since Aug. 27, 1942. Measuring point 2.5 feet above land-surface datum.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 23	12.43	Aug. 27	5.72	Oct. 4	a 4.57	Nov. 21	a 5.25
Feb. 28	12.88	29	a 5.05	10	a 4.62	28	a 5.40
Apr. 11	13.16	Sept. 5	a 4.87	17	a 4.68	Dec. 5	a 5.48
May 9	12.74	12	a 4.31	24	a 4.79	12	a 5.73
29	10.90	19	a 4.30	31	a 5.05	19	a 5.92
June 25	7.55	26	a 4.46	Nov. 7	a 5.08	26	a 6.05
July 28	5.09	29	4.41	14	a 5.18		

24 (*886, p. 646; 908, p. 283; 938, p. 230). SW¼SW¼ sec. 8, T. 93 N., R. 50 W. Measuring point 0.6 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 23	19.14	May 9	18.85	July 28	18.48	Nov. 2	18.97
Feb. 28	19.05	29	18.08	Aug. 27	18.64	25	18.95
Apr. 10	18.83	June 25	17.96	Sept.29	18.84	Dec. 31	18.89

25 (*886, p. 646; 908, p. 283; 938, p. 230). A. G. McGuire. NE¼SE¼ sec. 6, T. 94 N., R. 50 W. Measuring point 2.3 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 23	5.76	May 9	6.20	July 28	7.07	Nov. 2	9.91
Feb. 28	11.52	29	6.12	Aug. 27	8.38	25	10.36
Apr. 11	9.01	June 25	5.20	Sept.29	8.90	Dec. 31	9.39

a Observed by Mary Ellen Dolan.

Yankton County

1 (*886, p. 646; 908, p. 283; 938, p. 230). Gayville Cemetery. NW¼NW¼ sec. 11, T. 93 N., R. 54 W. Measuring point 0.2 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 24	15.94	May 10	15.77	Aug. 26	14.79	Nov. 22	15.02
Mar. 4	15.95	June 23	15.22	Sept.26	15.00	Dec. 29	15.03
Apr. 10	15.85	July 29	14.75	Oct. 27	15.04		

2B (*886, p. 646; 908, p. 283; 938, p. 230). Yankton Golf Club. SW¼SE¼ sec. 24, T. 94 N., R. 56 W. Measuring point 1.5 feet above land-surface datum.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level
Mar. 4	8.36	May 10	5.73	July 29	6.80
Apr. 10	7.48	June 23	5.66	Aug. 26	7.82

3 (*886, p. 646; 908, p. 283; 938, p. 231). NW¼NE¼ sec. 5, T. 95 N., R. 54 W. Measuring point 0.5 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 10	9.15	July 29	4.75	Sept.26	5.05	Nov. 22	5.75
May 10	2.0	Aug. 26	4.73	Oct. 27	5.41	Dec. 29	6.01
June 24	2.17						

33 (*886, p. 646; 908, p. 283; 938, p. 231). Adolph Schoenfeldt. NE¼NE¼ sec. 1, T. 93 N., R. 57 W. Measuring point 0.2 foot above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 24	18.57	May 10	13.26	Aug. 26	12.99	Nov. 22	15.91
Mar. 4	19.66	June 24	11.31	Sept.26	13.48	Dec. 29	16.55
Apr. 10	15.88	July 29	12.40	Oct. 27	15.13		

46 (*908, p. 284; 938, p. 231). Oswald Estate. SW¼NW¼ sec. 7, T. 96 N., R. 55 W. Measuring point 1.1 feet above land-surface datum.

Water level, in feet below land-surface datum, 1942

Jan. 24	17.84	May 10	12.92	Aug. 26	12.20	Nov. 22	14.63
Mar. 4	18.70	June 24	8.54	Sept.26	12.88	Dec. 29	15.39
Apr. 10	16.10	July 29	9.36	Oct. 27	13.78		

WISCONSIN

By L. K. Wenzel and D. M. Ireland

Periodic observations of the water levels in wells in Monroe and Vernon Counties, Wis., in the Coon Creek area, which were begun in 1934, were continued during 1942 by the Geological Survey, United States Department of the Interior. Observations on 1 of the 10 wells (No. 3) included in the report for 1941 were discontinued that year, and hence measurements in only 9 wells were used for computing average water levels in 1942. During the year about 108 individual measurements were made in these 9 wells. Frank J. Fencl made the measurements.

Average water levels, in feet above datum planes, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 17-18	10.67	Apr. 7-8	11.09	July 19-20	11.34	Oct. 30-31	11.70
Feb. 2-3	10.86	May 5-7	11.05	Aug. 31	11.09	Nov. 29-30	11.62
Mar. 4	11.09	June 6-7	12.03	Sept.29-30	11.57	Dec. 30-31	11.59

The average water level near the beginning of the year, as shown by measurements made on January 17 and 18, was 10.67 feet above the assumed datum planes, nearly the same as a year earlier when on January 4 and 5, it was 10.62 feet. The average water level rose to the highest recorded stage in 1942--12.03 feet above the datum planes--on June 6 and 7, declined to 11.09 feet by August 31, and recovered to 11.59 feet by the end of the year. There was thus a net average rise of 0.92 foot from January 17-18 to December 30-31. The average stage at the end of 1942 was the highest year-end stage recorded since observations were begun in 1934.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Monroe County

2 (777, p. 267; 817, p. 506; *840, p. 651; 845, p. 720; 886, p. 930; 908, p. 287; 938, p. 232). Joe Anderson. SE¼SE¼ sec. 34, T. 15 N., R. 4 W., lat. 43°43'46", long. 90°50'05".

Water level, in feet above datum planes, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 17	12.32	Apr. 7	14.06	July 20	15.09	Oct. 30	17.86
Feb. 3	12.37	May 7	14.23	Aug. 31	14.39	Nov. 29	16.91
Mar. 4	13.77	June 7	17.86	Sept.29	17.45	Dec. 31	16.32

10 (777, p. 267; 817, p. 507; *840, p. 655; 845, p. 723; 886, p. 932; 908, p. 287; 938, p. 232). Dennis Shea. NW¼NW¼ sec. 5, T. 15 N., R. 3 W., lat. 43°48'34", long. 90°46'13".

10 (777, p. 267; 817, p. 507; *840, p. 655; 845, p. 723; 886, p. 932; 908, p. 287; 938, p. 232)--Continued.

Water level, in feet above datum planes, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 17	10.73	Apr. 7	10.59	July 20	10.93	Oct. 30	10.73
Feb. 3	11.12	May 7	10.82	Aug. 31	10.57	Nov. 29	10.78
Mar. 4	11.18	June 7	15.60	Sept.29	10.67	Dec. 31	10.93

11 (777, p. 267; 817,, p. 507; *840, p. 655; 845, p. 723; 886, p. 932; 908, p. 287; 938, p, 232). John Sullivan. SW¼NW¼ sec. 27, T. 16 N., R. 3 W., lat. 43°50'17", long. 90°40'50".

Water level, in feet above datum planes, 1942

Jan. 17	9.99	Apr. 7	10.23	July 20	10.46	Oct. 31	10.83
Feb. 3	10.22	May 7	10.15	Aug. 31	10.00	Nov. 29	10.80
Mar. 4	10.22	June 7	10.75	Sept.29	10.33	Dec. 31	10.69

12 (777, p. 267; 817, p. 507; *840, p. 656; 845, p. 724; 886, p. 933; 908, p. 287; 938, p. 232). Melvin Olson. SE¼SE¼ sec. 32, T. 16 N., R. 4 W., lat. 43°48'49", long. 90°52'22".

Water level, in feet above datum planes, 1942

Jan. 17	10.75	Apr. 7	10.93	July 20	11.14	Oct. 31	11.11
Feb. 3	10.88	May 7	11.00	Aug. 31	11.08	Nov. 29	11.10
Mar. 4	10.92	June 7	10.36	Sept.29	11.06	Dec. 31	11.13

13 (777, p. 267; 817, p. 507; *840, p. 656; 845, p. 724; 886, p. 933; 908, p. 288; 938, p. 232). Walter Parks. SE¼NW¼ sec. 3, T. 16 N., R. 4 W., lat. 43°53'44", long. 90°50'28".

Water level, in feet above datum planes, 1942

Jan. 17	9.55	Apr. 7	9.46	July 20	9.73	Oct. 31	9.76
Feb. 3	9.51	May 7	9.37	Aug. 31	9.75	Nov. 29	9.76
Mar. 4	9.48	June 7	9.55	Sept.29	9.76	Dec. 31	9.71

Vernon County

3 (777, p. 267; 817, p. 506; *840, p. 651; 845, p. 720; 886, p. 930; 908, p. 288; 938, p. 232). Anton Bekkum. NE¼NE¼ sec. 12, T. 14 N., R. 5 W., lat. , long. 90°54'43". Measurements discontinued.

4 (777, p. 267; 817, p. 506; *840, p. 651; 845, p. 720; 886, p. 930; 908, p. 288; 938, p. 232). Albert Storbakken. NE¼NE¼ sec. 14, T. 14 N., R. 5 W., lat. 43°41'38", long. 90°56'01".

Water level, in feet above datum planes, 1942

Jan. 17	12.71	Apr. 7	13.51	July 20	13.54	Oct. 30	13.22
Feb. 3	12.78	May 7	13.34	Aug. 31	13.41	Nov. 29	13.29
Mar. 4	13.37	June 7	13.37	Sept.29	13.51	Dec. 31	13.33

8 (777, p. 267; 817, p. 506; *840, p. 654; 845, p. 722; 886, p. 931; 908, p. 288; 938, p. 232). Chris Stylen. SE¼NE¼ sec. 26, T. 14 N., R. 7 W., lat. 43°39'33", long. 90°10'26".

Water level, in feet above datum planes, 1942

Jan. 18	10.09	Apr. 8	11.44	July 19	11.47	Oct. 30	11.72
Feb. 2	11.09	May 5	11.12	Aug. 31	11.44	Nov. 30	11.75
Mar. 4	11.18	June 6	11.29	Sept.30	11.67	Dec. 30	11.82

9 (777, p. 267; 817, p. 506; *840, p. 654; 845, p. 722; 886, p. 932; 908, p. 288; 938, p. 232). F. Lenser. NW¼NE¼ sec. 14, T. 14 N., R. 7 W., lat. 43°41'35", long. 91°10'28".

Water level, in feet above datum planes, 1942

Jan. 18	10.35	Apr. 8	10.03	July 19	10.21	Oct. 30	10.39
Feb. 2	10.30	May 5	10.07	Aug. 31	10.16	Nov. 30	10.57
Mar. 4	10.19	June 6	10.09	Sept.30	10.37	Dec. 30	10.89

14 (777, p. 267; 817, p. 507; *840, p. 656; 845, p. 724; 886, p. 932; 908, p. 288; 938, p. 232). Chris Benrud. NE¼NW¼ sec. 6, T. 14 N., R. 4 W. lat. 43°43'27", long. 90°54'14".

Water level, in feet above datum planes, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 17	9.55	Apr. 7	9.52	July 20	9.48	Oct. 30	9.68
Feb. 3	9.47	May 7	9.39	Aug. 31	9.05	Nov. 29	9.65
Mar. 4	9.50	June 7	9.39	Sept.29	9.35	Dec. 31	9.48

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