

# Water Levels and Artesian Pressure in Observation Wells in the United States in 1945

## Part 3. North-Central States

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GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1025

*Prepared in cooperation with the States  
of Illinois, Iowa, Kansas, Minnesota,  
Missouri, Nebraska, North Dakota,  
South Dakota, and Wisconsin, and other  
agencies*



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## Part 3. North-Central States

*Prepared under the direction of C. G. PAULSEN, Chief Hydraulic Engineer*

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**UNITED STATES DEPARTMENT OF THE INTERIOR**

**J. A. Krug, *Secretary***

**GEOLOGICAL SURVEY**

**W. E. Wrather, *Director***

**UNITED STATES**

**GOVERNMENT PRINTING OFFICE**

**WASHINGTON : 1948**

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**For sale by the Superintendent of Documents, U. S. Government Printing Office  
Washington 25, D. C. - Price 50 cents (paper cover)**

## PREFACE

This report was prepared by the Geological Survey in cooperation with the States of Illinois, Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, and Wisconsin, and other agencies, by personnel of the Water Resources Branch under the direction of:

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# CONTENTS

	Page
Introduction, by A. N. Sayre and others. . . . .	1
Significance of records of water level and artesian pressure. . . . .	1
Annual publication of records by Geological Survey. . . . .	1
Scope of present volume . . . . .	2
Land-surface datum. . . . .	2
Network of key observation wells. . . . .	3
Changes in ground-water level in 1945 in the north-central part of the United States. . . . .	4
Acknowledgments . . . . .	4
Illinois, by H. G. Hershey and D. A. Barton. . . . .	5
Program of work . . . . .	5
Fluctuations of water level . . . . .	5
Well descriptions and water-level measurements. . . . .	5
Iowa, by W. E. Hale, D. A. Barton, and J. B. Cooper. . . . .	7
Program of work . . . . .	7
Fluctuations of water level . . . . .	9
Well-numbering system . . . . .	14
Well descriptions and water-level measurements. . . . .	14
Kansas, by Phyllis Mosley. . . . .	46
Program of work . . . . .	46
Well descriptions and water-level measurements. . . . .	49
Minnesota, by D. A. Barton and P. D. Akin. . . . .	134
Program of work . . . . .	134
Fluctuations of water level . . . . .	134
Well descriptions and water-level measurements. . . . .	134
Missouri, by D. A. Barton and Phyllis T. Mosley. . . . .	136
Program of work . . . . .	136
Fluctuations of water level . . . . .	136
Well descriptions and water-level measurements. . . . .	136
Nebraska, by H. A. Waite . . . . .	140
Program of work . . . . .	140
Fluctuations of water level . . . . .	141
Pumpage . . . . .	156
Well descriptions and water-level measurements. . . . .	158
North Dakota, by P. D. Akin. . . . .	220
Program of work . . . . .	220
Precipitation . . . . .	220
Fluctuations of water level . . . . .	222
Well descriptions and water-level measurements. . . . .	223
South Dakota, by P. D. Akin. . . . .	248
Program of work . . . . .	248
Well descriptions and water-level measurements. . . . .	248
Wisconsin, by F. C. Foley and F. C. Christopherson . . . . .	255
Program of work . . . . .	255
Fluctuations of water level . . . . .	255
Well descriptions and water-level measurements. . . . .	255

	Page
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 1945. . . . .	3
2. Graph showing fluctuations of the average water level in 9 to 12 wells in the Tarkio Creek Valley, Iowa-Mo., and precipitation at Shenandoah, Iowa . . . . .	8
3. Graph showing fluctuations of water level during 1945 in well 87-28-29N1, near Harcourt, Webster County, and precipitation at Fort Dodge, Webster County, Iowa . . .	10
4. Graph showing fluctuations of water level during 1945 in well 83-7-11E1 at Cedar Rapids, Iowa, caused by pumping in the vicinity . . . . .	11
5. Graph showing fluctuations of water level during 1945 in well 96-20-3L2, at Mason City, Iowa, caused by pumping in the vicinity . . . . .	13
6. Graph showing monthly water level in 10 to 42 selected observation wells in North Dakota, 1937-45. . . . .	221

# WATER LEVELS AND ARTESIAN PRESSURE IN OBSERVATION WELLS IN THE UNITED STATES IN 1945

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## Part 3. NORTH-CENTRAL STATES

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### INTRODUCTION

By A. N. Sayre and others

#### Significance of records of water level and artesian pressure

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, whether for public waterworks, irrigation, or 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.

#### Annual publication of records by Geological Survey

The regular publication of records of water level and artesian pressure in the United States was begun by the Geological Survey in 1935 and has continued yearly since. The records for the entire country were published in a single volume each year through 1939. Beginning with 1940 the records have been published in six volumes, covering the northeastern, southeastern, north-central, south-central, northwestern, and southwestern sections of the country. Hawaii is included in the southwestern section. (See fig. 1.) The following table gives the numbers of these reports. This series of water-supply papers is in a sense an inventory, year by year, of the ground-water supplies of such parts of the country as have been covered.

## Water-supply papers on water levels and artesian pressure in observation wells in the United States

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
1943	986	987	988	989	990	991
1944	1016	1017	1018	1019	1020	1021
1945	1023	1024	1025	1026	1027	1028

## Scope of present volume

The present volume covers the north-central States and gives records of water level and artesian pressure in about 1,180 observation wells of the Geological Survey and cooperating agencies in Illinois, Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, and Wisconsin. Of these wells, 33 are equipped with automatic water-stage recorders. For some wells not previously reported complete records of water level are given in this volume, including those of the years before 1945. For wells whose previous records have been published this volume gives only the current records. If a complete description of a well has been published in a previous report, only the well number or the well number and a brief identifying description are given in this report. The numbers in parentheses immediately following a well number are those of 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 the paper whose number is so marked. This report includes about 13,565 individual determinations of water level and artesian pressure.

## Land-surface datum

Before 1943, in Geological Survey reports, the water levels and artesian pressures for some wells were given in feet above or below the measuring points and for other wells in feet above or below sea level or above or below various assumed datum planes. It had been considered inadvisable to adopt a standard procedure in expressing water levels and artesian heads until after a period of trial with datum planes of different kinds.



In 1943, however, it was decided that uniform practice should be adopted. Accordingly precise datum planes were established approximating the land surface at each well. The water levels and artesian heads for all wells listed in this report are given in reference to land-surface datum planes.

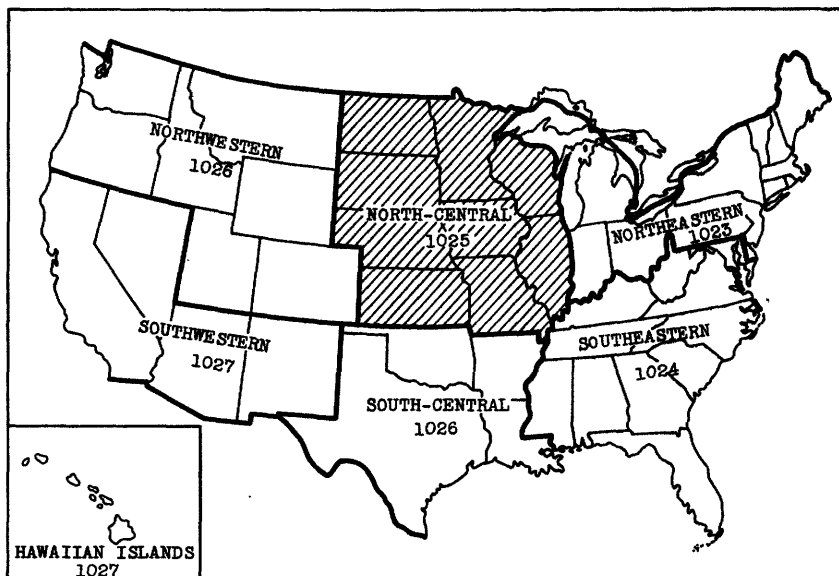


Figure 1.--Outline map of the United States showing sections of the country covered by the six water-supply papers on water levels and artesian pressure in observation wells in 1945. The shaded section represents the part of the country covered by this volume.

If the water levels or artesian heads are referred to land-surface datum for the first time, a conversion factor is given in the descriptive matter preceding them in order to facilitate comparison of the older and newer records. Wherever the conversion factor is given in earlier reports it is not repeated in this report. New data as to the positions of the measuring points and of the bench marks, in feet above or below land-surface datum plane, will be published in succeeding annual reports.

#### Network of key observation wells .

During 1942 the Geological Survey established a network of key observation wells in order to make available current information on general ground-water conditions over the country. These wells were selected

because the fluctuations of water level in them are believed to be typical and they represent the general fluctuations that occur in the parts of the country in which the wells are situated. At the end of 1945 the network included about 160 wells in 45 States. About 40 of the wells were established expressly for the network in 1942 and about 20 were established in 1943; the other 100 were selected from wells measured regularly in connection with cooperative ground-water investigations. 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.

Changes in ground-water level in 1945 in the north-central part of the United States

In 1945 the precipitation in 6 of the 9 States in the north-central section of the country was below normal, but in the other three States it was normal or above normal. The fluctuations of both water level and artesian pressure in wells depend, however, on many factors besides the amount of precipitation. In certain of the observation wells there are fluctuations caused by differences in the rate of pumping or artesian flow from other wells in the area, but most of the observation wells are not noticeably affected by pumping or artesian flow. A summary of the changes in ground-water level is given in the chapter for each State.

#### Acknowledgments

Acknowledgments for effective services in the preparation of this water-supply paper are due Miss Dorothy M. Ireland, Rodney Hart, and Mrs. Nauvoo Ragland and Miss Frances Head. Miss Ireland had general charge of the assembling of the several reports and did the editing; Mr. Hart prepared the illustrations; and Mrs. Ragland and Miss Head did the offset typing.

# ILLINOIS

By H. G. Hershey and D. A. Barton

## PROGRAM OF WORK

Measurements of water level were continued in 1945 in a well at Princeton, Bureau County, the only well in Illinois on the Nation-wide network of observation wells. It is equipped with a float-tape gage. It was first observed in 1942 and observations have been made at approximately weekly intervals since that time.

## FLUCTUATIONS OF WATER LEVEL

The fluctuations of the water level in the well at Princeton during 1945 varied from a maximum low on record of 20.75 feet below land-surface datum, on February 17, to the high for the year of 3.99 feet below land-surface datum on May 19. The year closed on December 29 with the water level at 10.10 feet below land-surface datum or 9.21 feet higher than the water level of January 6, when it was 19.31 feet below land-surface datum. The average water level for the last 3 months of the year was 10.65 feet below land-surface datum compared with the average water level of 19.87 feet below land-surface datum for the first 3 months, a difference of 9.22 feet.

## WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

### Bureau County

R. E. Neff (\*946, p. 10; 988, p. 6; 1018, p. 5). In Princeton, in sec. 9, T. 16 N., R. 9 W. Equipped with float-tape gage. Measurements were made by Nick Hansen.

### Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	19.31	Mar. 3	20.55	Apr. 14	13.89	June 9	8.54
13	19.58	8	20.28	21	12.84	9	8.58
20	19.98	10	20.16	28	11.75	16	9.32
27	20.21	17	19.99	May 5	10.34	23	10.05
Feb. 3	20.40	24	18.68	12	7.12	30	11.11
10	20.63	31	16.99	19	3.99	July 7	11.85
17	20.74	Apr. 7	15.10	26	6.51	14	12.55
24	20.68	10	14.69	June 2	7.59	21	13.54
							5

R. E. Neff--Continued.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 28	14.03	Sept. 8	15.54	Oct. 27	11.31	Dec. 1	10.11
Aug. 3	15.05	15	15.42	30	11.40	8	9.85
10	15.62	22	15.21	Nov. 3	11.54	15	10.19
18	14.48	29	12.38	10	11.78	20	10.36
23	14.41	Oct. 6	9.39	17	11.11	22	10.39
25	14.47	13	10.54	24	10.85	29	10.10
Sept. 1	15.00	20	10.85				

## IOWA

By W. E. Hale, D. A. Barton, and J. B. Cooper

### PROGRAM OF WORK

Measurements of the water level in observation wells in Iowa, some of which were established in 1934, were continued in 1945 in cooperation with the Iowa Geological Survey. Most of the observation wells were established over the State as a whole in 1938 when a cooperative program of investigation of the ground-water resources of the State was begun by the Federal Geological Survey and the Iowa Geological Survey. In the Tarkio Creek Valley, in southwestern Iowa and northwestern Missouri, an observation-well program was organized by the Federal Geological Survey in 1934 in which the Soil Conservation Service of the United States Department of Agriculture participated for several years. All of these wells in Iowa are now included in one program:

Past records of the water-level measurements made in the wells in the Tarkio Creek area are published in Water-Supply Papers, 777, 817, 840, 845, 886, 908, 936, 988, and 1018, and those for the wells established in 1938 first appear in Water-Supply Paper 886.

At the beginning of 1945 measurements were being made on 180 wells in 36 counties throughout the State. During the year 12 of these wells were dropped from the program, and 6 others were added, making a total of 174 wells in the observation-well program at the end of the year. Automatic water-stage recorders were being maintained on 11 wells at the close of the year. Water-level measurements were made weekly in 8 wells, monthly in about 63 wells, and quarterly in most of the remaining wells. Approximately 1,450 water-level measurements were made in 1945 as contributions to the observation-well program. In addition, many water-level measurements were made in connection with pumping tests and in gathering data on new wells throughout the State. These additional measurements and descriptions of wells are not included in this report.

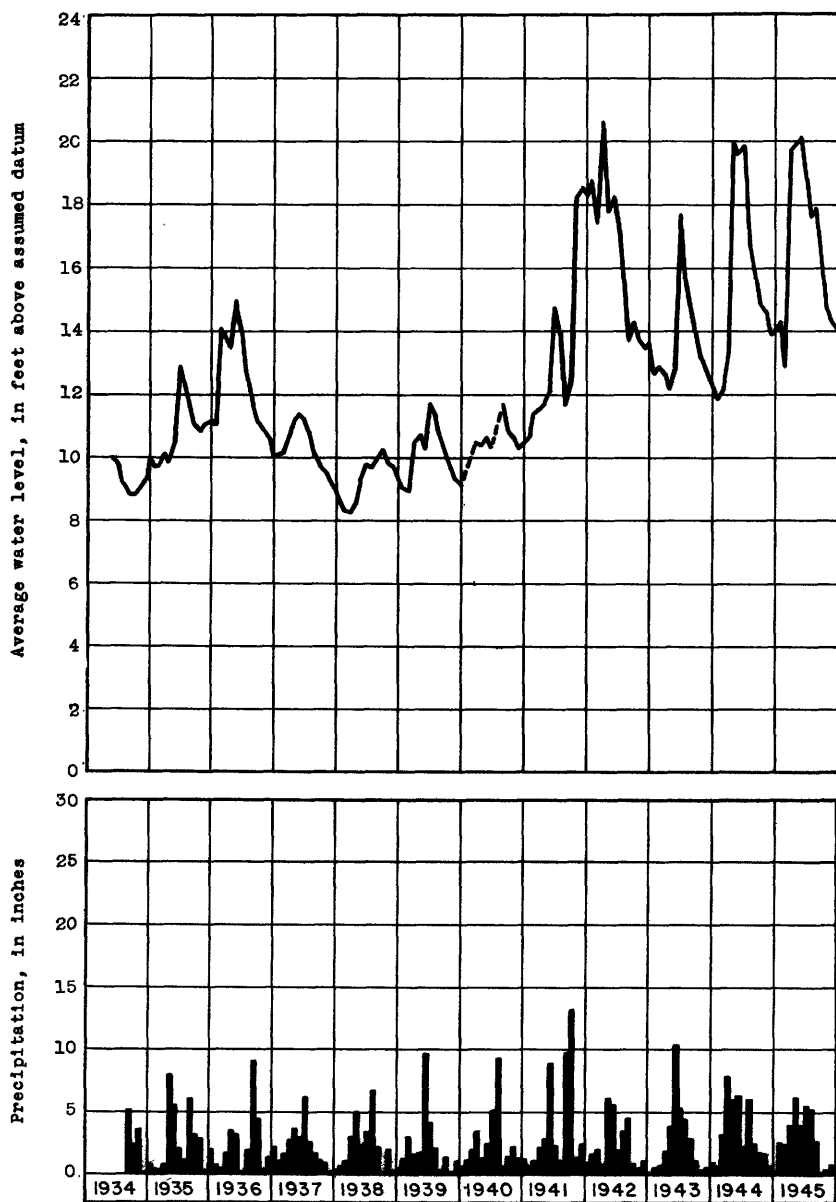


Figure 2.--Graph showing fluctuations of the average water level in 9 to 12 wells in the Tarkio Creek Valley, Iowa-Mo., and precipitation at Shenandoah, Iowa.

## FLUCTUATIONS OF WATER LEVEL

During 1945 the average precipitation was about 3 inches above the normal of 31.66 inches and about 2.7 inches below that of 1944. Above-normal rainfall occurred over most of the State during the months of February, March, April, and May. Snowfall was above average in December. In June, the precipitation was normal, but during the remaining months it was below normal.

Water levels, in shallow wells in Iowa fluctuated in phase with rainfall. The highest water levels occurred in March, April, and May; the water levels then declined in general during the remainder of the year.

The following table shows the average net change in the water level between December 1944 and December 1945 in groups of shallow wells, by counties, throughout the State. The precipitation for 1945 at the nearest U. S. Weather Bureau station and the departure from normal is also shown.

Average net change in water levels, in feet, in shallow wells in Iowa and annual precipitation, and departure from normal, in inches, at the nearest U. S. Weather Bureau station, 1945

County	No. of wells	Average net change	Precipitation	Departure from normal
Buena Vista	4	+2.70	32.89	+4.38
Calhoun	4	+1.21	33.98	+2.24
Cerro Gordo	6	+1.53	37.57	+7.07
Iowa	1	+1.67	32.97	-.43
Johnson	1	+1.12	31.09	-3.41
Linn	6	+1.23	34.35	+3.51
Lyon	1	-2.71	29.46	+3.92
Montgomery	7	-2.16	33.27	+1.79
Osceola	1	-.32	24.97	-1.94
Page	16	-.50	35.45	+3.00
Poweshiek	1	+1.33	33.53	+1.13
Sac	4	+1.58	32.59	+3.59
Webster	7	-.29	33.22	+2.09

Shallow observation wells were established in 1934 in the Tarkio Creek area, which covers parts of Montgomery and Page Counties, in Iowa, and Atchison County, Missouri. Water-level measurements have been made on this group of wells at least once a month for almost the entire period of record. In 1945 these measurements were made by Daniel L. Hummel. Records of the water levels in wells in the Missouri part of the area are given in the section of this volume that deals with that State.

Measurements in 11 wells (Nos. 1, 2, 5, 6, 7, 10, 11, 12, 14, 15, 17) were used in computing the average water level for each month in 1945. These averages are given in the following table.

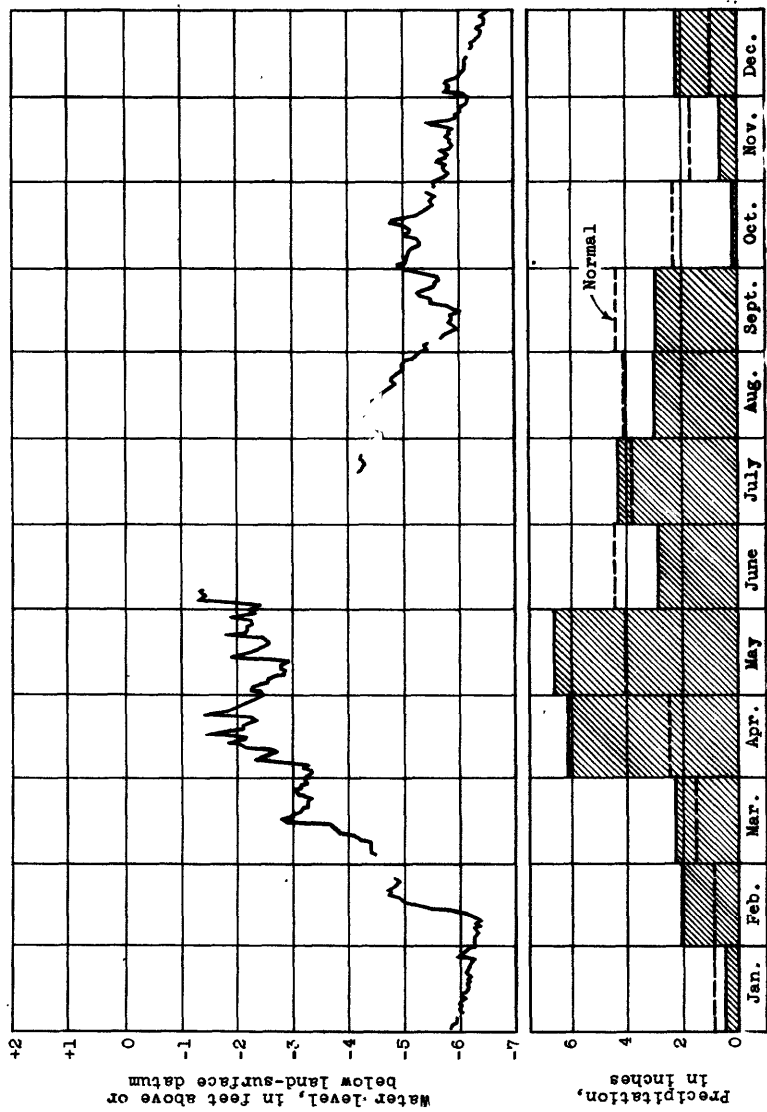


Figure 3.--Graph showing fluctuations of water level during 1945 in well 87-28-29N1, near Harcourt, Webster County, and precipitation at Fort Dodge, Webster County, Iowa.



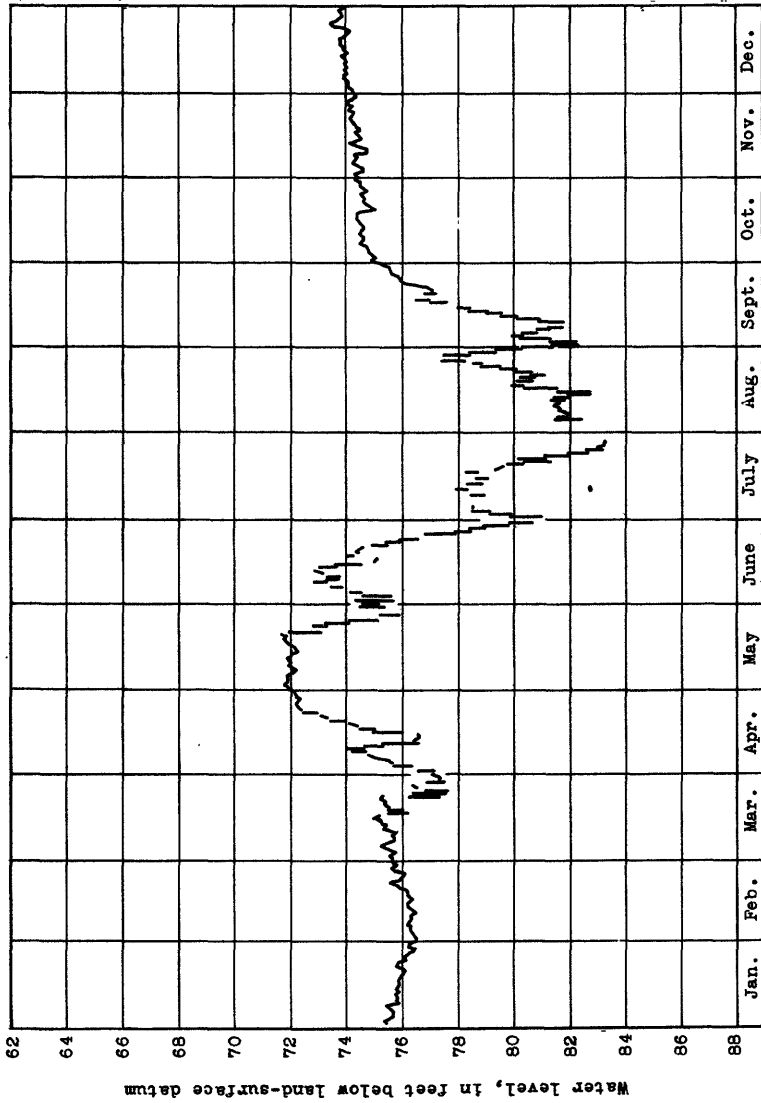


Figure 4.--Graph showing fluctuations of water level during 1945 in well 83-7-11E1 at Cedar Rapids, Iowa, caused by pumping in the vicinity.

Average water levels, in feet above assumed datum planes, in 11 observation wells in the Tarkio Creek area, Iowa-Mo., 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan.	14.34	Apr.	19.97	July	17.57	Oct.	14.75
Feb.	12.84	May	20.08	Aug.	17.88	Nov.	14.28
Mar.	19.68	June	19.02	Sept.	15.98	Dec.	14.09

The fluctuation of the average water level in this area as indicated by the 11 wells and the precipitation at Shenandoah since 1934 are shown by months in figure 2.

The fluctuation of the water level in 1945 in a shallow unused well in the southern part of Webster County, near Harcourt, is shown in figure 3. This well is 41.8 feet deep, taps water in glacial drift and is representative of several shallow observation wells in the county which tap the same water-bearing bed. This aquifer is confined over a large part of Webster County and receives most of its recharge in places where sandy drift material extends to the surface. The graph shows the close correlation of water levels to amount of precipitation during the year.

Well 83-7-11E1, at Cedar Rapids, Linn County, is illustrative of wells affected by seasonal draft on aquifers such as those pumped for air-conditioning. Figure 4 shows the fluctuations of water level in this well for the year 1945. In the graph the daily noon water level is shown as a point unless the fluctuation is more than 0.4 foot, in which case it is shown as a vertical line connecting the high and low water level for the day. The well is finished at a depth of 195 feet in the upper part of a dolomite strata which is locally about 400 feet thick. Most of the wells in Cedar Rapids develop water supplies for air-conditioning and industrial use from these strata. The observation well is about 3 miles north of the heavily pumped area and about half a mile from two wells used for air-conditioning and industrial purposes. Prior to this year the water level had stood somewhat lower at the end of each year than at the beginning. On December 31, 1945, the water level was 1.53 feet higher than on January 1, 1945.

The fluctuation of the water level in an unused municipally owned well in Mason City, Cerro Gordo County (well 96-20-3L2) is shown in figure 5. The daily fluctuation is shown by a line connecting the high and the low water level for the day. This well is 1,219 feet deep and is cased from the surface to a depth of 99 feet and from 349 to 710 feet.

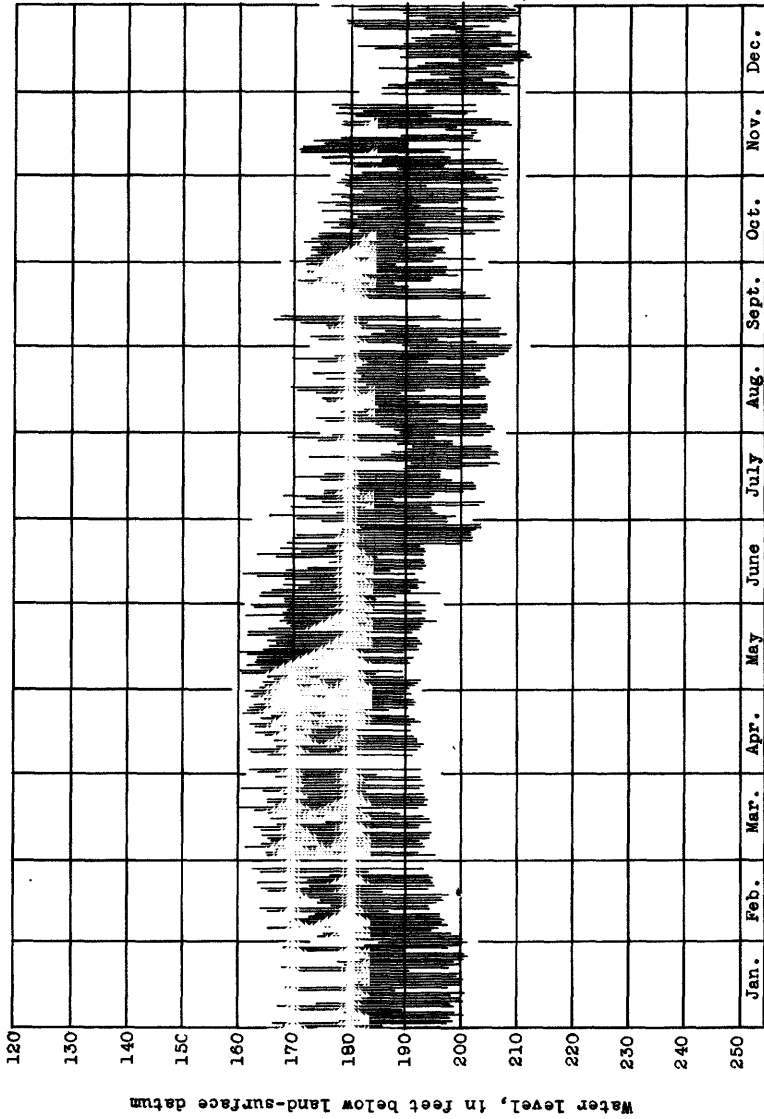


Figure 5.--Graph showing fluctuations of water level during 1945 in well 96-20-312, at Mason City, Iowa, caused by pumping in the vicinity.

The principal aquifer is the Jordan sandstone. Several nearby municipal and industrial wells are finished in the same aquifer.

#### WELL-NUMBERING SYSTEM

The numbers assigned by the Federal Geological Survey to its observation wells in Iowa, other than those in the Tarkio Creek area, show the location of the wells according to the rectangular system for subdivision of public land. Each well number is made up of three segments, separated by hyphens. The first and second segments indicate the township and range. The third segment includes the section, followed by a letter representing the 40-acre subdivision of the section, as shown by the diagram, and the serial number of the particular well.

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

The letter E is added to the second segment representing the range when a well is located east of the fifth principal meridian. In the number of the other wells, it is understood that the range indicated is west of the meridian.

For example, the number 76-31-25F1 indicates a well in T. 76 N., R. 31 W., in the SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 25, whose serial number is 1.

#### WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

##### Adair County

76-31-25F1 (\*946, p. 17; 988, p. 15; 1018, p. 14). SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 25, T. 76 N., R. 31 W. Water levels, in feet below land-surface datum, 1945: Mar. 23, 1.80; June 25, 2.44; Sept. 8, 4.90.

76-31-29F1 (\*946, p. 17; 988, p. 15; 1018, p. 14). SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 29, T. 76 N., R. 31 W. Water levels, in feet below land-surface datum, 1945: Mar. 23, 5.37; June 25, 5.99; Sept. 8, 8.68.

75-31-15B1 (\*908, p. 10; 938, p. 9; 946, p. 17; 988, p. 15; 1018, p. 14). John E. Soderberg. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 15, T. 75 N., R. 31 W. Water levels, in feet below land-surface datum, 1945: Mar. 31, 0.18; June 25, 0.36; Sept. 8, 4.62.

75-31-18B1 (\*908, p. 10; 938, p. 9; 946, p. 17; 988, p. 15; 1018, p. 14). Charles Gilham. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 18, T. 75 N., R. 31 W. Water levels, in feet below land-surface datum, 1945: Mar. 31, 9.18; June 25, 10.99; Sept. 8, 11.38.

75-30-3N1 (\*946, p. 17; 988, p. 15; 1018, p. 14). Elmer Phillips. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 3, T. 75 N., R. 30 W. Well destroyed after June 25; measurements discontinued. Water levels, in feet below land-surface datum, 1945: Mar. 23, 4.30; June 25, 2.50.

75-30-17E1 (\*946, p. 18; 988, p. 16; 1018, p. 14). SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 17, T. 75 N., R. 30 W. Water levels, in feet below land-surface datum, 1945: Mar. 31, 0.09; June 25, 0.68; Sept. 8, 2.60.

#### Benton County

85-10-16M3 (\*886, p. 116; 908, p. 10; 938, p. 10; 946, p. 18; 988, p. 16; 1018, p. 14). City of Vinton well 3. No measurements made in 1945.

#### Buena Vista County

##### Vicinity of Storm Lake

91-37-32E1 (\*908, p. 10; 938, p. 10; 946, p. 18; 988, p. 16; 1018, p. 15). SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 32, T. 91 N., R. 37 W. Water levels, in feet below land-surface datum, 1945: Mar. 29, 3.66; June 29, 4.19; Sept. 9, 4.82.

90-37-3E1 (\*908, p. 11; 938, p. 10; 946, p. 18; 988, p. 16; 1018, p. 15). Emil Schmitz. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 3, T. 90 N., R. 37 W. Water levels, in feet below land-surface datum, 1945: Mar. 27, 7.83; June 29, 6.67; Sept. 9, 11.45; Dec. 30, 7.70.

90-37-3M1 (\*908, p. 11; 938, p. 10; 946, p. 18; 988, p. 16; 1018, p. 15). L. B. Watt. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 3, T. 90 N., R. 37 W. Water levels, in feet below land-surface datum, 1945: Mar. 27, 10.30; June 29, 8.65; Sept. 9, 13.99; Dec. 30, 11.99.

90-37-11J1 (\*908, p. 11; 938, p. 10; 946, p. 18; 988, p. 16; 1018, p. 15). Geological Survey, U. S. Dept. of Interior. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 11, T. 90 N., R. 37 W. Well destroyed after Mar. 27; measurements discontinued. Water level, in feet below land-surface datum, 1945: Mar. 27, 0.60.

90-37-23D1 (\*908, p. 11; 938, p. 10; 946, p. 18; 988, p. 16; 1018, p. 15). Biggens Bros. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 23, T. 90 N., R. 37 W. Water levels, in feet below land-surface datum, 1945: Mar. 27, 15.20; June 29, 10.65; Sept. 9, 12.36; Dec. 30, 15.45.

90-37-34B1 (\*938, p. 11; 946, p. 18; 988, p. 16; 1018, p. 15). Ed Zinn. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 34, T. 90 N., R. 37 W. Water levels, in feet below land-surface datum, 1945: Mar. 27, 7.00; June 29, 6.59; Sept. 9, 8.20; Dec. 30, 9.90.

#### Calhoun County

##### Vicinity of Twin Lakes

89-32-28N1 (\*908, p. 11; 938, p. 11; 946, p. 19; 988, p. 16; 1018, p. 15). SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 28, T. 89 N., R. 32 W. Water levels, in feet below land-surface datum, 1945: Mar. 29, 2.80; July 1, 2.85; Sept. 11, 3.68; Dec. 30, 3.53.

89-32-33N1 (\*908, p. 11; 938, p. 11; 946, p. 19; 988, p. 17; 1018, p. 15). Ben Burns. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 33, T. 89 N., R. 32 W. Water levels, in feet below land-surface datum, 1945: Mar. 29, 1.68; July 1, 2.48; Sept. 11, 4.48; Dec. 30, 3.30.

88-33-1B1 (\*908, p. 12; 938, p. 11; 946, p. 19; 988, p. 17; 1018, p. 15). Mr. Burns. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 1, T. 88 N., R. 33 W. Water levels, in feet below land-surface datum, 1945: Mar. 29, 9.35; July 1, 7.39; Sept. 11, 11.20; Dec. 30, 10.81.

88-33-1D1 (\*908, p. 12; 938, p. 11; 946, p. 19; 988, p. 17; 1018, p. 15). George Voss. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 1, T. 88 N., R. 33 W. Water levels, in feet below land-surface datum, 1945: Mar. 29, 9.17; July 1, 5.08; Sept. 11, 8.13; Dec. 30, 11.59.

#### Carroll County

85-35-7N1 (\*946, p. 19; 988, p. 17; 1018, p. 15). City of Breda. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 7, T. 85 N., R. 35 W. Water levels, in feet below land-surface datum, 1945: Mar. 26, 190.65; July 14, 193.27.

85-35-18D1 (\*908, p. 12; 938, p. 11; 946, p. 19; 988, p. 17; 1018, p. 15). City of Breda. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 18, T. 85 N., R. 35 W. Water levels, in feet below land-surface datum, 1945: Mar. 26, 193.44; June 28, 193.99; Sept. 8, 192.90; Dec. 31, 194.40.

84-34-25F1 (\*886, p. 116; \*908, p. 12; 938, p. 12; 946, p. 19; 988, p. 17; 1018, p. 16). City of Carroll test hole 1. SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 25, T. 84 N., R. 34 W. Water levels, in feet below land-surface datum, 1945: Mar. 26, 40.10; June 28, 39.52; Sept. 8, 34.55; Dec. 31, 40.60, nearby well pumping.

#### Cerro Gordo County

97-21-9E1 (\*938, p. 12; 946, p. 20; 988, p. 18; 1018, p. 16). E. H. Phillips. S $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 9, T. 97 N., R. 21 W. Water levels, in feet below land-surface datum, 1945: Mar. 30, 96.49; Sept. 13, 98.8.

97-20-24H1 (\*938, p. 13; 946, p. 20; 988, p. 18; 1018, p. 16). Mrs. Vinnie Shanks. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 24, T. 97 N., R. 20 W. Water levels, in feet below land-surface datum, 1945: Mar. 31, 8.74; July 3, 4.27; Sept. 13, 7.27; Dec. 27, 8.23.

97-20-24H2 (\*338, p. 13; 946, p. 20; 988, p. 18; 1018, p. 16). Mrs. Vinnie Shanks. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 24, T. 97 N., R. 20 W. Water levels, in feet below land-surface datum, 1945: Mar. 31, 56.35; July 3, 58.49; Sept. 13, 64.15.

97-20-28L1 (\*988, p. 18; 1018, p. 16). American Crystal Sugar Co. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 28, T. 97 N., R. 20 W. Water levels, in feet below land-surface datum, 1945: Apr. 5, 169.05; July 3, 166.79; Sept. 13, 171.60.

97-19-30R1 (\*938, p. 14; 946, p. 21; 988, p. 19; 1018, p. 17). E. Stebbens. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 30, T. 97 N., R. 19 W. Water levels, in feet below land-surface datum, 1945: Mar. 30, 8.74; July 3, 5.43; Sept. 13, 8.47; Dec. 27, 10.94.

96-22-7Q1 (\*938, p. 14; 946, p. 21; 988, p. 19; 1018, p. 17). W. S. Overgaard. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 7, T. 96 N., R. 22 W. Water levels, in feet below land-surface datum, 1945: Sept. 12, 23.09; Dec. 27, 23.28.

96-22-7Q2 (\*938, p. 14; 946, p. 21; 988, p. 19; 1018, p. 17). W. S. Overgaard. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 7, T. 96 N., R. 22 W. Well destroyed after July 3; measurements discontinued. Water levels, in feet below land-surface datum, 1945: Mar. 30, 8.43; July 3, 6.90.

96-22-12P1 (\*908, p. 12; 938, p. 14; 946, p. 21; 988, p. 19; 1018, p. 17). Daughters of American Revolution Camp. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 12, T. 96 N., R. 22 W. Water level, in feet below land-surface datum, 1945: Mar. 31, 42.55.

96-22-14B1 (\*908, p. 12; 938, p. 14; 946, p. 21; 988, p. 19; 1018, p. 17). A. A. Adams. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 14, T. 96 N., R. 22 W. Well abandoned; measurements discontinued.

96-22-14C1 (\*908, p. 12; 938, p. 14; 946, p. 21; 988, p. 19; 1018, p. 17). Fred Stephens. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 14, T. 96 N., R. 22 W. Water levels, in feet below land-surface datum, 1945: Mar. 31, 32.61; July 3, 31.78; Sept. 12, 32.62; Dec. 27, 31.34.

96-22-20C1 (\*908, p. 13; 938, p. 14; 946, p. 22; 988, p. 19; 1018, p. 17). The Willow Inn. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 20, T. 96 N., R. 22 W. Water levels, in feet below land-surface datum, 1945: Mar. 31, 2.58; July 3, 3.78; Sept. 12, 6.38; Dec. 27, 5.88.

96-22-20L1 (\*908, p. 13; 938, p. 15; 946, p. 22; 988, p. 20; 1018, p. 17). NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 20, T. 96 N., R. 22 W. Water levels, in feet below land-surface datum, 1945: Mar. 31, 32.26; July 3, 36.95; Sept. 12, 33.79; Dec. 27, 31.99;

96-22-23Q1 (\*908, p. 13; 938, p. 15; 946, p. 22; 988, p. 20; 1018, p. 17). H. R. Anderson. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 23, T. 96 N., R. 22 W. Water levels, in feet below land-surface datum, 1945: Mar. 31, 15.18; July 3, 14.79; Sept. 12, 18.19; Dec. 29, 19.80.

96-22-25D2 (\*908, p. 13; 938, p. 15; 946, p. 22; 988, p. 20; 1018, p. 17). Geological Survey, U. S. Dept. of Interior. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 25, T. 96 N., R. 22 W. Water levels, in feet below land-surface datum, 1945: Mar. 31, 4.80; July 3, 3.68; Sept. 12, 6.85.

96-21-13E1 (\*908, p. 13; 938, p. 15; 946, p. 22; 988, p. 20; 1018, p. 18). Mason City & Clear Lake Railway. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 13, T. 96 N., R. 21 W. Water levels, in feet below land-surface datum, 1945: Mar. 31, 4.08; July 3, 2.95; Sept. 13, 4.96; Dec. 27, 3.68.

96-21-17C1 (\*908, p. 13; 938, p. 15; 946, p. 22; 988, p. 20; 1018, p. 18). Clear Lake Sand & Gravel Co. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 17, T. 96 N., R. 21 W. Water levels, in feet below land-surface datum, 1945: Mar. 31, 15.99; July 3, 15.59; Sept. 13, 17.55.

96-21-17M1 (\*908, p. 13; 938, p. 16; 946, p. 22; 988, p. 20; 1018, p. 18). NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 17, T. 96 N., R. 21 W. Water levels, in feet below land-surface datum, 1945: Mar. 31, 2.22; July 3, 1.49; Sept. 13, 2.59.

96-21-18H1 (\*908, p. 13; 938, p. 16; 946, p. 22; 988, p. 20; 1018, p. 18). Sam Kennedy. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 18, T. 96 N., R. 21 W. Water levels, in feet below land-surface datum, 1945: Mar. 31, 8.99; July 3, 3.45; Sept. 12, 9.09.

96-20-3L2 (\*938, p. 16; 946, p. 23; 988, pp. 21-22; 1018, p. 18). City of Mason City well 8. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 3, T. 96 N., R. 20 W. Highest observed water level, from recorder charts, 160.0 feet below land-surface datum on Mar. 19; lowest, 212.3 feet below land-surface datum on Dec. 13.

Daily high and low water levels, in feet below land-surface datum, 1945  
(From recorder charts)

Day	January		February		March		April	
	High	Low	High	Low	High	Low	High	Low
1	168.1	185.9	179.1	200.1	.....	194.5	163.3	180.8
2	166.2	197.3	174.2	199.7	165.3	195.5	161.8	192.7
3	178.2	198.1	175.3	198.0	165.1	192.5	.....	.....
4	180.3	198.1	168.7	194.8	167.0	183.6	.....	.....
5	180.3	200.5	165.3	196.3	161.3	193.3	.....	.....
6	179.0	199.0	172.0	197.7	164.3	193.0	.....	192.8
7	169.6	189.5	169.2	196.8	165.9	192.5	165.2	191.1
8	167.0	198.5	170.3	197.0	165.4	194.4	162.3	180.7
9	174.1	198.0	172.9	196.1	164.3	194.2	161.6	192.1
10	180.0	200.1	174.0	196.1	169.4	194.6	166.8	192.9
11	182.0	198.8	165.3	186.8	164.1	182.1	170.5	193.0
12	180.5	198.1	164.3	194.3	162.8	192.3	166.3	191.8
13	180.8	200.8	176.7	194.3	167.2	192.6	166.0	191.8
14	170.7	188.1	174.2	195.8	175.8	194.6	164.8	191.2
15	168.1	197.5	174.8	197.0	165.9	194.1	162.8	180.0
16	179.6	198.6	171.2	196.8	169.4	193.4	168.1	190.6
17	181.5	199.9	170.8	197.6	165.4	188.8	162.8	181.3
18	180.5	200.4	165.3	186.0	163.0	182.0	161.8	190.7
19	179.5	199.1	164.3	194.3	160.0	192.1	166.0	192.5
20	181.7	198.8	173.0	195.0	166.8	194.0	163.9	191.8
21	170.7	190.9	163.5	194.8	165.3	193.4	166.0	190.6
22	167.9	197.6	172.5	194.5	165.3	193.7	160.7	182.8

96-20-3L2--Continued.

Daily high and low water levels, in feet below land-surface datum, 1945  
(From recorder charts)

Day	January		February		March		April	
	High	Low	High	Low	High	Low	High	Low
23	179.3	199.6	169.1	194.8	172.5	193.5	161.5	187.1
24	177.9	198.5	176.6	194.1	168.3	193.4	162.0	190.4
25	182.0	200.3	164.1	183.5	164.4	183.0	162.9	191.5
26	183.6	201.0	162.5	193.1	160.5	192.5	166.0	191.8
27	180.0	200.8	.....	.....	171.8	193.0	164.8	191.7
28	169.3	189.8	.....	.....	169.3	182.9	162.1	189.8
29	168.1	197.8	.....	.....	168.7	193.0	162.9	191.3
30	182.8	199.8	.....	.....	166.9	192.8	161.1	190.2
31	185.0	201.2	.....	.....	171.6	184.8	.....	.....

Daily high and low water levels, in feet below land-surface datum, 1945  
(From recorder charts)

Day	May		June		July		August	
	High	Low	High	Low	High	Low	High	Low
1	163.8	190.4	168.4	192.5	170.2	196.8	188.5	204.6
2	164.8	191.6	168.3	184.6	165.8	198.5	187.8	205.6
3	164.4	191.8	163.8	188.4	177.6	195.3	185.3	205.1
4	166.5	192.6	164.3	196.2	179.2	194.8	184.5	204.3
5	165.2	189.2	165.9	190.9	169.3	194.2	175.4	195.6
6	160.5	184.0	170.9	192.0	183.6	202.9	173.9	203.3
7	160.2	189.4	167.8	191.8	175.1	203.9	180.6	203.3
8	164.0	181.3	172.8	193.1	172.1	187.8	178.1	204.1
9	161.4	183.6	168.1	191.8	168.0	194.6	182.5	204.6
10	162.9	190.1	163.3	182.1	175.4	195.3	185.0	204.6
11	163.3	190.0	160.6	191.3	175.5	200.5	181.0	204.6
12	163.3	191.3	168.5	187.0	179.2	202.5	175.8	192.3
13	161.5	181.0	172.3	192.5	181.0	202.1	175.0	204.1
14	160.1	189.5	178.6	193.4	181.5	202.0	181.1	204.1
15	164.5	192.1	176.1	193.4	174.5	198.3	173.9	189.0
16	165.5	192.0	178.0	193.2	169.8	195.6	170.4	193.0
17	167.0	192.5	166.8	184.8	175.4	196.1	169.4	203.4
18	165.3	192.3	163.4	193.1	180.6	196.3	182.8	205.0
19	166.7	192.3	171.3	193.5	189.4	199.8	178.8	205.0
20	161.6	182.0	167.4	193.3	189.7	204.8	175.6	204.1
21	161.6	190.7	175.8	193.0	190.8	206.7	182.0	204.3
22	165.2	192.2	168.8	200.1	178.8	198.8	173.2	202.4
23	169.3	192.6	180.4	201.8	172.5	205.0	181.0	203.5
24	168.6	192.8	169.7	202.0	185.6	206.3	181.1	204.2
25	167.4	195.0	170.1	201.4	187.6	206.3	182.2	204.3
26	168.2	193.4	178.4	201.4	190.3	205.3	174.1	194.0
27	161.3	183.1	178.5	202.4	191.3	205.3	169.6	204.1
28	168.0	192.8	181.8	203.4	188.1	198.3	177.1	206.4
29	168.8	193.5	181.2	203.3	174.3	198.3	179.8	207.4
30	162.8	183.9	174.8	197.3	168.8	194.9	181.6	208.3
31	162.3	193.2	.....	.....	176.7	203.8	190.5	208.6

Daily high and low water levels, in feet below land-surface datum, 1945  
(From recorder charts)

Day	September		October		November		December	
	High	Low	High	Low	High	Low	High	Low
1	189.4	208.9	168.8	195.0	178.9	208.0	193.4	206.6
2	181.1	202.8	171.6	202.4	182.0	202.3	185.6	206.2
3	174.1	195.6	172.7	195.7	188.2	208.2	186.5	209.8
4	172.8	206.8	174.1	196.8	180.5	196.8	190.0	207.9
5	183.8	208.0	172.8	196.3	176.2	207.4	191.6	203.5
6	186.1	206.5	172.9	196.9	185.8	206.0	197.5	209.1
7	176.0	206.8	174.4	189.2	174.8	197.4	194.1	208.1
8	171.6	194.7	194.7	171.6	191.9	191.9	190.1	207.4
9	170.7	182.8	173.0	197.6	171.0	196.8	184.9	204.0
10	166.0	203.3	174.1	190.3	170.9	200.1	191.9	207.3
11	167.4	196.0	174.3	202.5	171.5	190.1	193.3	209.0
12	.....	.....	181.4	206.6	175.3	190.3	199.2	211.0
13	.....	.....	176.3	199.9	173.1	203.2	188.9	212.3



96-20-3L2--Continued.

Daily high and low water levels, in feet below land-surface datum, 1945  
(From recorder charts)

Day	September		October		November		December	
	High	Low	High	Low	High	Low	High	Low
14	.....	.....	177.9	193.3	178.1	201.9	190.3	212.0
15	.....	.....	175.0	205.8	189.0	202.0	189.9	211.5
16	.....	.....	177.7	206.8	201.7	202.3	184.3	204.8
17	.....	203.3	181.2	207.4	196.7	202.6	181.0	208.8
18	178.7	205.1	180.3	198.9	183.6	198.7	189.4	209.9
19	179.1	204.2	174.6	207.4	178.3	208.8	191.6	206.7
20	178.7	200.6	185.3	200.7	178.5	208.3	190.6	206.7
21	178.0	199.8	177.2	192.5	184.0	205.3	194.0	209.0
22	178.6	190.5	174.1	199.5	180.8	194.4	198.7	208.6
23	172.0	187.8	180.4	206.1	177.1	200.8	182.3	201.8
24	170.3	204.4	178.3	207.4	182.3	202.9	180.5	204.7
25	174.0	204.6	176.4	201.2	177.8	194.8	179.4	198.9
26	175.4	199.2	182.1	206.4	176.5	202.6	179.3	207.7
27	172.3	196.9	180.2	206.5	.....	.....	193.3	208.3
28	173.4	203.5	178.8	193.5	.....	.....	190.0	210.0
29	173.4	197.0	177.4	205.3	.....	208.0	189.0	210.1
30	172.1	187.9	178.3	207.0	185.4	208.5	181.3	199.3
31			179.5	204.4			176.4	207.9

96-20-3P1 (\*938, p. 16; 946, p. 25; 988, p. 22; 1018, p. 19).  
Minneapolis & St. Louis Railroad Co. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 3, T. 96 N., R. 20 W.  
Water levels, in feet below land-surface datum, 1945: Mar. 30, 41.40,  
pump removed; July 3, 34.60, pump removed; Sept. 13, 41.26, pump installed;  
Dec. 27, 44.90.

96-20-16J1 (\*886, p. 116; 908, p. 14; 938, p. 17; 946, p. 25; 988,  
p. 22; 1018, p. 19). City of Mason City well 11. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 16,  
T. 96 N., R. 20 W. No measurements made in 1945.

95-22-5M1 (\*938, p. 17; 946, p. 26; 988, p. 23; 1018, p. 20). School  
district. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 5, T. 95 N., R. 22 W. Water levels, in feet below  
land-surface datum, 1945: Mar. 30, 1.22; July 3, 3.12; Sept. 11, 6.79;  
Dec. 27, 6.58.

95-22-8C1 (\*938, p. 18; 946, p. 26; 988, p. 23; 1018, p. 20).  
Jurgensen Bros. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 8, T. 95 N., R. 22 W. Water levels, in feet  
below land-surface datum, 1945: Mar. 30, 15.99; Sept. 12, 16.08; Dec. 27,  
15.58.

94-22-24J1 (\*938, p. 19; 946, p. 27; 988, p. 24; 1018, p. 21). NE $\frac{1}{4}$ SE $\frac{1}{4}$   
sec. 24, T. 94 N., R. 22 W. Water levels, in feet below land-surface datum,  
1945: Mar. 30, 10.82; July 2, 10.14; Sept. 11, 11.16; Dec. 29, 11.98.

94-22-24J2 (\*938, p. 19; 946, p. 27; 988, p. 25; 1018, p. 21). Town  
of Thornton. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 24, T. 94 N., R. 22 W. Water level, in feet  
below land-surface datum, 1945: July 3, 73.55.

94-22-24J3 (\*938, p. 19; 946, p. 28; 988, p. 25; 1018, p. 21). Mel  
Bowen. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 24, T. 94 N., R. 22 W. Water levels, in feet below  
land-surface datum, 1945: Mar. 30, 7.49; July 2, 7.24; Sept. 12, 7.70;  
Dec. 27, 15.52.

Cherokee County

92-40-26P1 (\*886, p. 116; 908, p. 14; 938, p. 21; 946, p. 29; 988,  
p. 26; 1018, p. 22). City of Cherokee well 2 south. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 26,  
T. 92 N., R. 40 W. Measurements by D. Kennedy, Cherokee Water Works.

92-40-26P1--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	17.3	Apr. 12	19.4	June 3	a 25.0	Sept. 9	a 28.6
	a 25.5		a 25.7	July 2	19.7	Oct. 2	24.0
Feb. 1	19.0	May 4	18.2		a 26.6		a 29.8
	a 27.5		a 26.3	Aug. 2	21.6	Nov. 2	25.2
Mar. 2	19.8	June 3	18.3	Sept. 9	23.2	Dec. 4	19.1
	a 25.1						

a Pumping.

Clay County

96-35-3R1 (\*908, p. 14; 938, p. 21; 946, p. 29; 988, p. 26; 1018, p. 22). Allis Wilson. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 3, T. 96 N., R. 35 W. Water levels, in feet below land-surface datum, 1945: Mar. 28, 4.00; June 30, 2.65; Sept. 10, 3.82.

Clinton County

81-6E-22H1 (\*908, p. 14; 938, p. 21; 946, p. 29; 988, p. 26; 1018, p. 22). E. I. du Pont de Nemours & Co. well 2. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 22, T. 81 N., R. 6 E.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	a 69.4	Mar. 17	b 81.8	June 3	b 68.4	Aug. 26	a 76.0
13	a 71.4	24	b 78.6	9	a 74.9	Sept. 3	a 78.4
20	a 74.9	31	b 79.5	17	a 77.9	16	a 72.6
27	a 73.7	Apr. 7	b 79.5	23	a 76.0	Oct. 2	a 76.0
Feb. 3	a 77.7	14	b 83.0	July 1	b 74.7	9	a 76.0
10	a 78.3	21	b 83.0	7	b 77.0	16	a 78.4
17	a 72.5	28	a 74.9	14	b 76.0	22	a 76.0
12	b 74.5	May 5	b 73.3	28	b 77.9	29	a 76.0
24	b 73.3	12	b 71.0	Aug. 5	b 74.8	Nov. 5	a 76.0
Mar. 3	b 76.0	19	b 70.3	12	b 69.1	12	a 73.7
10	b 78.3	26	b 72.1	18	b 70.3	Dec. 3	a 79.9

a Well 2 pumping, well 1 idle.

b Wells 1 and 2 pumping.

81-7E-6K1 (\*908, p. 14; 938, p. 21; 946, p. 30; 988, p. 26; 1018, p. 222). W. Atlee Burpee Co. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 6, T. 81 N., R. 7 E. Water levels, in feet below land-surface datum, 1945: Feb. 8, 93.78; Aug. 3, 89.76.

81-7E-7B1. Clinton Water Works Co. well 5. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 7, T. 81 N., R. 7 E. Occasionally used municipal-supply well, drilled in 1902, depth 1,763 feet. Cased with 8-inch pipe to 125 feet and 6-inch pipe from 739 to 840 feet; open 6-inch hole from 840 to 1,763 feet. Measuring point, top of 8-inch casing, 2.2 feet below concrete platform over well, 0.7 foot above land-surface datum and about 587 feet above mean sea level. Chief aquifers, Cambrian sandstones and dolomites. Equipped with air lift. Well flowed when completed. Water level affected by nearby pumping wells. Measurements made by Clinton Water Works Co.

Water level, in feet below land-surface datum, 1943-45					
Date	Water level	Date	Water level	Date	Water level
May 30, 1943	74.88	Aug. 8, 1943	76.97	Oct. 3	78.46
June 6	74.30	15	73.63	10	76.63
13	77.47	22	73.55	24	77.38
20	77.63	29	75.96	31	79.55
27	77.30	Sept. 5	79.22	Nov. 7	73.30
July 11	75.47	12	74.63	Aug. 14	75.88
18	72.47	19	70.13	Aug. 17, 1944	89.30
25	78.88	27	70.30	27	86.05

81-7E-7B1--Continued.

Water level, in feet below land-surface datum, 1943-45					
Date	Water level	Date	Water level	Date	Water level
Sept. 3, 1944	88.80	Nov. 26, 1944	82.97	Mar. 4, 1945	90.30
10	87.63	Dec. 3	82.05	25	99.30
17	86.22	10	82.38	Apr. 8	97.55
25	90.30	18	82.55	June 3	88.30
Oct. 2	92.96	25	92.47	July 8	99.80
9	93.13	31	94.55	22	97.80
22	88.80	Jan. 21, 1945	95.30	Aug. 3	a 92.38
29	97.05	Feb. 4	96.46	19	83.82
Nov. 5	97.13	12	96.88	Sept. 3	92.33
12	95.88	18	100.22	Nov. 11	87.25
19	82.88				

a Measurement by U. S. Geological Survey.

Decatur County

69-25-29R1 (\*908, p. 14; 938, p. 22; 946, p. 30; 988, p. 26; 1018, p. 22). Sam Gasset. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 29, T. 69 N., R. 25 W. No measurements made in 1945.

Dickinson County

99-36-66L (\*938, p. 22; 946, p. 30; 988, p. 26; 1018, p. 22). SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 6, T. 99 N., R. 36 W. Water levels, in feet below land-surface datum, 1945: June 30, +0.56; Sept. 10, 1.25.

Emmet County

100-32-11R1 (\*886, p. 116; 908, p. 15; 938, p. 22; 946, p. 30; 988, p. 27; 1018, p. 22). Okamapedan State Park. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 11, T. 100 N., R. 32 W. Measuring point beginning Mar. 28, 1945, hole in pump base 1.3 feet above pump base, and 1.5 feet above land-surface datum. Water levels, in feet below land-surface datum, 1945: Mar. 28, 64.80; June 30, 59.80; Sept. 10, 61.00.

99-34-14B1 (\*886, p. 116; 908, p. 15; 938, p. 22; 946, p. 30; 938, p. 27; 1018, p. 23). City of Estherville well 3. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 14, T. 99 N., R. 34 W. Water level, in feet below land-surface datum, 1945: Mar. 28, 110.20.

Harrison County

80-42-11Q1 (\*908, p. 15; 938, p. 22; 946, p. 31; 988, p. 27; 1018, p. 23). City of Woodbine. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 11, T. 80 N., R. 42 W. Measurements made by Mr. Dean, Woodbine Water Works.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Feb. 1	14.77	May 1	10.51	Aug. 1	10.68
28	14.60	June 1	7.93	31	13.60
Apr. 2	12.85	July 1	10.78	Oct. 1	13.02
				Nov. 3	13.98
				30	14.19

79-41-34N1 (\*886, p. 117; 908, p. 15; 938, p. 23; 946, p. 31; 988, p. 27; 1018, p. 23). Mutual Benefit Life Insurance Co. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 34, T. 79 N., R. 41 W. Water levels, in feet below land-surface datum, 1945: Mar. 26, 48.60; June 28, 41.76; Sept. 9, 42.65.

78-42-11A1 (\*886, p. 117; 908, p. 15; 938, p. 23; 946, p. 31; 988, p. 27; 1018, p. 23). Mutual Benefit Life Insurance Co. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 11, T. 78 N., R. 42 W. Water levels, in feet below land-surface datum, 1945: Mar. 26, 10.16; June 28, 9.20; Sept. 9, 15.10.

78-42-12Q1 (\*886, p. 117; 908, p. 15; 938, p. 23; 946, p. 31; 988, p. 27; 1018, p. 23). Mutual Benefit Life Insurance Co. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 12, T. 78 N., R. 42 W. Water levels, in feet below land-surface datum, 1945: Mar. 26, 21.85; June 28, 20.65; Sept. 9, 23.09.

#### Henry County

71-6-9B1. City of Mount Pleasant. NE $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 9, T. 71 N., R. 6 W. Drilled well, completed in 1915, depth 1,820 feet. Casing record: 68 feet of 12-inch pipe from 0 foot to 68 feet; 500 feet of 10-inch pipe from 0 foot to 500 feet; 67 feet of 8-inch pipe from 500 feet to 567 feet; 113 $\frac{1}{2}$  feet of 6-inch pipe from 567 feet to 678 $\frac{1}{2}$  feet; 8-inch pipe joined to 10-inch pipe with lead packer and to 6-inch pipe with reducing coupling. Measuring point, hole in plate over casing, 1.2 feet above land-surface datum. Principal aquifers are the Jordan sandstone and St. Lawrence dolomite of Cambrian age. Water levels, in feet below land-surface datum, 1945: Sept. 5, 132.40; Dec. 21, 134.40.

71-6-9M1. City of Mount Pleasant. SW $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 9, T. 71 N., R. 6 W. Drilled well, finished 1935, depth 1,802 feet. Casing and hole data: 210 feet of 16-inch pipe from 0 foot to 210 feet; 10-inch pipe from 203 to 213 feet; 8-inch pipe from 213 to 1,689 feet; open hole from 1,689 to 1,794 feet; cement plug from 1,794 to 1,802 feet. Measuring point, hole in pump base, 2.5 feet below land-surface datum. Principal aquifer is the Jordan sandstone of Cambrian age. Water levels, in feet below land-surface datum, 1945: Sept. 5, 188.35, well pumping approximately 200 gallons a minute; Dec. 21, 71.60.

#### Ida County

89-40-35D1 (\*886, p. 117; 908, p. 15; 938, p. 23; 946, p. 31; 988, p. 28; 1018, p. 23). City of Holstein well 3. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 35, T. 89 N., R. 40 W. Water level, in feet below land-surface datum, 1945: Oct. 24, 317.00.

#### Iowa County

80-9-3L1 (\*946, p. 31; 988, p. 28; 1018, p. 23). NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 3, T. 80 N., R. 9 W. Water levels, in feet below land-surface datum, 1945: Mar. 7, 3.53; Apr. 21, 2.68; Dec. 23, 4.18.

#### Jasper County

80-18-31C1 (\*908, p. 16; 938, p. 23; 946, p. 32; 988, p. 28; 1018, p. 23). Maynard Lust. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 31, T. 80 N., R. 18 W. Water levels, in feet below land-surface datum, 1945: Apr. 7, 8.19; June 23, 3.37; Sept. 6, 8.98.

#### Jefferson County

72-10-26A1 (\*946, p. 32; 988, p. 28; 1018, p. 23). NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 26, T. 72 N., R. 10 W. Water-stage recorder maintained on well until June 1, 1945.

Water level at noon, in feet below land-surface datum, 1945

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
1	.....	.....	20.39	19.03	18.61	.....	a18.81	.....	.....	.....
2	.....	.....	20.27	18.97	18.53	.....	.....	.....	ac33.79	.....
3	21.37	.....	20.17	18.89	18.48	.....	.....	.....	.....	.....
4	21.37	.....	20.15	18.91	18.48	.....	.....	.....	.....	.....
5	21.37	.....	20.07	18.89	18.50	.....	.....	.....	b19.27	.....
6	21.38	.....	20.03	19.06	18.47	.....	.....	a27.78	.....	.....

a Measurement by J. R. Jenness, local observer.

b Measurement by U. S. Geological Survey.

c Pumping short time before measurement.

72-10-26A1--Continued.

Water level at noon, in feet below land-surface datum, 1945  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
7	.....	.....	20.03	19.06	.....	.....	.....	.....	.....	.....
8	21.16	.....	19.99	19.04	.....	.....	.....	.....	.....	a26.90
9	21.17	.....	19.97	19.36	.....	.....	.....	.....	ac42.80	.....
10	21.18	.....	.....	19.31	.....	.....	.....	.....	.....	.....
11	21.11	.....	.....	19.27	.....	a18.12	.....	.....	.....	.....
12	21.09	20.86	19.87	19.24	.....	.....	.....	a27.28	.....	.....
13	21.03	20.80	19.80	19.20	.....	.....	.....	.....	.....	.....
14	.....	20.73	19.68	19.25	18.35	.....	.....	.....	.....	.....
15	.....	20.83	19.52	19.26	18.28	.....	.....	.....	.....	.....
16	.....	20.87	19.45	.....	18.33	.....	.....	.....	e23.16	a24.67
17	.....	.....	19.44	.....	18.35	a18.64	.....	.....	.....	.....
18	.....	.....	.....	.....	18.39	.....	.....	.....	.....	.....
19	.....	21.00	19.40	.....	18.41	.....	.....	.....	.....	.....
20	.....	20.93	19.38	.....	18.31	.....	.....	.....	.....	.....
21	.....	20.76	19.39	.....	18.18	.....	.....	a23.64	.....	.....
22	21.16	20.62	19.39	.....	18.14	b19.05	.....	.....	.....	.....
23	21.12	20.62	19.30	18.66	18.21	.....	.....	.....	a32.66	.....
24	21.10	20.65	19.22	18.59	18.21	a19.00	.....	.....	.....	.....
25	21.08	20.61	19.11	18.54	18.16	.....	.....	.....	.....	.....
26	21.10	20.62	19.06	18.52	18.15	.....	.....	a23.51	.....	.....
27	.....	20.48	19.04	18.57	18.11	.....	.....	.....	.....	.....
28	.....	20.44	19.05	18.58	.....	.....	.....	.....	.....	a23.60
29	21.03	.....	19.09	18.59	.....	.....	.....	.....	.....	.....
30	21.05	.....	19.12	18.61	.....	.....	.....	.....	.....	.....
31	.....	.....	19.08	.....	.....	.....	.....	.....	.....	.....

a Measurement by J. R. Jenness, local observer.

b Measurement by U. S. Geological Survey.

c Pumping short time before measurement.

Johnson County

80-5-9K2 (\*908, p. 16; 938, p. 23; 946, p. 32; 988, p. 29; 1018, pp. 24-25). Geological Survey, U. S. Dept. of Interior. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 9, T. 80 N., R. 5 W. Highest observed water level at noon, from recorder charts, 0.10 foot above land-surface datum on Mar. 26; lowest, 6.69 feet below land-surface datum on Aug. 29.

Water level at noon, in feet below land-surface datum, 1945  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	4.40	....	1.16	2.47	1.61	....	4.49	6.60	....	4.55	2.66
2	....	4.40	....	1.31	2.62	1.19	....	4.52	6.56	....	4.71	2.52
3	....	4.40	....	1.48	2.56	....	....	4.55	6.58	....	4.78	2.70
4	....	4.44	....	.39	2.49	....	....	4.61	6.56	....	4.75	2.82
5	....	4.49	....	.69	2.61	....	....	4.67	6.50	....	....	2.89
6	4.39	4.46	....	1.03	2.67	2.10	....	4.65	6.50	4.01	....	2.99
7	4.39	4.49	....	1.25	2.76	2.17	2.83	4.71	6.48	4.09	....	3.15
8	4.42	4.48	....	1.02	2.84	2.19	2.89	4.74	6.61	4.10	....	3.19
9	4.50	4.51	....	2.15	2.90	2.40	2.96	4.78	6.62	4.16	....	3.39
10	4.46	4.10	2.28	2.27	2.90	1.10	3.10	4.78	6.67	4.12	5.72	3.46
11	4.50	4.01	2.28	2.37	2.89	1.40	3.16	4.78	6.65	4.17	4.62	3.52
12	4.45	3.70	2.34	2.44	2.96	1.62	3.23	4.83	6.63	4.25	4.54	3.53
13	4.47	3.55	2.33	2.45	3.01	1.81	3.15	4.88	6.64	4.31	4.25	3.51
14	4.50	....	2.37	2.53	.76	2.05	3.33	4.90	4.89	4.33	4.29	3.62
15	4.55	2.15	2.38	2.55	.70	2.16	3.41	4.97	5.08	4.37	4.39	3.79
16	4.56	2.22	2.38	2.79	.70	1.56	3.50	4.96	5.10	4.34	4.23	3.86
17	4.56	2.46	2.26	.99	.54	1.56	3.56	4.96	5.13	4.36	4.34	3.92
18	4.53	2.76	2.39	1.28	.70	1.28	3.61	5.05	5.17	4.38	4.39	3.93
19	4.54	2.87	2.45	1.46	.85	1.10	3.67	5.13	....	4.37	4.43	3.94
20	4.56	2.99	2.48	1.52	2.00	.95	3.74	5.18	....	4.37	4.41	3.98
21	4.59	a2.92	2.60	1.73	2.35	.86	3.78	5.28	....	4.49	4.39	4.04
22	4.55	a2.85	2.60	1.89	1.96	.74	3.82	5.31	....	4.56	4.45	4.10
23	4.53	a2.77	2.60	1.03	1.68	.81	3.90	5.37	5.25	....	4.51	4.09

a Interpolated.

80-5-9K2--Continued.

Water level at noon, in feet below land-surface datum, 1945  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
24	4.41	....	2.65	1.65	1.56	0.87	3.97	5.40	5.52	....	4.43	4.04
25	4.31	....	.00	1.59	1.39	.86	4.07	....	5.50	....	4.52	4.00
26	4.31	....	+1.0	1.81	1.79	.92	4.13	....	5.46	4.66	4.47	4.12
27	4.24	....	.18	2.02	2.03	.92	4.20	....	5.64	4.59	4.19	4.17
28	4.20	....	.49	2.14	1.65	.88	4.24	....	4.73	4.62	3.94	4.14
29	4.30	....	.43	2.26	1.86	.94	4.31	6.69	....	4.69	3.72	4.10
30	4.30	....	.63	2.40	2.05	....	4.37	6.66	....	4.56	3.66	4.18
31	4.40	....	.80	....	2.06	....	4.42	6.64	....	4.65	....	4.24

80-5-22M1 (\*938, p. 24; 946, p. 33; 988, p. 30; 1018, p. 25). Chicago, Rock Island & Pacific Railway. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 22, T. 80 N., R. 5 W.Water level at noon, in feet below land-surface datum, 1945  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	17.23	14.73	....	....	....	....	16.09	17.63	13.32	15.99	15.52
2	....	17.22	14.58	....	....	....	....	16.20	17.67	13.06	16.13	15.09
3	....	17.23	14.38	....	....	....	....	16.32	17.73	12.96	16.24	14.68
4	....	17.22	14.37	....	....	....	....	16.37	17.77	12.84	16.19	14.39
5	....	17.28	14.23	....	....	b 9.78	....	16.42	17.80	12.83	16.22	14.00
6	....	17.28	....	....	....	9.94	....	16.47	17.85	12.89	16.30	13.60
7	....	17.30	....	....	....	10.13	....	16.53	17.87	13.06	16.34	13.42
8	....	17.33	....	....	....	10.38	....	16.62	17.93	13.30	16.46	13.30
9	....	17.30	....	....	....	10.58	....	16.61	17.96	13.56	16.61	13.31
10	....	17.22	....	....	a12.75	10.75	....	16.62	17.98	13.65	16.61	13.40
11	....	17.06	....	....	....	11.03	....	16.65	18.03	13.82	16.53	13.45
12	....	16.85	....	a12.22	....	11.22	....	16.67	18.06	14.02	16.41	....
13	....	16.60	....	....	....	11.32	....	16.72	18.09	14.20	16.42	....
14	....	16.32	....	....	....	11.43	....	16.74	18.09	14.34	16.39	....
15	....	15.99	....	....	....	11.63	....	16.83	18.13	14.48	16.23	....
16	....	16.88	....	....	....	b11.82	....	16.87	18.14	14.50	16.10	....
17	17.32	15.79	....	a11.48	....	....	....	16.89	18.13	14.55	16.13	....
18	17.32	15.75	....	....	....	....	....	16.94	18.07	14.63	16.10	....
19	17.32	15.76	....	....	....	....	b14.43	16.99	18.05	14.85	16.06	....
20	17.34	15.68	....	....	....	....	14.53	17.04	18.08	14.95	15.98	....
21	17.35	15.57	....	....	....	....	14.62	17.09	18.07	15.11	15.94	....
22	17.35	15.40	....	....	....	....	14.72	17.14	18.06	15.26	15.94	....
23	17.34	15.48	....	....	....	....	14.83b17.18	18.03	15.40	15.97	....	....
24	17.27	15.54	....	....	....	....	14.97b17.23	18.01	15.45	15.92	....	....
25	17.27	15.42	....	....	....	....	15.12b17.28	17.97	15.50	15.97	....	....
26	17.26	15.38	....	....	....	....	15.29b17.33	17.94	15.65	15.95	....	....
27	17.23	14.79	....	....	....	....	15.43b17.38	17.83	15.70	15.85	....	....
28	17.21	14.77	....	....	....	....	15.53b17.45	17.44	15.80	15.85	....	....
29	17.21	....	....	....	....	....	15.70	17.50	15.32	15.92	15.78	....
30	17.23	....	....	a11.61	....	....	15.86	17.53	13.99	15.91	15.67	....
31	17.22	....	....	....	....	....	15.98	17.58	....	15.99	....	....

a Tape measurement.

b Interpolated.

80-5-22M2 (\*938, p. 24; 946, p. 34; 988, p. 31; 1018, p. 25). Chicago, Rock Island & Pacific Railway. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 22, T. 80 N., R. 5 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	17.79	Apr. 12	15.55	June 16	15.24	Sept. 19	18.19
16	17.87	17	14.90	July 19	16.30	Oct. 11	17.20
20	17.86	30	15.49	Aug. 8	17.19	13	17.27
Feb. 17	16.11	June 5	14.70	29	17.74	Dec. 11	16.55
Mar. 5	15.21						

Linn County

85-6-19J1 (\*908, p. 17; 938, p. 24; \*946, p. 34; 988, p. 31; 1018, p. 26). Geological Survey, U. S. Dept. of Interior. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 19, T. 85 N., R. 6 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	4.44	Apr. 25	3.02	July 25	4.95	Oct. 31	4.87
Feb. 28	4.58	May 26	4.33	Aug. 30	5.63	Nov. 30	4.49
Mar. 31	4.59	June 30	4.27	Sept. 20	4.98	Dec. 22	4.88

85-6-26D1 (\*908, p. 17; 938, p. 24; 946, p. 34; 988, p. 31; 1018, p. 26). Geological Survey, U. S. Dept. of Interior. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 26, T. 85 N., R. 6 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	4.19	Apr. 25	1.15	July 25	4.88	Oct. 31	6.71
Feb. 28	2.50	May 26	1.64	Aug. 30	5.85	Nov. 30	5.26
Mar. 31	2.00	June 30	2.16	Sept. 20	6.90	Dec. 22	5.43

85-6-29B1 (\*908, p. 17; 938, p. 25; 946, p. 34; 988, p. 31; 1018, p. 26). Earl Balderson. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 29, T. 85 N., R. 6 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	61.63	Apr. 25	58.70	July 25	58.30	Oct. 31	60.60
Feb. 28	61.19	May 26	58.69	Aug. 30	59.80	Nov. 30	60.98
Mar. 31	61.41	June 30	57.63	Sept. 20	59.92	Dec. 22	60.18

85-6-30D1 (\*946, p. 34; 988, p. 31; 1018, p. 26). Weaver Witwer. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 30, T. 85 N., R. 6 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	14.75	Apr. 25	11.70	July 25	14.11	Oct. 31	14.83
Feb. 28	13.70	May 26	11.74	Aug. 30	14.18	Nov. 30	13.48
Mar. 31	11.71	June 30	11.83	Sept. 20	15.09	Dec. 22	12.36

84-7-13E1 (\*908, p. 18; 938, p. 25; 946, p. 35; 988, p. 31; 1018, p. 26). Alfred Rinderknecht. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 13, T. 84 N., R. 7 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	6.97	Apr. 25	3.62	July 25	5.01	Oct. 31	7.84
Feb. 28	5.06	May 26	3.47	Aug. 30	6.69	Nov. 30	6.38
Mar. 31	3.58	June 30	3.58	Sept. 20	5.57	Dec. 22	6.26

84-6-20N1 (\*908, p. 18; 938, p. 25; 946, p. 35; 988, p. 31; 1018, p. 26). Geological Survey, U. S. Dept. of Interior. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 20, T. 84 N., R. 6 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	8.23	Apr. 25	2.81	July 25	5.46	Oct. 31	7.68
Feb. 28	5.09	May 26	3.20	Aug. 30	6.89	Nov. 30	5.93
Mar. 31	2.96	June 30	3.81	Sept. 20	7.67	Dec. 22	5.86

84-6-22F1 (\*908, p. 18; 938, p. 25; 946, p. 35; 988, p. 31; 1018, p. 26). C. A. Wissler. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 22, T. 84 N., R. 6 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	5.04	Apr. 25	3.49	July 25	5.49	Oct. 31	6.15
Feb. 28	4.65	May 26	3.65	Aug. 30	7.46	Nov. 30	5.74
Mar. 31	3.34	June 30	4.34	Sept. 20	6.56	Dec. 22	5.84

83-7-1B1 (\*938, p. 25; 946, p. 35; 988, p. 33; 1018, p. 26). City of Marion. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 1, T. 83 N., R. 7 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 28	6.54	May 26	4.46	Aug. 30	6.90	Oct. 31	7.08
Mar. 31	5.51	June 30	5.25	Sept. 20	6.90	Nov. 30	7.03
Apr. 25	4.48	July 25	6.10				

83-7-2P1 (\*908, p. 18; 938, p. 26; 946, p. 35; 988, p. 33; 1018, p. 27). Mr. Hollenbeck. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 2, T. 83 N., R. 7 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	32.13	Apr. 25	24.99	July 25	30.69	Oct. 31	31.86
Feb. 28	31.78	May 26	28.15	Aug. 30	33.10	Nov. 30	31.98
Mar. 31	27.38	June 30	29.78	Sept. 20	31.62	Dec. 22	31.58

83-7-11E1 (\*938, p. 26; 946, p. 35; 988, pp. 32-33; 1018, pp. 27-28). Louis Maresh. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 11, T. 83 N., R. 7 W. Highest recorded water level, from recorder charts, 71.69 feet below land-surface datum on May 20; lowest, 83.19 feet below land-surface datum on July 25.

Daily high and low water levels, in feet below land-surface datum, 1945  
(From recorder charts)

Day	January		February		March		April	
	High	Low	High	Low	High	Low	High	Low
1	a 75.42	.....	a 76.51	.....	a 75.63	.....	77.13	76.57
2	a 75.39	.....	a 76.44	.....	a 75.52	.....	a 76.48	.....
3	a 75.51	.....	a 76.37	.....	a 75.74	.....	76.34	75.65
4	a 75.61	.....	a 76.32	.....	a 75.50	.....	a 75.66	.....
5	a 75.67	.....	a 76.32	.....	a 75.22	.....	a 75.53	.....
6	a 75.64	.....	a 76.19	.....	a 75.40	.....	a 75.06	.....
7	a 75.62	.....	a 76.26	.....	a 75.65	.....	a 74.79	.....
8	75.47	75.89	a 76.35	.....	a 75.70	.....	74.22	74.67
9	a 75.78	.....	a 76.29	.....	a 75.63	.....	74.02	74.63
10	a 75.81	.....	a 76.51	.....	a 75.72	.....	74.62	75.33
11	a 75.74	.....	a 76.36	.....	a 75.42	.....	75.33	76.59
12	a 75.86	.....	a 76.25	.....	a 75.40	.....	a 76.41	.....
13	a 75.81	.....	a 76.17	.....	a 75.28	.....	a 76.59	.....
14	a 75.78	.....	a 76.23	.....	a 75.24	.....	a 76.58	.....
15	a 75.85	.....	75.98	76.39	a 74.98	.....	74.96	75.96
16	a 75.91	.....	a 76.29	.....	a 75.22	.....	74.50	74.96
17	a 75.92	.....	a 76.20	.....	75.54	76.19	a 74.39	.....
18	a 75.93	.....	a 76.17	.....	75.52	76.06	a 74.09	.....
19	a 76.03	.....	a 75.92	.....	a 75.50	.....	73.43	73.87
20	a 76.11	.....	a 75.83	.....	a 75.38	.....	a 73.34	.....
21	a 76.02	.....	a 75.57	.....	a 75.42	.....	a 73.17	.....
22	a 75.81	.....	a 75.90	.....	a 75.21	.....	72.49	73.01
23	a 75.87	.....	a 76.05	.....	75.28	76.35	a 72.43	.....
24	a 76.12	.....	a 76.10	.....	76.35	77.61	a 72.27	.....
25	a 76.09	.....	a 75.81	.....	76.86	77.61	a 72.20	.....
26	a 76.21	.....	a 75.59	.....	a 76.54	.....	a 72.25	.....
27	a 76.42	.....	a 75.73	.....	76.39	76.95	a 72.31	.....
28	a 76.46	.....	a 75.64	.....	76.96	77.52	a 72.19	.....
29	a 76.32	.....	.....	.....	a 77.28	.....	a 72.14	.....
30	a 76.32	.....	.....	.....	a 77.27	.....	a 72.00	.....
31	a 76.49	.....	.....	.....	a 77.05	.....	.....	.....

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

Daily high and low water levels, in feet below land-surface datum, 1945  
(From recorder charts)

Day	May		June		July		August	
	High	Low	High	Low	High	Low	High	Low
1	a 71.91	.....	74.33	75.69	79.90	80.96	.....	.....
2	a 71.78	.....	a 75.75	.....	79.15	79.90	.....	.....
3	a 71.90	.....	74.55	75.60	78.53	79.15	.....	.....
4	a 71.91	.....	74.12	74.55	a 78.54	.....	.....	.....
5	a 71.90	.....	a 76.02	.....	78.52	79.99	81.49	82.46
6	a 72.06	.....	73.42	73.82	.....	.....	81.55	81.96
7	a 72.18	.....	a 76.23	.....	.....	.....	a 81.96	.....
8	a 72.12	.....	73.30	72.88	.....	.....	a 81.70	.....
9	a 71.96	.....	73.29	73.70	78.48	78.99	a 81.65	.....
10	a 72.01	.....	73.28	73.70	a 77.29	.....	a 81.48	.....
11	a 71.93	.....	a 73.13	.....	77.97	78.37	a 81.57	.....
12	a 72.00	.....	a 72.82	.....	a 77.94	.....	81.37	81.87

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



87-7-11E1--Continued.

Daily high and low water levels, in feet below land-surface datum, 1945  
(From recorder charts)

Day	May		June		July		August	
	High	Low	High	Low	High	Low	High	Low
13	a 72.05	.....	73.07	73.62	78.34	78.89	81.46	81.98
14	a 72.27	.....	73.62	74.56	a 78.97	.....	81.98	82.75
15	a 72.18	.....	a 74.99	.....	78.65	79.10	81.68	82.76
16	a 71.99	.....	a 75.02	.....	a 78.55	.....	80.39	81.60
17	a 71.92	.....	74.23	74.02	78.36	78.77	79.95	80.39
18	a 71.83	.....	a 74.46	.....	a 79.32	.....	a 80.35	.....
19	a 71.88	.....	a 74.44	.....	a 79.61	.....	80.15	80.72
20	a 71.69	.....	a 74.56	.....	79.80	80.40	80.22	80.75
21	71.97	73.08	74.96	75.45	80.40	81.30	80.67	81.11
22	a 73.26	.....	75.45	75.97	80.19	81.12	80.05	80.67
23	72.87	73.56	75.97	76.57	81.13	81.98	79.52	80.11
24	73.53	74.14	a 76.60	.....	81.98	82.68	78.82	79.52
25	74.14	75.12	76.86	77.94	82.68	83.19	78.53	78.85
26	a 75.12	.....	77.94	78.49	a 83.02	.....	77.47	78.22
27	75.28	75.90	78.41	78.95	a 83.24	.....	a 77.06	.....
28	a 75.32	.....	78.95	79.86	a 83.29	.....	77.50	78.41
29	a 75.94	.....	79.86	80.68	.....	.....	78.41	79.38
30	74.44	75.33	a 80.82	.....	.....	.....	79.58	80.32
31	74.56	75.12	.....	.....	.....	.....	80.32	81.43

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

Daily high and low water levels, in feet below land-surface datum, 1945  
(From recorder charts)

Day	September		October		November		December	
	High	Low	High	Low	High	Low	High	Low
1	81.43	82.30	a 74.91	.....	a 74.31	.....	a 74.23	.....
2	81.31	82.29	a 75.05	.....	a 74.63	.....	a 74.11	.....
3	80.22	81.31	a 74.99	.....	a 74.65	.....	a 74.09	.....
4	79.94	80.32	a 74.86	.....	a 74.40	.....	a 74.07	.....
5	80.32	80.81	a 74.81	.....	a 74.28	.....	a 73.93	.....
6	80.81	81.30	a 74.78	.....	a 74.36	.....	a 73.89	.....
7	81.30	81.78	a 74.52	.....	a 74.46	.....	a 74.00	.....
8	a 81.58	.....	a 74.61	.....	a 74.33	.....	a 73.92	.....
9	80.95	81.81	a 74.61	.....	a 74.78	.....	a 74.02	.....
10	80.16	80.35	a 74.53	.....	a 74.73	.....	a 73.93	.....
11	79.60	80.16	a 74.53	.....	a 74.43	.....	a 74.02	.....
12	79.08	79.60	a 74.64	.....	a 74.10	.....	a 73.97	.....
13	78.41	79.08	a 74.68	.....	a 74.46	.....	a 73.86	.....
14	77.99	78.41	a 74.55	.....	a 74.52	.....	a 74.03	.....
15	a 77.82	.....	a 74.45	.....	a 74.49	.....	a 73.96	.....
16	77.02	77.58	a 74.40	.....	a 74.32	.....	a 73.93	.....
17	76.58	77.03	a 74.42	.....	a 74.50	.....	a 73.84	.....
18	a 76.48	.....	a 74.45	.....	a 74.34	.....	a 73.82	.....
19	76.81	77.26	a 75.03	.....	a 74.31	.....	a 73.83	.....
20	a 77.11	.....	a 74.91	.....	a 74.21	.....	a 73.91	.....
21	a 76.91	.....	a 74.80	.....	a 74.18	.....	a 74.06	.....
22	a 76.45	.....	a 74.68	.....	a 74.26	.....	a 74.16	.....
23	a 76.06	.....	a 74.69	.....	a 74.31	.....	a 73.92	.....
24	a 75.97	.....	a 74.59	.....	a 74.12	.....	a 73.62	.....
25	a 75.86	.....	a 74.56	.....	a 74.21	.....	a 73.47	.....
26	a 75.67	.....	a 74.76	.....	a 74.06	.....	a 73.70	.....
27	a 75.59	.....	a 74.63	.....	a 74.04	.....	a 73.82	.....
28	a 75.56	.....	a 74.55	.....	a 74.26	.....	a 73.81	.....
29	a 75.54	.....	a 74.57	.....	a 74.31	.....	a 73.78	.....
30	a 75.22	.....	a 74.32	.....	a 74.30	.....	a 73.89	.....
31	.....	.....	a 74.49	.....	.....	.....	a 73.89	.....

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

83-7-16D1 (\*908, p. 19; 938, p. 27; 946, p. 37; 988, p. 34; 1018, p. 29). City of Cedar Rapids (Shaver Park). NW $\frac{1}{4}$  sec. 16, T. 83 N., R. 7 W.

## 28 WATER LEVELS AND ARTESIAN PRESSURE, 1945, NORTH-CENTRAL STATES

83-7-16D1--Continued.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	87.82	Apr. 25	83.79	Aug. 30	87.30	Oct. 31	88.22
Feb. 28	87.65	May 26	83.73	Sept. 20	88.18	Nov. 30	88.03
Mar. 31	86.55	June 30	85.15				

83-7-16J1 (\*908, p. 19; 938, p. 27; 946, p. 37; 988, p. 34; 1018, p. 29). City of Cedar Rapids (Daniels Park). NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 16, T. 83 N., R. 7 W. No measurements made in 1945.

83-7-17L1 (\*908, p. 19; 938, p. 27; 946, p. 37; 988, p. 34; 1018, p. 29). City of Cedar Rapids (Ellis Park). NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 17, T. 83 N., R. 7 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	20.40	Apr. 25	17.76	July 25	19.79	Oct. 31	20.50
Feb. 28	19.92	May 26	18.38	Aug. 30	20.69	Nov. 30	20.28
Mar. 31	17.59	June 30	19.33	Sept. 20	20.96	Dec. 22	20.40

83-7-21K1 (\*988, pp. 34-35; 1018, p. 29). Wapsi Valley Creamery. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 21, T. 83 N., R. 7 W. Highest recorded water level, from recorder charts, 57.01 feet below land-surface datum on Mar. 20; lowest, 60.94 feet below land-surface datum on Aug. 4.

Water level at noon, in feet below land-surface datum, 1945  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	57.45	57.58	57.60	57.06	57.45	57.60	58.89	60.01	59.38	59.49	59.17	58.44
2	57.41	57.77	57.75	57.05	57.52	57.72	58.79	60.02	59.88	59.43	59.22	57.99
3	57.50	57.76	57.84	57.47	57.55	57.54	58.81	60.05	59.59	59.36	59.06	58.20
4	57.56	57.73	57.49	57.45	57.47	57.62	58.58	59.94	59.99	59.32	58.60	58.41
5	57.64	57.57	57.58	57.48	57.44	57.85	59.05	59.77	60.33	59.36	58.66	58.44
6	57.61	57.66	57.73	57.25	57.21	57.67	59.12	59.50	60.42	59.35	58.92	58.44
7	57.55	57.87	57.72	57.51	57.33	57.89	59.19	59.98	60.29	58.97	58.97	58.45
8	57.57	57.92	57.78	57.18	57.54	57.87	59.05	59.98	60.40	59.22	58.93	58.38
9	57.61	57.92	57.86	57.35	57.59	57.95	59.04	60.04	60.02	59.23	58.95	57.96
10	57.65	57.91	57.85	57.56	57.63	57.51	59.24	60.12	60.05	59.24	58.79	58.01
11	57.62	57.60	57.60	57.65	57.58	57.55	59.18	60.05	60.18	59.24	58.30	58.23
12	57.69	57.69	57.39	57.62	57.65	57.75	59.21	59.86	60.01	59.24	58.52	58.25
13	57.69	57.95	57.76	57.65	.....	58.03	59.22	59.86	60.04	59.04	58.75	58.24
14	57.60	57.88	57.82	57.53	.....	58.13	59.23	60.06	60.08	58.80	58.74	58.32
15	57.61	57.92	57.81	57.11	.....	58.00	59.07	59.57	60.07	58.98	58.69	58.05
16	57.76	57.95	57.86	57.21	.....	57.97	58.70	59.55	59.94	59.02	58.73	57.81
17	57.77	57.76	57.69	57.36	.....	57.64	59.22	59.76	59.64	59.11	58.66	57.91
18	57.76	57.74	57.50	57.18	.....	57.94	59.49	60.02	60.01	59.15	58.49	58.20
19	57.76	57.75	57.22	57.36	.....	58.00	59.49	59.91	60.11	59.23	58.47	58.19
20	57.76	57.88	57.01	57.44	.....	58.16	59.54	59.89	60.19	59.12	58.67	59.32
21	57.45	57.89	57.16	57.46	57.10	58.53	59.62	60.09	60.09	58.80	58.69	58.35
22	57.48	57.93	57.31	57.25	57.56	58.69	59.49	60.05	59.95	59.00	58.14	57.99
23	57.57	57.99	57.37	57.30	57.36	58.77	59.91	59.93	59.90	59.10	58.41	57.81
24	57.71	57.94	57.54	57.31	57.43	58.64	59.70	59.87	59.97	59.10	58.37	57.73
25	57.73	57.55	57.17	57.32	57.44	58.70	59.74	59.95	60.04	59.14	58.04	57.66
26	57.75	57.53	57.25	57.26	57.67	58.84	59.84	60.02	60.07	59.19	58.23	57.98
27	57.75	57.73	57.45	57.43	57.38	58.88	59.77	59.82	59.99	59.05	58.41	58.20
28	57.50	57.84	57.54	57.31	57.49	58.89	59.77	59.94	59.89	58.69	58.55	58.26
29	57.41		57.56	57.16	57.60	58.95	59.46	60.16	59.78	58.76	58.47	58.20
30	57.68		57.46	57.22	57.18	58.97	59.61	60.54	59.47	59.08	58.51	57.83
31	57.74		57.49		57.40		59.94	60.43		59.18		57.75

83-7-21L1 (\*908, pp. 19-20; 938, p. 28; 946, pp. 37-39; 988, pp. 35-36; 1018, p. 30). City of Cedar Rapids. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 21, T. 83 N., R. 7 W. Highest observed water level, from recorder charts, 25.32 feet below land-surface datum on Dec. 17; lowest, 64.00 feet below land-surface datum on July 31.

83-7-21L1--Continued.

Daily high and low water levels, in feet below land-surface datum, 1945  
(From recorder charts)

Day	February		March		April		May	
	High	Low	High	Low	High	Low	High	Low
1	.....	.....	39.15	43.70	31.75	36.85	37.67	43.99
2	.....	.....	39.78	43.89	31.42	38.96	38.20	44.15
3	.....	.....	39.45	44.01	37.82	41.65	38.05	43.05
4	.....	.....	35.55	39.30	38.07	41.62	37.55	41.02
5	.....	.....	34.46	43.56	38.28	41.45	36.95	40.78
6	.....	.....	38.60	43.12	39.06	41.45	34.45	37.81
7	.....	.....	39.08	43.86	39.18	42.85	35.45	42.78
8	.....	.....	39.14	44.20	35.78	41.30	37.71	43.94
9	.....	.....	42.56	44.26	36.28	42.79	38.67	44.56
10	.....	.....	36.60	43.20	39.80	45.72	38.57	44.73
11	.....	.....	36.63	43.14	41.45	44.52	38.28	43.90
12	.....	.....	35.96	42.75	40.30	43.65	38.00	44.33
13	.....	.....	41.32	43.50	40.27	43.51	35.67	39.40
14	.....	.....	41.50	43.98	38.47	41.66	35.27	43.32
15	.....	.....	41.93	45.05	34.58	38.47	38.58	41.52
16	.....	.....	41.50	45.99	33.95	40.45	38.04	41.95
17	.....	.....	39.98	44.35	37.85	42.10	38.46	43.02
18	.....	.....	35.75	42.70	37.30	40.48	39.03	41.30
19	.....	.....	35.15	36.90	38.88	41.93	39.21	42.64
20	.....	.....	32.00	33.80	39.15	42.07	34.18	40.45
21	.....	.....	32.15	38.87	36.35	41.73	34.70	44.17
22	.....	.....	34.45	41.23	33.85	37.77	40.35	44.10
23	.....	.....	35.72	41.53	33.40	40.80	40.30	45.27
24	.....	.....	39.68	41.72	39.36	41.30	40.57	46.26
25	.....	.....	36.25	41.20	38.06	40.22	41.30	47.55
26	.....	.....	33.58	41.70	38.48	41.71	41.37	49.34
27	.....	.....	38.82	42.21	38.34	41.35	38.56	47.12
28	38.96	45.15	39.59	42.15	41.33	38.95	32.80	43.75
29			39.10	42.55	35.36	39.80	33.34	39.80
30			38.00	41.57	35.95	42.70	36.30	43.76
31			36.85	39.00			34.54	45.80

Daily high and low water levels, in feet below land-surface datum, 1945  
(From recorder charts)

Day	June		July		August		September	
	High	Low	High	Low	High	Low	High	Low
1	30.63	40.50	51.20	60.30	61.70	66.25	58.07	65.15
2	33.42	39.05	48.30	57.06	59.11	66.04	52.87	61.45
3	38.10	40.70	49.87	59.73	59.55	65.20	48.65	53.28
4	39.23	46.22	51.23	55.56	58.38	62.28	50.66	61.58
5	42.71	47.19	51.61	63.36	54.95	60.95	55.40	64.35
6	43.09	48.54	54.14	64.48	51.99	61.60	56.60	60.45
7	41.35	48.31	55.16	66.20	58.00	61.34	51.84	64.41
8	43.76	48.53	54.04	61.45	58.40	64.00	57.73	65.16
9	43.99	51.04	50.85	62.70	57.60	64.55	55.20	62.60
10	39.21	47.45	56.80	60.25	60.21	65.14	52.70	58.31
11	38.07	47.83	55.25	61.27	59.00	64.23	53.87	58.45
12	43.67	51.50	55.55	61.44	54.69	61.18	54.47	61.50
13	46.59	56.40	56.41	62.70	53.73	63.37	55.34	58.10
14	46.88	55.89	53.38	61.32	57.95	65.25	54.55	58.70
15	46.64	51.80	51.04	57.87	53.14	58.66	53.70	57.48
16	45.57	50.11	48.29	60.02	52.04	59.17	49.06	53.97
17	40.70	46.56	53.88	60.93	53.38	64.50	47.44	57.53
18	41.12	46.94	55.57	63.32	57.20	64.47	51.86	58.45
19	43.07	49.63	57.49	63.82	54.50	60.00	53.18	59.07
20	43.22	57.19	56.76	64.53	51.44	61.80	55.24	57.88
21	52.87	61.54	57.28	64.76	56.90	61.00	53.49	56.73
22	59.80	66.25	56.06	62.50	55.66	61.55	51.35	57.21
23	55.30	62.27	53.84	65.07	55.24	60.00	50.64	56.75
24	52.37	59.71	57.04	65.90	56.33	61.50	50.60	56.51
25	48.69	60.95	56.23	65.60	56.05	61.63	52.16	57.84
26	53.95	61.25	59.53	66.15	55.24	60.00	52.98	57.14
27	54.15	63.00	56.55	65.50	53.94	61.54	50.95	56.16

83-7-21L1--Continued.

Daily high and low water levels, in feet below land-surface datum, 1945  
(From recorder charts)

Day	June		July		August		September	
	High	Low	High	Low	High	Low	High	Low
28	54.95	61.60	58.18	64.08	55.75	63.45	50.81	54.87
29	53.70	61.65	53.57	60.98	57.70	65.54	48.50	53.53
30	54.04	62.42	52.04	65.31	59.04	65.59	48.29	51.13
31			59.62	66.30	58.81	65.14		

Daily high and low water levels, in feet below land-surface datum, 1945  
(From recorder charts)

Day	October		November		December	
	High	Low	High	Low	High	Low
1	46.94	52.71	42.93	46.96	34.30	38.86
2	43.93	47.61	43.53	45.82	32.08	35.50
3	42.03	47.11	38.64	45.64	32.58	39.67
4	41.94	48.75	35.63	39.75	34.60	41.58
5	42.58	48.27	37.70	41.27	36.79	40.72
6	41.50	49.00	37.13	43.95	36.84	42.27
7	41.06	44.54	37.99	44.39	36.50	41.48
8	41.14	48.08	37.98	44.68	34.30	40.26
9	41.12	46.04	38.43	45.12	31.07	34.95
10	42.43	46.70	36.30	40.97	30.35	37.29
11	43.18	47.15	33.67	36.30	34.35	39.09
12	44.10	46.79	32.28	42.08	34.92	39.12
13	41.32	45.41	38.28	43.36	33.99	39.78
14	37.81	41.41	37.70	42.39	35.23	39.34
15	37.55	45.36	37.17	43.06	33.36	38.56
16	38.56	45.39	38.23	42.68	28.57	33.36
17	41.01	45.82	37.67	39.77	27.62	37.21
18	40.02	46.82	33.91	38.17	35.41	39.16
19	42.60	47.06	35.31	42.39	36.51	39.85
20	40.78	45.67	38.16	42.35	37.27	40.05
21	38.87	41.85	37.01	42.44	36.94	39.99
22	37.44	44.53	31.95	36.76	33.66	37.32
23	40.63	46.05	31.06	40.03	31.62	35.09
24	41.58	45.52	32.82	38.18	31.24	32.75
25	41.76	45.64	31.95	34.00	30.10	31.49
26	41.91	46.59	30.95	39.93	29.79	37.83
27	39.75	43.20	34.75	39.99	36.00	39.70
28	37.56	40.36	36.43	42.61	36.51	40.66
29	36.89	44.90	37.70	41.61	36.20	39.09
30	43.43	45.90	37.34	41.22	31.84	36.29
31	43.50	46.30			31.25	33.28

83-7-21P1 (\*938, p. 28; 946, p. 39; 988, p. 36; 1018, p. 31). Kresge Co. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 21, T. 83 N., R. 7 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 28	45.60	Apr. 25	50.34	Oct. 31	60.17	Dec. 22	47.22
Mar. 31	47.84	May 26	55.49	Nov. 30	50.99		

83-7-21Q1 (\*938, p. 28; 946, p. 39; 988, p. 36; 1018, p. 31). Iowa Theater. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 21, T. 83 N., R. 7 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	43.45	Mar. 31	44.78	May 26	a 67.58	Oct. 31	a 57.23
Feb. 28	44.26	Apr. 25	49.97	Sept. 20	a 71.48	Nov. 30	49.49

a Nearby wells pumping.

83-7-23G1 (\*908, p. 20; 938, p. 29; 946, p. 39; 988, p. 36; 1018, p. 31). City of Cedar Rapids (Bever Park). SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 23, T. 83 N., R. 7 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	2.88	Apr. 25	2.29	July 25	2.64	Oct. 31	2.71
Feb. 28	2.75	May 26	2.11	Aug. 30	3.15	Nov. 30	2.68
Mar. 31	2.53	June 30	2.78	Sept. 20	3.06	Dec. 22	2.99

83-7-24A1 (\*908, p. 20; 938, p. 29; 946, p. 39; 988, p. 37; 1018, p. 31). John Zrudsky. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 24, T. 83 N., R. 7 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	28.74	Apr. 25	27.05	July 25	28.88	Oct. 31	30.36
Feb. 28	28.19	May 26	26.88	Aug. 30	28.93	Nov. 30	28.96
Mar. 31	28.30	June 30	26.92	Sept. 20	29.91	Dec. 22	28.59

83-7-28G2 (\*908, p. 20; 938, pp. 28-29; 946, pp. 39-40; 988, pp. 37-38; 1018, pp. 31-32). Cedar Rapids Gas Co. SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 28, T. 83 N., R. 7 W. Highest recorded water level, from recorder charts, 55.31 feet below land-surface datum on Mar. 27; lowest, 61.17 feet below land-surface datum on Aug. 10.

Daily high and low water levels, in feet below land-surface datum, 1945  
(From recorder charts)

Day	January		February		March		April		May	
	High	Low	High	Low	High	Low	High	Low	High	Low
1	.....	.....	40.65	43.22	39.19	40.84	.....	33.40	41.48	43.78
2	37.63	38.95	41.00	43.75	39.40	41.17	.....	39.25	42.43	44.13
3	37.65	39.42	39.00	42.92	39.18	41.95	37.00	39.71	41.81	42.98
4	38.55	40.88	.....	39.72	.....	40.30	36.82	38.78	42.03	43.56
5	39.15	41.29	38.28	41.85	.....	41.55	34.75	36.92	41.75	43.13
6	39.78	41.55	38.55	40.45	40.05	42.61	35.00	37.72	36.56	41.58
7	37.40	40.36	38.85	41.15	38.65	41.83	35.20	37.30	38.82	43.68
8	37.61	41.07	39.00	41.39	38.62	41.76	33.39	35.19	39.82	37.42
9	39.65	41.51	38.98	41.02	39.30	41.94	33.38	38.26	37.27	41.19
10	39.57	43.37	39.05	40.39	38.85	41.00	36.22	39.97	40.51	42.99
11	38.27	42.30	37.62	39.15	.....	38.98	37.59	40.11	41.82	43.86
12	38.23	40.12	37.65	39.20	.....	40.60	37.23	39.72	41.36	43.37
13	38.24	40.00	38.63	39.35	39.10	43.55	36.79	39.72	36.56	41.35
14	.....	39.90	37.85	39.98	39.00	42.01	35.62	39.23	36.70	41.47
15	.....	40.36	38.00	39.85	38.68	46.65	.....	35.62	39.43	41.47
16	40.00	42.25	37.95	43.71	36.83	48.75	.....	40.01	38.77	41.51
17	40.32	42.42	42.30	44.10	35.91	45.93	39.14	.....	40.15	44.79
18	38.55	41.00	41.08	42.31	.....	.....	42.59	44.67	40.70	43.52
19	38.40	40.70	39.40	42.30	.....	.....	42.03	54.06	40.00	42.25
20	37.65	40.14	37.84	39.36	.....	.....	42.34	44.33	36.10	40.00
21	.....	38.95	.....	38.87	.....	.....	42.43	.....	36.31	43.66
22	.....	41.22	.....	39.70	.....	.....	.....	.....	42.06	45.19
23	38.00	41.39	.....	39.54	.....	.....	.....	.....	42.90	46.12
24	37.65	41.48	.....	.....	.....	.....	.....	.....	43.03	46.25
25	38.18	41.45	.....	.....	.....	.....	.....	.....	43.47	47.73
26	37.62	41.70	.....	38.69	.....	39.97	.....	.....	43.81	46.91
27	39.64	41.72	38.02	40.72	33.31	35.59	.....	.....	39.98	46.30
28	38.40	40.20	37.93	40.59	33.53	37.40	.....	.....	39.58	43.12
29	37.70	41.45	.....	.....	34.05	36.91	37.36	40.86	40.72	47.61
30	39.00	41.78	.....	.....	33.35	36.10	37.22	42.22	40.99	44.98
31	39.75	42.70	.....	.....	33.40	35.55	.....	.....	40.17	45.10

Daily high and low water levels, in feet below land-surface datum, 1945  
(From recorder charts)

Day	June		July		August		December	
	High	Low	High	Low	High	Low	High	Low
1	42.38	47.23	47.25	52.30	.....	.....	.....	.....
2	45.69	46.26	46.45	50.05	.....	.....	.....	.....
3	39.45	44.50	46.80	51.55	.....	.....	.....	.....
4	39.28	43.53	46.98	51.15	.....	.....	.....	.....
5	42.18	44.86	45.73	54.92	48.65	55.06	.....	.....
6	43.30	46.55	48.49	54.83	45.55	57.92	.....	.....
7	43.99	45.40	47.98	52.59	53.89	58.65	.....	.....
8	44.23	46.65	41.43	50.62	53.62	59.04	.....	.....
9	45.05	48.05	46.42	54.89	54.41	59.26	.....	.....
10	40.77	47.97	48.35	51.55	55.35	61.17	.....	.....
11	40.61	47.36	47.05	49.57	55.79	60.29	.....	42.42
12	44.63	49.16	45.98	51.70	.....	.....	40.80	42.83
13	46.96	54.77	46.35	53.06	.....	.....	40.80	42.68
14	50.32	54.67	46.78	51.60	.....	.....	40.18	42.62

83-7-28G2--Continued.

Daily high and low water levels, in feet below land-surface datum, 1945  
(From recorder charts)

Day	June		July		August		December	
	High	Low	High	Low	High	Low	High	Low
15	47.95	54.06	46.35	51.21	.....	.....	39.55	41.98
16	46.34	49.77	46.96	52.04	.....	.....	37.26	40.18
17	42.43	47.53	48.08	53.21	.....	.....	41.23	37.08
18	42.60	48.20	.....	.....	.....	.....	42.77	40.27
19	45.39	50.29	.....	.....	.....	.....	43.53	41.48
20	47.21	49.82	.....	.....	.....	.....	41.98	44.48
21	46.21	49.99	.....	.....	.....	.....	40.37	44.79
22	46.55	54.02	53.25	47.37	.....	.....	41.52	43.84
23	47.58	53.98	47.27	57.72	.....	.....	.....	.....
24	45.62	51.20	51.18	57.28	.....	.....	.....	.....
25	44.92	54.32	52.61	58.48	.....	.....	.....	.....
26	47.95	55.33	53.55	59.33	.....	.....	.....	.....
27	47.86	55.52	.....	.....	.....	.....	.....	.....
28	49.00	56.13	.....	.....	.....	.....	.....	.....
29	49.30	56.82	.....	.....	.....	.....	.....	.....
30	49.48	54.68	.....	.....	.....	.....	.....	.....
31	.....	.....	.....	.....	.....	.....	.....	.....

83-7-32G1 (\*908, p. 21; 938, pp. 29-30; 946, p. 41; 988, p. 38; 1018, p. 32). Floyd Felter. SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 32, T. 83 N., R. 7 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	80.20	Apr. 25	80.20	July 25	82.18	Oct. 31	82.54
Feb. 28	80.21	May 26	79.95	Aug. 30	83.40	Nov. 30	82.00
Mar. 31	80.08	June 30	81.04	Sept. 20	83.29	Dec. 22	81.38

83-7-33F1 (\*908, p. 21; 938, p. 30; 946, p. 41; 988, p. 38; 1018, p. 33). SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 33, T. 83 N., R. 7 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	70.55	Apr. 25	71.20	July 25	71.32	Oct. 31	71.53
Feb. 28	70.94	May 26	71.69	Aug. 30	73.25	Nov. 30	72.00
Mar. 31	71.60	June 30	71.21	Sept. 20	71.50	Dec. 22	72.92

83-6-30E1 (\*908, pp. 21-22; 938, p. 30; 946, p. 41; 988, p. 38; 1018, p. 33). Mr. Katz. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 30, T. 83 N., R. 6 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	50.96	Apr. 25	48.44	July 25	49.69	Oct. 31	50.80
Feb. 28	50.74	May 26	49.19	Aug. 30	50.49	Nov. 30	50.83
Mar. 31	46.45	June 30	48.97	Sept. 20	50.57	Dec. 22	50.91

Lyon County98-43-11H1 (\*908, p. 22; 938, p. 31; 946, p. 41; 988, p. 38; 1018, p. 33). SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 11, T. 99 N., R. 43 W. Water levels, in feet below land-surface datum, 1945: Mar. 28, 1.35; June 30, 2.83; Sept. 10, 3.33; Dec. 31, 5.28.98-48-24M1 (\*886, p. 118; 908, p. 22; 938, p. 31; 946, p. 41; 988, p. 39; 1018, p. 33). A. C. Hanson. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 24, T. 98 N., R. 48 W. No measurements made in 1945.Madison County76-28-2B1 (\*908, p. 22; 938, p. 31; 946, p. 41; 988, p. 39; 1018, p. 33). Glen Newton. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 2, T. 76 N., R. 28 W. Water levels, in feet below land-surface datum, 1945: Mar. 23, 15.14; June 25, 15.36; Sept. 7, 17.30.

Marion County

75-20-22H1 (\*908, p. 22; 938, p. 31; 946, p. 42; 988, p. 39; 1018, p. 33). Union Central Life Insurance Co. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 22, T. 75 N., R. 20 W. Water levels, in feet below land-surface datum, 1945: Mar. 22, 1.99; June 21, 1.60; Sept. 6, 5.98.

75-20-31C2 (\*908, p. 23; 938, p. 31; 946, p. 42; 988, p. 39; 1018, p. 33). Miss Amanda Elliot. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 31, T. 75 N., R. 20 W. Water levels, in feet below land-surface datum, 1945: Mar. 22, 6.00; June 21, 6.22; Sept. 6, 9.28.

74-21-11A1 (\*946, p. 42; 988, p. 39; 1018, p. 33). Mr. Riddel. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 11, T. 74 N., R. 21 W. Water levels, in feet below land-surface datum, 1945: Mar. 22, 6.10; June 21, 6.19; Sept. 6, 7.89.

74-21-11F1. Town of Melcher. SE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 11, T. 74 N., R. 21 W. Test hole No. 5 (1945). Diameter 6 inches, depth 101 feet. Measuring point, top of recorder platform over casing, 2.1 feet above land-surface datum, and 933.54 feet above sea-level datum. Taps water in Pleistocene sand and gravel. Water levels affected by pumping of town well 610.35 feet to the south. Water-stage recorder installed June 11.

Daily high and low water levels, in feet below land-surface datum, 1945  
(From recorder charts)

Day	June		July		August	
	High	Low	High	Low	High	Low
1	.....	.....	.....	.....	.....	.....
2	.....	.....	.....	.....	.....	.....
3	.....	.....	.....	.....	.....	.....
4	.....	.....	36.04	36.20	.....	.....
5	.....	.....	35.89	36.20	.....	.....
6	.....	.....	35.74	35.89	.....	.....
7	.....	.....	35.59	35.74	48.70	50.05
8	.....	.....	35.44	35.59	47.70	48.70
9	.....	.....	35.34	35.44	.....	.....
10	.....	.....	35.24	35.34	.....	.....
11	33.50	.....	35.10	35.24	.....	.....
12	33.07	33.50	35.00	35.10	.....	.....
13	32.98	33.07	35.00	35.90	.....	.....
14	33.04	33.16	.....	35.90	.....	.....
15	.....	.....	b 39.59	.....	.....	.....
16	.....	.....	.....	.....	.....	.....
17	a 32.91	34.90	.....	.....	.....	.....
18	a 34.90	50.65	.....	.....	.....	.....
19	a 50.65	55.20	.....	.....	.....	.....
20	a 45.05	50.70	.....	.....	.....	.....
21	42.80	45.05	.....	.....	.....	.....
22	42.35	42.80	.....	.....	.....	.....
23	40.32	41.35	.....	.....	.....	.....
24	39.50	40.32	.....	.....	.....	.....
25	38.89	39.50	.....	.....	.....	.....
26	38.32	38.89	.....	.....	.....	.....
27	37.85	38.32	.....	.....	.....	.....
28	37.54	37.85	.....	.....	.....	.....
29	37.16	37.54	.....	.....	.....	.....
30	36.90	37.16	.....	.....	.....	.....
31	.....	.....	.....	.....	.....	.....

a Fluctuation due to nearby pumping test.

b Tape measurement.

## 34 WATER LEVELS AND ARTESIAN PRESSURE, 1945, NORTH-CENTRAL STATES

74-21-11F1--Continued.

Daily high and low water levels, in feet below land-surface datum, 1945  
(From recorder charts)

Day	September		October		November	
	High	Low	High	Low	High	Low
1	.....	.....	.....	.....	56.00	59.30
2	.....	.....	.....	.....	.....	.....
3	.....	.....	.....	.....	.....	.....
4	.....	.....	.....	54.40	.....	.....
5	.....	.....	52.30	54.30	.....	.....
6	a 57.14	.....	52.20	54.70	.....	.....
7	.....	.....	52.80	54.60	.....	.....
8	.....	.....	52.60	54.80	.....	.....
9	.....	.....	52.20	54.20	.....	.....
10	51.50	.....	51.60	54.20	.....	.....
11	51.15	54.90	52.00	.....	.....	.....
12	52.70	56.30	.....	.....	.....	.....
13	53.40	54.90	.....	.....	.....	.....
14	52.60	52.20	.....	.....	.....	.....
15	52.90	55.40	.....	.....	.....	.....
16	52.70	55.40	.....	.....	.....	.....
17	53.30	55.30	.....	.....	.....	.....
18	53.20	55.60	.....	.....	.....	.....
19	53.00	55.30	.....	.....	.....	.....
20	53.10	56.10	.....	.....	.....	.....
21	53.70	55.70	53.62	56.85	.....	.....
22	53.20	55.70	54.77	58.00	.....	.....
23	53.30	55.60	54.75	58.30	.....	.....
24	53.30	55.50	54.20	57.70	.....	.....
25	53.30	55.70	54.30	58.50	.....	.....
26	51.50	54.40	55.20	57.90	.....	.....
27	52.50	55.10	.....	58.80	.....	.....
28	52.80	55.10	55.80	59.60	56.60	59.60
29	53.20	55.50	56.10	59.40	56.50	60.10
30	.....	.....	55.90	59.30	56.80	59.90
31	.....	.....	56.00	59.30	.....	.....

a Tape measurement.

74-21-11K1. Town of Melcher. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 11, T. 74 N., R. 21 W. Test hole No. 3 (1945). Diameter 6 inches, depth 119 feet. Measuring point, top of casing, 1.35 feet above land-surface datum, and 944.11 feet above sea-level datum. Taps water in Pleistocene sand and gravel. Water levels affected by pumping of town well 25.5 feet to the south. Water-stage recorder installed July 14.

Daily high and low water levels, in feet below land-surface datum, 1945  
(From recorder charts)

Day	July		August		September	
	High	Low	High	Low	High	Low
1	.....	.....	.....	.....	74.38	98.22
2	.....	.....	.....	.....	.....	95.86
3	.....	.....	.....	.....	72.75	95.40
4	a 47.25	.....	.....	.....	73.70	92.90
5	a 47.06	.....	.....	.....	71.90	.....
6	a 46.95	.....	.....	.....	.....	.....
7	a 46.80	.....	.....	78.35	66.25	68.10
8	a 46.67	.....	58.90	78.45	64.45	66.25
9	a 46.53	.....	59.55	78.27	63.80	64.86
10	a 46.40	.....	59.03	.....	62.86	63.80
11	a 46.31	.....	59.45	.....	.....	.....
12	a 46.20	.....	60.68	95.60	64.30	78.85
13	a 46.10	.....	62.00	.....	65.10	78.07
14	a 46.03	.....	.....	86.78	64.10	78.40
15	51.00	64.30	59.10	90.30	63.90	78.52
16	51.70	66.00	.....	87.32	64.28	78.39
17	51.00	69.30	63.90	88.42	62.90	78.11
18	51.68	75.03	65.40	89.00	64.82	78.30
19	52.30	77.60	66.40	92.60	64.45	78.90

a Water level at noon.



74-21-11k1--Continued.

Daily high and low water levels, in feet below land-surface datum, 1945  
(From recorder charts)

Day	July		August		September	
	High	Low	High	Low	High	Low
20	53.30	79.10	67.75	91.75	64.60	78.60
21	54.60	75.90	68.90	94.73	65.05	78.33
22	54.55	71.72	69.55	92.80	64.76	78.23
23	54.78	77.74	70.38	93.40	64.80	77.91
24	53.49	.....	70.82	93.73	64.80	77.96
25	53.71	.....	69.70	93.54	64.81	78.45
26	53.40	.....	71.30	93.03	64.85	78.60
27	54.65	.....	70.80	94.70	63.90	78.25
28	.....	.....	71.88	97.90	64.10	78.24
29	.....	.....	72.60	97.75	64.70	77.71
30	.....	.....	73.50	98.00	64.50	77.39
31	.....	.....	74.10	98.05		

Daily high and low water levels, in feet below land-surface datum, 1945  
(From recorder charts)

Day	October		November		December	
	High	Low	High	Low	High	Low
1	64.70	76.75	67.29	83.73	67.90	84.10
2	64.20	77.20	67.42	84.01	67.85	84.22
3	64.72	76.63	67.60	84.18	68.04	83.49
4	64.28	76.38	67.77	80.67	67.62	84.15
5	63.70	76.42	66.05	82.72	67.75	84.91
6	63.40	76.44	66.65	83.30	68.50	84.93
7	64.18	76.18	67.00	83.50	68.40	84.94
8	63.97	76.07	67.00	82.40	67.84	82.58
9	63.85	75.58	66.71	81.70	67.57	84.46
10	62.88	76.46	66.26	82.52	68.16	84.60
11	63.36	75.27	66.55	83.03	68.19	83.91
12	63.29	75.30	66.88	79.80	68.08	84.60
13	63.37	76.42	65.46	82.12	68.08	84.48
14	.....	.....	66.28	82.52	68.24	84.71
15	.....	.....	66.55	82.64	68.30	85.07
16	.....	.....	66.68	82.78	68.90	85.55
17	64.40	75.05	66.88	83.41	68.98	85.26
18	62.70	80.07	67.28	81.58	68.99	85.65
19	63.57	81.02	66.09	82.62	69.03	85.15
20	64.02	81.93	66.56	82.48	68.95	85.13
21	65.07	82.98	66.40	82.66	68.84	85.05
22	66.27	83.17	66.65	83.10	68.91	85.27
23	66.18	82.48	67.00	83.22	69.00	85.34
24	65.62	76.78	67.10	84.08	68.94	85.21
25	65.60	83.32	67.89	84.30	69.08	84.96
26	66.75	82.52	67.87	84.12	.....	.....
27	66.18	83.40	67.75	84.20	.....	.....
28	67.15	84.21	67.80	83.76	.....	.....
29	67.36	83.84	67.80	84.55	.....	.....
30	67.20	83.72	68.08	84.40	69.45	85.76
31	67.28	83.81			69.56	85.80

74-21-15H1 (\*946, p. 42; 988, p. 39; 1018, p. 33). SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 15, T. 74 N., R. 21 W. Water levels, in feet below land-surface datum, 1945: June 21, 2.5; Sept. 11, 8.35.

74-20-2M1 (\*908, p. 23; 938, p. 32; 946, p. 42; 988, p. 39; 1018, p. 33). Iowa Highway Commission. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 2, T. 74 N., R. 20 W. Water levels, in feet below land-surface datum, 1945: Mar. 22, 2.35; May 29, 3.42; Sept. 11, 3.85.

74-20-16M1 (\*908, p. 23; 938, p. 32; 946, p. 43; 988, p. 40; 1018, p. 33). C. Wendall. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 16, T. 74 N., R. 20 W. Well abandoned; measurements discontinued.

74-20-22C1 (\*946, p. 43; 988, p. 40; 1018, p. 33). Grant DeWitt. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 22, T. 74 N., R. 20 W. Water levels, in feet below land-surface datum, 1945: Mar. 22, 8.00; June 21, 4.63; Sept. 6, 12.42.

74-20-33D1 (\*908, p. 23; 938, p. 32; 946, p. 43; 988, p. 40; 1018, p. 34). T. V. Beebout. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 33, T. 74 N., R. 20 W. Water levels, in feet below land-surface datum, 1945: Mar. 22, 12.12; June 21, 4.59; Sept. 6, 9.39.

#### Montgomery County

71-36-21R1 (\*946, p. 43; 988, p. 40; 1018, p. 34). City of Villisca well 1. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 21, T. 71 N., R. 36 W. Measurements made by C. J. Sandquist, water superintendent. Water levels, in feet below land-surface datum, 1945: Mar. 23, 6.9; Apr. 23, 4.6; June 16, 6.00; June 25, 5.75. Well destroyed after June 25; measurements discontinued.

#### Tarkio Creek area

(Wells in the Tarkio Creek area are numbered consecutively beginning with 1; measurements made by D. L. Hummel.)

7 (\*777, pp. 63-64; \*817, pp. 56, 57-59; \*840, pp. 91, 94-95; 845, pp. 86-87; 886, p. 122; 908, p. 36; 938, p. 39; 946, p. 55; 988, p. 40; 1018, p. 34). E. F. Holquist. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 11, T. 71 N., R. 38 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 23	21.68	Apr. 28	5.95	July 19	12.33	Oct. 23	20.89
Feb. 26	24.70	May 24	4.99	Aug. 26	14.88	Nov. 27	22.23
Mar. 22	10.86	June 27	7.56	Sept. 25	18.50	Dec. 22	22.82

72 (\*840, pp. 93, 98-99; 845, p. 92; 886, p. 133; 908, p. 36; 938, p. 45; 946, p. 55; 988, p. 40; 1018, p. 34). O. A. Milner. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 24, T. 72 N., R. 38 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 23	10.13	May 26	2.07	Aug. 25	8.96	Nov. 27	12.20
Mar. 25	2.96	June 27	3.94	Sept. 25	11.06	Dec. 22	12.89
Apr. 19	2.39	July 21	4.97	Oct. 23	11.79		

73 (\*840, pp. 93, 98-99; 845, p. 92; 886, p. 133; 908, p. 36; 938, p. 46; 946, p. 55; 988, p. 40; 1018, p. 34). NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 25, T. 72 N., R. 38 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 23	15.47	May 26	9.11	Aug. 25	15.49	Nov. 27	16.94
Mar. 25	9.49	June 29	13.23	Sept. 25	16.18	Dec. 22	17.49
Apr. 19	10.18	July 19	14.48	Oct. 23	16.50		

78 (\*840, pp. 93, 98-99; 845, p. 92; 886, p. 134; 908, p. 36; 938, p. 46; 946, p. 55; 988, p. 41; 1018, p. 34). Mr. Mainquist. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 35, T. 71 N., R. 38 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 23	6.58	May 29	1.26	Aug. 25	4.18	Nov. 27	6.94
Mar. 22	2.77	June 29	1.72	Sept. 25	5.99	Dec. 22	6.95
Apr. 19	.59	July 21	2.39	Oct. 23	6.71		

79 (\*840, pp. 93, 98-99; 845, p. 92; 886, p. 134; 908, p. 36; 938, p. 46; 946, p. 55; 988, p. 41; 1018, p. 34). SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 35, T. 71 N., R. 38 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 23	13.22	May 24	3.88	Sept. 25	13.43	Nov. 27	15.83
Mar. 22	5.17	Aug. 28	11.19	Oct. 23	14.72	Dec. 22	15.97
Apr. 19	4.12						

81 (\*840, pp. 95, 98-99; 845, p. 92; 886, p. 135; 908, p. 37; 938, p. 46; 946, p. 56; 986, p. 41; 1018, p. 35). L. G. Bergen. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 24, T. 71 N., R. 38 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 23	6.58	May 24	4.70	Aug. 25	5.31	Nov. 27	8.02
Mar. 22	5.05	June 29	6.17	Sept. 22	7.95	Dec. 22	9.10
Apr. 19	4.95	July 21	7.07	Oct. 25	7.87		

82 (\*840, pp. 95, 98-99; 845, p. 92; 886, p. 135; 908, p. 37; 938, p. 47; 946, p. 56; 988, p. 41; 1018, p. 35). NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 29, T. 72 N., R. 37 W.

Water level, in feet below land-surface datum, 1945

Jan. 23	16.98	May 24	6.31	Aug. 25	14.94	Nov. 27	20.07
Mar. 22	9.56	June 29	8.38	Sept. 25	17.64	Dec. 22	20.92
Apr. 19	8.84	July 21	10.65	Oct. 25	19.02		

Muscatine County

76-2-14D1 (\*886, p. 118; 908, p. 24; 938, p. 32; 946, p. 43; 988, p. 41; 1018, p. 35). City of Muscatine test well 4. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 14, T. 76 N., R. 2 W. Water levels, in feet below land-surface datum, 1945: Mar. 20, 8.20; June 21, 7.99; Sept. 5, 12.48; Dec. 21, 12.32.

76-2-15A1 (\*908, p. 24; 938, p. 32; 946, p. 43; 988, p. 41; 1018, p. 35). City of Muscatine test well 5. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 15, T. 76 N., R. 2 W. Water levels, in feet below land-surface datum, 1945: Mar. 20, 10.00; June 21, 6.55; Sept. 5, 10.54; Dec. 21, 9.82.

Osceola County

99-41-18C2 (\*908, p. 24; 938, p. 33; 946, p. 44; 988, p. 42; 1018, p. 35). City of Sibley. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 18, T. 99 N., R. 41 W. Water levels, in feet below land-surface datum, 1945: Mar. 28, 8.45; June 30, 7.90; Sept. 10, 8.65; Dec. 31, 8.71.

Page County

69-36-31K1 (\*908, p. 24; 938, p. 33; 946, p. 44; 988, p. 42; 1018, pp. 35-36). City of Clarinda. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 31, T. 69 N., R. 36 W. Highest observed water level, at noon, from recorder charts, 14.54 feet below land-surface datum on Apr. 18; lowest, 21.96 feet below land-surface datum, on Dec. 27.

Water level at noon, in feet below land-surface datum, 1945

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	20.73	19.92	16.47	15.72	.....	.....	.....	.....	20.49	20.86	21.33
2	.....	20.52	19.47	16.75	15.81	.....	.....	.....	.....	20.70	21.31	21.54
3	.....	20.40	19.33	16.89	16.09	.....	16.80	.....	19.36	20.62	21.41	21.76
4	20.86	20.49	18.75	16.68	16.24	.....	.....	.....	.....	20.47	20.98	21.72
5	20.68	20.75	18.42	16.75	16.31	16.72	.....	.....	.....	20.46	20.93	21.31
6	20.61	20.38	18.31	16.25	16.21	16.53	.....	18.32	.....	.....	20.99	21.20
7	20.66	20.67	18.42	16.10	16.36	16.41	.....	.....	.....	.....	21.18	21.34
8	20.65	20.60	18.27	15.94	16.78	.....	.....	.....	19.85	.....	21.17	21.35
9	20.99	20.37	18.19	15.78	16.76	.....	17.11	.....	19.88	.....	21.70	21.82
10	20.94	20.74	18.23	16.04	.....	.....	.....	18.28	20.04	.....	21.55	21.83
11	20.80	20.49	18.34	15.96	.....	.....	.....	.....	20.06	.....	21.20	21.82
12	20.79	20.41	18.14	15.82	.....	.....	.....	.....	20.12	.....	20.82	21.58
13	20.74	.....	17.81	15.56	.....	16.07	17.55	18.35	20.21	.....	21.38	21.42
14	20.52	.....	17.57	15.60	.....	16.16	.....	.....	20.16	.....	21.55	21.62
15	20.87	.....	17.15	15.23	.....	16.27	.....	.....	20.38	.....	21.41	21.76
16	20.84	20.79	16.53	14.68	.....	16.45	17.77	.....	20.31	20.61	21.02	21.84
17	20.71	20.81	.....	14.56	.....	16.38	.....	.....	20.29	20.66	21.32	21.85
18	20.59	20.74	16.19	14.54	.....	16.39	.....	.....	20.29	21.05	21.38	21.75

## 69-36-31K1--Continued.

Water level at noon, in feet below land-surface datum, 1945

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
19	20.58	20.63	16.23	.....	.....	.....	.....	20.42	20.93	21.49	.....	.....
20	20.69	20.38	16.25	.....	.....	.....	.....	18.18	20.59	20.98	21.18	.....
21	20.54	.....	16.36	.....	.....	.....	18.11	.....	20.54	21.12	21.44	21.70
22	20.54	.....	16.19	.....	16.43	.....	.....	.....	20.49	.....	21.49	21.86
23	20.52	.....	16.00	.....	16.41	.....	18.29	.....	20.51	21.11	21.60	21.71
24	20.54	.....	16.28	.....	16.23	.....	.....	.....	20.79	21.04	21.27	21.43
25	20.36	20.33	16.21	15.03	16.21	.....	.....	.....	20.82	20.93	21.50	21.41
26	20.55	20.30	16.23	15.37	16.30	16.86	.....	.....	20.78	21.18	21.32	21.83
27	20.55	20.24	16.14	15.53	16.20	.....	18.49	18.82	20.76	21.03	21.39	21.96
28	20.52	20.15	16.52	15.50	16.29	.....	.....	.....	20.91	21.05	21.62	21.76
29	20.47	.....	16.58	15.75	.....	.....	.....	.....	21.08	21.23	21.62	.....
30	20.59	.....	16.60	15.88	.....	17.00	.....	.....	20.76	20.91	21.47	.....
31	20.78	.....	16.46	.....	.....	.....	.....	.....	.....	20.96	.....	.....

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; 946, p. 56; 988, p. 42; 1018, p. 36). John Toft. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 7, T. 68 N., R. 38 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	13.15	Apr. 28	6.68	July 21	11.05	Oct. 23	14.15
Feb. 26	13.61	May 26	7.27	Aug. 30	9.84	Nov. 26	14.98
Mar. 28	4.14	June 27	9.75	Sept. 22	12.92	Dec. 28	12.39

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; 946, p. 56; 988, p. 43; 1018, p. 36). T. Slickerveer. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 18, T. 69 N., R. 38 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	3.49	May 24	1.02	Aug. 25	2.77	Nov. 27	3.49
Mar. 22	1.59	June 27	1.49	Sept. 25	3.25	Dec. 22	3.86
Apr. 19	1.07	July 19	2.28	Oct. 23	3.10		

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; 946, p. 56; 988, p. 43; 1018, p. 36). R. Palmquist. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 17, T. 70 N., R. 37 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 23	25.02	May 26	19.62	Aug. 25	22.25	Nov. 27	27.59
Mar. 22	19.74	June 29	17.14	Sept. 22	23.96	Dec. 22	26.67
Apr. 19	19.08	July 19	19.06	Oct. 23	24.49		

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; 946, p. 56; 988, p. 43; 1018, p. 36). R. Palmquist. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 17, T. 70 N., R. 37 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 23	6.59	Apr. 19	3.63	July 19	6.74	Oct. 23	7.96
Feb. 20	8.40	May 24	4.26	Aug. 26	5.15	Nov. 27	8.07
Mar. 22	3.71	June 29	5.85	Sept. 25	7.58	Dec. 28	8.10

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; 946, p. 57; 988, p. 43; 1018, p. 37). Amil Windhorst. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 20, T. 69 N., R. 37 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 23	21.03	May 24	11.79	Aug. 25	17.07	Nov. 27	20.56
Mar. 22	14.04	June 12	12.54	Sept. 25	18.83	Dec. 22	19.86
Apr. 19	13.80	July 19	14.68	Oct. 23	19.72		

13 (\*817, pp. 57, 59-61; \*840, pp. 92, 94-95; 845, pp. 86-87; 886, p. 123; 908, p. 31; 938, p. 40; 946, p. 57; 988, p. 43; 1018, p. 37). Amil Windhorst. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 20, T. 69 N., R. 37 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 23	16.98	May 24	10.89	Aug. 25	14.77	Nov. 27	17.83
Mar. 22	13.10	June 27	10.43	Sept. 25	16.40	Dec. 22	18.95
Apr. 19	12.51	July 19	12.71	Oct. 23	17.13		

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; 946, p. 57; 988, p. 43; 1018, p. 37). Floyd Haskins. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 19, T. 68 N., R. 38 W.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	19.69	Apr. 19	9.88	July 21	14.22	Oct. 23	16.17
Feb. 28	19.74	May 26	10.63	Aug. 25	12.60	Nov. 26	17.81
Mar. 25	11.39	June 27	13.19	Sept. 22	15.20	Dec. 28	20.40

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; 946, p. 57; 988, p. 43; 1018, p. 37). Metropolitan Life Insurance Co. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 21, T. 67 N., R. 38 W.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 23	4.90	Apr. 28	1.97	July 21	3.98	Oct. 23	5.58
Feb. 28	4.90	May 26	2.07	Aug. 25	3.40	Nov. 26	5.98
Mar. 22	1.53	June 27	3.45	Sept. 22	5.02	Dec. 28	6.05

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; 946, p. 57; 988, p. 44; 1018, p. 37). Albert Nordholm. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 20, T. 67 N., R. 38 W.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	17.11	Apr. 28	14.28	July 21	15.26	Oct. 23	17.03
Feb. 28	14.23	May 26	14.68	Aug. 25	15.24	Nov. 26	16.46
Mar. 22	14.16	June 27	15.18	Sept. 22	16.24	Dec. 28	17.83

38 (\*840, pp. 92, 96-97; 845, pp. 89-90; 886, p. 128; 908, p. 32; 938, p. 42; 946, p. 58; 988, p. 44; 1018, p. 37). Elsie Nordstrom. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 35, T. 69 N., R. 39 W. Well destroyed; measurements discontinued.

39 (\*840, pp. 92, 96-97; 845, pp. 89-90; 886, p. 128; 908, p. 32; 938, p. 42; 946, p. 58; 988, p. 44; 1018, p. 37). Elsie Nordstrom. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 35, T. 69 N., R. 39 W. Well destroyed; measurements discontinued after Sept. 22.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	16.92	Mar. 26	8.86	May 26	8.94	July 21	14.52
Feb. 28	16.51	Apr. 19	8.76	June 27	12.51	Aug. 25	12.29

42 (\*840, pp. 92, 96-97; 845, pp. 89-90; 886, p. 129; 908, p. 32; 938, p. 43; 946, p. 58; 988, p. 44; 1018, p. 38). Elsie Nordstrom. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 35, T. 69 N., R. 39 W. Well destroyed; measurements discontinued after Jan. 26.

43 (\*840, pp. 92, 96-97; 845, pp. 89-90; 886, p. 129; 908, p. 33; 938, p. 43; 946, p. 58; 988, p. 45; 1018, p. 38). Elsie Nordstrom. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 35, T. 69 N., R. 39 W. Well destroyed; measurements discontinued after Sept. 22.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	12.87	Mar. 25	3.57	May 26	4.16	July 21	10.69
Feb. 28	11.86	Apr. 19	4.15	June 27	8.23	Aug. 25	7.30

44 (\*840, pp. 92, 96-97; 845, pp. 89-90; 886, p. 129; 908, p. 33; 938, p. 43; 946, pp. 58-59; 988, p. 45; 1018, p. 38). Elsie Nordstrom. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 35, T. 69 N., R. 39 W. Well destroyed; measurements discontinued after Aug. 25.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	12.33	Apr. 19	3.70	June 27	7.62	Aug. 25	5.69
Mar. 28	2.91	May 26	3.86	July 21	9.57		

44A (\*840, p. 130; 908, p. 33; 938, p. 43; 946, p. 59; 988, p. 45; 1018, p. 38). Elsie Nordstrom. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 35, T. 69 N., R. 39 W.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	11.90	Apr. 19	4.43	July 27	7.76	Oct. 23	11.90
Feb. 28	12.00	May 26	4.62	Aug. 25	6.01	Nov. 26	12.86
Mar. 25	3.50	June 21	10.53	Sept. 22	9.80	Dec. 28	13.36

47 (#840, pp. 92, 96-97; 845, pp. 89-90; 886, p. 130; 908, p. 33; 938, p. 44; 946, p. 59; 988, p. 45; 1018, p. 38). Elsie Nordstrom. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 35, T. 69 N., R. 39 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	8.98	Apr. 19	2.36	July 21	7.99	Oct. 23	10.22
Feb. 28	9.13	May 26	2.42	Aug. 25	5.44	Nov. 26	10.27
Mar. 28	2.90	June 21	4.12	Sept. 22	8.97	Dec. 28	10.45

49 (#840, pp. 92, 97; 845, p. 90; 886, p. 131; 908, p. 33; 938, p. 44; 946, p. 59; 988, p. 45; 1018, p. 38). Elsie Nordstrom. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 35, T. 69 N., R. 39 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	16.79	Apr. 19	9.94	July 21	15.51	Oct. 23	18.47
Feb. 28	17.57	May 27	10.29	Aug. 25	13.70	Nov. 26	17.85
Mar. 26	10.79	June 27	13.36	Sept. 22	16.51	Dec. 28	17.84

51 (#840, pp. 92, 97; 845, p. 90; 886, p. 131; 908, p. 34; 938, p. 44; 946, p. 60; 988, p. 46; 1018, p. 39). Elsie Nordstrom. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 35, T. 69 N., R. 39 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 23	13.21	Apr. 19	5.77	July 21	11.87	Oct. 23	13.13
Feb. 28	13.10	May 26	5.94	Aug. 25	10.43	Nov. 26	13.35
Mar. 26	6.34	June 27	9.45	Sept. 22	12.31	Dec. 28	13.59

52 (#840, pp. 92, 97; 845, p. 90; 886, p. 131; 908, p. 34; 938, p. 44; 946, p. 60; 988, p. 46; 1018, p. 39). Elsie Nordstrom. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 35, T. 69 N., R. 39 W. Well destroyed after July 21; measurements discontinued.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 23	15.46	Mar. 26	6.85	May 26	6.38	July 21	13.15
Feb. 28	15.38	Apr. 19	6.40	June 27	10.82		

57 (#840, pp. 93, 97; 845, p. 90; 886, p. 132; 908, p. 34; 938, p. 45; 946, p. 69; 988, p. 46; 1018, p. 39). Elsie Nordstrom. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 35, T. 69 N., R. 39 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	10.84	Apr. 19	2.66	July 21	8.09	Oct. 23	12.39
Feb. 28	10.74	May 26	2.31	Aug. 25	5.83	Nov. 27	13.69
Mar. 26	2.68	June 27	4.17	Sept. 22	10.57	Dec. 28	13.78

58 (#840, pp. 93, 97; 845, p. 90; 886, p. 132; 908, p. 34; 938, p. 45; 946, p. 61; 988, p. 47; 1018, p. 39). Elsie Nordstrom. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 35, T. 69 N., R. 39 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	11.40	Apr. 19	8.06	July 21	10.00	Oct. 23	11.43
Feb. 28	11.31	May 26	6.98	Aug. 25	8.76	Nov. 26	11.59
Mar. 26	8.01	June 27	8.72	Sept. 22	10.87	Dec. 28	11.64

70 (#840, pp. 93, 98; 845, p. 91; 886, p. 133; 908, p. 34; 938, p. 45; 946, p. 61; 988, p. 47; 1018, p. 39). John Snyder. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 30, T. 69 N., R. 38 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	4.32	May 26	1.58	Aug. 25	3.71	Nov. 26	7.52
Mar. 26	+0.07	June 27	3.95	Sept. 22	6.78	Dec. 28	6.78
Apr. 19	2.13	July 21	5.92	Oct. 23	7.13		

71 (#840, pp. 93, 98; 845, p. 91; 886, p. 133; 908, p. 35; 938, p. 45; 936, p. 61; 988, p. 47; 1018, p. 39). John Snyder. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 30, T. 69 N., R. 38 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	6.49	May 26	2.57	Aug. 25	4.33	Nov. 26	6.92
Mar. 26	2.60	June 27	4.47	Sept. 22	5.38	Dec. 28	6.97
Apr. 19	3.32	July 21	5.76	Oct. 23	6.65		

76 (\*840, pp. 93, 98; 845, p. 91; 886, p. 134; 908, p. 35; 938, p. 46; 946, p. 61; 988, p. 47; 1018, p. 40). Metropolitan Life Insurance Co. SW $\frac{1}{4}$  sec. 29, T. 68 N., R. 38 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	12.10	Apr. 28	7.82	July 21	11.64	Oct. 23	12.23
Feb. 28	11.84	May 26	9.04	Aug. 25	10.34	Nov. 26	12.34
Mar. 25	8.42	June 27	11.10	Sept. 22	11.95	Dec. 28	12.57

80 (\*840, pp. 93, 98; 845, p. 92; 886, p. 135; 908, p. 35; 938, p. 46; 946, p. 62; 988, p. 47; 1018, p. 40). Mr. Burton. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 34, T. 69 N., R. 38 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	28.45	Apr. 19	12.59	July 19	18.36	Oct. 23	23.82
Feb. 28	28.55	May 24	12.61	Aug. 25	18.33	Nov. 27	25.69
Mar. 28	14.78	June 29	15.27	Sept. 25	20.87	Dec. 22	27.42

83 (\*886, p. 136; 908, p. 35; 938, p. 47; 946, p. 62; 988, p. 48; 1018, p. 40). Elsie Nordstrom. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 35, T. 69 N., R. 39 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	19.73	Apr. 19	12.05	July 21	14.90	Oct. 23	18.89
Feb. 28	18.15	May 26	12.39	Aug. 25	15.09	Nov. 26	19.76
Mar. 26	13.15	June 29	13.36	Sept. 22	17.23	Dec. 28	20.71

84 (\*886, p. 136; 908, p. 35; 938, p. 47; 946, p. 62; 988, p. 48; 1018, p. 40). Elsie Nordstrom. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 35, T. 69 N., R. 39 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	19.10	Apr. 19	11.89	July 21	14.77	Oct. 23	18.11
Feb. 28	18.61	May 24	12.35	Aug. 25	15.05	Nov. 26	18.98
Mar. 26	13.01	June 29	13.28	Sept. 22	16.77	Dec. 28	19.72

85 (\*886, p. 136; 908, p. 35; 938, p. 47; 946, p. 62; 988, p. 48; 1018, p. 40). Elsie Nordstrom. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 35, T. 69 N., R. 39 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	16.50	Apr. 19	9.55	July 21	12.46	Oct. 23	16.59
Feb. 28	16.32	May 26	10.02	Aug. 25	12.66	Nov. 26	16.40
Mar. 28	11.55	June 22	10.98	Sept. 22	14.36	Dec. 28	16.57

86 (\*886, p. 136; 908, p. 36; 938, p. 47; 946, p. 62; 988, p. 48; 1018, p. 40). Elsie Nordstrom. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 35, T. 69 N., R. 39 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	13.54	Apr. 19	7.24	July 21	8.37	Oct. 23	12.76
Feb. 28	13.52	May 26	7.68	Aug. 25	9.16	Nov. 26	13.54
Mar. 26	7.95	June 29	8.65	Sept. 22	11.68	Dec. 28	13.62

87 (\*886, p. 137; 908, p. 36; 938, p. 47; 946, p. 62; 988, p. 48; 1018, p. 40). NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 35, T. 69 N., R. 39 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	8.84	Apr. 19	3.47	Aug. 25	5.86	Nov. 26	8.12
Feb. 28	8.08	May 26	3.73	Sept. 22	7.38	Dec. 28	8.94
Mar. 26	4.72	July 21	5.82	Oct. 23	8.33		

### Palo Alto County

#### Vicinity of Lost Island Lake

97-34-29N1 (\*908, p. 24; 938, p. 33; 946, p. 45; 988, p. 48; 1018, p. 41). SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 29, T. 97 N., R. 34 W. Water levels, in feet below land-surface datum, 1945: Mar. 28, 0.13; June 30, 1.69; Sept. 10, 2.24.

97-34-29N2 (\*908, p. 24; 938, p. 34; 946, p. 45; 988, p. 48; 1018, p. 41). SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 29, T. 97 N., R. 34 W. Well flowing; no measurements made in 1945.

97-34-30Q1 (\*908, p. 24; 938, p. 34; 946, p. 45; 988, p. 48; 1018, p. 41). Norman Broad. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 30, T. 97 N., R. 34 W. Water levels, in feet below land-surface datum, 1945: Mar. 28, 16.58; June 30, 16.29; Sept. 10, 16.81.

96-34-6J1 (\*908, p. 25; 938, p. 34; 946, p. 45; 988, p. 49; 1018, p. 41). Electric Park. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 6, T. 96 N., R. 34 W. Water levels, in feet below land-surface datum, 1945: Mar. 28, 0.15; June 30, 0.85; Sept. 10, 1.59.

#### Plymouth County

91-48-19M1 (\*886, p. 119; 908, p. 25; 938, p. 34; 946, p. 45; 988, p. 49; 1018, p. 41). Joe Tracy. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 19, T. 91 N., R. 48 W. Water levels, in feet below land-surface datum, 1945: Mar. 27, 52.00; June 29, 51.09; Sept. 9, 54.20; Dec. 31, 51.82.

#### Polk County

78-24-4P1 (\*988, p. 49; 1018, p. 41). S. S. Kresge Co. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 4, T. 78 N., R. 24 W. Water levels, in feet below land-surface datum, 1945: Mar. 23, 27.77; June 23, 27.71; Sept. 6, 30.60.

79-22-22A1 (\*908, p. 25; 938, p. 34; 946, p. 45; 988, p. 49; 1018, p. 41). J. G. Reed. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 22, T. 79 N., R. 22 W. Water levels, in feet below land-surface datum, 1945: Apr. 7, 2.31; June 23, 4.11; Sept. 6, 6.71.

#### Poweshiek County

78-15-1R1 (\*988, p. 49; 1018, p. 41). Ben Harding. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 1, T. 78 N., R. 15 W. Water levels, in feet below land-surface datum, 1945: Apr. 7, 4.85; Sept. 6, 12.29; Dec. 23, 11.21.

#### Sac County

89-38-11J1 (\*946, p. 46; 988, p. 49; 1018, p. 41). NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 11, T. 89 N., R. 38 W. Water levels, in feet below land-surface datum, 1945: Mar. 27, 2.60; June 29, 2.95; Sept. 8, 3.95; Dec. 31, 4.69.

89-38-26A2 (\*908, p. 25; 938, p. 34; 946, p. 46; 988, p. 49; 1018, p. 41). City of Schaller. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 26, T. 89 N., R. 38 W. Water levels, in feet below land-surface datum, 1945: Mar. 28, 220.03; June 28, 220.22; Sept. 8, 220.00; Dec. 31, 224.90.

86-36-2C1 (\*908, p. 25; 938, p. 25; 946, p. 46; 988, p. 49; 1018, p. 41). John Christian. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 2, T. 86 N., R. 36 W. Water levels, in feet below land-surface datum, 1945: Mar. 26, 1.25; June 28, 2.67; Sept. 8, 2.06; Dec. 31, 0.85.

86-36-2E1 (\*908, p. 25; 938, p. 35; 946, p. 46; 988, p. 49; 1018, p. 42). Albert Culver, Jr. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 2, T. 86 N., R. 36 W. Water levels, in feet below land-surface datum, 1945: Mar. 26, 0.15; June 28, 0.29; Sept. 8, 0.90.

86-36-4N1 (\*908, p. 25; 938, p. 35; 946, p. 46; 988, p. 50; 1018, p. 42). Iowa State Conservation Commission. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 4, T. 86 N., R. 36 W. Water levels, in feet below land-surface datum, 1945: Mar. 26, 5.30; June 28, 2.48; Sept. 8, 4.90.



Sioux County

95-45-5A1 (\*886, p. 119; 908, p. 26; 938, p. 35; 946, p. 46; 988, p. 50; 1018, p. 42). City of Sioux Center. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 5, T. 95 N., R. 45 W. Water levels, in feet below land-surface datum, 1945: Mar. 28, 252.75; June 29, 267.74; Sept. 8, 266.94.

Story County

83-24-4Q1 (\*886, p. 119; 908, p. 26; 938, pp. 35-36; 946, pp. 46-47; 988, p. 50; 1018, p. 42). Iowa State College. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 4, T. 83 N., R. 24 W. Water levels, in feet below land-surface datum, 1945: Apr. 7, 39.67; June 25, 40.25; Sept. 6, 43.50.

83-24-20J1 (\*886, p. 120; 908, p. 26; 938, p. 36; 946, p. 47; 988, p. 50; 1018, p. 42). Agricultural Engineering Experiment Station. Near Ames, in NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 20, T. 83 N., R. 24 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 7	10.92	June 4	8.45	Aug. 10	15.51	Sept. 6	15.53
2	10.15	25	11.18	28	13.80		

a Measurements by D. E. Langenbacker.

93-24-4R1 (\*946, p. 47; 988, p. 51; 1018, p. 42). Iowa State College. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 4, T. 83 N., R. 24 W. Water levels, in feet below land-surface datum, 1945: Apr. 7, 9.01; June 25, 8.70; Sept. 6, 14.16.

Tama County

82-13-13R1. City of Belle Plaine. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 13, T. 82 N., R. 13 W. Drilled test well, diameter 8 inches, depth 29 feet. Measuring point, top of 8-inch casing, 2.5 feet above land-surface datum. Taps water in sand and gravel bed. Water level, in feet below land-surface datum, 1945: May 2, 7.28.

Warren County

77-25-12R1 (\*946, pp. 47-48; 988, p. 51; 1018, p. 42). SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 12, T. 77 N., R. 25 W. Water levels, in feet below land-surface datum, 1945: Mar. 23, 1.92; June 25, 1.89; Sept. 7, 3.38.

76-25-8Q1 (\*908, p. 26; 938, p. 36; 946, p. 48; 988, p. 51; 1018, p. 42). Iowa State College. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 8, T. 76 N., R. 25 W. Water levels, in feet below land-surface datum, 1945: Mar. 23, 5.41; June 25, 5.63; Sept. 7, 13.25.

Wayne County

67-23-20Q1 (\*908, p. 26; 938, p. 36; 946, p. 48; 988, p. 51; 1018, p. 42). L. P. Bryan. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 20, T. 67 N., R. 23 W. No measurements made in 1945.

Webster County

90-30-26A1 (\*946, p. 48; 988, p. 51; 1018, p. 42). County of Webster. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 26, T. 90 N., R. 30 W. Water levels, in feet below land-surface datum, 1945: Mar. 29, 6.52; July 2, 8.38; Sept. 11, 15.66; Dec. 29, 26.19.

90-28-1B1 (\*946, p. 48; 988, p. 51; 1018, p. 43). Ed Askland. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 1, T. 90 N., R. 28 W. Water levels, in feet below land-surface datum, 1945: July 1, 3.00; Sept. 11, 5.62; Dec. 29, 9.49.

90-28-8Q1 (\*946, p. 48; 988, p. 51; 1018, p. 43). Mr. Hovey. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 8, T. 90 N., R. 28 W. Water levels, in feet below land-surface datum, 1945: Mar. 29, 6.30; July 2, 6.39; Sept. 11, 8.29; Dec. 29, 9.25.

90-27-31N1 (\*946, p. 49; 988, p. 52; 1018, p. 43). C. S. Knudson. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 31, T. 90 N., R. 27 W. No measurements made in 1945.

89-30-18J1 (\*946, p. 49; 988, p. 52; 1018, p. 43). Dan Cain. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 18, T. 89 N., R. 30 W. Water levels, in feet below land-surface datum, 1945: Mar. 29, 0.78; July 2, 4.69; Sept. 11, 7.88; Dec. 29, 8.10.

80-30-23R1 (\*946, p. 49; 988, p. 52; 1018, p. 43). Johnson Township Consolidated School. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 23, T. 89 N., R. 30 W. Water levels, in feet below land-surface datum, 1945: July 2, 30.86; Sept. 11, 31.36.

89-28-21Q2 (\*946, p. 49; 988, p. 52; 1018, p. 43). Litchfield Real Estate Co. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 21, T. 89 N., R. 28 W. No measurements made in 1945.

88-29-11C1 (\*946, p. 49; 988, p. 52; 1018, p. 43). Charles Matson. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 11, T. 88 N., R. 29 W. Water levels, in feet below land-surface datum, 1945: Mar. 29, 4.40; July 1, 4.51; Sept. 11, 6.17; Dec. 29, 7.50.

87-30-30R1 (\*946, p. 50; 988, p. 53; 1018, p. 44). School District No. 9. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 30, T. 87 N., R. 30 W. Water levels, in feet below land-surface datum, 1945: Mar. 29, 5.70; July 1, 6.28; Sept. 11, 8.92; Dec. 30, 8.81.

87-28-5Q1 (\*946, p. 50; 988, p. 53; 1018, p. 44). SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 5, T. 87 N., R. 28 W. Water levels, in feet below land-surface datum, 1945: Mar. 29, 3.11; July 1, 3.20; Sept. 11, 3.49; Dec. 30, 4.28.

87-28-12Q1 (\*946, p. 50; 988, p. 53; 1018, p. 44). Thomas Timmons, Jr. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 12, T. 87 N., R. 28 W. Water levels, in feet below land-surface datum, 1945: Mar. 29, 2.47; July 1, 4.45; Sept. 11, 7.44; Dec. 30, 3.90.

87-28-29N1 (\*946, p. 51; 988, p. 53; 1018, p. 44). Grant Spangler. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 29, T. 87 N., R. 28 W. Highest observed water level, from recorder charts, 1.30 feet below land-surface datum on June 4; lowest, 6.55 feet below land-surface datum on Dec. 31.

Water level at noon, in feet below land-surface datum, 1945  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	5.86	6.24	....	3.25	2.48	2.46	....	4.66	5.48	4.93	5.58	6.05
2	5.88	6.25	....	3.34	2.27	1.87	....	4.63	5.42	5.04	5.76	5.76
3	5.96	6.24	4.52	3.35	2.39	....	....	4.45	5.47	5.08	5.82	5.82
4	5.96	6.30	4.42	3.24	2.53	1.30	....	4.43	....	5.11	5.75	5.83
5	5.95	6.31	4.41	3.30	2.59	1.38	....	4.39	5.69	5.10	5.73	5.76
6	....	6.25	4.39	2.99	2.62	1.45	....	4.38	5.77	5.12	5.76	5.82
7	5.99	6.38	4.41	2.36	2.74	1.36	....	4.38	5.85	5.14	5.62	....
8	6.03	6.31	4.39	2.45	2.88	1.43	....	4.34	5.90	5.31	5.67	5.90
9	6.04	6.35	4.26	2.55	2.91	....	....	4.47	5.95	5.33	5.77	6.03
10	6.00	6.32	4.10	2.68	2.81	....	....	4.44	5.91	5.29	5.83	6.07
11	6.01	6.15	3.88	2.17	2.79	....	....	4.58	5.83	5.10	5.80	6.12
12	6.09	5.86	3.82	2.08	2.90	....	....	4.39	5.87	5.02	5.70	6.10
13	6.05	5.52	3.73	1.84	2.96	....	....	4.40	5.87	5.10	5.88	6.08
14	6.04	5.26	3.69	2.17	1.88	....	....	4.50	5.86	5.12	5.93	6.13
15	6.13	5.00	2.93	2.20	2.08	....	....	4.60	6.04	5.04	5.88	....
16	6.15	4.96	2.78	1.48	2.26	....	....	4.62	5.92	4.77	5.80	....
17	6.14	4.89	3.02	1.83	2.40	....	....	4.67	5.80	4.82	5.86	6.23
18	6.17	4.73	3.02	2.14	2.54	....	....	4.75	5.49	5.01	5.85	6.24
19	6.16	4.75	3.17	2.16	2.58	....	4.18	4.82	5.50	5.26	5.90	6.23
20	6.18	4.71	3.24	2.28	2.54	....	4.25	4.87	5.32	5.34	5.55	6.29
21	6.10	4.81	3.29	2.41	2.44	....	4.28	4.79	5.24	5.45	5.72	6.33
22	6.13	4.82	3.28	2.30	1.93	....	4.33	4.82	5.29	5.50	5.83	6.38
23	6.15	4.84	3.27	1.42	2.14	....	4.29	4.86	5.46	5.54	5.95	6.39
24	6.23	4.87	3.36	1.72	2.18	....	4.25	4.93	5.60	5.52	5.94	6.34

87-28-29N1--Continued.

Water level at noon, in feet below land-surface datum, 1945  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
25	6.20	....	3.11	1.90	2.20	....	4.28	5.00	5.62	5.55	6.03	6.34
26	6.27	....	3.04	2.09	2.32	....	....	4.99	5.65	5.58	6.02	6.45
27	5.96	....	3.03	2.22	2.27	....	....	5.04	5.57	5.47	6.05	6.44
28	5.99	....	3.17	2.28	1.93	....	....	5.07	5.37	....	6.14	6.44
29	6.10	....	3.21	2.40	2.16	....	....	5.20	5.16	....	6.17	6.41
30	6.15	....	3.26	2.48	2.35	....	....	5.30	5.01	5.55	6.17	6.50
31	6.27	....	3.23	....	2.19	....	4.60	5.35	....	5.57	....	6.55

87-27-18M1 (\*946, p. 51; 988, p. 54; 1018, p. 45). J. B. Marsh.  
NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 18, T. 87 N., R. 27 W. Water levels, in feet below land-surface datum, 1945: Mar. 29, 122.59; July 1, 122.60; Sept. 11, 122.76; Dec. 29, 125.65.

86-30-5C1 (\*946, p. 51; 988, p. 54; 1018, p. 45). E. L. Monson.  
NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 5, T. 86 N., R. 30 W. Water levels, in feet below land-surface datum, 1945: Mar. 29, 57.19; July 1, 50.46; Sept. 11, 57.26; Dec. 29, 57.66.

89-29-14A1 (\*946, p. 51; 988, p. 55; 1018, p. 45). F. E. Castenson.  
NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 14, T. 86 N., R. 29 W. Water levels, in feet below land-surface datum, 1945: Mar. 29, 3.49; July 1, 4.58; Sept. 11, 6.81; Dec. 30, 7.18.

86-28-14H1 (\*946, p. 51; 988, p. 55; 1018, p. 45). Town of Dayton.  
SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 14, T. 86 N., R. 28 W. Water levels, in feet below land-surface datum, 1945: Mar. 29, 72.62; July 1, 71.69; Sept. 11, 72.22; Dec. 30, 73.20.

86-27-4D1 (\*946, p. 52; 988, p. 55; 1018, p. 45). Mr. Davis. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 4, T. 86 N., R. 27 W. Water levels, in feet below land-surface datum, 1945: Mar. 29, 104.76; July 1, 104.60; Sept. 11, 104.75; Dec. 30, 104.60.

Woodbury County

89-48-23E1 (\*886, p. 120; \*908, p. 27; 938, p. 36; 946, p. 52; 988, p. 55; 1018, p. 45). City of Sioux City. Riverside Station well 1.  
NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 23, T. 89 N., R. 48 W. No measurements made in 1945.

89-47-22E1 (\*896, p. 120; 908, p. 27; 938, p. 36; 946, p. 52; 988, p. 55; 1018, p. 45). City of Sioux City. Lowell 4. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 23, T. 89 N., R. 47 W. Measurements by Tim Kemper, Sioux City Water Works. Water levels affected by nearby pumping wells.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	41.00	Apr. 3	43.00	July 2	43.75	Oct. 2	47.75
Feb. 2	43.16	May 3	42.75	Aug. 2	46.08	Nov. 2	45.50
Mar. 2	46.00	June 2	43.87	Sept. 2	43.25	Dec. 2	47.42

# KANSAS

By Phyllis Mosley

## PROGRAM OF WORK

The observation-well program in Kansas was continued in 1945 in cooperation with the State Geological Survey of Kansas, the Division of Water Resources of the Kansas State Board of Agriculture, and the Division of Sanitation of the Kansas State Board of Health. In addition to the State agencies named, the city of Wichita cooperated in Harvey, McPherson, and Sedgwick Counties. The counties not heretofore included, Brown and Kingman, were added to the program in 1945, making 42 counties in which wells were observed during the year.

At the beginning of 1945, periodic water-level measurements were being made in 439 observation wells in the State. During the year measurements were discontinued in 5 wells and begun or resumed in 10 wells. At the end of the year 444 wells were under observation. Of the 423 wells measured in 1945, 96 were measured quarterly, 290 monthly, 4 semimonthly 23 weekly, and automatic water-stage recorders were maintained on 10. The recorders on 4 of these 12 wells--1 in Finney County, 1 in Grant County, and 2 in Scott County--are maintained by the Division of Water Resources of the Kansas State Board of Agriculture. During the year 4,335 wetted-tape measurements were made in the State. For convenience, the data given in this paragraph have been arranged in tabular form, by counties, as follows:

Observation-well program in Kansas, by counties, in 1945					
County	Observer	Wells included at beginning of year	Wells discontinued during year	Wells added during year	Wells included at end of year
Barber	(a)	10	0	0	10
Barton	(a)	16	0	0	15
Bourbon	G. E. Abernathy	2	0	0	2
Brown	C. H. Solomon	5	0	0	5
Cherokee	W. L. Stiles	1	1	0	0
Clark	(a)	4	0	0	4
Comanche	(a)	3	0	0	3
Cowley	Local observer	4	0	0	4

## Observation-well program in Kansas, by counties, in 1945--Continued

County	Observer	Wells included at beginning of year	Wells discontinued during year	Wells added during year	Wells included at end of year
Crawford	G. E. Abernathy	3	0	0	3
Dickinson	E. H. Mullanex	1	0	0	1
Edwards	(a)	3	0	0	3
Ellis	(a)	3	0	0	3
Finney	(a)	14	0	0	14
Ford	(a)	15	0	0	15
Grant	(a)	9	0	0	9
Gray	(a)	9	0	0	9
Hamilton	(a)	6	0	0	6
Harvey	(b)	128	0	0	128
Haskell	(a)	9	0	0	9
Hodgeman	(a)	3	0	0	3
Jewell	Geo. T. Hundevadt	26	0	0	26
Kearny	(a)	9	0	0	9
Kingman	(c)	2	0	10	12
Kiowa	(a)	5	0	0	5
Labette	John Wayenburg	4	0	0	4
Logan	(a)	3	0	0	3
McPherson	(b)	9	0	0	9
Meade	(a)	12	3	0	9
Morton	(a)	3	0	0	3
Ness	(a)	2	0	0	2
Pawnee	(a)	6	0	0	6
Republic	Local observer	8	1	0	7
Russell	(a)	11	0	0	11
Scott	(a)	11	0	0	11
Sedgwick	(b)	32	0	0	32
Seward	(a)	5	0	0	5
Stafford	(a)	6	0	0	6
Stanton	(a)	4	0	0	4
Stevens	(a)	7	0	0	7
Sumner	C. A. Posey	2	0	0	2
Thomas	(a)	11	0	0	11
Wyandotte	Local observer	14	0	0	14
Total		439	5	10	444

a Howard Palmer or Frank Hoppes.

b C. K. Bayne, M. Sears, or O. K. Brandon.

c C. K. Bayne, or R. W. Kennedy.

## Frequency of measurement of wells and number of wetted-tape measurements made in Kansas, by counties, in 1945

County	Wells measured quarterly	Wells measured monthly	Wells measured semi- monthly	Wells measured weekly	Wells equipped with recorders	Wetted-tape measurements made during year
Barber	10	0	0	0	0	36
Barton	0	15	0	0	0	171
Bourbon	0	2	0	0	0	20
Brown	0	5	0	0	0	60
Cherokee	0	1	0	0	0	3
Clark	4	0	0	0	0	15
Comanche	3	0	0	0	0	11
Cowley	0	4	0	0	0	8
Crawford	0	3	0	0	0	30
Dickinson	0	1	0	0	0	6
Edwards	0	3	0	0	0	32
Ellis	a 2	0	0	0	0	5
Finney	b 6	6	0	0	1	82
Ford	8	7	0	0	0	93
Grant	0	8	0	0	1	52
Gray	c 5	3	0	0	0	54
Hamilton	3	d 3	0	0	0	43
Harvey	0	110	0	16	2	2,053
Haskell	0	9	0	0	0	46
Hodgeman	2	1	0	0	0	19

\* See footnotes at end of table.

## 48 WATER LEVELS AND ARTESIAN PRESSURE, 1945, NORTH-CENTRAL STATES

Frequency of measurement of wells and number of wetted-tape measurements made in Kansas, by counties, in 1945--Continued

County	Wells measured quarterly	Wells measured monthly	Wells measured semi-monthly	Wells measured monthly	Wells equipped with recorders	Wetted-tape measurements made during year
Jewell	0	e 11	0	0	0	22
Kearny	4	5	0	0	0	68
Kingman	0	12	0	0	0	59
Kiowa	0	5	0	0	0	25
Labette	0	0	4	0	0	95
Logan	0	3	0	0	0	11
McPherson	5	4	0	0	0	65
Meade	f 7	0	0	0	1	21
Morton	1	2	0	0	0	11
Ness	2	0	0	0	0	6
Pawnee	0	6	0	0	0	66
Republic	0	7	0	0	0	58
Russell	g 10	0	0	0	0	27
Scott	0	9	0	0	2	92
Sedgwick	0	22	0	7	3	595
Seward	0	5	0	0	0	44
Stafford	0	6	0	0	0	70
Stanton	2	2	0	0	0	21
Stevens	0	7	0	0	0	33
Sumner	0	2	0	0	0	24
Thomas	h 10	0	0	0	0	26
Wyandotte	i 12	1	0	0	0	57
	96	290	4	23	10	4,335

- a No measurements made in 1945 for well 190.  
b No measurements made in 1945 for well 1005.  
c No measurements made in 1945 for well 17.  
d Measurements resumed on well 2 in July 1944.  
e No measurements made in 1945 for 14 wells.  
f No measurements made in 1945 for well 36.  
g No measurements made in 1945 for well 8.  
h No measurements made in 1945 for well 25.  
i No measurements made in 1945 for well 165.

Relation between the percentages of wells in Kansas in which the highest and lowest water levels of record were recorded in 1945, the percentage of wells in which there was a net rise in water level in 1945, and the precipitation during 1945, by counties

County	Number of wells observed entire year	Percentage of wells in which highest water levels of record were recorded	Percentage of wells in which lowest water levels of record were recorded	Percentage of wells having a net rise in water level	Precipitation at nearest Weather Bureau station
					Percentage of normal Station
Barber	10	30	0	40	108 Medicine Lodge
Barton	15	87	27	60	94 Great Bend
Bourbon	2	0	100	50	105 Fort Scott
Brown	5	40	40	80	133 Horton
Cherokee	0				128 Columbus
Clark	4	0	25	0	91 Ashland
Comanche	3	0	0	33	110 Coldwater
Cowley	4	75	0	50	131 Winfield
Crawford	3	33	66	66	130 Pittsburg
Dickinson	1	0	0	0	121 Chapman
Edwards	3	66	100	33	94 Trousdale
Ellis	3	33	0	66	98 Hays
Finney	14	21	7	43	80 Garden City
Ford	15	27	7	20	109 Dodge City
Grant	9	67	11	33	100 Olipses
Gray	9	44	0	22	97 Cimarron
Hamilton	6	0	0	33	82 Syracuse
Harvey	a 25	76	0	40	118 Newton

a Excludes 103 wells which are pumped or affected by pumping.

Relation between the percentages of wells in Kansas in which the highest and lowest water levels of record were recorded in 1945, the percentage of wells in which there was a net rise in water level in 1945, and the precipitation during 1945, by counties--Continued

County	Number of wells observed entire year	Percentage of wells in which highest water levels of record were recorded	Percentage of wells in which lowest water levels of record were recorded	Percentage of wells having a net rise in water level	Precipitation at nearest Weather Bureau station
					Percentage of normal      Station
Haskell	9	33	22	22	135 Sublette
Hodgeman	3	33	0	0	104 Jetmore
Jewell	26	94	0	24	97 Burr Oak
Kearny	9	22	11	64	96 Lakin
Kingman	8				110 Norwich
Kiowa	8	100	20	100	102 Greensburg
Labetta	4	100	0	25	131 Parsons
Logan	3	33	33	0	89 Oakley
McPherson	9	56	22	44	114 McPherson
Meade	9	22	0	33	93 Plains
Morton	3	100	0	66	105 Elkhart
Nass	2	0	0	0	80 Ness City
Pawnee	6	66	33	33	102 Larned
Republic	7	43	0	71	130 Belleville
Russell	11	27	0	45	104 Russell
Scott	11	18	45	18	76 Scott City
Sedgwick	32	53	6	50	130 Wichita
Seward	5	80	0	60	89 Liberal
Stafford	6	100	0	83	120 Hudson
Stanton	4	50	25	75	98 Johnson
Stevens	7	57	14	71	104 Hugoton
Sumner	2	50	100	100	102 Peck
Thomas	11	45	18	27	111 Colby
Wyandotte	14	71	93	7	98 Kansas City, Mo.

## WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Barber County

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 10 wells in Barber County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
1	5	73.47	Dec. 20, 1945	82.99	Oct. 17, 1940
2	5	11.94	Apr. 22, 1942	13.90	Aug. 20, 1943
3	5	9.05	May 26, 1942	15.42	Oct. 21, 1940
4	5	14.25	Nov. 20, 1941	16.30	Aug. 20, 1943
5	5	18.00	Aug. 31, 1944	30.15	Sept. 24, 1941
8	5	8.87	Nov. 21, 1941	17.48	Mar. 21, 1941
9	5	1.97	May 8, 1941	4.54	Aug. 21, 1943
10	5	102.20	Mar. 15, 1945	103.85	Oct. 22, 1940
12	5	2.08	Mar. 15, 1945	11.68	Oct. 22, 1940
13	5	7.89	Mar. 15, 1945	16.99	Oct. 22, 1940

Difference between highest and lowest recorded water levels and net change in water level, in feet, in 1945 and for period of record, in 10 wells in Barber County

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945	Net rise for period of record
1	9.52	+1.56	9.52
2	1.96	-.33	.43
3	6.37	+.70	3.35
4	2.05	-.14	.89

Difference between highest and lowest recorded water levels and net change in water level, in feet, in 1945 and for period of record, in 10 wells in Barber County--Continued.

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945	Net rise for period of record
5	12.15	+0.45	8.58
8	8.61	-.32	2.58
9	2.37	-.56	1.32
10	1.65	-.21	1.23
12	9.60	-2.84	4.96
13	9.10	+3.59	8.41

1 (\*908, p. 39; 938, p. 53; 946, p. 70; \*988, p. 62; 1018, p. 50 ).  
D. S. Shaw. SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 19, T. 31 S., R. 15 W. Water levels, in feet below land-surface datum, 1945: Mar. 15, 74.17; June 8, 73.77; Dec. 20, 73.47.

2 (\*908, p. 39; 938, p. 53; 946, p. 70; \*988, p. 62; 1018, p. 50 ).  
Russell Lake. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 14, T. 31 S., R. 14 W. Water levels, in feet below land-surface datum, 1945: Mar. 15, 11.98; June 8, 12.14; Sept. 18, 12.94; Dec. 20, 12.47.

3 (\*908, p. 40; 938, p. 53; 946, p. 70; \*988, p. 62; 1018, p. 50).  
Mrs. Grier. SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 12, T. 32 S., R. 12 W. Water levels, in feet below land-surface datum, 1945: Mar. 15, 10.98; Sept. 19, 13.53; Dec. 19, 12.07.

4 (\*908, p. 40; 938, p. 53; 946, p. 70; \*988, p. 62; 1018, p. 50).  
Madge Evans. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 4, T. 32 S., R. 12 W. Water levels, in feet below land-surface datum, 1945: Mar. 15, 14.93; June 8, 14.57; Sept. 19, 16.09; Dec. 19, 15.01.

5 (\*908, p. 40; 938, p. 53; 946, p. 70; \*988, p. 62; 1018, p. 50).  
R. Kenney. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 1, T. 33 S., R. 12 W. Water levels, in feet below land-surface datum, 1945: Mar. 15, 21.16; June 7, 20.56; Sept. 19, 20.68; Dec. 19, 20.27.

8 (\*908, p. 40; 938, p. 54; 946, p. 71; \*988, p. 62; 1018, p. 51 ).  
P. Brook. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 17, T. 34 S., R. 15 W. Water levels, in feet below land-surface datum, 1945: Mar. 15, 13.13; June 7, 10.44; Sept. 19, 13.93; Dec. 19, 14.53.

9 (\*908, p. 40; 938, p. 54; 946, p. 71; \*988, p. 62; 1018, p. 51).  
V. D. Wells. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 18, T. 34 S., R. 15 W. Water levels, in feet below land-surface datum, 1945: June 7, 2.13; Sept. 19, 3.60; Dec. 19, 2.44.

10 (\*908, p. 40; 938, p. 54; 946, p. 71; \*988, p. 63; 1018, p. 51 ).  
G. H. Davis. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 11, T. 35 S., R. 15 W. Water levels, in feet below land-surface datum, 1945: Mar. 15, 102.20; June 7, 102.47; Sept. 19, 102.93; Dec. 19, 102.62.

12 (\*908, p. 40; 938, p. 54; 946, p. 71; \*988, p. 63; 1018, p. 51).  
B. Mills. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 34, T. 33 S., R. 10 W. Water levels, in feet below land-surface datum, 1945: Mar. 15, 2.08; June 7, 4.04; Sept. 19, 7.67; Dec. 19, 6.72.

13 (\*908, p. 40; 938, p. 54; 946, p. 71; \*988, p. 63; 1018, p. 51).  
J. A. Hrencher. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 17, T. 32 S., R. 10 W. Water levels, in feet below land-surface datum, 1945: Mar. 15, 7.89; June 7, 8.54; Sept. 19, 9.54; Dec. 19, 8.58.



Barton County

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 15 wells in Barton County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
1	3.5	0.76	May 11, 1944	5.45	Jan. 19, 1944
2	3.5	32.37	Oct. 26, 1945	34.64	Jan. 20, 1944
16	3	27.93	May 22, 1943	29.90	Feb. 25, 1944
43	3	16.88	Aug. 8, 1945	21.21	Jan. 19, 1944
100	1.5	30.62	June 5, 1945	34.02	Feb. 15, 1944
101	1.5	25.39	Aug. 28, 1945	24.65	July 7, 1944
103	1.5	1.00	Apr. 27, 1945	4.53	Sept. 12, 1945
104	1.5	31.21	July 12, 1945	35.69	July 7, 1944
105	1.5	30.80	July 12, 1945	32.82	Dec. 21, 1944
107	1.5	98.32	June 6, 1945	101.15	Oct. 26, 1945
109	1.5	9.39	July 13, 1945	13.82	July 12, 1944
110	1.5	16.15	June 6, 1945	19.10	Oct. 26, 1945
111	1.5	60.11	Aug. 28, 1945	60.76	July 12, 1944
112	1.5	96.93	July 12, 1945	125.39	Nov. 20, 1945
131	1.5	9.78	July 13, 1945	13.18	July 22, 1944

Difference between highest and lowest recorded water levels and net change in water level, in feet, in 1945 and for period of record, in 15 wells in Barton County

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945	Net rise for period of record
1	4.69	-0.95	-1.77
2	2.27	a +.71	+1.15
16	1.97	-.01	-.34
43	4.33	+1.09	+2.73
100	3.40	-.10	-.68
101	1.26	+.58	+1.05
103	3.53	-.29	-1.08
104	4.48	+.03	+1.48
105	2.02	+1.25	+.50
107	2.83	+.40	+.22
109	4.43	+.08	+1.02
110	2.95	-1.09	-1.32
111	.65	b +.55	+.58
112	28.46	-10.25	-6.77
131	3.40	+.21	+1.35

a Last measurement made in November 1945.

b Last measurement made in September 1945.

1 (\*946, p. 72; \*988, p. 64; 1018, p. 52). F. Panning. SE. corner sec. 3, T. 20 S., R. 11 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	3.88	Apr. 26	2.77	July 12	3.48	Oct. 8	4.30
Feb. 14	3.95	May 16	3.06	Aug. 8	3.68	Nov. 20	4.56
Mar. 8	3.65	June 6	3.35	Sept. 12	4.30	Dec. 21	4.72

2 (\*946, p. 72; \*988, p. 64; 1018, p. 52). W. Otte. NW $\frac{1}{4}$  sec. 16, T. 19 S., R. 14 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	33.27	May 16	32.68	Aug. 8	32.70	Oct. 26	32.37
Feb. 14	33.34	June 6	32.64	Sept. 12	32.97	Nov. 20	32.68
Mar. 8	33.21	July 13	32.52				

16 (\*946, p. 72; \*988, p. 64; 1018, p. 52). Teichmann. NE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 12, T. 20 S., R. 13 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	29.70	Apr. 26	29.77	July 13	29.54	Oct. 16	29.52
Feb. 14	29.76	May 16	29.74	Aug. 7	29.51	Nov. 20	29.55
Mar. 8	29.81	June 6	29.68	Sept. 12	29.49	Dec. 21	29.87

43 (\*946, p. 72; \*988, p. 65; 1018, p. 52). M. Hagen. SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 20, T. 20 S., R. 11 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	18.78	Apr. 27	18.01	July 12	17.19	Oct. 16	17.48
Feb. 14	18.64	May 16	17.53	Aug. 8	16.88	Nov. 20	17.63
Mar. 8	18.65	June 6	17.46	Sept. 12	17.33	Dec. 21	17.80

100 (\*1018, p. 52). Unruh. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 11, T. 20 S., R. 15 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	33.58	May 16	30.83	Sept. 12	32.33	Nov. 20	33.29
Feb. 15	34.02	June 5	30.62	Oct. 26	33.15	Dec. 22	33.58
Mar. 8	33.54	Aug. 8	30.89				

101 (\*1018, p. 52). D. Converse. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 17, T. 19 S., R. 15 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	24.21	Apr. 27	23.94	July 13	23.55	Oct. 26	23.80
Feb. 15	24.22	May 16	23.88	Aug. 28	23.39	Nov. 20	23.58
Mar. 8	24.15	June 6	24.12	Sept. 12	23.45	Dec. 22	23.60

103 (\*1018, p. 53). F. Konareck. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 33, T. 17 S., R. 12 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	4.34	Apr. 27	1.00	July 12	1.20	Oct. 8	4.00
Feb. 14	1.19	May 16	2.52	Aug. 28	4.19	Nov. 20	4.11
Mar. 8	3.00	June 6	3.59	Sept. 12	4.53	Dec. 21	4.42

104 (\*1018, p. 53). J. Hennesey. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 33, T. 17 S., R. 13 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	34.74	Apr. 27	34.00	July 12	31.21	Oct. 26	33.92
Feb. 14	34.25	May 16	33.32	Aug. 28	31.60	Nov. 20	33.80
Mar. 8	34.69	June 6	32.14	Sept. 12	33.36	Dec. 21	34.21

105 (\*1018, p. 53). Lizzie Nagel. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 28, T. 18 S., R. 11 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	31.87	May 16	31.88	Aug. 28	31.74	Nov. 20	32.45
Feb. 14	31.83	June 6	31.86	Sept. 12	31.76	Dec. 21	31.57
Mar. 8	31.93	July 12	30.80	Oct. 26	32.29		

107 (\*1018, p. 53). Carter Oil Co. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 10, T. 17 S., R. 11 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	100.05	Apr. 26	99.16	July 12	98.61	Oct. 26	101.15
Feb. 14	99.43	May 16	98.56	Aug. 28	101.00	Nov. 20	98.63
Mar. 8	99.93	June 6	98.32	Sept. 12	98.70	Dec. 21	99.76

109 (\*1018, p. 53). J. C. Cook. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 28, T. 18 S., R. 15 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	12.85	Apr. 27	10.06	July 13	9.39	Oct. 26	12.55
Feb. 15	13.08	May 16	10.22	Aug. 28	11.40	Nov. 20	12.61
Mar. 8	12.79	June 6	10.29	Sept. 12	12.05	Dec. 22	12.80

110 (\*1018, p. 53). Prudential Life Insurance Co. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 33, T. 17 S., R. 14 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	17.86	Apr. 27	17.27	July 12	16.62	Oct. 26	19.10
Feb. 14	17.59	May 16	16.97	Aug. 28	18.67	Nov. 20	19.07
Mar. 8	18.21	June 6	16.15	Sept. 12	18.94	Dec. 22	19.01

111 (\*1018, p. 53). Continental Oil Co. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 24, T. 17 S., R. 12 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	60.65	Apr. 27	60.62	June 6	60.56	Aug. 28	60.11
Feb. 14	60.60	May 16	60.53	July 12	60.23	Sept. 12	60.18
Mar. 8	60.68						

112 (\*1018, p. 54). P. P. Kingston. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 34, T. 16 S., R. 14 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	114.07	Apr. 27	101.03	July 12	96.93	Oct. 26	125.28
Feb. 14	112.17	May 16	99.14	Aug. 28	100.44	Nov. 20	125.39
Mar. 8	112.92	June 6	97.64	Sept. 12	123.28	Dec. 22	124.72

131 (\*1018, p. 54). F. W. Gagleman. SE. corner sec. 22, T. 19 S., R. 15 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	12.03	May 16	11.04	Aug. 8	10.28	Nov. 20	11.69
Feb. 15	12.12	June 6	10.71	Sept. 12	11.32	Dec. 22	11.83
Mar. 8	11.94	July 13	9.78	Oct. 26	11.69		

### Bourbon County

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 2 wells in Bourbon County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
1	4	180.30	Sept. 10, 1942	184.35	Apr. 25, 1945
2	4	55.90	July 29, 1942	63.69	Oct. 29, 1945

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 2 wells in Bourbon County

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945	Net decline for period of record
1	4.05	a +2.19	0.87
2	7.79	a -2.94	7.35

a Last measurement made in November 1944.

1 (\*946, p. 73; \*988, p. 65; 1018, p. 54). City of Fort Scott. NE $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 29, T. 25 S., R. 25 E.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	183.70	Apr. 25	184.35	July 30	182.81	Oct. 29	181.99
Feb. 27	183.43	May 25	182.85	Aug. 31	183.68	Nov. 29	181.17
Mar. 24	182.35	June 30	183.95				

2 (\*946, p. 73; \*988, p. 65; 1018, p. 54). City of Fort Scott. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 30, T. 25 S., R. 25 E.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	62.51	Apr. 25	62.71	July 30	63.31	Oct. 29	63.69
Feb. 27	62.25	May 25	62.18	Aug. 31	63.49	Nov. 29	62.95
Mar. 24	62.45	June 30	62.27				

Brown County

By C. C. Williams and Phyllis Mosley

Since March 1944 monthly water-level measurements have been made at five municipal water-supply wells near the city of Hiawatha, in Brown County. In March 1944, at the behest of city officials and officials of the Kansas State Board of Health, S. W. Lohman and C. C. Williams made a brief reconnaissance of sources of water supply available for the city of Hiawatha. The first measurements listed below were made by Messrs. Lohman and Williams and subsequent measurements were made by C. H. Solomon, city water superintendent.

The Hiawatha city-supply wells are large-diameter dug wells which penetrate the mantle of glacial drift that covers much of the bedrock in this area. This material is a stony till near the surface, underlain by poorly sorted sand and coarse gravel in which the interstices are partly filled with fine material. The gravels include pebbles and large boulders of many northern erratics of Sioux quartzite, deeply weathered granite, and other rock types.

The average yield of the wells ranges from about 5 gallons a minute to about 100 gallons a minute. In times of extreme drought, however, the yield of the wells is much less and some of them fail. The portion of the city-water supply derived from wells is supplemented by flow from a spring which issues from the base of the glacial material near Hiawatha and which yields about 50 gallons a minute.

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 5 wells in Brown County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
1	2	20.30	Apr. 29, 1944	24.00	Sept. 29, 1945
3	2	6.60	June 30, 1945	18.90	Aug. 21, 1944
4	2	14.90	June 30, 1945	26.90	Nov. 30, 1944
5	2	8.60	May 31, 1944	28.20	Dec. 30, 1944
6	2	19.80	Sept. 30, 1944	28.80	Jan. 31, 1945

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 5 wells in Brown County

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945	Net rise (+) or net decline (-) for period of record
1	3.70	-0.40	-1.68
3	12.30	+11.20	+10.30
4	12.00	+4.80	+1.85
5	19.60	+10.00	+7.34
6	9.00	+1.10	-6.96

a Between last measurement in 1944 and last measurement in 1945.

1. City of Hiawatha. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 31, T. 2 S., R. 17 E. Dug public-supply well, diameter 12 feet, depth 35 feet. Measuring point, top edge of pipe, 2.2 feet above land-surface datum. Equipped with centrifugal pump and electric motor.

Water level, in feet below land-surface datum, 1944-45

Date	Water level	Date	Water level	Date	Water level
Mar. 24, 1944	21.92	Nov. 30, 1944	23.20	June 30, 1945	22.90
Apr. 29	20.30	Dec. 30	23.20	July 31	23.10
May 31	20.90	Jan. 31, 1945	23.30	Aug. 31	22.40
June 30	23.00	Feb. 28	20.80	Sept. 29	24.00
July 31	23.60	Mar. 31	23.70	Oct. 31	21.20
Aug. 31	21.40	Apr. 30	22.10	Nov. 30	23.20
Sept. 30	23.60	May 31	23.70	Dec. 31	23.60
Oct. 31	21.70				

3. City of Hiawatha. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 36, T. 2 S., R. 16 E. Dug public-supply well, diameter 8 feet, depth 22 feet. Measuring point, top of unused 3-inch float opening, at land-surface datum. Equipped with centrifugal pump and electric motor.

Water level, in feet below land-surface datum, 1944-45

Date	Water level	Date	Water level	Date	Water level
Mar. 24, 1944	17.10	Nov. 30, 1944	18.90	June 30, 1945	6.60
Apr. 29	17.10	Dec. 30	18.00	July 31	17.70
May 31	18.50	Jan. 31, 1945	18.10	Aug. 31	17.50
June 30	17.30	Feb. 28	18.50	Sept. 29	17.10
July 31	17.30	Mar. 31	17.40	Oct. 31	18.10
Aug. 31	18.90	Apr. 30	17.00	Nov. 30	7.20
Sept. 30	18.20	May 31	17.20	Dec. 31	6.80
Oct. 31	18.70				

4. City of Hiawatha. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 29, T. 2 S., R. 17 E. Dug public-supply well, diameter 10 feet, depth 33 feet. Measuring point, edge of opening in concrete base of well pit, 9.4 feet below land-surface datum. Equipped with centrifugal pump and electric motor.

Water level, in feet below land-surface datum, 1944-45

Date	Water level	Date	Water level	Date	Water level
Mar. 24, 1944	23.95	Nov. 30, 1944	24.10	June 30, 1945	14.90
Apr. 29	18.20	Dec. 30	26.90	July 31	23.60
May 31	18.60	Jan. 31, 1945	26.70	Aug. 31	22.40
June 30	16.90	Feb. 28	25.60	Sept. 29	23.40
July 31	24.10	Mar. 31	21.38	Oct. 31	22.00
Aug. 31	26.20	Apr. 30	19.20	Nov. 30	22.30
Sept. 30	25.80	May 31	16.80	Dec. 31	22.10
Oct. 31	26.20				

5. City of Hiawatha. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 29, T. 2 S., R. 17 E. Dug public-supply well, diameter 11 feet, depth 35 feet. Measuring point, top of 3-inch float opening in bottom of well pit, 11.6 feet below land-surface datum. Equipped with centrifugal pump and electric motor.

Water level, in feet below land-surface datum, 1944-45

Date	Water level	Date	Water level	Date	Water level
Mar. 24, 1944	25.54	Nov. 30, 1944	26.70	June 30, 1945	16.20
Apr. 29	18.20	Dec. 30	28.20	July 31	20.70
May 31	8.60	Jan. 31, 1945	23.30	Aug. 31	19.00
June 30	25.00	Feb. 28	22.00	Sept. 29	21.00
July 31	25.00	Mar. 31	17.60	Oct. 31	20.20
Aug. 31	27.90	Apr. 30	15.20	Nov. 30	18.80
Sept. 30	27.30	May 31	17.60	Dec. 31	18.20
Oct. 31	27.10				

6. City of Hiawatha. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 29, T. 2 S., R. 17 E. Dug public-supply well, diameter 8 feet, depth 35 feet. Measuring point, top edge of manhole in pit, 10.7 feet below land-surface datum. Equipped with centrifugal pump and electric motor.

Water level, in feet below land-surface datum, 1944-45

Date	Water level	Date	Water level	Date	Water level
Mar. 24, 1944	21.04	Nov. 30, 1944	27.20	June 30, 1945	21.30
Apr. 29	21.10	Dec. 30	28.10	July 31	26.50
May 31	21.60	Jan. 31, 1945	28.80	Aug. 31	27.70
June 30	23.00	Feb. 28	27.20	Sept. 29	27.90
July 31	25.40	Mar. 31	28.50	Oct. 31	27.50
Aug. 31	21.30	Apr. 30	27.85	Nov. 30	27.50
Sept. 30	19.80	May 31	26.50	Dec. 31	28.00
Oct. 31	24.60				

#### Cherokee County

1 (\*946, p. 74; \*988, p. 66; 1018, p. 55). W. L. Stiles. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 2, T. 34 S., R. 23 E. Water levels, in feet below land-surface datum, 1945: Jan. 25, 10.50; Feb. 25, 10.80; Mar. 26, 9.50. Measurements discontinued after Mar. 26, 1945.

#### Clark County

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 4 wells in Clark County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
5	5	25.88	Nov. 26, 1942	29.10	May 7, 1941
7	5	34.65	Sept. 29, 1942	35.98	Aug. 27, 1941
10	5	14.55	May 8, 1942	17.30	Sept. 19, 1945
12	5	67.02	Nov. 26, 1942	68.59	Oct. 21, 1941

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 4 wells in Clark County

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945 <sup>a</sup>	Net rise (+) or net decline (-) for period of record
5	3.22	0.76	-0.19
7	1.33	.64	+0.07
10	2.75	.35	-.49
12	1.57	.68	+2.29

a Between last measurement in 1944 and last measurement in 1945.

5 (\*908, p. 42; 938, p. 56; 946, p. 75; \*988, p. 67; 1018, p. 55). Winnie Floyd. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 12, T. 33 S., R. 25 W. Water levels, in feet below land-surface datum, 1945: June 7, 28.53; Sept. 19, 28.70; Dec. 18, 28.92.

7 (\*908, p. 42; 938, p. 56; 946, p. 75; \*988, p. 67; 1018, p. 55). M. C. Harper. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 32, T. 33 S., R. 21 W. Water levels, in feet below land-surface datum, 1945: Mar. 14, 35.07; June 7, 35.54; Sept. 19, 35.62; Dec. 19, 35.68.

10 (\*908, p. 42; 938, p. 56; 946, p. 76; \*988, p. 67; 1018, p. 55). J. F. Folks Estate. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 24, T. 32 S., R. 23 W. Water levels, in feet below land-surface datum, 1945: Mar. 14, 16.53; June 7, 16.63; Sept. 19, 17.30; Dec. 18, 16.85.

12 (\*908, p. 42; 938, p. 57; 946, p. 76; \*988, p. 67; 1018, p. 55). Ralph Gardner. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 11, T. 33 S., R. 24 W. Water levels, in feet below land-surface datum, 1945: Mar. 14, 67.36; June 7, 67.66; Sept. 19, 67.76; Dec. 18, 67.91.

Comanche County

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 3 wells in Comanche County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
1	5	38.53	Aug. 31, 1944	40.52	June 20, 1941
7	5	36.00	May 27, 1942	58.53	Jan. 22, 1941
9	5	88.54	Sept. 1, 1944	90.39	Sept. 23, 1941

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 3 wells in Comanche County

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945a/	Net rise (+) or net decline (-) for period of record
1	1.99	-0.01	+1.39
7	22.53	+1.13	+13.38
9	1.85	-1.15	-1.35

a Between last measurement in 1944 and last measurement in 1945.

1 (#908, p. 43; 938, p. 58; 946, p. 77; #988, p. 68; 1018, p. 56).  
A. A. Carpenter, NE $\frac{1}{4}$  sec. 8, T. 33 S., R. 20 W. Water levels, in feet below land-surface datum, 1945: Mar. 14, 39.02; June 7, 39.33; Sept. 19, 38.99; Dec. 19, 38.78.

7 (#908, p. 44; 938, p. 58; 946, p. 77; #988, p. 69; 1018, p. 56).  
W. D. Aitken, NW $\frac{1}{4}$  sec. 35, T. 34 S., R. 17 W. Water levels, in feet below land-surface datum, 1945: Mar. 16, 38.49; June 7, 37.15; Dec. 19, 37.01.

9 (#908, p. 44; 938, p. 58; 946, p. 77; #988, p. 69; 1018, p. 56).  
H. R. Burnette, NW $\frac{1}{4}$  sec. 13, T. 32 S., R. 17 W. Water levels, in feet below land-surface datum, 1945: Mar. 16, 89.31; June 8, 89.80; Sept. 18, 89.78; Dec. 20, 90.29.

Cowley County

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 4 wells in Cowley County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
1	2.5	11.99	Jan. 2, 1945	16.20	Mar. 3, 1944
40	1.5	10.82	May 16, 1945	13.44	Sept. 7, 1944
41	1.5	10.15	Jan. 2, 1945	14.54	July 6, 1944
42	1.5	27.30	July 6, 1944	28.48	June 1, 1944

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 4 wells in Cowley County

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945	Net rise (+) or net decline (-) for period of record
1	4.21	a +0.68	+2.62
40	2.62	b -.02	-1.24
41	4.39	b -.08	-.14
42	1.18	a +.31	+.39

a Net rise from November 1944 to February 1945.

b Net decline from November 1944 to February 1945.

1 (#1018, p. 56). City of Winfield well 2 east. SW. corner SE $\frac{1}{4}$  sec. 18, T. 32 S., R. 3 E. Water levels, in feet below land-surface datum, 1945: Jan. 2, 11.99; Feb. 15, 12.00.

40 (\*1018, p. 56). City of Winfield. NW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 19, T. 32 S., R. 3 E. Water levels, in feet below land-surface datum, 1945: Jan. 2, 11.13; Feb. 15, 12.06.

41 (\*1018, p. 56). City of Winfield. NE $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 19, T. 32 S., R. 3 E. Water levels, in feet below land-surface datum, 1945: Jan. 2, 10.15; Feb. 15, 10.87.

42 (\*1018, p. 56). Geol. Survey, U. S. Dept. of Interior. SW corner sec. 21, T. 32 S., R. 3 E. Water levels, in feet below land-surface datum, 1945: Jan. 2, 27.72; Feb. 15, 27.58.

#### Crawford County

Highest and lowest water levels, for the period of record, in feet below land-surface datum, in 3 wells in Crawford County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
1	4	1.06	Oct. 29, 1945	9.12	Aug. 25, 1943
24	4	262.10	Sept. 10, 1942	268.82	July 30, 1945
88	2	219.56	Jan. 24, 1944	230.39	Aug. 31, 1945

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 3 wells in Crawford County

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945	Net decline for period of record
1	8.06	a +0.23	1.00
24	6.72	a +2.22	1.87
88	10.83	b -.63	4.22

a Net rise from December 1944 to November 1945.

b Net decline from December 1944 to November 1945.

1 (\*946, p. 78; \*988, p. 69; 1018, p. 57). John P. Biddle. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 5, T. 31 S., R. 25 E.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	3.20	Apr. 25	1.65	July 30	3.91	Oct. 29	1.06
Feb. 27	5.11	May 25	1.55	Aug. 31	4.02	Nov. 29	5.25
Mar. 24	1.75	June 30	1.95				

24 (\*946, p. 78; \*988, p. 70; 1018, p. 57). City of Girard. SW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 24, T. 29 S., R. 23 E.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	267.56	Apr. 25	268.48	July 30	268.82	Oct. 29	264.41
Feb. 27	267.51	May 25	267.12	Aug. 31	268.78	Nov. 29	265.38
Mar. 24	267.55	June 30	267.05				

88 (\*1018, p. 58). Kansas City Southern Railway Co. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 20, T. 30 S., R. 25 E.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	226.32	Apr. 25	223.87	July 30	228.42	Oct. 29	227.04
Feb. 27	221.76	May 25	222.75	Aug. 31	230.39	Nov. 29	226.88
Mar. 24	223.92	June 30	226.31				

#### Dickinson County

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 1 well in Dickinson County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
53	2.5	13.50	May 1, 1944	21.50	Dec. 2, 1943



Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 1 well in Dickinson County

Well	Difference between highest and lowest water levels	Net decline in 1945	Net rise for period of record
53	8.00	a 1.50	1.93

a From June 1944 to August 1945.

53 (\*988, p. 70; 1018, p. 58). City of Enterprise. SW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 20, T. 13 S., R. 3 E.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Mar. 4	20.34	May 2	16.03	July 6	15.01
Apr. 7	20.00	June 6	17.10	Aug. 12	18.00

### Edwards County

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 3 wells in Edwards County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
1	1.5	6.23	Mar. 8, 1945	7.53	Sept. 11, 1945
2	1.5	.54	Oct. 17, 1945	3.50	Feb. 14, 1945
10	1.5	64.11	Dec. 7, 1944	65.45	Mar. 8, 1945

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 3 wells in Edwards County

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945a/	Net rise (+) or net decline (-) for period of record
1	1.30	-0.43	-0.99
2	2.96	+.81	+1.01
10	1.34	-.32	+.50

a Between last measurement in 1944 and last measurement in 1945.

1 (\*1018, p. 58). Owner unknown. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 35, T. 24 S., R. 19 W., north well of a battery of 3 wells.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	6.71	Apr. 20	6.47	Sept. 11	7.53	Nov. 19	7.47
Feb. 14	6.52	July 6	6.81	Oct. 17	7.51	Dec. 21	7.27
Mar. 8	6.23	Aug. 27	7.39				

2 (\*1018, p. 58). Owner unknown. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 7, T. 24 S., R. 18 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	3.40	Apr. 20	2.77	Sept. 11	1.50	Nov. 19	1.33
Feb. 14	3.50	July 6	.56	Oct. 17	.54	Dec. 21	2.16
Mar. 8	3.04	Aug. 28	1.16				

10 (\*1018, p. 58). Owner unknown. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 22, T. 23 S., R. 19 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	64.89	Apr. 20	65.09	Sept. 11	64.76	Nov. 19	64.54
Feb. 14	65.42	Aug. 28	64.80	Oct. 17	64.54	Dec. 21	64.43
Mar. 8	65.45						

Ellis County

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 3 wells in Ellis County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
190	4	12.19	Sept. 7, 1944	15.16	Dec. 22, 1943
218	4	13.14	July 11, 1945	16.19	Dec. 20, 1944
218	4	13.00	Sept. 7, 1944	54.67	Dec. 22, 1943

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 3 wells in Ellis County

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945	Net rise for period of record
190	2.97	+2.17	0.81
218	3.05	a +3.05	1.18
218	41.67	b -1.05	16.67

a Last measurement made in July 1945.

b Last measurement made in October 1945.

190 (\*938, p. 60; 946, p. 79; \*988, p. 71; 1018, p. 59). Ben Schulte. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 8, T. 14 S., R. 16 W. No measurements made in 1945.

215 (\*938, p. 60; 946, p. 79; \*988, p. 71; 1018, p. 59). A. H. Romine. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 7, T. 11 S., R. 16 W. Water levels, in feet below land-surface datum, 1945: Apr. 26, 13.94; July 11, 13.14.

218 (\*938, p. 60; 946, p. 80; \*988, p. 71; 1018, p. 59). W. W. Bemis. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 16, T. 12 S., R. 17 W. Water levels, in feet below land-surface datum, 1945: Apr. 26, 40.46; July 11, 18.24; Oct. 25, 37.27.

Finney County

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 14 wells in Finney County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
1	9.5	5.43	June 9, 1943	11.46	Mar. 8, 1941
2	6	105.33	June 27, 1944	109.82	Oct. 25, 1943
5	6	20.65	Oct. 19, 1944	22.54	Jan. 28, 1940
6	6	15.25	June 21, 1940	20.04	Dec. 22, 1945
7	6	77.24	May 9, 1945	78.79	Sept. 13, 1944
8	6	74.42	Sept. 20, 1940	75.25	June 21, 1940
13	6	.76	May 5, 1942	4.63	Sept. 23, 1939
15	6	9.34	June 25, 1943	14.40	Sept. 20, 1940
16	6	32.22	Nov. 22, 1944	42.20	May 19, 1941
17	6	.71	May 5, 1942	7.81	Oct. 26, 1939
23	6	42.48	Sept. 5, 1944	45.30	Feb. 17, 1940
26	6	68.34	Apr. 10, 1945	71.60	Apr. 24, 1941
1002	3	111.51	May 25, 1945	116.67	Nov. 30, 1943
1005	3	115.04	Nov. 30, 1942	116.22	Oct. 27, 1943

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 14 wells in Finney County

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945	Net rise (+) or net decline (-) for period of record
1	6.03	+0.44	+2.21
2	4.49	a +.41	+3.32
5	1.89	-.15	+1.51
6	4.79	-1.10	-3.90

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 14 wells in Finney County--Continued

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945	Net rise (+) or net decline (-) in period of record
7	1.55	b +1.75	+2.29
8	.83	b -.95	-.19
13	3.87	c -.42	+1.76
15	5.06	+ .54	+4.10
16	9.98	d -2.56	+2.71
17	7.10	b +.13	+4.35
23	2.82	e -.08	+2.55
26	3.26	f -.64	+3.06
1002	5.16	+ .11	-15.06
1005	1.18	....	-.82

a Net rise from September 1944 to November 1945.

b Last measurement made in November 1945.

c Net decline from November 1944 to December 1945.

d Last measurement made in April 1945.

e Last measurement made in July 1945.

f Last measurement made in October 1945.

1 (\*886, p. 139; 908, p. 49; 938, p. 62; 946, p. 82; \*988, p. 72; 1018, p. 60). Mrs. A. M. Reid. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 9, T. 24 S., R. 33 W.

Mean daily water level, in feet below land-surface datum, 1945

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	7.48	....	7.33	7.16	6.60	6.89	6.85	6.65	6.67	6.96	7.04	7.02
2	7.47	....	7.33	7.20	6.61	6.92	6.84	6.66	6.63	6.96	7.06	7.02
3	7.46	....	7.34	7.21	6.62	6.94	6.81	6.68	6.68	6.96	6.95	7.01
4	7.48	....	7.32	7.24	6.62	6.95	6.83	6.69	6.72	6.96	6.99	7.01
5	7.45	....	7.33	7.24	6.62	6.95	6.85	6.73	6.73	6.97	6.97	7.01
6	7.45	....	7.34	7.24	....	6.96	6.85	6.74	6.76	6.96	7.00	7.00
7	7.45	....	7.34	7.24	....	6.96	6.81	6.75	6.80	6.96	7.00	7.00
8	7.47	....	7.34	7.22	....	6.96	6.80	6.75	6.82	6.98	7.03	7.00
9	7.48	....	7.33	7.22	....	6.97	6.79	6.74	6.76	6.96	7.03	6.99
10	7.48	7.42	7.32	7.23	....	6.98	6.77	6.76	6.66	6.96	7.02	6.99
11	7.47	7.41	7.32	7.26	....	6.99	6.71	6.77	6.69	6.98	6.98	6.99
12	7.48	7.40	7.33	7.26	....	6.98	6.63	6.78	6.70	6.98	6.98	6.98
13	7.48	7.39	7.30	7.27	....	6.94	6.57	6.79	6.77	7.00	6.96	6.96
14	7.47	7.38	7.29	7.28	....	6.95	6.53	6.81	6.82	7.01	6.93	6.98
15	7.49	7.40	7.28	7.25	....	6.93	6.51	6.82	6.85	7.02	6.88	6.98
16	7.47	7.40	7.28	7.25	....	6.95	6.49	6.81	6.87	7.01	6.91	6.99
17	7.48	7.40	7.30	7.28	6.73	6.94	6.49	6.81	6.87	7.01	6.93	6.99
18	7.48	7.40	7.30	7.29	6.74	6.94	6.48	6.82	6.91	7.02	6.93	7.00
19	7.48	7.39	7.30	7.28	6.75	6.93	6.48	6.82	6.94	7.01	6.96	7.00
20	7.48	7.37	7.31	7.28	6.74	6.93	6.48	6.83	6.95	7.02	6.97	7.01
21	7.48	7.36	7.30	7.27	6.79	6.94	6.49	6.84	6.95	7.05	6.97	7.01
22	....	7.38	7.28	7.26	6.79	6.94	6.50	6.83	6.95	7.04	6.98	7.02
23	....	7.38	7.27	6.67	6.78	6.93	6.50	6.81	6.97	7.06	6.98	7.01
24	....	7.37	7.27	6.33	6.79	6.93	6.52	6.80	6.97	7.06	6.99	7.00
25	....	7.36	7.28	6.41	6.81	6.95	6.55	6.80	6.98	7.07	6.99	7.01
26	....	7.36	7.28	6.50	6.82	6.87	6.56	6.80	6.97	7.06	7.00	7.02
27	....	7.35	7.28	6.53	6.84	6.82	6.57	6.81	6.98	7.06	7.01	7.03
28	....	7.35	7.29	6.57	6.86	6.83	6.53	6.78	7.00	7.08	6.99	7.02
29	....	....	7.28	6.59	6.87	6.83	6.58	6.78	6.97	7.07	6.97	7.02
30	....	....	7.20	6.60	6.86	6.83	6.61	6.78	6.95	7.03	7.01	7.03
31	....	....	7.17	....	6.87	....	6.63	6.79	....	7.01	....	7.04

2 (\*886, p. 141; 908, p. 49; 938, p. 62; 946, p. 82; \*988, p. 73; 1018, p. 60). Maggie B. Smith. NE corner NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 30, T. 26 S., R. 32 W. Water levels, in feet below land-surface datum, 1945: Aug. 16, 105.56; Nov. 6, 105.84.

5 (\*886, p. 142; 908, p. 49; 938, p. 63; 946, p. 82; \*988, p. 73; 1018, p. 60). E. Alberta Reeves. SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 19, T. 21 S., R. 32 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	20.82	Apr. 5	20.85	July 10	20.84	Oct. 23	20.97
Feb. 22	20.83	May 24	20.80	Aug. 21	20.92	Nov. 23	21.00
Mar. 7	20.83	June 21	20.86	Sept. 5	20.93	Dec. 7	20.94

6 (\*886, p. 142; 908, p. 50; 938, p. 63; 946, p. 82; \*988, p. 73; 1018, p. 61). T. E. Meakel. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 36, T. 21 S., R. 29 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Jan. 5	18.94	June 5	19.42	Nov. 23	19.90
May 15	19.31	Oct. 28	19.77	Dec. 22	20.04

7 (\*886, p. 142; 908, p. 50; 938, p. 63; 946, p. 83; \*988, p. 73; 1018, p. 61). Marion Russell. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 2, T. 26 S., R. 33 W. Water levels, in feet below land-surface datum, 1945: May 9, 77.24; Aug. 16, 77.40; Nov. 6, 75.80.

8 (\*886, p. 142; 908, p. 50; 938, p. 63; 946, p. 83; \*988, p. 73; 1018, p. 61). O. G. Reeve. SW $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 13, T. 25 S., R. 33 W. Water levels, in feet below land-surface datum, 1945: Feb. 27, 74.47; May 9, 74.55; Aug. 16, 74.43; Nov. 6, 75.23.

13 (\*886, p. 143; 908, p. 50; 938, p. 64; 946, p. 83; \*988, p. 73; 1018, p. 61). Edwin Wehrley. NE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 13, T. 25 S., R. 31 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	2.40	Apr. 18	1.47	July 5	3.09	Oct. 4	3.30
Feb. 13	2.18	May 25	2.52	Aug. 27	3.48	Nov. 21	2.99
Mar. 13	1.82	June 22	3.09	Sept. 13	3.50	Dec. 17	2.87

15 (\*886, p. 143; 908, p. 51; 938, p. 64; 946, p. 84; \*988, p. 74; 1018, p. 61). Floyd A. Edwards. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 2, T. 24 S., R. 33 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	10.21	Apr. 24	9.91	July 25	9.48	Oct. 25	10.07
Feb. 25	10.08	May 25	9.58	Aug. 25	9.73	Nov. 25	9.89
Mar. 25	9.99	June 21	9.78	Sept. 25	10.07	Dec. 25	9.76

16 (\*886, p. 143; 908, p. 51; 938, p. 64; 946, p. 84; \*988, p. 74; 1018, p. 61). George L. Meeker. NW $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 6, T. 24 S., R. 34 W. Water levels, in feet below land-surface datum, 1945: Jan. 6, 33.31; Feb. 24, 34.53; Mar. 10, 34.78; Apr. 11, 35.34.

17 (\*886, p. 144; 908, p. 51; 938, p. 64; 946, p. 84; \*988, p. 74; 1018, p. 61). SE $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 7, T. 24 S., R. 33 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	3.29	May 19	3.28	Aug. 11	3.94	Oct. 2	3.81
Mar. 10	3.06	June 22	3.63	Sept. 5	4.51	Nov. 16	3.38
Apr. 11	3.28	July 28	3.41				

23 (\*886, p. 144; 908, p. 51; 938, p. 65; 946, p. 84; \*988, p. 74; 1018, p. 61). J. E. Ely. SE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 4, T. 23 S., R. 32 W. Water levels, in feet below land-surface datum, 1945: Apr. 10, 42.63; July 13, 42.64.

26 (\*886, p. 145; \*908, p. 52; 938, p. 65; 946, p. 85; \*988, p. 74; 1018, p. 61). Garden City Experiment Station. SW $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 3, T. 24 S., R. 32 W. Water levels, in feet below land-surface datum, 1945: Feb. 15, 68.59; Apr. 10, 68.34; July 13, 68.28; Oct. 29, 69.29.

1002 (\*946, p. 85; \*988, p. 74; 1018, p. 61). United States Army.  
SW $\frac{1}{4}$  sec. 27, T. 24 S., R. 31 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	114.14	Apr. 18	113.28	July 5	113.95	Nov. 16	115.12
Feb. 13	114.15	May 25	111.51	Aug. 27	114.60	Dec. 17	114.26
Mar. 13	113.98	June 22	113.95	Oct. 4	114.59		

1005 (\*946, p. 85; \*988, p. 74; 1018, p. 62). United States Army.  
SW $\frac{1}{4}$  sec. 27, T. 24 S., R. 31 W. No measurements made in 1945.

Ford County

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 15 wells in Ford County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
2	7	26.03	Sept. 1, 1944	27.78	Sept. 5, 1939
8	7	.86	May 13, 1942	8.17	Nov. 7, 1939
11	7	7.69	June 3, 1942	12.31	Jan. 24, 1940
38	7	36.67	Apr. 19, 1945	42.08	May 16, 1940
41	7	44.10	July 7, 1945	46.53	July 1, 1939
57	7	4.74	May 15, 1942	9.93	Oct. 2, 1939
59	7	14.49	May 15, 1942	18.99	Sept. 18, 1945
65	7	14.61	May 13, 1942	17.70	Oct. 2, 1939
79C	7	13.25	Jan. 2, 1942	19.69	Oct. 2, 1939
96	7	6.32	Apr. 19, 1945	10.22	Sept. 5, 1939
237	7	83.72	May 25, 1943	86.42	Nov. 8, 1939
343	7	75.64	Dec. 4, 1941	76.36	Aug. 19, 1943
1002	3	103.92	Sept. 18, 1945	184.09	Nov. 26, 1942
1003	3	94.35	July 4, 1944	109.62	Aug. 19, 1943
1004	3	98.54	Nov. 26, 1942	120.81	May 25, 1943

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 15 wells in Ford County

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945	Net rise (+) or net decline (-) for period of record
2	1.75	a -0.24	+0.87
8	7.31	b -1.04	+1.10
11	4.62	b -1.09	+1.26
38	5.41	b +.21	+4.41
41	2.43	c +.20	+1.95
57	5.19	-1.15	-0.08
59	4.50	-0.67	+0.08
65	3.09	-0.30	+0.47
79C	6.44	-1.91	-1.64
96	3.90	b -1.70	+1.57
237	2.70	b -1.93	+2.02
343	.72	d +.12	+0.06
1002	80.17	e -2.87	-5.49
1003	15.17	-0.15	-0.33
1004	22.27	e -0.89	-1.99

a Last measurement made in September 1945.

b Last measurement made in October 1945.

c Last measurement made in July 1945.

d Net rise from September 1944 to October 1945.

e Last measurement made in November 1945.

2 (\*845, p. 96; 886, p. 151; 908, p. 57; 938, p. 66; 946, p. 86; \*988, p. 75; 1018, p. 62). L. A. Lamb. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 4, T. 28 S., R. 22 W. Water levels, in feet below land-surface datum, 1945: Jan. 2, 26.27; Mar. 9, 26.38; June 6, 26.63; Sept. 13, 26.62.

8 (\*845, p. 96; 886, p. 151; 908, p. 57; 938, p. 67; 946, p. 86; \*988, p. 75; 1018, p. 63). F. H. Diehl. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 34, T. 26 S., R. 25 W. Water levels, in feet below land-surface datum, 1945: Apr. 19, 5.49; July 7, 5.73; Oct. 17, 6.29.

11 (\*845, p. 96; 886, p. 151; 908, p. 58; 938, p. 67; 946, p. 86; \*988, p. 76; 1018, p. 63). George W. Molitor. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 36, T. 21 S., R. 21 W. Water levels, in feet below land-surface datum, 1945: Apr. 19, 9.24; July 7, 9.65; Oct. 3, 10.52.

38 (\*845, p. 95; 886, p. 159; 908, p. 56; 938, p. 67; 946, p. 86; \*988, p. 76; 1018, p. 63). F. Buns. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 1, T. 26 S., R. 24 W. Water levels, in feet below land-surface datum, 1945: Apr. 19, 36.67; July 7, 36.96; Oct. 3, 37.02.

41 (\*845, p. 96; 886, p. 150; 908, p. 57; 938, p. 67; 946, p. 87; \*988, p. 76; 1018, p. 63). J. J. Burghardt. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 11, T. 25 S., R. 21 W. Water level, in feet below land-surface datum, 1945: July 7, 44.10.

57 (\*845, p. 98; 886, p. 153; 908, p. 58; 938, p. 67; 946, p. 87; \*988, p. 76; 1018, p. 63). Andrew Bogner. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 22, T. 26 S., R. 26 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	7.62	Apr. 18	7.54	July 7	7.83	Oct. 4	7.86
Feb. 13	7.51	May 25	7.66	Aug. 27	7.83	Nov. 21	7.94
Mar. 9	7.41	June 6	7.73	Sept. 18	7.43	Dec. 26	7.84

59 (\*845, p. 98; 886, p. 153; 906, p. 58; 938, p. 67; 946, p. 87; \*988, p. 76; 1018, p. 63). Ward Byers. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 21, T. 25 S., R. 26 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	15.86	Apr. 18	15.99	July 7	16.20	Oct. 4	17.83
Feb. 13	15.86	May 25	16.04	Aug. 27	20.58	Nov. 21	16.73
Mar. 9	15.78	June 6	16.12	Sept. 18	18.99	Dec. 26	16.58

65 (\*845, p. 98; 886, p. 154; 908, p. 59; 938, p. 67; 946, p. 87; \*988, p. 76; 1018, p. 63). John N. Clark. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 33, T. 26 S., R. 25 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	16.06	Apr. 19	15.99	July 7	16.44	Oct. 4	16.80
Feb. 13	15.95	May 17	16.18	Aug. 27	16.79	Nov. 21	16.64
Mar. 9	15.89	June 6	16.37	Sept. 13	16.94	Dec. 26	16.42

790 (\*845, p. 99; 886, p. 155; 908, p. 59; 938, p. 68; 946, p. 87; \*988, p. 77; 1018, p. 63). O. N. Nevins. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 23, T. 26 S., R. 24 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	17.91	Apr. 19	18.39	July 7	18.46	Oct. 3	19.10
Feb. 13	18.10	May 25	18.18	Aug. 27	18.81	Nov. 21	19.19
Mar. 9	18.26	June 6	18.28	Sept. 13	17.93	Dec. 26	19.12

96 (\*845, p. 99; 886, p. 155; 908, p. 60; 938, p. 68; 946, p. 87; \*988, p. 77; 1018, p. 63). Henry Hattrup. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 23, T. 26 S., R. 21 W. Water levels, in feet below land-surface datum, 1945: Apr. 19, 6.32; July 7, 7.13; Oct. 3, 8.09.

237 (\*886, p. 150; 908, p. 57; 938, p. 68; 946, p. 88; \*988, p. 77; 1018, p. 63). Atchinson, Topeka, & Santa Fe Railway. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 28, T. 25 S., R. 22 W. Water levels, in feet below land-surface datum, 1945: Apr. 19, 85.37; July 7, 85.36; Oct. 3, 83.97.

343 (\*886, p. 150; 908, p. 57; 938, p. 68; 946, p. 88; \*988, p. 77; 1018, p. 64). B. A. Schuette. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 1, T. 26 S., R. 20 W. Water levels, in feet below land-surface datum, 1945: Jan. 2, 75.97; Apr. 19, 75.91; July 7, 76.08; Oct. 4, 76.02.

1002 (\*946, p. 88; \*988, p. 77; 1018, p. 64). United States Army.  
SE $\frac{1}{4}$  sec. 12, T. 26 S., R. 25 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 13	106.10	May 25	110.50	Sept. 18	103.92	Nov. 21	109.17
Apr. 19	106.09	Aug. 27	105.96	Oct. 4	113.31		

1003 (\*946, p. 88; \*988, p. 77; 1018, p. 64). United States Army.  
NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 13, T. 26 S., R. 26 W.

Water level, in feet below land-surface datum, 1945

Apr. 19	103.43	June 6	104.53	Sept. 18	102.27	Nov. 21	104.22
May 25	104.99	Aug. 27	102.65	Oct. 4	102.75	Dec. 21	103.80

1004 (\*946, p. 88; \*988, p. 77; 1018, p. 64). United States Army.  
Center NE $\frac{1}{4}$  sec. 13, T. 26 S., R. 26 E.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Apr. 19	100.19	Aug. 27	99.79	Oct. 4	99.77
June 6	100.19	Sept. 18	99.76	Nov. 21	101.22

Grant County

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 9 wells in Grant County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
1	5	41.80	Mar. 24, 1945	45.06	Sept. 16, 1941
4	5	84.26	Mar. 24, 1945	87.52	May 14, 1941
5	5	66.10	Aug. 3, 1944	67.00	Dec. 28, 1943
7	5	81.91	Jan. 24, 1945	82.76	May 14, 1941
8	5	58.36	July 14, 1944	59.56	Apr. 21, 1944
11	5	45.99	May 10, 1945	47.32	July 12, 1943
13	5	105.08	Aug. 17, 1945	106.58	July 14, 1941
14	5	129.22	Apr. 21, 1944	130.47	May 30, 1941
400	1	52.78	Feb. 28, 1945	54.37	Sept. 13, 14, 1945

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record in 9 wells in Grant County

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945	Net rise (+) or net decline (-) for period of record
1	3.26	-0.11	+2.01
4	3.26	-.13	+2.97
5	.90	a -.23	+3.36
7	.85	b +.04	+3.05
8	1.20	a -.13	+1.17
11	1.33	-.11	+1.05
13	1.50	a +.14	+1.17
14	1.25	a +.16	+1.14
400	1.59	-1.14	-.63

a Last measurement made in November 1945.

b Last measurement made in February 1945.

<sup>1</sup> (\*938, p. 69; 946, p. 89; \*988, p. 78; 1018, p. 65). F. C. Williams.  
SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 30, T. 27 S., R. 37 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 27	42.16	May 10	42.07	Aug. 17	42.20	Nov. 14	42.35
Mar. 24	41.80	June 22	42.29	Sept. 7	42.03	Dec. 4	42.42
Apr. 13	42.32	July 27	42.23	Oct. 2	43.33		

<sup>4</sup> (\*938, p. 70; 946, p. 89; \*988, p. 78; 1018, p. 65). F. J. Andes.  
SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 9, T. 27 S., R. 38 W.

Water level, in feet below land-surface datum, 1945

Jan. 24	84.34	May 10	84.28	Sept. 7	84.46	Nov. 14	84.63
Feb. 27	85.06	June 22	84.46	Oct. 2	84.52	Dec. 4	84.55
Mar. 24	84.26	Aug. 17	84.48				

<sup>5</sup> (\*938, p. 70; 946, p. 89; \*988, p. 79; 1018, p. 65). C. L. Jury.  
NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 4, T. 27 S., R. 37 W. Water levels, in feet below land-surface datum, 1945: Jan. 24, 66.62; Feb. 27, 66.63; Aug. 17, 66.57; Nov. 14, 66.64.

<sup>7</sup> (\*938, p. 70; 946, p. 90; \*988, p. 79; 1018, p. 65). Ethel W. Hoffman. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 36, T. 28 S., R. 36 W. Water levels, in feet below land-surface datum, 1945: Jan. 24, 81.91; Feb. 27, 82.08.

<sup>8</sup> (\*938, p. 70; 946, p. 90; \*988, p. 79; 1018, p. 65). E. O. Stuart.  
NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 33, T. 29 S., R. 35 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Jan. 24	58.77	May 10	58.96	Nov. 13	58.86
Feb. 27	58.84	Aug. 17	58.71		

<sup>11</sup> (\*938, p. 71; 946, p. 90; \*988, p. 79; 1018, p. 65). J. A. Hoffman. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 26, T. 28 S., R. 38 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 24	46.03	Apr. 13	46.07	Sept. 7	46.20	Nov. 14	46.21
Feb. 27	46.06	May 10	45.99	Oct. 2	46.27	Dec. 4	46.18
Mar. 24	46.04	Aug. 17	46.19				

<sup>13</sup> (\*938, p. 71; 946, p. 90; \*988, p. 79; 1018, p. 65). Fred Powell.  
NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 5, T. 29 S., R. 36 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Jan. 24	105.33	May 10	105.29	Nov. 13	105.38
Feb. 27	105.32	Aug. 17	105.08		

<sup>14</sup> (\*938, p. 71; 946, p. 90; \*988, p. 79; 1018, p. 65). Mr. Hall.  
NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 31, T. 28 S., R. 36 W.

Water level, in feet below land-surface datum, 1945

Jan. 24	129.26	May 10	129.29	Nov. 13	129.33
Feb. 27	129.37	Aug. 17	129.32		



400 (\*1018, p. 66), Kansas State Board of Agriculture, Division of Water Resources. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 6, T. 28 S., R. 38 W.

Mean daily water level, in feet below land-surface datum, 1945

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	52.82	52.91	52.78	.....	53.58	53.74	53.38	53.77	54.26	54.19	53.88	53.98
2	52.82	52.90	52.78	.....	53.40	53.74	53.37	53.79	54.28	54.17	53.88	54.01
3	52.81	52.89	52.78	.....	53.40	53.73	53.37	53.81	54.28	54.10	53.88	54.05
4	52.81	52.88	52.79	.....	53.41	53.73	53.36	53.85	54.28	54.09	53.86	54.07
5	52.81	52.88	52.82	.....	53.43	53.75	53.35	53.87	54.28	54.06	53.86	54.07
6	52.80	52.87	52.85	.....	53.44	53.74	53.35	53.88	54.29	54.04	53.86	54.07
7	52.80	52.87	52.86	.....	53.45	53.75	53.34	53.88	54.30	54.03	53.86	54.10
8	52.80	52.86	52.87	.....	53.46	53.76	53.33	53.90	54.32	54.03	53.85	54.15
9	52.80	52.86	52.87	.....	53.48	53.76	53.33	53.94	54.33	54.02	53.86	54.21
10	52.81	52.86	52.88	.....	53.49	53.75	53.33	53.96	54.34	54.01	53.85	54.26
11	52.84	52.85	52.89	.....	53.52	53.71	53.33	53.98	54.35	54.01	53.85	54.28
12	52.87	52.84	52.90	.....	53.54	53.66	53.33	53.99	54.36	54.00	53.85	54.30
13	52.89	52.83	52.91	53.17	53.55	53.63	53.33	53.99	54.37	54.00	53.84	54.32
14	52.92	52.83	52.92	53.20	53.56	53.62	53.33	53.99	54.37	53.99	53.84	54.31
15	52.94	52.83	52.94	53.21	53.57	53.61	53.32	53.99	54.34	53.99	53.82	54.29
16	52.95	52.83	52.96	53.22	53.59	53.59	53.32	54.00	54.34	53.99	53.82	54.27
17	52.97	52.83	52.98	53.24	53.62	53.57	53.31	54.01	54.32	53.98	53.82	54.26
18	52.98	52.83	52.97	53.25	53.63	53.52	53.30	54.09	54.33	53.98	53.82	54.26
19	52.99	52.82	52.97	53.26	53.65	53.51	53.30	54.11	54.35	54.00	53.81	54.21
20	53.00	52.82	52.99	53.27	53.65	53.46	53.30	54.12	54.35	54.00	53.80	54.16
21	53.01	52.81	53.01	53.28	53.61	53.48	53.30	54.14	54.34	53.99	53.80	54.11
22	53.01	52.80	53.01	53.30	53.62	53.47	53.31	54.15	54.33	53.98	53.79	54.09
23	52.98	52.80	52.98	53.32	53.65	53.46	53.31	54.14	54.34	53.97	53.79	54.06
24	52.95	52.80	53.00	53.32	53.67	53.45	53.31	54.15	54.34	53.96	53.78	54.04
25	52.95	52.80	.....	53.33	53.68	53.43	53.30	54.17	54.34	53.94	53.81	54.03
26	52.94	52.80	.....	53.35	53.68	53.41	53.34	54.17	54.33	53.92	53.84	54.02
27	52.93	52.79	.....	53.35	53.69	53.42	53.43	54.18	54.31	53.90	53.86	54.00
28	52.93	52.78	.....	53.35	53.70	53.41	53.52	54.19	54.27	53.89	53.87	53.99
29	52.93	.....	.....	53.36	53.71	53.40	53.61	54.20	54.24	53.90	53.90	53.99
30	52.92	.....	.....	53.38	53.72	53.40	53.68	54.22	54.22	53.89	53.91	53.99
31	52.91	.....	.....	.....	53.72	.....	53.73	54.24	.....	53.89	.....	53.96

### Gray County

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 9 wells in Gray County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
1	6	3.48	June 13, 1941	7.56	Oct. 8, 1940
3	6	164.15	Mar. 13, 1945	165.98	Aug. 18, 1943
7	6	75.28	Dec. 18, 1945	77.70	May 22, 1940
8	6	a +.07	May 25, 1945	8.20	Oct. 7, 1939
11	6	57.76	Aug. 30, 1944	59.74	Aug. 18, 1943
17	6	81.03	Dec. 6, 1944	84.95	May 24, 1941
20	6	17.55	May 15, 1942	21.53	Nov. 4, 1940
23	6	111.31	Mar. 22, 1940	114.76	July 19, 1943
28	6	75.48	June 7, 1945	80.10	Dec. 14, 1939
					Jan. 26, 1940
					July 23, 1940

a Above land-surface datum.

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 9 wells in Gray County

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945	Net rise for period of record
1	4.08	-1.41	1.34
3	1.83	+3.4	.76
7	2.42	+1.9	2.20
8	8.27	-.40	6.14
11	1.98	-.31	.50
17	3.92	.....	3.59

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 9 wells in Gray County--Continued

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945	Net rise for period of record
20	3.98	-0.64	1.43
23	3.45	-.17	1.43
28	4.62	a -.70	4.58

a Last measurement made in June 1945.

1 (\*886, p. 158; 908, p. 63; 938, p. 73; 946, p. 92; \*988, p. 80; 1018, p. 67). G. A. Hard. NW $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 20, T. 25 S., R. 29 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	5.62	Apr. 18	5.54	July 5	6.13	Oct. 4	6.73
Feb. 13	5.29	May 25	5.84	Aug. 27	6.53	Nov. 21	6.14
Mar. 13	4.38	June 7	5.98	Sept. 13	6.71	Dec. 17	6.00

3 (\*886, p. 159; 908, p. 63; 938, p. 73; 946, p. 92; \*988, p. 80; 1018, p. 67). N. A. Mans. NE $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 7, T. 28 S., R. 27 W. Water levels, in feet below land-surface datum, 1945: Mar. 13, 164.15; June 7, 164.61; Sept. 20, 164.51; Dec. 18, 164.27.

7 (\*886, p. 159; 908, p. 64; 938, p. 73; 946, p. 92; \*988, p. 81; 1018, p. 67). P. Brietenbach and others. SE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 36, T. 26 S., R. 29 W. Water levels, in feet below land-surface datum, 1945: Mar. 13, 75.39; June 7, 75.34; Sept. 20, 75.34; Dec. 18, 75.28.

8 (\*886, p. 159; 908, p. 64; 938, p. 73; 946, p. 92; \*988, p. 81; 1018, p. 67). NW $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 11, T. 26 S., R. 28 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	0.87	Apr. 18	0.79	July 5	a 0.11	Oct. 4	1.69
Feb. 13	1.04	May 25	a .07	Aug. 27	1.31	Nov. 21	1.95
Mar. 13	.86	June 7	a .26	Sept. 18	1.58	Dec. 17	2.06

a Above land-surface datum.

11 (\*866, p. 159; 908, p. 64; 938, p. 74; 946, p. 92; \*988, p. 81; 1018, p. 67). J. D. Wetmore. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 35, T. 29 S., R. 28 W. Water levels, in feet below land-surface datum, 1945: Mar. 13, 57.82; June 7, 57.95; Sept. 20, 58.05; Dec. 18, 58.14.

17 (\*866, p. 160; 908, p. 65; 938, p. 74; 946, p. 93; \*988, p. 81; 1018, p. 67). V. E. Yeager. NE. corner NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 31, T. 28 S., R. 29 W. Measurements discontinued Dec. 6, 1944.

20 (\*886, p. 160; 908, p. 65; 938, p. 74; 946, p. 93; \*988, p. 82; 1018, p. 67). H. and E. Fischer. SE $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 23, T. 25 S., R. 30 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	19.25	Apr. 18	19.24	July 5	19.64	Oct. 4	20.32
Feb. 13	19.13	May 25	18.89	Aug. 27	20.08	Nov. 21	20.11
Mar. 13	19.00	June 7	19.43	Sept. 13	20.30	Dec. 17	19.97

23 (\*886, p. 160; 908, p. 65; 938, p. 75; 946, p. 93; \*988, p. 82; 1018, p. 67). Fry. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 24, T. 28 S., R. 29 W., in Montezuma. Water levels, in feet below land-surface datum, 1945: Mar. 13, 112.84; June 7, 112.97; Sept. 20, 111.93; Dec. 18, 111.56.

28 (\*886, p. 161; 908, p. 66; 938, p. 75; 946, p. 94; \*988, p. 82; 1018, p. 67). W. H. McLaughton. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 14, T. 27 S., R. 29 W. Water levels, in feet below land-surface datum, 1945: Mar. 13, 75.68; June 7, 75.48.

Hamilton County

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 6 wells in Hamilton County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
2	6	25.44	July 7, 1942	28.14	Nov. 22, 1940
3	6	11.57	May 20, 1942	14.67	Nov. 16, 1939
6	6	49.74	May 20, 1942	53.73	Nov. 16, 1939
7	6	42.25	Dec. 2, 1944	46.00	Nov. 27, 1940
16	6	b 84.38	Dec. 2, 1944	a 87.99	June 24, 1944
17	6	39.47	Aug. 12, 1943	43.48	May 15, 1940

a Incorrectly reported as 80.09 in 1944.

b Incorrectly reported as 84.48 in 1944.

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 6 wells in Hamilton County

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945	Net rise (+) or net decline (-) for period of record
2	2.70	a +0.13	+12.95
3	3.10	+0.05	+0.99
6	3.99	-1.17	+1.15
7	3.75	b -1.00	+2.52
16	3.61	b -2.30	-.96
17	4.00	c -1.64	+1.19

a Net rise from December 1944 to August 1945.

b Last measurement made in November 1945.

c Last measurement made in August 1945.

2 (\*886, p. 162; 908, p. 69; 938, p. 77). R. Holdren. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 22, T. 23 S., R. 43 W. Measurements resumed July 7, 1944.

Water level, in feet below land-surface datum, 1944-45

Date	Water level	Date	Water level	Date	Water level
July 7, 1944	13.64	Nov. 25, 1944	14.22	Feb. 10, 1945	14.16
Aug. 4	13.27	Dec. 2	14.19	May 11	14.14
Sept. 1	14.57	Jan. 13, 1945	14.16	Aug. 10	14.06
Oct. 1	14.33				

3 (\*886, p. 162; 908, p. 69; 938, p. 77; 946, p. 95; \*988, p. 83; 1018, p. 68). B. Rees. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 8, T. 24 S., R. 40 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	13.37	Apr. 7	13.46	July 28	13.09	Oct. 6	13.07
Feb. 10	13.36	May 11	13.51	Aug. 18	12.87	Nov. 15	13.12
Mar. 10	13.40	June 23	13.19	Sept. 8	13.01	Dec. 8	13.18

6 (\*886, p. 163; 908, p. 69; 938, p. 77; 946, p. 95; \*988, p. 83; 1018, p. 68). Belle Heinlein. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 24, T. 24 S., R. 39 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	51.86	Apr. 7	51.90	July 28	52.07	Oct. 5	52.14
Feb. 10	51.70	May 11	51.85	Aug. 10	52.21	Nov. 15	53.14
Mar. 10	52.79	June 23	52.03	Sept. 8	52.21	Dec. 8	52.09

7 (\*886, p. 163; 908, p. 69; 938, p. 77; 946, p. 95; \*988, p. 83; 1018, p. 68). I. E. Martin. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 16, T. 23 S., R. 40 W. Water levels, in feet below land-surface datum, 1945: Feb. 10, 42.52; May 11, 42.84; Nov. 15, 43.25.

16 (\*886, p. 163; 908, p. 70; 938, p. 78; 946, p. 96; \*988, p. 83; 1018, p. 68). Charles H. Miller. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 22, T. 25 S., R. 39 W. Water levels, in feet below land-surface datum, 1945: Feb. 10, 87.12; May 11, 86.46; Aug. 11, 86.06; Nov. 15, 86.68; Measurements published incorrectly in Water Supply Paper 1018. Corrected water levels, in feet below land-surface datum, 1944: Mar. 11, 87.88; June 24, 87.99; Dec. 2, 84.38.

17 (\*886, p. 163; 908, p. 70; 938, p. 78; 946, p. 96; \*988, p. 83; 1018, p. 68). Thomas A. Wells. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 11, T. 25 S., R. 39 W. Water levels, in feet below land-surface datum, 1945: Feb. 10, 40.38; Aug. 10, 42.07.

### Harvey County

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 25 wells in Harvey County that are not affected by pumping.

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945a/	Net rise (+) or net decline (-) for period of record
72	8.47	+0.08	+6.47
294	9.64	+1.09	+5.85
325	7.85	-1.00	+4.40
701	10.57	-1.38	+4.35
817	10.99	-.45	+1.56
824	12.39	+2.96	+5.47
831	9.01	+.97	+3.18
832	7.94	+.93	+2.12
833	6.38	+1.01	+.93
852	7.39	+.13	+2.65
853	5.66	+.08	+.88
854	9.63	-.59	+3.26
875	7.02	-1.89	+2.73
876	6.04	-1.04	+2.08
877	5.00	-.74	+2.98
880	4.44	-.30	+.52
881	3.86	-.40	-.07
888	9.38	-2.30	+2.61
889	7.24	-.47	-.61
890	6.97	-.86	+2.23
891	4.73	-.17	+.93
892	5.07	-.55	+1.22
893	4.64	-.68	+1.27
1174	6.76	+1.32	+3.42
1187	6.63	+.26	+3.43

a Between last measurement in 1944 and last measurement in 1945.

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 103 wells in Harvey County that are pumped or affected by pumping

Well	Length of record (years)	Highest level	Date	Lowest level	Date
2	8	1.53	Apr. 20, 1945	9.55	Mar. 10, 1944
3	7	7.09	June 12, 1940	23.02	Nov. 14, 1945
66d	7	40.33	Nov. 14, 1945	53.45	Mar. 31, 1944
86	5	10.69	Apr. 28, 1944	18.98	Sept. 8, 1945
87	5	8.86	Apr. 28, 1944	32.79	Sept. 8, 1945
87a	5	9.62	Apr. 28, 1944	32.52	Nov. 14, 1945
506	7	3.61	Apr. 28, 1944	16.36	Aug. 11, 1941
507	7	3.23	May 6, 1944	14.56	Dec. 10, 1943
821	7	12.03	Aug. 21, 1939	19.64	Sept. 22, 1945
839	7	9.62	Aug. 21, 1939	17.94	Mar. 7, 1944
872	7	17.65	Mar. 11, 1939	32.28	Sept. 5, 1945
873	7	17.61	Mar. 11, 1939	33.41	Nov. 14, 1945
874	7	20.04	May 27, 1940	44.92	Jan. 31, 1945
878	7	16.25	June 3, 1940	28.09	Dec. 31, 1945
879	7	17.82	May 27, 1940	28.18	Sept. 15, 1945
			June 3, 1940		
883	7	13.35	Aug. 21, 1939	22.46	Nov. 2, 1944

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 103 wells in Harvey County that are pumped or affected by pumping--Continued

Well	Length of record (years)	Highest level	Date	Lowest level	Date
884	7	13.34	Aug. 21, 1939	22.20	Mar. 7, 1944
885	7	13.22	Aug. 21, 1939	23.05	Mar. 7, 1944
886	7	2.34	Aug. 21, 1939	15.35	June 30, 1944
887	7	2.72	May 27, 1940	16.15	Mar. 1, 1945
894	7	9.56	May 27, 1940	21.11	Nov. 14, 1945
895	7	10.04	May 27, 1940	23.78	Nov. 14, 1945
1112	6	14.23	May 3, 1945	17.89	Nov. 4, 1940
1186	5	7.23	Sept. 30, 1945	12.85	Feb. 25, 1944
1189	5	6.50	Apr. 26, 1942	11.66	Mar. 3, 1944
1192	5	14.27	May 3, 1945	16.45	Mar. 8, 1944
2072	4	32.96	Oct. 25, 1941	35.26	Dec. 10, 1945
2088	2	3.90	Apr. 28, 1944	8.69	Mar. 3, 1944
M-1	7	18.56	Apr. 13, 1939	72.28	Feb. 3, 1945
M-1a	7	17.47	June 3, 1940	36.14	June 30, 1945
M-1b	7	15.94	June 3, 1940	33.75	Feb. 3, 1945
M-2	7	18.33	May 4, 1939	45.00	Oct. 5, 1943
					Mar. 8, 1944
M-2a	7	17.84	June 3, 1940	40.90	Sept. 9, 1940
M-2b	7	20.25	May 27, 1940	40.96	Mar. 8, 1944
M-3	7	23.20	May 8, 1939	75.41	Mar. 31, 1945
M-3a	7	19.93	May 27, 1940	43.35	May 3, 1945
M-3b	7	23.13	May 27, 1940	47.59	May 3, 1945
M-4	7	23.12	May 27, 1940	82.38	June 30, 1945
M-4a	7	22.87	May 27, 1940	45.40	May 3, 1945
M-4b	7	23.91	May 27, 1940	45.15	May 3, 1945
M-5	7	20.33	May 16, 1939	96.52	Aug. 3, 1945
M-5a	7	17.79	June 3, 1940	31.79	Oct. 6, 1945
M-5b	7	17.82	May 27, 1940	31.38	Oct. 6, 1945
M-6	7	19.05	May 27, 1940	91.32	Dec. 8, 1945
M-6a	7	18.63	June 3, 1940	33.86	Dec. 8, 1945
M-6b	7	18.46	June 3, 1940	33.31	Dec. 8, 1945
M-7	7	11.03	June 13, 1939	30.26	Dec. 6, 1945
M-7a	7	11.20	Aug. 21, 1939	23.93	Dec. 6, 1945
M-7b	7	11.24	Aug. 21, 1939	22.61	Sept. 6, 1945
M-8	7	15.93	May 27, 1940	87.06	Feb. 3, 1945
M-8a	7	14.72	June 3, 1940	28.92	Sept. 6, 1945
M-8b	7	13.30	June 3, 1940	27.72	Nov. 14, 1945
M-9	7	10.82	May 27, 1940	53.20	Mar. 1, 1945
M-9a	7	10.40	May 27, 1940	26.37	Sept. 6, 1945
M-9b	7	9.12	May 27, 1940	25.76	Oct. 6, 1945
M-10	7	12.05	May 27, 1940	68.41	May 31, 1945
M-10a	7	11.24	May 27, 1940	30.19	Sept. 6, 1945
M-10b	7	10.44	May 27, 1940	27.04	Sept. 6, 1945
M-11	7	7.11	May 27, 1940	65.79	Aug. 3, 1945
M-11a	7	6.38	May 27, 1940	23.71	Nov. 14, 1945
M-11b	7	7.67	May 27, 1940	23.77	Sept. 6, 1945
M-12	7	11.41	Aug. 21, 1939	55.94	June 30, 1945
M-12a	7	10.73	May 27, 1940	30.46	Sept. 6, 1945
M-12b	7	11.70	Aug. 21, 1939	31.59	Sept. 6, 1945
			Nov. 27, 1940		
M-13	7	8.27	Aug. 21, 1939	44.37	Jan. 3, 1945
M-13a	7	7.89	May 27, 1940	22.89	Feb. 5, 1945
M-13b	7	7.63	May 27, 1940	23.44	Sept. 6, 1945
M-14	7	9.07	May 27, 1940	49.76	Aug. 3, 1945
M-14a	7	8.31	Apr. 4, 1939	34.22	Sept. 6, 1945
M-14b	7	8.16	May 13, 27, June 3, 1940	30.18	Sept. 6, 1945
M-15	7	13.92	Apr. 17, 1939	47.01	Mar. 31, 1945
M-15a	7	12.49	May 27, 1940	26.16	Mar. 31, 1945
M-15b	7	13.45	May 27, 1940	26.21	Mar. 31, 1945
M-16	7	10.71	Aug. 21, 1939	53.28	Sept. 6, 1945
M-16a	7	10.93	Aug. 21, 1939	25.81	Mar. 1, 1945
M-16b	7	11.02	May 27, 1940	20.45	Mar. 1, 1945
M-17	7	6.58	Aug. 21, 1939	41.47	July 2, 1945

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 103 wells in Harvey County that are pumped or affected by pumping--Continued

Well	Length of record (years)	Highest level	Date	Lowest level	Date
M-17a	7	5.66	Aug. 21, 1939	14.54	Dec. 1, 1943
M-17b	7	4.01	Aug. 21, 1939	13.02	Dec. 1, 1943
M-18	7	10.00	Aug. 21, 1939	43.69	Mar. 1, 1945
M-18a	7	9.62	Aug. 21, 1939	29.59	Mar. 1, 1945
M-18b	7	9.38	Aug. 21, 1939	22.64	Mar. 1, 1945
M-19	7	10.82	Aug. 21, 1939	35.94	Jan. 3, 1945
M-19a	7	13.11	Aug. 21, 1939	22.72	Jan. 3, 1945
M-19b	7	11.47	Aug. 21, 1939	19.45	Apr. 1, 1944
M-20	7	9.74	May 27, 1940	64.20	May 31, 1945
M-20a	7	9.28	May 27, 1940	26.41	Oct. 6, 1945
M-20b	7	8.49	May 27, 1940	26.77	Oct. 6, 1945
M-21	7	8.32	Aug. 21, 1939	32.13	Feb. 5, 1945
M-21a	7	8.50	Aug. 21, 1939	21.52	Feb. 5, 1945
M-21b	7	8.08	Aug. 21, 1939	19.00	Feb. 5, 1945
M-22	7	9.20	Aug. 21, 1939	40.68	Sept. 6, 1945
M-22a	7	8.49	Aug. 21, 1939	23.46	Feb. 5, 1945
M-22b	7	9.28	Aug. 21, 1939	19.60	Sept. 6, 1945
M-23	7	7.85	Aug. 21, 1939	47.18	Aug. 3, 1945
M-23a	7	8.27	Aug. 21, 1939	17.03	Feb. 5, 1945
M-23b	7	7.50	Aug. 21, 1939	15.44	Feb. 1, 1944
M-24	7	8.71	Aug. 21, 1939	44.18	Aug. 3, 1945
M-24a	7	8.88	Aug. 21, 1939	18.90	Mar. 1, 1945
M-24b	7	11.17	Aug. 28, 1939	17.50	Nov. 9, 1943
M-25	7	5.54	Aug. 21, 1939	36.56	Feb. 5, 1945
M-25a	7	5.31	Aug. 21, 1939	12.37	Mar. 7, 1944
M-25b	7	6.89	Aug. 21, 1939	13.84	Mar. 7, 1944

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 25 wells in Harvey County that are not affected by pumping

Well	Length of record (years)	Highest level	Date	Lowest level	Date
72	8	16.88	May 4, 1945	25.35	Oct. 7, 1937
294	8	31.28	June 2, 1945	40.92	Apr. 3, 4, 5, 1938
325	8	5.16	May 1, 1945	13.01	June 4, 1939
701	8	33.66	May 4, 1945	44.23	Nov. 2, 1938
817	7	6.13	Apr. 20, 1945	17.12	Oct. 25, 1940
824	7	5.77	May 4, 1945	18.16	Nov. 5, 1940
831	7	11.53	May 4, 1945	20.54	Nov. 5, 1940
832	7	12.41	May 4, 1945	20.35	Nov. 5, 1940
833	7	5.11	Oct. 2, 1945	11.49	Mar. 1, 1944
852	7	9.27	May 6, 1944	16.66	Nov. 5, 1940
853	7	6.03	Sept. 30, 1945	11.69	Jan. 14, 1944
854	7	5.24	Apr. 27, 1945	14.87	Nov. 1, 1940
875	7	a +.98	Mar. 2, 1945	6.04	Oct. 25, 1940
876	7	21.79	Dec. 22, 1944	27.83	Nov. 8, 1940
877	7	9.95	Mar. 6, 1945	14.95	Jan. 27, 1941
880	7	2.56	Sept. 30, 1945	7.00	Jan. 14, 1944
881	7	3.23	Sept. 30, 1945	7.09	Jan. 7, 1944
888	7	a +.43	July 27, 1945	8.95	Oct. 27, 1939
889	7	.89	May 6, 1944	8.13	Dec. 10, 1943
890	7	.10	May 2, 1945	7.07	Nov. 5, 1940
891	7	a +.46	May 11, 1944	4.27	June 4, 1941
892	7	a +1.15	May 12, 1944	3.92	Oct. 3, 1940
893	7	a +.87	May 4, 1942	3.77	Jan. 27, 1941
1174	5	2.28	May 1, 1945	9.04	July 8, 1943
1187	5	3.68	May 4, 1945	10.31	Mar. 1, 1944

a Above land-surface datum.

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 103 wells in Harvey County that are pumped or affected by pumping

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945	Net rise (+) or net decline (-) for period of record
2	8.02	+0.11	-0.68
3	15.93	a -1.95	-13.66
66d	13.12	+4.12	+6.51
86	8.29	+1.01	+1.71
87	23.93	+13.86	+1.83
87a	22.90	+14.10	+1.97
506	12.75	-1.51	+3.33
507	11.33	-1.79	-4.79
821	7.61	-1.10	-7.03
839	8.32	+2.47	-1.69
872	14.63	-1.17	-13.50
873	15.80	-1.80	-14.43
874	24.88	+1.88	-19.46
878	11.84	-3.61	-11.61
879	10.66	+2.29	-6.99
883	9.11	+4.18	+16.42
884	8.86	+2.95	-3.05
885	9.83	+3.92	-3.42
886	13.01	+3.34	-9.08
887	13.43	+2.23	-9.71
894	11.55	-1.11	-9.56
895	13.74	+2.20	-10.85
1112	3.66	a +7.73	+1.29
1186	5.62	-1.06	+6.7
1189	5.16	b +6.69	-2.15
1192	2.18	a +7.79	+1.68
2072	2.30	-1.18	-2.19
2088	4.79	c +1.72	+4.45
M-1	53.72	-3.00	-9.42
M-1a	18.67	-4.05	-8.82
M-1b	17.81	-4.27	-9.49
M-2	26.67	a -6.31	-18.30
M-2a	23.06	-6.35	-13.24
M-2b	20.71	-5.48	-15.03
M-3	52.21	-2.78	-16.68
M-3a	23.42	-4.81	-14.53
M-3b	24.46	-4.37	-14.87
M-4	59.26	-5.51	-21.62
M-4a	22.53	-4.09	-16.24
M-4b	21.24	-4.65	-16.46
M-5	76.19	d -64.66	-78.16
M-5a	14.00	-1.35	-12.86
M-5b	13.56	-3.30	-11.90
M-6	72.27	-1.42	-69.13
M-6a	15.23	-1.74	-14.58
M-6b	14.85	-1.65	-14.16
M-7	19.23	-8.89	-18.00
M-7a	12.73	-1.96	-11.86
M-7b	11.37	-1.17	-10.41
M-8	71.13	+1.24	-11.31
M-8a	14.20	-4.40	-12.56
M-8b	14.42	-1.80	-13.05
M-9	42.38	+3.93	-39.69
M-9a	15.97	-1.45	-15.20
M-9b	16.64	-1.43	-15.02
M-10	56.36	+2.32	-52.07
M-10a	18.95	-2.20	-17.77
M-10b	16.60	+3.30	-15.29

- a Last measurement made in November 1945.  
 b Net rise from October 1944 to June 1945.  
 c Net rise from October 1944 to October 1945.  
 d Net decline from November 1944 to August 1945.

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 103 wells in Harvey County that are pumped or affected by pumping--Continued

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945	Net rise (+) or net decline (-) for period of record
M-11	58.68	+0.38	-14.19
M-11a	17.33	-.01	-13.79
M-11b	16.10	+.54	-13.24
M-12	44.53	+31.24	-13.56
M-12a	19.73	+6.34	-12.41
M-12b	19.89	+4.72	-13.29
M-13	36.10	-20.10	-33.13
M-13a	15.00	-.08	-12.40
M-13b	15.81	+.37	-13.03
M-14	40.69	+16.89	-18.28
M-14a	25.91	+9.17	-15.73
M-14b	22.02	+4.34	-16.75
M-15	33.09	+25.05	-8.24
M-15a	13.67	+3.86	-6.88
M-15b	12.76	+5.24	-6.96
M-16	42.57	+32.84	-7.70
M-17	34.89	-25.80	-33.90
M-17a	8.88	+1.27	-5.10
M-17b	9.01	+1.15	-5.76
M-18	33.69	+5.06	-27.68
M-18a	19.97	+4.61	-14.41
M-18b	13.26	+3.93	-8.11
M-19	25.12	+21.04	-3.27
M-19a	9.61	+4.66	-2.58
M-19b	7.98	+3.50	-1.85
M-20	54.46	+.13	-47.05
M-20a	17.13	+1.60	-13.34
M-20b	18.28	+.08	-14.28
M-21	23.81	+.35	-4.15
M-21a	13.02	+.45	-3.32
M-21b	10.92	+.65	-3.09
M-22	31.48	-19.79	-24.02
M-22a	14.97	-4.07	-8.01
M-22b	10.32	-.51	-4.46
M-23	39.33	+7.29	-28.74
M-23a	8.76	+2.82	-1.93
M-23b	7.94	+3.42	-1.31
M-24	35.47	+1.35	-1.70
M-24a	10.02	-1.20	-4.13
M-24b	6.33	+2.02	-.37
M-25	33.02	+30.71	+.53
M-25a	7.06	+4.61	+2.25
M-25b	6.95	+4.99	+.01

Pumpage from city of Wichita wells M-1 to M-25, in millions of gallons, in 1945, and since beginning of pumping on Sept. 1, 1940

Well	1945	Total 1940-45	Well	1945	Total 1940-45
M-1	223.3	1,430.5	M-14	441.3	1,387.7
M-2	97.4	538.4	M-15	363.5	1,258.6
M-3	145.2	1,287.9	M-16	48.5	1,090.0
M-4	242.4	682.2	M-17	278.9	1,442.8
M-5	375.5	929.5	M-18	290.5	1,522.2
M-6	311.2	1,040.4	M-19	326.5	904.1
M-7	259.2	1,413.4	M-20	169.7	1,078.0
M-8	266.8	1,346.3	M-21	309.6	1,529.0
M-9	333.2	1,326.7	M-22	163.7	665.6
M-10	357.2	1,277.1	M-23	265.9	1,306.6
M-11	209.0	1,284.3	M-24	279.1	1,299.3
M-12	230.0	1,190.7	M-25	183.2	1,258.0
M-13	327.1	1,232.3		6,497.9	29,771.6



72 (\*840, p. 102; 845, p. 118; 886, p. 202; 908, p. 77; 938, p. 83; 946, p. 102; \*988, p. 89; 1018, p. 74). Anna Hertzler. SW $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 16, T. 22 S., R. 1 W.

Water level, in feet below land-surface datum, 1945								
Date		Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	18.91	Mar. 28	18.63	July 3	17.97	Oct. 9	18.50	
Feb. 2	18.98	May 4	16.88	Aug. 8	18.59	Nov. 15	18.54	
Mar. 8	18.94	June 2	17.28	Sept. 6	19.37	Dec. 4	18.88	

294 (\*840, p. 103; 845, p. 119; 886, p. 202; 908, p. 77; 938, p. 84; 946, p. 102; \*988, p. 89; 1018, p. 74). Owner of well, J. B. Schmidt; lessee, Hollow Oil Co. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 17, T. 22 S., R. 3 W.

Water level, in feet below land-surface datum, 1945							
Jan. 2	34.01	Mar. 28	33.41	July 3	31.61	Nov. 15	34.62
Feb. 2	34.18	May 4	33.13	Sept. 8	33.48	Dec. 4	34.79
Mar. 7	34.06	June 2	31.28	Oct. 9	34.57		

325 (\*840, p. 103; 845, p. 120; 886, p. 203; 908, p. 78; 938, p. 84; 946, p. 102; \*988, p. 89; 1018, p. 74). A. L. Gouldner. SW. corner SE $\frac{1}{4}$  sec. 19, T. 23 S., R. 3 W.

Water level, in feet below land-surface datum, 1945							
Jan. 31	7.33	May 1	5.16	Aug. 1	7.79	Nov. 9	7.19
Mar. 7	7.28	30	6.33	Sept. 8	8.84	Dec. 1	8.39
30	6.89	June 29	6.66	Oct. 2	7.16		

701 (\*845, p. 121; 886, p. 204; 908, p. 79; 938, p. 85; 946, p. 102; \*988, p. 89; 1018, p. 74). Dr. V. E. Cheskey. NE. corner NW $\frac{1}{4}$  sec. 3, T. 23 S., R. 1 W.

Water level, in feet below land-surface datum, 1945							
Jan. 2	34.01	Mar. 30	33.89	June 27	34.79	Nov. 14	35.54
Feb. 2	33.99	May 4	33.66	Aug. 2	35.56	Dec. 4	35.64
26	33.98	28	34.04	Oct. 2	34.33		

817 (\*845, p. 121; 886, p. 204; 908, p. 79; 938, p. 85; 946, p. 102; 103; \*988, p. 89; 1018, p. 74). City of Wichita. NW. corner sec. 1, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945											
Jan.	5	13.45	Apr.	20	6.13	July	20	13.30	Oct.	15	11.65
	12	13.60		27	8.51		27	13.25		22	12.67
	19	13.76	May	4	8.57	Aug.	3	13.37		29	12.92
	26	13.84		11	9.43		10	13.75	Nov.	5	12.94
Feb.	2	13.69		18	10.20		17	13.96		12	13.27
	16	13.88		25	10.86		24	14.10		19	13.52
	23	13.94	June	1	11.39		31	14.38		26	13.64
Mar.	2	13.28		8	11.89	Sept.	7	14.60	Dec.	3	13.65
	9	12.71		15	12.06		15	14.94		10	13.80
	16	12.65		22	12.07		22	14.96		17	13.95
	30	12.31		29	12.43		30	12.22		23	14.01
Apr.	6	12.79	July	6	12.89	Oct.	8	11.59		31	13.68
	13	12.55		13	13.18						

824 (\*845, p. 122; 886, p. 205; 908, p. 80; 938, p. 86; 946, p. 103; \*988, p. 89; 1018, p. 74). City of Wichita. SE. corner sec. 22, T. 24 S., R. 1 W.

Water level, in feet below land-surface datum, 1945							
Jan. 2	9.42	Mar. 30	9.92	June 27	9.02	Oct. 2	9.87
31	10.33	May 4	5.77	Aug. 2	10.15	Nov. 9	8.29
Feb. 26	10.20	28	7.64	Sept. 4	10.99	Dec. 5	8.72

831 (\*886, p. 205; 908, p. 80; 938, p. 86; 946, p. 103; \*988, p. 89; 1018, p. 75). City of Wichita. NE. corner sec. 19, T. 24 S., R. 1 W.

Water level, in feet below land-surface datum, 1945							
Jan. 2	15.73	Mar. 30	15.73	June 27	14.97	Oct. 2	14.96
31	16.18	May 4	11.53	Aug. 2	15.37	Nov. 12	15.71
Feb. 26	15.96	28	14.25	Sept. 4	16.40	Dec. 5	15.67

832 (\*886, p. 205; 908, p. 80; 938, p. 86; 946, p. 103; \*988, p. 90; 1018, p. 76). City of Wichita. NE. corner sec. 19, T. 24 S., R. 1 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	16.44	Mar. 30	16.63	June 27	15.73	Oct. 2	15.86
31	16.79	May 4	12.41	Aug. 2	16.14	Nov. 12	16.48
Feb. 26	17.09	28	14.85	Sept. 4	17.25	Dec. 5	16.56

833 (\*886, p. 205; 908, p. 80; 938, p. 86; 946, p. 103; \*988, p. 90; 1018, p. 76). City of Wichita. SW. corner sec. 19, T. 24 S., R. 1 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	8.80	May 4	5.44	Aug. 2	7.09	Nov. 9	6.73
Feb. 26	8.81	28	6.86	Sept. 4	8.39	Dec. 5	7.33
Mar. 30	8.64	June 27	7.46	Oct. 2	5.11		

852 (\*886, p. 206; 908, p. 80; 938, p. 86; 946, p. 103; \*988, p. 90; 1018, p. 76). City of Wichita. NE. corner sec. 29, T. 24 S., R. 1 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	13.22	May 4	12.81	Aug. 2	12.32	Nov. 9	11.87
Feb. 26	13.29	28	11.47	Sept. 4	13.18	Dec. 5	12.50
Mar. 30	13.10	June 27	12.14	Oct. 2	10.30		

853 (\*845, p. 122; 886, p. 206; 908, p. 80; 938, p. 87; 946, p. 103; \*988, p. 90; 1018, p. 76). City of Wichita. NW. corner sec. 13, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	8.92	Apr. 20	6.45	July 20	8.48	Oct. 15	6.56
12	9.10	27	6.39	27	8.22	22	7.41
19	9.23	May 4	6.40	Aug. 3	8.46	29	7.68
26	9.09	11	6.87	10	8.71	Nov. 5	7.81
Feb. 2	9.12	18	7.55	17	8.46	12	7.99
16	9.34	25	7.67	24	8.70	19	8.30
23	9.42	June 1	7.88	31	9.06	26	8.38
Mar. 2	8.93	8	8.25	Sept. 7	9.23	Dec. 3	8.46
9	8.93	15	8.36	15	9.41	10	8.69
16	8.76	22	8.48	22	9.16	17	8.76
30	8.86	29	8.59	30	6.03	23	8.81
Apr. 6	9.09	July 6	8.82	Oct. 8	6.48	31	8.26
13	8.71	13	8.91				

854 (\*845, p. 122; 886, p. 206; 908, p. 81; 938, p. 87; 946, p. 104; \*988, p. 90; 1018, p. 76). City of Wichita. SW. corner sec. 23, T. 23 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	9.89	Apr. 13	8.56	July 13	9.08	Oct. 15	7.53
12	9.17	20	5.38	20	8.86	22	8.16
19	9.32	27	5.24	27	8.38	29	8.35
26	9.22	May 4	5.83	Aug. 3	8.79	Nov. 5	8.36
Feb. 2	9.25	11	6.35	10	9.10	12	8.64
16	9.57	18	6.97	17	9.36	19	8.99
23	9.52	25	7.37	24	9.69	26	9.03
Mar. 2	9.76	June 1	7.62	31	9.91	Dec. 3	9.11
9	9.03	8	8.07	Sept. 7	10.18	10	9.37
16	8.68	15	8.29	15	10.31	17	9.40
23	8.44	22	8.56	22	10.34	23	9.42
30	8.90	29	8.72	30	6.86	31	9.38
Apr. 6	9.06	July 6	8.98	Oct. 8	7.42		

875 (\*886, p. 208; 908, p. 82; 938, p. 86; 946, p. 104; \*988, p. 91; 1018, p. 77). Owner of well, city of Wichita; owner of property, A. B. Haveley. SE. corner sec. 17, T. 23 S., R. 3 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	0.14	Apr. 6	0.20	July 6	1.56	Oct. 8	0.85
9	.33	13	a +.43	13	1.68	15	.84
12	.14	20	a +.67	20	1.51	22	1.08
19	a +.20	27	a +.97	27	1.29	29	1.23
26	a +.32	May 4	a +.37	Aug. 3	1.84	Nov. 5	1.27
Feb. 2	a +.07	11	a +.28	10	2.03	12	1.13
16	.16	18	.07	17	2.02	19	1.56
23	a +.17	25	.50	24	2.15	26	1.48
Mar. 2	a +.98	June 1	.58	31	2.58	Dec. 3	1.54
9	a +.32	8	.89	Sept. 7	3.00	10	1.83
16	a +.73	15	.97	15	3.24	17	1.80
23	a +.67	22	1.00	22	3.22	23	1.84
30	.18	29	1.04	30	.48	31	1.89

a Above land-surface datum.

876 (\*886, p. 208; 908, p. 82; 938, p. 88; 946, p. 104; \*988, p. 91; 1018, p. 77). Owner of well, city of Wichita; owner of property, A. B. Haveley. SE. corner sec. 17, T. 23 S., R. 3 W.

Water level, in feet below land-surface datum, 1945

Jan. 5	21.92	Apr. 13	22.28	July 13	22.97	Oct. 15	22.38
12	22.28	20	22.18	20	23.05	22	22.31
19	22.10	27	22.10	27	23.14	29	22.24
26	21.97	May 4	22.13	Aug. 3	23.22	Nov. 5	22.22
Feb. 2	22.04	11	22.17	10	22.43	12	22.33
16	22.19	18	22.21	17	22.42	19	22.52
23	22.05	25	22.29	24	22.47	26	22.60
Mar. 2	21.94	June 1	22.36	31	22.60	Dec. 3	22.64
9	21.89	8	22.47	Sept. 7	22.73	10	22.73
16	21.80	15	22.57	15	22.90	17	22.84
23	21.82	22	22.65	22	23.10	23	22.87
30	21.85	29	22.73	30	22.92	31	22.87
Apr. 6	22.51	July 6	22.85	Oct. 8	22.52		

877 (\*886, p. 208; 908, p. 82; 938, p. 88; 946, p. 104; \*988, p. 91; 1018, p. 77). Owner of well, city of Wichita; owner of property, A. B. Haveley. SE. corner sec. 17, T. 23 S., R. 3 W.

Lowest daily water level, in feet below land-surface datum, 1945

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	11.09	11.11	10.97	10.77	9.98	10.34	10.87	11.14	11.49	11.29	11.11	11.51
2	11.09	11.10	10.90	10.80	9.96	10.42	10.87	11.16	11.52	11.29	11.20	11.52
3	11.08	.....	10.90	10.81	9.99	10.45	10.87	11.18	11.52	11.27	11.21	11.53
4	11.10	.....	10.90	10.85	9.98	10.46	10.86	11.19	11.52	11.21	11.21	11.53
5	11.10	.....	10.85	10.88	9.96	10.47	10.90	11.22	11.54	11.18	11.16	11.52
6	11.04	.....	10.89	10.88	9.95	10.49	10.96	11.22	11.55	11.16	11.15	11.46
7	11.03	.....	10.92	10.88	9.96	10.51	10.96	11.22	11.57	11.17	11.16	11.46
8	11.09	.....	10.92	10.85	10.04	10.53	10.96	11.23	11.58	11.12	11.24	11.51
9	11.11	10.99	10.92	10.82	10.04	10.53	10.96	11.24	11.61	11.12	11.30	11.56
10	11.09	11.08	10.89	10.81	10.04	10.53	11.01	11.23	11.63	11.11	11.31	11.58
11	11.08	11.08	10.86	10.75	10.03	10.59	11.02	11.23	11.63	11.08	11.30	11.55
12	11.09	11.06	10.89	10.75	9.99	10.61	11.02	11.26	11.65	11.08	11.24	11.54
13	11.09	11.02	10.89	10.73	9.99	10.61	11.01	11.27	11.67	11.09	11.31	11.57
14	11.08	11.02	10.84	10.75	10.02	10.63	11.02	11.30	11.67	11.08	11.34	11.61
15	11.12	11.09	10.74	10.70	10.09	10.63	11.04	11.33	11.67	11.14	11.34	11.64
16	11.12	11.15	10.75	10.41	10.11	10.66	11.05	11.33	11.66	11.14	11.31	11.66
17	11.11	11.16	10.81	10.39	10.16	10.68	11.01	11.32	11.64	11.10	11.34	11.65
18	11.10	11.18	10.81	10.37	10.17	10.68	11.03	11.25	11.64	11.08	11.37	11.64
19	11.06	11.18	10.79	10.55	10.14	10.68	11.05	11.27	11.72	11.14	11.39	11.68
20	11.08	11.15	10.79	10.25	10.11	10.67	11.07	11.29	11.72	11.14	11.37	11.66
21	11.06	11.09	10.79	10.19	10.18	10.70	11.07	11.32	11.72	11.14	11.40	11.65
22	11.08	11.07	10.79	10.16	10.26	10.74	11.07	11.34	11.73	11.16	11.41	11.68
23	11.08	11.12	10.70	10.12	10.27	10.75	11.09	11.34	11.74	11.16	11.41	11.68

877--Continued.

Lowest daily water level, in feet below land-surface datum, 1945

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
24	11.06	11.12	10.63	10.08	10.27	10.75	11.11	11.35	11.73	11.15	11.41	11.67
25	11.02	11.09	10.63	10.04	10.27	10.77	11.13	11.35	11.71	11.15	11.40	11.68
26	11.05	11.04	10.68	10.01	10.29	10.77	11.05	11.36	11.71	11.16	11.41	11.72
27	11.05	11.03	10.69	10.02	10.30	10.70	11.06	11.37	11.69	11.16	11.42	11.73
28	11.05	10.97	10.75	10.00	10.35	10.75	11.07	11.38	11.55	11.16	11.43	11.73
29	11.07		10.78	10.01	10.37	10.78	11.08	11.40	11.54	11.17	11.46	11.72
30	11.08		10.92	10.01	10.37	10.82	11.10	11.42	11.39	11.17	11.48	11.74
31	11.10		10.91		10.36		11.13	11.46		11.14		11.78

880 (\*886, p. 210; 908, p. 83; 938, p. 90; 946, p. 105; \*988, p. 92; 1018, p. 78). 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 land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	5.33	Apr. 27	3.19	July 20	5.61	Oct. 15	4.39
12	5.46	May 4	3.63	27	5.25	22	4.53
19	5.51	11	4.05	Aug. 3	5.67	29	5.13
26	5.31	18	4.40	10	5.86	Nov. 5	5.21
Feb. 2	5.31	25	4.75	17	5.55	12	5.33
16	5.48	June 1	5.00	24	5.59	19	5.19
Mar. 9	5.15	8	5.22	31	5.93	26	5.62
16	5.02	15	5.36	Sept. 7	6.19	Dec. 3	5.71
23	4.83	22	5.42	15	6.26	10	6.09
30	5.08	29	5.43	22	6.27	17	5.46
Apr. 6	5.27	July 6	5.60	30	2.56	23	5.48
13	4.88	13	5.74	Oct. 8	4.38	31	5.53
20	5.13						

881 (\*886, p. 210; 908, p. 83; 938, p. 90; 946, p. 105; \*988, p. 92; 1018, p. 78). 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 land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	5.59	Apr. 20	5.61	July 13	5.98	Oct. 8	3.80
12	5.74	27	3.65	20	5.88	15	3.82
19	5.76	May 4	4.02	27	5.66	22	3.98
26	5.56	11	4.39	Aug. 3	5.96	29	4.82
Feb. 2	5.59	18	4.69	10	6.09	Nov. 5	5.21
16	5.74	25	4.99	17	5.88	12	5.33
Mar. 9	5.45	June 1	5.20	24	5.90	19	4.92
16	5.28	8	5.43	31	6.21	26	5.36
23	5.15	15	5.56	Sept. 7	6.38	Dec. 3	5.41
30	5.41	22	5.63	15	6.47	10	5.43
Apr. 6	5.55	29	5.66	22	6.54	17	5.84
13	5.17	July 6	5.85	30	3.23	23	5.89

888 (\*886, p. 212; 908, p. 85; 938, p. 91; 946, p. 105; \*988, p. 92; 1018, p. 78). 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 land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	0.21	Apr. 27	a +0.02	July 20	1.78	Oct. 15	1.36
12	.19	May 4	.26	27	a +.43	22	1.38
26	.09	11	.21	Aug. 3	1.96	29	1.61
Feb. 2	.19	18	.76	10	2.51	Nov. 5	1.72
16	.38	25	1.64	17	2.76	12	1.73
23	a +.07	June 1	1.97	24	3.24	19	2.01
Mar. 2	a +.13	8	2.25	31	3.91	26	2.13
9	.16	15	2.34	Sept. 7	4.59	Dec. 3	2.24
16	a +.03	22	1.69	15	4.87	10	2.30
30	.62	29	1.16	22	5.06	17	2.37
Apr. 6	.39	July 6	1.76	30	a +.24	23	2.40
13	a +.06	13	2.47	Oct. 8	1.00	31	2.42
20	.02						

a Above land-surface datum.

889 (\*886, p. 212; 908, p. 85; 938, p. 91; 946, p. 106; \*988, p. 93; 1018, p. 78). 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 land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	3.40	Apr. 20	0.96	July 20	4.60	Oct. 15	1.10
12	3.31	27	1.42	27	4.25	22	3.84
19	3.61	May 4	1.95	Aug. 3	4.31	29	4.01
26	3.90	11	2.57	10	4.65	Nov. 5	4.12
Feb. 2	3.30	18	3.12	17	4.70	12	4.49
16	3.90	25	3.52	24	4.86	19	4.71
23	3.70	June 1	3.44	31	5.30	26	4.81
Mar. 2	3.05	8	4.11	Sept. 7	5.31	Dec. 3	4.93
9	3.16	15	4.19	15	5.68	10	4.83
16	3.24	22	4.45	22	5.76	17	4.94
30	3.28	29	4.33	30	4.23	23	4.98
Apr. 6	3.60	July 6	4.58	Oct. 8	1.90	31	5.01
13	3.79	13	4.60				

890 (\*886, p. 212; 908, p. 85; 938, p. 92; 946, p. 106; \*988, p. 93; 1018, p. 78). Owner of well, city of Wichita; owner of property, J. F. Gorgenson. NE. corner SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 21, T. 24 S., R. 3 W.

Water level, in feet below land-surface datum, 1945

Jan. 10	2.28	Mar. 30	2.19	June 29	2.53	Oct. 2	1.00
31	2.21	May 2	.10	Aug. 7	2.86	Nov. 9	2.90
Feb. 27	1.96	30	1.86	Sept. 8	4.19	Dec. 1	3.14

891 (\*886, p. 213; 908, p. 85; 938, p. 92; 946, p. 106; \*988, p. 93; 1018, p. 78). 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 land-surface datum, 1945

Jan. 30	2.14	May 2	1.22	Aug. 2	2.76	Nov. 9	2.44
Feb. 27	2.01	28	2.50	Sept. 4	2.98	Dec. 5	2.27
Mar. 28	2.34	June 27	2.53	Oct. 2	1.22		

892 (\*886, p. 213; 908, p. 86; 938, p. 92; 946, p. 106; \*988, p. 93; 1018, p. 78). 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 land-surface datum, 1945

Jan. 30	1.35	May 2	0.14	Aug. 2	1.92	Nov. 9	1.67
Feb. 27	1.12	28	1.08	Sept. 4	2.40	Dec. 5	1.85
Mar. 28	1.48	June 27	1.66	Oct. 2	.21		

893 (\*886, p. 213; 908, p. 86; 938, p. 92; 946, p. 106; \*988, p. 93; 1018, p. 78). 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 land-surface datum, 1945

Jan. 30	1.08	May 2	a +0.31	Aug. 2	1.52	Nov. 9	1.36
Feb. 27	.94	28	1.11	Sept. 4	1.80	Dec. 5	1.63
Mar. 28	1.17	June 27	1.47	Oct. 2	.05		

a Above land-surface datum.

1174 (\*908, p. 87; 938, p. 93; 946, p. 106; \*988, p. 93; 1018, p. 78). City of Wichita. SW. corner sec. 32, T. 24 S., R. 1 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	5.30	Mar. 30	5.84	July 2	4.78	Oct. 5	2.59
Feb. 5	6.36	May 1	2.28	Aug. 1	4.45	Nov. 14	5.69
Mar. 1	5.68	31	4.11	Sept. 6	5.70	Dec. 6	5.36

1187 (\*988, p. 94; 1018, p. 79). City of Wichita. NW. corner sec. 29, T. 24 S., R. 1 W.

Water level, in feet below land-surface datum, 1945

Jan. 31	7.59	May 4	3.68	Aug. 2	6.17	Nov. 12	6.30
Feb. 26	7.63	28	5.95	Sept. 4	7.67	Dec. 5	6.87
Mar. 30	7.07	June 27	6.82	Oct. 2	3.83		

## Wells pumped or affected by pumping

2 (\*946, p. 112; \*988, p. 94; 1018, p. 79). Langwalter Estate.  
NW $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 23, T. 24 S., R. 2 W.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	7.16	Apr. 13	4.04	July 13	6.76	Oct. 15	5.06
12	7.54	20	1.53	20	6.56	22	5.33
19	7.84	May 4	3.99	27	6.30	29	5.52
26	8.02	11	4.86	Aug. 3	6.31	Nov. 5	5.54
Feb. 2	8.09	18	5.24	10	6.60	12	5.90
16	8.12	25	5.50	17	6.75	19	6.04
23	8.16	June 1	5.74	24	6.89	26	6.12
Mar. 2	8.16	8	5.97	31	7.13	Dec. 3	6.23
9	8.12	15	6.20	Sept. 7	7.34	10	6.32
16	8.06	22	6.38	15	7.51	17	6.50
30	6.77	29	6.53	22	7.49	23	6.54
Apr. 6	7.38	July 6	6.61	Oct. 8	4.00	31	6.57

3 (\*988, p. 94; 1018, p. 79). Mrs. Emma Linn Webster. SE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 8, T. 24 S., R. 2 W.

## Water level, in feet below land-surface datum, 1945

Jan. 3	20.66	Mar. 31	20.61	June 29	22.35	Sept. 6	22.69
Feb. 5	20.71	May 3	21.64	Aug. 3	22.61	Nov. 14	23.02
Mar. 1	20.98	31	22.26				

66d (\*988, p. 94; 1018, p. 79). City of Newton. SW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 32, T. 23 S., R. 1 W.

## Water level, in feet below land-surface datum, 1945

Jan. 2	49.90	Apr. 2	43.02	July 3	49.19	Oct. 12	46.09
Feb. 2	50.09	May 4	42.04	Aug. 8	48.72	Nov. 14	40.33
Mar. 8	50.19	June 2	45.87	Sept. 8	51.95	Dec. 5	45.99

86 (\*988, p. 95; 1018, p. 79). City of Halstead. NW $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 35, T. 23 S., R. 2 W.

## Water level, in feet below land-surface datum, 1945

Jan. 2	16.76	Apr. 6	16.20	July 3	16.76	Oct. 12	15.65
Feb. 2	16.73	May 4	12.49	Aug. 8	17.78	Nov. 14	17.10
Mar. 7	15.76	June 2	15.83	Sept. 8	18.98	Dec. 8	17.03

87 (\*988, p. 95; 1018, p. 79). City of Halstead. NW $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 35, T. 23 S., R. 2 W.

## Water level, in feet below land-surface datum, 1945

Jan. 2	15.78	Apr. 6	14.87	July 3 a	31.16	Oct. 12 a	30.69
Feb. 2	15.27	May 4	11.23	Aug. 8	17.45	Nov. 14	32.24
Mar. 7	14.91	June 2	15.73	Sept. 8 a	32.79	Dec. 8	16.71

a Pumping.

87a (\*988, p. 95; 1018, p. 80). City of Halstead. NW $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 35, T. 23 S., R. 2 W.

## Water level, in feet below land-surface datum, 1945

Jan. 2	17.27	Apr. 6	16.60	July 3 a	31.83	Oct. 12	31.06
Feb. 2	17.03	May 4	12.83	Aug. 8	18.04	Nov. 14 a	32.62
Mar. 7	16.50	June 2	16.92	Sept. 8	24.42	Dec. 8	17.18

a Pumping.

506 (\*845, p. 120; 886, p. 203; 908, p. 78; 938, p. 84; 946, p. 107, 108; \*988, p. 95; 1018, p. 80). Owner of well city of Wichita; owner of property, W. G. Backhaus. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 28, T. 23 S., R. 2 W.

Lowest daily water level, in feet below land-surface datum, 1945

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	12.80	13.61	12.85	12.44	6.96	12.23	13.18	13.36	14.58	9.90	.....	13.86
2	12.80	13.61	12.78	12.60	7.30	12.32	13.27	13.45	14.59	10.12	.....	13.89
3	12.86	.....	12.59	12.66	7.46	12.37	13.35	13.53	14.60	10.37	.....	13.89
4	12.90	.....	12.14	12.83	7.82	12.42	13.42	13.62	14.62	10.64	.....	13.89
5	12.89	.....	11.71	12.88	8.19	12.50	13.49	13.70	14.66	10.89	13.49	13.86
6	12.95	.....	11.86	12.89	8.49	12.62	13.54	13.76	14.73	11.08	13.58	13.84
7	12.98	.....	12.01	12.95	8.93	12.75	13.56	13.85	14.80	11.32	13.59	13.85
8	13.08	.....	12.11	12.99	9.20	12.82	13.56	13.92	14.84	11.38	13.72	13.91
9	13.09	13.53	12.18	13.05	9.33	12.90	13.57	13.92	14.91	11.49	13.76	13.95
10	13.10	13.57	12.23	13.07	9.57	12.96	13.62	13.90	14.94	11.63	13.76	.....
11	13.13	13.56	12.35	13.02	9.73	12.90	13.65	13.91	14.95	11.77	13.71	14.05
12	13.23	13.52	12.44	12.72	9.91	12.54	13.68	13.95	15.01	11.91	13.65	14.04
13	13.26	13.52	12.45	12.52	10.04	12.60	13.71	13.98	15.04	12.02	13.68	14.07
14	13.32	13.51	12.47	12.55	10.32	12.78	13.74	14.08	15.08	12.14	13.69	14.17
15	13.37	.....	12.43	12.45	10.52	12.89	13.77	14.15	15.10	12.25	13.67	14.20
16	13.38	13.63	11.92	.....	10.68	12.96	13.80	14.20	15.09	12.29	13.59	14.22
17	13.40	13.68	10.93	.....	10.82	12.99	13.80	14.19	15.07	12.36	13.65	14.11
18	13.41	13.72	10.86	.....	10.94	12.74	13.73	14.12	15.05	12.50	13.67	14.11
19	13.47	13.73	11.17	.....	11.03	12.42	13.77	14.10	15.07	12.59	13.68	.....
20	13.47	13.73	11.25	4.43	11.13	12.68	13.75	14.10	15.07	12.59	13.67	.....
21	13.43	13.73	11.23	5.17	11.39	12.87	13.76	14.22	15.07	12.66	13.71	.....
22	13.43	13.81	10.88	5.62	11.53	12.97	13.81	14.28	14.96	12.66	13.74	.....
23	13.43	13.83	10.89	.....	11.58	13.03	13.86	14.36	14.96	12.75	13.75	14.26
24	13.37	13.85	11.16	.....	11.64	13.05	13.97	14.39	14.89	12.81	13.77	14.24
25	13.43	13.75	11.44	.....	11.78	13.08	14.06	14.41	14.34	12.90	13.75	14.26
26	13.45	13.37	11.66	.....	11.85	13.09	14.06	14.42	14.10	12.95	13.75	14.26
27	13.43	13.04	11.88	5.58	11.97	13.07	13.41	14.44	14.09	13.01	13.80	14.26
28	13.41	12.92	12.03	5.82	12.06	13.08	13.08	14.47	13.75	13.08	13.81	14.26
29	13.47	.....	12.14	6.30	12.13	13.05	13.03	14.50	11.44	13.16	13.82	14.23
30	13.52	.....	12.24	6.59	12.16	13.09	13.14	14.52	10.06	13.18	13.81	14.26
31	13.59	.....	12.34	.....	12.15	.....	13.26	14.55	.....	13.20	.....	14.25

507 (\*845, p. 120; 886, p. 203; 908, p. 79; 938, p. 85; 946, p. 108; \*988, p. 96; 1018, p. 80). Owner of well, city of Wichita; owner of property, W. G. Backhaus. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 28, T. 23 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	9.16	Apr. 13	10.72	July 13	11.13	Oct. 15	9.49
12	10.02	20	4.14	20	10.55	22	8.89
19	10.47	27	6.62	27	10.77	29	10.36
26	11.19	May 4	8.16	Aug. 3	10.45	Nov. 5	11.32
Feb. 2	11.90	11	9.05	10	10.97	12	10.63
16	10.21	18	10.18	17	11.55	19	10.04
23	10.90	25	10.57	24	11.97	26	10.19
Mar. 2	9.64	June 1	10.83	31	11.36	Dec. 3	10.26
9	9.01	8	11.58	Sept. 7	11.80	10	10.14
16	8.25	15	11.79	15	13.00	17	10.84
23	7.62	22	11.79	22	11.67	23	10.93
30	9.60	29	10.18	30	8.25	31	10.92
Apr. 6	11.06	July 6	11.16	Oct. 8	9.28		

821 (\*886, p. 204; 908, p. 79; 938, p. 86; 946, p. 108; \*988, p. 96; 1018, p. 81). City of Wichita. NW corner sec. 6, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	19.21	Mar. 2	19.23	Apr. 27	19.22	June 15	19.20
12	19.25	9	19.30	May 4	19.13	22	19.28
19	19.18	16	19.37	11	19.06	29	19.32
26	19.18	30	19.35	18	19.03	July 6	19.37
Feb. 2	19.28	Apr. 6	19.40	25	19.03	13	19.42
16	19.33	13	19.43	June 1	19.10	20	19.44
23	19.29	20	19.40	8	19.14	27	19.45

821--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 3	19.49	Sept. 15	19.59	Oct. 29	19.03	Dec. 3	19.31
10	19.50	22	19.64	Nov. 5	19.05	10	19.44
17	19.50	30	19.45	12	19.09	17	19.47
24	19.52	Oct. 8	19.00	19	19.22	23	19.50
31	19.55	15	19.02	26	19.28	31	19.29
Sept. 7	19.47	22	19.00				

839 (#845, p. 122; 886, p. 206; 908, p. 80; 938, p. 86; 946, p. 108; \*988, p. 96; 1018, p. 81). City of Wichita. NE. corner sec. 35, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	16.64	May 1	12.77	Aug. 1	14.09	Nov. 14	13.60
Mar. 1	15.88	30	13.28	Sept. 5	14.81	Dec. 1	13.68
31	15.77	June 29	14.04	Oct. 5	11.77		

872 (#886, p. 207; 908, p. 81; 938, p. 87; 946, p. 109; \*988, p. 96; 1018, p. 81). 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 land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	31.84	May 1	a 31.89	Aug. 1	29.77	Nov. 14	31.88
Mar. 1	28.72	30	29.82	Sept. 5	32.28	Dec. 1	31.20
30	31.33	June 29	31.35	Oct. 5	31.79		

a Nearby well pumping.

873 (#886, p. 207; 908, p. 81; 938, p. 87; 946, p. 109; \*988, p. 97; 1018, p. 81). 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 land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	32.03	May 1	32.19	Aug. 1	30.00	Nov. 14	33.41
Mar. 1	28.81	30	30.02	Sept. 5	32.37	Dec. 1	32.07
30	31.56	June 29	31.56	Oct. 5	32.07		

874 (#886, p. 207; 908, p. 81; 938, p. 88; 946, p. 109; \*988, p. 97; 1018, p. 81). 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 land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	44.92	May 1	44.62	Aug. 1	40.81	Nov. 14	42.44
Mar. 1	38.29	30	41.37	Sept. 5	43.28	Dec. 1	40.64
30	43.58	June 29	41.45	Oct. 5	41.85		

878 (#886, p. 209; 908, p. 83; 938, p. 89; 946, p. 109; \*988, p. 97; 1018, p. 81). 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 land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	24.48	Apr. 20	24.42	July 20	24.58	Oct. 15	27.89
12	24.53	27	24.35	27	24.63	22	27.94
19	24.51	May 4	24.33	Aug. 3	24.65	29	27.81
26	24.52	11	24.32	10	24.68	Nov. 5	27.84
Feb. 2	24.55	18	24.28	17	24.69	12	27.86
16	24.57	25	24.32	24	24.72	19	28.01
23	24.57	June 1	24.54	31	24.74	26	28.00
Mar. 2	24.53	8	24.37	Sept. 7	24.78	Dec. 3	28.05
9	24.55	15	24.38	15	24.88	10	27.95
16	24.54	22	24.44	22	24.85	17	28.02
30	24.55	29	24.47	30	24.79	23	28.07
Apr. 6	24.57	July 6	24.54	Oct. 8	27.83	31	28.09
13	24.58	13	24.59				



879 (\*886, p. 209; 908, p. 83; 938, p. 89; 946, p. 109; \*988, p. 97; 1018, p. 82). 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 land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	27.31	Apr. 20	27.14	July 20	27.46	Oct. 15	24.62
12	27.30	27	26.90	27	27.54	22	24.79
19	27.19	May 4	27.10	Aug. 3	27.67	29	24.72
26	27.28	11	26.97	10	27.67	Nov. 5	24.75
Feb. 2	27.23	18	26.94	17	27.60	12	24.84
16	27.28	25	26.92	24	27.88	19	25.06
23	27.24	June 1	26.97	31	27.94	26	24.68
Mar. 2	27.07	8	26.82	Sept. 7	28.10	Dec. 3	24.73
9	27.25	15	27.02	15	28.18	10	24.78
16	27.24	22	27.33	22	27.87	17	24.71
30	27.20	29	27.30	30	27.54	23	24.77
Apr. 6	27.19	July 6	27.48	Oct. 8	24.59	31	24.87
13	27.37	13	27.47				

883 (\*886, p. 210; 908, p. 84; 938, p. 90; 946, p. 110; \*988, p. 98; 1018, p. 82). 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 land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	19.77	May 1 a	20.07	Aug. 1	19.93	Nov. 14	19.54
Mar. 1	19.71	30	18.43	Sept. 5	20.79	Dec. 1	17.88
30	20.04	June 29	20.10	Oct. 5	19.27		

a Nearby well pumping.

884 (\*886, p. 211; 908, p. 84; 938, p. 90; 946, p. 110; \*988, p. 98; 1018, p. 82). 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 land-surface datum 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	19.74	May 1	20.17	Aug. 1	19.75	Nov. 15	20.04
Mar. 1	19.76	30	18.88	Sept. 5	20.19	Dec. 1	18.21
Apr. 30	20.22	June 29	20.08	Oct. 5	19.45		

885 (\*886, p. 211; 908, p. 84; 938, p. 91; 946, p. 110; \*988, p. 98; 1018, p. 82). 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 land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	19.63	May 1	21.21	Aug. 1	21.18	Nov. 15	20.12
Mar. 1	19.65	30	18.37	Sept. 5	21.00	Dec. 1	18.48
30	19.96	June 29	21.29	Oct. 5	20.38		

886 (\*886, p. 211; 908, p. 84; 938, p. 91; 946, p. 110; \*988, p. 98; 1018, p. 83). Owner of well, city of Wichita; owner of property, F. H. Haiber. NE. corner NW $\frac{1}{4}$  sec. 16, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	13.28	May 1 a	13.18	July 4	13.39	Oct. 2	13.86
Feb. 28	15.00	30	14.05	Aug. 1	14.57	29	12.43
Mar. 30	13.92	June 29	14.18	31	14.43	Dec. 1	12.41

a Nearby well pumping.

887 (\*886, p. 211; 908, p. 85; 938, p. 91; 946, p. 110; \*988, p. 98; 1018, p. 83). Owner of well, city of Wichita; owner of property, F. H. Haiber. NE. corner NW $\frac{1}{4}$  sec. 16, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	14.05	May 1 a	14.00	July 4	14.31	Oct. 2	14.80
Mar. 1	16.15	30	15.30	Aug. 1	15.78	30	12.54
30	14.98	June 29	15.48	31	15.45	Dec. 1	13.19

a Nearby well pumping.

## 84 WATER LEVELS AND ARTESIAN PRESSURE, 1945, NORTH-CENTRAL STATES

894 (\*886, p. 213; 908, p. 86; 938, p. 92; 946, p. 110; \*988, p. 98; 1018, p. 83). 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 land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	19.55	Mar. 30	20.38	June 29	20.17	Oct. 5	20.56
31	20.58	May 1	20.22	Aug. 1	20.23	Nov. 14	21.11
Mar. 1	20.49	31	20.13	Sept. 5	20.56	Dec. 1	20.76

895 (\*886, p. 213; 908, p. 86; 938, p. 92; 946, p. 111; \*988, p. 99; 1018, p. 83). 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 land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	22.21	Mar. 30	21.87	June 29	23.07	Oct. 5	22.99
31	22.17	May 1	21.83	Aug. 1	23.08	Nov. 14	23.78
Mar. 1	22.08	31	21.07	Sept. 5	23.61	Dec. 1	22.05

1112 (\*886, p. 214; 908, p. 87; 938, p. 93; 946, p. 111; \*988, p. 99; 1018, p. 83). M. H. Miller, owner, A. C. Unruh, tenant. NW. corner NE $\frac{1}{4}$  sec. 31, T. 23 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	16.67	Mar. 31	16.66	June 30	14.91	Oct. 6	16.07
Feb. 3	16.72	May 3	14.23	Sept. 6	16.39	Nov. 14	16.07
Mar. 7	16.67	June 1	14.79				

1186 (\*946, p. 111; \*988, p. 99; 1018, p. 83). City of Wichita. SW. corner sec. 13, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	11.44	Apr. 20	8.53	July 20	10.71	Oct. 15	9.94
12	11.57	27	8.79	27	10.17	22	10.64
19	11.64	May 4	9.66	Aug. 3	11.24	29	10.73
26	11.34	11	10.43	10	11.32	Nov. 5	10.77
Feb. 2	11.46	18	10.72	17	11.11	12	10.94
16	11.68	25	10.96	24	11.28	19	11.14
23	11.78	June 1	11.10	31	11.57	26	11.11
Mar. 2	11.09	8	11.20	Sept. 7	11.77	Dec. 3	11.18
9	11.30	15	11.27	15	11.75	10	11.25
16	10.86	22	11.34	22	11.28	17	11.28
30	11.47	29	11.32	30	7.23	23	11.31
Apr. 6	11.62	July 6	11.47	Oct. 8	9.92	31	11.44
13	10.58	13	11.51				

1189 (\*946, p. 112; \*988, p. 99; 1018, p. 84). City of Wichita. SW. corner sec. 16, T. 24 S., R. 2 W. Water levels, in feet below land-surface datum, 1945: Jan. 4, 9.10; Apr. 6, 10.85; June 25, 10.00.

1192 (\*938, p. 93; 946, p. 112; \*988, p. 99; 1018, p. 84). City of Wichita. SW. corner sec. 16, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	15.38	Mar. 31	15.23	June 30	14.61	Oct. 6	14.57
Feb. 3	15.37	May 3	14.27	Sept. 6	15.39	Nov. 14	14.84
Mar. 7	15.24	June 1	14.42				

2072 (\*988, p. 100; 1018, p. 84). Peter Hoops and others, owner;  
N. T. Unruh, tenant. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 5, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	34.39	Apr. 27	35.15	July 20	35.16	Oct. 15	35.20
12	35.01	May 4	35.13	27	35.20	22	35.12
19	35.00	11	35.11	Aug. 3	35.20	29	35.14
26	35.01	18	35.10	10	35.20	Nov. 5	35.16
Feb. 2	35.04	25	35.10	17	35.20	12	35.19
16	35.03	June 1	35.10	24	35.21	19	35.14
23	35.05	8	35.12	31	35.22	26	35.18
Mar. 2	35.09	15	35.13	Sept. 7	35.19	Dec. 3	35.21
9	35.10	22	35.15	15	35.22	10	35.26
30	35.11	29	35.15	22	35.23	17	35.16
Apr. 6	35.12	July 6	35.16	30	35.22	23	35.18
13	35.14	13	35.18	Oct. 8	35.19	31	35.15
20	35.15						

2088 (\*1018, p. 84). City of Wichita. NW. corner NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 22,  
T. 24 S., R. 2 W. Water levels, in feet below land-surface datum, 1945:  
Jan. 4, 6.71; Apr. 6, 7.53; June 25, 5.80; Oct. 16, 4.24.

M-1 (\*908, p. 88; 938, p. 93; 946, p. 112; \*988, p. 100; 1018, p. 84).  
City of Wichita. NW. corner sec. 29, T. 23 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	28.06	Mar. 31	30.96	June 30	70.02	Oct. 6	30.31
Feb. 3	a 72.28	May 3	a 67.40	Aug. 3	69.90	Nov. 14	a 31.14
Mar. 7	70.59	June 1	33.00	Sept. 6	30.25	Dec. 8	27.98

a Pumping.

M-1a (\*908, p. 89; 938, p. 94; 946, p. 112; \*988, p. 100; 1018, p. 84).  
City of Wichita. NW. corner sec. 29, T. 23 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	25.47	Mar. 31	26.89	June 30	36.14	Oct. 6	27.09
Feb. 3	a 36.03	May 3	a 34.40	Aug. 3	35.49	Nov. 14	a 30.93
Mar. 7	34.42	June 1	29.31	Sept. 6	27.01	Dec. 8	26.98

a Well M-1 pumping.

M-1b (\*908, p. 89; 938, p. 94; 946, p. 112; \*988, p. 100; 1018, p. 84).  
City of Wichita. NW. corner sec. 29, T. 23 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	24.42	Mar. 31	25.23	June 30	32.43	Oct. 6	26.13
Feb. 3	a 33.75	May 3	a 32.44	Aug. 3	33.48	Nov. 14	a 31.03
Mar. 7	30.40	June 1	28.05	Sept. 6	26.06	Dec. 8	26.07

a Well M-1 pumping.

M-2 (\*908, p. 89; 938, p. 94; 946, p. 113; \*988, p. 100; 1018, p. 85).  
City of Wichita. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 29, T. 23 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	33.30	Mar. 31	36.33	June 1	36.62	Aug. 3	36.14
Feb. 3	37.33	May 3	37.69	30	37.12	Nov. 14	a 36.63
Mar. 7	36.51						

a Pumping.

M-2a (\*908, p. 90; 938, p. 94; 946, p. 113; \*988, p. 101; 1018, p. 85).  
City of Wichita. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 29, T. 23 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	28.56	Mar. 31	33.43	June 30	34.84	Oct. 6	32.41
Feb. 3	34.47	May 3	35.41	Aug. 3	37.44	Nov. 14	a 33.91
Mar. 7	33.49	June 1	32.00	Sept. 6	32.15	Dec. 8	31.57

a Well M-2 pumping.

M-2b (#908, p. 90; 938, p. 94; 946, p. 113; \*988, p. 101; 1018, p. 85).  
City of Wichita. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 29, T. 23 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	35.29	Mar. 31	36.48	June 30	39.36	Oct. 6	35.98
Feb. 3	37.59	May 3	39.90	Aug. 3	37.65	Nov. 14	a 35.79
Mar. 7	37.04	June 1	37.02	Sept. 6	35.91	Dec. 8	36.31

a Well M-2 pumping.

M-3 (#908, p. 91; 938, p. 94; 946, p. 113; \*988, p. 101; 1018, p. 85).  
City of Wichita. SE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 29, T. 23 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	39.44	Mar. 31	a 75.41	June 30	40.46	Oct. 6	40.67
Feb. 3	41.64	May 3	a 71.74	Aug. 3	40.95	Nov. 14	39.30
Mar. 7	40.09	June 1	42.97	Sept. 6	a 75.20	Dec. 8	39.88

a Pumping.

M-3a (#908, p. 91; 938, p. 95; 946, p. 113; \*988, p. 101; 1018, p. 85).  
City of Wichita. SE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 29, T. 23 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	36.96	Mar. 31	a 37.81	June 30	37.64	Oct. 6	37.34
Feb. 3	39.93	May 3	a 43.35	Aug. 3	37.48	Nov. 14	37.23
Mar. 7	37.42	June 1	38.30	Sept. 6	a 40.98	Dec. 8	37.63

a Well M-3 pumping.

M-3b (#908, p. 92; 938, p. 95; 946, p. 113; \*988, p. 101; 1018, p. 85).  
City of Wichita. SE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 29, T. 23 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	41.40	Mar. 31	a 41.65	June 30	42.03	Oct. 6	41.51
Feb. 3	42.61	May 3	a 47.59	Aug. 3	41.42	Nov. 14	41.12
Mar. 7	41.82	June 1	42.48	Sept. 6	a 45.15	Dec. 8	41.87

a Well M-3 pumping.

M-4 (#908, p. 92; 938, p. 96; 946, p. 113; \*988, p. 101; 1018, p. 85).  
City of Wichita. SE. corner sec. 30, T. 23 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Feb. 3	41.54	June 30	82.38	Sept. 6	44.55	Nov. 14	43.62
May 3	a 77.80	Aug. 3	43.89	Oct. 6	a 81.76	Dec. 8	44.80
June 1	a 72.53						

a Pumping.

M-4a (#908, p. 93; 938, p. 95; 946, p. 114; \*988, p. 101; 1018, p. 85).  
City of Wichita. SE. corner sec. 30, T. 23 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	41.97	Mar. 31	42.40	June 30	44.03	Oct. 6	a 44.01
Feb. 3	40.47	May 3	a 45.40	Aug. 3	41.10	Nov. 14	40.56
Mar. 7	42.60	June 1	a 42.96	Sept. 6	41.10	Dec. 8	40.42

a Well M-4 pumping.

M-4b (#908, p. 93; 938, p. 95; 946, p. 114; \*988, p. 102; 1018, p. 86).  
City of Wichita. SE. corner sec. 30, T. 23 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	37.08	Mar. 31	42.17	June 30	43.71	Oct. 6	a 43.18
Feb. 3	39.82	May 3	a 45.15	Aug. 3	41.29	Nov. 14	41.35
Mar. 7	42.34	June 1	a 42.72	Sept. 6	41.29	Dec. 8	41.48

a Well M-4 pumping.

M-5 (#908, p. 94; 938, p. 96; 946, p. 114; \*988, p. 102; 1018, p. 86).  
City of Wichita. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 32, T. 23 S., R. 2 W. Water levels, in feet below land-surface datum, 1945: June 1, 95.64, pumping; June 30, 95.64; Aug. 3, 96.52.

M-5a (\*908, p. 94; 938, p. 96; 946, p. 114; \*988, p. 102; 1018, p. 86).  
City of Wichita. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 32, T. 23 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	30.22	Mar. 31	a 31.34	June 30	31.06	Oct. 6	a 31.79
Feb. 3	a 31.45	May 3	a 31.74	Aug. 3	29.80	Nov. 14	a 31.06
Mar. 7	a 31.09	June 1	a 29.53	Sept. 6	a 31.78	Dec. 8	a 31.22

a Well M-5 pumping.

M-5b (\*908, p. 95; 938, p. 96; 946, p. 114; \*988, p. 102; 1018, p. 86).  
City of Wichita. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 32, T. 23 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	30.48	Mar. 31	a 31.06	June 30	30.69	Oct. 6	a 31.38
Feb. 3	a 31.29	May 3	a 31.30	Aug. 3	29.44	Nov. 14	a 30.18
Mar. 7	a 30.34	June 1	a 29.25	Sept. 6	a 31.31	Dec. 8	a 30.35

a Well M-5 pumping.

M-6 (\*908, p. 95; 938, p. 96; 946, p. 114; \*988, p. 102; 1018, p. 86).  
City of Wichita. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 32, T. 23 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	88.46	Mar. 31	a 90.22	June 30	86.25	Oct. 6	a 89.64
Feb. 3	a 90.46	May 3	a 82.30	Aug. 3	32.61	Nov. 14	a 89.40
Mar. 1	31.61	June 1	32.48	Sept. 6	a 88.55	Dec. 8	a 91.32

a Pumping.

M-6a (\*908, p. 96; 938, p. 96; 946, p. 114; \*988, p. 102; 1018, p. 86).  
City of Wichita. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 32, T. 23 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	31.51	May 3	a 33.18	Aug. 3	31.44	Nov. 14	a 33.59
Feb. 3	a 31.86	June 1	30.83	Sept. 6	a 33.52	Dec. 8	a 33.86
Mar. 31	a 31.54	30	32.24	Oct. 6	a 33.71		

a Well M-6 pumping.

M-6b (\*908, p. 96; 938, p. 97; 946, p. 115; \*988, p. 103; 1018, p. 86).  
City of Wichita. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 32, T. 23 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	32.01	Mar. 31	a 32.40	June 30	32.09	Oct. 6	a 33.26
Feb. 3	a 32.79	May 3	a 32.70	Aug. 3	31.01	Nov. 14	a 33.18
Mar. 1	29.30	June 1	30.45	Sept. 6	a 32.97	Dec. 8	a 33.31

a Well M-6 pumping.

M-7 (\*908, p. 97; 938, p. 97; 946, p. 115; \*988, p. 103; 1018, p. 86).  
City of Wichita. NW. corner sec. 16, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	a 29.27	Mar. 31	a 29.59	June 30	29.13	Oct. 5	20.23
Feb. 5	20.93	May 3	19.50	Aug. 3	29.29	Nov. 14	20.12
Mar. 1	a 29.97	31	a 28.80	Sept. 6	a 30.23	Dec. 6	a 30.26

a Pumping.

M-7a (\*908, p. 97; 938, p. 97; 946, p. 115; \*988, p. 103; 1018, p. 87).  
City of Wichita. NW. corner SW $\frac{1}{4}$  sec. 16, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	a 22.53	Mar. 31	22.80	June 30	21.16	Oct. 5	19.64
Feb. 5	a 19.16	May 3	18.93	Aug. 3	21.84	Nov. 14	19.58
Mar. 1	23.16	31	22.10	Sept. 6	23.52	Dec. 6	23.93

a Well M-7 pumping.

M-7b (\*908, p. 98; 938, p. 97; 946, p. 115; \*988, p. 103; 1018, p. 87).  
City of Wichita. NW. corner SW $\frac{1}{4}$  sec. 16, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	a 21.84	Mar. 31	20.76	June 30	20.89	Oct. 5	20.31
Feb. 5	a 20.54	May 3	19.46	Aug. 3	21.93	Nov. 14	20.27
Mar. 1	21.29	31	21.11	Sept. 6	22.61	Dec. 6	22.56

a Well M-7 pumping.

## 88 WATER LEVELS AND ARTESIAN PRESSURE, 1945, NORTH-CENTRAL STATES

M-8 (\*908, p. 98; 938, p. 97; 946, p. 115; \*988, p. 103; 1018, p. 87 ).  
City of Wichita. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 6, T. 24 S., R. 2 W.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	a 86.22	Mar. 31	a 86.08	June 29	30.93	Oct. 6	31.18
Feb. 3	a 87.06	May 3	a 91.44	Aug. 3	83.25	Nov. 14	31.21
Mar. 1	a 86.54	June 1	a 86.80	Sept. 6	a 83.46	Dec. 6	29.43

a Pumping.

M-8a (\*908, p. 99; 938, p. 98; 946, p. 115; \*988, p. 103; 1018, p. 87).  
City of Wichita. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 6, T. 24 S., R. 2 W.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	a 27.82	Mar. 31	a 28.51	June 29	26.96	Oct. 6	28.27
Feb. 3	a 28.16	May 3	a 28.42	Aug. 3	28.36	Nov. 14	28.66
Mar. 1	a 28.64	June 1	a 28.17	Sept. 6	a 28.92	Dec. 6	27.86

a Well M-8 pumping.

M-8b (\*908, p. 99; 938, p. 98; 946, p. 116; \*988, p. 103; 1018, p. 87).  
City of Wichita. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 6, T. 24 S., R. 2 W.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	a 26.35	Mar. 31	a 25.92	June 29	26.39	Oct. 6	27.04
Feb. 3	a 26.95	May 3	a 27.17	Aug. 3	26.84	Nov. 14	27.72
Mar. 1	a 26.02	June 1	a 26.76	Sept. 6	a 27.57	Dec. 6	26.86

a Well M-8 pumping.

M-9 (\*908, p. 99; 938, p. 98; 946, p. 116; \*988, p. 104; 1018, p. 87 ).  
City of Wichita. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 6, T. 24 S., R. 2 W.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	a 52.90	Mar. 31	25.63	June 29	50.37	Oct. 6	a 49.28
Feb. 3	26.14	May 3	a 48.56	Aug. 3	48.78	Nov. 14	a 49.31
Mar. 1	a 53.20	31	25.37	Sept. 6	a 49.15	Dec. 6	a 51.19

a Pumping.

M-9a (\*908, p. 100; 938, p. 98; 946, p. 116; \*988, p. 104; 1018, p. 87).  
City of Wichita. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 8, T. 24 S., R. 2 W.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	a 25.19	Mar. 31	25.14	June 29	25.19	Oct. 6	a 26.27
Feb. 3	24.34	May 3	a 24.84	Aug. 3	25.32	Nov. 14	a 26.36
Mar. 1	a 25.14	31	24.15	Sept. 6	a 26.37	Dec. 6	a 26.18

a Well M-9 pumping.

M-9b (\*908, p. 100; 938, p. 98; 946, p. 116; \*988, p. 104; 1018, p. 87).  
City of Wichita. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 8, T. 24 S., R. 2 W.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	a 23.29	Mar. 31	23.18	June 29	23.61	Oct. 6	a 25.76
Feb. 3	22.16	May 3	a 23.28	Aug. 3	23.81	Nov. 14	a 24.83
Mar. 1	a 23.19	31	22.80	Sept. 6	a 24.20	Dec. 6	a 24.76

a Well M-9 pumping.

M-10 (\*908, p. 101; 938, p. 98; 946, p. 116; \*988, p. 104; 1018, p. 88).  
City of Wichita. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 8, T. 24 S., R. 2 W.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	a 66.14	Mar. 31	a 68.24	June 29	65.49	Oct. 6	a 64.22
Feb. 3	27.68	May 3	a 63.89	Aug. 3	64.59	Nov. 14	a 64.20
Mar. 1	a 67.91	31	a 68.41	Sept. 6	a 64.01	Dec. 6	a 65.89

a Pumping.

M-10a (\*908, p. 101; 938, p. 99; 946, p. 116; \*988, p. 104; 1018, p. 88). City of Wichita. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 8, T. 24 S., R. 2 W.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	a 29.02	Mar. 31	a 29.26	June 29	29.02	Oct. 6	a 29.71
Feb. 3	26.30	May 3	a 28.83	Aug. 3	29.21	Nov. 14	a 29.74
Mar. 1	a 29.34	31	a 28.62	Sept. 6	a 30.19	Dec. 6	a 29.73

a Well M-10 pumping.

M-10b (\*908, p. 102; 938, p. 99; 946, p. 117; \*988, p. 104; 1018, p. 88).  
City of Wichita. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 8, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	a 26.26	Apr. 31	a 25.72	June 29	25.91	Oct. 6	a 26.46
Feb. 3	a 25.26	May 3	a 26.18	Aug. 3	26.14	Nov. 14	a 26.51
Mar. 1	a 26.16	31	a 25.77	Sept. 6	a 27.04	Dec. 6	a 26.44

a Well M-10 pumping.

M-11 (\*908, p. 102; 938, p. 99; 946, p. 117; \*988, p. 104; 1018, p. 88). City of Wichita. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 8, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	21.89	Mar. 31	21.36	June 29	43.57	Oct. 6	a 41.04
Feb. 3	21.72	May 3	21.70	Aug. 3	65.79	Nov. 14	a 42.33
Mar. 1	21.61	31	21.24	Sept. 6	a 40.27	Dec. 6	21.86

a Pumping.

M-11a (\*908, p. 103; 938, p. 99; 946, p. 117; \*988, p. 105; 1018, p. 88). City of Wichita. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 8, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	20.41	Mar. 31	20.01	June 29	21.93	Oct. 6	a 23.03
Feb. 3	20.10	May 3	19.98	Aug. 3	22.74	Nov. 14	a 23.71
Mar. 1	20.08	31	19.82	Sept. 6	a 23.30	Dec. 6	20.87

a Well M-11 pumping.

M-11b (\*908, p. 103; 938, p. 99; 946, p. 117; \*988, p. 105; 1018, p. 88). City of Wichita. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 8, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	21.89	Mar. 31	21.38	June 29	22.39	Oct. 6	a 23.18
Feb. 3	21.68	May 3	21.29	Aug. 3	22.71	Nov. 14	a 23.46
Mar. 1	21.46	31	21.24	Sept. 6	a 23.77	Dec. 6	21.66

a Well M-11 pumping.

M-12 (\*908, p. 104; 938, p. 99; 946, p. 117; \*988, p. 105; 1018, p. 89). City of Wichita. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 9, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	26.14	Mar. 31	a 55.24	June 30	55.94	Oct. 5	26.13
Feb. 5	a 54.17	May 3	a 53.28	Aug. 3	54.53	Nov. 14	a 54.41
Mar. 1	a 55.02	31	a 55.41	Sept. 6	a 54.35	Dec. 6	26.71

M-12a (\*908, p. 104; 938, p. 100; 946, p. 117; \*988, p. 105; 1018, p. 88). City of Wichita. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 9, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	24.19	Mar. 31	a 29.09	June 30	28.96	Oct. 5	24.64
Feb. 5	a 28.58	May 3	a 30.36	Aug. 3	28.81	Nov. 14	a 30.26
Mar. 1	a 29.66	31	a 30.27	Sept. 6	a 30.46	Dec. 6	24.38

a Well M-12 pumping.

M-12b (\*908, p. 104; 938, p. 100; 946, p. 117; \*988, p. 105; 1018, p. 89). City of Wichita. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 9, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	24.19	Mar. 31	a 30.47	June 30	29.44	Oct. 5	26.41
Feb. 5	a 29.43	May 3	a 31.13	Aug. 3	29.36	Nov. 14	a 29.44
Mar. 1	a 30.74	31	a 31.02	Sept. 6	a 31.59	Dec. 6	26.24

a Well M-12 pumping.

M-13 (\*908, p. 105; 938, p. 100; 946, p. 118; \*988, p. 105; 1018, p. 89). City of Wichita. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 17, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	a 44.37	Mar. 31	21.66	June 29	43.98	Oct. 6	a 43.81
Feb. 5	a 39.96	May 3	a 42.52	Aug. 3	43.56	Nov. 14	a 43.83
Mar. 1	22.13	31	21.81	Sept. 6	a 43.60	Dec. 6	a 42.86

a Pumping.

M-13a (\*908, p. 105; 938, p. 100; 946, p. 118; \*988, p. 105; 1018, p. 89). City of Wichita. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 17, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	a 22.88	Mar. 31	20.69	June 29	21.84	Oct. 6	a 22.78
Feb. 5	a 22.89	May 3	a 21.73	Aug. 3	21.91	Nov. 14	a 22.81
Mar. 1	20.38	31	20.82	Sept. 6	a 22.83	Dec. 6	a 21.34

a Well M-13 pumping.

M-13b \*908, p. 106; 938, p. 100; 946, p. 118; \*988, p. 106; 1018, p. 89). City of Wichita. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 17, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	a 22.17	Mar. 31	21.59	June 29	22.29	Oct. 6	a 23.32
Feb. 5	a 21.37	May 3	a 22.34	Aug. 3	22.89	Nov. 14	a 23.36
Mar. 1	21.79	31	22.15	Sept. 6	a 23.44	Dec. 6	a 21.83

a Well M-13 pumping.

M-14 (\*908, p. 107; 938, p. 101; 946, p. 118; \*988, p. 106; 1018, p. 89). City of Wichita. NW. corner NW $\frac{1}{4}$  sec. 16, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	a 46.49	Mar. 31	26.06	June 30	26.28	Oct. 5	27.83
Feb. 5	24.13	May 3	a 45.96	Aug. 3	49.76	Nov. 14	30.75
Mar. 1	a 46.44	31	a 47.26	Sept. 6	a 52.83	Dec. 8	26.96

a Pumping.

M-14a (\*908, p. 107; 938, p. 101; 946, p. 118; \*988, p. 106; 1018, p. 89). City of Wichita. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 16, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	a 30.96	Mar. 31	25.28	June 30	25.01	Oct. 5	27.49
Feb. 5	22.73	May 3	a 33.33	Aug. 3	33.65	Nov. 14	24.79
Mar. 1	a 32.26	31	a 32.58	Sept. 6	a 34.22	Dec. 6	24.04

a Well M-14 pumping.

M-14b (\*908, p. 107; 938, p. 101; 946, p. 118; \*988, p. 106; 1018, p. 89). City of Wichita. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 9, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	a 27.04	Mar. 31	25.00	June 30	24.67	Oct. 5	27.68
Feb. 5	22.83	May 3	a 29.25	Aug. 3	29.57	Nov. 14	26.03
Mar. 1	a 28.24	31	a 29.51	Sept. 6	a 30.18	Dec. 6	24.93

a Well M-14 pumping.

M-15 (\*908, p. 108; 938, p. 101; 946, p. 118; \*988, p. 106; 1018, p. 89). City of Wichita. SE. corner NE $\frac{1}{4}$  sec. 9, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	44.79	Mar. 31	a 47.01	July 2	25.38	Oct. 5	21.96
Feb. 5	22.59	May 3	a 44.47	Aug. 3	24.71	Nov. 14	21.54
Mar. 1	22.81	31	24.80	Sept. 6	24.00	Dec. 6	21.16

a Pumping.

M-15a (\*908, p. 108; 938, p. 101; 946, p. 119; \*988, p. 106; 1018, p. 90). City of Wichita. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 9, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	25.25	Mar. 31	a 26.16	July 2	24.33	Oct. 5	20.27
Feb. 5	21.58	May 3	a 25.32	Aug. 3	24.16	Nov. 14	20.12
Mar. 1	23.14	31	23.70	Sept. 6	23.89	Dec. 6	20.06

a Well M-15 pumping.

M-15b (\*908, p. 109; 938, p. 101; 946, p. 119; \*988, p. 107; 1018, p. 90). City of Wichita. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 9, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	25.10	Mar. 31	a 26.21	July 2	25.60	Oct. 5	21.49
Feb. 5	22.57	May 3	a 25.32	Aug. 3	24.57	Nov. 14	21.29
Mar. 1	24.01	31	24.72	Sept. 6	24.81	Dec. 6	21.11

a Well M-15 pumping.



M-16 (\*908, p. 109; 938, p. 102; 946, p. 119; \*988, p. 107; 1018, p. 90 ). City of Wichita. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 9, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	21.34	Mar. 31	22.00	July 2	51.44	Oct. 5	19.14
Feb. 5	20.35	May 3	a 49.22	Aug. 3	51.52	Nov. 14	19.28
Mar. 1	a 51.92	31	a 51.60	Sept. 6	a 53.28	Dec. 6	19.25

a Pumping.

M-16a (\*908, p. 110; 938, p. 102; 946, p. 119; \*988, p. 107; 1018, p. 90 ). City of Wichita. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 9, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	20.71	Mar. 31	21.37	July 2	25.29	Oct. 5	18.44
Feb. 5	20.04	May 3	a 23.50	Aug. 3	25.19	Nov. 14	18.56
Mar. 1	a 25.81	31	a 25.27	Sept. 5	a 25.58	Dec. 6	18.53

M-16b (\*908, p. 110; 938, p. 102; 946, p. 119; \*988, p. 107; 1018, p. 90 ). City of Wichita. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 9, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	20.29	Mar. 31	20.08	July 2	20.32	Oct. 5	18.82
Feb. 5	19.58	May 3	a 19.57	Aug. 3	20.26	Nov. 14	18.98
Mar. 1	a 20.45	31	a 20.14	Sept. 6	a 19.98	Dec. 6	18.82

a Well M-16 pumping.

M-17 (\*908, p. 111; 938, p. 102; 946, p. 119; \*988, p. 107; 1018, p. 90). City of Wichita. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 16, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	40.48	Mar. 31	a 41.02	July 2	41.47	Oct. 5	a 40.40
Feb. 5	a 40.24	May 3	a 38.46	Aug. 3	40.17	Nov. 14	a 40.60
Mar. 1	15.54	31	a 40.89	Sept. 6	15.30	Dec. 8	a 41.20

a Pumping.

M-17a (\*908, p. 111; 938, p. 102; 946, p. 119; \*988, p. 107; 1018, p. 90). City of Wichita. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 16, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	13.55	Mar. 31	a 14.07	July 2	12.91	Oct. 5	a 11.16
Feb. 5	a 13.88	May 3	a 10.91	Aug. 3	13.09	Nov. 14	a 11.29
Mar. 1	13.40	31	a 12.58	Sept. 6	12.00	Dec. 6	a 12.27

a Well M-17 pumping.

M-17b (\*908, p. 112; 938, p. 103; 946, p. 120; \*988, p. 107; 1018, p. 90). City of Wichita. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 16, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	12.01	Mar. 31	a 12.43	July 2	11.43	Oct. 5	a 11.63
Feb. 5	a 12.19	May 3	a 9.71	Aug. 3	11.77	Nov. 14	a 10.06
Mar. 1	12.05	31	a 11.08	Sept. 6	11.46	Dec. 6	a 11.14

a Well M-17 pumping.

M-18 (\*908, p. 112; 938, p. 103; 946, p. 120; \*988, p. 108; 1018, p. 91). City of Wichita. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 22, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	17.58	Mar. 31	a 42.78	July 2	15.99	Oct. 5	14.70
Feb. 5	17.08	May 3	a 42.23	Aug. 3	43.26	Nov. 14	14.74
Mar. 1	a 43.69	31	a 41.63	Sept. 6	a 43.52	Dec. 6	a 38.55

a Pumping.

M-18a (\*908, p. 113; 938, p. 103; 946, p. 120; \*988, p. 108; 1018, p. 91). City of Wichita. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 22, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	16.37	Mar. 31	a 28.43	July 2	14.79	Oct. 5	13.55
Feb. 5	15.78	May 3	a 28.03	Aug. 3	28.44	Nov. 14	13.61
Mar. 1	a 29.59	31	a 27.39	Sept. 6	a 29.17	Dec. 6	a 25.05

a Well M-18 pumping.

## 92 WATER LEVELS AND ARTESIAN PRESSURE, 1945, NORTH-CENTRAL STATES

M-18b (\*908, p. 113; 938, p. 103; 946, p. 120; \*988, p. 108; 1018, p. 91). City of Wichita. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 22, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	15.98	Mar. 31	a 21.71	July 2	13.35	Oct. 5	13.09
Feb. 5	15.25	May 3	a 20.92	Aug. 3	21.49	Nov. 14	13.16
Mar. 1	a 22.64	31	a 20.69	Sept. 6	a 22.24	Dec. 6	a 18.64

a Well M-18 pumping.

M-19 (\*908, p. 113; 938, p. 103; 946, p. 120; \*988, p. 108; 1018, p. 91). City of Wichita. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 27, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	a 35.94	Mar. 31	17.58	July 2	34.12	Oct. 5	32.54
Feb. 5	17.48	May 3	a 34.85	Aug. 3	35.58	Nov. 15	16.84
Mar. 1	18.77	30	16.50	Sept. 6	a 35.79	Dec. 6	15.34

a Pumping.

M-19 a (\*908, p. 114; 938, p. 104; 946, p. 120; \*988, p. 108; 1018, p. 91). City of Wichita. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 27, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	a 22.72	Mar. 31	19.41	July 2	21.48	Oct. 5	19.35
Feb. 5	19.31	May 3	a 21.55	Aug. 3	21.72	Nov. 15	18.51
Mar. 1	19.38	30	18.26	Sept. 6	a 22.26	Dec. 6	17.98

a Well M-19 pumping.

M-19 b (\*908, p. 114; 938, p. 104; 946, p. 121; \*988, p. 108; 1018, p. 91). City of Wichita. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 27, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	a 19.14	Mar. 31	18.05	July 2	17.81	Oct. 5	17.09
Feb. 5	18.08	May 3	a 18.11	Aug. 3	17.67	Nov. 15	16.17
Mar. 1	18.01	30	17.07	Sept. 6	a 18.69	Dec. 6	15.69

a Well M-19 pumping.

M-20 (\*908, p. 115; 938, p. 104; 946, p. 121; \*988, p. 109; 1018, p. 91). City of Wichita. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 8, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	26.24	May 3	a 57.78	Aug. 3	59.34	Nov. 14	26.96
Feb. 5	26.25	31	a 64.20	Sept. 6	a 58.02	Dec. 6	58.28
Mar. 31	25.91	June 29	59.14	Oct. 6	a 58.91		

a Pumping.

M-20a (\*908, p. 115; 938, p. 104; 946, p. 121; \*988, p. 109; 1018, p. 92). City of Wichita. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 8, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	25.48	May 3	a 25.07	Aug. 3	25.58	Nov. 14	25.04
Feb. 5	24.36	31	a 24.81	Sept. 6	a 26.24	Dec. 6	24.18
Mar. 31	23.38	June 29	25.22	Oct. 6	a 26.41		

a Well M-20 pumping.

M-20b (\*908, p. 116; 938, p. 104; 946, p. 121; \*988, p. 109; 1018, p. 92). City of Wichita. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 8, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	25.66	May 3	a 25.49	Aug. 3	26.16	Nov. 14	26.71
Feb. 5	24.11	31	a 25.28	Sept. 8	a 26.75	Dec. 6	25.86
Mar. 31	24.77	June 29	25.58	Oct. 6	a 26.77		

a Well M-20 pumping.

M-21 (\*908, p. 116; 938, p. 104; 946, p. 121; \*988, p. 109; 1018, p. 92). City of Wichita. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 26, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	15.73	Mar. 31	16.40	July 2	14.10	Oct. 5	29.43
Feb. 5	a 32.13	May 3	13.47	Aug. 3	30.68	Nov. 15	20.26
Mar. 1	16.01	30	a 28.23	Sept. 6	a 31.00	Dec. 6	14.70

a Pumping.

M-21a (\*908, p. 117; 938, p. 105; 946, p. 121; \*988, p. 109; 1018, p. 92). City of Wichita. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 26, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	14.92	Mar. 31	15.61	July 2	13.21	Oct. 5	20.30
Feb. 5	a 21.52	May 3	12.69	Aug. 3	20.84	Nov. 15	19.47
Mar. 1	15.04	30	a 18.64	Sept. 6	a 21.48	Dec. 6	14.00

a Well M-21 pumping.

M-21b (\*908, p. 117; 938, p. 105; 946, p. 122; \*988, p. 109; 1018, p. 92). City of Wichita. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 26, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	14.50	Mar. 31	14.84	July 2	12.95	Oct. 5	17.73
Feb. 5	a 19.00	May 3	12.56	Aug. 3	17.88	Nov. 15	17.87
Mar. 1	14.70	30	a 15.92	Sept. 6	a 18.80	Dec. 6	13.48

a Well M-21 pumping.

M-22 (\*908, p. 118; 938, p. 105; 946, p. 122; \*988, p. 109; 1018, p. 92). City of Wichita. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 26, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	a 38.76	May 3	14.15	Aug. 3	39.94	Nov. 15	a 40.46
Feb. 5	a 40.51	30	a 37.00	Sept. 6	a 40.68	Dec. 6	a 36.36
Mar. 31	17.29	July 2	37.10	Oct. 5	37.89		

a Pumping.

M-22a (\*908, p. 118; 938, p. 105; 946, p. 122; \*988, p. 110; 1018, p. 92). City of Wichita. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 26, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	a 22.38	May 3	12.95	Aug. 3	22.24	Nov. 15	a 22.29
Feb. 5	a 23.46	30	a 19.50	Sept. 6	a 22.33	Dec. 6	a 19.56
Mar. 31	16.12	July 2	19.26	Oct. 5	22.33		

a Well M-22 pumping.

M-22b (\*908, p. 119; 938, p. 105; 946, p. 122; \*988, p. 110; 1018, p. 93). City of Wichita. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 26, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	a 17.58	May 3	13.74	Aug. 3	15.92	Nov. 15	a 19.54
Feb. 5	a 17.66	30	a 15.78	Sept. 6	a 19.60	Dec. 6	a 16.58
Mar. 31	16.80	July 2	14.51	Oct. 5	17.18		

a Well M-22 pumping.

M-23 (\*908, p. 119; 938, p. 106; 946, p. 122; \*988, p. 110; 1018, p. 93). City of Wichita. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 35, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	a 45.20	Mar. 31	a 43.88	July 2	42.02	Oct. 5	10.43
Feb. 5	a 46.00	May 3	10.32	Aug. 3	47.18	Nov. 14	a 44.92
Mar. 1	14.23	31	a 10.85	Sept. 6	a 45.10	Dec. 6	a 40.25

a Well pumping.

M-23a (\*908, p. 120; 938, p. 106; 946, p. 122; \*988, p. 110; 1018, p. 93). City of Wichita. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 35, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	a 16.33	Mar. 31	a 16.20	July 2	14.93	Oct. 5	10.33
Feb. 5	a 17.03	May 3	10.60	Aug. 3	15.19	Nov. 14	a 15.36
Mar. 1	14.27	31	a 11.81	Sept. 6	a 15.48	Dec. 6	a 13.82

a Well M-23 pumping.

M-23b (\*908, p. 120; 938, p. 106; 946, p. 123; \*988, p. 110; 1018, p. 93). City of Wichita. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 35, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	a 15.01	Mar. 31	a 14.79	July 2	13.57	Oct. 5	9.92
Feb. 5	a 15.41	May 3	9.94	Aug. 3	13.91	Nov. 14	a 13.91
Mar. 1	13.63	31	a 11.03	Sept. 6	a 13.99	Dec. 6	a 12.47

a Well M-23 pumping.

## 94 WATER LEVELS AND ARTESIAN PRESSURE, 1945, NORTH-CENTRAL STATES

M-24 (\*908, p. 121; 938, p. 106; 946, p. 123; \*988, p. 110; 1018, p. 93). City of Wichita. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 35, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	13.88	Mar. 31	15.26	July 2	36.94	Oct. 5	38.72
Feb. 5	14.36	May 3	10.67	Aug. 3	44.18	Nov. 14	a 39.24
Mar. 1	a 40.20	31	11.62	Sept. 6	14.36	Dec. 6	12.91

a Pumping.

M-24a (\*908, p. 121; 938, p. 106; 946, p. 123; \*988, p. 111; 1018, p. 93). City of Wichita. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 35, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	13.33	Mar. 31	14.07	July 2	17.08	Oct. 5	15.07
Feb. 5	13.80	May 3	9.80	Aug. 3	17.91	Nov. 14	a 14.98
Mar. 1	a 18.90	31	11.19	Sept. 6	13.66	Dec. 6	15.14

a Well M-24 pumping.

M-24b (\*908, p. 122; 938, p. 107; 946, p. 123; \*988, p. 111; 1018, p. 93). City of Wichita. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 35, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	15.34	Mar. 31	16.06	July 2	16.79	Oct. 5	14.38
Feb. 5	14.89	May 3	12.54	Aug. 3	17.46	Nov. 14	a 14.86
Mar. 1	a 17.25	31	13.07	Sept. 6	15.32	Dec. 6	13.82

a Well M-24 pumping.

M-25 (\*908, p. 122; 938, p. 107; 946, p. 123; \*988, p. 111; 1018, p. 94). City of Wichita. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 36, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	9.99	Mar. 31	a 36.05	July 2	9.08	Oct. 5	5.90
Feb. 5	a 38.56	May 3	5.82	Aug. 3	37.31	Nov. 14	8.95
Mar. 1	9.72	31	a 34.19	Sept. 6	9.96	Dec. 6	7.98

a Pumping.

M-25a (\*908, p. 123; 938, p. 107; 946, p. 123; \*988, p. 111; 1018, p. 94). City of Wichita. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 36, T. 24 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	9.58	Mar. 31	a 11.33	July 2	9.12	Oct. 5	7.33
Feb. 5	a 12.01	May 3	5.61	Aug. 3	9.46	Nov. 14	8.41
Mar. 1	9.45	31	a 8.92	Sept. 6	8.38	Dec. 6	7.55

a Well M-25 pumping.

M-25 b (\*908, p. 123; 938, p. 107; 946, p. 124; \*988, p. 111; 1018, p. 94). City of Wichita. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 1, T. 25 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 3	10.78	Mar. 31	a 12.50	July 2	9.89	Oct. 5	8.29
Feb. 5	a 10.82	May 3	6.98	Aug. 3	11.13	Nov. 14	9.35
Mar. 1	10.74	31	a 10.10	Sept. 6	10.87	Dec. 6	8.36

a Well M-25 pumping.

### Haskell County

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 9 wells in Haskell County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
1	4.5	108.85	Nov. 17, 1943	109.38	Nov. 1, 1941
4	4.5	196.96	May 9, 1945	197.78	Sept. 17, 1941
6	4.5	155.96	July 29, 1941	158.06	Aug. 27, 1943
7	4.5	187.14	Jan. 25, 1944	188.20	Sept. 23, 1943
9	4.5	207.24	May 9, 1945	208.78	Aug. 9, 1943
10	4.5	47.96	Aug. 9, 1943	50.73	Sept. 17, 1941

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 9 wells in Haskell County--Continued

Well	Length of record (years)	Highest level	Date	Lowest level	Date
11	4.5	183.84	Dec. 28, 1943	185.33	Nov. 6, 1945
12	4.5	179.40	Nov. 3, 1941	182.05	Nov. 13, 1942
14	4.5	151.50	Aug. 16, 1945	154.73	Nov. 13, 1945

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 9 wells in Haskell County

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945	Net rise (+) or net decline (-) for period of record
1	0.53	a -0.15	.....
4	.82	b -.73	-.09
6	2.10	b -.92	-.91
7	1.06	b -.43	-.54
9	1.54	b +.11	+.40
10	2.77	- .61	-.30
11	1.49	c -.92	-1.29
12	2.65	d +.01	-.58
14	3.23	e -2.96	-2.81

a Net decline from December 1944 to May 1945.

b Last measurement made in November 1945.

c Net decline from October 1944 to November 1945

d Net rise from November 1944 to November 1945

e Net decline from November 1944 to November 1945.

1 (\*938, p. 108; 946, p. 125; \*988, p. 112; 1018, p. 95). E. A. Davis. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 13, T. 27 S., R. 33 W. Water levels, in feet below land-surface datum, 1945: Jan. 24, 108.86; Feb. 26, 108.88; May 9, 109.04.

4 (\*938, p. 108; 946, p. 125; \*988, p. 112; 1018, p. 95). Dean Nelson. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 29, T. 28 S., R. 32 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Jan. 22	197.00	May 9	196.96	Nov. 6	197.74
Feb. 26	197.02	Aug. 16	196.97		

6 (\*938, p. 108; 946, p. 125; \*988, p. 113; 1018, p. 95). Copeland State Bank. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 11, T. 29 S., R. 31 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Jan. 22	156.61	May 9	156.54	Nov. 6	157.06
Feb. 26	156.60	Aug. 16	156.52		

7 (\*938, p. 109; 946, p. 125; \*988, p. 113; 1018, p. 95). Etta McCoy. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 2, T. 30 S., R. 32 W.

Water level, in feet below land-surface datum, 1945.

Date	Water level	Date	Water level	Date	Water level
Jan. 22	187.60	May 9	187.35	Nov. 6	188.04
Feb. 26	187.53	Aug. 16	187.42		

9 (\*938, p. 109; 946, p. 125; \*988, p. 113; 1018, p. 95). Bessie Custer. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 13, T. 30 S., R. 34 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Jan. 22	207.39	May 9	207.24	Nov. 6	207.28
Feb. 26	207.31	Aug. 16	207.26		

10 (\*908, p. 109; 946, p. 125; \*988, p. 113; 1018, p. 95). Eli Stoops. SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 33, T. 30 S., R. 34 W.

10--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 22	50.02	Apr. 12	50.16	July 27	49.90	Oct. 2	49.30
Feb. 26	50.15	May 9	50.09	Aug. 16	49.30	Nov. 6	49.90
Mar. 16	50.17	June 7	49.92	Sept. 7	49.60	Dec. 4	50.17

11 (\*938, p. 109; 946, p. 126; \*988, p. 113; 1018, p. 95). L. C. Leonard. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 20, T. 30 S., R. 32 W. Water levels, in feet below land-surface datum, 1945: Feb. 26, 184.45; Aug. 16, 184.43; Nov. 6, 185.33.

12 (\*938, p. 109; 946, p. 126; \*988, p. 113; 1018, p. 95). Sybol Smith. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 11, T. 30 S., R. 32 W.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 22	181.04	May 9	181.98	Nov. 6	181.04
Feb. 26	181.06	Aug. 16	181.10		

14 (\*938, p. 110; 946, p. 126; \*988, p. 113; 1018, p. 95). William Dreyer. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 21, T. 27 S., R. 34 W. Water levels, in feet below land-surface datum, 1945: Feb. 27, 151.66; Aug. 16, 151.50; Nov. 13, 154.73.

Hodgeman County

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 3 wells in Hodgeman County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
3	5	31.19	Sept. 8, 1944	34.77	Sept. 20, 1940
4	5	22.74	June 3, 1944	27.52	Oct. 2, 1941
5	5	27.86	June 3, 1944	33.08	Oct. 29, 1940

Difference between highest and lowest recorded water levels and net change in water level, in feet, in 1945 and for period of record, in 3 wells in Hodgeman County

Well	Difference between highest and lowest water levels	Net decline in 1945	Net rise for period of record
3	3.58	a 0.86	2.51
4	4.78	a 1.33	.90
5	5.22	.69	1.23

a From December 1944 to October 1945.

3 (\*908, p. 125; 938, p. 110; 946, p. 126; \*988, p. 114; 1018, p. 96). W. J. Fox. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 12, T. 21 S., R. 22 W. Water levels, in feet below land-surface datum, 1945: May 15, 31.26; July 13, 31.32; Oct. 26, 32.18.

4 (\*908, p. 125; 938, p. 111; 946, p. 126; \*988, p. 114; 1018, p. 96). William Macey. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 13, T. 22 S., R. 22 W. Water levels, in feet below land-surface datum, 1945: Apr. 28, 24.74; May 15, 24.72; July 13, 25.15; Oct. 26, 26.13.

5 (\*908, p. 125; 938, p. 111; 946, p. 126; \*988, p. 114; 1018, p. 96). Roy Klein. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 36, T. 22 S., R. 22 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	29.98	Apr. 28	30.01	July 13	30.60	Oct. 26	31.07
Feb. 15	30.08	May 15	29.96	Aug. 8	30.62	Nov. 21	31.00
Mar. 7	30.03	June 5	30.04	Sept. 11	31.47	Dec. 22	30.80

Jewell County

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 25 wells in Jewell County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
4	12	34.18	Sept. 29, 1944	53.50	Apr. 2, 1936
6	12	29.19	Oct. 31, 1944	48.76	Oct. 13, 1937
8	12	4.16	Apr. 26, 1943	68.06	Aug. 23, 1934
12	12	57.09	July 16, 1945	77.79	June 8, 1938
14	12	16.25	May 26, 1942	46.69	Mar. 20, 1934
18	12	13.35	Sept. 29, 1944	30.77	May 2, 1934
22	12	10.24	Sept. 29, 1944	25.68	Aug. 10, 1934
25	12	8.50	Sept. 24, 1945	15.72	Mar. 2, 1935
30	12	30.29	July 16, 1945	43.45	Sept. 20, 1940
34	12	10.25	Feb. 19, 1942	33.92	Aug. 19, 1940
40	12	37.64	July 16, 1945	43.13	Oct. 6, 1937
41	11	16.94	June 30, 1943	27.38	May 23, 1941
42	11	24.51	June 27, 1944	31.10	May 11, 1935
44	11	5.00	Aug. 5, 1944	24.03	May 9, 1935
45	11	21.96	July 16, 1945	34.39	Dec. 21, 1940
46	11	.75	Jan. 26, 1942	17.54	Aug. 30, 1934
47	11	2.07	Aug. 28, 1942	13.84	May 9, 1935
48	11	7.19	July 16, 1945	27.19	Oct. 25, 1934
49	11	16.34	June 27, 1944	46.83	Nov. 24, 1934
			Sept. 29, 1944		
50	11	9.50	June 27, 1944	36.25	Nov. 28, 1934
51	11	.07	Jan. 28, 1942	17.25	Sept. 26, 1934
64	10	56.29	June 27, 1944	65.90	Jan. 19, 1938
65	10	9.62	Nov. 23, 1942	38.10	Aug. 20, 1940
66	10	11.29	Oct. 28, 1942	27.55	Oct. 23, 1940
69	9	11.98	Sept. 29, 1944	24.50	Aug. 19, 1940

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 25 wells in Jewell County

Well	Difference between highest and lowest water level	Net rise (+) or net decline (-) in 1945	Net rise for period of record
4	19.32	.....	11.90
6	17.57	.....	12.91
8	63.90	.....	51.26
12	20.70	a +0.65	12.06
14	30.44	.....	27.68
18	17.42	a +.50	16.15
22	15.44	a +.09	11.38
25	7.22	a +1.78	6.08
30	13.16	a +1.48	8.89
34	23.67	.....	9.61
40	5.49	a -1.45	3.55
41	10.44	.....	6.13
42	6.59	a -.61	3.10
44	19.03	.....	6.98
45	12.43	a +3.19	9.27
46	16.79	.....	13.58
47	11.77	.....	7.76
48	20.00	a -2.08	15.57
49	19.64	.....	17.31
50	26.75	a -3.01	14.45
51	17.18	.....	13.98
64	9.61	.....	7.43
65	28.48	a -.76	22.28
66	16.26	.....	3.20
69	12.52	.....	6.69

a Net rise from October 1944 to September 1945.

4 (\*777, pp. 67-68; \*817, pp. 65-67; \*840, pp. 110-112; \*845, pp. 104, 109; 886, p. 170; 908, p. 129; 938, p. 114; 946, p. 131; \*988, p. 116; 1018, p. 97). Harvey Sloan. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 5, T. 3 S., R. 9 W. No measurements made in 1945.

6 (\*777, pp. 67-68; \*817, pp. 65-67; \*840, pp. 110-112; \*845, pp. 104, 109; 886, p. 170; 908, p. 129; 938, p. 114; 946, p. 131; \*988, p. 116; 1018, p. 97). H. C. Doud. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 5, T. 3 S., R. 9 W. No measurements made in 1945.

8 (\*777, pp. 67-68; \*817, pp. 65-67; \*840, pp. 110-112; \*845, pp. 104, 109; 886, p. 170; 908, p. 129; 938, p. 114; 946, p. 131; \*988, p. 116; 1018, p. 97). Will Zadina. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 17, T. 3 S., R. 9 W. No measurements made in 1945.

12 (\*777, pp. 67-68; \*817, pp. 65-67; \*840, pp. 110-112; \*845, p. 109; 886, p. 170; 908, p. 129; 938, p. 114; 946, pp. 129, 131; \*988, p. 116; 1018, p. 97). M. W. Howe. Lot 4 of sec. 30, T. 3 S., R. 9 W. Water levels, in feet below land-surface datum, 1945: July 16, 57.09; Sept. 24, 63.14.

14 (\*777, pp. 67; \*817, pp. 65-67; \*840, pp. 110-112; \*845, pp. 104, 109; 886, p. 170; 908, p. 129; 938, p. 114; 946, p. 131; \*988, p. 116; 1018, p. 98). C. Walker. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 24, T. 3 S., R. 9 W. No measurements made in 1945.

18 (\*777, pp. 67-68; \*817, pp. 65-67; \*840, pp. 110-112; \*845, pp. 104, 109; 886, p. 170; 908, p. 129; 938, p. 114; 946, p. 131; \*988, p. 117; 1018, p. 98). Martin Johaneck. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 29, T. 3 S., R. 10 W. Water levels, in feet below land-surface datum, 1945: July 16, 29.07; Sept. 24, 26.38.

22 (\*777, pp. 68-69; \*817, pp. 65-69; \*840, pp. 110, 114, 117; \*845, pp. 105, 111, 114; 886, p. 172; 908, p. 130; 938, p. 114; 946, pp. 129, 131; \*988, p. 117; 1018, p. 98). Meyer Miles. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 10, T. 5 S., R. 9 W. Water levels, in feet below land-surface datum, 1945: July 16, 12.50; Sept. 24, 11.50.

25 (\*777, pp. 68, 69; \*817, pp. 65, 69; \*840, pp. 110, 112; \*845, pp. 105, 109; 886, p. 170; 908, p. 129; 938, p. 114; 946, p. 131; \*988, p. 117; 1018, p. 98). J. N. Sorrell. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 29, T. 5 S., R. 9 W. Water levels, in feet below land-surface datum, 1945: July 16, 10.74; Sept. 24, 8.50.

30 (\*777, pp. 68, 69; \*817, pp. 65, 69; \*840, pp. 110, 114, 117; \*845, pp. 105, 111, 114; 886, p. 172; 908, p. 130; 938, p. 114; 946, pp. 129-131; \*988, p. 117; 1018, p. 98). Fred Van Wey. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 28, T. 4 S., R. 9 W. Water levels, in feet below land-surface datum, 1945: July 16, 30.29; Sept. 24, 31.21.

34 (\*817, pp. 65, 77; \*840, pp. 110, 114, 118; \*845, pp. 105, 111; 886, p. 172; 908, p. 130; 938, p. 114; 946, p. 131; \*988, p. 117; 1018, p. 98). Glen Kindler. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 18, T. 3 S., R. 10 W. No measurements made in 1945.

40 (\*777, pp. 68, 69; \*817, pp. 65, 69; \*840, pp. 111, 113; \*845, pp. 106, 110; 886, p. 170; 908, p. 129; 938, p. 114; 946, p. 131; \*988, p. 118; 1018, p. 98). R. L. McDaniel. SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 15, T. 4 S., R. 9 W. Water levels, in feet below land-surface datum, 1945: July 16, 37.64; Sept. 24, 39.14.

41 (\*777, pp. 68, 69; \*817, pp. 65, 69; \*840, pp. 111, 113; \*845, pp. 106, 110; 886, p. 170; 908, p. 129; 938, p. 114; 946, pp. 130, 131; \*988, p. 118; 1018, p. 98). Walter Dietz. Lot 16 of sec. 6, T. 5 S., R. 9 W. No measurements made in 1945.

42 (\*777, pp. 68, 69; \*817, pp. 65, 69; \*840, pp. 111, 113; \*845, pp. 106, 110; 886, p. 170; 908, p. 129; 938, p. 114; 946, pp. 130, 131; \*988, p. 118; 1018, p. 98). L. Lowdermilk. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 27, T. 6 S., R. 9 W. Water levels, in feet below land-surface datum, 1945: July 16, 25.88; Sept. 24, 26.87.



44 (\*777, pp. 68, 69; \*817, pp. 66, 71; \*840, pp. 111, 113; \*845, pp. 106, 110; 886, p. 170; 908, p. 129; 938, p. 114; 946, pp. 130, 131; \*988, p. 118; 1018, p. 98). Cleo Gimple. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 13, T. 4 S., R. 9 W. No measurements made in 1945.

45 (\*777, pp. 68, 69; \*817, pp. 66, 71; \*840, pp. 111, 113; \*845, pp. 106, 110; 886, p. 170; 908, p. 129; 938, p. 114; 946, pp. 130, 131; \*988, p. 119; 1018, p. 98). Victor Yapp. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 24, T. 4 S., R. 10 W. Water levels, in feet below land-surface datum, 1945: July 16, 21.96; Sept. 24, 22.50.

46 (\*817, pp. 66, 71; \*840, pp. 111, 113; \*845, pp. 106, 110; 886, p. 170; 908, p. 129; 938, pp. 113, 114; 946, pp. 130, 131; \*988, p. 119; 1018, p. 99). Ralph Wierenga. Lot 3 of sec. 19, T. 5 S., R. 9 W. No measurements made in 1945.

47 (\*817, pp. 66, 71; \*840, pp. 111, 114; \*845, pp. 106, 110; 886, p. 170; 908, p. 129; 938, pp. 113, 114; 946, p. 131; \*988, p. 119; 1018, p. 99). Meyer Miles. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 3, T. 5 S., R. 9 W. No measurements made in 1945.

48 (\*777, pp. 68, 69; \*817, pp. 66, 71; \*840, pp. 111, 114; \*845, pp. 107, 110; 886, p. 171; 908, p. 130; 938, p. 115; 946, p. 132; \*988, p. 119; 1018, p. 99). Frank Rogers. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 23, T. 4 S., R. 10 W. Water levels, in feet below land-surface datum, 1945: July 16, 7.19; Sept. 24, 14.62.

49 (\*777, pp. 68, 69; \*817, pp. 66, 71; \*840, pp. 111, 114; \*845, pp. 107, 110; 886, p. 171; 908, p. 130; 938, p. 115; 946, p. 132; \*988, p. 119; 1018, p. 99). E. Underwood. SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 5, T. 3 S., R. 9 W. No measurements made in 1945.

50 (\*777, pp. 68, 69; \*817, pp. 66, 71; \*840, pp. 111, 114; \*845, pp. 107, 110; 886, p. 171; 908, p. 130; 938, p. 114; 946, pp. 130, 131; \*988, p. 119; 1018, p. 99). S. Strom. Lot 15 of sec. 31, T. 3 S., R. 9 W. Water levels, in feet below land-surface datum, 1945: July 16, 13.76; Sept. 24, 16.14.

51 (\*817, pp. 66, 76; \*840, pp. 111, 116, 117; \*845, pp. 107, 113; 115; 886, p. 173; 908, p. 131; 938, pp. 113, 114; 946, p. 131; \*988, p. 120; 1018, p. 99). L. C. Beeler Estate. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 17, T. 4 S., R. 9 W. No measurements made in 1945.

64 (\*840, pp. 111, 114; \*845, pp. 108, 110; 886, p. 171; 908, p. 130; 938, p. 115; 946, p. 132; \*988, p. 120; 1018, p. 99). Chris Vandeventer, former owner. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 6, T. 3 S., R. 8 W. No measurements made in 1945.

65 (\*840, pp. 111, 114; \*845, pp. 108, 110; 886, p. 171; 908, p. 130; 938, p. 114; 946, p. 131; \*988, p. 121; 1018, p. 99). Mrs. B. M. Parkhurst. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 23, T. 3 S., R. 9 W. Water levels, in feet below land-surface datum, 1945: July 16, 10.81; Sept. 24, 11.63.

66 (\*840, pp. 111, 114; \*845, pp. 108, 110; 886, p. 171; 908, p. 130; 938, p. 115; 946, p. 132; \*988, p. 121; 1018, p. 99). A. E. Cook farm. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 1, T. 5 S., R. 10 W. No measurements made in 1945.

69 (\*840, pp. 111, 119; \*845, pp. 109, 115; 886, p. 171; 908, p. 130; 938, p. 115; 946, p. 132; \*988, p. 121; 1018, p. 99). Walter Dietz. NW $\frac{1}{4}$  lot 2 of sec. 7, T. 5 S., R. 9 W. No measurements made in 1945.

Kearny County

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 9 wells in Kearny County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
1	6	6.54	June 26, 1942	12.13	Sept. 10, 1943
2	6	50.39	Dec. 4, 1943	59.74	Sept. 20, 1940
7	6	49.38	Oct. 2, 1945	53.37	Oct. 16, 1939
11	6	12.17	Sept. 1, 1944	15.37	Mar. 15, 1941
12	3	6.78	Sept. 2, 1944	11.09	Nov. 6, 1945
13	6	1.47	May 9, 1942	8.93	Dec. 20, 1939
16	6	40.85	Nov. 16, 1945	47.81	July 3, 1941
19	6	130.37	Dec. 3, 1943	134.67	Nov. 15, 1945
28	6	121.41	Nov. 5, 1943	123.85	Feb. 19, 1940
					Oct. 22, 1940

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 9 wells in Kearny County

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945	Net rise (+) or net decline (-) for period of record
1	5.59	+0.26	+2.37
2	9.35	a +.53	+7.20
7	3.99	+ .30	+3.10
11	3.20	b -.20	+1.59
12	4.31	b +.10	+6.95
13	7.46	-.39	+3.86
16	6.96	b +2.79	+4.63
19	4.30	b -3.69	-3.80
28	2.44	b +.03	+2.27

a Net rise from September 1944 to December 1945.

b Last measurement made in November 1945.

1 (\*886, p. 164; 908, p. 133; \*938, p. 116; 946, p. 133; \*988, p. 122; 1018, p. 100). R. T. Beatly. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 34, T. 24 S., R. 35 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	8.79	Apr. 7	8.72	July 31	8.64	Oct. 2	9.00
Feb. 10	8.66	May 5	8.78	Aug. 10	8.83	Nov. 16	9.01
Mar. 10	8.59	June 2	9.06	Sept. 8	7.31	Dec. 4	8.96

2 (\*886, p. 164; 908, p. 133; \*938, p. 116; 946, p. 133; \*988, p. 122; 1018, p. 100). C. E. Worthen. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 16, T. 24 S., R. 36 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	52.15	Apr. 7	53.31	July 28	50.83	Oct. 2	51.12
Feb. 10	52.47	May 19	53.02	Aug. 10	51.09	Nov. 16	51.37
Mar. 10	52.78	June 2	51.91	Sept. 8	50.97	Dec. 4	51.28

7 (\*886, p. 164; 908, p. 134; \*938, p. 117; 946, p. 134; \*988, p. 122; 1018, p. 100). C. H. Browne. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 8, T. 25 S., R. 37 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	50.55	Apr. 7	50.94	July 28	50.20	Oct. 2	49.38
Feb. 10	50.58	May 12	50.17	Aug. 11	51.25	Nov. 17	50.32
Mar. 10	50.76	June 2	49.99	Sept. 8	50.36	Dec. 8	50.27

11 (\*886, p. 165; 908, p. 134; \*938, p. 117; 946, p. 134; \*988, p. 122; 1018, p. 100). P. J. Fichter. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 11, T. 25 S., R. 36 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Feb. 10	12.66	July 21	12.54	Nov. 15	12.59
May 11	12.67	Aug. 10	12.27		

12 (\*988, p. 123; 1018, p. 100). J. E. Beymer. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 22, T. 24 S., R. 35 W. Water levels, in feet below land-surface datum, 1945: Feb. 10, 7.84; May 11, 8.19; Aug. 18, 7.75; Nov. 15, 7.07.

13 (\*886, p. 165; 908, p. 134; \*938, p. 117; 946, p. 134; \*988, p. 123; 1018, p. 101). D. S. Nicholson. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 15, T. 25 S., R. 37 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	4.36	May 11	4.24	Aug. 11	3.71	Nov. 17	4.83
Feb. 10	4.26	June 2	4.16	Sept. 13	4.55	Dec. 8	4.70
Mar. 10	4.38	July 21	3.72	Oct. 2	3.71		

16 (\*886, p. 165; \*908, p. 134; 938, p. 118; 946, p. 134; \*988, p. 123; 1018, p. 101). C. B. Campbell. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 15, T. 23 S., R. 35 W. Water levels, in feet below land-surface datum, 1945: Feb. 24, 42.33; May 19, 42.43; Aug. 18, 41.82; Nov. 16, 40.85.

19 (\*886, p. 165; 908, p. 135; \*938, p. 118; 946, p. 135; \*988, p. 123; 1018, p. 101). E. M. Beymer. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 8, T. 26 S., R. 38 W. Water levels, in feet below land-surface datum, 1945: Feb. 27, 130.65; May 11, 130.57; Aug. 17, 133.35; Nov. 15, 134.67.

28 (\*886, p. 166; 908, p. 135; \*938, p. 118; 946, p. 135; \*988, p. 123; 1018, p. 101). Harry Tate. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 26, T. 22 S., R. 37 W. Water levels, in feet below land-surface datum, 1945: Feb. 24, 121.48; May 11, 121.52; Aug. 10, 121.57; Nov. 16, 121.50.

#### Kingman County

By B. F. Latta

An investigation of the geology and ground-water resources of Kingman County in south-central Kansas was begun in July 1945 in cooperation with the State Geological Survey of Kansas, the Division of Sanitation of the Kansas State Board of Health, and the Division of Water Resources of the Kansas State Board of Agriculture.

Kingman County is in the Plains Border section of the Great Plains physiographic province. The northern and central parts of the county are drained by South Fork Minnescah River and its tributary, Smoots Creek; and the southern part is drained by Chikaskia River. These streams are perennial and are a part of the lower Arkansas drainage system.

The western half of the county and the divide area between South Fork Minnescah River and Chikaskia River in the eastern half are underlain by silt, sand, and gravel of Pleistocene age. South Fork Minnescah River, Smoots Creek, and Chikaskia River have cut below the Pleistocene deposits

in the eastern half of the county and exposed the Harper sandstone, Stone Corral dolomite, and Ninnescah shale of Permian age. Quaternary terrace deposits occur along Chikaskia River. Most of the wells in the county derive water from Pleistocene sand and gravel except in parts of the eastern half of the county where the wells obtain water from Permian rocks. In some areas underlain by Permian rocks it is difficult to obtain a satisfactory supply of water. Many domestic and stock supplies and the public supply at Kingman are obtained from springs, most of which are contact springs that issue from Pleistocene sand and gravel where it is in contact with Permian shale.

At the end of 1945, measurements of water level were being made once a month by the wetted-tape method in 12 wells in Kingman County. The July and August measurements in all wells except 19 and 20 were made by the writer, and the October, November, and December measurements were made by Charles K. Bayne. Wells 19 and 20 were measured from December 1, 1943, to July 2, 1945, by employees of the Cunningham Helium Plant and from October through December 1945 by Charles K. Bayne. A total of 59 individual measurements of water level were made during 1945.

1. A. A. Mueller. SE $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 1, T. 30 S., R. 8 W. Unused drilled well, diameter 6 inches, depth 56.6 feet. Measuring point, top of casing, east side, 0.5 foot above land-surface datum. No pump on well. Water levels, in feet below land-surface datum, 1945: July 20, 11.79; Oct. 12, 13.02; Nov. 13, 12.91; Dec. 7, 13.56.

2. L. A. Brammer. SE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 3, T. 30 S., R. 6 W. Unused dug well, diameter 48 inches, depth 18.2 feet. Measuring point, top edge of board over well, 0.8 foot above land-surface datum. Equipped with hand-operated cylinder pump. Water levels, in feet below land-surface datum, 1945: July 21, 9.86; Oct. 12, 9.31; Nov. 13, 9.18; Dec. 7, 9.77.

4. Owner unknown. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 9, T. 27 S., R. 9 W. Unused tubular well, diameter 2 inches, depth 76.2 feet. Measuring point, top opening of pump, 3.0 feet above land-surface datum. Equipped with hand-operated cylinder pump. Water levels, in feet below land-surface datum, 1945: July 23, 63.89; Oct. 12, 63.44; Nov. 13, 63.40; Dec. 7, 63.73.

5. School District. SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 6, T. 29 S., R. 6 W. Unused drilled well, diameter 6 inches, depth 22.3 feet. Measuring point, top of casing, southwest side, 0.3 foot above land-surface datum. No pump on well. Water levels, in feet below land-surface datum, 1945: July 26, 20.53; Oct. 12, 20.52; Nov. 13, 20.37; Dec. 7, 20.33.

6. Jane Garrett. NE $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 3, T. 29 S., R. 6 W. Unused drilled well, diameter 6 inches, depth 64.0 feet. Measuring point, top of casing, southwest side, 0.5 foot above land-surface datum. Equipped with cylinder pump and windmill. Water levels, in feet below land-surface datum, 1945: July 26, 31.29; Oct. 12, 31.23; Nov. 13, 30.97; Dec. 7, 30.53.

7. S. Schrag. SW $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 5, T. 27 S., R. 5 W. Unused drilled well, diameter 6 inches, depth 57.5 feet. Measuring point, top of casing, east side, at land-surface datum. Equipped with cylinder pump and windmill. Water levels, in feet below land-surface datum, 1945: July 26, 46.54; Oct. 12, 46.80; Nov. 13, 46.78; Dec. 7, 47.36.

8. John McClure. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 10, T. 27 S., R. 7 W. Unused drilled well, diameter 5 inches, depth 13.5 feet. Measuring point, top of casing, east side, 0.3 foot above land surface datum. Equipped with cylinder pump and windmill. Water levels, in feet below land-surface datum, 1945: July 26, 5.75; Oct. 12, 5.49; Nov. 13, 5.42; Dec. 7, 5.45.

10. W. H. Stephens. SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 11, T. 30 S., R. 5 W. Unused drilled well, diameter 6 inches, depth 31.6 feet. Measuring point, lower edge of pump base, north side, 0.1 foot above land-surface datum. Equipped with cylinder pump and dismantled windmill. Water levels, in feet below land-surface datum, 1945: July 28, 25.73; Oct. 12, 25.52; Nov. 13, 25.44; Dec. 7, 25.49.

11. S. Bolinger. SE $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 12, T. 28 S., R. 5 W. Unused drilled well, diameter 6 inches, depth 27.7 feet. Measuring point, top of tin plate, south side of pump, 1.3 feet above land-surface datum. Equipped with cylinder pump and windmill. Water levels, in feet below land-surface datum, 1945: July 28, 6.63; Oct. 12, 7.28; Nov. 13, 7.34; Dec. 7, 7.67.

14. Rilla Marteney. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 22, T. 28 S., R. 7 W. Unused drilled well, diameter 5 inches, depth 24.2 feet. Measuring point, lower edge of pump, west side, 0.5 foot above land-surface datum. Equipped with hand-operated cylinder pump. Water levels, in feet below land-surface datum, 1945: July 28, 11.12; Oct. 12, 11.18; Nov. 13, 11.84; Dec. 7, 12.02.

19. Cunningham Helium Plant. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 31, T. 27 S., R. 10 W. Unused drilled industrial well. Measuring point, top of hole, south side of pump, 2.6 feet above land-surface datum. Equipped with turbine pump and electric motor.

Water level, in feet below land-surface datum, 1943-45

Date	Water level	Date	Water level	Date	Water level
Dec. 1, 1943	32.45	Aug. 1, 1944	31.62	Mar. 2, 1945	31.39
Jan. 5, 1944	32.75	Sept. 4	31.72	30	31.07
Feb. 3	32.61	Oct. 4	31.66	June 2	30.55
Mar. 1	32.60	Nov. 1	31.50	July 2	28.92
Apr. 1	32.53	Dec. 2	31.55	Oct. 12	24.75
May 2	32.05	Jan. 1, 1945	31.50	Nov. 13	24.70
June 1	31.67	31	31.46	Dec. 7	24.88
July 1	31.41	Feb. 28	31.43		

20. Cunningham Helium Plant. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 31, T. 27 S., R. 10 W. Used drilled industrial well. Measuring point, top of hole in pump base, south side of pump, 2.5 feet above land-surface datum. Equipped with turbine pump and electric motor.

Water level, in feet below land-surface datum, 1943-45

Date	Water level	Date	Water level	Date	Water level
Dec. 1, 1943	31.07	Aug. 1, 1944	30.29	Mar. 31, 1945	29.92
Jan. 1, 1944	31.32	Sept. 4	30.27	Apr. 30	29.58
Feb. 3	31.18	Oct. 4	30.26	June 1	29.05
Mar. 1	31.21	Nov. 1	30.08	30	30.54
Apr. 1	31.04	Dec. 2	30.23	Oct. 12	28.81
May 2	30.55	30	30.03	Nov. 13	28.77
June 1	30.20	Feb. 2, 1945	30.03	Dec. 7	28.89
July 1	30.01	28	30.00		

### Kiowa County

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 5 wells in Kiowa County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
4	5	74.04	Dec. 20, 1945	76.07	Aug. 20, 1943
7	5	27.82	Dec. 20, 1945	32.51	Mar. 22, 1941
8	5	22.05	Dec. 20, 1945	26.62	Apr. 28, 1941
10	5	104.67	Sept. 18, 1945	106.77	Oct. 24, 1940
19	5	34.19	Dec. 20, 1945	37.30	June 19, 1945

## 104 WATER LEVELS AND ARTESIAN PRESSURE, 1945, NORTH-CENTRAL STATES

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 5 wells in Kiowa County

Well	Difference between highest and lowest water levels	Net rise in 1945	Net rise for period of record
4	2.03	0.83	1.48
7	4.69	1.16	4.43
8	4.57	2.11	3.91
10	2.10	.09	1.91
19	3.11	1.54	4.79

4 (\*908, p. 137; 938, p. 119; 946, p. 136; \*988, p. 124; 1018, p. 101).  
H. E. Davis. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 4, T. 28 S., R. 16 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Jan. 2	74.23	June 8	74.54	Dec. 20	74.04
Mar. 9	74.66	Sept. 13	74.32		

7 (\*908, p. 137; 938, p. 120; 946, p. 136; \*988, p. 124; 1018, p. 102).  
A. C. Weaver. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 23, T. 27 S., R. 18 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Jan. 2	28.97	June 8	28.93	Dec. 20	27.82
Mar. 9	28.90	Sept. 13	28.04		

8 (\*908, p. 137; 938, p. 120; 946, p. 136; \*988, p. 125; 1018, p. 102).  
E. E. Miller. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 18, T. 27 S., R. 18 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Jan. 2	23.35	June 8	22.81	Dec. 20	22.05
Mar. 9	23.49	Sept. 13	22.39		

10 (\*908, p. 137; 938, p. 120; 946, p. 136; \*988, p. 125; 1018, p. 102).  
J. E. Ely. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 23, T. 30 S., R. 18 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Jan. 2	105.20	June 8	104.80	Dec. 20	104.86
Mar. 15	104.93	Sept. 18	104.67		

19 (\*1018, p. 102). C. Williamson. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 21, T. 27 S., R. 17 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Jan. 2	35.59	June 6	35.07	Dec. 20	34.19
Mar. 9	35.43	Sept. 13	34.48		

### Labette County

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 4 wells in Labette County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
1	3	1.20	Oct. 1, 1945	13.54	Jan. 16, 1944
2	3	a +1.10	May 1, 1945	13.62	Oct. 17, 1943
3	3	1.20	Oct. 1, 1945	10.47	Oct. 2, 1943
4	3	4.21	May 1, 1945	12.12	Jan. 16, 1944

a Above land-surface datum.

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 4 wells in Labette County

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945	Net rise (+) or net decline (-) for period of record
1	12.34	-9.26	-1.67
2	13.72	-2.51	-1.48
3	9.27	+1.23	+1.92
4	7.91	-2.28	-4.65

1 (\*946, p. 137; \*988, p. 125; 1018, p. 102). J. Ballah. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 38, T. 31 S., R. 21 E.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	7.79	Apr. 1	3.94	July 1	3.12	Oct. 1	1.20
17	9.02	16	3.84	16	7.18	16	7.02
Feb. 1	9.81	May 1	3.18	Aug. 1	9.96	Nov. 1	8.18
16	9.94	16	6.68	15	8.47	16	9.56
Mar. 2	8.22	June 1	3.78	Sept. 1	10.98	Dec. 2	10.44
15	6.90	17	3.37	16	10.26	16	10.98

2 (\*988, p. 125; 1018, p. 103). C. Givens. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 27, T. 31 S., R. 21 E.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	1.02	Apr. 1	0.66	July 1	0.37	Oct. 16	2.58
17	1.96	16	.40	16	3.66	Nov. 1	1.74
Feb. 1	1.36	May 1 a	.10	Aug. 1	6.92	16	2.14
16	1.38	16	1.04	15	5.86	Dec. 2	2.79
Mar. 2	.68	June 1	.86	Sept. 1	8.82	16	3.12
15	.71	17	.32	16	7.56		

a Above land-surface datum.

3 (\*988, p. 125; 1018, p. 103). B. H. Foster. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 34, T. 31 S., R. 21 E. Pump removed. Measuring point beginning Feb. 16, 1945, is at land-surface datum.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	1.56	Apr. 1	1.66	July 1	1.47	Oct. 1	1.20
17	1.68	16	1.59	16	2.95	16	2.28
Feb. 1	2.29	May 1	1.60	Aug. 1	5.76	Nov. 1	2.09
16	2.60	16	2.10	15	5.79	16	3.06
Mar. 2	1.49	June 1	1.98	Sept. 1	7.32	Dec. 2	3.91
15	1.76	17	1.51	16	5.56	16	4.29

4 (\*988, p. 125; 1018, p. 103). Roy Schierenberg. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 3, T. 32 S., R. 21 E.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	8.38	Apr. 1	6.37	July 1	6.12	Oct. 1	7.98
17	8.72	16	6.14	16	6.16	16	7.82
Feb. 1	9.02	May 1	4.21	Aug. 1	8.18	Nov. 1	7.22
16	9.02	16	5.32	15	8.59	16	8.46
Mar. 2	7.56	June 1	5.08	Sept. 1	9.88	Dec. 2	9.02
15	7.39	17	5.52	16	10.18	16	9.30

### Logan County

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 3 wells in Logan County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
1	3	96.42	Jan. 22, 1944	97.67	Oct. 23, 1945
2	3	59.66	Mar. 19, 1943	65.21	Feb. 27, 1944
4	3	33.41	Jan. 16, 1945	34.85	Aug. 6, 1943

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record in 3 wells in Logan County

Well	Difference between highest and lowest water levels	Net decline in 1945	Net rise (+) or net decline (-) for period of record
1	1.25	a 0.30	-0.45
2	5.55	b .18	-.45
4	1.44	a ....	+1.14

a Last measurement made in October 1945.

b Last measurement made in July 1945.

1 (\*946, p. 138; \*988, p. 126; 1018, p. 104). Octon Estate. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 2, T. 11 S., R. 32 W. Water levels, in feet below land-surface datum, 1945: Jan. 16, 97.23; Apr. 24, 97.22; July 10, 97.42; Oct. 23, 97.67.

2 (\*946, p. 138; \*988, p. 126; 1018, p. 104). J. J. Schultz. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 34, T. 11 S., R. 32 W. Water levels, in feet below land-surface datum, 1945: Jan. 16, 60.39; Apr. 24, 60.19; July 10, 60.22.

4 (\*946, p. 138; \*988, p. 127; 1018, p. 104). L. L. Garrison Estate. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 10, T. 13 S., R. 32 W. Water levels, in feet below land-surface datum, 1945: Jan. 16, 33.41; Apr. 24, 33.47; July 10, 33.50; Oct. 23, 33.45.

#### McPherson County

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 9 wells in McPherson County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
243	8	82.09	Sept. 2, 1938	83.47	Jan. 5, 1945
249	8	25.26	July 3, 1945	a 36.13	Apr. 2, 1940
250	8	36.58	July 12, 1944	a 45.87	July 29, 1938
260	8	21.18	Oct. 1, 1942	27.85	Nov. 4, 1937
262	8	21.51	Aug. 3, 1945	b 41.35	Nov. 2, 1938
309	8	20.74	Apr. 8, 1944	37.26	Mar. 26, 1938
310	8	7.18	May 4, 1945	19.39	Nov. 4, 1937
311	8	7.09	May 4, 1945	13.06	Dec. 31, 1939
1501a	2.5	25.57	Aug. 8, 1945	c 64.08	Feb. 2, 1945

a Measured after well had been pumped.

b Measured while pumping.

c Pumping.

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 9 wells in McPherson County

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945	Net rise (+) or net decline (-) for period of record
243	1.38	a -0.13	-0.09
249	10.87	a -1.46	+6.39
250	9.29	b -.39	+5.67
260	6.67	c +.38	+3.35
262	19.84	c +.59	+5.79
309	16.52	+24	+14.87
310	12.21	+29	+12.09
311	5.97	-1.78	+2.09
1501a	38.51	-7.64	-6.67

a Net decline from October 1944 to October 1945.

b Net decline from October 1944 to January 1945.

c Net rise from October 1944 to October 1945.

243 (\*840, p. 104; 845, p. 123; 886, p. 214; 908, p. 139; 938, p. 121; 946, p. 139; \*988, p. 128; 1018, p. 104). Emma Bergstrom. SE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 5, T. 19 S., R. 3 W. Water levels, in feet below land-surface datum, 1945: Jan. 5, 83.47; Mar. 28, 83.19; July 3, 83.23; Oct. 12, 83.18.



249 (\*840, p. 104; 845, p. 123; 886, p. 215; 908, p. 139; 938, p. 121; 946, p. 139; \*988, p. 128; 1018, p. 105). Prudential Life Insurance Co. SE. corner sec. 5, T. 18 S., R. 3 W. Water levels, in feet below land-surface datum, 1945: Jan. 5, 31.11; Mar. 28, 28.40; July 3, 25.26; Oct. 12, 29.70.

250 (\*840, p. 104; 845, p. 124; 886, p. 215; 908, p. 139; 938, p. 121; 946, p. 139; \*988, p. 128; 1018, p. 105). John Weed. NE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 30, T. 19 S., R. 4 W. Water levels, in feet below land-surface datum, 1945: Jan. 5, 37.03. Measurements discontinued after Jan. 5, 1945.

260 (\*840, p. 104; 845, p. 124; 886, p. 215; 908, p. 139; 938, p. 121; 946, p. 139; \*988, p. 128; 1018, p. 105). John Rawson. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 33, T. 17 S., R. 4 W. Water levels, in feet below land-surface datum, 1945: Jan. 5, 26.73; Mar. 28, 24.55; Aug. 3, 21.24; Oct. 12, 24.50.

262 (\*840, p. 104; 845, p. 124; 886, p. 215; 908, p. 139; 938, p. 121; 946, p. 139; \*988, p. 128; 1018, p. 105). P. A. Olsen. NE $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 1, T. 18 S., R. 5 W. Water levels, in feet below land-surface datum, 1945: Jan. 5, 26.71; Mar. 28, 24.93; Aug. 3, 21.51; Oct. 12, 24.29.

309 (\*840, p. 104; 845, p. 124; 886, p. 215; 908, p. 139; 938, p. 122; \*946, p. 139; \*988, p. 128; 1018, p. 105). Mrs. Ida Tuxhorn. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 9, T. 21 S., R. 4 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	25.01	Mar. 28	24.74	July 3	22.57	Oct. 9	24.11
Feb. 2	25.37	May 4	24.21	Aug. 8	23.30	Nov. 15	24.26
Mar. 8	25.35	June 2	21.72	Sept. 8	23.76	Dec. 4	24.28

310 (\*845, p. 125; 886, p. 216; 908, p. 140; 938, p. 122; 946, p. 139; \*988, p. 129; 1018, p. 105). City of Moundridge. SW $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 23, T. 21 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	7.33	Mar. 28	7.36	July 3	7.38	Oct. 9	7.21
Feb. 2	7.43	May 4	7.18	Aug. 8	7.39	Nov. 15	7.27
Mar. 8	7.40	June 2	7.21	Sept. 8	7.48	Dec. 4	7.30

311 (\*845, p. 125; 886, p. 216; 908, p. 140; 938, p. 122; 946, p. 140; \*988, p. 129; 1018, p. 105). City of Moundridge. SW $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 23, T. 21 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	8.17	Mar. 28	7.73	July 3	8.16	Oct. 9	9.70
Feb. 2	8.10	May 4	7.09	Aug. 8	8.84	Nov. 15	10.08
Mar. 8	8.02	June 2	7.83	Sept. 8	10.33	Dec. 4	10.11

1501a (\*988, p. 129; 1018, p. 105). City of Moundridge. NE $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 29, T. 21 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	62.87	Mar. 28	b 34.86	July 3	26.21	Oct. 12	b 35.21
Feb. 2	a 64.08	May 4	b 34.62	Aug. 8	25.57	Nov. 15	b 35.94
Mar. 8	26.39	June 2	26.30	Sept. 8	57.80	Dec. 5	b 34.17

a Pumping.

b Nearby well pumping.

Meade County

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 9 wells in Meade County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
33	6.5	37.33	Nov. 23, 1942	38.75	Nov. 3, 1943
34	6.5	143.28	Dec. 14, 1944	150.39	Oct. 29, 1939
36	6.5	156.57	Jan. 21, 1941	159.96	Sept. 20, 1940
45	6.5	2.01	June 17, 1944	4.10	Aug. 31, 1939
55	6.5	84.87	Sept. 30, 1939	85.92	Sept. 20, 1940
61	6.5	59.60	Mar. 13, 1945	60.77	May 17, 1940
			Dec. 18, 1945		
77	6.5	62.00	June 17, 1944	67.12	Sept. 9, 1943
88	6.5	41.95	May 12, 1942	46.20	July 1, 1942
234	6.5	12.98	June 27, 1945	15.52	Aug. 31, 1939

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 9 wells in Meade County

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945	Net rise (+) or net decline (-) for period of record
33	1.42	a -0.02	-0.30
34	7.11	-3.89	-.49
36	3.39	.....	-.04
45	2.09	-.37	+.71
55	1.05	b -.23	+.28
61	1.17	+.18	+.96
77	5.12	b -.15	+.05
88	4.25	c +.64	+2.16
234	2.54	+.02	+2.31

a Net decline from August 1944 to March 1945.

b Net decline from August 1944 to December 1945.

c Net rise from December 1944 to March 1945.

2 (\*886, p. 175; 908, p. 143; 938, p. 123; 946, p. 141; \*988, p. 130; 1018, p. 106). W. A. Ellison. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 5, T. 30 S., R. 26 W. Measurements discontinued after Dec. 6, 1944.

10 (\*886, p. 176; 908, p. 143; 938, p. 124; 946, p. 141; \*988, p. 130; 1018, p. 106). Fred Borchers. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 29, T. 33 S., R. 28 W. Measurements discontinued after Dec. 14, 1944.

27 (\*886, p. 176; 908, p. 143; 938, p. 124; 946, p. 141; \*988, p. 130; 1018, p. 106). Ira C. Rees. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 9, T. 30 S., R. 26 W. Measurements discontinued after Dec. 6, 1944.

33 (\*886, p. 176; 908, p. 143; 938, p. 124; 946, p. 142; \*988, p. 130; 1018, p. 106). W. L. Woodruff. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 34, T. 33 S., R. 26 W. Water level, in feet below land-surface datum, 1945: Mar. 14, 37.89.

34 (\*886, p. 176; 908, p. 143; 938, p. 124; 946, p. 142; \*988, p. 130; 1018, p. 106). District School. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 17, T. 33 S., R. 27 W. Water levels, in feet below land-surface datum, 1945: Feb. 14, 146.54; June 7, 147.05; Sept. 19, 147.03; Dec. 18, 147.17.

36 (\*886, p. 177; 908, p. 143; 938, p. 124; 946, p. 142; \*988, p. 130; 1018, p. 107). Tony Steinke. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 24, T. 32 S., R. 27 W. No measurements made in 1945.

45 (\*886, p. 177; 908, p. 144; 938, p. 125; 946, p. 142; \*988, p. 131; 1018, p. 107). Joseph Roche. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 31, T. 30 S., R. 27 W. Water levels, in feet below land-surface datum, 1945: Mar. 13, 2.24; June 7, 2.68; Sept. 20, 2.87; Dec. 18, 2.66.

55 (\*886, p. 178; 908, p. 144; 938, p. 125; 946, p. 142; \*988, p. 131; 1018, p. 107). C. W. Farris. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 15, T. 30 S., R. 28 W. Water levels, in feet below land-surface datum, 1945: Mar. 13, 85.30; June 7, 85.32; Sept. 20, 85.38; Dec. 18, 85.49.

61 (\*886, p. 178; 908, p. 144; 938, p. 125; 946, p. 143; \*988, p. 131; 1018, p. 107). John Meyer. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 26, T. 31 S., R. 27 W. Water levels, in feet below land-surface datum, 1945: Mar. 13, 59.60; June 7, 59.68; Sept. 19, 59.61; Dec. 18, 59.60.

77 (\*886, p. 178; 908, p. 145; 938, p. 126; 946, p. 143; \*988, p. 131; 1018, p. 107). J. W. Wood. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 4, T. 32 S., R. 28 W. Water levels, in feet below land-surface datum, 1945: June 7, 62.95; Sept. 20, 63.37; Dec. 18, 63.07.

88 (\*886, p. 179; 908, p. 145; 938, p. 126; 946, p. 143; \*988, p. 131; 1018, p. 107). H. V. Gerlick. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 14, T. 31 S., R. 28 W. Water level, in feet below land-surface datum, 1945: Mar. 13, 42.28.

234 (\*886, p. 279; 908, p. 145; 938, p. 126; 946, pp. 143-144; \*988, p. 131; 1018, p. 107). Christopher Sobba. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 23, T. 30 S., R. 27 W.

Lowest daily water level, in feet below land-surface datum, 1945												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	13.23	13.21	.....	13.17	13.20	13.29	13.07	13.08	13.49	.....	13.17	13.34
2	13.20	13.18	13.13	13.17	13.22	13.29	13.07	13.13	13.52	.....	13.20	13.34
3	13.22	13.19	13.15	13.22	13.21	13.28	13.06	13.12	13.49	.....	13.23	13.32
4	13.22	13.22	13.15	13.22	13.13	13.26	13.03	13.16	13.41	.....	13.23	13.31
5	13.19	13.21	.....	13.22	13.13	13.22	13.05	13.21	13.37	.....	13.16	13.26
6	13.18	13.21	.....	13.19	13.12	13.24	13.03	13.23	13.39	.....	13.16	13.26
7	13.18	13.22	.....	13.19	13.13	13.27	13.03	13.30	13.38	.....	13.16	13.26
8	13.23	13.20	.....	13.17	13.14	13.25	13.01	13.32	13.38	.....	13.18	13.31
9	13.23	13.23	13.27	13.15	13.13	13.24	13.01	13.32	13.36	.....	13.20	.....
10	13.21	13.24	13.27	13.19	13.15	.....	13.03	13.31	13.38	.....	13.21	13.29
11	13.18	13.22	13.26	13.19	13.12	.....	13.02	13.32	13.36	.....	13.18	13.25
12	13.18	13.20	13.27	13.21	13.13	.....	13.01	13.33	13.34	.....	13.17	13.23
13	13.19	13.19	13.26	13.20	13.13	13.17	12.99	13.32	13.36	.....	13.22	.....
14	13.20	13.19	13.20	13.20	13.14	13.13	12.99	13.37	13.27	13.19	13.22	13.21
15	13.21	13.24	13.17	13.13	13.16	13.16	13.00	13.37	13.32	13.21	13.21	13.22
16	13.19	13.23	13.17	13.17	13.17	13.18	13.00	13.29	13.38	13.19	13.14	13.23
17	13.17	13.24	13.21	13.20	13.17	13.18	13.00	13.24	13.38	13.17	13.18	13.22
18	13.17	13.24	13.20	13.20	13.13	13.16	13.00	13.23	13.39	13.18	13.21	13.23
19	13.17	13.23	13.22	13.17	13.12	13.15	13.01	13.21	13.51	13.22	13.21	.....
20	13.19	13.22	13.22	13.16	13.17	13.10	13.03	13.20	13.50	13.15	13.19	.....
21	13.16	13.18	13.20	13.17	13.18	13.06	.....	13.19	13.40	13.21	13.20	13.20
22	13.20	13.19	13.18	13.16	13.17	13.08	.....	13.20	13.39	13.21	13.20	13.20
23	13.19	13.19	13.10	13.15	13.16	13.08	.....	13.19	13.39	13.18	13.19	13.20
24	13.17	13.18	13.11	13.14	.....	13.08	.....	13.19	13.41	13.19	13.20	13.16
25	13.18	13.19	13.16	13.14	13.19	13.09	.....	13.17	13.49	13.19	13.21	13.17
26	13.17	13.19	13.17	13.16	13.23	13.08	.....	13.16	13.53	13.19	13.24	13.18
27	13.19	13.19	13.18	13.16	13.32	12.98	13.01	13.14	13.53	13.18	13.28	13.19
28	13.20	13.20	13.18	13.19	13.31	13.01	13.01	13.19	13.47	13.18	13.32	13.17
29	13.23	.....	13.20	13.20	13.27	13.02	13.03	13.28	.....	13.21	13.33	13.17
30	13.23	.....	13.16	13.20	13.31	13.03	13.05	13.38	.....	13.21	13.32	13.21
31	13.22	.....	13.16	.....	.....	.....	13.06	13.45	.....	13.17	.....	13.21

### Morton County

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 3 wells in Morton County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
22	6.5	71.82	Aug. 3, 1945	75.45	Jan. 6, 1941
65	6.5	51.76	Nov. 14, 1945	53.75	Mar. 13, 1941
117	6.5	163.87	Jan. 24, 1945	166.48	Aug. 28, 1943

## 110 WATER LEVELS AND ARTESIAN PRESSURE, 1945, NORTH-CENTRAL STATES

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 3 wells in Morton County

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945	Net rise for period of record
22	3.63	a +1.64	1.92
65	1.99	b +.44	1.45
117	2.61	c -.09	1.97

a Net rise from September 1944 to November 1945.

b Last measurement made in November 1945.

c Last measurement made in August 1945.

22 (\*886, p. 181; 908, p. 148; 938, p. 127; 946, p. 145; \*988, p. 133; 1018, p. 108). A. F. Wilcox. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 14, T. 31 S., R. 43 W. Water levels, in feet below land-surface datum, 1945: Feb. 27, 72.20; May 10, 72.08; Aug. 3, 71.82; Nov. 14, 71.87.

65 (\*886, p. 181; 908, p. 149; 938, p. 127; 946, p. 145; \*988, p. 133; 1018, p. 108). John Hentschel. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 8, T. 33 S., R. 42 W. Water levels, in feet below land-surface datum, 1945: Feb. 27, 52.38; May 10, 52.78; Aug. 3, 52.58; Nov. 14, 51.76.

117 (\*886, p. 183; 908, p. 150; 938, p. 128; 946, p. 145; \*988, p. 133; 1018, p. 108). W. C. Washburn. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 4, T. 34 S., R. 42 W. Water levels, in feet below land-surface datum, 1945: Jan. 24, 163.87; May 10, 164.12; Aug. 3, 164.14.

#### Ness County

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 2 wells in Ness County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
1	5	33.16	June 6, 1941	34.91	Aug. 27, 1940
2	5	23.22	Dec. 26, 1944	25.85	Nov. 8, 1943

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 2 wells in Ness County

Well	Difference between highest and lowest water levels	Net decline in 1945	Net rise for period of record
1	1.75	a 0.60	0.77
2	2.63	a 1.74	.44

a Last measurement made in October 1945.

1 (\*908, p. 181; 938, p. 128; 946, p. 146; \*988, p. 134; 1018, p. 109). J. E. Ficken. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 32, T. 20 S., R. 23 W. Water levels, in feet below land-surface datum, 1945: May 15, 33.99; July 13, 33.73; Oct. 26, 34.14.

2 (\*908, p. 151; 938, p. 123; 946, p. 146; \*988, p. 134; 1018, p. 109). C. L. Whitley. SW. corner of sec. 20, T. 20 S., R. 22 W. Water levels, in feet below land-surface datum, 1945: May 15, 24.12; July 13, 25.97; Oct. 26, 24.96.

#### Pawnee County

Highest and lowest water levels for the period of record in feet below land-surface datum, in 6 wells in Pawnee County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
5	1.5	45.08	Sept. 11, 1945	45.64	May 15, 1945
6	5	21.33	May 15, 1945	24.02	Nov. 28, 1940

Highest and lowest water levels for the period of record in feet below land-surface datum, in 6 wells in Pawnee County--Continued

Well	Length of record (years)	Highest level	Date	Lowest level	Date
7	5	25.14	June 3, 1944	27.63	Dec. 20, 1943
8	5	13.42	Apr. 22, 1943	18.32	Sept. 20, 1940
10	1.5	8.23	June 6, 1945	11.12	Sept. 12, 1945
14	1.5	17.11	Dec. 22, 1945	17.72	July 21, 1944

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 6 wells in Pawnee County

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945	Net rise for period of record
5	0.56	a +0.26	0.40
6	2.69	- .51	1.61
7	2.49	-1.07	.59
8	4.90	- .51	3.27
10	2.89	- .69	.18
14	.61	+ .41	.61

a Last measurement made in September 1945.

5 (\*1018, p. 109). Townsite. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 21, T. 20 S., R. 17 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	45.29	Mar. 7	45.23	June 5	45.24	Aug. 8	45.10
Feb. 15	45.34	May 15	45.64	July 6	45.32	Sept. 11	45.08

6 (\*908, p. 151; 938, p. 129; 946, p. 146; \*988, p. 134; 1018, p. 109). Frank Elmore. SW. corner of sec. 27, T. 21 S., R. 19 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	21.43	Apr. 28	21.39	July 6	21.49	Oct. 26	21.99
Feb. 15	21.68	May 15	21.33	Aug. 8	21.69	Nov. 21	22.11
Mar. 7	21.43	June 5	21.34	Sept. 11	21.94	Dec. 22	21.98

7 (\*908, p. 151; 938, p. 129; 946, p. 147; \*988, p. 134; 1018, p. 109). Ralph Lupfer. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 18, T. 22 S., R. 17 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	25.79	Apr. 28	25.36	July 6	25.69	Oct. 26	26.66
Feb. 15	25.92	May 15	25.29	Aug. 29	26.29	Nov. 21	26.87
Mar. 8	25.76	June 6	25.34	Sept. 11	26.45	Dec. 22	26.91

8 (\*908, p. 151; 938, p. 129; 946, p. 147; \*988, p. 134; 1018, p. 110). F. B. Reed. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 6, T. 22 S., R. 16 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	13.83	Apr. 28	13.69	July 6	13.93	Oct. 26	14.61
Feb. 15	13.82	May 15	13.63	Aug. 29	14.43	Nov. 20	14.59
Mar. 8	13.79	June 6	13.62	Sept. 11	14.47	Dec. 22	14.52

10 (\*1018, p. 110). Townsite. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 16, T. 23 S., R. 16 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	9.40	May 15	8.59	Aug. 28	10.72	Nov. 19	10.25
Feb. 14	9.28	June 6	8.23	Sept. 12	11.12	Dec. 21	10.11
Mar. 8	8.62	July 6	9.85	Oct. 16	9.81		

14 (\*1018, p. 110). B. Unruh. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 29, T. 21 S., R. 15 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	17.54	May 15	17.42	Aug. 29	17.15	Nov. 20	17.14
Feb. 15	17.56	June 5	17.44	Sept. 12	17.20	Dec. 22	17.11
Mar. 8	17.46	July 6	17.24	Oct. 26	17.15		

Republic County

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 7 wells in Republic County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
40	4	33.00	Dec. 25, 1944	35.46	Sept. 6, 1942
95	4	44.99	June 11, 1942	45.50	Oct. 27, 1942
158	4	11.17	June 25, 1945	15.97	Feb. 25, 1943
188	4	10.70	May 25, 1945	18.40	Nov. 25, 1943
202	4	33.50	Aug. 3, 1943	35.75	Aug. 29, 1943
209	4	27.35	Aug. 2, 1945	33.74	Jan. 31, 1944
230	4	4.78	Sept. 25, 1942	9.25	Dec. 26, 1943

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 7 wells in Republic County

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945	Net rise (+) or net decline (-) for period of record
40	2.46	-1.00	-1.46
95	.51	a +.08	-.29
158	4.80	+ .02	+2.27
188	7.70	+2.05	+3.72
202	2.25	b -.20	+.35
209	6.39	b +.93	+3.13
230	4.47	c +2.36	+.70

a Net rise from October 1944 to January 1945.

b Last measurement made in October 1945.

c Last measurement made in July 1945.

40 (\*946, p. 148; \*988, p. 135; 1018, p. 110). City of Republic.  
SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 31, T. 1 S., R. 4 W.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 23	33.70	Apr. 23	35.40	July 23	34.10	Oct. 25	33.90
Feb. 23	34.00	May 23	33.90	Aug. 23	34.30	Nov. 23	33.80
Mar. 23	34.80	June 23	34.00	Sept. 24	34.40	Dec. 23	34.00

95 (\*946, p. 148; \*988, p. 135; 1018, p. 111). H. E. Nixon. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 14, T. 2 S., R. 3 W. Water level, in feet below land-surface datum, 1945: Jan. 4, 45.28.

158 (\*946, p. 148; \*988, p. 136; 1018, p. 111). A. J. Dickerman.  
SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 1, T. 3 S., R. 4 W.

## Water level, in feet below land-surface datum, 1945

Jan. 25	13.52	Apr. 25	13.24	July 25	11.71	Oct. 25	13.51
Feb. 25	13.32	May 25	11.60	Aug. 25	12.51	Nov. 25	13.79
Mar. 25	13.25	June 25	11.17	Sept. 25	13.29	Dec. 25	13.68

172 (\*946, p. 148; \*988, p. 136; 1018, p. 111). City of Scandia.  
SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 17, T. 3 S., R. 4 W. Recorder removed and measurements discontinued after May 1945.

188 (\*946, p. 149; \*988, p. 136; 1018, p. 111). City of Courtland.  
SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 16, T. 3 S., R. 5 W.

## Water level, in feet below land-surface datum, 1945

Jan. 25	15.20	June 25	11.90	Sept. 27	15.00	Dec. 29	14.60
May 25	10.70	July 26	12.50	Nov. 30	14.70		

202 (\*946, p. 140; \*988, p. 136; 1018, p. 111). C. E. Erickson.  
SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 36, T. 4 S., R. 5 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	34.20	Mar. 28	34.10	June 26	33.90	Sept. 23	34.20
Feb. 26	33.60	May 26	34.10	July 24	34.30	Oct. 30	34.20

209 (\*946, p. 149; \*988, p. 137; 1018, p. 112). Glenn B. Snapp.  
SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 1, T. 4 S., R. 5 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 8	30.60	May 1	29.26	July 28	27.40	Sept. 12	29.30
26	30.44	July 5	27.95	Aug. 2	27.35	Oct. 2	29.60
Mar. 26	30.27	25	28.40	12	27.60		

230 (\*946, p. 149; \*988, p. 137; 1018, p. 112). Lloyd Blosser.  
NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 21, T. 4 S., R. 4 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	8.18	Mar. 25	8.14	May 25	5.40	July 28	5.75
Mar. 12	8.15	Apr. 26	7.78	June 30	5.85		

Russell County

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 11 wells in Russell County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
8	4	93.90	Oct. 3, 1941	130.62	June 10, 1944
45	4	18.39	July 12, 1945	24.28	Aug. 20, 1941
80	4	3.40	Apr. 14, 1942	7.76	June 29, 1943
81	4	101.85	Aug. 29, 1941	134.35	June 29, 1943
95	4	5.83	Sept. 7, 1944	11.38	Dec. 20, 1943
117	4	4.70	Apr. 13, 1942	10.61	Dec. 20, 1943
126	4	32.00	Feb. 4, 1942	38.02	Jan. 13, 1943
146	4	14.59	Apr. 8, 1943	16.20	Sept. 1, 1942
148	4	3.81	Apr. 8, 1943	7.92	Oct. 2, 1941
149	4	18.53	July 12, 1945	21.54	June 29, 1943
152	4	10.98	July 12, 1945	26.45	Sept. 22, 1941

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 11 wells in Russell County

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945	Net rise (+) or net decline (-) for period of record
8	36.72	.....	-22.18
45	5.89	a -2.24	+2.80
80	4.36	a -1.73	-1.64
81	32.50	a -2.10	-31.51
95	5.55	a -2.64	+1.11
117	5.91	a +.02	+2.29
126	6.02	a +1.79	+1.19
146	1.61	a +.32	+3.37
148	4.11	b -.05	+2.06
149	3.01	c +.41	+2.33
152	15.47	a +3.12	+13.16

a Last measurement made in October 1945.

b Net decline from September 1944 to October 1945.

c Net rise from December 1944 to July 1945.

8 (\*938, p. 130; 946, p. 150; \*988, p. 138; 1018, p. 112). F. C. and A. Ptacek. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 16, T. 15 S., R. 12 W. No measurements made in 1945.

45 (\*938, p. 130; 946, p. 151; \*988, p. 138; 1018, p. 113). Jacob Flogler. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 11, T. 15 S., R. 14 W. Water levels, in feet below land-surface datum, 1945: Apr. 26, 20.63; July 12, 18.59; Oct. 26, 21.48.

80 (\*938, p. 130; 946, p. 151; \*988, p. 138; 1018, p. 113). Joseph Furthmyer, Jr. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 9, T. 14 S., R. 15 W. Water levels, in feet below land-surface datum, 1945: Apr. 26, 4.58; July 12, 4.46; Oct. 25, 6.35.

81 (\*938, p. 130; 946, p. 151; \*988, p. 138; 1018, p. 113). Joseph Furthmyer, Jr. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 9, T. 14 S., R. 15 W. Water levels, in feet below land-surface datum, 1945: Apr. 26, 133.18; July 12, 126.66; Oct. 25, 133.36.

95 (\*938, p. 131; 946, p. 151; \*988, p. 138; 1018, p. 113). George J. Gobleman. SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 28, T. 11 S., R. 15 W. Water levels, in feet below land-surface datum, 1945: Apr. 26, 5.92; Oct. 25, 9.17.

117 (\*938, p. 131; 946, p. 152; \*988, p. 138; 1018, p. 113). Marie Dutt and others. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 18, T. 13 S., R. 14 W. Water levels, in feet below land-surface datum, 1945: Apr. 26, 7.07; July 11, 6.23; Oct. 25, 6.29.

126 (\*938, p. 131; 946, p. 152; \*988, p. 138; 1018, p. 113). Bertha Dewald. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 19, T. 13 S., R. 13 W. Water levels, in feet below land-surface datum, 1945: Apr. 26, 35.42; July 11, 32.03; Oct. 25, 34.93.

146 (\*938, p. 131; 946, p. 152; \*988, p. 138; 1018, p. 113). D. P. Steinle. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 24, T. 14 S., R. 12 W. Water levels, in feet below land-surface datum, 1945: Apr. 26, 15.68; July 11, 15.60; Oct. 26, 15.43.

148 (\*938, p. 131; 946, p. 152; \*988, p. 138; 1018, p. 113). John Penex. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 13, T. 14 S., R. 13 W. Water levels, in feet below land-surface datum, 1945: Apr. 26, 4.83; Oct. 26, 5.82.

149 (\*938, p. 131; 946, p. 152; \*988, p. 138; 1018, p. 113). George Boxberger, Jr. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 22, T. 14 S., R. 14 W. Water levels, in feet below land-surface datum, 1945: Apr. 26, 19.34; July 12, 18.53.

152 (\*938, p. 132; 946, p. 152; \*988, p. 138; 1018, p. 113). D. D. Beisel. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 10, T. 14 S., R. 12 W. Water levels, in feet below land-surface datum, 1945: Apr. 26, 13.39; July 12, 10.98; Oct. 26, 13.29.

#### Scott County

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 11 wells in Scott County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
1	14	55.89	May 14, 1934	66.26	Oct. 16, 1943
1A	5	53.42	May 16, 1934	56.59	Dec. 29, 1945
			Aug. 16, 1940		Dec. 30, 1945
			Aug. 18, 1940		Dec. 31, 1945
2	12	30.95	Apr. 25, 1939	37.93	Dec. 6, 1945
2A	1.5	31.58	Aug. 10, 1944	35.56	Nov. 10, 1945
					Nov. 11, 1945
					Nov. 12, 1945
3	6	67.94	May 30, 1934	77.93	Aug. 21, 1945
9	6	47.77	Sept. 8, 1939	52.70	Oct. 21, 1943
19	6	45.38	Apr. 18, 1940	49.52	Sept. 16, 1943
32	6	37.79	Apr. 20, 1939	42.90	Dec. 7, 1945
			Apr. 22, 1939		
39	6	68.30	Oct. 23, 1945	68.75	Apr. 16, 1943
48	6	30.12	Aug. 10, 1944	31.52	Apr. 24, 1944
50	6	96.95	Oct. 23, 1945	97.95	Aug. 6, 1943



Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 11 wells in Scott County

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945	Net rise (+) or net decline (-) for period of record
1	10.37	-0.73	-7.28
1A	3.17	-0.53	b -3.17
2	6.98	-1.55	-6.48
2A	3.98	-2.76	-3.39
3	9.99	-1.10	-0.99
9	4.93	-0.13	-4.16
19	4.14	-0.73	-1.36
32	5.11	-1.02	-5.11
39	.46	a +0.21	+0.23
48	1.40	-0.65	-0.38
50	1.00	a +0.08	-0.79

a Last measurement made in October 1945.

b Erroneously reported as -6.70 in Water-Supply Papers 988 and 1018. Correct figure, -2.74.

1 (\*886, p. 187; 908, p. 157; 938, p. 133; 946, p. 154; \*988, p. 139; 1018, p. 114). Mrs. Rosine Smith. NW. corner sec. 9, T. 20 S., R. 33 W. Recorder removed May 25, 1944. In Water-Supply Paper 1018 measurements were erroneously reported as discontinued after May 1944.

Water level, in feet below land-surface datum, 1944-45

Date	Water level	Date	Water level	Date	Water level
June 12, 1944	62.72	Jan. 10, 1945	62.97	July 26, 1945	63.02
July 19	62.66	Feb. 22	62.81	Aug. 21	66.06
Aug. 10	62.60	Mar. 7	62.74	Sept. 5	65.27
Sept. 5	65.79	Apr. 5	62.65	Oct. 23	64.24
Oct. 19	63.47	May 24	63.00	Nov. 23	63.92
Nov. 29	63.18	June 21	63.34	Dec. 7	63.81
Dec. 11	63.08				

1A (\*908, p. 157; 939, p. 134; 946, p. 155; \*988, p. 140; 1018, p. 114). Division of Water Resources, Kansas State Board of Agriculture. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 3, T. 30 S., R. 33 W.

Mean daily water level, in feet below land-surface datum, 1945

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	56.16	56.05	55.92	55.79	55.74	55.64	55.75	55.69	55.97	56.35	56.53	56.55
2	56.16	56.05	55.91	55.79	55.74	55.64	55.75	55.69	55.98	56.36	56.53	56.55
3	56.16	56.05	55.91	55.78	55.74	55.64	55.74	55.69	56.00	56.36	56.53	56.55
4	56.16	56.04	55.90	55.78	55.74	55.63	55.74	55.68	56.01	56.37	56.53	56.55
5	56.16	56.03	55.90	55.78	55.74	55.63	55.75	55.68	56.04	56.38	56.54	56.55
6	56.16	56.03	55.90	55.78	55.73	55.63	55.74	55.68	56.05	56.40	56.54	56.55
7	56.16	56.03	55.90	55.78	55.73	55.61	55.74	55.68	56.07	56.40	56.55	56.55
8	56.16	56.03	55.90	55.77	55.72	55.61	55.74	55.69	56.08	56.42	56.55	56.56
9	56.16	56.02	55.90	55.76	55.72	55.61	55.76	55.68	56.10	56.42	56.54	56.56
10	56.16	56.01	55.89	55.76	55.72	55.61	55.76	55.67	56.12	56.43	56.54	56.56
11	56.16	56.00	55.89	55.76	55.71	55.61	55.75	55.66	56.13	56.44	56.54	56.56
12	56.16	55.99	55.88	55.76	55.70	55.61	55.76	55.66	56.15	56.44	56.54	56.56
13	56.15	55.99	55.87	55.78	55.70	55.61	55.76	55.65	56.15	56.45	56.54	56.56
14	56.15	55.98	55.86	55.78	55.70	55.61	55.75	55.66	56.17	56.46	56.55	56.56
15	56.15	55.98	55.85	55.78	55.70	55.61	55.75	55.66	56.18	56.46	56.54	56.56
16	56.14	55.98	55.84	55.78	55.69	55.62	55.75	55.66	56.19	56.46	56.55	56.56
17	56.13	55.97	55.83	55.79	55.68	55.62	55.74	55.66	56.21	56.46	56.55	56.56
18	56.13	55.97	55.82	55.79	55.68	55.64	55.73	55.67	56.22	56.46	56.55	56.56
19	56.12	55.97	55.82	55.79	55.67	55.64	55.73	55.69	56.24	56.46	56.55	56.56
20	56.11	55.96	55.82	55.79	55.66	55.65	55.73	55.72	56.24	56.46	56.55	56.56
21	56.10	55.96	55.81	55.78	55.66	55.67	55.72	55.74	56.25	56.46	56.55	56.56
22	56.09	55.96	55.81	55.76	55.66	55.68	55.71	55.75	56.26	56.46	56.55	56.57
23	56.09	55.95	55.81	55.77	55.66	55.69	55.71	55.78	56.27	56.50	56.55	56.57
24	56.08	55.95	55.81	55.76	55.66	55.70	55.71	55.79	56.27	56.50	56.55	56.57
25	56.08	55.94	55.81	55.76	55.66	55.71	55.71	55.81	56.28	56.51	56.55	56.57
26	56.07	55.94	55.81	55.76	55.65	55.71	55.71	55.83	56.29	56.51	56.55	56.58

1A--Continued.

Mean daily water level, in feet below land-surface datum, 1945

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
27	56.07	55.94	55.81	55.75	55.65	55.72	55.71	55.86	56.30	56.51	56.54	56.58
28	56.07	55.93	55.81	55.75	55.65	55.74	55.70	55.88	56.31	56.51	56.54	56.58
29	56.06		55.81	55.74	55.65	55.74	55.69	55.90	56.32	56.51	56.54	56.59
30	56.06		55.80	55.74	55.65	55.74	55.69	55.93	56.33	56.52	56.54	56.59
31	56.06		55.79		55.63		55.69	55.95		56.52		56.59

2 (\*886, p. 191; 908, p. 158; 938, p. 134; 946, p. 155; 988, p. 140; 1018, p. 115). E. E. Coffin. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 25, T. 18 S., R. 33 W. In Water Supply Paper 1018 measurements were erroneously reported as discontinued after August 1944.

Water level, in feet below land-surface datum, 1944-45

Date	Water level	Date	Water level	Date	Water level
Sept. 5, 1944	36.27	Dec. 11, 1944	36.38	Mar. 7, 1945	35.91
Oct. 19	36.59	Jan. 10, 1945	36.22	Dec. 6	37.93
Nov. 29	36.41	Feb. 22	36.01		

2A (\*1018, p. 115). Division of Water Resources, Kansas State Board of Agriculture. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 26, T. 18 S., R. 33 W.

Mean daily water level, in feet below land-surface datum, 1945

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	32.22	32.03	31.92	31.83	32.23	33.16	33.33	33.62	34.68	35.34	35.50	35.19
2	32.20	32.02	31.90	31.87	32.26	33.17	33.34	33.61	34.73	.....	35.32	35.19
3	32.19	32.00	31.94	31.86	32.28	33.18	33.35	33.67	34.78	.....	35.36	35.19
4	32.21	32.03	31.92	31.87	32.29	33.19	33.37	33.72	34.83	.....	35.39	35.17
5	32.18	32.02	31.93	31.86	32.32	33.20	33.39	33.74	34.86	.....	35.40	35.15
6	32.17	31.99	31.94	31.86	32.34	33.19	33.40	33.76	34.88	.....	35.43	35.15
7	32.17	32.02	31.94	31.86	32.38	33.21	33.41	33.77	34.92	.....	35.46	35.15
8	32.20	32.00	31.95	31.83	32.42	33.22	33.39	33.83	34.96	.....	35.51	35.14
9	32.19	31.99	31.94	31.81	32.44	33.23	33.39	33.89	35.02	.....	35.55	35.14
10	32.18	32.02	31.93	31.82	32.46	33.25	33.39	33.93	35.10	.....	35.56	35.13
11	32.17	32.00	31.92	31.84	32.48	33.25	33.37	33.99	35.12	.....	35.56	35.12
12	32.17	31.97	31.92	31.83	32.48	33.26	33.36	34.03	35.12	.....	35.56	35.11
13	32.17	31.97	31.90	31.89	32.52	33.24	33.34	34.09	35.13	.....	35.55	35.11
14	32.16	31.96	31.88	31.97	32.54	33.23	33.31	34.15	35.13	.....	35.54	35.12
15	32.17	32.00	31.87	31.97	32.58	33.21	33.29	34.21	35.19	.....	35.51	35.12
16	32.14	31.99	31.87	31.98	32.59	33.21	33.27	34.26	35.12	.....	35.49	35.11
17	32.13	31.98	31.89	32.04	32.59	33.20	33.25	34.31	35.14	.....	35.47	35.11
18	32.13	31.97	31.89	32.06	32.59	33.19	33.24	34.37	35.17	.....	35.44	35.11
19	32.13	31.96	31.90	32.06	32.59	33.17	33.22	34.43	35.22	.....	35.41	35.09
20	32.13	31.94	31.89	32.07	32.61	33.17	33.21	34.50	35.25	.....	35.38	35.10
21	32.11	31.92	31.87	32.06	32.65	33.16	33.19	34.55	35.25	.....	35.36	35.09
22	32.10	31.94	31.85	32.06	32.69	33.22	33.19	34.53	35.26	.....	35.34	35.08
23	32.09	31.96	31.83	32.08	32.72	33.28	33.17	34.51	35.27	35.34	35.31	35.06
24	32.07	31.90	31.83	32.09	32.75	33.31	33.16	34.51	35.27	35.34	35.30	35.04
25	32.07	31.93	31.85	32.13	32.80	33.31	33.16	34.50	35.27	35.33	35.27	35.04
26	32.07	31.94	31.85	32.16	32.87	33.28	33.16	34.49	35.28	35.32	35.26	35.02
27	32.06	31.93	31.86	32.17	32.94	33.27	33.17	34.50	35.30	35.31	35.22	35.01
28	32.06	31.93	31.87	32.18	33.03	33.27	33.25	34.50	35.32	35.31	35.20	34.99
29	32.06		31.88	32.22	33.10	33.20	33.34	34.50	35.34	35.33	35.20	34.99
30	32.06		31.87	32.23	33.15	33.32	33.38	34.53	35.34	35.33	34.20	34.97
31	32.04		31.85		33.15		33.45	34.59		35.32		34.97

3 (\*886, p. 194; 908, p. 158; 938, p. 135; 946, p. 156; \*988, p. 141; 1018, p. 116). Claude Hughes. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 21, T. 18 S., R. 33 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	70.16	Apr. 5	69.64	Aug. 21	77.93	Nov. 23	71.31
Feb. 22	70.01	June 21	69.81	Sept. 5	71.42	Dec. 7	71.27
Mar. 7	69.98	July 26	69.76	Oct. 23	71.53		

a Well pumping.

9 (\*886, p. 195; 908, p. 159; 938, p. 135; 946, p. 156; \*988, p. 141; 1018, p. 116). Mrs. Rosine Smith. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 35, T. 19 S., R. 33 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	51.83	Apr. 5	51.66	July 26	50.50	Oct. 23	51.84
Feb. 22	51.71	May 24	51.49	Aug. 21	51.48	Nov. 23	51.87
Mar. 7	51.70	June 21	51.51	Sept. 5	51.56	Dec. 7	51.93

19 (\*886, p. 195; 908, p. 160; 938, p. 136; 946, p. 156; \*988, p. 141; 1018, p. 116). J. Dyer. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 12, T. 18 S., R. 33 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	47.55	Apr. 5	47.94	July 26	48.46	Nov. 23	48.62
Feb. 22	47.34	May 24	47.05	Oct. 23	48.26	Dec. 7	48.45
Mar. 7	47.42	June 21	47.56				

32 (\*886, p. 196; 908, p. 160; 938, p. 136; 946, p. 157; \*988, p. 141; 1018, p. 116). E. J. Roark. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 25, T. 19 S., R. 33 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	41.83	Apr. 5	41.72	July 26	42.18	Oct. 23	42.80
Feb. 22	41.74	May 24	41.88	Aug. 21	42.50	Nov. 23	42.88
Mar. 7	41.74	June 21	42.11	Sept. 5	42.47	Dec. 7	42.90

39 (\*886, p. 197; 908, p. 162; 938, p. 138; 946, p. 157; \*988, p. 142; 1018, p. 116). Henry F. Poos Estate. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 26, T. 18 S., R. 31 W. Water levels, in feet below land-surface datum, 1945: Jan. 10, 68.43; Feb. 22, 68.46; Apr. 5, 68.48; Oct. 23, 68.30.

48 (\*886, p. 198; 908, p. 162; 938, p. 138; 946, p. 158; \*988, p. 142; 1018, p. 116). P. Roark. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 25, T. 20 S., R. 33 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	30.31	Apr. 5	30.49	July 26	30.61	Oct. 23	30.86
Feb. 22	30.43	May 24	30.54	Aug. 21	30.69	Nov. 23	30.91
Mar. 7	30.38	June 21	30.72	Sept. 5	30.74	Dec. 7	30.90

50 (\*886, p. 198; 908, p. 163; 938, p. 138; 946, p. 158; \*988, p. 142; 1018, p. 117). F. M. Houston. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 28, T. 19 S., R. 32 W. Water levels, in feet below land-surface datum, 1945: Jan. 10, 96.96; Feb. 22, 97.01; May 5, 96.98; Oct. 23, 96.95.

### Sedgwick County

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 32 wells in Sedgwick County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
11	8	51.34	Aug. 4, 1945	60.34	July 4, 1938
12	8	11.06	May 7, 8, 1944	18.99	Apr. 1, 2, 8, 9, 11, 12, 1938
26	8	6.05	May 7, 1944	a 23.18	Jan. 29, 1940
28	8	9.99	May 4, 1945	19.08	Feb. 1, 1938
307	8	9.08	May 12, 13, 20, 1945	a 14.17	Mar. 12, 13, 14, 1944
502	3	12.49	Mar. 20, 1944	25.60	Sept. 10, 1945
800	7	7.27	Apr. 29, 1944	19.69	Apr. 3, 1940
802	7	1.96	May 11, 1942	8.06	Nov. 9, 1945
804	7	.59	May 2, 1945	4.70	Oct. 8, 1943
805	7	1.57	May 2, 1945	5.68	Dec. 3, 1940
806	7	14.57	May 2, 1945	17.61	Nov. 5, 1940
807	7	19.45	May 8, 1944	23.04	Jan. 2, 1941
808	7	19.94	Oct. 4, 1945	23.47	Mar. 4, 1941
809	7	6.77	Apr. 29, 1944	14.68	Jan. 2, 1941
810	7	1.94	Apr. 28, 1944	13.38	Aug. 30, 1940

a Affected by pumping in nearby wells.

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 32 wells in Sedgwick County--Continued.

Well	Length of record (years)	Highest level	Date	Lowest level	Date
811	7	3.69	May 6, 1944	8.96	Nov. 22, 1940
812	7	6.90	May 4, 1945	12.62	Jan. 10, 1941
814	7	9.72	May 4, 1945	17.11	Dec. 3, 1940 Jan. 2, Feb. 3, Mar. 4, May 1, 1941
815	7	7.65	May 11, 1945	14.04	Jan. 24, 31, 1941
816	7	5.32	Oct. 8, 1945	12.51	Jan. 24, 31, 1941
825	7	5.49	May 4, 1945	14.53	Nov. 5, 1940
826	7	2.12	May 9, 1944	13.01	Nov. 5, 1940
830	7	23.79	May 2, 1945	28.62	Oct. 3, 1940
834	7	5.87	May 8, 1944	11.70	Oct. 3, 1940
838	7	20.83	May 29, 1945	26.91	Nov. 5, 1940
840	7	.53	Sept. 30, 1945	7.75	Nov. 22, 1940
842	7	1.39	Oct. 4, 1945	7.27	Nov. 5, 1940
845	7	8.20	May 8, 1944	15.85	Apr. 3, 1940
846	7	11.35	May 8, 1944	17.35	Apr. 3, 1940
847	7	10.55	May 8, 1944	17.59	Apr. 3, 1940 May 1, 1941
870	7	1.64	Nov. 9, 1945	8.30	Nov. 5, 1940
2089	3	9.91	May 8, 1944	15.59	Sept. 8, 1943

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 32 wells in Sedgwick County

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945	Net rise (+) or net decline (-) for period of record
11	9.00	+0.27	+3.88
12	7.93	-.35	+6.26
26	17.13	-.59	+7.86
28	9.09	+.93	+5.56
307	5.19	+1.54	+2.98
502	13.11	a -1.95	+.34
800	12.42	+.48	+7.79
802	6.10	-1.54	-2.60
804	4.11	-1.37	-1.06
805	4.11	-.53	-.20
806	3.04	+.34	+1.01
807	3.59	+.21	+1.83
808	3.53	+.69	+3.25
809	7.91	+.38	+2.85
810	11.44	-1.15	-.49
811	5.27	-.75	+.49
812	5.72	-.14	+2.34
814	7.39	+.85	+5.23
815	6.39	+.68	+4.19
816	7.19	+1.42	+4.37
825	9.04	+1.86	+5.53
826	10.89	b +.86	+2.15
830	4.83	+.07	-.85
834	5.83	+.12	+2.26
838	6.08	+.93	+4.01
840	7.22	-.35	+6.87
842	5.88	-.30	+2.47
845	7.75	-.58	-.05
846	6.00	-.45	-.57
847	7.04	-.85	-.49
870	6.66	-.17	+1.44
2089	5.68	-.36	-2.82

a Last measurement made in November 1945.

b Net rise from November 1944 to December 1945.

11 (\*840, p. 105; 845, p. 126; 886, p. 217; 908, p. 165; 938, p. 140; 946, p. 160; \*988, p. 144; 1018, p. 118). J. H. Heim. SE. corner sec. 22, T. 26 S., R. 3 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	55.68	May 2	55.34	Aug. 4	51.34	Nov. 9	55.22
Feb. 27	55.62	28	55.43	Sept. 4	54.96	Dec. 5	55.36
Mar. 27	55.59	June 28	55.22	Oct. 4	54.58		

12 (\*840, p. 105; 845, p. 126; 886, p. 217; 908, p. 165; 938, p. 140; 946, p. 160; \*988, p. 144; 1018, p. 118). Dr. A. D. Updegraph. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 26, T. 25 S., R. 1 W.

Lowest daily water level, in feet below land-surface datum, 1945

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	15.02	15.38	15.60	15.32	13.01	13.54	14.17	14.73	15.27	14.77	14.21	14.82
2	15.02	15.38	15.58	15.36	12.99	13.59	14.18	14.74	15.28	14.66	14.26	14.84
3	15.04	.....	15.61	15.38	12.96	13.62	14.19	14.75	15.30	14.50	14.29	14.86
4	15.06	.....	15.57	15.42	12.92	13.64	14.21	14.77	15.32	14.38	14.28	14.87
5	15.04	.....	15.54	15.44	12.87	13.65	14.25	14.78	15.34	14.28	14.28	14.86
6	15.06	.....	15.53	15.42	12.83	13.68	14.28	14.80	15.36	14.21	14.32	14.89
7	15.08	.....	15.52	15.43	12.87	13.72	14.29	14.82	15.36	14.13	14.33	14.90
8	15.13	.....	15.51	15.43	12.89	13.73	14.30	14.84	15.37	14.10	14.38	14.94
9	15.13	15.46	15.49	15.42	12.88	13.75	14.34	14.86	15.39	14.06	14.41	14.97
10	15.14	15.48	15.47	15.45	12.91	13.79	14.36	14.87	15.41	14.01	14.42	14.98
11	15.14	15.47	15.47	15.46	12.88	13.82	14.37	14.88	15.41	13.99	14.42	14.98
12	15.14	15.47	15.48	15.45	12.90	13.84	14.39	14.90	15.44	13.97	14.44	14.99
13	15.16	15.49	15.47	15.40	12.91	13.84	14.42	14.91	15.46	13.96	14.48	14.99
14	15.18	15.49	15.43	15.37	12.99	13.86	14.44	14.93	15.47	13.95	14.50	15.02
15	15.20	15.53	15.46	15.38	13.03	13.90	14.46	14.95	15.50	13.96	14.50	15.04
16	15.21	15.54	15.47	15.14	13.06	13.93	14.49	14.97	15.50	13.94	14.50	15.09
17	15.23	15.56	15.51	14.64	13.09	13.93	14.51	14.98	15.51	13.93	14.55	15.10
18	15.24	15.57	15.46	14.67	13.11	13.94	14.53	15.01	15.53	13.96	14.57	15.10
19	15.25	15.57	15.42	14.49	13.11	13.95	14.55	15.03	15.55	14.00	14.60	15.11
20	15.27	15.57	15.40	14.30	13.12	13.95	14.56	15.05	15.57	13.98	14.61	15.12
21	15.29	15.58	15.39	14.10	13.22	13.97	14.57	15.08	15.58	14.03	14.64	15.14
22	15.31	15.61	15.37	13.95	13.25	14.00	14.58	15.09	15.61	14.03	14.66	15.17
23	15.31	15.62	15.32	13.79	13.28	14.01	14.60	15.10	15.62	14.06	14.67	15.19
24	15.30	15.62	15.31	13.67	13.28	14.03	14.62	15.11	15.63	14.07	14.68	15.20
25	15.32	15.64	15.29	13.55	13.32	14.04	14.64	15.13	15.63	14.10	14.70	15.24
26	15.34	15.65	15.31	13.50	13.35	14.05	14.66	15.14	15.61	14.11	14.72	15.26
27	15.33	15.63	15.31	13.39	13.40	14.05	14.66	15.16	15.59	14.12	14.74	15.28
28	15.34	15.63	15.33	13.23	13.44	14.09	14.67	15.19	15.59	14.13	14.76	15.28
29	15.36	.....	15.35	13.21	13.47	14.10	14.68	15.21	15.25	14.17	14.78	15.29
30	15.36	.....	15.34	13.13	13.47	14.14	14.70	15.24	14.89	14.17	14.78	15.32
31	15.37	.....	15.33	.....	13.49	.....	14.72	15.25	.....	14.17	.....	15.33

26 (\*840, p. 105; 845, p. 127; 886, p. 217; 908, p. 166; 938, p. 141; 946, p. 161; \*988, p. 144; 1018, p. 119). Wichita Water Co. SW $\frac{1}{4}$  sec. 18, T. 27 S., R. 1 W.

Lowest daily water level, in feet below land-surface datum, 1945

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	10.86	10.91	11.15	10.75	8.90	10.54	10.16	10.74	11.35	9.85	11.00	11.23
2	10.86	10.91	11.03	10.80	9.04	10.61	10.28	10.79	11.36	9.89	11.02	11.23
3	10.75	.....	10.95	10.80	9.16	10.66	10.47	10.85	11.38	9.99	11.03	11.24
4	10.49	.....	10.84	10.83	9.25	10.70	10.50	10.90	11.41	10.14	11.03	11.22
5	10.50	.....	10.74	10.83	9.31	10.73	10.61	10.95	11.43	10.24	11.04	11.22
6	10.62	.....	10.69	10.83	9.38	10.77	10.68	10.99	11.46	10.32	11.03	11.23
7	10.74	.....	10.67	10.84	9.48	10.80	10.73	11.01	11.44	10.38	11.03	11.23
8	10.87	.....	10.64	10.84	9.57	10.83	10.77	11.03	11.46	10.47	11.06	11.25
9	10.90	10.95	10.63	12.97	9.65	10.85	10.81	11.04	11.47	10.51	11.06	11.23
10	10.92	10.96	10.63	12.82	9.68	10.86	10.83	11.04	11.48	10.58	11.06	11.22
11	10.94	10.93	10.66	11.43	9.64	10.86	10.83	11.00	11.48	10.63	11.05	11.26
12	10.97	10.89	10.67	11.21	9.69	10.84	10.79	11.03	11.49	10.69	11.08	11.23
13	10.97	10.89	10.66	11.01	9.75	10.82	10.77	11.18	11.49	10.73	11.08	11.25
14	10.99	10.88	10.66	10.95	9.84	10.87	10.77	11.09	11.51	10.77	11.09	11.27

26--Continued.

Lowest daily water level, in feet below land-surface datum, 1945

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
15	11.00	10.93	10.65	10.89	9.91	10.91	10.82	11.05	11.54	10.80	11.09	11.28
16	11.00	10.93	10.62	10.75	9.97	10.91	10.85	10.93	11.54	10.78	11.10	11.33
17	11.01	10.93	11.81	9.17	10.04	10.91	10.90	10.98	11.55	10.79	11.11	11.45
18	11.00	10.94	10.64	8.46	10.09	10.93	10.86	10.89	11.57	10.82	11.11	11.44
19	10.99	10.95	10.64	9.30	10.14	10.96	10.53	10.91	11.59	10.84	11.17	11.50
20	11.01	10.95	10.64	8.76	10.19	10.98	10.29	11.00	11.60	10.85	11.12	11.54
21	10.98	10.93	10.64	8.74	10.28	11.00	10.50	11.07	11.61	10.86	11.14	11.51
22	10.98	10.93	11.42	8.93	10.32	11.03	10.28	11.10	11.61	10.92	11.16	11.47
23	10.97	10.95	11.42	9.16	11.34	11.04	10.40	11.12	11.54	10.90	11.18	11.44
24	10.93	11.55	10.85	9.23	10.80	11.04	10.52	11.15	12.08	10.91	11.17	11.49
25	10.90	12.60	10.78	9.26	10.49	10.92	10.59	11.17	11.54	10.93	11.18	11.49
26	10.90	11.77	10.77	9.26	10.19	10.86	10.60	11.19	11.17	10.94	11.21	11.52
27	10.89	11.47	10.74	9.01	10.02	10.67	10.57	11.21	11.14	10.96	11.21	11.52
28	10.88	11.27	10.80	8.78	10.24	10.49	10.47	11.23	11.14	10.96	11.22	11.50
29	10.90		10.74	8.69	10.35	10.26	10.54	11.27	10.90	11.00	11.22	11.48
30	10.90		10.74	8.75	10.40	10.15	10.62	11.30	9.76	10.98	11.23	11.48
31	10.91		10.74		10.46		10.68	11.32		10.99		11.43

28 (\*840, p. 106; 845, p. 127; 886, p. 218; 908, p. 167; 938, p. 141; 946, p. 161; \*988, p. 145; 1018, p. 119).

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	12.08	Mar. 30	11.59	June 27	11.44	Oct. 2	12.47
31	12.09	May 4	9.99	Aug. 2	12.09	Nov. 9	12.69
Feb. 26	11.67	28	11.12	Sept. 5	13.53	Dec. 5	12.73

307 (\*840, p. 107; 845, p. 128; 886, p. 218; 908, p. 167; 938, p. 142; 946, p. 162; \*988, p. 145; 1018, p. 120). J. R. Clark. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 1, T. 25 S., R. 2 W.

Lowest daily water level, in feet below land-surface datum, 1945

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	11.61	11.74	11.86	11.83	9.33	9.39	10.18	10.41	10.85	9.64	9.39	10.01
2	11.59	11.72	11.83	11.86	9.26	9.42	10.18	10.47	10.85	9.60	9.48	10.01
3	11.57	.....	11.88	11.86	9.24	9.44	10.18	10.51	10.87	9.54	9.51	10.02
4	11.57	.....	11.87	11.87	9.21	9.42	10.20	10.55	10.93	9.51	9.49	10.01
5	11.54	.....	11.88	11.86	9.17	9.59	10.26	10.59	10.97	9.49	9.46	9.96
6	11.52	.....	11.84	11.81	9.12	9.43	10.27	10.59	10.98	9.45	9.55	9.87
7	11.52	.....	11.94	11.78	9.17	9.50	10.28	10.57	11.01	9.44	9.55	9.93
8	11.59	.....	11.97	11.75	9.18	9.53	10.29	10.58	11.06	9.44	9.68	9.95
9	11.59	11.73	11.98	11.71	9.16	9.57	10.36	10.58	11.10	9.43	9.72	9.98
10	11.59	11.75	11.99	11.73	9.13	9.62	10.39	10.59	11.10	9.39	9.72	9.98
11	11.59	11.75	12.01	11.69	9.11	9.66	10.39	10.59	11.09	9.37	9.70	9.75
12	11.60	11.73	12.02	11.68	9.08	9.69	10.40	10.57	11.11	9.38	9.72	9.74
13	11.61	11.75	12.02	11.63	9.08	9.70	10.42	10.61	11.11	9.39	9.78	9.72
14	11.63	11.76	12.02	11.62	9.12	9.76	10.43	10.61	11.11	9.36	9.79	9.71
15	11.66	11.82	12.00	11.58	9.13	9.82	10.43	10.61	11.11	9.37	9.78	9.74
16	11.66	11.84	12.00	11.10	9.12	9.83	10.42	10.58	11.10	9.32	9.75	9.77
17	11.67	11.86	12.05	10.77	9.12	9.77	10.44	10.58	11.13	9.30	9.81	9.96
18	11.67	11.87	12.04	10.56	9.11	9.79	10.43	10.57	11.18	9.32	9.85	9.97
19	11.72	11.88	12.01	10.44	9.11	9.82	10.23	10.57	11.23	9.38	9.85	10.04
20	11.73	11.88	12.00	10.33	9.08	9.83	10.20	10.59	11.25	9.32	9.86	10.02
21	11.73	11.88	11.98	10.26	9.21	9.88	10.23	10.62	11.28	9.30	9.89	10.00
22	11.76	11.91	11.97	10.19	9.23	9.94	10.28	10.63	11.21	9.30	9.90	10.05
23	11.76	11.94	11.90	10.11	9.24	9.96	10.34	10.63	11.13	9.27	9.92	9.99
24	11.74	11.94	11.83	10.08	9.18	9.99	10.41	10.60	11.11	9.27	9.91	10.00
25	11.74	11.90	11.85	10.01	9.27	10.01	10.46	10.59	10.97	9.26	9.92	10.04
26	11.75	11.85	11.87	9.88	9.29	10.02	10.46	10.60	10.86	9.27	9.94	10.05
27	11.74	11.85	11.90	9.74	9.34	10.01	10.28	10.63	10.80	9.30	9.97	10.06
28	11.74	11.87	11.90	9.62	9.37	10.08	10.27	10.66	10.67	9.32	10.01	10.05
29	11.74		11.89	9.50	9.40	10.10	10.29	10.73	10.16	9.37	10.03	10.02
30	11.74		11.89	9.43	9.40	10.16	10.37	10.77	9.86	9.36	10.03	10.06
31	11.74		11.85		9.32		10.41	10.80		9.33		10.06

502 (\*988, p. 146; 1018, p. 120). Kansas Gas & Electric Co. NW. corner sec. 29, T. 26 S., R. 1 E. Pumping before all measurements.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	21.86	May 4	21.20	Aug. 14	25.30	Nov. 5	20.40
Mar. 5	21.40	June 6	24.40	Sept. 10	25.60	Dec. 30	23.90
Apr. 10	23.50	July 6	25.00	Oct. 3	17.60		

800 (\*845, p. 129; 886, p. 219; 908, p. 167; 938, p. 142; 946, p. 162; \*988, p. 146; 1018, p. 120). City of Wichita. SW. corner sec. 33, T. 26 S., R. 1 E.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	10.57	Mar. 30	11.84	June 27	10.33	Oct. 2	10.22
31	11.23	May 4	8.53	Aug. 2	11.64	Nov. 9	10.91
Feb. 26	11.67	28	9.50	Sept. 5	11.86	Dec. 5	11.12

802 (\*886, p. 219; 908, p. 167; 938, p. 142; 946, p. 162; \*988, p. 146; 1018, p. 120). City of Wichita. NW. corner sec. 1, T. 27 S., R. 1 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	6.06	May 2	3.83	Aug. 2	6.48	Nov. 9	8.06
Feb. 27	6.21	June 29	5.45	Sept. 4	7.39	Dec. 5	7.33
Mar. 27	5.95	28	6.36	Oct. 4	6.22		

804 (\*845, p. 130; 886, p. 219; 908, p. 167; 938, p. 142; 946, p. 162; \*988, p. 146; 1018, p. 120). City of Wichita. SE. corner sec. 16, T. 26 S., R. 1 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	2.11	May 2	0.59	Aug. 4	3.23	Nov. 9	2.93
Feb. 27	2.04	29	2.24	Sept. 4	3.70	Dec. 5	3.15
Mar. 27	2.12	June 28	2.60	Oct. 4	2.54		

805 (\*845, p. 130; 886, p. 219; 908, p. 168; 938, p. 142; 946, p. 162; \*988, p. 146; 1018, p. 121). City of Wichita. NW. corner NE $\frac{1}{4}$  sec. 19, T. 26 S., R. 1 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	2.83	May 2	1.57	Aug. 4	3.65	Nov. 9	3.24
Feb. 27	2.78	29	2.70	Sept. 4	3.85	Dec. 5	3.31
Mar. 27	2.77	June 28	2.79	Oct. 9	2.48		

806 (\*845, p. 130; 886, p. 220; 908, p. 168; 938, p. 143; 946, p. 163; \*988, p. 146; 1018, p. 121). City of Wichita. NW. corner SW $\frac{1}{4}$  sec. 15, T. 26 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	15.55	May 2	14.57	Aug. 4	15.18	Nov. 9	15.09
Feb. 27	15.48	28	14.63	Sept. 4	15.95	Dec. 5	15.19
Mar. 27	15.29	June 28	14.79	Oct. 4	15.13		

807 (\*845, p. 130; 886, p. 220; 908, p. 168; 938, p. 143; 946, p. 163; \*988, p. 146; 1018, p. 121). City of Wichita. NW. corner sec. 10, T. 26 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	20.70	May 2	20.40	Aug. 4	20.12	Nov. 9	20.22
Feb. 27	20.65	29	19.57	Sept. 4	20.62	Dec. 5	20.36
Mar. 27	20.50	June 28	19.86	Oct. 4	20.32		

808 (\*845, p. 130; 886, p. 220; 908, p. 168; 938, p. 143; 946, p. 163; \*988, p. 147; 1018, p. 121). City of Wichita. SW. corner NW $\frac{1}{4}$  sec. 18, T. 26 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	20.77	May 2	20.24	Aug. 4	20.22	Nov. 9	20.10
Feb. 27	20.71	28	20.08	Sept. 4	20.30	Dec. 5	20.19
Mar. 27	20.65	June 28	20.00	Oct. 4	19.94		

## 122 WATER LEVELS AND ARTESIAN PRESSURE, 1945, NORTH-CENTRAL STATES

809 (\*845, p. 131; 886, p. 220; 908, p. 168; 938, p. 143; \*946, p. 163; \*988, p. 147; 1018, p. 121). City of Wichita. NW. corner sec. 21, T. 26 S., R. 1 E.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	8.93	Mar. 30	9.15	Aug. 2	9.74	Nov. 9	9.45
31	9.45	May 28	7.55	Sept. 5	10.71	Dec. 5	9.81
Feb. 26	9.66	June 27	8.63	Oct. 2	8.84		

810 (\*845, p. 131; 886, p. 220; 908, p. 168; 938, p. 143; 946, p. 163; \*988, p. 147; 1018, p. 121). City of Wichita. NE. corner SE $\frac{1}{4}$  sec. 35, T. 26 S., R. 1 W.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	10.50	Apr. 20	2.33	July 20	10.74	Oct. 15	8.71
12	10.73	27	5.00	27	10.48	22	9.91
19	10.88	May 4	6.39	Aug. 3	10.84	29	10.28
26	10.91	11	7.88	10	11.12	Nov. 5	10.31
Feb. 2	10.96	18	8.71	17	11.26	12	10.71
16	11.13	25	9.28	24	11.38	19	11.01
23	11.22	June 1	9.70	31	11.57	26	11.08
Mar. 2	10.68	8	10.08	Sept. 7	11.79	Dec. 3	11.12
9	10.31	15	10.19	15	11.82	10	11.20
16	10.48	22	10.17	22	11.98	17	11.36
30	10.26	29	10.41	30	3.79	23	11.41
Apr. 6	10.63	July 6	10.65	Oct. 8	8.17	31	11.39
13	9.69	13	10.86				

811 (\*845, p. 131; 886, p. 221; 908, p. 168; 938, p. 143; 946, p. 163; \*988, p. 147; 1018, p. 121). City of Wichita. SE. corner sec. 33, T. 25 S., R. 1 W.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	6.43	Apr. 27	4.33	July 20	6.56	Oct. 15	5.73
12	6.57	May 4	4.19	27	5.97	22	6.58
19	6.74	11	4.53	Aug. 3	6.31	29	6.83
Feb. 2	6.60	18	4.94	10	6.61	Nov. 5	6.88
16	6.61	25	5.32	17	6.50	12	6.82
23	6.76	June 1	5.55	24	6.91	19	7.14
Mar. 2	6.50	8	5.87	31	7.11	26	6.88
9	6.62	15	6.06	Sept. 7	7.17	Dec. 3	6.91
16	6.45	22	6.11	15	7.21	10	6.90
30	6.52	29	6.16	22	7.54	17	6.89
Apr. 6	6.68	July 6	6.34	30	5.50	23	6.92
13	6.26	13	6.47	Oct. 8	5.59	31	6.98
20	4.70						

812 (\*845, p. 132; 886, p. 221; 908, p. 169; 938, p. 144; 946, p. 164; \*988, p. 147; 1018, p. 122). City of Wichita. NW. corner sec. 27, T. 25 S., R. 1 W.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	8.98	Apr. 20	7.30	July 20	8.28	Oct. 15	7.84
12	9.17	27	7.08	27	7.95	22	8.09
19	9.27	May 4	6.90	Aug. 3	8.24	29	8.23
26	9.28	11	6.96	10	8.43	Nov. 5	8.30
Feb. 2	9.28	18	7.16	17	8.58	12	8.36
16	9.40	25	7.32	24	8.73	19	8.61
23	9.47	June 1	7.47	31	8.90	26	8.72
Mar. 2	9.18	8	7.75	Sept. 7	9.10	Dec. 3	8.80
9	9.24	15	7.86	15	9.26	10	8.89
16	9.11	22	7.90	22	9.38	17	8.93
30	9.03	29	7.97	30	7.82	23	8.96
Apr. 6	9.14	July 6	8.18	Oct. 8	7.82	31	9.13
13	8.84	13	8.27				



814 (\*845, p. 132; 886, p. 221; 908, p. 169; 938, p. 144; 946, p. 164; \*988, p. 148; 1018, p. 122). City of Wichita. SE. corner sec. 14, T. 25 S., R. 1 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	11.67	Mar. 30	12.54	June 27	10.94	Oct. 2	11.09
31	12.22	May 4	9.72	Aug. 2	11.59	Nov. 9	11.10
Feb. 26	12.31	28	10.37	Sept. 5	12.13	Dec. 5	11.44

815 (\*845, p. 132; 886, p. 221; 908, p. 169; 938, p. 144; 946, p. 164; \*988, p. 148; 1018, p. 122). City of Wichita. NE. corner sec. 17, T. 25 S., R. 1 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	9.85	Apr. 20	8.80	July 20	8.63	Oct. 15	7.91
12	9.85	27	8.20	27	8.49	22	8.14
19	9.93	May 4	7.79	Aug. 3	8.64	29	8.22
26	10.00	11	7.65	10	8.75	Nov. .5	8.28
Feb. 2	10.03	18	7.74	17	8.76	12	8.48
16	10.15	25	7.86	24	8.92	19	8.69
23	10.21	June 1	7.97	31	9.09	26	8.76
Mar. 2	10.15	8	8.14	Sept. 7	9.26	Dec. 3	10.84
9	10.19	15	8.28	15	9.48	10	10.08
16	10.13	22	8.37	22	9.67	17	9.13
30	10.03	29	8.48	30	8.72	23	9.17
Apr. 6	10.09	July 6	8.63	Oct. 8	7.89	31	9.02
13	9.92	13	8.76				

816 (\*845, p. 133; 886, p. 222; 908, p. 169; 938, p. 144; 946, p. 165; \*988, p. 148; 1018, p. 122). City of Wichita. SE. corner sec. 7, T. 25 S., R. 1 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	8.29	Apr. 20	5.96	July 20	6.82	Oct. 15	5.47
12	8.36	27	5.60	27	6.66	22	5.63
19	8.45	May 4	5.39	Aug. 3	6.87	29	5.84
26	8.47	11	5.59	10	7.02	Nov. 5	5.88
Feb. 2	8.45	18	5.84	17	7.01	12	6.04
16	8.56	25	6.09	24	7.23	19	6.30
23	8.60	June 1	6.30	31	7.48	26	6.43
Mar. 2	8.45	8	6.54	Sept. 7	7.74	Dec. 3	6.48
9	8.51	15	6.71	15	7.84	10	6.52
16	8.44	22	6.77	22	7.86	17	6.79
30	8.33	29	6.87	30	5.63	23	6.83
Apr. 6	8.39	July 6	7.05	Oct. 8	5.32	31	6.79
13	8.25	13	7.17				

825 (\*845, p. 133; 886, p. 222; 908, p. 170; 938, p. 145; 946, p. 165; \*988, p. 148; 1018, p. 123). City of Wichita. NE. corner sec. 3, T. 25 S., R. 1 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	8.90	Mar. 30	8.45	June 27	6.98	Oct. 2	7.70
31	9.00	May 4	5.49	Aug. 2	7.98	Nov. 9	8.10
Feb. 26	8.74	28	6.63	Sept. 5	8.60	Dec. 5	8.07

826 (\*886, p. 222; 908, p. 170; 938, p. 145; 946, p. 165; \*988, p. 149; 1018, p. 123). City of Wichita. NE. corner sec. 5, T. 25 S., R. 1 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	7.61	Mar. 30	7.90	July 2	7.70	Oct. 5	3.21
Feb. 5	8.45	May 1	2.98	Aug. 1	8.19	Nov. 14	7.72
Mar. 1	8.16	31	7.07	Sept. 6	9.18	Dec. 6	8.11

830 (\*845, p. 133; 886, p. 222; 908, p. 170; 938, p. 145; 946, p. 165; \*988, p. 149; 1018, p. 123). City of Wichita. SW. corner sec. 30, T. 25 S., R. 2 W.

## 124 WATER LEVELS AND ARTESIAN PRESSURE, 1945, NORTH-CENTRAL STATES

830--Continued.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	25.08	May 2	23.79	Aug. 4	24.70	Nov. 9	24.73
Feb. 26	25.00	29	24.41	Sept. 4	25.55	Dec. 5	24.97
Mar. 27	24.97	June 28	24.61	Oct. 4	24.54		

874 (\*845, p. 133; 886, p. 223; 908, p. 170; 938, p. 145; 946, p. 165; \*988, p. 149; 1018, p. 123). City of Wichita. SW. corner sec. 9, T. 25 S., R. 3 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	8.36	May 2	6.12	Aug. 4	8.30	Nov. 9	7.90
Feb. 27	8.14	29	7.44	Sept. 4	8.82	Dec. 5	8.04
Mar. 27	8.19	June 28	7.91	Oct. 4	6.62		

888 (\*845, p. 133; 886, p. 223; 908, p. 170; 938, p. 145; 946, p. 165; \*998, p. 149; 1018, p. 123). City of Wichita. NE. corner NW $\frac{1}{4}$  sec. 33, T. 25 S., R. 3 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	22.47	May 2	22.06	Aug. 4	21.86	Nov. 9	21.02
Feb. 27	22.41	29	20.83	Sept. 4	22.08	Dec. 5	21.35
Mar. 27	22.43	June 28	21.19	Oct. 4	21.31		

340 (\*908, p. 170; 938, p. 145; 946, p. 165; \*988, p. 149; 1018, p. 123). Owner of well, city of Wichita; owner of property, C. A. Berger. NE. corner sec. 9, T. 25 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	4.06	Apr. 20	1.98	July 20	3.31	Oct. 15	1.54
12	4.25	May 4	1.86	27	3.28	22	1.72
19	4.33	11	2.47	Aug. 3	4.00	29	2.82
26	4.10	18	3.00	10	4.37	Nov. 6	2.87
Feb. 2	4.16	25	3.38	17	4.30	12	3.38
16	4.35	June 1	3.66	24	4.59	19	3.53
23	4.48	8	3.96	31	5.01	26	3.75
Mar. 2	4.11	15	4.13	Sept. 7	5.42	Dec. 3	3.79
9	4.26	22	4.09	15	5.51	10	4.13
16	4.02	29	4.10	22	5.45	17	4.24
30	4.20	July 6	4.52	30	.53	23	4.26
Apr. 6	4.38	13	4.51	Oct. 8	1.32	31	4.25
13	3.94						

842 (\*886, p. 223; 908, p. 171; 938, p. 145; 946, p. 166; \*988, p. 149; 1018, p. 123). City of Wichita. SW. corner sec. 16, T. 25 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	3.43	May 2	1.95	Aug. 2	4.29	Nov. 9	3.58
Feb. 27	3.40	28	3.84	Sept. 4	5.18	Dec. 5	3.78
Mar. 30	3.65	June 27	3.97	Oct. 4	1.39		

845 (\*886, p. 223; 908, p. 171; 938, p. 146; 946, p. 166; \*988, p. 150; 1018, p. 124). City of Wichita. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 5, T. 27 S., R. 1 E.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	14.52	May 4	11.72	Aug. 4	13.72	Nov. 9	14.33
Feb. 27	14.22	29	13.59	Sept. 4	14.14	Dec. 5	14.82
Mar. 27	13.97	June 28	14.12	Oct. 4	12.57		

846 (\*886, p. 223; 908, p. 171; 938, p. 146; 946, p. 166; \*988, p. 150; 1018, p. 124). City of Wichita. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 6, T. 27 S., R. 1 E.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	16.40	May 2	13.08	Aug. 4	15.95	Nov. 9	15.90
Feb. 27	15.94	29	15.27	Sept. 4	16.41	Dec. 5	16.65
Mar. 27	15.48	June 28	15.87	Oct. 4	14.64		

847 (\*886, p. 223; 908, p. 171; 938, p. 146; 946, p. 166; \*988, p. 150; 1018, p. 124). City of Wichita. SW. corner SE $\frac{1}{4}$  sec. 6, T. 27 S., R. 1 E.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	16.21	May 2	13.34	Aug. 4	15.89	Nov. 9	15.44
Feb. 27	16.27	28	15.75	Sept. 4	16.43	Dec. 5	16.64
Mar. 27	15.54	June 28	16.15	Oct. 4	12.92		

870 (\*908, p. 171; 938, p. 146; 946, p. 166; \*988, p. 150; 1018, p. 124). W. Williams. NW $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 18, T. 25 S., R. 2 W.

Water level, in feet below land-surface datum, 1945

Jan. 31	4.76	May 2	3.37	Aug. 2	4.99	Nov. 9	1.64
Feb. 27	4.66	28	4.50	Sept. 4	5.94	Dec. 5	4.99
Mar. 30	4.82	June 27	4.67	Oct. 4	2.47		

2039 (\*1018, p. 124). Mrs. G. H. von Hein. In Wichita, at rear of dwelling at 842 Coolidge Avenue, in NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 18, T. 27 S., R. 1 E.

Water level, in feet below land-surface datum, 1945

Jan. 5	14.39	Apr. 20	13.51	July 20	13.39	Oct. 15	13.42
12	14.54	27	12.39	27	13.33	22	13.54
19	14.62	May 4	12.03	Aug. 3	13.36	29	13.61
26	14.57	11	12.32	10	13.47	Nov. 5	13.42
Feb. 2	14.43	18	12.66	17	13.49	12	13.46
16	14.53	25	13.19	24	13.68	19	13.63
23	14.55	June 1	13.53	31	13.69	26	13.72
Mar. 2	14.75	8	13.86	Sept. 7	13.67	Dec. 3	13.74
9	14.36	15	14.09	15	13.78	10	13.78
16	14.09	22	14.16	22	14.08	17	14.55
30	14.07	29	14.21	30	13.81	23	14.57
Apr. 6	14.15	July 6	13.90	Oct. 8	13.38	31	14.59
13	14.45	13	13.95				

### Seward County

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 5 wells in Seward County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
15	5	15.88	May 3, 1944	18.00	Aug. 28, 1940
106	5	206.69	Dec. 4, 1945	208.32	July 19, 1941
108	5	106.04	Apr. 12, 1945	110.78	Apr. 21, 1941
122	5	200.66	Jan. 22, 1945	203.63	Aug. 5, 1940
159	5	93.71	Dec. 4, 1945	95.55	Dec. 19, 1940

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 5 wells in Seward County

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945	Net rise for period of record
15	2.12	-0.43	0.79
106	1.63	a +.71	1.45
108	4.74	b -.21	2.69
122	2.97	+.51	1.48
159	1.84	+.67	1.67

a Net rise from November 1944 to December 1945.

b Last measurement made in August 1945.

15 (\*908, p. 173; 938, p. 147; 946, p. 167; \*988, p. 151; 1018, p. 125). R. H. Hitch. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 21, T. 32 S., R. 33 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 23	16.58	Mar. 16	16.63	May 9	16.77	Aug. 17	16.96
Feb. 26	16.55	Apr. 12	16.70	June 7	16.47	Dec. 4	17.03

106 (\*908, p. 173; 938, p. 147; 946, p. 167; 168; \*988, p. 151; 1018, p. 125). Kansas City Life Insurance Co. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 8, T. 32 S., R. 34 W.

Water level, in feet below land-surface datum, 1945

Jan. 23	206.94	Mar. 16	206.82	June 7	206.81	Nov. 13	207.96
Feb. 26	206.74	May 9	207.69	Aug. 16	206.71	Dec. 4	206.69

108 (\*908, p. 173; 938, p. 147; 946, p. 168; \*988, p. 151; 1018, p. 125). C. D. Day. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 6, T. 31 S., R. 34 W. Water levels, in feet below land-surface datum, 1945: Feb. 26, 107.45; Apr. 12, 106.04; June 7, 107.74; Aug. 16, 107.64.

122 (\*908, p. 173; 938, p. 148; 946, p. 168; \*988, p. 151; 1018, p. 125). Mrs. Flora Atwell. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 9, T. 33 S., R. 31 W. Measuring point lowered 0.76 foot on Sept. 7, 1945.

Water level, in feet below land-surface datum, 1945

Jan. 22	200.66	Apr. 12	202.73	July 27	202.12	Oct. 3	202.86
Feb. 26	202.86	May 9	202.62	Aug. 16	201.97	Nov. 6	202.81
Mar. 16	202.76	June 7	202.93	Sept. 7	202.78	Dec. 4	202.91

159 (\*908, p. 174; 938, p. 148; 946, p. 168; \*988, p. 151; 1018, p. 125). Liberal Gas Co. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 3, T. 35 S., R. 34 W.

Water level, in feet below land-surface datum, 1945

Jan. 23	94.27	Apr. 12	94.13	July 27	93.92	Oct. 2	93.81
Feb. 26	94.22	May 9	94.06	Aug. 16	93.73	Nov. 14	93.80
Mar. 16	94.16	June 7	94.01	Sept. 7	93.85	Dec. 4	93.71

### Stafford County

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 6 wells in Stafford County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
3	3.5	15.70	May 16, 1945	20.06	Oct. 12, 1943
19	3.5	2.69	Aug. 7, 1945	11.04	Aug. 1, 1942
25	3.5	16.09	June 6, 1945	25.35	Aug. 1, 1942
26	3.5	9.28	Aug. 8, 1945	20.11	Aug. 3, 1942
29	3.5	15.89	June 6, 1945	22.84	Aug. 4, 1942
63	3.5	16.47	Nov. 20, 1945	20.66	Aug. 26, 1942

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 6 wells in Stafford County

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945	Net rise for period of record
3	4.36	-1.32	0.60
19	8.35	+3.08	7.05
25	9.26	+1.54	7.27
26	10.83	+4.34	9.38
29	6.96	+1.43	4.89
63	4.19	a +1.61	4.19

a Last measurement made in November 1945.

3 (\*946, p. 170; \*988, p. 152; 1018, p. 126). B. Fritzmeier. SW. corner SW $\frac{1}{4}$  sec. 12, T. 23 S., R. 12 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	16.70	Apr. 27	17.16	July 12	16.75	Oct. 16	17.59
Feb. 14	16.24	May 16	15.70	Aug. 8	17.17	Nov. 20	17.68
Mar. 9	16.93	June 6	16.68	Sept. 12	18.33	Dec. 21	17.79

19 (\*946, p. 170; \*988, p. 153; 1018, p. 126). Atlantic Refining Co. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 27, T. 21 S., R. 13 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	6.93	Apr. 27	3.96	July 12	3.52	Nov. 20	3.91
Feb. 14	6.83	May 16	3.76	Aug. 7	2.69	Dec. 21	3.99
Mar. 9	6.47	June 6	4.16	Oct. 12	3.97		

25 (\*946, p. 170; \*988, p. 153; 1018, p. 126). Continental Oil Co. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 12, T. 25 S., R. 13 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	19.72	Apr. 27	17.27	July 12	16.21	Oct. 16	17.44
Feb. 14	19.62	May 16	16.21	Aug. 8	16.72	Nov. 20	17.76
Mar. 9	19.14	June 6	16.09	Sept. 13	17.25	Dec. 21	18.08

26 (\*946, p. 170; \*988, p. 153; 1018, p. 126). Stanolind Oil Co. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 3, T. 22 S., R. 12 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	15.05	Apr. 27	13.31	July 12	10.91	Oct. 16	10.22
Feb. 14	14.89	May 16	12.04	Aug. 8	9.28	Nov. 20	10.46
Mar. 9	14.72	June 6	11.73	Sept. 12	9.95	Dec. 21	10.73

29 (\*946, p. 170; \*988, p. 153; 1018, p. 126). Atlantic Refining Co. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 28, T. 24 S., R. 13 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	19.34	Apr. 27	17.23	July 12	16.22	Oct. 16	17.63
Feb. 14	19.20	May 16	16.07	Aug. 8	16.91	Nov. 20	17.72
Mar. 9	19.68	June 6	15.88	Sept. 13	17.60	Dec. 21	17.95

63 (\*946, p. 171; \*988, p. 154; 1018, p. 127). G. W. Buckles. NE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 16, T. 24 S., R. 11 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	18.07	Apr. 27	17.56	July 12	16.89	Oct. 16	16.48
Feb. 14	17.79	May 16	17.22	Aug. 8	16.69	Nov. 20	16.47
Mar. 9	18.19	June 6	17.20	Sept. 13	16.62		

### Stanton County

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 4 wells in Stanton County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
13	6.5	47.55	Dec. 14, 1944	51.83	Apr. 23, 1940
47	6.5	69.92	Aug. 17, 1945	71.52	Jan. 24, 1945
93	6.5	174.52	Apr. 20, 1944	175.60	Oct. 9, 1939
146	6.5	39.99	Nov. 14, 1945	46.30	Apr. 22, 1940
					May 14, 1940
					June 18, 1940

## 128 WATER LEVELS AND ARTESIAN PRESSURE, 1945, NORTH-CENTRAL STATES

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 4 wells in Stanton County

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945	Net rise (+) or net decline (-) for period of record
13	4.28	a -0.20	+3.58
47	1.60	+ .43	+ .58
93	1.08	b +.31	-.84
146	6.31	b +1.56	+6.74

a Last measurement made in May 1945.

b Last measurement made in November 1945.

13 (\*886, p. 225; 908, p. 177; 938, p. 149; 946, p. 171; \*988, p. 154; 1018, p. 127). L. Y. Carrithers. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 21, T. 27 S., R. 40 W. Water levels, in feet below land-surface datum, 1945: May 10, 47.75.

47 (\*886, p. 225; 908, p. 177; 938, p. 149; 946, p. 172; \*988, p. 154; 1018, p. 127). Southwestern College. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 35, T. 28 S., R. 39 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 24	71.52	Apr. 13	70.37	July 27	70.30	Nov. 15	70.17
Feb. 27	70.39	May 10	70.32	Aug. 17	69.92	Dec. 4	70.01
Mar. 24	70.29	June 22	70.29	Sept. 17	70.30		

93 (\*886, p. 226; 908, p. 178; 938, p. 149; 946, p. 172; \*988, p. 155; 1018, p. 127). J. Plummer. Center NE $\frac{1}{4}$  sec. 11, T. 29 S., R. 41 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Jan. 24	174.70	May 10	174.70	Nov. 14	174.61
Feb. 27	174.74	Aug. 3	174.62		

146 (\*886, p. 227; \*908, p. 178; 938, p. 149; 946, p. 172; \*988, p. 155; 1018, p. 127). C. M. Harrison. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 27, T. 30 S., R. 43 W. Water levels, in feet below land-surface datum, 1945: Feb. 27, 40.06; May 10, 40.19; Aug. 3, 40.18; Nov. 14, 39.99.

### Stevens County

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 7 wells in Stevens County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
10	3.5	80.38	Apr. 20, 1944	a 93.20	May 10, 1945
12	3.5	112.03	Aug. 3, 1945	113.38	July 28, 1942
21	3.5	86.32	Aug. 3, 1944	87.63	July 12, 1943
26	3.5	90.55	Jan. 23, 1945	92.20	July 5, 1943
28	3.5	132.04	Aug. 17, 1945	132.64	Sept. 23, 1943
29	3.5	120.89	Apr. 20, 1944	122.41	Nov. 17, 1943
30	3.5	104.55	Aug. 17, 1945	106.84	Sept. 23, 1943

a Affected by pumping.

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 7 wells in Stevens County

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945	Net rise (+) or net decline (-) for period of record
10	12.82	a +0.52	+1.23
12	1.35	a +.73	+1.78
21	1.31	a -.23	-.17
26	1.65	a +.11	+.81
28	.64	a +.18	+.39
29	1.52	b +.35	+.72
30	2.29	(a)	+1.23

a Last measurement in November 1945.

b Net rise from November 1944 to November 1945.

10 (\*946, p. 173; \*988, p. 156; 1018, p. 128). T. P. Patterson. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 21, T. 33 S., R. 37 W. Water levels, in feet below land-surface datum, 1945: Jan. 23, 80.90; May 10, 93.20, pumping; Aug. 3, 83.06; Nov. 14, 80.45.

12 (\*946, p. 173; \*988, p. 156; 1018, p. 128). Mack Greenwood. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 28, T. 33 S., R. 38 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Jan. 23	112.22	May 10	112.11	Nov. 14	112.45
Feb. 26	112.23	Aug. 3	112.03		

21 (\*946, p. 173; \*988, p. 156; 1018, p. 128). B. W. Parsons. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 9, T. 31 S., R. 37 W. Water levels, in feet below land-surface datum, 1945: Feb. 26, 87.06; May 10, 87.36; Aug. 17, 87.59; Nov. 14, 87.33.

26 (\*946, p. 174; \*988, p. 156; 1018, p. 128). Panhandle Eastern Pipeline Co. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 4, T. 33 S., R. 38 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Jan. 23	90.55	May 10	91.90	Nov. 14	90.70
Feb. 26	90.80	Aug. 17	91.68		

28 (\*946, p. 174; \*988, p. 157; 1018, p. 129). C. E. Dudley. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 34, T. 31 S., R. 36 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Jan. 23	132.25	May 10	132.20	Nov. 14	132.05
Feb. 26	132.19	Aug. 17	132.04		

29 (\*946, p. 174; \*988, p. 157; 1018, p. 129). Eunice Bateman. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 10, T. 32 S., R. 36 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Jan. 23	121.37	May 10	121.39	Nov. 14	121.06
Feb. 26	121.30	Aug. 17	121.05		

30 (\*946, p. 174; \*988, p. 157; 1018, p. 129). Central Life Assurance Co. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 15, T. 33 S., R. 36 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Jan. 23	104.78	May 10	104.77	Nov. 14	104.77
Feb. 26	104.68	Aug. 17	104.55		

Sumner County

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 2 wells in Sumner County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
1	1.5	5.77	June 7, 1944	9.00	Oct. 1, 1945
2	1.5	21.95	Dec. 6, 1945	22.84	June 12, 1945

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record in 2 wells in Sumner County

Well	Difference between highest and lowest water levels	Net rise in 1945	Net rise (+) or net decline (-) for period of record
1	3.23	0.03	-2.39
2	.89	.85	+.89

1 (\*1018, p. 129). Geol. Survey, U. S. Dept. of Interior. On township road right-of-way in NW. corner sec. 1, T. 30 S., R. 1 E.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	8.00	Apr. 5	7.75	July 2	7.40	Oct. 1	9.00
Feb. 1	8.03	May 5	7.74	Aug. 2	8.05	Nov. 3	7.69
Mar. 3	8.01	June 8	7.70	Sept. 11	8.65	Dec. 6	8.16

2 (\*1018, p. 129). Geol. Survey, U. S. Dept. of Interior. On township road right-of-way in NE. corner sec. 6, T. 30 S., R. 1 E.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	22.47	Apr. 4	22.37	July 2	22.26	Oct. 1	22.10
Feb. 1	22.46	May 5	22.34	Aug. 2	22.33	Nov. 3	22.29
Mar. 3	22.48	June 7	22.45	Sept. 11	22.70	Dec. 6	21.95

Thomas County

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 11 wells in Thomas County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
1	3.5	124.05	Mar. 17, 1944	126.17	July 13, 1942
2	3.5	48.10	Feb. 27, 1944	48.73	July 13, 1943
			Oct. 24, 1945		
4	3.5	83.14	Jan. 16, 1945	84.44	Aug. 7, 1943
7	3.5	123.97	Apr. 25, 1945	125.41	Oct. 7, 1942
9	3.5	72.10	Oct. 24, 1945	73.21	Apr. 24, 1944
12	3.5	89.87	Nov. 27, 1944	90.46	Oct. 24, 1945
21	3.5	105.17	Oct. 7, 1942	109.55	Sept. 16, 1943
25	3.5	115.88	Dec. 19, 1944	116.18	Feb. 11, 1943
26	3.5	111.54	June 12, 1944	111.82	Sept. 16, 1942
			Oct. 24, 1945		Feb. 11, 1943
33	3.5	116.65	May 24, 1944	117.24	Aug. 7, 1943
62	3.5	97.65	Nov. 27, 1942	98.40	Apr. 24, 1945



Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 11 wells in Thomas County

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945	Net rise (+) or net decline (-) for period of record
1	2.12	.....	+0.80
2	.63	a +.28	+.21
4	1.30	.....	+.38
7	1.44	b -.06	-.01
9	1.11	a +.23	+.33
12	.59	b -.63	-.30
21	4.38	.....	-1.91
25	.30	.....	+.25
26	.28	a +.08	+.24
33	.59	b -.02	+.21
62	.75	c -.02	-.66

a Net rise from December 1944 to October 1945.

b Net decline from December 1944 to October 1945.

c Net decline from December 1944 to April 1945.

1 (\*946, p. 175; \*988, p. 158; 1018, p. 130). Earl W. Dawes. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 9, T. 9 S., R. 36 W. Water level, in feet below land-surface datum, 1945: Jan. 16, 124.37.

2 (\*946, p. 175; \*988, p. 158; 1018, p. 130). Lem Fulwider. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 30, T. 8 S., R. 36 W. Water levels, in feet below land-surface datum, 1945: Jan. 16, 48.44; Apr. 25, 48.38; July 10, 48.25; Oct. 24, 48.10.

4 (\*988, p. 158; 1018, p. 130). Will Guise. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 35, T. 7 S., R. 36 W. Water level, in feet below land-surface datum, 1945: Jan. 16, 83.14.

7 (\*946, p. 176; \*988, p. 158; 1018, p. 130). George Strait. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 18, T. 8 S., R. 36 W. Water levels, in feet below land-surface datum, 1945: Jan. 16, 124.65; Apr. 25, 123.97; July 10, 124.63; Oct. 24, 124.53.

9 (\*988, p. 158; 1018, p. 131). Mr. Sloan. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 26, T. 7 S., R. 33 W. Water levels, in feet below land-surface datum, 1945: Jan. 16, 72.26; Oct. 24, 72.10.

12 (\*946, p. 176; \*988, p. 159; 1018, p. 131). W. A. Atha. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 2, T. 7 S., R. 31 W. Water levels, in feet below land-surface datum, 1945: Jan. 16, 89.93; Apr. 25, 89.92; July 11, 89.89; Oct. 24, 90.46.

13 (\*946, p. 176; \*988, p. 159; 1018, p. 131). H. V. Christensen. SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 13, T. 8 S., R. 31 W. Measurements discontinued after Dec. 19, 1944.

21 (\*946, p. 176; \*988, p. 159; 1018, p. 131). W. J. Campbell. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 36, T. 7 S., R. 34 W. Water level, in feet below land-surface datum, 1945: Jan. 16, 109.27.

25 (\*946, p. 176; \*988, p. 159; 1018, p. 131). Roy Zeiglemeyer. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 12, T. 6 S., R. 32 W. No measurements made in 1945.

26 (\*946, p. 176; \*988, p. 159; 1018, p. 131). T. A. Ryan. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 27, T. 8 S., R. 32 W. Water levels, in feet below land-surface datum, 1945: Jan. 16, 111.62; Apr. 25, 111.64; July 11, 111.58; Oct. 24, 111.54.

32 (\*946, p. 177; \*988, p. 159; 1018, p. 131). F. D. Hoover. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 2, T. 8 S., R. 35 W. Measurements discontinued after June 11, 1944.

33 (\*946, p. 177; \*988, p. 160; 1018, p. 131). Arch Ball. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 7, T. 9 S., R. 33 W. Water levels, in feet below land-surface datum, 1945: Jan. 16, 116.88; Apr. 24, 116.84; July 10, 116.83; Oct. 24, 116.90.

62 (\*946, p. 177; \*988, p. 160; 1018, p. 131). H. A. Hills. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 27, T. 10 S., R. 34 W. Water level, in feet below land-surface datum, 1945: Apr. 24, 98.40.

Wyandotte County

Highest and lowest water levels for the period of record, in feet below land-surface datum, in 14 wells in Wyandotte County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
13	1	8.98	July 11, 1945	15.28	Nov. 29, 1945
86	1	19.63	July 11, 1945	28.49	Nov. 29, 1945
87	1	16.07	July 11, 1945	23.49	Nov. 29, 1945
97	1	15.15	July 11, 1945	23.14	Apr. 12, 1945
98	1	19.10	July 11, 1945	27.33	Apr. 12, 1945
100	1	15.82	July 11, 1945	26.15	Nov. 29, 1945
101	1	25.02	July 11, 1945	36.85	Nov. 29, 1945
118	1	23.55	July 11, 1945	32.70	Nov. 29, 1945
119	1	21.33	July 11, 1945	34.14	Nov. 29, 1945
120	1	20.34	July 10, 1944	28.90	Nov. 29, 1945
121	1	9.38	July 11, 1945	21.08	Nov. 29, 1945
138	2	12.08	Oct. 1, 1944	27.92	Jan. 25, 1944
147	2	26.50	Aug. 15, 1945	27.77	Apr. 19, 1945
165	9	23.50	Aug. 14, 1943	29.50	Apr. 13, 1945

Difference between highest and lowest recorded water levels, and net change in water level, in feet, in 1945 and for period of record, in 14 wells in Wyandotte County

Well	Difference between highest and lowest water levels	Net rise (+) or net decline (-) in 1945	Net rise (+) or net decline (-) for period of record
13	6.30	-1.18	-2.06
86	8.86	-1.43	-2.41
87	7.42	-.60	-2.64
97	7.99	+1.18	-.58
98	8.23	-.14	-.84
100	10.33	-1.43	-2.49
101	11.83	-2.07	-3.44
118	9.15	-1.49	-3.96
119	12.81	-1.54	-3.70
120	8.56	-1.86	-3.95
121	11.70	-1.65	-1.65
138	15.84	-3.07	-1.91
147	1.27	....	+ .02
165	6.00	....	+2.47

13 (\*1018, p. 132). Geol. Survey, U. S. Dept. of Interior. NW $\frac{1}{4}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 34, T. 10 S., R. 25 E., between Runston and Rickel Roads, at their intersection with 7th Street Trafficway. Water levels, in feet below land-surface datum, 1945: Jan. 3, 14.32; Apr. 12, 10.72; July 11, 8.98; Nov. 29, 15.28

86 (\*1018, p. 132). Geol. Survey, U. S. Dept. of Interior. SE $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 10, T. 11 S., R. 25 E., southeast of intersection of Central Avenue with Kansas River, at south end of truck lot at Farmers Union Jobbing Association. Water levels, in feet below land-surface datum, 1945: Jan. 3, 27.60; Apr. 12, 27.59; July 11, 19.63; Nov. 29, 28.49.

87 (\*1018, p. 132). Geol. Survey, U. S. Dept. of Interior. SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 11, T. 11 S., R. 25 E., southwest of the intersection of James Street with Meyers Avenue, 33 feet west and 15 feet north of power pole at curve on Central Avenue viaduct. Water levels, in feet below land-surface datum, 1945: Jan. 3, 23.14; Apr. 12, 22.90; July 11, 16.07; Nov. 29, 23.49.

97 (\*1018, p. 132). Geol. Survey, U. S. Dept. of Interior. NW $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 15, T. 11 S., R. 25 E., 30 feet south and 21 feet east of center of intersection of 4th Street with Berger Avenue. Water levels, in feet below land-surface datum, 1945: Jan. 3, 22.11; Apr. 12, 23.14; July 11, 15.15; Nov. 29, 22.68.

98 (\*1018, p. 132). Geol. Survey, U. S. Dept. of Interior.  $SE\frac{1}{4}SW\frac{1}{4}SE\frac{1}{4}$  sec. 15, T. 11 S., R. 25 E., at the rear of the port of entry, about 150 feet north of Kansas Avenue and 125 feet west of 2d Street. Water levels, in feet below land-surface datum, 1945: Jan. 3, 26.49; Apr. 12, 27.33; July 11, 19.10; Nov. 29, 27.24.

100 (\*1018, p. 132). Geol. Survey, U. S. Dept. of Interior.  $SE\frac{1}{4}NE\frac{1}{4}NE\frac{1}{4}$  sec. 22, T. 11 S., R. 25 E., 30 feet south and 102 feet east of center of intersection of Shawnee Avenue with Adams Street. Water levels, in feet below land-surface datum, 1945: Jan. 3, 24.75; Apr. 12, 25.31; July 11, 15.82; Nov. 29, 26.15.

101 (\*1018, p. 132). Geol. Survey, U. S. Dept. of Interior.  $NW\frac{1}{4}SW\frac{1}{4}NW\frac{1}{4}$  sec. 23, T. 11 S., R. 25 E., about 150 feet southeast of river, 30 feet southwest of Kansas City Terminal Railway high-line viaduct, 15 feet west and 15 feet south of first manhole cover south of railroad bridge. Water levels, in feet below land-surface datum, 1945: Jan. 3, 35.03; Apr. 12, 35.68; July 11, 25.02; Nov. 29, 36.85.

118 (\*1018, p. 132). Geol. Survey, U. S. Dept. of Interior. NW. corner sec. 21, T. 11 S., R. 25 E., 72 feet south and 15 feet west of center of intersection of Kansas Avenue with 17th Street. Water levels, in feet below land-surface datum, 1945: Jan. 3, 31.28; Apr. 12, 31.65; July 11, 23.55; Nov. 29, 32.70.

119 (\*1018, p. 132). Geol. Survey, U. S. Dept. of Interior.  $SE\frac{1}{4}NE\frac{1}{4}NE\frac{1}{4}$  sec. 20, T. 11 S., R. 25 E., southeast of intersection of Osage Avenue with 19th Street, 36 feet south of center of Osage Avenue and between two sets of double railroad tracks. Water levels, in feet below land-surface datum, 1945: Jan. 3, 32.65; Apr. 12, 29.99; July 11, 21.33; Nov. 29, 34.14.

120 (\*1018, p. 133). Geol. Survey, U. S. Dept. of Interior.  $NW\frac{1}{4}SE\frac{1}{4}NE\frac{1}{4}$  sec. 20, T. 11 S., R. 25 E., just northeast of intersection of Miami Avenue (extended) with levee. Water levels, in feet below land-surface datum, 1945: Jan. 3, 27.11; Apr. 12, 23.55; Nov. 29, 28.90.

121 (\*1018, p. 133). Geol. Survey, U. S. Dept. of Interior.  $NE\frac{1}{4}NW\frac{1}{4}SE\frac{1}{4}$  sec. 20, T. 11 S., R. 25 E., northeast of intersection of 22d Street with Argentine Boulevard, 24 feet north and 12 feet east of second power pole north of Boulevard. Water levels, in feet below land-surface datum, 1945: Jan. 3, 19.62; Apr. 12, 16.02; July 11, 9.38; Nov. 29, 21.08.

138 (\*988, p. 160; 1018, p. 133). P. S. Judy.  $SE\frac{1}{4}$  sec. 13, T. 11 S., R. 24 E., 0.1 mile north of Kansas Avenue and 0.65 mile west of Carlisle Road. Water levels, in feet below land-surface datum, 1945: Jan. 15, 24.79; Apr. 12, 24.69; July 11, 17.15; Nov. 29, 25.66.

147 (\*988, p. 160; 1018, p. 133). South well. Santa Fe Railway. In Morris,  $NE\frac{1}{4}SW\frac{1}{4}$  sec. 28, T. 11 S., R. 24 E.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 16	27.52	June 8	27.42	Sept. 21	27.42	Nov. 30	27.52
Mar. 14	26.80	July 24	27.42	Oct. 29	26.51	Dec. 28	27.51
Apr. 6	27.51	Aug. 15	26.50				

165 (\*988, p. 160; 1018, p. 133). Northwest well. City of Bonner Springs.  $SE\frac{1}{4}NE\frac{1}{4}$  sec. 32, T. 11 S., R. 23 E. No measurements made in 1945.

# MINNESOTA

By D. A. Barton and P. D. Akin

## PROGRAM OF WORK

Periodic measurements of water level were made in three wells in Minnesota in 1945. A total of 155 measurements was made during the year.

### FLUCTUATIONS OF WATER LEVEL

The maximum amount of fluctuation during the year in the well in Brown County was 3.75 feet. The minimum depth to water occurred on June 18, when the reading of 3.60 feet below land-surface datum was made. The greatest depth to water occurred on February 7, when it was 7.35 feet. The year closed with the water levels 1.77 feet higher than at the beginning of the year.

Weekly measurements of water level were also made in the other two wells, one near the town of Deer River, in Itasca County, the other at Eveleth, in St. Louis County.

### WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

#### Brown County

108-30-9 (\*946, pp. 178-179; 988, p. 162; 1018, p. 134). Erwin Kjelshus. Sec. 9, T. 108 N., R. 30 W., near Hanska. Measurements made by Erwin Kjelshus.

#### Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	7.31	Apr. 3	5.07	July 4	4.18	Oct. 2	4.64
8	7.31	10	4.58	11	4.18	9	4.78
16	7.33	17	4.25	17	4.40	16	4.86
22	7.24	24	4.01	24	4.55	23	5.00
29	7.20	May 1	4.20	31	4.40	30	5.23
Feb. 7	7.35	7	4.14	Aug. 7	4.50	Nov. 6	5.35
12	7.34	15	4.30	14	4.50	13	5.42
20	7.02	22	4.28	21	4.75	20	5.40
27	6.94	29	4.17	28	4.98	27	5.49
Mar. 6	6.86	June 5	4.10	Sept. 4	4.90	Dec. 4	5.43
13	6.22	12	3.80	11	5.20	11	5.51
20	5.35	18	3.60	17	5.38	18	5.54
26	5.18	26	4.05	25	4.80	26	5.54

Itasca County

US 135 (\*988, p. 163; 1018, p. 135). Corps of Engineers, U. S. Army.  
SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 26, T. 146 N., R. 27 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	18.88	Apr. 9	20.10	July 16	19.69	Oct. 15	20.90
8	19.06	23	19.88	23	19.74	22	20.98
15	19.17	30	19.72	30	19.84	29	20.97
22	19.18	May 7	19.65	Aug. 6	19.94	Nov. 5	21.04
Feb. 5	19.36	14	19.60	13	20.10	12	21.17
12	19.47	21	19.57	20	20.10	19	21.20
19	19.55	28	19.56	27	20.20	26	21.26
26	19.65	June 4	19.57	Sept. 3	20.32	Dec. 3	21.30
Mar. 5	19.80	11	19.55	10	20.43	10	21.37
12	19.89	18	19.49	17	20.55	17	21.40
19	20.02	25	19.47	24	20.65	24	21.44
26	20.08	July 2	19.50	Oct. 1	20.62	31	21.47
Apr. 2	20.18	9	19.60	8	20.82		

St. Louis County

US 136 (\*988, p. 163; 1018, p. 135). Herman A. Katola. Lot 3, sec. 4,  
T. 56 N., R. 17 W.

Water level, in feet below land-surface datum, 1945

Jan. 7	7.45	Apr. 8	5.67	July 8	6.03	Oct. 7	5.04
14	7.56	15	5.44	15	6.28	14	6.05
21	7.63	22	5.25	22	6.18	22	6.21
28	7.69	29	5.17	29	6.38	28	6.32
Feb. 4	7.77	May 6	5.54	Aug. 5	6.61	Nov. 4	6.41
11	7.83	13	4.80	12	6.56	11	6.47
18	7.98	20	5.85	19	6.22	18	6.25
25	7.95	27	5.64	26	6.33	25	6.40
Mar. 4	8.94	June 3	5.21	Sept. 2	6.44	Dec. 2	6.52
11	8.04	10	5.46	9	6.68	9	6.58
18	6.98	17	5.39	16	6.79	16	6.73
25	6.29	24	5.19	23	5.92	23	6.93
Apr. 1	5.94	July 1	5.85	30	5.93	30	7.03

## MISSOURI

By D. A. Barton and Phyllis T. Mosley

### PROGRAM OF WORK

Water-level measurements were made in Atchison County in 1945 as part of the Tarkio Creek Valley observation-well program organized by the Federal Geological Survey in 1934 in which the Soil Conservation Service of the United States Department of Agriculture participated for several years. The Atchison County section consists of 17 wells in 1945 in which 192 single measurements were made by D. L. Hummel, observer of the Tarkio Creek well program. The measurements in the observation well in Grundy County, were continued on a weekly basis. W. H. Estes, owner of the Grundy County observation well, has been the observer since its establishment.

The water levels in the Phelps County wells were measured monthly by engineers from the Rolla office of the Survey's division of surface water, through the courtesy of H. C. Beckman, district engineer. A total of 22 measurements were made in these two wells during 1945.

### FLUCTUATIONS OF WATER LEVEL

In the Grundy County well the maximum fluctuation of water levels was 4.90 feet with the highest reading of 1.14 feet below land-surface datum occurring on June 17, and the lowest reading of 6.56 feet below land-surface datum occurring on March 25. The water level was 2.62 feet lower on December 29 than it was at the close of 1944. Fluctuations of water levels in wells in Atchison County, together with the other wells in the Tarkio Creek area, are discussed in the section of this volume that deals with Iowa.

### WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

#### Atchison County

#### Tarkio Creek area

(Wells in the Tarkio Creek area are numbered consecutively beginning with 1; measurements by D. L. Hummel.)

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; 946, p. 181; 988, p. 165; 1018, p. 137). W. R. Marshall. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 13, T. 66 N., R. 40 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	10.64	Apr. 28	7.02	July 21	7.34	Oct. 23	8.97
Feb. 28	9.67	May 26	6.04	Aug. 25	7.56	Nov. 26	9.63
Mar. 25	5.40	June 27	6.75	Sept. 22	8.31	Dec. 28	10.38

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; 946, p. 182; 988, p. 165; 1018, p. 137). H. W. Klutas. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 1, T. 66 N., R. 40 W. Measuring point on and after May 26, 1945, top of tile curbing, 1.0 foot above land-surface datum.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	9.28	Mar. 25	7.34	May 26	7.09	July 21	10.11
Feb. 28	9.18	Apr. 22	7.26	June 27	8.21	Oct. 20	9.98

20 (\*840, pp. 92, 95; 845, pp. 87-88; 886, p. 124; 908, p. 181; 938, p. 40; 946, p. 182; 988, p. 165; 1018, p. 137). SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 10, T. 65 N., R. 40 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 23	21.89	Apr. 28	14.83	July 21	14.12	Oct. 23	18.33
Feb. 28	21.87	May 22	12.84	Aug. 25	14.46	Nov. 26	18.46
Mar. 22	16.94	June 29	12.40	Sept. 22	16.55	Dec. 28	19.74

21 (\*840, pp. 92, 95; 845, pp. 87-88; 886, p. 124; 908, p. 181; 938, p. 41; 946, p. 182; 988, p. 165; 1018, p. 137). SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 11, T. 65 N., R. 40 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	20.23	Apr. 28	14.85	July 21	15.97	Oct. 23	18.86
Feb. 28	20.63	May 26	13.73	Aug. 25	17.02	Nov. 26	19.47
Mar. 25	15.26	June 27	13.79	Sept. 22	18.03	Dec. 28	19.71

22 (\*840, pp. 92, 95; 845, pp. 87-88; 886, p. 125; 908, p. 182; 938, p. 41; 946, p. 182; 988, p. 165; 1018, p. 137). J. A. McAllister. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 35, T. 66 N., R. 40 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	11.03	Apr. 28	9.89	July 21	9.89	Oct. 25	10.79
Feb. 22	10.70	May 26	8.82	Aug. 25	10.26	Nov. 26	11.06
Mar. 25	8.55	June 27	9.26	Sept. 22	10.61	Dec. 28	11.77

23 (\*840, pp. 92, 95; 845, pp. 87-88; 886, p. 125; 938, p. 41; 946, p. 182; 988, p. 165; 1018, p. 137). J. A. McAllister. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 35, T. 66 N., R. 40 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 25	11.13	June 27	9.50	Sept. 22	10.98	Nov. 26	11.32
Apr. 28	9.55	July 21	10.89	Oct. 23	10.45	Dec. 28	11.62
Mar. 26	9.62	Aug. 25	10.25				

24 (\*840, pp. 92, 95; 886, p. 125; 908, p. 182; 938, p. 41; 946, p. 182; 988, p. 165; 1018, p. 137). SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 26, T. 66 N., R. 40 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	3.36	Apr. 28	2.29	July 21	1.90	Oct. 23	2.18
Feb. 28	3.38	May 26	2.26	Aug. 25	1.85	Nov. 26	2.49
Mar. 25	3.55	June 27	1.96	Sept. 22	2.02	Dec. 28	2.48

25 (\*840, pp. 92, 95; 845, pp. 87-88; 886, p. 125; 908, p. 182; 938, p. 41; 946, p. 183; 988, p. 166; 1018, p. 137). Edwin Rolf. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 12, T. 66 N., R. 40 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	43.95	Apr. 22	35.69	July 21	36.48	Oct. 23	41.30
Feb. 28	43.96	May 26	34.13	Aug. 25	36.63	Nov. 26	42.41
Mar. 25	37.89	June 27	34.55	Sept. 22	39.29	Dec. 28	43.58

27 (\*840, pp. 92, 95-96; 845, pp. 87-88; 886, p. 126; 908, p. 182; 938, p. 41; 946, p. 183; 988, p. 166; 1018, p. 138). Edwin Rolf. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 12, T. 66 N., R. 40 W.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	42.74	June 27	38.22	Aug. 30	38.93	Oct. 23	40.20
Mar. 25	40.50	July 21	38.66	Sept. 27	41.65	Nov. 26	40.77
Apr. 28	38.71						

28 (\*840, pp. 92, 95; 845, pp. 87-88; 886, p. 126; 908, p. 182; 938, p. 41; 946, p. 183; 988, p. 166; 1018, p. 138). Edwin Rolf. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 12, T. 66 N., R. 40 W.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	18.11	Apr. 22	5.27	July 31	12.72	Oct. 23	16.90
Feb. 28	18.33	May 26	7.51	Aug. 25	12.84	Nov. 26	17.93
Mar. 25	8.09	June 27	9.61	Sept. 22	15.24	Dec. 28	18.32

29 (\*840, pp. 92, 95-96; 845, pp. 88-89; 886, p. 126; 908, p. 182; 938, p. 41; 946, p. 183; 988, p. 166; 1018, p. 138). Edwin Rolf. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 12, T. 66 N., R. 40 W.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	12.75	Apr. 22	7.55	July 21	10.01	Oct. 23	12.82
Feb. 28	12.82	May 26	7.69	Aug. 25	10.12	Nov. 26	13.05
Mar. 25	9.22	June 27	8.77	Sept. 22	9.58	Dec. 29	13.02

31 (\*840, pp. 92, 95-96; 845, pp. 88-89; 886, p. 126; 908, p. 183; 938, p. 42; 946, p. 183; 988, p. 166; 1018, p. 138). W. F. Marshall. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 13, T. 66 N., R. 40 W.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	3.10	Apr. 28	2.51	July 21	2.50	Oct. 23	2.80
Feb. 28	2.68	May 26	2.37	Aug. 25	2.66	Nov. 26	2.92
Mar. 25	2.04	June 27	2.59	Sept. 22	2.71	Dec. 28	3.04

32 (\*840, pp. 92, 95-96; 845, pp. 88-89; 886, p. 127; 908, p. 183; 938, p. 42; 946, p. 183-184; 988, p. 166; 1018, p. 138). W. F. Marshall. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 13, T. 66 N., R. 40 W.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	14.67	Apr. 28	8.57	July 21	10.83	Oct. 23	13.24
Feb. 28	14.09	May 26	7.03	Aug. 25	10.20	Nov. 26	13.10
Mar. 25	8.24	June 27	9.86	Sept. 22	12.48		

33 (\*840, pp. 92, 95-96; 845, pp. 88-89; 886, p. 127; 908, p. 183; 938, p. 42; 946, p. 184; 988, p. 167; 1018, p. 138). W. F. Marshall. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 13, T. 66 N., R. 40 W.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	16.65	Apr. 28	13.74	July 21	15.21	Oct. 23	16.51
Feb. 28	16.00	May 26	12.34	Aug. 25	15.30	Nov. 26	16.30
Mar. 25	13.03	June 27	14.85	Sept. 22	18.19	Dec. 28	16.75

34 (\*840, pp. 92, 95-96; 845, pp. 88-89; 886, p. 127; 908, p. 183; 938, p. 42; 946, p. 184; 988, p. 167; 1018, p. 139). W. F. Marshall. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 13, T. 66 N., R. 40 W.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	5.97	Apr. 28	2.83	July 21	3.99	Oct. 23	5.08
Feb. 28	3.84	May 26	1.37	Aug. 25	4.16	Nov. 26	5.28
Mar. 25	1.46	June 27	2.95	Sept. 22	4.69	Dec. 28	5.73

35 (\*840, pp. 92, 95-96; 845, pp. 88-89; 886, p. 127; 908, p. 183; 938, p. 42; 946, p. 184; 988, p. 167; 1018, p. 139). W. F. Marshall. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 13, T. 66 N., R. 40 W.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	21.36	Apr. 28	9.51	July 21	13.86	Oct. 23	19.55
Feb. 28	20.56	May 26	7.44	Aug. 25	15.28	Nov. 26	21.30
Mar. 25	11.11	June 27	11.38	Sept. 22	17.81		



36 (\*840, pp. 92, 95-96; 845, pp. 88-89; 886, p. 127; 908, p. 183; 938, p. 42; 946, p. 184; 988, p. 167; 1018, p. 139). George Rolfe. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 13, T. 66 N., R. 40 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	28.55	Apr. 28	19.81	July 21	18.32	Oct. 23	24.99
Feb. 25	28.78	May 26	18.05	Aug. 25	19.49	Nov. 26	26.88
Mar. 25	25.94	June 27	17.38	Sept. 22	22.66	Dec. 28	27.39

Grundy County

US 113 (\*946, p. 184; 988, p. 167; 1018, p. 139). Wiley H. Estes. In Trertton, in sec. 17, T. 61 N., R. 24 W., on property of owner at 105 E. Fourth Street. Measurements made by owner.

Water level, in feet below land-surface datum, 1945

Jan. 6	2.16	Apr. 14	2.92	July 15	3.45	Oct. 6	4.88
11	4.49	21	1.98	21	3.79	14	5.20
13	4.50	29	2.08	29	4.24	20	5.34
21	4.88	May 6	2.52	Aug. 5	4.32	26	5.48
27	4.92	13	2.66	12	4.66	Nov. 3	5.62
Feb. 13	5.24	19	1.38	19	5.04	10	5.82
17	5.20	27	2.54	26	5.52	17	5.94
25	4.72	June 3	2.92	Sept. 2	5.66	24	6.10
Mar. 4	4.30	9	1.92	8	5.74	Dec. 2	6.12
10	4.00	17	1.14	15	5.92	8	6.34
25	6.56	23	1.66	22	5.90	15	6.34
Apr. 1	2.08	30	2.18	29	5.82	29	6.04
7	5.52	July 8	2.83				

Phelps County

US 98 (\*946, p. 185; \*988, p. 167; 1018, p. 139). S. V. Allen. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 13, T. 37 N., R. 10 W.

Water level, in feet below land-surface datum, 1945

Jan. 1	9.65	Apr. 2	4.38	July 2	4.93	Oct. 1	5.35
Feb. 1	9.60	May 1	6.94	Aug. 1	7.96	Nov. 1	6.95
Mar. 1	6.70	June 1	6.70	Sept. 1	9.10	30	7.60

US 98a (\*946, p. 185; \*988, p. 168; 1018, p. 139). Fred Pillman. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 24, T. 37 N., R. 10 W.

Water level, in feet below land-surface datum, 1945

Jan. 1	(a)	Apr. 2	4.16	July 2	6.57	Oct. 1	9.35
Feb. 1	13.19	May 1	6.70	Aug. 1	11.30	Nov. 1	8.20
Mar. 1	12.61	June 1	6.15	Sept. 1	(a)	30	10.28

a Dry.

## NEBRASKA

By H. A. Waite

### PROGRAM OF WORK

The State-wide program of water-level measurements in observation wells, begun in 1934 in cooperation with the Conservation and Survey Division of the University of Nebraska, was continued in 1945. Records of water level in the wells and some interpretation of the fluctuations of the water levels 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, 938, 946, 988 and 1018.

Measurements of water levels made in 356 wells are given in the present report. Included in this group are 231 wells in the observation of which the following organizations are cooperating informally: Grand Island Water Department, 45 wells in Hall County and 2 wells 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, 1 well in Arthur County, 18 wells in Dawson County, 2 wells in Garden County, 21 wells in Gosper County, 59 wells in Keith County, 66 wells in Lincoln County, and 7 wells in Phelps County.

Two wells, 600 and 601, were equipped with 8-day automatic water-stage recorders. Well 600, in the South Platte Valley, south of O'Fallons, is serviced each week by Warren Doolittle, of the Platte Valley Public Power and Irrigation District, and well 601, in the Middle Loup River Valley, southwest of Arcadia, is serviced each month by members of the district office of the surface-water division of the Geological Survey at Lincoln. The water-level records for each of these wells are given under the county in which the well is situated.

Tables are included showing the monthly and the average daily pumpage over a period of years for the municipal supplies of Grand Island and Lincoln.

Monthly measurements of the water levels in eight key wells in Nebraska were continued during 1945. These wells were selected for

observation in connection with the preparation of statements on water-level conditions in Nebraska that are prepared currently for the monthly Water Resources Review. Monthly measurements of the water level in one of the eight wells (well 2-6600W or US 62), just west of the Lincoln city well field, near Ashland, are given under Saunders County. This well is measured by personnel of the Ashland pumping station. In all, 2,067 individual measurements of water level were made in Nebraska in 1945.

#### FLUCTUATIONS OF WATER LEVEL

The precipitation in Nebraska in 1945 was 22.70 inches, which is 0.14 inch above normal but 4.68 inches below the precipitation in 1944.

The following two tables give, for each observation well in the State, the highest and the lowest recorded water levels and the difference between them, the length of record, the net changes in water level in 1945, and the net change in water level during the entire period of record.

Highest and lowest recorded water levels, in feet below land-surface datum, in observation wells in Nebraska

Well	Highest level	Date	Lowest level	Date
<u>Antelope County</u>				
202	3.31	Mar. 24, 1936 May 30, 1936	7.88	Sept. 12, 1935
<u>Arthur County</u>				
N31	2.31	May 7, 1942	6.37	Mar. 9, 1945
<u>Blaine County</u>				
211	2.49	June 8, 1935	5.17	Aug. 10, 1937
<u>Box Butte County</u>				
338	118.33	Aug. 16, 1944	119.41	Oct. 20, 1941
378	1.67	Mar. 27, 1936	4.08	July 20, 1940
482	85.20	Aug. 16, 1944	86.40	Mar. 30, 1940
<u>Brown County</u>				
243	14.02	Aug. 1, 1944	18.87	Aug. 9, 1937
<u>Buffalo County</u>				
263	7.63	June 20, 1932	12.65	Oct. 27, 1940
264	11.92	July 11, 1932	16.60	Nov. 24, 1939
265	16.54	May 20, 1931	22.00	Nov. 9, 1942
267	16.62	June 20, 1932	23.05	Oct. 15, 1941
268	9.25	June 20, 1932	15.68	Oct. 27, 1940
		June 27, 1932		
269	17.62	July 11, 1932	22.11	Nov. 24, 1939
270	22.55	June 9, 1931	28.53	Oct. 15, 1941
272	25.16	May 22, 1933	29.96	Oct. 15, 1941
		May 29, 1933		
273	16.60	June 16, 1931	21.23	Oct. 29, 1936
274	1.59	Apr. 25, 1933	6.92	Oct. 29, 1936
278	6.58	Apr. 15, 1944	11.90	Nov. 3, 1934
279	1.20	Feb. 16, 1932	4.95	Aug. 20, 1936

## 142 WATER LEVELS AND ARTESIAN PRESSURE, 1945, NORTH-CENTRAL STATES

Highest and lowest recorded water levels, in feet below land-surface datum,  
in observation wells in Nebraska--Continued

Well	Highest level	Date	Lowest level	Date
<u>Cherry County</u>				
115	98.02	Aug. 25, 1934	100.39	Oct. 19, 1941
116	2.25	May 16, 1945	6.38	Sept. 12, 1936
256	4.46	June 6, 1935	9.54	Oct. 1, 1941
399	1.88	Mar. 29, 1940	3.38	Aug. 9, 1937
431	6.19	Aug. 1, 1944	8.14	Aug. 9, 1937
<u>Colfax County</u>				
37A	4.45	Mar. 21, 1940	7.26	Oct. 9, 1941
<u>Custer County</u>				
53	12.73	Nov. 11, 1942	14.98	July 16, 1940
<u>Dawes County</u>				
123	16.79	Aug. 22, 1942	21.51	Aug. 27, 1934
<u>Dawson County</u>				
280	7.58	Apr. 7, 1931	13.32	Oct. 16, 1937
281	23.83	Oct. 27, 1930	33.28	July 24, 1940
282	7.00	May 4, 1931	11.88	Sept. 21, 1934
283	5.63	Apr. 6, 1931	12.55	Sept. 21, 1934
284	6.22	Apr. 13, 1931	13.44	Sept. 21, 1934
285	4.96	June 12, 1935	12.84	Sept. 21, 1934
286	10.07	Oct. 27, 1930	17.27	Sept. 21, 1934
287	11.88	July 20, 1931	18.60	July 24, 1940
288	11.68	May 25, 1931	18.81	July 24, 1940
289	4.38	Apr. 6, 1931	11.64	Aug. 21, 1934
290	4.57	May 11, 1931	12.35	Aug. 21, 1934
291	1.67	June 12, 1935	8.98	Aug. 21, 1934
292	3.29	June 12, 1935	9.27	Sept. 21, 1934
293	2.89	Apr. 30, 1944	7.92	Aug. 21, 1934
294	1.97	Apr. 30, 1944	7.45	Aug. 21, 1934
295	5.36	Apr. 30, 1944	8.99	Aug. 21, 1934
296	4.23	June 19, 1932	7.14	Oct. 22, 1941
297	2.50	Apr. 30, 1944	7.24	Aug. 14, 1934
298	2.74	May 9, 1933	6.48	Sept. 21, 1934
299	1.88	Feb. 25, 1932	5.55	Nov. 14, 1934
300	a 1.23	Feb. 25, 1932	2.75	Aug. 10, 1937
301	.95	Feb. 25, 1932	5.66	Sept. 16, 1936
302	2.83	Feb. 25, 1932	7.62	Nov. 14, 1934
303	.10	May 3, 1933	5.21	Sept. 30, 1940
304	4.82	Feb. 25, 1932	9.20	Sept. 30, 1940
305	13.99	Apr. 30, 1944	19.54	Nov. 2, 1940
306	10.88	July 29, 1945	22.90	July 24, 1940
308	10.00	Oct. 20, 1930	17.98	Aug. 21, 1934
309	9.62	June 13, 1935	14.97	Sept. 22, 1934
310	28.01	Nov. 7, 1942	31.25	Aug. 17, 1935
311	4.18	Nov. 17, 1931	20.37	Aug. 2, 1933
314	9.82	June 18, 1935	13.19	Aug. 10, 1937
317	2.28	June 10, 1939	6.29	Sept. 21, 1934
318	3.94	Nov. 7, 1943	16.19	Oct. 1, 1940
319	3.85	June 6, 1936	7.45	Nov. 5, 1940
U44	6.92	June 23, 1944	14.30	Oct. 2, 1939
U45	7.74	June 23, 1944	13.78	Sept. 5, 1939
U48	4.76	Nov. 1, 1945	19.78	May 1, 1941
U49	1.03	Apr. 7, 1939	5.04	Aug. 4, 1939
U51	6.32	Apr. 5, 1944	9.57	Oct. 3, 1939
U52	4.08	Mar. 2, 1939	7.17	Oct. 1, 1940
U53	1.08	May 4, 1945	5.30	Aug. 30, 1940
U54	2.84	Nov. 1, 1945	9.96	Nov. 4, 1940
U55	3.64	May 12, 1944	6.75	Oct. 1, 1940

a Above land-surface datum.

Highest and lowest recorded water levels, in feet below land-surface datum,  
in observation wells in Nebraska--Continued

Well	Highest level	Date	Lowest level	Date
<u>Dawson County--Continued</u>				
U57	3.43	Nov. 21, 1945	9.04	Sept. 30, 1940
U58	6.95	Sept. 4, 1945	15.62	Aug. 7, 1943
		Nov. 21, 1945		
U59	5.86	Nov. 21, 1945	17.28	Nov. 2, 1940
U60	10.19	May 12, 1944	15.49	Aug. 29, 1940
U61	8.19	Dec. 13, 1945	19.82	Nov. 5, 1940
U62	9.75	May 5, 1939	14.38	Mar. 5, 1940
U63	6.82	Apr. 6, 1939	10.16	Dec. 5, 1939
U64	2.84	Apr. 6, 1939	6.84	Nov. 2, 1940
U73	28.83	Nov. 21, 1945	52.93	Aug. 29, 1940
<u>Dodge County</u>				
420	.68	June 22, 1945	9.65	Mar. 22, 1937
455	2.43	Mar. 20, 1940	5.37	Oct. 22, 1940
456	3.66	Oct. 26, 1944	7.29	Feb. 21, 1940
457	2.07	June 22, 1945	8.14	Feb. 3, 1940
459	6.11	June 22, 1945	14.19	Oct. 22, 1940
460	6.44	June 22, 1945	16.88	Mar. 20, 1940
461	4.15	June 22, 1945	14.29	Oct. 22, 1940
462	3.71	June 22, 1945	13.33	Feb. 3, 1940
463	1.74	June 22, 1945	11.06	Feb. 21, 1940
464	3.35	June 22, 1945	12.21	Feb. 3, 1940
467	23.63	Oct. 8, 1941	31.92	Feb. 3, 1940
468	60.86	Oct. 8, 1941	68.72	Mar. 20, 1940
<u>Garden County</u>				
3	3.16	May 4, 1934	7.18	Nov. 5, 1937
				Nov. 23, 1937
4	.44	Feb. 12, 1934	4.84	Aug. 20, 1937
5	2.48	June 6, 1935	6.66	July 29, 1934
12	3.30	July 24, 1935	7.87	Nov. 30, 1938
17	3.78	May 23, 1935	6.64	Oct. 9, 1937
19	3.66	June 6, 1935	7.49	Aug. 19, 1937
21	2.00	June 6, 1935	5.12	Sept. 29, 1939
25	2.09	June 20, 1935	5.86	Apr. 2, 1938
27	4.30	Oct. 21, 1934	8.04	Jan. 13, 1938
				Dec. 15, 1939
326	20.83	Oct. 25, 1935	27.30	July 26, 1940
S11	16.75	June 10, 1941	19.89	Oct. 6, 1944
S13	16.19	July 13, 1944	21.45	June 1, 1937
<u>Gosper County</u>				
1	3.14	May 2, 1940	6.65	Mar. 5, 1940
2	3.09	Aug. 7, 1943	5.98	Oct. 3, 1939
3	8.36	Mar. 6, 1942	12.30	Nov. 1, 1937
4	4.99	June 4, 1942	9.11	July 27, 1940
U76	153.61	Nov. 21, 1945	223.87	Jan. 3, 1941
U81	8.83	Sept. 14, 1943	16.40	Sept. 30, 1940
U82	23.56	Aug. 9, 1943	31.96	Sept. 30, 1940
U83	24.19	Sept. 30, 1940	32.56	Nov. 2, 1940
U84	42.42	Oct. 25, 1944	50.83	Sept. 30, 1940
		Nov. 21, 1945		
U85	26.68	Nov. 17, 1944	34.74	Sept. 30, 1940
U86	19.53	Aug. 7, 1943	28.10	Sept. 30, 1940
U87	13.39	Aug. 7, 1943	21.62	Sept. 30, 1940
U88	9.20	July 21, 1942	15.76	Sept. 30, 1940
U89	3.01	June 4, 1942	10.18	Sept. 30, 1940
U90	2.25	Sept. 15, 1942	10.48	Sept. 30, 1940
U92	5.51	Oct. 2, 1942	13.97	Sept. 30, 1940
U93	7.83	Oct. 2, 1942	15.63	Sept. 30, 1940
U96	2.97	Oct. 2, 1942	9.52	Sept. 30, 1940
U97	7.95	Aug. 4, 1942	12.72	Nov. 2, 1940

Highest and lowest recorded water levels, in feet below land-surface datum,  
in observation wells in Nebraska--Continued

Well	Highest level	Date	Lowest level	Date
<u>Gosper County--Continued</u>				
U98	9.36	Aug. 4, 1942	13.27	Nov. 2, 1940
U99	15.57	May 12, 1944	17.96	Sept. 2, 1941
<u>Grant County</u>				
216	12.32	June 8, 1935	14.10	July 22, 1940
<u>Hall County</u>				
246	19.52	June 20, 1932	38.35	July 18, 1934
247	19.92	Oct. 19, 1930	38.82	July 31, 1933
		Oct. 21, 1930		
248	15.92	July 11, 1932	28.15	Aug. 11, 1931
249	29.04	May 20, 1931	38.60	July 18, 1934
258	15.67	June 23, 1931	34.70	Aug. 4, 1931
		June 30, 1931		
259	2.47	May 6, 1931	20.60	Aug. 20, 1936
260	18.83	June 27, 1932	26.72	July 22, 1931
GI202	5.20	July 7, 1944	9.05	Dec. 24, 1940
GI203	9.00	July 7, 1944	12.80	Dec. 24, 1940
GI204	9.46	July 7, 1944	12.80	Dec. 24, 1940
GI207	12.55	Dec. 20, 1935	17.63	Nov. 2, 1940
GI208	11.42	Jan. 28, 1942	19.05	Feb. 5, 1941
GI209	10.08	Oct. 1, 1945	16.70	July 27, 1940
GI210	13.58	Oct. 1, 1945	23.25	Aug. 28, 1941
GI211	13.00	July 19, 1945	18.90	Aug. 28, 1941
GI212	17.25	Oct. 1, 1945	25.50	July 27, 1940
GI214	15.08	Oct. 1, 1945	24.25	July 27, 1940
GI215	17.66	Oct. 1, 1945	26.15	Apr. 18, 1941
				Feb. 5, 1941
				Aug. 28, 1941
GI216	25.16	Oct. 1, 1945	33.65	Nov. 2, 1940
GI217	25.58	Oct. 1, 1945	33.70	Dec. 24, 1940
GI219	4.60	July 10, 1944	8.40	Feb. 13, 1937
GI221	26.50	Oct. 1, 1945	35.40	July 19, 1941
GI222	23.75	Oct. 1, 1945	31.40	July 19, 1941
GI223	6.04	May 29, 1944	17.45	Nov. 2, 1940
GI224	5.92	Oct. 1, 1945	18.66	May 21, 1943
GI225	6.06	July 7, 1944	11.00	Dec. 24, 1940
GI226	30.16	Oct. 1, 1945	41.95	Aug. 28, 1941
GI227	27.42	Oct. 1, 1945	36.62	Nov. 2, 1940
GI229	31.58	Dec. 18, 1944	42.45	Nov. 2, 1940
GI230	16.83	Oct. 1, 1945	35.65	Feb. 5, 1941
GI231	29.25	Oct. 1, 1945	37.54	Nov. 2, 1940
GI232	11.83	Oct. 1, 1945	21.25	Feb. 5, 1941
GI233	15.25	Oct. 1, 1945	26.35	Feb. 5, 1941
GI234	17.42	Oct. 1, 1945	33.75	Nov. 2, 1940
GI237	26.34	Oct. 1, 1945	33.15	Feb. 5, 1941
GI238	27.25	Oct. 1, 1945	36.27	May 29, 1944
GI239	6.95	May 12, 1936	10.42	July 17, 1942
GI240	2.56	July 7, 1944	8.75	Dec. 6, 1942
GI241	6.15	Mar. 31, 1936	15.60	Feb. 26, 1944
		May 2, 1936		
GI242	19.60	Dec. 2, 1935	26.00	Dec. 24, 1940
GI243	1.90	May 29, 1938	6.05	Oct. 17, 1936
GI244	2.54	July 7, 1944	7.30	Dec. 24, 1940
GI246	2.50	July 7, 1944	7.15	Dec. 24, 1940
GI247	2.50	July 7, 1944	6.10	Dec. 24, 1940
GI248	1.95	May 29, 1938	6.70	Dec. 24, 1940
GI249	2.46	July 7, 1944	6.55	Dec. 24, 1940
GI250	1.90	May 29, 1938	6.55	Dec. 24, 1940
GI251	7.72	July 7, 1944	12.00	Dec. 24, 1940
GI252	7.30	Dec. 15, 1935	12.40	Dec. 24, 1940
GI253	10.33	Sept. 11, 1944	15.75	Mar. 26, 1941
				Mar. 26, 1941

Highest and lowest recorded water levels, in feet below land-surface datum,  
in observation wells in Nebraska--Continued

Well	Highest level	Date	Lowest level	Date
<u>Hall County--Continued</u>				
GI254	14.42	Sept. 11, 1944	19.95	Dec. 24, 1940
GI255	5.64	July 7, 1944	17.70	Dec. 28, 1935
<u>Holt County</u>				
203	4.00	June 4, 1935	9.77	Sept. 14, 1936
<u>Hooker County</u>				
214	.19	June 8, 1935	19.50	Aug. 17, 1945
<u>Kearney County</u>				
266	7.31	June 20, 1932	21.60	Aug. 29, 1934
<u>Keith County</u>				
93	6.90	May 8, 1942	15.29	Sept. 17, 1936
350	10.55	May 8, 1942	15.31	Nov. 17, 1940
E1	4.47	Apr. 3, 1939	9.30	Dec. 2, 1941
E2	4.40	Apr. 3, 1939	10.08	July 24, 1940
E3	6.17	Apr. 3, 1939	10.31	July 24, 1940
E6	4.30	Mar. 2, 1942	8.35	Aug. 28, 1940
E7	2.61	Apr. 7, 1939	5.24	Aug. 28, 1940
E8	3.04	Oct. 6, 1942	7.56	Sept. 30, 1940
E9	2.60	June 6, 1941	6.79	Aug. 28, 1940
E11	3.08	June 2, 1939	6.09	Sept. 30, 1940
E12	3.37	Apr. 5, 1939	6.73	Nov. 1, 1940
E13	2.52	Apr. 5, 1939	6.59	Aug. 28, 1940
E14	3.98	Apr. 5, 1939	8.96	Aug. 3, 1943
E15	1.55	Apr. 5, 1939	7.40	Aug. 28, 1940
E16	5.20	Apr. 5, 1939	9.24	Oct. 13, 1944
E17	2.78	Mar. 2, 1942	6.43	Aug. 30, 1940
E18	3.94	Sept. 10, 1938	6.42	Aug. 30, 1940
E19	2.47	Feb. 27, 1939	5.79	Aug. 30, 1940
E20	2.96	July 10, 1943	4.94	Nov. 5, 1941
E21	2.83	Sept. 7, 1942	6.34	May 1, 1940
E37	4.61	May 8, 1942	10.25	Aug. 30, 1940
N4	16.40	Aug. 13, 1936	19.26	Sept. 27, 1940
N5	7.36	May 31, 1938	12.+	Dec. 2, 1941
N6	.88	June 30, 1938	5.24	June 8, 1945
N7	4.94	May 31, 1938	10.32	Feb. 8, 1945
N8	a .26	May 31, 1938	2.50	Nov. 30, 1945
N9	10.25	May 4, 1942	13.85	Oct. 3, 1941
N12	7.63	May 4, 1942	10.24	July 16, 1936
N13	5.11	May 4, 1942	8.63	July 31, 1945
N14	8.58	Sept. 29, 1938	11.48	Nov. 5, 1943
N15	3.02	May 4, 1942	6.39	Apr. 12, 1941
N16	b .67	Oct. 17, 1945	12.38	Aug. 28, 1940
N17	3.39	Aug. 3, 1943	12.+	July 24, 1940
N18	15.11	Nov. 30, 1945	34.29	Sept. 30, 1940
N19	9.79	Apr. 13, 1939	11.85	Feb. 8, 1945
N20	7.68	May 4, 1938	10.56	Sept. 4, 1941
N23	c 1.64	June 6, 1944	18.78	Dec. 1, 1937
N24	6.02	June 1, 1938	8.95	Oct. 5, 1944
N25	22.90	June 1, 1938	35.84	Mar. 27, 1940
N26	7.90	July 30, 1936	10.90	Sept. 2, 1941

a Above land-surface datum.

b Flooded through July 1945.

c Flooded January and February 1945.

Highest and lowest recorded water levels, in feet below land-surface datum,  
in observation wells in Nebraska--Continued

Well	Highest level	Date	Lowest level	Date
<u>Keith County--Continued</u>				
N28	8.44	Feb. 2, 1937	10.52	Apr. 30, 1942
N30	5.87	Aug. 7, 1942	9.80	Feb. 4, 1941
N32	10.25	Aug. 7, 1942	12.69	Feb. 13, 1940
N33	10.22	May 7, 1942	12.78	Oct. 1, 1941
N37	10.44	May 2, 1941	20.46	Sept. 30, 1936
N41	45.06	Jan. 8, 1945	83.36	Mar. 3, 1942
N42	47.19	Nov. 30, 1945	95.17	Nov. 28, 1940
S10	12.14	Aug. 3, 1945	23.11	Nov. 2, 1937
S16	185.03	Jan. 12, 1945	188.45	May 3, 1937
S18	154.39	Oct. 17, 1945	163.38	Oct. 3, 1941
S19	144.31	Oct. 17, 1945	166.90	Oct. 6, 1942
S20	172.05	Oct. 18, 1945	182.62	Apr. 2, 1937
S21	101.59	Mar. 17, 1943	105.80	July 25, 1940
S22	85.25	Dec. 4, 1945	108.45	Mar. 3, 1941
S23	104.00	Oct. 18, 1945	109.49	Mar. 3, 1941
S24	70.67	Dec. 4, 1945	73.96	Dec. 1, 1941
S25	1.48	Aug. 12, 1942	7.41	Oct. 31, 1941
S26	9.27	May 8, 1942	15.79	Aug. 2, 1943
S27	8.04	May 8, 1942	13.85	Aug. 2, 1943
S28	2.03	May 8, 1942	6.32	Aug. 2, 1943
S29	9.94	May 8, 1942	14.63	Sept. 16, 1944
S32	14.27	Aug. 2, 1945	58.09	June 2, 1941
				Feb. 4, 1941
				July 3, 1941
S34	30.40	Dec. 4, 1945	60.07	Oct. 31, 1940
<u>Keya Paha County</u>				
375	1.52	Mar. 29, 1940	3.61	Oct. 31, 1940
<u>Kimball County</u>				
88	33.67	June 15, 1935	35.04	July 28, 1940
<u>Lincoln County</u>				
241	2.98	July 2, 1935	7.07	Aug. 30, 1941
242	11.61	May 13, 1943	19.92	Sept. 17, 1936
405	.45	Aug. 3, 1945	4.60	Aug. 30, 1940
600	3.10	May 18, 1944	5.42	Sept. 28, 1943
				Oct. 2, 1943
E22	2.57	Oct. 6, 1941	5.74	Sept. 3, 1941
E23	2.15	Sept. 7, 1942	5.48	Aug. 30, 1940
E24	1.04	Feb. 3, 1941	3.82	July 26, 1940
E25	.37	Sept. 7, 1942	4.70	Aug. 30, 1940
E26	8.16	Sept. 10, 1942	10.77	Dec. 30, 1940
E27	6.87	Sept. 10, 1942	11.01	Aug. 30, 1940
E28	1.94	Aug. 8, 1942	7.18	Apr. 12, 1945
E29	2.20	Sept. 16, 1944	6.94	May 7, 1941
E30	2.62	May 8, 1942	6.00	Aug. 2, 1939
E31	2.53	May 8, 1942	5.69	Aug. 2, 1939
E32	2.02	May 8, 1942	4.27	Aug. 6, 1939
E33	a .28	May 8, 1942	3.34	Aug. 30, 1940
E34	1.57	May 8, 1942	4.66	Dec. 3, 1945
E35	3.77	May 8, 1942	6.27	Nov. 6, 1939
		Sept. 10, 1943		
E36	1.94	May 8, 1942	6.11	July 26, 1940
E38	9.57	May 8, 1942	13.37	Sept. 27, 1940
E39	3.49	May 8, 1942	7.40	Sept. 27, 1940
U3	1.88	May 11, 1944	5.67	July 26, 1940
U4	2.41	Dec. 3, 1937	6.92	Sept. 1, 1939
U5	1.03	May 5, 1937	4.72	July 26, 1940
U6	1.42	Feb. 2, 1937	5.04	July 7, 1943
U7	2.40	May 8, 1942	5.70	Sept. 14, 1944

a Above land-surface datum.



Highest and lowest recorded water levels, in feet below land-surface datum,  
in observation wells in Nebraska--Continued

Well	Highest level	Date	Lowest level	Date
<u>Lincoln County--Continued</u>				
U8	1.56	May 8, 1942	6.24	Sept. 14, 1944
U9	.65	May 1, 1942	7.28	Sept. 15, 1936
U10	2.42	May 11, 1942	10.57	Aug. 28, 1936
U11	1.37	Apr. 6, 1939	6.35	Nov. 1, 1939
				Dec. 4, 1942
U12	9.09	Sept. 11, 1942	15.98	Aug. 2, 1937
U13	1.86	Apr. 30, 1941	8.74	Aug. 3, 1939
U15	1.57	May 11, 1942	5.45	Aug. 15, 1936
U16	4.60	Feb. 2, 1938	7.68	Apr. 4, 1945
U17	2.14	May 8, 1942	5.31	July 26, 1940
U18	2.98	May 8, 1942	6.45	Oct. 2, 1939
U19	3.28	May 8, 1942	7.08	Oct. 2, 1939
U20	.85	Apr. 30, 1941	4.60	Sept. 5, 1939
U21	8.95	Sept. 11, 1942	14.61	Oct. 1, 1940
U22	4.60	July 30, 1941	10.84	Aug. 3, 1939
U23	4.98	Feb. 14, 1945	10.65	Nov. 1, 1939
U24	3.05	Apr. 7, 1939	6.86	Nov. 22, 1944
U25	3.85	Mar. 3, 1939	6.46	Sept. 30, 1940
U26	3.28	Apr. 7, 1939	6.31	Aug. 30, 1941
U27	1.05	May 1, 1942	6.48	Aug. 29, 1940
U28	2.78	May 1, 1942	6.62	Sept. 6, 1939
U29	.75	May 1, 1942	4.33	Aug. 29, 1940
U30	2.45	May 1, 1942	5.07	Sept. 6, 1939
U31	1.74	Sept. 11, 1942	7.36	Nov. 1, 1939
U32	12.06	Mar. 4, 1943	16.85	Oct. 1, 1940
U33	27.88	Nov. 9, 1945	37.43	Oct. 1, 1940
U34	14.11	Nov. 9, 1945	18.68	Oct. 1, 1940
U35	1.44	Feb. 14, 1945	10.66	Nov. 1, 1939
U36	1.40	May 1, 1942	5.13	Aug. 4, 1939
U37	2.53	Feb. 2, 1943	7.87	Aug. 29, 1940
U38	5.85	Mar. 6, 1945	14.07	Oct. 2, 1939
U39	3.02	July 1, 1941	9.02	Oct. 2, 1939
U40	9.28	Nov. 15, 1945	21.62	Apr. 6, 1939
U41	6.06	Aug. 3, 1942	16.19	July 29, 1940
U42	8.88	Sept. 20, 1944	21.38	Oct. 2, 1939
U43	25.87	Nov. 15, 1945	42.36	June 5, 1939
U46	1.90	June 14, 1943	5.47	Sept. 5, 1939
U77	22.74	Sept. 20, 1944	31.65	Nov. 4, 1940
U78	19.73	Sept. 20, 1944	27.86	Nov. 4, 1940
U79	16.62	June 14, 1943	25.02	Oct. 1, 1940
U80	24.54	Nov. 7, 1945	31.05	Oct. 1, 1940
JS1	25.64	Sept. 20, 1944	38.90	Nov. 1, 1939
JS2	16.95	May 18, 1944	26.96	Nov. 1, 1939
JS3	21.91	Sept. 20, 1944	33.66	Oct. 2, 1939
JS4	14.42	June 14, 1943	23.40	Oct. 2, 1939
<u>Madison County</u>				
108	2.89	June 4, 1935	6.55	Aug. 10, 1935
109	2.46	Aug. 1, 1945	4.86	July 16, 1936
110	.04	Aug. 5, 1935	4.38	Aug. 1, 1945
<u>Merrick County</u>				
42	6.34	July 8, 1935	9.84	Nov. 1, 1934
49	6.56	Mar. 26, 1937	9.10	Dec. 20, 1934
50	5.20	July 8, 1935	9.60	July 14, 1940
GI200	3.23	July 7, 1944	7.10	Feb. 26, 1944
GI201	6.16	July 7, 1944	11.20	Dec. 24, 1940
<u>Morrill County</u>				
85	2.00	May 14, 1942	5.42	Aug. 16, 1940
				Aug. 21, 1940
97	13.18	Nov. 16, 1944	14.49	July 26, 1940

Highest and lowest recorded water levels, in feet below land-surface datum,  
in observation wells in Nebraska--Continued

Well	Highest level	Date	Lowest level	Date
<u>Phelps County</u>				
5	6.90	May 12, 1944	12.22	Nov. 1, 1937
6	10.45	May 12, 1944	16.25	Nov. 1, 1937
7	6.53	June 15, 1938	12.67	July 2, 1940
8	2.10	June 4, 1942	7.42	Sept. 30, 1940
9	4.39	Nov. 17, 1944	11.01	Sept. 30, 1940
10	8.23	May 12, 1944	13.90	Sept. 30, 1940
11	5.01	June 4, 1942	9.19	Nov. 2, 1940
275	7.75	May 9, 1933	12.23	Oct. 27, 1940
276	11.88	Oct. 19, 1945	15.42	Nov. 25, 1939
277	.94	Feb. 23, 1932	6.05	Nov. 3, 1934
<u>Platte County</u>				
41	6.79	July 5, 1935	11.79	Nov. 21, 1939
US150	60.80	Mar. 27, 1940	71.23	July 30, 1937
		Apr. 24, 1940		
<u>Rock County</u>				
117	1.97	May 1, 1942	5.47	Nov. 22, 1935
198	.51	June 5, 1935	5.56	Sept. 13, 1936
<u>Saunders County</u>				
2-6600W	1.50	Apr. 28, 1944	7.92	Aug. 30, 1934
<u>Scotts Bluff County</u>				
438	6.13	June 24, 1937	12.70	Mar. 16, 1945
439	8.69	Nov. 8, 1940	9.58	Oct. 27, 1938
440	3.10	June 24, 1937	4.14	Nov. 8, 1940
442	3.69	Nov. 15, 1942	8.45	Apr. 7, 1937
<u>Sheridan County</u>				
217	7.23	June 24, 1938	9.37	Oct. 21, 1941
376	2.68	Apr. 1, 1937	5.24	Sept. 12, 1936
<u>Thomas County</u>				
212	9.79	June 8, 1935	10.98	July 23, 1940
213	2.33	Mar. 27, 1936	3.07	Aug. 15, 1935
<u>Valley County</u>				
601	3.01	May 3, 1944	6.56	Sept. 10, 1945
				Sept. 12, 1945
				Sept. 17, 1945
				Sept. 18, 1945

Length of record, difference between highest and lowest water levels, net  
change in water level in 1945, and net change in water level during  
period of record in observation wells in Nebraska

Well	Length of record (years)	Difference between highest and lowest water levels (feet)	Net rise (+) or net decline (-) in 1945 (feet)	Net rise (+) or net decline (-) for period of record (feet)
<u>Antelope County</u>				
202	11	4.57	....	-0.57

Length of record, difference between highest and lowest water levels, net change in water level in 1945, and net change in water level during period of record in observation wells in Nebraska--Continued

Well	Length of record (years)	Difference between highest and lowest water levels (feet)	Net rise (+) or net decline (-) in 1945 (feet)	Net rise (+) or net decline (-) for period of record (feet)
<u>Arthur County</u>				
N31	10	4.06	-0.17	-1.15
<u>Blaine County</u>				
211	12	2.68	-.23	-.70
<u>Box Butte County</u>				
338	11	1.08	....	+.14
378	11	2.41	....	-.97
482	8	1.20	....	-.40
<u>Brown County</u>				
243	11	4.85	....	+.97
<u>Buffalo County</u>				
263	16	5.02	....	+2.38
264	15	4.68	....	-1.58
265	16	5.46	....	-2.02
267	16	6.43	....	-.92
268	16	6.43	....	-1.24
269	16	4.49	....	-1.11
270	16	5.98	+1.17	-1.34
272	12	4.80	....	-2.10
273	16	4.63	....	-3.01
274	16	5.33	....	-.71
278	15	5.32	....	+3.19
279	15	3.75	....	+1.27
<u>Cherry County</u>				
115	12	2.37	....	-.18
116	10	4.13	....	+1.33
256	12	5.08	....	-.33
399	10	1.50	....	+.09
431	9	1.95	....	-.20
<u>Colfax County</u>				
37	5	2.81	....	-.53
<u>Custer County</u>				
53	12	2.25	....	+1.69
<u>Dawes County</u>				
123	12	4.72	-.02	+2.62
<u>Dawson County</u>				
280	16	5.74	....	-.15
281	16	9.45	+.02	-2.78
282	16	4.88	+.01	+4.59
283	16	6.92	+.30	-2.47
284	16	7.22	+.75	-1.73
285	16	7.88	-.16	-3.18
286	16	7.20	-.21	-3.46
287	16	6.92	-.24	-3.92
288	16	7.13	-.17	-3.65

Length of record, difference between highest and lowest water levels, net change in water level in 1945, and net change in water level during period of record in observation wells in Nebraska--Continued

Well	Length of record (years)	Difference between highest and lowest water levels (feet)	Net rise (+) or net decline (-) in 1945 (feet)	Net rise (+) or net decline (-) for period of record (feet)
<u>Dawson County--Continued</u>				
289	16	7.26	-0.47	-3.77
290	16	7.78	-.49	-3.94
291	16	7.31	+.05	-3.67
292	16	5.98	-.86	-3.56
293	16	5.03	-.36	-1.08
294	16	5.48	-.26	-.58
295	16	3.63	-.10	-.09
296	16	2.91	-.02	-1.23
297	16	4.74	+.05	-.86
298	16	3.74	+.07	-1.14
299	16	3.67	-.22	-.92
300	16	3.98	-.35	-1.23
301	16	4.91	-.54	-1.08
302	16	4.79	-.30	-.96
303	16	5.11	-.12	-.66
304	16	4.38	.00	-.23
305	16	5.55	+.26	+1.98
306	16	12.02	+.21	+4.77
308	16	7.98	+.98	-2.71
309	14	5.35	....	-.23
310	14	3.24	....	+1.14
311	16	16.19	....	+1.74
314	14	3.37	....	-.32
317	15	4.01	+.16	+.42
318	15	12.25	+1.87	+9.29
319	15	3.60	-.49	+.88
U44	8	7.38	+.03	+2.89
U45	8	6.04	+.16	+3.13
U48	8	15.02	+1.21	+12.96
U49	8	4.01	-.06	+.27
U51	8	3.25	-.20	+1.33
U52	7	3.09	-1.03	+1.58
U53	7	4.22	-.06	+.63
U54	7	7.12	+2.05	+6.53
U55	7	3.11	+.14	+.62
U57	7	5.61	+.79	+2.86
U58	7	8.67	+.58	+2.63
U59	7	11.42	+1.19	+9.50
U60	7	5.30	+.19	+.99
U61	7	11.63	+.88	+7.21
U62	7	4.63	+.32	-1.74
U63	7	3.34	+.35	-1.95
U64	7	4.00	-.03	-1.32
U73	6	24.10	+2.51	+25.50
<u>Dodge County</u>				
420	10	8.97	....	+2.86
455	6	2.94	....	-1.50
456	6	3.63	....	+2.38
457	6	6.07	....	+4.22
459	6	8.08	....	+5.03
460	6	10.44	....	+6.81
461	6	10.14	....	+6.12
462	6	9.62	....	+5.27
463	6	9.32	....	+5.60
464	6	8.86	....	+7.49
467	6	8.29	....	+5.87

Length of record, difference between highest and lowest water levels, net change in water level in 1945, and net change in water level during period of record in observation wells in Nebraska--Continued

Well	Length of record (years)	Difference between highest and lowest water levels (feet)	Net rise (+) or net decline (-) in 1945 (feet)	Net rise (+) or net decline (-) for period of record (feet)
<u>Dodge County--Continued</u>				
468	6	7.86	.....	+4.68
<u>Garden County</u>				
3	13	4.02	+4.40	-2.06
4	13	4.40	+3.30	-1.30
5	13	4.18	-3.30	+7.8
12	12	4.57	+1.10	+2.12
17	12	2.86	.....	-.63
19	12	3.83	-.60	+1.69
21	12	3.12	-.30	+1.54
25	12	3.77	+7.75	+2.9
27	12	3.74	-.80	-2.24
326	11	6.47	.....	-5.85
S11	10	3.14	+4.40	+7.05
S13	10	5.26	-.62	+3.37
<u>Gosper County</u>				
1	8	3.51	+7.09	-8.86
2	8	2.89	-.43	-1.20
3	9	3.94	-.33	+2.18
4	9	4.12	-.24	+5.8
U76	6	70.26	+9.55	+69.76
U81	6	7.57	+2.29	+6.64
U82	6	8.40	+1.61	+7.59
U83	6	8.37	+1.42	-2.42
U84	6	8.41	+4.46	+8.41
U85	6	8.06	+3.39	+6.23
U86	6	8.57	+1.78	+6.94
U87	6	8.43	+1.87	+6.61
U88	6	6.56	+4.47	+5.17
U89	6	7.17	-.20	+5.05
U90	6	8.23	+7.04	+6.96
U92	6	8.46	+1.57	+6.46
U93	6	7.80	-.21	+5.88
U96	6	6.55	+1.66	+4.70
U97	6	4.77	+7.09	+3.38
U98	6	3.91	+7.05	+2.29
U99	6	2.39	+1.11	+1.44
<u>Grant County</u>				
216	13	1.78	.....	-.83
<u>Hall County</u>				
246	15	18.83	.....	-1.10
247	16	18.90	.....	-3.38
248	16	12.23	.....	-.84
249	16	9.56	.....	-5.86
258	16	19.03	.....	-4.56
259	16	18.13	.....	+7.76
260	16	7.89	.....	-1.96
GI202	12	3.85	.....	+3.33
GI203	11	3.80	.....	+6.4
GI204	11	3.34	.....	+1.17
GI207	11	5.08	.....	-.05
GI208	11	7.63	.....	-3.36
GI209	11	6.62	.....	+3.12

Length of record, difference between highest and lowest water levels, net change in water level in 1945, and net change in water level during period of record in observation wells in Nebraska--Continued

Well	Length of record (years)	Difference between highest and lowest water levels (feet)	Net rise (+) or net decline (-) in 1945 (feet)	Net rise (+) or net decline (-) for period of record (feet)
<u>Hall County--Continued</u>				
GI210	11	9.67	....	+3.92
GI211	11	5.90	....	+1.55
GI212	11	8.25	....	+2.45
GI214	11	9.18	....	+2.27
GI215	11	8.49	....	+3.84
GI216	11	8.49	....	+3.04
GI217	11	8.12	....	+3.92
GI219	11	3.80	....	+1.71
GI221	11	8.90	....	+4.20
GI222	11	7.65	....	+3.45
GI223	11	11.41	....	+3.53
GI224	11	12.74	....	+3.13
GI225	11	4.94	....	+.45
GI226	11	11.79	....	+3.74
GI227	11	9.20	....	+2.28
GI229	11	10.87	....	+5.33
GI230	11	18.82	....	+3.78
GI231	11	8.09	....	+4.15
GI232	11	9.42	....	+4.62
GI233	11	11.10	....	+5.95
GI234	11	16.33	....	+13.08
GI237	11	6.81	....	+2.71
GI238	11	9.02	....	+1.35
GI239	11	3.47	....	-2.20
GI240	11	6.19	....	+1.37
GI241	11	9.45	....	-7.28
GI242	11	6.40	....	-1.15
GI243	11	4.15	....	+1.20
GI244	11	4.76	....	+.52
GI246	11	4.65	....	+.70
GI247	11	3.60	....	+.82
GI248	11	4.75	....	+1.74
GI249	11	4.09	....	+1.93
GI250	11	4.45	....	+2.57
GI251	11	4.28	....	-.25
GI252	11	5.10	....	-.06
GI253	11	5.42	....	+.07
GI254	11	5.53	....	-.45
GI255	11	12.06	....	+1.54
<u>Holt County</u>				
203	12	5.77	-.24	-.65
<u>Hooker County</u>				
214	12	19.31	....	-8.01
<u>Kearney County</u>				
266	16	14.29	....	+.29
<u>Keith County</u>				
93	12	8.39	+.34	+6.76
350	11	4.76	....	-.16
E1	8	4.83	.00	-1.62
E2	8	5.68	+.33	-1.85
E3	8	4.14	-.12	-2.00

Length of record, difference between highest and lowest water levels, net change in water level in 1945, and net change in water level during period of record in observation wells in Nebraska--Continued

Well	Length of record (years)	Difference between highest and lowest water levels (feet)	Net rise (+) or net decline (-) in 1945 (feet)	Net rise (+) or net decline (-) for period of record (feet)
<u>Keith County--Continued</u>				
E6	8	4.05	+0.16	-0.44
E7	8	2.63	+1.03	+1.16
E8	8	4.52	+1.03	+1.40
E9	8	3.19	+.21	-.43
E11	8	3.01	+.23	+.19
E12	8	3.36	+.27	-.33
E13	8	4.07	+.84	+.81
E14	8	4.98	-.88	+.27
E15	8	5.85	-3.26	-.48
E16	8	4.04	-.48	+.15
E17	8	3.65	-1.08	-.29
E18	8	2.48	.00	-1.66
E19	8	3.32	-.51	-.47
E20	8	1.98	+.22	+.87
E21	8	3.51	-.27	-1.16
E37	8	5.64	+.63	.0
N4	10	2.86	+.15	-.25
N5	10	4.64+	....	-3.40
N6	10	4.36	-.50	-1.99
N7	10	5.38	-.23	-1.74
N8	10	2.76	....	+.17
N9	10	3.60	-.38	-1.43
N12	10	2.61	+.50	-1.85
N13	10	3.52	+.07	-2.31
N14	10	2.90	-.29	-1.14
N15	10	3.37	....	+.62
N16	10	11.71	....	+4.34
N17	10	8.61+	....	-5.00
N18	10	19.18	3.72	+16.44
N19	10	2.06	+.03	+.92
N20	10	2.88	+.15	-.48
N23	10	17.14	....	+16.80
N24	10	2.93	+.72	+.79
N25	10	12.94	-.17	-1.82
N26	10	3.00	-.40	-3.02
N28	10	2.08	....	-.92
N30	10	3.93	....	-.11
N32	10	2.44	-.22	-.07
N33	10	2.56	-.63	-1.29
N37	10	10.02	-.30	+7.79
N41	10	38.30	-7.09	+21.59
N42	10	47.98	+13.22	+46.73
S10	10	10.97	....	+6.36
S16	9	3.42	....	+2.62
S18	10	8.99	+1.55	+6.74
S19	10	22.59	+5.88	+21.67
S20	9	10.57	+1.61	+10.14
S21	10	4.21	+.35	-.72
S22	10	23.20	+4.51	+21.66
S23	10	5.49	+.65	+4.43
S24	10	3.29	....	+1.00
S25	9	5.93	-.02	+1.43
S26	10	6.52	+.27	+.58
S27	10	5.81	+.26	+1.00
S28	10	4.29	+.64	+.98
S29	10	4.69	-.13	-.41
S32	9	43.72	+8.74	+41.05
S34	9	29.67	+10.23	+28.92

Length of record, difference between highest and lowest water levels, net change in water level in 1945, and net change in water level during period of record in observation wells in Nebraska--Continued

Well	Length of record (years)	Difference between highest and lowest water levels (feet)	Net rise (+) or net decline (-) in 1945 (feet)	Net rise (+) or net decline (-) for period of record (feet)
<u>Keya Paha County</u>				
375	21	2.09	....	+0.40
<u>Kimball County</u>				
88	12	1.37	+ .39	-.19
<u>Lincoln County</u>				
241	12	4.09	....	-.98
242	12	8.31	+ .20	+4.98
405	10	4.15	-.40	+ .30
600	3	2.32	-.18	-1.32
E22	8	3.17	-.36	-.24
E23	8	3.33	-.49	-1.29
E24	8	2.78	-.39	-.06
E25	8	4.33	+ .92	-.79
E26	8	2.61	+ .43	-.64
E27	8	4.14	+ .25	+ .86
E28	8	5.24	+ .46	-.90
E29	8	4.64	+ .79	-.92
E30	8	3.38	+ .46	+ .33
E31	8	3.16	+ .38	+1.05
E32	8	2.25	+ .38	+ .70
E33	8	3.62	+ .42	+ .45
E34	8	3.09	-1.37	-.28
E35	8	2.50	+ .67	-.41
E36	8	4.17	-.06	-.23
E38	8	3.80	+ .12	-.22
E39	8	3.91	....	-.64
U3	10	3.79	....	+1.38
U4	10	4.51	....	+ .41
U5	10	3.69	....	+1.60
U6	10	3.62	....	+1.05
U7	10	3.30	....	-1.38
U8	10	4.68	....	-.91
U9	10	6.63	-.03	+4.01
U10	10	8.15	+ .09	+5.54
U11	10	4.98	+ .33	+ .65
U12	10	6.89	....	+4.90
U13	10	6.88	-.75	+2.75
U15	10	3.88	....	+1.80
U16	10	3.08	....	+ .73
U17	8	3.17	....	+ .32
U18	8	3.47	....	+ .55
U19	8	3.80	....	+ .70
U20	8	3.75	....	+2.16
U21	8	5.66	....	+4.54
U22	8	6.24	....	+4.50
U23	8	5.67	....	+3.43
U24	8	3.81	....	-.62
U25	8	2.61	....	-.97
U26	8	3.03	....	-1.07
U27	8	5.43	....	+3.11
U28	8	3.84	....	-.31
U29	8	3.58	....	+ .72
U30	8	2.62	....	-1.16
U31	8	5.62	-1.63	-.04
U32	8	4.79	+ .12	+3.36
U33	8	9.55	+ .57	+8.94



Length of record, difference between highest and lowest water levels, net change in water level in 1945, and net change in water level during period of record in observation wells in Nebraska--Continued

Well	Length of record (years)	Difference between highest and lowest water levels (feet)	Net rise (+) or net decline (-) in 1945 (feet)	Net rise (+) or net decline (-) for period of record (feet)
<u>Lincoln County--Continued</u>				
U34	8	4.57	+0.26	+3.41
U35	8	9.21	....	+6.39
U36	8	3.73	....	+3.38
U37	8	5.34	....	-1.54
U38	8	8.22	-.30	+4.24
U39	8	6.00	-.08	+2.19
U40	8	12.34	+6.1	+11.52
U41	8	10.13	-1.80	+2.63
U42	8	12.50	-.76	+7.14
U43	8	16.49	+3.20	+17.44
U46	7	3.57	+0.02	+8.8
U77	6	8.91	....	+7.90
U78	6	8.13	....	+6.85
U79	6	8.40	+8.3	+7.67
U80	6	6.51	+2.33	+6.51
JS1	8	13.26	+4.9	+7.87
JS2	8	10.01	....	+4.26
JS3	8	11.75	+8.4	+8.93
JS4	8	8.98	+3.1	+6.91
<u>Madison County</u>				
108	12	3.66	....	+1.10
109	12	2.40	....	+3.66
110	11	4.34	....	-3.34
<u>Merrick County</u>				
42	12	3.50	....	+2.58
49	12	2.54	....	+2.09
50	12	4.40	....	+2.50
GI200	11	3.87	....	+2.10
GI201	11	5.04	....	+2.12
<u>Morrill County</u>				
85	16	3.42	+1.2	-.39
97	12	1.31	....	+3.38
<u>Phelps County</u>				
5	9	5.32	-.05	+9.41
6	9	5.80	+0.3	+1.71
7	9	6.14	+0.8	+3.07
8	8	5.32	-.03	+5.27
9	8	6.62	-.04	+8.19
10	8	5.67	+1.2	+5.05
11	8	4.18	+0.6	+9.18
275	16	4.48	....	+1.13
276	16	3.54	....	-.02
277	15	5.11	....	+1.17
<u>Platte County</u>				
41	12	5.00	....	+1.58
US150	11	10.43	-.70	-2.9

Length of record, difference between highest and lowest water levels, net change in water level in 1945, and net change in water level during period of record in observation wells in Nebraska--Continued

Well	Length of record (years)	Difference between highest and lowest water levels (feet)	Net rise (+) or net decline (-) in 1945 (feet)	Net rise (+) or net decline (-) for period of record (feet)
<u>Rock County</u>				
117	12	3.50	....	+0.64
198	12	5.05	....	+1.97
<u>Saunders County</u>				
2-6600W	13	6.42	- .96	-1.41
<u>Scotts Bluff County</u>				
438	10	6.57	....	-.19
439	10	.89	....	-.17
440	10	1.04	....	-.17
442	9	4.76	....	+1.10
<u>Sheridan County</u>				
217	12	2.14	....	-1.39
376	6	2.56	....	+.28
<u>Thomas County</u>				
212	12	1.19	....	-.25
213	12	.74	....	-.38
<u>Valley County</u>				
601	3	3.55	- .04	+.32

## PUMPAGE

The following tables give the total draft from the important ground-water developments for the public supplies of Lincoln and Grand Island. The public supply for the city of Lincoln is pumped from nine wells installed on the flood plain of the Platte River, about 3 miles north of Ashland. The first pumping from the Lincoln well field, near Ashland, began in August 1932, and by the end of 1945 a total of approximately 39,011.11 million gallons of water had been withdrawn from the ground-water reservoir. The public supply at Grand Island is obtained by pumping from a group of wells drilled into the Pleistocene sands and gravels of the Platte Valley and situated for the most part within the city.<sup>1/</sup>

<sup>1/</sup> Wenzel, L. K., Local overdevelopment of ground-water supplies with special reference to conditions at Grand Island, Nebraska: U. S. Geol. Survey Water-Supply Paper 836-E, pp. 244-247, 1940.

Monthly pumpage, in millions of gallons, for the public supply of  
Grand Island, Nebr., 1936-45

	1936	1937	1938	1939	1940
Jan.	133.8	93.0	98.9	107.4	125.7
Feb.	95.6	83.3	88.2	89.7	99.8
Mar.	111.8	96.7	112.5	108.5	100.9
Apr.	154.3	131.3	140.7	154.8	144.8
May	172.8	165.1	162.2	195.6	190.6
June	215.1	173.6	181.9	209.8	229.2
July	291.2	236.3	242.4	248.2	245.6
Aug.	241.0	239.3	189.8	251.1	240.6
Sept.	194.6	194.7	199.0	241.5	198.8
Oct.	153.6	163.0	191.4	192.2	172.8
Nov.	104.2	139.3	135.7	144.1	132.6
Dec.	104.4	101.6	112.2	131.6	118.4
	1,972.4	1,817.2	1,854.9	2,074.5	1,999.8

	1941	1942	1943	1944	1945
Jan.	100.6	126.0	156.6	189.7	228.1
Feb.	82.5	88.4	151.6	178.3	209.3
Mar.	108.1	132.5	177.0	209.6	269.3
Apr.	111.1	128.9	212.3	196.1	205.9
May	159.7	137.2	223.6	224.9	213.4
June	134.9	251.9	244.3	228.7	225.0
July	254.5	225.1	301.3	275.2	289.5
Aug.	251.3	250.4	299.6	320.6	286.3
Sept.	174.3	202.3	250.1	234.8	271.8
Oct.	148.4	198.4	235.2	228.8	231.7
Nov.	134.7	168.9	188.9	227.0	215.6
Dec.	131.1	161.3	189.4	223.6	214.2
	1,791.4	2,071.3	2,629.9	2,737.3	2,860.1

Average daily pumpage, in millions of gallons, for public supply  
of Grand Island, Nebr.

1918	a 1.64	1925	a 2.15	1932	4.11	1939	5.68
1919	a 1.53	1926	a 2.29	1933	4.90	1940	5.47
1920	a 1.44	1927	a 2.12	1934	5.72	1941	4.90
1921	a 1.59	1928	a 2.51	1935	5.34	1942	5.67
1922	a 1.76	1929	3.65	1936	5.41	1943	7.20
1923	a 1.83	1930	3.52	1937	5.00	1944	7.50
1924	a 2.04	1931	4.16	1938	5.08	1945	7.84

a Does not include water pumped for condenser use at municipal electric plant.

Monthly pumpage, in millions of gallons, for public supply  
Lincoln, Nebr., 1932-45

	1932	1933	1934	1935	1936	1937	1938
Jan.	.....	204.2	136.6	181.1	186.2	203.8	208.7
Feb.	.....	187.0	164.2	167.2	193.0	190.7	192.2
Mar.	.....	205.0	188.5	199.2	204.4	200.6	211.1
Apr.	.....	210.0	194.8	193.6	188.8	158.5	189.5
May	.....	213.8	236.0	188.7	234.8	262.9	216.4
June	.....	263.6	249.9	192.0	296.4	254.5	245.8
July	.....	212.6	308.9	236.9	334.5	322.5	304.9
Aug.	98.5	197.2	278.1	255.8	319.8	317.7	298.9
Sept.	186.1	169.4	206.5	181.3	228.2	297.6	201.6
Oct.	204.9	152.6	176.9	154.0	236.4	204.8	207.2
Nov.	201.8	106.4	196.6	90.1	209.2	217.1	116.3
Dec.	203.2	133.9	171.7	182.9	201.2	188.8	141.1
Total	894.5	2,235.7	2,508.7	2,228.8	2,832.9	2,819.5	2,533.7

Monthly pumpage, in millions of gallons, for public supply  
Lincoln, Nebr., 1932-45--Continued

	1939	1940	1941	1942	1943	1944	1945
Jan.	196.1	195.8	193.4	198.5	248.2	281.4	310.1
Feb.	185.6	182.8	181.2	178.4	227.6	246.1	283.9
Mar.	212.9	193.9	195.1	199.3	253.5	274.0	317.7
Apr.	223.7	177.1	173.8	213.8	246.9	274.3	313.3
May	284.6	246.5	289.2	243.4	290.0	297.2	319.6
June	267.4	290.7	286.3	292.4	324.6	353.1	312.1
July	325.0	374.3	382.4	372.5	379.8	381.0	365.6
Aug.	300.6	290.7	377.8	399.8	377.1	361.0	361.0
Sept.	324.3	314.1	277.0	269.3	334.0	343.3	334.7
Oct.	232.7	264.4	201.2	234.1	304.8	327.1	324.0
Nov.	222.8	170.8	197.7	200.5	237.4	291.4	311.5
Dec.	203.4	201.5	205.3	241.8	263.9	307.5	291.9
Total	2,979.1	2,902.3	2,960.4	3,043.8	3,487.8	3,737.4	3,845.4

Average daily pumpage, in millions of gallons, for public supply  
of Lincoln, Nebr., 1932-45

1932	a 5.84	1936	7.76	1940	7.95	1943	9.53
1933	6.12	1937	7.72	1941	8.11	1944	10.20
1934	6.87	1938	6.94	1942	8.34	1945	10.54
1935	6.10	1939	8.16				

a Pumping from the Ashland well field began August 1932.

## WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Adams County

193 (\*817, p. 92; 840, p. 190; 845, p. 169; 886, p. 289; 908, p. 188; 938, p. 157; 946, p. 189; 988, p. 187; 1018, p. 163). H. Fricke. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 23, T. 7 N., R. 10 W. Well destroyed; measurements discontinued.

448 (\*886, p. 289; 908, p. 188; 938, p. 157; 946, p. 189; 988, p. 187; 1018, p. 163). University of Nebraska. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 23, T. 6 N., R. 10 W. No measurements made in 1945.

Antelope County

202 (\*817, p. 92; 840, p. 190; 845, p. 169; 886, p. 289; 908, p. 188; 938, p. 157; 946, p. 189; 988, p. 187; \*1018, p. 164). University of Nebraska. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 1, T. 24 N., R. 6 W. Water level, in feet below land-surface datum, 1945: Aug. 1, 4.64.

Arthur County

250 (\*840, p. 190; 845, p. 169; 886, p. 289; 908, p. 188; 938, p. 157; 946, p. 189; 988, p. 188; \*1018, p. 164). University of Nebraska. SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 21, T. 17 N., R. 38 W. No measurements made in 1945.

N31 (\*988, p. 187; 1018, p. 164). Central Nebraska Public Power and Irrigation District. SW corner SE $\frac{1}{4}$  sec. 31, T. 17 N., R. 39 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	5.38	Mar. 9	a 6.37	Aug. 7	5.13	Dec. 14	5.55
Feb. 9	5.35	Apr. 11	5.35	Oct. 18	5.51		

a Lowest observed stage in period of record.

Banner County

238 (\*817, p. 93; 840, p. 191; 845, p. 169; 886, p. 289; 908, p. 188; 938, p. 157; 946, p. 189; 988, p. 188; 1018, p. 164). F. Grant. SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 29, T. 19 N., R. 55 W. No measurements made in 1945.

354 (\*817, p. 93; 840, p. 191; 845, p. 169; 886, p. 289; 908, p. 188; 946, p. 189; 988, p. 188; 1018, p. 164). A. Andersen. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 6, T. 17 N., R. 55 W. No measurements made in 1945.

Blaine County

210 (\*817, p. 93; 840, p. 191; 845, p. 169; 886, p. 289; 908, p. 188; 938, p. 157; 946, p. 189; 988, p. 188; 1018, p. 164). University of Nebraska. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 22, T. 23 N., R. 22 W. No measurements made in 1945.

211 (\*817, p. 93; 840, p. 191; 845, p. 169; 886, p. 289; 908, p. 188; 938, p. 157; 946, p. 189; \*988, p. 188; 1018, p. 164). Key well US 57. University of Nebraska. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 33, T. 22 N., R. 24 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	4.25	Apr. 28	3.43	July 28	4.36	Sept. 28	4.65
Feb. 26	3.85	May 29	3.85	Aug. 17	4.59	Oct. 29	4.48
Mar. 29	3.85	June 28	3.33	29	4.51		

237 (\*817, p. 93; 840, p. 191; 845, p. 169; 886, p. 289; 908, p. 188; 938, p. 157; 946, p. 189; 988, p. 188; 1018, p. 164). Cox & Sons. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 7, T. 24 N., R. 25 W. No measurements made in 1945.

433 (\*886, p. 290; 908, p. 189; 938, p. 157; 946, p. 190; 988, p. 189; 1018, p. 164). University of Nebraska. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 7, T. 24 N., R. 25 W. No measurements made in 1945.

434 (\*886, p. 290; 908, p. 189; 938, p. 157; 946, p. 190; 988, p. 189; 1018, p. 164). University of Nebraska. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 22, T. 23 N., R. 22 W. No measurements made in 1945.

Boone County

201 (\*817, p. 94; 840, p. 191; 845, p. 169; 886, p. 290; 908, p. 189; 938, p. 157; 946, p. 190; 988, p. 189; 1018, p. 165). University of Nebraska. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 26, T. 21 N., R. 7 W. No measurements made in 1945.

207 (\*817, p. 94; 840, p. 191; 845, p. 169; 886, p. 290; 908, p. 189; 938, p. 157; 946, p. 190; 988, p. 189; 1018, p. 165). University of Nebraska. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 5, T. 18 N., R. 7 W. No measurements made in 1945.

425 (\*886, p. 290; 908, p. 189; 938, p. 157; 946, p. 190; 988, p. 189; 1018, p. 165). University of Nebraska. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 26, T. 21 N., R. 7 W. No measurements made in 1945.

426 (\*886, p. 290; 908, p. 189; 938, p. 157; 946, p. 190; 988, p. 189; 1018, p. 165). University of Nebraska. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 4, T. 18 N., R. 7 W. No measurements made in 1945.

Box Butte County

129 (\*817, p. 94; 840, p. 191; 845, p. 172; 886, p. 291; 908, p. 189; 938, p. 158; 946, p. 190; 988, p. 189; \*1018, p. 165). M. Jacobson. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 31, T. 25 N., R. 50 W. No measurements made in 1945.

338 (\*817, p. 95; 840, p. 192; 845, p. 172; 886, p. 291; 908, p. 189; 938, p. 158; 946, p. 190; 988, p. 189; \*1018, p. 165). E. Wildy. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 21, T. 27 N., R. 49 W. Water level, in feet below land-surface datum, 1945: Aug. 17, 118.38.

378 (\*817, p. 95; 840, p. 192; 845, p. 172; 886, p. 291; 908, p. 189; 938, p. 158; 946, p. 190; 988, p. 189; \*1018, p. 165). University of Nebraska. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 6, T. 28 N., R. 51 W. Water level, in feet below land-surface datum, 1945: Aug. 2, 3.15.

473 (Box Butte 2 in \*845, p. 169 and 886, p. 290; 946, p. 190; 988, p. 189; \*1018, p. 165). Mrs. E. A. Wells. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 30, T. 25 N., R. 48 W. No measurements made in 1945.

474 (Box Butte 3 in \*845, p. 170 and 886, p. 290; 946, p. 190; 988, p. 189; \*1018, p. 165). John Nolan. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 10, T. 24 N., R. 50 W. No measurements made in 1945.

475 (Box Butte 5 in \*845, p. 170 and 886, p. 290; 946, p. 190; 988, p. 189; \*1018, p. 166). Dr. G. D. Shepard. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 13, T. 24 N., R. 52 W. No measurements made in 1945.

477 (Box Butte 7 in #845, p. 170 and 886, p. 291; 946, p. 191; 988, p. 189; \*1018, p. 166). C. A. Allen. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 14, T. 25 N., R. 51 W. No measurements made in 1945.

478 (Box Butte 8 in #845, p. 170 and 886, p. 291; 946, p. 191; 988, p. 189; \*1018, p. 166). O. J. Wilkens. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 25, T. 26 N., R. 51 W. No measurements made in 1945.

479 (Box Butte 9 in #845, p. 170 and 886, p. 291; listed as well 479 in 946, p. 191; 988, p. 189; \*1018, p. 166). Lew Bauer. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 10, T. 26 N., R. 52 W. No measurements made in 1945.

480 (Box Butte 10 in #845, p. 171; 946, p. 191; 988, p. 189; 1018, p. 166). Mrs. L. A. Rosenberg. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 12, T. 26 N., R. 50 W. No measurements made in 1945.

481 (Box Butte 12 in #845, p. 171; 946, p. 191; 988, p. 189; \*1018, p. 166). NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 20, T. 27 N., R. 50 W. No measurements made in 1945.

482 (Box Butte 13 in #845, p. 171 and 886, p. 291; 946, p. 191; 988, p. 189; \*1018, p. 166). W. J. Gregg. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 8, T. 28 N., R. 51 W. Water level, in feet below land-surface datum, 1945: Aug. 17, 85.30.

483 (Box Butte 15 in #845, p. 171 and 886, p. 291; 946, p. 191; 988, p. 189; \*1018, p. 167). Mr. Shremik. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 24, T. 27 N., R. 47 W. No measurements made in 1945.

#### Boyd County

74 (\*817, p. 95; 840, p. 192; 845, p. 172; 886, p. 291; 908, p. 189; 938, p. 158; 946, p. 191; 988, p. 190; 1018, p. 167). A. Christman. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 10, T. 34 N., R. 13 W. No measurements made in 1945.

75 (\*817, p. 95; 840, p. 192; 845, p. 172; 886, p. 291; 908, p. 189; 938, p. 158; 946, p. 191; 988, p. 190; 1018, p. 167). E. Engelhaupt. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 9, T. 33 N., R. 13 W. No measurements made in 1945.

209 (\*817, p. 95, 96; 840, p. 192; 845, p. 172; 886, p. 291; 908, p. 189; 938, p. 158; 946, p. 191; 988, p. 190; 1018, p. 167). University of Nebraska. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 1, T. 32 N., R. 10 W. No measurements made in 1945.

#### Brown County

243 (\*817, p. 96; 840, p. 192; 845, p. 172; 886, p. 291; 908, p. 189; 938, p. 158; 946, p. 191; 988, p. 190; \*1018, p. 167). T. Bower. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 27, T. 30 N., R. 22 W. Water levels, in feet below land-surface datum, 1945: May 16, 15.71; Aug. 1, 15.85.

#### Buffalo County

52 (\*817, p. 96; 840, p. 192; 845, p. 172; 946, p. 192; 988, p. 190; 1018, p. 167). W. Starks. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 2, T. 12 N., R. 14 W. No measurements made in 1945.

232 (\*817, p. 96; 840, p. 192; 845, p. 172; 886, p. 291; 908, p. 190; 938, p. 158; 946, p. 192; 988, p. 190; 1018, p. 167). W. Buettner. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 21, T. 10 N., R. 17 W. No measurements made in 1945.

263 (\*817, p. 97; 840, p. 192; 845, p. 172; 886, p. 291; 908, p. 190; 938, p. 158; 946, p. 192; \*988, p. 190; 1018, p. 167). E. Stubblefield. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 22, T. 9 N., R. 13 W. Water levels, in feet below land-surface datum, 1945: Oct. 18, 8.69; Dec. 12, 8.57.

264 (\*817, p. 97; 840, p. 192; 845, p. 172; 886, p. 291; 908, p. 190; 946, p. 192; 988, p. 190; 1018, p. 167). B. Smith. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 9, T. 9 N., R. 15 W. To convert water levels from feet above assumed datum, as published in all previous reports, subtract from 14.68. Measurements resumed. Water levels, in feet below land-surface datum, 1945: Oct. 19, 14.57; Dec. 12, 14.00.

265 (\*817, p. 98; 840, p. 193; 845, p. 172; 886, p. 291; 908, p. 190; 938, p. 158; 946, p. 192; \*988, p. 190; 1018, p. 167). F. Scott. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 5, T. 9 N., R. 13 W. Water levels, in feet below land-surface datum, 1945: Oct. 18, 20.34; Dec. 12, 20.16.

267 (\*817, p. 98; 840, p. 193; 845, p. 172; 886, p. 292; 908, p. 190; 938, p. 158; 946, p. 192; \*988, p. 190; 1018, p. 167). M. Davis. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 13, T. 9 N., R. 14 W. Water levels, in feet below land-surface datum, 1945: May 15, 19.66; Oct. 18, 19.33; Dec. 12, 19.30.

268 (\*817, p. 98; 840, p. 193; 845, p. 172; 886, p. 292; 908, p. 190; 938, p. 158; 946, p. 192; \*988, p. 190; 1018, p. 167). C. Nicholson. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 34, T. 9 N., R. 14 W. Water levels, in feet below land-surface datum, 1945: Oct. 18, 11.74; Dec. 12, 11.52.

269 (\*817, p. 99; 840, p. 193; 845, p. 172; 886, p. 292; 908, p. 190; 946, p. 192; 988, p. 192; \*1018, p. 168). W. Adair. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 21, T. 9 N., R. 14 W. Water levels, in feet below land-surface datum, 1945: Oct. 18, 19.67; Dec. 12, 19.25.

270 (\*817, p. 99; 840, p. 193; 845, p. 172; 886, p. 292; 908, p. 190; 938, p. 158; 946, p. 192; \*988, p. 190; 1018, p. 168). Key well US 129. T. Lewis. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 19, T. 9 N., R. 14 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	25.09	Apr. 30	24.85	Aug. 29	25.39	Nov. 29	24.29
Feb. 28	24.92	May 29	24.79	Sept. 29	25.64	Dec. 29	24.92
Mar. 29	25.03	June 29	24.79	Oct. 29	25.19		

272 (\*817, p. 100; 840, p. 193; 845, p. 172; 886, p. 292; 908, p. 190; 938, p. 158; 946, p. 192; 988, p. 191; \*1018, p. 168). C. Aldeen. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 11, T. 9 N., R. 15 W. Water levels, in feet below land-surface datum, 1945: Oct. 18, 27.31; Dec. 12, 27.29.

273 (\*817, p. 100; 840, p. 193; 886, p. 292; 908, p. 190; 938, p. 158; 946, p. 192; 988, p. 191; 1018, p. 168). J. Wolford. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 34, T. 9 N., R. 15 W. To convert water levels from feet above assumed datum, as published in previous reports, to feet below land-surface datum, subtract from 119.22. Water levels, in feet below land-surface datum, 1945: Oct. 18, 20.58; Dec. 12, 20.33.

274 (\*817, p. 101; 840, p. 193; 845, p. 172; 886, p. 292; 908, p. 190; 938, p. 158; 946, p. 192; \*988, p. 191; 1018, p. 168). M. Garvin. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 12, T. 8 N., R. 16 W. Water levels, in feet below land-surface datum, 1945: Oct. 18, 5.74; Dec. 12, 5.21.

278 (\*817, p. 101; 840, p. 193; 845, p. 172; 886, p. 292; 908, p. 190; 938, p. 158; 946, p. 192; \*988, p. 191; 1018, p. 168). University of Nebraska. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 1, T. 8 N., R. 17 W. Water levels, in feet below land-surface datum, 1945: Oct. 18, 6.92; Dec. 13, 7.69.

279 (\*817, p. 102; 840, p. 193; 845, p. 172; 886, p. 292; 908, p. 190; 938, p. 158; 946, p. 192; 1018, p. 168). University of Nebraska. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 12, T. 8 N., R. 17 W. Water levels, in feet below land-surface datum, 1945: Oct. 18, 2.45; Dec. 13, 2.88.

#### Burt County

64 (\*946, p. 192; 988, p. 191; \*1018, p. 168). Tom Turk. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 34, T. 21 N., R. 11 E. No measurements made in 1945.

402 (\*886, p. 292; 908, p. 190; 938, p. 158; 946, p. 193; 988, p. 191; \*1018, p. 168). University of Nebraska. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 35, T. 22 N., R. 8 E. No measurements made in 1945.

#### Butler County

508 (\*946, p. 193; 988, p. 191; 1018, p. 168). University of Nebraska. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 9, T. 14 N., R. 3 E. No measurements made in 1945.

#### Cass County

16 (\*817, p. 103; 840, p. 194; 845, p. 173; 886, p. 292; 908, p. 190; 938, p. 159; 946, p. 193; \*988, p. 191; \*1018, p. 168). J. Wiedeman. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 32, T. 12 N., R. 9 E. No measurements made in 1945.

18 (\*817, p. 103; 840, p. 194; 845, p. 173; 886, p. 292; 908, p. 190; 938, p. 159; 946, p. 193; \*988, p. 191; 1018, p. 169). W. Stine. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 26, T. 10 N., R. 13 E. No measurements made in 1945.

#### Cedar County

65 (\*817, p. 103; 840, p. 194; 845, p. 173; 908, p. 191; 938, p. 159; 946, p. 193; 988, p. 191; 1018, p. 169). University of Nebraska. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 4, T. 28 N., R. 3 E. No measurements made in 1945.

66 (\*817, p. 103; 840, p. 194; 845, p. 173; 886, p. 293; 908, p. 191; 946, p. 193; 988, p. 191; 1018, p. 169). J. Leise. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 31, T. 31 N., R. 2 E. No measurements made in 1945.

369 (\*817, p. 104; 840, p. 194; 845, p. 173; 886, p. 293; 908, p. 191; 938, p. 159; 946, p. 193; 988, p. 191; 1018, p. 169). H. Kleinberg. SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 23, T. 32 N., R. 2 E. No measurements made in 1945.

#### Chase County

152 (\*817, p. 104; 840, p. 194; 845, p. 173; 886, p. 293; 908, p. 191; 946, p. 193; 988, p. 191; \*1018, p. 169). A. Banks. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 20, T. 17 N., R. 38 W. No measurements made in 1945.

153 (\*817, p. 104; 840, p. 194; 845, p. 173; 886, p. 293; 908, p. 191; 946, p. 193; \*988, p. 191; 1018, p. 169). J. Redden. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 11, T. 5 N., R. 36 W. No measurements made in 1945.

#### Cherry County

115 (\*817, p. 104; 840, p. 194; 845, p. 173; 886, p. 293; 908, p. 191; 938, p. 159; 946, p. 194; 988, p. 192; \*1018, p. 169). Nebraska Agricultural College. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 31, T. 34 N., R. 27 W. Water levels, in feet below land-surface datum, 1945: May 17, 98.26; Aug. 2, 98.20.

116 (\*840, p. 195; 845, p. 173; 886, p. 293; 908, p. 191; 938, p. 159; 946, p. 194; \*988, p. 192; 1018, p. 169). University of Nebraska. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 20, T. 31 N., R. 25 W. Water levels, in feet below land-surface datum, 1945: May 16, 2.25, highest observed stage in period of record; Aug. 2, 3.24.

146 (\*988, p. 192; 1018, p. 169). University of Nebraska. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 33, T. 34 N., R. 27 W. No measurements made in 1945.

256 (\*817, p. 105; 840, p. 195; 845, p. 173; 886, p. 293; 908, p. 191; 938, p. 159; 946, p. 194; \*988, p. 192; 1018, p. 169). University of Nebraska. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 1, T. 34 N., R. 36 W. Water level, in feet below land-surface datum, 1945: Aug. 2, 7.01.



312 (\*817, p. 105; 840, p. 195; 845, p. 173; 886, p. 293; 908, p. 191; 938, p. 159; 946, p. 194; 988, p. 192; \*1018, p. 169). R. Osborne. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 28, T. 26 N., R. 32 W. No measurements made in 1945.

399 (\*840, p. 195; 845, p. 173; 886, p. 293; 908, p. 191; 938, p. 159; \*988, p. 192; 1018, p. 169). University of Nebraska. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 8, T. 33 N., R. 27 W. Water level, in feet below land-surface datum, 1945: Aug. 2, 2.14.

431 (\*886, p. 293; 908, p. 191; 938, p. 159; 988, p. 192; \*1018, p. 169). University of Nebraska. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 14, T. 34 N., R. 38 W. Water level, in feet below land-surface datum, 1945: Aug. 2, 6.93.

#### Cheyenne County

87 (\*777, p. 92; 817, p. 105; 840, p. 195; 845, p. 173; 886, p. 293; 908, p. 191; 938, p. 159; 946, p. 194; 988, p. 192; 1018, p. 170). A. Linn. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 2, T. 15 N., R. 49 W. No measurements made in 1945.

90 (\*817, p. 106; 840, p. 195; 845, p. 173; 886, p. 293; 908, p. 191; 946, p. 194; 988, p. 192; 1018, p. 170). W. Goding. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 5, T. 14 N., R. 52 W. No measurements made in 1945.

91 (\*817, p. 106; 840, p. 195; 845, p. 173; 886, p. 293; 908, p. 191; 938, p. 159; 946, p. 194; 988, p. 192; \*1018, p. 170). F. Mather Estate. SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 35, T. 14 N., R. 50 W. No measurements made in 1945.

92 (\*817, p. 106; 840, p. 196; 845, p. 173; 886, p. 293; 908, p. 192; 938, p. 159; 946, p. 194; 988, p. 192; 1018, p. 170). G. Fay. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 22, T. 12 N., R. 51 W. No measurements made in 1945.

444a (\*938, p. 159; 946, p. 194; 988, p. 192; \*1018, p. 170). University of Nebraska. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 26, T. 14 N., R. 47 W. No measurements made in 1945.

#### Colfax County

37 (\*817, p. 106; 840, p. 196; 845, p. 173; 886, p. 294; 908, p. 192; 938, p. 160; 946, p. 194; 988, p. 193; 1018, p. 170). H. Schlemmer. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 2, T. 17 N., R. 4 E. Measurements discontinued.

37A. H. Schlemmer. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 1, T. 17 N., R. 4 E. Drilled irrigation well, north well of 2 wells interconnected to 1 pump, diameter 8 inches. Measuring point, top of concrete curb near northwest corner of concrete pit, 0.2 foot below land-surface. Well 37A replaces well 37. Measurements for well 37 in Water-Supply Papers 908, p. 192; 938, p. 160; and 946, p. 194, are superseded by the measurements given below for well 37A. Water levels, in feet below land-surface datum: Mar. 21, 1940, 4.45; Oct. 22, 1940, 6.23; Oct. 9, 1941, 7.26; Oct. 31, 1942, 5.60; Oct. 16, 1945, 4.98.

332 (\*817, p. 107; 840, p. 196; 845, p. 173; 886, p. 294; 908, p. 192; 938, p. 160; 946, p. 194; 988, p. 193; 1018, p. 170). University of Nebraska. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 7, T. 20 N., R. 4 E. No measurements made in 1945.

343a (\*938, p. 160; 946, p. 195; 988, p. 193; 1018, p. 170). University of Nebraska. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 2, T. 20 N., R. 2 E. No measurements made in 1945.

#### Cuming County

61 (\*817, p. 107; 840, p. 196; 845, p. 173; 886, p. 294; 908, p. 192; 938, p. 160; 946, p. 195; \*988, p. 193; 1018, p. 170). University of Nebraska. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 6, T. 23 N., R. 7 E. No measurements made in 1945.

69 (\*817, p. 107; 840, p. 196; 845, p. 173; 886, p. 294; 908, p. 192; 938, p. 160; 946, p. 195; \*988, p. 193; 1018, p. 170). University of Nebraska. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 23, T. 21 N., R. 6 E. No measurements made in 1945.

#### Custer County

53 (\*817, p. 107; 840, p. 196; 845, p. 173; 886, p. 294; 908, p. 192; 938, p. 160; 946, p. 195; 988, p. 193; 1018, p. 170). L. Owen. NE $\frac{1}{4}$ E $\frac{1}{4}$  sec. 9, T. 19 N., R. 18 W. Water level, in feet below land-surface datum, 1945: May 16, 15.09.

196 (\*817, p. 108; 840, p. 196; 845, p. 173; 886, p. 294; 908, p. 192; 946, p. 195; 988, p. 193; 1018, p. 170). W. Crouch. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 17, T. 19 N., R. 22 W. No measurements made in 1945.

219 (\*817, p. 108; 840, p. 197; 845, p. 173; 886, p. 294; 908, p. 192; 938, p. 160; 946, p. 195; 988, p. 193; 1018, p. 170). University of Nebraska. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 2, T. 15 N., R. 23 W. No measurements made in 1945.

220 (\*817, p. 108; 840, p. 197; 845, p. 173; 886, p. 294; 908, p. 192; 946, p. 195; 988, p. 193; 1018, p. 171). University of Nebraska. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 28, T. 17 N., R. 25 W. No measurements made in 1945.

435 (\*886, p. 295; 908, p. 192; 938, p. 160; 946, p. 195; 988, p. 193; 1018, p. 171). University of Nebraska. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 27, T. 17 N., R. 25 W. No measurements made in 1945.

436 (\*886, p. 295; 908, p. 192; 938, p. 160; 946, p. 195; 988, p. 193; 1018, p. 171). University of Nebraska. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 35, T. 16 N., R. 23 W. No measurements made in 1945.

#### Dakota County

104 (\*777, p. 92; 817, p. 109; 840, p. 197; 845, p. 174; 886, p. 245; 908, p. 192; 946, p. 195; 988, p. 193; 1018, p. 171). R. Nelson. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 28, T. 27 N., R. 8 E. No measurements made in 1945.

453 (\*886, p. 295; 908, p. 192; 938, p. 160; 946, p. 195; 988, p. 193; 1018, p. 171). John Boyle. SE $\frac{1}{4}$  sec. 21, T. 29 N., R. 5 E. No measurements made in 1945.

#### Dawes County

123 (\*817, p. 109; 840, p. 197; 845, p. 174; 886, p. 295; 908, p. 193; 938, p. 160; 946, p. 195; \*988, p. 194; 1018, p. 171). Key well US 60. T. Moody. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 3, T. 31 N., R. 52 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	18.84	Apr. 29	17.89	Aug. 2	17.97	Oct. 29	18.86
Feb. 26	18.85	May 31	18.81	3	18.04	Dec. 1	18.36
Mar. 29	18.00	June 29	17.86	Sept. 30	18.88		

315 (\*817, p. 109; 840, p. 197; 845, p. 174; 886, p. 295; 908, p. 193; 938, p. 160; 946, p. 196; 988, p. 194; 1018, p. 171). A. McIntyre. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 21, T. 33 N., R. 48 W. No measurements made in 1945.

396 (\*817, p. 109; 840, p. 197; 845, p. 174; 886, p. 295; 908, p. 193; 938, p. 160; 946, p. 196; 988, p. 194; \*1018, p. 171). W. Howard. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 1, T. 32 N., R. 51 W. No measurements made in 1945.

Dawson County

99 (\*817, p. 110; 840, p. 197; 845, p. 174; 886, p. 295; 908, p. 193; 938, p. 160; 946, p. 196; \*988, p. 194; 1018, p. 171). L. Tell Estate. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 31, T. 9 N., R. 25 W. No measurements made in 1945.

280 (\*817, p. 110; 840, p. 197; 845, p. 174; 886, p. 295; 908, p. 193; 938, p. 160; 946, p. 196; \*988, p. 194; 1018, p. 171). J. Brick. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 13, T. 9 N., R. 20 W. Water level, in feet below land-surface datum, 1945: Dec. 13, 10.44.

281 (\*988, p. 194; 1018, p. 171). University of Nebraska. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 31, T. 11 N., R. 21 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Jan. 7	26.60	Apr. 29	27.32	Oct. 14	25.98
Mar. 25	27.05	July 29	25.31	Dec. 13	26.58

282 (\*988, p. 195; 1018, p. 172). University of Nebraska. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 6, T. 10 N., R. 21 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Jan. 7	7.95	Apr. 29	8.30	Oct. 14	7.94
Mar. 25	8.18	July 29	8.23		

283 (\*817, p. 110; 840, p. 197; 845, p. 174; 886, p. 295; 908, p. 193; 938, p. 160; 946, p. 196; \*988, p. 195; 1018, p. 172). University of Nebraska. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 7, T. 10 N., R. 21 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Jan. 7	8.60	Apr. 29	8.93	Oct. 14	8.22
Mar. 25	8.72	July 29	7.67	Dec. 13	8.30

234 (\*817, p. 111; 840, p. 197; 845, p. 174; 886, p. 295; 908, p. 193; 938, p. 160; 946, p. 196; \*988, p. 195; 1018, p. 172). University of Nebraska. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 7, T. 10 N., R. 21 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Jan. 7	9.21	Apr. 29	9.44	Oct. 14	8.94
Mar. 25	9.25	July 29	7.75	Dec. 13	8.46

285 (\*817, p. 111; 840, p. 198; 908, p. 193; 938, p. 160; 946, p. 196; \*988, p. 195; 1018, p. 172). University of Nebraska. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 18, T. 10 N., R. 21 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Jan. 7	8.63	Apr. 29	9.02	Oct. 14	8.66
Mar. 25	8.74	July 29	7.62	Dec. 13	8.79

286 (\*817, p. 112; 840, p. 198; 845, p. 174; 886, p. 245; 908, p. 193; 938, p. 161; 946, p. 196; \*988, p. 196; 1018, p. 172). University of Nebraska. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 18, T. 10 N., R. 21 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Jan. 7	13.47	Apr. 29	13.95	Oct. 14	12.65
Mar. 25	13.63	July 29	12.29	Dec. 13	12.68

287 (\*817, p. 112; 840, p. 198; 845, p. 174; 886, p. 295; 908, p. 193; 938, p. 161; 946, p. 196; \*988, p. 196; 1018, p. 172). University of Nebraska. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 19, T. 10 N., R. 21 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Jan. 7	15.73	Apr. 29	16.24	Oct. 14	15.92
Mar. 25	15.81	July 29	14.94	Dec. 13	15.97

288 (\*817, p. 112; 840, p. 198; 845, p. 174; 886, p. 296; 908, p. 193; 938, p. 161; 946, p. 196; \*988, p. 196; 1018, p. 172). University of Nebraska. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 19, T. 10 N., R. 21 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Jan. 7	15.53	Apr. 29	15.97	Oct. 14	16.85
Mar. 25	15.70	July 29	16.29	Dec. 13	16.70

289 (\*817, p. 113; 840, p. 198; 845, p. 174; 886, p. 296; 908, p. 193; 938, p. 161; 946, p. 196; \*988, p. 196; 1018, p. 172). University of Nebraska. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 30, T. 10 N., R. 21 W.

Water level, in feet below land-surface datum, 1945

Jan. 7	8.04	Apr. 29	8.47	Oct. 14	8.45
Mar. 25	8.16	July 29	8.50	Dec. 13	8.51

290 (\*817, p. 113; 840, p. 198; 845, p. 174; 886, p. 296; 908, p. 193; 938, p. 161; 946, p. 196; \*988, p. 196; 1018, p. 173). University of Nebraska. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 30, T. 10 N., R. 21 W.

Water level, in feet below land-surface datum, 1945

Jan. 7	8.74	Apr. 29	9.01	Oct. 14	8.96
Mar. 25	8.82	July 29	6.77	Dec. 13	9.23

291 (\*817, p. 114; 840, p. 198; 845, p. 174; 886, p. 296; 908, p. 193; 938, p. 161; 946, p. 196; \*988, p. 196; 1018, p. 173). University of Nebraska. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 31, T. 10 N., R. 21 W.

Water level, in feet below land-surface datum, 1945

Jan. 7	5.93	Apr. 29	6.02	Oct. 14	6.08
Mar. 25	5.95	July 29	4.54	Dec. 13	5.88

292 (\*817, p. 114; 840, p. 198; 845, p. 174; 886, p. 296; 908, p. 193; 938, p. 161; 946, p. 196; \*988, p. 197; 1018, p. 173). University of Nebraska. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 31, T. 10 N., R. 21 W.

Water level, in feet below land-surface datum, 1945

Jan. 7	7.18	Apr. 29	7.18	Oct. 14	7.47
Mar. 25	7.19	July 29	6.21	Dec. 13	8.04

293 (\*817, p. 114; 840, p. 198; 845, 174; 908, p. 193; 938, p. 161; 946, p. 196; \*988, p. 197; 1018, p. 173). University of Nebraska. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 6, T. 9 N., R. 21 W.

Water level, in feet below land-surface datum, 1945

Jan. 7	5.37	Apr. 29	5.28	Oct. 14	5.65
Mar. 25	5.30	July 29	5.75	Dec. 13	5.73

294 (\*817, p. 115; 840, p. 198; 845, p. 174; 886, p. 296; 908, p. 193; 938, p. 161; 946, p. 196; \*988, p. 197; 1018, p. 173). University of Nebraska. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 6, T. 9 N., R. 21 W.

Water level, in feet below land-surface datum, 1945

Jan. 7	4.18	Apr. 29	4.21	Oct. 14	4.68
Mar. 25	4.12	July 29	4.21	Dec. 13	4.44

295 (\*817, p. 115; 840, p. 198; 845, p. 174; 886, p. 296; 908, p. 193; 938, p. 161; 946, p. 196; \*988, p. 197; 1018, p. 173). University of Nebraska. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 7, T. 9 N., R. 21 W.

Water level, in feet below land-surface datum, 1945

Jan. 7	7.12	Apr. 29	7.25	Oct. 14	7.67
Mar. 25	7.14	July 29	7.19	Dec. 13	7.22

296 (\*817, p. 116; 840, p. 198; 845, p. 174; 886, p. 296; 908, p. 193; 938, p. 161; 946, p. 197; \*988, p. 197; 1018, p. 173). University of Nebraska. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 7, T. 9 N., R. 21 W.

296--Continued.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Jan. 7	6.75	Apr. 29	6.61	Oct. 14	6.92
Mar. 25	6.67	July 29	6.79	Dec. 13	6.77

297 (\*817, p. 116; 840, p. 198; 845, p. 174; 886, p. 296; 908, p. 193; 938, p. 161; 946, p. 195; \*988, p. 197; 1018, p. 173). University of Nebraska. NE $\frac{1}{2}$ NE $\frac{1}{4}$  sec. 18, T. 9 N., R. 21 W.

## Water level, in feet below land-surface datum, 1945

Jan. 7	5.43	Apr. 29	5.19	Oct. 14	5.30
Mar. 25	5.20	July 29	4.84	Dec. 13	5.38

298 (\*817, p. 116; 840, p. 199; 845, p. 174; 886, p. 296; 908, p. 193; 938, p. 161; 946, p. 197; \*988, p. 198; 1018, p. 174). University of Nebraska. NE $\frac{1}{2}$ SE $\frac{1}{4}$  sec. 18, T. 9 N., R. 21 W.

## Water level, in feet below land-surface datum, 1945

Jan. 7	5.41	Apr. 29	5.14	Oct. 14	5.40
Mar. 25	5.05	July 29	4.99	Dec. 13	5.34

299 (\*817, p. 117; 840, p. 199; 845, p. 174; 886, p. 296; 908, p. 194; 946, p. 197; \*988, p. 198; 1018, p. 174). University of Nebraska. NE $\frac{1}{2}$ NE $\frac{1}{4}$  sec. 19, T. 9 N., R. 21 W.

## Water level, in feet below land-surface datum, 1945

Jan. 7	3.80	Apr. 29	3.79	Oct. 14	3.93
Mar. 25	3.82	July 29	4.22	Dec. 13	4.02

300 (\*817, p. 117; 840, p. 199; 845, p. 174; 886, p. 296; 908, p. 194; 938, p. 161; 946, p. 197; \*988, p. 198; 1018, p. 174). University of Nebraska. NE $\frac{1}{2}$ NE $\frac{1}{4}$  sec. 19, T. 9 N., R. 21 W.

## Water level, in feet below land-surface datum, 1945

Jan. 7	0.57	Apr. 29	0.70	Oct. 14	1.02
Mar. 25	.72	July 29	1.27	Dec. 13	.92

301 (\*817, p. 118; 840, p. 199; 845, p. 174; 886, p. 296; 908, p. 194; 938, p. 161; 946, p. 197; \*988, p. 198; 1018, p. 174). University of Nebraska. NE $\frac{1}{2}$ SE $\frac{1}{4}$  sec. 19, T. 9 N., R. 21 W.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	3.09	Feb. 17	3.40	Apr. 29	2.92	Oct. 14	3.68
9	3.49	Mar. 25	2.97	July 24	3.95	Dec. 13	3.63

302 (\*817, p. 118; 840, p. 199; 845, p. 174; 886, p. 296; 908, p. 194; 938, p. 161; 946, p. 197; \*988, p. 198; 1018, p. 174). University of Nebraska. SE $\frac{1}{2}$ SE $\frac{1}{4}$  sec. 19, T. 9 N., R. 21 W.

## Water level, in feet below land-surface datum, 1945

Jan. 7	5.04	Feb. 17	5.13	Apr. 29	4.62	Oct. 14	5.27
9	5.16	Mar. 25	4.67	July 29	5.80	Dec. 13	5.34

303 (\*817, p. 118; 840, p. 199; 845, p. 174; 886, p. 296; 908, p. 194; 938, p. 161; 946, p. 197; \*988, p. 198; 1018, p. 174). University of Nebraska. NW $\frac{1}{2}$ NW $\frac{1}{4}$  sec. 29, T. 9 N., R. 21 W.

## Water level, in feet below land-surface datum, 1945

Jan. 7	2.76	Feb. 17	2.74	Apr. 29	2.80	Oct. 14	3.09
9	2.75	Mar. 25	2.93	July 29	3.56	Dec. 13	2.88

304 (\*817, p. 119; 840, p. 199; 845, p. 174; 886, p. 296; 908, p. 194; 938, p. 161; 946, p. 197; \*988, p. 199; 1018, p. 175). University of Nebraska. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 30, T. 9 N., R. 21 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	6.26	Feb. 17	6.28	Apr. 29	6.35	Oct. 14	6.45
9	6.28	Mar. 25	5.34	July 29	6.49	Dec. 13	6.26

305 (\*817, p. 119; 840, p. 199; 845, p. 174; 886, p. 297; 908, p. 194; 938, p. 161; 946, p. 197; \*988, p. 199; 1018, p. 175). University of Nebraska. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 31, T. 9 N., R. 21 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	14.38	Feb. 17	14.34	Apr. 29	14.32	Oct. 14	14.53
9	14.38	Mar. 25	14.29	July 29	14.03	Dec. 13	14.12

306 (\*817, p. 120; 840, p. 199; 845, p. 174; 886, p. 297; 908, p. 194; 938, p. 161; 946, p. 198; \*988, p. 199; 1018, p. 175). University of Nebraska. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 31, T. 9 N., R. 21 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	11.46	Feb. 17	11.29	Apr. 29	11.11	Oct. 14	11.38
9	11.44	Mar. 25	11.13	July 29	10.88	Dec. 13	11.25

a Highest observed stage in period of record.

308 (\*817, p. 120; 840, p. 199; 845, p. 174; 886, p. 297; 908, p. 194; 938, p. 162; 946, p. 198; \*988, p. 199; 1018, p. 175). E. Fleming. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 9, T. 10 N., R. 23 W. Water levels, in feet below land-surface datum, 1945: May 15, 15.05; Oct. 19, 13.62; Dec. 15, 14.07.

309 (\*817, p. 120; 840, p. 199; 845, p. 174; 886, p. 297; 908, p. 194; 938, p. 162; 946, p. 198; 988, p. 199; 1018, p. 175). J. Owings. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 20, T. 11 N., R. 24 W. To convert water levels from feet above assumed datum, as published in previous reports, to feet below land-surface datum, subtract from 112.61. Water levels, in feet below land-surface datum: Nov. 13, 1944, 11.93; Oct. 19, 1945, 11.72; Dec. 15, 12.26.

310 (\*817, p. 121; 840, p. 199; 845, p. 174; 886, p. 297; 908, p. 194; 946, p. 198; 988, p. 199; 1018, p. 175). J. Block. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 34, T. 12 N., R. 25 W. To convert water levels from feet above assumed datum, as published in previous reports, to feet below land-surface datum, subtract from 128.89. Water levels, in feet below land-surface datum: Nov. 13, 1944, 28.03; Oct. 19, 1945, 28.43; Dec. 14, 28.49.

311 (\*817, p. 121; 840, p. 199; 845, p. 174; 886, p. 297; 908, p. 194; 938, p. 162; 946, p. 198; 988, p. 199; 1018, p. 175). E. Clark. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 21, T. 11 N., R. 25 W. To convert water levels from feet above assumed datum, as published in previous reports, to feet below land-surface datum, subtract from 111.79. Water levels, in feet below land-surface datum: Nov. 13, 1944, 9.82; Oct. 19, 1945, 8.43; Dec. 14, 1945, 9.30.

314 (\*817, p. 121; 840, p. 200; 845, p. 174; 886, p. 297; 908, p. 194; \*988, p. 199; 1018, p. 175). C. Myers. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 12, T. 9 N., R. 21 W. Water levels, in feet below land-surface datum, 1945: Oct. 19, 11.33; Dec. 13, 11.24.

317 (\*817, p. 121; 840, p. 200; 845, p. 174; 886, p. 297; 908, p. 194; 938, p. 162; 946, p. 198; \*988, p. 199; 1018, p. 175). University of Nebraska. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 24, T. 9 N., R. 21 W. Water levels, in feet below land-surface datum, 1945: May 15, 4.10; Oct. 19, 3.93; Dec. 13, 3.94.

318 (\*817, p. 122; 840, p. 200; 845, p. 174; 886, p. 297; 908, p. 195; 938, p. 162; 946, p. 198; \*988, p. 200; 1018, p. 175). University of Nebraska. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 17, T. 9 N., R. 22 W. Water levels, in feet below land-surface datum, 1945: Jan. 9, 7.48; Feb. 17, 6.91; Oct. 19, 5.20; Dec. 14, 5.61.

319 (\*817, p. 122; 840, p. 200; 845, p. 174; 886, p. 297; 908, p. 195; 938, p. 162; 946, p. 198; \*988, p. 200; 1018, p. 176). University of Nebraska. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 29, T. 10 N., R. 22 W. Water levels, in feet below land-surface datum, 1945: May 15, 4.09; Oct. 19, 4.63; Dec. 14, 4.58.

U44 (\*988, p. 200; 1018, p. 176). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 19, T. 11 N., R. 25 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	7.88	Apr. 6	7.93	July 5	7.92	Sept. 14	7.88
Feb. 14	7.75	May 2	7.94	Aug. 6	7.89	Nov. 15	7.85
Mar. 6	7.80	June 1	7.96				

U45 (\*988, p. 200; 1018, p. 176). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 20, T. 11 N., R. 25 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	9.78	Mar. 6	8.70	May 2	8.83	Nov. 15	9.62
Feb. 14	9.59	Apr. 6	8.81	June 1	8.88		

U48 (\*988, p. 201; 1018, p. 176). Central Nebraska Public Power and Irrigation District. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 17, T. 10 N., R. 24 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Jan. 6	5.97	Mar. 7	6.90	Nov. 1	a 4.76
Feb. 17	6.95	Apr. 18	7.01		

a Highest observed stage in period of record.

U49 (\*988, p. 201; 1018, p. 176). Central Nebraska Public Power and Irrigation District. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 8, T. 11 N., R. 25 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	2.61	Apr. 4	2.33	July 13	1.94	Sept. 7	2.22
Feb. 8	1.95	May 4	2.80	Aug. 8	2.35	Oct. 3	2.67
Mar. 1	1.91	June 1	1.51				

U51 (\*988, p. 202; 1018, p. 176). Central Nebraska Public Power and Irrigation District. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 30, T. 9 N., R. 25 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	6.94	Mar. 7	6.65	May 4	6.54	Nov. 1	7.14
Feb. 17	6.71	Apr. 18	6.58	June 4	6.48		

U52 (\*988, p. 202; 1018, p. 176). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 6, T. 9 N., R. 22 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	5.95	Apr. 18	6.52	July 3	6.34	Sept. 4	6.88
Feb. 17	6.77	May 4	6.39	Aug. 8	6.80	Nov. 1	6.98
Mar. 7	6.70	June 4	6.35				

U53 (\*988, p. 203; 1018, p. 176). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 1, T. 9 N., R. 22 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

U53--Continued.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	2.56	Apr. 18	1.11	July 3	1.15	Sept. 4	2.40
Feb. 17	2.06	May 4 a	1.08	Aug. 8	1.31	Nov. 1	2.62
Mar. 7	2.03	June 4	1.11				

a Highest observed stage in period of record.

U54 (\*988, p. 203; 1018, p. 177). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 12, T. 9 N., R. 23 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Jan. 9	4.89	Apr. 18	4.13	July 3	3.90	Sept. 4	3.50
Feb. 17	4.40	May 4	4.05	Aug. 8	3.70	Nov. 1 a	2.84
Mar. 7	4.37	June 4	4.00				

a Highest observed stage in period of record.

U55 (\*988, p. 203; 1018, p. 177). Central Nebraska Public Power and Irrigation District. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 7, T. 9 N., R. 22 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Jan. 9	4.43	Apr. 18	3.99	July 3	4.00	Sept. 4	4.18
Feb. 17	4.26	May 4	3.90	Aug. 8	4.15	Nov. 1	4.29
Mar. 7	4.20	June 4	3.88				

U56 (\*988, p. 204; 1018, p. 177). Central Nebraska Public Power and Irrigation District. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 16, T. 9 N., R. 22 W. Measuring point reported destroyed; measurements discontinued since May 12, 1944.

U57 (\*988, p. 204; 1018, p. 177). Central Nebraska Public Power and Irrigation District. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 23, T. 9 N., R. 22 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Jan. 9	4.22	Apr. 18	3.65	July 3	3.55	Sept. 4	3.47
Feb. 17	4.07	May 4	3.62	Aug. 8	3.51	Nov. 21 a	3.43
Mar. 7	3.99	June 4	3.59				

a Highest observed stage in period of record.

U58 (\*988, p. 205; 1018, p. 177). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 26, T. 9 N., R. 22 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Jan. 9	7.53	Apr. 18	6.99	June 4	6.97	Sept. 4 a	6.95
Feb. 17	7.27	May 4	6.98	Aug. 8	6.96	Nov. 21 a	6.95
Mar. 7	7.17						

a Highest observed stage in period of record.

U59 (\*988, p. 205; 1018, p. 177). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 25, T. 9 N., R. 22 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Jan. 9	7.05	Apr. 18	6.78	July 3	6.29	Sept. 4	5.99
Feb. 17	7.07	May 4	6.28	Aug. 8	6.10	Nov. 21 a	5.86
Mar. 7	6.99	June 4	6.30				

a Highest observed stage in period of record.



U60 (\*988, p. 206; 1018, p. 177). Central Nebraska Public Power and Irrigation District.  $NE\frac{1}{4}NE\frac{1}{4}$  sec. 31, T. 9 N., R. 21 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	10.60	Apr. 18	10.51	July 3	10.45	Sept. 4	10.43
Feb. 17	10.58	May 4	10.50	Aug. 8	10.43	Nov. 21	10.41
Mar. 7	10.42	June 4	10.45				

U61 (\*988, p. 206; 1018, p. 177). Central Nebraska Public Power and Irrigation District.  $SE\frac{1}{4}SE\frac{1}{4}$  sec. 31, T. 9 N., R. 21 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	9.07	Apr. 18	8.73	July 3	8.51	Nov. 21	8.29
Feb. 17	8.92	May 4	8.69	Aug. 8	8.52	Dec. 13	8.19
Mar. 7	8.80	June 4	8.58	Sept. 4	8.35		

a Highest observed stage in period of record.

U62 (\*988, p. 206; 1018, p. 178). Central Nebraska Public Power and Irrigation District.  $SE\frac{1}{4}SE\frac{1}{4}$  sec. 32, T. 9 N., R. 21 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	12.14	Apr. 18	12.23	July 3	12.02	Sept. 4	12.88
Feb. 19	12.26	May 2	12.20	Aug. 8	12.74	Nov. 24	11.82
Mar. 7	12.26	June 4	12.16				

U63 (\*988, p. 207; 1018, p. 178). Central Nebraska Public Power and Irrigation District.  $NE\frac{1}{4}NW\frac{1}{4}$  sec. 4, T. 8 N., R. 21 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	9.50	Apr. 18	9.20	June 4	9.19	Sept. 4	9.14
Feb. 17	(a)	May 2	9.20	Aug. 8	9.15	Nov. 24	9.15
Mar. 7	(a)						

a Dry.

U64 (\*988, p. 207; 1018, p. 178). Central Nebraska Public Power and Irrigation District.  $NE\frac{1}{4}NE\frac{1}{4}$  sec. 32, T. 9 N., R. 21 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	4.19	Apr. 18	5.04	July 3	4.26	Sept. 4	4.23
Feb. 17	4.16	May 2	4.31	Aug. 8	4.22	Nov. 24	4.22
Mar. 7	4.13	June 4	4.28				

U73 (\*988, p. 208; 1018, p. 178). Central Nebraska Public Power and Irrigation District.  $SW\frac{1}{4}SW\frac{1}{4}$  sec. 31, T. 9 N., R. 21 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	31.34	Apr. 18	30.46	July 3	29.68	Sept. 4	29.37
Feb. 17	30.96	May 4	30.20	Aug. 8	29.49	Nov. 21	28.83
Mar. 7	30.74	June 4	30.09				

a Highest observed stage in period of record.

#### Deuel County

94 (\*817, p. 122; 840, p. 200; 886, p. 297; 908, p. 195; 938, p. 162; 946, p. 198; 988, p. 209; 1018, p. 178). W. Kimball.  $NW\frac{1}{4}NW\frac{1}{4}$  sec. 1, T. 12 N., R. 42 W. No measurements made in 1945.

130A (\*1018, p. 178). Mrs. Jacobson. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 28, T. 13 N., R. 45 W. No measurements made in 1945.

#### Dixon County

107 (\*817, p. 123; 840, p. 200; 845, p. 174; 886, p. 297; 908, p. 195; 938, p. 162; 946, p. 198; 988, p. 209; 1018, p. 178). F. Beyeler. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 7, T. 31 N., R. 4 E. Well destroyed; measurements discontinued.

333 (\*817, p. 123; 840, p. 200; 845, p. 174; 886, p. 297; 908, p. 195; 938, p. 162; 946, p. 198; 988, p. 209; 1018, p. 178). F. Mille. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 23, T. 30 N., R. 6 E. No measurements made in 1945.

#### Dodge County

31 (\*817, p. 124; 840, p. 200; 845, p. 174; 886, p. 297; 908, p. 195; 938, p. 162; 946, p. 199; \*988, p. 209; \*1018, p. 179). J. Wieser. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 24, T. 17 N., R. 9 W. No measurements made in 1945.

401 (\*840, p. 201; 845, p. 174; 886, p. 298; 908, p. 195; 938, p. 162; 946, p. 199; \*988, p. 209; \*1018, p. 179). University of Nebraska. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 18, T. 18 N., R. 9 E. No measurements made in 1945.

420 (\*886, p. 298; 908, p. 195; 938, p. 162; 946, p. 199; 988, p. 209; \*1018, p. 179). University of Nebraska. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 6, T. 17 N., R. 6 E. Water levels, in feet below land-surface datum, 1945: June 22, 0.68, highest observed stage in period of record; Oct. 16, 1.82.

455 (\*988, p. 209; 1018, p. 179). City of Fremont. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 28, T. 17 N., R. 8 E. Water levels, in feet below land-surface datum, 1945: June 22, 3.06; Oct. 16, 4.42.

456 (\*988, p. 209; 1018, p. 179). City of Fremont. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 28, T. 17 N., R. 8 E. Water levels, in feet below land-surface datum, 1945: June 22, 1.21; Oct. 16, 3.91.

457 (\*988, p. 209; 1018, p. 179). City of Fremont. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 22, T. 17 N., R. 8 E. Water levels, in feet below land-surface datum, 1945: June 22, 2.07, highest observed stage in period of record; Oct. 16, 3.92.

459 (\*988, p. 210; 1018, p. 179). City of Fremont. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 16, T. 17 N., R. 8 E. Water levels, in feet below land-surface datum, 1945: June 22, 6.11, highest observed stage in period of record; Oct. 16, 7.95.

460 (\*988, p. 210; 1018, p. 179). City of Fremont. NE. corner sec. 16, T. 17 N., R. 8 E. Water levels, in feet below land-surface datum, 1945: June 22, 6.44, highest observed stage in period of record; Oct. 16, 9.03.

461 (\*988, p. 210; 1018, p. 179). City of Fremont. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 9, T. 17 N., R. 8 E. Water levels, in feet below land-surface datum, 1945: June 22, 4.15, highest observed stage in period of record; Oct. 16, 7.84.

462 (\*988, p. 210; 1018, p. 179). City of Fremont. SE. corner sec. 4, T. 17 N., R. 8 E. Water levels, in feet below land-surface datum, 1945: June 22, 3.71; highest observed stage in period of record; Oct. 16, 8.06.

463 (\*1018, p. 179). City of Fremont. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 4, T. 17 N., R. 8 E. Water levels, in feet above land-surface datum, 1945: June 22, 1.74, highest observed stage in period of record; Oct. 16, 5.46.

464 (\*988, p. 210; 1018, p. 179). City of Fremont. NE. corner sec. 4, T. 17 N., R. 8 E. Water levels, in feet below land-surface datum, 1945: June 22, 3.35, highest observed stage in period of record; Oct. 16, 4.72.

467 (\*988, p. 210; 1018, p. 179). City of Fremont. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 28, T. 18 N., R. 8 E. Water levels, in feet below land-surface datum, 1945: June 22, 26.21; Oct. 16, 26.05.

468 (\*988, p. 210; 1018, p. 179). City of Fremont. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 28, T. 18 N., R. 8 E. Water levels, in feet below land-surface datum, 1945: June 22, 63.80; Oct. 16, 65.88.

#### Douglas County

24 (\*817, p. 124; 840, p. 201; 845, p. 175; 886, p. 298; 908, p. 195; 938, p. 162; 946, p. 199; 988, p. 211; \*1018, p. 180). Robinson Seed Co. SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 4, T. 15 N., R. 10 E. No measurements made in 1945.

#### Dundy County

177 (\*817, p. 124; 840, p. 201; 845, p. 175; 886, p. 298; 908, p. 196; 938, p. 162; 946, p. 199; 988, p. 211; 1018, p. 180). G. Russell. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 21, T. 3 N., R. 37 W. Measurements discontinued after Oct. 28, 1941.

361 (\*817, p. 125; 840, p. 201; 845, p. 175; 886, p. 298; 908, p. 196; 946, p. 199; \*988, p. 211; 1018, p. 180). O. Scrivner. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 34, T. 1 N., R. 41 W. No measurements made in 1945.

380 (\*817, p. 125; 840, p. 201; 845, p. 175; 886, p. 298; 908, p. 196; 938, p. 162; 946, p. 199; \*988, p. 211; 1018, p. 180). L. Krutsinger. SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 21, T. 1 N., R. 39 W. No measurements made in 1945.

445 (\*886, p. 298; 908, p. 196; 938, p. 163; 946, p. 199; \*988, p. 211; 1018, p. 180). University of Nebraska. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 21, T. 1 N., R. 38 W. No measurements made in 1945.

#### Fillmore County

174 (\*817, p. 125; 840, p. 202; 845, p. 175; 886, p. 298; 908, p. 196; 938, p. 163; 946, p. 199; 988, p. 211; 1018, p. 180). G. Taylor. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 29, T. 7 N., R. 2 W. Well destroyed; measurements discontinued.

#### Franklin County

156 (\*817, p. 126; 840, p. 202; 845, p. 175; 886, p. 299; 908, p. 196; 938, p. 163; 946, p. 199; 988, p. 211; \*1018, p. 180). J. Wessels. SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 36, T. 2 N., R. 15 W. No measurements made in 1945.

221 (\*817, p. 126; 840, p. 202; 845, p. 175; 886, p. 299; 908, p. 196; 938, p. 163; 946, p. 199; 988, p. 211; 1018, p. 180). University of Nebraska. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 36, T. 3 N., R. 14 W. No measurements made in 1945.

224 (\*817, p. 126; 840, p. 202; 845, p. 176; 886, p. 299; 908, p. 196; 946, p. 199; 988, p. 211; 1018, p. 180). Gilgen. Bros. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 10, T. 4 N., R. 14 W. No measurements made in 1945.

#### Frontier County

136 (\*817, p. 127; 840, p. 202; 845, p. 175; 886, p. 299; 908, p. 196; 938, p. 163; 946, p. 200; 988, p. 211; 1018, p. 180). O. Worley. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 34, T. 7 N., R. 27 W. No measurements made in 1945.

#### Furnas County

147 (\*817, p. 127; 840, p. 202; 845, p. 175; 886, p. 299; 908, p. 196; 938, p. 163; \*988, p. 211; 1018, p. 181). H. Lambert. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 34, T. 3 N., R. 23 W. No measurements made in 1945.

149 (\*817, p. 127; 840, p. 203; 845, p. 175; 886, p. 300; 908, p. 196; 946, p. 200; 988, p. 212; 1018, p. 181). S. Shoemaker. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 6, T. 1 N., R. 25 W. No measurements made in 1945.

180 (\*817, p. 128; 840, p. 203; 845, p. 175; 886, p. 300; 908, p. 196; 938, p. 163; 946, p. 200; 988, p. 212; 1018, p. 181). A. Askey. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 1, T. 3 N., R. 21 W. No measurements made in 1945.

387 (\*817, p. 128; 840, p. 203; 845, p. 175; 886, p. 300; 908, p. 197; 946, p. 200; 988, p. 212; 1018, p. 181). J. Loar. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 28, T. 2 N., R. 25 W. No measurements made in 1945.

388 (\*817, p. 128; 840, p. 203; 845, p. 175; 886, p. 300; 908, p. 197; 938, p. 163; 946, p. 200; 988, p. 212; 1018, p. 181). E. Hunt. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 27, T. 2 N., R. 25 W. No measurements made in 1945.

395 (\*840, p. 203; 845, p. 175; 886, p. 300; 908, p. 197; 938, p. 163; 946, p. 200; 988, p. 212; 1018, p. 181). O. V. Moore. SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 23, T. 4 N., R. 23 W. No measurements made in 1945.

#### Gage County

230 (\*817, p. 128; 840, p. 203; 845, p. 175; 886, p. 300; 908, p. 197; 938, p. 163; 946, p. 200; 988, p. 212; 1018, p. 181). J. Witzenburg. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 10, T. 2 N., R. 6 E. No measurements made in 1945.

231 (\*817, p. 128; 840, p. 203; 845, p. 175; 886, p. 300; 908, p. 197; 938, p. 163; 946, p. 200; 988, p. 212; 1018, p. 181). E. Miller. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 31, T. 5 N., R. 5 E. No measurements made in 1945.

#### Garden County

3 (\*777, p. 93; 817, p. 129; 840, p. 203; 845, p. 175; 886, p. 300; 946, p. 200; 988, p. 212; 1018, p. 181). Crescent Lake Migratory Bird Refuge. North side of Crescent Lake. Measurements supplied through courtesy of Fish and Wildlife Service, U. S. Dept. of Interior. Water levels, in feet below land-surface datum, 1945: Mar. 27, 5.91; July 4, 6.11; Sept. 13, 5.81; Dec. 11, 5.51.

4 (\*886, p. 300; 908, p. 197; 938, p. 163; 946, p. 200; 988, p. 212; 1018, p. 182). Key well US 59. Crescent Lake Migratory Bird Refuge. North side of Island Lake. Measurements supplied through courtesy of Fish and Wildlife Service, U. S. Dept. of Interior.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 24	3.31	Apr. 30	2.51	July 23	3.61	Oct. 8	3.41
Feb. 6	3.11	May 7	2.51	30	3.71	22	3.51
13	2.92	14	2.71	Aug. 6	3.81	29	3.51
19	2.81	21	2.81	13	3.81	Nov. 5	3.51
26	2.71	29	3.01	20	3.71	13	3.41
Mar. 5	2.61	June 11	2.91	27	3.71	19	3.61
13	2.51	18	3.01	Sept. 4	3.71	27	3.61
20	2.41	25	3.11	10	4.01	Dec. 4	3.01
27	2.61	July 4	3.31	17	3.81	10	3.01
Apr. 10	2.61	9	3.51	24	3.81	17	3.01
13	2.51	19	3.61	Oct. 1	3.41	23	3.01
22	2.51						

5 (\*908, p. 197; 938, p. 164; 946, p. 201; 988, p. 213; 1018, p. 182). Crescent Lake Migratory Bird Refuge. Northwest of Smith Lake. Measurements supplied through courtesy of Fish and Wildlife Service, U. S. Dept. of Interior. Water levels, in feet below land-surface datum, 1945: Mar. 27, 2.72; July 3, 2.52; Sept. 9, 4.62; Dec. 10, 3.02.

12 (\*908, p. 199; 938, p. 164; 946, p. 201; \*988, p. 213; 1018, p. 182). Crescent Lake Migratory Bird Refuge. Northwest corner of refuge. Measurements supplied through courtesy of Fish and Wildlife Service, U. S. Dept. of Interior.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 6	3.95	Apr. 30	3.35	July 23	3.85	Oct. 8	3.45
13	3.85	May 7	3.35	30	3.75	22	3.55
19	3.75	14	3.45	Aug. 6	3.75	29	3.55
26	3.65	21	3.55	13	3.85	Nov. 5	3.65
Mar. 5	3.65	29	3.65	20	3.75	13	3.55
12	3.65	June 11	3.75	27	3.65	19	3.55
20	3.55	18	3.75	Sept. 4	3.65	27	3.75
27	3.45	25	3.65	10	3.65	Dec. 4	3.45
Apr. 10	3.45	July 3	3.55	17	3.75	10	3.55
16	3.35	9	3.65	24	3.75	17	3.65
23	3.35	18	3.75	Oct. 1	3.45	23	3.85

17 (\*886, p. 301; 908, p. 200; 938, p. 164; 946, p. 201; \*988, p. 213; 1018, p. 182). 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 Interior. Water levels, in feet below land-surface datum, 1945: Mar. 27, 3.92; July 3, 3.82; Sept. 7, 4.32.

19 (\*886, p. 302; 908, p. 200; 938, p. 164; 946, p. 201; \*988, p. 213; 1018, p. 182). Crescent Lake Migratory Bird Refuge. 1 mile southwest of Swan Lake. Measurements supplied through courtesy of Fish and Wildlife Service, U. S. Dept. of Interior. Water levels, in feet below land-surface datum, 1945: Mar. 27, 4.26; July 3, 4.66; Sept. 7, 5.36; Dec. 11, 4.86.

21 (\*886, p. 303; 908, p. 200; 938, p. 164; 946, p. 201; \*988, p. 213; 1018, p. 182). Crescent Lake Migratory Bird Refuge. West of Blue Lake. Measurements supplied through courtesy of Fish and Wildlife Service, U. S. Dept. of Interior. Water levels, in feet below land-surface datum, 1945: Mar. 27, 2.82; July 3, 3.12; Sept. 7, 3.62; Dec. 11, 3.12.

25 (\*886, p. 304; 908, p. 200; 938, p. 165; 946, p. 201; \*988, p. 213; 1018, p. 182). 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 Interior. Water levels, in feet below land-surface datum, 1945: Mar. 27, 3.86; July 3, 3.56; Sept. 7, 3.56; Dec. 1, 3.11.

27 (\*908, p. 200; 938, p. 165; 946, p. 201; \*988, p. 213; 1018, p. 182). Crescent Lake Migratory Bird Refuge. West of Island Lake. Measurements supplied through courtesy of Fish and Wildlife Service, U. S. Dept. of Interior. Water levels, in feet below land-surface datum, 1945: Mar. 28, 6.50; July 4, 6.70; Sept. 13, 8.00; Dec. 10, 7.30.

218 (\*817, p. 129; 840, p. 204; 845, p. 176; 886, p. 305; 908, p. 202; 938, p. 165; 946, p. 202; 988, p. 213; \*1018, p. 182). University of Nebraska. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 34, T. 17 N., R. 46 W. No measurements made in 1945.

326 (\*817, p. 129; 840, p. 204; 845, p. 176; 886, p. 305; 908, p. 202; 938, p. 165; 946, p. 203; 988, p. 214; \*1018, p. 182). G. Morris. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 22, T. 17 N., R. 44 W. Water level, in feet below land-surface datum, 1945: Mar. 16, 26.83.

S11 (\*988, p. 214; 1018, p. 182). Central Nebraska Public Power and Irrigation District. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 3, T. 15 N., R. 42 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Jan. 9	19.15	Mar. 9	18.86	Aug. 7	17.92	Dec. 4	18.75
Feb. 9	18.85	Apr. 11	18.86	Oct. 18	18.57		

313 (\*988, p. 214; 1018, p. 183). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 1, T. 15 N., R. 42 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	17.15	Mar. 9	17.56	Aug. 7	17.11	Dec. 4	17.77
Feb. 9	17.16	Apr. 11	17.87	Oct. 18	17.53		

Garfield County

55 (\*817, p. 129; 840, p. 204; 845, p. 176; 886, p. 305; 908, p. 202; 938, p. 165; 946, p. 202; 988, p. 215; 1018, p. 183). F. Robke. SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 31, T. 21 N., R. 16 W. No measurements made in 1945.

Gosper County

1 (\*988, p. 215; 1018, p. 183). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 2, T. 8 N., R. 21 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Jan. 9	6.28	Apr. 18	6.34	July 3	6.40	Sept. 7	6.45
Feb. 17	6.46	May 4	6.50	Aug. 8	6.48	Nov. 24	6.19
Mar. 9	6.47	June 4	6.49				

2 (\*988, p. 215; 1018, p. 183). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 11, T. 8 N., R. 21 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Jan. 9	5.21	Apr. 18	5.26	July 3	5.28	Sept. 7	5.39
Feb. 17	5.17	May 4	5.25	Aug. 8	5.50	Nov. 24	5.64
Mar. 9	5.29	June 4	4.70				

3 (\*988, p. 216; 1018, p. 183). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 12, T. 8 N., R. 21 W. Measurements supplied through courtesy of Central Nebraska Public and Irrigation District.

Water level, in feet below land-surface datum, 1945

Jan. 9	9.79	Apr. 18	9.80	July 3	9.88	Sept. 7	9.86
Feb. 17	9.80	May 4	9.78	Aug. 8	9.82	Nov. 24	10.12
Mar. 9	9.92	June 4	9.90				

4 (\*988, p. 216; 1018, p. 183). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 12, T. 8 N., R. 21 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Jan. 9	6.93	Apr. 18	6.99	July 3	7.00	Sept. 7	7.15
Feb. 17	6.96	May 4	7.05	Aug. 8	7.02	Nov. 24	7.17
Mar. 9	7.01	June 4	7.04				

183 (\*817, p. 130; 840, p. 204; 845, p. 176; 886, p. 305; 908, p. 202; 938, p. 165; 946, p. 202; 988, p. 217; 1018, p. 183). M. Berntson. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 12, T. 5 N., R. 22 W. No measurements made in 1945.

307 (\*817, p. 130; 840, p. 204; 845, p. 176; 886, p. 305; 908, p. 202; 938, p. 165; 946, p. 202; \*988, p. 217; 1018, p. 183). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 6, T. 8 N., R. 21 W. No measurements made in 1945.

447 (\*886, p. 305; 908, p. 202; 938, p. 166; 946, p. 202; 988, p. 217; 1018, p. 184). University of Nebraska. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 12, T. 5 N., R. 22 W. No measurements made in 1945.

U76 (\*988, p. 217; 1018, p. 184). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 8, T. 8 N., R. 22 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	163.16	Apr. 18	160.49	July 3	157.70	Sept. 4	154.80
Feb. 17	162.00	May 4	159.50	Aug. 8	155.19	Nov. 21	153.61
Mar. 7	161.35	June 4	158.80				

a Highest observed stage in period of record.

U81 (\*988, p. 217; 1018, p. 184). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 6, T. 8 N., R. 21 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	10.05	Apr. 18	10.13	July 7	9.99	Sept. 4	9.81
Feb. 17	10.11	May 2	10.09	Aug. 8	9.88	Nov. 21	9.76
Mar. 7	10.11	June 4	10.04				

U82 (\*988, p. 218; 1018, p. 184). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 6, T. 8 N., R. 21 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	25.98	Apr. 18	25.08	July 3	24.78	Sept. 4	24.59
Feb. 17	25.06	May 2	24.98	Aug. 8	24.70	Nov. 21	24.37
Mar. 7	25.09	June 4	24.80				

U83 (\*988, p. 218; 1018, p. 184). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 6, T. 8 N., R. 21 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	28.03	Apr. 18	27.10	July 3	26.91	Sept. 4	26.70
Feb. 17	27.36	May 2	27.08	Aug. 8	26.82	Nov. 21	26.61
Mar. 7	27.34	June 4	27.00				

U84 (\*988, p. 218; 1018, p. 184). Central Nebraska Public Power and Irrigation District. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 6, T. 8 N., R. 21 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	42.88	Apr. 18	42.99	July 3	42.70	Sept. 4	42.50
Feb. 17	43.08	May 2	42.90	Aug. 8	42.59	Nov. 21	42.42
Mar. 7	43.05	June 4	42.82				

U85 (\*988, p. 219; 1018, p. 184). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 4, T. 8 N., R. 21 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	28.90	Apr. 13	28.96	July 3	28.73	Sept. 4	28.56
Feb. 17	29.13	May 2	28.84	Aug. 8	28.62	Nov. 24	28.51
Mar. 7	29.15	June 4	28.76				

## 178 WATER LEVELS AND ARTESIAN PRESSURE, 1945, NORTH-CENTRAL STATES

U86 (#988, p. 219; 1018, p. 184). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 5, T. 8 N., R. 21 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	22.94	Apr. 18	21.89	July 3	21.49	Sept. 4	21.20
Feb. 17	22.23	May 2	21.76	Aug. 8	21.32	Nov. 24	21.16
Mar. 7	22.19	June 4	21.63				

U87 (#988, p. 219; 1018, p. 184). Central Nebraska Public Power and Irrigation District. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 5, T. 8 N., R. 21 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	16.88	May 2	15.99	July 3	15.75	Sept. 4	15.09
Feb. 17	16.21	June 4	15.87	Aug. 8	15.29	Nov. 24	15.01
Mar. 7	16.06						

U88 (#988, p. 220; 1018, p. 185). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 5, T. 8 N., R. 21 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	11.05	Apr. 18	11.08	July 3	10.72	Sept. 4	10.62
Feb. 17	11.32	May 2	10.88	Aug. 8	10.68	Nov. 24	10.59
Mar. 7	11.29	June 4	10.80				

U89 (#988, p. 220; 1018, p. 185). Central Nebraska Public Power and Irrigation District. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 3, T. 8 N., R. 21 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	4.93	Apr. 18	5.15	July 3	5.12	Sept. 4	5.11
Feb. 17	5.19	May 2	5.14	Aug. 8	5.11	Nov. 24	5.13
Mar. 9	5.09	June 4	5.13				

U90 (#988, p. 220; 1018, p. 185). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 3, T. 8 N., R. 21 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	3.56	Apr. 18	3.63	July 3	3.50	Sept. 4	3.48
Feb. 17	3.58	May 2	3.50	Aug. 8	3.49	Nov. 24	3.52
Mar. 9	3.40	June 4	3.52				

U92 (#988, p. 221; 1018, p. 185). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 4, T. 8 N., R. 21 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	9.08	Apr. 18	8.35	July 3	8.00	Sept. 4	7.60
Feb. 17	9.32	May 2	8.50	Aug. 8	7.70	Nov. 24	7.51
Mar. 9	9.24	June 4	8.21				

U93 (#988, p. 221; 1018, p. 185). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 4, T. 8 N., R. 21 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	9.54	Apr. 18	9.72	June 4	9.69	Aug. 8	9.72
Feb. 17	10.68	May 2	9.70	July 3	9.72	Sept. 4	9.75
Mar. 9	10.60						



U95 (\*988, p. 221; 1018, p. 185). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 9, T. 8 N., R. 21 W. No measurements made in 1945.

U96 (\*988, p. 222; 1018, p. 185). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 3, T. 8 N., R. 21 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	6.48	Apr. 18	4.45	July 3	4.78	Sept. 4	4.82
Feb. 17	5.88	May 2	4.71	Aug. 8	4.80	Nov. 24	4.82
Mar. 9	5.96	June 4	4.75				

U97 (\*988, p. 222; 1018, p. 185). Central Nebraska Public Power and Irrigation District. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 3, T. 8 N., R. 21 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	12.41	Mar. 9	12.48	May 2	11.68	Aug. 8	10.00
Feb. 17	12.45	Apr. 18	11.44	June 4	11.78	Nov. 24	12.32

U98 (\*988, p. 222; 1018, p. 186). Central Nebraska Public Power and Irrigation District. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 11, T. 8 N., R. 21 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	10.90	Apr. 18	11.41	June 4	11.10	Aug. 8	10.84
Feb. 17	11.14	May 2	11.28	July 3	10.86	Sept. 4	10.85
Mar. 9	11.26						

U99 (\*988, p. 223; 1018, p. 186). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 10, T. 8 N., R. 21 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	15.99	Mar. 9	16.11	May 2	16.00	July 3	15.95
Feb. 17	16.05	Apr. 18	16.13	June 4	16.01	Nov. 24	15.88

#### Grant County

215 (\*817, p. 130; 840, p. 204; 845, p. 176; 886, p. 306; 908, p. 202; 938, p. 166; 946, p. 202; 988, p. 223; 1018, p. 186). University of Nebraska. SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 25, T. 24 N., R. 37 W. No measurements made in 1945.

216 (\*817, p. 131; 840, p. 204; 845, p. 176; 886, p. 306; 908, p. 202; 938, p. 166; 946, p. 202; 988, p. 223; \*1018, p. 186). University of Nebraska. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 36, T. 24 N., R. 40 W. Water level, in feet below land-surface datum, 1945: Aug. 17, 13.70.

#### Greeley County

206 (\*817, p. 131; 840, p. 204; 845, p. 176; 886, p. 306; 908, p. 202; 938, p. 166; 946, p. 202; 988, p. 223; 1018, p. 186). University of Nebraska. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 20, T. 20 N., R. 9 W. No measurements made in 1945.

347 (\*817, p. 131; 840, p. 204; 845, p. 176; 886, p. 306; 908, p. 202; 938, p. 166; 946, p. 202; 988, p. 223; 1018, p. 186). University of Nebraska. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 10, T. 17 N., R. 10 W. No measurements made in 1945.

Hall County

244 (\*817, p. 131; 840, p. 205; 845, p. 176; 886, p. 306; 908, p. 203; 938, p. 166; 946, p. 203; 988, p. 223; 1018, p. 186). University of Nebraska. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 27, T. 11 N., R. 9 W. No measurements made in 1945.

246 (\*817, p. 132; 840, p. 205; 845, p. 176; 886, p. 306; 908, p. 203; 938, p. 166; 946, p. 203; \*988, p. 223; 1018, p. 186). F. Dahlstrom. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 8, T. 10 N., R. 10 W. Water levels, in feet below land-surface datum, 1945: May 15, 21.76; Oct. 18, 21.49; Dec. 12, 21.58.

247 (\*817, p. 132; 840, p. 205; 845, p. 176; 886, p. 306; 908, p. 203; \*988, p. 223; 1018, p. 186). E. Batie. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 36, T. 11 N., R. 11 W. Water levels, in feet below land-surface datum, 1945: Oct. 18, 23.55; Dec. 12, 23.53.

248 (\*988, p. 224; 1018, p. 186). W. A. Bouton. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 15, T. 10 N., R. 11 W. Water levels, in feet below land-surface datum, 1945: Oct. 18, 17.77; Dec. 12, 17.99.

249 (\*817, p. 133; 840, p. 205; 845, p. 176; 886, p. 306; 908, p. 203; 938, p. 166; \*988, p. 224; 1018, p. 186). F. Hughes. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 32, T. 11 N., R. 11 W. Water levels, in feet below land-surface datum, 1945: Oct. 18, 35.64; Dec. 12, 35.26.

258 (\*817, p. 133; 840, p. 205; 845, p. 176; 886, p. 306; 908, p. 203; 938, p. 166; 946, p. 203; \*988, p. 224; 1018, p. 186). J. Weldon. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 30, T. 10 N., R. 11 W. Water levels, in feet below land-surface datum, 1945: May 15, 20.78; Oct. 18, 21.87; Dec. 12, 20.56.

259 (\*817, p. 133; 840, p. 205; 845, p. 176; 886, p. 306; 908, p. 203; 938, p. 166; 946, p. 203; \*988, p. 224; 1018, p. 187). J. Kipp. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 1, T. 9 N., R. 12 W. Water levels, in feet below land-surface datum, 1945: Oct. 18, 4.11; Dec. 12, 5.02.

260 (\*817, p. 134; 840, p. 205; 845, p. 176; 886, p. 306; 908, p. 203; 938, p. 166; 946, p. 203; \*988, p. 224; 1018, p. 187). S. Spahr. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 9, T. 9 N., R. 12 W. Stevens 8-day automatic water-stage recorder installed on December 18. Water levels, in feet below land-surface datum, 1945: May 15, 22.61; Oct. 18, 21.72; Dec. 12, 21.88.

261 (\*817, p. 134; 840, p. 205; 845, p. 176; 886, p. 306; 908, p. 203; 946, p. 203; 988, p. 224; 1018, p. 187). J. Barron. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 20, T. 10 N., R. 12 W. Well destroyed; measurements discontinued.

GI202 (\*886, p. 306; 908, p. 203; 938, p. 166; 946, p. 203; 988, p. 224; \*1018, p. 187). City of Grand Island. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 27, T. 12 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water level, in feet below land-surface datum, 1945: Jan. 22, 6.42.

GI203 (\*836-E, pp. 252, 271; 886, p. 307; 908, p. 203; 938, p. 166; 946, p. 203; \*988, p. 225; 1018, p. 187). City of Grand Island. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 32, T. 12 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Jan. 22, 10.25; May 14, 9.66.

GI204 (\*836-E, pp. 252, 271; 886, p. 307; 908, p. 203; 938, p. 166; 946, p. 203; \*988, p. 225; 1018, p. 187). City of Grand Island. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 32, T. 12 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Jan. 22, 9.75; May 14, 9.58.

GI207 (\*836-E, pp. 252, 272; 886, p. 307; 908, p. 203; 938, p. 166; 946, p. 204; \*988, p. 225; 1018, p. 187). City of Grand Island. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 3, T. 11 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Jan. 22, 13.25; May 14, 13.00.

GI208 (\*836-E, pp. 252, 272; 886, p. 308; 908, p. 203; 938, p. 166; 946, p. 204; \*988, p. 225; 1018, p. 187). City of Grand Island. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 4, T. 11 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Apr. 10, 13.92; July 19, 12.34; Oct. 1, 16.66.

GI209 (\*836-E, pp. 252, 272; 886, p. 308; 908, p. 203; 938, p. 166; 946, p. 204; \*988, p. 225; 1018, p. 187). City of Grand Island. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 4, T. 11 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Apr. 10, 13.25; July 19, 12.16; Oct. 1, 10.08, highest observed stage in period of record.

GI210 (\*836-E, pp. 252, 272; 886, p. 308; 908, p. 203; 938, p. 166; 946, p. 204; \*988, p. 225; 1018, p. 187). City of Grand Island. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 8, T. 11 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Apr. 10, 17.25; July 19, 16.83; Oct. 1, 13.58, highest observed stage in period of record.

GI211 (\*836-E, pp. 252, 272; 886, p. 308; 908, p. 203; 938, p. 167; 946, p. 204; \*988, p. 225; 1018, p. 188). City of Grand Island. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 8, T. 11 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Apr. 10, 14.00; July 19, 13.00, highest observed stage in period of record.

GI212 (\*836-E, pp. 252, 272; 886, p. 309; 908, p. 203; 938, p. 166; 946, p. 204; \*988, p. 225; 1018, p. 188). City of Grand Island. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 9, T. 11 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Apr. 10, 19.75; July 19, 19.00; Oct. 1, 17.25, highest observed stage in period of record.

GI214 (\*836-E, pp. 252, 273; 886, p. 309; 908, p. 203; 938, p. 167; 946, p. 204; \*988, p. 226; 1018, p. 188). City of Grand Island. SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 9, T. 11 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Apr. 10, 18.08; July 19, 17.16; Oct. 1, 15.08, highest observed stage in period of record.

GI215 (\*836-E, pp. 252, 273; 886, p. 309; 908, p. 204; 938, p. 167; 946, p. 204; \*988, p. 226; 1018, p. 188). City of Grand Island. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 9, T. 11 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Apr. 10, 20.75; July 19, 19.66; Oct. 1, 17.66, highest observed stage in period of record.

GI216 (\*836-E, pp. 252, 273; 886, p. 309; 908, p. 204; 938, p. 167; 946, p. 204; \*988, p. 226; 1018, p. 188). City of Grand Island. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 9, T. 11 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Apr. 10, 27.33; July 19, 27.08; Oct. 1, 25.16, highest observed stage in period of record.

GI217 (\*836-E, pp. 252, 273; 886, p. 310; 908, p. 204; 938, p. 167; 946, p. 204; \*988, p. 226; 1018, p. 188). City of Grand Island. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 9, T. 11 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Apr. 10, 27.58; July 19, 27.58; Oct. 1, 25.58, highest observed stage in period of record.

GI218 (\*836-E, pp. 252, 273; 886, p. 310; 908, p. 204; 938, p. 167; 946, p. 205; \*988, p. 226; 1018, p. 188). City of Grand Island. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 10, T. 11 N., R. 9 W. No measurements made in 1945.

GI219 (\*836-E, pp. 252, 274; 886, p. 310; 908, p. 204; 938, p. 167; 946, p. 205; \*988, p. 226; 1018, p. 188). City of Grand Island. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 15, T. 11 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Jan. 22, 6.58; May 14, 5.34.

GI220 (\*836-E, pp. 252, 274; 886, p. 310; 908, p. 204; 938, p. 167; 946, p. 205; \*988, p. 226; 1018, p. 189). City of Grand Island. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 14, T. 11 N., R. 9 W. No measurements made in 1945.

GI221 (\*836-E, pp. 252, 274; 886, p. 311; 908, p. 204; 938, p. 167; 946, p. 205; \*988, p. 226; 1018, p. 189). City of Grand Island. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 15, T. 11 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Apr. 10, 28.66; July 19, 29.25; Oct. 1, 26.50, highest observed stage in period of record.

GI222 (\*836-E, pp. 252, 274; 886, p. 311; 908, p. 204; 938, p. 167; 946, p. 205; \*988, p. 226; 1018, p. 189). City of Grand Island. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 15, T. 11 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Apr. 10, 26.58; July 19, 25.83; Oct. 1, 23.75, highest observed stage in period of record.

GI223 (\*836-E, pp. 252, 274; 886, p. 311; 908, p. 204; 938, p. 167; 946, p. 205; \*988, p. 227; 1018, p. 189). City of Grand Island. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 15, T. 11 N., R. 9 W. Measurements through courtesy of Grand Island Water Department. Water level, in feet below land-surface datum, 1945: Apr. 10, 10.92.

GI224 (\*836-E, pp. 252, 275; 886, p. 311; 908, p. 204; 946, p. 205; \*988, p. 227; 1018, p. 189). City of Grand Island. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 15, T. 11 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Apr. 10, 8.66; July 19, 7.58; Oct. 1, 5.92, highest observed stage in period of record.

GI225 (\*836-E, pp. 252, 275; 886, p. 312; 908, p. 204; 938, p. 167; 946, p. 205; \*988, p. 227; 1018, p. 189). City of Grand Island. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 15, T. 11 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Jan. 22, 8.16; May 14, 7.50.

GI226 (\*836-E, pp. 253, 275; 886, p. 312; 908, p. 204; 938, p. 167; 946, p. 206; \*988, p. 227; 1018, p. 189). City of Grand Island. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 16, T. 11 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Apr. 10, 31.92; July 19, 33.16; Oct. 1, 30.16, highest observed stage in period of record.

GI227 (\*836-E, pp. 253, 275; 886, p. 312; 908, p. 204; 938, p. 167; 946, p. 206; \*988, p. 227; 1018, p. 189). City of Grand Island. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 16, T. 11 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Apr. 10, 29.25; July 19, 29.16; Oct. 1, 27.42, highest observed stage in period of record.

GI229 (\*836-E, pp. 253, 276; 886, p. 313; 908, p. 204; 938, p. 167; 946, p. 206; \*988, p. 227; 1018, p. 190). City of Grand Island. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 16, T. 11 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Apr. 10, 36.08; July 19, 35.83; Oct. 1, 33.92.

GI230 (\*836-E, pp. 253, 276; 886, p. 313; 908, p. 204; 938, p. 167; 946, p. 206; \*988, p. 227; 1018, p. 190). City of Grand Island. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 16, T. 11 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Apr. 10, 29.25; July 19, 29.42.

GI231 (\*836-E, pp. 253, 276; 886, p. 313; 908, p. 205; 938, p. 167; 946, p. 206; \*988, p. 227; 1018, p. 190). City of Grand Island. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 16, T. 11 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: July 19, 31.25; Oct. 1, 29.25, highest observed stage in period of record.

GI232 (\*836-E, pp. 253, 276; 886, p. 313; 908, p. 205; 938, p. 167; 946, p. 206; \*988, p. 228; 1018, p. 190). City of Grand Island. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 17, T. 11 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Apr. 10, 16.08; July 19, 14.16; Oct. 1, 11.83, highest observed stage in period of record.

GI233 (\*836-E, pp. 253, 276; 886, p. 314; 908, p. 205; 938, p. 167; 946, p. 206; \*988, p. 228; 1018, p. 190). City of Grand Island. SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 17, T. 11 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Apr. 10, 18.83; July 19, 17.58; Oct. 1, 15.25, highest observed stage in period of record.

GI234 (\*836-E, pp. 253, 277; 886, p. 314; 908, p. 205; 938, p. 167; 946, p. 206; \*988, p. 228; 1018, p. 190). City of Grand Island. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 17, T. 11 N., R. 9 W. Measurements supplied by Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Apr. 10, 21.08; July 19, 20.16; Oct. 1, 17.42, highest observed stage in period of record.

GI236 (\*836-E, pp. 253, 277; 886, p. 314; 908, p. 205; 938, p. 167; 946, p. 207; \*988, p. 228; 1018, p. 190). City of Grand Island. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 20, T. 11 N., R. 9 W. No measurements made in 1945.

GI237 (\*836-E, pp. 253, 277; 886, p. 314; 908, p. 205; 938, p. 167; 946, p. 207; \*988, p. 228; 1018, p. 190). City of Grand Island. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 21, T. 11 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Apr. 10, 28.66; July 19, 28.50; Oct. 1, 26.34, highest observed stage in period of record.

GI238 (\*836-E, pp. 253, 277; 886, p. 315; 908, p. 205; 938, p. 167; 946, p. 207; \*988, p. 228; 1018, p. 191). City of Grand Island. SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 21, T. 11 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Apr. 10, 29.83; July 19, 29.66; Oct. 1, 27.25, highest observed stage in period of record.

GI239 (\*836-E, pp. 253, 277; 886, p. 315; 908, p. 205; 938, p. 167; 946, p. 207; \*988, p. 228; 1018, p. 191). City of Grand Island. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 22, T. 11 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water level, in feet below land-surface datum, 1945: May 14, 9.75.

GI240 (\*836-E, pp. 253, 278; 886, p. 315; 908, p. 205; 938, p. 168; 946, p. 207; \*988, p. 228; 1018, p. 191). City of Grand Island. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 20, T. 11 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Jan. 22, 5.16; May 14, 4.08.

GI241 (\*836-E, pp. 253, 278; 886, p. 315; 908, p. 205; 938, p. 168; 946, p. 207; \*988, p. 229; 1018, p. 191). City of Grand Island. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 28, T. 11 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water level, in feet below land-surface datum, 1945: May 14, 14.08.

GI242 (\*836-E, pp. 253, 278; 886, p. 316; 908, p. 205; 938, p. 168; 946, p. 207; \*988, p. 229; 1018, p. 191). City of Grand Island. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 29, T. 11 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Jan. 22, 20.92; May 14, 20.75.

GI243 (\*836-E, pp. 253, 278; 886, p. 316; 946, p. 207; \*988, p. 229; 1018, p. 191). City of Grand Island. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 32, T. 11 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Jan. 22, 1.25; May 14, 3.25.

GI244 (\*836-E, pp. 253, 278; 886, p. 316; 908, p. 205; 938, p. 168; 946, p. 207; \*988, p. 229; 1018, p. 191). City of Grand Island. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 24, T. 11 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Jan. 22, 5.42; May 14, 4.58.

GI246 (\*836-E, pp. 253, 279; 886, p. 316; 908, p. 205; 938, p. 168; 946, p. 208; \*988, p. 229; 1018, p. 191). City of Grand Island. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 34, T. 11 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Jan. 22, 5.50; May 14, 4.50.

GI247 (\*836-E, pp. 253, 279; 886, p. 317; 908, p. 205; 938, p. 168; 946, p. 208; \*988, p. 229; 1018, p. 191). City of Grand Island. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 35, T. 11 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Jan. 22, 3.58; May 14, 2.75.

GI248 (\*836-E, pp. 253, 279; 886, p. 317; 908, p. 205; 938, p. 168; 946, p. 208; \*988, p. 229; 1018, p. 191). City of Grand Island. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 3, T. 10 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Jan. 22, 4.83; May 14, 3.66.

GI249 (\*836-E, pp. 253, 279; 886, p. 317; 908, p. 206; 938, p. 168; 946, p. 208; \*988, p. 229; 1018, p. 192). City of Grand Island. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 4, T. 10 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Jan. 22, 4.75; May 14, 3.42.

GI250 (\*836-E, pp. 253, 279; 886, p. 317; 908, p. 206; 938, p. 168; 946, p. 208; \*988, p. 229; 1018, p. 192). City of Grand Island. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 8, T. 10 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Jan. 22, 3.83; May 14, 2.58.

GI251 (\*836-E, pp. 253, 280; 886, p. 318; 908, p. 206; 938, p. 168; 946, p. 208; \*988, p. 230; 1018, p. 192). City of Grand Island. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 1, T. 12 N., R. 10 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Jan. 22, 8.59; May 14, 8.25.

GI252 (\*836-E, pp. 253, 280, 886, p. 318; 908, p. 206; 938, p. 168; 946, p. 208; \*988, p. 230; 1018, p. 192). City of Grand Island. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 11, T. 12 N., R. 10 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Jan. 22, 8.50; May 14, 8.16.

GI253 (\*836-E, pp. 253, 280; 886, p. 318; 908, p. 206; 938, p. 168; 946, p. 208; \*988, p. 230; 1018, p. 192). City of Grand Island. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 13, T. 11 N., R. 10 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Jan. 22, 10.92; May 14, 11.08.

GI254 (\*836-E, pp. 253, 280; 886, p. 318; 908, p. 206; 938, p. 168; 946, p. 208; \*988, p. 230; 1018, p. 192). City of Grand Island. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 24, T. 11 N., R. 10 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Jan. 22, 15.08; May 14, 15.25.

GI255 (\*836-E, pp. 253, 280; 886, p. 319; 946, p. 208; \*988, p. 230; 1018, p. 192). City of Grand Island. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 26, T. 11 N., R. 10 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Jan. 22, 7.50; May 14, 7.16.

Hamilton County

158 (\*817, p. 135; 840, p. 205; 845, p. 176; 886, p. 319; 938, p. 160; 946, p. 209; 988, p. 230; \*1018, p. 192). O. Swedberg. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 13, T. 11 N., R. 6 W. No measurements made in 1945.

160 (\*817, p. 135; 840, p. 205; 845, p. 176; 886, p. 319; 908, p. 206; 938, p. 168; 946, p. 209; 988, p. 230; \*1018, p. 192). R. Phillips. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 9, T. 9 N., R. 8 W. No measurements made in 1945.

173 (\*817, p. 135; 840, p. 206; 845, p. 176; 886, p. 319; 908, p. 206; 938, p. 168; 946, p. 209; 988, p. 230; \*1018, p. 193). T. Wild. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 34, T. 9 N., R. 6 W. No measurements made in 1945.

330 (\*817, p. 135; 840, p. 206; 845, p. 176; 886, p. 319; 908, p. 206; 946, p. 209; 988, p. 230; \*1018, p. 193). H. Lock. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 27, T. 13 N., R. 6 W. No measurements made in 1945.

Harlan County

155 (\*817, p. 136; 840, p. 206; 845, p. 177; 886, p. 319; 908, p. 206; 938, p. 168; 946, p. 209; 988, p. 230; \*1018, p. 193). C. Fesse. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 33, T. 2 N., R. 18 W. No measurements made in 1945.

222 (\*817, p. 136; 840, p. 206; 845, p. 177; 886, p. 319; 908, p. 206; 946, p. 209). University of Nebraska. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 27, T. 3 N., R. 17 W. No measurements made in 1945.

329 (\*817, p. 136; 840, p. 206; 845, p. 177; 886, p. 319; 908, p. 206; 938, p. 168; 946, p. 209; 988, p. 230; \*1018, p. 193). G. Remke. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 21, T. 3 N., R. 17 W. No measurements made in 1945.

Hayes County

141 (\*817, p. 136; 840, p. 206; 845, p. 177; 886, p. 319; 908, p. 207; 938, p. 169; 946, p. 209; 988, p. 231; \*1018, p. 193). E. Joy. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 25, T. 5 N., R. 32 W. No measurements made in 1945.

142 (\*817, p. 136; 840, p. 206; 845, p. 177; 886, p. 319; 908, p. 207; 938, p. 169; 946, p. 209; 988, p. 231; \*1018, p. 193). Laird & Ward. SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 4, T. 7 N., R. 32 W. No measurements made in 1945.

446 (\*886, p. 320; 908, p. 207; 938, p. 169; 946, p. 209; \*988, p. 231; \*1018, p. 193). University of Nebraska. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 31, T. 5 N., R. 33 W. No measurements made in 1945.

Hitchcock County

140 (\*817, p. 137; 840, p. 206; 845, p. 177; 886, p. 320; 908, p. 207; 938, p. 169; 946, p. 209; 988, p. 231; \*1018, p. 193). A. Nowka. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 26, T. 4 N., R. 32 W. No measurements made in 1945.

178A (\*1018, p. 193). Mrs. David Engerham. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 20, T. 2 N., R. 35 W. No measurements made in 1945.

178B (\*1018, p. 193). Mrs. David Engerham. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 20, T. 2 N., R. 35 W. No measurements made in 1945.

362 (\*817, p. 137; 840, p. 206; 845, p. 177; 886, p. 320; 908, p. 207; 938, p. 169; 946, p. 210; \*988, p. 231; \*1018, p. 194). S. Lawrence. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 35, T. 3 N., R. 33 W. No measurements made in 1945.

Holt County

112 (\*817, p. 137; 840, p. 207; 845, p. 177; 886, p. 320; 908, p. 207; 946, p. 210; 988, p. 231; \*1018, p. 194). G. Shoemaker. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 14, T. 29 N., R. 12 W. No measurements made in 1945.

113 (\*817, p. 137; 840, p. 207; 845, p. 177; 886, p. 320; 908, p. 207; 946, p. 210; 988, p. 231; 1018, p. 194). F. Juracek. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 10, T. 29 N., R. 14 W. No measurements made in 1945.

203 (\*817, p. 137; 840, p. 207; 845, p. 177; 886, p. 320; 908, p. 207; 938, p. 169; 946, p. 210; \*988, p. 231; 1018, p. 194). University of Nebraska. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 34, T. 27 N., R. 9 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	9.02	Apr. 29	8.39	July 29	9.43	Oct. 30	9.48
Feb. 26	7.84	May 28	8.74	Aug. 29	9.67	Nov. 27	9.26
Mar. 30	8.92	June 30	8.52	Sept. 28	9.66		

373 (\*817, p. 138; 840, p. 207; 845, p. 177; 886, p. 320; 908, p. 207; 938, p. 169; 946, p. 210; 988, p. 231; 1018, p. 194). University of Nebraska. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 29, T. 28 N., R. 14 W. No measurements made in 1945.

374 (\*817, p. 138; 840, p. 207; 845, p. 177; 886, p. 320; 908, p. 207; 938, p. 169; 946, p. 210; 988, p. 231; 1018, p. 194). L. Nessen. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 28, T. 27 N., R. 14 W. No measurements made in 1945.

424 (\*886, p. 320; 908, p. 207; 938, p. 169; 946, p. 210; 988, p. 231; 1018, p. 194). University of Nebraska. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 24, T. 26 N., R. 12 W. No measurements made in 1945.

428 (\*886, p. 320; 908, p. 207; 938, p. 169; 946, p. 210; \*988, p. 231; 1018, p. 194). University of Nebraska. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 27, T. 27 N., R. 9 W. Water levels, in feet below land-surface datum, 1945: Mar. 30, 6.20; May 28, 5.84; July 29, 5.40.

#### Hooker County

214 (\*817, p. 138; 840, p. 207; 845, p. 177; 886, p. 320; 908, p. 207; 938, p. 169; 946, p. 210; 988, p. 232; \*1018, p. 194). University of Nebraska. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 23, T. 24 N., R. 35 W. Water level, in feet below land-surface datum, 1945: Aug. 17, 19.50, lowest observed stage in period of record.

#### Howard County

46 (\*817, p. 138; 840, p. 207; 845, p. 177; 886, p. 321; 908, p. 207; 938, p. 169; 946, p. 210; 988, p. 232; \*1018, p. 194). University of Nebraska. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 14, T. 14 N., R. 10 W. No measurements made in 1945.

51 (\*817, p. 138; 840, p. 207; 845, p. 177; 886, p. 321; 908, p. 207; 938, p. 169; 946, p. 210; 988, p. 232; \*1018, p. 194). Placke Estate. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 27, T. 13 N., R. 9 W. No measurements made in 1945.

59 (\*817, p. 139; 840, p. 207; 845, p. 177; 886, p. 321; 908, p. 207; 938, p. 169; 946, p. 210; \*988, p. 232; 1018, p. 195). M. Augustyn. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 27, T. 16 N., R. 11 W. No measurements made in 1945.

98 (\*817, p. 139; 840, p. 207; 845, p. 177; 886, p. 321; 908, p. 208; 938, p. 169; 946, p. 210; 988, p. 232; 1018, p. 195). O. Young. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 29, T. 13 N., R. 12 W. No measurements made in 1945.

346 (\*817, p. 139; 840, p. 207; 845, p. 177; 886, p. 321; 908, p. 208; 938, p. 169; 946, p. 210; 988, p. 232; 1018, p. 195). University of Nebraska. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 15, T. 15 N., R. 10 W. No measurements made in 1945.



Jefferson County

226 (\*817, p. 139; 840, p. 208; 845, p. 177; 886, p. 321; 908, p. 208; 938, p. 169; 946, p. 210; 988, p. 232; \*1018, p. 195). C. Ellis. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 26, T. 2 N., R. 4 E. No measurements made in 1945.

227 (\*817, p. 139; 840, p. 208; 845, p. 177; 886, p. 321; 908, p. 208; 946, p. 211; 988, p. 232; 1018, p. 195). R. Garrett. SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 19, T. 1 N., R. 4 E. Measuring point reported destroyed on Aug. 3, 1940; measurements discontinued.

228 (\*817, p. 139; 840, p. 208; 845, p. 177; 886, p. 321; 908, p. 208; 938, p. 169; 946, p. 211; 988, p. 232; 1018, p. 195). A. Knispel. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 14, T. 5 N., R. 1 E. No measurements made in 1945.

229 (\*817, p. 140; 840, p. 208; 845, p. 177; 886, p. 321; 908, p. 208; 938, p. 169; 946, p. 211; 988, p. 232; 1018, p. 195). E. Simpkins. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 18, T. 4 N., R. 2 E. No measurements made in 1945.

Johnson County

2 (\*817, p. 140; 840, p. 208; 845, p. 177; 886, p. 321; 908, p. 208; 938, p. 169; 946, p. 211; 988, p. 232; \*1018, p. 195). L. Miller. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 26, T. 6 N., R. 9 E. No measurements made in 1945.

Kearney County

181 (\*817, p. 140; 840, p. 208; 845, p. 177; 886, p. 321; 908, p. 208; 938, p. 170; 946, p. 211; 988, p. 232; 1018, p. 195). E. Carlson. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 20, T. 6 N., R. 16 W. No measurements made in 1945.

266 (\*817, p. 140; 840, p. 208; 845, p. 177; 886, p. 321; 908, p. 208; 938, p. 170; 946, p. 211; \*988, p. 232; 1018, p. 195). H. Jensen. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 13, T. 8 N., R. 14 W. Water levels, in feet below land-surface datum, 1945: Oct. 18, 8.77; Dec. 12, 8.64.

Keith County

93 (\*817, p. 141; 840, p. 208; 845, p. 177; 908, p. 208; 938, p. 170; 946, p. 211; \*988, p. 233; 1018, p. 195). D. Thiessen. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 5, T. 13 N., R. 25 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	8.61	Mar. 10	8.40	Aug. 2	8.45	Dec. 3	8.27
Feb. 13	8.46	Apr. 12	8.39	Oct. 19	8.41		

255 (\*817, p. 141; 840, p. 208; 845, p. 177; 886, p. 321; 908, p. 208; 938, p. 170; 946, p. 211; 988, p. 233; \*1018, p. 196). University of Nebraska. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 30, T. 16 N., R. 38 W. No measurements made in 1945.

348 (\*817, p. 141; 840, p. 208; 845, p. 177; 886, p. 321; 908, p. 208; 946, p. 211; 988, p. 232; 1018, p. 196). E. Pueppke. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 12, T. 13 N., R. 35 W. Measurements discontinued after Apr. 4, 1940.

350 (\*817, p. 142; 840, p. 209; 845, p. 177; 886, p. 321; 908, p. 208; 938, p. 170; 946, p. 211; \*988, p. 233; 1018, p. 196). NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 3, T. 13 N., R. 37 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District. Water levels, in feet below land-surface datum, 1945: Jan. 10, 14.30; Feb. 13, 13.86; Mar. 10, 13.77; Apr. 12, 19.96, lowest observed stage in period of record.

356 (\*817, p. 143; 840, p. 209; 845, p. 178; 886, p. 322; 908, p. 209; 938, p. 170; 988, p. 233; 1018, p. 196). G. McGinely. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 19, T. 13 N., R. 39 W. No measurements made in 1945.

360 (\*817, p. 132; 840, p. 209; 845, p. 178; 886, p. 322; 908, p. 209; 938, p. 170; 946, p. 212; 988, p. 233; 1018, p. 196). G. Peters Estate. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 34, T. 13 N., R. 39 W. No measurements made in 1945.

E1 (\*988, p. 233; 1018, p. 196). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 35, T. 15 N., R. 38 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 12	7.26	Mar. 8	8.21	July 31	7.35	Nov. 30	7.26
Feb. 8	7.31	Apr. 10	7.47	Oct. 17	7.25		

E2 (\*988, p. 234; 1018, p. 196). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 34, T. 15 N., R. 38 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Jan. 12	7.50	Mar. 8	7.17	July 31	6.29	Nov. 30	7.17
Feb. 14	7.30	Apr. 10	7.42	Oct. 17	7.70		

E3 (\*988, p. 234; 1018, p. 196). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 34, T. 15 N., R. 38 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Jan. 12	8.96	Mar. 8	9.07	July 31	8.15	Nov. 30	9.08
Feb. 14	9.16	Apr. 10	9.31	Oct. 17	9.62		

E6 (\*988, p. 234; 1018, p. 196). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 36, T. 15 N., R. 38 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Jan. 8	7.87	Feb. 26	7.80	July 31	7.40	Nov. 30	7.71
Feb. 8	7.82	Apr. 7	7.67	Oct. 17	7.50		

E7 (\*988, p. 235; 1018, p. 196). Central Nebraska Public Power and Irrigation District. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 5, T. 14 N., R. 37 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Jan. 8	4.41	Feb. 26	4.04	Aug. 2	4.41	Nov. 30	3.38
Feb. 8	3.66	Apr. 7	3.51	Oct. 17	4.10		

E8 (\*988, p. 235; 1018, p. 197). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 29, T. 15 N., R. 37 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Jan. 8	5.29	Feb. 26	4.48	Aug. 2	4.02	Nov. 30	4.26
Feb. 8	4.76	Apr. 7	4.03	Oct. 17	4.00		

E9 (\*988, p. 236; 1018, p. 197). Central Nebraska Public Power and Irrigation District. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 5, T. 14 N., R. 37 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

E9--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	5.32	Mar. 8	5.21	Aug. 2	4.68	Nov. 30	5.11
Feb. 8	5.30	Apr. 7	5.13	Oct. 17	5.20		

E11 (\*988, p. 236; 1018, p. 197). Central Nebraska Public Power and Irrigation District. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 4, T. 14 N., R. 37 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	5.08	Mar. 8	5.20	Aug. 2	4.56	Nov. 30	4.85
Feb. 8	5.19	Apr. 7	5.14	Oct. 17	4.68		

E12 (\*988, p. 237; 1018, p. 197). Central Nebraska Public Power and Irrigation District. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 11, T. 14 N., R. 37 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	5.69	Mar. 8	5.81	Aug. 2	5.16	Nov. 30	5.42
Feb. 8	5.80	Apr. 7	5.75	Oct. 17	5.28		

E13 (\*988, p. 237; 1018, p. 197). Central Nebraska Public Power and Irrigation District. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 12, T. 14 N., R. 37 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	5.17	Mar. 8	4.33	Aug. 2	4.66	Nov. 30	4.33
Feb. 8	4.75	Apr. 7	4.24	Oct. 17	4.17		

E14 (\*988, p. 237; 1018, p. 197). Central Nebraska Public Power and Irrigation District. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 8, T. 14 N., R. 36 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	6.38	Mar. 8	5.57	Aug. 2	6.70	Nov. 30	7.26
Feb. 8	5.91	Apr. 7	5.44	Oct. 17	6.03		

E15 (\*988, p. 238; 1018, p. 197). Central Nebraska Public Power and Irrigation District. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 15, T. 14 N., R. 36 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	2.59	Mar. 8	5.13	Aug. 2	5.95	Nov. 30	5.85
Feb. 8	2.75	Apr. 7	5.56	Oct. 17	5.55		

E16 (\*988, p. 238; 1018, p. 197). Central Nebraska Public Power and Irrigation District. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 16, T. 14 N., R. 35 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	6.91	Mar. 10	6.19	Aug. 2	7.25	Dec. 3	7.39
Feb. 13	6.36	Apr. 12	6.23	Oct. 19	6.78		

E17 (\*988, p. 239; 1018, p. 197). Central Nebraska Public Power and Irrigation District. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 13, T. 14 N., R. 35 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

E17--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	4.44	Mar. 10	3.85	Aug. 2	5.55	Dec. 3	5.52
Feb. 13	4.06	Apr. 12	4.68	Oct. 19	5.28		

E18 (\*988, p. 239; 1018, p.198). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 27, T. 14 N., R. 35 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	5.60	Mar. 10	5.88	Aug. 2	4.41	Dec. 3	5.60
Feb. 13	5.78	Apr. 12	6.00	Oct. 19	5.14		

E19 (\*988, p. 240; 1018, p.198). Central Nebraska Public Power and Irrigation District. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 3, T. 14 N., R. 38 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 12	3.34	Mar. 8	3.63	Aug. 3	2.79	Dec. 17	3.85
Feb. 14	3.77	Apr. 10	3.83	Oct. 17	3.97		

E20 (\*988, p. 240; 1018, p.198). Central Nebraska Public Power and Irrigation District. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 28, T. 14 N., R. 35 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	3.47	Mar. 10	3.46	Aug. 2	3.23	Dec. 3	3.25
Feb. 13	3.37	Apr. 12	3.57	Oct. 19	3.08		

E21 (\*988, p. 240; 1018, p.198). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 24, T. 14 N., R. 35 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	4.73	Mar. 10	5.15	Aug. 3	4.69	Dec. 3	5.00
Feb. 13	4.97	Apr. 12	5.33	Oct. 19	4.57		

E37 (\*988, p. 241; 1018, p.198). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 3, T. 13 N., R. 36 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	8.93	Mar. 10	8.49	Aug. 2	9.17	Dec. 3	8.30
Feb. 13	8.52	Apr. 12	8.63	Oct. 19	8.43		

N4 (\*908, p. 209; 938, p. 170; 946, p. 212; \*988, p. 241; 1018, p.198). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 20, T. 15 N., R. 38 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	17.30	Feb. 26	17.27	July 31	17.17	Nov. 30	17.15
Feb. 8	17.29	Apr. 7	17.26	Oct. 17	17.16		

N5 (\*908, p. 209; 938, p. 170; 946, p. 212; \*988, p. 242; 1018, p.198). Central Nebraska Public Power and Irrigation District. NW $\frac{1}{4}$  sec. 16, T. 15 N., R. 38 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District. Water levels, in feet below land-surface datum, 1945: Jan. 8, dry, lowest observed stage in period of record; Feb. 8, dry.

N6 (\*908, p. 210; 938, p. 170; 946, p. 212; \*988, p. 242; 1018, p. 198). Central Nebraska Public Power and Irrigation District. SE $\frac{1}{4}$  sec. 4, T. 15 N., R. 38 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	4.74	Mar. 6	4.87	July 31	4.85	Nov. 30	5.24
Feb. 8	4.82	Apr. 7	4.84	Oct. 17	5.12		

a Lowest observed stage in period of record.

N7 (\*908, p. 210; 938, p. 170; 946, p. 212; 988, p. 242; 1018, p. 199). Central Nebraska Public Power and Irrigation District. NW $\frac{1}{4}$  sec. 34, T. 16 N., R. 38 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	10.01	Feb. 26	9.92	July 31	10.08	Nov. 30	10.24
Feb. 8	9.33	Apr. 7	10.07	Oct. 17	10.20		

N8 (\*988, p. 242; 1018, p. 199). Central Nebraska Public Power and Irrigation District. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 33, T. 16 N., R. 38 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District. Water levels, in feet below land-surface datum, 1945: Feb. 8, frozen; Aug. 31, 2.02; Oct. 17, 1.98.

N9 (\*908, p. 211; 938, p. 171; 946, p. 212; \*988, p. 243; 1018, p. 199). Central Nebraska Public Power and Irrigation District. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 28, T. 16 N., R. 38 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	13.15	Feb. 26	13.03	July 31	13.85	Nov. 30	13.53
Feb. 8	13.06	Apr. 7	13.12	Oct. 17	13.39		

a Lowest observed stage in period of record.

N11 (\*886, p. 322; 908, p. 211; 938, p. 171; 946, p. 212; \*988, p. 243; 1018, p. 199). Central Nebraska Public Power and Irrigation District. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 9, T. 16 N., R. 38 W. Well plugged; measurements discontinued.

N12 (\*988, p. 244; 1018, p. 199). Key well US 58. Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$  sec. 7, T. 16 N., R. 38 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	10.20	Mar. 31	9.42	Aug. 31	9.50	Nov. 30	9.65
31	9.43	Apr. 7	9.42	Oct. 17	9.61	Dec. 1	9.65
Feb. 8	8.43	June 1	9.32	Nov. 1	9.61	31	9.70
26	9.44	July 31	9.58				

N13 (\*988, p. 244; 1018, p. 199). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 7, T. 16 N., R. 38 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	8.23	Feb. 26	8.31	July 31	7.83	Nov. 30	8.16
Feb. 8	8.25	Apr. 7	8.37	Oct. 17	8.14		

N14 (\*988, p. 245; 1018, p. 199). Central Nebraska Public Power and Irrigation District. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 30, T. 16 N., R. 38 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	10.05	Feb. 26	11.06	July 31	10.28	Nov. 30	10.34
Feb. 8	10.05	Apr. 7	10.10	Oct. 17	10.34		

N15 (\*988, p. 245; 1018, p. 200). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 36, T. 16 N., R. 39 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District. Water levels, in feet below land-surface datum, 1945: Jan. 8, 5.16; Feb. 26, 4.98; measurements discontinued.

N16 (\*988, p. 246; 1018, p. 200). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 1, T. 15 N., R. 39 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Jan. 8	2.32	Feb. 26	5.74	Oct. 17	a 0.67
Feb. 8	3.53	Apr. 7	6.36		

a Highest observed stage in period of record.

N17 (\*988, p. 247; 1018, p. 200). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 7, T. 15 N., R. 38 W. Water level, in feet below land-surface datum, 1945: Feb. 8, dry.

N18 (\*908, p. 211; 938, p. 171; 946, p. 212; \*988, p. 247; 1018, p. 200). Central Nebraska Public Power and Irrigation District. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 21, T. 15 N., R. 38 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	18.83	Feb. 26	19.50	July 31	17.08	Nov. 30	a 15.11
Feb. 8	18.58	Apr. 7	18.33	Oct. 17	15.85		

a Highest observed stage in period of record.

N19 (\*988, p. 247; 1018, p. 200). Central Nebraska Public Power and Irrigation District. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 23, T. 15 N., R. 38 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	10.01	Feb. 26	9.88	July 31	9.88	Nov. 30	9.98
Feb. 8	9.91	Apr. 7	9.85	Oct. 17	9.94		

N20 (\*988, p. 248; 1018, p. 200). Central Nebraska Public Power and Irrigation District. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 36, T. 15 N., R. 38 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	10.53	Feb. 26	10.52	July 31	10.12	Nov. 30	10.38
Feb. 8	10.52	Apr. 7	10.50	Oct. 17	10.28		

N23 (\*988, p. 248; 1018, p. 200). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 27, T. 15 N., R. 38 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District. Water levels, in feet below land-surface datum, 1945: Jan. 10, flooded; Feb. 13, flooded.

N24 (\*988, p. 249; 1018, p. 200). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 17, T. 15 N., R. 38 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	7.13	Mar. 9	7.03	Aug. 7	6.93	Dec. 4	6.41
Feb. 9	6.96	Apr. 11	7.03	Oct. 18	6.87		

N25 (\*908, p. 212; 938, p. 171; 946, p. 213; \*988, p. 250; 1018, p. 201). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 5, T. 15 N., R. 39 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	35.65	Mar. 9	35.66	Aug. 7	35.77	Dec. 4	35.82
Feb. 9	35.66	Apr. 11	35.67	Oct. 18	35.80		

N26 (\*988, p. 250; 1018, p. 201). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 32, T. 16 N., R. 39 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	10.52	Mar. 9	10.58	Aug. 7	10.79	Dec. 4	10.92
Feb. 9	10.51	Apr. 11	10.57	Oct. 18	10.91		

a Lowest observed stage in period of record.

N28 (\*988, p. 251; 1018, p. 201). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 20, T. 16 N., R. 39 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District. Water levels, in feet below land-surface datum, 1945: Jan. 9, 9.56; Feb. 9, 9.50.

N30 (\*988, p. 251; 1018, p. 201). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 7, T. 16 N., R. 39 W. Water levels, in feet below land-surface datum, 1945: Aug. 7, 8.16; Oct. 18, 8.94; Dec. 4, 9.00.

N32 (\*988, p. 252; 1018, p. 201). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 2, T. 16 N., R. 40 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	10.99	Mar. 9	11.04	Aug. 7	10.94	Dec. 4	11.21
Feb. 9	11.00	Apr. 11	11.05	Oct. 18	11.18		

N33 (\*988, p. 253; 1018, p. 201). Central Nebraska Public Power and Irrigation District. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 14, T. 16 N., R. 40 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	12.02	Mar. 9	12.04	Aug. 7	11.99	Dec. 4	12.65
Feb. 9	12.03	Apr. 11	12.01	Oct. 18	12.57		

N37 (\*886, p. 323; 938, p. 171; 908, p. 213; 946, p. 213; \*988, p. 253; 1018, p. 201). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 34, T. 16 N., R. 41 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	12.27	Mar. 9	12.28	Aug. 7	13.72	Dec. 4	12.57
Feb. 9	12.26	Apr. 11	12.30	Oct. 18	13.15		

N41 (\*908, p. 213; 938, p. 171; 946, p. 213; \*988, p. 254; 1018, p. 202). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 24, T. 15 N., R. 39 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	45.06	Feb. 26	55.22	July 31	54.15	Nov. 30	52.15
Feb. 8	55.16	Apr. 11	55.18	Oct. 17	52.78		

a Highest observed stage in period of record.

N42 (\*908, p. 213; 938, p. 172; 946, p. 213; \*988, p. 254; 1018, p. 202). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 23, T. 15 N., R. 38 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	60.41	Feb. 26	60.64	July 31	49.62	Nov. 30	a 47.19
Feb. 8	60.53	Apr. 7	60.61	Oct. 17	50.16		

a Highest observed stage in period of record.

S10 (\*908, p. 213; 938, p. 172; 946, p. 213; \*988, p. 254; 1018, p. 202). Central Nebraska Public Power and Irrigation District. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 3, T. 14 N., R. 38 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Jan. 12	13.30	Mar. 8	13.14	Aug. 3	a 12.14
Feb. 14	13.07	Apr. 10	12.91		

a Highest observed stage in period of record.

S16 (\*908, p. 214; 938, p. 172; 946, p. 213; \*988, p. 254; 1018, p. 202). Central Nebraska Public Power and Irrigation District. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 10, T. 14 N., R. 38 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District. Water level, in feet below land-surface datum, 1945: Jan. 12, 185.03, highest observed stage in period of record; measurements discontinued after Mar. 8.

S18 (\*886, p. 323; 908, p. 214; 938, p. 172; 946, p. 213; \*988, p. 255; 1018, p. 202). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 17, T. 14 N., R. 38 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	156.01	Mar. 8	156.42	Aug. 3	155.50	Dec. 17	154.46
Feb. 14	155.98	Apr. 10	155.79	Oct. 17	a 154.39		

a Highest observed stage in period of record.

S19 (\*908, p. 214; 938, p. 172; 946, p. 213; \*988, p. 255; 1018, p. 202). Central Nebraska Public Power and Irrigation District. SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 7, T. 14 N., R. 38 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	150.25	Mar. 8	150.33	Aug. 2	145.30	Dec. 17	144.37
Feb. 14	150.06	Apr. 10	150.08	Oct. 17	a 144.31		

a Highest observed stage in period of record.

S20 (\*908, p. 215; 938, p. 172; 946, p. 214; \*988, p. 255; 1018, p. 202). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 2, T. 14 N., R. 39 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	173.72	Mar. 8	173.55	Aug. 2	173.15	Dec. 17	172.11
Feb. 14	173.38	Apr. 10	172.93	Oct. 18	a 172.05		

a Highest observed stage in period of record.

S21 (\*886, p. 323; 908, p. 215; 938, p. 172; 946, p. 214; \*988, p. 255; 1018, p. 203). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 4, T. 14 N., R. 34 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	105.20	Mar. 8	105.23	Aug. 2	105.15	Dec. 17	104.85
Feb. 14	105.13	Apr. 10	105.21	Oct. 18	105.51		



S22 (\*908, p. 215; 938, p. 172; 946, p. 214; \*988, p. 255; 1018, p. 203). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 31, T. 15 N., R. 39 W. Measurements through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	89.76	Mar. 9	89.41	Aug. 7	86.82	Dec. 4	a 85.25
Feb. 14	89.73	Apr. 11	89.13	Oct. 18	85.65		

a Highest observed stage in period of record.

S23 (\*886, p. 323; 908, p. 216; 938, p. 173; 946, p. 214; \*988, p. 255; 1018, p. 203). C. Samuelson. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 27, T. 15 N., R. 40 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	104.80	Mar. 9	104.93	Aug. 7	104.65	Dec. 4	104.15
Feb. 14	104.73	Apr. 11	104.95	Oct. 18	104.00		

a Highest observed stage in period of record.

S24 (\*908, p. 216; 938, p. 173; 946, p. 214; \*988, p. 256; 1018, p. 203). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 17, T. 15 N., R. 40 W. Measurements resumed and supplied through courtesy of Central Nebraska Public Power and Irrigation District. Water levels, in feet below land-surface datum, 1945: Oct. 18, 70.96; Dec. 4, 70.67, highest observed stage in period of record.

S25 (\*988, p. 256; 1018, p. 203). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 1, T. 13 N., R. 39 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	5.48	Mar. 8	5.22	Aug. 2	5.66	Dec. 3	5.50
Feb. 13	5.27	Apr. 10	5.35	Oct. 18	5.32		

S26 (\*903, p. 216; 938, p. 173; 946, p. 214; \*988, p. 256; 1018, p. 203). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 3, T. 13 N., R. 38 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	14.12	Mar. 10	14.86	Aug. 2	14.65	Dec. 3	13.85
Feb. 13	13.84	Apr. 12	13.97	Oct. 19	14.02		

S27 (\*908, p. 217; 938, p. 173; 946, p. 214; \*988, p. 256; 1018, p. 203). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 5, T. 13 N., R. 37 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	12.12	Mar. 10	10.97	Aug. 2	12.71	Dec. 3	11.86
Feb. 13	11.97	Apr. 12	12.11	Oct. 19	12.00		

S28 (\*988, p. 257; 1018, p. 203). Central Nebraska Public Power and Irrigation District. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 6, T. 13 N., R. 38 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	5.24	Mar. 10	5.08	Aug. 2	5.59	Dec. 3	4.60
Feb. 13	5.06	Apr. 12	5.28	Oct. 19	4.76		

S29 (\*257; 1018, p. 204). Central Nebraska Public Power and Irrigation District. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 6, T. 13 N., R. 38 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	13.57	Mar. 10	13.35	Aug. 2	14.35	Dec. 3	13.70
Feb. 13	13.37	Apr. 12	13.49	Oct. 19	13.75		

S32 (\*908, p. 217; 938, p. 173; 946, p. 214; \*988, p. 258; 1018, p. 204). Ellen Kelly. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 32, T. 14 N., R. 39 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Jan. 11	25.16	Mar. 10	25.11	Aug. 2	14.27	Dec. 17	16.42
Feb. 14	25.11	Apr. 10	24.08	Oct. 18	17.17		

a Highest observed stage in period of record.

S34 (\*988, p. 258; 1018, p. 204). Mary E. Paul. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 26, T. 15 N., R. 40 E. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Jan. 11	40.63	Mar. 9	40.11	Aug. 7	31.45	Dec. 4	30.40
Feb. 14	40.43	Apr. 11	38.81	Oct. 18	33.00		

a Highest observed stage in period of record.

Keya Paha County

375 (\*817, p. 143; 840, p. 209; 845, p. 178; 886, p. 324; 908, p. 218; 938, p. 174; 988, p. 259; 1018, p. 204). University of Nebraska. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 19, T. 32 N., R. 20 W. Water level, in feet below land-surface datum, 1945: May 18, 1.92.

Kimball County

88 (\*817, p. 143; 840, p. 209; 845, p. 178; 886, p. 324; 908, p. 218; 938, p. 174; 946, p. 215; \*988, p. 259; 1018, p. 204). W. Settlementire. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 32, T. 15 N., R. 57 W.

Water level, in feet below land-surface datum, 1945

Jan. 6	34.59	June 28	34.18	Sept. 26	34.18	Nov. 28	34.24
Feb. 10	34.57	July 23	34.08	Oct. 30	34.20	Dec. 28	34.20
Apr. 7	34.59						

89 (\*817, p. 144; 840, p. 210; 845, p. 178; 886, p. 324; 908, p. 218; 938, p. 174; 946, p. 215; 988, p. 259; 1018, p. 204). H. McGowan. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 12, T. 16 N., R. 54 W. No measurements made in 1945.

327 (\*817, p. 144; 840, p. 210; 845, p. 178; 886, p. 324; 908, p. 218; 938, p. 174; 946, p. 215; 988, p. 259; 1018, p. 204). Kimball Irrigation District. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 17, T. 15 N., R. 55 W. No measurements made in 1945.

Knox County

67 (\*817, p. 144; 840, p. 210; 845, p. 178; 886, p. 324; 908, p. 218; 938, p. 174; 946, p. 215; 988, p. 259; 1018, p. 204). W. Krohn. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 11, T. 30 N., R. 3 W. No measurements made in 1945.

71 (\*817, p. 144; 840, p. 210; 845, p. 178; 886, p. 324; 908, p. 218; 938, p. 174; 946, p. 215; 988, p. 259; 1018, p. 204). F. Stingley. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 28, T. 29 N., R. 5 W. Well destroyed; measurements discontinued.

335 (\*817, p. 145; 840, p. 210; 845, p. 178; 886, p. 324; 908, p. 218; 938, p. 174; 946, p. 215; \*988, p. 259). University of Nebraska. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 30, T. 33 N., R. 7 W. No measurements made in 1945.

336 (\*817, p. 145; 840, p. 210; 845, p. 178; 886, p. 324; 908, p. 218; 938, p. 174; 946, p. 215; 988, p. 259; 1018, p. 204). W. MacGraw. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 8, T. 32 N., R. 6 W. No measurements made in 1945.

370 (\*817, p. 145; 840, p. 211; 845, p. 178; 886, p. 324; 908, p. 218; 938, p. 174; 946, p. 215; 988, p. 259; 1018, p. 205). Lunberg Bros. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 27, T. 29 N., R. 2 W. No measurements made in 1945.

429 (\*886, p. 324; 908, p. 218; 938, p. 174; 946, p. 215; 988, p. 259; 1018, p. 205). University of Nebraska. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 30, T. 33 N., R. 7 W. No measurements made in 1945.

#### Lancaster County

1 (\*817, p. 145; 840, p. 210; 908, p. 219; 938, p. 174; 946, p. 215; 938, p. 259; 1018, p. 205). Mrs. Burling. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 34, T. 7 N., R. 7 E. No measurements made in 1945.

13 (\*817, p. 145; 840, p. 210; 845, p. 178; 886, p. 325; 908, p. 219; 938, p. 174; 946, p. 215; 988, p. 259; 1018, p. 205). Miss Brady. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 21, T. 9 N., R. 5 E. No measurements made in 1945.

14 (\*817, p. 145; 840, p. 210; 845, p. 178; 886, p. 325; 908, p. 219; 938, p. 174; 988, p. 260; \*1018, p. 205). W. Brightenburg. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 6, T. 11 N., R. 6 E. No measurements made in 1945.

366 (\*817, p. 146; 840, p. 210; 845, p. 178; 886, p. 325; 908, p. 219; 938, p. 174; 946, p. 215; 988, p. 260; 1018, p. 205). H. Hollan. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 28, T. 9 N., R. 7 E. No measurements made in 1945.

367 (\*817, p. 146; 840, p. 211; 845, p. 178; 886, p. 325; 908, p. 219; 946, p. 216; 988, p. 260; 1018, p. 205). F. Jappert. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 35, T. 10 N., R. 6 E. No measurements made in 1945.

#### Lincoln County

131 (\*817, p. 146; 908, p. 219; 938, p. 174; 946, p. 216; 988, p. 260; 1018, p. 205). Great Western Sugar Co. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 21, T. 14 N., R. 32 W. No measurements made in 1945.

133 (\*817, p. 146; 840, p. 211; 845, p. 178; 886, p. 325; 908, p. 219; 938, p. 174; 946, p. 216; 988, p. 260; 1018, p. 205). R. Larson. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 32, T. 10 N., R. 29 W. No measurements made in 1945.

134 (\*817, p. 146; 840, p. 211; 845, p. 178; 886, p. 325; 908, p. 219; 938, p. 174; 946, p. 216; 988, p. 260; \*1018, p. 205). G. Roethemeyer. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 4, T. 9 N., R. 29 W. No measurements made in 1945.

143 (\*817, p. 146; 840, p. 211; 845, p. 178; 886, p. 325; 908, p. 219; 938, p. 174; 946, p. 216; 988, p. 260; 1018, p. 205). G. Connealy. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 18, T. 10 N., R. 34 W. Well destroyed; measurements discontinued.

144 (\*817, p. 147; 840, p. 211; 845, p. 178; 886, p. 325; 908, p. 219; 938, p. 174; 946, p. 216; 988, p. 260; \*1018, p. 205). J. Fristo. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 17, T. 10 N., R. 32 W. No measurements made in 1945.

241 (\*817, p. 147; 840, p. 211; 845, p. 178; 886, p. 325; 908, p. 219; 938, p. 174; 946, p. 216; \*988, p. 260; 1018, p. 205). University of Nebraska. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 14, T. 12 N., R. 27 W.

## 198 WATER LEVELS AND ARTESIAN PRESSURE, 1945, NORTH-CENTRAL STATES

241--Continued.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	6.04	Apr. 4	6.29	July 13	6.24	Sept. 7	6.09
Feb. 8	6.12	May 4	6.27	Aug. 8	6.35	Oct. 3	6.33
Mar. 1	6.11	June 1	6.12				

242 (\*817, p. 147; 840, p. 211; 845, p. 178; 886, p. 325; 908, p. 219; 938, p. 175; 946, p. 216; \*988, p. 260; 1018, p. 206). Nebraska Agricultural College. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 21, T. 13 N., R. 30 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	12.36	Apr. 5	12.08	July 5	11.98	Sept. 1	11.95
Feb. 11	12.08	May 2	12.02	Aug. 6	11.96	Nov. 9	12.16
Mar. 1	11.99	June 1	12.01				

252 (\*817, p. 147; 840, p. 211; 845, p. 178; 886, p. 325; 908, p. 219; 938, p. 175; 946, p. 216; 988, p. 260; 1018, p. 206). University of Nebraska. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 13, T. 15 N., R. 31 W. No measurements made in 1945.

253 (\*817, p. 147; 840, p. 211; 845, p. 178; 886, p. 325; 908, p. 219; 938, p. 175; 946, p. 216; 988, p. 260; 1018, p. 206). University of Nebraska. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 4, T. 16 N., R. 31 W. No measurements made in 1945.

383 (\*817, p. 147; 840, p. 211; 845, p. 178; 886, p. 325; 908, p. 219; 946, p. 216; 988, p. 260; 1018, p. 206). Lech Bros. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 4, T. 16 N., R. 31 W. No measurements made in 1945.

405 (\*886, p. 325; 908, p. 220; 938, p. 175; 946, p. 216; \*988, p. 261; 1018, p. 206). University of Nebraska. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 17, T. 14 N., R. 33 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	3.05	Mar. 10	2.81	Aug. 3	0.45	Dec. 3	3.45
Feb. 13	2.91	Apr. 12	3.45	Oct. 19	.65		

a Highest observed stage in period of record.

406 (\*886, p. 327; 908, p. 220; 938, p. 175; 946, p. 217; 988, p. 261; 1018, p. 206). University of Nebraska. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 32, T. 14 N., R. 33 W. No measurements made in 1945.

600 (\*988, p. 261; 1018, p. 206). Geol. Survey, U. S. Dept. of Interior. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 27, T. 14 N., R. 33 W. Half mile south of O'Fallon.

Lowest daily water level, in feet below land-surface datum, 1945

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	4.54	4.77	4.82	5.02	5.06	4.77	4.07	4.68	4.18	4.60	4.40	4.56
2	4.51	4.78	4.80	5.02	5.08	4.78	4.09	4.69	4.19	4.57	4.41	a 4.56
3	4.46	4.80	4.80	5.03	5.08	4.80	4.12	4.70	4.23	4.54	4.42	4.56
4	4.46	4.82	4.79	5.04	5.08	4.81	4.16	4.71	4.25	4.52	4.42	4.56
5	4.47	4.82	4.79	5.05	5.09	4.82	4.20	4.72	4.27	4.50	4.41	4.55
6	4.52	4.81	4.81	5.06	5.11	4.67	4.22	a 4.72	4.31	4.47	4.42	4.55
7	4.53	4.81	4.82	5.07	5.12	4.57	4.25	a 4.73	4.32	4.45	a 4.43	4.55
8	4.56	4.77	4.82	5.07	5.13	4.51	4.28	a 4.73	4.29	4.43	a 4.45	4.54
9	4.56	4.74	4.82	5.08	5.14	4.45	4.32	a 4.74	4.32	a 4.40	a 4.47	4.53
10	4.57	4.74	a 4.82	5.09	5.14	4.07	4.34	a 4.74	4.34	a 4.37	4.48	4.54
11	4.58	4.71	a 4.82	5.10	5.16	3.95	4.35	4.74	4.37	4.35	a 4.48	4.57
12	4.60	4.69	a 4.82	5.11	5.17	3.93	4.38	4.75	4.40	4.35	a 4.48	4.59
13	4.61	4.69	a 4.82	5.11	5.18	3.92	a 4.40	4.75	4.42	4.34	a 4.49	4.62
14	4.62	4.68	a 4.83	a 5.09	5.19	3.92	a 4.42	4.74	4.44	4.34	a 4.49	4.64
15	4.61	4.69	a 4.83	5.09	5.20	3.91	a 4.43	d 4.71	4.46	4.34	a 4.49	a 4.67
16	4.60	a 4.69	4.85	5.08	5.21	3.91	a 4.45	4.65	4.49	4.34	a 4.50	a 4.69
17	4.60	4.70	4.86	5.04	5.21	3.94	a 4.43	4.58	4.51	4.34	4.50	4.71
18	4.61	4.72	4.87	4.99	5.22	3.95	a 4.49	4.52	4.54	4.35	4.51	4.73

a Interpolated.

d River rising.

600--Continued.

Lowest daily water level, in feet below land-surface datum, 1945  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
19	4.62	4.74	4.88	4.94	5.23	3.95	4.50	4.43	4.55	4.35	4.51	4.75
20	4.63	4.76	4.89	4.92	5.25	3.92	4.53	4.27	4.57	4.35	4.53	4.77
21	4.65	4.79	4.90	a4.92	5.26	3.89	4.56	4.24	4.58	4.36	4.53	4.79
22	4.67	4.80	4.91	a4.91	5.26	3.92	4.57	4.17	a4.62	4.36	4.55	4.80
23	4.68	4.79	4.93	4.94	5.27	3.95	4.60	4.11	a4.64	4.36	4.55	4.80
24	4.69	a4.79	4.94	4.95	5.27	3.96	4.62	4.17	4.66	a4.37	4.57	4.80
25	4.71	4.79	4.95	4.97	5.27	3.97	c4.63	4.16	4.68	4.38	4.57	4.80
26	4.71	4.80	4.95	4.99	5.27	a3.99	4.57	4.16	4.68	4.38	4.58	4.80
27	4.71	4.81	4.97	5.00	b5.28	4.02	4.57	4.15	4.68	4.38	4.58	4.80
28	4.72	4.82	4.97	5.02	4.72	4.00	4.59	4.13	4.68	4.39	4.58	4.80
29	4.73		4.98	5.03	4.74	4.02	4.61	4.10	4.66	4.40	4.58	4.78
30	4.75		4.99	5.04	4.74	4.05	4.63	4.11	4.63	4.40	4.57	4.77
31	4.76		5.00		4.75		4.65	4.15		4.40		4.72

a Interpolated.

b  $3\frac{1}{2}$  inches of rain; water level starting to rise.

c Rain; water level starting to rise.

E22 (\*988, p. 261; 1018, p. 207). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$  NW $\frac{1}{4}$  sec. 21, T. 14 N., R. 34 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	3.08	Mar. 10	3.08	Aug. 3	3.45	Dec. 3	3.44
Feb. 13	2.86	Apr. 12	3.32	Oct. 19	2.93		

E23 (\*988, p. 262; 1018, p. 207). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$  NW $\frac{1}{4}$  sec. 17, T. 14 N., R. 33 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Jan. 10	4.07	Mar. 10	4.57	Aug. 3	3.23	Dec. 3	4.56
Feb. 13	4.41	Apr. 12	4.72	Oct. 19	3.62		

E24 (\*988, p. 262; 1018, p. 207). Central Nebraska Public Power and Irrigation District. NW $\frac{1}{4}$  NW $\frac{1}{4}$  sec. 8, T. 14 N., R. 33 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Jan. 10	1.96	Mar. 10	1.83	Aug. 3	2.44	Dec. 3	2.35
Feb. 13	1.51	Apr. 12	2.16	Oct. 19	2.38		

E25 (\*988, p. 263; 1018, p. 207). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$  SE $\frac{1}{4}$  sec. 16, T. 14 N., R. 33 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Jan. 10	2.99	Apr. 12	3.32	Oct. 19	1.77	Dec. 3	2.07
Mar. 10	3.10	Aug. 3	1.98				

E26 (\*908, p. 220; 938, p. 175; 946, p. 217; \*988, p. 263; 1018, p. 207). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$  NE $\frac{1}{4}$  sec. 27, T. 14 N., R. 33 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Jan. 10	10.35	Mar. 10	10.52	Aug. 3	9.18	Dec. 3	9.92
Feb. 13	10.45	Apr. 12	10.68	Oct. 19	9.32		

E27 (\*908, p. 200; 938, p. 175; 946, p. 217; \*988, p. 263; 1018, p. 207). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 32, T. 13 N., R. 34 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	9.65	Mar. 10	9.80	Aug. 3	8.89	Dec. 3	9.40
Feb. 13	9.72	Apr. 12	9.91	Oct. 19	9.07		

E28 (\*988, p. 264; 1018, p. 207). Central Nebraska Public Power and Irrigation District. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 20, T. 14 N., R. 32 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Jan. 10	6.76	Mar. 10	7.08	Aug. 3	6.08	Dec. 3	6.30
Feb. 13	6.99	Apr. 12	7.18	Oct. 19	5.66		
a Lowest observed stage in period of record.							

E29 (\*988, p. 264; 1018, p. 208). Central Nebraska Public Power and Irrigation District. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 18, T. 14 N., R. 32 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Jan. 10	5.42	Mar. 10	6.31	Aug. 3	3.94	Dec. 3	4.63
Feb. 13	6.00	Apr. 12	6.60	Oct. 19	3.18		

E30 (\*988, p. 264; 1018, p. 208). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 5, T. 14 N., R. 32 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Jan. 10	4.49	Mar. 10	3.96	Aug. 3	4.64	Dec. 3	4.03
Feb. 13	4.06	Apr. 12	4.18	Oct. 19	4.05		

E31 (\*988, p. 265; 1018, p. 208). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 5, T. 14 N., R. 31 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945						
Jan. 10	3.28	Mar. 10	2.64	Aug. 3	4.28	Dec. 3 2.90
Feb. 13	2.66	Apr. 12	3.17	Oct. 19	3.55	

E32 (\*988, p. 265; 1018, p. 208). Central Nebraska Public Power and Irrigation District. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 8, T. 14 N., R. 30 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945						
Jan. 10	3.10	Mar. 10	2.70	Aug. 3	3.38	Dec. 3 2.72
Feb. 13	2.73	Apr. 12	2.67	Oct. 19	2.95	

E33 (\*988, p. 266; 1018, p. 208). Central Nebraska Public Power and Irrigation District. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 26, T. 14 N., R. 30 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945						
Jan. 10	1.67	Mar. 10	1.15	Aug. 3	1.87	Dec. 3 1.25
Feb. 13	1.23	Apr. 12	1.32	Oct. 19	1.44	

E34 (\*988, p. 266; 1018, p.208). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 19, T. 14 N., R. 30 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	3.29	Mar. 10	4.03	Aug. 3	4.12	Dec. 3	a 4.66
Feb. 13	3.41	Apr. 12	4.28	Oct. 19	4.15		

a Lowest observed stage in period of record.

E35 (\*988, p. 267; 1018, p.208). Central Nebraska Public Power and Irrigation District. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 29, T. 14 N., R. 31 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	5.69	Mar. 10	5.49	Aug. 3	5.16	Dec. 3	5.02
Feb. 13	5.73	Apr. 12	5.48	Oct. 19	4.75		

E36 (\*988, p. 267; 1018, p.208). Central Nebraska Public Power and Irrigation District. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 32, T. 14 N., R. 30 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 11	4.06	Apr. 4	4.22	June 1	4.04	Aug. 6	4.12
Mar. 1	4.12	May 2	4.10	July 5	4.06		

E38 (\*908, p. 220; 938, p. 175; 946, p. 217; \*988, p. 267; 1018, p.209). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 32, T. 13 N., R. 34 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	12.34	Mar. 10	12.28	Aug. 3	12.21	Dec. 3	12.22
Feb. 13	12.22	Apr. 12	12.29	Oct. 19	12.33		

E39 (\*988, p. 268; 1018, p.209). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 34, T. 14 N., R. 30 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	6.55	Mar. 1	6.33	May 2	6.40		
Feb. 11	6.36	Apr. 4	6.50				

JS1 (\*908, p. 221; 938, p. 175; 946, p. 217; \*988, p. 268; 1018, p.209). Central Nebraska Public Power and Irrigation District. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 35, T. 12 N., R. 27 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	26.30	Apr. 6	26.80	June 1	26.78	Sept. 14	26.03
Feb. 14	26.25	May 2	26.83	Aug. 5	26.60	Nov. 7	25.81
Mar. 6	26.34						

JS2 (\*908, p. 221; 938, p. 175; 946, p. 217; \*988, p. 268; 1018, p. 209). NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 35, T. 12 N., R. 27 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 14	17.47	May 2	17.95	July 5	17.99	Sept. 14	18.04
Mar. 6	17.50	June 1	17.97	Aug. 5	17.99	Nov. 7	18.09
Apr. 6	17.94						

JS3 (\*908, p. 221; 938, p. 176; 946, p. 217; \*988, p. 268; 1018, p. 209). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 35, T. 12 N., R. 27 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	22.91	Apr. 6	23.48	July 5	23.20	Sept. 14	22.32
Feb. 14	22.89	May 2	23.50	Aug. 6	22.60	Nov. 7	22.07
Mar. 6	22.98	June 1	23.42				

JS4 (\*908, p. 221; 938, p. 176; 946, p. 217; \*988, p. 269; 1018, p. 209). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 35, T. 12 N., R. 27 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	15.10	Apr. 6	15.56	July 5	15.25	Sept. 14	14.86
Feb. 14	16.10	May 2	15.53	Aug. 6	15.09	Nov. 7	14.79
Mar. 6	15.14	June 1	15.57				

U3 (\*988, p. 269; 1018, p. 209). Central Nebraska Public Power and Irrigation District. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 6, T. 13 N., R. 29 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	3.41	Apr. 4	3.43	July 5	3.35	Sept. 1	3.48
Feb. 11	3.26	May 2	3.32	Aug. 6	3.40	Oct. 17	3.52
Mar. 1	3.36	June 1	3.28				

U4 (\*988, p. 269; 1018, p. 210). Central Nebraska Public Power and Irrigation District. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 6, T. 13 N., R. 29 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	4.40	Apr. 4	4.99	July 5	4.43	Sept. 1	4.56
Feb. 11	4.47	May 2	4.43	Aug. 6	4.49	Oct. 17	4.79
Mar. 1	4.62	June 1	4.39				

U5 (\*988, p. 270; 1018, p. 210). Central Nebraska Public Power and Irrigation District. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 5, T. 13 N., R. 29 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	2.44	Apr. 4	2.51	July 5	2.32	Sept. 1	2.59
Feb. 11	2.31	May 2	2.28	Aug. 6	2.41	Oct. 17	3.85
Mar. 1	2.45	June 1	2.26				

U6 (\*988, p. 271; 1018, p. 210). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 5, T. 13 N., R. 29 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	2.43	Apr. 4	2.32	July 5	2.37	Sept. 1	2.45
Feb. 11	2.56	May 2	2.30	Aug. 6	2.41	Oct. 17	2.55
Mar. 1	2.40	June 1	2.29				



U7 (\*988, p. 271; 1018, p. 210). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 9, T. 13 N., R. 29 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	5.22	Apr. 4	5.38	July 5	5.19	Sept. 1	5.53
Feb. 8	5.25	May 2	5.20	Aug. 6	5.30	Oct. 17	5.68
Mar. 1	5.27	June 1	5.16				

U8 (\*988, p. 272; 1018, p. 210). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 4, T. 13 N., R. 29 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	5.65	Apr. 4	5.66	July 5	5.62	Sept. 1	5.79
Feb. 8	5.61	May 2	5.52	Aug. 6	5.71	Oct. 17	5.91
Mar. 1	5.60	June 1	5.46				

U9 (\*988, p. 272; 1018, p. 210). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 13, T. 13 N., R. 30 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	2.81	Apr. 5	2.69	July 5	2.79	Sept. 1	2.83
Feb. 11	2.58	May 2	2.73	Aug. 6	2.85	Nov. 9	2.84
Mar. 1	2.80	June 1	2.73				

U10 (\*988, p. 273; 1018, p. 210). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 14, T. 13 N., R. 30 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	5.10	Apr. 5	5.03	July 5	4.95	Sept. 1	4.90
Feb. 11	5.04	May 2	5.01	Aug. 6	4.94	Nov. 9	5.01
Mar. 1	5.00	June 1	5.00				

U11 (\*988, p. 273; 1018, p. 210). Central Nebraska Public Power and Irrigation District. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 18, T. 13 N., R. 29 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	4.58	May 2	4.39	July 5	4.21	Sept. 1	4.15
Mar. 1	4.45	June 1	4.30	Aug. 6	4.20	Nov. 9	4.25
Apr. 5	4.45						

U12 (\*902, p. 222; 933, p. 176; 946, p. 218; \*988, p. 274; 1018, p. 210). Central Nebraska Public Power and Irrigation District. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 13, T. 13 N., R. 30 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	10.48	Apr. 5	10.31	June 1	10.30	Aug. 6	10.24
Feb. 11	10.30	May 2	10.30	July 5	10.26	Sept. 1	10.20
Mar. 1	10.26						

U13 (\*988, p. 274; 1018, p. 211). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 17, T. 13 N., R. 29 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	3.20	Apr. 5	3.20	July 5	3.18	Sept. 1	3.62
Feb. 14	2.90	May 2	3.20	Aug. 6	3.59	Nov. 9	3.95
Mar. 1	2.91	June 1	3.24				

U15 (\*988, p. 275; 1018, p. 211). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 20, T. 13 N., R. 29 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 5	2.36	Apr. 5	2.32	June 1	2.35
Feb. 14	1.98	May 2	2.30	July 5	2.36
Mar. 1	2.20			Aug. 6	3.00
				Sept. 1	3.40

U16 (\*988, p. 276; 1018, p. 211). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 1, T. 13 N., R. 30 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 10	5.28	Apr. 4 a	7.68	July 5	7.45
Feb. 11	5.78	May 2	7.53	Aug. 6	7.43
Mar. 1	7.56	June 1	7.40	Oct. 17	7.37

a Lowest observed stage in period of record.

U17 (\*988, p. 276; 1018, p. 211). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 6, T. 13 N., R. 29 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 10	3.01	Apr. 4	3.04	July 5	3.00
Feb. 11	2.82	May 2	3.00	Aug. 6	3.02
Mar. 1	2.93	June 1	2.90	Sept. 1	3.06
				Oct. 17	3.08

U18 (\*988, p. 277; 1018, p. 211). Central Nebraska Public Power and Irrigation District. SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 6, T. 13 N., R. 29 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 10	4.13	Apr. 4	4.21	July 5	4.04
Feb. 11	4.00	May 2	4.09	Aug. 6	4.05
Mar. 1	4.12	June 1	4.00	Oct. 17	4.05

U19 (\*988, p. 277; 1018, p. 211). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 6, T. 13 N., R. 29 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 10	3.91	Apr. 4	4.40	July 5	3.92
Feb. 11	4.10	May 2	4.30	Aug. 6	3.90
Mar. 1	4.20	June 1	3.90	Sept. 1	3.79
				Oct. 17	3.69

U20 (\*988, p. 278; 1018, p. 211). Central Nebraska Public Power and Irrigation District. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 21, T. 13 N., R. 29 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 5	1.86	Apr. 5	1.50	June 1	1.56
Feb. 14	1.49	May 2	1.55	July 5	1.56
Mar. 1	1.56			Aug. 6	1.60
				Sept. 1	1.66

U21 (\*908, p. 222; 938, p. 176; 946, p. 218; \*988, p. 278; 1018, p. 211). A. E. Wheeler. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 35, T. 13 N., R. 29 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

## U21--Continued.

Water level, in feet below land-surface datum, 1945								
Date		Water level	Date		Water level	Date		Water level
Jan. 5		9.43	Apr. 5		9.82	June 1		9.83
Feb. 8		9.73	May 2		9.80	July 5		9.79
Mar. 1		9.75				Aug. 6		9.75
						Sept. 14		9.65

U22 (\*908, p. 223; 938, p. 176; 946, p. 218; \*988, p. 278; 1018, p. 212). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 31, T. 13 N., R. 28 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945											
Jan.	5	5.09	Apr.	5	5.55	June	1	5.60	Aug.	5	5.70
Mar.	1	5.33	May	2	5.58	July	5	5.69	Sept.	1	5.50

U23 (\*988, p. 278; 1018, p. 212). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 9, T. 12 N., R. 28 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Jan. 8	5.18	Apr. 6	5.18	June 1	5.24	Aug. 6	5.40
Feb. 14	a 4.98	May 2	5.22	July 5	5.30	Sept. 14	5.36
Mar. 1	5.14						

a Highest observed stage in period of record.

U24 (\*988, p. 279; 1018, p. 212). Central Nebraska Public Power and Irrigation District. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 25, T. 13 N., R. 29 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Jan. 8	4.82	Apr. 4	4.92	July 5	4.64	Sept. 1	4.95
Feb. 7	4.85	May 2	4.64	Aug. 6	4.92	Oct. 8	4.82
Mar. 3	4.87	June 1	4.64				

U25 (\*988, p. 279; 1018, p. 212). Central Nebraska Public Power and Irrigation District. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 16, T. 13 N., R. 29 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945					
Jan. 8	5.83	Apr. 4	5.97	July 5	5.67
Feb. 7	5.95	May 2	5.78	Aug. 6	5.93
Mar. 3	5.95	June 1	5.68	Sept. 1	5.62
				Oct. 8	5.70

U26 (\*988, p. 280; 1018, p. 212). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 29, T. 13 N., R. 28 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Jan. 8	5.32	Apr. 4	5.41	June 1	4.94	Aug. 6	5.07
Feb. 7	5.28	May 2	5.26	July 5	5.13	Oct. 8	5.42
Mar. 3	5.29			.			

U27 (\*988, p. 280; 1018, p. 212). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 21, T. 13 N., R. 28 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945						
Date	Water level	Date	Water level	Date	Water level	
Jan. 8	4.55	Mar. 3	3.85	June 1	1.37	
Feb. 7	4.21	Apr. 4	3.12			

U28 (\*988, p. 281; 1018, p. 212). Central Nebraska Public Power and Irrigation District. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 4, T. 12 N., R. 28 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	4.80	Apr. 4	4.68	July 5	4.05	Sept. 1	5.19
Feb. 7	4.60	May 2	4.38	Aug. 6	4.82	Oct. 8	4.99
Mar. 3	4.55	June 1	4.05				

U29 (\*988, p. 281; 1018, p. 212). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 11, T. 12 N., R. 28 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	2.75	Apr. 4	2.66	July 3	2.40	Sept. 1	3.22
Feb. 7	2.52	May 2	2.27	Aug. 6	3.14	Oct. 8	2.95
Mar. 3	2.44	June 1	1.52				

U30 (\*988, p. 282; 1018, p. 213). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 16, T. 12 N., R. 27 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	4.60	Apr. 4	4.63	July 3	4.57	Sept. 1	4.76
Feb. 17	4.55	May 2	4.54	Aug. 6	4.29	Oct. 8	4.62
Mar. 3	4.58	June 1	4.02				

U31 (\*988, p. 282; 1018, p. 213). Central Nebraska Public Power and Irrigation District. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 27, T. 12 N., R. 27 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	3.26	Apr. 6	3.09	July 5	3.15	Sept. 14	3.75
Feb. 14	2.97	May 2	3.10	Aug. 6	3.35	Nov. 7	4.89
Mar. 6	2.90	June 1	3.12				

U32 (\*908, p. 223; 938, p. 176; 946, p. 218; \*988, p. 283; 1018, p. 213). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 15, T. 12 N., R. 28 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	12.29	Apr. 6	12.36	July 5	12.46	Sept. 14	12.51
Feb. 14	12.24	May 2	12.40	Aug. 6	12.55	Nov. 9	12.17
Mar. 1	12.27	June 1	12.43				

U33 (\*908, p. 223; 938, p. 177; 946, p. 218; \*988, p. 283; 1018, p. 213). Central Nebraska Public Power and Irrigation District. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 14, T. 12 N., R. 28 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	28.45	Apr. 6	28.32	July 5	28.32	Sept. 14	28.01
Feb. 14	28.32	May 2	28.34	Aug. 6	28.21	Nov. 9	a 27.88
Mar. 1	28.31	June 1	28.36				

a Highest observed stage in period of record.

U34 (\*908, p. 223; 938, p. 177; 946, p. 218; \*988, p. 283; 1018, p. 213). Central Nebraska Public Power and Irrigation District. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 20, T. 12 N., R. 27 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

U34--Continued.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	14.37	Apr. 6	14.22	July 5	14.18	Sept. 14	14.15
Feb. 14	14.26	May 2	14.21	Aug. 6	14.18	Nov. 9	14.11
Mar. 1	14.25	June 1	14.20				

a Highest observed stage in period of record.

U35 (\*908, p. 224; 938, p. 177; 946, p. 218; \*988, p. 283; 1018, p. 213). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 28, T. 12 N., R. 27 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Jan. 11	1.70	Mar. 1	1.54	May 2	1.72	July 5	1.75
Feb. 14	1.41	Apr. 6	1.70	June 1	1.75		

a Highest observed stage in period of record.

U36 (\*988, p. 283; 1018, p. 213). Central Nebraska Public Power and Irrigation District. SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 32, T. 13 N., R. 27 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Jan. 5	3.04	Apr. 4	3.09	July 13	3.44	Sept. 7	2.40
Feb. 17	2.90	May 4	2.70	Aug. 8	3.00	Oct. 3	2.45
Mar. 1	3.07	June 4	2.12				

U37 (\*988, p. 284; 1018, p. 213). Central Nebraska Public Power and Irrigation District. SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 11, T. 12 N., R. 27 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Jan. 5	6.67	Apr. 4	6.83	July 13	6.71	Sept. 7	7.00
Feb. 8	6.71	May 4	7.10	Aug. 8	7.14	Oct. 3	7.13
Mar. 1	6.72	June 1	6.24				

U38 (\*908, p. 224; 938, p. 177; 946, p. 219; \*988, p. 284; 1018, p. 214). Dr. Schneider. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 26, T. 12 N., R. 27 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Jan. 8	5.99	Apr. 6	6.17	July 5	6.22	Sept. 14	6.26
Feb. 14	5.86	May 2	6.18	Aug. 16	6.25	Nov. 7	6.29
Mar. 6	5.85	June 1	6.20				

a Highest observed stage in period of record.

U39 (\*988, p. 284; 1018, p. 214). Central Nebraska Public Power and Irrigation District. SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 36, T. 12 N., R. 27 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Jan. 8	4.85	Apr. 6	4.93	July 5	4.92	Sept. 14	4.90
Feb. 14	4.85	May 2	4.96	Aug. 6	4.89	Nov. 7	4.93
Mar. 6	4.87	June 1	4.95				

U40 (\*908, p. 224; 938, p. 177; 946, p. 219; \*988, p. 285; 1018, p. 214). Central Nebraska Public Power and Irrigation District. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 16, T. 11 N., R. 26 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Jan. 8	9.89	Apr. 6	10.32	July 5	10.35	Sept. 14	9.50
Feb. 14	9.99	May 2	10.38	Aug. 6	10.13	Nov. 15	9.28
Mar. 3	10.13	June 1	10.42				

a Highest observed stage in period of record.

U41 (\*988, p. 285; 1018, p. 214). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 15, T. 11 N., R. 26 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	6.75	Mar. 6	6.78	May 2	7.32	Nov. 15	8.55
Feb. 14	6.59	Apr. 6	7.30	June 1	7.39		

U42 (\*908, p. 224; 938, p. 177; 946, p. 219; \*988, p. 285; 1018, p. 214). Sheldon. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 15, T. 11 N., R. 26 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	10.14	Mar. 6	10.81	May 2	11.30	Nov. 15	10.90
Feb. 14	10.50	Apr. 6	11.29	June 1	11.32		

U43 (\*908, p. 225; 938, p. 177; 946, p. 219; \*988, p. 286; 1018, p. 214). Central Nebraska Public Power and Irrigation District. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 22, T. 11 N., R. 26 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	27.51	Apr. 6	28.70	July 5	27.41	Sept. 14	26.02
Feb. 14	28.04	May 2	28.71	Aug. 6	27.03	Nov. 15	24.31
Mar. 6	28.26	June 1	28.69				

a Highest observed stage in period of record.

U46 (\*988, p. 286; 1018, p. 214). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 31, T. 12 N., R. 26 W. Measurements through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	3.13	Apr. 6	3.22	June 1	3.24	Sept. 14	3.14
Feb. 14	2.81	May 2	3.23	July 5	3.20	Nov. 7	3.11
Mar. 6	2.95						

U50 (\*908, p. 225; 938, p. 177; 946, p. 219; \*988, p. 286; 1018, p. 215). Dr. Schneider. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 26, T. 12 N., R. 26 W. No measurements made in 1945.

U77 (\*988, p. 286; 1018, p. 215). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 34, T. 12 N., R. 27 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 14	24.25	May 2	24.17	July 5	24.05	Sept. 14	23.25
Mar. 6	24.33	June 1	24.13	Aug. 6	23.66	Nov. 7	23.62
Apr. 6	25.16						

U78 (\*988, p. 287; 1018, p. 215). Central Nebraska Public Power and Irrigation District. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 35, T. 12 N., R. 27 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 14	21.15	May 2	22.16	July 5	21.99	Sept. 14	21.14
Mar. 6	21.63	June 1	22.10	Aug. 6	21.55	Nov. 7	20.85
Apr. 6	22.14						

U79 (\*988, p. 287; 1018, p. 215). Central Nebraska Public Power and Irrigation District. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 35, T. 12 N., R. 27 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	18.18	Apr. 6	18.86	July 5	18.62	Sept. 14	17.88
Feb. 14	18.18	May 2	18.90	Aug. 6	18.20	Nov. 7	17.35
Mar. 6	18.34	June 1	18.83				

U80 (\*988, p. 287; 1018, p. 215). Central Nebraska Public Power and Irrigation District. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 35, T. 12 N., R. 27 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	26.87	Apr. 6	24.83	July 5	24.79	Sept. 14	24.62
Feb. 14	24.85	May 2	24.84	Aug. 6	24.76	Nov. 7	24.54
Mar. 1	24.83	June 1	24.83				

a Highest observed stage in period of record.

#### Logan County

404 (\*886, p. 326; 908, p. 225; 938, p. 178; 946, p. 219; 988, p. 288; 1018, p. 215). University of Nebraska. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 5, T. 17 N., R. 27 W. No measurements made in 1945.

#### Loup County

234 (\*817, p. 148; 840, p. 211; 845, p. 178; 886, p. 326; 908, p. 225; 946, p. 219; 988, p. 288; 1018, p. 215). University of Nebraska. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 25, T. 24 N., R. 19 W. No measurements made in 1945.

345 (\*817, p. 148; 840, p. 212; 845, p. 178; 886, p. 326; 908, p. 225; 938, p. 178; 946, p. 219; 988, p. 288; 1018, p. 215). University of Nebraska. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 22, T. 21 N., R. 18 W. No measurements made in 1945.

422 (\*886, p. 326; 908, p. 225; 938, p. 178; 946, p. 219; 988, p. 288; 1018, p. 215). University of Nebraska. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 26, T. 21 N., R. 18 W. No measurements made in 1945.

#### McPherson County

254 (\*817, p. 148; 840, p. 212; 845, p. 178; 886, p. 326; 908, p. 225; 938, p. 178; 946, p. 219; 988, p. 288; 1018, p. 215). University of Nebraska. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 16, T. 18 N., R. 31 W. No measurements made in 1945.

#### Madison County

108 (\*817, p. 148; 840, p. 212; 845, p. 178; 886, p. 326; 908, p. 225; 938, p. 178; 946, p. 220; 988, p. 288; 1018, p. 216). F. Prauner. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 32, T. 24 N., R. 2 W. Water level, in feet below land-surface datum, 1945: Aug. 1, 4.67.

109 (\*817, p. 149; 840, p. 212; 908, p. 226; 938, p. 178; 946, p. 220; 988, p. 288; 1018, p. 216). J. Bredehoft. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 5, T. 23 N., R. 2 W. Water level, in feet below land-surface datum, 1945: Aug. 1, 2.46, highest observed stage in period of record.

110 (\*817, p. 149; 840, p. 212; 845, p. 178; 886, p. 326; 908, p. 226; 938, p. 178; 946, p. 220; 988, p. 288; 1018, p. 216). A. Christian. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 33, T. 22 N., R. 1 W. Water level, in feet below land-surface datum, 1945: Aug. 1, 4.38, highest observed stage in period of record.

334 (\*817, p. 149; 840, p. 212; 845, p. 178; 908, p. 226; 938, p. 178; 946, p. 220; 988, p. 288; 1018, p. 216). O. Engelsgard. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 34, T. 21 N., R. 4 W. No measurements made in 1945.

#### Merrick County

42 (\*817, p. 149; 840, p. 212; 845, p. 179; 886, p. 326; 908, p. 226; 938, p. 178; 946, p. 220; 988, p. 288; 1018, p. 216). F. Pearson. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 27, T. 16 N., R. 3 W. Water levels, in feet below land-surface datum 1945: Oct. 17, 6.52; Dec. 14, 7.11.

49 (\*817, p. 149; 840, p. 212; 845, p. 179; 886, p. 326; 908, p. 226; 938, p. 178; 946, p. 220; 988, p. 288; 1018, p. 216). H. Trudy. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 21, T. 14 N., R. 7 W. To convert water levels from feet above assumed datum, as published in previous reports, to feet below land-surface datum, subtract from 109.04. Water level, in feet below land-surface datum, 1945: Dec. 12, 7.65.

50 (\*817, p. 150; 840, p. 212; 845, p. 179; 886, p. 326; 908, p. 226; 938, p. 178; 946, p. 220; 988, p. 288; \*1018, p. 216). C. Reeves. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 33, T. 13 N., R. 7 W. Water levels, in feet below land-surface datum, 1945: Oct. 17, 5.52; Dec. 11, 5.83.

602. Geol. Survey, U. S. Dept. of Interior. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 28, T. 12 N., R. 8 W. Unused driven observation well, diameter 1 $\frac{1}{4}$  inches, depth 11.3 feet. Measuring point, top of pipe, 1.0 foot above land surface. Water level, in feet below land-surface datum, 1945: Dec. 11, 2.3.

603. Geol. Survey, U. S. Dept. of Interior. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 7, T. 12 N., R. 7 W. Unused driven observation well, diameter 1 $\frac{1}{4}$  inches, depth 11.7 feet. Measuring point, top of pipe, 1.0 foot above land surface. Water level, in feet below land-surface datum, 1945: Dec. 11, 6.35.

604. Geol. Survey, U. S. Dept. of Interior. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 4, T. 13 N., R. 7 W. Unused driven observation well, diameter 1 $\frac{1}{4}$  inches, depth 11.8 feet. Measuring point, top of pipe, 1.0 foot above land surface. Water level, in feet below land-surface datum, 1945: Dec. 11, 7.18.

605. Geol. Survey, U. S. Dept. of Interior. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 15, T. 14 N., R. 6 W. Unused driven observation well, diameter 1 $\frac{1}{4}$  inches, depth 12.12 feet. Measuring point, top of pipe, 1.0 foot above land surface. Water level, in feet below land-surface datum, 1945: Dec. 12, 4.10.

606. Geol. Survey, U. S. Dept. of Interior. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 7, T. 13 N., R. 6 W. Unused driven observation well, diameter 1 $\frac{1}{4}$  inches, depth 12.12 feet. Measuring point, top of pipe, 1.0 foot above land surface. Water level, in feet below land-surface datum, 1945: Dec. 12, 5.48.

607. Geol. Survey, U. S. Dept. of Interior. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 19, T. 13 N., R. 6 W. Unused driven observation well, diameter 1 $\frac{1}{4}$  inches, depth 11.51 feet. Measuring point, top of pipe, 1.0 foot above land surface. Water level, in feet below land-surface datum, 1945: Dec. 13, 4.35.

608. Geol. Survey, U. S. Dept. of Interior. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 2, T. 13 N., R. 6 W. Unused driven observation well, diameter 1 $\frac{1}{4}$  inches, depth 11.8 feet. Measuring point, top of pipe, 1.0 foot above land surface. Water level, in feet below land-surface datum, 1945: Dec. 13, 5.45.

609. Geol. Survey, U. S. Dept. of Interior. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 31, T. 15 N., R. 4 W. Unused driven observation well, diameter 1 $\frac{1}{4}$  inches, depth 11 feet. Measuring point, top of pipe, 1.0 foot above land surface. Water level, in feet below land-surface datum, 1945: Dec. 13, 4.06.

610. Geol. Survey, U. S. Dept. of Interior. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 9, T. 14 N., R. 5 W. Unused driven observation well, diameter 1 $\frac{1}{4}$  inches, depth 9.01 feet. Measuring point, top of pipe, 1.0 foot above land surface. Water level, in feet below land-surface datum, 1945: Dec. 14, 3.83.

611. Geol. Survey, U. S. Dept. of Interior. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 15, T. 15 N., R. 4 W. Unused driven observation well, diameter 1 $\frac{1}{4}$  inches, depth 14.03 feet. Measuring point, top of pipe, 1.0 foot above land surface. Water level, in feet below land-surface datum, 1945: Dec. 14, 7.91.

GI200 (\*836-E, pp. 252, 270; 886, p. 327; 908, p. 226; 938, p. 178; 946, p. 220; \*988, p. 289; 1018, p. 216). City of Grand Island. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 18, T. 11 N., R. 8 W. Measurements supplied through courtesy of Grand Island Water Department. Water level, in feet below land-surface datum, 1945: May 14, 3.34.

GI201 (\*836-E, pp. 252, 271; 886, p. 327; 908, p. 226; 938, p. 178; 946, p. 220; \*988, p. 289; 1018, p. 216). City of Grand Island. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 19, T. 11 N., R. 9 W. Measurements supplied through courtesy of Grand Island Water Department. Water levels, in feet below land-surface datum, 1945: Jan. 22, 9.00; May 14, 7.58.



Morrill County

84 (\*817, p. 150; 840, p. 212; 845, p. 179; 886, p. 327; 908, p. 226; 938, p. 178; 946, p. 220; 988, p. 289; \*1018, p. 216). J. Jenson. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 28, T. 22 N., R. 50 W. No measurements made in 1945.

85 (\*817, p. 150; 840, p. 213; 945, p. 179; 886, p. 327; 908, p. 226; 938, p. 178; 946, p. 220; \*988, p. 289; 1018, p. 217). State of Nebraska, Department of Roads and Irrigation. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 32, T. 20 N., R. 50 W.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	4.58	Apr. 30	4.55	June 19	3.51	Aug. 27	4.58
10	4.61	May 4	4.63	20	3.60	31	4.66
15	4.61	10	4.72	21	3.69	Sept. 5	4.71
20	4.63	15	4.66	22	3.75	10	4.66
25	4.65	20	4.62	23	3.86	16	4.57
Feb. 3	4.69	25	4.67	24	3.90	20	4.45
7	4.57	30	4.50	25	3.95	25	4.44
10	4.54	June 2	4.56	26	4.03	28	4.35
15	4.56	3	4.51	30	4.06	30	4.26
25	4.68	5	4.43	July 3	4.25	Oct. 5	4.19
Mar. 3	4.68	6	4.25	5	4.34	10	4.23
10	4.67	7	4.15	10	4.37	17	4.34
20	4.71	8	4.11	16	4.50	22	4.36
25	4.58	9	3.89	21	4.65	25	4.38
31	4.49	10	3.24	26	4.77	31	4.39
Apr. 7	4.59	11	3.30	Aug. 1	4.86	Nov. 13	4.46
10	4.63	12	3.43	2	4.68	18	4.47
13	4.65	14	3.62	5	4.60	Dec. 4	4.53
16	4.57	15	2.95	10	4.53	10	4.56
20	4.48	16	3.07	15	4.55	15	4.60
26	4.56	17	3.28	20	4.59	21	4.46
27	4.54	18	3.40				

97 (\*817, p. 151; 840, p. 214; 845, p. 180; 886, p. 328; 908, p. 227; 938, p. 179; 946, p. 221; 988, p. 289; \*1018, p. 217). F. Smith. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 28, T. 20 N., R. 50 W. Water level, in feet below land-surface datum, 1945: Mar. 16, 13.67.

Nance County

43 (\*817, p. 151; 840, p. 214; 845, p. 180; 886, p. 328; 908, p. 227; 938, p. 179; 988, p. 289; 1018, p. 217). Greek Estate. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 24, T. 17 N., R. 4 W. No measurements made in 1945.

371 (\*817, p. 151; 840, p. 214; 845, p. 180; 886, p. 328; 908, p. 228; 938, p. 179; 946, p. 221; 988, p. 289; 1018, p. 217). W. Christiansen. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 34, T. 17 N., R. 6 W. No measurements made in 1945.

Nemaha County

11 (\*817, p. 151; 840, p. 214; 845, p. 180; 886, p. 328; 908, p. 228; 938, p. 179; 946, p. 221; \*988, p. 290; 1018, p. 217). Mrs. Horn. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 23, T. 5 N., R. 14 E. No measurements made in 1945.

Nuckolls County

164 (\*817, p. 152; 840, p. 215; 845, p. 180; 886, p. 329; 908, p. 228; 938, p. 179; 988, p. 290; 1018, p. 217). F. Hornbussel. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 2, T. 1 N., R. 7 W. No measurements made in 1945.

165 (\*817, p. 152; 840, p. 215; 845, p. 180; 886, p. 329; 908, p. 228; 938, p. 179; 988, p. 290; 1018, p. 217). E. Dillon. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 8, T. 2 N., R. 5 W. No measurements made in 1945.

393 (\*817, p. 152; 840, p. 215; 845, p. 180; 886, p. 329; 908, p. 228; 938, p. 179; 988, p. 290; 1018, p. 217). W. Statz. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 26, T. 4 N., R. 7 W. No measurements made in 1945.

407 (\*886, p. 329; 908, p. 228; 946, p. 222; 988, p. 290; 1018, p. 218). University of Nebraska. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 36, T. 1 N., R. 7 W. No measurements made in 1945.

#### Otoe County

8a (\*946, p. 222; 988, p. 290; \*1018, p. 218). University of Nebraska. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 3, T. 8 N., R. 10 E. No measurements made in 1945.

9 (\*817, p. 152; 840, p. 215; 845, p. 181; 886, p. 330; 908, p. 228; 938, p. 180; 946, p. 222; 988, p. 290; \*1018, p. 218). W. Gellerman. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 7, T. 8 N., R. 11 E. No measurements made in 1945.

10 (\*817, p. 153; 840, p. 215; 845, p. 181; 886, p. 330; 908, p. 228; 938, p. 180; 946, p. 222; 988, p. 290; \*1018, p. 218). L. Damme. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 35, T. 7 N., R. 12 E. No measurements made in 1945.

#### Pawnee County

4 (777, p. 92; 817, p. 153; 840, p. 215; 845, p. 181; 886, p. 330; 908, p. 228; 946, p. 222; 988, p. 290; \*1018, p. 218). E. Hunzeker. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 8, T. 2 N., R. 11 E. No measurements made in 1945.

#### Perkins County

151 (\*817, p. 153; 840, p. 215; 845, p. 181; 886, p. 330; 908, p. 228; 938, p. 180; 946, p. 222; 988, p. 290; 1018, p. 218). A. Lagler. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 35, T. 11 N., R. 39 W. No measurements made in 1945.

#### Phelps County

5 (\*988, p. 291; 1018, p. 218). Andrew O. Matson. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 8, T. 8 N., R. 20 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

##### Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	9.33	Apr. 18	9.05	July 3	9.20	Sept. 7	9.11
Feb. 17	9.40	May 4	9.30	Aug. 8	9.08	Nov. 24	9.38
Mar. 9	9.46	June 4	9.28				

6 (\*988, p. 291; 1018, p. 218). Breuer W. Nelson. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 17, T. 8 N., R. 20 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

##### Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 19	12.55	Apr. 18	12.60	July 3	12.55	Sept. 7	12.60
Feb. 17	12.75	May 4	12.58	Aug. 8	12.50	Nov. 24	12.52
Mar. 9	12.82	June 4	12.57				

7 (\*988, p. 292; 1018, p. 218). Albert S. Hanson. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 17, T. 8 N., R. 20 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

##### Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	9.04	Apr. 18	8.90	July 3	8.91	Sept. 7	8.97
Feb. 17	9.14	May 4	8.88	Aug. 8	8.92	Nov. 24	8.96
Mar. 9	9.22	June 4	8.85				

8 (\*988, p. 292; 1018, p. 219). Lewis W. Jones. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 9, T. 8 N., R. 20 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	4.00	Apr. 18	4.89	July 3	4.95	Sept. 7	4.00
Feb. 17	4.03	May 4	4.00	Aug. 8	3.90	Nov. 24	4.03
Mar. 9	4.14	June 4	3.98				

9 (\*988, p. 293; 1018, p. 219). Wm. Carlson. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 15, T. 8 N., R. 20 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	7.27	Apr. 18	7.17	July 3	7.15	Sept. 7	7.20
Feb. 17	7.30	May 4	7.20	Aug. 8	7.28	Nov. 24	7.31
Mar. 9	7.40	June 4	8.18				

10 (\*988, p. 293; 1018, p. 219). Central Nebraska Public Power and Irrigation District. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 15, T. 8 N., R. 20 W. Measurements supplied through the courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	9.46	Apr. 18	9.84	July 3	9.41	Sept. 7	9.75
Feb. 17	9.61	May 4	9.50	Aug. 8	9.50	Nov. 24	9.34
Mar. 9	9.51	June 4	9.32				

11 (\*988, p. 293; 1018, p. 219). Central Nebraska Public Power and Irrigation District. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 14, T. 8 N., R. 20 W. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	5.28	Apr. 18	5.05	July 3	5.18	Sept. 7	5.20
Feb. 17	5.25	May 4	5.21	Aug. 8	5.25	Nov. 24	5.22
Mar. 9	5.33	June 4	5.12				

157 (\*817, p. 153; 840, p. 215; 845, p. 181; 886, p. 330; 908, p. 228; 938, p. 180; 946, p. 222; 988, p. 290; 1018, p. 219). Western Public Service Co. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 4, T. 5 N., R. 18 W. No measurements made in 1945.

275 (\*817, p. 154; 840, p. 216; 845, p. 181; 886, p. 330; 908, p. 229; 938, p. 180; 946, p. 222; \*988, p. 290; 1018, p. 219). F. Skiles. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 24, T. 8 N., R. 17 W. Water levels, in feet below land-surface datum, 1945: Oct. 19, 9.39; Dec. 12, 9.33.

276 (\*817, p. 154; 840, p. 216; 886, p. 330; 908, p. 229; 938, p. 180; 946, p. 222; \*988, p. 290; 1018, p. 219). W. Bamford. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 19, T. 8 N., R. 17 W. Water levels, in feet below land-surface datum, 1945: Oct. 19, 11.88, highest observed stage in period of record; Dec. 12, 12.18.

277 (\*817, p. 155; 840, p. 216; 845, p. 181; 886, p. 330; 908, p. 229; 946, p. 223; \*988, p. 290; 1018, p. 219). Water level, in feet below land-surface datum, 1945: Oct. 19, 3.97.

#### Pierce County

70 (\*817, p. 155; 840, p. 216; 845, p. 181; 886, p. 330; 908, p. 229; 938, p. 180; 946, p. 223; 988, p. 294; 1018, p. 219). Village of Foster. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 33, T. 27 N., R. 3 W. No measurements made in 1945.

Platte County

39 (\*817, p. 155; 840, p. 216; 845, p. 181; 886, p. 330; 908, p. 229; 938, p. 180; 946, p. 223; 1018, p. 220). A. Grossnicklaus. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 29, T. 18 N., R. 1 W. Well destroyed; measurements discontinued.

40 (\*817, p. 156; 840, p. 216; 845, p. 181; 886, p. 330; 908, p. 229; 938, p. 180; 946, p. 223; 988, p. 294; 1018, p. 220). E. Schacher. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 2, T. 17 N., R. 2 W. No measurements made in 1945.

41 (\*817, p. 156; 840, p. 216; 845, p. 181; 886, p. 330; 908, p. 229; 938, p. 180; 946, p. 223; 988, p. 294; \*1018, p. 220). H. Ernst. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 12, T. 16 N., R. 2 W. Water level, in feet below land-surface datum, 1945: Oct. 17, 9.58.

342 (\*817, p. 156; 840, p. 216; 845, p. 181; 886, p. 330; 908, p. 229; 938, p. 180; 946, p. 223; 988, p. 294; 1018, p. 220). University of Nebraska. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 18, T. 20 N., R. 1 E. No measurements made in 1945.

US150 (\*988, p. 294; 1018, p. 220). Loup River Public Power District. SE corner SW $\frac{1}{4}$  sec. 28, T. 18 N., R. 1 E.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	67.1	Apr. 28	67.4	July 27	67.4	Oct. 29	67.7
Feb. 28	66.8	May 28	67.4	Aug. 28	67.4	Nov. 28	67.8
Mar. 28	67.2	June 28	67.6	Sept. 29	67.7		

Redwillow County

137 (\*817, p. 156; 840, p. 217; 845, p. 181; 886, p. 330; 908, p. 229; 938, p. 180; 946, p. 223; \*988, p. 295; 1018, p. 220). F. Duckworth. SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 8, T. 3 N., R. 27 W. No measurements made in 1945.

179 (\*817, p. 157; 840, p. 217; 845, p. 181; 886, p. 331; 908, p. 229; 938, p. 180; 988, p. 295; 1018, p. 220). J. Clamp. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 33, T. 2 N., R. 29 W. No measurements made in 1945.

494 (\*988, p. 295; 1018, p. 220). University of Nebraska. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 32, T. 3 N., R. 29 W. No measurements made in 1945.

Richardson County

1 (\*908, p. 229; 938, p. 180; 946, p. 223; 988, p. 295; 1018, p. 220). Fred Metzner. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 29, T. 1 N., R. 17 E. No measurements made in 1945.

2 (\*908, p. 230; 938, p. 180; 946, p. 223; 988, p. 295; 1018, p. 220). Approximately center of sec. 16, T. 1 N., R. 16 E. No measurements made in 1945.

3 (\*908, p. 230; 938, p. 180; 946, p. 223; 988, p. 295; 1018, p. 220). Clarence Schatz. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 10, T. 3 N., R. 16 E. No measurements made in 1945.

4 (\*908, p. 230; 938, p. 180; 946, p. 223; 988, p. 295; 1018, p. 220). Mrs. Della Goolsley. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 10, T. 3 N., R. 16 E. No measurements made in 1945.

5 (\*817, p. 157; 840, p. 217; 845, p. 181; 886, p. 331; 908, p. 230; 938, p. 181; 946, p. 223; \*988, p. 295; 1018, p. 221). W. Hogue. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 27, T. 2 N., R. 14 E. No measurements made in 1945.

6 (\*908, p. 230; 938, p. 180; 946, p. 223; 988, p. 296; 1018, p. 221). Will Yoessel. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 3, T. 1 N., R. 17 E. No measurements made in 1945.

7 (\*817, p. 157; 840, p. 217; 845, p. 181; 908, p. 230; 938, p. 181; 988, p. 296; \*1018, p. 221). University of Nebraska. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 16, T. 1 N., R. 17 E. No measurements made in 1945.

8 (\*908, p. 231; 938, p. 180; 946, p. 224). F. W. Burgett. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 19 (may be SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 20) T. 1 N., R. 14 E. No measurements made in 1945.

9 (\*908, p. 231; 938, p. 180; 946, p. 224). Fowle Realty Co. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 19, T. 1 N., R. 16 E. No measurements made in 1945.

10 (\*908, p. 231; 938, p. 180; 946, p. 224). Ben Stalder. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 27, T. 1 N., R. 15 E. No measurements made in 1945.

11 (\*908, p. 231; 938, p. 180; 946, p. 224). George Riden. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 32, T. 1 N., R. 15 E. No measurements made in 1945.

12 (\*908, p. 231; 938, p. 180; 946, p. 224). E. J. Ahearn. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 24, T. 3 N., R. 15 E. No measurements made in 1945.

13 (\*908, p. 232; 938, p. 180; 946, p. 224). Warren Gergens. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 23, T. 3 N., R. 13 E. No measurements made in 1945.

14 (\*908, p. 232; 938, p. 180; 946, p. 224). L. Heineman. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 16, T. 2 N., R. 15 E. No measurements made in 1945.

15 (\*908, p. 232; 938, p. 180; 946, p. 224). Mrs. Martha Remmers. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 29, T. 5 N., R. 17 E. No measurements made in 1945.

408 (\*886, p. 331; 908, p. 332; 938, p. 181; 946, p. 224; \*988, p. 296; 1018, p. 221). S. A. Miles. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 11, T. 1 N., R. 14 E. No measurements made in 1945.

410 (\*908, p. 232; 946, p. 224; 988, p. 296; \*1018, p. 221). University of Nebraska. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 4, T. 2 N., R. 13 E. No measurements made in 1945.

416 (\*886, p. 331; 908, p. 233; 938, p. 181; 946, p. 224; \*988, p. 296; 1018, p. 221). Mrs. Wittler. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 22, T. 2 N., R. 14 E. No measurements made in 1945.

417 (\*908, p. 233; 938, p. 180; 946, p. 224; 988, p. 296; 1018, p. 221). University of Nebraska. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 19, T. 1 N., R. 16 E. No measurements made in 1945.

419 (\*886, p. 331; 908, p. 233; 938, p. 181; 946, p. 224; \*988, p. 296; 1018, p. 221). University of Nebraska. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 12, T. 1 N., R. 15 E. No measurements made in 1945.

#### Rock County

117 (\*817, p. 158; 840, p. 217; 845, p. 181; 886, p. 331; 908, p. 233; 938, p. 181; \*988, p. 296; 1018, p. 221). University of Nebraska. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 8, T. 30 N., R. 17 W. Water levels, in feet below land-surface datum, 1945: May 18, 1.97; Aug. 1, 3.11.

198 (\*817, p. 158; 840, p. 217; 908, p. 233; 938, p. 181; 946, p. 224; 988, p. 296; 1018, p. 221). H. Gallagher. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 3, T. 30 N., R. 19 W. Water levels, in feet below land-surface datum, 1945: May 16, 0.80, water in ditch; Aug. 1, 2.73.

#### Saline County

194 (\*817, p. 158; 840, p. 217; 845, p. 181; 886, p. 332; 908, p. 233; 938, p. 181; 946, p. 224; 988, p. 296; \*1018, p. 221). Frybl Estate. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 24, T. 6 N., R. 1 E. No measurements made in 1945.

341 (\*817, p. 158; 840, p. 217; 845, p. 181; 886, p. 332; 908, p. 233; 938, p. 181; 946, p. 224; 988, p. 297; \*1018, p. 221). A. Kohout. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 30, T. 7 N., R. 3 E. No measurements made in 1945.

#### Sarpy County

26a (\*938, p. 181; 988, p. 297; 1018, p. 222). University of Nebraska. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 26, T. 13 N., R. 13 E. No measurements made in 1945.

27 (\*817, p. 159; 840, p. 218; 845, p. 182; 886, p. 332; 908, p. 234; 946, p. 225; 988, p. 297; 1018, p. 222). Chicago, Burlington & Quincy Railroad. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 27, T. 13 N., R. 13 E. No measurements made in 1945.

323 (\*817, p. 159; 840, p. 218; 845, p. 182; 886, p. 332; 908, p. 234; 938, p. 181; 946, p. 225; 988, p. 297; 1018, p. 222). S. Arbutnot. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 26, T. 14 N., R. 12 E. No measurements made in 1945.

#### Saunders County

19 (\*817, p. 159; 840, p. 218; 845, p. 182; 886, p. 332; 908, p. 234; 938, p. 181; 988, p. 297; \*1018, p. 222). Chicago, Burlington & Quincy Railroad. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 29, T. 14 N., R. 8 E. No measurements made in 1945.

21 (\*817, p. 159; 840, p. 218; 845, p. 182; 886, p. 332; 908, p. 234; 938, p. 181; 946, p. 225; 988, p. 297; \*1018, p. 222). City of Lincoln. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 11, T. 13 N., R. 9 E. No measurements made in 1945.

22 (\*817, p. 159; 840, p. 218; 845, p. 182; 886, p. 332; 908, p. 234; 938, p. 181; 946, p. 225; 988, p. 297; \*1018, p. 222). City of Lincoln. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 11, T. 13 N., R. 9 E. No measurements made in 1945.

331 (\*817, p. 160; 840, p. 218; 845, p. 182; 886, p. 332; 908, p. 234; 938, p. 181; 946, p. 225; 988, p. 297; \*1018, p. 222). Union Pacific Railroad. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 35, T. 14 N., R. 5 E. No measurements made in 1945.

2-6600W (\*988, p. 297; 1018, p. 222). Key well US 62. City of Lincoln. SW. corner sec. 24, T. 13 N., R. 9 E.

#### Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	5.00	May 1	2.30	July 30	2.51	Oct. 31	5.95
Mar. 1	4.09	June 1	1.70	Aug. 31	5.18	Dec. 1	6.10
30	3.55	30	2.30	Oct. 1	5.63	31	5.96

#### Scotts Bluff County

438 (\*840, p. 228; 845, p. 190; 886, p. 332; 908, p. 234; 938, p. 181; 946, p. 225; 988, p. 298; \*1018, p. 222). University of Nebraska. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 21, T. 23 N., R. 56 W. Water level, in feet below land-surface datum, 1945: May 16, 12.70, lowest observed stage in period of record.

439 (\*840, p. 228; 845, p. 191; 886, p. 332; 908, p. 234; 938, p. 181; 946, p. 225; 988, p. 298; \*1018, p. 222). University of Nebraska. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 28, T. 23 N., R. 56 W. Water level, in feet below land-surface datum, 1945: Mar. 16, 9.54.

440 (\*840, p. 228; 845, p. 191; 886, p. 332; 908, p. 234; 938, p. 181; 946, p. 225; 988, p. 298; \*1018, p. 223). University of Nebraska. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 28, T. 23 N., R. 56 W. Water level, in feet below land-surface datum, 1945: Mar. 16, 3.64.

442 (\*840, p. 229; 845, p. 191; 886, p. 332; 908, p. 234; 938, p. 181; 946, p. 225; 988, p. 298; \*1018, p. 223). University of Nebraska. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 4, T. 22 N., R. 56 W. Water level, in feet below land-surface datum, 1945: Mar. 16, 7.35.

502 (\*946, p. 225; 988, p. 298; 1018, p. 223). Harry Long. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 22, T. 23 N., R. 57 W. No measurements made in 1945.

#### Seward County

171 (\*817, p. 160; 840, p. 229; 845, p. 192; 886, p. 332; 908, p. 234; 938, p. 182; 946, p. 226; 988, p. 298; 1018, p. 223). Kilpatrick Estate. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 22, T. 11 N., R. 3 E. No measurements made in 1945.

#### Sheridan County

120 (\*817, p. 161; 840, p. 229; 845, p. 192; 908, p. 235; 938, p. 182; 946, p. 226; 988, p. 298; 1018, p. 223). C. Johnson. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 5, T. 31 N., R. 46 W. No measurements made in 1945.

217 (\*817, p. 161; 840, p. 229; 845, p. 192; 886, p. 333; 908, p. 235; 938, p. 182; 946, p. 226; 988, p. 298; 1018, p. 223). University of Nebraska. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 34, T. 24 N., R. 41 W. Water level, in feet below land-surface datum, 1945: Aug. 17, 8.17.

376 (\*817, p. 161; 840, p. 230; 845, p. 192; 886, p. 333; 908, p. 235; 938, p. 182; 946, p. 226; 988, p. 298; 1018, p. 223). University of Nebraska. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 1, T. 31 N., R. 44 W. Water level, in feet below land-surface datum, 1945: Aug. 2, 3.47.

#### Sherman County

58 (\*817, p. 162; 840, p. 230; 845, p. 192; 886, p. 333; 908, p. 235; 938, p. 182; 946, p. 226; 988, p. 299; 1018, p. 223). J. Kociemba. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 24, T. 15 N., R. 15 W. No measurements made in 1945.

#### Sioux County

81 (\*817, p. 162; 840, p. 230; 845, p. 192; 886, p. 333; 908, p. 235; 938, p. 182; 946, p. 226; 988, p. 299; 1018, p. 223). J. Cook. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 33, T. 29 N., R. 55 W. No measurements made in 1945.

125 (\*817, p. 162; 840, p. 230; 845, p. 192; 886, p. 333; 908, p. 235; 946, p. 226; 988, p. 299; 1018, p. 224). Village of Harrison. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 10, T. 31 N., R. 56 W. No measurements made in 1945.

377 (\*817, p. 163; 840, p. 231; 845, p. 192; 886, p. 333; 908, p. 235; 938, p. 182; 946, p. 226; 988, p. 299; 1018, p. 224). University of Nebraska. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 6, T. 28 N., R. 55 W. No measurements made in 1945.

#### Stanton County

421 (\*886, p. 333; 908, p. 235; 946, p. 226; 988, p. 299; 1018, p. 224). University of Nebraska. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 11, T. 23 N., R. 3 E. No measurements made in 1945.

#### Thayer County

166 (\*817, p. 163; 840, p. 231; 845, p. 193; 886, p. 334; 908, p. 235; 938, p. 182; 988, p. 299; 1018, p. 224). H. Eggert. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 31, T. 3 N., R. 2 W. No measurements made in 1945.

187 (\*817, p. 163; 840, p. 231; 845, p. 193; 886, p. 334; 908, p. 235; 938, p. 182; 988, p. 299; 1018, p. 224). L. Williams. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 4, T. 4 N., R. 4 W. No measurements made in 1945.

452 (\*886, p. 334; 908, p. 235; 938, p. 182; 988, p. 299; 1018, p. 224). University of Nebraska. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 22, T. 4 N., R. 4 W. No measurements made in 1945.

Thomas County

212 (\*817, p. 163; 840, p. 231; 845, p. 193; 886, p. 334; 908, p. 236; 946, p. 226; 988, p. 299; \*1018, p. 224). University of Nebraska. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 9, T. 23 N., R. 28 W. Water level, in feet below land-surface datum, 1945: Aug. 17, 10.78.

213 (\*817, p. 164; 840, p. 231; 845, p. 193; 886, p. 334; 908, p. 236; 938, p. 182; 946, p. 227; 988, p. 299; \*1018, p. 224). University of Nebraska. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 20, T. 24 N., R. 30 W. Water level, in feet below land-surface datum, 1945: Aug. 17, 2.90.

Thurston County

60 (\*817, p. 164; 840, p. 231; 908, p. 236; 938, p. 182; 946, p. 227; 988, p. 299; 1018, p. 224). S. French. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 26, T. 25 N., R. 6 E. No measurements made in 1945.

102 (\*817, p. 164; 840, p. 232; 845, p. 193; 886, p. 334; 908, p. 236; 946, p. 227; 988, p. 299; 1018, p. 224). University of Nebraska. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 12, T. 26 N., R. 5 E. No measurements made in 1945.

103 (\*817, p. 164; 840, p. 232; 845, p. 193; 886, p. 334; 908, p. 236; 938, p. 182; 946, p. 227; 988, p. 299; 1018, p. 224). D. Leap. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 13, T. 26 N., R. 8 E. No measurements made in 1945.

Valley County

54 (\*817, p. 164; 840, p. 232; 845, p. 193; 886, p. 334; 908, p. 236; 938, p. 183; 946, p. 300; 1018, p. 224). E. Esterbrook. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 26, T. 17 N., R. 16 W. No measurements made in 1945.

56 (\*817, p. 165; 840, p. 232; 845, p. 193; 886, p. 334; 908, p. 236; 938, p. 183; 946, p. 227; 988, p. 300; 1018, p. 225). C. Verzal. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 6, T. 19 N., R. 14 W. No measurements made in 1945.

57 (\*817, p. 165; 840, p. 232; 845, p. 193; 886, p. 334; 908, p. 236; 938, p. 183; 946, p. 227; 988, p. 300; 1018, p. 225). W. T. Hutchins. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 23, T. 18 N., R. 13 W. No measurements made in 1945.

601 (\*1018, p. 225). Geol. Survey, U. S. Dept. of Interior. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 26, T. 17 N., R. 16 W.

Lowest daily water level, in feet below land-surface datum, 1945  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	a5.17	4.90	4.66	5.37	a5.14	4.53	5.43	6.14	6.45	6.18	5.95	5.71
2	a5.21	4.91	4.60	5.41	5.21	4.73	5.49	6.17	6.47	6.15	5.94	5.71
3	a5.25	4.91	4.62	5.42	5.27	4.87	5.56	6.18	6.48	6.14	5.94	5.70
4	a5.26	4.85	4.62	5.42	5.32	4.92	a5.64	6.19	6.49	6.12	5.94	5.69
5	5.25	4.81	4.63	a5.38	5.37	4.88	a5.73	6.21	6.49	6.11	5.92	5.69
6	5.19	4.74	4.73	a5.39	5.42	4.16	5.76	6.24	6.53	6.10	5.91	a5.67
7	5.14	4.69	a4.74	a5.40	5.47	a4.01	5.80	6.27	6.54	6.08	5.91	a5.65
8	5.08	a4.66	a4.75	a5.41	5.53	a4.08	5.85	6.28	6.54	6.08	5.90	5.63
9	5.06	a4.63	a4.76	a5.42	5.54	a4.15	5.88	a6.27	6.55	a6.08	5.89	5.62
10	5.07	a4.59	a4.77	5.43	5.44	a4.22	5.90	6.25	6.56	a6.06	5.89	5.62
11	5.04	a4.55	a4.78	5.46	a5.37	a4.29	5.90	6.21	6.56	a6.05	5.88	5.63
12	5.00	a4.52	a4.79	5.49	a5.34	a4.36	a5.95	6.23	6.56	a6.04	5.87	5.63
13	4.96	a4.48	a4.80	5.51	a5.32	a4.42	a5.98	6.14	6.55	a6.04	5.86	5.62
14	4.92	a4.44	a4.81	5.42	a5.29	a4.50	a5.98	6.26	6.53	a6.03	5.85	5.60
15	4.87	4.41	a4.82	5.29	a5.26	a4.57	a5.95	6.28	6.53	a6.03	5.84	5.58
16	4.84	4.50	a4.83	5.20	5.26	a4.64	a5.96	6.30	6.55	a6.03	5.83	5.57
17	4.79	4.58	a4.84	4.79	5.34	a4.71	a5.84	6.32	6.56	a6.02	5.83	5.58
18	4.76	4.63	a4.85	4.35	5.45	a4.78	5.73	6.34	6.56	a6.02	5.82	5.58
19	4.73	4.66	a4.86	a4.22	5.52	a4.85	5.76	6.35	6.51	a6.02	5.82	5.57
20	4.71	4.67	4.88	a4.30	5.56	4.94	5.83	6.38	6.47	a6.02	5.81	5.54

a Interpolated.



601--Continued.

Lowest daily water level, in feet below land-surface datum, 1945  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
21	4.68	4.67	4.91	a4.37	5.56	5.03	5.91	6.39	6.44	a6.01	5.80	5.50
22	4.65	4.67	4.94	a4.45	5.30	5.12	5.95	6.30	6.45	a6.01	5.80	5.47
23	4.63	4.68	4.98	a4.53	5.22	5.22	5.99	6.20	6.47	a6.01	5.80	5.44
24	4.61	4.66	5.06	a4.60	5.32	5.23	6.03	6.17	6.48	a6.00	5.80	5.42
25	4.56	4.61	5.09	a4.68	5.41	5.28	a6.05	6.19	6.48	a6.00	5.79	5.38
26	4.54	4.51	5.13	a4.76	5.48	5.34	a5.86	6.23	6.48	a5.99	5.77	5.36
27	4.52	4.65	5.16	a4.83	5.50	5.40	5.79	6.30	6.43	a5.98	5.76	5.33
28	4.51	4.67	5.24	a4.91	5.08	5.30	5.82	6.35	6.53	a5.98	5.74	5.31
29	4.58		5.28	a4.99	4.96	5.38	5.89	6.38	6.27	a5.97	5.73	5.27
30	4.70		5.31	a5.06	5.03	5.42	5.98	6.40	6.23	5.96	5.72	5.24
31	4.73		5.33		5.04		6.07	6.43		5.96		5.21

a Interpolated.

Washington County

32 (\*817, p. 165; 840, p. 232; 845, p. 193; 886, p. 334; 908, p. 236; 938, p. 183; 946, p. 227; 988, p. 300; \*1018, p. 225). A. Matzen. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 5, T. 17 N., R. 11 E. No measurements made in 1945.

33 (\*817, p. 165; 840, p. 232; 845, p. 193; 886, p. 334; 908, p. 236; 938, p. 183; 946, p. 227; 988, p. 300; \*1018, p. 225). E. Jensen. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 3, T. 18 N., R. 11 E. No measurements made in 1945.

Wayne County

100 (\*817, p. 165; 840, p. 232; 845, p. 193; 886, p. 334; 908, p. 236; 938, p. 183; 946, p. 227; 988, p. 300; \*1018, p. 226). W. Andrews. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 13, T. 26 N., R. 3 E. No measurements made in 1945.

Webster County

161 (\*817, p. 166; 840, p. 232; 845, p. 193; 886, p. 336; 908, p. 236; 938, p. 183; 946, p. 227; 988, p. 300; \*1018, p. 226). R. Adams. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 34, T. 3 N., R. 10 W. No measurements made in 1945.

162 (\*817, p. 166; 840, p. 233; 845, p. 193; 946, p. 227; 988, p. 300; \*1018, p. 226). H. Sommerhalder. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 36, T. 2 N., R. 10 W. No measurements made in 1945.

163 (\*817, p. 166; 840, p. 233; 845, p. 193; 886, p. 336; 908, p. 236; 938, p. 183; 946, p. 228; 988, p. 300; \*1018, p. 226). H. Pederson. SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 24, T. 2 N., R. 9 W. No measurements made in 1945.

Wheeler County

204 (\*817, p. 166; 840, p. 233; 845, p. 193; 886, p. 336; 908, p. 237; 938, p. 183; 946, p. 228; 988, p. 300; \*1018, p. 226). University of Nebraska. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 12, T. 23 N., R. 11 W. No measurements made in 1945.

205 (\*817, p. 167; 840, p. 233; 845, p. 193; 886, p. 336; 908, p. 237; 938, p. 183; 946, p. 228; 988, p. 300; \*1018, p. 226). University of Nebraska. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 22, T. 21 N., R. 12 W. No measurements made in 1945.

York County

167 (\*817, p. 167; 840, p. 233; 845, p. 193; 908, p. 237; 938, p. 183; 946, p. 228; 988, p. 300; \*1018, p. 226). H. Moore. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 32, T. 11 N., R. 3 W. No measurements made in 1945.

## NORTH DAKOTA

By P. D. Akin

### PROGRAM OF WORK

Ground-water investigations and the measurement of water levels in observation wells in North Dakota were continued in 1945 in cooperation with the State Geological Survey and the North Dakota State Water Conservation Commission. At the end of 1945 water levels were being measured in 133 observation wells, of which 9 were equipped with automatic water-stage recorders and 42 were measured weekly or intermittently by local observers or through the courtesy of city, State, or other Federal agencies. Measurements were discontinued in 4 wells. In the report are given the records of a total of 1,373 water-level measurements made in 1945 and, in addition, 3,134 water-level determinations obtained from the wells equipped with automatic water-stage recorders.

Field work in connection with the investigation of the ground-water conditions in the vicinity of Minot was continued in 1945. A short investigation of the ground-water conditions in Lake Agassiz beach deposits was made in an area near Mountain. An intensive investigation of the ground-water conditions in Wells County was begun in 1945 in the vicinity of Fessenden. An intensive ground-water investigation was begun in a wide area near Fargo and Moorhead in Cass County, North Dakota, and Clay County, Minnesota, to supplement and extend the investigation begun in 1940 by Alan C. Byers and L. K. Wenzel. This new investigation is being carried out by the United States Geological Survey in cooperation with the North Dakota State Water Conservation Commission and the Minnesota State Department of Conservation.

### PRECIPITATION

The average annual precipitation for the State in 1945, as reported by the United States Weather Bureau, was 14.85 inches or 2.23 inches below

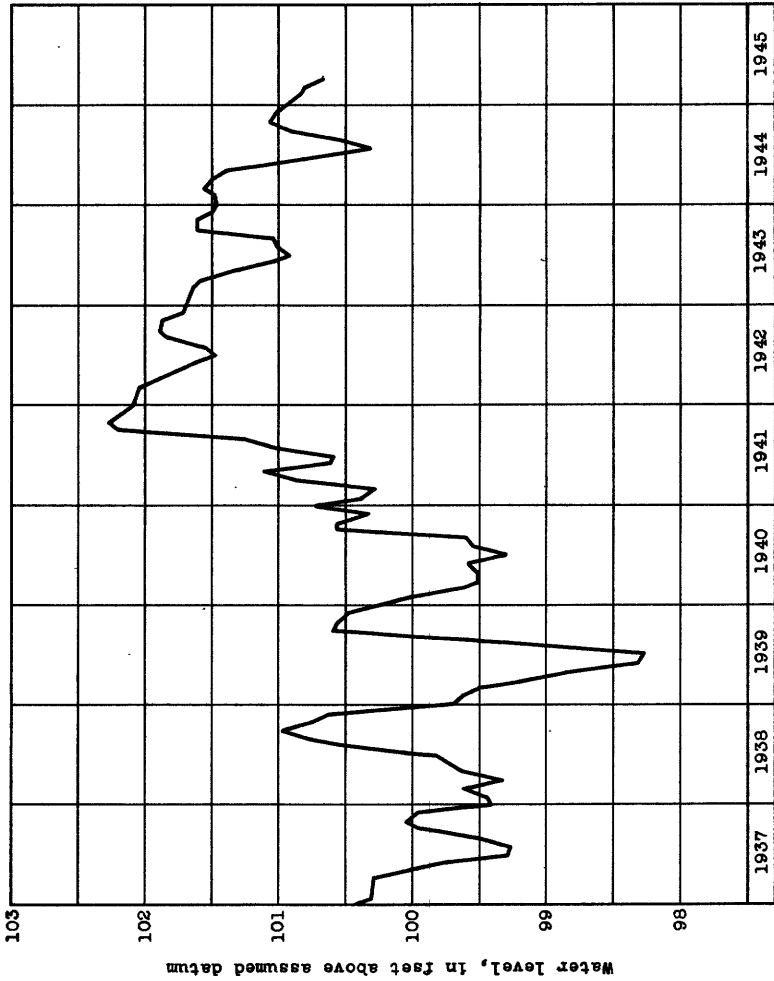


Figure 6.--Graph showing average monthly water level in 10 to 42 selected observation wells in North Dakota, 1937-45.

normal. Departures from normal precipitation range from -7.18 inches to +4.61 inches at different stations in the State. The greatest negative departures from normal occurred in the southeastern quarter of the State while the northeast portion had relatively near normal or above-normal precipitation. Precipitation in the western part of the State was generally below normal, although a few stations in this section received above-normal precipitation. Average precipitation for the State was below normal for all months except March, September, and December. The greatest monthly departures were -0.77 inch in May and -1.03 inches in June. Positive monthly departures from normal were +0.54 inch in March, +.59 inch in September, and +0.17 inch in December.

#### FLUCTUATIONS OF WATER LEVEL

The average monthly water levels for the State from 1937 through 1945 are shown in the following table. These averages are based on water levels in selected observation wells. The averages for 1945 were computed from records on 17 wells distributed over the State in which water levels were measured weekly. Figure 6 is a graphical presentation of these data.

Average monthly water levels, in feet above assumed datum planes, in observation wells in North Dakota, 1937-45

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
1943	100.51	100.44	100.40	101.30	102.09	102.73
1944	100.40	100.24	100.02	100.22	100.52	101.15
1945	101.04	100.96	101.06	101.49	101.74	101.71

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
1943	102.68	102.19	101.91	101.50	100.37	101.26
1944	101.28	101.37	101.67	101.36	101.55	101.59
1945	101.27	100.95	100.71	100.71	100.70	100.54

The average water levels declined rapidly in January and reached the winter low in February. They began to rise in March and rose quite rapidly in April and May in response to recharge from snowmelt and rain. The yearly high was reached in May and the water levels began to go down in

June and declined throughout the remainder of the year, reaching the yearly low in December.

The following table shows the general fluctuations and net change in ground-water levels during 1945 in several regions in the State according to drainage basins. These regions are (1) the Red River basin, exclusive of the Souris and the upper part of the Sheyenne, (2) the Devils Lake and Upper Sheyenne River basin, (3) the James River basin, (4) the Souris River basin, and (5) the Missouri River basin, exclusive of the James.

Average high and low water levels, in feet below land-surface datum, and average fluctuation and average net change in water level, in feet, in selected observation wells in five drainage basins in North Dakota in 1945

Basin	Number of wells	High	Low	Fluctuation	Net change
Red River	9	5.63	9.69	4.06	-0.45
Devils Lake and Upper Sheyenne River	4	13.49	14.25	.77	+.80
James River	1	46.08	46.90	.82	+.35
Souris River	8	30.87	31.72	.82	-1.92
Missouri River	5	44.78	47.09	2.31	-.07

#### WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

##### Adams County

1 (\*908, p. 240; 938, p. 187; 946, p. 232; \*988, p. 307; 1018, p. 233). Mrs. Halverson. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 14, T. 130 N., R. 97 W. Water level, in feet below land-surface datum, 1945: Aug. 23, 48.81.

##### Barnes County

97 (\*886, p. 531; 908, p. 240; 938, p. 187; 946, p. 232; \*988, p. 307; 1018, p. 233). H. H. Wilkins. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 5, T. 138 N., R. 57 W.

#### Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	41.25	Apr. 7	41.26	July 7	40.46	Oct. 6	40.41
13	41.26	14	41.25	14	40.47	13	40.41
20	41.26	21	41.25	21	40.48	20	40.42
27	41.27	28	41.26	28	40.47	27	40.44
Feb. 3	41.27	May 5	40.46	Aug. 4	40.47	Nov. 3	40.44
10	41.27	12	40.46	11	40.45	10	40.45
17	41.28	19	40.45	18	40.44	17	40.46
24	41.29	26	40.46	25	40.44	24	40.46
Mar. 3	41.29	June 2	40.45	Sept. 1	40.45	Dec. 1	40.46
10	41.28	9	40.44	8	40.44	8	40.45
17	41.28	16	40.45	15	40.43	15	40.45
24	41.27	23	40.46	22	40.41	22	40.46
31	41.26	30	40.46	29	40.40	29	40.47

98 (\*886, p. 531; 908, p. 240; 938, p. 188; 946, p. 233; \*988, p. 307; 1018, p. 233). H. H. Wilkins. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 5, T. 138 N., R. 57 W.

98--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	37.41	Apr. 7	37.44	July 7	37.14	Oct. 6	37.29
15	37.42	14	37.42	14	37.15	13	37.31
20	37.44	21	37.41	21	37.16	20	37.34
27	37.39	28	37.40	28	37.14	27	37.38
Feb. 3	37.49	May 5	37.20	Aug. 4	37.15	Nov. 3	37.40
10	37.53	12	37.19	11	37.12	10	37.41
17	37.53	19	37.18	18	37.51	17	37.43
24	37.55	26	37.30	25	37.44	24	37.42
Mar. 3	37.57	June 2	37.14	Sept. 1	37.42	Dec. 1	37.44
10	37.54	9	37.12	8	37.39	8	37.46
17	37.52	16	37.12	15	37.36	15	37.48
24	37.50	23	37.14	22	37.32	22	37.47
31	37.47	30	37.13	29	37.29	29	37.48

Benson County

111 (\*908, p. 240; 938, p. 188; 946, p. 233; \*988, p. 307; 1018, p. 233). H. Biltingsrud. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 36, T. 136 N., R. 69 W. Water level, in feet below land-surface datum, 1945: Aug. 19, 14.95.

Bottineau County

60 (\*840, p. 320; 845, p. 347; 886, p. 531; 908, p. 241; 938, p. 188; 946, p. 233; \*988, p. 308; 1018, p. 233). Federal Land Bank. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 23, T. 160 N., R. 76 W. Measurements discontinued.

112 (\*908, p. 241; 938, p. 188; 946, p. 233; \*988, p. 308; 1018, p. 233). Frank Churchill. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 25, T. 161 N., R. 78 W. Water level, in feet below land-surface datum, 1945: May 24, 6.74.

Bowman County

83 (\*908, p. 241; 938, p. 189; 946, p. 233; 988, p. 308; 1018, p. 234). City of Bowman. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 11, T. 131 N., R. 102 W. Water level, in feet below land-surface datum, 1945: Aug. 23, 28.40.

84 (\*908, p. 242; 938, p. 189; 946, p. 233; \*988, p. 308; 1018, p. 234). City of Bowman. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 11, T. 131 N., R. 102 W. Water level, in feet below land-surface datum, 1945: Aug. 23, 24.12.

85 (\*908, p. 242; 936, p. 189; 946, p. 233; 988, p. 308; 1018, p. 234). City of Bowman. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 11, T. 131 N., R. 102 W. Water level, in feet below land-surface datum, 1945: Aug. 23, 36.13.

Burke County

52 (\*938, p. 189; 946, p. 234; \*988, p. 308; 1018, p. 234). Fish and Wildlife Service, U. S. Dept. of Interior. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 1, T. 163 N., R. 89 W. Measurements discontinued.

66 (\*840, p. 320; 845, p. 348; 886, p. 532; 908, p. 243; 938, p. 189; 946, p. 234; \*988, p. 308; 1018, p. 234). Mrs. P. M. Peterson. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 5, T. 162 N., R. 89 W. Water levels, in feet below land-surface datum, 1945: May 23, 70.19; Nov. 10, 70.41.

115 (\*908, p. 243; 938, p. 190; 946, p. 234; \*988, p. 308; 1018, p. 234). Fish and Wildlife Service, U. S. Dept. of Interior. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 21, T. 160 N., R. 91 W. Water levels, in feet below land-surface datum, 1945: May 23, 56.85; Oct. 7, 56.99.

116 (\*908, p. 243; 938, p. 190; 946, p. 234; \*988, p. 308; 1018, p. 234). Fish and Wildlife Service, U. S. Dept. of Interior. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 4, T. 159 N., R. 91 W. Water levels, in feet below land-surface datum, 1945: May 23, 76.13; Oct. 6, 76.54.

Burleigh County

1 (\*908, p. 244; 938, p. 190; 946, p. 234; \*988, p. 309; 1018, p. 234).  
Celia DeLong. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 35, T. 141 N., R. 80 W. Water level, in feet  
below land-surface datum, 1945: May 12, 14.29.

Cass County

3 (\*908, p. 246; 938, p. 191; 946, p. 236; \*988, p. 310; 1018, p. 235).  
The Pierce Co., 1019 First Avenue North, Fargo.

Lowest daily water level, in feet below land-surface datum, 1945

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	30.37	30.42	30.38	30.33	30.40	30.43	30.61	30.79	30.93	31.01	31.06	31.14
2	30.37	30.43	30.36	30.33	30.38	30.41	30.62	30.81	30.95	31.01	31.04	31.15
3	30.36	30.43	30.37	30.35	30.39	30.43	30.62	30.82	30.95	31.01	31.06	31.18
4	30.38	30.40	30.38	30.35	30.40	30.44	30.61	30.82	30.95	30.98	31.06	31.18
5	30.38	30.40	30.39	30.35	30.40	30.45	30.61	30.81	30.94	30.98	31.05	31.17
6	30.38	30.39	30.30	30.36	30.39	30.46	30.63	30.81	30.94	30.97	31.05	31.11
7	30.36	30.40	30.40	30.36	30.36	30.46	30.63	30.83	30.96	30.98	31.06	31.09
8	30.36	30.40	30.40	30.34	30.38	30.46	30.63	30.84	30.96	31.01	31.06	31.09
9	30.37	30.36	30.39	30.33	30.39	30.46	30.64	30.84	30.94	31.01	31.10	31.14
10	30.37	30.36	30.40	30.33	30.40	30.45	30.65	30.83	30.94	31.01	31.11	31.17
11	30.37	30.36	30.40	30.33	30.39	30.44	30.66	30.83	30.94	31.01	31.11	31.18
12	30.34	30.37	30.41	30.37	30.39	30.44	30.66	30.93	30.96	31.04	31.10	31.18
13	30.34	30.36	30.41	30.40	30.40	30.46	30.68	30.82	30.97	31.05	31.08	31.17
14	30.33	30.34	30.39	30.40	30.42	30.47	30.69	30.82	30.97	31.05	31.11	31.20
15	30.36	30.35	30.39	30.39	30.44	30.49	30.69	30.83	30.98	31.05	31.11	31.20
16	30.37	30.39	30.37	30.31	30.45	30.50	30.69	30.83	30.98	31.05	31.09	31.21
17	30.37	30.37	30.37	30.33	30.45	30.50	30.70	30.82	30.98	31.04	31.07	31.23
18	30.37	30.43	30.37	30.34	30.46	30.51	30.70	30.83	30.95	31.02	31.10	31.24
19	30.38	30.43	30.39	30.35	30.46	30.51	30.71	30.83	30.95	31.00	31.10	31.24
20	30.38	30.43	30.39	30.35	30.45	30.51	30.73	30.84	30.92	31.01	31.09	31.23
21	30.38	30.36	30.39	30.37	30.42	30.51	30.73	30.87	30.92	31.02	31.10	31.24
22	30.37	30.38	30.38	30.37	30.43	30.51	30.73	30.89	30.92	31.03	31.10	31.25
23	30.37	30.36	30.35	30.35	30.44	30.52	30.72	30.89	30.91	31.05	31.13	31.25
24	30.36	30.38	30.32	30.34	30.44	30.54	30.74	30.99	30.92	31.05	31.12	31.24
25	30.36	30.40	30.31	30.35	30.44	30.57	30.77	30.90	30.93	31.04	31.12	31.21
26	30.36	30.40	30.31	30.36	30.45	30.57	30.77	30.90	30.94	31.05	31.12	31.18
27	30.38	30.39	30.27	30.36	30.45	30.55	30.76	30.89	30.96	31.05	31.12	31.18
28	30.38	30.39	30.28	30.36	30.46	30.52	30.75	30.88	31.01	31.05	31.13	31.18
29	30.39		30.33	30.38	30.47	30.53	30.75	30.90	31.02	31.08	31.14	31.16
30	30.39		30.34	30.40	30.46	30.57	30.75	30.91	31.02	31.08	31.14	31.17
31	30.41		30.34		30.46		30.76	30.91		31.06		31.19

4 (\*908, p. 247; 938, p. 192; 946, p. 236; \*988, p. 311; 1018, p. 236).  
City of Fargo. In Island Park.

Lowest daily water level, in feet below land-surface datum, 1945

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	39.29	39.33	39.20	39.21	39.26	39.26	39.70	40.32	40.62	40.47	40.32	40.35
2	39.28	39.31	39.21	39.24	39.25	39.30	39.70	40.35	40.65	40.50	40.36	40.38
3	39.27	39.29	39.21	39.25	39.24	39.31	39.68	40.40	40.62	40.48	40.38	40.39
4	39.28	39.30	39.22	39.25	39.26	39.31	39.69	40.38	40.65	40.43	40.37	40.39
5	39.29	39.30	39.22	39.22	39.23	39.31	39.75	40.34	40.65	40.43	40.33	40.33
6	39.27	39.30	39.22	39.20	39.19	39.33	39.79	40.39	40.70	40.42	40.33	40.27
7	39.25	39.30	39.22	39.21	39.21	39.34	39.80	40.44	40.73	40.44	40.34	40.27
8	.....	39.29	39.22	39.21	39.25	39.34	39.79	40.46	40.77	40.46	40.33	40.30
9	.....	39.23	39.24	39.17	39.25	39.32	39.82	40.44	40.80	40.45	40.39	40.35
10	.....	39.25	39.25	39.18	39.25	39.31	39.85	40.42	40.80	40.40	40.40	40.36
11	.....	39.25	39.25	39.17	39.23	39.33	39.83	40.39	40.81	40.43	40.36	.....
12	.....	39.24	39.25	39.22	39.24	39.33	39.84	40.39	40.79	40.46	40.32	.....
13	39.26	39.18	39.22	39.31	39.27	39.33	39.85	40.36	40.79	40.46	40.36	.....
14	39.26	39.20	39.16	39.32	39.28	39.35	39.87	40.38	40.75	40.46	40.37	.....
15	39.27	39.24	39.13	39.29	39.30	39.37	39.87	40.39	40.76	40.45	40.36	.....
16	39.29	39.27	39.05	39.23	39.30	39.37	39.86	40.37	40.73	40.40	40.30	.....
17	39.28	39.27	39.38	39.18	39.31	39.37	39.90	40.36	40.65	40.36	40.32	.....
18	39.27	39.30	39.71	39.22	39.32	39.36	39.91	40.37	40.61	40.36	40.34	.....
19	39.29	39.30	39.08	39.22	39.30	39.34	39.95	40.36	40.57	40.38	40.34	.....

a Estimated.

4--Continued.

Lowest daily water level, in feet below land-surface datum, 1945  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
20	39.29	39.25	37.77	39.23	39.25	39.36	39.99	40.58	40.53	40.39	40.33	.....
21	39.27	39.22	37.59	39.24	39.25	39.36	40.00	40.40	40.54	40.39	40.34	.....
22	39.27	39.20	37.64	39.21	39.29	39.38	40.02	40.41	40.51	40.40	40.35	.....
23	39.27	39.21	37.94	39.16	39.31	39.41	40.07	40.59	40.49	40.40	40.36	.....
24	39.27	39.24	38.44	39.16	39.29	39.47	40.15	40.42	40.50	40.40	40.34	.....
25	39.28	39.26	.....	39.18	39.33	39.54	40.23	40.44	40.51	40.38	40.34	.....
26	39.29	39.23	.....	39.20	39.34	39.54	40.23	40.42	40.51	40.39	40.33	.....
27	39.29	39.23	39.12	39.21	39.33	39.54	40.21	40.42	40.53	40.37	40.34	.....
28	39.29	39.21	39.21	39.21	39.34	39.57	40.22	40.48	40.54	40.39	40.34	.....
29	39.29	39.25	39.25	39.36	39.64	40.24	40.55	40.53	40.43	40.34	40.27	.....
30	39.29	39.25	39.26	39.34	39.68	40.25	40.58	40.51	40.38	40.34	40.30	.....
31	39.32	39.21	.....	39.33	.....	40.23	40.57	.....	40.37	.....	40.32	.....

a Estimated.

5 (\*908, p. 248; 938, p. 193; 946, p. 237; \*988, p. 311; 1018, p. 236).  
Gardner Hotel, First Street North and Roberts Street, Fargo.Lowest daily water level, in feet below land-surface datum, 1945  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	30.65	30.66	30.68	30.64	30.65	30.72	30.79	30.96	31.10	31.20	31.28	31.34
2	30.65	30.68	30.68	30.64	30.65	30.72	30.80	30.97	31.10	31.21	31.28	31.34
3	30.65	30.68	30.67	30.64	30.65	30.72	30.80	30.97	31.11	31.21	.....	31.34
4	30.65	30.68	30.67	30.64	30.65	30.72	30.81	30.98	31.11	31.21	.....	31.35
5	30.66	30.68	30.67	30.64	30.65	30.72	30.81	30.98	31.11	31.22	.....	31.35
6	30.66	30.68	30.67	30.64	30.65	30.73	30.82	30.98	31.12	31.22	.....	31.35
7	30.66	30.68	30.67	30.64	30.65	30.73	30.82	30.99	31.13	31.22	.....	31.35
8	30.66	30.68	30.68	30.64	30.65	30.73	30.83	31.00	31.13	31.23	.....	.....
9	30.66	30.68	30.68	30.64	30.65	30.73	30.83	31.01	31.13	31.23	.....	.....
10	30.66	30.68	30.68	30.64	30.65	30.73	30.84	31.01	31.13	31.23	31.29	.....
11	30.66	30.68	30.68	30.64	30.65	30.73	30.84	31.01	31.13	31.23	31.29	.....
12	30.66	30.68	30.68	30.63	30.65	30.73	30.85	31.01	31.14	31.23	31.30	.....
13	30.64	30.68	30.68	30.63	30.65	30.73	30.86	31.01	31.14	31.23	31.30	.....
14	30.64	30.68	30.68	30.64	30.65	30.73	30.87	31.01	31.15	31.23	31.30	.....
15	30.64	30.67	30.68	30.64	30.66	30.73	30.87	31.01	31.15	31.24	31.31	31.40
16	30.64	30.67	30.68	30.64	30.66	30.73	30.87	31.03	31.15	31.24	31.31	31.40
17	30.64	30.67	30.68	30.64	30.67	30.73	30.89	31.03	31.16	31.24	31.31	31.41
18	30.64	30.68	30.68	30.63	30.68	30.74	30.89	31.03	31.16	31.25	31.31	31.41
19	30.65	30.68	30.68	30.63	30.68	30.74	30.90	31.03	31.16	31.25	31.31	31.42
20	30.65	30.68	30.68	30.63	30.68	30.74	30.91	31.03	31.16	31.25	31.31	31.42
21	30.65	30.68	30.68	30.63	30.68	30.75	30.91	31.04	31.16	31.25	31.32	31.42
22	30.65	30.68	30.68	30.64	30.68	30.75	30.91	31.05	31.16	31.25	31.32	31.40
23	30.65	30.68	30.67	30.64	30.68	30.75	30.92	31.06	31.16	31.26	31.32	31.40
24	30.65	30.68	30.67	30.64	30.69	30.75	30.92	31.08	31.16	31.26	31.31	31.40
25	30.65	30.68	30.66	30.64	30.70	30.76	30.93	.....	31.16	31.26	31.31	31.40
26	30.65	30.68	30.66	30.64	30.70	30.76	30.94	.....	31.16	31.27	31.31	31.40
27	30.65	30.68	30.66	30.64	30.70	30.76	30.94	.....	31.17	31.27	31.32	31.40
28	30.65	30.68	30.66	30.64	30.70	30.77	30.95	.....	31.19	31.27	31.32	31.40
29	30.65	.....	30.66	30.64	30.71	30.78	30.95	.....	31.20	31.28	31.33	31.40
30	30.65	.....	30.65	30.65	30.71	30.79	30.95	.....	31.20	31.28	31.34	31.40
31	30.66	30.64	.....	30.71	.....	30.96	31.10	.....	31.28	.....	31.40	.....

8 (\*840, p. 320; 845, p. 348; 886, p. 532; 908, p. 249; 938, p. 194; 946, p. 238; \*988, p. 312; 1018, p. 237). Mrs. Arthur D. South. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 14, T. 140 N., R. 52 W. Water level, in feet below land-surface datum, 1945: June 16, 19.52.10 (\*840, p. 321; 845, p. 249; 886, p. 532; 908, p. 249; 938, p. 194; 946, p. 238; \*988, p. 312; 1018, p. 237). Mrs. Arthur D. South. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 14, T. 140 N., R. 52 W. Water level, in feet below land-surface datum, 1945: June 16, 9.29.



12 (\*840, p. 321; 845, p. 349; 886, p. 532; \*908, p. 249; 938, p. 195; 946, p. 258; \*988, p. 312; 1018, p. 237). City of Fargo. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 1, T. 139 N., R. 49 W.

Lowest daily water level, in feet below land-surface datum, 1945

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	36.52	36.92	37.05	37.23	37.38	37.41	37.90	38.29	38.58	38.75	38.95	39.28
2	36.51	36.90	37.07	37.28	37.38	37.47	37.89	38.32	38.58	38.80	39.04	39.31
3	36.53	36.87	37.10	37.29	37.40	37.49	37.84	38.31	38.54	38.78	39.06	39.32
4	36.56	36.92	37.12	37.29	37.39	37.50	37.84	38.30	38.58	38.76	39.04	39.32
5	36.57	36.92	37.13	37.29	37.37	37.99	37.86	38.23	38.55	38.76	39.02	39.26
6	36.55	36.94	37.14	37.29	37.34	37.60	37.88	38.27	38.57	38.81	39.05	39.23
7	36.55	36.95	37.15	37.33	37.36	37.57	37.89	38.32	38.60	38.79	39.07	39.23
8	36.63	36.93	37.15	37.31	37.40	37.55	37.87	38.32	38.55	38.91	39.07	39.35
9	36.63	36.91	37.17	37.29	37.40	37.53	37.90	38.30	38.54	38.83	39.50	39.35
10	36.62	36.92	37.17	37.31	37.40	37.50	37.94	38.28	38.57	38.80	39.25	39.37
11	36.60	36.92	37.14	37.25	37.37	37.53	37.91	38.30	38.59	38.83	39.18	39.38
12	36.59	36.94	37.12	37.32	37.39	37.53	37.93	38.30	38.63	38.88	39.14	39.35
13	36.60	36.90	.....	37.40	37.42	37.53	37.96	38.26	38.67	38.89	a39.21	39.33
14	36.63	36.93	.....	37.42	37.43	37.55	37.98	38.30	38.67	38.89	.....	39.40
15	36.65	37.00	.....	37.38	37.45	37.59	37.97	38.31	38.71	38.89	a39.21	39.41
16	36.67	37.02	.....	37.29	37.45	37.60	37.97	38.29	38.68	38.85	.....	39.44
17	36.67	37.03	.....	37.27	37.46	37.59	38.01	38.29	38.63	38.85	.....	39.47
18	36.69	37.07	.....	37.33	37.48	37.60	38.01	38.32	38.65	38.85	.....	39.47
19	36.72	37.07	.....	37.33	37.46	37.57	38.02	38.32	38.61	38.88	.....	39.44
20	36.73	37.02	.....	37.35	37.42	37.61	38.04	38.33	38.63	38.90	.....	39.46
21	36.70	37.00	a37.21	37.37	37.42	37.60	38.06	38.38	.....	38.93	.....	39.50
22	36.73	37.01	a37.21	37.34	37.46	37.62	38.10	38.41	.....	38.94	.....	39.53
23	36.74	37.03	a37.20	37.30	37.48	37.65	38.09	38.39	.....	38.96	.....	39.49
24	36.75	37.09	a37.19	37.30	37.46	37.70	38.13	38.42	.....	38.96	39.21	39.41
25	36.78	37.09	a37.19	37.33	37.51	37.72	38.18	38.43	.....	38.96	39.21	39.39
26	36.80	37.05	a37.17	37.35	37.53	37.70	38.23	38.39	.....	38.98	39.19	39.42
27	36.81	37.07	a37.15	37.35	37.52	38.20	38.26	28.40	.....	38.97	39.24	39.41
28	36.82	37.05	a37.19	37.35	37.52	37.80	38.23	38.44	.....	38.98	39.26	39.38
29	36.83	.....	a37.25	37.40	37.55	37.80	38.22	38.49	38.78	39.05	39.26	39.40
30	36.88	.....	a37.30	37.41	37.52	37.88	38.23	38.52	38.76	38.99	39.25	39.43
31	36.91	.....	37.25	.....	37.50	.....	38.25	38.51	.....	38.98	.....	39.47

a Estimated.

28 (\*840, p. 321; 845, p. 350; 886, p. 533; 908, p. 250; 938, p. 195; 946, p. 259; \*988, p. 313; 1018, p. 238). City of Fargo. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 1, T. 139 N., R. 49 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	a 10.40	Apr. 20	a 2.96	July 13	a 27.29	Oct. 5	38.77
19	a 36.73	27	a 2.96	20	35.55	12	38.33
26	a 37.14	May 4	a 2.84	28	37.66	19	38.89
Feb. 2	a 37.09	11	a 3.19	Aug. 3	38.14	26	38.94
9	a 37.09	18	a 3.54	10	38.33	Nov. 2	38.98
23	a 37.22	25	a 3.71	17	38.37	9	39.07
Mar. 2	a 37.22	June 1	a 3.59	24	38.44	16	39.13
9	a 37.34	8	a 3.53	31	38.51	23	39.19
16	a 37.34	15	a 3.89	Sept. 7	38.59	30	39.18
23	a 37.41	22	a 4.29	14	38.64	Dec. 7	39.18
30	a 37.45	29	a 4.74	21	38.69	21	39.43
Apr. 6	a 4.63	July 6	a 5.23	28	38.73	28	39.44
13	a 3.64						

a Flooded with surface water.

29 (\*840, p. 321; 845, p. 350; 886, p. 533; 908, p. 251; 938, p. 196; 946, p. 259; \*988, p. 314; 1018, p. 238). Mrs. Arthur D. South. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 14, T. 140 N., R. 52 W. No measurements made in 1945.

58 (\*845, p. 351; 886, p. 533; 908, p. 251; 938, p. 197; 946, p. 239; \*988, p. 314; 1018, p. 238). Union Stockyards. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 6, T. 139 N., R. 49 W.

Lowest daily water level, in feet below land-surface datum, 1945  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	56.10	58.18	57.88	55.50	54.70	55.03	57.20	59.80	60.10	59.73	61.48	61.90
2	56.20	58.15	57.00	55.00	54.88	54.95	56.95	59.98	59.75	60.21	61.83	61.60
3	56.70	58.10	57.98	55.25	55.15	54.67	57.25	60.13	59.33	60.40	62.18	61.54
4	57.25	57.78	57.85	55.32	55.38	56.22	57.22	60.10	59.93	60.48	62.05	61.55
5	57.39	57.25	57.48	55.38	55.37	56.38	56.70	59.90	60.09	60.40	.....	61.58
6	57.75	57.45	57.60	55.45	55.14	56.05	.....	59.63	60.11	60.30	61.80	61.66
7	57.70	57.68	57.80	55.44	54.65	55.65	.....	60.03	60.22	60.05	61.80	61.78
8	57.55	57.68	57.93	55.25	55.05	55.75	.....	60.20	60.15	59.93	61.60	61.75
9	57.97	57.60	58.10	54.53	55.38	55.73	.....	60.24	59.70	60.27	61.65	61.45
10	58.25	57.60	57.85	54.80	55.68	55.37	.....	60.20	59.48	60.65	61.70	61.20
11	58.38	57.43	57.50	54.86	55.83	54.88	58.05	60.18	59.75	60.83	61.55	61.50
12	58.55	57.12	58.35	54.90	55.83	55.05	58.15	59.85	59.95	60.87	61.55	61.55
13	58.55	57.23	58.85	54.98	55.73	55.25	58.17	59.54	60.05	60.83	61.95	61.65
14	58.42	57.37	58.85	55.05	55.45	55.73	58.10	59.73	60.45	60.50	62.20	.....
15	58.25	57.47	58.80	54.95	55.66	55.82	57.72	.....	60.40	60.13	62.42	.....
16	58.50	56.70	58.40	54.30	55.90	55.85	57.65	.....	60.03	60.25	62.45	.....
17	58.60	56.70	57.90	54.25	56.05	55.80	58.15	.....	59.98	60.55	62.30	.....
18	58.65	57.53	57.35	54.35	56.13	55.60	58.50	60.20	60.20	60.80	61.90	.....
19	58.78	57.36	56.90	54.55	56.10	55.81	58.62	60.05	60.35	60.93	61.70	.....
20	58.78	57.48	56.00	54.80	55.90	56.03	58.73	60.15	60.28	60.85	61.98	.....
21	58.48	57.55	56.05	54.94	55.43	56.30	58.72	60.43	60.55	60.68	62.03	62.50
22	57.80	57.64	56.03	54.90	55.75	56.53	58.35	60.60	60.50	60.53	61.97	62.50
23	58.02	57.85	56.90	54.45	56.05	56.53	57.93	60.55	60.10	61.02	61.53	62.15
24	58.14	57.85	56.80	54.58	56.28	56.48	58.55	60.70	60.00	61.20	61.40	61.30
25	58.23	57.80	56.40	54.75	56.48	56.80	59.15	60.75	60.33	61.20	61.30	60.90
26	58.42	57.40	55.80	54.83	56.55	56.75	59.35	60.40	60.45	61.40	61.30	60.78
27	58.42	57.47	55.73	55.00	56.40	56.52	59.36	60.15	60.70	61.30	61.73	61.13
28	58.34	57.73	55.73	54.95	55.83	57.08	59.28	60.13	60.63	60.90	62.00	61.32
29	57.88	.....	55.80	54.95	56.15	57.57	58.85	59.97	60.55	61.05	62.05	61.25
30	58.00	.....	55.85	54.65	56.15	57.53	59.03	59.85	60.18	61.30	61.98	61.00
31	58.12	.....	55.85	.....	56.05	.....	59.48	59.90	.....	61.35	.....	60.62

a Estimated.

67 (\*845, p. 352; 886, p. 533; \*908, p. 252; 938, p. 197; 946, p. 240; \*988, p. 315; 1018, p. 239). City of Fargo. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 18, T. 139 N., R. 48 W.

Lowest daily water level, in feet below land-surface datum, 1945  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	33.04	33.05	32.92	32.92	33.00	33.09	33.50	33.84	34.06	33.98	33.99	34.00
2	33.03	33.03	32.93	32.96	33.00	33.14	33.51	33.88	34.06	34.02	34.04	34.01
3	33.02	.....	32.94	32.96	33.01	33.18	33.50	33.93	34.02	34.00	34.06	34.02
4	33.05	.....	32.95	32.95	33.00	33.18	33.50	33.91	34.02	33.98	34.04	34.02
5	33.05	.....	32.96	32.93	33.00	33.16	33.53	33.83	34.01	33.97	34.00	33.95
6	33.02	.....	32.95	32.91	32.98	33.18	33.55	33.88	34.04	33.99	34.01	33.91
7	32.99	.....	32.95	32.94	33.00	33.19	33.55	33.91	34.07	34.01	34.01	33.91
8	33.06	.....	32.95	32.92	33.04	33.19	33.56	33.90	34.01	34.03	34.00	33.97
9	33.07	.....	32.96	32.92	33.05	33.17	33.60	33.88	34.00	34.02	34.08	34.01
10	33.04	32.97	32.96	32.95	33.05	33.17	33.63	33.85	34.00	33.96	34.08	34.02
11	33.01	32.97	32.96	32.91	33.03	33.20	33.61	33.86	34.01	33.99	34.02	34.03
12	33.00	32.97	32.97	32.97	33.05	33.21	33.63	33.88	34.02	34.05	33.99	34.02
13	33.00	32.90	32.92	33.02	33.09	33.21	33.65	33.84	34.03	34.06	34.05	33.97
14	33.00	32.93	32.85	33.04	33.11	33.24	33.68	33.86	34.04	34.06	34.07	34.03
15	33.02	32.98	32.81	33.00	33.13	33.27	33.69	33.87	34.06	34.04	34.03	34.03
16	33.04	33.02	32.72	32.83	33.14	33.27	33.67	33.84	34.04	34.00	33.96	34.06
17	33.02	.....	32.53	32.89	33.13	33.26	33.70	33.84	34.00	33.97	33.99	34.07
18	33.00	.....	32.36	32.94	33.14	33.26	33.70	33.86	34.00	33.97	34.01	34.08
19	33.03	.....	32.16	32.93	33.12	33.26	33.72	33.86	33.96	34.00	34.01	34.04
20	33.03	.....	32.14	32.95	33.04	33.28	33.74	33.89	33.98	34.00	34.00	34.04
21	33.00	.....	31.97	32.96	33.07	33.29	33.73	33.94	33.99	34.01	34.01	34.08
22	33.00	.....	31.91	32.93	33.12	33.32	33.73	33.94	33.98	34.03	34.02	34.09

67--Continued.

Lowest daily water level, in feet below land-surface datum, 1945  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
23	32.99	.....	32.02	32.89	33.13	33.38	33.72	33.93	33.95	34.04	34.02	34.07
24	33.00	32.99	32.31	.....	33.12	33.41	33.78	33.95	33.98	34.04	33.99	33.97
25	33.00	33.00	32.47	.....	33.16	33.42	33.82	33.96	34.04	34.00	33.99	33.95
26	33.01	32.95	32.60	.....	33.18	33.40	33.81	33.93	.....	34.02	33.97	33.96
27	33.01	32.97	32.73	.....	33.16	33.34	33.75	33.93	.....	34.00	33.99	33.96
28	33.01	32.94	32.84	32.96	33.17	33.37	33.73	33.96	.....	34.02	33.99	33.93
29	33.00		32.91	33.01	33.23	33.45	33.75	34.01	34.04	34.08	33.99	33.91
30	33.01		32.92	33.02	33.20	33.48	33.78	34.03	34.01	34.05	33.97	33.96
31	33.04		32.89		33.20		33.81	34.02		34.04		33.98

Cavalier County

43 (\*840, p. 322; \*845, p. 352; 886, p. 534; 908, p. 254; 938, p. 200; 946, p. 242; \*988, p. 316; 1018, p. 240). City of Langdon. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 14, T. 161 N., R. 60 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	17.00	Apr. 7	16.65	July 8	15.96	Oct. 6	17.21
13	17.00	14	17.63	14	16.00	13	17.29
20	17.29	21	17.36	21	16.02	20	17.31
27	17.58	28	17.21	28	16.19	28	17.55
Feb. 3	17.40	May 5	17.02	Aug. 5	16.29	Nov. 3	17.50
10	17.48	12	16.81	11	16.50	10	17.50
17	17.71	19	16.67	18	16.57	18	17.48
24	17.79	26	16.55	25	16.79	25	17.52
Mar. 3	17.86	June 2	16.23	Sept. 1	16.96	Dec. 2	17.65
10	17.96	9	15.96	10	17.09	10	17.75
17	17.96	16	15.92	15	17.23	15	17.79
24	17.71	23	15.82	22	17.11	22	17.90
31	17.63	30	15.86	29	17.34	30	17.92

44 (\*840, p. 322; \*845, p. 353; 886, p. 534; 908, p. 254; 938, p. 200; 946, p. 243; \*988, p. 316; 1018, p. 240). City of Langdon. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 14, T. 161 N., R. 60 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	20.75	Apr. 7	19.64	July 8	19.93	Oct. 6	19.96
13	20.94	14	19.60	14	20.18	13	20.02
20	21.02	21	19.10	21	19.85	20	20.02
27	20.98	28	19.64	28	20.10	28	20.08
Feb. 3	20.98	May 5	19.56	Aug. 5	20.12	Nov. 3	20.18
10	21.00	12	19.56	11	20.18	10	20.18
17	21.10	19	19.62	18	20.32	18	20.27
24	21.12	26	19.37	28	20.58	25	20.39
Mar. 3	21.16	June 2	19.50	Sept. 1	20.54	Dec. 2	20.41
10	21.25	9	19.58	10	20.23	10	20.33
17	20.98	16	19.64	15	20.14	15	20.35
24	20.68	23	19.73	22	19.87	22	20.43
31	19.56	30	19.77	29	20.00	30	20.43

45 (\*840, p. 322; \*845, p. 353; 886, p. 534; 908, p. 254; 938, p. 200; 946, p. 243; \*988, p. 316; 1018, p. 240). City of Langdon. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 23, T. 161 N., R. 60 W.

45--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	32.39	Apr. 7	29.86	July 8	30.57	Oct. 6	18.18
13	39.80	14	30.59	14	24.63	13	17.90
20	33.13	21	27.34	21	26.95	20	18.22
27	31.72	28	28.13	28	28.88	28	b 39.28
Feb. 3	32.65	May 5	32.03	Aug. 5	29.09	Nov. 3	40.97
10	34.03	12	35.97	11	a 11.34	10	43.05
17	34.18	19	35.78	18	11.88	17	43.63
24	29.72	26	39.05	25	12.78	25	c 20.88
Mar. 3	27.82	June 2	30.99	Sept. 1	14.03	Dec. 2	14.72
10	24.84	9	31.30	10	13.34	10	14.76
17	32.84	16	31.72	15	13.88	15	15.72
24	25.55	23	29.68	22	13.72	22	15.84
31	27.13	30	29.80	29	14.13	29	16.67

a Cleaned out. Let water into well.

b Reservoir supply pipe off, Oct. 26.

c Reservoir supply pipe on, Nov. 24.

46 (\*840, p. 322; \*845, p. 354; 886, p. 534; 908, p. 254; 938, p. 200; 946, p. 243; \*988, p. 317; 1018, p. 241). City of Langdon. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 14, T. 161 N., R. 60 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	5.85	Apr. 7	6.56	July 7	3.63	Oct. 6	5.63
13	6.48	14	6.15	14	4.06	13	5.86
20	6.98	21	5.71	21	3.31	20	6.04
27	7.17	28	5.17	28	3.90	27	6.15
Feb. 3	7.29	May 5	4.40	Aug. 5	4.21	Nov. 3	6.23
10	7.54	12	3.27	11	4.46	10	6.31
17	7.81	19	2.73	18	5.06	17	6.44
24	8.02	26	1.44	25	5.67	24	6.54
Mar. 3	8.27	June 2	2.04	Sept. 1	6.07	Dec. 1	6.75
10	8.48	9	2.69	9	6.31	10	6.90
17	8.44	16	2.86	15	6.00	15	7.04
24	7.90	23	3.36	22	5.79	22	7.15
31	6.92	30	2.96	29	5.54	29	7.35

Dickey County

92 (\*845, p. 354; 886, p. 535; 908, p. 255; 938, p. 201; 946, p. 244; \*988, p. 317; 1018, p. 241). S. A. Reko. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 27, T. 131 N., R. 60 W. Measurements discontinued.

101 (\*908, p. 256; \*938, p. 202; 946, p. 244; \*988, p. 318; 1018, p. 241). D. C. Botts. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 7, T. 129 N., R. 59 W. Water level, in feet below land-surface datum, 1945: May 5, 4.84.

102 (\*908, p. 256; 938, p. 202; 946, p. 245; \*988, p. 318; 1018, p. 241). State of North Dakota. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 16, T. 131 N., R. 59 W. Water levels, in feet below land-surface datum, 1945: May 5, 21.19; Oct. 7, 21.26.

104 (\*938, p. 202; 946, p. 245; \*988, p. 318; 1018, p. 241). Lynus Sitts, Jr. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 33, T. 131 N., R. 59 W. Water level, in feet below land-surface datum, 1945: May 5, 5.48.

105 (\*908, p. 256; 938, p. 202; 946, p. 245; \*988, p. 318; 1018, p. 242). H. G. Martin, administrator. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 9, T. 130 N., R. 59 W. Water level, in feet below land-surface datum, 1945: May 5, 4.71.

121 (\*938, p. 203; 946, p. 245; \*988, p. 318; 1018, p. 242). M. J. Reinhart. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 3, T. 130 N., R. 59 W. Water level, in feet below land-surface datum, 1945: May 5, 3.32.

128 (\*908, p. 257; 938, p. 203; 946, p. 246; \*988, p. 318; 1018, p. 242). City of Oakes. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 28, T. 131 N., R. 59 W. Water levels, in feet below land-surface datum, 1945: May 5, 5.98; Oct. 7, 7.80.

136 (\*988, p. 319; 1018, p. 242). Fred Sletvold. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 29, T. 131 N., R. 59 W. Water levels, in feet below land-surface datum, 1945: May 5, 8.90; Oct. 7, 8.03.

#### Divide County

70 (\*845, p. 355; 886, p. 536; 908, p. 259; 938, p. 204; 946, p. 246; \*988, p. 319; 1018, p. 242). J. M. Johnson. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 22, T. 163 N., R. 67 W. Water levels, in feet below land-surface datum, 1945: May 23, 13.53; Nov. 11, 13.17.

117 (\*908, p. 259; 938, p. 204; 946, p. 246; \*988, p. 319; 1018, p. 242). A. U. Anderson. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 34, T. 163 N., R. 100 W. Water level, in feet below land-surface datum, 1945: May 23, 13.81.

#### Dunn County

90 (\*946, p. 246; \*988, p. 319; 1018, p. 242). S. F. Lemeister. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 25, T. 145 N., R. 92 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	7.58	Apr. 7	5.96	July 20	5.67	Sept. 7	7.11
26	7.92	May 18	6.42	27	6.66	14	7.15
Feb. 25	7.96	June 8	5.32	Aug. 3	6.22	21	7.10
Mar. 2	7.92	22	5.04	10	6.44	Oct. 12	7.44
9	6.67	29	5.13	17	6.93	26	8.07
13	6.50	July 6	5.30	24	6.94	Nov. 23	7.56
30	7.83	13	5.54	31	8.45	30	7.59

#### Eddy County

17 (\*817, p. 230; \*845, p. 355; 886, p. 537; 908, p. 259; 938, p. 205; 946, p. 247; \*988, p. 319; 1018, p. 242). L. S. Rude. SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 9, T. 150 N., R. 66 W. Water level, in feet below land-surface datum, 1945: May 6, 8.99.

18 (\*817, p. 230; \*840, p. 323; 845, p. 356; 886, p. 537; 908, p. 259; 938, p. 205; 946, p. 247; \*988, p. 319; 1018, p. 242). U. S. No. 49. Stockyards. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 9, T. 150 N., R. 66 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	8.02	Mar. 31	7.44	June 23	7.09	Aug. 25	7.38
13	8.05	Apr. 16	7.36	July 7	7.18	Sept. 8	7.43
27	8.08	21	7.38	14	7.25	22	7.38
Feb. 3	8.09	May 5	7.21	21	7.20	29	7.57
10	8.14	19	7.16	28	7.20	Oct. 6	7.57
Mar. 3	8.01	26	7.15	Aug. 4	7.21	27	7.71
10	7.96	June 2	7.14	13	7.31	Nov. 17	6.90
17	7.59	9	7.07	18	7.35	Dec. 3	7.82
24	7.54	16	7.13				

19 (\*817, p. 230; \*845, p. 356; 886, p. 537; 908, p. 260; 938, p. 205; 946, p. 247; \*988, p. 320; 1018, p. 243). Gilbert Olson. SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 9, T. 150 N., R. 66 W. Water level, in feet below land-surface datum, 1945: May 6, 14.89.

20 (\*817, p. 230; \*845, p. 356; 886, p. 537; 908, p. 260; 938, p. 205; 946, p. 247; \*988, p. 320; 1018, p. 243). Knute Egger. SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 9, T. 150 N., R. 66 W. Water level, in feet below land-surface datum, 1945: May 6, 18.37.

21 (\*817, p. 230; \*845, p. 356; 886, p. 537; 908, p. 260; 938, p. 205; 946, p. 247; \*988, p. 320; 1018, p. 243). Elmer Moe. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 9, T. 150 N., R. 66 W. Water level, in feet below land-surface datum, 1945: May 6, 19.88.

154 (\*908, p. 260; 938, p. 205; 946, p. 247; 988, p. 320; 1018, p. 243). Pfau Estate. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 28, T. 148 N., R. 67 W. No measurements made in 1945.

#### Foster County

125 (\*908, p. 260; \*938, p. 206; 946, p. 247; \*988, p. 320; 1018, p. 243). J. W. Wampler. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 22, T. 145 N., R. 66 W. Water level, in feet below land-surface datum, 1945: May 5, 7.22.

#### Golden Valley County

2 (\*946, p. 248; \*988, p. 320; 1018, p. 243). City of Beach. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 25, T. 140 N., R. 106 W. Water level, in feet below land-surface datum, 1945: Aug. 23, 23.65.

#### Grant County

121 (\*908, p. 260; 938, p. 206; 946, p. 248; \*988, p. 320; 1018, p. 243). R. O. Ozburn. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 10, T. 134 N., R. 85 W. No measurements made in 1945.

#### Griggs County

/1 (\*908, p. 260; 938, p. 206; 946, p. 248; \*988, p. 320; 1018, p. 243). Griffith Loan & Investment Co. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 20, T. 144 N., R. 59 W. Water level, in feet below land-surface datum, 1945: May 3, 20.40.

#### Kidder County

50 (\*840, p. 323; 845, p. 357; 886, p. 538; 908, p. 260; 938, p. 206; 946, p. 248; \*988, p. 321; 1018, p. 243). U. S. No. 53. Herman Peterson. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 9, T. 138 N., R. 73 W. Water level, in feet below land-surface datum, 1945: May 9, 6.45.

147 (\*908, p. 261; 938, p. 207; 946, p. 248; \*988, p. 321; 1018, p. 243). Phillip Mitteleider. Center of S $\frac{1}{4}$  sec. 27, T. 139 N., R. 71 W. Water level, in feet below land-surface datum, 1945: May 9, 0.01.

148 (\*908, p. 261; 938, p. 207; 946, p. 249; \*988, p. 321; 1018, p. 243). Chas. Woessner. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 10, T. 139 N., R. 72 W. Water level, in feet below land-surface datum, 1945: May 9, 11.34.

149 (\*908, p. 261; 938, p. 207; 946, p. 249; \*988, p. 321; 1018, p. 243). Village of Tappen. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 10, T. 139 N., R. 71 W. Water level, in feet below land-surface datum, 1945: May 9, 7.34.

151 (\*908, p. 261; 938, p. 207; 946, p. 249; \*988, p. 321; 1018, p. 244). Mrs. Pagereng. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 23, T. 142 N., R. 70 W. Water level, in feet below land-surface datum, 1945: May 9, 18.53.

152 (\*908, p. 261; 938, p. 207; 946, p. 249; \*988, p. 321; 1018, p. 244). Northern Pacific Railway. SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 12, T. 142 N., R. 70 W. Water level, in feet below land-surface datum, 1945: May 9, 35.07.

166 (\*908, p. 261; 938, p. 207; 946, p. 249; \*998, p. 231; 1018, p. 244). Jake Schaurer. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 3, T. 139 N., R. 71 W. Water level, in feet below land-surface datum, 1945: May 9, 10.31.

#### LaMoure County

1 (\*908, p. 261; 938, p. 207; 946, p. 249; \*988, p. 321; 1018, p. 244). Town of Edgeley. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 3, T. 133 N., R. 64 W. Water level, in feet below land-surface datum, 1945: May 5, 26.28.

2A (\*886, p. 538; 908, p. 262; 938, p. 207; 946, p. 249; \*988, p. 321; 1018, p. 244). Mrs. Fidela Davis. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 24, T. 134 N., R. 64 W. Water level, in feet below land-surface datum, 1945: May 5, 0.05.

#### Logan County

143 (\*908, p. 262; 938, p. 208; 946, p. 249; \*988, p. 321; 1018, p. 244). Oscar France. W $\frac{1}{2}$ SW $\frac{1}{4}$  sec. 17, T. 135 N., R. 72 W. Water levels, in feet below land-surface datum, 1945: May 9, 16.80; Oct. 8, 16.91.

146 (\*908, p. 262; 938, p. 208; 946, p. 249; \*988, p. 322; 1018, p. 244). George Dummiland. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 27, T. 135 N., R. 72 W. Water levels, in feet below land-surface datum, 1945: May 9, 29.43; Oct. 8, 33.30.

#### McHenry County

101 (\*886, p. 539; 908, p. 262; 938, p. 208; 946, p. 250; \*988, p. 322; 1018, p. 244). Denbigh Forest Experimental Station well 1. Forest Service, U. S. Dept. of Agriculture. SW corner SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 36, T. 156 N., R. 78 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 15	4.00	June 1	3.40	Aug. 1	4.20	Oct. 1	4.60
May 1	3.60	15	3.40	Sept. 1	4.50	Nov. 1	4.80
15	3.50	July 1	3.50				

102 (\*886, p. 540; 908, p. 263; 938, p. 208; 946, p. 250; \*988, p. 322; 1018, p. 244). U. S. No. 50. Denbigh Forest Experimental Station well 2. Forest Service, U. S. Dept. of Agriculture. NW corner SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 36, T. 156 N., R. 78 W.

Water level, in feet below land-surface datum, 1945							
May 1	4.40	June 15	4.10	Aug. 1	5.00	Oct. 1	5.50
15	4.40	July 1	4.30	Sept. 1	5.50	Nov. 1	5.60
June 1	4.20						

103 (\*886, p. 541; 908, p. 263; 938, p. 208; 946, p. 250; 988, p. 322). Denbigh Forest Experimental Station well 3. Forest Service, U. S. Dept. of Agriculture. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 36, T. 156 N., R. 78 W. Measurements resumed.

Water level, in feet below land-surface datum, 1945							
May 1	3.80	June 15	4.40	Aug. 1	4.20	Oct. 1	4.30
15	3.60	July 1	3.60	Sept. 1	4.60	Nov. 1	4.90
June 1	3.40						

104 (\*886, p. 542; 908, p. 263; 938, p. 209; 946, p. 250; 988, p. 322; 1018, p. 244). Denbigh Forest Experimental Station well 4. Forest Service, U. S. Dept. of Agriculture. SE corner SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 36, T. 156 N., R. 78 W.

Water level, in feet below land-surface datum, 1945							
Apr. 15	2.30	June 1	3.20	Aug. 1	3.90	Oct. 1	4.40
May 1	2.90	15	3.10	Sept. 1	4.20	Nov. 1	4.50
15	3.30	July 1	3.30				

## 234 WATER LEVELS AND ARTESIAN PRESSURE, 1945, NORTH-CENTRAL STATES

105 (\*886, p. 543; 908, p. 263; 938, p. 209; 946, p. 250; 988, p. 322; 1018, p. 245). Denbigh Forest Experimental Station well 5. Forest Service, U. S. Dept. of Agriculture. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 36, T. 156 N., R. 78 W.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Apr. 15	4.00	June 15	3.30	Nov. 1	4.50
May 1	3.60	Oct. 1	4.50		

13 (\*908, p. 263; 938, p. 209; 946, p. 250; \*988, p. 322; 1018, p. 245). Mrs. H. Notbohm. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 1, T. 151 N., R. 77 W. Water levels, in feet below land-surface datum, 1945: May 24, 11.83; Aug. 21, 11.50.

156 (\*908, p. 263; \*938, p. 209; 946, p. 250; \*988, p. 322; 1018, p. 245). Minneapolis, St. Paul & Sault Ste. Marie Railway Co. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 6, T. 152 N., R. 79 W. Water levels, in feet below land-surface datum, 1945: May 24, 12.98; Aug. 21, 14.55.

157 (\*908, p. 263; 938, p. 210; 946, p. 250; \*988, p. 322; 1018, p. 245). Federal Land Bank. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 9, T. 153 N., R. 78 W. No measurements made in 1945.

159 (\*908, p. 263; 938, p. 210; 946, p. 250; \*988, p. 322; 1018, p. 245). Harold H. Sullwold. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 33, T. 156 N., R. 79 W. Water levels, in feet below land-surface datum, 1945: May 5, 7.70; Aug. 19, 8.75.

160 (\*908, p. 263; 938, p. 210; 946, p. 250; \*988, p. 322; 1018, p. 245). Forest Service, U. S. Dept. of Agriculture. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 31, T. 157 N., R. 75 W. Water levels, in feet below land-surface datum, 1945: May 15, 2.98; Aug. 19, 3.37.

161 (\*908, p. 264; 938, p. 210; 946, p. 250; \*988, p. 323; 1018, p. 245). Village of Towner. SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 11, T. 156 N., R. 76 W. Water level, in feet below land-surface datum, 1945: Aug. 19, 10.05.

162 (\*908, p. 264; 938, p. 210; 946, p. 250; \*988, p. 323; 1018, p. 245). Walter Arneson. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 3, T. 158 N., R. 78 W. Water level, in feet below land-surface datum, 1945: May 24, 25.26. Well pumped dry prior to measurement.

McIntosh County

93 (\*845, p. 357; 886, p. 545; 908, p. 264; 938, p. 210; 946, p. 251; \*988, p. 323; 1018, p. 245). Freida Forrest. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 7, T. 130 N., R. 69 W.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 10	3.83	July 14	7.90	July 28	8.20	Aug. 11	14.20
12	2.65	21	8.20	Aug. 4	13.10	18	15.10
26	3.50						

94 (\*845, p. 358; 886, p. 545; 908, p. 264; 938, p. 210; 946, p. 251; \*988, p. 323; 1018, p. 245). Freida Forrest. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 7, T. 130 N., R. 69 W.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 10	2.10	May 26	1.28	July 21	3.18	Aug. 11	6.98
12	1.32	June 2	1.78	28	4.08	18	6.98
19	1.18	July 14	2.91	Aug. 4	6.88		



137 (\*908, p. 264; 938, p. 211; 946, p. 251; \*988, p. 323; 1018, p. 246). Federal Land Bank. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 24, T. 132 N., R. 71 W. Water levels, in feet below land-surface datum, 1945: May 10, 7.36; Oct. 8, 8.30.

139 (\*908, p. 265; 938, p. 211; 946, p. 251; \*988, p. 323; 1018, p. 246). Dan Nigisch. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 28, T. 132 N., R. 70 W. Water levels, in feet below land-surface datum, 1945: May 5, 15.50; Oct. 7, 14.34.

141 (\*908, p. 265; \*938, p. 211; 946, p. 251; \*988, p. 323; 1018, p. 246). U.S. 55. Town of Wishek. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 15, T. 132 N., R. 71 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	19.83	May 12	22.88	Aug. 4	23.07	Oct. 20	23.28
13	19.79	19	22.88	11	23.10	27	23.40
20	19.81	26	23.04	18	23.15	Nov. 3	23.40
28	19.85	June 2	22.91	25	23.17	10	23.42
Feb. 4	19.90	9	22.88	Sept. 1	23.13	17	23.46
11	19.83	16	22.88	8	23.21	24	23.45
18	19.83	23	22.98	15	23.25	Dec. 1	23.48
25	19.79	30	22.92	22	23.27	8	23.48
Mar. 4	19.75	July 7	22.96	29	23.29	15	23.52
11	19.73	14	23.00	Oct. 6	23.33	22	23.54
18	19.54	21	23.04	13	23.33	29	23.62
May 10	22.90	28	22.96				

McKenzie County

81 (\*845, p. 358; 886, p. 545; 908, p. 265; 938, p. 211; 946, p. 252; \*988, p. 324; 1018, p. 246). Chas. E. Fleck. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 12, T. 150 N., R. 100 W.

Water level, in feet below land-surface datum, 1945

Jan. 6	114.09	Apr. 7	114.09	July 7	114.09	Sept. 29	113.90
13	114.10	14	114.07	14	114.14	Oct. 6	114.00
20	114.12	21	114.94	21	114.08	13	114.12
27	114.16	28	114.30	28	114.02	20	114.13
Feb. 3	114.13	May 5	114.10	Aug. 4	114.14	27	114.12
10	114.10	12	114.13	11	114.19	Nov. 3	114.18
17	114.15	19	114.14	18	114.13	10	114.00
24	114.33	26	114.12	25	113.88	17	114.14
Mar. 3	114.10	June 2	114.25	Sept. 1	114.35	24	114.20
10	113.91	9	114.00	8	113.95	Dec. 1	114.25
17	114.16	16	114.10	15	114.01	8	114.50
24	114.19	23	114.39	22	113.85	29	114.23
31	114.94	30	114.36				

119 (\*908, p. 265; 938, p. 211; 946, p. 252; \*988, p. 324; 1018, p. 246). Federal Land Bank. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 8, T. 145 N., R. 98 W. No measurements made in 1945.

McLean County

27 (\*840, p. 323; 845, p. 358; 886, p. 546; 908, p. 266; 938, p. 212; 946, p. 252; \*988, p. 324; 1018, p. 246). State of North Dakota. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 15, T. 149 N., R. 84 W.

Water level, in feet below land-surface datum, 1945

Jan. 6	45.31	Feb. 28	45.35	Apr. 21	45.35	June 16	45.27
12	45.31	Mar. 7	45.39	28	45.27	24	45.23
18	45.33	13	45.27	May 5	45.25	30	45.23
25	45.30	20	45.39	12	45.18	July 7	45.25
31	45.39	27	45.35	19	45.23	14	45.27
Feb. 8	45.10	Apr. 2	45.43	26	45.23	21	45.27
14	45.31	9	45.27	June 2	45.23	28	45.22
21	45.35	14	45.39	9	45.14	Aug. 4	45.18

27--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 11	45.14	Sept. 15	45.31	Oct. 23	45.23	Dec. 1	45.20
18	45.18	22	45.02	27	45.25	9	45.20
25	45.22	29	45.27	Nov. 3	45.23	17	45.27
Sept. 1	45.31	Oct. 6	45.23	18	45.20	24	45.25
8	45.14	13	45.27	26	45.23	29	45.20

Mercer County

118 (\*908, p. 266; 938, p. 212; 946, p. 252; \*988, p. 325; 1018, p. 247). Maichel Bros. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 22, T. 144 N., R. 85 W. Water level, in feet below land-surface datum, 1945; May 11, 16.48.

Morton County

1 (\*938, p. 212; 946, p. 252; \*988, p. 325; 1018, p. 247). Fred Lehde. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 15, T. 139 N., R. 85 W.

Water level, in feet below land-surface datum, 1945							
Jan. 6	34.10	Apr. 7	35.48	July 8	36.26	Oct. 13	36.33
13	34.16	15	35.71	14	36.34	22	36.33
21	34.29	21	35.81	22	36.36	31	36.28
27	34.42	28	35.88	28	36.39	Nov. 3	36.30
Feb. 3	34.62	May 5	35.98	Aug. 12	36.20	12	36.23
10	31.77	12	35.99	18	35.97	17	36.19
17	33.25	19	36.07	28	36.10	24	36.28
24	33.99	26	36.13	Sept. 1	36.11	Dec. 2	36.34
Mar. 5	34.48	June 2	36.11	8	36.02	9	36.31
10	34.54	9	36.10	15	36.16	16	36.37
17	34.18	16	36.10	23	36.18	22	36.40
24	34.64	23	36.13	Oct. 1	36.30	29	36.31
Apr. 2	35.16	30	36.14	7	36.30		

2 (\*938, p. 212; 946, p. 253; \*988, p. 325; 1018, p. 247). Henry Polenberg. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 32, T. 139 N., R. 88 W. Water level, in feet below land-surface datum, 1945; May 11, 6.98.

3 (\*938, p. 232; 946, p. 253; \*988, p. 325; 1018, p. 247). Joe Lanz, Jr. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 6, T. 136 N., R. 81 W. Water level, in feet below land-surface datum, 1945; May 11, 21.18.

4 (\*938, p. 212; 946, p. 253; \*988, p. 325; 1018, p. 247). Albrecht & Johnson. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 36, T. 134 N., R. 82 W. Water level, in feet below land-surface datum, 1945; May 11, 15.90.

49 (\*840, p. 324; \*845, p. 359; 886, p. 546; 908, p. 266; 938, p. 213; 946, p. 253; \*988, p. 325; 1018, p. 247). U. S. No. 54. Soil Conservation Service, U. S. Dept. of Agriculture. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 4, T. 138 N., R. 81 W. Water level, in feet below land-surface datum, 1945; May 11, 13.20.

Mountrail County

90 (\*845, p. 359; 886, p. 546; 908, p. 266; 938, p. 213; 946, p. 253; \*988, p. 325; 1018, p. 247). Emil Molter. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 6, T. 152 N., R. 89 W. Water level, in feet below land-surface datum, 1945; Aug. 22, 47.44.

Nelson County

47 (\*886, p. 546; 908, p. 267; \*938, p. 213; 946, p. 253; \*988, p. 325; 1018, p. 248). Tom Miller. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 5, T. 152 N., R. 59 W. Water levels, in feet below land-surface datum, 1945; May 8, 9.88; Aug. 18, 8.53.

Oliver County

1 (\*908, p. 267; 938, p. 213; 946, p. 253; \*988, p. 326; 1018, p. 248). Otis Tye. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 10, T. 141 N., R. 82 W. New measuring point, top of new corrugated steel well cover at north side of well, 1.32 feet above land-surface datum. Water level, in feet below land-surface datum, 1945: May 11, 17.05.

Pembina County

1 (\*938, p. 213; 946, p. 253; \*988, p. 326; 1018, p. 248). E. J. Lander & Co., NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 22, T. 161 N., R. 56 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	6.21	Apr. 7	4.15	July 7	4.21	Oct. 6	7.02
13	6.48	14	3.98	14	4.65	13	7.13
20	6.50	21	4.09	24	4.65	20	7.14
27	6.57	28	3.82	28	4.92	27	7.17
Feb. 3	6.57	May 5	3.56	Aug. 4	5.25	Nov. 3	7.13
10	6.71	12	3.77	11	5.52	10	7.13
17	6.83	19	4.00	18	5.85	17	7.31
24	6.98	26	3.62	25	6.25	24	7.35
Mar. 3	7.01	June 2	3.52	Sept. 1	6.58	Dec. 1	7.42
10	7.16	9	3.98	8	6.83	8	7.45
17	6.57	16	4.40	15	6.92	15	7.46
24	5.51	23	4.64	22	6.94	22	7.54
31	4.32	30	3.86	29	7.00	29	7.48

5 (\*938, p. 214; 946, p. 254; \*988, p. 326; 1018, p. 248). Garnett A. Snell. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 31, T. 162 N., R. 53 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	8.55	Apr. 7	8.90	July 7	7.45	Oct. 6	8.63
13	8.73	14	8.83	14	7.70	13	8.53
20	8.92	21	8.56	21	7.70	20	8.52
27	9.00	28	8.41	28	7.80	27	8.57
Feb. 3	8.94	May 5	8.08	Aug. 4	8.05	Nov. 3	8.47
10	9.10	12	7.76	11	8.25	10	8.65
17	9.24	19	7.42	18	8.61	17	8.49
24	9.28	26	7.08	25	8.33	24	8.59
Mar. 3	9.32	June 2	6.78	Sept. 1	9.37	Dec. 1	8.59
10	9.40	9	6.64	8	9.15	8	8.59
17	9.25	16	6.70	15	8.86	15	8.60
24	9.22	23	7.03	22	8.72	22	8.73
31	9.03	30	7.08	29	8.54	29	8.70

41 (\*840, p. 324; 845, p. 360; 886, p. 547; 900, p. 267; 938, p. 214; 946, p. 254; \*988, p. 326; 1018, p. 248). George Harris. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 27, T. 163 N., R. 51 W. No measurements made in 1945.

50 (\*938, p. 214; 946, p. 254; \*988, p. 326; 1018, p. 248). Albert C. McCurdy. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 3, T. 162 N., R. 55 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	7.72	Apr. 14	6.57	July 14	5.58	Oct. 13	6.58
14	8.18	21	6.07	21	5.09	20	6.68
20	8.15	28	3.64	28	5.36	27	6.72
27	8.16	May 5	5.12	Aug. 4	5.68	Nov. 4	6.79
Feb. 3	8.26	12	5.00	11	5.92	10	6.88
10	8.35	19	4.98	18	6.26	17	6.97
24	8.50	27	4.78	25	6.65	24	7.03
Mar. 3	8.01	June 3	4.63	Sept. 1	6.88	Dec. 2	7.18
10	8.72	9	4.84	8	6.99	9	7.21
17	8.72	16	5.03	15	6.72	16	7.30
24	8.46	23	5.27	22	6.57	22	7.47
31	7.70	30	5.03	29	6.37	30	7.74
Apr. 7	7.06	July 7	5.06	Oct. 7	6.45		

## 238 WATER LEVELS AND ARTESIAN PRESSURE, 1945, NORTH-CENTRAL STATES

72 (\*938, p. 215; 946, p. 254; \*988, p. 327; 1018, p. 249). Herman Tesmer. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 9, T. 163 N., R. 56 W. No measurements made in 1945.

Pierce County

1 (\*908, p. 267; 938, p. 215; 946, p. 255; \*988, p. 327; 1018, p. 249). Eric Hammel. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 10, T. 156 N., R. 72 W. Water levels, in feet below land-surface datum, 1945: May 15, 23.40; Aug. 19, 23.45.

Ramsey County

48 (\*840, p. 324; 845, p. 360; 886, p. 547; 908, p. 267; 938, p. 215; 946, p. 255; \*988, p. 327; 1018, p. 249). Mrs. Bonnie Boland. SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 14, T. 153 N., R. 65 W. Water level, in feet below land-surface datum, 1945: May 8, 57.10.

110 (\*946, p. 255; \*988, p. 327; 1018, p. 249). Ray Young. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 5, T. 153 N., R. 64 W. Water level, in feet below land-surface datum, 1945: May 8, 24.49.

111 (\*946, p. 255; \*988, p. 327; 1018, p. 249). W. H. Summers. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 20, T. 153 N., R. 64 W. Water level, in feet below land-surface datum, 1945: May 5, 50.41.

112 (\*988, p. 327; 1018, p. 249). Camp Grafton Military Reserve. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 25, T. 153 N., R. 64 W. Water level, in feet below land-surface datum, 1945: May 5, 53.68.

Ransom County

1 (\*908, p. 268; 938, p. 215; 946, p. 255; \*988, p. 327; 1018, p. 249). Melfird Skramstad. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 3, T. 136 N., R. 56 W. Water level, in feet below land-surface datum, 1945: May 3, 10.52.

Renville County

26 (\*840, p. 324; 845, p. 361; 886, p. 548; 908, p. 268; 938, p. 215; 946, p. 255; \*988, p. 328; 1018, p. 249). Minnesota Trust Co. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 20, T. 16 N., R. 85 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	82.79	Mar. 24	82.78	July 21	82.76	Oct. 27	83.03
20	82.78	31	82.77	Aug. 4	82.77	Nov. 10	83.05
29	82.80	Apr. 14	82.75	11	82.76	24	82.90
Feb. 5	82.80	June 2	82.65	25	82.81	Dec. 3	82.89
18	82.86	16	82.64	Sept. 1	82.82	8	82.89
Mar. 5	82.81	23	82.65	15	82.94	15	82.89
10	82.82	July 7	82.64	29	83.04	29	82.89
17	82.81	14	82.78				

168 (\*908, p. 268; 938, p. 216; 946, p. 255; \*988, p. 328; 1018, p. 250). J. Dighton Taylor. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 24, T. 161 N., R. 84 W. Water level, in feet below land-surface datum, 1945: Oct. 7, 10.62.

169 (\*908, p. 269; 938, p. 216; 946, p. 256; \*988, p. 328; 1018, p. 250). Fred Paris. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 13, T. 161 N., R. 84 W. Water level, in feet below land-surface datum, 1945: Oct. 7, 8.64.

Richland County

2 (\*845, p. 361; 886, p. 548; 908, p. 269; 938, p. 216; 946, p. 256; \*988, p. 328; 1018, p. 250). Ira Madden. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 12, T. 132 N., R. 49 W. Water level, in feet below land-surface datum, 1945: May 4, 0.36.

5 (\*840, p. 325; 845, p. 362; 886, p. 548; 908, p. 269; \*938, p. 216; 946, p. 256; \*988, p. 328; 1018, p. 250). U. S. No. 52. John Liljemark. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 33, T. 133 N., R. 52 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	5.39	Apr. 7	1.77	June 30	4.10	Sept. 29	8.08
14	5.60	14	1.85	July 8	4.93	Oct. 6	7.05
20	5.49	22	1.32	14	5.52	13	7.12
27	5.41	29	1.52	21	5.89	27	7.29
Feb. 4	5.98	May 5	1.56	28	5.37	Nov. 10	7.25
11	5.93	12	1.77	Aug. 11	6.70	17	7.14
17	5.97	19	2.02	18	6.87	25	7.18
24	5.98	26	2.10	25	7.14	Dec. 1	7.29
Mar. 3	5.86	June 3	1.68	Sept. 1	7.32	9	7.27
10	5.89	9	1.60	9	7.60	16	7.39
17	4.66	17	1.95	15	7.57	23	7.65
24	2.89	23	2.56	24	7.10	30	7.72
31	2.10						

Rolette County

165 (\*908, p. 269; \*938, p. 217; 946, p. 256; \*988, p. 329; 1018, p. 250). Town of Rolla well 4. NE $\frac{1}{4}$  sec. 17, T. 162 N., R. 69 W. No measurements made in 1945.

Sargent County

116 (\*908, p. 270; \*938, p. 217; 946, p. 256; \*988, p. 329; 1018, p. 250). Reko Realty. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 19, T. 130 N., R. 58 W. No measurements made in 1945.

Sheridan County

95 (\*845, p. 362; 886, p. 549; 908, p. 270; 938, p. 217; 946, p. 256; \*988, p. 329; 1018, p. 250). Bank of North Dakota. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 28, T. 145 N., R. 75 W.

Water level, in feet below land-surface datum, 1945

Jan. 6	53.97	Apr. 9	53.96	July 7	53.96	Oct. 6	53.97
13	53.96	14	53.96	14	53.96	13	53.96
20	53.96	21	53.97	21	53.96	20	53.96
27	53.96	28	53.97	28	53.95	27	53.97
Feb. 3	53.97	May 5	53.96	Aug. 4	53.95	Nov. 3	53.96
10	53.96	12	53.96	11	53.96	10	53.97
17	53.96	19	53.96	18	53.96	17	53.97
24	53.96	26	53.96	25	53.96	24	53.97
Mar. 3	53.97	June 2	53.96	Sept. 1	53.96	Dec. 1	53.97
10	53.97	9	53.96	8	53.97	8	53.96
20	53.97	16	53.96	15	53.97	15	53.96
24	53.96	23	53.97	22	53.96	22	53.97
31	53.96	30	53.96	29	53.97	29	53.96

Sioux County

1 (\*908, p. 270; 938, p. 217; 946, p. 257; \*988, p. 329; 1018, p. 251). Mrs. Lookingout. SW $\frac{1}{4}$  sec. 7, T. 130 N., R. 79 W. Water level, in feet below land-surface datum, 1945: May 11, 9.95.

2 (\*938, p. 217; 946, p. 257; \*988, p. 329; 1018, p. 251). Mrs. Mulache. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 23, T. 130 N., R. 80 W. Water level, in feet below land-surface datum, 1945: May 11, 23.04.

Slope County

1 (\*908, p. 270; 938, p. 218; 946, p. 257; \*988, p. 329; 1018, p. 251). Arthur Nesseth. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 14, T. 134 N., R. 100 W. Water level, in feet below land-surface datum, 1945: Aug. 23, 14.29.

Stark County

120 (\*908, p. 270; 938, p. 218; 946, p. 257; \*988, p. 329; 1018, p. 251). Roland and George Funk. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 2, T. 139 N., R. 91 W. Water level, in feet below land-surface datum, 1945: May 11, 2.41.

Steele County

1 (\*908, p. 270; 938, p. 218; 946, p. 257; \*988, p. 330; 1018, p. 251). Mrs. Snortland. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 15, T. 143 N., R. 57 W. Water level, in feet below land-surface datum, 1945: May 3, 12.25.

Stutsman County

124 (\*908, p. 270; 938, p. 218; 946, p. 257; \*988, p. 330; 1018, p. 251). Union Central Life Insurance Co. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 33, T. 137 N., R. 64 W. Water levels, in feet below land-surface datum, 1945: May 5, 46.90; Oct. 6, 46.08.

Towner County

59 (\*840, p. 325; 845, p. 363; 886, p. 549; 908, p. 271; 938, p. 218; 946, p. 257; \*988, p. 330; 1018, p. 251). Bank of North Dakota. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 28, T. 160 N., R. 66 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	15.55	Apr. 14	15.26	July 14	15.17	Oct. 13	15.26
20	15.50	21	15.24	21	15.18	20	15.25
27	15.49	28	15.22	28	15.21	27	15.24
Feb. 3	15.47	May 5	15.18	Aug. 4	15.26	Nov. 3	15.24
10	15.45	12	15.17	11	15.27	10	15.23
17	15.42	19	15.15	15	15.30	17	15.22
24	15.40	26	15.13	18	15.27	24	15.19
Mar. 3	15.38	June 2	15.13	25	15.30	Dec. 1	15.17
10	15.37	9	15.12	Sept. 1	15.30	8	15.16
17	15.34	16	15.11	8	15.30	15	15.15
24	15.33	23	15.13	22	15.28	22	15.13
31	15.30	30	15.15	29	15.28	29	15.11
Apr. 7	15.28	July 7	15.16	Oct. 6	15.27		

170 (\*946, p. 258; \*988, p. 330; 1018, p. 252). S. L. Isaacson. In town of Cando, in Lot 12, block 16. No measurements made in 1945.

Traill County

15 (\*840, p. 326; 845, p. 363; 886, p. 549; 908, p. 271; 938, p. 218; 946, p. 258; \*988, p. 330; 1018, p. 252). A. C. Skyberg. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 24, T. 146 N., R. 51 W.

15--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	18.52	Apr. 14	18.14	July 14	17.69	Oct. 13	17.32
13	18.48	21	18.07	21	17.65	20	17.32
20	18.34	28	18.03	28	17.61	27	17.34
27	18.44	May 5	17.99	Aug. 4	17.57	Nov. 3	17.36
Feb. 3	18.42	12	17.94	11	17.52	10	17.40
10	18.40	19	17.90	18	17.48	17	17.42
17	18.38	26	17.86	25	17.44	24	17.44
24	18.36	June 2	17.82	Sept. 1	17.40	Dec. 1	17.48
Mar. 3	18.36	9	17.78	8	17.36	8	17.50
10	18.32	16	17.73	15	17.34	15	17.52
17	18.27	23	17.69	22	17.32	22	17.52
24	18.23	30	17.69	29	17.32	29	17.52
Apr. 7	18.15	July 7	17.73	Oct. 6	17.32		

32 (\*845, p. 364; 886, p. 550; 908, p. 271; 938, p. 219; 946, p. 258; \*988, p. 331; 1018, p. 252). City of Hatton. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 18, T. 148 N., R. 53 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 3	10.81	July 14	11.36	Aug. 25	13.15	Sept. 29	12.47
10	10.73	21	11.48	Sept. 1	13.86	Oct. 6	13.63
16	10.63	28	11.64	8	13.54	13	12.38
24	10.80	Aug. 5	11.96	15	13.04	21	12.44
30	10.80	11	11.95	23	12.59	Nov. 10	12.13
July 7	11.18	18	12.92				

33 (\*840, p. 326; 845, p. 366; 908, p. 272; 938, p. 219; 946, p. 258; \*988, p. 331; 1018, p. 252). City of Hatton. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 18, T. 148 N., R. 53 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 3	8.54	July 14	8.68	Aug. 25	11.60	Sept. 29	12.55
10	7.43	21	8.26	Sept. 1	12.23	Oct. 6	12.24
16	7.19	28	9.32	8	12.59	13	12.02
24	7.43	Aug. 5	9.80	15	12.51	21	11.79
30	7.72	11	10.14	23	11.51	Nov. 10	11.31
July 7	8.26	18	10.82				

34 (\*845, p. 365; 886, p. 550; 908, p. 272; 938, p. 219; 946, p. 259; \*988, p. 331; 1018, p. 253). City of Hatton. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 18, T. 148 N., R. 53 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 3	8.50	July 14	9.04	Aug. 25	11.02	Sept. 29	11.49
10	8.52	21	9.25	Sept. 1	11.44	Oct. 6	11.50
16	8.38	28	9.66	8	11.71	13	11.32
24	8.70	Aug. 5	9.94	15	11.54	24	11.22
30	8.71	11	10.07	23	11.49	Nov. 10	10.99
July 7	8.71	18	10.50				

Walsh County

38 (\*840, p. 326; 845, p. 366; 886, p. 551; 908, p. 272; 938, p. 219; 946, p. 259; \*988, p. 331; 1018, p. 253). Henry Dipple. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 16, T. 157 N., R. 51 W.

Water level, in feet above land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	8.48	Jan. 27	10.02	Feb. 17	8.51	Mar. 3	10.43
13	8.53	Feb. 3	8.47	24	10.51	9	9.03
20	8.45	10	8.51				

## 242 WATER LEVELS AND ARTESIAN PRESSURE, 1945, NORTH-CENTRAL STATES

39 (\*840, p. 327; 845, p. 366; 886, p. 551; 908, p. 272; 938, p. 220; 946, p. 259; \*988, p. 332; 1018, p. 253). U. S. No. 48. Henry Dipple. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 16, T. 157 N., R. 51 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	3.06	Jan. 27	4.61	Feb. 17	3.03	Mar. 3	4.74
13	3.18	Feb. 3	4.35	24	5.98	9	6.51
20	3.09	10	4.54				

96 (\*886, p. 551; 908, p. 273; 938, p. 220; 946, p. 260; \*988, p. 332; 1018, p. 253). C. D. Lewis. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 17, T. 157 N., R. 55 W.

Water level, in feet below land-surface datum, 1945							
Jan. 6	4.89	Apr. 7	3.17	July 7	3.67	Oct. 6	6.42
13	5.01	14	2.78	14	4.07	13	6.41
20	5.06	21	2.54	21	4.39	20	6.40
27	5.08	28	2.35	28	4.61	27	6.35
Feb. 3	5.09	May 5	2.29	Aug. 4	4.97	Nov. 3	6.35
10	5.15	12	2.33	11	5.29	10	6.35
17	5.22	19	2.52	18	5.72	17	6.34
24	5.29	26	2.23	25	5.91	24	6.33
Mar. 3	5.34	June 2	2.19	Sept. 1	6.20	Dec. 1	6.33
10	5.41	9	2.57	8	6.38	8	6.31
17	5.31	16	2.81	15	6.47	15	6.30
24	4.44	23	3.29	22	6.48	22	6.31
31	3.48	30	3.54	29	6.46	29	6.32

Ward County

50 (\*946, p. 261; \*988, p. 335; 1018, p. 254). Fish and Wildlife Service, U. S. Dept. of Interior. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 31, T. 160 N., R. 89 W. Water levels, in feet below land-surface datum, 1945: May 16, 9.64; Nov. 10, 11.50.

53 (\*886, p. 552; 908, p. 273; 938, p. 221; 946, p. 261; \*988, p. 333; 1018, p. 254). Chas. O'Neill. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 30, T. 160 N., R. 88 W. Measurements discontinued.

71 (\*840, p. 327; 845, p. 367; 886, p. 553; 908, p. 274; 938, p. 221; 946, p. 261; \*988, p. 333; 1018, p. 254). U. S. No. 51. Fish and Wildlife Service, U. S. Dept. of Interior. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 5 T. 157 N., R. 84 W.

Water level, in feet below land-surface datum, 1945							
Apr. 30	a 5.35	June 30	5.00	Aug. 31	5.80	Nov. 1	5.80
May 30	5.00	July 31	5.36	Oct. 1	5.80		

a Frozen.

73 (\*840, p. 327; 845, p. 367; 886, p. 563; 908, p. 274; 938, p. 221; 946, p. 261; \*988, p. 333; 1018, p. 254). Fish and Wildlife Service, U. S. Dept. of Interior. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 21, T. 157 N., R. 84 W.

Water level, in feet below land-surface datum, 1945							
Apr. 30	a 6.20	June 30	6.00	Aug. 31	6.90	Nov. 1	6.30
May 30	5.40	July 31	6.30	Oct. 1	6.70		

a Frozen.

74 (\*840, p. 328; 845, p. 367; 886, p. 553; 908, p. 274; 938, p. 222; 946, p. 261; \*988, p. 334; 1018, p. 254). Fish and Wildlife Service, U. S. Dept. of Interior. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 21, T. 157 N., R. 84 W.

Water level, in feet below land-surface datum, 1945							
Apr 30	8.21	June 30	7.89	Aug. 31	9.49	Nov. 1	8.99
May 30	7.09	July 31	8.59	Oct. 1	9.39		



150. City of Minot supply well 2. NE $\frac{1}{4}$  NW $\frac{1}{4}$  sec. 23, T. 155 N., R. 83 W. Unused drilled well, diameter 15 inches, depth 132 feet. Measuring point, top edge of recorder shelf, 2.21 feet above concrete floor of pumphouse and 19.88 feet below land-surface datum. Equipped with water-stage recorder.

Lowest daily water level, in feet below land-surface datum, 1944  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 10	44.28	Oct. 9	47.33	Nov. 6	47.94	Dec. 1	44.68
11	47.23	12	44.30	7	45.51	2	44.43
12	44.22	13	47.21	8	43.36	4	43.01
13	45.72	14	44.34	9	45.04	5	45.40
14	45.71	15	44.18	10	43.42	6	44.48
15	45.64	16	47.15	11	44.67	7	45.33
16	47.23	17	45.58	12	45.16	8	43.38
17	45.48	18	45.92	13	45.87	9	43.43
20	44.20	19	44.40	14	44.82	12	43.12
21	45.73	20	44.28	15	43.50	13	43.18
22	45.77	21	44.28	16	43.11	14	43.18
23	44.36	22	45.44	17	42.97	15	43.25
24	44.06	23	45.65	18	44.67	19	42.40
25	47.20	24	45.25	19	45.13	20	42.68
26	44.04	25	45.53	20	46.06	21	43.03
27	44.88	26	45.59	21	44.94	22	43.26
28	45.48	27	45.54	22	43.88	23	42.55
29	46.88	29	45.44	23	44.48	24	43.12
30	44.24	30	45.33	24	44.50	25	43.07
Oct. 1	44.03	31	46.41	25	44.38	26	43.02
2	44.36	Nov. 1	43.78	26	44.64	28	42.80
3	46.73	2	43.28	27	45.98	29	43.09
4	45.62	3	46.19	28	44.63	30	43.16
5	45.63	4	45.02	29	44.85	31	42.84
8	44.05	5	45.11	30	44.23		

Lowest daily water level, in feet below land-surface datum, 1945  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	42.91	45.36	43.18	43.11	42.71	41.75	43.16	46.98	42.28	.....	50.08	.....
2	42.64	45.47	43.26	43.08	42.93	41.72	44.58	46.98	48.31	.....	50.43	46.03
3	42.98	45.53	43.22	42.85	42.95	.....	44.94	46.90	48.35	.....	50.27	47.01
4	42.63	45.53	43.23	43.04	42.88	.....	44.13	45.88	48.38	.....	49.53	46.89
5	42.86	45.53	44.31	43.01	42.82	.....	43.68	46.95	48.62	.....	48.82	47.26
6	42.93	45.68	43.13	43.10	42.53	.....	43.69	46.69	48.86	.....	48.56	46.01
7	42.81	45.63	43.33	43.18	42.63	.....	43.83	45.39	48.86	50.38	49.86	47.13
8	43.04	45.53	43.21	44.20	42.33	41.58	45.43	46.60	48.72	50.01	50.15	47.26
9	42.82	45.75	43.26	42.98	42.38	41.58	45.43	46.83	48.38	49.86	50.08	46.90
10	42.90	45.63	43.08	43.08	42.33	42.93	45.44	47.05	47.27	50.03	49.65	47.00
11	42.89	45.58	43.07	44.55	42.26	43.03	45.74	47.06	47.08	50.43	49.60	46.82
12	42.97	45.53	43.07	44.90	42.23	42.58	45.73	47.03	.....	49.15	48.38	46.90
13	44.28	45.68	42.93	44.95	42.11	42.93	44.31	45.93	.....	49.01	48.23	46.94
14	44.18	45.78	43.05	43.45	42.11	41.63	45.30	46.95	.....	50.20	49.59	47.00
15	.....	48.88	44.26	43.28	42.03	41.68	45.28	45.83	.....	49.89	49.65	46.98
16	.....	48.88	43.28	43.18	43.45	41.68	45.63	45.63	.....	50.08	48.32	46.90
17	.....	44.75	43.16	43.31	43.48	42.64	45.80	47.14	.....	50.56	.....	47.10
18	.....	43.88	43.21	43.28	42.58	.....	45.96	47.41	.....	50.55	.....	47.04
19	.....	43.79	43.19	43.35	42.03	41.71	45.98	47.68	.....	50.48	.....	47.28
20	48.15	44.72	42.92	43.31	41.84	43.44	44.63	46.26	.....	49.18	.....	45.83
21	.....	43.74	43.08	43.31	41.88	43.43	45.78	47.51	.....	50.25	.....	45.73
22	47.08	.....	43.15	43.18	41.88	.....	46.13	47.61	.....	48.93	.....	46.85
23	46.97	43.56	43.06	43.19	41.93	.....	46.20	47.73	.....	50.06	.....	47.05
24	45.08	44.72	43.06	43.12	41.88	44.49	46.42	47.95	.....	50.06	.....	46.53
25	45.18	43.40	43.02	43.23	41.95	44.38	46.55	47.93	.....	49.04	.....	45.38
26	45.15	44.30	43.02	43.06	41.92	44.62	46.56	47.76	.....	48.72	.....	46.95
27	48.12	43.23	42.93	43.13	41.73	45.00	45.23	47.89	.....	50.33	.....	46.91
28	45.20	43.26	43.13	43.03	41.68	45.00	46.18	48.22	.....	50.12	.....	46.66
29	45.20	.....	43.20	42.88	41.53	43.70	46.26	48.43	.....	48.83	.....	47.00
30	45.41	.....	42.98	43.91	41.65	43.26	46.56	48.43	.....	48.74	.....	46.78
31	45.48	.....	43.02	.....	41.63	.....	46.74	48.48	.....	48.63	.....	46.31

151. Peoples Ice Co. SW  $\frac{1}{4}$  sec. 14, T. 155 N., R. 83 W. Unused drilled well, diameter 8 inches. Measuring point, top of 8-inch casing at southwest side of well, 1.00 foot above land-surface datum. Equipped with water-stage recorder.

Lowest daily water level, in feet below land-surface datum, 1944  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 29	45.94	Sept. 28	44.92	Oct. 28	43.95	Nov. 26	42.92
30	46.01	29	43.59	29	43.29	27	42.10
31	44.45	30	43.74	30	43.82	28	43.26
Sept. 1	44.81	Oct. 1	43.51	31	43.41	29	42.94
2	44.06	2	43.61	Nov. 1	43.35	30	43.02
3	43.80	3	43.55	2	42.84	Dec. 1	42.71
4	43.85	4	44.44	3	42.74	2	42.52
5	43.54	5	44.54	4	43.23	6	42.94
6	43.91	7	43.92	5	43.50	7	42.87
7	44.17	8	43.54	6	43.87	8	42.87
8	44.16	9	43.79	7	43.87	9	42.92
9	44.07	10	44.03	8	43.15	10	42.64
10	43.78	11	44.86	9	43.44	11	42.74
11	43.97	12	44.91	10	43.24	12	42.45
12	43.63	13	44.08	11	42.87	13	42.59
13	44.35	14	44.09	12	43.79	14	42.60
14	44.35	15	43.65	13	43.37	15	42.65
15	44.87	16	43.85	14	42.84	16	42.45
16	43.43	17	43.92	15	42.78	17	42.48
17	43.63	18	44.53	16	42.57	18	42.10
18	43.50	19	44.46	17	42.47	19	41.88
19	42.90	20	44.15	18	42.89	20	41.81
20	43.49	21	44.18	19	43.95	21	42.42
21	44.25	22	43.98	20	43.93	22	42.59
22	44.49	23	44.13	21	43.47	23	42.15
23	44.43	24	43.30	22	43.37	24	42.19
24	43.50	25	44.06	23	42.77	25	42.56
25	43.75	26	44.19	24	42.77	26	42.32
26	43.75	27	44.16	25	42.47	31	41.98
27	43.65						

Lowest daily water level, in feet below land-surface datum, 1945  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	42.14	44.53	42.62	41.87	40.75	40.05	41.59	45.46	47.50	.....	46.41	.....
2	41.81	44.53	42.58	41.94	41.16	38.10	42.00	45.54	47.25	.....	47.16	45.34
3	42.09	44.56	42.55	41.52	41.33	38.55	42.34	45.63	47.38	.....	47.26	45.32
4	41.72	44.64	42.40	41.88	41.37	38.84	42.74	45.63	47.40	.....	46.52	45.28
5	42.14	44.64	42.63	42.02	41.37	38.84	42.81	45.43	47.40	.....	46.51	45.45
6	42.26	44.77	42.60	42.08	.....	38.68	42.84	45.41	48.00	47.42	46.42	45.39
7	42.00	44.81	42.55	42.18	.....	38.67	42.86	45.15	48.19	47.46	46.40	45.31
8	42.30	44.81	42.50	42.14	.....	36.95	43.35	45.25	48.20	47.25	46.93	45.39
9	42.12	44.85	42.47	41.98	.....	36.80	43.42	45.49	47.44	46.83	46.98	45.04
10	42.16	44.90	42.36	41.55	.....	38.28	43.55	45.74	47.42	46.88	46.42	45.17
11	42.15	44.90	42.04	42.20	.....	38.34	43.97	45.86	47.39	47.56	46.33	45.15
12	42.25	44.87	42.02	.....	.....	37.90	44.03	45.72	.....	47.48	46.20	45.19
13	42.58	44.87	42.15	.....	.....	37.94	44.03	45.73	.....	47.34	45.71	45.17
14	42.32	44.97	42.24	.....	.....	37.72	44.03	45.73	.....	.....	46.01	45.24
15	42.39	45.16	42.60	41.27	41.34	36.96	.....	45.56	.....	.....	46.46	45.01
16	42.37	45.21	42.33	41.30	41.30	37.64	.....	45.57	.....	.....	46.00	44.89
17	42.54	44.82	42.45	40.97	41.50	.....	.....	45.76	.....	.....	45.99	44.88
18	43.66	43.30	42.19	41.33	41.61	.....	.....	46.17	.....	.....	45.94	44.88
19	44.25	43.20	42.26	41.37	41.59	38.70	.....	46.51	.....	.....	45.82	45.31
20	44.33	42.85	41.77	41.38	40.78	39.73	.....	46.51	.....	.....	45.46	45.30
21	44.30	43.15	42.10	41.41	41.07	40.20	.....	46.42	.....	.....	45.62	44.79
22	43.70	43.13	42.25	40.92	41.05	40.30	.....	46.53	.....	47.05	46.07	44.86
23	43.70	42.97	42.25	41.24	41.01	41.63	44.43	46.71	.....	46.90	45.91	.....
24	43.94	43.00	42.16	41.24	41.15	42.11	44.02	47.05	.....	47.15	.....	.....
25	44.17	42.77	41.38	41.21	41.25	42.44	44.80	47.14	.....	46.94	.....	.....
26	44.19	42.68	42.04	41.21	41.29	42.49	44.88	46.65	.....	46.25	.....	.....

151--Continued.

Lowest daily water level, in feet below land-surface datum, 1945

(From recorder charts)											
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. Dec.
27	44.22	42.46	41.90	41.09	40.79	42.91	43.48	46.99	.....	47.20	.....
28	44.20	42.71	42.04	41.23	40.86	43.19	43.76	46.99	.....	47.04	.....
29	44.25		42.13	41.06	40.33	43.19	44.25	47.37	.....	46.88	.....
30	44.28		41.82	41.11	40.67	41.09	44.67	47.61	.....	46.27	.....
31	44.52		42.03		40.75		44.86	47.68		46.30	44.97

152. Minot Milling Co. SE  $\frac{1}{4}$  sec. 13, T. 155 N., R. 83 W. Unused drilled well, diameter 8 inches, depth 100 feet. Measuring point, top of wooden well cover at square hole for recorder cable, 0.20 foot above land-surface datum. Equipped with water-stage recorder.

Lowest daily water level, in feet below land-surface datum, 1944

(From recorder charts)							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 15	45.71	Oct. 31	45.07	Nov. 16	44.70	Dec. 2	44.46
16	45.63	Nov. 1	45.01	17	44.67	7	44.37
17	45.61	2	44.90	18	44.60	8	44.35
18	45.83	3	44.81	19	44.76	9	44.57
19	45.82	4	44.95	20	44.90	10	44.52
20	45.68	5	44.91	21	44.86	11	44.35
21	45.70	6	44.95	22	44.76	12	44.36
22	45.58	7	44.98	23	44.64	20	44.00
23	45.56	8	44.98	24	44.33	21	44.13
24	45.52	9	44.97	25	44.48	22	44.21
25	45.46	10	44.97	26	44.48	23	44.21
26	45.51	11	44.81	27	44.45	24	44.09
27	45.50	12	44.91	28	44.45	25	44.14
28	45.50	13	44.91	29	44.60	26	44.14
29	45.39	14	44.78	30	44.58	31	44.10
30	45.09	15	44.74	Dec. 1	44.48		

Lowest daily water level, in feet below land-surface datum, 1945

(From recorder charts)											
Day	Jan.	Feb.	Mar.	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
1	43.75	45.37	.....	.....	43.43	.....	53.39	.....	51.64	.....	.....
2	43.70	45.39	.....	.....	43.65	51.18	53.32	.....	51.92	48.97	.....
3	43.78	45.44	.....	.....	44.50	51.26	53.22	.....	51.74	48.39	.....
4	43.78	.....	44.30	.....	.....	51.11	.....	.....	51.25	48.35	.....
5	43.80	.....	44.36	.....	.....	50.96	.....	.....	51.27	.....	.....
6	43.85	.....	44.36	.....	.....	50.92	.....	.....	51.27	.....	.....
7	43.78	.....	44.32	41.29	.....	50.75	.....	51.99	51.32	.....	.....
8	43.85	.....	44.30	41.25	45.12	50.82	.....	52.02	51.32	.....	.....
9	43.85	.....	44.20	41.20	45.18	51.11	.....	51.67	51.41	48.00	.....
10	44.71	45.82	44.20	41.02	45.25	.....	.....	51.74	50.67	48.18	.....
11	43.69	45.71	43.99	41.44	45.64	.....	.....	52.06	50.40	47.94	.....
12	43.99	45.77	44.07	41.14	45.68	51.09	.....	52.16	50.12	47.86	.....
13	43.95	45.79	44.07	.....	45.57	51.04	.....	51.96	49.73	47.90	.....
14	43.95	45.91	44.00	.....	45.58	50.64	.....	.....	50.05	47.79	.....
15	43.93	46.01	44.09	.....	.....	50.90	.....	.....	50.07	47.79	.....
16	43.93	46.01	44.01	.....	.....	.....	.....	.....	49.66	.....	.....
17	43.90	.....	44.11	40.81	45.79	.....	.....	.....	49.60	.....	.....
18	44.51	45.59	44.05	41.52	45.95	.....	.....	.....	49.47	.....	.....
19	44.82	45.17	44.11	41.91	46.08	.....	.....	.....	49.15	.....	.....
20	45.10	44.88	43.87	42.68	46.10	.....	.....	.....	49.08	.....	.....
21	45.10	44.87	43.80	42.91	46.24	.....	.....	.....	49.26	.....	.....
22	44.83	44.87	43.84	44.23	46.65	.....	.....	.....	49.34	.....	.....
23	44.85	44.80	43.83	45.33	.....	.....	.....	52.54	48.97	.....	.....
24	44.90	44.71	.....	.....	.....	.....	.....	52.66	.....	.....	.....
25	45.05	.....	.....	.....	.....	.....	.....	52.64	.....	.....	.....
26	45.05	.....	.....	.....	.....	.....	.....	52.64	.....	.....	.....
27	45.17	.....	.....	.....	.....	.....	.....	52.56	.....	.....	.....
28	45.17	.....	.....	.....	.....	52.99	.....	52.38	.....	.....	.....
29	45.15	.....	.....	.....	.....	53.32	.....	51.46	.....	.....	.....
30	45.26	.....	.....	.....	.....	53.25	.....	51.62	.....	.....	.....
31	45.37	.....	.....	.....	.....	53.40	.....	51.62	.....	.....	.....

Wells County

23 (\*817, p. 229; \*940, p. 328; 845, p. 368; 886, p. 554; 908, p. 274; 938, p. 222; 946, p. 261; \*988, p. 334; 1018, p. 254). City of Harvey. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 20, T. 150 N., R. 72 W. Water level, in feet above land-surface datum, 1945: May 8, 0.22.

24 (\*840, p. 328; 845, p. 368; 886, p. 554; 908, p. 274; 938, p. 222; 946, p. 262; \*988, p. 334; 1018, p. 254). City of Harvey. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 28, T. 150 N., R. 72 W. Water level, in feet below land-surface datum, 1945: May 8, 5.49.

153 (\*908, p. 275; 938, p. 222; 946, p. 262; \*988, p. 334; 1018, p. 254). Hayden Jones. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 23, T. 147 N., R. 70 W. Water level, in feet below land-surface datum, 1945: May 8, 5.59.

Williams County

77 (\*886, p. 554; 908, p. 275; 938, p. 223; 946, p. 262; \*988, p. 334; 1018, p. 255). Hans O. Lottestad. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 24, T. 159 N., R. 103 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	29.25	Apr. 1	29.41	July 1	29.02	Oct. 7	29.98
14	29.25	8	28.97	8	29.17	14	29.98
22	29.32	15	28.65	15	29.29	21	30.22
28	29.35	22	28.24	22	29.36	28	30.07
Feb. 4	29.37	29	28.26	29	29.43	Nov. 4	30.05
11	29.40	May 6	28.19	Aug. 5	29.44	11	30.05
18	29.44	13	28.23	19	29.55	18	30.06
25	29.49	20	28.38	26	30.13	25	30.07
Mar. 4	29.45	27	28.51	Sept. 2	30.13	Dec. 2	30.08
11	29.51	June 3	28.65	9	29.97	9	30.09
18	29.48	10	28.58	23	30.01	16	30.11
25	29.42	17	28.88	30	30.03	30	30.17

78 (\*845, p. 368; 886, p. 555; 908, p. 275; 938, p. 223; 946, p. 262; \*988, p. 334; 1018, p. 255). Hans O. Lottestad. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 24, T. 159 N., R. 103 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	23.25	Apr. 1	24.08	July 1	24.62	Oct. 7	25.46
14	23.30	8	23.79	8	24.76	14	25.54
22	23.48	15	23.76	15	24.76	21	25.50
28	23.58	22	23.74	22	24.82	28	25.53
Feb. 4	23.61	29	24.05	29	24.91	Nov. 4	25.54
11	23.67	May 6	24.08	Aug. 5	25.04	11	25.54
18	23.71	13	24.12	19	25.13	18	25.62
25	24.01	20	24.21	26	25.14	25	25.61
Mar. 4	23.99	27	24.32	Sept. 2	25.27	Dec. 2	25.72
11	24.09	June 3	24.36	9	25.29	9	25.73
18	24.10	10	24.26	23	25.19	16	25.83
25	24.05	17	24.52	30	25.48	30	25.75

79 (\*845, p. 369; 886, p. 555; 908, p. 276; 938, p. 223; 946, p. 262; \*988, p. 335; 1018, p. 255). Mrs. Gus B. Swanson Estate. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 29, T. 157 N., R. 96 W.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	17.06	Mar. 3	24.08	Apr. 28	18.21	June 23	18.33
13	17.08	10	24.06	May 5	18.35	30	18.19
20	17.06	17	24.06	12	18.30	July 7	18.04
27 a	23.83	24	24.07	19	19.92	14	18.14
Feb. 4	24.39	31	24.05	28	19.73	21	18.10
11	24.25	Apr. 7	24.06	June 2	19.50	28	18.13
18	24.06	14	24.05	9	17.71	Aug. 4	18.17
25	24.07	21	18.29	16	17.81	11	18.37

a Not pumped for 6 days.

79--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 18	18.44	Sept. 22	19.58	Oct. 27	19.71	Dec. 1	19.75
25	19.85	29	19.65	Nov 3	19.71	8	19.75
Sept. 1	19.89	Oct. 6	19.77	10	19.72	15	19.75
8	19.97	13	19.79	17	19.71	22	19.73
15	19.89	20	19.77	24	19.73	29	19.72

## SOUTH DAKOTA

By P. D. Akin

### PROGRAM OF WORK

The program of inventorying ground-water levels in selected wells in South Dakota, begun in 1939, was continued until July 1, 1945, in cooperation with the South Dakota Geological Survey. Financial cooperation between the United States Geological Survey and the South Dakota Geological Survey for ground-water studies was discontinued as of July 1, 1945. It is reported that the South Dakota Geological Survey continued measurements in many of the wells and that the records will be published by that agency.

Water-level measurements made in 31 wells during the first 6 months of 1945 are given in this report. In all, 145 individual measurements are reported.

An explanation of the well-numbering system used is given in Water-Supply Paper 1018.

### WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

#### Beadle County

109-62-3R1 (\*886, p. 642; 908, p. 278; 938, p. 226; 946, p. 269; \*988, p. 341; 1018, p. 260). SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 3, T. 109 N., R. 62 W. Measurements discontinued.

109-62-7A1 (\*886, p. 642; 908, p. 279; 938, p. 226; 946, p. 269; \*988, p. 341; \*1018, p. 260). Mrs. Ella Johnson. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 7, T. 109 N., R. 62 W. Measurements discontinued.

109-62-9H1 (\*886, p. 642; 908, p. 278; 938, p. 226; 946, p. 269; \*988, p. 341; 1018, p. 260). Mrs. Hildur Erickson. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 9, T. 109 N., R. 62 W. Measurements discontinued.

109-63-1B1 (\*886, p. 642; 908, p. 279; 938, p. 226; 946, p. 269; \*988, p. 341; 1018, p. 260). Nels Christensen. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 1, T. 109 N., R. 63 W. Measurements discontinued.

110-62-9E1 (\*817, p. 314; 840, p. 373; 945, p. 436; 886, p. 640; 908, p. 277; 938, p. 231; 946, p. 267; \*988, p. 341; 1018, p. 260). City of Huron. Owner's gage hole 1. In Huron, in SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 9, T. 110 N., R. 62 W. Measurements discontinued.

110-62-36P1 (\*886, p. 642; 908, p. 278; 938, p. 226; 946, p. 269; \*988, p. 341; 1018, p. 261). SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 36, T. 110 N., R. 62 W. Measurements discontinued.

111-59-31R1 (\*938, p. 226; 946, p. 269; \*988, p. 341; 1018, p. 261). P. J. Murphy. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 31, T. 111 N., R. 59 W. Measurements discontinued.

#### Bon Homme County

94-58-14P1 (\*886, p. 642; \*908, p. 279; 938, p. 226; \*946, p. 269; \*988, p. 341; \*1018, p. 261). T. V. Dugovic. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 14, T. 94 N., R. 58 W. Water levels, in feet below land-surface datum, 1945: Feb. 28, 11.84; Mar. 26, well plugged at 10 feet; Apr. 25, 10.22; June 11, 5.00.

94-59-6B1 (\*886, p. 643; 908, p. 279; 938, p. 227; 946, p. 270; \*988, p. 341; 1018, p. 261). Joseph Krejci. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 6, T. 94 N., R. 59 W.

#### Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Jan. 25	8.81	Mar. 26	7.03	June 11	5.78
Feb. 28	8.08	Apr. 25	5.54		

95-60-8E1 (\*886, p. 643; 908, p. 279; 938, p. 226; 946, p. 270; \*988, p. 342; 1018, p. 261). Jake Berndt. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 8, T. 95 N., R. 60 W.

#### Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Jan. 25	5.51	Mar. 26	4.06	June 11	1.92
Feb. 28	5.49	Apr. 25	3.16		

96-60-32M1 (\*946, p. 270; \*988, p. 342; 1018, p. 261). NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 32, T. 96 N., R. 60 W. Measurements discontinued.

#### Brookings County

110-50-13M1 (\*946, p. 267; \*988, p. 342; 1018, p. 261). City of Brookings well 1. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 13, T. 110 N., R. 50 W. Measurements discontinued.

#### Clay County

92-52-00 (\*908, p. 280; 938, p. 227; 946, p. 271; \*988, p. 342; 1018, p. 261). 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.

#### Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Jan. 25	15.11	Mar. 26	14.89	June 11	14.95
Feb. 28	15.01	Apr. 25	14.83		

92-52-13J1 (\*908, p. 280; 938, p. 227; \*946, p. 270; \*988, p. 342; 1018, p. 262). University of South Dakota. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 13, T. 92 N., R. 52 W. Water levels, in feet below land-surface datum, 1945: Jan. 25, 9.37; Feb. 28, 7.59; Mar. 26, 7.94; June 11, 7.21.

94-52-35P1 (\*886, p. 643; \*908, p. 279; \*938, p. 227; 946, p. 270; \*988, p. 342; 1018, p. 262). Ed Yusten. SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 35, T. 94 N., R. 52 W.

#### Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Jan. 25	3.65	Mar. 26	2.35	June 11	0.65
Feb. 28	3.49	Apr. 25	2.35		

## 250 WATER LEVELS AND ARTESIAN PRESSURE, 1945, NORTH-CENTRAL STATES

95-52-23M1 (\*908, p. 280; 938, p. 227; 946, p. 271; \*988, p. 343; 1018, p. 262). Geological Survey, U. S. Dept. of Interior. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 23, T. 95 N., R. 52 W.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 25	5.34	Mar. 26	4.62	June 11	4.46
Feb. 28	5.40	Apr. 25	4.64		

Harding County

19N-5E-30H1 (U.S. 131) (\*1018, p. 262). George Hall. SE $\frac{1}{4}$ NE $\frac{1}{4}$  T. 19 N., R. 5 E., at power plant in Buffalo.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 6	25.93	Apr. 17	24.94	June 12	26.91	July 24	25.46
13	25.70	May 15	25.50	19	25.01	30	25.95
20	24.88	22	26.26	26	25.34	Aug. 14	25.77
28	24.63	29	25.16	July 10	25.42	21	25.90
Apr. 3	24.82	June 5	26.01	18	25.98		

Hutchinson County

97-56-11C1 (\*908, p. 280; 938, p. 228; 946, p. 271; \*988, p. 343; 1018, p. 263). Christ Harnisch. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 11, T. 97 N., R. 56 W.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 25	7.86	Mar. 26	8.07	June 11	5.88
Feb. 28	8.09	Apr. 25	6.81		

97-57-10D1 (\*886, p. 643; 908, p. 280; 938, p. 228; 946, p. 271; \*988, p. 343; 1018, p. 263). Ed C. Metteler. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 10, T. 97 N., R. 57 W.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 25	6.13	Mar. 26	4.47	June 11	2.90
Feb. 28	5.60	Apr. 25	3.80		

97-58-10B1 (\*988, p. 343; 1018, p. 263). NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 10, T. 97 N., R. 58 W.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 25	5.16	Mar. 26	2.30	June 11	2.87
Feb. 28	3.68	Apr. 25	2.87		

97-60-8L1 (\*886, p. 643; 908, p. 280; 938, p. 227; 946, p. 271; \*988, p. 344; 1018, p. 263). Herman Krause. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 8, T. 97 N., R. 60 W.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 25	6.24	Mar. 26	5.98	June 11	2.74
Feb. 28	6.83	Apr. 25	4.87		

Kingsbury County

109-53-12A1 (\*886, p. 643; 908, p. 279; 938, p. 227; 946, p. 272; \*988, p. 344; 1018, p. 263). NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 12, T. 109 N., R. 53 W. Measurements discontinued.



Lincoln County

96-50-20J1 (\*908, p. 281; \*938, p. 228; 946, p. 272; \*988, p. 344; 1018, p. 263). Geological Survey, U. S. Dept. of Interior. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 20, T. 96 N., R. 50 W. Water levels, in feet below land-surface datum, 1945: Apr. 23, 3.75; June 1, 2.76.

97-50-5B1 (\*886, p. 644; 908, p. 281; 938, p. 228; 946, p. 272; \*988, p. 344; \*1018, p. 263). Andrew Lenna. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 5, T. 97 N., R. 50 W. Water levels, in feet below land-surface datum, 1945: Feb. 6, 6.26; Mar. 21, 6.37; Apr. 23, 4.24; June 1, 2.82.

98-50-15P1 (\*886, p. 644; 908, p. 281; 938, p. 228; 946, p. 272; \*988, p. 344; 1018, p. 263). H. J. Rolfe. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 15, T. 98 N., R. 50 W. Water levels, in feet below land-surface datum, 1945: Feb. 6, 10.54; Mar. 21, 10.97; Apr. 23, 11.01; June 1, 10.50.

100-50-26N1 (\*886, p. 644; 908, p. 281; 938, p. 228; 946, p. 272; \*988, p. 344; 1018, p. 264). Ed Devitt. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 26, T. 100 N., R. 50 W. Measurements discontinued.

Minnehaha County

101-49-4A1 (68 S.F.) (\*1018, p. 264). Standard Station. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 4, T. 101 N., R. 49 W. Measurements discontinued.

101-49-4C1 (\*946, p. 269; \*988, p. 344; 1018, p. 264). State of South Dakota. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 4, T. 101 N., R. 49 W. Measurements discontinued.

101-49-5A1 (72 S.F.) (\*1018, p. 264). City of Sioux Falls. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 5, T. 101 N., R. 49 W. Measurements discontinued.

101-49-5G1 (79 S.F.) (\*1018, p. 264). City of Sioux Falls. SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 5, T. 101 N., R. 49 W. Measurements discontinued.

101-49-5J1 (95 S.F.) (\*1018, p. 264). City of Sioux Falls. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 5, T. 101 N., R. 49 W. Measurements discontinued.

101-49-5P1 (104 S.F.) (\*1018, p. 265). City of Sioux Falls. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 5, T. 101 N., R. 49 W. Measurements discontinued.

101-49-6A1 (75 S.F.) (\*1018, p. 265). City of Sioux Falls. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 6, T. 101 N., R. 49 W. Measurements discontinued.

101-49-6H1 (109 S.F.) (\*1018, p. 265). City of Sioux Falls. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 6, T. 101 N., R. 49 W. Measurements discontinued.

101-49-9C1 (120 S.F.) (\*946, p. 269; 988, p. 345; 1018, p. 265). Morrell Co. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 9, T. 101 N., R. 49 W. Measurements discontinued.

101-49-25L1 (186 S.F.) (\*1018, p. 265). City of Sioux Falls. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 25, T. 101 N., R. 49 W. Measurements discontinued.

101-49-28L1 (130 S.F.) (\*1018, p. 266). Keeler's Gardens. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 28, T. 101 N., R. 49 W. Measurements discontinued.

101-49-32A1 (148 S.F.) (\*1018, p. 266). A. C. Odequard. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 32, T. 101 N., R. 49 W. Measurements discontinued.

101-50-12A1 (165 S.F.) (\*1018, p. 266). City of Sioux Falls. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 12, T. 101 N., R. 50 W. Measurements discontinued.

101-50-15D1 (173 S.F.) (\*1018, p. 266). City of Sioux Falls, NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 15, T. 101 N., R. 50 W. Measurements discontinued.

101-50-23J1 (178 S.F.) (\*1018, p. 266). City of Sioux Falls. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 23, T. 101 N., R. 50 W. Measurements discontinued.

## 252 WATER LEVELS AND ARTESIAN PRESSURE, 1945, NORTH-CENTRAL STATES

101-51-21A1 (\*886, p. 644; 908, p. 281; 938, p. 229; 946, p. 272; \*988, p. 345; \*1018, p. 266). NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 21, T. 101 N., R. 51 W. Water levels, in feet below land-surface datum, 1945: Feb. 6, 6.27; Mar. 21, 6.05; Apr. 23, 4.49; June 1, 4.84.

102-47-29J1 (56 S.F.) (\*988, p. 345; 1018, p. 266). State of South Dakota. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 29, T. 102 N., R. 49 W. Measurements discontinued.

102-49-5A1 (36 S.F.) (\*1018, p. 267). City of Sioux Falls. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 5, T. 102 N., R. 49 W. Measurements discontinued.

102-49-16D1 (\*886, p. 644; 908, p. 281; 938, p. 229; 946, p. 272; \*988, p. 346; 1018, p. 267). Renner Baseball Park. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 16, T. 102 N., R. 49 W. Water level, in feet below land-surface datum, 1945: Mar. 21, 3.10; Apr. 23, 3.96; June 1, 3.67.

102-49-20P1 (50 S.F.) (\*1018, p. 267). City of Sioux Falls. Center line secs. 20 and 29, T. 102 N., R. 49 W. Measurements discontinued.

102-49-32N1 (62 S.F.) (\*1018, p. 267). City of Sioux Falls. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 32, T. 102 N., R. 49 W. Measurements discontinued.

102-49-32P1 (66 S.F.) (\*1018, p. 267). City of Sioux Falls. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 32, T. 102 N., R. 49 W. Measurements discontinued.

103-49-6B1 (\*886, p. 644; 908, p. 281; 938, p. 229; 946, p. 273; 988, p. 346; 1018, p. 268). NW $\frac{1}{4}$ E $\frac{1}{4}$  sec. 6, T. 103 N., R. 49 W. Water level, in feet below land-surface datum, 1945: Mar. 21, 6.01; Apr. 23, 6.00; June 1, 5.49.

103-49-8Q1 (27 S.F.) (\*1018, p. 268). City of Sioux Falls. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 8, T. 103 N., R. 49 W. Measurements discontinued.

Moody County

106-49-33E1 (\*886, p. 644; 908, p. 282; 938, p. 229; 946, p. 273; \*988, p. 346; 1018, p. 268). SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 33, T. 106 N., R. 49 W. Measurements discontinued.

106-50-16N1 (\*886, p. 644; 908, p. 282; 938, p. 229; 946, p. 273; 988, p. 346; 1018, p. 268). Carl B. Jensen. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 16, T. 106 N., R. 50 W. Measurements discontinued.

Turner County

96-53-27R1 (\*886, p. 645; 908, p. 282; 938, p. 230; 946, p. 273; \*988, p. 347; 1018, p. 268). W. C. Olson. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 27, T. 96 N., R. 53 W.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Jan. 25	15.15	Mar. 26	13.74	June 11	12.16
Feb. 28	15.02	Apr. 25	13.41		

96-53-32N1 (\*886, p. 645; 908, p. 282; 938, p. 229; 946, p. 273; \*988, p. 347; 1018, p. 268). J. H. Shaw. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 32, T. 96 N., R. 53 W.

Water level, in feet below land-surface datum, 1945

Jan. 25	6.12	Mar. 26	5.44	June 11	3.09
Feb. 28	6.34	Apr. 25	4.41		

97-53-35N1 (\*886, p. 645; 908, p. 282; 938, p. 230; 946, p. 274; \*988, p. 347; 1018, p. 269). Jorgenson Studio. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 35, T. 97 N., R. 53 W. Measuring point beginning Apr. 23, 2.5 feet above land-surface datum. Water levels, in feet below land-surface datum, 1945: Feb. 6, 6.44; Mar. 21, 5.89; Apr. 23, 5.45; June 1, 3.75.

98-53-26R1 (\*886, p. 645; 908, p. 282; 938, p. 230; 946, p. 274; \*988, p. 347; 1018, p. 269). SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 26, T. 98 N., R. 43 W. Water levels, in feet below land-surface datum, 1945: Mar. 21, 6.26; June 1, 6.61.

99-53-8P1 (\*946, p. 274; \*988, p. 347; 1018, p. 269). A. M. Fisher. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 8, T. 99 N., R. 53 W. Water levels, in feet below land-surface datum, 1945: Feb. 6, 19.44; Mar. 21, 19.58; Apr. 23, 19.54; June 1, 19.42.

99-53-29A1 (\*886, p. 645; 908, p. 282; 938, p. 229; 946, p. 273; \*988, p. 347; 1018, p. 269). NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 29, T. 99 N., R. 53 W. Water levels, in feet below land-surface datum, 1945: Mar. 21, 4.70; Apr. 23, 4.95; June 1, 5.66.

100-53-9N1 (\*886, p. 645; 908, p. 282; 938, p. 229; 946, p. 273; \*988, p. 348; 1018, p. 269). Otto Kraemer. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 9, T. 100 N., R. 53 W. Water levels, in feet below land-surface datum, 1945: Feb. 6, 39.15; Mar. 21, 38.90; Apr. 23, 38.92; June 1, 38.93.

#### Union County

94-50-6J1 (\*886, p. 646; 908, p. 283; 938, p. 230; 946, p. 274; \*988, p. 348; 1018, p. 269). A. G. McGuire. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 6, T. 94 N., R. 50 W. Water levels, in feet below land-surface datum, 1945: Feb. 6, 6.41; Mar. 21, 4.73; Apr. 23, 4.36; June 1, 4.63.

95-50-8B1 (\*886, p. 645; 908, p. 283; 938, p. 230; \*946, p. 274; \*988, p. 348; 1018, p. 269). J. J. Dolan. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 8, T. 95 N., R. 50 W. Measurements discontinued.

93-50-8N1 (\*886, p. 646; 908, p. 283; 938, p. 230; 946, p. 274; \*988, p. 348; \*1018, p. 269). SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 8, T. 93 N., R. 50 W. Water levels, in feet below land-surface datum, 1945: Feb. 6, 17.78; Mar. 21, 17.82; Apr. 23, 17.74; June 1, 17.40.

#### Walworth County

121-76-2Q1 (U.S. 130) (\*1018, p. 270). Martin Anderson. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 2, T. 121 N., R. 76 E. Measurements discontinued.

#### Yankton County

93-54-11D1 (\*886, p. 646; 908, p. 283; 938, p. 230; 946, p. 275; \*988, p. 348; 1018, p. 270). Gayville Cemetery. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 11, T. 93 N., R. 54 W.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 25	11.80	Mar. 26	11.45	June 11	10.40
Feb. 28	11.75	Apr. 25	11.13		

93-56-13G1 (\*988, p. 349; 1018, p. 270). Thomas Bosteder. SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 13, T. 93 N., R. 56 W.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 25	11.87	Mar. 26	11.51	June 11	11.07
Feb. 28	11.82	Apr. 25	11.52		

93-57-1A1 (\*886, p. 646; 908, p. 283; 938, p. 231; 946, p. 275; \*988, p. 349; 1018, p. 270). Adolph Schochfeldt. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 1, T. 93 N., R. 57 W.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 25	12.98	Mar. 26	12.72	June 11	9.97
Feb. 28	13.11	Apr. 25	12.19		

96-55-7E1 (\*908, p. 284; 938, p. 231; 946, p. 275; \*988, p. 349; 1018, p. 270). Oswald Estate. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 7, T. 96 N., R. 55 W.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 25	11.12	Mar. 26	12.09	June 11	7.97
Feb. 28	11.74	Apr. 25	8.61		

# WISCONSIN

By F. C. Foley and F. C. Christopherson

## PROGRAM OF WORK

Observations of water level in wells in Wisconsin were continued during 1945 by the Geological Survey, United States Department of the Interior. No new wells were added during the year and in one well no measurements were made after October 1. At the end of the year 19 wells were included in the program. Wells in the Coon Creek area were measured monthly and those in the northern part of the Wisconsin River Valley were measured weekly. One water-stage recorder was in operation, serviced by the Wisconsin Valley Improvement Co. During the year about 620 individual measurements of water level were made.

## FLUCTUATIONS OF WATER LEVEL

Precipitation in Wisconsin in 1945 was 35.16 inches, which is 4.52 inches above normal. Observation wells in Wisconsin, all of which are water-table wells, responded to the high precipitation, for only one well showed a net decline during the year. Eight observation wells in the Coon Creek area showed a net rise which ranged from 0.09 foot to 4.90 feet. Of the 10 observation wells in the northern Wisconsin River Valley, 9 showed a net rise which ranged from 0.23 foot to 4.36 feet and one, well On-23, showed a net decline of 0.12 foot.

## WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

### Ashland County

As 1 (#988, p. 351; #1018, p. 272). Lake Superior District Power Co. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 6, T. 47 N., R. 4 W., 6 miles south of Ashland, near power dam. Measurements by Lake Superior District Power Co.

- Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	2.49	Mar. 12	2.30	May 21	2.75	July 30	2.71
8	2.61	19	1.89	28	2.40	Aug. 6	2.90
15	2.53	26	1.89	June 4	2.10	13	3.05
22	2.50	Apr. 2	2.15	11	2.35	20	3.11
29	2.55	9	2.00	18	1.80	27	3.15
Feb. 5	2.53	16	1.93	25	2.21	Sept. 3	2.45
12	2.49	23	1.70	July 2	2.39	10	2.95
19	2.43	30	2.25	9	2.35	17	3.10
26	2.35	May 7	2.47	16	2.39	24	3.15
Mar. 5	2.35	14	2.59	23	2.33	Oct. 1	2.97

Langlade County

La 26 (\*1018, p. 272). Geological Survey, U. S. Dept. of Interior.  
SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 7, T. 31 N., R. 11 E.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	7.88	Apr. 7	5.26	July 8	4.81	Oct. 7	5.48
13	8.02	14	5.31	15	5.09	14	5.77
21	8.14	22	4.79	22	5.21	21	5.88
27	8.24	29	4.53	29	5.38	28	6.05
Feb. 4	8.26	May 6	4.72	Aug. 5	5.48	Nov. 4	5.64
10	8.42	13	5.03	11	5.63	11	5.01
17	8.55	20	5.11	19	5.79	18	4.44
24	8.67	28	3.52	25	5.85	25	4.72
Mar. 3	8.74	June 2	3.42	Sept. 2	5.47	Dec. 2	4.83
10	8.74	10	3.63	11	5.68	9	5.05
17	6.35	16	4.14	16	5.87	16	5.27
24	5.77	23	4.43	22	5.85	23	5.51
31	5.53	30	4.66	30	5.53	29	5.53

Lincoln County

Ln 25 (\*1018, p. 273). Geological Survey, U. S. Dept. of Interior.  
SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 36, T. 34 N., R. 6 E.

Water level, in feet below land-surface datum, 1945

Jan. 1	6.22	Apr. 1	4.80	July 1	5.47	Oct. 1	5.24
7	6.39	8	4.61	8	5.08	7	5.43
14	6.39	15	4.74	15	5.61	15	5.63
21	6.37	22	4.59	22	5.61	22	5.69
28	6.32	29	4.67	30	5.57	29	5.80
Feb. 4	6.42	May 7	4.89	Aug. 6	5.60	Nov. 4	5.33
11	6.31	13	4.98	13	5.28	18	5.10
18	6.31	20	4.99	19	5.51	26	5.25
25	6.06	28	4.68	30	5.96	Dec. 3	5.18
Mar. 4	6.13	June 3	4.63	Sept. 4	5.27	9	5.36
11	6.07	12	5.01	9	5.56	16	5.54
18	4.81	17	5.13	18	5.83	24	5.62
25	4.66	24	5.47	24	5.35	30	5.60

Marathon County

Mr 27 (\*1018, p. 273). Conrad Kreamsreiter. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 24, T. 29 N., R. 3 E.

Water level, in feet below land-surface datum, 1945

Jan. 1	7.73	Apr. 8	4.38	July 9	4.69	Oct. 1	3.81
7	7.65	15	3.89	12	4.97	8	3.07
14	7.82	22	3.41	17	5.42	15	3.82
21	7.87	30	3.61	23	5.31	21	4.25
28	8.12	May 7	4.05	30	5.69	29	4.87
Feb. 4	8.17	13	4.59	Aug. 5	5.65	Nov. 4	4.45
11	8.21	21	4.84	13	5.38	11	3.87
18	8.37	29	2.88	20	4.47	19	3.76
25	8.46	June 3	2.71	26	4.97	Dec. 3	4.03
Mar. 4	8.38	11	3.02	Sept. 5	3.79	9	3.49
11	8.31	18	3.62	10	3.86	16	4.03
18	7.60	25	4.18	18	4.65	26	4.42
25	6.31	July 1	4.65	23	4.87	30	5.04
Apr. 1	5.52						

Mr 28 (\*1018, p. 273). Geological Survey, U. S. Dept. of Interior.  
NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 31, T. 27 N., R. 9 E.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	18.57	Apr. 9	18.52	July 13	17.40	Oct. 8	17.37
8	18.63	16	18.46	16	17.44	15	17.45
15	18.70	23	18.48	23	17.40	22	17.50
22	18.77	30	18.60	30	17.38	29	17.56
31	18.88	May 7	18.47	Aug. 6	17.35	Nov. 5	17.57
Feb. 5	18.91	14	18.52	13	17.36	12	17.58
12	19.03	21	18.50	20	17.33	19	17.54
20	19.00	28	17.98	27	17.38	29	17.53
26	19.19	June 5	17.84	Sept. 4	17.33	Dec. 3	17.55
Mar. 5	19.25	11	17.74	10	17.30	10	17.56
12	19.35	18	17.67	17	17.36	17	17.61
19	18.76	25	17.60	24	17.38	24	17.61
26	18.44	July 2	17.53	Oct. 1	17.36	31	17.68
Apr. 2	18.49	9	17.45				

### Monroe County

Mo 2 (777, p. 267; 817, p. 506; \*840, p. 651; 845, p. 720; 886, p. 930; 908, p. 287; 938, p. 232; 946, p. 276; \*988, p. 351; 1018, p. 273). Joe Anderson. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 34, T. 15 N., R. 4 W.

Water level, in feet below land-surface datum, 1945

Jan. 29	12.20	Apr. 28	8.00	July 28	6.70	Oct. 27	6.80
Feb. 28	12.40	May 26	6.70	Aug. 25	7.00	Nov. 26	6.90
Mar. 27	8.10	June 28	6.70	Sept. 29	7.60	Dec. 29	6.70

Mo 10 (777, p. 267; 817, p. 507; \*840, p. 655; 845, p. 723; 886, p. 932; 908, p. 287; 938, p. 232; 946, p. 276; \*988, p. 351; 1018, p. 273). Dennis Shea. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 5, T. 15 N., R. 3 W.

Water level, in feet below land-surface datum, 1945

Jan. 28	10.64	Apr. 30	7.08	July 26	9.70	Nov. 29	9.75
Feb. 27	10.48	May 26	5.89	Aug. 28	10.14	Dec. 28	10.00
Mar. 28	3.56	June 29	9.37	Sept. 27	10.30		

Mo 11 (777, p. 267; 817, p. 507; \*840, p. 655; 845, p. 723; 886, p. 932; 908, p. 287; 938, p. 232; 946, p. 277; \*988, p. 351; 1018, p. 273). John Sullivan. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 27, T. 16 N., R. 3 W.

Water level, in feet below land-surface datum, 1945

Jan. 25	6.85	Apr. 27	5.40	July 29	5.85	Oct. 30	5.80
Feb. 28	6.45	May 29	4.69	Aug. 28	6.25	Nov. 29	5.65
Mar. 27	4.65	June 29	5.30	Sept. 25	6.40	Dec. 26	6.40

Mo 12 (777, p. 267; 817, p. 507; \*840, p. 655; 845, p. 724; 886, p. 933; 908, p. 287; 938, p. 232; 946, p. 277; \*988, p. 351; 1018, p. 273). Melvin Olson. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 32, T. 16 N., R. 4 W.

Water level, in feet below land-surface datum, 1945

Jan. 1	27.34	Apr. 28	27.22	July 28	27.12	Oct. 29	27.13
29	27.35	May 28	27.11	Aug. 29	27.13	Dec. 1	27.11
Feb. 27	27.23	June 29	27.08	Sept. 29	27.14	28	27.15
Mar. 27	27.06						

Mo 13 (777, p. 267; 817, p. 507; \*840, p. 656; 845, p. 724; 886, p. 933; 908, p. 288; 938, p. 232; 946, p. 277; \*988, p. 352; 1018, p. 274). Walter Parks. SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 3, T. 16 N., R. 4 W.

Water level, in feet below land-surface datum, 1945

Feb. 3	10.00	Apr. 26	9.17	July 12	9.21	Sept. 28	9.64
23	9.95	May 22	6.77	30	9.27	Oct. 26	9.74
Mar. 15	7.63	June 5	8.35	Aug. 27	9.55	Nov. 30	9.21
28	8.98	27	8.97	Sept. 15	9.72	Dec. 22	9.50
Apr. 22	9.08						

## Oneida County

On 22 (\*1018, p. 274). Wisconsin Valley Improvement Co. NW $\frac{1}{4}$  sec. 18, T. 39 N., R. 8 E., on Rainbow snow course. Measurements by Wisconsin Valley Improvement Co.

Water level at noon, in feet below land-surface datum, 1945  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	17.00	17.33	17.66	17.88	17.01	.....	15.36	15.24	15.54	15.84	15.95	15.95
2	17.02	17.34	17.67	17.88	16.96	.....	15.36	15.25	15.55	15.84	15.95	15.94
3	17.02	17.35	17.70	17.88	16.92	.....	15.33	15.28	15.56	15.85	15.97	15.94
4	17.04	17.36	17.72	17.82	16.87	.....	15.31	15.29	15.56	15.85	15.98	15.94
5	17.04	17.37	17.74	17.82	16.83	.....	15.27	15.30	15.56	15.85	15.98	15.93
6	17.06	17.38	17.75	17.82	16.78	.....	15.26	15.31	15.56	15.84	15.99	15.91
7	17.06	17.38	17.78	17.82	16.75	.....	15.26	15.34	15.55	15.84	15.99	15.91
8	17.06	17.38	17.79	17.81	16.74	15.87	15.24	15.36	15.56	15.85	15.99	15.92
9	17.08	17.39	17.80	17.79	16.73	15.85	15.22	15.37	15.56	15.85	16.01	15.92
10	17.08	17.40	17.83	17.78	16.70	15.83	15.21	15.37	15.57	15.85	16.03	15.94
11	17.10	17.42	17.84	17.77	16.67	15.82	15.20	15.36	15.56	15.85	16.03	15.95
12	17.10	17.44	17.85	17.75	16.63	15.81	15.20	15.38	15.59	15.85	16.00	15.95
13	17.12	17.43	17.85	17.73	16.61	15.76	15.20	15.40	15.62	15.88	15.96	15.95
14	17.15	17.44	17.86	17.73	16.60	15.73	15.20	15.40	15.62	15.88	15.99	15.93
15	17.17	17.46	17.87	17.69	16.59	15.71	15.22	15.39	15.65	15.88	15.99	15.93
16	17.17	17.48	17.89	17.64	.....	15.66	15.23	15.39	15.67	15.87	15.99	15.93
17	17.17	17.49	17.90	17.61	.....	15.63	15.22	15.39	15.68	15.87	15.98	15.93
18	17.18	17.52	17.92	17.61	.....	15.59	15.23	15.39	15.68	15.87	15.98	15.94
19	17.19	17.53	17.92	17.58	.....	15.55	15.22	15.40	15.69	15.87	15.98	15.94
20	17.20	17.52	17.92	17.56	.....	15.52	15.22	15.40	15.69	15.89	15.98	15.93
21	17.20	17.53	17.93	17.53	16.39	15.50	15.22	15.41	15.74	15.90	15.96	15.93
22	17.19	17.53	17.92	17.49	.....	15.47	15.21	15.44	15.77	15.92	15.92	15.95
23	17.19	17.56	17.92	17.43	.....	15.45	15.22	15.45	15.77	15.94	15.93	15.97
24	17.21	17.59	17.92	17.38	.....	15.43	15.21	15.45	15.78	15.95	15.93	15.97
25	17.21	17.61	17.92	17.33	.....	15.42	15.21	15.46	15.79	15.94	15.94	15.93
26	17.23	17.61	17.93	17.27	.....	15.41	15.22	15.48	15.81	15.95	15.95	15.92
27	17.24	17.64	17.92	17.22	.....	15.37	15.22	15.49	15.81	15.96	15.95	15.95
28	17.25	17.65	17.92	17.15	.....	15.37	15.21	15.48	15.83	15.97	15.95	15.95
29	17.27		17.92	17.09	.....	15.36	15.23	15.51	15.84	15.98	15.95	15.95
30	17.28		17.92	17.05	.....	15.36	15.24	15.53	15.85	15.97	15.95	15.96
31	17.30		17.90	.....	.....		15.23	15.54		15.94		15.99

On 23 (\*1018, p. 274). Geological Survey, U. S. Dept. of Interior. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 22, T. 37 N., R. 6 E.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	30.10	Apr. 8	30.70	July 8	29.77	Oct. 8	29.84
14	30.14	15	30.72	15	29.65	15	29.87
21	30.22	22	30.72	22	29.60	22	29.89
28	30.21	29	30.70	30	29.56	29	29.90
Feb. 5	30.30	May 6	30.60	Aug. 5	29.55	Nov. 5	29.90
11	30.37	13	30.63	12	29.51	12	30.02
18	30.37	20	30.45	19	29.47	19	30.07
25	30.41	27	30.40	26	29.50	26	30.91
Mar. 4	30.50	June 3	30.38	Sept. 2	29.59	Dec. 3	30.12
11	30.53	10	30.20	9	29.62	10	30.15
18	30.46	17	30.10	17	29.70	16	30.20
25	30.63	24	29.90	24	29.63	27	30.17
Apr. 1	30.68	July 1	29.80	Oct. 1	29.77	31	30.22



On 24 (\*1018, p. 274). Geological Survey, U. S. Dept. of Interior.  
NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 9, T. 36 N., R. 9 E.

Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	21.45	Apr. 8	21.11	July 8	20.04	Sept. 30	20.50
14	21.55	15	21.00	15	20.08	Oct. 7	20.48
22	21.63	22	20.93	23	20.10	14	20.52
29	21.64	29	20.85	29	20.10	22	20.54
Feb. 4	21.60	May 6	20.76	Aug. 5	20.20	28	20.57
12	21.60	13	20.66	13	20.28	Nov. 6	20.60
19	21.59	20	20.60	19	20.35	11	20.54
24	21.70	28	20.52	26	20.40	19	20.52
Mar. 5	21.75	June 3	20.46	Sept. 3	20.40	Dec. 3	20.45
11	21.79	11	20.35	9	20.40	9	20.45
18	21.75	17	20.30	18	20.42	17	20.47
25	21.42	24	20.20	23	20.42	24	20.47
Apr. 1	21.25	July 1	20.14				

Portage County

Pt 30 (\*1018, p. 275). Geological Survey, U. S. Dept. of Interior.  
SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 1, T. 22 N., R. 8 E.

Water level, in feet below land-surface datum, 1945

Jan. 7	11.77	Apr. 15	11.77	July 12	8.85	Sept. 30	9.22
14	11.77	22	11.44	15	7.88	Oct. 7	10.11
22	11.88	29	11.33	22	8.91	14	10.33
28	11.92	May 6	12.07	29	8.11	21	10.33
Feb. 4	11.92	13	12.11	Aug. 6	9.00	28	10.66
11	12.81	20	12.11	12	8.55	Nov. 4	9.88
18	12.22	27	9.77	19	8.88	11	9.44
25	12.20	June 3	9.00	20	9.40	18	9.66
Mar. 4	12.22	10	8.00	27	9.77	25	8.55
11	12.23	17	8.11	Sept. 2	9.68	Dec. 2	8.77
18	12.40	24	8.33	9	9.68	9	8.55
25	12.11	July 1	7.88	16	9.88	16	8.77
Apr. 1	11.88	8	7.77	23	9.11	23	8.77
7	11.88						

Vernon County

Ve 4 (777, p. 267; 817, p. 506; \*840, p. 651; 845, p. 720; 886, p. 930; 908, p. 288; 938, p. 232; 946, p. 277; \*988, p. 352; 1018, p. 275). Albert Storbakken. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 14, T. 14 N., R. 5 W.

Water level, in feet below land-surface datum, 1945

Jan. 23	10.50	Apr. 24	9.00	July 26	9.75	Oct. 29	9.70
Feb. 26	10.40	May 24	7.85	Aug. 29	9.70	Nov. 24	9.65
Mar. 26	7.90	June 25	9.35	Sept. 25	9.70	Dec. 27	10.05

Ve 8 (777, p. 267; 817, p. 506; \*840, p. 654; 845, p. 722; 886, p. 931; 908, p. 288; 938, p. 232; 946, p. 277; \*988, p. 352; 1018, p. 275). M. H. Willenberg. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 26, T. 14 N., R. 7 W.

Water level, in feet below land-surface datum, 1945

Jan. 24	49.44	June 2	49.41	Sept. 19	49.42	Nov. 20	49.42
Mar. 6	49.48	July 14	49.44	Oct. 22	49.43	Dec. 22	49.43
Apr. 5	49.47	Aug. 20	49.43				

Ve 9 (777, p. 267; 817, p. 506; \*840, p. 654; 845, p. 722; 886, p. 932; 908, p. 288; 938, p. 232; 946, p. 277; \*988, p. 352; 1018, p. 275). F. Lenser. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 14, T. 14 N., R. 7 W.

Water level, in feet below land-surface datum, 1945

Mar. 1	48.95	May 25	48.18	July 24	47.85	Sept. 21	47.19
28	48.08	June 26	48.55	Aug. 24	47.12	Oct. 22	45.30
Apr. 28	48.84						

Ve 14 (777, p. 267; 817, p. 507; \*840, p. 656; 845, p. 724; 886, p. 932; 908, p. 288; 938, p. 232; 946, p. 278; \*988, p. 352; 1018, p. 275).  
Chris Benrud. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 6, T. 14 N., R. 4 W.

## Water level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 24	7.60	Apr. 30	7.10	June 28	7.00	Sept. 29	7.30
Mar. 1	7.53	May 26	6.30	Sept. 10	7.40	Nov. 1	7.30
Apr. 1	6.90						

## Vilas County

Vi 21 (\*1018, p. 275). Geological Survey, U.S. Dept. of Interior.  
NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 10, T. 40 N., R. 10 E.

## Water level, in feet below land-surface datum, 1945

Jan. 2	15.02	Apr. 8	14.89	July 9	14.22	Oct. 15	14.52
9	15.06	16	14.86	16	14.22	15	14.53
14	15.12	23	14.83	22	14.21	22	14.56
21	15.17	30	14.74	29	14.25	29	14.60
29	15.22	May 7	14.61	Aug. 6	14.28	Nov. 5	14.61
Feb. 4	15.26	14	14.57	12	14.31	12	14.61
12	15.34	22	14.55	27	14.38	19	14.61
18	15.34	28	14.53	Sept. 3	14.35	26	14.62
28	15.41	June 4	14.47	10	14.38	Dec. 3	14.63
Mar. 5	15.42	11	14.39	17	14.46	9	14.66
13	15.53	19	14.33	24	14.46	17	14.68
19	15.09	24	14.26	Oct. 1	14.48	25	14.72
25	14.95	July 3	14.28	8	14.49	31	14.73
Apr. 1	14.91						

## Wood County

Wd 29 (\*1018, p. 276). Elmer Aschenbrenner. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 2, T. 23 N., R. 4 E.

## Water level, in feet below land-surface datum, 1945

Jan. 1	10.39	Mar. 26	5.38	June 18	6.15	Oct. 1	7.44
9	11.25	Apr. 2	5.15	25	6.30	8	8.08
15	11.17	9	4.74	July 2	5.18	15	6.94
22	11.36	16	5.12	9	5.33	23	6.98
29	11.27	23	5.29	16	6.16	29	7.00
Feb. 5	11.40	30	5.10	Aug. 6	6.74	Nov. 19	5.90
12	11.30	May 7	5.19	20	7.40	26	5.61
20	11.33	14	5.40	27	8.40	Dec. 3	5.64
26	11.26	21	4.15	Sept. 3	7.38	10	5.74
Mar. 5	11.10	28	5.10	10	7.40	17	5.95
12	11.25	June 4	4.13	17	7.38	24	6.00
19	4.40	11	4.40	24	7.44	31	6.02