

Water Levels and Artesian Pressure in Observation Wells in the United States in 1948

Part 3. North-Central States

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

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1128

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



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GEOLOGICAL SURVEY

W. E. Wrather, *Director*



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PREFACE

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

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WATER LEVELS AND ARTESIAN PRESSURE IN OBSERVATION WELLS IN THE UNITED STATES IN 1948

Part 3. NORTH-CENTRAL STATES

INTRODUCTION

By A. N. Sayre and others

The ground-water investigations of the United States Geological Survey are primarily concerned with the location and appraisal of the ground-water resources of the Nation. They are carried on principally in financial cooperation with States and municipalities, or at the request of other Federal agencies. Most of the investigations have to do with the availability of usable water supplies, but a few deal with drainage, flood control, construction of waterways and dams, mine drainage, and other problems to which the principles of ground-water geology are pertinent. Water-Supply Paper 992 lists about 1,800 papers and reports describing ground-water investigations made by the Survey in cooperation with States and municipalities through 1945.

Significance of records of water level and artesian pressure

An essential part of the ground-water investigations is the measurement of fluctuations of water level and artesian pressure in wells. 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 indicate 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 recorded changes of pressure in flowing wells indicate depletion or replenishment of the artesian supplies.

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. This series of water-supply papers is in a sense an inventory of ground-water supplies. Prior to 1940 the records were published in a single volume. 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 introduction to the chapter on each State contains an outline of the general program of work and special features of the program in the current year, such as preliminary reports issued or put on file during the year or of work done in preparation for such a report. A general discussion of the fluctuations of water level and statements in regard to precipitation, pumpage, and other factors affecting water level are included. The following table gives the numbers of water-level reports from 1935 through 1948.

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
1946	1071	1072	1073	1074	1075	1076
1947	1096	1097	1098	1099	1100	1101
1948	1126	1127	1128	1129	1130	1131

Scope of present volume

The present volume covers the north-central States and gives records of water level and artesian pressure in about 1,940 observation wells of the Geological Survey and cooperating agencies in Illinois, Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and Wisconsin. Of these wells, 77 are equipped with automatic water-stage recorders. For some wells not previously reported complete records of water level are given. 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 description are given in this report. This report includes about 13,910 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

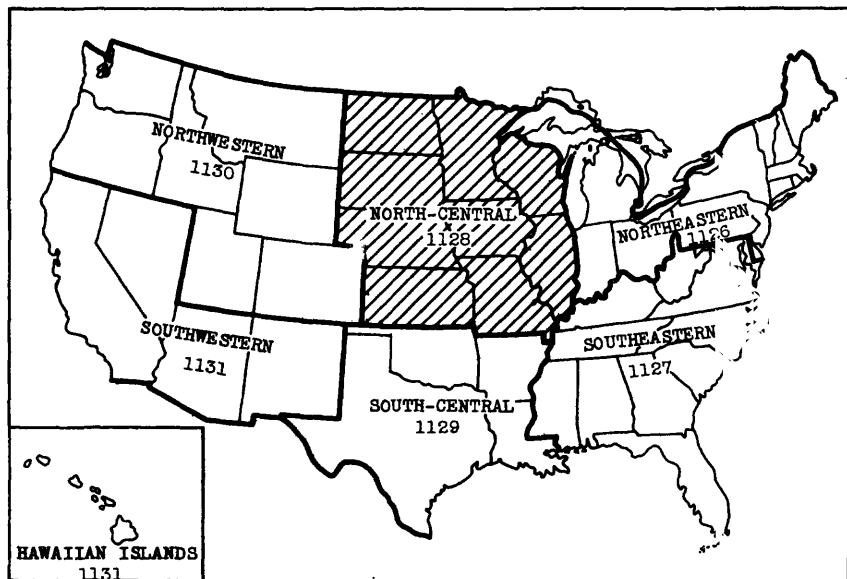


Figure 1.--Outline map of the United States showing sections of the country covered by the six water-supply papers on water levels and artesian pressure in observation wells in 1948. The shaded section represents the part of the country covered by this volume.

measuring points and for other wells in feet above or below sea level or above or below various assumed datum planes. In 1943, it was decided that uniform practice should be adopted. Accordingly, a precise datum plane was established approximating the land surface at each well. The water levels and artesian heads for all wells listed in this report are given in feet below land-surface datum unless preceded by a plus (+) sign, or otherwise indicated in the descriptive text for each State. When 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.

Network of Federal observation wells

In 1942 and 1943 the Geological Survey established a network of 60 Federal observation wells. These wells were selected because the fluctuations of water level in them are believed to be typical and represent the general fluctuations that occur in the parts of the country in which the wells are situated. At the end of 1948 the network comprised about 360 wells in 45 States, including 300 wells measured regularly in connection with cooperative ground-water investigations.

Changes in ground-water level in 1948 in the north-central part of the United States

In 1948 the precipitation in the north-central section of the country was below normal with the exception of Illinois, Kansas, and North Dakota. In Illinois, precipitation totaled several inches above the annual average in nearly all the southern part of the State, but was somewhat below normal elsewhere. In Kansas, the year's precipitation was above normal in almost every part of the State and exceeded amounts during either of the two preceding years. In Missouri, precipitation was slightly below the 61-year average. The average for the year was 39.59 inches, compared with the 61-year average of 40.49 inches. The average precipitation for North Dakota was 17.45 inches--0.68 inch above normal. The fluctuations of both water level and artesian pressure in wells, however, depend on many factors besides the amount of precipitation. In certain of the observation wells there are fluctuations caused by difference 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

Miss Dorothy M. Ireland and, later, Miss Verda M. Dougherty had general charge of the assembling of the several reports and did the editing; Mr. Rodney Hart edited the illustrations; and Mrs. Nauvoo Ragland, Mrs. Frances Dowell, and Miss Beulah B. Brunson did the offset typing.

Penn P. Livingston had general supervision of the observation-well program. The measurements were made under the direction of the district supervisors of the ground water branch in the several States.

ILLINOIS

By J. B. Cooper and H. Garland Hershey

PROGRAM OF WORK

Measurements of water level were continued in 1948 in the well at Princeton, in Bureau County, as a part of the Nation-wide network of observation wells. This well is equipped with a float-tape gage, and was first observed in November 1942; observations have been made at approximately weekly intervals since that time. A total of 49 measurements was made in this well during 1948.

FLUCTUATIONS OF WATER LEVEL

The water level in the well at Princeton during 1948 followed the general pattern of previous years, as indicated by figure 2. The high water level occurred in the first quarter and the low water level in the last quarter of the year. The range of fluctuation of 17.39 feet was greater than in any previous year of record. The high of 3.60 feet below land-surface datum occurred on March 27 and the low of 20.99 feet below land-surface datum on December 25, the lowest on record for this well and 4 feet lower than the first measurement of the year as recorded on January 3. The average water level for the last 3 months of the year was 20.41 feet below land-surface datum, as compared with the average water level for the first 3 months of 13.51 feet below land-surface datum, a difference of 6.90 feet.

The following is an excerpt from the Weather Bureau report on Climatological Data: Precipitation totaled several inches above the annual average in nearly all of the extreme south and also in the southernmost counties of central Illinois. Except in scattered localities, precipitation elsewhere in the State was somewhat under normal.

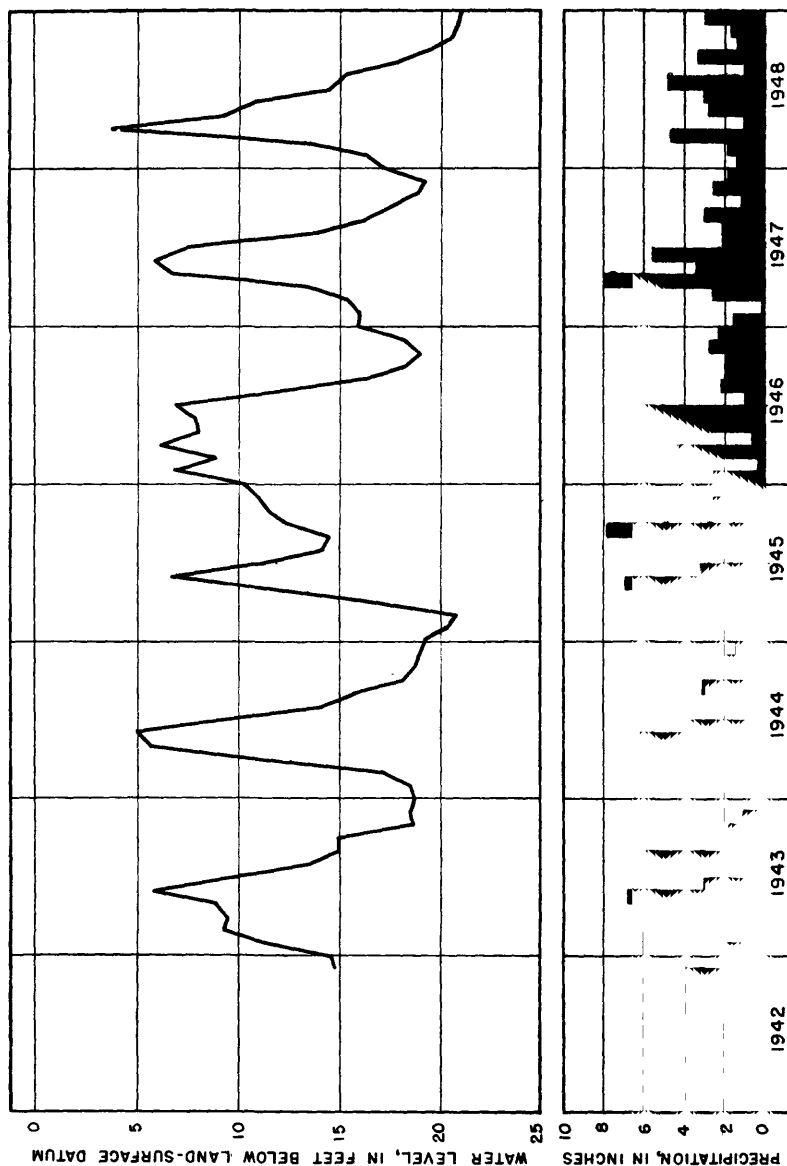


Figure 2.--Hydrograph of well U. S. 112 at Princeton, Ill., and monthly precipitation at U. S. Weather Bureau Station near Tiskilwa from November 1942 to December 1948.

WELL DESCRIPTION AND WATER-LEVEL MEASUREMENTS

Bureau County

US 112. R. E. Neff. In Princeton, in sec. 9, T. 16 N., R. 9 W.
 Equipped with float-tape gage. Measurements made by Nick Hansen. Records
 available: 1942-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	16.99	Apr. 17	9.00	July 10	14.69	Oct. 9	19.98
10	16.60	24	9.15	17	15.13	16	20.19
17	16.53	May 1	9.48	24	15.45	23	20.30
31	16.39	8	9.55	31	15.59	30	20.49
Feb. 14	16.29	15	9.48	Aug. 7	16.19	Nov. 6	20.59
21	14.69	22	9.80	14	16.61	13	20.61
28	13.05	29	10.85	21	17.11	20	20.69
Mar. 6	14.30	June 5	11.80	28	17.80	27	20.71
13	13.85	12	12.80	Sept. 11	18.80	Dec. 4	20.58
20	6.30	19	13.90	18	19.21	11	20.39
27	3.60	26	14.40	25	19.45	18	20.08
Apr. 3	8.34	July 3	14.19	Oct. 2	19.71	25	20.99
10	8.49						

IOWA

By J. B. Cooper, C. W. Lane, and H. Garland Hershey

PROGRAM OF WORK

Measurements of the water level in observation wells in Iowa were continued in 1948 in cooperation with the Iowa Geological Survey. Most of the observation wells were established in 1938. In a few observation wells in the Tarkio Creek Valley, in southwestern Iowa, measurements were begun in 1934 through a program organized by the Federal Geological Survey in which the Soil Conservation Service of the United States Department of Agriculture participated for several years. All of these wells are now included in one program for the State.

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, 938, 988, 1018, 1025, 1073, and 1098, and those for the wells established in 1938 first appear in Water-Supply Paper 886.

At the beginning of 1948 measurements were being made on 164 wells in 39 counties throughout the State. (See fig. 3.) During the year 6 wells were dropped from the program, and 3 wells were added, making a total of 161 wells in the observation-well program at the end of the year. Automatic water-stage recorders were being maintained on 12 wells at the close of the year. Water-level measurements were being made weekly on 5 wells, monthly on 48 wells, and quarterly on most of the remaining wells. Approximately 1,044 wetted-tape measurements were made in 1948 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.

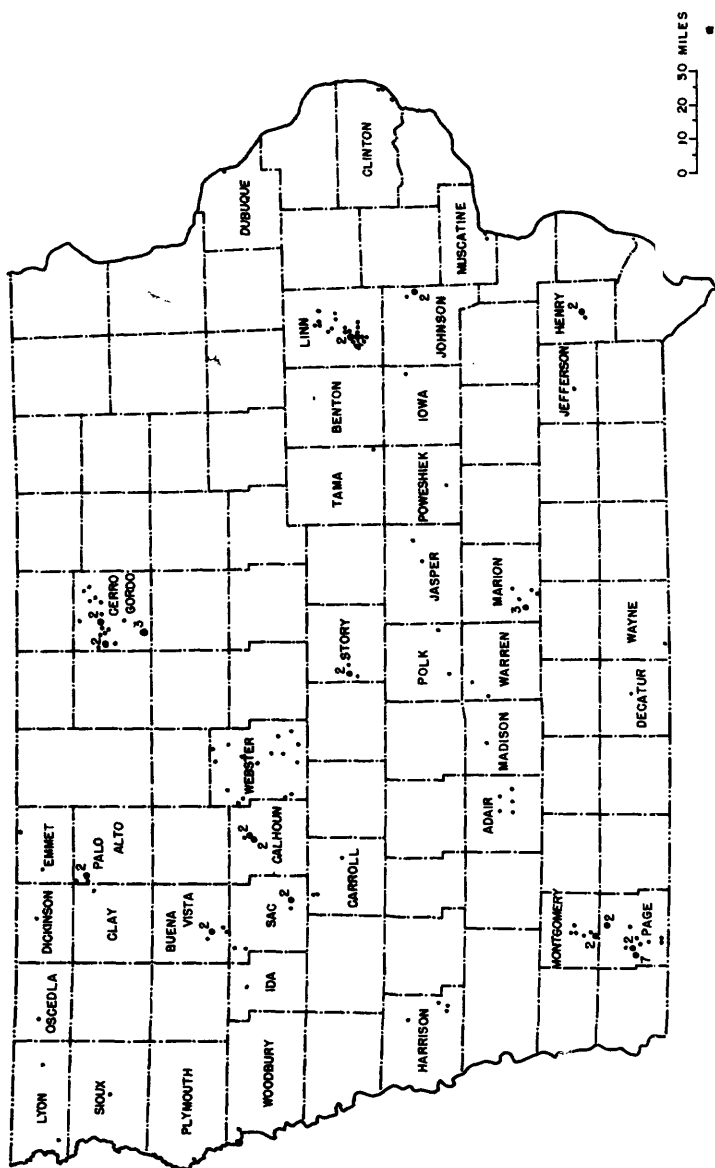


Figure 3.--Map showing location of observation wells in Iowa in 1948.

FLUCTUATIONS OF WATER LEVEL

The average total precipitation over the State in 1948 was 28.33 inches, about 3.22 inches below normal, as obtained from published records of the U. S. Department of Commerce, Weather Bureau. Above-normal precipitation occurred over most of the State during the months of February, March, July, November, and December. In April, the precipitation was normal but during the remaining months it was below normal.

The following table shows the average net change in the water level between December 1947 and December 1948 in groups of shallow wells, by counties, throughout the State. The precipitation for 1948 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 the annual precipitation and departure from normal, in inches, at the nearest U. S. Weather Bureau station, 1948.

County	No. of wells	Average net change	Precipitation	Departure from normal
Adair	3	-1.49	32.70	+1.21
Buena Vista	1	-1.37	29.70	+1.28
Calhoun	4	-1.55	25.94	-5.80
Clay-Palo Alto	a 3	-.91	24.96	-3.31
Dickinson	1	-2.65	.....	.....
Jefferson	1	-2.53	30.24	-4.08
Johnson	1	+1.10	33.97	-.53
Linn	8	+1.06	34.74	+3.91
Lyon	1	+.33	25.58	+.04
Madison	1	-.69	32.05	+.96
Marion	4	-4.25	31.21	-1.61
Montgomery-Page	b 24	-1.65	31.55	-.90
Muscatine	2	-2.40	35.81	+2.12
Polk	1	-1.32	28.74	-2.23
Poweshiek	1	-.04	31.01	-2.39
Sac	4	+.06	26.71	-2.00
Story	2	-6.69	28.45	-2.30
Warren	2	-5.91	28.98	-2.91
Webster	2	-3.27	26.92	-4.21

a These wells, 1 in Clay County and 2 in Palo Alto County, are all in the vicinity of Lost Island Lake.

b These wells, 7 in Montgomery County and 17 in Page County, are in the Tarkio Creek Valley which occupies parts of both counties.

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, in 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 1948, these measurements were made by Dean W. Knox, local observer. Records of the water levels in wells in the Missouri part of the area are given in the section of this report that deals with that State.

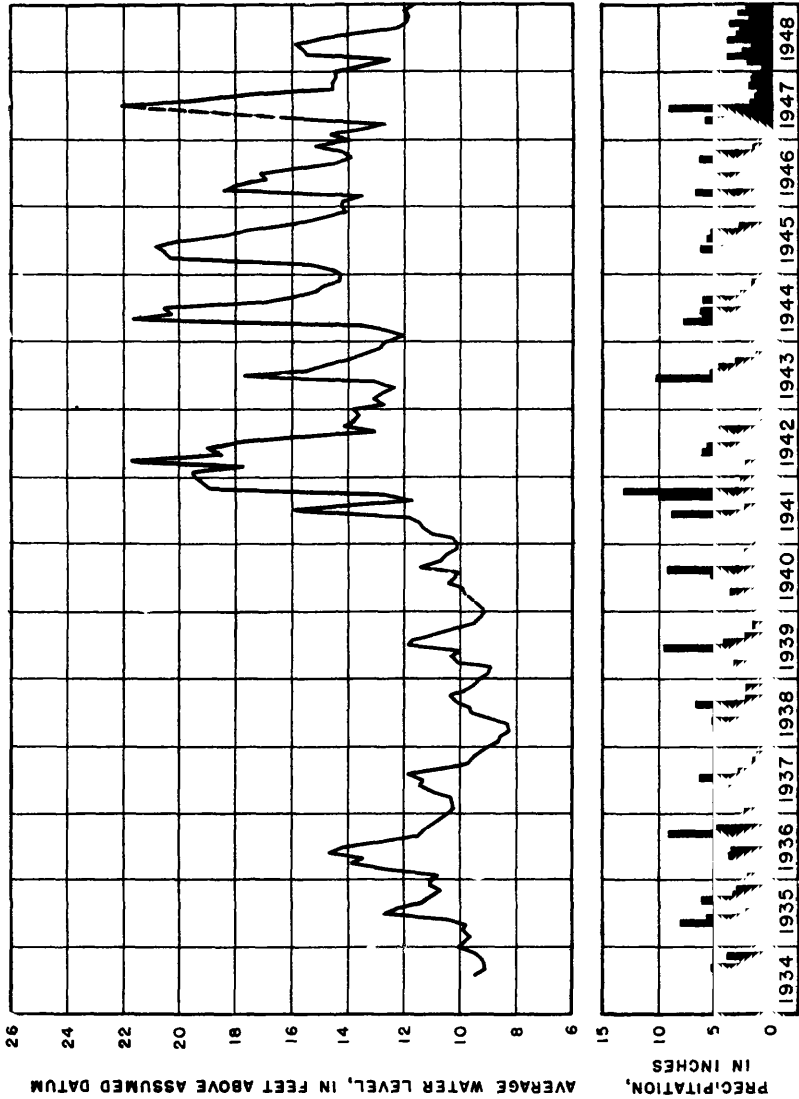


Figure 4.--Graph showing fluctuations of the average water level in 8 wells in the Tarkio Creek Valley, Iowa-Mo., and precipitation at Shenandoah, Iowa, from September 1934 to December 1948.

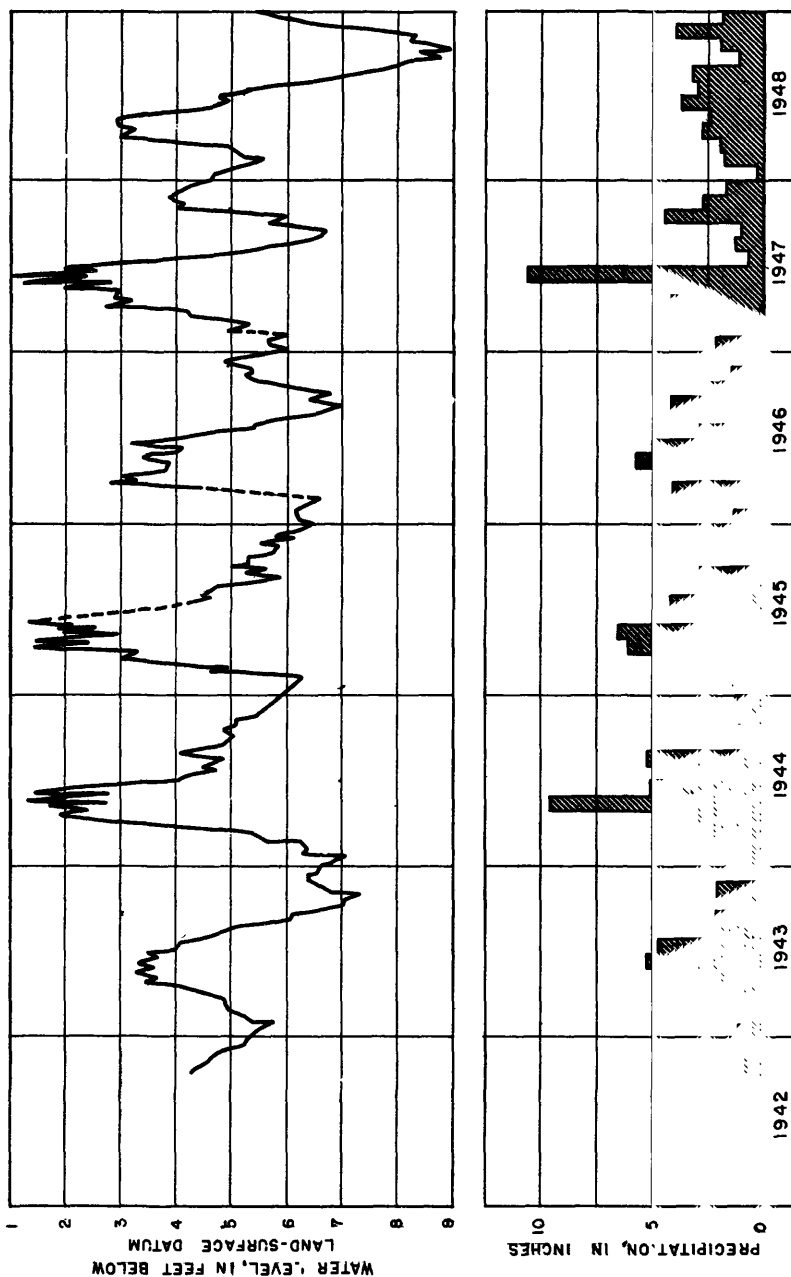


Figure 5.--Hydrograph of well 87-28-29N1, near Harcourt, and precipitation at Fort Dodge, Iowa, from October 1942 to December 1948.

Measurements in 8 wells (Nos. 1, 5, 6, 7, 10, 12, 15, and 17) were used in computing the average water level for each month in 1948. These averages are given in the following table.

Average water levels, in feet above assumed datum planes, in 8 observation wells in the Tarkio Creek area, Iowa-Mo., 1948.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan.	13.38	Apr.	15.39	July	13.29	Oct.	11.63
Feb.	12.34	May	15.65	Aug.	12.05	Nov.	11.75
Mar.	15.25	June	14.51	Sept.	11.74	Dec.	11.38

The fluctuation of the average water level in this area during the period of record as indicated by these 8 wells, and the precipitation at Shenandoah since 1934 are shown by months in figure 4.

The fluctuations of the water level during the period of record in a shallow unused well in the southern part of Webster County, near Harcourt, are shown in figure 5. . This well is 41.8 feet deep, taps water in the glacial drift, and is representative of several shallow observation wells in the county which tap the same water-bearing bed. The monthly precipitation at Fort Dodge, shown also on the graph, correlates closely with fluctuations of water level. Figure 6 shows the depth of the water table below land-surface datum in well 84-6-20N1, which is an observation well 11.7 feet deep tapping water in glacial drift. Wetted-tape measurements were made during the last week of each month to obtain these data. The well is in central Linn County about 5 miles northeast of Cedar Rapids. Close correlation between precipitation, as recorded at the U. S. Weather Bureau station in Cedar Rapids, and the water-level fluctuations in this well is evident. This well is representative of several shallow observation wells in the county and of many domestic farm wells which tap the same water-bearing bed.

Well 83-7-21K1, figure 7 , at Cedar Rapids, Linn County, is illustrative of artesian rock wells affected by industrial and seasonal withdrawals for normal industrial use and air-conditioning purposes. This is an unused well completed at a depth of 156 feet in the upper part of Silurian dolomite, which is locally about 400 feet thick. Most wells in Cedar Rapids develop water supplies for air-conditioning and industrial use from these strata. The observation well is about half a mile from the heavily pumped areas of downtown Cedar Rapids. The well was first measured in August 1943. On December 31, 1948, the water level was 60.91 feet below land-surface datum, which is 3.69 feet below its stage of December 31, 1943.

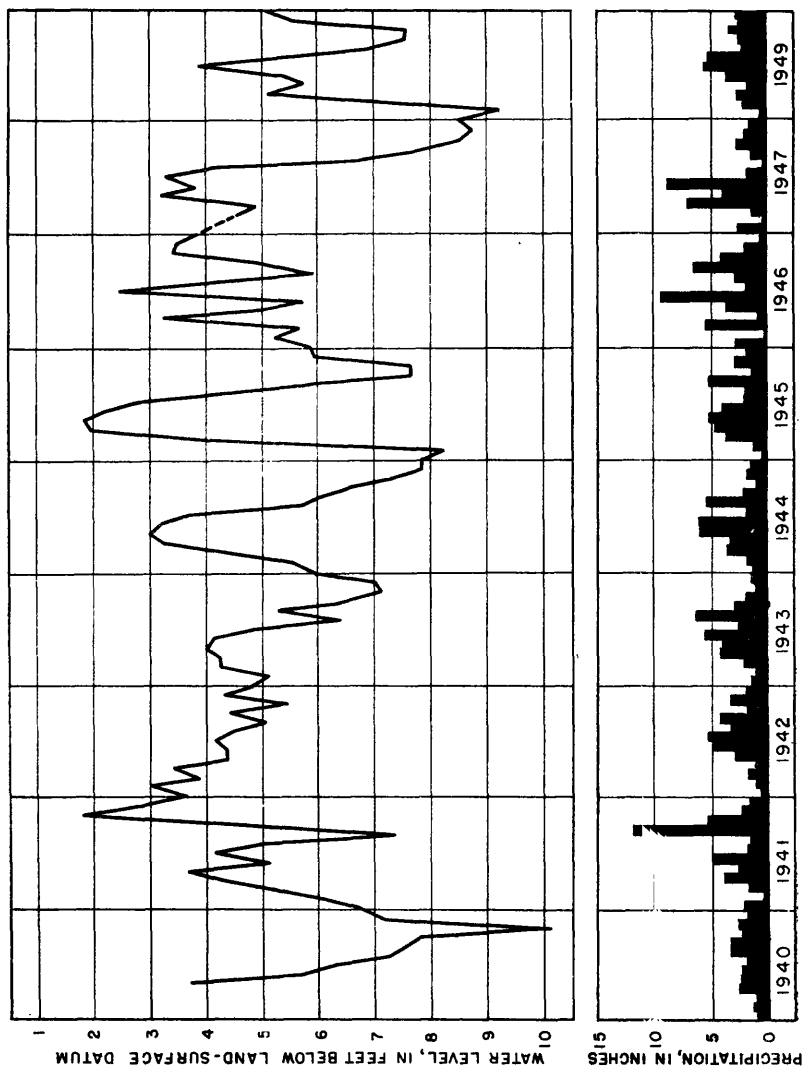


Figure 6.--Hydrograph of well 84-6-20N1, near Marion, and monthly precipitation at Cedar Rapids, Linn County, Iowa, from April 1940 to December 1948.

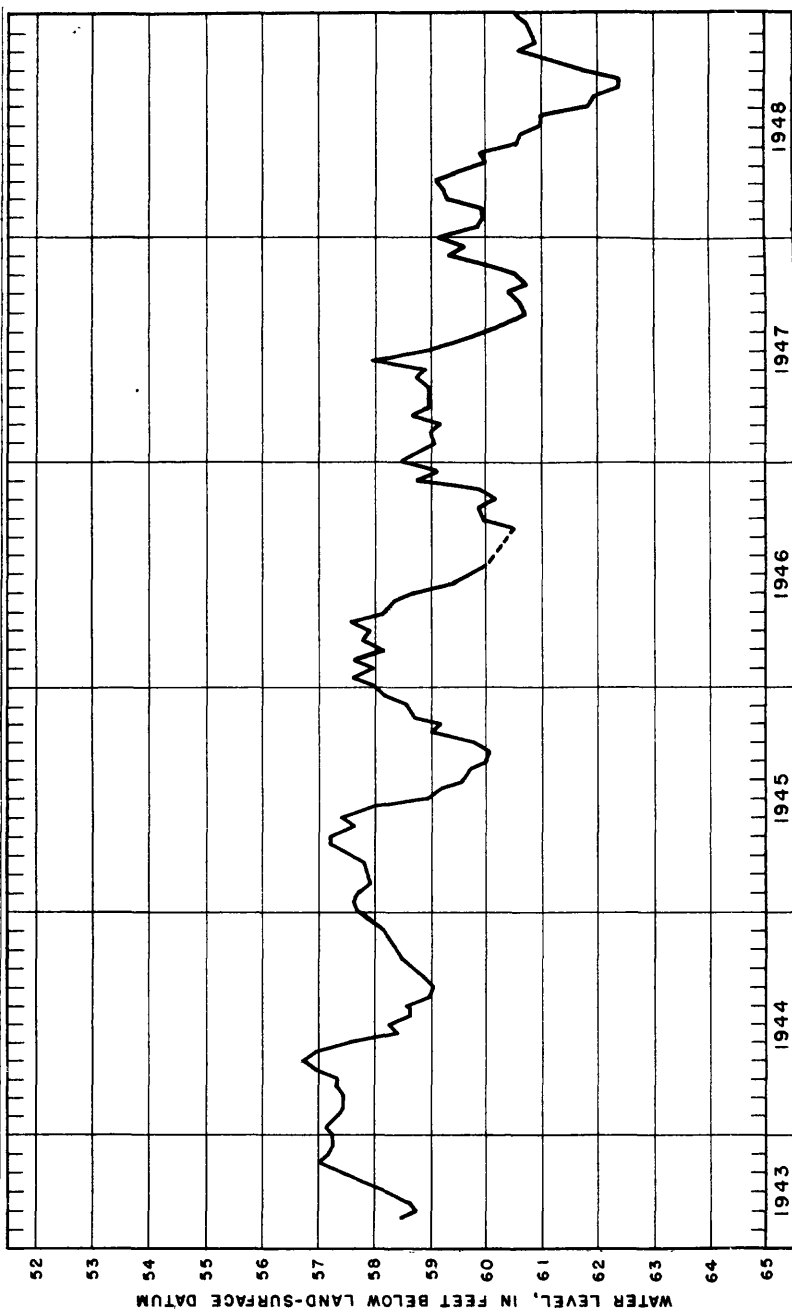


Figure 7.--Hydrograph of well 83-7-21K1 at Cedar Rapids, Linn County, Iowa, showing fluctuations of water level caused by pumping in the vicinity from August 1943 to December 1948.

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 east of the fifth principal meridian. In the numbers of the other wells, it is understood that the range indicated is west of the meridian.

For example, the number 76-31-25P1 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

76-31-25P1. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 25, T. 76 N., R. 31 W. Records available: 1942-48. Mar. 23, 1.97; July 13, 5.74; Oct. 5, 6.27; Dec. 14, 5.16.

76-31-29P1. SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 29, T. 76 N., R. 31 W. Records available: 1942-48. Mar. 23, 8.49; July 13, 13.85; Oct. 5, 14.72; Dec. 14, 15.84.

75-31-15B1. John E. Soderberg. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 15, T. 75 N., R. 31 W. Records available: 1940-48. Mar. 23, 1.30; July 13, 5.05; Oct. 5, 6.40.

75-31-18B1. Charles Gillam. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 18, T. 75 N., R. 31 W. Records available: 1940-47. Well destroyed; measurements discontinued.

75-30-17E1. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 17, T. 75 N., R. 30 W. Measuring point on and after Mar. 23, top of tile casing, 0.10 foot above land-surface datum which is 1.3 feet below previous measuring point. Records available: 1942-48. Mar. 23, + 0.10; July 13, 2.40; Oct. 5, 1.97; Dec. 14, 0.15.

Benton County

85-10-16M3. City of Vinton well 3. Records available: 1939-42. No measurements made in 1948.

Buena Vista County

Vicinity of Storm Lake

91-37-32E1. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 32, T. 91 N., R. 37 W. Records available: 1940-47. Well destroyed; measurements discontinued.

90-37-3E1. Emil Schmitz. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 3, T. 90 N., R. 37 W. Records available: 1940-48. Apr. 27, 6.10; July 15, 9.30.

90-37-3M1. L. B. Watt. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 3, T. 90 N., R. 37 W. Records available: 1940-47. Well destroyed; measurements discontinued.

90-37-23D1. Biggins Bros. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 23, T. 90 N., R. 37 W. Records available: 1940-47. No measurements made in 1948.

90-37-34B1. Ed Zinn. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 34, T. 90 N., R. 37 W. Records available: 1941-48. Apr. 27, 6.60; July 15, 8.80; Oct. 7, 13.44; Dec. 15, 11.08.

Calhoun County

Vicinity of Twin Lakes

89-32-28N1. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 28, T. 89 N., R. 32 W. Records available: 1940-48. Apr. 27, 3.27; July 15, 3.65; Oct. 8, 5.20; Dec. 17, 4.65.

89-32-33F1. Iowa State Conservation Commission. SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 33, T. 89 N., R. 32 W. Drilled well, depth 53 feet. Taps water in glacial sand and gravel. Well used during summer months to provide water for visitors to Twin Lakes State Park. Equipped with lift pump. Measuring point, hole in pump base, 0.5 foot above land-surface datum. Records available: 1948. Oct. 8, 14.76; Dec. 17, 14.90.

89-32-33N1. Ben Burns. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 33, T. 89 N., R. 32 W. Records available: 1940-48. Apr. 27, 2.37; July 15, 4.55; Oct. 8, 8.08; Dec. 17, 6.01.

88-33-1B1. Ben Burns. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 1, T. 88 N., R. 33 W. Records available: 1940-48. Apr. 27, 7.16; July 15, 11.65; Oct. 8, 14.10; Dec. 17, 13.00.

88-33-1D1. Bernard Kutz. Formerly owned by George Voss. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 1, T. 88 N., R. 33 W. Records available: 1940-48. Apr. 27, 7.38; July 15, 9.20; Oct. 8, 12.80; Dec. 17, 13.16.

Carroll County

85-35-7N1. City of Breda. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 7, T. 85 N., R. 35 W. Records available: 1942-48. Mar. 25, 187.70; July 14, 188.55; Oct. 5, 190.90; Dec. 15, 194.51.

85-35-18D1. City of Breda. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 18, T. 85 N., R. 35 W. Records available: 1940-48. Mar. 25, 190.73; July 14, 191.10; Oct. 6, 190.47; Dec. 15, 192.00.

84-34-25F1. City of Carroll test hole 1. SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 25, T. 84 N., R. 34 W. Records available: 1939-48. Mar. 25, 40.47; July 14, 43.96; Oct. 6, 46.27; Dec. 15, 39.82.

Cerro Gordo County

97-21-9E1. E. H. Phillips. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 9, T. 97 N., R. 21 W. Records available: 1941-48. Apr. 23, 96.10; July 16, 97.42; Oct. 12, 97.84.

97-20-24H1. Mrs. Vinnie Shanks. SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 24, T. 97 N., R. 20 W. Records available: 1941-48. Apr. 23, 9.05; July 16, 9.85; Oct. 12, 16.26.

97-20-28L1. Crystal Sugar Co. NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 28, T. 97 N., R. 20 W. Records available: 1943-48. Apr. 23, 177.35; July 16, 191.00.

97-19-30R1. F. Stebbens. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 30, T. 97 N., R. 19 W. Records available: 1941-48. Apr. 23, 9.70; July 16, 11.75; Oct. 12, 11.35.

96-22-7Q1. W. S. Overgaard. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 7, T. 96 N., R. 22 W. Records available: 1941-48. Apr. 22, 23.20; July 15, 23.12; Oct. 12, 25.58.

96-22-14C1. Fred Stephens. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 14, T. 96 N., R. 22 W. Records available: 1940-48. Apr. 14, 33.10; July 15, 35.60; Oct. 12, 35.20.

96-22-20C1. The Willow Inn. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 20, T. 96 N., R. 22 W. Records available: 1940-48. Apr. 14, 3.20; July 15, 5.90; Oct. 12, 8.26.

96-22-20L1. NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 20, T. 96 N., R. 22 W. Records available: 1940-48. Apr. 22, 34.24; July 15, 39.97; Oct. 12, 36.36.

96-22-23Q1. H. R. Anderson. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 23, T. 96 N., R. 22 W. Records available: 1940-48. Apr. 22, 21.60; July 15, 21.40; Oct. 12, 23.32.

96-22-25D2. Geological Survey, U. S. Dept. of Interior. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 25, T. 96 N., R. 22 W. Records available: 1940-48. Apr. 22, 5.90; July 15, 7.13; Oct. 12, 8.18.

96-21-13E1. Mason City & Clear Lake Pailway. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 13, T. 96 N., R. 21 W. Records available: 1940-48. Apr. 22, 5.50; July 15, 6.30; Oct. 12, 8.02.

96-21-17C1. Clear Lake Sand & Gravel Co. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 17, T. 96 N., R. 21 W. Records available: 1940-48. Apr. 22, 17.83; July 15, 18.30; Oct. 12, 18.70.

96-21-17M1. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 17, T. 96 N., R. 21 W. Records available: 1940-48. Apr. 14, 0.90; July 15, 2.77; Oct. 12, 2.96.

96-21-18H1. Sam Kennedy. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 18, T. 96 N., R. 21 W. Records available: 1940-48. Apr. 14, 10.16; July 15, 10.80; Oct. 12, 11.02.

96-20-3P1. Minneapolis & St. Louis Railroad Co. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 3, T. 96 N., R. 20 W. Records available: 1941-48. Apr. 22, 46.62; Oct. 12 51.25.

96-20-16J1. City of Mason City well 11. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 16, T. 96 N., R. 20 W. Records available: 1939-43; 1947-48.

Water level at noon, from recorder charts

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	202.70	209.00	203.20	a216.80	208.40	206.70
2	202.20	207.90	202.90	208.00	208.00	207.00
3	202.10	208.50	203.20	205.90	207.60	207.60
4	202.40	209.30	203.70	204.30	207.20	208.20
5	201.80	209.90	203.70	203.10	206.60	209.30
6	202.00	210.30	203.30	202.30	206.80	209.60
7	201.80	210.40	202.70	201.30	206.60	209.00
8	202.10	210.70	202.30	201.60	206.40	208.90
9	202.70	210.30	202.40	201.60	205.70	209.20
10	203.10	210.30	202.60	200.60	205.40	209.50
11	202.50	210.30	202.90	199.80	205.20	210.00
12	202.30	210.60	202.90	199.70	205.10	210.40
13	202.40	210.40	202.90	199.80	205.00	210.40
14	202.60	210.80	202.00	200.00	204.90	209.60
15	202.40	220.40	201.30	199.60	204.80	209.50
16	203.10	208.10	201.50	199.90	204.60	209.70
17	203.20	207.00	201.60	201.70	204.30	209.50
18	202.90	206.10	201.00	200.50	204.50	209.40
19	202.30	206.00	200.60	200.40	204.70	209.60
20	202.00	206.00	200.80	201.00	204.70	209.40
21	202.20	205.60	200.70	201.40	205.00	208.40
22	202.50	204.80	200.50	201.10	205.80	208.30
23	204.80	204.00	200.40	201.00	206.00	208.80
24	206.40	203.60	200.50	a232.80	205.60	209.20
25	207.20	203.50	200.30	a235.70	205.40	209.80
26	205.80	203.50	200.20	a224.20	205.30	210.40
27	207.20	203.10	200.60	213.10	205.60	210.40
28	207.80	203.30	200.10	211.40	206.60	209.60
29	208.40	203.90	a224.50	210.10	207.40	209.70
30	209.10		a234.50	209.00	207.60	210.30
31	209.70		a232.90		207.20	

a Nearby well pumping.

Water level at noon, from recorder charts

Day	July	Aug.	Sept.	Oct.	Nov.
1	210.60	216.80	a230.40	.....	226.00
2	216.30	a227.60	.....	226.20
3	216.20	a248.80	.....	226.40
4	216.20	a249.90	.....	226.00
5	216.00	a250.00	.....	226.30
6	215.90	a249.10	.....	227.20
7	215.80	a248.80	.....	225.80
8	215.10	a284.20	.....	224.20
9	214.30	230.30	.....	223.30
10	214.20	224.80	.....	225.10
11	a243.30	214.50	223.20	.....	224.70

96-20-16J1--Continued.

Water level at noon, from recorder charts

Day	July	Aug.	Sept.	Oct.	Nov.
12	a244.30	215.00	222.60	.....	223.80
13	a254.80	215.80	a232.90	220.10	225.40
14	.....	216.90	a246.50	220.30	224.30
15	.....	216.40	a247.90	220.00	222.60
16	225.10	215.80	a248.90	220.30	222.50
17	.....	216.10	a249.80	220.40	222.90
18	.....	217.40	a250.40	219.50	223.80
19	.....	218.00	a250.50	219.70	223.20
20	.....	a236.10	a250.10	220.30	222.70
21	.....	a242.80	a247.70	221.50	222.50
22	.....	a222.10	a247.30	222.30	221.60
23	.....	a237.90	a246.50	222.60	221.10
24	.....	a244.70	a246.00	223.70	221.00
25	.....	a247.00	.....	222.20	220.90
26	.....	a248.80	.....	223.50	220.30
27	.....	a249.80	.....	224.60	220.40
28	.....	a250.30	.....	225.40	221.40
29	216.40	a249.90	.....	225.80	220.20
30	216.80	a245.80	.....	226.00	220.20
31	217.10	a248.90	.....	226.20	

a Nearby well pumping.

95-22-5M1. School district. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 5, T. 95 N., R. 22 W.

Records available: 1941-48. Apr. 22, 6.50; July 15, 6.66; Oct. 12, 10.30.

95-21-27Q1. Dave Blankenship. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 27, T. 95 N., R. 21 W.

Records available: 1941-48. Apr. 22, 21.42; July 16, 21.87; Oct. 13, 26.30.

94-22-24J1. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 24, T. 94 N., R. 22 W. Records available: 1941-48. Apr. 22, 10.90; July 16, 11.17; Oct. 13, 13.36.94-22-24J2. Town of Thornton. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 24, T. 94 N., R. 22 W. Records available: 1941-47. No measurements made in 1948.94-22-24J3. Mel Bowen. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 24, T. 94 N., R. 22 W. Records available: 1941-48. Apr. 22, 13.65; July 16, 10.87; Oct. 13, 13.70.Clay County96-35-3R1. Allis Wilson. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 3, T. 96 N., R. 35 W. Records available: 1940-48. Apr. 21, 4.12; July 15, 4.18; Oct. 8, 6.64; Dec. 16, 6.08.Clinton County81-6E-22H1. 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. Records available: 1940-48. Affected by pumping of nearby wells.

Water level from air-gage measurements

Date	Water level	Pumping gallons a minute	Number of wells wells pumping at time of measurement
Jan. 6	126.00	1800	2
11	125.00	1750	2
19	128.00	2000	2
26	128.00	1650	2
Feb. 2	136.00	1850	2
9	134.00	2000	2
16	133.00	1800	3
23	138.00	1700	2
Mar. 1	138.00	1800	3
7	128.00	1450	2
15	138.00	1950	2
22	140.00	1950	2
29	143.00	1800	3
Apr. 7	140.00	1800	3
9	143.00	1800	3
12	141.00	1600	3
19	142.00	1850	3
26	138.00	1725	3

81-7E-6K1. W. Atlee Burpee Co. NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 6, T. 81 N., R. 7 E. Records available: 1940-45, 1947. No measurements made in 1948.

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. Measurements made by Clinton Water Works Co. Records available: 1945-48. June 4, 119.30; June 17, 114.00.

Decatur County

69-25-29R1. Sam Cassett. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 29, T. 69 N., R. 25 W. Records available: 1940, 1942, and 1948. Mar. 23, 14.15.

Dickinson County

99-36-6G1. SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 6, T. 99 N., R. 6 W. Records available: 1941-48. Mar. 26, 0.22; July 14, 1.10; Oct. 7, 4.20; Dec. 16, 3.50.

Dubuque County

89-3E-7Q1. City of Dubuque well 2. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 7, T. 89 N., R. 3 E. Highest observed water level, from recorder charts 24.1 feet below land-surface datum, on Dec. 6; lowest, 100.4 feet below land-surface datum on Apr. 20. Records available: 1947-48.

Daily high and low water levels from recorder charts

Day	January		March		April		May		June		July	
	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
1	26.6	70.8	....	....	29.5	72.2	38.2	69.7	36.3	81.2	41.7	79.2
2	24.6	66.8	....	....	39.8	71.7	45.2	62.6	39.4	79.7	42.9	81.7
3	28.4	68.5	....	....	35.7	....	36.6	67.0	41.7	80.7	54.7	85.4
4	56.1	....	....	....	45.2	....	72.2	....	38.8	42.2	82.1	....
5	24.5	66.9	....	....	30.3	68.3	35.9	73.1	....	82.2	43.9	82.2
6	27.3	69.2	....	....	38.9	73.2	38.1	73.9	....	....	48.0	82.3
7	26.3	68.1	....	....	36.6	69.2	36.7	78.2	....	80.3	50.3	78.7
8	26.2	68.4	....	....	35.3	78.0	33.6	70.3	....	78.9	54.9	81.5
9	26.7	69.1	....	....	35.0	72.3	43.4	61.2	37.3	....	43.6	79.0
10	29.6	70.2	....	....	31.5	71.0	32.7	69.3	40.0	74.3	64.7	83.1
11	35.2	61.0	....	....	29.2	63.3	33.7	64.1	44.2	....	44.2	86.0
12	23.8	67.0	....	....	27.4	59.2	35.2	71.3	41.9	....	50.0	88.1
13	26.9	68.9	....	56.0	33.9	78.5	38.4	80.0	39.0	....	51.5	80.2
14	28.3	70.4	41.2	58.4	34.9	79.0	....	....	41.3	74.2	54.0	80.7
15	27.2	69.8	28.2	55.2	34.6	80.7	....	....	39.8	82.7	51.4	80.7
16	27.9	70.9	30.4	....	35.8	81.0	....	....	44.9	78.7	49.1	80.1
17	31.4	71.0	28.3	....	....	....	34.2	....	43.3	....	49.0	81.4
18	....	....	29.7	....	....	....	46.5	89.2	39.2	....	53.0	81.5
19	....	....	28.7	56.0	....	....	43.6	73.2	39.5	....	40.5	81.0
20	....	....	30.0	58.3	30.1	100.4	....	....	....	....	53.7	82.0
21	....	....	36.3	52.5	34.9	80.9	46.1	....	....	....	51.4	81.7
22	....	....	28.0	55.1	40.4	67.1	42.7	....	37.6	81.3	51.3	81.2
23	....	....	43.3	59.2	37.4	73.3	....	....	39.0	74.5	46.3	81.2
24	....	....	38.8	61.5	36.0	59.0	....	....	38.6	....	48.7	82.0
25	....	....	39.5	61.0	33.1	68.2	37.9	85.5	43.7	....	49.3	75.3
26	....	....	39.3	61.4	34.9	71.4	36.0	80.6	44.1	....	48.7	78.0
27	....	....	33.8	....	45.7	75.2	35.4	81.4	47.7	....	53.3	80.0
28	....	....	42.1	....	41.0	76.0	39.2	82.2	38.5	....	52.6	81.1
29	....	....	29.2	58.5	41.9	69.7	37.4	82.1	39.0	....	53.1	80.4
30	....	....	36.5	60.6	38.3	77.0	38.9	76.4	41.0	78.5	49.8	81.1
31	....	....	36.1	61.1	....	....	31.7	77.8	....	....	46.0	81.2

Daily high and low water levels from recorder charts

Day	August		September		October		November		December	
	High	Low	High	Low	High	Low	High	Low	High	Low
1	48.8	82.6	46.7	84.7	....	....	38.8	74.7	29.8	68.1
2	46.8	87.7	45.4	85.0	....	....	38.8	76.7	29.5	57.4
3	48.9	79.5	47.3	90.8	....	....	38.5	75.3	29.6	62.1
4	47.4	77.3	53.3	89.3	....	....	35.9	76.9	28.5	63.5
5	47.3	77.2	55.9	90.4	....	....	42.3	73.7	33.0	67.3
6	48.7	80.1	55.5	84.0	....	....	39.1	73.6	24.1	60.7

89-3E-7Q1--Continued.

Daily high and low water levels from recorder charts

Day	August		September		October		November		December	
	High	Low	High	Low	High	Low	High	Low	High	Low
7	50.2	81.2	44.2	89.0	....	....	45.0	79.4	29.2	65.2
8	51.9	73.7	46.5	83.4	....	....	39.2	66.1	28.5	66.6
9	44.3	75.2	45.6	83.9	....	....	40.3	76.8	29.6	68.4
10	41.5	78.3	44.1	86.5	....	....	34.7	76.7	33.4	67.3
11	46.3	79.2	47.3	85.8	....	....	42.6	73.9	30.8	68.4
12	48.1	79.7	54.6	71.3	....	....	32.1	75.8	34.7	69.3
13	38.7	87.0	44.8	82.1	....	....	42.6	71.4	26.5	57.6
14	41.9	88.6	49.0	83.1	....	....	40.7	70.5	33.8	69.2
15	46.0	87.2	47.7	85.0	....	....	33.9	69.1	27.9	67.7
16	36.2	82.7	52.3	89.3	....	....	34.6	72.0	32.2	68.3
17	39.3	86.9	45.1	91.0	....	....	33.9	71.2	32.6	69.1
18	38.7	89.8	52.3	88.5	....	....	33.8	71.2	32.2	69.0
19	39.5	96.3	55.5	93.2	....	....	34.1	71.2	32.3	67.7
20	39.8	79.5	41.8	89.8	....	....	30.3	71.7	29.0	64.0
21	57.0	89.1	43.3	88.5	....	....	37.7	71.8	29.3	67.4
22	55.1	84.5	46.8	91.7	....	....	38.8	71.0	31.2	67.7
23	39.3	86.0	46.4	91.9	....	....	33.8	76.7	28.8	68.4
24	53.1	90.4	47.5	91.2	....	....	33.2	71.2	31.7	70.2
25	48.2	84.9	47.1	88.5	....	....	32.5	70.6	29.5	67.5
26	51.8	93.1	51.3	81.3	....	....	26.5	66.5	30.3	66.4
27	51.3	93.6	44.5	86.5	42.7	79.1	32.5	67.9	28.0	63.6
28	48.5	93.7	41.1	87.2	....	....	32.9	69.2	28.0	65.1
29	53.6	94.3	39.5	88.2	41.3	79.0	29.9	65.8	26.4	64.8
30	42.7	83.6	50.7	90.0	42.7	79.4	30.0	68.0	31.3	67.7
31	49.0	91.8	....	....	43.0	79.4	....	....	29.0	68.3

Emmet County

100-32-11R1. Okamanpedan State Park. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 11, T. 100 N., R. 32 W. Records available: 1939-48. Mar. 27, 61.72; July 14, 62.05; Oct. 8, 62.34; Dec. 16, 62.28.

99-34-14B1. City of Estherville well 3. Measuring point on and after Mar. 27, top of casing, 2.05 feet above land-surface datum and 0.80 feet above previous measuring point. Records available: 1939, 1943, 1945, and 1947-48. Mar. 27, 113.50.

Harrison County

80-42-11Q1. 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. Records available: 1940, 1942-48.

Date	Water level	Date	Water level	Date	Water level
Mar. 1	14.58	May 1	14.67	Sept. 30	16.00
Apr. 1	13.75	June 1	15.33	Nov. 3	15.09

79-41-34N1. Mutual Benefit Life Insurance Co. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 34, T. 79 N., R. 41 W. Records available: 1939-47. No measurements made in 1948.

78-42-11A1. Mutual Benefit Life Insurance Co. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 11, T. 78 N., R. 42 W. Records available: 1939-48. Mar. 24, 9.22.

78-42-12Q1. Mutual Benefit Life Insurance Co. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 12, T. 78 N., R. 42 W. Records available: 1939-47. No measurements made in 1948.

Henry County

71-6-9B1. City of Mount Pleasant well 2. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 9, T. 71 N., R. 6 W. Records available: 1945-48. Mar. 22, 138.10; July 9, 139.55; Oct. 5, 140.54; Dec. 9, 140.28.

71-6-9B2. City of Mount Pleasant well 4. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 9, T. 71 N., R. 6 W. Records available: 1946-48. Mar. 22, 135.62; July 9, 136.02; Oct. 5, 136.71; Dec. 9, 136.58.

71-6-9M1. City of Mount Pleasant well 3. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 9, T. 71 N., R. 6 W. Records available: 1945-48. Mar. 22, 89.20; July 9, 156.10; pumping approximately 200 gallons a minute.

Ida County

89-40-35D1. City of Holstein well 3. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 35, T. 89 N., R. 40 W. Records available: 1939, 1945, and 1948. Mar. 25, 332.85, pumping approximately 200 gallons a minute; Dec. 15, 322.60, 11 minutes after pump shut off; Dec. 15, 322.9, 21 minutes after pump shut off.

Iowa County

80-9-3L1. NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 3, T. 80 N., R. 9 W. Records available: 1942-46. No measurements made in 1948.

Jasper County

80-18-31C1. P. W. Beukema. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 31, T. 80 N., R. 18 W. Records available: 1940-48. Apr. 29, 20.12; July 17, 21.00; Oct. 14, 21.98; Dec. 18, 27.15.

80-17-17K1. Iowa State Conservation Commission core hole 8. NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 17, T. 80 N., R. 17 W. Records available: 1947-48. Apr. 29, 70.10; July 17, 70.85; Sept. 20, 71.00; Dec. 13, 71.58.

Jefferson County

72-10-26A1. Dr. Charles Carter. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 26, T. 72 N., R. 10 W. Records available: 1942-48. Mar. 22, 23.65; July 9, 24.34; Oct. 5, 27.02. Dec. 8, 26.90.

Johnson County

80-5-9K2. Geological Survey, U. S. Dept. of Interior. NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 9, T. 80 N., R. 5 W. Highest water level at noon, from recorder charts, 0.89 foot below land-surface datum on May 6; lowest, 6.18 feet below land-surface datum on Sept. 18. Records available: 1940-48.

Water level at noon, from recorder charts

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	4.50	4.84	2.35	2.32	...	3.68	3.75	4.26	5.74	6.05	5.39	4.92
2	4.64	4.86	2.64	2.44	1.39	3.74	3.88	4.36	5.78	6.13	5.36	4.86
3	4.65	4.83	2.80	2.51	1.32	3.78	4.03	4.41	5.70	6.12	5.29	4.90
4	4.73	4.80	2.94	2.54	1.45	3.83	4.12	4.46	5.74	6.06	5.26	4.86
5	4.73	4.85	2.96	2.35	1.68	3.90	4.11	4.52	5.77	6.01	5.23	4.70
6	4.76	4.84	2.91	2.44	.89	3.87	4.17	4.60	5.82	6.05	5.32	4.65
7	4.71	4.78	3.02	2.17	1.14	3.86	4.25	4.60	5.85	5.44	5.40	4.70
8	4.69	4.90	3.14	2.38	1.44	3.94	4.32	4.63	5.83	5.13	5.34	4.70
9	4.78	4.87	3.21	2.52	1.58	4.02	4.40	4.71	5.75	5.13	5.29	4.65
10	4.76	4.83	3.33	2.56	1.46	4.06	4.44	4.77	5.80	5.14	5.31	4.62
11	4.65	4.81	3.39	2.67	1.43	4.12	4.48	4.84	5.85	5.18	5.38	4.73
12	4.74	4.83	...	2.84	1.39	4.09	4.55	4.91	5.94	5.25	5.30	4.76
13	4.79	4.71	3.45	2.92	1.56	4.10	4.57	4.95	6.02	5.27	5.37	4.82
14	4.82	4.84	3.32	2.97	1.71	4.14	4.47	5.01	6.04	5.34	5.32	4.84
15	4.72	4.80	2.56	3.01	1.47	4.21	4.45	5.04	6.05	5.28	5.29	4.00
16	4.89	4.68	2.25	3.14	1.82	4.28	4.55	5.07	6.09	5.40	5.21	3.89
17	4.86	4.11	2.01	3.20	2.05	4.33	4.66	5.07	6.14	5.42	5.03	3.88
18	4.83	3.73	1.84	3.21	2.25	4.38	4.69	5.15	6.18	5.32	4.98	3.88
19	4.82	3.64	.96	3.27	2.43	4.48	4.74	5.21	6.16	5.38	4.72	3.93
20	4.75	3.75	1.21	3.40	2.56	4.47	4.78	5.23	6.17	5.37	4.47	3.97
21	4.75	3.87	1.36	3.47	2.74	4.46	4.10	5.31	5.61	5.36	4.52	4.10
22	4.79	3.92	1.51	3.47	2.88	4.50	4.11	5.33	5.68	5.38	4.54	4.21
23	4.91	3.99	1.66	3.15	3.00	4.46	5.24	5.40	5.87	5.43	4.59	4.26
24	4.89	3.98	1.81	2.59	3.13	4.54	4.31	5.45	5.92	5.41	4.59	4.28
25	4.90	3.56	1.85	2.62	3.18	4.58	4.30	5.51	5.98	5.37	4.65	4.38
26	4.94	3.43	1.72	2.73	3.24	4.63	3.87	5.58	6.03	5.37	4.73	4.36
27	4.95	2.70	1.92	2.48	3.32	4.18	3.91	5.59	6.02	5.38	4.84	4.36
28	4.87	1.58	2.00	2.62	3.41	3.95	4.02	5.60	6.04	5.39	4.85	4.35
29	4.83	2.12	2.04	2.78	3.48	3.56	4.07	5.66	6.06	5.37	4.83	3.70
30	4.86		2.12	...	3.54	3.66	4.07	5.64	5.99	5.35	4.91	3.72
31	4.86		2.16		3.61		4.15	5.73		5.36		3.73

80-5-22M1. Chicago, Rock Island & Pacific Railway. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 22, T. 80 N., R. 5 W. Records available: 1941-48.

Water level at noon, from recorder charts

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Oct.	Nov.
1	....	17.01	14.97	....	....	13.71	15.74	a18.35	....
2	....	17.13	14.74	....	....	13.86	15.67	....	....
3	....	17.19	14.76	....	....	13.98	15.67	....	....
4	....	17.26	14.90	....	....	14.07	15.70	....	....
5	....	17.39	14.95	....	....	14.23	15.72	....	....
6	....	17.46	14.76	....	....	14.44	15.74	....	....
7	....	....	14.58	....	a 0.97	14.57	15.79	....	....
8	....	....	14.61	....	....	14.70	15.86	....	....
9	a15.54	....	14.72	12.65	....	14.88	15.92	....	....
10	15.65	....	14.80	12.60	....	15.02	15.98	....	....
11	15.57	....	14.86	12.46	....	15.15	16.04	....	....
12	15.68	....	14.86	....	....	15.23	16.10	....	....
13	15.73	....	14.83	....	....	15.27	15.74	....	....
14	15.70	....	14.70	....	....	15.24	15.34	....	....
15	15.67	....	13.55	....	....	15.23	14.85	....	....
16	15.81	....	12.94	....	....	15.27	14.55	....	....
17	15.87	....	12.63	....	....	15.27	14.41	....	....
18	15.91	....	12.25	....	....	15.26	14.40	....	....
19	15.96	....	11.76	....	....	15.35	14.43	....	....
20	15.98	....	8.81	....	....	15.44	14.49	....	....
21	16.01	....	7.89	....	....	15.46	14.21	....	....
22	16.08	....	7.76	....	....	15.53	....	....	....
23	16.27	....	....	....	....	15.60	....	....	....
24	....	....	....	....	....	15.55	....	....	....
25	....	....	....	....	....	15.73	....	....	....
26	....	a17.43	....	....	....	15.81	....	....	....
27	....	17.35	....	....	12.50	15.89	....	....	....
28	....	15.48	....	....	12.79	15.94	....	....	....
29	....	15.13	....	....	13.05	15.88	....	a18.16	....
30	16.82	....	....	....	13.28	15.79	....	....	a17.59
31	16.89	....	....	....	13.51	....	a17.20	....	....

a Wetted-tape measurement.

80-5-22M2. Chicago, Rock Island & Pacific Railway. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 22, T. 80 N., R. 5 W. Records available: 1941-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	18.45	May 5	15.68	Aug. 31	20.21	Oct. 29	18.30
Feb. 26	17.63	27	16.30	Oct. 1	18.43	Nov. 30	18.26
Apr. 9	16.64	June 24	16.80				

Linn County

85-6-19J1. Geological Survey, U. S. Dept. of Interior. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 19, T. 85 N., R. 6 W. Records available: 1940-48.

Jan. 29	6.06	Apr. 30	5.30	July 28	5.15	Oct. 29	5.56
Feb. 26	5.30	May 28	5.50	Aug. 31	5.86	Nov. 30	5.16
Apr. 9	5.00	June 28	5.30	Oct. 1	5.75	Dec. 31	5.19

85-6-26D1. Geological Survey, U. S. Dept. of Interior. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 26, T. 85 N., R. 6 W. Records available: 1940-48.

Jan. 29	7.82	Apr. 30	5.27	July 28	3.25	Oct. 29	5.64
Feb. 26	7.06	May 28	4.52	Aug. 31	4.74	Nov. 30	4.87
Apr. 9	4.52	June 28	1.60	Oct. 1	5.76		

85-6-29B1. Earl Balderson. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 29, T. 85 N., R. 6 W. Records available: 1940-48.

Jan. 29	62.54	Apr. 30	62.44	July 28	61.18	Oct. 29	63.29
Feb. 26	62.82	May 28	62.30	Aug. 31	62.33	Nov. 30	63.28
Apr. 9	62.74	June 28	60.55	Oct. 1	62.84	Dec. 31	63.36

85-6-30D1. Weaver Witwer. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 30, T. 85 N., R. 6 W. Records available: 1942, 1946, 1948. July 28, 15.02.

84-7-11R1. E. E. Badham. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 11, T. 84 N., R. 7 W. Unused bored well, diameter 12 inches, depth 29.30 feet. Taps water in glacial drift. Equipped with lift pump. Measuring point, top of concrete curb, 0.4 foot above land-surface datum. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 28	5.39	July 28	6.22	Oct. 29	8.44	Dec. 31	6.62
June 28	4.77	Aug. 31	8.03	Nov. 30	7.62		

84-7-13F1. Alfred Rinderknecht. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 13, T. 84 N., R. 7 W. Records available: 1940-48. Well destroyed, measurements discontinued after Apr. 30. Jan 29, 10.52; Feb. 26, 10.89; Apr. 9, 7.94; Apr. 30, 7.60.

84-7-13E2. Geological Survey, U. S. Dept. of Interior. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 13, T. 84 N., R. 7 W. Augered well, diameter 3 inches, depth 16.75 feet. Cased with galvanized drain spouting. Taps water in glacial drift. Approximately 100 feet northwest and at same approximate elevation as original well 84-7-13E1 which was destroyed. Water levels reported for this well continue the record begun in 1940 on the former well at this location. Measuring point, top of 3-inch galvanized casing, 2.75 feet above land-surface datum. Records available: 1940-48.

Date	Water level	Date	Water level	Date	Water level
Sept. 30	12.03	Oct. 29	9.46	Dec. 31	6.32
Oct. 1	10.22	Nov. 30	8.22		

84-6-20N1. Geological Survey, U. S. Dept. of Interior. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 20, T. 84 N., R. 6 W. Records available: 1940-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	9.25	Apr. 30	5.75	July 28	5.47	Oct. 29	7.60
Feb. 26	7.11	May 28	5.36	Aug. 31	6.96	Nov. 30	5.55
Apr. 9	5.12	June 28	3.90	Oct. 1	7.58	Dec. 31	5.09

84-6-22F1. C. A. Wissler. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 22, T. 84 N., R. 6 W. Records available: 1940-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	8.65	Apr. 30	6.74	Aug. 31	8.32	Nov. 30	8.96
Feb. 26	8.65	May 28	5.40	Oct. 1	8.94	Dec. 31	7.52
Apr. 9	6.89	July 28	6.88	29	9.02		

83-7-1B1. City of Marion. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 1, T. 83 N., R. 7 W. Records available: 1941-48. June 28, 7.40.

83-7-2P1. Mr. Hollenbeck. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 2, T. 83 N., R. 7 W. Records available: 1940-48. July 28, 30.96; Sept. 30, 41.56; Oct. 29, 31.55; Dec. 31, 31.30.

83-7-11E1. Louis Maresh. In Cedar Rapids, in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 11, T. 83 N. R. 7 W. Records available: 1941-48.

Day	Jan.	Feb.	Mar.	Apr.
1	73.79	75.14	75.57	75.21
2	73.98	75.02	75.49	75.43
3	73.87	75.02	75.76	75.35
4	74.06	75.18	75.98	75.05
5	73.95	75.36	75.88	75.07
6	74.12	75.44	75.61	75.19
7	74.14	75.40	75.55	75.15
8	74.20	75.47	75.53	75.53
9	74.60	75.35	75.65	75.57
10	74.72	75.44	75.82	75.30
11	74.31	75.53	75.98	75.35
12	74.54	75.64	76.10	75.47
13	74.70	75.51	76.12	75.54
14	74.82	75.89	75.82	75.50

83-7-11E1--Continued.

Water level at noon, from recorder charts				
Day	Jan.	Feb.	Mar.	Apr.
15	74.75	75.62	75.64	75.46
16	75.17	75.55	75.77	75.66
17	75.21	75.67	75.70	75.62
18	74.97	75.54	75.42	75.35
19	74.90	75.94	75.42	75.34
20	74.84	76.00	75.28	75.54
21	74.95	75.95	75.25	75.62
22	75.15	75.81	75.22	75.56
23	75.42	75.75	75.23	75.50
24	75.29	75.88	75.31	75.58
25	75.06	75.92	75.18	75.41
26	74.94	75.95	75.07	75.40
27	75.07	75.64	75.39	75.58
28	74.93	75.84	75.13	75.66
29	75.02	75.83	74.95	75.64
30	75.22		74.90	75.56
31	75.32		74.96	

83-7-16D1. In Cedar Rapids (Shaver Park), in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 16, T. 83 N., R. 7 W. Records available: 1940-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	88.82	Apr. 30	87.70	July 28	87.74	Oct. 29	89.40
Feb. 26	89.23	May 28	87.55	Aug. 31	88.88	Nov. 30	89.18
Apr. 9	88.23	June 28	87.70	Sept. 30	89.32	Dec. 31	93.66

83-7-16J1. City of Cedar Rapids. In Daniels Park, in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 16, T. 83 N., R. 7 W. Records available: 1940-48.

Feb. 26	31.97	June 28	35.84	Sept. 30	36.67	Nov. 30	36.90
Apr. 9	35.90	July 28	36.48	Oct. 29	36.76	Dec. 31	40.85
May 28	35.65	Aug. 31	34.93				

83-7-17L1. City of Cedar Rapids. In Ellis Park, in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 17, T. 83 N., R. 7 W. Records available: 1940-48.

Jan. 29	20.96	Apr. 30	20.23	July 28	21.03	Oct. 29	20.98
Feb. 26	20.40	May 28	20.75	Aug. 31	21.30	Nov. 30	20.86
Apr. 9	20.25	June 28	21.08	Sept. 30	21.16	Dec. 31	20.80

83-7-21K1. Wapsi Valley Creamery. NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 21, T. 83 N., R. 7 W. Highest observed water level, from recorder charts, 58.47 feet below land-surface datum on Mar. 28; lowest, 62.82 feet below land-surface datum on Aug. 28. Records available: 1943-48.

Water level at noon, from recorder charts												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	59.03	59.45	59.36	59.26	59.89	60.05	61.02	61.13	62.41	61.85	60.95	60.84
2	59.29	59.59	59.28	59.26	59.38	60.53	60.85	61.22	62.43	61.42	61.28	60.83
3	59.51	59.89	59.33	59.00	59.55	60.76	60.54	61.55	62.53	61.22	61.37	60.83
4	59.59	60.01	59.33	58.61	59.78	60.86	60.43	61.69	62.12	61.53	61.35	60.68
5	59.61	60.02	59.30	58.87	59.97	60.44	60.28	61.73	61.90	61.63	61.31	60.19
6	59.79	60.11	59.20	59.21	59.96	58.83	60.87	61.76	61.56	61.68	60.92	60.59
7	59.83	59.91	58.82	59.26	59.85	59.26	61.47	61.15	61.89	61.57	60.73	60.84
8	59.89	59.48	59.09	59.45	59.55	59.60	61.61	60.75	62.22	61.59	61.08	60.81
9	60.01	59.71	59.13	59.51	59.25	59.68	61.72	60.99	62.12	61.02	61.25	60.79
10	59.85	60.00	59.07	59.05	59.58	59.60	61.23	61.61	62.07	60.84	61.27	60.73
11	59.18	60.07	59.13	58.78	59.91	59.76	61.03	61.79	61.66	61.37	61.23	60.28
12	59.55	60.05	59.08	59.10	59.98	59.40	61.12	61.81	61.68	61.51	61.18	60.14
13	59.77	60.02	59.34	59.44	59.99	60.05	60.78	61.99	61.93	61.43	60.85	60.63
14	59.86	60.03	58.82	59.40	59.98	60.36	61.00	61.71	62.18	61.40	60.60	60.81
15	59.86	59.41	58.94	59.53	59.63	60.58	61.21	61.37	62.38	61.31	60.92	60.77
16	60.01	59.74	59.22	59.63	59.45	60.64	60.94	61.67	62.54	61.07	61.07	60.77
17	59.56	59.93	59.31	59.11	59.72	60.67	61.14	61.98	62.55	60.85	61.02	60.75
18	59.05	59.93	59.33	58.91	59.94	60.69	60.90	62.11	62.23	61.05	61.03	60.33

83-7-21K1--Continued.

Water level at noon, from recorder charts

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
19	59.60	60.12	59.16	59.33	60.08	60.69	61.13	62.23	61.96	61.25	60.95	60.38
20	59.92	60.07	58.97	59.76	60.25	60.06	60.89	62.26	62.22	61.25	60.64	60.49
21	59.91	59.73	58.52	59.79	60.50	60.32	60.80	61.91	62.24	61.25	60.57	60.79
22	59.92	59.41	58.69	59.81	60.05	60.87	60.76	61.63	62.18	61.32	60.70	60.82
23	59.90	59.73	58.93	59.87	59.90	61.03	60.78	61.99	61.97	60.90	60.79	60.83
24	59.80	59.90	59.01	59.91	60.09	61.33	61.18	62.13	61.88	60.66	60.64	60.77
25	59.79	59.98	59.09	59.44	60.38	61.32	60.91	61.98	61.39	60.96	60.43	60.28
26	59.84	60.01	59.08	59.77	60.57	61.35	61.17	61.91	61.22	61.21	60.66	60.49
27	59.95	59.91	58.75	60.05	60.68	60.67	61.63	61.83	61.56	61.31	60.35	60.57
28	59.95	59.34	58.47	60.00	60.67	60.78	61.81	62.82	61.69	61.27	60.29	60.65
29	59.97	59.56	58.81	59.93	60.16	61.17	61.83	62.37	61.81	61.31	60.54	60.79
30	59.96		59.06	60.01	59.79	61.34	61.84	62.40	61.71	60.90	60.85	.....
31	59.95		59.77		59.57		61.25	62.47		60.69		60.91

83-7-21L1. 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, 40.5 feet below land-surface datum on Mar. 1; lowest, 73.0 feet below land-surface datum on Aug. 27. Records available: 1940-48.

Daily high and low water levels, from recorder charts

Day	High	Low	Day	High	Low
Feb. 27	49.6	52.5	Nov. 5	....	56.1
28	44.0	50.4	6	48.1	....
29	40.6	44.0	7	46.9	48.3
Mar. 1	40.5	48.9	8	46.8	55.0
2	45.0	50.6	9	49.1	56.4
3	....	50.9	10	49.4	56.2
Apr. 10	42.7	49.7	11	49.7	55.1
11	41.0	44.1	12	48.1	53.8
12	40.8	50.3	13	48.0	50.9
13	46.1	52.9	14	45.9	48.0
May 1	50.8	52.7	15	45.3	52.9
28	59.4	....	16	47.2	53.2
29	51.1	59.3	17	45.8	53.8
30	46.5	51.1	18	46.9	54.0
31	46.6	48.8	19	47.1	52.9
Nov. 1	45.2	52.9	20	47.4	49.5
2	49.6	57.6	30	47.1	....
3	50.8	58.3	Dec. 1	47.3	51.2
4	50.2	57.5	2	47.6	50.7

Daily high and low water levels, from recorder charts

Day	June High	June Low	July High	July Low	August High	August Low	September High	September Low	October High	October Low
1	46.7	62.5	58.9	67.5	57.3	65.3	64.8	69.3	....	....
2	56.3	63.8	54.8	66.3	54.1	67.2	56.3	70.2	....	....
3	58.0	65.1	56.1	64.5	62.9	68.0	67.1	70.4	....	....
4	....	....	54.9	59.1	65.1	68.0	65.6	68.9	....	....
5	....	....	53.2	55.8	65.8	68.3	59.8	67.4	....	....
6	49.1	54.8	53.0	68.4	65.5	68.1	57.3	69.8	....	....
7	47.2	63.9	66.5	....	55.9	67.7	55.5	67.3	....	....
8	58.9	64.6	67.2	....	53.0	55.9	64.2	66.3	....	....
9	....	....	....	....	51.9	66.5	62.6	....	49.2	53.0
10	58.2	65.6	....	68.6	59.6	68.2	....	....	50.4	48.1
11	61.1	66.2	62.2	66.1	64.6	68.7	....	....	48.8	57.7
12	....	....	58.3	70.1	64.2	69.5	57.1	63.4	50.9	60.5
13	53.9	56.7	....	....	65.5	69.7	57.9	66.0	50.9	58.2
14	51.6	64.5	....	....	65.8	68.3	58.4	67.3	....	....
15	56.9	63.4	....	....	58.7	65.8	64.5	68.0	....	....
16	....	....	....	....	56.6	68.3	66.0	69.2	....	....
17	....	....	....	....	64.7	67.9	66.2	69.6	47.2	51.5
18	....	....	58.5	64.5	66.0	70.5	64.7	68.1	47.0	54.6
19	....	....	56.2	68.7	67.6	71.2	58.3	66.7	49.0	56.1
20	50.4	56.9	....	....	67.2	71.1	55.7	67.6	....	....

83-7-2111--Continued.

Daily high and low water levels, from recorder charts

Day	June		July		August		September		October	
	High	Low	High	Low	High	Low	High	Low	High	Low
21	....	....	....	....	65.6	70.0	59.6	66.3	49.0	55.2
22	....	....	....	....	61.2	65.9	58.6	64.7	49.9	54.5
23	61.3	67.3	....	....	58.2	69.2	55.2	62.1	48.9	52.3
24	63.5	68.3	....	....	66.7	71.5	53.8	59.0	45.4	49.3
25	64.7	68.6	57.0	63.7	67.7	72.0	53.0	55.8	45.2	52.5
26	64.3	67.3	57.8	68.4	68.8	72.1	51.5	53.8	47.3	56.0
27	56.2	65.3	35.0	69.8	69.1	73.0	50.2	57.7	49.6	56.5
28	52.7	67.1	67.1	70.8	66.6	70.9	....	....	49.6	55.6
29	64.0	68.7	66.5	70.8	....	69.6	....	....	50.1	57.5
30	64.7	68.2	67.9	70.6	63.9	69.8	....	59.0	49.6	53.0
31	....	....	63.5	68.9	66.2	71.2	....	....	46.4	51.1

83-7-21P1. Kresge Co. In Cedar Rapids, in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 21, T. 83 N., R. 7 W. Records available: 1941-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	60.90	Apr. 9	62.83	May 28	84.20	Oct. 29	66.98
Feb. 26	64.14	30	68.82	Oct. 1	75.30	Dec. 31	59.68

83-7-21Q1. Iowa Theater. In Cedar Rapids, in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 21, T. 83 N. R. 7 W., at corner of First Ave. SE and Third St. NE. Records available: 1941-48.

Jan. 29	58.22	Apr. 30	69.40	June 28	85.60	Oct. 29	66.00
Feb. 26	66.05	May 28	77.98	Oct. 1	79.33	Dec. 31	61.70
Apr. 9	64.60						

83-7-23G1. City of Cedar Rapids. In Bever Park, in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 23, T. 83 N., R. 7 W. Records available: 1940-48.

Jan. 29	2.60	Apr. 30	2.38	July 28	2.92	Oct. 29	2.98
Feb. 26	2.58	May 28	1.92	Aug. 31	3.14	Nov. 30	2.75
Apr. 9	2.54	June 28	2.44	Oct. 1	3.32	Dec. 31	2.68

83-7-24A1. John Zrudsky. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 24, T. 83 N., R. 7 W. Records available: 1940-48.

Jan. 29	29.04	Apr. 30	28.98	July 28	29.07	Oct. 29	31.37
Feb. 26	28.80	May 28	29.07	Aug. 31	30.74	Nov. 30	29.78
Apr. 9	28.62	June 28	29.67	Oct. 1	29.95	Dec. 31	28.61

83-7-28G2. Cedar Rapids Gas Co. In Cedar Rapids, in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 28, T. 83 N., R. 7 W., at corner of Eighth Ave. SE and First St. NE. Records available: 1940-48.

Daily high and low water levels, from recorder charts

Day	High	Low	Day	High	Low
Jan. 1	34.46	39.21	Jan. 17	36.96	39.87
2	34.14	38.46	18	36.27	38.95
3	37.60	38.62	19	35.90	38.57
4	36.84	38.02	20	38.35	39.42
5	37.02	39.53	21	37.66	39.76
6	39.17	40.39	22	37.84	39.65
7	39.45	40.32	23	38.15	39.83
8	39.18	40.74	24	37.39	38.47
9	39.67	41.15	25	36.34	38.00
10	39.75	40.97	26	35.94	38.66
11	37.46	39.76	27	37.62	39.35
12	37.22	40.09	28	37.96	39.35
13	38.75	40.03	29	37.85	39.27
14	38.40	39.89	30	38.08	39.72
15	38.56	40.34	31	38.20	39.00
16	38.78	40.57	Feb. 1	35.91	38.71

83-7-28G2--Continued.

Daily high and low water levels, from recorder charts

Day	High	Low	Day	High	Low
Feb. 2	35.64	38.11	Feb. 8	35.20	38.34
3	36.99	39.02	9	35.08	37.87
4	37.51	39.40	10	36.66	38.73
5	37.58	39.50	11	37.13	39.07
6	38.01	39.73	12	37.32	39.11
7	38.08	39.08	13	37.39	....

83-7-32G1. Floyd Felter. In Cedar Rapids, in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 32, T. 83 R. 7 W., at corner of Twenty-second Ave. SW and Eleventh St. NE. Records available; 1940-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	84.15	Apr. 30	84.89	July 28	85.84	Oct. 29	86.23
Feb. 26	84.03	May 28	81.35	Aug. 31	86.27	Nov. 30	85.54
Apr. 9	83.90	June 28	84.30	Sept. 30	86.86	Dec. 31	85.28

83-7-33F1. In Cedar Rapids, in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 33, T. 83 N., R. 7 W., at corner of Twenty-second Ave. and K St. SW. Records available: 1940-48

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	73.72	Apr. 30	71.50	July 28	72.21	Oct. 29	72.69
Feb. 26	73.20	May 28	71.80	Aug. 31	73.10	Nov. 30	73.35
Apr. 9	72.44	June 28	72.02	Sept. 30	73.55	Dec. 31	73.03

83-6-30B1. Mr. Katz. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 30, T. 83 N., R. 6 W. Records available; 1940-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	50.63	Apr. 30	50.20	July 28	50.83	Oct. 29	51.41
Feb. 26	50.69	May 28	50.43	Aug. 31	51.14	Nov. 30	51.48
Apr. 9	49.70	June 28	51.12	Oct. 1	51.39	Dec. 31	51.34

Lyon County

99-44-26R1. SE $\frac{1}{4}$ SF $\frac{1}{4}$ sec. 26, T. 99 N., R. 44 W. Measuring point, top of concrete tile casing, 2.0 feet above land-surface datum. Equipped with lift pump. Abandoned in 1943; opened and measurements resumed. Records available: 1940-43, 1947-48. Mar. 26, 3.05; July 14, 1.46; Oct. 7, 4.44; Dec. 16, 3.92.

98-48-24M1. A. C. Hanson. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 24, T. 98 N., R. 48 W. Records available: 1939-43; 1948. Mar. 26, 8.26; Sept. 2, 10.53; Oct. 30, 11.70.

Madison County

76-28-2B1. Glen Newton. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 2, T. 76 N., R. 28 W. Records available: 1940-48. Mar. 23, 13.50; July 13, 15.02; Oct. 5, 15.06; Dec. 14, 14.43.

Marion County

75-20-22H1. Union Central Life Insurance Co. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 22, T. 75 N., R. 20 W. Records available: 1940-48. Mar. 22, 6.75; July 12, 8.86; Oct. 5, 8.83; Dec. 4, 8.18.

75-20-31C2. Miss Amanda Elliot. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 31, T. 75 N., R. 20 W. Records available: 1940-48. Mar. 22, 6.60; July 12, 12.84; Oct. 5, 19.30; Dec. 4, 16.44.

74-21-11A1. Mr. Riddle. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 11, T. 74 N., R. 21 W. Well destroyed; measurements discontinued after Mar. 22. Records available: 1942-48. Mar. 22, 8.60.

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 5 (1945). Records available: 1945-46; 1948.

74-21-11F1--Continued.

Daily high and low water levels, from recorder charts

Day	February		March		April		May		June	
	High	Low	High	Low	High	Low	High	Low	High	Low
1	.....	.....	84.20	85.24	85.68	85.95	85.17	85.55	84.57	85.50
2	.....	.....	84.47	85.06	85.67	86.05	84.04	85.55	84.35	85.52
3	.....	.....	84.75	85.30	86.02	86.16	83.16	84.32	84.22	84.58
4	.....	.....	85.08	85.33	85.69	86.16	84.32	85.02	84.38	85.03
5	.....	.....	84.78	85.47	84.88	85.70	83.99	84.95	84.42	85.36
6	.....	.....	84.35	85.12	85.02	85.45	83.98	84.70	85.02	85.49
7	.....	.....	84.40	84.95	84.87	85.49	84.22	84.71	.....	.....
8	.....	.....	84.60	85.04	85.56	85.89	84.24	84.92	.....	.....
9	.....	.....	84.60	85.08	85.49	85.89	84.79	84.99	85.13	85.54
10	.....	.....	84.60	85.12	85.01	85.73	84.02	84.81	.....	.....
11	.....	.....	.....	.....	85.02	85.62	84.47	84.94	.....	.....
12	84.76	85.33	.....	.....	85.32	85.65	84.49	85.04	.....	.....
13	84.20	85.05	.....	.....	85.27	85.73	84.63	85.06	.....	.....
14	84.08	84.92	.....	.....	85.34	85.74	84.58	85.20	.....	.....
15	84.51	85.11	.....	.....	85.18	85.60	85.00	85.41	.....	.....
16	84.45	85.11	.....	.....	85.16	85.72	84.10	85.44	.....	.....
17	84.58	85.14	.....	.....	85.56	85.76	83.31	84.31	85.05	85.53
18	84.49	85.16	.....	84.79	85.12	85.74	83.97	84.52	84.93	85.53
19	84.41	85.15	84.15	85.10	85.47	85.76	84.26	84.93	84.85	85.45
20	84.70	85.28	85.18	85.43	85.48	85.85	84.87	85.20	84.90	85.45
21	84.95	85.38	84.94	85.51	85.50	85.86	84.82	85.27	84.11	84.90
22	85.03	85.49	85.11	85.50	85.18	85.55	84.81	85.29	84.44	85.01
23	85.03	85.50	84.91	85.50	85.08	85.51	85.08	85.53	84.62	85.13
24	84.96	85.41	84.92	85.41	85.05	85.51	85.23	85.52	.....	.....
25	84.88	85.41	84.95	85.40	85.15	85.64	85.12	85.53	.....	.....
26	84.67	85.14	84.72	85.35	85.23	85.64	85.12	85.53	.....	.....
27	84.30	85.15	85.01	85.52	85.31	85.74	85.31	85.63	.....	.....
28	84.31	85.09	85.38	85.75	85.23	85.74	85.15	85.63	.....	.....
29	84.88	85.24	85.27	85.76	85.06	85.53	85.02	85.42	.....	.....
30	.....	.....	85.12	85.63	84.99	85.53	84.87	85.35	.....	.....
31	.....	.....	85.01	85.63	.....	.....	84.67	85.30	.....	.....

Water level at noon, from recorder charts

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	86.50	86.76	.....	87.73	87.79
2	.....	86.52	86.69	.....	87.59	87.77
3	.....	86.60	86.70	.....	87.58	87.73
4	.....	86.55	86.75	.....	87.61	87.25
5	.....	86.42	86.74	.....	87.60	87.08
6	.....	86.43	86.73	.....	87.59	87.24
7	.....	86.51	86.72	.....	87.59	87.24
8	.....	86.48	86.80	87.54	87.57	87.08
9	.....	86.49	86.86	87.58	87.56	87.03
10	.....	86.39	86.86	87.61	87.55	.....
11	.....	86.43	86.89	87.62	87.55	.....
12	86.65	86.42	86.91	87.68	87.44	.....
13	86.64	86.43	87.03	87.67	87.47	.....
14	86.60	86.48	87.13	87.72	87.42	86.35
15	86.61	86.49	87.08	87.73	87.33	86.43
16	86.64	86.52	87.01	87.71	.....	86.73
17	86.62	86.45	86.98	87.84	.....	86.95
18	86.56	86.43	86.90	87.84	.....	86.95
19	86.65	86.42	86.89	87.75	.....	86.82
20	86.55	86.36	86.95	87.78	.....	86.82
21	86.80	86.46	86.90	87.71	.....	86.80
22	86.69	86.51	86.93	87.82	.....	86.99
23	86.65	86.53	.....	87.93	.....	87.13
24	86.63	86.57	.....	87.96	.....	87.13
25	86.61	86.56	.....	87.87	.....	.....
26	86.52	86.63	.....	87.81	87.53	.....
27	86.51	86.57	.....	87.84	87.59	.....
28	86.35	86.58	.....	87.85	87.70	.....
29	86.47	86.65	.....	87.83	87.67	86.98
30	86.51	86.59	.....	87.80	87.71	87.19
31	86.49	86.75	.....	87.77	.....	86.93

74-21-11K1. Town of Melcher. NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 11, T. 74 N., R. 21 W. Test hole 3 (1945). Highest observed water level, from recorder charts, 96.69 feet below land-surface datum on May 3; lowest, 108.05 feet below land-surface datum on Sept. 25 and 26, Oct. 30 and Nov. 3. Records available: 1945-48.

Daily high and low water levels, from recorder charts

Day	February		March		April		May	
	High	Low	High	Low	High	Low	High	Low
1	.....	.....	99.68	105.99	103.42	106.46	101.84	106.30
2	.....	.....	101.01	106.21	102.51	106.56	98.12	103.11
3	.....	.....	101.38	106.36	103.68	106.54	96.69	105.98
4	.....	.....	101.85	106.32	102.56	106.17	100.97	105.69
5	.....	.....	101.06	106.02	100.54	105.88	99.08	104.94
6	.....	.....	100.27	106.17	101.06	106.11	99.41	105.58
7	.....	.....	100.75	106.18	100.99	106.35	100.20	105.29
8	.....	.....	101.16	106.13	102.64	106.29	100.08	106.21
9	.....	.....	100.94	106.11	101.98	106.11	100.70	105.51
10	.....	.....	100.82	106.15	101.05	106.15	99.33	105.72
11	.....	106.32	100.78	105.95	101.77	106.41	100.48	105.80
12	100.92	105.86	100.28	106.08	101.98	106.27	100.42	106.01
13	99.87	105.15	100.60	105.95	101.61	106.37	100.77	105.88
14	99.77	106.14	100.86	105.99	101.79	105.86	100.72	106.38
15	.....	.....	100.19	106.15	101.54	106.27	102.18	106.43
16	100.68	106.16	100.97	105.94	101.75	106.39	98.32	103.88
17	100.67	106.26	100.59	106.16	102.57	106.27	97.47	105.29
18	100.63	105.96	100.57	104.78	101.46	106.48	99.44	105.42
19	100.80	106.22	99.85	106.35	102.68	106.32	100.18	106.33
20	100.88	106.31	102.46	106.18	102.30	106.39	101.71	106.30
21	101.73	106.34	101.43	106.34	102.08	106.12	101.78	106.31
22	101.91	106.51	101.63	106.28	101.34	106.18	101.34	106.36
23	101.93	106.31	101.13	106.05	101.46	106.27	102.30	106.52
24	101.63	106.33	101.03	106.18	101.40	106.17	102.31	106.32
25	101.40	106.11	101.24	106.16	101.79	106.39	101.88	106.41
26	100.91	106.18	101.05	106.22	101.94	106.21	101.88	106.44
27	100.50	105.65	101.68	106.34	101.96	106.32	102.60	106.47
28	100.78	106.23	102.37	106.49	101.38	105.93	101.96	106.13
29	101.54	106.18	102.30	106.35	101.09	106.21	101.55	106.12
30	.....	.....	101.74	106.27	101.21	106.27	101.10	106.13
31	.....	.....	101.65	106.52	.....	.....	100.48	105.85

Daily high and low water levels, from recorder charts

Day	June		July		August		September	
	High	Low	High	Low	High	Low	High	Low
1	101.57	106.42	102.62	106.46	105.79	107.19	106.22	107.36
2	99.71	103.50	102.65	106.48	105.62	106.93	106.05	107.27
3	99.33	105.61	102.84	106.76	105.32	106.76	105.98	107.33
4	100.61	106.24	102.70	106.55	105.07	106.82	106.40	107.48
5	101.84	106.43	101.86	106.46	105.05	106.84	106.24	107.44
6	102.06	106.53	103.14	106.62	104.93	106.93	106.28	107.38
7	101.87	106.17	103.90	106.87	105.38	106.94	106.25	107.48
8	102.43	106.46	105.07	106.93	105.36	106.97	106.55	107.56
9	102.05	106.24	104.96	106.96	105.26	106.77	106.34	107.55
10	101.78	106.41	105.18	106.98	104.95	106.93	106.81	107.57
11	102.00	105.73	105.30	106.99	105.22	106.97	107.40	107.72
12	100.35	106.21	105.35	106.96	105.35	107.04	107.38	107.82
13	101.83	105.66	105.17	106.89	105.54	106.97	107.47	107.84
14	99.31	106.03	104.98	106.86	105.34	106.85	106.87	107.86
15	101.56	106.27	105.05	106.93	105.33	107.00	106.74	107.70
16	101.42	106.12	104.98	106.89	105.48	106.94	106.68	107.61
17	101.48	106.38	105.31	106.96	105.09	106.97	106.65	107.65
18	101.46	105.58	104.97	106.93	105.55	107.07	106.58	107.65
19	100.92	106.27	106.12	107.16	105.48	106.99	107.65	107.86
20	101.86	105.54	105.55	107.13	105.45	107.13	106.90	107.94
21	99.23	105.55	105.90	107.25	105.80	107.16	106.78	107.78
22	100.52	106.05	105.47	107.14	105.86	107.26	107.47	107.91
23	100.91	106.08	105.84	107.08	105.74	107.27	107.91	107.95
24	101.33	106.42	105.35	106.98	106.33	107.35	107.65	107.98

74-21-11K1--Continued.

Daily high and low water levels, from recorder charts

Day	June		July		August		September	
	High	Low	High	Low	High	Low	High	Low
25	102.00	106.37	105.44	107.09	105.91	107.26	107.71	108.05
26	101.97	106.05	105.08	106.63	105.96	107.17	107.14	108.05
27	101.34	106.56	105.09	106.99	105.70	107.05	106.90	107.86
28	103.25	106.45	105.44	107.08	105.67	107.19	106.80	107.73
29	102.69	106.55	105.64	107.11	105.82	107.23	106.81	107.68
30	102.90	106.55	105.73	107.13	105.72	107.33	106.73	107.74
31			105.64	107.08	106.51	107.46		

Daily high and low water levels, from recorder charts

Day	October		November		December	
	High	Low	High	Low	High	Low
1	106.99	107.86	106.90	107.76	107.57	107.85
2	106.93	107.73	107.56	107.95	107.15	107.99
3	106.67	107.66	107.35	108.05	105.99	107.15
4	106.62	107.57	106.98	107.75	105.90	106.75
5	106.99	107.77	107.34	107.96	106.20	106.75
6	106.66	107.45	106.97	107.69	106.15	106.72
7	106.35	107.55	106.73	107.61	105.52	106.15
8	106.95	107.74	106.47	107.56	105.23	105.60
9	106.65	107.58	107.29	107.75	104.45	105.35
10	107.05	107.77	106.87	107.63	102.23	104.35
11	106.73	107.65	106.65	107.49	100.85	103.55
12	107.06	107.82	106.40	107.49	.....	.....
13	106.72	107.68	106.63	107.47	.....	.....
14	107.14	107.85	106.45	107.44	.....	.....
15	106.76	107.63	106.18	107.40	.....	.....
16	106.78	107.66	106.94	107.67	106.54	107.07
17	106.73	107.63	106.52	107.43	105.85	107.05
18	106.48	107.61	106.27	107.41	106.57	107.05
19	107.03	107.74	106.82	107.62	106.07	107.08
20	106.58	107.56	106.51	107.55	106.05	106.95
21	107.61	107.83	107.01	107.75	106.85	107.31
22	107.52	107.95	106.65	107.45	106.33	107.32
23	107.28	107.99	106.92	107.67	106.21	107.03
24	107.06	107.79	106.56	107.56	106.10	106.78
25	106.80	107.75	106.63	107.56	106.75	107.25
26	107.48	107.93	106.61	107.53	106.86	107.38
27	107.51	108.02	106.62	107.57	105.95	106.86
28	106.99	107.78	106.42	107.38	105.82	106.65
29	107.78	107.95	107.00	107.68	105.46	106.65
30	107.36	108.05	107.00	107.76	104.95	106.02
31	107.07	107.83			106.02	106.61

74-20-22C1. Grant DeWitt. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 22, T. 74 N., R. 20 W.

Records available: 1942-48. Mar. 23, 11.10; July 13, 12.58; Oct. 5, 16.10; Dec. 3, 16.32.

74-20-33D1. T. V. Beebout. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 33, T. 74 N., R. 20 W.

Records available: 1940-48. Mar. 23, 11.65; July 13, 11.70; Oct. 5, 12.21; Dec. 3, 12.65.

Montgomery County

Tarkio Creek area

(Wells in the Tarkio Creek area are numbered consecutively beginning with 1; measurements made by Dean W. Knox.)

7. E. F. Holquist. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 11, T. 71 N., R. 38 W. Records available: 1934-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 25	19.94	June 23	18.98	Aug. 26	22.28	Oct. 22	21.85
Apr. 28	17.04	July 22	20.57	Sept. 25	21.59	Dec. 23	21.90
May 24	6.96						

72. O. A. Milner. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 24, T. 72 N., R. 38 W. Records available: 1937-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 25	10.90	Apr. 28	4.52	June 23	8.24	Dec. 23	10.62
Mar. 26	7.70	May 24	5.55	Nov. 23	11.14		

73. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 25, T. 72 N., R. 38 W. Records available: 1937-48

Feb. 25	15.71	May 24	17.44	Aug. 26	17.76	Nov. 23	17.50
Mar. 26	11.45	June 23	15.98	Sept. 25	17.62	Dec. 23	17.18
Apr. 28	13.77	July 22	17.08	Oct. 22	18.30		

78. Mr. Mainquist. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 35, T. 71 N., R. 38 W. Records available: 1937-48.

Feb. 25	7.66	June 23	6.35	Sept. 25	6.40	Nov. 23	4.80
Apr. 28	1.48	July 22	6.34	Oct. 22	6.96	Dec. 23	5.55
May 24	4.95	Aug. 26	6.86				

79. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 35, T. 71 N., R. 38 W. Records available: 1937-48

Feb. 25	14.20	June 23	13.12	Aug. 26	14.46	Oct. 22	15.96
Apr. 28	7.52	July 22	13.57	Sept. 25	15.24	Dec. 23	13.30
May 24	11.80						

81. L. G. Berggren. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 24, T. 71 N., R. 38 W. Records available: 1937-48.

Feb. 25	6.58	June 22	8.25	Sept. 25	8.75	Nov. 23	7.16
Apr. 28	6.15	July 22	8.30	Oct. 22	8.70	Dec. 23	5.78
May 24	7.52	Aug. 26	8.80				

82. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 29, T. 72 N., R. 37 W. Records available: 1937-48

Feb. 25	19.02	May 24	15.08	Aug. 26	20.44	Nov. 23	18.40
Mar. 26	15.66	June 23	16.51	Sept. 25	20.30	Dec. 23	19.79
Apr. 28	13.25	July 22	18.04	Oct. 22	20.46		

Muscatine County

76-2-14D1. City of Muscatine test well 4. In Muscatine, in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 14, T. 76 N., R. 2 W. Records available: 1939-48.

Date	Water level	Date	Water level	Date	Water level
Mar. 15	11.16	July 10	12.60	Dec. 9	13.70
May 14	8.70	Oct. 5	13.60		

76-2-15A1. City of Muscatine test well 5. In Muscatine, in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 15, T. 76 N., R. 2 W. Records available: 1940-48.

Mar. 22	8.32	July 10	12.12	Dec. 9	13.12
May 14	8.74	Oct. 5	13.80		

Osceola County

99-41-18C2. City of Sibley. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 18, T. 99 N., R. 41 W. Records available: 1940-47. No measurements made in 1948.

Page County

Tarkio Creek area

(Wells in the Tarkio Creek area are numbered consecutively beginning with 1; measurements made by Dean W. Knox.)

5. John Toft. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 7, T. 68 N., R. 38 W. Records available 1934-48.

5--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	15.75	Apr. 21	10.58	July 22	15.02	Nov. 22	16.02
Feb. 23	15.14	May 21	10.42	Aug. 25	15.77	Dec. 22	16.00
Mar. 25	10.39	June 22	12.35	Sept. 20	16.70		

6. T. Slickerveer. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 18, T. 69 N., R. 38 W. Records available: 1934-48.

Jan. 30	4.34	Apr. 21	2.45	July 22	4.49	Oct. 21	5.63
Feb. 25	4.14	May 24	2.72	Aug. 25	5.08	Dec. 23	5.35
Mar. 25	1.61	June 23	3.28	Sept. 30	5.55		

10. R. Palmquist. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 17, T. 70 N., R. 37 W. Records available: 1934-48.

Feb. 25	25.46	May 24	24.26	Aug. 26	25.76	Nov. 23	25.60
Mar. 26	24.67	June 23	24.62	Sept. 25	25.36	Dec. 23	25.75
Apr. 28	23.56	July 22	24.86	Oct. 22	25.49		

11. R. Palmquist. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 17, T. 70 N., R. 37 W. Records available: 1934-48.

Mar. 26	7.25	May 24	6.82	July 22	7.23	Sept. 25	7.55
Apr. 28	7.05	June 22	6.98	Aug. 26	7.44		

12. Amil Windhorst. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 20, T. 69 N., R. 37 W. Records available: 1934-48.

Jan. 30	26.04	Apr. 28	26.14	July 22	23.40	Oct. 22	24.54
Feb. 25	28.07	May 24	26.06	Aug. 26	28.68	Nov. 23	37.95
Mar. 26	22.02	June 23	22.44	Sept. 25	24.56	Dec. 23	34.82

a Pumping.

15. Metropolitan Life Insurance Co. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 21, T. 67 N., R. 38 W. Records available: 1934-48.

Jan. 29	7.91	Apr. 21	7.60	July 21	7.19	Oct. 21	8.16
Feb. 23	8.02	May 21	6.32	Aug. 25	7.69	Nov. 22	7.76
Mar. 25	5.78	June 22	7.89	Sept. 20	8.12	Dec. 22	8.09

17. Albert Nordholm. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 20, T. 67 N., R. 38 W. Records available: 1934-48.

Jan. 29	18.00	Apr. 21	17.26	July 21	18.73	Oct. 21	17.75
Feb. 23	17.97	May 21	16.96	Aug. 25	21.05	Nov. 22	17.06
Mar. 25	16.38	June 22	17.10	Sept. 20	18.35	Dec. 22	18.84

44A. Elsie Nordstrom. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 35, T. 69 N., R. 39 W. Records available: 1937-48.

Jan. 29	20.07	Apr. 21	16.15	July 22	20.33	Oct. 21	21.70
Feb. 23	18.96	May 21	17.79	Aug. 25	20.86	Nov. 22	21.98
Mar. 25	15.66	June 22	19.15	Sept. 20	21.25	Dec. 22	22.22

47. Elsie Nordstrom. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 35, T. 69 N., R. 39 W. Records available: 1937-48.

Jan. 29	18.66	Apr. 21	16.32	July 22	19.00	Oct. 21	21.38
Feb. 23	17.20	May 21	16.79	Aug. 25	20.48	Nov. 22	21.57
Mar. 25	15.98	June 22	18.70	Sept. 20	20.82	Dec. 22	20.78

70. John Snyder. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 30, T. 69 N., R. 38 W. Records available: 1937-48.

Jan. 29	6.68	Apr. 21	3.68	July 22	7.65	Oct. 21	8.42
Feb. 23	6.69	May 21	4.82	Aug. 25	7.73	Dec. 22	7.94
Mar. 25	1.82	June 22	6.86	Sept. 20	8.36		

71. John Snyder. $SR\frac{1}{4}NE\frac{1}{4}$ sec. 30, T. 69 N., R. 38 W. Records available: 1937-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	6.96	Apr. 21	6.14	July 22	6.56	Sept. 20	7.00
Feb. 23	6.90	May 21	6.24	Aug. 25	7.05	Oct. 21	7.20
Mar. 25	6.08	June 22	6.32				

76. Metropolitan Life Insurance Co. $SR\frac{1}{4}SW\frac{1}{4}$ sec. 29, T. 68 N., R. 38 W. Records available: 1937-48.

Jan. 29	12.30	Apr. 21	11.68	July 21	13.40	Oct. 21	13.83
Feb. 23	11.50	May 21	11.82	Aug. 25	13.69	Nov. 22	12.96
Mar. 25	11.37	June 22	15.44	Sept. 20	14.20	Dec. 22	12.77

80. Mr. Burton. $NW\frac{1}{4}NE\frac{1}{4}$ sec. 34, T. 69 N., R. 38 W. Records available: 1937-48.

Jan. 30	29.35	Apr. 28	24.40	July 22	30.60	Sept. 25	31.78
Feb. 25	30.09	May 24	28.37	Aug. 26	30.94	Nov. 23	31.18
Mar. 25	25.02	June 22	29.83				

83. Flsie Nordstrom. $NW\frac{1}{4}NW\frac{1}{4}$ sec. 35, T. 69 N., R. 39 W. Records available: 1939-48.

Jan. 29	22.82	Apr. 21	21.35	July 21	22.93	Oct. 21	25.32
Feb. 23	23.39	May 21	20.58	Aug. 25	23.69	Nov. 23	26.36
Mar. 25	22.58	June 22	21.77	Sept. 20	24.24	Dec. 22	26.22

84. Flsie Nordstrom. $NW\frac{1}{4}NW\frac{1}{4}$ sec. 35, T. 69 N., R. 39 W. Records available: 1939-48.

Jan. 29	22.14	Apr. 21	20.27	July 21	22.13	Oct. 21	24.57
Feb. 23	22.46	May 21	18.50	Aug. 25	22.90	Nov. 23	25.44
Mar. 25	21.62	June 22	21.22	Sept. 20	23.48	Dec. 22	25.45

85. Flsie Nordstrom. $NW\frac{1}{4}NW\frac{1}{4}$ sec. 35, T. 69 N., R. 39 W. Records available: 1939-48.

Jan. 29	13.50	Apr. 21	18.73	July 21	20.19	Oct. 21	22.26
Feb. 23	20.08	May 21	19.38	Aug. 25	20.80	Nov. 23	22.92
Mar. 25	18.95	June 22	19.44	Sept. 20	21.52	Dec. 22	22.88

86. Flsie Nordstrom. $NW\frac{1}{4}NW\frac{1}{4}$ sec. 35, T. 69 N., R. 39 W. Records available: 1939-48.

Jan. 29	16.58	Apr. 21	16.77	July 21	17.34	Oct. 21	19.35
Feb. 23	17.00	May 21	15.96	Aug. 25	17.95	Nov. 23	19.90
Mar. 25	15.73	June 22	16.70	Sept. 20	18.50	Dec. 22	19.86

87. Flsie Nordstrom. $NW\frac{1}{4}NW\frac{1}{4}$ sec. 35, T. 69 N., R. 39 W. Records available: 1939-48.

Jan. 29	12.08	Apr. 21	10.88	July 21	12.60	Oct. 21	14.55
Feb. 23	12.56	May 21	11.08	Aug. 25	15.14	Nov. 23	15.20
Mar. 25	10.52	June 22	11.08	Sept. 20	14.74	Dec. 22	15.15

Palo Alto County

Vicinity of Lost Island Lake

97-34-29N1. $SW\frac{1}{4}SW\frac{1}{4}$ sec. 29, T. 97 N., R. 34 W. Records available: 1940-48. Apr. 21, 1.20; July 15, 1.85; Oct. 8, 2.35; Dec. 16, 1.86.

97-34-29N2. $SW\frac{1}{4}SW\frac{1}{4}$ sec. 29, T. 97 N., R. 34 W. Records available: 1940-48. Flowing; no measurements made in 1948.

97-34-30Q1. Norman Broadwell. $SW\frac{1}{4}SE\frac{1}{4}$ sec. 30, T. 97 N., R. 34 W., about 150 feet north of normal shore line of Lost Island Lake. Records available: 1940-45, 1948. Apr. 21, 17.32; July 15, 17.20; Oct. 8, 18.09; Dec. 16, 17.40.

96-34-6J1. Electric Park. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 6, T. 96 N., R. 34 W. Records available: 1940-48. Apr. 21, 0.95; July 15, 1.28; Oct. 8, 2.06; Dec. 16, 1.79.

Plymouth County

91-48-19M1. Joe Tracy. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 19, T. 91 N., R. 48 W. Records available: 1939-47. Abandoned; measurements discontinued.

Polk County

78-24-4P1. S. S. Kresge Co. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 4, T. 78 N., R. 24 W. Records available: 1943-46. Apr. 28, 29.60; July 17, 31.52; Oct. 13, 31.54; Dec. 14, 30.67.

79-22-22A1. J. G. Reed. NE $\frac{1}{4}$ NF $\frac{1}{4}$ sec. 22, T. 79 N., R. 22 W. Records available: 1940-48. Apr. 28, 6.65; July 17, 6.78; Oct. 13, 7.22; Dec. 18, 6.24.

Poweshiek County

78-15-1R1. Ben Harding. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 1, T. 78 N., R. 15 W. Records available: 1943-48. Apr. 29, 10.40; July 17, 11.22; Oct. 14, 11.99; Dec. 13, 12.92.

Sac County

89-38-11J1. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 11, T. 89 N., R. 38 W. Records available: 1942-48. Mar. 25, 2.85; July 14, 3.62; Oct. 7, 5.09; Dec. 15, 4.25.

89-38-26A2. City of Schaller. In Schaller, in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 26, T. 89 N., R. 38 W. Records available: 1940-48. Mar. 25, 210.01; July 14, 220.45; Oct. 7, 209.92; Dec. 15, 220.22.

86-36-2C1. John Christian. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 2, T. 86 N., R. 36 W. Records available: 1940-48. Mar. 25, 4.45; July 14, 6.45; Oct. 7, 11.60; Dec. 15, 9.32.

86-36-2E1. Albert Culver, Jr. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 2, T. 86 N., R. 36 W. Records available: 1940-48. Mar. 25, 0.29; July 14, 0.86; Oct. 7, 1.12; Dec. 15, 1.15.

86-36-4N1. Iowa State Conservation Commission. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 4, T. 86 N., R. 36 W. Records available: 1940-48. Mar. 25, 4.50; July 14, 4.63; Oct. 7, 6.57; Dec. 15, 6.04.

Sioux County

95-45-5A1. City of Sioux Center. In Sioux Center, in NE $\frac{1}{4}$ NF $\frac{1}{4}$ sec. 5, T. 95 N., R. 45 W. Records available: 1939-45, 1948. Mar. 26, 268.50; July 14, 269.09; Oct. 7, 268.47; Dec. 16, 268.63.

Story County

83-24-2Q1. City of Ames well 2. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 2, T. 83 N., R. 24 W. Highest observed water level, from recorder charts, 46.3 feet below land-surface datum on Mar. 28 and 29; lowest, 59.3 feet below land-surface datum on June 1. Records available: 1947-48.

Daily high and low water levels, from recorder charts

Day	January		February		March		April		May		June	
	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
1	52.8	53.1	49.6	56.1	49.4	56.2	46.9	53.8	47.5	54.2	55.4	59.3
2	52.8	53.1	49.7	56.4	49.5	56.2	47.1	54.1	47.7	54.2	54.6	55.2
3	52.8	53.2	49.7	56.4	49.6	56.2	47.2	54.0	47.7	54.3	54.8	55.2
4	53.0	56.2	49.6	56.5	49.6	56.3	47.3	54.0	49.3	54.2	54.9	57.9
5	49.3	53.0	49.6	56.4	49.5	56.2	47.3	54.2	51.3	53.9	50.4	58.0
6	49.6	56.2	49.8	56.5	49.5	55.9	47.5	54.2	51.3	54.1	52.7	55.8
7	49.3	56.3	49.9	56.5	49.6	56.2	47.8	54.2	51.2	53.7	55.4	56.0
8	49.4	53.2	49.8	56.5	49.6	56.2	47.8	54.3	51.2	53.9	55.6	56.0
9	49.6	56.4	49.8	56.5	49.7	56.3	47.8	54.5	51.0	51.3	55.6	56.0
10	49.2	56.3	49.9	56.5	49.3	56.3	47.6	54.3	47.7	51.5	55.6	56.1
11	49.4	56.3	49.9	56.5	49.6	56.2	47.5	54.4	51.0	51.4	55.2	56.0

83-24-2Q1--Continued.

Daily high and low water levels, from recorder charts

Day	January		February		March		April		May		June	
	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
12	49.3	56.3	49.7	56.6	49.7	56.2	47.6	54.7	51.2	54.0	50.1	55.9
13	49.3	56.3	49.7	56.5	49.7	56.2	47.7	54.6	51.4	54.1	49.5	53.2
14	....	....	49.9	56.6	49.5	56.2	47.9	54.5	51.4	54.2	49.2	57.1
15	....	....	49.7	56.6	49.5	56.2	47.8	54.6	51.5	54.2	49.4	56.1
16	49.3	56.3	49.8	56.5	49.0	55.9	47.9	54.7	51.4	54.2	49.4	55.2
17	49.4	56.4	49.8	56.5	48.6	55.2	48.0	54.8	51.6	54.3	49.2	55.2
18	49.5	56.4	49.8	56.6	48.2	54.9	48.1	54.8	51.7	54.6	49.8	54.9
19	49.3	56.4	49.9	56.6	47.2	54.1	48.2	54.9	51.7	54.7	52.8	55.9
20	49.4	56.5	49.8	56.6	47.0	53.8	48.4	55.1	54.5	54.9	49.4	55.7
21	49.7	56.3	50.3	57.0	46.9	50.8	48.6	55.1	52.0	55.0	52.7	53.0
22	49.4	56.4	50.2	56.9	46.8	53.5	48.6	55.1	48.7	55.1	52.6	53.4
23	49.5	56.4	50.4	56.9	47.0	53.8	48.1	54.5	52.1	55.1	52.9	55.7
24	49.4	56.4	50.4	57.0	49.4	51.2	47.9	54.6	52.0	55.1	52.9	56.1
25	49.6	56.4	50.3	57.0	50.7	51.1	47.5	54.3	52.2	55.2	52.9	53.4
26	49.6	56.4	50.4	56.9	51.2	54.0	47.6	54.4	52.2	55.3	53.0	55.9
27	49.9	56.5	49.9	56.9	50.6	51.2	47.8	54.1	52.3	55.5	52.7	55.9
28	49.6	56.4	49.5	56.4	46.3	50.6	47.7	54.4	52.5	55.6	52.7	53.0
29	49.5	56.4	49.5	56.2	46.3	53.5	47.7	54.4	52.5	55.5	52.7	55.4
30	49.6	56.5			46.5	53.6	47.6	54.4	52.2	52.5	49.9	55.8
31	49.6	56.5			46.6	53.7			52.2	55.3	....	....

Daily high and low water levels, from recorder charts

Day	July		August		September		October		November		December	
	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
1	49.7	55.9	53.3	53.8	54.1	56.7	56.6	57.3	51.3	57.2	....	....
2	49.2	57.2	50.4	53.5	54.2	56.7	54.9	57.0	52.1	57.4	....	....
3	49.5	57.5	50.2	55.8	54.4	56.6	54.9	57.1	51.7	57.1	....	....
4	52.9	53.4	53.5	55.5	54.3	56.8	54.7	57.2	51.6	57.1	....	....
5	51.6	56.6	50.1	55.7	54.2	56.6	54.9	57.2	54.8	56.9	....	....
6	52.7	55.8	53.4	53.7	54.2	56.7	54.9	57.2	54.8	57.0	....	....
7	53.9	56.0	53.4	53.7	51.2	56.8	54.8	57.1	54.7	54.8	....	....
8	50.2	57.8	53.4	53.9	54.4	56.7	56.8	57.1	54.6	54.8	....	....
9	55.8	57.6	53.6	53.9	51.4	56.9	54.7	57.1	54.6	57.2	....	....
10	53.5	56.0	50.7	56.2	54.4	56.7	54.7	57.2	54.7	54.9	....	....
11	53.4	55.8	50.7	55.7	54.6	57.0	54.6	54.8	54.7	54.9	....	....
12	53.3	56.0	53.5	55.7	54.7	56.9	54.6	56.6	54.8	57.3	....	....
13	53.5	55.8	53.5	55.6	56.0	57.3	54.9	57.1	51.3	57.2	....	....
14	49.8	55.6	53.6	55.8	54.8	57.1	54.8	56.9	51.5	57.0	....	....
15	49.8	55.6	54.0	54.3	57.0	57.3	54.9	57.2	....	....	....	....
16	53.4	55.6	54.0	56.3	56.6	57.4	54.8	56.9	....	....	....	....
17	52.6	55.6	54.0	56.9	54.9	57.0	54.8	57.1	....	....	....	....
18	53.3	55.5	54.0	56.4	56.7	57.3	54.7	57.0	....	....	54.3	54.5
19	53.2	55.9	54.2	56.5	56.8	57.4	54.9	57.0	....	....	54.3	54.5
20	53.5	56.1	51.3	56.7	54.9	57.3	55.0	56.9	....	....	51.0	54.5
21	53.7	55.8	54.5	56.9	54.8	57.1	51.7	57.0	....	....	54.1	54.8
22	51.0	55.7	54.3	56.5	54.7	57.3	55.0	57.3	....	....	54.0	54.2
23	53.4	55.9	52.0	56.8	54.6	56.9	51.6	56.9	....	....	54.0	54.4
24	53.3	55.5	56.5	59.3	54.7	57.2	55.8	57.1	....	....	50.7	54.1
25	53.4	55.5	56.7	56.9	54.6	56.9	54.8	55.0	....	....	53.9	54.2
26	53.3	54.0	54.7	57.0	54.7	57.2	54.9	57.4	....	....	50.4	53.9
27	53.3	56.1	54.5	56.3	54.7	57.0	53.1	57.1	....	....	53.8	54.2
28	51.2	55.6	54.2	56.8	54.9	56.6	51.6	57.4	....	....	53.9	54.1
29	53.3	54.0	54.2	56.2	54.9	57.2	51.9	57.3	....	....	50.5	54.0
30	53.3	55.9	54.0	56.2	54.8	56.6	51.8	57.4	....	....	53.9	54.2
31	53.3	53.8	54.1	56.5			51.3	57.2			54.0	54.2

83-24-4Q1. Iowa State College. In Ames, in SW $\frac{1}{4}$ sec. 4, T. 83 N., R. 24 W. Records available: 1939-48. Apr. 28, 42.92; July 16, 43.16; Oct. 13, 44.30; Dec. 18, 43.29.

83-24-20J1. Agricultural Engineering Experiment Station. Near Ames, in NE $\frac{1}{4}$ sec. 20, T. 83 N., R. 24 W. Records available: 1939-48. Apr. 28, 12.50; July 16, 17.35; Oct. 13, 21.44; Dec. 18, 20.41.

83-24-4R1. Iowa State College. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 4, T. 83 N., R. 24 W. Records available: 1942-48. Apr. 28, 7.29; July 16, 13.02; Oct. 13, 17.42; Dec. 18, 19.18.

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. Records available: 1945-48. Apr. 19, 8.85; Aug. 11, 9.30.

Warren County

77-25-12R1. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 12, T. 77 N., R. 25 W. Measuring point on and after Mar. 23, top of wooden casing, at land-surface datum and 1.6 feet lower than previous measuring point. Records available: 1942-48. Mar. 23, 0.50; July 13, 2.36; Oct. 5, 2.78; Dec. 14, 2.40.

76-25-8Q1. Iowa State College. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 8, T. 76 N., R. 25 W. Measuring point on and after Mar. 23, top of concrete well cover at 4-inch hole, 0.9 foot above land-surface datum and 0.6 foot above previous measuring point. Records available: 1940-48. Mar. 23, 7.42; July 13, 16.80; Oct. 5, 25.48; Dec. 14, 25.30.

Wayne County

67-23-20Q1. L. P. Bryan. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 20, T. 67 N., R. 23 W. Records available: 1940, 1942, and 1948. Mar. 23, 6.10.

Webster County

90-30-26A1. County of Webster. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 26, T. 90 N., R. 30 W. Records available: 1942-48. Apr. 20, 13.70; June 15, 9.37; Oct. 8, 16.33; Dec. 17, 17.62.

90-28-1B1. Ed Askland. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 1, T. 90 N., R. 28 W. Records available: 1942-43, 1945-48. Apr. 20, 5.00; June 15, 4.89; Oct. 11, 13.48; Dec. 17, 12.55.

90-28-8Q1. Mr. Hovey. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 8, T. 90 N., R. 28 W. Records available: 1942-48. Apr. 20, 8.26; June 15, 8.03; Oct. 11, 11.02; Dec. 17, 10.16.

90-27-31N1. C. S. Knudson. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 31, T. 90 N., R. 27 W. Records available: 1942-43, 1948. Apr. 19, 9.10; June 14, 7.50; Oct. 10, 10.30; Dec. 17, 13.90.

89-30-18J1. Dan Cain. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 18, T. 89 N., R. 30 W. Records available: 1942-48. Apr. 20, 11.65; June 15, 10.90; Oct. 8, 18.96; Dec. 17, 17.80.

89-30-23R1. Johnson Township Consolidated School. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 23, T. 89 N., R. 30 W. Records available: 1942-45, 1947-48. Apr. 20, 33.22; June 15, 33.14; Oct. 8, 33.58; Dec. 17, 33.90.

89-28-21Q2. Litchfield Real Estate Co. In Fort Dodge, in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 21, T. 89 N., R. 28 W. Records available: 1942-43. No measurements made in 1948.

88-29-11C1. Charles Matson. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 11, T. 88 N., R. 29 W. Records available: 1942-48. Apr. 20, 5.21; June 14, 6.10; Oct. 11, 13.02; Dec. 17, 7.80.

87-30-30R1. School District No. 9. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 30, T. 87 N., R. 30 W. Records available: 1942-48. Apr. 20, 5.08; June 16, 6.84; Oct. 11, 10.84; Dec. 17, 10.35.

87-28-5Q1. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 5, T. 87 N., R. 28 W. Records available: 1942-48. Apr. 20, 2.80; June 16, 4.08; Oct. 11, 7.30; Dec. 17, 6.05.

87-28-29N1. Grant Spangler. About 4 miles northeast of Harcourt, in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 29, T. 87 N., R. 28 W. Highest observed water level, from recorder charts, 2.42 feet below land-surface datum on May 1; lowest, 9.00 feet below land-surface datum on Oct. 14. Records available: 1942-48.

87-28-29N1--Continued.

Water level at noon, from recorder charts												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	4.32	5.13	5.27	3.52	2.42	4.06	4.75	6.33	...	8.40	8.43	6.86
2	4.39	5.18	5.23	3.59	2.64	4.13	4.84	6.41	7.68	8.48	8.48	6.77
3	4.40	5.16	5.30	3.54	2.81	4.17	4.93	6.44	7.70	8.55	8.46	6.74
4	4.52	5.18	5.36	3.46	2.94	4.24	5.00	6.48	7.72	8.57	8.43	6.59
5	4.51	5.22	5.31	3.48	2.98	4.22	5.07	6.51	7.72	8.52	8.42	6.37
6	4.54	5.23	5.18	3.50	2.59	4.19	5.08	6.54	7.74	8.52	8.56	6.54
7	4.51	5.21	5.18	3.34	2.70	4.33	5.18	6.56	7.86	8.56	8.64	6.46
8	4.52	5.31	5.24	3.30	2.78	4.32	5.29	6.58	7.86	8.73	8.56	6.37
9	4.62	5.32	5.23	3.32	2.83	4.37	5.33	6.65	7.91	8.82	8.44	6.41
10	4.65	5.33	5.15	3.23	2.94	4.51	5.18	6.73	7.95	8.82	8.37	6.34
11	4.48	5.11	5.05	3.00	2.98	4.61	5.23	6.80	7.95	8.84	8.43	6.10
12	4.53	5.13	5.08	3.02	3.04	4.60	5.35	6.89	7.99	8.90	8.16	6.13
13	4.58	5.16	5.09	3.10	3.07	4.57	5.39	6.95	8.18	8.91	8.01	6.18
14	4.62	5.30	5.07	3.07	3.03	4.58	5.35	7.01	8.26	9.00	7.89	6.20
15	4.59	5.29	5.06	3.08	3.20	4.56	5.32	7.08	8.21	8.92	7.83	6.12
16	4.70	5.40	5.18	3.22	3.29	4.58	5.37	7.13	...	8.81	7.87	6.23
17	4.69	5.45	5.24	3.20	3.34	4.57	5.46	7.11	...	8.78	7.83	6.23
18	4.70	5.43	5.13	3.17	3.35	4.60	5.51	7.15	...	...	...	6.09
19	4.71	5.57	...	3.22	3.43	4.68	5.50	7.16	...	...	7.59	6.05
20	4.72	5.65	...	3.30	3.48	4.70	5.55	7.13	8.38	...	7.44	5.92
21	4.74	5.48	...	3.15	3.56	4.66	5.62	7.23	8.39	8.57	7.40	6.03
22	4.78	5.50	4.97	3.15	3.63	4.69	5.73	7.20	8.47	8.56	7.35	6.10
23	4.86	5.52	4.89	3.15	3.70	4.68	5.78	7.26	8.52	8.67	7.22	6.10
24	4.86	5.58	4.84	3.18	3.76	4.78	5.82	7.34	8.62	8.67	7.15	6.07
25	4.93	5.54	4.70	3.21	3.79	4.85	5.85	7.42	8.78	8.65	7.10	6.12
26	4.93	5.54	4.67	3.03	3.84	4.91	5.95	7.53	8.84	8.66	7.00	5.83
27	4.98	5.29	4.27	2.77	3.84	4.86	6.05	7.62	8.85	8.45	6.98	5.74
28	4.94	5.23	3.92	2.54	3.90	4.67	6.08	7.63	8.84	8.31	6.97	5.70
29	4.98	5.31	3.77	2.97	3.94	4.66	6.08	7.63	8.52	8.22	6.82	5.91
30	5.06	...	3.70	2.94	3.96	4.71	6.21	...	8.36	8.22	6.91	5.76
31	5.11	...	3.59	...	4.00	...	6.23	...	...	8.31	...	5.46

87-27-18M1. J. B. Marsh. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 18, T. 87 N., R. 27 W. Records available: 1942-48. Apr. 20, 126.90; June 16, 127.40; Oct. 11, 132.92; Dec. 17, 130.74

86-30-5C1. E. C. Monson. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 5, T. 86 N., R. 30 W. Records available: 1942-48. Apr. 20, 58.80; June 16, 58.90; Oct. 11, 59.33; Dec. 17, 59.20.

86-29-14A1. F. R. Castenson. Near Harcourt, in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 14, T. 86 N., R. 29 W. Records available: 1942-48. Apr. 20, 4.51; June 16, 5.68; Oct. 11, 9.73; Dec. 17, 9.59.

86-28-14H1. Town of Dayton. In Dayton, in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 14, T. 86 N., R. 28 W. Measuring point on and after Dec. 17, hole in pump base, 1.3 feet above land-surface datum and 0.70 foot above previous measuring point. Records available: 1942-48. Apr. 20, 77.88; June 16, 104.50, pumping; Oct. 11, 78.60; Dec. 17, 79.70.

86-27-4D1. Mr. Davis. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 4, T. 86 N., R. 27 W. Records available: 1942-48.

Date	Water level	Date	Water level	Date	Water level
Apr. 20	105.25	Oct. 11	110.60	Dec. 17	105.85
June 16	105.60	11	106.35		

a Pumping.

Woodbury County

89-48-23B1. City of Sioux City Riverside Station well. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 23, T. 89 N., R. 48 W. Records available: 1939-44. No measurements made in 1948.

89-47-22B1. City of Sioux City well Lowell 4. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 22, T. 89 N., R. 47 W. Affected by nearby pumping wells. Measurements made by Tim Kemper and R. R. Bates of the Sioux City Water Works. Records available 1939-48. Jan. 2, 48.50; Feb. 2, 49.10; Apr. 2, 46.50; May 2, 45.70.

KANSAS

By Phyllis T. Mosley

PROGRAM OF WORK

The observation-well program in Kansas was continued in 1948 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. Also, an observation-well program was carried on in the Missouri Basin in cooperation with the Bureau of Reclamation. Eighteen counties not heretofore included were added to the program in 1948 and none was dropped making 67 counties in which wells were observed at the end of the year.

Results of cooperative ground-water investigations in the following areas were published in 1948: Geology and ground-water resources of Seward County,¹ Ground-water resources of the Kansas City, Kansas, area,² and Ground-water resources of Republic County and northern Cloud County.³

At the beginning of 1948, periodic water-level measurements were being made in 527 observation wells in the State. During the year measurements were discontinued in 42 wells and begun or resumed in 106 wells. At the end of the year 591 wells were under observation. Of the wells measured in 1948, 252 were measured bimonthly, 171 were measured quarterly, 114 monthly, 4 semimonthly, 21 weekly, and water-stage recorders were maintained on 12. The recorders on four of these wells--one in Finney County, one in Grant County, and two in Scott County--are maintained by the Division of Water Resources of the Kansas State Board of Agriculture. During the year

1 Byrne, F. D., and McLaughlin, T. G., Geology and ground-water resources of Seward County, Kansas: Kansas Geol. Survey Bull. 69, 140 pp., 12 pls., 10 figs.

2 Fishel, V. C., Ground-water resources of the Kansas City, Kansas, area: Kansas Geol. Survey Bull. 71, 109 pp., 3 pls., 12 figs.

3 Fishel, V. C., Ground-water resources of Republic County and northern Cloud County, Kansas: Kansas Geol. Survey Bull. 73, 194 pp., 12 pls., 6 figs.

4,134 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 1948

County	Observer	Wells included at beginning of year	Wells discontinued during year	Wells added during year	Wells included at end of year
Allen	W. W. Wilson	0	0	2	2
Atchison	W. W. Wilson	0	0	2	2
Barber	(a)	10	2	0	8
Barton	(a)	12	2	0	10
Bourbon	W. W. Wilson	2	0	2	4
Brown	W. W. Wilson	5	0	2	7
Cheyenne	D. W. Berry	0	2	22	20
Clark	(a)	3	1	0	2
Coffey	W. W. Wilson	0	0	3	3
Comanche	(a)	3	1	0	2
Cowley	C. K. Bayne	5	1	0	4
Crawford	C. K. Bayne	3	0	0	3
Douglas	W. W. Wilson	0	0	2	2
Edwards	(a)	3	0	0	3
Ellis	(b)	16	0	4	20
Finney	(a)	11	2	1	10
Ford	(a)	14	2	0	12
Franklin	W. W. Wilson	0	0	1	1
Grant	(a)	9	0	0	9
Gray	(a)	7	0	0	7
Greeley	(c)	0	0	12	12
Hamilton	(a)	5	0	0	5
Harvey	(d)	129	3	1	127
Haskell	(a)	7	2	0	5
Hodgeman	(a)	3	0	0	3
Jackson	W. W. Wilson	0	0	3	3
Jefferson	W. W. Wilson	0	0	2	2
Jewell	D. W. Berry	20	2	3	21
Johnson	W. W. Wilson	0	0	3	3
Kearny	(a)	7	1	0	6
Kingman	C. K. Bayne	12	2	0	10
Kiowa	(a)	5	0	0	5
Labette	John Wayenburg	4	0	0	4
Leavenworth	W. W. Wilson	0	0	2	2
Lincoln	D. W. Berry	16	1	0	15
Linn	W. W. Wilson	0	0	3	3
Logan	(a)	3	0	0	3
McPherson	(e)	11	0	0	11
Meade	(a)	8	1	0	7
Miami	W. W. Wilson	0	0	1	1
Mitchell	D. W. Berry	12	1	0	11
Morton	(a)	3	0	0	3
Ness	(a)	2	0	0	2
Norton	D. W. Berry	11	0	0	11
Osborne	D. W. Berry	15	2	0	13
Pawnee	(a)	4	1	0	3
Phillips	D. W. Berry	14	0	0	14
Reno	C. K. Bayne	1	0	0	1
Republic	Local observer	6	0	2	8
Rice	D. W. Berry	21	7	0	14
Russell	(a)	10	0	0	10
Saline	D. W. Berry	11	0	0	11
Scott	(a)	11	1	0	10
Sedgwick	(d)	30	1	9	38
Seward	(a)	5	0	0	5
Shawnee	W. W. Wilson	0	0	1	1

* See footnotes at end of table.

Observation-well program in Kansas, by counties, in 1948--Continued

County	Observer	Wells included at beginning of year	Wells discontinued during year	Wells added during year	Wells included at end of year
Sherman	W. W. Wilson	0	0	3	3
Smith	D. W. Berry	8	0	0	8
Stafford	(a)	4	1	0	3
Stanton	(a)	4	1	0	3
Stevens	(a)	6	1	0	5
Sumner	C. A. Posey	2	0	0	2
Thomas	(a)	8	0	1	9
Wallace	H. C. Corrigan	0	0	5	5
Wichita	(c)	0	0	13	13
Woodson	W. W. Wilson	0	0	1	1
Wyandotte	V. C. Fishel	6	1	0	5
		527	42	106	591

a Harry F. Ruppel or H. C. Corrigan.

b D. W. Berry, Harry F. Ruppel, H. C. Corrigan, or V. A. Bigsall.

c H. C. Corrigan or J. R. Branch.

d C. K. Bayne or O. K. Brandon.

e C. K. Bayne or D. W. Berry.

Frequency of measurement of wells and number of wetted-tape measurements made in Kansas, by counties, in 1948

County	Wells measured bi-monthly	Wells measured quarterly	Wells measured monthly	Wells measured semi-monthly	Wells measured weekly	Wells equipped with recorders	Wetted tape measurements made during year
Allen	2	0	0	0	0	0	10
Atchison	2	0	0	0	0	0	9
Barber	0	8	0	0	0	0	31
Barton	0	0	10	0	0	0	128
Bourbon	a 2	0	0	0	0	0	10
Brown	b 2	0	0	0	0	0	10
Cheyenne	c 17	2	0	0	0	0	112
Clark	0	2	0	0	0	0	5
Coffey	3	0	0	0	0	0	14
Comanche	0	2	0	0	0	0	7
Cowley	0	4	0	0	0	0	16
Crawford	0	d 1	0	0	0	0	1
Douglas	2	0	0	0	0	0	10
Edwards	0	0	3	0	0	0	34
Ellis	14	2	4	0	0	0	128
Finney	0	4	5	0	0	1	66
Ford	0	7	5	0	0	0	68
Franklin	1	0	0	0	0	0	5
Grant	0	6	2	0	0	1	35
Gray	0	e 4	1	0	0	0	25
Greeley	5	7	0	0	0	0	71
Hamilton	0	3	2	0	0	0	33
Harvey	f 85	3	21	0	15	2	1,293
Haskell	0	4	1	0	0	0	23
Hodgeman	0	2	1	0	0	0	18
Jackson	3	0	0	0	0	0	15
Jefferson	2	0	0	0	0	0	10
Jewell	0	0	21	0	0	0	196
Johnson	3	0	0	0	0	0	15
Kearny	0	5	1	0	0	0	27
Kingman	0	10	0	0	0	0	39
Kiowa	0	5	0	0	0	0	20
Labette	0	0	0	4	0	0	86
Leavenworth	2	0	0	0	0	0	10
Lincoln	14	1	0	0	0	0	89

* See footnotes at end of table.

Frequency of measurement of wells and number of wetted-tape measurements made in Kansas, by counties, in 1948--Continued

County	Wells meas-ured bi-monthly	Wells meas-ured quar-terly	Wells meas-ured monthly	Wells meas-ured semi-monthly	Wells meas-ured weekly	Wells equipped with recorders	Wetted tape measurements made during year
Linn	3	0	0	0	0	0	15
Logan	0	3	0	0	0	0	12
McPherson	4	7	0	0	0	0	52
Meade	0	5	0	0	0	1	14
Miami	1	0	0	0	0	0	5
Mitchell	11	0	0	0	0	0	62
Morton	0	3	0	0	0	0	10
Ness	0	2	0	0	0	0	8
Norton	11	0	0	0	0	0	60
Osborne	10	2	0	0	0	1	75
Pawnee	0	0	3	0	0	0	40
Phillips	11	3	0	0	0	0	75
Reno	0	1	0	0	0	0	4
Republic	0	1	5	0	0	0	54
Rice	12	2	0	0	0	0	91
Russell	0	10	0	0	0	0	31
Saline	11	0	0	0	0	0	66
Scott	0	2	6	0	0	2	75
Sedgwick	1	9	19	0	6	3	459
Seward	13	0	1	0	0	0	30
Shawnee	1	0	0	0	0	0	5
Sherman	0	3	0	0	0	0	9
Smith	8	0	0	0	0	0	48
Stafford	1	1	1	0	0	0	24
Stanton	0	3	0	0	0	0	17
Stevens	0	5	0	0	0	0	12
Sumner	0	0	2	0	0	0	22
Thomas	0	8	0	0	0	1	19
Wallace	0	5	0	0	0	0	15
Wichita	4	9	0	0	0	0	46
Woodson	1	0	0	0	0	0	5
Wyandotte	0	5	0	0	0	0	5
	252	171	114	4	21	12	4,134

- a No measurements made in 1948 for wells 1 and 2.
b No measurements made in 1948 for wells 1, 3, 4, 5, and 6.
c No measurements made in 1948 for well 2-39-17ba.
d No measurements made in 1948 for wells 1 and 88.
e No measurements made in 1948 for wells 20 and 23.
f No wetted-tape measurements made in 1948 for well M-2.
g No measurements made in 1948 for well 55.
h No measurements made in 1948 for wells 209 and 230.
i No measurements made in 1948 for well 108.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Allen County

24-18-33baa. Arnold Estate. NE $\frac{1}{4}$ sec. 33, T. 24 S., R. 18 E. Unused dug domestic well, diameter 5 feet, depth 18.6 feet below land-surface datum. Measuring point, top of boards over well at center, 0.2 foot above land-surface datum. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level
May 6	12.87	Aug. 26	11.01	Nov. 26	12.33
June 7	13.18	Oct. 15	12.52		

24-21-33dcd. J. F. Harris. $SE\frac{1}{4}SW\frac{1}{4}SE\frac{1}{4}$ sec. 33, T. 24 S., R. 21 E. Unused drilled industrial well, diameter 12 inches. Measuring point, top of casing, south side, 0.7 foot above land-surface datum. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level
May 6	39.41	Aug. 26	39.96	Nov. 26	39.49
June 7	40.58	Oct. 15	39.72		

Atchison County

5-18-3dd. Lee Savage. $SE\frac{1}{4}SE\frac{1}{4}$ sec. 3, T. 5 S., R. 18 E. Unused dug domestic and stock well, diameter 3 feet, depth 10.2 feet below land-surface datum. Measuring point, top of boards over well, 0.3 foot above land-surface datum. Records available: 1948. July 3, 1.65; Aug. 25, 2.14; Oct. 14, 2.36; Nov. 27, 2.57.

6-21-32d. Owner unknown. $SE\frac{1}{4}$ sec. 32, T. 6 S., R. 21 E. Unused dug domestic well, diameter 5 feet, depth 12.9 feet below land-surface datum. Measuring point, top of boards over well at center, 0.9 foot above land-surface datum. Records available: 1948.

May 28	4.52	Aug. 25	8.63	Nov. 27	8.76
July 3	4.90	Oct. 14	8.73		

Barber County

Highest and lowest water levels for the period of record
in 8 wells in Barber County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
1	8	69.67	Dec. 29, 1948	82.99	Oct. 17, 1940
3	8	8.57	June 19, 1947	15.42	Oct. 21, 1940
4	8	13.87	Mar. 20, 1948	16.30	Aug. 20, 1943
5	8	17.62	Mar. 20, 1948	30.15	Sept. 24, 1941
8	8	8.87	Nov. 21, 1941	17.48	Mar. 21, 1941
9	8	1.13	Sept. 25, 1948	4.54	Aug. 21, 1943
10	8	102.20	Mar. 15, 1945	107.72	Sept. 25, 1948
13	8	5.96	June 19, 1947	16.99	Oct. 22, 1940

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record, in 8 wells in Barber County

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise (+) or net decline (-) for period of record
1	13.32	+1.79	+13.32
3	6.85	+5.9	+3.22
4	2.43	-.29	+5.50
5	12.53	+21	+10.00
8	8.61	+62	+2.60
9	3.41	+90	+1.72
10	5.52	+10	-.95
13	11.03	-1.15	+8.54

1. D. S. Shaw. $SE\frac{1}{4}NW\frac{1}{4}$ sec. 19, T. 31 S., R. 15 W. Records available: 1940-48. Mar. 20, 71.04; June 23, 70.95; Sept. 25, 70.73; Dec. 29, 69.67.

2. Russell Lake. $SW\frac{1}{4}SW\frac{1}{4}$ sec. 14, T. 31 S., R. 14 W. Records available: 1940-47. Measurements discontinued after Dec. 17, 1947.

3. Mrs. Griever. $SW\frac{1}{4}NE\frac{1}{4}$ sec. 12, T. 32 S., R. 12 W. Records available: 1940-48. Mar. 20, 9.79; June 21, 13.16; Sept. 25, 12.79; Dec. 29, 12.20.

4. Madge Evans. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 4, T. 32 S., R. 12 W. Records available: 1940-48. Mar. 20, 13.87; June 22, 15.02; Sept. 25, 15.17; Dec. 29, 15.40.
5. R. Kenney. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 1, T. 33 S., R. 12 W. Records available: 1940-48. Mar. 20, 17.62; June 22, 18.42; Sept. 25, 18.77; Dec. 30, 18.85.
8. P. Brooks. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 17, T. 34 S., R. 15 W. Records available: 1940-48. Mar. 20, 11.12; June 23, 13.71; Sept. 25, 12.29; Dec. 30, 14.51.
9. V. D. Wells. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 18, T. 34 S., R. 15 W. Records available: 1940-48. June 23, 1.15; Sept. 25, 1.15; Dec. 30, 2.04.
10. G. H. Davis. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 11, T. 35 S., R. 15 W. Records available: 1940-48. Mar. 20, 103.77; June 23, 104.45; Sept. 25, 107.72; Dec. 30, 104.80.
12. E. Mills. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 34, T. 33 S., R. 10 W. Measurements discontinued after Dec. 17, 1947. Records available: 1940-47.
13. J. A. Hrencher. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 17, T. 32 S., R. 10 W. Records available: 1940-48. Mar. 20, 7.09; June 22, 10.20; Sept. 25, 6.32; Dec. 29, 8.45.

Barton County

Highest and lowest water levels for the period of record
in 12 wells in Barton County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
1	6.5	0.76	May 11, 1944	5.49	Aug. 21, 1946
16	6	27.93	May 22, 1943	33.34	July 11, 1947
43	6	16.88	Aug. 8, 1945	21.21	Jan. 19, 1944
100	4.5	28.86	Aug. 23, 1948	35.14	Dec. 7, 1947
101	4.5	.89	July 20, 1948	24.83	Feb. 17, 1948
103	4.5	1.00	Apr. 27, 1945	7.65	Aug. 21, 1946
105	4.5	30.80	July 12, 1945	32.82	Dec. 21, 1944
107	4.5	97.98	July 20, 1948	101.60	Oct. 26, 1945
109	4.5	8.90	July 20, 1948	14.61	July 10, 1946
110	4.5	16.15	June 6, 1945	23.00	Oct. 20, 1948
112	4.5	96.93	July 12, 1945	130.14	Sept. 12, 1946
131	4.5	9.78	July 13, 1945	14.81	Sept. 23, 1948

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record, in 12 wells in Barton County

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise (+) or net decline (-) for period of record
1	4.73	+0.49	-1.56
16	5.41	+1.98	+1.00
43	4.33	+1.59	+2.40
100	6.28	+ .64	-1.07
101	23.94	+5.22	+5.17
103	6.66	+ .94	-1.56
105	2.02	+ .08	+ .53
107	3.62	+1.32	+1.25
109	5.71	+ .91	+ .89
110	6.85	- .47	-4.57
112	33.21	+1.49	-5.70
131	5.03	+ .20	-1.12

1. F. Panning. SE. corner sec. 3, T. 20 S., R. 11 W. Records available: 1942-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 16	4.80	Apr. 14	4.06	July 20	1.48	Oct. 19	4.04
Feb. 17	5.01	May 20	3.94	Aug. 23	2.02	Nov. 24	4.59
Mar. 15	4.05	June 23	3.79	Sept. 23	3.17	Dec. 21	4.51

16. Teichmann. NE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 12, T. 20 S., R. 13 W. Records available: 1942-48.

Jan. 16	30.42	Apr. 14	30.37	July 20	29.99	Oct. 19	28.25
Feb. 17	30.20	May 20	30.44	Aug. 23	28.91	Nov. 24	28.22
Mar. 15	30.50	June 23	30.32	Sept. 23	28.30	Dec. 21	28.33

43. M. Hagen. SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 20, T. 20 S., R. 11 W. Records available: 1942-48.

Jan. 16	19.79	Apr. 14	19.28	July 20	17.87	Oct. 19	18.21
Feb. 17	19.79	May 20	18.85	Aug. 23	17.61	Nov. 24	18.00
Mar. 15	19.38	June 23	19.02	Sept. 23	18.08	Dec. 21	18.13

100. Unruh. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 11, T. 20 S., R. 15 W. Records available: 1944-48.

Jan. 17	34.80	May 21	33.56	Aug. 23	28.86	Oct. 20	33.78
Feb. 17	34.81	June 24	33.36	Sept. 23	33.15	Dec. 22	33.97
Apr. 15	33.50	July 20	30.21				

101. D. Converse. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 17, T. 19 S., R. 15 W. Records available: 1944-48. Measurements discontinued after Nov. 25, 1948.

Jan. 17	24.78	Apr. 15	20.08	July 20	0.89	Oct. 20	17.09
Feb. 17	24.83	May 20	6.58	Aug. 23	10.62	Nov. 25	19.48
Mar. 16	23.59	June 24	2.42	Sept. 23	15.06		

103. F. Konareck. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 33, T. 17 S., R. 12 W. Records available: 1944-48.

Jan. 16	5.59	Apr. 14	2.84	July 20	2.21	Oct. 20	4.79
Feb. 17	5.70	May 20	4.30	Aug. 23	4.12	Nov. 25	4.85
Mar. 16	3.25	June 24	6.10	Sept. 23	4.62	Dec. 21	4.90

105. Lizzie Nagel. SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 28, T. 18 S., R. 11 W. Records available: 1944-48. Jan. 16, 31.54. Measurements discontinued after Jan. 16, 1948.

107. Carter Oil Co. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 10, T. 17 S., R. 11 W. Records available: 1944-48.

Jan. 16	100.48	Apr. 14	99.68	July 20	97.98	Oct. 20	98.62
Feb. 17	99.84	May 20	100.59	Aug. 23	98.05	Nov. 25	98.26
Mar. 16	99.61	June 24	99.55	Sept. 23	98.07	Dec. 21	98.73

109. J. C. Cook. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 28, T. 18 S., R. 15 W. Records available: 1944-48.

Jan. 17	13.90	Apr. 14	12.50	July 20	8.90	Oct. 20	12.62
Feb. 17	14.50	May 21	12.98	Aug. 23	10.77	Nov. 25	12.79
Mar. 16	13.10	June 24	13.38	Sept. 23	12.22	Dec. 22	12.93

110. Prudential Life Insurance Co. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 33, T. 17 S., R. 14 W. Records available: 1944-48.

Jan. 16	21.54	Apr. 14	20.87	July 20	21.46	Oct. 20	23.00
Feb. 17	21.49	May 20	20.64	Aug. 23	22.08	Nov. 25	22.56
Mar. 16	21.01	June 24	21.23	Sept. 23	22.59	Dec. 21	22.26

112. P. P. Kingston. $SE\frac{1}{4}SE\frac{1}{4}$ sec. 34, T. 16 S., R. 14 W. Records available: 1944-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 16	125.24	Apr. 14	124.96	July 20	126.15	Sept. 23	124.40
Feb. 17	124.39	May 20	125.57	Aug. 23	122.68	Oct. 20	123.65
Mar. 16	125.00	June 24	125.66				

131. F. W. Gagleman. SE. corner sec. 22, T. 19 S., R. 15 W. Records available: 1944-48.

Jan. 17	14.78	Apr. 15	13.25	July 20	13.65	Oct. 20	14.77
Feb. 17	14.35	May 20	13.81	Aug. 23	13.49	Nov. 25	14.39
Mar. 16	14.56	June 24	14.29	Sept. 23	14.81	Dec. 22	14.30

Bourbon County

1. City of Fort Scott. $NE\frac{1}{4}SE\frac{1}{4}SE\frac{1}{4}$ sec. 29, T. 25 S., R. 25 E. Records available: 1942-47. No measurements made in 1948.

2. City of Fort Scott. $SW\frac{1}{4}NW\frac{1}{4}$ sec. 30, T. 25 S., R. 25 E. Records available: 1942-47. No measurements made in 1948.

25-23-27bbb. Harold Comstock. $NW\frac{1}{4}NW\frac{1}{4}$ sec. 27, T. 25 S., R. 23 E. Unused dug domestic well, diameter 5 feet, depth 11 feet below land-surface datum. Measuring point, top of round hole in slab of rock, north side, 1.9 feet above land-surface datum. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level
May 6	6.13	Aug. 26	5.28	Nov. 26	5.52
July 6	5.66	Oct. 15	5.41		

25-24-13dda. John Ibson. $NE\frac{1}{4}SE\frac{1}{4}SE\frac{1}{4}$ sec. 13, T. 25 S., R. 24 E. Unused dug domestic well, diameter 6 feet, depth 23.2 feet below land-surface datum. Measuring point, top of concrete curb, north side, 1.7 feet above land-surface datum. Records available: 1948.

May 5	5.74	Aug. 26	6.33	Nov. 26	5.53
June 7	5.17	Oct. 15	7.51		

Brown County

1. City of Hiawatha. $NE\frac{1}{4}NE\frac{1}{4}$ sec. 31, T. 2 S., R. 17 E. Records available: 1945-47. No measurements made in 1948.

3. City of Hiawatha. $SE\frac{1}{4}SE\frac{1}{4}$ sec. 36, T. 2 S., R. 16 E. Records available: 1945-47. No measurements made in 1948.

4. City of Hiawatha. $NW\frac{1}{4}SE\frac{1}{4}$ sec. 29, T. 2 S., R. 17 E. Records available: 1945-47. No measurements made in 1948.

5. City of Hiawatha. $SE\frac{1}{4}SW\frac{1}{4}$ sec. 29, T. 2 S., R. 17 E. Records available: 1945-47. No measurements made in 1948.

6. City of Hiawatha. $NW\frac{1}{4}SW\frac{1}{4}$ sec. 29, T. 2 S., R. 17 E. Records available: 1945-47. No measurements made in 1948.

2-15-25dd. Henry Rieger. $SE\frac{1}{4}SE\frac{1}{4}$ sec. 25, T. 2 S., R. 15 W. Unused dug domestic well, diameter 3 feet, depth 13.8 feet below land-surface datum. Measuring point, top of 3- by 8-inch plank over well, 0.4 foot above land-surface datum. Records available: 1948.

May 27	9.27	Aug. 25	9.26	Nov. 27	9.92
July 3	9.67	Oct. 14	9.79		

4-17-17ada. H. C. Brown. NE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 17, T. 4 S., R. 17 W. Unused drilled domestic well, diameter 6 inches, depth 50.8 feet below land-surface datum. Measuring point, top of casing, south side, 0.1 foot above land-surface datum. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level
May 27	35.81	Aug. 25	36.21	Nov. 27	37.19
July 3	36.37	Oct. 14	35.90		

Cheyenne County

By D. W. Berry and Phyllis T. Mosley

An observation-well program was set up in cooperation with the Bureau of Reclamation, in Cheyenne County during the spring and summer of 1946 as part of the St. Francis Unit of the Missouri Basin irrigation projects. The observation-well program includes 22 domestic, stock, and irrigation wells situated in the valley and adjacent uplands of the South Fork of the Republican River. These wells tap either the alluvium of the valley or the Ogallala of the uplands.

Periodic measurements of the water levels in 19 of the wells were started in 1946, measurements on 1 well were started in June 1947, and observation of 2 wells was begun in 1948.

1-38-1cd. Paul O'Brien. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 1, T. 1 S., R. 38 W. Drilled irrigation well, diameter 18 inches, depth 42 feet below land-surface datum. Measuring point, hole in turbine base, 1.0 foot above land-surface datum. Records available: 1948.

Apr. 10	22.49	Aug. 3	23.02	Dec. 8	22.80
June 8	22.46	Oct. 5	23.09		

1-38-8dd. Owner unknown. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 8, T. 1 S., R. 38 W. Drilled irrigation well, diameter 18 inches, depth 34 feet below land-surface datum. Measuring point, hole inside of turbine base, 1.0 foot above land-surface datum. Records available: 1946-48.

Aug. 19, 1946	12.52	Sept. 7, 1947	13.32	June 8, 1948	12.08
Oct. 22	12.30	Dec. 5	12.53	Aug. 3	12.94
Dec. 13	11.81	Feb. 3, 1948	12.27	Oct. 5	13.27
Feb. 25, 1947	11.24	Apr. 10	12.02	Nov. 5	12.75
June 8	11.50				

1-38-10cc. School district. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 10, T. 1 S., R. 39 W. Bored observation well, diameter 5 inches, depth 36.5 feet below land-surface datum. Measuring point, top of cement platform 0.25 foot above land-surface datum. Records available: 1946-48.

June 14, 1946	21.62	June 8, 1947	20.16	Apr. 10, 1948	20.55
Aug. 17	21.47	July 29	20.10	June 8	20.45
Oct. 22	21.67	Sept. 7	20.86	Aug. 3	19.99
Dec. 13	21.34	Dec. 4	20.69	Oct. 5	20.72
Feb. 25, 1947	20.42	Feb. 3, 1948	20.73	Dec. 8	20.67

1-38-17cd. F. J. Ostick. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 17, T. 1 S., R. 38 W. Bored domestic well, diameter 5 inches, depth 22.2 feet below land-surface datum. Measuring point, top of cement platform, 0.33 foot above land-surface datum. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
June 13, 1946	11.74	June 8, 1947	11.32	Apr. 10, 1948	11.77
Aug. 17	12.42	July 29	11.62	June 8	11.62
Oct. 22	11.99	Sept. 7	12.47	Aug. 3	11.40
Dec. 13	11.67	Dec. 5	12.31	Oct. 5	12.57
Feb. 25, 1947	11.61	Feb. 3, 1948	11.96	Dec. 8	12.28

2-39-2cb. Owner unknown. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 2, T. 2 S., R. 39 W. Bored observation well, diameter 5 inches, depth 26.6 feet below land-surface datum. Measuring point, top of board platform, 0.75 foot above land-surface datum. Records available: 1946-48.

Mar. 28, 1946	19.03	June 8, 1947	16.14	Apr. 10, 1948	15.87
Aug. 17	16.93	July 29	14.59	June 8	15.96
Dec. 13	16.41	Sept. 7	16.04	Aug. 3	15.74
Feb. 25, 1947	16.34	Feb. 3, 1948	15.90	Oct. 5	15.32

2-39-10bb. Owner unknown. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 10, T. 2 S., R. 39 W. Drilled domestic well, diameter 5 inches, depth 39 feet below land-surface datum. Measuring point, edge of casing, 0.5 foot above land-surface datum. Records available: 1947-48.

June 8, 1947	25.75	Feb. 3, 1948	26.12	Aug. 3, 1948	27.10
July 29	25.27	Apr. 10	26.24	Oct. 5	26.39
Sept. 7	26.02	June 8	26.94	Dec. 8	26.19
Dec. 5	25.69				

2-39-17ba. Owner unknown. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 17, T. 2 S., R. 39 W. Dug stock well, diameter 24 inches, depth 13.5 feet below land-surface datum. Measuring point, top of board platform, 0.5 foot above land-surface datum. Records available: 1946-48.

Apr. 16, 1946	11.03	June 8, 1947	10.38	Dec. 5, 1947	12.27
Aug. 17	11.60	Sept. 7	12.56		

2-39-27bb. Owner unknown. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 27, T. 2 S., R. 39 W. Unused bored observation well, diameter 8 inches, depth 29.3 feet below land-surface datum. Measuring point, top of board platform, 1.33 feet above land-surface datum. Records available: 1946-48.

Mar. 27, 1946	19.50	June 8, 1947	17.67	Apr. 10, 1948	18.99
Aug. 17	18.63	July 29	17.08	June 8	19.05
Oct. 22	17.95	Sept. 7	18.06	Aug. 3	19.14
Dec. 13	17.99	Dec. 5	17.94	Oct. 5	18.22
Feb. 25, 1947	18.12	Feb. 3, 1948	19.01	Dec. 8	18.19

2-40-25db. Owner unknown. NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 25, T. 2 S., R. 40 W. Unused drilled domestic well, diameter 4 inches, depth 23 feet below land-surface datum. Measuring point, edge of 4-inch casing, at land-surface datum. Records available: 1948. June 8, 15.77; Oct. 5, 16.45; Dec. 8, 15.69.

2-40-26cc. Owner unknown. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 26, T. 2 S., R. 40 W. Drilled domestic and stock well, diameter 5 inches, depth 88.6 feet below land-surface datum. Measuring point, top of board platform, 0.33 foot above land-surface datum. Records available: 1946-47. Mar. 29, 1946, 79.07; Dec. 13, 1946, 79.01; Feb. 25, 1947, 78.67; Sept. 7, 1947, 78.93. Measurements discontinued after Sept. 7, 1947.

3-39-6aa. Owner unknown. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 6, T. 3 S., R. 39 W. Bored domestic well, diameter 5 inches, depth 14.8 feet below land-surface datum. Measuring point, top of cement slab, 0.66 foot above land-surface datum. Records available: 1946-48.

3-39-6aa--Continued.

Date	Water level	Date	Water level	Date	Water level
Mar. 26, 1946	6.48	June 8, 1947	5.49	Apr. 10, 1948	6.46
Aug. 17	7.86	July 29	6.94	June 8	7.05
Oct. 22	7.23	Sept. 7	8.64	Aug. 3	6.85
Dec. 13	5.89	Dec. 5	8.73	Oct. 4	8.38
Feb. 25, 1947	6.19	Feb. 3, 1948	7.54		

3-40-9ba. Owner unknown. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 9, T. 3 S., R. 40 W. Bored stock well, diameter 5 inches, depth 16.2 feet below land-surface datum. Measuring point is at land-surface datum. Records available: 1946-48.

Mar. 19, 1946	12.30	June 8, 1947	12.21	Apr. 10, 1948	12.36
Aug. 16	12.43	July 29	12.59	June 8	12.40
Oct. 22	12.88	Sept. 7	13.10	Aug. 3	12.62
Dec. 13	12.45	Dec. 5	13.02	Oct. 5	12.80
Feb. 25, 1947	11.69	Feb. 3, 1948	12.32		

3-40-16da. Owner unknown. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 16, T. 3 S., R. 40 W. Bored observation well, diameter 6 inches, depth 14.34 feet below land-surface datum. Measuring point, top of cement slab, 1.0 foot above land-surface datum. Records available: 1946-48.

Mar. 13, 1946	9.74	June 8, 1947	9.70	Apr. 10, 1948	10.40
Aug. 16	10.81	July 29	10.02	June 8	10.28
Oct. 22	10.23	Sept. 7	11.90	Aug. 3	10.30
Dec. 13	10.12	Dec. 6	11.52	Oct. 5	11.49
Feb. 25, 1947	10.09	Feb. 3, 1948	10.67	Dec. 8	11.11

3-40-22ab. Owner unknown. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 22, T. 3 S., R. 40 W. Bored observation well, diameter 5 inches, depth 19.2 feet below land-surface datum. Measuring point, top of cement slab, 0.25 foot above land-surface datum. Records available: 1946-48.

Mar. 9, 1946	15.18	June 8, 1947	11.06	Apr. 10, 1948	14.72
Aug. 16	15.08	July 29	10.02	June 8	14.35
Oct. 22	13.68	Sept. 7	13.37	Aug. 3	12.60
Dec. 13	11.95	Dec. 5	12.61	Oct. 5	14.55
Feb. 25, 1947	12.47	Feb. 3, 1948	13.94	Dec. 8	14.06

3-40-28bd. Owner unknown. SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 28, T. 3 S., R. 40 W. Bored observation well, diameter 5 inches, depth 25.5 feet below land-surface datum. Measuring point is at land-surface datum. Records available: 1946-48.

Mar. 20, 1946	10.02	June 8, 1947	11.23	Apr. 10, 1948	11.59
Aug. 16	12.75	July 29	10.90	June 8	12.10
Oct. 22	11.79	Sept. 9	12.53	Aug. 3	12.03
Dec. 13	11.54	Dec. 5	11.91	Oct. 5	12.65
Feb. 25, 1947	11.33	Feb. 3, 1948	11.86	Dec. 8	12.13

3-40-30dc. Owner unknown. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 30, T. 3 S., R. 40 E. Bored stock well, diameter 8 inches, depth 19.5 feet below land-surface datum. Measuring point, top of board platform, 0.16 foot above land-surface datum. Records available: 1946-47. Measurements discontinued after June 8, 1947. Mar. 1, 1946, 11.81; Oct. 22, 1946, 12.79; Feb. 25, 1947, 12.20; June 8, 1947, 12.23.

3-40-33dd. Owner unknown. Sk $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 33, T. 3 S., R. 40 W. Drilled observation well, diameter 6 inches, depth 27.4 feet below land-surface datum. Measuring point, top of cement slab, at land-surface datum. Records available: 1946-48.

Mar. 4, 1946	14.50	June 8, 1947	14.08	Apr. 10, 1948	13.71
Aug. 16	14.29	July 29	11.90	June 8	13.75
Oct. 22	13.50	Sept. 7	13.50	Aug. 3	12.88
Dec. 13	13.68	Dec. 6	12.28	Oct. 5	13.45
Feb. 25, 1947	14.10	Feb. 3, 1948	13.75	Dec. 8	12.89

3-41-13cc. Owner unknown. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 13, T. 3 S., R. 41 W. Unused bored domestic well, diameter 5 inches, depth 15.1 feet below land-surface datum. Measuring point, top of casing, at land-surface datum. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
June 12, 1946	14.70	June 8, 1947	15.31	Apr. 10, 1948	13.59
Aug. 16	15.78	July 29	10.78	June 8	13.50
Oct. 22	15.51	Sept. 7	11.14	Aug. 3	13.37
Dec. 13	15.32	Feb. 3, 1948	13.84	Oct. 5	12.00
Feb. 25, 1947	15.28				

4-41-2aa. Owner unknown. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 2, T. 4 S., R. 41 W. Bored domestic and stock well, diameter 6 inches, depth 29.9 feet below land-surface datum. Measuring point, top of cement slab, 0.66 foot above land-surface datum. Records available: 1946-48.

Mar. 1, 1946	23.67	June 8, 1947	24.81	Apr. 10, 1948	24.79
Aug. 16	25.57	July 29	24.97	June 8	24.73
Oct. 22	25.02	Sept. 7	26.20	Aug. 3	25.25
Dec. 13	24.89	Feb. 3, 1948	25.62	Oct. 4	25.98
Feb. 25, 1947	24.76				

4-42-24ca. Jake Waltz. NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 24, T. 4 S., R. 42 W. Drilled irrigation well, diameter 24 inches, depth 72 feet below land-surface datum. Measuring point, hole in turbine base, north side, 0.8 foot below land-surface datum. Records available: 1946-48.

Aug. 17, 1946	25.78	July 29, 1947	25.50	June 8, 1948	25.20
Oct. 22	25.50	Sept. 7	25.89	Aug. 3	25.38
Dec. 13	25.09	Dec. 5	24.97	Oct. 4	25.83
Feb. 25, 1947	24.85	Feb. 3, 1948	25.14	Dec. 8	25.17
June 8	24.90	Apr. 10	24.85		

4-42-34db. Owner unknown. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 34 T. 4 S., R. 42 W. Bored observation well, diameter 5 inches, depth 14.8 feet below land-surface datum. Measuring point, top of cement slab, 0.08 foot above land-surface datum. Records available: 1946-48.

Mar. 22, 1946	9.42	Sept. 7, 1947	10.31	June 8, 1948	9.43
Feb. 25, 1947	8.92	Dec. 5	9.43	Aug. 3	9.60
June 8	9.57	Feb. 3, 1948	9.86	Oct. 4	10.04
July 29	9.25	Apr. 10	9.27	Dec. 8	9.73

5-42-4aa. Owner unknown. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 4, T. 5 S., R. 42 W. Bored stock well, diameter 6 inches, depth 37.2 feet below land-surface datum. Measuring point, top of cement slab, 1.0 foot above land-surface datum. Records available: 1946-48.

Mar. 12, 1946	22.78	Feb. 25, 1947	22.66	Feb. 3, 1948	21.98
Aug. 16	23.11	July 29	23.10	June 8	21.83
Oct. 22	22.81	Dec. 5	21.83	Dec. 8	22.68

Clark County

Highest and lowest water levels for the period of record,
in 2 wells in Clark County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
5	8	25.68	Nov. 26, 1942	29.36	June 5, 1946
12	8	67.02	Nov. 26, 1942	74.05	Dec. 16, 1947

Difference between highest and lowest recorder water levels and net change in water level, in 1948 and for period of record, in 2 wells in Clark County

Well	Difference between highest and lowest levels	Net rise in 1948	Net rise (+) or net decline (-) for period of record
5	3.68	0.83	+1.07
12	7.03	2.46	-3.39

5. Winnie Floyd. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 12, T. 33 S., R. 25 W. Records available: 1940-48. Mar. 20, 28.74; June 21, 28.40; Sept. 24, 27.66.

7. M. C. Harper. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 32, T. 33 S., R. 21 W. Records available: 1940-47. Measurements discontinued after Sept. 17, 1947.

12. Ralph Gardner. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 11, T. 33 S., R. 24 W. Records available: 1940-48. Sept. 24, 69.73; Dec. 30, 71.59.

Coffey County

19-17-9ab. Atchison, Topeka & Santa Fe Railway. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 9, T. 19 S., R. 17 E. Unused dug industrial well, diameter 6 feet, depth 19.1 feet below land-surface datum. Measuring point, top of boards over well, 0.5 foot above land-surface datum. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level
May 7	3.90	Aug. 26	4.11	Nov. 26	6.01
July 6	4.64	Oct. 15	5.98		

20-15-34dcb. Owner unknown. NW $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 34, T. 20 S., R. 15 E. Unused dug domestic well, diameter 2.5 feet, depth 39.5 feet below land-surface datum. Measuring point, top of concrete, south side, 0.6 foot above land-surface datum. Records available: 1948.

May 7	5.30	Aug. 26	4.71	Nov. 26	8.35
July 6	4.63	Oct. 15	6.03		

22-15-34da. B. D. Harreld. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 34, T. 22 S., R. 15 E. Unused dug domestic and stock well, diameter 3 feet, depth 17.9 feet below land-surface datum. Measuring point, top of plank over well, at land-surface datum. Records available: 1948. May 6, 8.38; July 6, 13.21; Aug. 26, 12.53; Oct. 15, 16.90.

Comanche County

Highest and lowest water levels for the period of record, in 2 wells in Comanche County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
1	8	37.72	June 21, 1948	40.52	June 20, 1941
9	8	85.44	Sept. 17, 1947	98.30	Dec. 20, 1946

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record, in 2 wells in Comanche County

Well	Difference between highest and lowest levels	Net rise in 1948	Net rise (+) or net decline (-) for period of record
1	2.80	0.92	+2.10
9	12.86	6.10	-3.26

1. A. A. Carpenter. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 8, T. 33 S., R. 20 W. Records available: 1940-48. Mar. 20, 38.50; June 21, 37.72; Sept. 24, 37.76; Dec. 30, 38.07.

7. W. D. Aitken. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 35, T. 34 S., R. 17 W. Records available: 1940-46. Measurements discontinued after June 5, 1946.

9. H. R. Burnette. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 13, T. 32 S., R. 17 W. Records available: 1940-48. Mar. 20, 88.11; Sept. 24, 91.38; Dec. 29, 92.20.

Cowley County

Highest and lowest water levels for the period of record,
in 4 wells in Cowley County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
1	5.5	11.79	Jan. 2, 1945	27.31	June 1, 1946
2	5	16.19	July 5, 1947	23.04	Jan. 10, 1948
40	4.5	10.82	May 16, 1945	16.06	Feb. 8, 1947
42	4.5	25.23	June 28, 1947	28.98	Aug. 30, 1946

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record, in 4 wells in Cowley County

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise (+) or net decline (-) for period of record
1	15.32	+0.59	-0.37
2	6.85	+3.97	-2.48
40	5.24	+1.66	-1.87
42	3.75	-.16	+2.03

1. Winfield well 2 east. SW. corner SE $\frac{1}{4}$ sec. 18, T. 32 S., R. 3 E. Records available: 1944-48. Jan. 10, 15.56; Mar. 31, 15.48; July 3, 15.02; Sept. 28, 14.89.

2. United States Army and Fairchild Aircraft Co. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 19, T. 33 S., R. 4 E. (Strother Field well 5). Records available: 1946-48. Jan. 10, 23.04; Mar. 31, 17.82; July 3, 17.04; Sept. 28, 19.00.

40. City of Winfield. NW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 19 T. 32 S., R. 3 E. Records available: 1944-48. Jan. 10, 14.46; Mar. 31, 14.33; July 3, 14.01; Sept. 28, 12.69.

41. City of Winfield. NE $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 19, T. 32 S., R. 3 E. Records available: 1944-46. Measurements discontinued after Feb. 21, 1946.

42. Geol. Survey, U. S. Dept. of Interior. SW. corner sec. 21, T. 32 S., R. 3 E. Records available: 1944-48. Jan. 10, 26.38; Mar. 31, 26.29; July 3, 27.21; Sept. 28, 26.44.

Crawford County

Highest and lowest water levels for the period of record,
in 1 well in Crawford County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
24	7	262.10	Sept. 10, 1942	273.66	June 10, 1948

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record, in 1 well in Crawford County

Well	Difference between highest and lowest levels	Net decline in 1948	Net decline for period of record
24	11.56	11.56	9.65

1. John P. Biddle. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 5, T. 31 S., R. 25 E. Records available: 1942-47. No measurements made in 1948.

24. City of Girard. SW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 24, T. 29 S., R. 23 E. Records available: 1942-48. June 10, 273.66.

88. Kansas City Railway Co. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 20, T. 30 S., R. 25 E. Records available: 1944-47. No measurements made in 1948.

Douglas County

13-20-11bab. Armstrong Martin. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 11, T. 13 S., R. 20 E. Drilled stock well, diameter 8 inches, depth 37.8 feet below land-surface datum. Measuring point, top of casing, north side, 0.9 foot above land-surface datum. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level
May 4	18.90	Aug. 26	18.23	Nov. 26	19.88
July 6	a 18.69	Oct. 15	19.31		

a Nearby well pumping.

14-19-23ccc. C. A. Puckett. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 23, T. 14 S., R. 19 E. Unused dug domestic well, diameter 3 feet, depth 12.7 feet below land-surface datum. Measuring point, top of lower inner edge of sewer pipe, 0.3 foot above land-surface datum. Records available: 1948.

May 7	3.67	Aug. 26	4.00	Nov. 26	3.74
July 6	3.67	Oct. 15	5.26		

Edwards County

Highest and lowest water levels for the period of record, in 3 wells in Edwards County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
1	4.5	5.03	Aug. 23, 1948	7.97	Sept. 13, 1946
2	4.5	+1.10	Aug. 23, 1948	3.50	Feb. 14, 1945
10	4.5	63.42	July 2, 1947	68.20	Mar. 13, 1946

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record, in 3 wells in Edwards County

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise for period of record
1	2.94	+1.21	0.14
2	4.60	-.25	3.41
10	4.78	+1.10	.75

1. 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. Records available: 1944-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 17	7.19	Apr. 15	6.04	July 19	5.91	Oct. 19	6.35
Feb. 18	6.69	May 20	6.77	Aug. 23	5.03	Nov. 24	6.46
Mar. 16	5.76	June 24	6.41	Sept. 22	5.97	Dec. 21	6.14

2. Owner unknown. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 7, T. 24 S., R. 18 W. Records available: 1944-48.

Jan. 17	0.20	Apr. 15	1.40	Aug. 23	+1.10	Nov. 24	+0.97
Feb. 18	2.06	May 20	1.30	Sept. 22	+.59	Dec. 21	+.24
Mar. 16	1.43	July 19	+.29	Oct. 19	+.45		

10. Owner unknown. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 22, T. 23 S., R. 19 W. Records available: 1944-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 20	64.27	Apr. 15	64.12	July 19	63.88	Oct. 19	64.19
Feb. 18	64.18	May 20	64.20	Aug. 23	64.18	Nov. 24	64.18
Mar. 16	64.24	June 24	63.89	Sept. 22	64.07		

Ellis County

Highest and lowest water levels for the period of record,
in 2 wells in Ellis County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
215	7	13.14	July 11, 1945	17.70	Oct. 15, 1947
218	7	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 1948 and for period of record, in 2 wells in Ellis County

Well	Difference between highest and lowest levels	Net rise in 1948	Net rise (+) or net decline (-) for period of record
215	4.56	1.41	-1.97
218	41.67	1.53	+17.94

1. City of Hays. SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 4, T. 14 S., R. 18 W. Drilled and driven observation well, diameter 1.5 inches, depth 34 feet below land-surface datum. Measuring point, top of pipe, 0.7 foot above land-surface datum. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Apr. 27, 1946	25.40	Jan. 20, 1947	24.30	Jan. 21, 1948	23.90
May 19	23.88	Feb. 18	24.47	Feb. 20	23.47
June 18	25.63	Mar. 19	24.80	Mar. 20	19.30
July 17	26.22	Apr. 22	23.97	Apr. 19	23.88
Aug. 20	26.30	July 20	23.60	June 21	25.22
Sept. 20	25.63	Aug. 25	24.20	Sept. 20	24.72
Oct. 19	25.30	Sept. 20	24.30	Oct. 20	23.93
Nov. 18	24.30	Dec. 21	23.90	Nov. 21	23.63
Dec. 18	24.63				

2. City of Hays. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 3, T. 14 S., R. 18 W. Drilled and driven observation well, diameter 1.25 inches, depth 35.3 feet below land-surface datum. Measuring point, top of pipe, 0.7 foot above land-surface datum. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Apr. 25, 1946	26.35	Jan. 20, 1947	34.55	Jan. 21, 1948	34.30
May 19	34.63	Feb. 18	34.63	Feb. 20	34.05
June 18	33.80	Mar. 19	34.63	Mar. 20	34.05
July 17	34.80	Apr. 21	34.38	Apr. 21	33.97
Aug. 20	35.30	July 29	34.40	June 21	35.80
Sept. 20	35.30	Aug. 25	35.20	Sept. 20	36.72
Oct. 19	35.75	Sept. 20	34.30	Oct. 21	35.47
Nov. 19	34.90	Dec. 21	34.40	Nov. 15	35.30
Dec. 18	34.30				

3. City of Hays. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 3, T. 14 S., R. 18 W. Drilled and driven observation well, diameter 1.25 inches, depth 41.4 feet below land-surface datum. Records available: 1946-48.

3--Continued.

Date	Water level	Date	Water level	Date	Water level
Apr. 26, 1946	34.31	Jan. 20, 1947	30.65	Jan. 21, 1948	31.00
May 19	29.82	Feb. 18	30.32	Feb. 20	30.15
June 18	31.40	Mar. 19	30.23	Mar. 20	30.30
July 17	32.23	Apr. 22	31.23	Apr. 19	29.73
Aug. 20	32.82	July 20	29.40	June 21	31.98
Sept. 20	32.40	Aug. 25	30.70	Sept. 19	32.15
Oct. 16	32.07	Sept. 22	31.00	Oct. 20	31.07
Nov. 19	31.73	Dec. 20	31.10	Nov. 20	31.32
Dec. 18	31.53				

4. City of Hays. SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 33, T. 13 S., R. 18 W. Drilled and driven observation well, diameter 1.5 inches, depth 67 feet below land-surface datum. Measuring point, top of pipe, 0.8 foot above land-surface datum. Records available: 1946-48.

Apr. 27, 1946	54.57	Dec. 21, 1946	57.33	Sept. 22, 1947	54.80
May 19	57.37	Jan. 20, 1947	57.23	Dec. 22	54.50
June 18	58.95	Feb. 18	56.70	Jan. 22, 1948	54.60
July 17	59.20	Mar. 19	56.87	Feb. 17	55.03
Aug. 20	60.78	Apr. 22	54.85	Mar. 20	55.45
Sept. 20	58.53	July 20	54.20	Apr. 19	55.12
Oct. 19	57.87	Aug. 25	55.20	June 21	56.95
Nov. 18	57.86				

215. A. H. Romine. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 7, T. 11 S., R. 16 W. Records available: 1941-48. Jan. 15, 15.13; Apr. 14, 13.29; July 20, 14.62; Oct. 20, 16.29.

218. W. W. Bemis. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 16, T. 12 S., R. 17 W. Records available: 1941-48. Jan. 15, 47.62; Apr. 14, 17.76; July 20, 21.67; Oct. 20, 36.00.

Ellis County

Smoky Hill Valley

Highest and lowest water levels for the period of record
in 14 wells in Ellis County, Smoky Hill Valley

Well	Length of record (years)	Highest level	Date	Lowest level	Date
14-16-17cb	2	18.05	July 23, 1947	19.62	Oct. 9, 1948
14-16-36bb	2	19.69	July 23, 1947	21.74	May 10, 1947
14-18-12bb	2	23.96	Dec. 1, 1948	27.15	July 30, 1946
14-18-26aa	2	18.03	July 23, 1947	20.85	Jan. 8, 1948
14-20-35dd	2	14.93	July 23, 1947	16.29	Aug. 8, 1946
15-16-6dd	2	22.17	May 10, 1947	24.33	Aug. 9, 1946
15-16-13bb	2	13.87	June 4, 1948	14.85	July 17, 1946
15-17-19ab	2	139.67	Apr. 8, 1948	140.50	July 22, 1946
15-17-25cb	2	11.52	July 23, 1947	12.10	July 12, 1946
15-18-1bb	2	18.12	Oct. 9, 1948	28.22	July 24, 1946
15-18-16bb	2	5.62	July 23, 1947	9.55	July 12, 1946
15-19-6aa	2	52.06	Dec. 1, 1948	52.59	Aug. 8, 1946
15-19-13ab	2	6.08	July 23, 1947	9.30	Oct. 8, 1947
15-19-35aa	2	59.45	Jan. 8, 1948	70.70	Apr. 8, 1948

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record, in 14 wells in Ellis County, Smoky Hill Valley

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise (+) or net decline (-) for period of record
14-16-17cb	1.57	-0.23	-0.02
14-16-36bb	2.05	-.35	-.15
14-18-12bb	3.19	+1.04	+3.19
14-18-26aa	2.82	+3.35	+5.1
14-20-35dd	1.36	-.05	+.63
15-16-6dd	2.16	+.45	+1.72
15-16-13bb	.98	+.18	+.63
15-17-19ab	.83	-.08	+.46
15-17-25cb	.58	-.31	+.03
15-18-1bb	10.10	+.98	+8.92
15-18-16bb	3.93	+.47	+.85
15-19-6aa	.53	+.12	+.53
15-19-13ab	3.22	+.25	+.02
15-19-35aa	11.25	-1.35	-.86

One measurement was made in each of the observation wells in Ellis County, Smoky Hill Valley, in 1946. These measurements for 1946 were inadvertently omitted from the 1946 water-level report but are included in this report.

14-16-17cb. Owner unknown. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 17, T. 14 S., R. 16 W. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Aug. 2, 1946	19.60	June 4, 1948	19.18	Oct. 9, 1948	19.62
Apr. 8, 1948	18.87	Aug. 5	18.59		

14-16-36bb. Tony Wagner. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 36, T. 14 S., R. 16 W. Records available: 1946-48.

July 17, 1946	19.77	Apr. 8, 1948	19.82	Aug. 5, 1948	19.83
Jan. 8, 1948	19.78	June 4	20.16	Oct. 9	19.92

14-18-12bb. J. Brull. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 12, T. 14 S., R. 18 W. Records available: 1946-48.

July 30, 1946	27.15	June 4, 1948	25.05	Oct. 9, 1948	25.65
Jan. 8, 1948	24.83	Aug. 5	24.60	Dec. 1	23.96
Apr. 8	24.72				

14-18-26aa. F. J. Befort. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 26, T. 14 S., R. 18 W. Records available: 1946-48.

July 22, 1946	20.76	June 4, 1948	19.95	Oct. 9, 1948	20.45
Jan. 8, 1948	20.85	Aug. 5	19.38	Dec. 1	20.25
Apr. 8	20.18				

14-20-35dd. F. A. Pfannestiel. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 35, T. 14 S., R. 20 W. Records available: 1946-48.

Aug. 8, 1946	16.29	Apr. 8, 1948	15.71	Aug. 5, 1948	15.42
Jan. 8, 1948	15.58	June 4	15.79	Oct. 9	15.66

15-16-6dd. Ted Thalen. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 6, T. 15 S., R. 16 W. Records available: 1946-48.

15-16-6dd--Continued.

Date	Water level	Date	Water level	Date	Water level
Aug. 9, 1946	24.33	June 4, 1948	23.17	Oct. 9, 1948	23.79
Jan. 8, 1948	22.80	Aug. 5	22.85	Dec. 1	22.61
Apr. 8	22.58				

15-16-13bb. Owner unknown. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 13, T. 15 S., R. 16 W. Records available: 1946-48.

July 17, 1946	14.85	Apr. 8, 1948	14.14	Aug. 5, 1948	13.94
Jan. 8, 1948	14.42	June 4	13.87	Oct. 9	14.22

15-17-19ab. Likier. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 19, T. 15 S., R. 17 W. Records available: 1946-48.

July 22, 1946	140.50	June 4, 1948	139.90	Oct. 9, 1948	140.11
Jan. 8, 1948	139.70	Aug. 5	139.83	Dec. 1	140.04
Apr. 8	139.67				

15-17-25cb. George Meder. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 25, T. 15 S., R. 17 W. Records available: 1946-48.

July 12, 1946	12.10	June 4, 1948	11.67	Oct. 9, 1948	11.84
Jan. 8, 1948	11.80	Aug. 5	11.72	Dec. 1	12.07
Apr. 8	11.72				

15-18-1bb. Mat Rohr. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 1, T. 15 S., R. 18 W. Records available: 1946-48.

July 24, 1946	28.22	June 4, 1948	18.60	Oct. 9, 1948	18.12
Jan. 8, 1948	19.70	Aug. 5	18.40	Dec. 1	19.30
Apr. 8	19.38				

15-18-16bb. T. W. Wolf. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 16, T. 15 S., R. 18 W. Records available: 1946-48.

July 12, 1946	9.55	June 4, 1948	7.89	Oct. 9, 1948	8.58
Jan. 8, 1948	9.23	Aug. 5	6.65	Dec. 1	8.70
Apr. 8	6.72				

15-19-6aa. Aug. Leiker. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 6, T. 15 S., R. 19 W. Records available: 1946-48.

Aug. 8, 1946	52.59	June 4, 1948	52.19	Oct. 9, 1948	52.35
Jan. 8, 1948	52.20	Aug. 5	52.13	Dec. 1	52.06
Apr. 8	52.23				

15-19-13ab. Pete Wolfe. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 13, T. 15 S., R. 19 W. Records available: 1946-48.

July 13, 1946	9.07	June 4, 1948	7.30	Oct. 9, 1948	9.05
Apr. 8, 1948	6.19	Aug. 5	5.75		

15-19-35aa. J. Zimmerman. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 35, T. 15 S., R. 19 W. Records available: 1946-48.

July 16, 1946	60.16	June 4, 1948	61.04	Oct. 9, 1948	64.25
Jan. 8, 1948	59.45	Aug. 5	61.90	Dec. 1	61.02
Apr. 8	70.70				

Finney County

Highest and lowest water levels for the period of record
in 11 wells in Finney County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
1	12.5	5.00	June 1, 1947	11.46	Mar. 8, 1941
2	9	105.33	June 25, 1944	109.92	Oct. 25, 1943
5	9	19.10	Dec. 15, 1948	22.54	Jan. 28, 1940
6	9	15.25	June 21, 1940	20.82	June 22, 1946
8	9	73.45	Nov. 16, 1948	75.25	June 21, 1940
13	9	.76	May 5, 1942	4.63	Sept. 23, 1939
15	9	8.31	Apr. 25, 1947	14.40	Sept. 20, 1940
23	9	40.73	July 31, 1947	45.30	Feb. 17, 1940
26	9	67.22	Apr. 13, 1948	71.60	Apr. 24, 1941
1002	6	111.51	May 25, 1945	119.65	Dec. 18, 1948
1005	4	a 107.38	Jan. 17, 1948	125.08	Dec. 13, 1948

a Pumping recently.

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record in 11 wells in Finney County

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise (+) or net decline (-) for period of record
1	6.46	+0.08	+2.89
2	4.49	-1.19	+1.77
5	3.44	+3.2	+3.35
6	5.57	+6.66	-1.90
8	1.80	+3.1	+1.59
13	3.87	+3.8	+1.77
15	6.09	+1.24	+4.67
23	4.57	-3.4	+3.62
26	4.38	-4.0	+3.57
1002	8.14	-7.12	-6.65
1005	17.70	(a)	-10.04

a No measurements made in 1947.

1. Mrs. A. M. Reid. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 9, T. 24 S., R. 33 W. Records available: 1939-48.

Lowest daily water level

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Nov.	Dec.
1	6.68	6.09	6.11	6.57	6.46	6.41	6.50	6.61	6.73
2	6.67	6.07	6.15	6.57	....	6.41	6.49	6.62	6.75
3	6.67	6.06	6.18	6.55	....	6.43	6.44	6.62	6.73
4	6.68	6.06	6.19	6.55	6.42	6.43	6.39	6.61	6.72
5	6.67	6.07	6.21	6.55	6.41	6.42	6.36	6.64	6.74
6	6.65	6.06	6.23	6.55	6.42	6.41	6.36	6.66	6.74
7	6.65	6.09	6.26	6.55	6.42	6.41	6.37	6.65	6.72
8	6.64	6.11	6.29	6.55	6.42	6.41	6.38	6.66	6.74
9	6.62	6.08	6.32	6.56	6.43	6.40	6.39	6.68	6.74
10	6.62	6.04	6.35	6.56	6.44	6.38	6.39	6.68	6.71
11	6.62	6.05	6.37	6.55	6.45	6.36	6.40	6.68	6.72
12	6.61	6.08	6.26	6.50	6.46	6.36	6.42	6.69	6.72
13	6.60	6.10	6.01	6.51	6.47	6.36	6.43	6.69	6.72
14	6.58	6.08	6.01	6.55	6.49	6.36	6.42	6.70	6.73
15	6.56	5.89	6.11	6.56	6.50	6.36	6.41	6.69	6.74
16	6.54	5.70	6.19	6.56	6.50	6.36	6.41	6.71	6.73
17	6.49	5.67	6.24	6.56	6.49	6.36	6.43	6.68	6.73
18	6.40	5.70	6.29	6.53	6.47	6.36	6.45	6.69	6.73
19	6.32	5.76	6.33	6.51	6.46	6.37	6.47	6.71	6.73
20	6.25	5.80	6.37	6.51	6.45	6.40	6.50	6.72	....
21	6.21	5.81	6.40	....	6.45	6.43	6.51	6.75	....
22	6.67	6.18	5.83	6.42	6.54	6.46	6.46	6.53	6.74	....
23	6.68	6.15	5.86	6.44	6.57	6.46	6.49	6.55	6.73	....
24	6.71	6.13	5.90	6.46	6.58	6.46	6.51	6.58	6.73	....

1--Continued.

Lowest daily water level

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Nov.	Dec.
25	6.71	6.09	5.95	6.47	6.60	6.47	6.54	6.60	6.74	....
26	6.69	6.10	5.98	6.48	6.60	6.48	6.55	6.62	6.74	....
27	6.68	6.10	6.03	6.50	6.61	6.48	6.54	6.63	6.77	6.74
28	6.70	6.07	6.05	6.52	6.54	6.46	6.46	....	6.77	6.73
29	6.69	6.06	6.06	6.53	6.51	6.40	6.48	....	6.76	6.71
30		6.06	6.08	6.55	6.48	6.39	6.50	....	6.76	6.71
31		6.08		6.56		6.40	6.51			6.76

2. Maggie B. Smith. NE corner NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 30, T. 26 S., R. 32 W. Records available: 1939-48. Feb. 19, 107.39.

5. E. Alberta Reeves. SE $\frac{1}{4}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 19, T. 21 S., R. 32 W. Records available: 1939-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	19.96	Apr. 12	20.10	July 13	19.87	Oct. 13	19.15
Feb. 22	19.94	May 19	19.98	Aug. 16	19.35	Nov. 10	19.65
Mar. 22	19.98	June 15	19.87	Sept. 20	19.26	Dec. 15	19.10

6. T. E. Meakel. NW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 36, T. 21 S., R. 29 W. Records available: 1939-48.

Date	Water level	Date	Water level	Date	Water level
Mar. 23	18.22	Sept. 23	18.08	Nov. 25	18.19
Aug. 24	17.78	Oct. 10	18.23	Dec. 21	18.04

7. Marion Russell. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 2, T. 26 S., R. 33 W. Records available: 1939-47. Measurements discontinued after Aug. 28, 1947.

8. O. G. Reeve. SW $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 13, T. 25 S., R. 33 W. Records available: 1939-48. Feb. 19, 73.94; May 26, 73.84; Aug. 17, 73.81; Nov. 16, 73.45.

13. Edwin Wehrley. NE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 13, T. 25 S., R. 31 W. Records available: 1939-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 17	3.09	Apr. 12	2.79	Aug. 23	3.08	Oct. 19	3.17
Feb. 18	2.95	May 20	3.60	Sept. 23	2.12	Dec. 18	2.86
Mar. 17	2.22						

15. Floyd A. Edwards. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 2, T. 24 S., R. 33 W. Records available: 1939-48. Jan. 25, 9.74; Feb. 25, 9.64; Mar. 25, 9.19. Measurements discontinued after Mar. 25, 1948.

23. J. E. Ely. SE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 4, T. 23 S., R. 32 W. Records available: 1939-48. Apr. 13, 41.63; July 13, 41.75; Oct. 13, 41.57.

26. Garden City Experiment Station. SW $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 3, T. 24 S., R. 32 W. Records available: 1939-48. Jan. 14, 68.34; Apr. 13, 67.22; July 22, 68.47; Oct. 27, 68.78.

1002. United States Army. SW $\frac{1}{4}$ sec. 27, T. 24 S., R. 31 W. Records available: 1942-48.

Jan. 17	113.80	Apr. 16	113.38	Aug. 23	113.30	Nov. 24	114.41
Feb. 18	113.39	June 21	117.98	Sept. 22	116.95	Dec. 18	119.65
Mar. 17	112.70	July 19	112.66	Oct. 19	112.73		

1005. United States Army. SW $\frac{1}{4}$ sec. 27, T. 24 S., R. 31 W. Records available: 1942-45, 1948. Measurements resumed Jan. 17, 1948.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 17	107.38	Apr. 16	114.31	July 19	122.53	Oct. 19	114.73
Feb. 18	118.80	May 20	119.98	Aug. 23	115.77	Nov. 24	116.70
Mar. 17	114.28	June 21	121.15	Sept. 22	115.78	Dec. 18	125.08

a Pumping recently.

Ford County

Highest and lowest water levels for the period of record in 13 wells in Ford County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
8	10	0.86	May 13, 1942	8.17	Nov. 7, 1939
11	10	7.69	June 3, 1942	12.31	Jan. 24, 1940
38	10	26.73	Jan. 9, 1946	42.08	May 16, 1940
41	10	44.10	July 7, 1945	46.53	July 1, 1939
57	10	4.74	May 15, 1942	13.88	Oct. 26, 1947
59	10	14.12	July 17, 1947	26.88	Aug. 9, 1946
65	10	14.61	May 13, 1942	17.81	Sept. 13, 1946
79C	10	13.25	July 2, 1942	20.19	Sept. 13, 1946
96	10	6.32	Apr. 19, 1945	10.22	Sept. 5, 1939
237	10	83.72	May 25, 1943	86.42	Nov. 8, 1939
1002	6	101.94	Dec. 10, 1947	1184.09	Nov. 26, 1942
1003	6	94.35	July 4, 1944	109.52	Aug. 19, 1943
1004	6	96.68	May 20, 1948	120.81	May 25, 1943

a Pumping.

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record in 13 wells in Ford County

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise (+) or net decline (-) for period of record
8	7.31	-0.19	-0.20
11	4.62	+1.10	+2.05
38	15.35	+1.48	+6.38
41	2.43	-1.12	+1.23
57	9.14	-1.10	-1.14
59	12.86	+6.62	+1.43
65	3.20	+0.04	+1.30
79C	6.94	-0.24	-2.01
96	3.90	+0.72	+1.64
237	2.70	+0.22	+2.00
1002	82.15	-3.12	-1.48
1003	15.17	-2.79	-0.68
1004	24.13	+0.04	+0.68

8. F. H. Diehl. NW $\frac{1}{4}$ sec. 34, T. 26 S., R. 25 W. Records available: 1938-48. Jan. 17, 4.20; Apr. 12, 4.52; July 19, 5.64; Oct. 19, 6.59.

11. George W. Molitor. SW $\frac{1}{4}$ sec. 36, T. 21 S., R. 21 W. Records available: 1938-48. Jan. 17, 11.12; Apr. 15, 9.72. Measurements discontinued after Apr. 15, 1948.

38. F. Buns. SE $\frac{1}{4}$ sec. 1, T. 26 S., R. 24 W. Records available: 1938-48. Jan. 17, 36.27; Apr. 15, 36.34; July 19, 35.48; Oct. 19, 35.05.

41. J. J. Burghardt. NW $\frac{1}{4}$ sec. 11, T. 25 S., R. 2 W. Records available: 1938-48. Jan. 17, 44.82.

57. Andrew Bogner. NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 22, T. 26 S., R. 26 W. Records available: 1938-48. Jan. 17, 7.75; Feb. 18, 7.90.

59. Ward Byers. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 21, T. 25 S., R. 26 W. Records available: 1938-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 17	15.33	June 21	16.00	Sept. 22	16.90	Nov. 24	15.68
Apr. 12	15.53	July 19	15.38	Oct. 19	15.88	Dec. 18	15.53
May 20	21.11	Aug. 23	15.65				

65. John N. Clark. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 33, T. 26 S., R. 25 W. Records available: 1938-48. Jan. 17, 15.62; Feb. 18, 15.59.

79C. O. N. Nevins. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 23, T. 26 S., R. 24 W. Records available: 1938-48.

Jan. 17	19.22	Apr. 12	19.02	July 19	19.18	Oct. 19	19.10
Feb. 18	18.41	May 20	19.18	Aug. 23	18.98	Nov. 24	19.08
Mar. 17	19.16	June 21	19.28	Sept. 22	19.16	Dec. 18	19.49

96. Henry Hattrup. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 23, T. 26 S., R. 21 W. Records available: 1938-48. Jan. 17, 8.60; Apr. 15, 7.23; July 19, 7.93; Oct. 19, 8.02.

237. Atchison, Topeka & Santa Fe Railway. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 28, T. 25 S., R. 22 W. Records available: 1939-48. Jan. 17, 85.64; Apr. 15, 85.35; July 19, 85.49; Oct. 19, 85.67.

343. B. A. Schuette. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 1, T. 26 S., R. 26 W. Records available: 1939-47. Measurements discontinued after July 17, 1947.

1002. United States Army. SE $\frac{1}{4}$ sec. 12, T. 26 S., R. 25 W. Records available: 1942-48.

Feb. 18	103.72	Apr. 15	107.15	July 19	108.14	Dec. 18	105.16
Mar. 17	104.38	May 20	107.31	Oct. 19	103.76		

1003. United States Army. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 13, T. 26 S., R. 26 W. Records available: 1942-48.

Feb. 18	100.96	Apr. 15	101.98	July 19	102.73	Nov. 24	104.08
Mar. 17	101.63	May 20	102.51	Oct. 19	104.07	Dec. 18	104.15

1004. United States Army. Center of NE $\frac{1}{4}$ sec. 13, T. 26 S., R. 26 E. Correction: Depth to water level on Dec. 10, 1947, was 98.59 feet instead of 198.59 feet as indicated in Water-Supply Paper 1098. Tables giving highest water level and difference in water levels have been corrected in this report. Records available: 1942-48.

Feb. 18	98.42	Apr. 15	98.54	July 19	98.45	Nov. 24	98.42
Mar. 17	98.60	May 20	96.68	Oct. 19	98.55	Dec. 18	98.55

Franklin County

17-19-11da. L. W. Seright. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 11, T. 17 S., R. 19 E. Unused drilled domestic well, diameter 6 inches, depth 16.7 feet below land-surface datum. Measuring point, top of casing, north side, 0.5 foot above land-surface datum. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level
May 7	8.03	Aug. 26	7.44	Nov. 26	8.72
July 6	7.99	Oct. 15	8.49		

Grant County

By Janet S. Olson

Highest and lowest water levels for the period of record
in 9 wells in Grant County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
1	8	31.96	June 18, 1947	45.06	Sept. 16, 1941
4	8	84.26	Mar. 24, 1945	87.52	May 14, 1941
5	8	64.77	Feb. 15, 1946	68.48	Nov. 16, 1948
7	8	81.04	Aug. 13, 1947	82.76	May 14, 1941
8	8	57.35	Nov. 21, 1946	59.56	Apr. 21, 1944
11	8	45.99	May 10, 1945	48.48	Dec. 17, 1948
13	8	104.64	Nov. 21, 1946	106.58	July 14, 1941
14	8	128.36	Aug. 18, 1948	130.47	May 30, 1941
400	4	52.78	Feb. 28, 1945	56.54	Sept. 21, 1948

Difference between highest and lowest recorded water levels and net change
in water level, in 1948 and for period of record in 9 wells in Grant
County

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise (+) or net decline (-) for period of record
1	13.10	-0.15	+2.14
4	3.26	-.20	+2.11
5	3.71	-2.00	-1.48
7	1.72	-.24	+.71
8	2.21	-.13	+.83
11	2.49	-1.27	-1.25
13	1.94	+.21	+1.71
14	2.11	-.72	+.03
400	3.76	-.89	-2.60

1. F. C. Williams. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 30, T. 27 S., R. 37 W. Records available: 1941-48. Jan. 13, 42.62; Feb. 20, 42.39.4. F. J. Andes. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 9, T. 27 S., R. 38 W. Records available: 1941-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	84.35	May 25	85.44	Aug. 18	87.41	Nov. 16	85.58
Feb. 20	85.29	June 16	85.49	Oct. 18	84.85	Dec. 17	85.41

5. C. L. Jury. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 4, T. 27 S., R. 37 W. Records available: 1941-48. Feb. 19, 65.92; May 24, 66.22; Aug. 18, 68.33; Nov. 16, 68.48.7. Ethel W. Hoffman. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 36, T. 28 S., R. 36 W. Records available: 1941-48. May 24, 81.20; Aug. 18, 81.14; Nov. 16, 81.42.8. E. O. Stuart. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 33, T. 29 S., R. 35 W. Records available: 1941-48. Feb. 19, 58.20.11. J. A. Hoffman. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 26, T. 28 S., R. 38 W. Records available: 1941-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	47.28	Apr. 17	47.32	July 15	47.62	Oct. 18	48.37
Feb. 20	47.27	May 24	47.49	Aug. 18	47.95	Nov. 16	48.47
Mar. 18	47.21	June 16	47.57	Sept. 21	48.20	Dec. 17	48.48

13. Fred Powell. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 5, T. 29 S., R. 36 W. Records available: 1941-48. Feb. 19, 104.84.

14. Mr. Hall. NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 31, T. 28 S., R. 26 W. Records available: 1941-48. Feb. 19, 130.10; May 24, 130.17; Aug. 9, 128.36; Nov. 16, 130.44.

400. 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. Records available: 1944-48.

Lowest daily water level												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	55.04	54.98	54.91	54.82	55.40	55.50	55.29	56.06	.....	56.49	56.37	56.09
2	55.05	54.98	54.90	54.83	55.41	55.49	55.28	56.07	.....	56.50	56.37	56.08
3	55.05	54.98	54.89	54.83	55.44	55.46	55.28	56.09	.....	56.51	56.37	56.08
4	55.05	54.98	54.99	54.85	55.44	55.45	55.27	56.11	.....	56.51	56.35	56.07
5	55.04	54.98	54.88	54.86	55.45	55.45	55.28	56.13	.....	56.49	56.35	56.07
6	55.05	54.97	54.88	54.86	55.47	55.44	55.27	56.16	.....	56.46	56.33	56.06
7	55.04	54.97	54.87	54.88	55.49	55.41	55.27	56.17	.....	56.46	56.31	56.06
8	55.04	54.99	54.87	54.89	55.51	55.41	55.32	56.17	.....	56.46	56.30	56.06
9	55.04	54.98	54.86	54.90	55.53	55.40	55.39	56.17	.....	56.42	56.28	56.06
10	55.04	54.97	54.86	54.90	55.56	55.39	55.44	56.19	.....	56.39	56.27	56.05
11	55.04	54.97	54.86	54.91	55.59	55.38	55.49	56.19	.....	56.38	56.26	56.04
12	55.04	54.97	54.86	54.93	55.62	55.36	55.52	56.19	.....	56.36	56.26	56.03
13	55.04	54.96	54.86	54.97	55.66	55.36	55.57	56.19	.....	56.33	56.24	56.03
14	55.03	54.96	54.84	55.00	55.63	55.35	55.63	56.20	.....	56.32	56.23	56.03
15	55.02	54.96	54.84	55.03	55.71	55.35	55.67	56.20	.....	56.30	56.22	56.02
16	55.02	54.96	54.84	55.06	55.74	55.34	55.69	56.20	.....	56.28	56.21	56.02
17	55.02	54.96	54.84	55.10	55.76	55.36	55.71	56.20	.....	56.28	56.19	56.02
18	55.01	54.95	54.84	55.13	55.76	55.39	55.73	.....	.....	56.28	56.17	56.01
19	55.01	54.95	54.84	55.16	55.77	55.41	55.76	.....	.....	56.30	56.16	56.00
20	55.00	54.94	54.83	55.20	55.78	55.41	55.80	.....	.....	56.32	56.16	56.00
21	55.00	54.94	54.83	55.21	55.80	55.38	55.83	.....	56.54	56.32	56.15	55.99
22	54.99	54.94	54.83	55.25	55.80	55.36	55.85	.....	56.53	56.33	56.14	55.98
23	54.99	54.94	54.82	55.27	55.80	55.35	55.88	.....	56.51	56.33	56.13	55.98
24	54.99	54.94	54.82	55.28	55.81	55.33	55.90	.....	56.48	56.35	56.12	55.96
25	54.99	54.94	54.81	55.30	55.78	55.32	55.92	.....	56.47	56.35	56.12	55.96
26	55.00	54.92	54.81	55.30	55.71	55.31	55.94	.....	56.44	56.35	56.11	55.96
27	55.00	54.91	54.81	55.33	55.66	55.30	55.96	.....	56.44	56.35	56.11	55.95
28	54.99	54.92	54.82	55.35	55.63	55.29	55.93	.....	56.44	56.34	56.10	55.95
29	54.98	54.92	54.81	55.36	55.59	55.29	56.00	.....	56.47	56.34	56.10	55.94
30	54.98		54.80	55.38	55.56	55.29	56.02	.....	56.48	56.37	56.10	55.93
31	54.98		54.81		55.53		56.04	.....		56.38		55.93

Gray County

By Janet S. Olson

Highest and lowest water levels for the period of record
in 5 wells in Gray County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
1	9	3.48	June 13, 1941	7.56	Oct. 8, 1940
3	9	162.80	Dec. 15, 1947	169.33	Sept. 21, 1948
7	9	72.82	Sept. 21, 1948	77.70	May 22, 1940
8	9	+ .70	May 25, 1945	8.20	Oct. 7, 1939
11	9	57.05	Dec. 17, 1948	59.74	Aug. 18, 1943

Difference between highest and lowest recorded water levels and net change in water level, in 1943 and for period of record, in 5 wells in Gray County

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1943	Net rise for period of record
1	4.08	+1.85	2.30
3	6.53	-.49	1.74
7	4.88	+.65	4.66
8	3.90	-.29	5.04
11	2.69	+.40	1.59

1. G. A. Hard. NW $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 20, T. 25 S., R. 29 W. Records available: 1939-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	5.78	Apr. 12	4.20	July 19	6.10	Oct. 19	6.38
Feb. 18	5.31	May 20	5.87	Aug. 22	6.12	Nov. 24	5.85
Mar. 17	5.49	June 17	5.49	Sept. 22	6.30	Dec. 17	5.04

3. N. A. Mans. NE $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 7, T. 28 S., R. 27 W. Records available: 1939-48. Mar. 19, 163.95; June 17, 166.06; Sept. 21, 169.33; Dec. 17, 163.29.

7. P. Brietenbach and others. SE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 36, T. 26 S., R. 29 W. Records available: 1939-48. Mar. 19, 73.20; June 17, 73.07; Sept. 21, 72.82.

8. NW $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 11, T. 26 S., R. 28 W. Records available: 1939-48 Jan. 17, 2.99; Feb. 18, 3.16.

11. J. D. Wetmore. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 35, T. 29 S., R. 28 W. Records available: 1939-48. Mar. 19, 57.82; June 17, 57.27; Sept. 21, 57.33; Dec. 17, 57.05.

20. H. E. Fischer. SE $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 23, T. 25 S., R. 30 W. Records available: 1939-47. No measurements made in 1948.

28. W. H. McLaughton. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 14, T. 27 S., R. 29 W. Records available: 1939-47. No measurements made in 1948.

Greeley County

16-39-10cd. School district. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 10, T. 16 S., R. 39 W. Drilled domestic well, diameter 5 inches, depth 104.6 feet below land-surface datum. Measuring point, top of casing, 0.2 foot above land-surface datum. Records available: 1947-48. Aug. 5, 1947, 82.75; Sept. 6, 1947, 82.79; June 24, 1948, 83.00; July 24, 1948, 82.83.

16-41-20ba. J. Howell. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 20, T. 16 S., R. 41 W. Drilled stock well, diameter 6 inches, depth 153 feet below land-surface datum. Measuring point, top of casing, 0.4 foot above land-surface datum. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level
Aug. 5, 1947	130.10	May 19, 1948	130.15	July 24, 1948	130.10
Sept. 6	130.07	June 24	130.06	Sept. 20	130.55
Mar. 22, 1948	130.75	July 14	130.15	Nov. 12	130.33

16-43-26aa. Owner unknown. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 26, T. 16 S., R. 43 W. Drilled observation well, diameter 5 inches, depth 210.1 feet below land-surface datum. Measuring point, top of curbing, 0.4 foot above land-surface datum. Records available: 1947-48. Aug. 12, 1947, 205.03; Sept. 6, 1947, 204.96; June 24, 1948, 204.50; July 24, 1948, 204.90.

17-40-22ccd. Owner unknown. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 22, T. 17 S., R. 40 W. Drilled observation well, diameter 5 inches, depth 150.2 feet below land-surface datum. Measuring point, top of casing, 0.1 foot above land-surface datum. Records available: 1947-48.

Aug. 7, 1947	140.18	May 19, 1948	141.72	July 24, 1948	138.70
Sept. 6	130.50	June 24	136.53	Sept. 20	146.59
Mar. 22, 1948	138.80	July 14	145.40	Nov. 12	146.78

17-41-30odd. Owner unknown. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 30, T. 17 S., R. 41 W. Drilled observation well, diameter 5 inches, depth 111.8 feet below land-surface datum. Measuring point, top of casing, 0.4 foot above land-surface datum. Records available: 1947-48. Aug. 6, 1947, 89.43; Sept. 6, 1947, 89.35; June 24, 1948, 90.75; July 24, 1948, 89.72.

17-42-28bc. F. S. Luther. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 28, T. 17 S., R. 42 W. Drilled observation well, diameter 5 inches, depth 23.7 feet below land-surface datum. Measuring point, top of casing, 2.3 feet above land-surface datum. Records available: 1947-48. Aug. 6, 1947, 16.04; June 24, 1948, 16.55; July 24, 1948, 16.49.

18-39-10ad. Owner unknown. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 10, T. 18 S., R. 39 W. Drilled observation well, diameter 5 inches, depth 133.1 feet below land-surface datum. Measuring point, top of casing, 0.4 foot above land-surface datum. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level
Aug. 5, 1947	109.50	June 24, 1948	109.53	Sept. 20, 1948	109.34
Mar. 22, 1948	109.62	July 14	109.45	Nov. 10	109.71
May 19	109.58	24	109.45		

18-40-34aa. Owner unknown. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 34, T. 18 S., R. 40 W. Drilled observation well, diameter 6 inches, depth 111.6 feet below land-surface datum. Measuring point, top of casing, 0.2 foot above land-surface datum. Records available: 1947-48. Aug. 21, 1947, 86.10; Sept. 5, 1947, 86.00; June 24, 1948, 86.09; July 24, 1948, 86.04.

18-41-26aa. Aaron Sell. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 26, T. 18 S., R. 41 W. Drilled domestic well, diameter 5 inches, 113.6 feet below land-surface datum. Measuring point, top of casing, at land-surface datum. Records available: 1947-48.

Aug. 6, 1947	101.66	May 19, 1948	101.00	July 24, 1948	101.65
Sept. 5	101.65	June 24	102.90	Sept. 20	100.21
Mar. 22, 1948	101.67	July 14	101.61	Nov. 12	101.78

19-42-36bc. Owner unknown. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 36, T. 19 S., R. 42 W. Drilled observation well, diameter 5 inches, depth 99.3 feet below land-surface datum. Measuring point, top of casing, 0.1 foot above land-surface datum. Records available: 1947-48. Aug. 7, 1947, 85.96; Sept. 5, 1947, 85.95; June 24, 1948, 86.06; July 24, 1948, 85.92.

19-43-25aa. Owner unknown. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 25, T. 19 S., R. 43 W. Drilled observation well, diameter 6 inches, depth 101.3 feet below land-surface datum. Measuring point, top of concrete curbing, 1.1 feet above land-surface datum. Records available: 1947-48.

Aug. 7, 1947	90.70	June 24, 1948	91.64	Sept. 20, 1948	100.66
Sept. 5	91.57	July 14	94.33	Nov. 12	93.05
May 19, 1948	93.40	24	91.64		

20-39-33aa. Owner unknown. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 33, T. 20 S., R. 39 W. Drilled observation well, diameter 6 inches, depth 205.6 feet below land-surface datum. Measuring point, top of casing, at land-surface datum. Records available: 1947-48.

Aug. 18, 1947	192.15	Mar. 22, 1948	192.13	July 24, 1948	192.03
Sept. 6	191.39	June 24	191.88		

Hamilton County

Highest and lowest water levels for the period of record
in 5 wells in Hamilton County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
2	9	12.84	Apr. 11, 1947	27.94	Nov. 22, 1940
3	9	11.57	July 7, 1942	14.67	Nov. 16, 1939
6	9	47.95	Jan. 22, 1948	53.74	Nov. 16, 1939
7	9	42.25	Dec. 2, 1944	46.00	Nov. 27, 1940
6	9	84.38	Dec. 2, 1944	87.99	June 24, 1944

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record, in 5 wells in Hamilton County

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise (+) or net decline (-) for period of record
2	15.10	+0.06	+13.23
3	3.10	-.33	+1.23
6	5.79	-.62	+1.04
7	3.75	+.19	+2.35
16	3.61	-.22	-1.47

2. R. Holdren. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 22, T. 23 S., R. 43 W. Records available: 1939-42, 1945-48. Feb. 25, 13.85; May 27, 14.40; Aug. 19, 15.95; Nov. 11, 13.78.

3. B. Rees. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 8, T. 24 S., R. 40 W. Records available: 1939-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 22	12.84	Apr. 25	13.06	July 14	12.13	Oct. 11	12.64
Feb. 25	11.60	May 27	12.54	Aug. 19	12.23	Nov. 11	12.72
Mar. 21	12.86	June 16	12.18	Sept. 27	12.72	Dec. 27	12.94

6. Belle Heinlein. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 24, T. 24 S., R. 39 W. Records available: 1939-48.

Jan. 22	47.95	Apr. 25	51.13	July 14	52.10	Oct. 11	52.33
Feb. 25	49.56	May 27	48.38	Aug. 19	51.99	Nov. 11	52.24
Mar. 21	50.02	June 16	51.81	Sept. 27	52.39	Dec. 27	52.20

7. I. E. Martin. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 16, T. 23 S., R. 40 W. Records available: 1939-48. Feb. 25, 42.81; Aug. 19, 43.21; Nov. 11, 43.42.

16. Charles H. Miller. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 22, T. 25 S., R. 39 W. Records available: 1939-48. Aug. 19, 86.61; Nov. 11, 87.19.

Harvey County

Highest and lowest water levels for the period of record in 25 wells in Harvey County that are not affected by pumping

Well	Length of record (years)	Highest level	Date	Lowest level	Date
72	11	13.73	May 31, 1946	25.35	Oct. 7, 1937
294	11	17.15	May 31, 1946	40.92	Apr. 3, 1938
					4, 1938
					5, 1938
325	11	5.16	May 1, 1945	13.01	June 4, 1939
701	11	30.71	May 27, 1947	44.23	Nov. 2, 1938
817	10	6.13	Apr. 20, 1945	17.12	Oct. 25, 1940
824	10	5.77	May 4, 1945	18.16	Nov. 5, 1940
831	10	11.53	May 4, 1945	20.54	Nov. 5, 1940
832	10	12.41	May 4, 1945	20.35	Nov. 5, 1940
833	10	5.11	Oct. 2, 1945	15.79	May 27, 1947
852	10	9.27	May 6, 1944	16.66	Nov. 5, 1940
853	10	6.03	Sept. 30, 1945	11.93	Feb. 9, 1948
854	10	5.24	Apr. 27, 1945	14.87	Nov. 1, 1940
875	10	4.98	Mar. 2, 1945	6.04	Oct. 25, 1940
876	10	21.79	Dec. 22, 1944	27.83	Nov. 8, 1940
877	10	9.95	May 6, 1945	14.95	Jan. 27, 1941
880	10	2.56	Sept. 30, 1945	8.38	Mar. 10, 1947
881	10	3.23	Sept. 30, 1945	8.44	Nov. 24, 1947
888	10	4.43	July 27, 1945	8.95	Oct. 27, 1939
889	10	.89	May 6, 1944	8.95	Oct. 7, 1946
890	10	.10	May 2, 1945	7.07	Nov. 5, 1940

Highest and lowest water levels for the period of record
in 25 wells in Harvey County that are not affected by pumping--Continued

Well	Length of record (years)	Highest level	Date	Lowest level	Date
891	10	+0.46	May 11, 1942	4.68	Sept. 26, 1946
892	10	+1.15	May 12, 1944	3.92	Oct. 3, 1940
893	10	+.87	May 4, 1942	3.77	Jan. 27, 1941
1174	8	2.28	May 1, 1945	11.11	Jan. 29, 1948
1187	8	3.68	May 4, 1945	10.44	Dec. 5, 1947

Difference between highest and lowest recorded water levels and net change
in water level, in 1948 and for period of record in 25 wells in Harvey
County that are not affected by pumping

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise (+) or net decline (-) for period of record
72	11.62	-0.39	+4.49
294	23.77	+1.66	+6.10
325	7.85	+.07	+2.58
701	13.52	+.94	+8.19
817	10.99	+2.00	+1.24
824	12.39	-2.34	+2.68
831	9.01	+.53	+2.09
832	7.94	+.50	+1.61
833	10.88	+.42	-3.11
852	7.39	+2.77	+1.94
853	5.90	+1.72	-.83
854	9.63	+1.34	+2.24
875	7.02	+.55	+.88
876	6.04	+2.33	+.82
877	5.00	+3.02	+3.59
880	5.82	+1.26	-.78
881	5.21	+1.30	-1.18
888	9.38	+2.21	-.49
889	8.06	+1.46	-2.29
890	6.97	+2.32	+2.78
891	5.14	+.52	+.76
892	5.07	+.56	+1.41
893	4.64	+.59	+1.48
1174	8.83	+2.10	-.16
1187	6.76	+1.87	+2.04

Highest and lowest water levels for the period of record, in 100 wells in
Harvey County that are pumped or are affected by pumping

Well	Length of record (years)	Highest level	Date	Lowest level	Date
5	10	7.09	June 12, 1940	27.71	Jan. 29, 1948
66d	10	39.31	Jan. 7, 1946	61.14	Sept. 3, 1947
86	8	10.69	Apr. 28, 1944	20.66	Nov. 7, 1947
87	8	8.86	Apr. 28, 1944	32.79	Sept. 8, 1945
87a	8	9.62	Apr. 28, 1944	32.99	May 3, 1946
506	10	3.61	Apr. 28, 1944	16.67	Oct. 4, 1946
507	10	3.23	May 6, 1944	15.73	Sept. 15, 1947
821	10	12.03	Aug. 21, 1939	22.66	Jan. 26, 1948
839	10	9.62	Apr. 21, 1939	18.79	May 26, 1948
872	10	17.65	Mar. 11, 1939	34.15	Mar. 5, 1948
873	10	17.61	Mar. 11, 1939	35.46	May 1, 1948
874	10	20.04	May 27, 1940	46.30	May 1, 1948
878	10	16.25	June 3, 1940	31.05	Oct. 13, 1947
879	10	17.52	May 27, 1940	30.64	Sept. 1, 1947
			June 3, 1940		
883	10	13.35	Aug. 21, 1939	24.13	Apr. 1, 1947
					May 7, 1947
884	10	13.34	Aug. 21, 1939	24.39	Jan. 29, 1948
885	10	13.22	Aug. 21, 1939	24.92	Nov. 8, 1947

Highest and lowest water levels for the period of record, in 100 wells in Harvey County that are pumped or are affected by pumping--continued

Well	Length of record (years)	Highest level	Date	Lowest level	Date
886	10	2.34	Aug. 21, 1939	18.41	May 30, 194
887	10	2.72	May 27, 1940	20.74	May 26, 194
894	10	9.56	May 27, 1940	24.16	May 4, 194
895	10	10.04	May 27, 1940	26.32	Oct. 3, 194
1186	8	7.23	Sept. 30, 1945	13.88	Dec. 15, 194
1192	8	14.27	May 3, 1945	17.26	Dec. 3, 194
2072	7	27.09	May 5, 1947	37.11	May 19, 194
M-1	10	18.56	Apr. 13, 1939	74.82	Sept. 25, 194
M-1a	10	17.47	June 3, 1940	38.70	Sept. 25, 194
M-1b	10	15.94	June 3, 1940	36.44	Sept. 25, 194
M-2	10	18.33	May 4, 1939	45.00	Oct. 5, 194
M-2a	10	17.84	June 3, 1940	40.90	Sept. 9, 194
M-2b	10	20.25	May 27, 1940	40.96	Mar. 8, 194
M-2c	3	31.58	Feb. 6, 1946	39.76	Aug. 1, 194
M-3	10	23.20	May 8, 1939	77.09	Jan. 7, 194
M-3a	10	19.93	May 27, 1940	43.99	May 4, 194
M-3b	10	23.13	May 27, 1940	47.88	Oct. 3, 194
M-4	10	23.12	May 27, 1940	94.63	July 10, 194
M-4a	10	22.87	May 27, 1940	51.93	Oct. 3, 194
M-4b	10	23.91	May 27, 1940	47.88	Oct. 3, 194
M-5	10	20.33	May 16, 1939	96.52	Aug. 3, 194
M-5a	10	17.79	June 3, 1940	35.91	Oct. 3, 194
M-5b	10	17.82	May 27, 1940	43.00	Feb. 27, 194
M-6	10	19.05	May 27, 1940	96.09	Dec. 4, 194
M-6a	10	18.63	June 3, 1940	39.43	Dec. 3, 194
M-6b	10	18.46	June 3, 1940	36.88	Oct. 3, 194
M-7	10	11.03	June 13, 1939	33.80	May 7, 194
M-7a	10	11.20	Aug. 21, 1939	25.91	May 7, 194
M-7b	10	11.24	Aug. 21, 1939	25.32	Dec. 3, 194
M-8	10	15.93	May 27, 1940	87.76	Oct. 3, 194
M-8a	10	14.72	June 3, 1940	37.86	Jan. 29, 194
M-8b	10	13.30	June 3, 1940	32.01	Oct. 3, 194
M-9	10	10.82	May 27, 1940	57.96	May 4, 194
M-9a	10	10.40	May 27, 1940	29.96	Oct. 3, 194
M-9b	10	9.12	May 27, 1940	29.09	Oct. 3, 194
M-10	10	12.05	May 27, 1940	72.81	May 4, 194
M-10b	10	11.24	May 27, 1940	35.91	Dec. 3, 194
M-10b	10	10.44	May 27, 1940	31.00	May 4, 194
M-11	10	7.11	May 27, 1940	65.79	Aug. 3, 194
M-11a	10	6.38	May 27, 1940	26.38	Oct. 3, 194
M-11b	10	7.67	May 27, 1940	26.24	Oct. 3, 194
M-12	10	11.41	Aug. 21, 1939	65.83	Jan. 29, 194
M-12a	10	10.73	May 27, 1940	35.09	Sept. 2, 194
M-12b	10	11.70	Aug. 21, 1939	34.69	Oct. 3, 194
M-13	10	8.27	Nov. 27, 1940		
M-13a	10	7.89	Aug. 21, 1939	49.87	Feb. 5, 194
M-13b	10	7.63	May 27, 1940	27.36	Oct. 3, 194
M-14	10	9.07	May 27, 1940	26.85	Oct. 3, 194
M-14a	10	6.31	May 27, 1940	58.21	Oct. 3, 194
M-14b	10	8.16	Apr. 4, 1939	36.02	May 4, 194
M-14b	10		May 13, 1940	32.21	Oct. 3, 194
M-15	10	13.92	May 27, 1940		
M-15a	10	12.49	June 3, 1940	80.82	Jan. 7, 194
M-15b	10	13.45	Arr. 17, 1939	34.86	Dec. 3, 194
M-16	10	10.71	May 27, 1940	33.35	May 4, 194
M-16a	10	10.93	Aug. 21, 1939	59.38	Oct. 3, 194
M-16b	10	11.02	Aug. 21, 1939	30.76	Dec. 3, 194
M-17	10	6.58	May 27, 1940	24.09	May 4, 194
M-17a	10	5.66	Aug. 21, 1939	49.83	May 4, 194
M-17b	10	4.01	Aug. 21, 1939	23.11	Jan. 29, 194
M-17b	10		Aug. 21, 1939	16.06	Jan. 29, 194

Highest and lowest water levels for the period of record, in 100 wells in Harvey County that are pumped or are affected by pumping--Continued

Well	Length of record (years)	Highest level	Date	Lowest level	Date
M-18	10	10.00	Aug. 21, 1939	50.09	Dec. 3, 1947
M-18a	10	9.62	Aug. 21, 1939	30.60	May 4, 1948
M-18b	10	9.38	Aug. 21, 1939	26.14	Feb. 27, 1947
M-19	10	10.82	Aug. 21, 1938	39.12	Aug. 6, 1947
M-19a	10	13.11	Aug. 21, 1939	26.96	Dec. 3, 1947
M-19b	10	11.47	Aug. 21, 1939	22.86	Sept. 2, 1947
M-20	10	9.74	May 27, 1940	64.83	Jan. 29, 1948
M-20a	10	9.28	May 27, 1940	29.96	May 4, 1948
M-20b	10	8.49	May 27, 1940	30.86	May 4, 1948
M-21	10	8.32	Aug. 21, 1939	33.73	Aug. 6, 1947
M-21a	10	8.50	Aug. 21, 1939	31.89	Dec. 4, 1946
M-21b	10	8.08	Aug. 21, 1939	22.04	Nov. 8, 1947
M-22	10	9.20	Aug. 21, 1939	44.96	Sept. 2, 1947
M-22a	10	8.49	Aug. 21, 1939	25.08	May 4, 1948
M-22b	10	9.28	Aug. 21, 1939	22.01	Oct. 3, 1948
M-23	10	7.85	Aug. 21, 1939	48.98	Sept. 25, 1946
M-23a	10	8.27	Aug. 21, 1939	20.46	July 7, 1948
M-23b	10	7.50	Aug. 21, 1939	20.29	July 7, 1948
M-24	10	8.71	Aug. 21, 1939	48.96	Dec. 3, 1947
M-24a	10	8.88	Aug. 21, 1939	21.43	Jan. 29, 1948
M-24b	10	11.17	Aug. 28, 1939	25.73	Jan. 29, 1948
M-25	10	5.54	Aug. 21, 1939	45.86	May 4, 1948
M-25a	10	5.31	Aug. 21, 1939	14.91	Dec. 30, 1947
M-25b	10	6.89	Aug. 21, 1939	14.97	Dec. 3, 1947

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record in 100 wells in Harvey County that are pumped or affected by pumping

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise (+) or net decline (-) for period of record
3	20.62	+0.61	-17.45
66d	21.93	+5.42	-5.53
86	9.97	+2.38	+6.66
87	23.93	+1.83	+5.59
87a	23.37	+1.89	+9.96
506	13.06	+1.02	-1.18
507	12.50	+1.17	-6.33
821	10.63	+1.20	-9.16
839	9.17	+2.28	-3.83
872	16.50	-.27	-15.98
873	17.85	+2.29	-17.05
874	26.26	-3.46	-23.05
878	14.80	+1.29	-11.97
879	13.12	+1.07	-8.29
883	10.67	+1.89	-6.75
884	11.05	+2.60	-6.55
885	11.70	+2.33	-7.30
886	16.07	-.72	-14.24
887	18.02	-.47	-14.88
894	14.60	+0.07	-12.11
895	16.28	-.69	-15.12
1186	6.65	-.05	+1.04
1192	2.99	+1.70	+9.98
2072	10.02	-.08	-3.25
M-1	56.26	+1.76	-50.82
M-1a	21.23	-1.89	-17.10
M-1b	20.50	-.81	-18.06
M-2	26.67	(a)	(a)
M-2a	23.06	-2.88	-20.73
M-2b	20.71	-1.26	-17.46
M-2c	8.18	-.43	-6.94
M-3	53.89	+8.87	-52.38

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record in 100 wells in Harvey County that are pumped or affected by pumping--Continued

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise (+) or net decline (-) for period of record
M-3a	24.06	-4.49	-23.63
M-3b	24.75	-4.71	-20.88
M-4	71.51	-36.19	-59.18
M-4a	29.06	-5.32	-27.75
M-4b	23.97	-3.94	-22.86
M-5	76.19	(b)	(b)
M-5a	18.12	-.74	-17.55
M-5b	25.18	-1.93	-16.49
M-6	77.04	+.86	-69.57
M-6a	20.80	+2.31	-17.58
M-6b	18.42	-2.24	-17.73
M-7	22.77	+1.36	-19.02
M-7a	14.71	+1.33	-11.79
M-7b	14.08	+1.07	-11.90
M-8	71.83	-57.98	-69.64
M-8a	23.14	-3.82	-17.99
M-8b	18.71	-1.80	-18.20
M-9	47.14	+1.34	-44.68
M-9a	19.56	-1.10	-18.98
M-9b	19.97	-1.08	-19.35
M-10	60.76	-1.40	-57.99
M-10a	24.67	-.54	-20.40
M-10b	20.56	-.42	-19.85
M-11	58.68	-6.25	-39.02
M-11a	20.00	-3.27	-19.30
M-11b	18.57	-3.00	-17.82
M-12	54.42	+3.73	-48.56
M-12a	24.36	-.06	-22.66
M-12b	22.99	-3.55	-21.74
M-13	41.60	-19.22	-31.80
M-13a	19.47	-2.79	-18.42
M-13b	19.22	-2.00	-18.05
M-14	49.14	-2.08	-40.53
M-14a	27.71	+1.25	-26.68
M-14b	24.05	-1.22	-24.03
M-15	66.90	+3.25	-60.84
M-15a	22.37	+1.13	-20.08
M-15b	19.90	-9.69	-17.80
M-16	48.67	-3.61	-47.83
M-16a	19.83	-.02	-19.47
M-16b	13.07	-.10	-12.04
M-17	43.25	-19.44	-39.58
M-17a	17.45	+3.81	-9.51
M-17b	12.05	+1.12	-8.61
M-18	40.09	+.54	-38.50
M-18a	20.98	-8.52	-18.62
M-18b	16.76	-3.73	-12.47
M-19	28.30	+2.93	-23.60
M-19a	13.85	+4.68	-6.49
M-19b	11.39	+1.52	-6.15
M-20	55.09	+4.24	-48.63
M-20a	20.62	-.57	-18.05
M-20b	22.37	+1.02	-17.59
M-21	25.41	+2.50	-20.16
M-21a	23.39	+4.71	-12.61
M-21b	13.96	+2.05	-9.20
M-22	35.76	-21.54	-29.16
M-22a	16.59	-4.12	-12.41
M-22b	12.73	-1.89	-9.89
M-23	41.13	+3.32	-33.02
M-23a	12.19	-1.51	-8.24
M-23b	12.79	-2.82	-8.35

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record in 100 wells in Harvey County that are pumped or affected by pumping--continued

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise (+) or net decline (-) for period of record
M-24	40.25	+8.85	-28.85
M-24a	12.55	+3.74	-6.62
M-24b	14.56	+4.53	-1.64
M-25	40.32	+4.85	-32.35
M-25a	9.60	+1.74	-3.37
M-25b	8.08	+2.53	-3.60

a No wetted-tape measurements made in 1948.

b No wetted-tape measurement made end of 1948.

Pumpage from city of Wichita wells M-1 to M-25, in millions of gallons, in 1948, and since beginning of pumping on Sept. 1, 1948

Well	Pumpage 1948	Total 1940-48
M-1	224.0	2,312.8
M-2	223.9	1,062.9
M-3	61.6	1,654.2
M-4	137.1	1,445.2
M-5	407.1	2,072.5
M-6	301.6	2,062.0
M-7	376.3	2,495.2
M-8	272.6	2,183.7
M-9	396.9	2,321.6
M-10	314.5	2,087.3
M-11	336.3	2,201.4
M-12	280.0	1,981.7
M-13	340.5	2,159.9
M-14	379.0	2,507.5
M-15	383.2	2,264.3
M-16	286.4	2,033.3
M-17	361.3	2,366.8
M-18	358.3	2,486.0
M-19	385.0	1,319.0
M-20	185.8	1,685.4
M-21	416.5	2,727.4
M-22	162.8	1,109.8
M-23	270.8	2,136.9
M-24	306.4	2,133.9
M-25	299.1	2,060.5

72. Anna Hertzler. SE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 16, T. 22 S., R. 1 W. Records available: 1937-48. Jan. 6, 21.68; Apr. 6, 21.24; July 9, 20.71; Oct. 2, 20.86.

294. Owner of well, J. B. Schmidt; lessee, Hollow Oil Co. SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 17, T. 22 S., R. 3 W. Records available: 1937-48. Jan. 6, 34.01; Apr. 6, 33.59; July 9, 32.86; Oct. 2, 32.54.

325. A. L. Gouldner. SW. corner SE $\frac{1}{4}$ sec. 19, T. 23 S., R. 3 W. Records available: 1937-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	10.32	Mar. 29	9.63	June 29	9.53	Sept. 24	10.08
28	10.41	May 1	9.76	Aug. 12	9.66	Nov. 3	10.21
Feb. 26	10.26	26	9.86	Sept. 1	9.82	Dec. 1	10.19

701. Dr. V. E. Cheskey. NE. corner NW $\frac{1}{4}$ sec. 3, T. 23 S., R. 1 W.
Records available: 1938-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	32.83	May 5	32.15	Aug. 8	32.33	Nov. 3	31.78
Mar. 3	32.17	26	32.34	31	32.39	Dec. 3	31.80
30	32.12	June 30	32.06	Sept. 23	31.41		

817. City of Wichita. NW. corner sec. 1, T. 24 S., R. 2 W. Records available: 1938-48.

Jan. 5	15.91	Mar. 15	15.16	July 13	13.40	Sept. 27	13.58
12	15.97	29	13.55	19	13.06	Oct. 4	13.76
19	15.96	Apr. 5	13.77	27	12.73	Nov. 3	13.82
26	15.97	May 3	13.80	Aug. 10	12.88	8	13.86
Feb. 2	15.95	25	13.83	16	13.08	15	13.88
9	16.04	June 1	13.60	30	13.21	29	13.90
24	15.79	22	13.61	Sept. 7	13.50	Dec. 6	13.96
Mar. 2	15.25	29	11.46	13	13.46	20	13.98
8	15.32	July 6	13.43	22	13.66	27	14.00

824. City of Wichita. SE. corner sec. 22, T. 24 S., R. 1 W. Records available: 1938-48.

Jan. 30	9.26	May 5	12.12	Aug. 8	11.16	Nov. 3	11.48
Mar. 3	8.54	26	12.69	31	12.66	Dec. 3	11.51
30	11.82	June 30	11.52	Sept. 23	11.19		

831. City of Wichita. NE. corner sec. 19, T. 24 S., R. 1 W. Records available: 1939-48.

Jan. 30	17.39	May 5	17.16	Aug. 8	16.06	Nov. 3	16.72
Mar. 3	16.62	26	17.64	31	17.39	Dec. 3	16.76
30	16.74	June 30	16.62	Sept. 23	16.14		

832. City of Wichita. NE. corner sec. 19, T. 24 S., R. 1 W. Records available: 1939-48.

Jan. 30	17.76	May 5	17.47	Aug. 8	16.41	Nov. 3	17.09
Mar. 3	16.99	26	17.98	31	17.56	Dec. 3	17.07
30	17.09	June 30	16.90	Sept. 23	16.52		

833. City of Wichita. SW. corner sec. 19, T. 24 S., R. 1 W. Records available: 1939-48.

Jan. 30	11.83	May 5	12.86	Aug. 8	10.12	Nov. 3	11.35
Mar. 3	10.76	26	13.43	31	12.39	Dec. 3	11.37
30	12.35	June 30	10.67	Sept. 23	10.59		

852. City of Wichita. NE. corner sec. 29, T. 24 S., R. 1 W. Records available: 1939-48.

Jan. 30	16.06	May 5	14.77	Aug. 8	13.76	Nov. 3	13.17
Mar. 3	15.01	26	15.60	31	14.89	Dec. 3	13.21
30	14.21	June 30	14.08	Sept. 23	13.04		

853. City of Wichita. NW. corner sec. 13, T. 24 S., R. 2 W. Records available: 1938-48.

Jan. 5	11.62	Mar. 23	9.76	July 13	9.93	Sept. 27	9.57
12	11.58	29	9.86	19	9.76	Oct. 4	9.71
19	11.50	Apr. 5	9.94	27	9.69	Nov. 3	9.80
26	11.52	May 3	9.98	Aug. 10	9.73	8	9.88
Feb. 2	11.53	25	9.96	16	9.71	15	9.91
9	11.93	June 1	9.97	30	9.70	29	9.96
24	11.38	22	9.98	Sept. 7	9.69	Dec. 6	9.84
Mar. 2	10.88	29	9.91	13	9.64	20	9.96
8	10.89	July 6	9.92	22	9.60	27	9.97
15	10.56						

854. City of Wichita. SW. corner sec. 23, T. 23 S., R. 2 W. Records available: 1938-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	11.88	Mar. 29	10.34	July 19	10.24	Oct. 4	10.16
19	11.96	Apr. 5	10.40	27	10.21	Nov. 3	10.21
26	11.99	May 3	10.45	Aug. 10	10.28	8	10.26
Feb. 2	11.98	25	10.52	16	10.18	15	10.28
9	12.13	June 1	10.48	30	10.23	29	10.33
24	11.86	22	10.50	Sept. 7	10.08	Dec. 6	10.34
Mar. 2	11.26	29	10.46	13	10.06	20	10.37
8	11.29	July 6	10.45	22	10.04	27	10.40
15	10.93	13	10.46	27	10.00		

875. Owner of well, city of Wichita; owner of property, A. F. Havely. NE. corner sec. 17, T. 23 S., R. 3 W. Records available: 1939-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	4.39	Mar. 23	1.52	June 29	2.36	Sept. 22	3.01
12	4.48	29	1.51	July 6	2.31	27	3.22
19	4.53	Apr. 5	1.95	13	2.18	Oct. 4	3.28
26	4.56	12	2.10	19	2.06	Nov. 3	3.51
Feb. 2	4.53	19	2.38	27	1.99	8	3.63
9	4.53	May 3	2.12	Aug. 2	1.48	15	3.69
18	4.21	10	3.15	10	2.19	29	3.76
24	4.44	25	2.34	16	2.22	Dec. 6	3.69
Mar. 2	3.46	June 1	2.42	30	2.28	20	3.72
8	2.83	8	4.24	Sept. 7	2.71	27	3.74
15	2.36	22	2.46	13	2.68		

876. Owner of well, city of Wichita; owner of property, A. F. Havely. NE. corner sec. 17, T. 23 S., R. 3 W. Records available: 1939-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	26.51	Mar. 23	25.19	June 29	25.01	Sept. 22	24.16
12	26.69	29	24.94	July 6	24.97	27	23.79
19	26.85	Apr. 5	24.90	13	24.81	Oct. 4	23.90
26	26.88	12	24.96	19	24.78	Nov. 3	24.03
Feb. 2	26.89	19	25.02	27	24.58	8	24.09
9	26.68	May 3	24.94	Aug. 2	23.10	15	24.11
18	26.65	10	25.02	10	24.72	29	24.13
24	26.67	25	25.07	16	24.69	Dec. 6	24.11
Mar. 2	26.50	June 1	25.09	30	24.68	20	24.13
8	26.53	8	25.52	Sept. 7	24.61	27	24.13
15	26.06	22	23.11	13	24.49		

877. Owner of well, city of Wichita; owner of property, A. F. Havely. NE. corner sec. 17, T. 23 S., R. 3 W. Records available: 1939-48.

Lowest daily water level												
May	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	14.16	14.46	14.31	13.71	.....	14.93	13.30	12.34	12.40	12.67	.....	13.03
2	14.17	14.47	14.20	13.72	.....	.....	13.27	12.33	12.40	12.68	.....	13.01
3	14.22	14.47	14.20	13.72	13.74	.....	13.24	12.32	12.40	12.69	12.87	13.01
4	14.23	14.47	14.19	13.70	.....	.....	13.20	12.32	12.41	12.69	12.86	12.99
5	14.24	14.48	14.16	13.68	.....	.....	13.18	.....	12.42	12.65	12.89	13.01
6	14.25	14.48	14.09	13.68	.....	.....	13.17	.....	12.42	12.65	12.93	13.02
7	14.24	14.49	14.04	13.70	.....	.....	13.16	.....	12.45	12.69	12.93	13.04
8	14.25	14.50	14.04	13.74	.....	13.97	13.14	.....	12.45	12.70	12.93	13.04
9	14.27	14.52	14.02	13.73	.....	13.98	13.13	.....	12.45	12.71	12.94	13.08
10	14.27	14.52	14.02	13.70	14.77	13.99	13.05	12.33	12.46	12.72	12.94	13.08
11	14.26	14.53	14.02	13.67	14.78	14.00	13.01	12.33	12.46	12.73	12.95	13.02
12	14.26	14.54	14.02	13.72	14.78	14.01	12.99	12.30	12.46	.....	12.98	13.02
13	14.28	14.52	14.01	13.74	14.78	14.02	12.97	12.31	12.50	.....	12.98	13.03
14	14.28	14.57	13.96	13.73	14.77	14.01	12.97	12.30	12.51	.....	12.98	.....
15	14.27	14.57	13.89	13.72	14.78	13.97	12.82	12.31	12.51	.....	12.98	.....
16	14.28	14.56	13.91	13.73	14.79	.....	12.81	12.32	12.51	.....	12.98	.....
17	14.28	14.52	13.91	13.72	14.81	.....	12.72	12.31	12.51	.....	12.98	.....
18	14.29	14.49	13.87	13.71	.....	.....	12.63	12.31	12.52	.....	12.93	.....
19	14.37	14.55	13.80	13.72	.....	.....	12.54	12.31	12.52	.....	12.93	.....

877--Continued.

Lowest daily water level

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
20	14.36	14.55	13.80	13.75	.....	.....	12.48	12.30	12.52	.....	12.98	13.02
21	14.36	14.55	13.75	13.75	.....	.....	12.44	12.31	12.53	.....	13.02	13.08
22	14.41	14.54	13.75	13.74	.....	13.75	12.40	12.32	12.54	.....	13.02	13.09
23	14.42	14.52	13.74	13.71	.....	13.77	12.40	12.33	12.55	.....	13.01	13.09
24	14.43	14.55	13.74	13.72	.....	13.76	12.39	.....	12.56	.....	13.01	13.10
25	14.45	14.55	13.72	13.71	.....	13.73	12.35	.....	12.61	.....	13.01	13.14
26	14.45	14.53	13.71	13.74	.....	13.61	12.33	.....	12.64	.....	13.01	13.14
27	14.47	14.32	13.74	13.77	.....	13.55	12.31	.....	12.64	.....	13.01	13.11
28	14.47	14.38	13.74	.....	.....	13.41	12.34	.....	12.64	.....	13.01	11.09
29	14.43	14.38	13.66	.....	.....	13.40	12.35	.....	12.62	.....	13.03	11.17
30	14.44	.....	13.65	.....	.....	13.36	12.35	12.38	12.62	.....	13.03	11.17
31	14.46	.....	13.68	.....	.....	.....	12.35	12.39	.....	.....	.....	11.17

880. Owner of well, city of Wichita; owner of property, Peter Miller SE. corner sec. 11, T. 24 S., R. 3 W. Records available: 1939-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	8.11	May 3	7.49	July 27	7.26	Oct. 4	6.58
12	8.09	25	5.53	Aug. 10	7.32	Nov. 3	6.61
26	8.12	June 1	7.51	16	7.29	8	6.69
Feb. 2	8.10	22	7.56	30	7.33	15	6.73
24	7.96	29	7.42	Sept. 7	7.31	29	6.79
Mar. 8	7.66	July 6	7.35	13	7.28	Dec. 6	6.77
15	7.41	13	7.31	22	7.08	20	6.81
29	7.36	19	5.19	27	6.53	27	6.83
Apr. 5	7.41						

881. Owner of well, city of Wichita; owner of property, Peter Miller. SE. corner sec. 11, T. 24 S., R. 3 W. Records available: 1939-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	8.32	May 3	7.58	July 27	7.30	Oct. 4	6.74
12	8.28	25	7.61	Aug. 10	7.41	Nov. 3	6.77
26	8.30	June 1	7.58	16	7.41	8	6.83
Feb. 2	8.32	22	7.61	30	7.46	15	6.86
24	8.08	29	7.56	Sept. 7	7.39	29	6.98
Mar. 8	7.73	July 6	7.51	13	7.38	Dec. 6	6.95
15	7.59	13	7.47	22	7.23	20	6.99
29	7.53	19	5.33	27	6.68	27	7.00
Apr. 5	7.59						

888. Owner of well, city of Wichita; owner of property, C. K. Ellis. NW. corner sec. 17, T. 23 S., R. 2 W. Records available: 1939-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	7.75	Apr. 5	2.50	July 27	2.26	Oct. 4	5.30
12	7.71	May 3	2.86	Aug. 10	2.46	Nov. 3	5.36
26	7.74	25	3.08	16	2.78	8	5.40
Feb. 2	7.76	June 1	2.91	30	2.95	15	5.46
24	7.46	22	2.99	Sept. 7	3.19	29	5.49
Mar. 2	6.16	29	2.71	13	3.16	Dec. 6	5.47
8	7.08	July 6	2.66	22	3.83	20	5.50
15	5.21	13	2.50	27	5.06	27	5.52
29	5.10	19	2.36				

889. Owner of well, city of Wichita; owner of property, C. K. Ellis. NW. corner sec. 17, T. 23 S., R. 2 W. Records available: 1939-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	8.19	Apr. 5	5.87	July 27	5.21	Oct. 4	6.48
12	8.23	May 3	5.93	Aug. 10	5.48	Nov. 3	6.53
26	8.27	25	5.99	16	5.57	8	6.59
Feb. 2	8.29	June 1	5.94	30	5.53	15	6.63
24	8.08	22	5.96	Sept. 7	5.56	29	6.71
Mar. 2	7.71	29	5.83	13	5.49	Dec. 6	6.66
8	7.59	July 6	5.78	22	5.96	20	6.69
15	6.36	13	5.69	27	6.03	27	6.69
29	6.33	19	5.40				

890. 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. Records available: 1939-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	4.47	Mar. 29	2.09	June 29	2.23	Sept. 24	2.44
9	4.47	May 1	3.39	Aug. 12	2.59	Nov. 3	2.79
28	4.56	26	3.42	Sept. 1	2.81	Dec. 1	2.59
Feb. 26	3.99						

891. Owner of well, city of Wichita; owner of property, Arthur McMurray. SE. corner sec. 31, T. 24 S., R. 3 W. Records available: 1939-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	3.01	May 5	2.82	Aug. 8	1.42	Nov. 3	2.40
Mar. 3	2.33	26	3.38	31	3.26	Dec. 3	2.44
30	2.05	June 30	1.91	Sept. 23	2.67		

892. Owner of well, city of Wichita; owner of property, Arthur McMurray. SE. corner sec. 31, T. 24 S., R. 3 W. Records available: 1939-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	2.29	May 5	1.96	Aug. 8	0.58	Nov. 3	1.61
Mar. 3	2.42	26	2.64	31	2.38	Dec. 3	1.66
30	1.18	June 30	1.08	Sept. 23	2.08		

893. Owner of well, city of Wichita; owner of property, Arthur McMurray. SE. corner sec. 31, T. 24 S., R. 3 W. Records available: 1939-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	2.11	May 5	1.71	Aug. 8	0.29	Nov. 3	1.36
Mar. 3	1.26	26	2.47	31	2.19	Dec. 3	1.42
30	.78	June 30	.70	Sept. 23	1.89		

1174. City of Wichita. SW. corner sec. 32, T. 24 S., R. 1 W. Records available: 1940-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 29	11.11	Apr. 1	7.51	July 7	3.36
Mar. 5	10.37	May 4	6.33	Oct. 3	8.94

1187. City of Wichita. NW. corner sec. 29, T. 24 S., R. 1 W. Records available: 1943-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	10.21	May 5	8.88	Aug. 8	7.52	Nov. 3	8.20
Mar. 3	9.11	26	8.65	31	9.51	Dec. 3	8.26
30	7.71	June 30	7.88	Sept. 23	7.54		

Wells pumped or affected by pumping

2. Langwalter Estate. NW $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 23, T. 24 S., R. 2 W. Records available: 1942-46. Measurements discontinued after Nov. 25, 1946.

3. Mrs. Emma Linn Webster. SE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 8, T. 24 S., R. 2 W. Records available: 1943-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 29	27.71	May 4	27.48	Sept. 24	26.81
Mar. 5	27.66	July 7	26.26		

66d. City of Newton. SW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 32, T. 23 S., R. 1 W. Records available: 1943-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	47.59	Apr. 5	48.78	July 3	49.24	Oct. 2	47.50
Feb. 3	47.63	May 6	50.36	31	49.63	Nov. 4	47.71
Mar. 4	46.70	28	50.16	Sept. 1	51.62	30	47.08

86. City of Halstead. NW $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 35, T. 23 S., R. 2 W. Records available: 1943-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	19.38	Apr. 5	19.13	July 3	18.56	Oct. 2	18.01
Feb. 3	19.42	May 6	18.89	31	14.44	Nov. 4	18.10
Mar. 4	18.96	28	18.98	Sept. 1	17.88	30	18.08

87. City of Halstead. NW $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 35, T. 23 S., R. 2 W. Records available: 1943-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	19.31	Apr. 5	19.16	July 3	18.54	Oct. 2	17.94
Feb. 3	19.34	May 6	30.01	31	13.88	Nov. 4	17.98
Mar. 4	18.91	28	31.36	Sept. 1	17.87	30	17.95

87a. City of Halstead. NW $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 35, T. 23 S., R. 2 W. Records available: 1943-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	19.63	Apr. 5	19.58	July 3	18.78	Oct. 2	18.18
Feb. 3	19.68	May 6	30.42	31	14.18	Nov. 4	18.21
Mar. 4	19.36	28	31.63	Sept. 1	18.11	30	18.19

506. 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. Records available: 1938-48.

Lowest daily water level

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	15.77	15.73	12.60	13.23	.....	12.30	8.00	.....	13.13	14.08	.....	14.57
2	15.81	15.73	12.49	13.36	.....	.....	7.90	10.20	13.20	14.09	.....	14.52
3	15.87	15.73	12.57	13.46	14.16	.....	8.11	10.53	13.27	14.09	14.50	14.52
4	15.88	15.73	12.76	13.56	.....	.....	8.30	10.68	13.35	14.10	14.40	14.52
5	15.89	15.73	12.95	13.58	.....	.....	8.38	10.75	13.42	14.11	14.47	14.54
6	15.90	15.73	13.12	13.65	.....	.....	8.61	10.85	13.59	14.18	14.52	14.59
7	15.85	15.77	13.31	13.80	.....	.....	9.99	11.03	13.65	14.21	14.52	14.62
8	15.78	15.78	13.39	13.90	.....	15.55	10.33	11.25	13.63	14.22	14.56	14.60
9	15.78	15.77	13.47	13.91	.....	15.58	10.40	11.44	13.54	14.23	14.56	14.60
10	15.77	15.74	13.67	13.88	14.72	15.76	10.09	11.58	13.12	14.27	14.56	14.58
11	15.72	15.80	13.74	13.97	14.76	15.75	9.78	11.74	13.07	14.30	14.57	14.45
12	15.69	15.80	13.76	14.13	14.77	15.77	9.34	11.74	13.28	.....	14.58	14.46
13	15.71	15.80	13.76	14.18	14.81	15.77	9.77	11.71	13.45	.....	14.58	14.45
14	15.70	15.86	13.58	14.18	14.80	16.00	10.06	11.10	13.54	.....	14.59	.....
15	15.68	15.85	13.34	14.18	14.88	16.00	10.02	10.83	13.64	.....	14.59	.....
16	15.69	15.84	13.21	14.24	14.92	.....	9.00	11.02	13.73	.....	14.61	.....
17	15.69	15.76	12.98	14.25	14.97	.....	7.76	11.13	13.80	.....	14.61	.....
18	15.71	15.65	12.52	14.27	.....	.....	6.13	11.40	13.87	.....	14.59	.....
19	15.76	15.60	12.14	14.36	.....	.....	4.50	11.62	13.98	.....	14.60	.....
20	15.74	15.58	11.74	14.42	.....	.....	4.63	11.84	14.00	.....	14.61	14.50
21	15.74	15.53	11.58	14.43	.....	.....	5.09	12.02	14.04	.....	.....	14.58
22	15.79	15.52	11.80	14.41	.....	12.79	5.12	12.20	14.08	.....	.....	14.61
23	15.80	15.56	12.01	14.41	.....	12.76	5.52	12.34	14.10	.....	.....	14.62
24	15.78	15.59	12.16	14.43	12.19	12.78	5.86	.....	14.10	.....	.....	14.62
25	15.79	15.62	12.28	14.41	12.20	12.78	6.54	.....	14.09	.....	.....	14.69
26	15.78	15.63	12.57	14.40	12.18	12.74	7.23	.....	13.43	.....	.....	14.69
27	15.80	15.44	12.79	14.33	12.24	12.70	7.50	.....	13.57	.....	.....	14.67
28	15.77	13.96	12.83	.....	12.28	12.66	.....	.....	13.74	.....	.....	14.68
29	15.73	13.04	12.85	.....	12.30	12.66	.....	.....	13.87	.....	14.69	14.76
30	15.73	.....	12.89	.....	12.30	8.28	.....	12.93	14.00	.....	14.62	14.76
31	15.73	.....	12.99	.....	12.30	.....	.....	13.04	.....	.....	.....	14.76

507. Owner of well, city of Wichita; owner of property, W. G. Backhaus.
NW 1/4 sec. 28, T. 23 S., R. 2 W. Records available: 1938-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	13.74	Mar. 23	9.02	June 29	7.73	Sept. 22	13.14
12	13.44	29	10.43	July 6	7.88	27	12.77
19	13.18	Apr. 5	11.58	13	7.92	Oct. 4	12.83
26	13.19	12	12.03	19	4.11	Nov. 3	13.18
Feb. 2	13.17	19	12.16	27	6.57	8	13.28
9	12.91	May 3	12.73	Aug. 2	9.71	15	13.32
18	13.44	10	12.60	10	10.73	29	13.46
24	12.98	25	13.61	16	9.98	Dec. 6	13.40
Mar. 2	10.41	June 1	11.47	30	11.96	20	13.38
8	11.75	8	13.87	Sept. 7	12.47	27	13.46
15	11.66	22	11.76	13	12.28		

821. City of Wichita. NW. corner sec. 6, T. 24 S., R. 2 W. Records available: 1939-48.

Jan. 5	22.65	Apr. 5	22.06	July 27	21.83	Oct. 4	21.33
12	22.64	May 3	22.11	Aug. 10	21.82	Nov. 3	21.36
26	22.66	25	22.14	16	21.71	8	21.39
Feb. 2	21.64	June 1	22.12	30	21.69	15	21.40
24	22.59	22	22.14	Sept. 7	21.76	29	21.43
Mar. 2	22.31	29	22.12	13	21.67	Dec. 6	21.41
8	22.23	July 6	22.08	22	21.33	20	21.41
15	22.06	13	22.01	27	21.19	27	21.42
29	22.03	19	21.97				

839. City of Wichita. NE. corner sec. 35, T. 24 S., R. 2 W. Records available: 1938-48.

Jan. 29	18.21	May 1	18.26	Aug. 12	16.56	Nov. 3	16.06
Mar. 5	17.97	26	18.79	Sept. 1	16.83	Dec. 1	15.82
Apr. 1	17.92	June 29	16.43	24	15.54		

872. Owner of well, city of Wichita; owner of property, D. C. Buller.
SE. corner sec. 31, T. 23 S., R. 2 W. Records available: 1939-48.

Mar. 5	34.15	May 1	33.36	Aug. 12	32.86	Nov. 3	33.71
29	33.30	26	33.38	Sept. 1	32.91	Dec. 1	33.68
Apr. 1	33.30	June 29	32.76	24	33.74		

873. Owner of well, city of Wichita; owner of property, D. C. Buller.
SE. corner sec. 31, T. 23 S., R. 2 W. Records available: 1939-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 29	35.06	Apr. 1	35.28	June 29	34.93
Mar. 5	34.46	May 1	35.46	Sept. 24	34.69

874. Owner of well, city of Wichita; owner of property, D. C. Buller.
SE. corner sec. 31, T. 23 S., R. 2 W. Records available: 1939-48.

Jan. 29	40.88	Apr. 1	46.23	June 29	45.31
Mar. 5	40.53	May 1	46.30	Sept. 24	44.23

878. Owner of well, city of Wichita; owner of property, C. Cadwell.
SE. corner sec. 1, T. 24 S., R. 3 W. Records available: 1939-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	29.76	Mar. 8	29.48	June 1	29.33	July 27	28.89
12	29.74	15	29.31	22	29.35	Aug. 10	28.96
26	29.79	29	29.28	29	29.30	16	28.91
Feb. 2	29.77	Apr. 5	29.32	July 6	29.18	30	28.86
24	29.71	May 3	29.36	13	29.10	Sept. 7	28.82
Mar. 2	29.46	25	29.40	19	29.06	13	28.76

878--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 22	28.41	Nov. 3	28.30	Nov. 29	28.39	Dec. 20	28.43
27	28.17	8	28.34	Dec. 6	28.40	27	28.45
Oct. 4	28.27	15	28.36				

879. Owner of well, city of Wichita; owner of property, C. Cadwell. SE. corner sec. 1, T. 24 S., R. 3 W. Records available: 1939-48.

Jan. 5	27.28	Apr. 5	26.41	July 27	25.85	Oct. 4	25.91
12	27.29	May 3	26.42	Aug. 10	25.98	Nov. 3	25.94
26	27.33	25	26.52	16	25.90	8	25.98
Feb. 2	27.33	June 1	26.51	30	25.96	15	26.01
24	27.26	22	26.52	Sept. 7	25.97	29	26.07
Mar. 2	26.62	29	26.48	13	26.28	Dec. 6	26.10
8	26.66	July 6	26.38	22	26.02	20	26.14
15	26.43	13	26.26	27	25.82	27	26.17
29	26.36	19	26.15				

883. Owner of well, city of Wichita; owner of property, Maggie Holle. NW. corner sec. 26, T. 24 S., R. 2 W. Records available: 1939-48.

Jan. 29	24.13	May 1	22.21	Aug. 12	19.36	Nov. 3	21.99
Mar. 5	23.99	26	22.44	Sept. 1	19.51	Dec. 1	21.88
Apr. 1	22.18	June 29	19.14	24	21.92		

884. Owner of well, city of Wichita; owner of property, Maggie Holle. NW. corner sec. 26, T. 24 S., R. 2 W. Records available: 1939-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 29	24.39	Apr. 1	23.77	June 26	21.99
Mar. 5	24.20	May 1	23.83	Sept. 24	21.71

885. Owner of well, city of Wichita; owner of property, Maggie Holle. NW. corner sec. 26, T. 24 S., R. 2 W. Records available: 1939-48.

Jan. 29	24.81	Apr. 1	24.27	June 26	20.44
Mar. 5	24.52	May 1	24.36	Sept. 24	22.36

886. Owner of well, city of Wichita; owner of property, E. H. Haiber. NE. corner NW $\frac{1}{4}$ sec. 16, T. 24 S., R. 2 W. Records available: 1939-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	17.11	Apr. 31	18.05	July 31	15.71	Nov. 2	17.89
Feb. 26	17.16	May 30	18.41	Aug. 31	16.78	Dec. 1	17.61
Mar. 31	16.42	June 29	14.59	Sept. 30	17.56	30	17.89

887. 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. Records available: 1939-48.

Jan. 28	17.93	Apr. 1	17.00	June 29	15.41	Sept. 24	18.24
Feb. 23	17.81	May 1	19.35	July 31	16.58	Nov. 3	18.41
Mar. 29	17.00	26	20.74	Aug. 30	18.32	Dec. 1	18.36

894. Owner of well, city of Wichita; owner of property, H. A. Lawrence. NE. corner sec. 18, T. 24 S., R. 2 W. Records available: 1939-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 29	23.41	Apr. 1	23.61	July 7	23.31
Mar. 5	23.30	May 4	24.16	Oct. 3	23.31

895. Owner of well, city of Wichita; owner of property, H. A. Lawrence. NE, corner sec. 18, T. 24 S., R. 2 W. Records available: 1939-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 29	25.72	Apr. 1	24.21	July 7	23.95
Mar. 5	25.66	May 4	24.86	Oct. 3	26.32

1186. City of Wichita. SW, corner sec. 13, T. 24 S., R. 2 W. Records available: 1942-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	13.21	Mar. 23	11.89	July 13	11.05	Sept. 27	11.76
12	13.23	29	12.23	19	10.22	Oct. 4	11.83
19	13.24	Apr. 5	12.48	27	10.18	Nov. 3	11.90
26	13.26	May 3	12.54	Aug. 10	10.52	8	12.02
Feb. 2	13.29	25	12.61	16	10.75	15	12.06
9	13.34	June 1	13.00	30	10.79	29	12.12
24	13.02	22	13.01	Sept. 7	11.09	Dec. 6	12.10
Mar. 2	12.63	29	12.96	13	11.16	20	12.12
8	12.72	July 6	11.07	22	11.83	27	12.16
15	10.61						

1189. City of Wichita. SW, corner sec. 16, T. 24 S., R. 2 W. Records available: 1942-46. Measurements discontinued after Jan. 19, 1946.

1192. City of Wichita. SW, corner sec. 16, T. 24 S., R. 2 W. Records available: 1941-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 29	17.22	May 4	16.05	Oct. 3	15.44
Apr. 1	15.27	July 7	15.62		

2072. Owner, Peter Hoops and others; tenant, N. T. Unruh. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 5, T. 24 S., R. 2 W. Records available: 1943-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	36.40	Mar. 15	36.29	July 13	36.16	Sept. 27	36.20
12	36.41	29	36.26	19	36.10	Oct. 4	36.21
19	36.42	Apr. 5	36.28	27	36.07	Nov. 3	36.22
26	36.44	May 3	36.29	Aug. 10	36.11	8	36.23
Feb. 2	36.46	25	36.33	16	36.11	15	36.26
9	36.48	June 1	36.32	30	36.13	29	36.24
24	36.36	22	36.32	Sept. 7	36.15	Dec. 6	36.21
Mar. 2	36.33	29	36.28	13	36.15	20	36.20
8	36.33	July 6	36.19	22	36.17	27	36.21

2088. City of Wichita. NW, corner NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 22, T. 24 S., R. 2 W. Records available: 1944-46. Measurements discontinued after Jan. 19, 1946.

M-1. City of Wichita. NW, corner sec. 29, T. 23 S., R. 2 W. Records available: 1940-43.

Date	Water level	Date	Water level	Date	Water level
Jan. 29	a 71.52	Apr. 1	a 69.99	July 7	a 68.56
Mar. 5	36.03	May 4	a 69.75	Oct. 3	a 69.38

a Pumping.

M-1a. City of Wichita. NW. corner sec. 29, T. 23 S., R. 2 W. Records available: 1940-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 29	a 34.86	Apr. 1	a 34.03	July 7	a 35.12
Mar. 5	33.51	May 4	a 36.21	Oct. 3	a 35.26

a Pumping.

M-1b. City of Wichita. NW. corner sec. 29, T. 23 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 31.68	Apr. 1	a 34.16	July 7	a 34.13
Mar. 5	31.79	May 4	a 34.64	Oct. 3	a 34.64

a Well M-1 pumping.

M-2. City of Wichita. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 29, T. 23 S., R. 2 W. Records available: 1940. No measurements made in 1948.

M-2a. City of Wichita. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 29, T. 23 S., R. 2 W. Records available: 1940-48.

Jan. 29	38.68	Apr. 1	a 37.40	July 7	37.50
Mar. 2	38.41	May 4	37.80	Oct. 3	39.06

a Well M-2 pumping.

M-2b. City of Wichita. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 29, T. 23 S., R. 2 W. Records available: 1940-48.

Jan. 29	38.17	Apr. 1	a 37.38	July 7	36.86
Mar. 5	37.93	May 4	37.49	Oct. 3	38.74

a Well M-2 pumping.

M-2c. City of Wichita. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 29, T. 23 S., R. 2 W. Records available: 1946-48.

Jan. 29	38.58	Apr. 1	a 38.00	July 7	37.16
Mar. 5	38.77	May 4	37.60	Oct. 3	38.96

a Well M-2 pumping.

M-3. City of Wichita. SE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 29, T. 23 S., R. 2 W. Record available: 1940-48.

Jan. 29	42.29	Apr. 1	42.68	July 7	a 75.26
Mar. 5	a 75.89	May 4	a 75.81	Oct. 3	a 75.58

r a Pumping.

M-3a. City of Wichita. SE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 29, T. 23 S., R. 2 W. Records available: 1940-48.

Jan. 29	41.22	Apr. 1	40.81	July 7	a 42.86
Mar. 5	a 42.38	May 4	a 43.99	Oct. 3	a 46.73

a Well M-3 pumping.

M-3b. City of Wichita. SE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 29, T. 23 S., R. 2 W. Records available: 1940-48.

Jan. 29	41.78	Apr. 1	44.75	July 7	a 44.38
Mar. 5	a 43.06	May 4	a 44.97	Oct. 3	a 47.88

a Well M-3 pumping.

M-4. City of Wichita. SE. corner sec. 30, T. 23 S., R. 2 W. Records available: 1940-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 29	46.23	Apr. 1	a 91.89	Oct. 3	a 82.36
Mar. 5	45.56	May 4	45.61		

a Pumping.

M-4a. City of Wichita. SE. corner sec. 30, T. 23 S., R. 2 W. Records available: 1940-48.

Jan. 29	46.72	Apr. 1	a 45.10	July 7	a 50.62
Mar. 5	46.11	May 4	44.28	Oct. 3	51.93

a Well M-4 pumping.

M-4b. City of Wichita. SE. corner sec. 30, T. 23 S., R. 2 W. Records available: 1940-48.

Jan. 29	44.03	Apr. 1	a 44.72	July 7	a 43.46
Mar. 5	43.83	May 4	45.00	Oct. 3	47.88

a Well M-4 pumping.

M-5. City of Wichita. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 32, T. 23 S., R. 2 W. Records available: 1940-48. Jan. 29, 33.71.

M-5a. City of Wichita. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 32, T. 23 S., R. 2 W. Records available: 1940-48.

Jan. 29	34.03	Apr. 1	a 34.55	July 7	34.48
Mar. 5	34.67	May 4	35.33	Oct. 3	35.91

a Well M-5 pumping.

M-5b. City of Wichita. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 32, T. 23 S., R. 2 W. Records available: 1940-48.

Jan. 29	33.56	Apr. 1	a 32.57	July 7	34.16
Mar. 5	32.83	May 4	34.98	Oct. 3	34.94

a Well M-5 pumping.

M-6. City of Wichita. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 32, T. 23 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 92.71	Apr. 1	a 91.20	July 7	a 91.56
Mar. 5	35.56	May 4	a 92.03	Oct. 3	a 91.76

a Pumping.

M-6a. City of Wichita. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 32, T. 23 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 39.26	Apr. 1	a 34.30	July 7	a 36.17
Mar. 5	34.49	May 4	a 36.98	Oct. 3	a 36.86

a Well M-6 pumping.

M-6b. City of Wichita. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 32, T. 23 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 34.73	Apr. 1	a 33.24	July 7	a 35.83
Mar. 5	33.01	May 4	a 36.60	Oct. 3	a 36.88

a Well M-6 pumping.

M-7. City of Wichita. NW. corner SW $\frac{1}{4}$ sec. 16, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 32.72	Apr. 1	22.07	July 7	a 31.12
Mar. 5	a 32.61	May 4	a 32.16	Oct. 3	a 31.28

a Pumping.

M-7a. City of Wichita. NW. corner SW $\frac{1}{4}$ sec. 16, T. 24 S., R. 2 W. Records available: 1940-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 29	a 24.28	Apr. 1	22.71	July 7	a 22.46
Mar. 5	a 24.21	May 4	a 24.38	Oct. 3	a 22.86

a Well M-7 pumping.

M-7b. City of Wichita. NW. corner SW $\frac{1}{4}$ sec. 16, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 25.17	Apr. 1	22.77	July 7	a 22.33
Mar. 5	a 25.03	May 4	a 25.17	Oct. 3	a 24.05

a Well M-7 pumping.

M-8. City of Wichita. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 6, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 84.88	Apr. 1	a 84.00	July 7	a 82.96
Mar. 5	a 84.17	May 4	a 84.22	Oct. 3	a 87.76

a Pumping.

M-8a. City of Wichita. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 6, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 37.86	Apr. 1	a 32.40	July 7	a 32.91
Mar. 5	a 37.31	May 4	a 34.08	Oct. 3	a 33.29

a Well M-8 pumping.

M-8b. City of Wichita. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 6, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 30.89	Apr. 1	a 29.79	July 7	a 28.87
Mar. 5	a 30.63	May 4	a 29.97	Oct. 3	a 32.01

a Well M-8 pumping.

M-9. City of Wichita. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 6, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 57.63	Apr. 1	29.60	July 7	a 55.97
Mar. 5	a 27.16	May 4	a 57.96	Oct. 3	a 56.18

a Pumping.

M-9a. City of Wichita. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 8, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 28.92	Apr. 1	27.79	July 7	a 29.11
Mar. 5	a 24.38	May 4	a 29.85	Oct. 3	a 29.96

a Well M-9 pumping.

M-9b. City of Wichita. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 8, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 28.13	Apr. 1	24.97	July 7	a 24.93
Mar. 5	a 24.02	May 4	a 26.04	Oct. 3	a 29.09

a Well M-9 pumping.

M-10. City of Wichita. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 8, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 70.56	Apr. 1	a 69.19	July 7	a 70.96
Mar. 5	a 70.21	May 4	a 72.81	Oct. 3	a 71.81

a Pumping.

M-10a. City of Wichita. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 8, T. 24 S., R. 2 W. Records available: 1940-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 29	a 31.96	Apr. 1	a 31.53	July 7	a 31.93
Mar. 5	a 31.73	May 4	a 33.53	Oct. 3	a 32.36

a Well M-10 pumping.

M-10b. City of Wichita. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 8, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 30.71	Apr. 1	a 30.47	July 7	a 29.40
Mar. 5	a 30.56	May 4	a 31.00	Oct. 3	a 31.00

a Well M-10 pumping.

M-11. City of Wichita. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 8, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	23.28	Apr. 1	a 42.35	July 7	a 42.06
Mar. 5	a 43.26	May 4	a 43.19	Oct. 3	a 45.69

a Pumping.

M-11a. City of Wichita. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 8, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	23.36	Apr. 1	a 24.70	July 7	a 23.53
Mar. 5	a 23.56	May 4	a 24.91	Oct. 3	a 26.38

a Well M-11 pumping.

M-11b. City of Wichita. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 8, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	24.18	Apr. 1	a 24.24	July 7	a 23.26
Mar. 5	a 23.92	May 4	a 24.76	Oct. 3	a 26.24

a Well M-11 pumping.

M-12. City of Wichita. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 9, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 65.83	Apr. 1	a 60.00	July 7	a 59.71
Mar. 5	a 65.81	May 4	a 60.96	Oct. 3	a 61.71

a Pumping.

M-12a. City of Wichita. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 9, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 34.61	Apr. 1	a 32.85	July 7	a 32.83
Mar. 5	a 34.56	May 4	a 33.06	Oct. 3	a 34.63

a Well M-12 pumping.

M-12b. City of Wichita. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 9, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 31.26	Apr. 1	a 33.05	July 7	a 31.44
Mar. 5	a 31.10	May 4	a 33.24	Oct. 3	a 34.69

a Well M-12 pumping.

M-13. City of Wichita. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 17, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	22.68	Apr. 1	a 45.27	July 7	a 40.41
Mar. 5	22.11	May 4	a 41.56	Oct. 3	a 41.53

a Pumping.

M-13a. City of Wichita. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 17, T. 24 S., R. 2 W. Records available: 1940-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 29	24.32	Apr. 1	a 25.38	July 7	a 24.89
Mar. 5	24.26	May 4	a 25.91	Oct. 3	a 27.36

a Well M-13 pumping.

M-13b. City of Wichita. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 17, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	24.59	Apr. 1	a 25.90	July 7	a 25.06
Mar. 5	24.44	May 4	a 26.18	Oct. 3	a 26.95

a Well M-13 pumping.

M-14. City of Wichita. NW. corner NW $\frac{1}{4}$ sec. 16, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 56.37	Apr. 1	28.80	July 7	a 57.61
Mar. 5	36.11	May 4	a 57.53	Oct. 3	a 59.21

a Pumping.

M-14a. City of Wichita. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 16, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 35.41	Apr. 1	26.70	July 7	a 34.49
Mar. 5	30.63	May 4	a 36.02	Oct. 3	a 33.99

a Well M-14 pumping.

M-14b. City of Wichita. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 9, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 31.03	Apr. 1	30.18	July 7	a 29.24
Mar. 5	30.63	May 4	a 31.17	Oct. 3	a 32.21

a Well M-14 pumping.

M-15. City of Wichita. SE. corner NE $\frac{1}{4}$ sec. 9, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 79.63	Apr. 1	a 74.10	July 7	a 74.88
Mar. 5	a 79.49	May 4	a 75.24	Oct. 3	a 73.76

a Pumping.

M-15a. City of Wichita. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 9, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 34.72	Apr. 1	a 32.97	July 7	a 33.19
Mar. 5	a 33.42	May 4	a 33.58	Oct. 3	a 33.26

a Well M-15 pumping.

M-15b. City of Wichita. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 9, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 23.09	Apr. 1	a 23.08	July 7	a 32.39
Mar. 5	a 22.96	May 4	a 33.35	Oct. 5	a 31.95

a Well M-15 pumping.

M-16. City of Wichita. SE. corner SE $\frac{1}{4}$ sec. 9, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 55.69	Apr. 1	a 54.40	July 7	a 59.17
Mar. 5	a 55.91	May 4	a 59.31	Oct. 3	a 59.38

a Pumping.

M-16a. City of Wichita. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 9, T. 24 S., R. 2 W. Records available: 1940-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 29	a 30.62	Apr. 1	a 28.60	July 7	a 29.12
Mar. 5	a 30.48	May 4	a 29.85	Oct. 3	a 30.33

a Well M-16 pumping.

M-16b. City of Wichita. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 9, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 23.86	Apr. 1	a 23.61	July 7	a 23.41
Mar. 5	a 23.71	May 4	a 24.09	Oct. 3	a 23.82

a Well M-16 pumping.

M-17. City of Wichita. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 16, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 47.22	Apr. 1	29.30	July 7	a 46.73
Mar. 5	a 46.56	May 4	a 49.83	Oct. 3	a 46.88

a Pumping.

M-17a. City of Wichita. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 16, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 23.11	Apr. 1	15.35	July 7	a 16.46
Mar. 5	a 22.79	May 4	a 17.40	Oct. 3	a 16.68

a Well M-17 pumping.

M-17b. City of Wichita. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 16, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 16.06	Apr. 1	14.61	July 7	a 13.88
Mar. 5	a 15.86	May 4	a 15.85	Oct. 3	a 13.99

a Well M-17 pumping.

M-18. City of Wichita. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 22, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 50.08	Apr. 1	22.80	July 7	a 47.56
Mar. 5	24.58	May 4	a 49.63	Oct. 3	a 49.37

a Pumping.

M-18a. City of Wichita. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 22, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 20.86	Apr. 1	19.40	July 7	a 29.11
Mar. 5	21.18	May 4	a 30.60	Oct. 3	a 29.26

a Well M-18 pumping.

M-18b. City of Wichita. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 22, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 19.62	Apr. 1	18.89	July 7	a 21.77
Mar. 5	19.28	May 4	a 24.41	Oct. 3	a 23.00

a Well M-18 pumping.

M-19. City of Wichita. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 27, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	17.98	Apr. 1	a 36.37	July 7	a 36.91
Mar. 5	a 38.20	May 4	a 38.12	Oct. 3	a 35.67

a Pumping.

M-19a. City of Wichita. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 27, T. 24 S., R. 2 W. Records available: 1940-48.

M-19a--Continued.

Date	Water level	Date	Water level	Date	Water level
Jan. 29	19.66	Apr. 1	a 25.04	July 7	a 22.91
Mar. 5	a 25.14	May 4	a 24.67	Oct. 3	a 21.89

a Well M-19 pumping.

M-19b. City of Wichita. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 27, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	20.58	Apr. 1	a 21.29	July 7	a 19.90
Mar. 5	a 21.09	May 4	a 21.98	Oct. 3	a 19.99

a Well M-19 pumping.

M-20. City of Wichita. NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 8, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 64.83	Apr. 1	a 58.50	July 7	a 58.23
Mar. 5	a 64.64	May 4	a 59.43	Oct. 3	a 59.86

a Pumping.

M-20a. City of Wichita. NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 8, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 28.47	Apr. 1	a 29.33	July 7	a 28.28
Mar. 5	a 28.34	May 4	a 29.96	Oct. 3	a 28.89

a Well M-20 pumping.

M-20b. City of Wichita. NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 8, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 30.26	Apr. 1	a 30.59	July 7	a 28.43
Mar. 5	a 30.11	May 4	a 30.86	Oct. 3	a 29.17

a Well M-20 pumping.

M-21. City of Wichita. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 26, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 33.62	Apr. 1	17.24	July 7	a 30.88
Mar. 5	18.08	May 4	a 33.46	Oct. 3	a 30.71

a Pumping.

M-21a. City of Wichita. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 26, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 23.13	Apr. 1	17.59	July 7	a 19.76
Mar. 5	18.04	May 4	a 23.40	Oct. 3	a 23.29

a Well M-21 pumping.

M-21b. City of Wichita. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 26, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 21.73	Apr. 1	16.54	July 7	a 14.98
Mar. 5	16.43	May 4	a 20.93	Oct. 3	a 19.59

a Well M-21 pumping.

M-22. City of Wichita. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 26, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 44.83	Apr. 1	18.06	July 7	a 41.71
Mar. 5	a 44.47	May 4	a 41.86	Oct. 3	a 41.50

a Pumping.

M-22a. City of Wichita. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 26, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 21.16	Apr. 1	18.29	July 7	a 24.39
Mar. 5	a 20.73	May 4	a 25.08	Oct. 3	a 23.96

a Well M-22 pumping.

M-22b. City of Wichita. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 26, T. 24 S., R. 2 W. Records available: 1940-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 29	a 19.83	Apr. 1	18.84	July 7	a 20.27
Mar. 5	a 19.08	May 4	a 20.70	Oct. 3	a 22.01

a Well M-22 pumping.

M-23. City of Wichita. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 35, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 47.96	Apr. 1	21.20	July 7	a 45.38
Mar. 5	a 47.74	May 4	a 45.36	Oct. 3	a 44.53

a Pumping.

M-23a. City of Wichita. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 35, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 18.81	Apr. 1	16.35	July 7	a 20.46
Mar. 5	a 18.53	May 4	a 17.96	Oct. 3	a 20.13

a Well M-23 pumping.

M-23b. City of Wichita. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 35, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 16.72	Apr. 1	16.22	July 7	a 20.29
Mar. 5	a 16.26	May 4	a 17.44	Oct. 3	a 19.51

a Well M-23 pumping.

M-24. City of Wichita. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 35, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 48.94	Apr. 1	14.28	July 7	a 40.38
Mar. 5	17.08	May 4	a 43.56	Oct. 3	a 40.06

a Pumping.

M-24a. City of Wichita. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 35, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 21.43	Apr. 1	16.24	July 7	a 17.92
Mar. 5	17.52	May 4	a 20.35	Oct. 3	a 17.63

a Well M-24 pumping.

M-24b. City of Wichita. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 35, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	a 25.73	Apr. 1	18.40	July 7	a 16.72
Mar. 5	18.21	May 4	a 19.51	Oct. 3	a 15.09

a Well M-24 pumping.

M-25. City of Wichita. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 36, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	13.63	Apr. 1	11.92	July 7	a 41.56
Mar. 5	a 45.63	May 4	a 45.86	Oct. 3	a 40.86

a Pumping.

M-25a. City of Wichita. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 36, T. 24 S., R. 2 W. Records available: 1940-48.

Jan. 29	14.16	Apr. 1	11.64	July 7	a 13.46
Mar. 5	a 14.76	May 4	a 13.31	Oct. 3	a 13.17

a Well M-25 pumping.

M-25b. City of Wichita. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 1, T. 25 S., R. 2 W. Records available: 1940-48.

M-25b--Continued.

Date	Water level	Date	Water level	Date	Water level
Jan. 29	14.28	Apr. 1	13.21	July 7	a 12.50
Mar. 5	a 14.28	May 4	a 14.68	Oct. 3	a 11.97

a Well M-25 pumping.

M-26b. City of Wichita. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 22, T. 24 S., R. 2 W., 500 feet southwest of well M-26. Drilled observation well, diameter 1 $\frac{1}{4}$ inches, depth 79 feet below land-surface datum. Measuring point, top of pipe, 2.2 feet above land-surface datum. Records available: 1947-48. Nov. 22, 1947 15.02; July 7, 1948, 11.62; Oct. 4, 1948, 12.10.

Haskell County

Highest and lowest water levels for the period of record,
in 6 wells in Haskell County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
6	7.5	154.73	Nov. 20, 1946	158.66	Feb. 6, 1946
7	7.5	187.08	Aug. 17, 1948	189.06	Feb. 6, 1946
9	7.5	206.96	May 7, 1947	208.78	Aug. 9, 1943
10	7.5	47.96	Aug. 9, 1943	51.57	Nov. 21, 1946
11	7.5	183.84	Dec. 28, 1943	186.60	May 6, 1947
12	7.5	179.40	Nov. 3, 1941	184.88	Nov. 24, 1947

Difference between highest and lowest recorded water levels and net change in water levels, in 1948 and for period of record, in 6 wells in Haskell County

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise (+) or net decline (-) for period of record
6	3.93	-1.27	-1.22
7	1.98	-.96	-.75
9	1.82	+.33	+.32
10	3.61	+.36	+1.63
11	2.76	-2.11	-2.27
12	5.48	+.13	-4.29

6. Copeland State Bank. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 11, T. 29 S., R. 31 W. Records available: 1941-48. May 26, 156.01; Aug. 17, 156.28; Nov. 15, 157.37.

7. Etta McCoy. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 2, T. 30 S., R. 32 W. Records available: 1941-48. Correction: Depth to water level on Aug. 14, 1947, was 187.26 feet instead of 205.91 as indicated in Water-Supply Paper 1098. Tables giving highest water level and difference in water levels have been corrected in this report. Feb. 19, 188.07; May 26, 187.66; Aug. 17, 187.08; Nov. 15, 188.25.

9. Bessie Custer. NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 13, T. 30 S., R. 34 W. Records available: 1941-48. Feb. 19, 207.36. Measurements discontinued after Feb. 19, 1948.

10. Eli Stoops. SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 33, T. 30 S., R. 34 W. Records available: 1940, 1942-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	48.74	Apr. 17	50.37	July 15	50.22	Oct. 18	49.62
Feb. 19	48.68	May 26	50.38	Aug. 17	49.80	Nov. 15	49.77
Mar. 18	50.24	June 16	50.22	Sept. 21	49.33	Dec. 17	49.74

11. L. C. Leonard. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 20, T. 30 S., R. 32 W. Records available: 1941-48. Feb. 19, 185.30; Aug. 17, 186.31.

12. Sybol Smith. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 11, T. 30 S., R. 32 W. Records available: 1941-48. Aug. 17, 184.75.

14. William Dreyer. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 21, T. 27 S., R. 34 W. Records available: 1941-47. Measurements discontinued after Nov. 24, 1947.

Hodgeman County

By Janet S. Olson

Highest and lowest water levels for the period of record,
in 3 wells in Hodgeman County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
3	8	28.89	Oct. 21, 1948	34.77	Sept. 20, 1940
4	8	19.55	Oct. 21, 1948	27.52	Oct. 2, 1941
5	8	27.48	July 21, 1948	33.08	Oct. 29, 1940
					Aug. 20, 1946

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record, in 3 wells in Hodgeman County

Well	Difference between highest and lowest levels	Net rise in 1948	Net rise for period of record
3	5.88	2.91	5.80
4	7.97	4.09	7.48
5	5.60	.57	.78

3. W. J. Fox. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 12, T. 21 S., R. 22 W. Records available: 1940-48. Jan. 20, 31.24; Apr. 16, 31.06; July 21, 30.79; Oct. 21, 29.89.

4. William Macey. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 13, T. 22 S., R. 22 W. Records available: 1940-48. Jan. 20, 25.35; Apr. 16, 24.81; July 21, 21.99; Oct. 21, 19.55.

5. Roy Klein. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 36, T. 22 S., R. 22 W. Records available: 1940-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 20	31.42	Apr. 14	30.81	July 21	27.48	Sept. 23	29.65
Feb. 23	32.03	May 21	30.80	Aug. 24	27.58	Oct. 21	31.25
Mar. 23	30.97	June 24	30.87				

a Pumping recently.

Jackson County

5-15-22db. Fred Bergman Estate. NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 22, T. 5 S., R. 15 E. Drilled domestic well, diameter 12 inches, depth 31.8 feet below land-surface datum. Records available: 1948. Measuring point, top edge of tile casing, 1.2 feet above land-surface datum.

Date	Water level	Date	Water level	Date	Water level
May 27	20.22	Aug. 25	20.38	Nov. 27	21.29
July 3	20.28	Oct. 14	21.10		

7-15-3ca. Fred Shafer. NW $\frac{1}{4}$ of sec. 3, T. 7 S., R. 15 E. Unused drilled domestic well, diameter 6 inches, depth 17.2 feet below land-surface datum. Records available: 1948. Measuring point, top of casing, south side, 0.4 foot above land-surface datum.

7-15-3ca--Continued.

Date	Water level	Date	Water level	Date	Water level
May 26	6.17	Aug. 25	6.66	Nov. 27	6.52
July 3	5.85	Oct. 14	7.22		

9-15-23dcb. B. P. Albright. NW $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 23, T. 9 S., R. 15 E. Unused dug domestic and stock well, diameter 20 inches, depth 16 feet below land-surface datum. Records available: 1948. Measuring point, top of concrete platform, east side of hole, 0.7 foot above land-surface datum.

May 26	6.23	Aug. 25	7.54	Nov. 27	7.77
July 3	6.02	Oct. 14	8.31		

Jefferson County

11-19-27bcc. School district. SW $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 27, T. 11 S., R. 19 E. Dug public-supply well, diameter 2 feet, depth 32.9 feet below land-surface datum. Measuring point, top of concrete curbing, east side of hole, 0.2 foot above land-surface datum. Records available: 1948.

May 26	26.40	Aug. 25	25.62	Nov. 27	27.43
July 3	26.26	Oct. 14	25.74		

11-19-29bc. Bill Green. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 29, T. 11 S., R. 19 E. Unused dug domestic and stock well, diameter 36 inches, depth 22.7 feet below land-surface datum. Measuring point, top edge of 3- by 8-inch plank, 0.5 foot above land-surface datum. Records available: 1948.

May 26	21.45	Aug. 25	19.02	Nov. 27	24.87
July 3	19.41	Oct. 14	19.36		

Jewell County

Highest and lowest water levels for the period of record,
in 20 wells in Jewell County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
6	14	37.18	July 25, 1947	46.76	Oct. 13, 1937
8	14	3.87	June 24, 1947	68.06	Aug. 23, 1934
12	14	54.62	June 24, 1947	77.77	June 8, 1938
14	14	14.53	June 24, 1947	46.69	Mar. 20, 1934
22	14	9.38	June 24, 1947	25.62	Aug. 10, 1934
25	14	8.50	Sept. 24, 1945	15.72	Mar. 2, 1935
30	14	22.46	June 24, 1947	43.45	Sept. 20, 1940
34	14	9.85	Mar. 24, 1948	33.92	Aug. 19, 1940
40	14	37.64	July 16, 1945	43.13	Oct. 6, 1937
41	13	10.27	June 24, 1947	27.38	May 23, 1941
44	13	5.00	Aug. 2, 1944	24.03	May 9, 1935
45	13	18.24	June 24, 1947	34.39	Dec. 21, 1940
46	13	.36	June 24, 1947	17.54	Aug. 30, 1934
47	13	.98	June 24, 1947	13.84	May 9, 1935
48	13	6.66	Apr. 25, 1947	27.19	Oct. 25, 1934
49	12	13.15	June 24, 1947	46.93	Nov. 24, 1934
64	12	53.00	June 24, 1947	65.90	Jan. 19, 1938
65	12	9.62	Nov. 23, 1942	39.10	Aug. 20, 1940
66	12	8.67	June 24, 1947	27.55	Oct. 23, 1940
69	11	6.31	Sept. 17, 1946	24.50	Aug. 19, 1940

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record, in 20 wells in Jewell County

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise for period of record
6	17.57	+0.12	6.04
8	64.19	-.90	21.70
12	23.17	-.54	9.91
14	32.16	+.34	23.19
22	16.30	-.06	10.19
25	7.22	+.42	4.00
30	20.99	-1.77	14.05
34	24.07	+2.66	3.42
40	5.49	(a)	4.19
41	17.11	-1.84	10.42
44	19.03	-.46	8.43
45	16.15	-1.19	10.83
46	17.18	-.23	3.29
47	12.86	-.16	2.61
48	20.53	-.30	7.09
49	33.68	-2.97	.81
64	12.90	-.97	8.12
65	28.48	0	22.31
66	18.88	-1.09	7.96
69	18.19	-.13	8.77

a No measurement made end of 1948.

6. H. C. Doud. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 5, T. 3 S., R. 9 W. Correction: Depth to water level on Oct. 31, 1944, was 39.19 feet instead of 29.19 feet, as indicated in Water-Supply Paper 1018. Tables giving highest water level and difference in water levels have been corrected in this report. Records available: 1935-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	40.52	Apr. 26	38.47	July 1	39.47	Aug. 25	39.48
Feb. 25	40.66	May 26	38.86	July 26	39.57	Sept. 27	40.20
Mar. 24	39.22						

8. Will Zadina. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 17, T. 3 S., R. 9 W. Records available: 1935-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	25.70	May 26	18.27	July 26	18.02	Sept. 27	20.57
Mar. 24	14.04	July 1	17.54	Aug. 25	18.95	Nov. 26	24.73
Apr. 26	17.44						

12. M. W. Howe. Lot 4 of sec. 30, T. 3 S., R. 9 W. Records available: 1935-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	64.92	May 26	63.96	July 26	63.54	Sept. 27	64.84
Mar. 24	61.14	July 1	64.12	Aug. 25	64.69	Nov. 26	65.29
Apr. 26	61.68						

14. C. Walker. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 24, T. 3 S., R. 9 W. Records available: 1935-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	22.98	May 26	16.22	July 26	18.40	Sept. 27	20.98
Mar. 24	14.98	July 1	17.72	Aug. 25	19.72	Nov. 26	22.30
Apr. 26	14.56						

22. Meyer Miles. NW $\frac{1}{4}$ N $\frac{1}{2}$ sec. 10, T. 5 S., R. 9 W. Records available: 1935-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	12.80	May 26	12.00	July 26	10.40	Sept. 27	12.33
Mar. 25	11.94	July 1	12.02	Aug. 25	11.25	Nov. 26	12.69
Apr. 26	11.96						

25. J. N. Sorrell. NW $\frac{1}{4}$ sec. 29, T. 5 S., R. 9 W. Records available: 1935-48. Measurements discontinued after Aug. 25, 1948.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	11.22	Apr. 26	9.63	July 1	10.16	Aug. 25	10.58
Mar. 25	10.27	May 26	9.82	26	10.32		

30. Fred Van Wey. NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 28, T. 4 S., R. 9 W. Records available: 1935-48.

Jan. 26	25.95	Apr. 26	23.70	July 26	25.45	Oct. 25	26.93
Feb. 26	25.18	May 26	23.79	Aug. 25	26.49	Nov. 26	26.27
Mar. 25	24.28	June 25	25.40	Sept. 27	27.57	Dec. 27	26.05

34. Glen Kindler. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 18, T. 3 S., R. 10 W. Records available: 1936-48.

Jan. 26	18.49	May 26	15.65	July 26	11.56	Sept. 27	14.76
Mar. 24	9.85	July 1	16.75	Aug. 25	12.03	Nov. 26	15.68
Apr. 26	13.05						

40. R. L. McDaniel. SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 15, T. 4 S., R. 9 W. Records available: 1935-48. Jan. 26, 38.69; Mar. 24, 38.70. Measurements discontinued after Mar. 24, 1948.

41. Walter Dietz. Lot 16 of sec. 6, T. 5 S., R. 9 W. Records available: 1935-48.

Jan. 26	13.25	May 26	12.61	July 26	13.38	Sept. 27	15.29
Mar. 25	12.06	July 1	13.30	Aug. 25	14.42	Nov. 26	15.22
Apr. 26	12.24						

44. Cleo Gimple. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 13, T. 4 S., R. 9 W. Records available: 1935-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 26	9.35	May 26	9.40	Sept. 27	9.76
Apr. 26	11.30	July 1	9.40		

45. Victor Yapp. NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 24, T. 4 S., R. 10 W. Records available: 1935-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	19.77	May 26	19.77	July 26	20.67	Sept. 27	21.55
Mar. 24	19.35	July 1	20.36	Aug. 25	21.01	Nov. 26	20.94
Apr. 26	19.44						

46. Ralph Wierenga. Lot 3 of sec. 19, T. 5 S., R. 9 W. Records available: 1936-48.

Jan. 26	5.48	May 26	4.00	July 26	3.21	Sept. 27	5.90
Mar. 25	1.38	July 1	2.73	Aug. 25	4.77	Nov. 26	5.59
Apr. 26	3.30						

47. Meyer Miles. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 3, T. 5 S., R. 9 W. Records available: 1936-48.

Jan. 26	7.57	May 26	6.32	July 26	4.74	Sept. 27	7.62
Mar. 25	6.65	July 1	5.53	Aug. 25	6.60	Nov. 26	7.64
Apr. 26	6.82						

48. Frank Rogers. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 23, T. 4 S., R. 10 W. Records available: 1935-48.

Jan. 26	18.86	May 26	13.65	July 26	14.15	Sept. 27	17.06
Mar. 24	15.98	July 1	13.54	Aug. 25	15.54	Nov. 26	19.10
Apr. 26	14.77						

49. E. Underwood. SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 5, T. 3 S., R. 9 W. Records available: 1935-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	20.02	May 26	17.57	July 26	20.37	Sept. 27	22.77
Mar. 24	16.51	July 1	19.20	Aug. 25	21.70	Nov. 26	22.80
Apr. 26	16.57						

64. Chris Vandeventer, former owner. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 6, T. 3 S., R. 8 W. Records available: 1937-48.

Jan. 26	57.20	Apr. 26	55.75	July 1	56.63	Aug. 25	57.15
Feb. 25	57.12	May 26	56.25	26	56.58	Sept. 27	57.78
Mar. 24	55.31						

65. Mrs. B. M. Parkhurst. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 23, T. 3 S., R. 9 W. Records available: 1937-48.

Jan. 26	11.57	May 26	11.43	July 26	11.50	Sept. 27	12.20
Mar. 24	10.75	July 1	11.57	Aug. 25	11.83	Nov. 26	11.60
Apr. 26	11.18						

66. A. E. Cook farm. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 1, T. 5 S., R. 10 W. Records available: 1937-48.

Jan. 26	13.98	Apr. 26	13.54	July 26	13.90	Sept. 27	14.89
Mar. 25	13.64	July 1	14.22	Aug. 25	14.22	Nov. 26	14.97

69. Walter Dietz. NW $\frac{1}{4}$ lot 2 of sec. 7, T. 5 S., R. 9 W. Records available: 1937-48.

Jan. 26	11.47	May 26	11.10	July 26	7.76	Sept. 27	11.21
Mar. 25	9.87	July 1	13.52	Aug. 25	9.98	Nov. 26	11.46
Apr. 26	10.65						

1-6-5da. Geol. Survey, U. S. Dept. of Interior. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 5, T. 1 S., R. 6 W. Bored observation well, diameter 1.25 inches, depth 13.10 feet below land-surface datum. Measuring point, top of $\frac{1}{4}$ -inch pipe, 1.0 foot above land-surface datum. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level
Oct. 2, 1947	8.90	Feb. 20, 1948	8.98	July 26, 1948	6.96
13	9.09	Mar. 25	6.70	Aug. 19	8.31
Nov. 14	9.37	Apr. 16	7.77	Sept. 23	9.29
Dec. 17	9.54	May 20	8.45	Nov. 2	9.80
Jan. 15, 1948	9.36				

1-7-1bb. Geol. Survey, U. S. Dept. of Interior. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 1, T. 1 S., R. 7 W. Driven and bored observation well, diameter 1.25 inches, depth 16 feet below land-surface datum. Measuring point, top of $\frac{1}{4}$ -inch pipe, 1.0 foot above land-surface datum. Records available: 1947-48.

Oct. 2, 1947	9.93	Feb. 19, 1948	9.67	July 26, 1948	8.58
13	10.13	Mar. 25	8.63	Aug. 19	9.34
Nov. 14	10.39	Apr. 16	8.77	Sept. 23	10.27
Dec. 17	10.27	May 20	9.54	Nov. 2	10.80
Jan. 15, 1948	10.05				

1-7-2da. Geol. Survey, U. S. Dept. of Interior. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 2, T. 1 S., R. 7 W. Driven and bored observation well, diameter 1.25 inches, depth 13 feet below land-surface datum. Measuring point, top of $\frac{1}{4}$ -inch pipe, 1.0 foot above land-surface datum. Records available: 1948.

Oct. 3, 1947	6.90	Feb. 19, 1948	7.22	July 22, 1948	5.80
13	7.00	Mar. 25	4.51	Aug. 19	6.67
Nov. 14	7.30	Apr. 16	5.42	Sept. 23	7.50
Dec. 17	7.44	May 20	6.10	Nov. 2	7.97
Jan. 15, 1948	7.39				

Johnson County

12-23-29bcc. William Johnson. SW $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 29, T. 12 S., R. 23 E. Unused dug domestic well, diameter 3 feet, depth 15 feet below land-surface datum. Measuring point, top of boards over well, 0.2 foot above land-surface datum. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level
May 4	5.30	Aug. 26	6.52	Nov. 26	8.17
July 6	6.60	Oct. 15	8.39		

12-25-31aaa. C. M. Webb. NE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 31, T. 12 S., R. 25 E. Dug domestic and stock well, diameter 3 feet, depth 12.2 feet below land-surface datum. Measuring point, hole in top of concrete cover, east side, 0.7 foot above land-surface datum. Records available: 1948.

May 4	1.86	Aug. 26	2.01	Nov. 26	2.46
July 6	1.98	Oct. 15	2.12		

14-25-8bb. Mrs. Alice Allison. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 8, T. 14 S., R. 25 E. Unused dug domestic well, diameter 3 feet, depth 28.2 feet below land-surface datum. Measuring point, top of hole in 2- by 8-inch board cover, 0.8 foot above land-surface datum. Records available: 1948.

May 4	2.82	Aug. 26	6.78	Nov. 26	10.48
July 6	3.88	Oct. 15	10.39		

Kearny County

By Janet S. Olson

Highest and lowest water levels for the period of record,
in 7 wells in Kearny County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
1	9	6.37	Dec. 6, 1946	12.13	Sept. 10, 1943
2	9	50.39	Dec. 4, 1943	59.74	Sept. 20, 1940
12	6	5.52	Nov. 23, 1946	11.09	Nov. 6, 1943
13	9	1.47	May 9, 1942	8.93	Dec. 20, 1939
16	9	37.36	Nov. 11, 1948	47.81	July 3, 1941
19	9	130.24	Aug. 19, 1948	134.67	Nov. 15, 1945
28	9	121.33	Aug. 16, 1948	123.85	Feb. 19, 1940
					Oct. 22, 1940

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record, in 7 wells in Kearny County

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise for period of record
1	5.76	-1.18	3.23
2	9.35	-1.77	5.76
12	5.57	-.60	6.65
13	7.46	-.48	3.14
16	10.45	+1.64	8.12
19	4.43	+1.18	.56
28	2.52	+.92	2.14

1. R. T. Beatty. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 34, T. 24 S., R. 36 W. Records available: 1939-48. Jan. 22, 9.98; Feb. 25, 8.10.

2. C. E. Worthen. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 16, T. 24 S., R. 36 W. Records available: 1939-48. Jan. 22, 51.17; Feb. 25, 52.72.

12. J. E. Boymer. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 22, T. 24 S., R. 35 W. Records available: 1943-48. Feb. 28, 7.37. Measurements discontinued after Feb. 28, 1948.

13. D. S. Nicholson. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 15, T. 25 S., R. 37 W. Records available: 1939-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 22	5.30	Apr. 25	5.38	July 15	5.19	Oct. 11	4.69
Feb. 25	5.11	May 27	4.48	Aug. 20	4.58	Nov. 12	5.06
Mar. 21	4.50	June 16	5.02	Sept. 27	5.32	Dec. 27	5.42

16. C. B. Campbell. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 15, T. 23 S., R. 35 W. Records available: 1939-48. Feb. 29, 38.79; Aug. 19, 38.65; Nov. 11, 37.36.

19. E. M. Beymer. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 8, T. 26 S., R. 38 W. Records available: 1939-48. Feb. 20, 130.40; May 25, 131.53; Aug. 19, 130.24; Nov. 11, 130.31.

28. Harry Tate. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 26, T. 22 S., R. 37 W. Records available: 1939-48. Feb. 25, 121.46; May 27, 121.79; Aug. 16, 121.33; Nov. 11, 121.63.

Kingman County

Highest and lowest water levels for the period of record,
in 10 wells in Kingman County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
1	2.6	11.27	Mar. 31, 1948	15.25	Nov. 12, 1946
2	2.6	7.69	Jan. 9, 1946	13.80	Nov. 20, 1946
4	2.6	58.20	Feb. 19, 1947	65.13	Feb. 6, 1947
5	2.6	19.39	Feb. 8, 1946	20.60	Dec. 5, 1946
6	2.6	29.68	Mar. 31, 1948	32.68	Aug. 29, 1946
7	2.6	46.54	Nov. 13, 1945	48.73	Sept. 25, 1948
8	2.6	5.22	Mar. 31, 1948	8.32	Sept. 30, 1946
10	2.6	22.45	May 31, 1947	24.73	July 2, 1948
11	2.6	6.63	July 28, 1945	13.75	July 13, 1946
14	2.6	11.12	July 28, 1945	13.86	Jan. 10, 1947

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record, in 10 wells in Kingman County

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise (+) or net decline (-) for period of record
1	3.98	+0.83	-0.34
2	6.11	+0.59	-.21
4	6.93	-.01	+5.16
5	1.21	-.08	+1.6
6	3.00	-.03	+1.03
7	2.19	-.37	-2.19
8	3.10	+1.23	-.43
10	2.28	+0.62	+0.87
11	7.12	+0.81	-.23
14	2.74	+0.16	-2.11

1. A. A. Mueller. SE $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 1, T. 30 S., R. 8 W. Records available: 1945-48. Jan. 8, 12.63; Mar. 31, 11.27; July 2, 11.71; Sept. 25, 12.13.

2. L. A. Brammer. SE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 3, T. 30 S., R. 6 W. Records available: 1945-48. Jan. 8, 10.44; Mar. 31, 7.86; July 2, 9.83; Sept. 25, 10.07.

4. Owner unknown. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 9, T. 27 S., R. 9 W. Records available: 1945-48. Jan. 8, 58.67; Mar. 31, 61.60; July 2, 58.38; Sept. 25, 58.73.

5. School district. SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 6, T. 29 S., R. 6 W. Records available: 1945-48. Jan. 8, 20.21; Mar. 31, 20.47; July 2, 19.72; Sept. 25, 20.37.

6. Jane Garrett. NE $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 3, T. 29 S., R. 6 W. Records available: 1945-48. Jan. 8, 30.11; Mar. 31, 29.68; July 2, 29.72; Sept. 25, 30.26.

7. S. Schrag. SW $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 5, T. 27 S., R. 5 W. Records available: 1945-48. Jan. 8, 48.21; Mar. 31, 47.09; July 2, 48.00; Sept. 25, 48.73.

8. John McClure. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 10, T. 27 S., R. 7 W. Records available: 1945-48. Jan. 8, 7.27; Mar. 31, 5.22; July 2, 6.66; Sept. 25, 6.18.

10. W. H. Stephens. SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 11, T. 30 S., R. 5 W. Records available: 1945-48. Jan. 8, 25.27; Mar. 31, 24.79; July 2, 24.73; Sept. 25, 24.86.

11. S. Bolinger. SE $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 12, T. 28 S., R. 5 W. Records available: 1945-48. Jan. 8, 7.24; Mar. 31, 8.47; July 2, 6.68; Sept. 25, 6.86.

14. Rilla Marteney. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 22, T. 28 S., R. 7 W. Records available: 1945-48. Jan. 8, 13.24; July 2, 12.96; Sept. 25, 13.23.

19. Cunningham Helium Plant. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 31, T. 27 S., R. 10 W. Records available: 1945-47. Measurements discontinued after May 31, 1947.

20. Cunningham Helium Plant. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 31, T. 27 S., R. 10 W. Records available: 1945-47. Measurements discontinued after May 31, 1947.

Kiowa County

Highest and lowest water levels for the period of record,
in 5 wells in Kiowa County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
4	8	72.78	Sept. 22, 1948	76.07	Aug. 20, 1947
7	8	25.19	Sept. 22, 1948	32.51	Mar. 22, 1947
8	8	21.43	Dec. 29, 1948	25.62	Apr. 28, 1947
10	8	104.67	Sept. 18, 1945	120.18	June 23, 1947
19	8	33.17	Dec. 29, 1948	37.30	June 19, 1947

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record, in 5 wells in Kiowa County

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise (+) or net decline (-) for period of record
4	3.29	-1.82	+0.81
7	7.32	+1.55	+5.12
8	5.19	+1.07	+4.53
10	15.51	-9.93	-8.33
19	4.13	+1.10	+5.81

4. H. E. Davis. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 4, T. 28 S., R. 16 W. Measuring point beginning Jan. 1, 1948, top of 6-inch casing, south side, 0.5 foot below old measuring point, 0.5 foot above land-surface datum. Records available: 1940-48. Mar. 21, 73.33; June 23, 72.92; Sept. 22, 72.78; Dec. 29, 74.71.

7. A. C. Weaver. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 23, T. 27 S., R. 18 W. Records available: 1940-48. Mar. 21, 28.02; June 23, 28.05; Sept. 22, 25.19; Dec. 29, 27.13.

8. E. E. Miller. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 18, T. 27 S., R. 18 W. Records available: 1940-48. Mar. 21, 21.97; June 23, 22.26; Sept. 22, 21.68; Dec. 29, 21.43.

10. J. E. Ely. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 23, T. 30 S., R. 18 W. Records available: 1940-48. Mar. 21, 105.28; June 23, 120.18; Sept. 22, 116.46; Dec. 29, 115.10.

19. C. Williamson. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 21, T. 27 S., R. 17 W. Records available: 1944-48. Mar. 21, 34.44; June 23, 34.47; Sept. 22, 33.35; Dec. 29, 33.17.

Labette County

Highest and lowest water levels for the period of record,
in 4 wells in Labette County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
1	6	1.20	Oct. 1, 1945	15.49	Oct. 16, 1946
2	6	+ .28	Aug. 1, 1948	13.62	Oct. 17, 1943
3	6	.28	Aug. 1, 1945	11.52	Sept. 16, 1946
4	6	4.21	May 1, 1948	14.77	Oct. 16, 1946

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record in 4 wells in Labette County

Well	Difference between highest and lowest levels	Net rise in 1948	Net decline for period of record
1	14.29	1.00	4.01
2	13.90	3.98	6.70
3	11.24	4.67	.10
4	10.56	1.72	6.55

1. J. Ballah. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 33, T. 31 S., R. 21 E. Records available: 1942-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 18	14.29	May 1	11.18	Aug. 1	2.77	Oct. 17	15.34
Feb. 16	14.71	16	9.48	16	3.61	Nov. 1	12.11
Mar. 1	14.59	June 2	11.84	Sept. 1	9.54	16	12.96
16	13.22	16	12.98	16	11.02	Dec. 1	13.28
Apr. 1	10.49	July 1	4.72	Oct. 1	12.18	16	13.32
17	12.06	16	4.66				

2. C. Givens. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 27, T. 31 S., R. 21 E. Records available: 1943-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 18	12.22	May 1	6.70	Aug. 1	+0.28	Oct. 17	10.88
Feb. 16	12.49	16	2.07	16	1.22	Nov. 1	10.31
Mar. 1	12.32	June 2	6.48	Sept. 1	5.42	16	8.62
16	11.04	16	9.81	16	8.00	Dec. 1	8.88
Apr. 1	2.28	July 1	1.88	Oct. 1	9.17	16	8.34
17	4.08	16	1.81				

3. B. H. Foster. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 34, T. 31 S., R. 21 E. Records available: 1943-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 1	11.00	May 16	2.98	Aug. 1	0.28	Oct. 17	8.36
16	10.30	June 2	5.64	16	1.30	Nov. 1	5.73
Apr. 1	4.59	16	6.34	Sept. 1	3.49	16	4.42
17	6.34	July 1	1.15	16	5.02	Dec. 1	5.61
May 1	4.46	16	1.13	Oct. 1	6.22	16	6.31

4. Roy Schierenberg. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 3, T. 32 S., R. 21 E. Records available: 1943-48.

Jan. 18	13.01	May 1	12.08	Aug. 1	7.98	Oct. 17	10.96
Feb. 16	13.04	16	11.87	16	6.02	Nov. 1	10.21
Mar. 1	13.99	June 2	11.84	Sept. 1	8.42	16	10.94
16	12.91	16	12.28	16	9.61	Dec. 1	11.09
Apr. 1	12.28	July 1	9.82	Oct. 1	10.09	16	11.20
17	12.09	16	9.78				

Leavenworth County

8-22-7c. Mrs. Joe Kennedy. SW $\frac{1}{4}$ of sec. 7, T. 8 S., R. 22 E. Unused dug domestic well, diameter 5 feet, depth 14.6 feet below land-surface datum. Measuring point, top edge of hole in concrete platform, west side, 1.0 foot above land-surface datum. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level
May 28	5.52	Aug. 25	3.43	Nov. 27	9.53
July 3	2.45	Oct. 14	9.15		

10-22-34ad. A. K. Mussett. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 34, T. 10 S., R. 22 E. Unused dug domestic well, diameter 6 feet, depth 34.8 feet below land-surface datum. Measuring point, top of concrete, north side, 1.0 foot above land-surface datum. Records available: 1948.

May 28	2.79	Aug. 25	2.91	Nov. 27	2.50
July 3	1.11	Oct. 14	2.86		

Lincoln County

By Janet S. Olson

Highest and lowest water levels for the period of record,
in 16 wells in Lincoln County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
11-7-32dc	1	73.74	Apr. 6, 1948	74.67	Sept. 8, 1947
11-8-34cc	1	4.17	Apr. 6, 1948	7.45	Nov. 28, 1947
12-6-12cd	1	11.64	Aug. 9, 1948	15.52	Jan. 12, 1948
12-6-16cc	1	21.09	Apr. 28, 1947	24.87	Nov. 28, 1947
12-7-18aa	1	20.15	July 24, 1947	25.43	Nov. 28, 1947
					Jan. 12, 1948
12-7-19dd	1	10.58	Aug. 9, 1948	17.18	Jan. 12, 1948
12-7-23aa	1	10.56	Aug. 9, 1948	13.43	Jan. 12, 1948
12-7-34ad	1	49.90	Aug. 9, 1948	50.84	Feb. 21, 1947
12-8-6aa	1	5.92	Apr. 28, 1947	10.53	Sept. 8, 1947
12-8-8cd	1	12.53	Apr. 6, 1948	14.30	Jan. 12, 1948
12-8-11cb	1	15.85	Aug. 9, 1948	19.35	Jan. 12, 1948
12-9-10ad	1	18.52	Sept. 29, 1948	20.26	Jan. 12, 1948
					Apr. 6, 1948
12-10-8bb	1	14.65	Aug. 9, 1948	16.58	Jan. 12, 1948
12-10-13aa	1	19.36	Aug. 9, 1948	24.48	Jan. 12, 1948
12-10-17ab	1	25.61	July 24, 1947	28.49	Dec. 7, 1948
12-10-21dd	1	25.98	July 24, 1947	27.38	Jan. 12, 1948

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record in 16 wells in Lincoln County

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise (+) or net decline (-) for period of record
11-7-32dc	0.93	+0.33	+0.04
11-8-34cc	3.28	+1.01	-1.10
12-6-12cd	3.88	+1.03	-.18
12-6-16cc	3.78	+.38	-3.31
12-7-18aa	3.28	+.64	-2.17
12-7-19dd	2.60	+.39	+1.04
12-7-23aa	2.87	+1.94	+2.06
12-7-34ad	.94	+.67	+.80
12-8-6aa	4.61	+1.12	-1.39
12-8-8cd	1.77	+.10	-.33
12-8-11cb	4.50	+.76	-.07
12-9-10ad	1.74	+1.39	+1.03
12-10-8bb	1.93	+.12	-.23
12-10-13aa	5.12	+3.70	+3.66
12-10-17ab	2.88	-1.71	-2.33
12-10-21dd	1.40	-.32	-.45

11-7-32dc. Owner unknown. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 32, T. 11 S., R. 7 W. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 12	74.55	May 20	74.23	Sept. 29	74.30
Apr. 6	73.74	Aug. 9	73.80		

11-8-34cc. School district. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 34, T. 11 S., R. 8 W. Records available: 1947-48. Measurements discontinued after Sept. 29, 1948.

Date	Water level	Date	Water level	Date	Water level
Jan. 12	7.32	May 20	6.83	Sept. 29	6.44
Apr. 6	4.17	Aug. 9	5.24		

12-6-12cd. Harry W. Woody. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 12, T. 12 S., R. 6 W. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 12	15.52	May 20	13.82	Sept. 29	13.27
Apr. 6	13.36	Aug. 9	11.64	Dec. 6	13.77

12-6-16cc. Owner unknown. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 16, T. 12 S., R. 6 W. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 12	24.70	May 20	24.12	Sept. 29	24.00
Apr. 6	23.80	Aug. 9	22.35	Dec. 6	24.49

12-7-18aa. Mr. Hendrickson. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 18, T. 12 S., R. 7 W. Records available: 1947-48. Jan. 12, 23.43; Apr. 6, 22.89; May 20, 23.07; Sept. 29, 22.79.

12-7-19dd. Owner unknown. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 19, T. 12 S., R. 7 W. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 12	13.18	May 20	11.38	Sept. 29	11.10
Apr. 6	11.57	Aug. 9	10.58	Dec. 6	11.56

12-7-23aa. Owner unknown. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 23, T. 12 S., R. 7 W. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 12	13.43	May 20	11.99	Sept. 29	11.34
Apr. 6	12.17	Aug. 9	10.56		

12-7-34ad. Owner unknown. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 34, T. 12 S., R. 7 W. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 12	50.60	May 20	50.03	Sept. 29	50.04
Apr. 6	50.30	Aug. 9	49.90		

12-8-6aa. Owner unknown. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 6, T. 12 S., R. 8 W. Records available: 1947-48.

Jan. 12	8.70	May 20	8.15	Sept. 29	9.07
Apr. 6	6.63	Aug. 9	8.00	Dec. 7	7.73

12-8-8cd. Owner unknown. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 8, T. 12 S., R. 8 W. Records available: 1947-48.

Jan. 12	14.30	May 20	13.16	Sept. 29	13.90
Apr. 6	12.53	Aug. 9	12.55	Dec. 7	14.00

12-8-11cb. Owner unknown. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 11, T. 12 S., R. 8 W. Records available: 1947-48.

Jan. 12	19.35	May 20	18.60	Sept. 29	18.44
Apr. 6	18.30	Aug. 9	15.85		

12-9-10ad. Owner unknown. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 10, T. 12 S., R. 9 W. Records available: 1947-48.

Jan. 12	20.26	May 20	20.18	Sept. 29	18.52
Apr. 6	20.26	Aug. 9	18.83	Dec. 7	18.58

12-10-8bb. G. Meitler. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 8, T. 12 S., R. 10 W. Records available: 1947-48.

Jan. 12	16.58	May 20	a 18.90	Sept. 29	15.40
Apr. 6	15.96	Aug. 9	14.65	Dec. 7	a 16.43

a Pumping.

12-10-13aa. Saenger Estate. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 13, T. 12 S., R. 10 W. Records available: 1947-48.

Jan. 12	24.48	May 20	22.94	Sept. 29	19.73
Apr. 6	23.64	Aug. 9	19.36	Dec. 7	20.42

12-10-17ab. Gorge School district. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 17, T. 12 S., R. 10 W. Records available: 1947-48.

Jan. 12	26.80	May 20	26.86	Sept. 29	26.42
Apr. 6	26.65	Aug. 9	25.98	Dec. 12	28.49

12-10-21dd. Owner unknown. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 21, T. 12 S., R. 10 W. Records available: 1947-48.

Jan. 12	27.38	May 20	27.26	Sept. 29	27.13
Apr. 6	27.13	Aug. 9	26.88	Dec. 7	27.32

Linn County

19-24-36aa. Mr. Newby. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 36, T. 19 S., R. 24 E. Unused dug domestic well, diameter 6 feet, depth 21 feet below land-surface datum. Measuring point, top of hole in concrete base, east side, 0.3 foot above land-surface datum. Records available: 1948.

May 5	10.84	Aug. 26	10.47	Nov. 26	13.81
July 6	9.41	Oct. 15	11.38		

22-25-6cb. E. C. Smith. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 6, T. 22 S., R. 25 E. Unused dug domestic and stock well, diameter 5 feet, depth 15.8 feet below land-surface datum. Measuring point, top of concrete, south side of hole, 0.6 foot above land-surface datum. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level
May 5	12.98	Aug. 26	12.11	Nov. 26	13.21
July 6	13.19	Oct. 15	12.97		

23-25-7daa. O. M. Grigsby. NE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 7, T. 23 S., R. 25 E. Unused dug domestic well, diameter 3 feet, depth 19 feet below land-surface datum. Measuring point, top of concrete, north side of hole, 0.6 foot above land-surface datum. Records available: 1948.

May 5	17.21	Aug. 26	15.45	Nov. 26	15.29
July 6	17.05	Oct. 15	15.33		

Logan County

By Janet S. Olson

Highest and lowest water levels for the period of record,
in 3 wells in Logan County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
1	6	96.42	Jan. 22, 1944	99.29	Jan. 6, 1947
2	6	59.39	Oct. 13, 1948	65.21	Feb. 27, 1944
4	6	33.23	Apr. 4, 1947	34.85	Aug. 6, 1943

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record in 3 wells in Logan County

Well	Difference between highest and lowest levels	Net rise in 1948	Net rise (+) or net decline (-) for period of record
1	2.87	0.12	-0.57
2	5.82	.49	+3.58
4	1.62	.95	+1.27

1. Octon Estate. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 2, T. 11 S., R. 32 W. Records available: 1942-48. Jan. 14, 97.66; Apr. 13, 97.28; July 13, 97.50; Oct. 13, 97.79.

2. J. J. Schultz. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 34, T. 11 S., R. 32 W. Records available: 1942-48. Jan. 14, 59.97; Apr. 13, 59.98; July 13, 59.89; Oct. 13, 59.59.

4. L. L. Garrison Estate. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 10, T. 13 S., R. 32 W. Records available: 1942-48. Jan. 14, 33.39; Apr. 13, 33.30; July 13, 33.28; Oct. 13, 32.32.

McPherson County

By Janet S. Olson

Highest and lowest water levels for the period of record,
in 7 wells in McPherson County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
243	11	80.98	Oct. 2, 1948	83.48	Jan. 6, 1948
249	11	25.26	July 3, 1945	36.13	Apr. 2, 1940
260	11	21.18	Oct. 1, 1942	27.85	Nov. 4, 1937

a Pumping recently.

Highest and lowest water levels for the period of record
in 7 wells in McPherson County--Continued

Well	Length of record (years)	Highest level	Date	Lowest level	Date
262	11	21.51	Aug. 3, 1945	b 41.35	Nov. 2, 1938
309	11	20.74	Apr. 8, 1944	37.26	Mar. 26, 1938
310	11	7.03	Apr. 8, 1946	19.39	Nov. 4, 1937
311	11	7.09	May 4, 1945	13.06	Dec. 31, 1939

b Pumping.

Difference between highest and lowest recorded water levels and net change
in water level, in 1948 and for period of record in 7 wells in McPherson
County

Well	Difference between Highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise (+) or net decline (-) for period of record
243	2.50	+2.26	+2.11
249	10.37	+1.28	+2.06
260	6.67	+.20	+1.82
262	19.84	-4.36	-2.95
309	16.52	+10.05	-.37
310	12.36	+.16	+12.13
311	5.97	+.99	+2.24

243. Emma Bergstrom. $SE\frac{1}{4}SW\frac{1}{4}SE\frac{1}{4}$ sec. 5, T. 19 S., R. 3 W. Records available: 1937-48. Jan. 6, 83.48; Apr. 6, 82.69; July 9, 82.46; Oct. 2, 80.98.

249. Prudential Life Insurance Co. SE. corner sec. 5, T. 18 S., R. 3 W. Records available: 1937-48. Jan. 6, 35.08; Apr. 6, 34.52; July 9, 34.18; Oct. 2, 34.03.

260. John Rawson. $SE\frac{1}{4}SE\frac{1}{4}$ sec. 33, T. 17 S., R. 4 W. Records available: 1937-48. Jan. 6, 27.13; Apr. 6, 26.61; July 9, 26.19; Oct. 2, 26.03.

262. P. A. Olsen. $NE\frac{1}{4}NW\frac{1}{4}NE\frac{1}{4}$ sec. 1, T. 18 S., R. 5 W. Records available: 1937-48. Jan. 6, 33.49; Apr. 6, 33.08; July 9, 32.96; Oct. 2, 33.03.

309. Mrs. Ida Tuxhorn. $SW\frac{1}{4}SW\frac{1}{4}$ sec. 9, T. 21 S., R. 4 W. Records available: 1937-48. Jan. 6, 30.69; Apr. 6, 30.33; July 9, 29.72; Oct. 2, 29.70.

310. City of Moundridge. $SW\frac{1}{4}NE\frac{1}{4}SW\frac{1}{4}$ sec. 23, T. 21 S., R. 2 W. Records available: 1938-48. Jan. 6, 8.00; Apr. 6, 7.72; July 9, 7.22; Oct. 2, 7.26.

311. City of Moundridge. $SW\frac{1}{4}NE\frac{1}{4}SW\frac{1}{4}$ sec. 23, T. 21 S., R. 2 W. Records available: 1938-48. Jan. 6, 10.88 (well pumping); Apr. 6, 10.34; July 9, 9.83; Oct. 2, 9.96.

Smoky Hill Valley

Highest and lowest water levels for the period of record,
in 4 wells in McPherson County, Smoky Hill Valley

Well	Length of record (years)	Highest level	Date	Lowest level	Date
17-3-17dd	2.5	26.24	Nov. 4, 1946	28.18	Dec. 1, 1947
17-3-18dd	2.5	26.42	July 21, 1947	28.40	Jan. 6, 1948
17-3-30dd	2.5	29.40	Dec. 2, 1946	31.36	Jan. 6, 1948
17-4-25dd	2.5	24.30	Apr. 23, 1946	25.80	Jan. 6, 1948

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record in 4 wells in McPherson County, Smoky Hill Valley

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise (+) or net decline (-) for period of record
17-3-17dd	1.94	+0.70	-0.52
17-3-18dd	1.98	+.91	+.04
17-3-30dd	1.96	+.41	-.39
17-4-25dd	1.50	-.67	+.67

17-3-17dd. Geol. Survey, U. S. Dept. of Interior. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 17, T. 17 S., R. 3 W. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 6	28.16	May 28	27.77	Sept. 30	27.54
Apr. 7	27.35	Aug. 6	27.10	Dec. 2	27.48

17-3-18dd. Geol. Survey, U. S. Dept. of Interior. SW $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 18, T. 17 S., R. 3 W. Records available: 1946-48.

Jan. 6	28.40	May 28	27.80	Sept. 30	27.14
Apr. 7	27.49	Aug. 6	26.52	Dec. 2	27.40

17-3-30dd. Geol. Survey, U. S. Dept. of Interior. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 30, T. 17 S., R. 3 W. Records available: 1946-48.

Jan. 6	31.36	May 28	31.02	Sept. 30	30.77
Apr. 7	30.72	Aug. 6	30.46	Dec. 2	30.92

17-4-25dd. Geol. Survey, U. S. Dept. of Interior. SE. corner sec. 25, T. 17 S., R. 4 W. Records available: 1946-48.

Jan. 6	25.80	May 28	25.23	Sept. 30	24.86
Apr. 7	25.05	Aug. 6	24.40	Dec. 2	24.97

Meade County

By Janet S. Olson

Highest and lowest water levels for the period of record, in 6 wells in Meade County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
33	9.5	37.33	Nov. 23, 1942	38.75	Nov. 3, 1943
34	9.5	143.28	Dec. 14, 1944	150.39	Oct. 29, 1939
45	9.5	1.33	June 20, 1947	4.10	Aug. 31, 1939
61	9.5	59.23	Dec. 17, 1948	60.77	May 17, 1940
77	9.5	62.00	June 17, 1944	67.12	Sept. 9, 1943
234	9.5	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 1948 and for period of record, in 6 wells in Meade County

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise (+) or net decline (-) for period of record
33	1.42	+0.24	-0.35
34	7.11	-.84	-.11
45	2.77	-1.16	+.75
61	1.54	+2.17	+1.33
77	5.12	+.68	+.91
234	2.54	(a)	+2.19

a No measurements made end of 1947.

33. W. L. Woodruff. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 34, T. 33 S., R. 26 W. Records available: 1939-48. Mar. 19, 37.94.

34. School district. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 17, T. 33 S., R. 27 W. Records available: 1939-48. Mar. 19, 146.88; June 17, 146.90; Dec. 17, 146.79.

45. Joseph Rocke. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 31, T. 30 S., R. 27 W. Records available: 1939-48. Mar. 19, 1.49; June 17, 2.16; Sept. 21, 2.36; Dec. 17, 2.62.

55. C. W. Farris. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 15, T. 30 S., R. 26 W. Records available: 1939-47. No measurements made in 1948.

61. John Meyer. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 26, T. 31 S., R. 27 W. Records available: 1939-48. June 17, 59.28; Sept. 21, 59.49; Dec. 17, 59.23.

77. J. W. Wood. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 4, T. 32 S., R. 28 W. Records available: 1939-48. June 17, 63.42; Sept. 21, 63.14; Dec. 17, 62.21.

88. H. V. Gerlick. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 14, T. 31 S., R. 28 W. Records available: 1939-46. Measurements discontinued after Sept. 20, 1946.

234. Christopher Sobba. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 23, T. 30 S., R. 27 W. The recorder and shelter were destroyed by a tornado in April 1947. Another recorder was installed and measurements were resumed in July 1948. Measuring point beginning September 1948, top of casing, 0.15 foot below old measuring point, at land-surface datum. Records available: 1939-48.

Lowest daily water level

Day	Aug.	Sept.	Oct.	Nov.	Dec.	Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	14.16	.....	13.55	13.37	13.33	17	.....	.....	13.72	13.65	13.69	13.42
2	14.12	.....	13.57	13.36	13.32	18	.....	.....	13.69	13.60	13.72	13.36
3	13.96	.....	13.57	13.33	13.32	19	.....	.....	13.67	13.53	13.64	13.36
4	.....	13.44	13.55	13.33	13.30	20	.....	.....	13.67	13.54	.....	13.33
5	.....	13.54	13.48	13.39	13.33	21	.....	.....	13.65	13.57	.....	13.35
6	.....	13.57	13.50	13.40	13.33	22	.....	.....	13.61	13.58	.....	13.35
7	.....	13.65	13.54	13.39	13.35	23	.....	.....	13.55	13.59	.....	13.34
8	13.48	13.71	13.54	13.40	13.36	24	.....	.....	13.57	13.60	.....	13.35
9	13.45	13.66	13.54	13.40	13.38	25	.....	.....	13.62	13.57	.....	13.38
10	13.38	13.58	13.58	13.38	13.37	26	.....	.....	13.65	13.52	13.38	.....
11	13.35	13.51	13.59	13.40	13.32	27	.....	.....	13.64	13.48	13.36	.....
12	13.31	13.51	13.60	13.50	13.40	28	.....	.....	13.64	13.45	13.38	.....
13	13.23	13.43	13.62	13.50	13.41	29	.....	.....	13.59	13.42	13.36	.....
14	13.23	13.47	13.63	13.47	13.40	30	.....	.....	13.54	13.42	13.36	.....
15	13.22	13.52	13.62	13.45	13.42	31	14.11	.....	.....	13.41	.....	.....
16	.....	13.77	13.65	13.59	13.42							

Miami County

16-25-5ccc. C. E. Moews. SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 5, T. 16 S., R. 25 E. Unused dug domestic and stock well, diameter 8 feet, depth 18.2 feet below land-surface datum. Measuring point, top of hole in 2- by 8-inch board cover, 0.2 foot above land-surface datum. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level
May 4	3.54	Aug. 26	3.91	Nov. 26	5.28
July 6	3.12	Oct. 15	5.35		

Mitchell County

By Janet S. Olson

Highest and lowest water levels for the period of record,
in 11 wells in Mitchell County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
6-8-34cc	1	a 16.65	July 29, 1947	a 18.30	Sept. 29, 1947
6-9-27ab	13	22.36	June 24, 1947	31.10	May 11, 1935
6-9-30da	2	26.70	Nov. 20, 1946	29.30	Nov. 29, 1948
7-6-30bc	2	20.60	Dec. 10, 1946	30.32	July 28, 1948
7-6-34cb	2	22.93	July 28, 1948	32.19	Nov. 29, 1948
7-7-7aa	2	28.16	July 29, 1947	29.70	May 27, 1948
7-7-15dc	2	19.47	July 29, 1948	22.90	May 27, 1948
7-8-5cb	2	25.04	Nov. 8, 1946	29.18	Nov. 29, 1948
7-9-2bc	2	27.60	July 29, 1947	32.54	Nov. 29, 1948
7-10-10cc	2	25.25	July 29, 1948	26.84	Oct. 14, 1946
8-6-12dd	2	31.76	Mar. 30, 1948	34.13	Sept. 29, 1947

a Pumping.

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record in 11 wells in Mitchell County

Well	Difference between Highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise (+) or net decline (-) for period of record
6-8-34cc	1.65	+0.16	-0.48
6-9-27ab	8.74	+0.01	+3.40
6-9-30da	2.60	-.75	-2.14
7-6-30bc	9.72	+2.33	+1.39
7-6-34cb	9.26	-3.60	-7.84
7-7-7aa	1.54	-.22	-.18
7-7-15dc	3.43	+0.37	-.92
7-8-5cb	4.14	-.58	-4.14
7-9-2bc	4.94	-1.45	-4.19
7-10-10cc	1.59	+0.20	+0.90
8-6-12dd	2.37	-.04	+0.05

6-9-34cc. Owner unknown. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 34, T. 6 S., R. 8 W. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level
Feb. 2	18.13	May 27	17.83	Sept. 28	17.85
Mar. 30	17.66	July 29	17.14	Nov. 29	a 18.00

a Pumping.

6-9-27ab. (Listed as well 42 in Jewell County in reports prior to 1947). L. Lowdermilk. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 27, T. 6 S., R. 9 W. Records available: 1935-48.

Date	Water level	Date	Water level	Date	Water level
Feb. 2	26.61	May 27	26.48	Sept. 28	26.63
Mar. 30	26.18	July 29	25.55	Nov. 29	26.57

6-9-30da. Owner unknown. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 30, T. 6 S., R. 9 W. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level
Feb. 2	28.85	May 27	28.69	Sept. 28	28.98
Mar. 30	28.60	July 29	28.93	Nov. 29	29.30

6-10-19dd. Owner unknown. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 19, T. 6 S., R. 10 W. Records available: 1947. Measurements discontinued after May 5, 1947.

7-6-30bc. Dan F. Gise. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 30, T. 7 S., R. 6 W. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level
Feb. 2	29.32	May 27	27.65	Sept. 28	27.16
Mar. 30	27.85	July 29	a 30.52		

a Pumping.

7-6-34cb. Owner unknown. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 34, T. 7 S., R. 6 W. Records available: 1947-48.

Feb. 2	28.90	May 27	28.77	Sept. 28	26.18
Mar. 30	28.37	July 28	22.93	Nov. 29	32.19

7-7-7aa. A. McDysan. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 7, T. 7 S., R. 7 W. Measuring point beginning Nov. 29, 1948, 1.0 foot higher than old measuring point, 1.0 foot above land-surface datum. Records available: 1947-48. May 27, 29.70; July 29, 29.28; Sept. 28, 28.84; Nov. 29, 29.28.

7-7-15dc. Owner unknown. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 15, T. 7 S., R. 7 W. Records available: 1947-48.

Feb. 2	22.77	May 27	22.90	Sept. 28	21.77
Mar. 30	22.59	July 28	19.47	Nov. 29	22.28

7-8-5cb. Paul Meers. NW $\frac{1}{4}$ S $\frac{1}{4}$ sec. 5, T. 7 S., R. 8 W. Records available: 1947-48.

Feb. 2	28.98	May 27	29.03	Sept. 28	28.82
Mar. 30	28.40	July 29	27.83	Nov. 29	29.18

7-9-2bc. F. Day. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 2, T. 7 S., R. 9 W. Records available: 1947-48.

Feb. 2	31.52	May 27	31.78	Sept. 28	32.13
Mar. 30	31.40	July 29	31.78	Nov. 29	32.54

7-10-10cc. J. P. Kaster. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 10, T. 7 S., R. 10 W. Records available: 1947-48.

Feb. 2	26.20	May 27	a 25.66	Nov. 29	25.94
Mar. 30	25.34	July 28	25.25		

a Pumping.

8-6-12dd. Mrs. R. E. McKee. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 12, T. 8 S., R. 6 W. Records available: 1947-48.

Feb. 2	31.85	May 27	31.86	Sept. 28	31.87
Mar. 30	31.76	July 28	31.88	Nov. 29	31.89

Morton County

Highest and lowest water levels for the period of record,
in 3 wells in Morton County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
22	9.5	71.58	Feb. 12, 1947	75.45	Jan. 6, 1941
65	9.5	47.29	May 25, 1948	53.75	Mar. 13, 1941
117	9.5	161.98	July 18, 1948	166.54	May 25, 1948

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record, in 3 wells in Morton County

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise for period of record
22	3.87	+1.36	0.72
65	6.46	+3.54	1.35
117	4.56	-1.18	2.76

22. A. F. Wilcox. $SE\frac{1}{4}SW\frac{1}{4}$ sec. 14, T. 31 S., R. 43 W. Correction: Depth to water level on May 7, 1947, was 71.62 feet instead of 48.62 feet as indicated in Water-Supply Paper 1098. Tables giving highest water level and difference in water levels have been corrected in this report. Records available: 1939-48. Feb. 20, 74.09; Nov. 16, 73.07.

65. John Hentschel. $SE\frac{1}{4}SE\frac{1}{4}$ sec. 8, T. 33 S., R. 42 W. Records available: 1939-48. Feb. 20, 52.27; May 25, 47.29; July 18, 52.28; Nov. 16, 51.96.

117. W. C. Washburn. $SW\frac{1}{4}SW\frac{1}{4}$ sec. 4, T. 34 S., R. 42 W. Records available: 1939-48. Feb. 20, 163.67; May 25, 166.54; July 18, 161.98; Nov. 16, 163.35.

Ness County

Highest and lowest water levels for the period of record, in 2 wells in Ness County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
1	8	30.22	Oct. 21, 1948	34.91	Aug. 27, 1940
2	8	22.70	Oct. 21, 1943	25.85	Nov. 3, 1943

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

Well	Difference between highest and lowest levels	Net rise in 1948	Net rise for period of record
1	4.69	2.85	4.69
2	3.15	1.34	2.70

1. J. E. Ficken. $SE\frac{1}{4}SW\frac{1}{4}$ sec. 32, T. 20 S., R. 23 W. Records available: 1940-48. Jan. 20, 33.70; Apr. 16, 33.17; July 21, 30.76; Oct. 21, 30.22.

2. C. L. Whitley. SW. corner sec. 20, T. 20 S., R. 22 W. Records available: 1940-48. Jan. 20, 23.34; Apr. 16, 24.47; July 21, 24.02; Oct. 21, 22.70.

Norton County

Highest and lowest water levels for the period of record, in 11 wells in Norton County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
1-21-35dc	2.5	31.46	Apr. 2, 1948	33.74	Oct. 7, 1948
2-21-1bb	2.5	23.22	Aug. 29, 1947	27.01	June 24, 1946
2-21-2bd	2.5	22.53	July 31, 1947	26.19	Oct. 7, 1948
2-21-11aa	3	29.03	July 31, 1947	34.95	Oct. 7, 1948
2-21-18aa	1.5	42.44	Aug. 29, 1947	43.22	Nov. 30, 1948
2-21-19dd	2.5	63.70	June 3, 1948	64.90	Oct. 7, 1947
2-22-11dc	2	65.95	Oct. 7, 1947	67.35	May 7, 1947
2-22-26ac	2	27.21	July 31, 1947	29.61	Oct. 7, 1948
2-22-28aa	1.5	47.30	July 31, 1947	49.17	May 7, 1947
2-23-36cd	2.5	26.93	July 31, 1947	29.30	Oct. 7, 1948
3-23-8aa	1.5	37.37	Aug. 29, 1947	38.80	Dec. 1, 1948

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record in 11 wells in Norton County

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise (+) or net decline (-) for period of record
1-21-35dc	2.28	-1.40	-0.50
2-21-1bb	3.79	-1.52	+1.55
2-21-2bd	3.66	-.98	+4.46
2-21-11aa	5.82	-2.17	-1.63
2-21-18aa	.78	-.47	-.18
2-21-19dd	1.20	+1.10	+1.13
2-22-11dc	1.40	-.82	+2.23
2-22-26ac	2.40	-.69	-.06
2-22-28aa	1.87	+2.25	+3.32
2-23-36cd	2.37	-.95	-.71
3-23-8aa	1.43	-.39	-.95

One measurement of the water level was made in 8 of the observation wells in Norton County in 1945 and 1946. These measurements were inadvertently omitted from the 1947 water-level report and are included in this report.

1-21-35dc. H. S. Whitaker. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 35, T. 1 S., R. 21 W. Records available: 1946, 1948.

Date	Water level	Date	Water level	Date	Water level
May 3, 1946	33.24	Apr. 2, 1948	31.46	Aug. 4, 1948	33.00
Jan. 1, 1948	31.98	June 3	31.91	Oct. 7	33.74

2-21-1bb. Verner Ross. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 1, T. 2 S., R. 21 W. Records available: 1946, 1948.

June 24, 1946	27.01	June 3, 1948	24.22	Oct. 7, 1948	25.43
Jan. 1, 1948	23.92	Aug. 4	24.62	Nov. 30	25.46
Apr. 2	23.72				

2-21-2bd. Vernon J. Hamilton. SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 2, T. 2 S., R. 21 W. Records available: 1946, 1948.

June 27, 1946	25.76	June 3, 1948	24.42	Oct. 7, 1948	26.19
Jan. 1, 1948	24.20	Aug. 4	25.18	Nov. 30	25.30
Apr. 2	23.84				

2-21-11aa. W. B. Woods. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 11, T. 2 S., R. 21 W. Records available: 1945, 1948.

Aug. 28, 1945	31.44	June 3, 1948	30.42	Nov. 30, 1948	33.07
Apr. 2, 1948	30.16	Oct. 7	34.85		

2-21-18aa. Mr. Hrypkema. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 18, T. 2 S., R. 21 W. Records available: 1947-48.

Jan. 1	42.70	June 3	42.66	Oct. 7	43.05
Apr. 2	42.61	Aug. 4	42.86	Nov. 30	43.22

2-21-19dd. Owner unknown. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 19, T. 2 S., R. 21 W. Records available: 1946, 1948.

May 27, 1946	63.96	June 3, 1948	63.70	Oct. 7, 1948	63.85
Jan. 1, 1948	63.91	Aug. 4	63.84	Dec. 1	63.83
Apr. 2	63.80				

2-22-11dc. Owner unknown. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 11, T. 2 S., R. 22 W. Records available: 1946, 1948.

Date	Water level	Date	Water level	Date	Water level
Jan. 7, 1946	67.17	June 3, 1948	66.60	Oct. 7, 1948	66.89
1, 1948	66.20	Aug. 4	66.72	Dec. 1	66.94
Apr. 2	66.48				

2-22-26ac. Percy G. Whitaker. SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 26, T. 2 S., R. 22 W. Records available: 1946, 1948.

Apr. 29, 1946	29.31	Aug. 4, 1948	29.05	Dec. 1, 1948	29.37
Jan. 1, 1948	28.65	Oct. 7	29.61		

2-22-28aa. H. E. Fisher. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 28, T. 2 S., R. 22 W. Records available: 1947-48.

Jan. 1	49.10	June 3	49.08	Oct. 7	49.14
Apr. 2	49.08	Aug. 4	49.10	Dec. 1	48.85

2-23-36cd. R. L. Brooks. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 36, T. 2 S., R. 23 W. Records available: 1946, 1948.

July 1, 1946	28.45	June 3, 1948	28.35	Oct. 7, 1948	29.30
Jan. 1, 1948	28.02	Aug. 4	28.71	Dec. 1	29.16
Apr. 2	27.79				

3-23-8aa. Owner unknown. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 8, T. 3 S., R. 23 W. Records available: 1947-48.

Jan. 1	38.53	June 3	38.58	Oct. 7	37.98
Apr. 2	38.61	Aug. 4	38.54	Dec. 1	38.80

Osborne County

Highest and lowest water levels for the period of record,
in 15 wells in Osborne County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
6-11-34aa	3	34.67	Aug. 18, 1947	37.07	June 11, 1946
6-11-36aa	3	30.65	July 30, 1947	33.05	Apr. 26, 1946
6-12-20bb	3	36.30	Nov. 26, 1945	43.06	Jan. 28, 1946
6-12-23cd	3	25.23	Jan. 2, 1948	27.17	Apr. 26, 1946
6-12-24aa	3	32.21	July 30, 1947	37.00	Nov. 23, 1945
6-13-12ba	3	37.85	Mar. 31, 1948	40.95	Dec. 15, 1947
7-11-18cc	2	30.67	Mar. 30, 1948	33.32	Mar. 3, 1947
7-11-21da	2	32.24	July 29, 1947	33.86	Nov. 29, 1948
7-11-23dd	2	18.79	Nov. 20, 1946	25.67	Aug. 27, 1947
7-12-28ab	2	32.45	July 29, 1947	34.60	Jan. 7, 1947
7-13-15da	2	36.20	Nov. 7, 1946	a 38.94	Sept. 30, 1947
7-14-6cb	2	23.65	Dec. 9, 1946	24.19	Nov. 29, 1948
7-14-10dd	2	31.93	July 29, 1947	32.22	Feb. 4, 1947
7-15-8cc	2	22.95	Aug. 27, 1947	23.64	Feb. 16, 1948
7-15-12dc	2	10.83	July 29, 1947	b 20.85	Dec. 2, 1948

a Pumping recently.

b Pumping.

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record, in 15 wells in Osborne County

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise (+) or net decline (-) for period of record
6-11-34aa	2.40	-1.03	-0.41
6-11-36aa	2.40	-.80	-.02
6-12-20bb	6.76	-.13	-4.25
6-12-23cd	1.94	-.19	+1.01
6-12-24aa	4.79	-.18	+2.49
6-13-12ba	3.10	+1.31	+.86
7-11-18cc	2.65	+1.72	+1.23
7-11-21da	1.62	-.20	-.43
7-11-23dd	6.88	-4.23	-4.93
7-12-28ab	2.15	-.97	-.04
7-13-15da	2.74	-.02	-1.67
7-14-6cb	.54	-.27	-.49
7-14-10dd	.29	-.02	+.24
7-15-8cc	.69	+.20	0
7-15-12dc	10.02	+3.02	-3.91

6-11-34aa. W. E. Lowdon. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 34, T. 6 S., R. 11 W. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	35.38	Apr. 12	35.60	June 5	35.70	Aug. 1	35.93
12	35.43	16	35.65	12	35.75	7	36.01
19	35.52	23	35.57	19	35.73	14	35.95
27	35.58	May 1	35.63	29	35.62	Dec. 5	36.34
Feb. 23	35.86	8	35.62	July 3	35.91	12	36.34
Mar. 1	35.65	15	35.72	10	35.90	19	36.35
8	35.71	22	35.70	25	35.95	26	36.39
19	35.64	29	35.75				

6-11-36aa. J. M. Irey. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 36, T. 6 S., R. 11 W. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 2	31.80	June 2	32.38	Oct. 6	32.66
Mar. 31	32.10	Aug. 3	32.28	Nov. 30	32.82

6-12-20bb. C. M. Storer. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 20, T. 6 S., R. 12 W. Records available: 1946-48.

Jan. 2	40.45	June 2	40.40	Oct. 6	40.39
Mar. 31	40.35	Aug. 3	40.31	Nov. 30	40.55

6-12-23cd. C. Fink. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 23, T. 6 S., R. 12 W. Records available: 1946-48.

Jan. 2	25.23	June 2	a 25.77	Nov. 30	25.83
Mar. 31	25.52	Aug. 3	25.50		

a Pumping.

6-12-24aa. L. J. Konzem. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 24, T. 6 S., R. 12 W. Records available: 1946-48. Measurements discontinued after Oct. 6, 1948.

Jan. 2	a 32.75	June 2	32.68	Oct. 6	34.51
Mar. 31	32.70	Aug. 3	33.56		

a Pumping.

6-13-12ba. F. L. Smith. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 12, T. 6 S., R. 13 W. Records available: 1946-48.

6-13-12ba--Continued.

Date	Water level	Date	Water level	Date	Water level
Jan. 2	39.60	June 2	39.52	Oct. 6	a 40.82
Mar. 31	37.85	Aug. 3	39.63	Nov. 30	39.64

a Pumping.

7-11-18cc. Mrs. N. Beatty. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 18, T. 7 S., R. 11 W. Records available: 1947-48. Feb. 16, 32.58; Mar. 30, 30.67; May 28, 31.73; July 30, 30.70. Measurements discontinued after July 30, 1948.

7-11-21da. J. O. Harrison. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 21, T. 7 S., R. 11 W. Records available: 1947-48.

Feb. 16	33.67	May 28	33.65	Sept. 28	33.50
Mar. 30	33.59	July 30	33.00	Nov. 29	33.86

7-11-23dd. Owner unknown. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 23, T. 7 S., R. 11 W. Records available: 1947-48.

Feb. 16	21.06	May 28	19.74	Sept. 28	20.44
Mar. 30	20.18	July 30	19.58	Nov. 29	a 24.73

a Pumping.

7-12-28ab. C. E. Galley. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 28, T. 7 S., R. 12 W. Records available: 1947-48. Mar. 30, 33.03; July 30, 33.24; Sept. 28, 33.34; Nov. 29, 33.88.

7-13-15da. J. W. Bathurst. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 15, T. 7 S., R. 13 W. Records available: 1947-48.

Feb. 16	38.45	May 28	37.45	Sept. 28	38.42
Mar. 30	38.10	July 30	37.36	Nov. 29	38.47

7-14-6cb. J. A. Guttery. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 6, T. 7 S., R. 14 W. Records available: 1947-48.

Feb. 16	24.09	May 28	24.08	Sept. 28	24.13
Mar. 30	24.02	July 30	24.12	Nov. 29	24.19

7-14-10dd. John Clark. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 10, T. 7 S., R. 14 W. Records available: 1947-48.

Mar. 30	32.15	July 30	32.00	Nov. 29	32.17
May 28	32.15	Sept. 28	32.00		

7-15-8cc. F. Dibble. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 8, T. 7 S., R. 15 W. Records available: 1947-48.

Feb. 16	23.64	May 28	23.20	Sept. 28	23.00
Mar. 30	23.33	July 30	23.03	Nov. 29	23.10

7-15-12dc. Tom Hale, Jr. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 12, T. 7 S., R. 15 W. Records available: 1947-48. May 28, 14.66; July 30, 11.65; Sept. 28, 11.74; Nov. 29, 16.25, pumping recently.

Pawnee County

Highest and lowest water levels for the period of record,
in 4 wells in Pawnee County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
6	8	19.52	Aug. 24, 1948	a 27.25	Oct. 8, 1948
7	8	23.69	Aug. 23, 1948	29.17	Jan. 20, 1948
8	8	b 7.45	Nov. 8, 1947	18.32	Sept. 30, 1940
14	4.5	15.49	Sept. 22, 1948	17.72	July 21, 1944
			Oct. 19, 1948		

a Nearby well pumping.

b Pumping recently.

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record, in 4 wells in Pawnee County

Well	Difference between highest and lowest levels	Net rise in 1948	Net rise for period of record
6	7.73	2.58	4.07
7	5.48	2.22	1.32
8	10.87	1.55	5.20
14	-2.23	.63	2.07

6. Frank Elmore. SW. corner sec. 27, T. 21 S., R. 19 W. Records available: 1940-48. Jan. 20, 22.40; Mar. 16, 21.86; Apr. 14, 21.65; Aug. 24, 19.52. Measurements discontinued after Aug. 24, 1948.

7. Ralph Lupfer. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 18, T. 22 S., R. 17 W. Records available: 1940-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 20	29.17	Apr. 14	28.38	July 19	26.58	Oct. 19	25.91
Feb. 28	28.37	May 21	28.29	Aug. 23	23.69	Nov. 24	26.12
Mar. 16	27.60	June 24	28.78	Sept. 22	25.52	Dec. 21	26.18

8. F. B. Reed. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 6, T. 22 S., R. 16 W. Records available: 1940-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 20	14.77	Apr. 14	13.37	July 19	14.14	Oct. 19	11.48
Feb. 18	14.70	May 21	14.14	Aug. 23	8.08	Nov. 24	12.30
Mar. 16	14.28	June 24	14.69	Sept. 22	10.51	Dec. 21	12.59

14. B. Unruh. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 29, T. 21 S., R. 15 W. Records available: 1944-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 20	16.34	Apr. 14	15.72	July 19	15.55	Oct. 19	15.49
Feb. 18	16.29	May 21	15.72	Aug. 23	14.86	Nov. 24	15.68
Mar. 16	15.67	June 24	15.77	Sept. 22	15.49	Dec. 21	15.65

Phillips County

Highest and lowest water levels for the period of record, in 14 wells in Phillips County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
1-19-19cc	1	17.07	Dec. 5, 1947	20.18	Nov. 30, 1948
1-20-13ad	1.5	25.05	July 31, 1947	29.35	Oct. 8, 1948
1-20-30cc	1	77.30	Apr. 2, 1948	78.43	Jan. 1, 1948
			Aug. 4, 1948		
1-20-34ba	1	27.07	Oct. 28, 1947	30.50	Oct. 8, 1948
4-17-25cd	3	83.10	Jan. 2, 1948	86.27	Sept. 25, 1946
4-17-31bc	3	50.59	July 30, 1947	52.72	Oct. 6, 1948
4-18-30ab	3	15.20	July 30, 1947	20.29	Sept. 25, 1946
4-19-21dd	3	10.10	June 2, 1948	15.10	Sept. 25, 1946
4-19-35ab	3	12.17	Aug. 29, 1947	14.17	Nov. 30, 1948
4-20-21cc	3	48.46	Mar. 31, 1948	48.92	Feb. 6, 1946
5-16-3aa	3	42.43	July 30, 1947	44.76	Dec. 17, 1945
5-17-1aa	3	.73	Mar. 31, 1948	7.60	Nov. 21, 1945
5-17-3cd	3	1.18	May 6, 1947	27.00	June 12, 1946
5-17-12aa	3	51.93	Mar. 31, 1948	54.20	Sept. 30, 1947

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record in 14 wells in Phillips County

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise (+) or net decline (-) for period of record
1-19-19cc	3.11	-3.11	-2.68
1-20-13ad	4.30	-1.55	-.52
1-20-30cc	1.13	+ .60	+ .52
1-20-34ba	3.43	-2.16	-1.83
4-17-25cd	3.17	-.73	+2.09
4-17-31bc	2.13	-.85	-.53
4-18-30ab	5.09	-1.78	+1.88
4-19-21dd	5.00	-.88	-1.23
4-19-35ab	2.00	-1.49	-1.51
4-20-21cc	.46	+ .04	+ .35
5-16-3aa	2.33	-.94	-.56
5-17-1aa	6.87	-.56	+ .20
5-17-3cd	25.82	-5.45	-.35
5-17-12aa	2.27	-.07	+ .69

1-19-19cc. Al Skelton. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 19, T. 1 S., R. 19 W. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Apr. 2	17.42	Aug. 4	18.52	Nov. 30	20.18
June 3	18.40	Oct. 8	19.73		

1-20-13ad. Owner unknown. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 13, T. 1 S., R. 20 W. Records available: 1947-48.

Jan. 1	26.51	June 3	26.85	Oct. 8	29.35
Apr. 2	26.04	Aug. 4	27.84	Nov. 30	28.23

1-20-30cc. Owner unknown. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 30, T. 1 S., R. 20 W. Records available: 1947-48.

Jan. 1	78.43	June 3	77.32	Oct. 7	77.64
Apr. 2	77.30	Aug. 4	77.30	Nov. 30	77.35

1-20-34ba. Harold Parker. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 34, T. 1 S., R. 20 W. Records available: 1947-48.

Jan. 1	27.60	June 3	28.18	Oct. 8	30.50
Apr. 2	27.40	Aug. 4	29.13	Nov. 30	29.88

4-17-25cd. Minnie Gray. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 25, T. 4 S., R. 17 W. Records available: 1946-48.

Jan. 2	83.10	June 2	83.20	Oct. 6	83.60
Mar. 31	83.22	Aug. 3	83.60	Nov. 30	84.03

4-17-31bc. C. B. Brower. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 31, T. 4 S., R. 17 W. Records available: 1946-48. Jan. 2, 51.34; Mar. 31, 51.43; Aug. 3, 52.10; Oct. 6, 52.72.

4-18-30ab. Sutley Estate. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 30, T. 4 S., R. 18 W. Records available: 1946-48.

Jan. 2	15.91	June 2	15.82	Oct. 6	17.06
Mar. 31	15.49	Aug. 3	16.52	30	17.42

4-19-21dd. F. Kinter. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 21, T. 4 S., R. 19 W. Records available: 1946-48.

Jan. 2	10.80	June 2	10.10	Oct. 6	a 11.81
Mar. 31	10.16	Aug. 3	a 10.73	Nov. 30	a 12.11

a Pumping.

4-19-35ab. Glen Seeger. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 35, T. 4 S., R. 19 W. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 2	13.02	June 2	13.92	Oct. 6	13.92
Mar. 31	13.31	Aug. 3	13.65	Nov. 30	14.17

4-20-21cc. F. Albright. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 21, T. 4 S., R. 20 W. Records available: 1946-48.

Jan. 2	48.49	June 2	48.52	Oct. 6	48.56
Mar. 31	48.46	Aug. 3	48.60	Nov. 30	48.57

5-16-3aa. M. W. Hardman. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 3, T. 5 S., R. 16 W. Records available: 1946-48.

Jan. 2	43.65	June 2	43.39	Oct. 6	44.60
Mar. 31	43.52	Aug. 3	44.04		

5-17-1aa. Phillips County. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 1, T. 5 S., R. 17 W. Records available: 1946-48. Mar. 31, 0.73; June 2, 4.27; Aug. 3, 5.46; Oct. 6, 7.40.

5-17-3cd. Owner unknown. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 7 T. 5 S., R. 17 W. Records available: 1946-48. Mar. 31, 6.67; June 2, 6.82; Aug. 3, 8.63; Oct. 6, 12.09.

5-17-12aa. E. R. Downing and others. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 12, T. 5 S., R. 17 W. Records available: 1946-48.

Jan. 2	52.10	June 2	51.95	Oct. 6	52.20
Mar. 31	51.93	Aug. 3	52.16		

Reno County

Highest and lowest water levels for the period of record,
in 1 well in Reno County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
86	7	10.30	Oct. 26, 1946	19.08	Mar. 31, 1948

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record, in 1 well in Reno County

Well	Difference between highest and lowest levels	Net decline in 1948	Net decline for period of record
86	8.78	0.95	4.00

86. Mrs. Barb. SW $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 12, T. 23 S., R. 6 W. (307 East Sixth Street). Records available: 1946-48. Jan. 6, 18.99; Mar. 31, 19.08; July 9, 18.53; Sept. 26, 18.36.

Republic County

Highest and lowest water levels for the period of record,
in 4 wells in Republic County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
40	7	33.00	Dec. 25, 1944	35.46	Sept. 6, 1948
158	7	11.17	June 25, 1945	15.97	Feb. 25, 1948
188	7	9.40	June 28, 1947	18.40	Nov. 25, 1948
202	7	33.50	Aug. 3, 1943	35.74	Aug. 29, 1948
			Apr. 27, 1946		

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record, in 4 wells in Republic County

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise for period of record
40	2.46	-0.50	1.96
158	4.80	+ .61	1.23
188	9.00	-.60	2.42
202	2.25	-.10	.45

40. City of Republic. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 31, T. 1 S., R. 4 W. Records available: 1942-48. Jan. 24, 34.40; Feb. 26, 34.40; Apr. 24, 34.40.

158. A. J. Dickerman. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 1, T. 3 S., R. 4 W. Records available: 1942-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	15.47	Apr. 25	11.30	July 25	13.87	Oct. 25	14.95
Feb. 25	15.36	May 25	15.11	Aug. 25	14.53	Nov. 25	14.88
Mar. 25	15.43	June 25	15.12	Sept. 25	14.65	Dec. 25	14.72

188. City of Courtland. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 16, T. 3 S., R. 5 W. Records available: 1942-48.

Jan. 24	15.10	Apr. 24	14.60	July 24	13.20	Nov. 5	16.80
Mar. 3	14.10	June 1	13.70	Aug. 29	16.00	23	16.70
30	13.70	21	13.80	Sept. 28	16.90	Dec. 5	15.90

202. C. E. Erickson. SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 36, T. 4 S., R. 5 W. Correction: Depth to water level on Oct. 27, 1947, was 34.10 feet instead of 25.10 as published in Water-Supply Paper 1098. Tables giving highest water level and difference in water levels have been corrected in this report. Records available: 1942-48.

Feb. 1	34.20	June 29	34.10	Sept. 27	34.00	Nov. 29	34.10
27	34.10	July 28	34.10	Oct. 27	34.10	Dec. 26	34.10
June 1	34.10						

209. Glenn B. Snapp. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 1, T. 4 S., R. 3 W. Records available: 1942-48. No measurements made in 1948.

230. Lloyd Blosser. NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 21, T. 4 S., R. 4 W. Records available: 1942-47. No measurements made in 1948.

1-5-7bb. Geol. Survey, U. S. Dept. of Interior. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 7, T. 1 S., R. 5 W. Driven and bored observation well, diameter 1.25 inches, depth 13.2 feet. Measuring point, top of 1 $\frac{1}{4}$ -inch pipe, 1.0 foot above land-surface datum. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level
Oct. 1, 1947	8.07	Feb. 19, 1948	8.25	July 26, 1948	7.05
13	8.12	Mar. 24	6.95	Aug. 19	7.64
Nov. 14	8.48	Apr. 16	7.04	Sept. 23	8.40
Dec. 16	8.57	May 20	7.38	Nov. 2	8.83
Jan. 15, 1948	8.50				

1-5-7cb. Geol. Survey, U. S. Dept. of Interior. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 7, T. 1 S., R. 5 W. Bored observation well, diameter 1.25 inches, depth 25 feet. Measuring point, top of 1 $\frac{1}{4}$ -inch pipe, 1.00 foot above land-surface datum. Records available: 1947-48.

Oct. 1, 1947	20.35	Feb. 19, 1948	21.24	July 26, 1948	20.75
13	20.42	Mar. 24	20.30	Aug. 19	21.21
Nov. 14	20.47	Apr. 16	20.30	Sept. 23	21.76
Dec. 16	20.97	May 20	20.77	Nov. 2	21.89
Jan. 15, 1948	21.00				

Rice County

Highest and lowest water levels for the period of record,
in 20 wells in Rice County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
18-6-13bc	3	11.62	Aug. 6, 1948	13.14	Jan. 6, 1948
18-6-29ddd(C)	3	32.23	Dec. 29, 1946	33.03	Sept. 10, 1947
18-6-29ddd(N)	3	34.55	Dec. 5, 1946	35.62	Sept. 10, 1947
18-6-29ddd(S)	3	29.27	Dec. 29, 1946	30.40	Sept. 10, 1947
18-7-10ad	3	37.18	Aug. 5, 1948	43.54	Sept. 16, 1946
18-8-10dc	3	40.25	Sept. 30, 1948	42.18	Dec. 5, 1946
18-9-22ad	3	8.88	Aug. 6, 1948	11.50	Dec. 11, 1947
18-10-2ca	3	32.25	Aug. 5, 1948	34.67	Oct. 3, 1947
19-6-13dd	3	40.43	Mar. 31, 1947	41.12	Jan. 6, 1948
19-6-17ba	3	5.80	Aug. 6, 1948	13.17	Oct. 3, 1947
19-7-24ab	3	33.30	Aug. 6, 1948	36.12	Feb. 27, 1947
19-7-34ab	3	43.34	Sept. 30, 1948	44.68	Dec. 29, 1946
19-10-22bc	3	1.56	Aug. 5, 1948	8.00	Oct. 4, 1946
20-6-23cd	3	4.57	Apr. 7, 1948	18.83	Feb. 27, 1947
20-6-36bb	3	4.20	Aug. 6, 1948	16.06	Oct. 3, 1947
20-9-13cc	3	8.23	July 22, 1947	9.74	Sept. 10, 1947
20-10-28ba	3	9.64	Aug. 5, 1948	13.39	Oct. 4, 1946
21-6-11bb	3	4.32	May 9, 1947	8.02	Oct. 4, 1946
21-8-20cc	3	6.03	Dec. 2, 1948	8.76	Oct. 3, 1947
21-9-28ad	3	10.05	July 22, 1947	12.38	Oct. 30, 1947

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record in 20 wells in Rice County

Well	Difference between highest and lowest levels	Net rise in 1948	Net rise (+) or net decline (-) for period of record
18-6-13bc	1.52	1.27	+0.25
18-6-29ddd(C)	.80	.09	-.35
18-6-29ddd(N)	1.07	.12	-.12
18-6-29ddd(S)	1.13	.17	-.32
18-7-10ad	6.36	.30	+.98
18-8-10dc	1.93	.67	+2.30
18-9-22ad	2.62	1.15	+.75
18-10-2ca	2.42	1.01	-.69
19-6-13dd	.69	.38	+.01
19-6-17ba	7.37	3.25	+3.06
19-7-24ab	2.82	1.53	+.77
19-7-34ab	1.34	1.00	+1.11
19-10-22bc	6.44	3.30	+.20
20-6-23cd	14.26	.07	+2.10
20-6-36bb	11.86	.73	+5.78
20-9-13cc	1.51	.53	+.75
20-10-28ba	3.75	1.28	+1.67
21-6-11bb	3.70	.67	+2.30
21-8-20cc	2.73	2.22	+2.35
21-9-28ad	2.33	1.69	+1.45

The wells in Rice County have been renumbered to conform to the location numbering system now used in Kansas. The new number is given followed by the original number that was used in the 1946 and 1947 water-level reports.

18-6-13bc (Well 7 in previous reports). F. Kasperek. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 13, T. 18 S., R. 6 W. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 6	13.14	May 24	12.21	Sept. 30	11.73
Apr. 7	12.08	Aug. 6	11.62		

18-6-29ddd(C) (Well 20C in previous reports). Owner of property, G. G. Green; owner of well, Geol. Survey, U. S. Dept. of Interior. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 29, T. 18 S., R. 6 W. Records available: 1946-48. Jan. 6, 32.93; Apr. 7, 32.70. Measurements discontinued after Apr. 7, 1948.

18-6-29ddd(N) (Well 20N in previous reports). Owner of property, G. G. Green; owner of well, Geol. Survey, U. S. Dept. of Interior. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 29, T. 18 S., R. 6 W. Records available: 1946-48. Jan. 6, 35.14; Apr. 7, 34.95. Measurements discontinued after Apr. 7, 1948.

18-6-29ddd(S) (Well 20S in previous reports). Owner of property, G. G. Green; owner of well, Geol. Survey, U. S. Dept. of Interior. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 29, T. 18 S., R. 6 W. Records available: 1946-48. Jan. 6, 30.23; Apr. 7, 29.92. Measurements discontinued after Apr. 7, 1948.

18-7-10ad (Well 8 in previous reports). G. J. O'Neill. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 10, T. 18 S., R. 7 W. Records available: 1946-48.

Apr. 7	42.94	Aug. 5	37.18	Dec. 2	42.55
May 24	42.86	Sept. 30	42.12		

18-8-10dc (Well 9 in previous reports). C. Dobrinski. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 10, T. 18 S., R. 8 W. Records available: 1946-48.

Jan. 6	41.25	May 24	40.61	Sept. 30	40.25
Apr. 7	40.70	Aug. 5	40.42	Dec. 2	40.32

18-9-22ad (Well 10 in previous reports). O. Brownleewe. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 22, T. 18 S., R. 9 W. Records available: 1946-48.

Jan. 7	11.13	May 24	9.76	Sept. 30	9.84
Apr. 7	9.39	Aug. 6	8.88	Dec. 2	9.95

18-10-2ca (Well 11 in previous reports). The Bushton News. NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 2, T. 18 S., R. 10 W. Records available: 1946-48.

Jan. 7	34.10	May 24	34.02	Sept. 30	33.26
Apr. 7	33.48	Aug. 5	32.25	Dec. 2	33.22

19-6-13dd (Well 3 in previous reports). W. M. Myers. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 13, T. 19 S., R. 6 W. Records available: 1946-48.

Jan. 6	41.12	May 24	40.63	Sept. 30	40.64
Apr. 7	40.47	Aug. 6	40.73		

19-6-17ba (Well 19 in previous reports). City of Little River. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 17, T. 19 S., R. 6 W. Records available: 1946-48.

Jan. 6	12.30	May 24	9.18	Sept. 30	8.90
Apr. 7	8.74	Aug. 6	5.80	Dec. 2	9.37

19-7-24ab (Well 2 in previous reports). J. P. Pulliam. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 24, T. 19 S., R. 7 W. Records available: 1946-48. Apr. 7, 34.18; May 24, 34.50; Aug. 6, 33.30; Sept. 30, 34.26.

19-7-34ab (Well 1 in previous reports). B. J. Good. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 34, T. 19 S., R. 7 W. Records available: 1946-48. Apr. 7, 43.98; May 24, 43.88; Aug. 6, 43.47; Sept. 30, 43.34.

19-8-9cd (Well 17 in previous reports). J. A. Roesler. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 9, T. 19 S., R. 8 W. Records available: 1946-47. Measurements discontinued after Dec. 10, 1947.

19-10-22bc (Well 12 in previous reports). J. K. Fowman. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 22, T. 19 S., R. 10 W. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 7	7.50	May 24	5.97	Sept. 30	3.82
Apr. 7	5.42	Aug. 5	1.56	Dec. 2	4.18

20-6-23cd (Well 4 in previous reports). School district. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 23, T. 20 S., R. 6 W. Records available: 1946-48.

Jan. 7	16.06	May 24	9.55	Sept. 30	10.70
Apr. 7	4.57	Aug. 6	5.22	Dec. 2	14.85

20-6-36bb (Well 5 in previous reports). J. W. Harder. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 36, T. 20 S., R. 6 W. Records available: 1946-48.

Jan. 7	9.18	May 24	8.17	Sept. 30	7.37
Apr. 7	4.86	Aug. 6	4.20		

20-9-13cc (Well 16 in previous reports). J. H. Feir. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 13 T. 20 S., R. 9 W. Records available: 1946-48. Jan. 7, 9.20; Apr. 7, 8.28; May 24, 8.67. Measurements discontinued after May 24, 1948.

20-10-28ba (Well 13 in previous reports). H. Thompson. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 28, T. 20 S., R. 10 W. Records available: 1946-48.

Jan. 7	13.00	May 24	12.38	Sept. 30	10.98
Apr. 7	12.00	Aug. 5	9.64	Dec. 2	11.66

21-6-11bb (Well 6 in previous reports). J. C. Brown. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 11, T. 21 S., R. 6 W. Records available: 1946-48. Jan. 7, 5.84; Apr. 7, 4.54; May 24, 5.43. Measurement discontinued after May 24, 1948.

21-8-20cc (Well 15 in previous reports). R. J. Dill. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 20, T. 21 S., R. 8 W. Records available: 1946-48.

Jan. 7	8.05	May 24	7.23	Sept. 30	6.40
Apr. 7	6.64	Aug. 5	4.98	Dec. 2	6.03

21-9-28ad (Well 14 in previous reports). J. H. Feir. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 28, T. 21 S., R. 9 W. Records available: 1946-48. Jan. 7, 11.88; Apr. 7, 10.30. Measurements discontinued after Apr. 7, 1948.

Russell County

By Janet S. Olson

Highest and lowest water levels for the period of record,
in 10 wells in Russell County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
45	7	18.39	July 12, 1945	24.28	Aug. 20, 1941
80	7	3.40	Apr. 14, 1942	7.76	June 29, 1943
81	7	101.85	Aug. 29, 1941	134.71	July 10, 1947
95	7	5.83	Sept. 7, 1944	11.38	Dec. 20, 1943
117	7	4.70	Apr. 13, 1942	10.61	Dec. 20, 1943
126	7	31.66	July 10, 1946	38.02	Jan. 13, 1943
146	7	14.59	Apr. 8, 1943	16.20	Sept. 1, 1942
148	7	3.81	Apr. 8, 1943	7.92	Oct. 2, 1941
149	7	18.35	July 20, 1948	21.54	June 29, 1943
152	7	10.30	Apr. 14, 1948	26.45	Sept. 22, 1941

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record in 10 wells in Russell County

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise (+) or net decline (-) for period of record
45	5.89	+1.68	+2.94
80	4.36	+3.33	-.79
81	32.86	+2.01	-21.05
95	5.55	-1.23	+2.06
117	5.91	+1.14	+4.47
126	6.36	+2.83	+2.22
146	1.61	+6.68	+7.77
148	4.11	+2.27	+7.74
149	3.19	+1.15	+1.71
152	16.15	-.29	+9.46

45. Jacob Flogler. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 11, T. 15 S., R. 14 W. Records available: 1941-48. Jan. 16, 23.38; Apr. 14, 21.29; July 20, 21.34.

80. Joseph Furthmyer, Jr. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 9, T. 14 S., R. 15 W. Records available: 1941-48. Jan. 15, 5.33; Apr. 14, 4.90; July 20, 4.91; Oct. 20, 5.50.

81. Joseph Furthmyer, Jr. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 9, T. 14 S., R. 15 W. Records available: 1941-48. Jan. 15, 130.98; Apr. 14, 132.38; July 20, 123.27; Oct. 20, 122.90.

95. George J. Gobleman. SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 28, T. 11 S., R. 15 W. Records available: 1941-48. Jan. 15, 7.22.

117. Marie Dutt and others. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 18, T. 13 S., R. 14 W. Records available: 1941-48. Jan. 15, 5.96; Apr. 14, 6.68; July 20, 5.29; Oct. 20, 6.11.

126. Bertha Dewald. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 19, T. 13 S., R. 13 W. Records available: 1941-48. Jan. 16, 32.90.

146. D. P. Steinle. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 24, T. 14 S., R. 12 W. Records available: 1941-48. Jan. 16, 14.81; Apr. 14, 15.54; July 20, 15.57; Oct. 20, 15.03.

148. John Penex. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 13, T. 14 S., R. 13 W. Records available: 1941-48. Apr. 14, 19.24; July 20, 18.35; Oct. 20, 19.15.

149. George Boxberger, Jr. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 22, T. 14 S., R. 14 W. Records available: 1941-48. Apr. 14, 19.24; July 20, 18.35; Oct. 20, 19.15.

152. D. D. Beisel. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 10, T. 14 S., R. 12 W. Records available: 1941-48. Jan. 16, 15.96; Apr. 14, 10.30; July 20, 12.35; Oct. 20, 16.99.

Saline County

Highest and lowest water levels for the period of record, in 11 wells in Saline County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
15-2-17cd	3	22.33	Aug. 6, 1948	25.44	Jan. 6, 1948
15-2-18cd	3	22.90	Nov. 4, 1946	25.50	Jan. 6, 1948
15-2-30dc	3	19.58	Aug. 6, 1948	22.42	Sept. 5, 1946
15-3-24dd	3	17.49	Aug. 6, 1948	20.64	Jan. 6, 1948
15-3-36ab	3	23.54	Aug. 6, 1948	27.35	Jan. 6, 1948
16-2-7bb	3	18.30	Aug. 6, 1948	22.08	Aug. 1, 1946
16-2-18cc	3	23.39	Nov. 4, 1946	26.52	Dec. 1, 1947
					Jan. 6, 1948

Highest and lowest water levels for the period of record,
in 11 wells in Saline County--Continued

Well	Length of record (years)	Highest level	Date	Lowest level	Date
16-2-19ab	3	21.00	Nov. 4, 1946	24.67	Dec. 1, 1946
16-3-13cd	3	20.70	Apr. 1, 1946	24.38	Jan. 6, 1946
16-3-26dc	3	19.00	Dec. 2, 1946	21.60	Jan. 6, 1946
16-3-34dd	3	20.92	Dec. 2, 1946	27.15	Jan. 6, 1946

Difference between highest and lowest recorded water levels and net change in water level, in 1946 and for period of record in 11 wells in Saline County

Well	Difference between highest and lowest levels	Net rise in 1946	Net rise (+) or net decline (-) for period of record
15-2-17cd	3.11	1.29	-0.25
15-2-18cd	2.60	.72	-.55
15-2-30dc	2.84	1.24	+.30
15-3-24dd	3.15	1.29	-.28
15-3-36ab	3.81	1.90	-.10
16-2-7bb	3.78	1.23	+.48
16-2-18cc	3.13	.74	+.02
16-2-19ab	3.67	.73	-.04
16-3-13cd	3.68	1.14	-2.36
16-3-26dc	2.60	.80	-.14
16-3-34dd	2.23	.98	+.47

15-2-17cd. Geol. Survey, U. S. Dept. of Interior. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 17, T. 15 S., R. 2 W. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 6	25.44	May 28	24.87	Sept. 30	23.32
Apr. 7	24.43	Aug. 6	22.33	Dec. 3	23.98

15-2-18cd. Geol. Survey, U. S. Dept. of Interior. SE. corner SW $\frac{1}{4}$ sec. 18, T. 15 S., R. 2 W. Records available: 1946-48.

Jan. 6	25.50	May 28	25.18	Sept. 30	24.16
Apr. 7	24.83	Aug. 6	23.70	Dec. 3	24.67

15-2-30dc. Geol. Survey, U. S. Dept. of Interior. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 30, T. 15 S., R. 2 W. Records available: 1946-48.

Jan. 6	22.41	May 28	21.38	Sept. 30	20.60
Apr. 7	20.85	Aug. 6	19.58	Dec. 3	21.08

15-3-24dd. Geol. Survey, U. S. Dept. of Interior. SE. corner sec. 24, T. 15 S., R. 24 W. Records available: 1946-48.

Jan. 6	20.64	May 28	19.44	Sept. 30	18.75
Apr. 7	18.93	Aug. 6	17.49	Dec. 3	19.18

15-3-36ab. Geol. Survey, U. S. Dept. of Interior. NW. corner NE $\frac{1}{4}$ sec. 36, T. 15 S., R. 3 W. Records available: 1946-48.

Jan. 6	27.35	May 28	25.74	Sept. 30	24.98
Apr. 7	25.48	Aug. 6	23.54	Dec. 3	25.40

16-2-7bb. Geol. Survey, U. S. Dept. of Interior. NW. corner sec. 7, T. 16 S., R. 2 W. Records available: 1946-48.

Jan. 6	21.14	May 28	20.13	Sept. 30	19.05
Apr. 7	19.75	Aug. 6	18.30	Dec. 3	19.72

16-2-18cc. Geol. Survey, U. S. Dept. of Interior. SW. corner sec. 18, T. 16 S., R. 2 W. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 6	26.52	May 28	26.18	Sept. 30	25.47
Apr. 7	25.54	Aug. 6	24.83	Dec. 2	25.78

16-2-19ab. Geol. Survey, U. S. Dept. of Interior. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 19, T. 16 S., R. 2 W. Records available: 1946-48.

Jan. 6	24.66	May 28	24.41	Sept. 30	23.70
Apr. 7	23.62	Aug. 6	22.98	Dec. 2	23.94

16-3-13cd. Geol. Survey, U. S. Dept. of Interior. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 13, T. 16 S., R. 3 W. Records available: 1946-48.

Jan. 6	24.38	May 28	23.56	Sept. 30	22.44
Apr. 7	23.32	Aug. 6	21.78	Dec. 2	23.06

16-3-26dc. Geol. Survey, U. S. Dept. of Interior. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 26, T. 16 S., R. 3 W. Records available: 1946-48.

Jan. 6	21.60	May 28	20.75	Sept. 30	20.28
Apr. 7	20.17	Aug. 6	19.50	Dec. 2	20.74

16-3-34dd. Geol. Survey, U. S. Dept. of Interior. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 34, T. 16 S., R. 3 W. Records available: 1946-48.

Jan. 6	23.15	May 28	22.36	Sept. 30	21.90
Apr. 7	21.84	Aug. 6	21.57	Dec. 2	22.09

Scott County

By Janet S. Olson

Highest and lowest water levels for the period of record,
in 11 wells in Scott County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
1	17	55.89	May 14, 1934	68.48	Nov. 4, 1947
1A	8	53.42	May 16, 1934 Aug. 16, 1940 Aug. 18, 1940	58.63	Dec. 27, 28, 29, 1948
2	15	30.95	Apr. 25, 1939	40.81	Dec. 11, 1947
2A	4.5	31.58	Aug. 10, 1944	38.33	Sept. 16, 1946
3	9	67.94	May 30, 1934	91.99	Oct. 13, 1948
9	9	47.77	Sept. 8, 1939	55.09	Jan. 14, 1948
19	9	45.38	Apr. 18, 1940	57.32	June 15, 1948
32	9	37.79	Apr. 20, 1939 Apr. 22, 1939	44.35	Sept. 20, 1948
39	9	67.00	Mar. 5, 1947	68.76	Apr. 16, 1943
48	9	29.51	June 6, 1947	31.63	July 13, 1948
50	9	94.99	Oct. 13, 1948	97.95	Aug. 6, 1943

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record in 11 wells in Scott County

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise (+) or net decline (-) for period of record
1	12.57	+0.42	-9.57
1A	5.21	-.94	-5.17
2	9.86	+.81	-8.55

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record, in 11 wells in Scott County--Continued

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise (+) or net decline (-) for period of record
2A	6.75	+0.06	-4.78
3	24.05	-2.69	-12.57
9	7.32	-1.39	-7.32
19	11.94	-2.54	-6.21
32	6.56	-1.17	-5.79
39	1.76	-.02	+6.65
48	2.12	-.14	+0.02
50	2.96	+2.28	+2.75

1. Mrs. Rosine Smith. NW. corner sec. 9, T. 20 S., R. 33 W. Records available: 1939-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	65.35	Apr. 13	64.97	July 13	64.91	Oct. 13	67.60
Feb. 22	65.14	May 19	65.17	Aug. 16	65.34	Nov. 10	66.25
Mar. 22	65.04	June 15	65.16	Sept. 20	66.64	Dec. 15	65.90

1A. Division of Water Resources, Kansas State Board of Agriculture. NW $\frac{1}{4}$ sec. 3, T. 20 S., R. 33 W. Records available: 1940-48.

Lowest daily water level

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	57.93	57.75	57.74	58.00	58.05	58.09	58.09	58.23	58.44	58.53
2	.....	.....	57.92	57.75	57.76	58.00	58.05	58.10	58.09	58.24	58.44	58.53
3	.....	.....	57.92	57.74	57.77	58.01	58.06	58.11	58.10	58.25	58.44	58.55
4	.....	.....	57.92	57.74	57.78	58.00	58.06	58.12	58.11	58.25	58.44	58.55
5	.....	.....	57.91	57.74	57.80	58.01	58.06	58.12	58.12	58.26	58.44	58.56
6	.....	.....	57.90	57.74	57.81	58.01	58.06	58.12	58.13	58.26	58.45	58.56
7	.....	.....	57.89	57.73	57.83	58.01	58.06	58.13	58.14	58.27	58.45	58.56
8	.....	.....	57.89	57.73	57.85	58.01	58.06	58.13	58.14	58.29	58.45	58.57
9	.....	.....	57.88	57.72	57.87	58.01	58.06	58.14	58.15	58.30	58.45	58.57
10	.....	.....	57.86	57.72	57.88	58.00	58.06	58.14	58.16	58.31	58.45	58.58
11	.....	.....	57.85	57.72	57.89	58.01	58.06	.....	58.18	58.32	58.45	58.58
12	.....	.....	57.84	57.71	57.90	58.00	58.05	.....	58.18	58.32	58.46	58.59
13	.....	.....	57.84	57.71	57.90	58.00	58.05	.....	58.19	58.32	58.47	58.59
14	58.05	.....	57.83	57.71	57.92	57.99	58.04	.....	58.19	58.32	58.48	58.60
15	58.05	.....	57.83	57.70	57.93	57.99	58.05	.....	58.20	58.33	58.48	58.60
16	58.05	.....	57.83	57.70	57.95	57.99	58.04	58.14	58.20	58.33	58.49	.....
17	58.05	.....	57.81	57.70	57.96	57.99	58.05	58.14	58.21	58.34	58.49	58.60
18	58.04	.....	57.81	57.69	57.96	58.00	58.05	58.14	58.21	58.34	58.49	58.60
19	58.05	.....	57.81	57.69	57.97	58.01	58.06	58.14	58.22	58.35	58.49	58.61
20	58.05	.....	57.80	57.68	57.98	58.01	58.07	58.13	58.22	58.35	58.49	58.62
21	58.05	.....	57.80	57.68	57.99	58.01	58.06	58.13	58.22	58.35	58.48	58.62
22	58.05	57.93	57.80	57.67	57.99	58.02	58.07	58.12	58.22	58.37	58.48	58.62
23	58.05	57.94	57.80	57.67	57.98	58.03	58.07	58.12	58.22	58.38	58.48	58.62
24	58.05	57.94	57.79	57.66	57.98	58.03	58.07	58.11	58.23	58.39	58.48	58.62
25	58.05	57.94	57.78	57.66	57.99	58.03	58.08	58.11	58.23	58.39	58.49	58.62
26	58.05	57.94	57.78	57.67	57.98	58.03	58.07	58.11	58.24	58.40	58.49	58.62
27	58.05	57.93	57.77	57.67	57.99	58.04	58.07	58.10	58.24	58.42	58.50	58.63
28	.....	57.93	57.76	57.69	57.99	58.05	58.08	58.10	58.23	58.42	58.51	58.63
29	.....	57.93	57.76	57.70	57.98	58.05	58.08	58.10	58.23	58.42	58.52	58.63
30	.....	.....	57.76	57.71	58.00	58.05	58.08	58.10	58.23	58.42	58.52	58.62
31	.....	.....	57.75	.....	58.01	.....	58.09	58.10	.....	58.43	.....	58.62

2. E. E. Coffin. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 25, T. 18 S., R. 33 W. Measuring point beginning Jan. 1, 1948, top edge of casing, south side, 0.2 foot lower than old measuring point, at land-surface datum. Records available: 1939-48.

2--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	39.78	Apr. 13	40.57	July 13	39.18	Oct. 13	40.66
Feb. 22	38.82	May 19	38.93	Aug. 16	38.31	Nov. 10	39.83
Mar. 22	40.10	June 15	38.05	Sept. 20	39.68	Dec. 15	40.00

2A. 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. Records available: 1944-48.

Lowest daily water level

Day	Jan.	Feb.	Mar.	Apr.	May	Day	Jan.	Feb.	Mar.	Apr.	May
1	36.41	.....	35.76	35.55	35.92	17	36.25	.....	35.61	35.45	.....
2	36.39	.....	35.74	35.55	35.98	18	36.23	.....	35.58	35.42	.....
3	36.39	.....	35.75	35.54	36.02	19	36.22	.....	35.60	35.44	.....
4	36.40	.....	35.75	35.52	36.04	20	36.20	.....	35.57	35.47	.....
5	36.38	.....	35.73	35.53	36.07	21	36.19	.....	35.59	35.45	.....
6	36.38	.....	.....	35.51	36.13	22	36.17	35.82	35.58	35.42	.....
7	36.35	.....	.....	35.53	36.14	23	36.17	35.82	35.58	35.46	.....
8	36.33	.....	.....	35.56	36.17	24	36.15	35.85	35.57	35.58	.....
9	36.35	.....	.....	35.52	36.24	25	36.16	35.82	35.54	35.67	.....
10	36.33	.....	.....	35.48	36.31	26	36.16	35.79	35.56	35.74	.....
11	36.30	.....	.....	35.50	36.36	27	36.16	35.77	35.60	35.80	.....
12	36.31	.....	.....	35.52	.....	28	.....	35.80	35.56	35.83	.....
13	36.32	.....	.....	35.53	.....	29	.....	35.79	35.53	35.85	.....
14	36.28	.....	35.59	35.49	.....	30	.....	.....	35.51	35.88	.....
15	36.27	.....	35.62	35.47	.....	31	.....	.....	35.55	.....	.....
16	36.28	.....	35.64	35.47	.....					

3. Claude Hughes. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 21, T. 18 S., R. 33 W. Records

available: 1939-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	81.72	Apr. 13	77.70	Aug. 16	79.31	Nov. 10	87.69
Feb. 22	81.47	May 19	79.12	Sept. 20	83.80	Dec. 15	82.85
Mar. 22	77.13	June 15	80.05	Oct. 13	91.99		

9. Mrs. Rosine Smith. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 35, T. 19 S., R. 33 W. Records

available: 1939-48. Jan. 14, 55.09. Measurements discontinued after Jan. 14, 1948.

19. J. Dyer. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 12, T. 18 S., R. 33 W. Records available:

1939-48.

Jan. 14	50.23	Apr. 14	49.65	Aug. 16	51.80	Nov. 10	52.34
Feb. 22	49.93	June 15	57.32	Sept. 20	51.95	Dec. 15	53.30
Mar. 22	49.67	July 13	56.42	Oct. 13	56.02		

32. E. J. Roark. NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 25, T. 19 S., R. 33 W. Records available: 1939-48.

Jan. 14	42.48	Apr. 13	42.40	July 13	43.28	Oct. 13	44.01
Feb. 22	42.39	May 19	42.82	Aug. 16	42.45	Nov. 10	43.69
Mar. 22	42.51	June 15	42.99	Sept. 20	44.35	Dec. 15	43.58

39. Henry F. Poos Estate. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 26, T. 18 S., R. 31 W. Records available: 1939-48. Jan. 14, 67.88.48. P. Roark. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 25, T. 20 S., R. 33 W. Records available: 1939-48.

Jan. 14	30.53	Apr. 13	30.47	July 13	31.63	Oct. 13	30.56
Feb. 22	30.85	May 19	30.68	Aug. 16	29.65	Nov. 10	30.52
Mar. 20	30.44	June 15	30.78	Sept. 20	30.45	Dec. 15	30.50

50. F. M. Houston. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 28, T. 19 S., R. 32 W. Records available: 1939-48. Jan. 14, 95.19; Apr. 13, 95.18; Oct. 13, 94.99.

Sedgwick County

Highest and lowest water levels for the period of record
in 29 wells in Sedgwick County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
11	11	51.34	Aug. 4, 1945	60.34	July 4, 1938
12	11	11.06	May 7, 1944	18.99	Apr. 1, 1938
			8, 1944		2, 1938
					8, 1938
					9, 1938
					11, 1938
					12, 1938
26	11	5.00	July 24, 1948	a 23.18	Jan. 29, 1940
307	11	9.08	May 12, 1945	15.04	Feb. 26, 1948
			13, 1945		
			20, 1945		
502	6	12.49	Mar. 20, 1944	26.70	Aug. 30, 1946
800	10	7.27	Apr. 29, 1944	19.69	Apr. 3, 1940
802	10	1.96	May 11, 1942	8.46	Dec. 5, 1947
804	10	.59	May 2, 1945	5.20	Sept. 26, 1946
805	10	1.57	May 2, 1945	6.27	Sept. 26, 1946
807	10	19.45	May 8, 1944	23.04	Jan. 2, 1941
808	10	19.94	Oct. 4, 1945	23.47	Mar. 4, 1941
809	10	6.77	Apr. 29, 1944	14.68	Jan. 2, 1941
810	10	1.94	Apr. 28, 1944	13.38	Aug. 30, 1940
811	10	3.69	May 6, 1944	9.57	July 8, 1946
812	10	6.54	Sept. 27, 1948	18.91	Feb. 10, 1947
814	10	9.72	May 4, 1945	17.11	Dec. 3, 1940
					Jan. 2, 1941
					Feb. 3, 1941
					Mar. 4, 1941
					May 1, 1941
815	10	7.65	May 11, 1945	14.04	Jan. 24, 1941
					31, 1941
816	10	5.32	Oct. 8, 1945	18.47	Mar. 3, 1947
825	10	5.49	May 4, 1945	15.18	Dec. 5, 1947
826	10	2.12	May 9, 1944	13.01	Nov. 5, 1940
830	10	23.79	May 2, 1945	28.62	Oct. 3, 1940
834	10	5.87	May 8, 1944	11.70	Oct. 3, 1940
838	10	20.83	May 29, 1945	26.91	Nov. 5, 1940
840	10	.53	Sept. 30, 1945	8.30	Mar. 10, 1947
842	10	1.39	Oct. 4, 1945	7.62	Sept. 26, 1946
845	10	8.20	May 8, 1944	16.16	Dec. 5, 1947
846	10	11.35	May 8, 1944	18.21	Dec. 5, 1947
847	10	10.55	May 8, 1944	18.36	Dec. 5, 1947
870	10	1.64	Nov. 9, 1945	8.30	Nov. 5, 1940

a Affected by pumping in nearby well field.

Difference between highest and lowest recorded water levels and net change in water level in 1948 and for period of record in 29 wells in Sedgwick County

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise (+) or net decline (-) for period of record
11	9.00	+1.09	+5.50
12	7.93	+3.67	+4.67
26	18.18	-1.19	+4.11
307	5.96	+2.73	+1.58
502	14.21	-4.60	-1.46
800	12.42	+0.04	+2.88
802	6.50	+0.58	-2.67
804	4.61	+1.23	-.49

Difference between highest and lowest recorded water levels and net change in water level in 1948 and for period of record in 29 wells in Sedgwick County--Continued

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise (+) or net decline (-) for period of record
805	4.70	+1.10	-0.61
807	3.59	+1.38	+1.01
808	3.53	-.77	+.58
809	7.91	+2.11	+1.73
810	11.44	+2.31	+.49
811	5.88	+2.68	+1.51
812	12.37	+4.58	+4.13
814	7.39	+2.48	+4.54
815	6.39	-.34	+.13
816	13.15	+3.90	+3.40
825	9.69	+4.04	+4.17
826	10.89	+6.02	+5.24
830	4.83	+1.46	-2.04
834	5.83	+1.02	+1.87
838	6.08	+2.09	+3.11
840	7.77	-.56	+3.14
842	6.23	+.16	+.92
845	7.96	-1.06	-.72
846	6.36	+.30	-.69
847	7.81	+.46	-.68
870	6.66	+2.32	+2.73

11. J. H. Heim. SE. corner sec. 22, T. 26 S., R. 3 W. Records available: 1937-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	54.87	May 5	55.56	Aug. 8	54.43	Nov. 3	53.72
Mar. 3	54.79	26	55.72	31	55.21	Dec. 3	53.74
30	55.24	June 30	54.63	Sept. 23	54.29		

12. Dr. A. D. Updegraph. NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 26, T. 25 S., R. 1 W. Records available: 1937-48. Water-stage recorder removed Aug. 17, 1948.

Lowest daily water level											
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Nov.	Dec.
1	17.59	17.75	17.62	16.74	16.96	17.22	16.06	.....	.....	.....	al5.17
2	17.60	17.75	17.52	16.76	16.97	.....	15.91	13.74	.....	al4.98	.....
3	17.62	17.75	17.46	16.74	16.98	.....	15.78	13.76	.....	.....	.....
4	17.62	17.76	17.40	16.73	.....	.....	15.68	13.78	.....	.....	.....
5	17.63	17.76	17.34	16.74	.....	.....	15.61	13.78	.....	.....	.....
6	17.63	17.76	17.29	16.73	.....	.....	15.57	13.78	.....	.....	.....
7	17.62	17.77	17.26	16.76	.....	.....	15.52	13.79	.....	.....	.....
8	17.64	17.77	17.24	16.78	.....	17.28	15.49	13.81	.....	.....	.....
9	17.65	17.30	17.23	16.78	.....	17.28	15.46	13.83	.....	.....	.....
10	17.65	17.81	17.21	16.76	17.03	17.28	15.44	13.85	.....	.....	.....
11	17.64	17.81	17.21	16.77	17.04	17.28	15.41	13.89	.....	.....	.....
12	17.65	17.81	17.21	16.82	17.04	17.29	15.39	13.90	.....	.....	.....
13	17.66	17.80	17.17	16.84	17.05	17.31	15.36	13.92	.....	.....	.....
14	17.66	17.82	17.15	16.84	17.05	17.31	15.32	13.93	.....	.....	.....
15	17.66	17.82	17.13	16.84	17.07	17.31	15.29	13.94	.....	.....	.....
16	17.67	17.83	17.13	16.85	17.07	.....	15.15	13.93	.....	.....	.....
17	17.67	17.81	17.12	16.86	17.09	.....	15.07	.....	.....	.....	.....
18	17.67	17.80	17.08	16.84	.....	.....	14.94	.....	.....	.....	.....
19	17.69	17.83	17.06	16.87	.....	.....	14.80	.....	.....	.....	.....
20	17.69	17.83	16.98	16.89	.....	.....	14.65	.....	.....	.....	.....
21	17.69	17.82	16.91	16.90	.....	.....	14.52	.....	.....	.....	.....
22	17.71	17.80	16.87	16.89	.....	17.15	14.32	.....	.....	.....	.....
23	17.71	17.78	16.80	16.90	.....	.....	14.24	.....	.....	.....	.....
24	17.71	17.78	16.79	16.91	.....	.....	14.09	.....	al4.76	.....	.....
25	17.72	17.80	16.77	16.92	.....	.....	13.98	.....	.....	.....	.....
26	17.73	17.79	16.75	16.94	17.26	.....	13.89	.....	.....	.....	.....

a Wetted-tape measurement.

12--Continued.

Lowest daily water level											
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Nov.	Dec.
27	17.73	17.77	16.76	16.97	17.16	.....	13.83	.....	.....	.....	.....
28	17.73	17.77	16.75	16.95	17.17	.....	.....	.....	.....	.....	.....
29	17.73	17.71	16.72	16.93	17.18	16.32	.....	.....	.....	.....	.....
30	17.74		16.71	16.94	17.20	16.23	.....	.....	al4.76	.....	al5.22
31	17.74		16.73		17.21		.....	.....			.....

a Wetted-tape measurement.

26. Wichita Water Co. SW $\frac{1}{4}$ sec. 18, T. 27 S., R. 1 W. Records available: 1937-48.

Lowest daily water level												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	12.13	12.00	10.45	11.30	.....	11.70	7.88	.....	12.84	11.57	11.72	11.45
2	12.17	11.97	10.44	12.35	.....	.....	7.71	10.24	13.01	11.58	11.70	11.41
3	12.10	11.95	9.88	12.56	12.18	.....	7.53	10.29	12.57	11.58	11.64	11.39
4	12.10	11.93	9.94	11.49	.....	.....	7.75	9.42	12.07	11.59	11.61	11.36
5	12.00	11.93	10.09	13.20	.....	.....	8.11	10.40	11.18	11.61	11.64	11.36
6	11.92	11.92	10.21	13.24	.....	.....	8.64	10.32	11.04	11.64	11.65	11.36
7	11.86	11.91	10.31	13.69	.....	.....	8.96	9.12	11.02	11.64	11.65	13.50
8	11.80	11.92	10.34	13.74	.....	12.07	9.22	9.64	11.03	11.65	11.63	14.73
9	11.85	11.89	10.37	13.13	.....	12.05	9.41	9.59	11.00	11.66	12.37	15.45
10	11.87	11.89	10.41	14.10	11.52	13.83	9.44	9.58	10.97	11.68	12.10	14.90
11	11.87	11.92	10.65	14.47	11.52	14.35	9.23	9.85	10.99	11.69	11.85	13.30
12	11.94	11.93	10.81	14.33	11.51	14.53	9.10	9.88	11.04	.....	11.76	12.80
13	11.94	11.96	10.83	14.46	11.50	13.66	9.22	9.68	11.07	.....	11.73	12.43
14	11.95	11.99	10.83	14.89	11.50	12.59	9.55	9.20	11.09	.....	11.70	.....
15	11.98	11.97	10.63	15.01	11.52	13.21	10.92	8.63	11.12	.....	11.68	.....
16	12.04	11.91	10.56	15.10	11.53	.....	9.42	8.22	11.16	.....	11.67	.....
17	12.13	11.85	10.48	15.19	11.53	.....	8.81	7.91	11.35	.....	11.67	.....
18	12.21	11.78	10.78	15.38	.....	.....	7.56	7.67	12.14	.....	11.63	.....
19	12.25	11.73	10.95	15.40	.....	.....	7.15	8.41	11.90	.....	11.63	.....
20	12.23	11.73	10.82	15.32	.....	.....	6.82	9.85	12.65	.....	11.63	12.33
21	12.16	11.71	10.99	15.32	.....	.....	6.62	9.63	.....	.....	11.62	12.33
22	12.09	11.69	10.27	13.90	.....	11.57	6.13	9.08	13.29	.....	11.62	12.32
23	12.16	11.65	9.87	12.92	.....	.....	5.52	10.72	12.60	.....	.....	12.30
24	12.25	11.62	9.82	12.51	.....	.....	5.00	10.56	12.7	.....	.....	12.26
25	12.25	11.58	9.80	12.25	.....	.....	5.11	.....	11.67	.....	.....	12.26
26	12.23	11.53	9.98	12.07	11.74	.....	5.67	.....	11.65	.....	.....	12.23
27	12.19	11.45	10.09	.....	11.73	.....	5.98	.....	11.66	.....	.....	12.20
28	12.15	11.21	10.12	.....	11.70	.....	.....	.....	15.55	.....	.....	12.21
29	12.10	10.56	10.20	.....	11.72	8.54	.....	.....	11.55	.....	11.51	12.22
30	12.06	.....	10.88	.....	11.72	8.17	.....	11.82	11.66	.....	11.50	12.21
31	12.03	.....	12.01	.....	11.71	.....	.....	12.38	.....	.....	.....	12.17

307. J. R. Clark. NW $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 1, T. 25 S., R. 2 W. Records available: 1937-48.

able: 1957-48.

	Lowest daily water level											
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	14.70	14.85	14.90	14.27	.....	14.52	13.71	....	10.30	10.90	.....	11.64
2	14.70	14.86	14.84	14.26	.....	.....	13.71	9.92	10.31	10.91	.....	11.65
3	14.70	14.87	14.81	14.25	14.03	.....	13.68	9.92	10.34	10.91	11.31	11.65
4	14.70	14.87	14.77	14.22	.....	.....	13.66	9.94	10.36	10.91	11.32	11.65
5	14.72	14.87	14.74	14.19	.....	.....	13.66	9.94	10.39	10.93	11.36	11.69
6	14.72	14.87	14.72	14.18	.....	.....	13.64	9.92	10.42	10.99	11.38	11.70
7	14.72	14.87	14.72	14.17	.....	.....	13.65	9.91	10.45	11.01	11.38	11.70
8	14.71	14.87	14.72	14.16	.....	14.67	13.65	9.91	10.47	11.02	11.34	11.69
9	14.69	14.87	14.72	14.15	.....	14.69	13.65	9.92	10.47	11.02	11.34	11.70
10	14.68	14.90	14.73	14.11	14.20	14.70	13.64	9.92	10.48	11.05	11.38	11.68
11	14.67	14.91	14.74	14.07	14.20	14.72	13.59	9.94	10.50	11.07	11.39	11.63
12	14.66	14.92	14.76	14.07	14.20	14.74	13.51	9.94	10.54	.....	11.43	11.70
13	14.66	14.93	14.76	14.02	14.23	14.75	13.48	9.94	10.56	.....	11.44	11.72
14	14.66	14.94	14.76	14.01	14.24	14.75	13.47	9.90	10.59	.....	11.45	.....
15	14.66	14.94	14.74	13.99	14.26	14.75	13.36	9.80	10.60	.....	11.45	.....

307--Continued.

Lowest daily water level

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
16	14.65	14.95	14.74	13.98	14.27	.....	12.41	9.89	10.64	.....	11.48	.....
17	14.65	14.95	14.74	13.97	14.30	.....	12.00	9.92	10.66	.....	11.48	.....
18	14.67	14.96	14.73	13.95	.....	.....	11.83	9.95	10.68	.....	11.48	.....
19	14.72	14.97	14.70	13.93	.....	.....	11.70	9.96	10.70	.....	11.51	.....
20	14.73	14.97	14.59	13.92	.....	.....	11.67	9.99	10.72	.....	11.55	11.79
21	14.75	14.98	14.50	13.92	.....	.....	11.65	10.02	10.74	.....	11.57	11.81
22	14.76	14.99	14.46	13.93	.....	14.78	11.58	10.06	10.79	.....	11.57	11.83
23	14.76	15.00	14.39	13.95	.....	14.74	11.20	10.09	10.81	.....	.....	11.85
24	14.77	15.02	14.39	13.96	14.45	14.59	11.01	.....	10.84	.....	.....	11.88
25	14.77	15.03	14.38	13.96	14.45	14.54	10.93	.....	10.88	.....	.....	11.89
26	14.81	15.04	14.37	13.96	14.43	14.42	10.86	.....	10.88	.....	.....	11.90
27	14.81	15.00	14.36	.....	14.45	14.34	10.85	.....	10.89	.....	.....	11.90
28	14.82	14.95	14.35	.....	14.47	14.04	.....	.....	10.89	.....	.....	11.94
29	14.83	14.92	14.34	.....	14.48	13.86	.....	.....	10.87	.....	11.63	11.96
30	14.84	.....	14.31	.....	14.48	13.77	.....	10.25	10.88	.....	11.64	11.96
31	14.85	.....	14.28	.....	14.48	.....	.....	10.28	.....	.....	.....	11.96

502. Kansas Gas & Electric Co. NW. corner sec. 29, T. 26 S., R. 1 E. Records available: 1943-48. Pumping before each measurement.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 2	21.80	May 10	18.20	Aug. 16	21.10	Nov. 12	26.00
Mar. 12	20.50	June 11	25.10	Sept. 7	24.40	Dec. 3	25.70
Apr. 1	20.80	June 13	20.80	Oct. 11	24.20		

800. City of Wichita. SW. corner sec. 33, T. 26 S., R. 1 E. Correction: Depth to water level on Jan. 3, 1946, was 11.82 feet instead of 6.80 feet as indicated in Water-Supply Paper 1073. Tables giving highest water level and difference in water levels have been corrected in this report. Records available: 1938-48.

Jan. 30	16.22	May 5	16.52	Aug. 8	15.78	Nov. 3	15.99
Mar. 3	15.96	26	17.04	31	16.86	Dec. 3	16.03
30	15.98	June 30	16.12	Sept. 23	16.17		

802. City of Wichita. NW. corner sec. 1, T. 27 S., R. 1 W. Records available: 1939-48.

Jan. 30	8.11	May 5	7.56	Aug. 8	5.47	Nov. 3	7.36
Mar. 3	6.48	26	8.03	31	7.68	Dec. 3	7.40
30	6.72	June 30	6.22	Sept. 23	7.10		

804. City of Wichita. SE. corner sec. 16, T. 26 S., R. 1 W. Records available: 1938-48.

Jan. 20	3.99	May 5	3.08	Aug. 8	2.28	Nov. 3	2.54
Mar. 3	2.41	26	3.79	31	3.58	Dec. 3	2.58
30	2.67	June 30	2.61	Sept. 23	3.94		

805. City of Wichita. NW. corner NE $\frac{1}{4}$ sec. 19, T. 26 S., R. 1 W. Records available: 1938-48.

Jan. 30	5.39	May 5	4.23	Aug. 8	2.51	Nov. 3	3.70
Mar. 3	3.60	26	5.05	31	4.79	Dec. 3	3.72
30	3.70	June 30	2.92	Sept. 23	3.72		

807. City of Wichita. NW. corner sec. 10, T. 26 S., R. 2 W. Records available: 1938-48.

Jan. 30	22.78	May 5	21.91	Aug. 8	21.03	Nov. 3	21.30
Mar. 3	22.12	26	22.15	31	21.89	Dec. 3	21.28
30	21.69	June 30	21.21	Sept. 23	21.98		

808. City of Wichita. SW. corner NW $\frac{1}{4}$ sec. 18, T. 26 S., R. 2 W.
Records available: 1938-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	22.26	May 5	21.96	Aug. 8	20.69	Nov. 3	22.91
Mar. 3	21.79	26	22.44	31	21.14	Dec. 3	22.86
30	21.54	June 30	21.76	Sept. 23	20.83		

809. City of Wichita. NW. corner sec. 21, T. 28 S., R. 1 E. Records available: 1938-48.

Jan. 30	13.18	May 5	13.12	Aug. 8	12.42	Nov. 3	10.90
Mar. 3	12.26	26	13.96	31	13.21	Dec. 3	10.93
30	12.31	June 30	12.91	Sept. 23	10.66		

810. City of Wichita. NE. corner SE $\frac{1}{4}$ sec. 35, T. 26 S., R. 1 W.
Records available: 1938-48.

Jan. 5	12.83	Mar. 15	12.21	July 13	10.39	Sept. 27	10.01
12	12.81	29	12.00	19	9.99	Oct. 4	10.13
19	12.79	Apr. 5	12.18	27	8.72	Nov. 3	10.31
26	12.82	May 3	12.65	Aug. 10	9.56	8	10.34
Feb. 2	12.84	25	11.48	16	9.58	15	10.39
9	12.94	June 1	11.50	30	9.76	29	10.23
24	12.86	22	11.46	Sept. 7	9.86	Dec. 6	10.24
Mar. 2	12.33	29	10.76	13	9.82	20	10.33
8	12.39	July 6	10.44	22	10.16	27	10.41

811. City of Wichita. SE. corner sec. 33, T. 25 S., R. 1 W. Records available: 1938-48.

Jan. 5	8.59	Mar. 15	7.96	July 13	5.12	Sept. 27	5.42
12	8.60	29	7.75	19	4.76	Oct. 4	5.50
19	8.61	Apr. 5	7.83	27	4.41	Nov. 3	5.72
26	8.58	May 3	7.84	Aug. 10	4.71	8	5.80
Feb. 2	8.59	25	5.60	16	4.79	15	5.86
9	8.62	June 1	5.80	30	5.02	29	5.84
24	8.59	22	5.79	Sept. 7	5.07	Dec. 6	5.88
Mar. 2	7.98	29	5.51	13	5.05	20	5.90
8	8.04	July 6	5.38	22	5.37	27	5.96

812. City of Wichita. NW. corner sec. 27, T. 25 S., R. 1 W. Records available: 1938-48.

Jan. 5	11.94	Mar. 15	11.56	July 27	9.56	Oct. 4	6.58
12	11.98	29	11.02	Aug. 10	9.78	Nov. 3	6.79
19	12.02	Apr. 5	11.07	16	9.82	8	6.91
26	12.03	June 1	10.56	30	10.51	15	7.08
Feb. 2	12.01	22	10.58	Sept. 7	10.06	29	7.12
9	12.11	29	10.36	13	9.96	Dec. 6	7.23
24	12.06	July 6	10.22	22	10.18	20	7.28
Mar. 2	11.62	13	10.08	27	6.54	27	7.34
8	11.79	19	9.71				

814. City of Wichita. SE. corner sec. 14, T. 25 S., R. 1 W. Records available: 1938-48.

Jan. 30	14.86	May 26	15.08	Aug. 31	13.81	Nov. 2	12.09
Mar. 3	13.98	June 30	14.06	Sept. 23	11.68	Dec. 1	12.21
30	14.11	Aug. 8	13.58	30	11.68	30	12.26
May 5	14.48						

815. City of Wichita. NE. corner sec. 17, T. 25 S., R. 1 W. Records available: 1938-48.

815--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	12.77	Mar. 23	12.16	July 13	11.36	Sept. 27	10.52
12	12.81	29	12.08	19	11.12	Oct. 4	10.59
19	12.85	Apr. 5	12.14	27	10.21	Nov. 3	10.81
26	12.87	May 3	12.17	Aug. 10	10.26	8	10.90
Feb. 2	12.89	25	12.30	16	10.24	15	10.96
9	12.93	June 1	12.32	30	10.66	29	12.98
24	12.91	22	12.29	Sept. 7	10.38	Dec. 6	13.02
Mar. 2	12.52	29	11.76	13	10.39	20	13.04
8	12.58	July 6	11.48	22	10.64	27	13.08
15	12.39						

816. City of Wichita. SE. corner sec. 7, T. 25 S., R. 1 W. Records available: 1938-48.

Jan. 5	11.68	Mar. 23	10.95	July 13	10.31	Sept. 27	7.06
12	11.74	29	10.85	19	8.09	Oct. 4	7.14
19	11.79	Apr. 5	10.88	27	8.96	Nov. 3	7.46
26	11.81	May 3	10.86	Aug. 10	8.94	8	7.52
Feb. 2	11.83	25	11.06	16	8.93	15	7.61
9	11.89	June 1	11.10	30	9.14	29	7.65
24	11.86	22	11.02	Sept. 7	8.26	Dec. 6	7.66
Mar. 2	11.27	29	10.71	13	8.30	20	7.72
8	11.47	July 6	10.48	22	8.51	27	7.76
15	11.34						

825. City of Wichita. NE. corner sec. 3, T. 25 S., R. 1 W. Records available: 1938-48.

Jan. 30	13.68	May 5	9.72	Aug. 8	9.08	Nov. 3	9.45
Mar. 3	13.08	26	10.18	31	9.43	Dec. 3	9.43
30	9.54	June 30	9.62	Sept. 23	9.14		

826. City of Wichita. NE. corner sec. 5, T. 25 S., R. 1 W. Records available: 1939-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 29	11.06	Apr. 1	9.19	July 7	4.92
Mar. 5	10.26	May 4	7.27	Oct. 3	5.02

830. City of Wichita. SW. corner sec. 30, T. 25 S., R. 2 W. Records available: 1938-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	27.78	May 5	25.96	Aug. 8	24.98	Nov. 3	26.00
Mar. 3	27.12	26	26.65	31	25.12	Dec. 3	26.16
30	25.46	June 30	25.31	Sept. 23	25.45		

834. City of Wichita. SW. corner sec. 9, T. 25 S., R. 3 W. Records available: 1938-48.

Jan. 30	9.56	May 5	7.59	Aug. 8	6.73	Nov. 3	8.44
Mar. 3	7.61	26	9.20	31	6.96	Dec. 3	8.43
30	7.33	June 30	7.42	Sept. 23	8.14		

838. City of Wichita. NE. corner NW $\frac{1}{4}$ sec. 33, T. 25 S., R. 3 W. Records available: 1938-48.

Jan. 30	24.53	May 5	22.86	Aug. 8	21.86	Nov. 3	22.28
Mar. 3	24.01	26	23.47	31	21.91	Dec. 3	22.25
30	22.57	June 30	22.59	Sept. 23	21.32		

840. Owner of property, C. A. Berger; owner of well, city of Wichita. NE. corner sec. 9, T. 25 S., R. 2 W. Records available: 1940-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	7.43	Mar. 29	5.41	July 19	4.66	Oct. 4	5.17
12	7.42	Apr. 5	5.50	27	2.93	Nov. 3	5.59
19	7.40	May 3	5.58	Aug. 10	3.08	8	5.71
26	7.43	25	6.40	16	3.09	15	5.78
Feb. 2	7.41	June 1	6.51	30	3.82	29	5.82
24	7.46	22	6.46	Sept. 7	4.28	Dec. 6	5.91
Mar. 2	6.82	29	5.79	13	4.32	20	7.93
8	7.06	July 6	5.71	22	4.91	27	7.98
15	6.61	13	5.22	27	5.02		

842. City of Wichita. SW. corner sec. 16, T. 25 S., R. 2 W. Records available: 1939-48.

Jan. 30	5.56	May 5	3.91	Aug. 8	2.91	Nov. 3	5.38
Mar. 3	4.61	26	4.29	31	3.08	Dec. 3	5.33
30	3.17	June 30	3.59	Sept. 23	5.28		

845. City of Wichita. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 5, T. 27 S., R. 1 E. Records available: 1939-48.

Jan. 30	14.59	May 5	14.56	Aug. 8	13.88	Nov. 3	15.47
Mar. 3	13.72	26	15.19	31	14.03	Dec. 3	15.49
30	14.25	June 30	14.31	Sept. 23	14.86		

846. City of Wichita. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 6, T. 27 S., R. 1 E. Records available: 1939-48.

Jan. 30	17.23	May 5	16.80	Aug. 8	15.91	Nov. 3	16.74
Mar. 3	16.48	26	17.47	31	16.03	Dec. 3	16.77
30	16.64	June 30	16.69	Sept. 23	16.21		

847. City of Wichita. SW. corner SE $\frac{1}{4}$ sec. 6, T. 27 S., R. 1 E. Records available: 1939-48.

Jan. 30	17.42	May 5	16.38	Aug. 8	15.72	Nov. 3	16.80
Mar. 3	16.26	26	17.40	31	15.89	Dec. 3	16.83
30	16.03	June 30	16.17	Sept. 23	16.25		

870. W. Williams. NW $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 18, T. 25 S., R. 2 W. Records available: 1940-48.

Jan. 30	6.06	May 5	4.01	Aug. 8	3.06	Nov. 3	3.67
Mar. 3	4.36	26	4.67	31	3.41	Dec. 3	3.65
30	3.54	June 30	3.50	Sept. 23	3.55		

2089. Mrs. G. H. von Hein. At rear of dwelling at 842 Coolidge Avenue, Wichita, in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 18, T. 27 S., R. 1 E. Records available: 1944-47. Measurements discontinued after Mar. 3, 1947.

M-27b. City of Wichita. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 3, T. 25 S., R. 2 W. Drilled observation well, diameter 1 $\frac{1}{4}$ inches, depth 78 feet below land-surface datum. Measuring point, top of pipe, 2.6 feet above land-surface datum. Records available: 1947-48. Dec. 1, 1947, 16.05; July 7, 1948, 13.47; Oct. 4, 1948, 12.62.

M-28b. City of Wichita. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 2, T. 25 S., R. 2 W. Drilled observation well, diameter 1 $\frac{1}{4}$ inches, depth 82 feet below land-surface datum. Measuring point, top of pipe, 3.0 feet above land-surface datum. Records available: 1947-48. Dec. 17, 1947, 16.00; July 7, 1948, 13.22; Oct. 4, 1948, 12.55.

M-29b. City of Wichita. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 11, T. 25 S., R. 2 W. Drilled observation well, diameter 1 $\frac{1}{4}$ inches, depth 103 feet below land-surface datum. Measuring point, top of pipe, 2.5 feet above land-surface datum. Records available: 1947-48. July 1, 1947, 11.81; July 7, 1948, 10.29; Oct. 4, 1948, 9.81.

M-30b. City of Wichita. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 11, T. 25 S., R. 2 W. Drilled observation well, diameter 1 $\frac{1}{4}$ inches, depth 61 feet below land-surface datum. Measuring point, top of pipe, 1.2 feet above land-surface datum. Records available: 1947-48. Oct. 16, 1947, 11.60; July 7, 1948, 8.40; Oct. 4, 1948, 7.39.

M-31b. City of Wichita. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 12, T. 25 S., R. 2 W. Drilled observation well, diameter 1 $\frac{1}{4}$ inches, depth 62 feet below land-surface datum. Measuring point, top of pipe, 1.4 feet above land-surface datum. Records available: 1947-48. July 16, 1947, 9.95; July 7, 1948, 8.34; Oct. 4, 1948, 8.81.

M-32b. City of Wichita. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 12, T. 25 S., R. 2 W. Drilled observation well, diameter 1 $\frac{1}{4}$ inches, depth 71 feet below land-surface datum. Measuring point, top of pipe, 1.0 foot above land-surface datum. Records available: 1947-48. Aug. 16, 1947, 10.70; July 7, 1948, 9.64; Oct. 4, 1948, 8.40.

M-33b. City of Wichita. E $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 1, T. 25 S., R. 2 W. Drilled observation well, diameter 1 $\frac{1}{4}$ inches, depth 75 feet below land-surface datum. Measuring point, top of pipe, 1.6 feet above land-surface datum. Records available: 1947-48. Oct. 29, 1947, 10.74; July 7, 1948, 6.88; Oct. 4, 1948, 6.82.

M-34b. City of Wichita. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 6, T. 25 S., R. 1 W. Drilled observation well, diameter 1 $\frac{1}{4}$ inches, depth 85 feet below land-surface datum. Measuring point, top of pipe, 1.3 feet above land-surface datum. Records available: 1947-48. Nov. 12, 1947, 9.83; July 7, 1948, 8.64; Oct. 4, 1948, 6.83.

M-35b. City of Wichita. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 6, T. 25 S., R. 1 W. Drilled observation well, diameter 1 $\frac{1}{4}$ inches, depth 86 feet below land-surface datum. Measuring point, top of pipe, 1.1 feet above land-surface datum. Records available: 1947-48. Nov. 5, 1947, 13.20; July 7, 1948, 10.92; Oct. 4, 1948, 10.72.

Seward County

By Janet S. Olson

Highest and lowest water levels for the period of record,
in 4 wells in Seward County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
15	8	15.88	May 3, 1944	18.67	Nov. 24, 1947
106	8	203.89	Jan. 13, 1947	210.08	Dec. 12, 1947
122	8	200.66	Jan. 22, 1945	206.76	Oct. 21, 1947
159	8	90.56	Dec. 17, 1948	95.55	Dec. 19, 1940

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record in 4 wells in Seward County

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise (+) or net decline (-) for period of record
15	2.79	+0.85	-1.00
106	6.19	+1.03	-.91
122	5.10	-.95	+.32
159	4.69	+2.20	+4.82

15. R. H. Hitch. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 21, T. 32 S., R. 33 W. Records available: 1940-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	17.52	Apr. 17	17.32	June 16	18.00	Dec. 17	17.72
Feb. 19	17.36	May 26	17.48	July 15	17.62		

106. Kansas City Life Insurance Co. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 8, T. 32 S., R. 34 W. Records available: 1940-48.

Jan. 13	209.84	Mar. 18	207.47	May 26	206.32	July 15	209.67
Feb. 19	207.49	Apr. 17	209.54	June 16	208.77	Dec. 17	209.05

108. C. D. Day. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 6, T. 31 S., R. 34 W. Records available: 1940-47. No measurements made in 1948.

122. Mrs. Flora Atwell. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 9, T. 33 S., R. 31 W. Records available: 1940-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 13	203.46	May 26	203.45	Dec. 17	203.31
Mar. 18	202.92	June 17	202.33		

159. Liberal Gas Co. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 3, T. 35 S., R. 34 W. Records available: 1940-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	92.69	Apr. 17	91.00	July 15	91.04	Oct. 18	90.77
Feb. 19	91.65	May 26	91.05	Aug. 17	90.84	Nov. 15	90.60
Mar. 18	91.24	June 17	91.10	Sept. 21	90.72	Dec. 17	90.56

Shawnee County

11-16-5bc. C. C. Busey. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 5, T. 11 S., R. 16 E. Unused dug domestic and stock well, diameter 6 feet, depth 22.6 feet below land-surface datum. Measuring point, top of concrete, 0.1 foot above land-surface datum. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level
May 26	5.39	Aug. 25	9.00	Nov. 27	11.80
July 3	7.18	Oct. 14	11.12		

Sherman County

8-37-28abb. Albert Vohs. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 28, T. 8 S., R. 37 W. Unused drilled domestic well, diameter 6 inches, depth 125 feet below land-surface datum. Measuring point, top of casing, west side, 0.3 foot above land-surface datum. Records available: 1948. May 17, 107.59; July 14, 107.30; Oct. 14, 107.73.

8-40-24baa. Victoria van Drasek Estate. NE $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 24, T. 8 S., R. 40 W. Unused drilled domestic well, diameter 6 inches, depth 164 feet below land-surface datum. Measuring point, top of casing, west side, 0.7 foot above land-surface datum. Records available: 1948. May 17, 136.49; July 14, 136.67; Oct. 14, 136.85.

9-39-30cbb. Charles Glenn. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 30, T. 9 S., R. 39 W. Unused drilled domestic and stock well, diameter 6 inches, depth 145 feet below land-surface datum. Measuring point, top of casing, south side, at land-surface datum. Records available: 1948. May 17, 118.68; July 14, 118.73; Oct. 14, 118.80.

Smith County

Highest and lowest water levels for the period of record,
in 8 wells in Smith County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
4-14-34bc	3	42.15	Nov. 21, 1945	43.05	Sept. 25, 1946
4-15-31bb	3	34.92	July 30, 1947	36.26	Nov. 30, 1948
4-15-35bc	3	34.10	July 30, 1947	37.99	June 12, 1946
5-13-4dc	3	24.18	Mar. 31, 1948	35.28	Dec. 17, 1945
5-13-25cc	3	43.78	Jan. 2, 1948	48.53	Jan. 28, 1946
5-13-33ba	3	25.64	July 30, 1947	30.46	Jan. 2, 1948
5-14-3bc	3	34.80	Mar. 26, 1947	40.50	Oct. 27, 1947
5-15-2dc	3	31.85	Aug. 28, 1947	33.84	Nov. 30, 1948

Difference between highest and lowest recorded water levels and net change
in water level, in 1948 and for period of record, in 8 wells in Smith
County

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise (+) or net decline (-) for period of record
4-14-34bc	0.90	-0.35	-0.65
4-15-31bb	1.34	-.84	-.36
4-15-35bc	3.89	-1.83	-2.38
5-13-4dc	11.10	-.29	+8.05
5-13-25cc	2.75	-.26	+1.18
5-13-33ba	4.82	-3.32	-2.90
5-14-3bc	5.70	+2.46	-2.43
5-15-2dc	1.99	-1.84	-.69

4-14-34bc. Laura Davis. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 34, T. 4 S., R. 14 W. Records
available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 2	42.44	June 2	42.69	Oct. 6	42.75
Mar. 31	42.61	Aug. 3	42.75	Nov. 30	42.30

4-15-31bb. W. Lala. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 31, T. 4 S., R. 15 W. Record
available: 1946-48.

Jan. 2	35.46	June 2	35.59	Oct. 6	36.04
Mar. 31	35.53	Aug. 3	35.87	Nov. 30	36.26

4-15-35bc. H. R. Dannenburg. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 35, T. 4 S., R. 15 W.
Records available: 1946-48.

Jan. 2	36.24	June 2	36.79	Oct. 6	37.70
Mar. 31	36.50	Aug. 3	36.43	Nov. 30	37.98

5-13-4dc. R. Eller. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 4, T. 5 S., R. 13 W. Records avail-
able: 1946-48.

Jan. 2	25.90	June 2	a 27.07	Oct. 6	27.68
Mar. 31	24.18	Aug. 3	25.80	Nov. 30	27.05

a Pumping.

5-13-25cc. Zelma Carter. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 25, T. 5 S., R. 13 W. Records
available: 1946-48.

Jan. 2	43.78	June 2	43.96	Oct. 6	44.00
Mar. 31	43.84	Aug. 3	43.96	Nov. 30	44.12

5-13-33ba. W. L. Gearhart and others. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 33, T. 5 S., R. 13 W. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 2	a 30.46	June 2	27.63	Oct. 6	28.82
Mar. 31	28.80	Aug. 3	27.80	Nov. 30	29.70

a Pumping recently.

5-14-3bc. Walter Felsburg. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 3, T. 5 S., R. 14 W. Records available: 1946-48.

Jan. 2	37.12	June 2	36.29	Oct. 6	38.75
Mar. 31	36.15	Aug. 3	37.80	Nov. 30	38.04

5-15-2dc. G. K. Wanhoff. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 2, T. 5 S., R. 15 W. Records available: 1946-48.

Jan. 2	32.34	June 2	32.97	Oct. 6	33.55
Mar. 31	32.90	Aug. 3	33.42	Nov. 30	33.84

Stafford County

Highest and lowest water levels for the period of record, in 4 wells in Stafford County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
3	6.5	15.54	July 20, 1948	22.23	Nov. 16, 1947
19	6.5	2.18	Nov. 24, 1948	11.04	Aug. 1, 1942
26	6.5	9.28	Aug. 8, 1945	20.11	Aug. 3, 1942
29	6.5	15.88	June 6, 1945	22.84	Aug. 4, 1942

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record, in 4 wells in Stafford County

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise for period of record
3	6.69	+5.25	1.41
19	8.86	+4.75	8.86
26	10.83	-.64	6.17
29	6.96	+0.02	2.88

3. B. Fritzmeier. SW. corner SW $\frac{1}{4}$ sec. 12, T. 23 S., R. 12 W. Records available: 1942-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 16	19.95	Apr. 14	19.50	July 20	15.54	Oct. 19	17.67
Feb. 17	19.80	May 20	18.43	Aug. 24	15.97	Nov. 24	17.18
Mar. 15	20.17	June 23	18.73	Sept. 22	17.28	Dec. 21	16.98

19. Atlantic Refining Co. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 27, T. 21 S., R. 13 W. Records available: 1942-48.

Jan. 16	6.75	Mar. 15	5.73	May 20	4.97	Nov. 24	2.18
Feb. 17	6.68	Apr. 14	5.70	June 23	4.85		

26. Stanolind Oil Co. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 3, T. 22 S., R. 12 W. Records available: 1942-48. Jan. 16, 13.84; Feb. 17, 13.94.

29. Atlantic Refining Co. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 28, T. 24 S., R. 13 W. Records available: 1942-48. Jan. 16, 20.22; Feb. 17, 20.34; Mar. 15, 19.96. Measurements discontinued after Mar. 15, 1948.

Stanton County

Highest and lowest water levels for the period of record,
in 4 wells in Stanton County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
13	9.5	47.52	Aug. 13, 1947	51.83	Apr. 23, 1940
47	9.5	69.92	Aug. 17, 1945	72.00	June 16, 1948
93	9.5	174.16	Nov. 26, 1947	178.61	Nov. 16, 1948
146	9.5	39.35	Nov. 26, 1947	46.30	Apr. 22, 1940 May 14, 1940 June 18, 1940

Difference between highest and lowest recorded water levels and net change
in water level, in 1948 and for period of record in 4 wells in Stanton
County

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise (+) or net decline (-) for period of record
13	4.31	+0.05	+2.21
47	2.08	-.12	-.77
93	4.45	-4.45	-3.16
146	6.95	+1.28	+8.16

13. L. Y. Carrithers. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 21, T. 27 S., R. 40 W. Records
available: 1939-48. Feb. 20, 49.17; Aug. 18, 50.36; Nov. 16, 49.12.

47. Southwestern College. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 35, T. 28 S., R. 39 W.
Records available: 1939-48. Measurements discontinued after July 15,
1948.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	71.15	Mar. 18	70.96	May 22	71.36	July 15	71.36
Feb. 20	71.04	Apr. 17	70.89	June 16	72.00		

93. J. Plummer. Center NE $\frac{1}{4}$ sec. 11, T. 29 S., R. 41 W. Records
available: 1939-48. Feb. 20, 174.25; May 25, 176.08; Aug. 18, 175.26;
Nov. 16, 178.61.

146. C. M. Harrison. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 27, T. 30 S., R. 43 W. Records
available: 1939-48. Feb. 20, 39.12; Aug. 18, 38.38; Nov. 16, 38.07.

Stevens County

By Janet S. Olson

Highest and lowest water levels for the period of record,
in 5 wells in Stevens County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
10	6.5	79.92	Feb. 21, 1948	a 93.20	May 10, 1945
12	6.5	109.79	May 24, 1948	113.38	July 28, 1942
21	6.5	86.32	Aug. 3, 1944	89.21	Nov. 26, 1947
28	6.5	131.17	Nov. 26, 1947	132.64	Sept. 23, 1943
30	6.5	102.54	Nov. 15, 1948	106.84	Sept. 23, 1943

a Affected by pumping.

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record in 5 wells in Stevens County

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net rise (+) or net decline (-) for period of record
10	13.28	-2.49	-2.56
12	3.59	-1.57	+1.56
21	2.89	+1.25	-.80
28	1.47	-.22	+1.05
30	4.30	+.55	+3.46

10. T. P. Patterson. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 21, T. 33 S., R. 37 W. Records available: 1942-48. Feb. 21, 79.92; Aug. 17, 83.39; Nov. 15, 84.24.

12. Mack Greenwood. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 28, T. 33 S., R. 38 W. Records available: 1942-48. Feb. 21, 110.07; May 24, 109.79; Nov. 15, 111.82.

21. B. W. Parsons. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 9, T. 31 S., R. 37 W. Records available: 1942-48. Feb. 21, 87.96.

28. C. E. Dudley. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 34, T. 31 S., R. 36 W. Records available: 1942-48. Feb. 21, 131.39.

29. Eunice Bateman. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 10, T. 32 S., R. 36 W. Records available: 1942-47. Measurements discontinued after Nov. 26, 1947.

30. Central Life Assurance Co. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 15, T. 33 S., R. 36 W. Records available: 1942-48. Feb. 21, 103.07; May 24, 102.91; Aug. 17, 102.79; Nov. 15, 102.54.

Sumner County

By Janet S. Olson

Highest and lowest water levels for the period of record, in 2 wells in Sumner County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
1	4.5	5.77	June 7, 1944	10.40	Oct. 7, 1946
2	4.5	21.95	Dec. 5, 1945	23.05	July 6, 1948

Difference between highest and lowest recorded water levels and net change in water level, in 1948 and for period of record in 2 wells in Sumner County

Well	Difference between highest and lowest levels	Net rise (+) or net decline (-) in 1948	Net decline for period of record
1	4.63	+0.12	3.27
2	1.10	-.52	.16

1. Geol. Survey, U. S. Dept. of Interior. On township road right-of-way in NW. corner sec. 1, T. 30 S., R. 1 E. Records available: 1944-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 24	8.77	May 17	8.75	Aug. 7	9.82	Nov. 8	9.20
Mar. 5	10.10	June 2	10.00	Sept. 1	8.00	Dec. 2	9.04
Apr. 9	9.77	July 6	9.55	Oct. 11	7.85		

2. Geol. Survey, U. S. Dept. of Interior. On township road right-of-way in NE. corner sec. 6, T. 30 S., R. 1 E. Records available: 1944-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 24	22.30	May 17	22.37	Aug. 7	22.95	Nov. 8	23.00
Mar. 5	22.85	June 2	23.00	Sept. 1	22.75	Dec. 2	23.00
Apr. 9	22.33	July 6	23.05	Oct. 11	22.65		

Thomas County

By Janet S. Olson

Highest and lowest water levels for the period of record,
in 7 wells in Thomas County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
7	6.5	123.97	Apr. 25, 1945	128.02	Oct. 14, 1948
9	6.5	70.81	July 10, 1947	73.21	Apr. 24, 1944
12	6.5	89.45	July 10, 1947	90.46	Oct. 24, 1945
					July 9, 1946
					Jan. 7, 1947
26	6.5	111.43	Oct. 14, 1947	117.55	Oct. 13, 1948
28	6.5	30.24	Apr. 4, 1947	32.70	Apr. 25, 1945
33	6.5	116.60	Apr. 13, 1948	119.96	Oct. 13, 1948
62	6.5	97.65	Nov. 27, 1942	99.19	Jan. 7, 1947

Difference between highest and lowest recorded water levels and net change
in water level, in 1948 and for period of record in 7 wells in Thomas
County

Well	Difference between highest and lowest levels	Net decline in 1948	Net rise (+) or net decline (-) for period of record
7	4.05	0.09	-3.50
9	1.44	.27	+.83
12	.64	.18	+.16
26	6.12	6.12	-5.77
28	2.46	1.09	-1.47
33	3.36	2.35	-2.85
62	1.54	.96	-1.06

7. George Strait. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 18, T. 8 S., R. 36 W. Records available: 1942-48. Jan. 15, 124.49; Apr. 13, 124.72; July 14, 125.32; Oct. 14, 128.02.

9. Mr. Sloan. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 26, T. 7 S., R. 33 W. Records available: 1943-48. Jan. 15, 71.60.

12. W. A. Atha. NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 2, T. 7 S., R. 31 W. Records available: 1942-48. Jan. 15, 89.84; Apr. 13, 89.89; July 13, 89.96; Oct. 13, 90.00.

13. H. V. Christensen. SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 13, T. 8 S., R. 31 W. Records available: 1942-48. Well was measured on Jan. 15, 1948 and reported dry.

26. T. A. Ryan. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 27, T. 8 S., R. 32 W. Records available: 1942-48. Jan. 14, 114.05; Apr. 13, 114.04; July 13, 114.98; Oct. 13, 117.55.

28. Katherine B. Hood. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 20, T. 10 S., R. 31 W. Records available: 1946-48. Jan. 14, 32.34.

33. Arch Ball. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 7, T. 9 S., R. 33 W. Records available: 1942-48. Jan. 14, 119.02; Apr. 13, 116.60; July 13, 118.10; Oct. 13, 119.96.

62. H. A. Hills. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 27, T. 10 S., R. 34 W. Records available: 1942-48. Jan. 14, 98.80.

8-34-2aa. U. S. Dept. of Agriculture and Kansas Agricultural Experiment Station. NE $\frac{1}{4}$ sec. 2, T. 8 S., R. 34 W. Unused drilled irrigation well, depth 160 feet below land-surface datum. Measuring point, top edge of hole in platform, 2.1 feet above land-surface datum. Records available: 1947-48. Water-stage recorder installed May 1, 1947.

8-34-2aa--Continued.

Date	Water level	Date	Water level	Date	Water level
May 1, 1947	114.03	Nov. 6, 1947	114.35	May 20, 1948	114.20
8	114.04	27	114.30	27	114.26
15	114.02	Dec. 11	114.15	June 3	114.24
21	113.70	18	114.20	10	114.30
29	113.80	26	114.20	25	114.33
June 5	113.95	Jan. 1, 1948	114.11	July 1	114.40
12	114.00	8	114.10	8	114.40
19	113.95	15	114.20	15	114.44
26	113.90	22	114.10	22	114.50
July 3	113.90	29	114.00	29	114.46
10	113.90	Feb. 5	114.00	Aug. 5	114.45
17	113.80	12	113.90	12	114.45
31	113.90	19	114.00	19	114.43
Aug. 7	114.10	26	114.00	28	114.51
15	114.10	Mar. 4	114.00	Sept. 2	114.45
21	114.10	11	114.00	9	114.50
28	114.10	18	113.90	16	114.50
Sept. 4	114.15	25	114.00	22	114.54
11	114.25	Apr. 1	114.07	30	114.52
18	114.20	8	114.05	Oct. 7	114.51
25	114.20	15	114.05	14	114.48
Oct. 2	114.25	22	114.01	21	114.47
10	114.20	28	113.95	28	114.46
16	114.20	May 6	114.15	Nov. 5	114.35
23	114.30	13	114.15	11	114.40
30	114.30				

Wallace County

By Janet S. Olson

11-40-15ddd. School district. $SE\frac{1}{4}SE\frac{1}{4}SE\frac{1}{4}$ sec. 15, T. 11 S., R. 40 W. Unused drilled public-supply well, diameter 6 inches, depth 57 feet below land-surface datum. Measuring point, top of casing, north side, 0.45 foot above land-surface datum. Records available: 1948. May 17, 42.69; July 14, 42.60; Oct. 14, 42.56.

12-40-14bba. W. P. Kirkham. $NE\frac{1}{4}NW\frac{1}{4}NW\frac{1}{4}$ sec. 14, T. 12 S., R. 40 W. Unused drilled domestic and stock well, diameter 6 inches, depth 22.5 feet below land-surface datum. Measuring point, top of casing, north side, 1.0 foot below land-surface datum. Records available: 1948. May 18, 20.75; July 14, 22.42; Oct. 14, 22.52.

13-40-10abb. J. Mumma. $NW\frac{1}{4}NW\frac{1}{4}NE\frac{1}{4}$ sec. 10, T. 13 S., R. 40 W. Unused drilled irrigation well, diameter 24 inches, depth 44.5 feet below land-surface datum. Measuring point, top of 8- by 8-inch plank, south side, at land-surface datum. Records available: 1949. May 18, 16.08; July 14, 16.10; Oct. 14, 20.10.

14-40-34ddd. Owner unknown. $SE\frac{1}{4}SE\frac{1}{4}SE\frac{1}{4}$ sec. 34, T. 14 S., R. 40 W. Unused drilled domestic and stock well, diameter 6 inches, depth 91 feet below land-surface datum. Measuring point, top of casing, west side, 0.1 foot above land-surface datum. Records available: 1948. May 18, 88.10; July 14, 88.13; Oct. 14, 88.19.

15-40-23bbb. Broadway School district. $NW\frac{1}{4}NW\frac{1}{4}NV\frac{1}{4}$ sec. 23, T. 15 S., R. 40 W. Unused drilled public-supply well, diameter 6 inches, depth 80. feet below land-surface datum. Measuring point, top of casing, south side, 0.2 foot above land-surface datum. Records available: 1948. May 18, 76.97; July 14, 76.88; Oct. 14, 77.08.

Wichita County

16-35-26da. F. H. Taylor. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 26, T. 16 S., R. 35 W. Drilled domestic and stock well, diameter 5 feet, depth 122.3 feet below land-surface datum. Measuring point, top of casing, 1.3 feet above land-surface datum. Records available: 1947-48. July 28, 1947, 111.30; Sept. 7, 1947, 111.33; June 23, 1948, 111.27; July 23, 1948, 111.36.

16-36-3dc. Leonard Harper. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 3, T. 16 S., R. 36 W. Drilled irrigation well, diameter 18 inches, depth 138.2 feet below land-surface datum. Measuring point, base of pump, 0.2 foot above land-surface datum. Records available: 1947-48. Aug. 14, 1947, 86.83; Sept. 7, 1947, 87.02; June 23, 1948, 89.54; July 23, 1948, 87.21.

16-37-26abb. Richard G. Hobson. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 26, T. 16 S., R. 37 W. Unused drilled stock well, diameter 6 inches, depth 96.3 feet below land-surface datum. Measuring point, edge of concrete curbing, 0.5 foot above land-surface datum. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level
July 21, 1947	87.50	June 15, 1948	87.35	Oct. 14, 1948	87.30
Sept. 7	88.28	23	87.27	Dec. 15	87.37
Apr. 19, 1948	87.34	July 23	87.33		

17-35-22bb. W. and J. D. Meisenheimer. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 22, T. 17 S., R. 35 W. Unused drilled domestic well, diameter 5 inches, depth 117.5 feet below land-surface datum. Measuring point, top of casing, 0.2 foot above land-surface datum. Records available: 1947-48. July 29, 1947, 100.19; Sept. 7, 1947, 99.54; June 23, 1948, 99.59; July 23, 1948, 99.71.

17-36-17da. John Schwindt. NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 17, T. 17 S., R. 36 W. Drilled domestic well, diameter 6 inches, depth 32.7 feet below land-surface datum. Measuring point, edge of casing, 7.1 feet below land-surface datum. Records available: 1947-48. July 26, 1947, 17.54; Sept. 7, 1947, 25.16; June 23, 1948, 25.16; July 23, 1948, 25.39.

17-38-4ba. Mary Kiefer. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 4, T. 17 S., R. 38 W. Drilled domestic and stock well, diameter 6 inches, depth 87.5 feet below land-surface datum. Measuring point, top of casing, 0.7 foot above land-surface datum. Records available: 1947-48. July 31, 1947, 80.20; Sept. 7, 1947, 80.19; June 23, 1948, 80.47; July 23, 1948, 80.40.

18-35-14bb. A. C. Felt. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 14, T. 18 S., R. 35 W. Drilled domestic well, diameter 5 inches, depth 95.25 feet below land-surface datum. Measuring point, top of casing, southeast side, 0.2 foot above land-surface datum. Records available: 1947-48.

Aug. 19, 1947	83.00	June 15, 1948	83.05	Aug. 16, 1948	83.03
Sept. 17	82.96	23	82.88	Oct. 14	83.04
Apr. 19, 1948	82.95	July 23	82.91	Dec. 15	83.28

18-37-11dcc. L. L. Barngrober. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 11, T. 18 S., R. 37 W. Unused drilled well, diameter 5 inches, depth 82.3 feet below land-surface datum. Measuring point, top of casing, 0.4 foot above land-surface datum. Records available: 1947-48.

July 31, 1947	72.30	June 15, 1948	72.14	Aug. 16, 1948	71.25
Sept. 7	72.34	23	72.26	Oct. 14	72.28
Apr. 19, 1948	72.26	July 23	72.15	Dec. 15	72.20

19-35-4dda. Jake Hagelgantz. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 4, T. 19 S., R. 35 W. Drilled domestic well, diameter 6 inches, depth 94.7 feet below land-surface datum. Measuring point, top of casing, 0.7 foot above land-surface datum. Records available: 1947-48. July 31, 1947, 77.82; Sept. 7, 1947, 77.74; June 23, 1948, 77.70; July 23, 1948, 77.74.

19-37-31bb. A. C. Buck. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 31, T. 19 S., R. 37 W. Drilled domestic well, diameter 5 inches, depth 89.5 feet below land-surface datum. Measuring point, top of casing, 3.2 feet above land-surface datum. Records available: 1947-48. Aug. 4, 1947, 70.25; Apr. 19, 1948, 70.49; June 23, 1948, 70.55; July 23, 1948, 70.63.

20-36-14dad. Elmer Hartman. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 14, T. 20 S., R. 36 W. Drilled observation well, diameter 6 inches, depth 115.6 feet below land-surface datum. Measuring point, top of casing, 0.5 foot above land-surface datum. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level
Aug. 4, 1947	104.87	June 16, 1948	94.82	Aug. 16, 1948	94.94
Sept. 8	94.90	23	94.80	Oct. 14	94.86
Apr. 19, 1948	94.96	July 23	94.90	Dec. 15	94.97

20-37-20cc. J. P. Stevenson. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 20, T. 20 S., R. 37 W. Drilled observation well, diameter 5 inches, depth 114.7 feet below land-surface datum. Measuring point, top edge of casing, 0.2 foot above land-surface datum. Records available: 1947-48. Aug. 4, 1947, 89.65; Sept. 8, 1947, 89.72; June 23, 1948, 90.00; July 23, 1948, 90.93.

20-38-18ad. E. E. Hoard. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 18, T. 20 S., R. 38 W. Drilled observation well, diameter 6 inches, depth 140 feet below land-surface datum. Measuring point, top of casing, at land-surface datum. Records available: 1947-48. Aug. 4, 1947, 135.80; Sept. 8, 1947, 135.85; June 23, 1948, 135.80; July 23, 1948, 135.75.

Woodson County

25-16-11ddd. John Yohon. SE $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 11, T. 25 S., R. 16 E. Unused dug domestic and stock well, diameter 5 feet, depth 19.6 feet below land-surface datum. Measuring point, top of hole in concrete, north side, 0.7 foot above land-surface datum. Records available: 1948.

May 6	4.23	Aug 26	7.14	Nov. 26	9.56
July 6	5.53	Oct. 15	9.08		

Wyandotte County

Highest and lowest water levels for the period of record in 5 wells in Wyandotte County

Well	Length of record (years)	Highest level	Date	Lowest level	Date
97	4	15.15	July 11, 1945	29.90	Dec. 31, 1948
100	4	15.82	July 11, 1945	33.45	Dec. 31, 1948
101	4	25.02	July 11, 1945	44.55	Dec. 31, 1948
119	4	21.33	July 11, 1945	35.56	Dec. 31, 1948
121	4	9.38	July 11, 1945	21.44	Feb. 2, 1946

Difference between highest and lowest recorded water levels and net change in water level in 1948 and for period of record in 5 wells in Wyandotte County

Well	Difference between highest and lowest levels	Net decline in 1948	Net decline for period of record
97	12.75	2.29	7.80
100	17.63	2.09	9.45
101	19.53	2.67	11.14
119	14.23	2.24	5.12
121	12.06	2.15	1.50

97. 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 Fourth Street and Berger Avenue. Records available: 1944-48. Dec. 31, 29.90.

100. 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 and Adams Street. Records available: 1944-48. Dec. 31, 33.45.

101. 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. Records available: 1944-48. Dec. 31, 44.55.

119. 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 Nineteenth Street, 36 feet south of center of Osage Avenue and between two sets of double railroad tracks. Records available: 1944-48. Dec. 31, 35.56.

121. 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 and Argentine Boulevard, 24 feet north and 12 feet east of second power pole north of boulevard. Records available: 1944-48. Dec. 31, 20.93.

138. 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 Carlile Road. Records available: 1943-46. Measurements discontinued after May 4, 1946.

MINNESOTA

By J. E. Powell

PROGRAM OF WORK

Periodic measurements of water level were made in three wells in Minnesota in 1948, and water-level determinations were made from recorder charts from two wells equipped with automatic water-stage recorders. A total of 1,266 measurements was made during the year. Of this total, 1,168 measurements were obtained from the two wells equipped with recorders. Also included in this report are the 1947 water-level determinations for the two wells equipped with automatic water-stage recorders.

Field work was done in connection with the investigation of groundwater resources in the vicinity of Cloquet, in Carlton County, and at the Camp Ripley military reservation near Little Falls, in Morrison County.

FLUCTUATIONS OF WATER LEVEL

The maximum and minimum water levels observed in the various observation wells for 1948 are as follows: (The first two wells listed are those equipped with automatic water-stage recorders.)

Well	Maximum	Minimum
M18 (city of Moorhead)	187.50	176.00
MS1 (city of Moorhead, east of Dilworth)	17.20	12.54
US135 (Itasca Co.)	22.03	20.63
US136 (St. Louis Co.)	8.74	8.42
US78 (Brown Co.)	7.13	4.00

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Brown County

108.30-9(US 78). Erwin Kjelshus. Records available: 1942-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	6.24	Apr. 7	4.95	June 16	5.15	Aug. 24	4.58
20	6.36	14	4.88	22	4.80	30	4.35
28	6.50	21	4.83	29	4.62	Sept. 13	4.94
Feb. 4	6.78	28	4.15	July 7	4.96	22	4.55
10	6.95	May 5	4.17	14	5.45	29	4.60
17	7.13	12	4.00	21	5.60	Oct. 7	4.80
25	6.97	18	4.20	Aug. 5	6.40	14	5.02
Mar. 3	6.25	25	4.35	12	4.23	27	5.45
16	6.25	June 2	4.53	19	4.32	Nov. 3	5.25
30	5.00	9	4.89				

Clay County

139.47.5cc3. City of Moorhead test hole MSl. Diameter 8 inches, depth 131 feet. Records available: 1947-48.

Daily high and low water levels, from recorder charts, 1947

Day	January		February		March		April		May	
	High	Low	High	Low	High	Low	High	Low	High	Low
1	.....	.....	13.33	13.35	.....	.....	.....	.....	.....	.....
2	.....	.....	13.38	13.40	.....	.....	.....	.....	.....	.....
3	.....	.....	13.46	13.56	.....	.....	13.42	14.90	12.72	12.74
4	13.18	13.19	13.35	13.37	.....	.....	13.41	15.02	12.76	12.76
5	13.14	13.18	13.36	13.41	.....	.....	13.44	15.02	12.74	12.76
6	13.19	13.21	.....	.....	.....	.....	13.42	13.44	12.74	12.75
7	13.16	14.63	14.08	14.10	.....	.....	13.36	13.40	.....	.....
8	13.20	14.54	14.04	14.10	.....	.....	13.28	13.35	.....	.....
9	13.40	14.04	14.05	14.10	.....	.....	13.23	13.28	.....	.....
10	13.47	14.43	14.11	14.13	.....	.....	13.15	13.23	.....	.....
11	13.54	13.59	.....	.....	.....	.....	13.18	13.21	.....	.....
12	13.54	13.56	.....	.....	.....	.....	13.12	13.18	.....	.....
13	13.50	14.80	.....	.....	.....	.....	12.92	13.12	.....	.....
14	13.40	14.90	.....	.....	.....	.....	12.94	12.96	.....	.....
15	13.26	13.31	.....	.....	.....	.....	12.96	12.99	.....	.....
16	13.24	13.26	.....	.....	.....	.....	12.91	12.96	.....	.....
17	13.24	13.28	.....	.....	.....	.....	12.88	12.92	.....	.....
18	13.22	13.28	.....	.....	.....	.....	12.88	12.92	.....	.....
19	13.22	13.24	.....	.....	.....	.....	12.88	12.92	.....	.....
20	13.24	13.30	.....	.....	.....	.....	12.86	12.88	.....	.....
21	13.30	13.30	.....	.....	13.65	13.92	12.84	12.86	.....	.....
22	13.28	13.30	.....	.....	13.81	13.92	12.83	12.86	.....	.....
23	13.22	13.23	.....	.....	13.91	13.92	12.82	12.84	.....	.....
24	13.22	14.98	.....	.....	13.92	13.92	12.83	12.84	.....	.....
25	13.66	14.89	.....	.....	13.92	13.93	12.80	12.84	.....	.....
26	13.69	13.74	.....	.....	13.93	13.94	12.78	12.81	.....	.....
27	13.62	14.74	.....	.....	13.93	13.93	12.81	12.84	.....	.....
28	13.41	14.85	.....	.....	13.93	13.93	12.77	12.80	.....	.....
29	13.35	13.38	.....	.....	13.93	13.93	12.76	12.76	.....	.....
30	13.38	13.40	.....	.....	13.93	13.93	12.74	12.76	.....	.....
31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Daily high and low water levels, from recorder charts, 1947

Day	July		September		October		November		December	
	High	Low	High	Low	High	Low	High	Low	High	Low
1	.....	.....	.....	.....	.....	.....	12.94	12.96	.....	.....
2	.....	.....	.....	.....	.....	.....	12.96	12.98	.....	.....
3	.....	.....	.....	.....	.....	.....	12.98	12.98	.....	.....
4	.....	.....	.....	.....	.....	.....	12.50	12.82	.....	.....
5	.....	.....	.....	.....	.....	.....	12.50	14.78	.....	.....
6	.....	.....	.....	.....	.....	.....	14.76	15.34	.....	.....
7	12.39	12.63	.....	.....	.....	.....	.....	.....	.....	.....
8	12.34	12.39	.....	.....	.....	.....	.....	.....	.....	.....
9	12.32	12.34	.....	.....	.....	.....	.....	.....	.....	.....
10	12.31	12.32	.....	.....	.....	.....	.....	.....	.....	.....
11	12.28	12.31	.....	.....	.....	.....	14.40	14.70	.....	.....
12	12.26	12.28	.....	.....	.....	.....	13.54	13.81	13.14	13.20
13	12.24	12.26	.....	.....	.....	.....	13.34	13.54	13.12	13.14
14	12.24	12.24	.....	.....	.....	.....	13.24	13.34	13.12	13.18
15	12.19	12.24	12.55	12.58	.....	.....	13.16	13.24	13.08	13.12
16	.....	.....	12.57	12.59	.....	.....	13.13	13.16	.....	.....
17	.....	.....	12.59	12.59	.....	.....	13.14	13.15	.....	.....
18	.....	.....	12.59	12.60	.....	.....	13.10	13.11	.....	.....
19	.....	.....	12.60	12.62	.....	.....	13.10	13.10	.....	.....
20	.....	.....	12.61	12.62	.....	.....	13.08	13.10	13.26	13.26
21	.....	.....	12.60	12.62	12.85	12.89	13.11	13.14	13.22	13.26
22	.....	.....	12.62	12.66	12.89	12.91	13.08	13.14	13.24	13.27
23	.....	.....	12.65	12.66	12.91	12.91	.....	.....	13.26	13.26
24	.....	.....	12.66	12.69	12.91	12.91	.....	.....	13.24	13.26

139.47.5cc3--Continued.

Daily high and low water levels, from recorder charts, 1947

Day	July		September		October		November		December	
	High	Low	High	Low	High	Low	High	Low	High	Low
25	12.69	12.70	12.91	12.93	.....	.....	13.25	13.27
26	12.91	12.93	.....	.....	13.23	13.25
27	12.91	12.92	.....	.....	13.25	13.27
28	13.23	13.23
29	13.25	13.28
30	13.28	13.28
31

Daily high and low water levels, from recorder charts, 1948

Day	January		February		May		June		July	
	High	Low	High	Low	High	Low	High	Low	High	Low
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3	13.24	13.28	.....	.....	.....	.....	.....	.....	.....	.....
4	13.24	13.29	.....	.....	.....	.....	.....	.....	.....	.....
5	13.24	13.30	.....	.....	.....	.....	12.60	12.67	.....	.....
6	13.26	13.30	.....	.....	.....	.....	12.56	12.62	.....	.....
7	13.25	13.27	.....	.....	.....	.....	12.56	12.58	12.60	13.54
8	13.22	13.25	.....	.....	.....	.....	12.56	12.59	12.60	13.61
9	13.32	13.34	.....	.....	.....	.....	12.55	12.58	12.60	12.61
10	13.33	13.34	.....	.....	.....	.....	12.57	12.60	12.60	12.90
11	13.24	13.32	.....	.....	.....	.....	12.58	12.60	12.60	12.61
12	13.33	13.34	.....	.....	.....	.....	12.58	12.62	12.60	12.62
13	.....	.....	.....	.....	12.60	12.61	.....	.....	12.57	12.58
14	.....	.....	13.44	13.45	12.58	12.61	.....	.....	12.57	12.58
15	.....	.....	13.37	13.44	12.60	12.61	.....	.....	12.59	13.52
16	.....	.....	13.37	13.43	12.61	12.62	.....	.....	12.60	12.63
17	.....	.....	13.43	13.44	12.60	12.62	.....	.....	12.58	12.60
18	.....	.....	.....	.....	12.60	12.65	.....	.....	12.60	13.00
19	.....	.....	.....	.....	12.62	12.65	.....	.....	.....	.....
20	.....	.....	.....	.....	12.62	12.63	.....	.....	.....	.....
21	13.37	13.37	.....	.....	12.58	12.62	.....	.....	.....	.....
22	13.37	13.39	.....	.....	12.56	12.59	.....	.....	.....	.....
23	13.38	13.39	.....	.....	12.56	12.58	.....	.....	.....	.....
24	.....	.....	.....	.....	12.56	12.59	.....	.....	.....	.....
25	.....	.....	.....	.....	12.55	12.56	.....	.....	.....	.....
26	.....	.....	.....	.....	12.57	12.58	.....	.....	.....	.....
27	.....	.....	.....	.....	12.56	12.58	.....	.....	.....	.....
28	.....	.....	.....	.....	12.56	12.60	.....	.....	.....	.....
29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Daily high and low water levels, from recorder charts, 1948

Day	August		September		October		November		December	
	High	Low	High	Low	High	Low	High	Low	High	Low
1	12.79	12.80	13.14	13.44	14.22	15.36	16.00	17.02
2	12.78	12.80	13.17	13.35	14.70	15.66	15.92	17.20
3	13.09	13.17	14.70	15.73	16.00	17.00
4	12.58	12.60	13.04	13.23	14.76	15.76	15.98	16.70
5	12.60	12.61	13.04	13.06	14.82	15.83	14.96	16.62
6	12.62	14.32	13.00	13.01	14.84	15.94	15.67	16.72
7	12.54	12.56	13.01	13.04	15.12	16.09	15.98	16.74
8	12.83	12.84	13.04	13.05	15.04	16.14	15.98	16.78
9	12.84	12.85	13.05	13.08	15.52	16.02	16.04	16.70
10	12.79	12.84	13.07	13.07	15.04	16.04	16.25	16.74
11	12.78	12.80	13.07	13.07	15.05	16.08	16.14	16.62
12	12.78	12.86	13.05	13.07	15.06	16.08	16.44	16.45
13	12.86	12.87	13.07	13.08	15.12	15.88	16.44	16.44
14	12.82	12.86	13.03	13.08	15.14	16.05	16.44	16.44
15	12.82	12.83	12.99	13.07	15.06	16.09	16.44	16.44
16	12.84	12.87	13.10	13.10	15.01	15.98	16.44	16.44
17	12.82	12.84	13.06	13.10	15.12	15.92	16.44	16.44

Daily high and low water levels, from recorder charts, 1948

Day	August		September		October		November		December	
	High	Low	High	Low	High	Low	High	Low	High	Low
18	.....	.....	12.89	12.90	13.06	14.46	15.46	16.30	16.39	16.84
19	.....	.....	12.88	12.92	13.63	14.46	15.43	16.28	16.80	16.82
20	.....	.....	12.89	12.92	13.36	13.52	15.42	16.33	16.44	16.82
21	.....	.....	12.90	12.92	13.04	13.80	15.30	16.30	16.44	16.90
22	.....	.....	12.91	12.92	13.80	14.78	15.40	16.38	16.90	16.90
23	.....	.....	12.92	12.92	13.96	15.16	15.44	16.41	16.90	16.90
24	.....	.....	12.93	13.09	14.24	15.18	15.50	16.41	16.90	16.90
25	.....	.....	13.00	13.02	13.98	15.14	15.58	16.34	.....	.....
26	.....	.....	12.99	13.02	14.10	15.29	15.44	16.32	.....	.....
27	12.76	12.78	13.00	13.12	13.70	14.00	15.56	16.36	.....	.....
28	12.76	12.78	12.99	13.02	13.71	14.94	15.20	16.04	.....	.....
29	12.75	13.80	13.00	13.77	14.00	15.00	15.10	16.58	.....	.....
30	12.82	13.88	13.11	13.56	14.66	15.34	15.80	16.62	.....	.....
31	12.80	12.82	.....	.....	14.37	15.36	.....	.....	.....	.....

139.48.7dcl. City of Moorhead supply well 4 (M18). Diameter 20 inches, depth 242 feet. Equipped with automatic water-stage recorder. Records available: 1947-48.

Daily high and low water levels, from recorder charts, 1947

Day	January		February		March		April	
	High	Low	High	Low	High	Low	High	Low
1	180.59	.....	180.97	181.64	181.03	181.76	.....	.....
2	.....	.....	179.76	181.49	180.58	181.48	.....	.....
3	.....	.....	180.13	181.39	180.58	181.58	.....	.....
4	.....	.....	180.63	181.57	180.98	181.83	180.82	181.52
5	.....	.....	179.89	181.17	181.30	182.12	180.31	181.30
6	.....	.....	180.15	181.02	181.30	182.17	181.02	182.40
7	.....	.....	180.27	181.08	181.14	182.02	181.02	182.40
8	.....	.....	180.60	181.50	181.07	181.87	181.47	182.39
9	.....	.....	180.63	181.59	181.13	181.93	181.28	182.24
10	179.02	180.11	180.84	181.38	181.09	181.88	181.00	182.05
11	179.50	180.83	.....	.....	181.00	181.87	181.75	182.45
12	.....	.....	.....	.....	181.31	182.15	181.75	182.45
13	.....	.....	.....	.....	181.55	182.20	181.14	182.39
14	179.50	180.10	180.97	181.32	181.10	182.00	181.42	182.38
15	179.64	180.92	180.66	181.41	181.00	181.93	181.75	182.53
16	179.50	180.27	180.20	180.49	181.05	181.92	181.13	182.29
17	179.77	180.78	180.38	181.59	180.93	181.75	181.10	181.98
18	.....	.....	180.82	181.87	180.95	181.90	181.80	182.46
19	.....	.....	.....	.....	181.10	181.92	181.75	182.64
20	179.98	180.94	.....	.....	180.10	181.80	181.35	182.42
21	179.13	181.13	180.02	181.81	181.05	181.97	181.30	182.45
22	180.79	181.81	181.08	181.81	179.67	181.60	181.59	182.55
23	178.26	179.48	180.94	181.77	180.00	182.07	181.47	182.50
24	.....	.....	181.07	181.31	180.37	182.43	181.81	182.82
25	.....	.....	181.81	182.08	181.88	181.40	181.78	182.85
26	.....	.....	181.07	181.88	181.40	182.20	181.45	182.50
27	.....	.....	181.02	181.67	180.20	182.16	181.76	182.45
28	180.72	.....	181.04	181.73	181.00	182.15	181.58	182.50
29	.....	.....	.....	.....	181.25	182.06	181.25	182.23
30	.....	.....	.....	.....	181.05	181.95	182.26	182.31
31	180.97	183.39	.....	.....	180.97	182.89	.....	.....

a Tape measurement.

Daily high and low water levels, from recorder charts, 1947

[illegible]

139.48.7dcel--Continued.

Daily high and low water levels, from recorder charts, 1947

Day	May		October		November		December	
	High	Low	High	Low	High	Low	High	Low
6
7	182.94	183.64	.....	.....
8	182.75	183.93	.....	.....
9	183.14	184.15	.....	.....
10	183.40	184.07	.....	.....
11	183.25	184.30	.....	.....
12	183.70	184.55	.....	.....
13	183.87	184.63	.....	.....
14	183.65	184.33	.....	.....
15
16	183.28	184.03	.....	.....	.....	.....
17	182.97	184.39	.....	.....	.....	.....
18	183.40	184.28	.....	.....	.....	.....
19	183.10	184.04	.....	.....	.....	.....
20	183.10	184.08	.....	.....	183.90	184.53
21	182.98	184.18	.....	.....	183.35	184.36
22	183.55	184.67	.....	.....	183.11	184.35
23	183.47	184.35
24	183.47	184.27
25	183.38	184.23
26	182.92	184.94
27	183.35	184.40
28	184.08	184.33
29	182.70	184.93
30	183.23	184.45
31	184.40	185.56

Daily high and low water level, from recorder charts, 1948

Day	January		February		March		August	
	High	Low	High	Low	High	Low	High	Low
1	.....	.....	183.41	184.55	.....	.....	.....	.....
2	.....	.....	183.82	184.75	.....	.....	.....	.....
3	183.12	183.87	183.68	184.43	.....	.....	.....	.....
4	182.75	183.87	183.60	184.55	.....	.....	.....	.....
5	182.63	184.13	183.67	184.56	.....	.....	.....	.....
6	182.22	184.04	183.63	184.25	.....	.....	.....	.....
7	182.91	184.93	184.10	184.87	183.60	184.30	.....	.....
8	182.90	184.21	184.02	184.70	183.30	184.37	.....	.....
9	183.50	184.61	183.72	184.60	182.47	184.60	.....	.....
10	182.72	184.25	184.02	184.75	183.77	185.00	.....	.....
11	182.63	184.78	184.01	184.60	184.20	185.00	.....	.....
12	183.35	184.33	183.50	184.58	183.75	185.00	.....	.....
13	182.64	184.55	183.00	184.15	183.18	184.67	.....	.....
14	182.10	184.55	184.00	184.56	183.45	184.12	.....	.....
15	182.90	184.58	183.23	184.41	.....	.....	.....	.....
16	183.68	184.55	182.92	183.75	.....	.....	.....	.....
17	183.64	184.55	183.18	183.37	.....	.....	.....	.....
18	.....	.....	182.91	184.12	.....	.....	.....	.....
19	.....	.....	183.50	184.78	.....	.....	.....	.....
20	.....	.....	183.90	184.85	.....	.....	.....	.....
21	.....	.....	183.75	184.85	.....	.....	.....	.....
22	.....	.....	183.42	184.42	.....	.....	.....	.....
23	.....	.....	183.25	184.08	.....	.....	.....	.....
24	.....	.....	183.38	184.56	.....	.....	.....	.....
25	.....	.....	183.64	184.28	.....	.....	.....	.....
26	.....	.....	183.50	184.20	.....	.....	.....	.....
27	.....	.....	183.40	184.20	.....	.....	.....	.....
28	.....	.....	182.98	184.55	.....	.....	.....	.....
29	.....	.....	.....	.....	.....	.....	187.25	187.50
30	.....	.....	.....	.....	.....	.....	187.15	187.34
31	185.68	186.34	.....	.....	.....	.....	.....	.....

139.48.7dcd1--Continued.

Daily high and low water levels, from recorder charts, 1948

Day	September		October		November		December	
	High	Low	High	Low	High	Low	High	Low
1	186.70	187.15	185.52	185.60	.....	.....	.....	.....
2	186.82	186.90	185.38	185.73	185.62	185.62	178.94	179.16
3	186.67	186.90	.....	.....	.....	.....	178.68	178.94
4	186.45	186.46	.....	.....	178.26	178.50	178.50	178.68
5	186.45	186.50	.....	.....	178.10	178.25	.....	.....
6	186.40	186.57	.....	.....	178.15	178.56	.....	.....
7	186.47	186.60	.....	.....	178.50	178.63	.....	.....
8	186.50	186.57	.....	.....	178.63	178.90	.....	.....
9	186.40	186.57	.....	.....	178.90	179.10	.....	.....
10	185.97	186.45	.....	.....	178.56	179.10	.....	.....
11	185.95	186.01	.....	.....	.....	179.55	176.00	176.20
12	185.94	186.44	.....	.....	.....	.....	176.20	176.45
13	186.48	186.56	.....	.....	.....	.....	176.45	176.95
14	186.18	186.55	.....	.....	.....	.....	176.60	176.95
15	185.95	186.18	.....	.....	.....	.....	176.22	176.60
16	185.94	185.96	185.59	185.87	.....	.....	176.20	176.55
17	185.96	186.05	185.12	185.75	.....	.....	176.58	176.60
18	186.06	186.09	185.01	185.50	.....	.....	177.80	178.05
19	185.83	186.05	185.43	185.50	178.03	178.05	177.25	177.80
20	185.65	186.00	185.02	185.51	178.05	178.20	176.88	177.25
21	185.80	185.91	185.02	185.51	178.20	178.27	176.98	177.85
22	185.59	185.87	185.02	185.44	177.74	178.25	177.60	178.15
23	185.53	185.74	185.00	185.25	177.60	177.74	178.00	178.12
24	185.58	185.85	.....	.....	177.30	177.62	177.86	178.10
25	185.85	186.06	183.98	.....	177.20	177.30	177.85	178.15
26	.....	.....	183.98	184.29	177.26	177.54	177.85	178.18
27	185.57	185.90	184.13	184.39	.....	.....	177.30	177.70
28	185.58	185.83	183.90	184.38	180.20	180.30	177.10	177.30
29	185.53	185.80	183.75	183.90	179.15	180.95	177.10	177.45
30	183.00	185.52	183.00	183.00	179.95	180.04	177.45	177.65
31	.....	.....	.....	.....	.....	.....	.....	.....

Itasca County

146.27.26bd(U S 135). Corps of Engineers, U. S. Army. Records available: 19.2-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 12	21.09	Apr. 12	21.54	July 12	20.72	Oct. 11	21.44
19	21.12	19	21.48	19	20.76	18	21.50
26	21.15	26	21.37	26	20.76	25	21.51
Feb. 2	21.19	May 1	21.22	Aug. 2	20.78	Nov. 1	21.56
9	21.24	8	21.13	9	20.76	8	21.59
16	21.29	17	20.90	16	20.82	15	21.65
23	21.33	24	20.88	23	20.86	22	21.72
Mar. 1	21.41	31	20.78	30	20.92	29	21.80
8	21.43	June 7	20.68	Sept. 6	21.00	Dec. 6	21.87
15	21.46	14	20.66	13	21.04	13	21.92
22	21.50	21	20.65	20	21.12	30	21.98
29	21.44	28	20.63	27	21.24	27	22.03
Apr. 5	21.51	July 5	20.66	Oct. 4	21.33		

St. Louis County

56.17.4(U S 136). Herman A. Katola. Records available: 1943-48.

Oct. 31	8.46	Nov. 21	8.46	Dec. 5	8.74	Dec. 19	8.67
Nov. 7	8.42	28	8.56	12	8.67	26	8.62
14	8.42						

MISSOURI

By J. B. Cooper, H. Garland Hershey, and Phyllis T. Mosley

PROGRAM OF WORK

Water-level measurements were made in Atchison County in 1948 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 consisted of 14 wells in 1948 in which 152 single measurements were made by D. W. Knox, observer of the Tarkio Creek well program.

The measurements of the observation well in Grundy County were continued on a weekly basis. W. H. Estes, owner of the Grundy County well, has been the observer since its establishment and initial measurement in 1942.

The water levels in the Phelps County wells were measured monthly by engineers from the Rolla office of the surface water branch through the courtesy of H. C. Bolon, district engineer. A total of 20 measurements was made in these two wells in 1948.

FLUCTUATIONS OF WATER LEVEL

In the Grundy County well the low measurement of 8.19 feet below land-surface datum, recorded on December 25, is the lowest on record for this well. The year started with a measurement of 4.10 feet below land-surface datum on January 11. The maximum fluctuation of water levels was 5.03 feet, with the highest reading of 3.16 feet below land-surface datum occurring on April 4. The water level was 3.99 feet lower at the end of 1948 than at the end of 1947.

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.)

1. W. R. Marshall. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 13, T. 66 N., R. 40 W. Records available: 1934-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	12.38	Mar. 25	11.28	May 21	9.58	July 21	11.56
Feb. 23	13.67	Apr. 21	10.90	June 22	10.44	Aug. 25	11.44

2. H. W. Klutas. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 1, T. 66 N., R. 40 W. Records available: 1934-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	10.22	Apr. 21	9.97	July 21	9.86	Oct. 21	10.38
Feb. 23	10.28	May 21	9.98	Aug. 25	10.22	Nov. 22	10.08
Mar. 25	9.42	June 22	10.05	Sept. 20	10.39	Dec. 22	10.30

20. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 10, T. 65 N., R. 40 W. Records available: 1937-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	20.68	Apr. 21	20.80	July 21	22.45	Oct. 21	23.69
Feb. 23	21.55	May 21	17.71	Aug. 25	24.02	Nov. 22	22.69
Mar. 25	18.67	June 22	20.24	Sept. 20	23.29	Dec. 22	23.96

21. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 11, T. 65 N., R. 40 W. Records available: 1937-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	20.40	Apr. 21	20.55	July 21	21.32	Oct. 21	21.78
Feb. 23	20.81	May 21	20.81	Aug. 25	21.59	Nov. 22	21.90
Mar. 25	19.06	June 22	21.26	Sept. 20	21.87	Dec. 22	22.58

22. J. A. McAllister. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 35, T. 66 N., R. 40 W. Records available: 1937-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	11.44	Apr. 21	11.78	July 21	10.78	Oct. 21	12.32
Feb. 23	11.48	May 21	11.06	Aug. 25	11.99	Nov. 22	11.58
Mar. 25	10.59	June 22	7.40	Sept. 20	12.22	Dec. 22	12.00

24. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 26, T. 66 N., R. 40 W. Records available: 1937-48

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	2.08	Apr. 21	2.25	July 21	2.60	Oct. 21	3.31
Feb. 23	2.32	May 21	2.22	Aug. 25	2.82	Nov. 22	3.51
Mar. 25	2.19	June 22	2.46	Sept. 20	5.87	Dec. 22	3.70

25. Edwin Rolf. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 12, T. 66 N., R. 40 W. Records available: 1937-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	42.74	Apr. 21	40.95	July 21	42.80	Oct. 21	42.39
Feb. 23	43.50	May 21	42.57	Aug. 25	43.27	Nov. 22	44.17
Mar. 25	38.39	June 22	43.24	Sept. 20	44.07	Dec. 22	44.68

29. Edwin Rolf. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 12, T. 66 N., R. 40 W. Records available: 1937-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 29	13.52	Mar. 25	11.60	May 21	12.21
Feb. 23	13.47	Apr. 21	11.64		

31. W. F. Marshall. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 13, T. 66 N., R. 40 W. Records available: 1937-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	4.21	May 21	4.20	Aug. 25	4.96	Nov. 22	5.96
Mar. 25	2.99	June 22	3.63	Sept. 20	6.03	Dec. 22	6.32
Apr. 21	4.22	July 21	4.25	Oct. 21	6.02		

32. W. F. Marshall. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 13, T. 66 N., R. 40 W. Records available: 1937-48.

Jan. 29	15.14	Apr. 21	13.52	July 21	13.22	Sept. 20	14.82
Feb. 23	15.38	May 21	13.02	Aug. 25	14.15	Nov. 22	15.00
Mar. 25	13.47	June 22	14.21				

33. W. F. Marshall. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 13, T. 66 N., R. 40 W. Records available: 1937-48.

Jan. 29	16.90	Apr. 21	16.58	July 21	16.57	Oct. 21	17.37
Feb. 23	16.69	May 21	16.53	Aug. 25	17.06	Nov. 22	17.55
Mar. 25	15.91	June 22	16.40	Sept. 20	17.60	Dec. 22	17.50

34. W. F. Marshall. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 13, T. 66 N., R. 40 W. Records available: 1937-48.

Jan. 29	7.25	Apr. 21	6.28	July 21	5.84	Oct. 21	9.02
Feb. 23	7.57	May 21	5.77	Aug. 25	6.90	Nov. 22	7.25
Mar. 25	4.98	June 22	7.42	Sept. 20	7.42	Dec. 22	8.29

35. W. F. Marshall. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 13, T. 66 N., R. 40 W. Records available: 1937-48.

Jan. 29	22.76	Apr. 21	19.70	July 21	22.12	Sept. 20	23.09
Feb. 23	19.45	May 21	18.78	Aug. 25	22.32	Nov. 22	22.49
Mar. 25	20.50	June 22	20.17				

36. George Rolf. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 13, T. 66 N., R. 40 W. Records available: 1937-48.

Jan. 29	30.86	Apr. 21	29.92	July 21	29.34	Oct. 21	31.51
Feb. 23	27.98	May 21	29.44	Aug. 25	29.49	Nov. 22	30.45
Mar. 25	30.14	June 22	29.58	Sept. 20	30.00	Dec. 22	30.80

Grundy County

US 113. Wiley H. Estes. In Trenton, in sec. 17, T. 61 N., R. 24 W., on property of owner at 105 E. Fourth Street. Records available: 1942-48.

Jan. 11	4.10	Apr. 10	3.62	July 11	5.40	Oct. 10	7.22
18	4.16	18	4.20	18	5.56	17	7.53
25	4.64	25	4.64	25	5.82	24	7.59
Feb. 1	4.69	May 1	4.90	Aug. 1	5.83	31	7.69
8	4.56	8	3.46	10	6.02	Nov. 7	7.68
15	5.72	15	4.56	22	6.24	14	7.64
22	6.16	23	4.52	29	6.42	21	7.76
29	5.88	30	4.88	Sept. 5	6.67	28	7.79
Mar. 7	4.90	June 6	4.84	12	6.82	Dec. 6	7.81
14	4.65	13	5.42	19	6.78	12	8.09
21	3.76	20	5.16	26	6.88	19	8.16
28	3.18	27	4.78	Oct. 3	7.08	25	8.19
Apr. 4	3.16	July 4	5.30				

Phelps County

US 98. S. V. Allen. NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 13, T. 37 N., R. 10 W. Records available: 1942-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	7.75	Apr. 30	7.23	July 30	7.68	Oct. 28	8.71
Mar. 1	6.95	June 1	7.56	Aug. 31	8.40	Nov. 30	8.55
29	6.80	30	5.72	Sept. 30	9.01	Dec. 31	8.16

US 98A. Fred Pillman. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 24, T. 37 N., R. 10 W. Dry September through December 1948. Records available: 1942-48.

Jan. 30	11.78	Mar. 29	7.06	June 1	10.71	July 30	10.98
Mar. 1	11.18	Apr. 30	9.25	30	6.98	Aug. 31	12.60

NEBRASKA

By R. L. Schreurs

PROGRAM OF WORK

The State-wide program of water-level measurements in observation wells in Nebraska was continued in 1948. This program was started in 1934 in co-operation with the Conservation and Survey Division, University of Nebraska, and in 1945 was expanded significantly as a part of the program for the development of the natural resources of the Missouri River Basin.

A very large proportion of the water-level records included in this report have been obtained as a result of intensive water-level observation programs that have been established in all of the project areas under investigation in the Missouri Basin Program. Since 1945, the water-level observation program in Nebraska has been supported substantially by Missouri Basin funds and has resulted in a significant increase each year in the number of observation wells being measured in the areas under investigation. Also, as a result of this participation, the number of water-level measurements made in individual observation wells during the year has been increased very materially. Likewise, the cooperative test-drilling program with the Conservation and Survey Division, University of Nebraska, has been considerably increased due to the inclusion of the observation-well program in the Missouri Basin studies.

Records of water levels in the wells and some interpretation of the fluctuation of the water levels are given in the annual reports of the Geological Survey on water levels and artesian pressure.

Measurements of water levels made in 838 wells are given in this report, including 78 wells in the observation of which the following organizations are cooperating informally: Grand Island Water Department, 44 wells in Hall County and 1 in Merrick County; Fish and Wildlife Service, United States Department of Interior, 9 wells in Garden County; Central Nebraska Public Power and Irrigation District, 1 well in Keith County, and 11 wells

in Phelps County; Platte Valley Public Power and Irrigation District, 2 wells in Keith County and 10 wells in Lincoln County. Weekly tape measurements for well 20-50-32aa, in Morrill County, were furnished by the Nebraska Department of Roads and Irrigation.

Water-level measurements are not included for the following observation wells measured by the Central Nebraska Public Power and Irrigation District; 1 well in Arthur County, 24 wells in Dawson County, 2 wells in Garden County, 23 wells in Gosper County, 52 wells in Keith County, 66 wells in Lincoln County, and 10 wells in Phelps County. Records of water levels in these wells prior to 1948 have been included in previous reports of the Geological Survey on water levels and artesian pressure.

Automatic water-stage recorders were in operation on 23 wells. Of these, the following wells are equipped with 60-day continuous recorders:

1-11-11ab (near Red Cloud, Webster County)
 1-40-29bb (near Haigler, Dundy County)
 3-25-4bb (near Cambridge, Furnas County)
 7-38-28cc (near Imperial, Chase County)
 8-9-14ac (near Trumbull, Adams County)
 9-14-1dc (near Gibbon, Buffalo County)
 11-11-25cc (near Alda, Hall County)

The remaining wells listed below, are equipped with 8-day recorders:

1-6-30dd (near Superior, Nuckolls County)
 5-6-26bd (in Edgar, Clay County)
 5-15-3ba (near Minden, Kearney County)
 5-19-22da (near Atlanta, Phelps County)
 7-10-23ab (near Hastings, Adams County)
 7-20-31cd (in Bertrand, Phelps County)
 13-36-8cc (near Korty, Keith County)
 13-36-9ad (near Korty, Keith County)
 14-33-27da (near O'Fallons, Lincoln County)
 15-9-9aa (near Cushing, Howard County)
 17-16-26dc (near Arcadia, Valley County)
 24-48-10bb (near Alliance, Box Butte County)
 24-48-31ba (near Alliance, Box Butte County)
 25-48-14aa (near Alliance, Box Butte County)
 25-45-32ad (near Antioch, Sheridan County)
 30-22-23dd (near Ainsworth, Brown County)

The well near Superior is serviced by personnel of the Bureau of Reclamation at Superior. The two wells near Korty and the one near O'Fallons are serviced by Warren Doolittle of the Platte Valley Public Power and Irrigation District. The well near Ainsworth is serviced by personnel of the Bureau of Reclamation at Ainsworth.

Tables have been included showing the total monthly pumpage for the public supplies for the city of Grand Island and for the city of Lincoln at its well field near Ashland. Monthly measurements of the water level in well A13-9-24cc (U. S. 62) are given under the heading Saunders County.

This well is one of eight key wells in Nebraska and the water level in the well is measured by personnel of the Ashland pumping station.

Monthly measurements of the water levels in eight key wells in Nebraska were continued during 1948. Measurements from these wells form the basis of statements of water-level conditions in Nebraska that are published currently in the monthly Water Resources Review.

In all, exclusive of automatic water-stage recorder measurements, 4,542 individual measurements of water level were made in Nebraska in 1948.

FLUCTUATIONS OF WATER LEVEL

The precipitation in Nebraska in 1948 was 21.57 inches, 1.07 inches below normal and 1.78 inches below that of 1947.

The following table summarizes for each observation well, the highest and lowest water level of record, the net change in water level in 1948, and the net change in water level during the entire period of record:

Length of record, in years, highest and lowest recorded water levels, in feet, net change in water level in 1948, and net change in water level during period of record in 726 wells in Nebraska

Well number	Highest level	Date	Lowest level	Date	Net rise (+) or net decline (-) in 1948	Net rise (+) or net decline (-) for entire period of record
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>Adams County</u>						
5-9-9dc	36.74	June 30, 1948	37.70	Aug. 20, 1947	+0.65	+0.83
5-10-1bb	93.83	May 10, 1948	94.89	Aug. 30, 1948	....	.40
5-11-2bb	85.93	July 1, 1948	86.40	Aug. 30, 1948	+0.07	+0.07
5-11-10bc	9.26	July 1, 1948	10.81	Nov. 13, 1940	+0.16	+0.59
6-9-4cb	103.22	June 3, 1948	103.40	Nov. 17, 1947	+0.13	+0.13
6-10-8ac	90.41	June 3, 1948	90.55	Nov. 24, 1948	+0.04	+0.04
6-10-23bb	6.20	May 10, 1948	10.43	Apr. 12, 1937	+0.63	+1.98
6-10-31bd	91.09	May 10, 1948	91.70	Aug. 30, 1948	....	.15
7-9-12dc	111.14	Oct. 4, 1948	111.53	June 28, 1948	....	+0.26
7-10-23ab	99.95	Jan. 22 and Mar. 14, 1935	102.96	Sept. 18, 1948	....	2.57
7-10-26da	113.91	Oct. 5, 1948	115.63	Sept. 1, 1948	+0.13	+0.13
7-11-3cb	111.62	Nov. 15, 1948	112.20	May 11, 1948	+0.27	+0.27
7-11-22ad	118.40	May 11, 1948	120.60	Aug. 15, 1947	+1.80	+1.80
7-12-15ca	97.46	Nov. 15, 1948	98.05	Nov. 17, 1947	+0.59	+0.59
7-12-24cc	98.70	Nov. 15, 1948	99.02	Nov. 17, 1947	+0.32	+0.32
8-9-5cc	91.80	June 2, 1948	92.12	Nov. 13, 1947	+0.16	+0.16
8-9-14aa	108.03	June 2, 1948	110.34	Oct. 4, 1948	.00	.00
8-9-14ac	110.18	Dec. 28, 1948	111.13	Dec. 22, 1948	....	+0.35
8-10-29ab	119.09	June 28, 1948	120.00	Nov. 13, 1948	+0.91	+0.91
8-11-13aa	91.64	Oct. 4, 1948	92.68	Aug. 14, 1947	+0.34	+0.96
8-12-1cd	83.88	Nov. 15, 1948	85.00	Oct. 5, 1947	+1.12	+1.12
8-12-8ab	7.68	July 16, 1947	9.72	Sept. 7, 1946	+0.05	+0.59
8-12-22db	83.04	Nov. 15, 1948	84.10	Aug. 13, 1947	+0.61	+1.06

Antelope County

24-6-2aa	3.71	Mar. 24, 1936	7.88	Sept. 12, 1935	1.23	+1.58
27-7-10bb	54.33	May 30, 1936				
		Oct. 18, 1948	66.40	Oct. 17, 1941	+10.01	+10.83

Length of record, in years, highest and lowest recorded water levels, in feet, net change in water level in 1948, and net change in water level during period of record in 726 wells in Nebraska--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>Blaine County</u>						
22-24-33ca	2.41	Oct. 14, 1946	5.65	Aug. 4, 1946	0.99	0.90
23-22-22ca	2.24	Jan. 7, 1935	4.38	July 1, 1936	....	.35
<u>Boone County</u>						
18-7-4ca	14.33	Mar. 26, 1937	15.17	Oct. 26, 1940	....	0.06
18-7-5ad	5.20	Mar. 26, 1937	6.33	Aug. 6, 1935	....	.03
21-7-26ca	17.20	Apr. 21, 1948	21.07	Oct. 14, 1938	....	2.03
<u>Box Butte County</u>						
24-47-1db	11.14	Mar. 25, 1948	12.45	May 14, 1946	.23	.54
24-48-4bb	13.32	Apr. 11, 1946	14.50	Oct. 22, 1948	.57	1.18
24-48-10bb	10.16	July 12, 1947	11.37	Oct. 22 to 29, 1948	.73	.80
24-48-11dd	4.17	July 1, 1946	7.05	Nov. 12, 1946	.53	.84
24-48-31ba	37.46	Mar. 28, 1948	39.20	June 8, 16, 18, 30, 1946	.19	+4.2
24-50-10aa	48.68	June 3, 1946	52.02	July 2, 1938	.06	+1.75
24-52-13cb	77.60	Mar. 13, 1947	78.55	Sept. 1, 1948	....	.66
24-52-35aa	97.61	July 22, 1940	99.13	May 9, 1946	.38	.85
25-47-31cc	14.29	Aug. 28, 1947	18.18	Oct. 21, 1948	2.07	2.82
25-48-4dd	63.15	July 22, 1946	63.91	Dec. 17, 1946	....	.49
25-48-14aa	48.06	Mar. 6, 1946	50.90	May 16, 1946	.57	1.79
25-46-25bb2	70.76	May 29, 1946	77.78	Aug. 31, 1946	.65	3.10
25-48-27db2	67.90	May 13, 1946	71.32	Sept. 1, 1948	1.15	1.71
25-49-14da	31.43	May 13, 1946	32.45	Mar. 12, 1946	+0.1	+9.90
25-50-22aa	132.01	May 13, 1946	132.54	May 1, 1947	.02	+1.3
25-50-31ab	102.72	July 2, 1948				
25-51-14aa	87.52	Sept. 1, 1948	103.41	Oct. 20, 1941	+1.14	+1.16
26-47-17dd	52.21	July 22, 1940	90.04	Feb. 27, 1946	.03	+2.28
26-47-35dd	11.83	July 1, 1948	62.29	Sept. 1, 1948	4.98	3.81
26-50-12dc	100.56	Mar. 26, 1948	13.64	Oct. 21, 1948	.39	1.54
26-51-25tc	95.49	July 1, 1948	102.38	Nov. 12, 1946	.92	.48
26-52-10bc	93.37	July 22, 1940	96.50	Feb. 19, 1947	+0.07	.32
26-52-17ab	73.39	July 22, 1938	101.02	Sept. 1, 1948	+0.02	2.79
27-47-12da	7.71	Oct. 21, 1948	75.46	Feb. 18, 1947	+0.09	+2.1
27-47-23ba	16.78	June 5, 1946	12.23	Apr. 19, 1935	....	+2.85
27-49-21cb	118.00	Oct. 21, 1948	29.94	Nov. 2, 1940	+1.43	+12.14
27-50-20aa	173.99	Feb. 27, 1946	119.41	Oct. 20, 1941	.25	.03
27-51-6bb	220.11	Feb. 27, 1946	174.82	Aug. 10, 1936	.17	+2.25
28-51-6dd	1.67	June 5, 1947	221.17	Mar. 27, 1948	....	.04
28-51-8bc	85.00	Mar. 27, 1936	4.08	July 20, 1940	.68	.82
		May 13, 1944	88.40	Mar. 30, 1940	.21	+1.16
		July 1, 1948				
<u>Brown County</u>						
29-21-6cd	5.00	Nov. 1944	9.00	June 17, 1945	.77	1.32
29-21-7ab	3.92	Dec. 16, 1947	5.99	Oct. 14, 1948	2.07	1.37
29-22-4ab	.90	Nov. 1944	3.95	Sept. 15, 1948	+3.39	1.19
30-21-15cd	74.39	Nov. 15, 1948	75.47	Sept. 14, 1948	+4.42	+6.65
30-21-18bc	55.88	May 12, 1948	56.08	Nov. 15, 1947	+0.06	+0.04
30-21-19cc	36.80	June 15, 1948				
30-21-20bb	45.80	Mar. 16, 1948	40.12	Jan. 13, 1948	+2.42	+9.92
30-21-30bc	37.04	June 15, 1948	47.82	Sept. 14, 1948	.01	+2.20
30-22-15cc	41.54	Feb. 17, 1948	38.45	Sept. 15, 1948	.72	.11
30-22-17cb	45.12	Mar. 17, 1948	43.53	June 18, 1948	.26	.00
30-22-19aa	38.08	Nov. 14, 1947	46.59	Sept. 15, 1948	.28	1.21
		Feb. 18, 1948	38.70	Nov. 22, 1948	.59	.50
30-22-23dd	38.57	Dec. 15, 1948				
		Mar. 24, 1948	39.47	Sept. 23, 1948	.27	.35
		Apr. 9, 1948				
		Apr. 17, 1948				

Length of record, in years, highest and lowest recorded water levels, in feet, net change in water level in 1948, and net change in water level during period of record in 726 wells in Nebraska--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>Brown County--Continued</u>						
30-22-26db	24.95	Nov. 18, 1944	29.00	Aug. 15, 1937	0.60	+0.73
30-22-27dc	14.02	Aug. 1, 1944	18.87	Aug. 9, 1937	.16	+ .08
30-23-1cc	62.94	Apr. 14, 1948	64.20	Oct. 14, 1948	.11	.08
30-23-13bc	38.59	Dec. 16, 1947	39.50	Nov. 20, 1944	.46	+ .45
				Nov. 14, 1947		
30-23-21aa	22.82	Nov. 16, 1947	23.73	Dec. 15, 1948	.82	.90
31-22-23dd	41.95	Nov. 15, 1947	42.95	Oct. 14, 1948	.33	.42
<u>Buffalo County</u>						
8-16-3cb	10.22	Sept. 8, 1947	13.22	Aug. 7, 1946	+ .02	+ .01
8-16-10cc	1.76	Nov. 7, 1946	3.79	Sept. 7, 1948	+ .01	+ .93
8-16-12cc	1.59	Apr. 25, 1933	7.80	Jan. 7, 1947	+ .75	.97
8-17-1da	4.18	Oct. 7, 1946	11.90	Nov. 3, 1934	+ .10	+1.61
8-17-4bc	5.26	Dec. 3, 1946	11.19	Sept. 7, 1948	.94	2.78
8-17-12dd	.89	Mar. 9, 1948	4.95	Aug. 20, 1936	+ .40	+1.63
8-18-4cb	7.30	Oct. 7, 1946	10.07	Sept. 7, 1948	.33	.36
9-13-5cb	16.54	May 20, 1931	22.54	Sept. 5, 1946	.55	.91
9-13-9cc	11.00	July 10, 1947	17.09	Oct. 4, 1946	1.63	1.65
9-14-1dc	16.67	July 9, 1947	19.79	Sept. 6, 1946	.66	+1.00
		July 10, 1947				
9-14-4cc	17.68	July 11, 1947	23.11	Sept. 5, 1946	1.08	.67
9-14-13cb	15.30	July 11, 1947	23.05	Oct. 15, 1941	1.28	1.15
9-14-19dd	22.55	June 9, 1931	28.53	Oct. 15, 1941	1.03	2.70
9-14-21cc	17.49	July 11, 1947	22.11	Nov. 24, 1939	1.22	2.16
9-14-22bb	15.00	July 11, 1947	19.56	Sept. 5, 1946	2.68	1.38
9-14-34bb	9.25	June 20, 1932	15.68	Oct. 27, 1940	1.17	2.72
		June 27, 1932				
9-15-11cb	23.67	July 11, 1947	29.96	Oct. 15, 1941	1.35	1.61
9-15-16cc	31.86	May 4, 1948	35.02	Sept. 5, 1946	1.91	+ .87
9-15-34bb	16.60	June 16, 1931	25.35	Nov. 3, 1948	4.32	8.03
9-17-31cd	8.02	Oct. 7, 1946	13.01	Mar. 9, 1948	+ .85	+ .39
9-18-27dd	3.63	Oct. 7, 1946	9.39	July 10, 1946	1.69	.13
9-18-31cc	7.38	Oct. 8, 1946	12.50	Sept. 7, 1948	.67	.84
10-13-24bc	17.91	May 13, 1931	26.28	Sept. 5, 1946	+ .44	5.43
<u>Butler County</u>						
A14-3-8ba	10.18	Apr. 12, 1948	18.63	Oct. 15, 1940	....	+6.85
A16-1-17bc	2.80	July 7, 1947	5.47	Sept. 3, 1946	+ .12	1.22
A16-2-14cc	3.46	July 7, 1947	6.35	Oct. 12, 1946	+ .07	.49
A16-2-30bc	21.45	Sept. 3, 1947	22.68	Aug. 6, 1946	+ .35	+ .51
		Nov. 1, 1948				
A16-3-1dc	8.11	July 7, 1947	12.45	Jan. 12, 1948	.24	1.61
A16-3-8dd	2.70	Mar. 24, 1948	4.86	Sept. 3, 1947	+ .43	+ .33
A16-3-15cd	11.52	July 7, 1947	17.28	Aug. 5, 1946	+ .32	+1.17
A17-4-28cd	19.55	July 7, 1947	22.10	Oct. 11, 1946	+ .25	.59
<u>Cedar County</u>						
A-28-3-4ca	5.78	July 12, 1940	10.05	June 23, 1947	2.25	.85
<u>Chase County</u>						
5-36-7ba	15.70	Feb. 4, 1948	16.39	Aug. 15, 1946	+ .14	+ .27
5-36-11dc	62.46	Feb. 27, 1947	63.92	Aug. 21, 1935	.43	+ .85
7-38-20cd	68.60	Aug. 21, 1935	70.92	Nov. 19, 1942	....	.11
7-38-28cc	75.67	Dec. 31, 1948	76.85	Dec. 9, 1944	....	1.18
<u>Cherry County</u>						
26-32-28ad	59.50	Oct. 15, 1947	67.45	Dec. 15, 1944	....	5.59
31-25-20ad	2.25	May 16, 1945	6.38	Sept. 12, 1936	+1.24	+1.30
33-27-17cb	1.68	Mar. 29, 1940	3.38	Aug. 9, 1937	+ .17	.09

Length of record, in years, highest and lowest recorded water levels, in feet, net change in water level in 1948, and net change in water level during period of record in 723 wells in Nebraska--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>Clay County</u>						
5-6-26bd	76.81	Nov. 20, 1948	77.09	July 16, 1948	....	+0.06
<u>Colfax County</u>						
A17-2-16bc	24.62	July 8, 1947	26.32	Sept. 4, 1946	.33	.50
A17-2-22dd	3.52	July 8, 1947	6.49	Jan. 13, 1948	+.91	+.15
A17-3-4cc	5.19	Mar. 23, 1948	6.34	Sept. 4, 1947	+.19	+.33
A17-3-11dd	6.60	July 7, 1947	10.50	Jan. 3, 1947	.61	.80
A17-3-18dc	1.75	Mar. 23, 1948	4.82	Sept. 4, 1946	.86	.73
A17-3-23cc	2.15	Mar. 24, 1948	5.27	Sept. 3, 1946	.12	.24
A17-3-29ea	6.97	July 8, 1947	8.83	Nov. 1, 1948	.05	.20
A17-4-1cc	3.83	Mar. 23, 1948	7.26	Oct. 9, 1941	...	.79
A17-4-4bb	11.19	July 8, 1947	17.11	Aug. 6, 1946	.67	2.00
<u>Cuming County</u>						
A21-6-23bb	4.86	May 27, 1935	8.93	Oct. 10, 1941	....	.43
<u>Custer County</u>						
19-18-9aa	11.98	Mar. 28, 1948	14.98	July 16, 1940	....	2.80
<u>Dawes County</u>						
31-52-3dc	15.84	Mar. 30, 1948	21.51	Aug. 27, 1934	.01	3.70
<u>Dawson County</u>						
9-19-16ab	6.50	Dec. 3, 1946	10.70	Sept. 7, 1948	1.39	1.60
9-19-25bb	5.45	July 11, 1947	9.72	Nov. 4, 1948	2.48	.60
9-19-33bb	5.03	Oct. 8, 1946	9.04	Sept. 6, 1946	.87	.76
9-20-3dd	6.72	Dec. 3, 1946	12.92	Sept. 7, 1948	1.27	.38
9-20-5bc	18.45	July 1, 1947	23.50	Nov. 4, 1948	2.15	1.98
9-20-13bc	6.90	Dec. 3, 1946	11.94	Sept. 7, 1948	1.36	1.56
9-20-22cc	7.74	Dec. 3, 1946	12.63	Sept. 6, 1946	1.62	1.39
9-20-33dd	2.41	Nov. 7, 1946	5.28	Sept. 7, 1948	1.28	.41
9-21-6ad	1.39	Oct. 8, 1946	8.30	July 11, 1946	.55	1.72
9-21-6da	1.01	Oct. 8, 1946	7.45	Aug. 21, 1934	....	.41
9-21-7aa	4.52	Oct. 8, 1946	8.99	Aug. 21, 1934	.83	1.57
9-21-7da	4.13	Oct. 8, 1946	7.32	Nov. 4, 1948	.40	.30
9-21-12cb	9.29	Oct. 8, 1946	13.19	Aug. 10, 1937	1.47	1.70
9-28-18aa	2.50	Apr. 30, 1944	7.24	Aug. 14, 1934	.51	1.69
9-21-18da	2.22	Oct. 8, 1946	6.48	Sept. 21, 1934	.51	2.02
9-21-19aa1	1.45	Oct. 8, 1946	5.55	Nov. 14, 1934	.43	1.85
9-21-19aa2	1.23	Feb. 25, 1932	2.75	Aug. 10, 1937	.57	2.28
9-21-19da	.95	Feb. 25, 1932	5.86	Sept. 16, 1936	.53	1.78
9-21-19dd	2.83	Feb. 25, 1932	7.64	Nov. 14, 1934	.87	2.17
9-21-24aa	1.97	July 12, 1947	6.29	Sept. 21, 1934	.92	.61
9-21-29bc	.10	May 3, 1947	5.21	Sept. 30, 1940	.16	.98
9-21-30da	3.63	Oct. 8, 1946	9.20	Sept. 30, 1940	.13	.50
9-21-31aa1	11.82	Oct. 8, 1946	19.54	Nov. 2, 1940	.60	+1.90
9-21-31da	7.68	July 12, 1947	22.90	July 24, 1940	.53	4.77
9-21-31dd	4.16	Oct. 8, 1946	19.82	Nov. 5, 1940	.19	8.04
9-22-25dc	2.70	July 14, 1947	17.28	Nov. 2, 1940	.58	11.31
9-23-2dc	14.02	July 14, 1947	18.24	Aug. 9, 1946	1.51	.54
9-23-3cc	10.74	July 14, 1947	13.15	Sept. 9, 1948	1.23	1.20
9-24-1dc	14.50	Nov. 5, 1948	17.90	Sept. 7, 1946	1.27	3.40
9-25-31db	190.55	Aug. 4, 1948	194.06	July 25, 1940	....	+2.13
10-20-21cb	22.33	July 12, 1947	25.79	Sept. 6, 1946	1.72	.60
10-20-35bb	14.80	July 12, 1947	18.64	Sept. 7, 1948	1.68	.65
10-21-6da	7.00	May 4, 1931	11.88	Sept. 21, 1934	1.62	1.38
10-21-7aa	5.63	Apr. 6, 1931	12.55	Sept. 21, 1934	1.17	2.97

Length of record, in years, highest and lowest recorded water levels, in feet, net change in water level in 1948, and net change in water level during period of record in 726 wells in Nebraska--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>Dawson County--Continued</u>						
10-21-7da	6.10	July 12, 1947	13.44	Sept. 21, 1934	1.03	2.19
10-21-18aa	4.60	July 12, 1947	12.84	Sept. 21, 1934	1.41	2.87
10-21-18dd	8.92	July 12, 1947	17.27	Sept. 21, 1934	2.10	3.36
10-21-19aa	11.88	July 20, 1931	19.80	July 24, 1940	2.45	3.93
10-21-19da	11.68	May 25, 1931	18.81	July 24, 1940	2.41	3.77
10-21-23ab	8.15	July 12, 1947	13.94	Aug. 8, 1946	1.82	.53
10-21-30aa	4.37	July 12, 1947	10.02	Aug. 8, 1946	1.73	3.68
10-21-30da	4.37	July 12, 1947	12.35	Aug. 21, 1934	1.48	3.84
10-21-31aa	1.67	June 12, 1935	8.98	Aug. 12, 1934	....	3.04
10-21-31dd	3.29	June 12, 1935	9.27	Sept. 21, 1934	1.26	3.52
10-22-11ab	4.83	Oct. 9, 1946	9.69	Aug. 8, 1946	.40	+.94
10-22-29aa	1.52	July 12, 1947	7.45	Nov. 5, 1940	2.10	.50
10-23-5bb	4.29	Dec. 4, 1946	8.40	July 11, 1946	.25	.66
10-23-29bb	2.02	Oct. 9, 1946	7.70	Nov. 5, 1948	.45	1.19
10-23-30bc	5.80	Oct. 9, 1946	12.05	Sept. 9, 1948	1.78	1.05
10-24-7bb	10.35	Oct. 9, 1946	13.52	July 12, 1946	+.06	+.74
10-24-15cc	3.78	July 14, 1947	7.93	Sept. 7, 1946	.20	+2.07
10-24-17bb	2.72	Nov. 8, 1946	19.78	May 1, 1941	1.71	+12.49
11-21-31dd	22.77	Sept. 8, 1947	33.28	July 24, 1940	1.80	1.93
11-22-28aa	25.08	July 12, 1947	30.89	Sept. 6, 1946	.67	.01
11-23-21bc	12.40	July 12, 1947	15.11	July 11, 1946	1.58	.86
11-23-23cc	.42	Oct. 8, 1946	5.28	Sept. 6, 1946	.62	+1.29
11-24-16bb	3.56	Oct. 9, 1946	8.42	Sept. 6, 1946	.96	1.07
11-24-20ca	9.52	July 12, 1947	14.97	Sept. 22, 1934	1.54	1.20
11-24-24cb	6.91	Dec. 4, 1946	12.40	June 28, 1946	1.03	+1.68
11-25-8ad	1.03	Apr. 7, 1939	5.04	Aug. 4, 1939	.35	+.34
11-25-16bb	4.45	Mar. 1, 1948	6.05	Sept. 9, 1947	+.09	+.45
11-25-19cc	5.42	July 14, 1947	14.30	Oct. 2, 1939	1.23	+3.17
11-25-21cc	4.18	Nov. 17, 1931	20.37	Aug. 2, 1933	.05	+1.72
11-25-34bc	12.12	Dec. 5, 1946	14.35	July 12, 1946	.20	+1.36
12-24-30ab	42.50	May 9, 1946	44.85	Sept. 9, 1947	1.91	+.14
12-25-34cc	27.50	Nov. 5, 1947	30.40	July 11, 1946	.55	+1.58

Dodge County

A17-5-2bb	2.32	Dec. 10, 1946	4.60	Sept. 3, 1946	+.22	+.69
A17-6-6aa	.68	June 22, 1945	9.65	Mar. 22, 1937	+.28	+1.56
A17-6-8bc	2.52	Mar. 4, 1947	6.03	Sept. 3, 1947	+.37	1.95
A17-6-15ad	1.90	Mar. 4, 1947	4.30	Sept. 3, 1947	....	.46
A17-6-4aa	3.35	June 22, 1945	12.21	Feb. 2, 1940	.72	+5.92
A17-8-4dd	3.70	July 7, 1947	13.33	Feb. 3, 1940	+.67	+4.33
A17-8-9da	4.15	June 22, 1945	14.29	Oct. 22, 1940	.81	+3.56
A17-8-16ad	6.11	June 22, 1945	14.19	Oct. 22, 1940	1.03	+2.93
A17-8-22cb	.82	Mar. 23, 1948	8.14	Feb. 3, 1940	+.52	+2.56
A17-8-28ad	1.19	July 7, 1947	7.29	Feb. 21, 1940	+.65	+2.40
A17-9-24dc	5.80	Oct. 27, 1942	10.70	Oct. 20, 1936	....	+2.33
A18-5-23bb	6.55	July 7, 1947	8.73	Oct. 11, 1946	.46	+.41
A18-6-25cc	5.07	July 7, 1947	10.50	Nov. 1, 1948	.63	1.92
A18-7-36cb	.84	July 7, 1947	5.48	July 12, 1948	+1.33	.80
A18-6-28da	60.86	Oct. 8, 1941	68.72	Mar. 20, 1940	+.10	+4.66
A18-8-28dd	23.63	Oct. 8, 1941	31.92	Feb. 3, 1940	.14	+6.12
A18-8-33aa	3.00	Oct. 8, 1941	9.36	Mar. 20, 1940	.37	+2.39
A18-9-18ac	6.76	July 9, 1940	9.33	Oct. 18, 1940	+.65	+1.34

Dundy County

1-37-7ab	60.82	July 30, 1947	61.88	Oct. 21, 1946	+.08	+.28
1-37-16dd	38.34	Dec. 4, 1947	30.02	Oct. 21, 1946	+.43	+.25
1-37-19ba	9.23	Feb. 26, 1947	14.25	Oct. 8, 1947	+.46	+1.86
1-37-31cd	3.75	June 7, 1947	5.85	Oct. 8, 1947	.03	.93
				Oct. 6, 1948		
1-38-20bc	15.50	June 8, 1948	18.42	Aug. 10, 1946	+.51	+2.64

Length of record, in years, highest and lowest recorded water levels, in feet, net change in water level in 1948, and net change in water level during period of record in 726 wells in Nebraska--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>Dundy County--Continued</u>						
1-36-21cb	5.53	June 6, 1947	9.74	Oct. 28, 1938	0.16	+2.65
1-38-26ca	11.84	Aug. 3, 1948	13.90	Oct. 8, 1947	+41	.70
1-38-28da	19.69	Apr. 10, 1948	20.42	Oct. 5, 1948	....	.49
1-38-29ad	7.94	Feb. 26, 1947	9.03	Oct. 5, 1948	+39	+87
1-39-21ac	4.62	Feb. 3, 1948	6.23	July 29, 1940	+30	.33
1-39-22cc	11.20	June 8, 1948	13.02	Aug. 16, 1946	+58	.08
1-39-26aa	25.19	June 6, 1947	26.50	Oct. 5, 1948	+34	.09
1-39-30bb	11.04	Aug. 3, 1948	13.12	Oct. 8, 1947	+53	+75
1-40-20cb	1.80	June 6, 1947	4.37	Oct. 8, 1947	+19	+11
1-40-24cd	8.21	Aug. 3, 1948	9.79	Oct. 8, 1947	+1.22	+96
1-40-27ab	18.66	June 11, 1946	20.87	Aug. 16, 1946	+70	.27
1-40-29bb	10.80	July 3-4, 1948	12.58	Oct. 3-4, 1946	+85	+59
1-41-20dd	2.52	Feb. 3, 1948	4.23	Aug. 16, 1946	+11	+1.70
1-41-27ca	3.24	Feb. 3, 1948	5.70	Aug. 16, 1946	+02	+1.45
1-42-10cd	3.41	Feb. 26, 1947	6.01	Aug. 16, 1946	+19	+1.15
1-42-13bb	3.71	Feb. 26, 1947	5.62	Aug. 16, 1946	+06	+1.41
1-42-36aa	9.88	Oct. 23, 1946	11.44	Aug. 3, 1948	1.33	.46
2-36-24ca	14.28	Feb. 27, 1947	15.65	Oct. 6, 1948	.31	1.21
2-36-29ac	21.32	June 7, 1947	22.94	Aug. 16, 1946	.11	.60
2-36-31bc	21.47	June 7, 1947	22.64	Oct. 6, 1948	.05	+06
2-36-32da	7.20	Aug. 4, 1948	8.55	Apr. 12, 1948	....	+30
<u>Franklin County</u>						
1-13-1cc	4.27	June 10, 1947	8.16	Dec. 16, 1947	+22	1.20
1-13-2bc	7.12	Oct. 26, 1946	9.56	Oct. 8, 1948	.46	.15
1-13-3ca	4.46	Oct. 26, 1946	8.52	Dec. 16, 1947	....	+73
1-13-4cb	10.13	Aug. 2, 1947	13.51	Aug. 6, 1948	.69	1.04
1-13-7bb	2.56	Oct. 26, 1946	7.19	Aug. 6, 1948	.51	.81
1-14-2cd	5.70	Dec. 18, 1946	12.36	Dec. 21, 1948	2.86	2.21
1-14-3ba	.91	Oct. 27, 1946	5.94	Aug. 13, 1946	....	.04
1-14-6bc	5.34	Oct. 27, 1946	9.05	Oct. 8, 1948	.18	.48
1-14-7bb1	.70	Oct. 27, 1946	5.40	Nov. 13, 1940	+90	+78
1-14-7bb2	3.45	Oct. 27, 1946	7.52	Oct. 9, 1947	+83	1.41
1-15-5ca	.62	Oct. 26, 1946	7.50	Dec. 22, 1946	1.26	2.91
1-15-8cb	8.93	Oct. 26, 1946	11.92	Nov. 18, 1948	.13	.51
1-16-9bc	10.25	Oct. 26, 1946	14.42	Oct. 7, 1946	.63	1.58
1-16-10bd	.70	Oct. 26, 1946	6.20	Oct. 8, 1948	.69	1.76
1-16-14ab	37.40	Oct. 26, 1946	42.41	Aug. 13, 1946	.74	1.27
2-13-31ad	52.18	Nov. 17, 1948	54.60	Mar. 8, 1946	+1.23	+1.95
2-13-32dd	2.77	Mar. 1, 1947	9.20	Oct. 8, 1948	+20	.93
2-14-33cc	8.27	Oct. 7, 1946	10.44	Nov. 17, 1948	....	1.71
2-14-34ad	50.37	Oct. 7, 1948	51.10	Aug. 5, 1948	+01	+01
4-14-10da	135.82	June 30, 1938	138.86	Aug. 12, 1947	....	.73
<u>Furnas County</u>						
3-21-2cc	6.97	Oct. 25, 1946	10.35	Oct. 7, 1948	+45	1.15
3-21-12dc	3.40	Oct. 25, 1946	6.70	Oct. 9, 1947	+40	.30
3-22-2ba	4.78	July 28, 1947	8.84	Oct. 1, 1948	.30	1.35
3-23-4bb	4.12	June 23, 1947	7.37	Oct. 3, 1946	+20	+77
4-21-32cc	11.67	July 31, 1947	16.74	Aug. 31, 1946	1.05	.21
4-22-25cc	6.29	Dec. 17, 1946	12.85	Oct. 7, 1948	.62	1.31
4-22-29ad	13.64	July 31, 1947	17.60	Aug. 13, 1946	.40	+1.52
4-22-32dd	7.55	July 28, 1947	12.20	Dec. 6, 1948	1.51	3.15
4-22-34bb	12.22	Dec. 1, 1947	15.61	June 11, 1948	.67	.84
4-23-20ab	25.29	July 31, 1947	31.28	Aug. 14, 1946	.63	.06
4-23-23bd	28.72	July 31, 1947	30.89	Sept. 13, 1943	.10	.40
4-23-27dd	7.08	July 28, 1947	11.35	Aug. 13, 1946	.54	1.31
4-23-30cc	51.84	June 5, 1947	54.69	Aug. 2, 1948	.86	1.44
4-23-36aa	17.06	July 28, 1947	23.17	Aug. 13, 1947	.36	1.25
4-24-13cd	15.14	July 31, 1947	19.73	Aug. 14, 1946	.26	+1.51

Length of record, in years, highest and lowest recorded water levels, in feet, net change in water level in 1948, and net change in water level during period of record in 725 wells in Nebraska--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>Furnas County--Continued</u>						
4-24-15cc	10.82	July 31, 1947	14.20	Aug. 14, 1946	0.22	0.87
4-24-19cc	12.90	Oct. 25, 1946	15.05	June 12, 1946	.16	+ .33
4-24-22dd	5.00	Oct. 25, 1946	7.19	Dec. 6, 1948	1.09	1.52
4-24-29cd	20.38	July 28, 1946	23.57	Aug. 14, 1946	+ .22	.41
4-25-32cd	3.66	Oct. 25, 1946	6.56	Oct. 6, 1947	+ .33	.05
				Oct. 1, 1948		
4-25-34ad	14.32	July 28, 1947	17.76	Jan. 31, 1946	+ .61	+ .90
<u>Garden County</u>						
17-44-22cc	20.83	Oct. 25, 1935	27.30	July 26, 1940	....	5.41
16-46-27cc	1.97	Apr. 25, 1935	5.95	July 26, 1940	....	.02
20-44-5db	4.30	Oct. 21, 1934	8.04	Jan. 13, 1938	.20	1.24
				Dec. 15, 1939		
20-44-9ca	3.16	Mar. 4, 1934	7.18	Nov. 5, 1937	.60	1.96
				Nov. 23, 1937		
20-45-13ab	2.00	June 6, 1935	5.12	Sept. 29, 1939	.80	+1.54
20-45-17ba	3.30	Mar. 26, 1948	7.49	Aug. 19, 1937	.80	+2.18
21-44-29ab	2.09	June 20, 1935	5.86	Apr. 2, 1938	.10	+ .67
21-44-35ca	.44	Feb. 12, 1934	4.84	Aug. 20, 1937	.60	1.40
21-45-3bd	2.00	June 22, 1947	7.87	Nov. 30, 1936	.80	1.35
21-45-10cd	1.60	Mar. 25, 1948	6.66	July 29, 1934	.40	+ .68
21-45-27cb	2.60	June 22, 1947	6.64	Oct. 9, 1937	.30	+1.52
<u>Gosper County</u>						
5-22-3da	151.04	June 21, 1948	151.86	Oct. 16, 1948	....	.29
6-21-29cc	123.48	Nov. 13, 1948	123.72	Oct. 16, 1948	....	+ .17
6-22-15dd	126.84	Nov. 13, 1948	127.14	Oct. 16, 1948	....	+ .16
7-21-6bc	108.20	Nov. 12, 1948	118.20	Sept. 26, 1935	....	+9.39
7-21-20bb	197.42	Nov. 12, 1948	198.97	Nov. 25, 1947	+1.55	+1.55
7-21-24dc	171.23	Nov. 12, 1948	172.11	May 28, 1948	....	+ .88
7-21-33aa	177.85	Oct. 29, 1948	181.68	Dec. 17, 1947	+3.83	+3.83
7-22-8bb	244.65	Nov. 12, 1948	251.65	Nov. 25, 1947	+7.00	+7.00
7-23-13bb	225.32	Nov. 12, 1948	227.80	Aug. 12, 1947	+1.97	+2.38
6-21-3dc	11.10	July 14, 1947	14.50	Sept. 10, 1947	.47	+ .38
8-21-11aa	3.09	Aug. 7, 1943	6.35	Sept. 9, 1948	.70	1.72
8-21-30dd	130.80	Nov. 12, 1948	132.11	Jan. 12, 1948	....	+1.31
8-22-17dd	162.40	Nov. 12, 1948	169.72	Nov. 25, 1947	+7.32	+7.32
8-22-28bc	213.32	Nov. 12, 1948	216.25	Nov. 25, 1947	+2.92	+2.92
<u>Grant County</u>						
24-37-25ac	3.59	June 8, 1935	6.62	July 22, 1940	.16	1.35
24-40-36bb	12.32	June 8, 1935	14.99	Aug. 29, 1947	.24	1.39
<u>Hall County</u>						
9-10-4dc	4.70	Dec. 6, 1946	6.67	Sept. 7, 1946	+ .11	1.15
9-10-29db	63.96	May 11, 1948	70.03	Nov. 14, 1947	+ .03	+ .03
9-11-6bc	4.65	Dec. 2, 1946	7.82	Sept. 5, 1946	+ .04	1.56
9-11-14cb	7.03	July 16, 1947	8.67	Aug. 9, 1946	.38	1.18
9-11-21bb	7.44	Dec. 6, 1946	9.52	Sept. 7, 1946	+1.30	+ .39
9-12-1dc	2.47	May 6, 1931	7.78	Sept. 20, 1934	+ .27	1.54
9-12-9ba	18.63	June 27, 1932	23.35	Sept. 6-12, 1946	.07	2.18
10-9-3cb	1.95	May 29, 1938	6.70	Dec. 24, 1940	+ .31	+ .06
10-9-4cb	2.46	July 10, 1944	6.55	Dec. 24, 1940	.20	.10
10-9-10bb	7.23	July 10, 1947	9.38	Sept. 11, 1947	+ .04	1.06
10-9-26cc	13.77	July 16, 1947	15.32	Sept. 3, 1946	+ .14	.21
10-10-8cc	19.52	June 20, 1932	24.08	Sept. 5, 1946	.37	.74
10-10-13dd	2.65	Mar. 15, 1948	4.62	Sept. 2, 1948	+ .37	+ .31

Length of record, in years, highest and lowest recorded water levels, in feet, net change in water level in 1948, and net change in water level during period of record in 726 wells in Nebraska--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>Hall County--Continued</u>						
10-11-15dc	15.56	July 10, 1947	21.12	Sept. 5, 1946	1.24	1.77
10-11-30bc	15.67	June 23, 1931	23.92	Aug. 18, 1944	.52	3.56
		June 30, 1931				
10-12-21cc	27.76	July 5, 1948	29.30	May 8, 1947	+3.35	+1.03
11-9-4cc	10.08	Oct. 1, 1945	16.70	July 27, 1940	+1.34	+2.62
11-9-12dc	11.42	July 12, 1947	19.05	Feb. 5, 1941	+1.59	+1.47
11-9-8da	13.58	Oct. 1, 1945	23.25	Aug. 28, 1941	....	1.75
11-9-8db	12.00	May 10, 1948	18.90	Aug. 28, 1941	....	+2.55
11-9-9aa1	17.25	Oct. 1, 1945	25.50	July 27, 1940	.08	+2.20
11-9-9bd	15.08	Oct. 1, 1945	24.25	July 27, 1940	.57	.97
				Apr. 18, 1941		
11-9-9cc	17.66	Oct. 1, 1945	26.15	Feb. 5, 1941	+1.92	+3.84
		Nov. 16, 1948		Aug. 28, 1941		
11-9-9da	24.83	Nov. 15, 1948	33.65	Nov. 2, 1940	+1.58	+3.37
11-9-9dd	24.93	Nov. 15, 1948	33.70	Dec. 24, 1940	+1.73	+4.57
11-9-12dc	4.60	July 10, 1944	8.40	Feb. 13, 1937	+2.25	+0.05
11-9-15bb1	22.00	Nov. 15, 1948	31.40	July 19, 1941	+3.25	+5.20
11-9-15bb2	25.25	Nov. 15, 1948	35.40	July 19, 1940	+2.00	+5.45
11-9-15db	5.92	Oct. 1, 1945	18.66	May 21, 1943	+1.67	+2.22
11-9-15dd	5.53	July 14, 1947	11.00	Dec. 24, 1940	+2.24	+0.03
11-9-16ad	28.42	Nov. 15, 1948	41.95	Aug. 28, 1941	+1.74	+5.48
11-9-16bc	23.75	June 10, 1946	36.62	Nov. 2, 1940	+1.61	+2.95
11-9-16bd	31.66	Dec. 18, 1944	45.30	July 27, 1940	+1.17	+4.07
11-9-16ca	31.25	Dec. 9, 1946	42.45	Nov. 2, 1940	+1.84	+5.42
11-9-16cb	16.83	Oct. 1, 1945	35.65	Feb. 5, 1941	+1.66	+5.28
11-9-16db	29.08	Nov. 15, 1948	37.34	Nov. 2, 1940	+1.76	+4.32
11-9-17ba	11.83	Oct. 1, 1945	21.25	Feb. 5, 1941	+1.32	+3.45
11-9-17bd	15.25	Oct. 1, 1945	26.35	Feb. 5, 1941	+2.08	+4.70
11-9-17cd	17.42	Oct. 1, 1945	33.75	Nov. 2, 1940	+9.41	+11.25
11-9-21bb	24.25	Aug. 5, 1948	33.15	Feb. 5, 1941	+2.08	+1.63
11-9-21-bd	27.25	Oct. 1, 1945	36.27	May 29, 1944	+3.68	.04
11-9-22cb	6.95	May 12, 1936	10.42	July 17, 1942	.50	1.70
11-9-26aa	2.56	July 10, 1944	8.75	Dec. 3, 1942	+0.09	+2.20
11-9-27bc	6.00	July 10, 1947	10.70	Feb. 26, 1944	.83	.01
11-9-28ba	6.15	Mar. 31, 1936	15.60	Feb. 26, 1944	+2.24	6.62
		May 2, 1936				
11-9-29bb	19.16	July 14, 1947	23.00	Dec. 24, 1940	+4.41	+3.35
11-9-32cc	1.90	May 29, 1938	6.05	Oct. 17, 1936	+2.25	.05
11-9-34aa	2.54	July 10, 1944	7.30	Dec. 24, 1940	+2.25	+1.10
11-9-34cb	2.50	July 10, 1944	7.15	Dec. 24, 1940	+1.16	.22
11-9-35dc	2.08	July 14, 1947	6.10	Dec. 24, 1940	+2.24	.02
11-10-1cc	5.08	July 14, 1947	12.00	Dec. 24, 1940	1.41	+1.34
11-10-11dc	5.00	July 14, 1947	12.40	Dec. 24, 1940	.49	+1.78
				Mar. 26, 1941		
11-10-13ab	8.00	July 14, 1947	15.75	Mar. 26, 1941	.41	+1.82
11-10-14dd	9.15	July 20, 1947	11.68	Aug. 6, 1946	.83	.48
11-10-16bb	9.57	Mar. 16, 1948	11.07	Mar. 8, 1946	.06	+1.21
11-10-24cb	12.66	July 14, 1947	19.95	Dec. 24, 1940	1.72	.08
11-10-26dd	5.64	July 7, 1944	17.70	Dec. 28, 1935	.42	+6.62
11-10-27dc	15.43	Sept. 5, 1947	17.72	June 7, 1946	1.16	.05
11-11-25cc	13.11	June 28, 1947	17.10	Oct. 4, 1946	+3.38	+8.80
11-11-32cb	29.04	May 20, 1931	36.80	Sept. 3, 1948	+3.37	6.65
11-11-36cb	19.92	Oct. 19, 1930	26.07	Sept. 4, 1946	+3.31	2.93
		Oct. 21, 1930				
11-12-34dc	25.68	July 10, 1946	27.58	Sept. 3, 1948	+1.10	.80
12-9-27cb	5.08	Mar. 11, 1946	9.05	Dec. 24, 1940	1.00	.08
12-9-32aa1	7.58	July 14, 1947	12.80	Dec. 24, 1940	....	+1.05
12-9-32aa2	10.67	July 10, 1947	13.35	Sept. 4, 1946	.13	.36
12-9-32cc	7.08	July 14, 1947	12.80	Dec. 24, 1940	.17	+1.33
12-11-24cd	6.42	July 10, 1947	12.26	Oct. 4, 1946	.18	+1.70

Length of record, in years, highest and lowest recorded water levels, in feet, net change in water level in 1948, and net change in water level during period of record in 726 wells in Nebraska--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>Hamilton County</u>						
9-6-34bb	38.65	July 7, 1947	44.29	Nov. 14, 1940	....	+2.3
11-6-13cb	89.06	Jan. 24, 1935	93.99	Jan. 21, 1941	....	2.7
11-8-28bc	29.75	Mar. 16, 1948	32.33	Sept. 3, 1946	.10	1.0
13-5-19aa	24.00	July 7, 1947	27.28	Aug. 5, 1946	+1.80	+4.4
13-6-27cc	6.85	June 30, 1935	11.41	Nov. 14, 1940	.02	.0
<u>Harlan County</u>						
1-17-1da	1.95	Oct. 25, 1946	8.00	Oct. 7, 1948	+1.14	.3
1-17-12da	12.71	Oct. 26, 1946	18.92	Dec. 22, 1948	1.90	1.8
1-19-35bc	28.80	Apr. 2, 1948	30.05	Oct. 13, 1947	....	+1.2
2-18-33cd	5.68	Aug. 1, 1947	14.52	Sept. 27, 1934	.44	+3.8
2-19-5cb	20.32	Dec. 17, 1946	24.19	Apr. 13, 1946	.12	.2
2-19-17da	18.60	Aug. 1, 1947	22.22	Dec. 10, 1946	1.42	.3
2-19-28dd	6.82	Dec. 17, 1946	10.74	Nov. 17, 1946	+1.18	+9.9
2-19-34bc	20.15	June 9, 1947	23.70	Aug. 13, 1946	.01	.5
3-17-21da	51.59	Aug. 5, 1948	53.25	July 31, 1940	....	+1.1
3-17-27bb	18.68	Nov. 13, 1940	20.66	Oct. 21, 1937	....	+3.3
3-20-7ab	29.56	Aug. 1, 1947	32.00	Aug. 13, 1946	.03	+5.5
3-20-16bb	3.95	Oct. 25, 1946	9.44	Aug. 13, 1946	+2.20	.4
3-20-18ca	13.40	June 9, 1947	16.56	Aug. 13, 1946	.40	+8.8
3-20-22dd	24.20	Aug. 1, 1947	26.29	Aug. 13, 1946	+1.12	+6.6
3-20-25cc	10.22	Aug. 1, 1947	18.13	Aug. 13, 1946	.12	1
<u>Hayes County</u>						
5-33-30cb	16.71	Dec. 16, 1946	20.00	Aug. 15, 1946	.02	.0
5-33-31dc	6.64	Apr. 9, 1937	14.82	Oct. 8, 1947	+3.34	6.4
5-34-28bc	57.60	Apr. 12, 1948	60.25	Aug. 4, 1948	+2.26	+0.0
5-24-30bc	10.55	Oct. 24, 1946	11.53	Oct. 5, 1948	+3.32	+1.1
5-35-17da	0.22	Oct. 24, 1946	9.33	Oct. 6, 1948	+1.17	+6.6
<u>Hitchcock County</u>						
2-33-2aa	9.69	Mar. 19, 1946	12.05	Oct. 6, 1948	+1.10	1.1
2-33-6cb	9.66	Feb. 4, 1948	11.52	Oct. 6, 1948	+5.56	+4.4
2-35-10ab	7.05	Apr. 9, 1948	8.72	Oct. 4, 1948	+1.12	+2.2
2-34-6da	18.47	July 30, 1947	20.65	June 9, 1948	.17	1.0
2-34-11dc	10.10	July 30, 1947	11.95	Oct. 6, 1948	+1.16	.3
2-35-13bb	13.55	Aug. 16, 1946	15.74	June 6, 1947	.10	2.0
2-35-21bc	19.97	June 16, 1935	21.73	Sept. 24, 1946	.30	+9.9
2-35-24aa	4.50	June 6, 1947	8.77	Oct. 6, 1947	.03	+2.2
3-31-14bc	11.82	Oct. 8, 1947	15.88	Aug. 5, 1946	+2.25	+1.3
3-31-17cd	7.18	Feb. 2, 1948	8.78	Aug. 15, 1946	+2.27	+1.2
3-31-20da	6.58	July 28, 1947	8.52	Dec. 6, 1948	.32	.3
3-31-29bb	12.79	June 7, 1948	13.50	Dec. 3, 1947	....	+5.5
3-32-11bb	13.11	Feb. 4, 1946	14.15	Oct. 6, 1948	.10	.2
3-32-12cc	21.20	Oct. 24, 1946	22.15	Aug. 4, 1948	.33	+2.2
3-32-26dd	27.40	July 28, 1947	29.34	Aug. 2, 1948	.34	.3
3-32-31aa	5.78	Feb. 27, 1947	7.35	Oct. 6, 1948	+3.35	+1.1
3-33-35dc	9.59	Mar. 4, 1943	12.04	Oct. 6, 1948	+3.03	1.1
4-32-30dc	17.89	Apr. 12, 1948	18.95	Oct. 6, 1948	....	.2
4-33-8bb	54.85	Feb. 27, 1947	56.05	Oct. 6, 1948	.10	.3
4-33-23ad	12.55	Dec. 16, 1946	13.86	Oct. 6, 1948	+1.16	+1.1
		Feb. 27, 1947				
<u>Holt County</u>						
27-9-27dd	2.62	July 18, 1947	8.86	Oct. 30, 1940	+1.10	+1.6
27-9-34da	4.00	June 4, 1935	9.88	Sept. 29, 1948	+1.14	.8
29-11-9bb	7.38	Mar. 22, 1948	8.08	Oct. 13, 1948	.58	.3
29-11-21bb	16.87	Dec. 15, 1947	25.47	Feb. 16, 1948	8.32	.7
		Jan. 14, 1948				

Length of record, in years, highest and lowest recorded water levels, in feet, net change in water level in 1948, and net change in water level during period of record in 726 wells in Nebraska--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>Holt County--Continued</u>						
29-12-10cb	26.89	Jan. 14, 1948	27.63	Feb. 16, 1948	0.37	0.41
29-13-13dd	39.66	Dec. 15, 1947	43.07	Mar. 22, 1948	.46	.53
30-13-27cc	29.78	Mar. 22, 1948	30.80	Oct. 13, 1948	.56	.75
30-14-23ad	30.59	Nov. 15, 1948	32.05	July 12, 1948	.15	.18
31-14-35cb	27.71	Jan. 14, 1948	29.21	June 15, 1948	1.43	1.43
<u>Hooker County</u>						
24-35-23dd	.19	June 8, 1935	20.84	Oct. 19, 1948	.33	9.14
<u>Howard County</u>						
13-9-26dd	5.54	July 10, 1947	9.68	Sept. 4, 1946	+ .98	+1.48
				Oct. 31, 1946		
13-9-27ca	18.50	July 2, 1948	22.09	Oct. 26, 1940	....	+ .95
13-12-29ba	25.84	Mar. 29, 1948	30.43	Oct. 28, 1940	....	+2.28
14-10-14bb	5.85	June 28, 1948	8.15	Oct. 29, 1940	....	+1.52
15-9-9aa	32.50	May 21, 1948	32.80	Dec. 25, 1948	....	.29
				Dec. 29, 1948		
15-10-19ab	8.48	June 29, 1948	11.14	Sept. 30, 1948	....	.29
16-11-7cc	18.59	Mar. 30, 1948	19.59	Sept. 30, 1948	....	1.00
16-11-27dc	64.73	Feb. 21, 1935	72.24	June 28, 1948	....	6.48
16-11-32ab	17.58	Sept. 30, 1948	18.45	Mar. 30, 1946	....	+ .87
				June 29, 1948		
<u>Kearney County</u>						
5-13-4bc	120.78	June 29, 1948	121.19	Sept. 14, 1948	....	.04
5-13-8cd	106.50	July 12, 1948	106.86	Sept. 14, 1948	....	.35
5-13-33cc	138.87	Apr. 30, 1947	139.62	Aug. 3, 1948	.59	.59
5-14-16cb	140.86	Oct. 11, 1946	142.18	Aug. 11, 1947	+ .01	+ .16
5-14-33bb	158.40	Oct. 11, 1948	158.53	Sept. 14, 1948	....	+ .07
5-15-3ba	104.53	Dec. 4, 1948	108.15	Aug. 8, 1947	+ .72	+3.20
5-15-9cb	111.99	Sept. 11, 1946	112.42	Dec. 29, 1947	+ .42	+ .42
5-16-6ac	120.50	Nov. 17, 1948	121.80	Jan. 1, 1948	....	+1.30
5-16-30da	136.39	Nov. 17, 1948	137.65	Aug. 3, 1948	+ .41	+ .19
6-13-16db	87.26	May 21, 1946	89.42	Aug. 13, 1947	+1.51	+2.10
6-14-21db	103.92	Oct. 29, 1948	104.49	Sept. 3, 1948	+ .37	+ .37
6-14-25ba	89.66	Nov. 16, 1948	93.56	Dec. 31, 1947	+3.90	+3.90
6-15-1cb	70.79	Nov. 17, 1948	71.36	June 29, 1948	....	+ .77
6-15-11ab	72.36	Nov. 17, 1948	75.78	Aug. 2, 1948	....	+3.42
6-15-14bb	82.40	Nov. 17, 1948	83.88	Aug. 3, 1948	+1.15	+1.15
6-15-22ac	96.51	Oct. 13, 1948	97.55	Dec. 31, 1947	+1.04	+1.04
6-15-32ab	91.64	Nov. 16, 1948	91.92	Sept. 11, 1948	....	+ .28
6-16-20bb1	84.04	Nov. 17, 1948	100.50	Oct. 29, 1938	+3.03	+15.89
6-16-25cb	98.19	Oct. 11, 1948	99.89	Nov. 17, 1947	+1.70	+1.70
7-13-20aa	55.67	Nov. 9, 1948	56.67	Nov. 17, 1947	+ .80	+ .80
7-14-12cd	52.55	Sept. 16, 1948	52.62	Nov. 15, 1948	....	.07
7-14-30db	70.08	Nov. 25, 1948	71.70	Dec. 30, 1947	+1.62	+1.62
7-15-11ad	34.27	Aug. 31, 1948	35.07	Nov. 24, 1947	+ .65	+ .80
		Oct. 7, 1948				
7-16-8dc	17.40	Nov. 17, 1948	18.93	Aug. 7, 1947	+1.28	+1.53
7-16-11dd	26.72	Nov. 17, 1948	27.61	Aug. 7, 1947	+ .52	+ .89
7-16-23da	66.20	Nov. 17, 1948	67.85	Dec. 30, 1947	+1.65	+1.65
7-16-25aa	48.50	Nov. 17, 1948	48.80	Sept. 20, 1948	....	+ .30
8-13-12cb	4.84	Dec. 6, 1946	7.12	Aug. 9, 1946	+ .18	+ .14
8-13-16cb	3.98	July 15, 1947	6.77	Sept. 7, 1946	.31	....
8-14-13db	6.59	Nov. 15, 1946	10.98	Oct. 27, 1940	.08	.02
8-14-19cc	2.38	Nov. 15, 1946	6.18	Sept. 7, 1946	.40	1.33
8-14-23ba	2.63	Nov. 15, 1946	5.75	Sept. 11, 1947	.23	.55
8-15-21dc	3.20	Nov. 15, 1946	7.25	Sept. 11, 1947	.25	.64
8-16-23dd	2.20	Oct. 10, 1946	5.70	Sept. 8, 1948	.32	.46
8-16-28aa	4.36	Oct. 10, 1946	7.60	Sept. 7, 1946	.47	+ .31

Length of record, in years, highest and lowest recorded water levels, in feet, net change in water level in 1948, and net change in water level during period of record in 726 wells in Nebraska--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>Keith County</u>						
13-35-6dd	5.90	May 8, 1942	9.29	Nov. 8, 1948	....	1.45
13-36-3cb	4.61	May 8, 1942	10.25	Sept. 27, 1940	+ .28	1.52
13-36-6bc	2.03	May 8, 1942	6.32	Aug. 2, 1943	+ .39	+1.47
13-36-8cc	2.44	July 1, 1947	5.79	Apr. 17, 1946	.42	.24
13-36-9ad	+ .02	Mar. 16, 1946	3.74	Apr. 17-22, 1946	.73	1.21
13-37-3ab	10.55	May 8, 1942	15.80	Nov. 6, 1947	+ .06	1.09
13-37-5ad	8.04	May 8, 1942	13.85	Aug. 2, 1943	.30	+ .76
13-38-3ba	9.27	May 8, 1942	15.79	Aug. 2, 1943	.15	+ .48
13-38-6ca	9.94	May 8, 1942	14.90	Oct. 9, 1948	.71	1.12
16-38-7aa	7.63	May 4, 1942	10.50	Aug. 31, 1948	.40	2.60
<u>Lancaster County</u>						
A7-7-35cb	24.40	Apr. 15, 1948	26.46	Oct. 17, 1940	....	+1.92
<u>Lincoln County</u>						
11-26-16bb	8.48	July 24, 1947	21.62	Apr. 6, 1939	.32	+11.45
				Oct. 2, 1939		
12-26-35db	7.32	July 13, 1947	11.45	Sept. 8, 1948	.63	.64
12-27-14aa	2.98	July 2, 1935	7.07	Aug. 30, 1941	.51	1.07
12-27-16aa	2.18	July 2, 1947	5.31	July 7, 1948	.86	1.83
12-27-20dd	13.17	July 13, 1947	18.68	Oct. 1, 1940	.33	+2.94
12-27-27ad	1.74	Sept. 11, 1942	7.36	Nov. 1, 1939	+ .30	+ .47
12-27-28dd	12.48	May 5, 1948	12.74	Sept. 9, 1948	+ .12	....
12-27-36ad	3.02	July 1, 1941	9.02	Oct. 2, 1939	.54	+1.79
12-28-9bc	4.77	Dec. 4, 1946	10.65	Nov. 1, 1939	+ .36	+3.74
12-28-14dd	27.42	Jan. 8, 1948	37.43	Oct. 1, 1940	.03	+9.06
12-28-15ba	11.05	June 13, 1947	16.85	Oct. 1, 1940	.02	+3.25
13-27-32bd	1.40	May 1, 1942	5.13	Aug. 4, 1939	.75	1.42
13-28-16dd	4.19	Mar. 1, 1948	6.18	Sept. 8, 1948	.10	+ .21
13-28-21da	.62	June 12, 1947	6.48	Aug. 29, 1940	.71	.76
13-28-25bc	3.50	Mar. 14, 1947	6.24	Sept. 8, 1948	.11	1.60
13-28-28cc	2.34	Mar. 1, 1948	3.50	July 7, 1948	.04	+ .22
				Sept. 8, 1948		
13-28-29cc	3.28	Apr. 7, 1939	6.39	Sept. 9, 1947	.11	1.63
13-28-31cc	3.39	Oct. 30, 1946	10.84	Aug. 3, 1939	+ .37	+5.32
13-29-6ba	2.14	May 8, 1942	5.13	July 26, 1940	1.20	.36
13-29-20bb	5.15	Sept. 11, 1942	12.19	Oct. 2, 1936	.28	+4.79
13-29-25bb	3.05	Apr. 7, 1939	6.86	Nov. 22, 1944	.25	1.08
13-29-35bb	15.03	Sept. 10, 1947	17.85	May 14, 1947	.60	.50
13-30-3ad	2.10	May 8, 1942	6.57	Sept. 9, 1947	.16	.66
13-30-4cd	4.97	Oct. 9, 1946	7.60	Jan. 7-22, 1948	+ .05	+ .25
13-30-9cb	.90	June 13, 1947	3.24	Aug. 2, 1946	.12	+ .10
13-30-13dd	9.09	Sept. 11, 1942	15.89	Aug. 2, 1937	.62	+4.07
13-30-21bb	11.10	Apr. 14, 1948	19.92	Sept. 17, 1936	.31	+5.64
13-30-21cd	38.60	Dec. 13, 1948	41.20	Jan. 20, 1947	+1.50	+2.60
14-30-9ca	2.55	June 13, 1947	6.05	Sept. 12, 1946	+ .10	.40
14-30-16db	.10	Feb. 25, 1947	2.69	Sept. 9, 1947	+ .20	.20
14-30-21cd	2.89	Oct. 9, 1946	4.12	July 7, 1948	.10	....
14-30-28dc	5.30	May 24, 1946	7.53	July 7, 1948	.60	1.20
14-30-33cd	5.90	June 23, 1947	8.20	Dec. 13, 1948	1.00	1.90
14-33-27aa	8.16	Sept. 10, 1942	10.90	May 8-14, 1947	+ .10	1.22
14-33-27da	2.07	July 2, 1947	5.71	Feb. 4-7, 1948	+ .07	1.81
<u>Loup County</u>						
21-18-22aa	4.79	Mar. 23, 1936	5.31	July 16, 1940	....	+ .85
<u>Madison County</u>						
22-1-33cb	+0.04	Aug. 1, 1945	4.25	Aug. 18, 1936	+ .18	+ .83
23-2-5aa	2.93	June 4, 1935	4.86	July 16, 1936	+ .07	+ .75
24-2-32dc	2.89	June 4, 1935	6.55	Aug. 10, 1935	+ .15	+ .94

Length of record, in years, highest and lowest recorded water levels, in feet, net change in water level in 1948, and net change in water level during period of record in 726 wells in Nebraska--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>Merrick County</u>						
11-8-3dd	.55	Mar. 17, 1948	3.32	Sept. 5, 1947	0.02	+.02
11-8-18ab	3.00	July 11, 1947	7.10	Feb. 26, 1944	+1.10	.11
12-7-7aa	4.34	July 10, 1947	7.32	Sept. 4, 1946	.04	.81
12-8-7dc	9.44	July 10, 1947	13.79	Sept. 4, 1946	+.46	+.67
12-8-28dc	.59	July 10, 1947	3.40	Sept. 4, 1946	+.18	1.17
13-6-2bc	4.41	July 8, 1947	6.91	Nov. 11, 1947	+.03	1.40
13-6-7bb	4.09	July 10, 1947	6.60	Jan. 5, 1948	.05	1.12
				Nov. 2, 1948		
13-6-19cb	3.10	July 10, 1947	5.75	Jan. 5, 1948	.01	1.30
				Nov. 2, 1948		
13-6-28bb	5.12	Jan. 6, 1947	7.49	Sept. 4, 1946	+.03	1.13
13-7-4bc	3.40	Mar. 17, 1948	7.46	May 7, 1946	+.71	+1.83
13-7-29cb	1.00	June 4, 1946	4.07	Aug. 6, 1946	.05	.59
14-4-18bb	3.10	Mar. 18, 1948	5.72	Sept. 3, 1946	.13	1.07
14-5-9cc2	4.56	July 8, 1947	7.14	Nov. 11, 1947	+.05	1.59
14-6-15bb	2.43	July 17, 1948	5.64	Sept. 4, 1946	+.19	.56
14-7-21cb	5.39	July 10, 1947	9.74	Dec. 20, 1934	+.51	+2.29
14-7-26cc	11.04	July 5, 1948	13.00	May 7, 1946	+.04	+1.72
15-4-15dd	5.05	July 8, 1947	8.90	Nov. 11, 1947	+.25	.74
15-4-31cc	2.97	May 7, 1947	5.22	Nov. 11, 1947	+.53	.63
15-5-8dd	11.15	July 8, 1947	14.63	Nov. 2, 1948	2.77	.61
15-5-27dd	1.92	July 8, 1947	4.70	Jan. 13, 1948	.25	1.02
16-3-7dd	2.94	May 8, 1948	4.97	Nov. 11, 1947	+.02	+.05
16-3-27cc	4.39	July 8, 1947	9.84	Nov. 1, 1934	.10	+2.24
<u>Morrill County</u>						
20-49-30ac	17.07	Nov. 7, 1946	21.22	June 11, 1946	+.91	+3.14
20-50-17bb	10.90	Oct. 27, 1947	15.93	May 9, 1946	.92	+4.05
20-50-28bb	11.99	Jan. 18, 1947	14.74	Mar. 12, 1947	+.31	+.59
20-50-32aa	2.00	May 14, 1942	5.80	June 10, 1948	.23	.12
21-50-33bc	17.76	Aug. 31, 1948	47.85	June 11, 1946	+3.43	+20.76
22-50-14bc	.08	Mar. 28, 1948	2.33	Aug. 13, 1946	.23	.35
22-50-28bc	81.22	July 2, 1948	82.46	Aug. 29, 1934	+.23	+1.16
		Aug. 31, 1948				
23-51-29bb	100.95	Sept. 1, 1948	101.33	June 12, 1946	+.03	+.25
<u>Nance County</u>						
16-4-31bc	5.28	Mar. 18, 1948	6.76	Jan. 13, 1948	....	+.47
16-6-14ac	26.47	Apr. 23, 1948	30.84	Oct. 26, 1940	....	+.17
17-4-24db	.88	Mar. 21, 1936	6.22	Sept. 28, 1948	....	1.31
17-6-34ad	42.60	July 5, 1948	45.15	Oct. 31, 1942	....	.39
<u>Nuckolls County</u>						
1-5-31cb	19.22	Mar. 24, 1948	20.43	Nov. 2, 1948	.35	.39
1-5-31cc	.66	June 10, 1947	6.07	Oct. 2, 1947	+1.41	.02
1-6-30dd	33.10	May 1, 1948	33.52	Oct. 27, 1946	.11	+2.24
		July 8, 1948				
1-6-31cc	9.44	Apr. 16, 1948	13.53	Dec. 21, 1948	3.03	3.84
1-6-33cb	4.00	Mar. 24, 1948	6.31	Sept. 23, 1948	.92	.92
1-6-33cc	11.39	July 26, 1948	12.93	Nov. 2, 1948	.19	.93
1-6-35cb	12.15	Mar. 24, 1948	14.69	Dec. 20, 1948	.65	1.52
1-6-35cc	9.38	Dec. 18, 1946	14.00	Nov. 2, 1948	.39	2.22
1-7-19cb	7.30	Aug. 2, 1947	11.65	Oct. 25, 1948	.63	2.94
1-7-19dd	3.29	Mar. 22, 1948	7.80	Sept. 24, 1948	+.67	+1.55
1-7-27cb	20.11	Mar. 22, 1948	20.59	Oct. 31, 1947	+.14	+.17
1-7-31da	8.52	Mar. 24, 1948	11.55	Oct. 25, 1948	.42	.75
1-7-32bb	.51	Mar. 24, 1948	4.95	Sept. 24, 1948	.37	+.63
1-7-33ad	1.95	Mar. 24, 1948	6.70	Oct. 25, 1948	.19	.07
1-7-33dd	8.07	Mar. 24, 1948	9.73	Oct. 25, 1948	.57	.19

Length of record, in years, highest and lowest recorded water levels, in feet, net change in water level in 1948, and net change in water level during period of record in 726 wells in Nebraska--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>Nuckolls County--Continued</u>						
1-7-34bb	2.53	Mar. 24, 1948	7.73	Sept. 23, 1948 Oct. 25, 1948	.61	1.60
1-7-35da	5.55	Aug. 2, 1947	9.00	Dec. 21, 1948	.95	.43
1-7-36da	10.00	Oct. 13, 1947	12.43	Dec. 21, 1948	1.23	2.43
1-8-7bb	1.16	May 19, 1948	6.96	Oct. 13, 1947	+4.13	+5.52
1-8-14cb	13.99	Mar. 22, 1948	16.90	Oct. 25, 1948	.27	.02
1-8-17aa	2.73	Mar. 22, 1948	6.60	Oct. 25, 1948	+3.32	+1.32
1-8-17da	3.29	Mar. 22, 1948	7.73	Oct. 25, 1948	+0.08	+3.38
1-8-18cc	12.14	Apr. 15, 1948	13.63	Oct. 25, 1948	.36	.69
1-8-21cb	10.10	Mar. 24, 1948	13.06	Oct. 25, 1948	.42	.23
1-8-21dc	24.52	Aug. 2, 1947	28.92	Sept. 24, 1948	.50	1.45
1-8-22ab	1.31	Mar. 22, 1948	5.64	Sept. 24, 1948	+7.72	1.67
1-8-22ad	7.03	Mar. 24, 1948	10.05	Oct. 13, 1947	+6.68	+1.36
1-8-22dd	7.57	Apr. 15, 1948	8.60	Oct. 25, 1948	+0.08	.01
1-8-25aa	5.29	Apr. 15, 1948	7.06	Oct. 25, 1948	+0.03	+0.03
1-8-25ad	6.47	Mar. 22, 1948	10.50	Oct. 13, 1947	+6.61	+1.23
1-8-36aa	8.46	Mar. 24, 1948	12.17	Oct. 13, 1947	+3.39	+1.14
<u>Phelps County</u>						
5-18-2cc	158.18	Dec. 27, 1948	159.61	Sept. 8, 1948	+0.99	+0.99
5-18-4ab	149.76	Nov. 9, 1948	154.62	Aug. 1, 1940	....	+2.90
5-18-6ab	158.88	Nov. 15, 1948	159.54	July 20, 1948	+0.69	+0.04
5-18-15cb	157.60	Dec. 27, 1948	159.05	June 1, 1948	....	+1.45
5-19-4bc	205.85	Dec. 27, 1948	208.25	Jan. 21, 1948	....	.60
5-19-22da	202.95	Dec. 4, 1948	204.00	Apr. 26, 1948 Dec. 9, 1948	+1.10	.11
5-19-35db	198.48	July 21, 1948	199.93	Nov. 18, 1947	.22	+0.87
5-20-16dc	38.93	Sept. 2, 1948	39.35	July 22, 1948	....	+0.95
5-20-32cc	105.38	Oct. 7, 1948	105.84	Nov. 8, 1948	....	.27
6-17-15ad	86.38	Nov. 10, 1948	90.08	Aug. 6, 1947	+3.70	+2.66
6-18-12bc	86.10	Nov. 9, 1948	89.92	Aug. 5, 1947	+3.82	+3.53
6-18-13da	114.74	Nov. 9, 1948	116.75	May 20, 1948	....	+2.01
6-18-33aa	136.38	Apr. 29, 1948	137.42	July 25, 1948	+0.54	+0.39
6-19-2aa	109.63	Dec. 30, 1948	123.70	Mar. 9, 1945	+4.69	+14.07
6-19-21dc	150.35	Oct. 5, 1948	151.35	May 5, 1948	....	+0.50
6-20-10aa	187.87	Dec. 30, 1948	188.01	May 17, 1948	....	+0.61
6-20-28ad	194.40	Nov. 10, 1948	194.78	July 23, 1948	....	+0.38
7-17-11cb	27.48	Nov. 10, 1948	28.78	Aug. 7, 1947	+1.29	+0.76
7-17-30bb	51.19	Nov. 10, 1948	54.17	Aug. 5, 1947	+2.98	+1.23
7-18-3cc	77.11	Oct. 5, 1948	80.85	May 15, 1948	....	+3.05
7-18-27ab	60.42	Nov. 9, 1948	64.15	Aug. 15, 1947	+3.73	8.00
7-18-35ab	70.99	Nov. 9, 1948	72.74	May 12, 1948	....	+1.75
7-19-6aa	59.79	Dec. 27, 1948	63.28	May 10, 1948	....	+3.49
7-19-12cc	48.65	Dec. 27, 1948	54.07	July 24, 1947	+3.60	+5.42
7-19-16ac	75.49	Dec. 30, 1948	81.40	July 25, 1947	....	+5.91
7-19-23ad	56.79	Dec. 27, 1948	71.60	May 9, 1945	+4.79	+14.81
7-19-26dd	38.88	Aug. 5, 1947	49.89	Apr. 19, 1945	+4.48	+5.07
7-20-14cc	165.11	Dec. 30, 1948	168.63	May 18, 1948	....	+3.52
7-20-28dc	159.60	Oct. 5, 1948	172.72	Nov. 15, 1934	....	+10.29
7-20-31cd	221.08	Dec. 4, 1948	227.40	Aug. 20, 1947	+1.47	+5.71
8-17-19db	10.00	July 15, 1947	15.91	Oct. 27, 1940	.25	+1.51
8-17-21bc	5.55	Mar. 8, 1948	6.95	Sept. 8, 1948	.14	.38
8-17-24bc	7.75	May 9, 1933 Dec. 6, 1946	12.23	Oct. 27, 1940	.29	.23
8-18-16cc	6.02	July 15, 1947	9.26	Aug. 9, 1946	.51	+0.03
8-18-21dd	11.26	May 8, 1948	11.80	Dec. 30, 1948	....	.54
8-18-24bb	6.85	July 15, 1947	10.05	Sept. 7, 1946	.60	+0.77
8-18-33dd	73.15	Dec. 30, 1948	76.48	May 8, 1948	....	+3.33
8-18-34bb	20.10	Oct. 5, 1948	20.22	June 15, 1948	....	.01
8-19-7dc	4.24	July 15, 1947	6.48	Aug. 9, 1946	+0.36	.01
8-19-14dc	10.19	July 15, 1947	13.22	Sept. 6, 1946	.57	+0.50

Length of record, in years, highest and lowest recorded water levels, in feet, net change in water level in 1948, and net change in water level during period of record in 726 wells in Nebraska--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>Phelps County--Continued</u>						
8-19-29cc	63.89	Dec. 27, 1948	64.43	May 10, 1948	....	+0.54
8-19-33cc	50.46	Dec. 27, 1948	51.70	May 10, 1948	....	+1.24
8-19-36bb	33.23	Dec. 27, 1948	39.48	Mar. 9, 1945	+1.42	+6.25
8-20-8cd	5.38	July 15, 1948	8.90	Aug. 9, 1946	+9.1	+1.90
8-20-9cd	2.10	June 4, 1942	7.42	Sept. 30, 1940	+18	+2.06
8-20-12dc	1.35	Jan. 8, 1948	3.00	Sept. 8, 1948	....	.47
8-20-18dd	106.10	July 20, 1948	107.23	Dec. 30, 1948	....	.31
8-20-23dc	67.06	Dec. 30, 1948	71.26	June 5, 1948	....	+1.54
8-20-26dc	34.57	June 23, 1948	64.88	May 25, 1948	....	+9.74
<u>Platte County</u>						
A17-1-14cc	7.44	July 8, 1947	14.10	Aug. 25, 1936	.48	+1.78
A17-1-14dd	2.90	July 30, 1945	9.68	Aug. 26, 1936	.11	+1.25
A17-1-17dd	5.20	July 30, 1945	10.58	Aug. 3, 1937	.63	1.19
A17-1-25aa	4.00	July 30, 1946	11.00	Apr. 30, 1940	.14	.09
A17-1-29da	7.82	July 8, 1947	12.00	Oct. 16, 1943	.30	.78
A17-1-36bc	3.93	July 8, 1947	6.77	Nov. 11, 1947	+27	+22
A18-1-28cd	60.80	Mar. 27, 1940	71.23	July 30, 1937	.30	+7.70
		Apr. 24, 1940				
16-2-2da	3.16	July 8, 1947	6.19	Nov. 11, 1947	+17	.83
16-2-9cc	1.55	Dec. 10, 1946	4.80	Sept. 4, 1946	+06	+05
16-2-12ab	6.75	July 8, 1947	11.79	Nov. 21, 1939	+08	+1.04
17-1-2cc	6.80	Apr. 13, 1942	13.29	Oct. 18, 1936	+06	+2.02
17-1-5ad	1.23	July 7, 1947	7.40	Dec. 3, 1935	.08	+3.78
17-1-7ac	4.50	July 23, 1945	9.34	Dec. 21, 1936	.66	+1.22
17-1-14cc	9.06	July 7, 1947	11.50	Sept. 10, 1940	+12	+5.52
17-1-34dc	6.29	July 7, 1947	9.40	Sept. 4, 1946	.04	1.76
17-2-2cd	4.58	July 8, 1947	8.80	Oct. 23, 1936	1.54	.28
17-2-4bc	7.24	June 11, 1945	12.30	Aug. 31, 1942	.53	.31
<u>Polk County</u>						
13-4-34cc	7.77	Apr. 8, 1946	12.61	Aug. 2, 1940	....	+3.09
14-4-19ab	2.36	Mar. 18, 1948	6.02	Sept. 3, 1947	+17	1.20
15-2-4dc	4.50	July 7, 1947	7.80	Nov. 10, 1947	+34	1.21
15-2-7bb	5.58	Mar. 19, 1948	8.43	Nov. 10, 1947	+76	.83
15-3-3dc	4.52	July 12, 1948	6.42	Nov. 10, 1947	+38	.60
15-3-20cc	4.20	Dec. 9, 1946	7.63	Nov. 10, 1947	+35	1.59
15-3-23dc	8.90	Mar. 18, 1948	10.72	Nov. 1, 1948	.27	.88
15-4-35dc	18.45	July 7, 1947	21.00	Sept. 3, 1946	+14	.36
16-1-14bb	3.72	July 7, 1947	6.38	Sept. 3, 1946	+35	+0.04
16-1-36cd	19.32	July 7, 1947	21.71	June 3, 1946	.09	.72
16-2-23dc	5.92	July 7, 1947	8.24	Nov. 10, 1947	+10	.27
<u>Red Willow County</u>						
2-29-4aa	8.90	Oct. 25, 1946	11.52	Oct. 6, 1948	.01	.37
2-29-5ab	16.35	Dec. 7, 1946	19.92	Oct. 6, 1948	.64	1.09
2-30-1aa	8.17	Oct. 24, 1946	11.42	Aug. 4, 1948	+08	.27
2-30-12ad	27.76	Oct. 6, 1948	30.81	June 12, 1946	1.07	+1.26
3-26-5bb	43.32	June 9, 1947	47.77	July 31, 1947	+1.07	+1.11
3-26-5cc	16.35	Apr. 13, 1948	17.35	Oct. 7, 1948	....	.61
3-26-9cb	15.35	Dec. 3, 1947	17.02	Aug. 14, 1946	.13	.09
3-26-11bb	7.92	July 28, 1947	9.43	Oct. 4, 1948	+03	.65
3-27-7dc	7.18	Dec. 11, 1946	10.15	Dec. 6, 1947	+63	.32
3-27-8ac	9.21	Oct. 21, 1946	13.49	Oct. 21, 1937	.53	+1.60
3-27-11aa	3.73	Oct. 21, 1946	8.06	Oct. 9, 1947	....	+1.27
3-27-11cd	16.39	Jan. 30, 1946	17.90	Oct. 4, 1947	.11	.71
3-27-17cb	8.31	Oct. 25, 1946	10.85	Oct. 6, 1947	+18	1.07
3-28-17da	9.83	Oct. 21, 1946	12.28	Oct. 6, 1947	+44	.42
3-28-20bb	9.27	Dec. 17, 1946	11.62	Oct. 6, 1947	+73	.21

Length of record, in years, highest and lowest recorded water levels, in feet, net change in water level in 1948, and net change in water level during period of record in 726 wells in Nebraska--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>Red Willow County--Continued</u>						
3-28-21cd	8.48	Oct. 21, 1946	9.73	Oct. 6, 1947	+1.15	.61
3-29-32db	4.72	Oct. 25, 1946	7.85	Oct. 6, 1948	.02	.14
3-29-35da	17.92	July 31, 1947	20.39	June 9, 1947	+2.20	+1.20
3-30-19bb	6.88	Mar. 6, 1946	8.49	Aug. 15, 1946	.20	.71
		June 9, 1947				
3-30-26cb	8.05	Feb. 4, 1946	10.35	Oct. 4, 1948	1.29	2.03
3-30-29aa	3.08	Oct. 24, 1946	5.06	Oct. 9, 1947	+1.18	.17
3-30-34bb	12.34	Oct. 24, 1946	14.73	Oct. 6, 1948	.27	.72
4-26-34db	19.65	July 31, 1947	21.28	Oct. 7, 1948	.14	.31
<u>Rock County</u>						
30-17-8ab	1.68	Mar. 22, 1948	5.12	Nov. 22, 1935	.57	+2.10
30-19-10aa	.80	May 16, 1945	4.23	July 19, 1940	.26	+2.26
<u>Saunders County</u>						
A13-9-24cc	.48	July 31, 1948	7.92	Aug. 30, 1934	+1.40	+2.81
A17-5-23bb	.71	Mar. 23, 1948	3.35	Sept. 3, 1947	+1.19	1.41
<u>Sheridan County</u>						
24-41-34da	5.52	June 8, 1935	9.37	Oct. 21, 1941	.09	2.05
24-42-27ba	12.19	Apr. 4, 1946	13.27	Jan. 21, 1947	.02	.82
24-43-15da	5.97	Apr. 4, 1946	8.08	Nov. 4, 1940	.19	+8.89
24-44-14da	4.05	Apr. 4, 1946	6.18	Apr. 15, 1946	.17	1.63
24-44-18bb	4.25	May 14, 1946	5.50	Aug. 15, 1946	.47	.89
24-45-8dd	.96	May 14, 1946	3.29	Aug. 15, 1946	.57	+1.15
24-46-10cb	2.26	Apr. 4, 1946	7.35	Aug. 15, 1946	+1.11	4.60
25-45-32ad	32.06	June 23-24-25, 1947	33.84	Sept. 16, 1946	+1.05	.17
<u>Thomas County</u>						
23-28-9da	9.79	June 8, 1935	10.98	July 23, 1940	.03	.18
24-30-20ab	2.33	Mar. 27, 1936	3.12	Apr. 26, 1946	.05	.18
<u>Valley County</u>						
17-16-26dc	2.91	June 12, 1947	6.83	Dec. 26, 1946	+2.25	+9.96
<u>Webster County</u>						
1-9-6cd	48.03	Apr. 14, 1948	50.65	Oct. 8, 1948	....	2.62
1-9-9ad	2.80	Oct. 5, 1948	3.97	Oct. 25, 1948	....	+3.31
1-9-9cb	5.09	July 22, 1948	6.78	Oct. 25, 1948	.26	.23
1-9-9cc	6.51	Mar. 23, 1948	8.43	Dec. 20, 1948	.75	.87
1-9-11cb	2.05	June 10, 1947	6.12	Sept. 24, 1948	.26	1.21
1-9-13ad	5.50	Oct. 27, 1946	9.60	Oct. 25, 1948	+1.08	.69
1-9-14bb	5.83	Mar. 23, 1948	8.55	Oct. 25, 1948	+1.08	+5.58
1-9-14bc	10.02	Mar. 23, 1948	12.55	Oct. 13, 1947	+3.32	+1.16
1-9-16bc	8.30	June 10, 1947	17.70	Aug. 18, 1948	1.20	2.57
1-10-1dcl	9.51	Oct. 29, 1941	10.92	Sept. 25, 1939	.24	.15
1-10-3ad	8.22	Aug. 2, 1947	10.08	Oct. 8, 1948	.01	.09
1-10-9ad	15.60	Aug. 2, 1947	17.89	Nov. 17, 1948	.03	1.43
1-10-4db	9.50	Dec. 21, 1948	9.75	Nov. 17, 1948	....	+1.10
1-11-1da	5.30	June 10, 1947	10.02	Dec. 21, 1948	.52	.97
1-11-5bc	2.64	Dec. 18, 1946	7.63	Dec. 21, 1948	.71	1.08
1-11-11ab	3.82	Nov. 14, 1946	9.29	Dec. 11, 1948	.90	.04
1-11-16aa	18.74	Apr. 14, 1948	21.25	Aug. 12, 1946	+1.94	+1.63
		Dec. 21, 1948				
1-12-2bb	2.77	Oct. 26, 1946	7.12	Oct. 8, 1948	.68	1.27

Length of record, in years, highest and lowest recorded water levels, in feet, net change in water level in 1948, and net change in water level during period of record in 726 wells in Nebraska--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>Webster County--Continued</u>						
1-12-4bb	3.10	Oct. 27, 1946	9.58	Oct. 8, 1948	+1.14	1.40
1-12-8aa	1.95	Oct. 26, 1946	6.10	Oct. 8, 1948	+33	.81
2-10-36db	26.66	Apr. 14, 1948	28.07	Feb. 12, 1946	.21	1.27
2-12-34cd	17.30	Oct. 26, 1946	19.62	Oct. 2, 1936	.50	+1.70

PUMPAGE

The following tables give the total pumpage 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 three miles north of Ashland. The first pumping from the Lincoln well field, near Ashland, began in August 1932 and by the end of 1948 a total of approximately 51,209.8 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.

Monthly pumpage, in millions of gallons, for public supply of Lincoln, Nebr., from well field north of Ashland, 1932-48

	1932	1933	1934	1935	1936	1937	1938	1939
Jan.	.....	204.2	136.6	181.1	186.2	203.8	208.7	196.1
Feb.	.....	187.0	164.2	167.2	193.0	190.7	192.2	185.6
Mar.	.....	205.0	188.5	199.2	204.4	200.6	211.1	212.9
Apr.	.....	210.0	194.8	193.6	188.8	158.5	189.5	223.7
May	.....	213.8	236.0	188.7	234.8	262.9	216.4	284.6
June	.....	263.6	249.9	192.0	296.4	254.5	245.8	267.4
July	.....	212.6	308.9	236.9	334.5	322.5	304.9	325.0
Aug.	98.5	197.2	278.1	255.8	319.8	317.7	298.9	300.6
Sept.	186.1	169.4	206.5	181.3	228.2	297.6	201.6	324.3
Oct.	204.9	132.6	176.9	154.0	236.4	204.8	207.2	232.7
Nov.	201.8	106.4	196.6	90.1	209.2	217.1	116.3	222.8
Dec.	203.2	133.9	171.7	182.9	201.2	188.8	141.1	203.4
	894.5	2,235.7	2,508.7	2,228.8	2,832.9	2,819.5	2,533.7	2,979.1

	1940	1941	1942	1943	1944
Jan.	195.8	193.4	198.5	248.2	281.4
Feb.	182.8	181.2	178.4	227.6	246.1
Mar.	193.9	195.1	199.3	253.5	274.0
Apr.	177.1	173.8	213.8	246.9	274.3
May	246.5	289.2	243.4	290.0	297.2
June	290.7	286.3	292.4	324.6	353.1
July	374.3	387.4	372.5	379.8	381.0
Aug.	290.7	377.8	399.8	377.1	361.0
Sept.	314.1	277.0	269.3	334.0	343.3
Oct.	264.4	201.2	234.1	304.8	327.1
Nov.	170.8	197.7	200.5	237.4	291.4
Dec.	201.5	205.3	241.8	263.9	307.5
	2,902.3	2,960.4	3,043.8	3,487.8	3,737.4

Monthly pumpage, in millions of gallons, for public supply of
Lincoln, Nebr., from well field north of Ashlera, 1932-48

	1945	1946	1947	1948
Jan.	310.1	283.9	329.1	333.3
Feb.	283.9	259.6	299.0	309.6
Mar.	317.7	268.3	333.8	334.8
Apr.	313.3	330.7	325.5	213.7
May	319.6	327.2	335.0	356.7
June	312.1	353.0	326.7	349.4
July	365.6	374.2	375.4	407.2
Aug.	361.0	340.0	399.5	409.3
Sept.	334.7	341.8	380.2	392.1
Oct.	324.0	341.3	364.7	392.8
Nov.	311.5	312.8	313.8	361.1
Dec.	291.9	312.5	325.8	363.0
	3,845.4	3,868.3	4,106.5	4,223.0

Average daily pumpage, in millions of gallons, for public supply of
Lincoln, Nebr., from Ashland well field, 1932-48

1932	a 5.84	1937	7.72	1941	8.11	1945	10.54
1933	6.12	1938	6.94	1942	8.34	1946	10.60
1934	6.67	1939	8.16	1943	9.53	1947	11.25
1935	6.10	1940	7.95	1944	10.20	1948	11.54
1936	7.76						

a Pumping from the Ashland well field began in August 1932.

Monthly pumpage, in millions of gallons, for public
supply of Grand Island, Nebr., 1936-48

	1936	1937	1938	1939	1940	1941
Jan.	133.8	93.0	98.9	107.4	125.7	100.6
Feb.	95.6	83.3	88.2	89.7	99.8	82.5
Mar.	111.8	96.7	112.5	108.5	100.9	108.1
Apr.	154.3	131.3	140.7	154.8	144.8	111.1
May	172.8	165.1	162.2	195.6	190.6	159.7
June	215.1	173.6	181.9	209.8	229.2	134.9
July	291.2	236.3	242.4	248.2	245.6	254.5
Aug.	241.0	239.3	189.8	251.1	240.6	251.3
Sept.	194.6	194.7	199.0	241.5	198.8	174.3
Oct.	153.6	163.0	191.4	192.2	172.8	148.4
Nov.	104.2	139.3	135.7	144.1	132.6	134.7
Dec.	104.4	101.6	112.2	131.6	118.4	131.1
	1,972.4	1,817.2	1,854.9	2,074.5	1,999.8	1,791.4

	1942	1943	1944	1945	1946	1947	1948
Jan.	126.0	156.6	189.7	228.1	210.3	218.3	216.5
Feb.	88.4	151.6	178.3	209.3	196.5	195.5	190.3
Mar.	132.5	177.0	209.6	269.3	218.7	230.6	209.6
Apr.	128.9	212.3	196.1	205.9	258.0	251.9	252.7
May	137.2	223.6	224.9	213.4	247.7	298.2	273.8
June	251.9	244.3	228.7	225.0	304.4	238.5	278.2
July	225.1	301.3	275.2	289.5	342.4	322.5	345.8
Aug.	250.4	299.6	320.6	286.3	354.8	399.6	311.7
Sept.	202.3	250.1	234.8	271.8	250.6	314.2	317.0
Oct.	198.4	235.2	228.8	231.7	245.7	244.8	268.4
Nov.	168.9	188.9	227.0	215.6	211.5	206.5	216.4
Dec.	161.3	189.4	223.6	214.2	217.6	213.0	222.6
	2,071.3	2,629.9	2,737.3	2,860.1	3,058.2	3,133.6	3,103.0

Average daily pumpage, in millions of gallons, for public supply of Grand Island, Nebr., 1918-48

1918	a	1.64	1929	3.65	1939	5.68
1919	a	1.53	1930	3.52	1940	5.47
1920	a	1.44	1931	4.16	1941	4.90
1921	a	1.59	1932	4.11	1942	5.67
1922	a	1.76	1933	4.90	1943	7.20
1923	a	1.83	1934	5.72	1944	7.50
1924	a	2.04	1935	5.34	1945	7.84
1925	a	2.15	1936	5.41	1946	8.38
1926	a	2.29	1937	5.00	1947	8.58
1927	a	2.12	1938	5.08	1948	8.48
1928	a	2.51				

a Does not include water pumped for condenser use at municipal electric plant.

WELL-NUMBERING SYSTEM

The following well-numbering system has been adopted in the Missouri Basin and is now being used in Nebraska. The State has been divided into two principal divisions. The numbers of those wells east of the sixth principal meridian, which passes through Columbus, are preceded by the capital letter A. Those west of Columbus have no preceding letter. The first number indicates the township, the second the range, and the third the section. The lower-case letters, which follow the section number, indicate the position of the well within the section, the first letter indicating the quarter section and the second letter the quarter-quarter section. The letters a, b, c, and d are applied in counter-clockwise direction beginning with a in the northeast quadrant. The last numeral indicates the number of the well within the tract of land indicated by the last letter. No number is shown unless more than one well is within the given tract of land.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Adams County

5-9-9dc. D. McClarry. Altitude of measuring point 1,795.43 feet above sea level. Highest observed stage in period of record, 36.74 on June 30. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level
May 10	37.27	June 30	36.74	Oct. 5	37.06
June 3	36.95	July 26	37.15	Nov. 10	36.87

5-10-1bb. Sims. Drilled irrigation well, diameter 24 inches, depth 164.0 feet. Measuring point, hole in turbine base, at land-surface datum, 1,877.16 feet above sea level. Highest observed stage in period of record, 93.83 on May 10; lowest, 94.89 on Aug. 30. Records available: 1948.

Apr. 2	94.00	June 30	93.94	Oct. 5	94.55
May 10	93.83	Aug. 30	94.89	Nov. 10	94.40

5-11-2bb. Neilson. Altitude of measuring point 1,844.24 feet above sea level. Highest observed stage in period of record, 85.93 on July 1; lowest, 86.40 on Aug. 30. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level
May 10	86.05	July 1	85.93	Oct. 5	86.14
June 4	85.98	Aug. 30	86.40	Nov. 10	86.15

5-11-10bc. University of Nebraska. Altitude of measuring point 1,875.63 feet above sea level. Highest observed stage in period of record, 9.26 on July 1. Records available: 1937-38, 1940-41, 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 10	9.54	July 1	9.26	Aug. 30	9.81	Nov. 10	9.33
June 4	9.46	26	9.52	Oct. 5	9.67		

5-11-25ac. Slater. Drilled irrigation well, diameter 18 inches, reported depth 184.0 feet. Measuring point, hole in turbine base, at land-surface datum, 1,937.60 feet above sea level. Records available: 1948. June 21, 90.90; Oct. 20, 91.69.

6-9-4cb. Larson. Altitude of measuring point 1,891.85 feet above sea level. Highest observed stage in period of record, 103.22 on June 3. Records available: 1947-48.

May 11	103.29	June 30	103.23	Aug. 30	103.26	Nov. 11	103.27
June 3	103.22	July 26	103.25	Oct. 5	103.25		

6-10-8ac. Hageman. Altitude of measuring point 1,927.93 feet above sea level. Highest observed stage in period of record, 90.41 on June 3. Records available: 1947-48. June 3, 90.41; June 30, 90.42; Oct. 5, 90.50; Nov. 11, 90.51.

6-10-23bb. University of Nebraska. Altitude of measuring point 1,818.27 feet above sea level. Highest observed stage in period of record, 6.20 on May 10. Records available: 1937-40, 1942, 1946-48.

May 10	6.20	June 30	6.81	Aug. 30	7.13	Nov. 10	8.45
June 3	6.76	July 26	6.91	Oct. 5	8.00		

6-10-31bd. Magnuson. Drilled irrigation well, diameter 18 inches, depth 156.0 feet. Measuring point, hole in turbine base, 0.5 foot above land-surface datum, 1,919.93 feet above sea level. Highest observed stage in period of record, 91.09 on May 10; lowest, 91.70 on Aug. 30. Records available: 1948.

Apr. 2	91.28	June 3	91.26	Aug. 30	91.70	Nov. 10	91.43
May 10	91.09	30	91.22	Oct. 5	91.36		

6-12-12db. Christensen. Drilled irrigation well, diameter 18 inches, reported depth 187.0 feet. Measuring point, hole in turbine base, 0.5 foot above land-surface datum. Records available: 1948. Aug. 9, 100.20; Oct. 20, 100.30.

7-9-12dc. Halloran. Drilled irrigation well, diameter 24 inches, depth 205.0 feet. Measuring point, hole in turbine base, 1.0 foot above land-surface datum, 1,891.48 feet above sea level. Highest observed stage in period of record, 111.14 on Oct. 4; lowest, 111.53 on June 28. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level
Apr. 2	111.50	June 28	111.53	Nov. 11	111.24
June 3	111.40	Oct. 4	111.14		

7-10-23ab. Well 193 in previous reports. Fricke. Altitude of measuring point 1,928.00 feet above sea level. Cleaned out and Stevens Type F 8-day automatic water-stage recorder installed Aug. 19, 1948. To convert water levels from feet above assumed datum, as published in previous reports, to feet below land-surface datum, subtract from 199.96. Lowest observed stage in period of record, 102.96 on Sept. 18. Records available: 1934-38, 1948.

Lowest daily water level, from recorder charts

Day	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	102.78	102.82	102.80	102.64
2	.....	102.79	102.79	102.79	102.64
3	.....	102.81	102.79	102.76	102.61
4	.....	102.80	102.78	102.78	102.58
5	.....	102.82	102.77	102.85	102.66
6	.....	102.84	102.86	102.85	102.60
7	.....	102.76	102.87	102.81	102.57
8	.....	102.75	102.80	102.81	.....
9	.....	102.73	102.80	102.74	102.48
10	.....	102.72	102.79	102.78	102.55
11	.....	102.71	102.78	102.78	102.62
12	.....	102.78	102.78	102.76	102.62
13	.....	102.75	102.79	102.75	102.53
14	.....	102.76	102.79	102.74	.....
15	.....	102.76	102.86	102.62	.....
16	.....	102.78	102.85	102.76	.....
17	.....	102.95	102.81	102.67	.....
18	.....	102.96	102.76	102.70	.....
19	.....	102.76	102.78	102.60	.....
20	102.72	102.78	102.79	.....	.....
21	102.70	102.76	102.79	.....	.....
22	102.71	.....	102.80	102.62	.....
23	102.78	.....	102.79	102.66	.....
24	102.80	102.84	102.74	102.64	.....
25	102.84	102.84	102.74	102.68	.....
26	102.86	102.82	102.74	102.67	.....
27	102.83	102.79	102.76	102.72	.....
28	102.83	102.79	102.76	102.71	.....
29	102.75	102.78	102.78	102.70	.....
30	102.76	102.80	102.81	102.69	.....
31	102.77		102.80		.....

7-10-26da. R. Dougherty. Altitude of measuring point 1,932.79 feet above sea level. Highest observed stage in period of record, 113.91 on Oct. 5; lowest, 115.63 on Sept. 1. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level
May 11	113.95	June 29	113.95	Oct. 5	113.91
June 3	113.96	Sept. 1	115.63	Nov. 11	113.92

7-11-3cb. V. Katzberg. Altitude of measuring point 2,020.04 feet above sea level. Highest observed stage in period of record, 111.82 on Nov. 15; lowest 112.20 on May 11. Records available: 1947-48.

May 11	112.20	June 29	112.03	Oct. 4	111.90
June 2	111.92	July 27	112.03	Nov. 15	111.82

7-11-22ad. V. Anderson. Altitude of measuring point 2,007.20 feet above sea level. Highest observed stage in period of record, 118.40 on May 11. Records available: 1947-48. May 11, 118.40; June 3, 119.93; Sept. 1, 118.82; Oct. 21, 118.80.

7-12-15ca. R. Karr. Altitude of measuring point 2,057.90 feet above sea level. Highest observed stage in period of record, 97.46 on Nov. 15. Records available: 1947-48.

May 11	97.89	June 29	97.65	Nov. 15	97.46
June 2	97.64	Oct. 6	97.67		

7-12-24cc. Groff. Altitude of measuring point 2,033.72 feet above sea level. Highest observed stage in period of record, 98.70 on Nov. 15. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level
May 11	98.99	July 27	98.83	Oct. 6	98.83
June 2	98.84	Sept. 1	98.84	Nov. 15	98.70

8-9-5cc. Hargerroad. Altitude of measuring point 1,958.96 feet above sea level. Highest observed stage in period of record, 91.80 on June 2. Records available: 1947-48.

May 11	91.98	June 28	91.91	Oct. 4	91.82
June 2	91.80	Aug. 30	92.03	Nov. 11	91.96

8-9-14aa. C. Anderson. Altitude of measuring point 1,919.09 feet above sea level. Highest observed stage in period of record, 108.03 on June 2; lowest, 110.34 on Oct. 4. Records available: 1947-48.

May 11	109.60	June 28	108.04	Nov. 11	109.60
June 2	108.03	Oct. 4	110.34		

8-9-14ac. C. Anderson. Abandoned drilled irrigation well, diameter 18 inches, depth 149 feet. Measuring point, top of casing, 0.2 foot above land-surface datum, 1,917.83 feet above sea level. Stevens Type A 60-day automatic water-stage recorder installed Dec. 13. Highest observed stage in period of record, 110.18 on Dec. 28; lowest, 111.15 on Dec. 22. Records available: 1948.

Lowest daily water level, from recorder charts

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Dec. 13	110.95	Dec. 18	110.64	Dec. 23	110.83	Dec. 28	110.18
14	110.72	19	110.55	24	110.74	29	110.79
15	110.63	20	110.35	25	110.95	30	110.84
16	110.99	21	110.75	26	110.58	31	110.55
17	110.71	22	111.13	27	110.40		

8-10-25bb. Barchers. Records available: 1947. Measurements discontinued.

8-10-26da. Staltz. Drilled irrigation well, depth 162 feet. Measuring point, hole in turbine base, at land-surface datum. Records available: 1948. Nov. 11, 97.40.

8-10-29ab. Junkers. Altitude of measuring point 1,986.50 feet above sea level. Highest observed stage in period of record, 119.09 on June 28. Records available: 1947-48. June 2, 119.14; June 28, 119.09; Sept. 1, 119.45; Oct. 4, 119.10.

8-10-32da. Kieefe. Drilled irrigation well, diameter 18 inches, reported depth 186 feet. Measuring point, hole in turbine base, 1.0 foot above land-surface datum, 1,972.92 feet above sea level. Records available: 1948. Oct. 21, 104.05; Nov. 11, 104.30.

8-11-13aa. Kent. Altitude of measuring point 2,003.52 feet above sea level. Highest observed stage in period of record, 91.64 on Oct. 4. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level
May 11	92.12	June 28	91.91	Oct. 4	91.64
June 2	91.83	Sept. 1	92.08	Nov. 15	91.72

8-12-1cd. Brickel. Drilled irrigation well, diameter 18 inches, reported depth 178.0 feet. Measuring point, hole in turbine base, 2.0 feet above land-surface datum, 2,056.03 feet above sea level. Highest observed stage in period of record, 83.88 on Nov. 15, 1948; lowest 85.00 on Oct. 5, 1947. Records available: 1947-48. Oct. 5, 1947, 85.00; Oct. 22, 1948, 84.05; Nov. 15, 1948, 83.88.

8-12-8ab. Woodman. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 9	8.79	May 6	8.19	Sept. 3	8.85
Mar. 8	8.55	July 9	8.41	Nov. 6	8.80

8-12-22db. Long. Altitude of measuring point 2,062.33 feet above sea level. Highest observed stage in period of record, 83.04 on Nov. 15. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 11	84.07	June 29	83.91	Sept. 1	83.60	Nov. 15	83.04
June 2	83.88	July 27	83.86	Oct. 6	83.52		

Antelope County

24-6-2aa. University of Nebraska. Records available: 1935-42, 1944-48. Feb. 10, 4.85; Oct. 18, 5.32.

27-7-10bb. Beberniss. Highest observed stage in period of record, 54.33 on Oct. 18. Records available: 1940-42, 1944-48. Oct. 18, 54.33.

Arthur County

No measurements made in 1948.

Banner County

No measurements made in 1948.

Blaine County

22-24-33ca. U. S. 57. University of Nebraska. Records available: 1935-42, 1948.

Jan. 6	3.40	June 3	4.27	Aug. 11	4.13	Oct. 5	4.83
Feb. 19	3.45	30	3.92	24	4.39	19	4.76
Mar. 25	3.20	July 13	4.46	Sept. 2	4.72	21	4.73
May 11	3.88	27	4.55	21	4.86	Nov. 2	4.54
26	4.28						

23-22-22cb. University of Nebraska. Records available: 1937-42. No measurements made in 1948.

23-22-22cc. University of Nebraska. To convert water levels from feet above assumed datum, as published in previous reports, to feet below land-surface datum, subtract from 102.23. Records available: 1935-42, 1948. Oct. 21, 2.89.

24-25-7aa. University of Nebraska. Records available: 1937-42. No measurements made in 1948.

24-25-7ca. Cox & Sons. Records available: 1934-42. No measurements made in 1948.

Boone County

18-5-12cc. Smith. Drilled irrigation well, diameter 18 inches, depth 65.0 feet. Measuring point, hole in turbine base, 0.5 foot above land-surface datum. Records available: 1948. Apr. 21, 13.45; Sept. 28, 13.98.

18-7-4ca. University of Nebraska. Records available: 1937-42, 1948. Apr. 22, 14.38; Sept. 28, 14.39.

18-7-5ad. University of Nebraska. Records available: 1935-42, 1948. Apr. 22, 5.70; Sept. 29, 5.82.

18-7-14bb. Kleffner. Drilled irrigation well, diameter 18 inches, depth 250 feet. Measuring point, hole in turbine base, level at land-surface datum. Records available: 1948. May 20, 58.55; Sept. 29, 58.50.

19-5-4ac. C. L. Choat. Drilled irrigation well, diameter 22 inches, reported depth 142.0 feet. Measuring point, hole in turbine base, at land-surface datum. Records available: 1948. Apr. 21, 65.20; Sept. 28, 65.65.

19-5-6aa. Olson. Drilled irrigation well. Measuring point, hole in turbine base, 0.50 foot above land-surface datum. Records available: 1948. Apr. 21, 42.20; Sept. 28, 42.95.

19-5-7cd. Maricle. Drilled irrigation well, diameter 18 inches, reported depth 147.0 feet. Measuring point, hole in turbine base, 1.0 foot above land-surface datum. Records available: 1948. Apr. 21, 45.45; Sept. 29, 46.42.

19-5-16db. Choat. Drilled irrigation well, diameter 22 inches, reported depth 129.00 feet. Measuring point, hole in turbine base, level at land-surface datum. Records available: 1948. Apr. 20, 24.00; Sept. 28, 24.85.

19-5-27dc. Gasper. Drilled irrigation well, diameter 18 inches, depth 65.0 feet. Measuring point, hole in turbine base, 0.50 foot above land-surface datum. Records available: 1948. Apr. 21, 14.28; Sept. 28, 14.58.

19-5-28cd. Bryan. Drilled irrigation well, diameter 18 inches, reported depth 147.0 feet. Measuring point, hole in turbine base, 1.0 foot above land-surface datum. Records available: 1948. Apr. 21, 33.65; Sept. 29, 34.88.

19-7-31cc. Brown. Drilled irrigation well, diameter 18 inches, depth 96 feet. Measuring point, hole in turbine base at land-surface datum. Records available: 1948. May 20, 37.15; Sept. 29, 37.65.

19-7-30aa. Green. Drilled irrigation well, diameter 18 inches, depth 98 feet. Measuring point, hole in turbine base, 0.5 foot above land-surface datum. Records available: 1948. May 20, 25.15; Sept. 29, 25.05.

19-8-9bb. Curring. Drilled irrigation well, diameter 18 inches, reported depth 160.0 feet. Measuring point, hole in turbine base, at land-surface datum. Records available: 1948. Apr. 22, 69.35; Sept. 29, 69.85.

19-8-14db. West. Drilled irrigation well, diameter 24 inches, reported depth 100.00 feet. Measuring point, hole in turbine base, 0.50 foot above land-surface datum. Records available: 1948. Apr. 22, 26.34; Sept. 29, 26.58.

19-8-16cc. Dresch. Drilled irrigation well, diameter 18 inches, depth 165 feet. Measuring point, hole in turbine base, at land-surface datum. Records available: 1948. May 20, 44.75; Sept. 29, 45.29.

20-6-6dc. Stock well, diameter 3 inches, depth 78.0 feet. Measuring point, top edge of 3-inch pipe, 4.0 feet above land-surface datum. Records available: 1948. Apr. 20, 68.50; Sept. 29, 68.85.

20-6-23bb. Redler. Drilled irrigation well, diameter 22 inches, reported depth 100.0 feet. Measuring point, hole in turbine base, at land-surface datum. Records available: 1948. Apr. 21, 31.48; Sept. 28, 32.55.

20-6-35ba. Thompson. Drilled irrigation well, diameter 18 inches, reported depth 154.0 feet. Measuring point, hole in turbine base, 1.0 foot above land-surface datum. Records available: 1948. Apr. 21, 50.25; Sept. 28, 51.27.

21-7-26ca. University of Nebraska. Highest observed stage in period of record, 17.20 on Apr. 21. Records available: 1937-42, 1948. Apr. 21, 17.20; Sept. 29, 19.72.

21-7-26da. University of Nebraska. Records available: 1835-42. Well destroyed, measurements discontinued.

Box Butte County

24-47-1db. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 11.14 on Mar. 25. Records available: 1946-48. Mar. 25, 11.14; July 1, 11.49; Sept. 2, 12.03; Oct. 21, 11.98.

24-48-4bb. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 14.50 on Oct. 22. Records available: 1946-48. Mar. 27, 14.10; July 1, 14.20; Sept. 1, 14.37; Oct. 22, 14.50.

24-48-10bb. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 11.37 on Oct. 22-29. Records available: 1946-48.

Lowest daily water level, from recorder charts

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 27	10.98	July 2	10.61	Aug. 31	11.21	Oct. 22	11.37
28	10.98	3	10.60	Sept. 1	11.21	23	11.37
29	10.97	4	10.59	2	11.22	24	11.37
30	10.97	5	10.59	3	11.24	25	11.37
31	10.96	6	10.59	4	11.25	26	11.37
Apr. 1	10.96	7	10.59	5	11.25	27	11.37
2	10.96	8	10.59	6	11.27	28	11.37
3	10.96	9	10.60	7	11.29	29	11.37

24-48-11dd. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 4.17 on July 1. Records available: 1946-48. Mar. 25, 4.98; July 1, 4.17; Aug. 31, 5.73; Oct. 21, 6.10.

24-48-31ba. Odell. Highest observed stage in period of record, 37.46 on Mar. 28. Records available: 1946-48.

Lowest daily water level, from recorder charts

Mar. 28	37.46	July 2	38.77	Aug. 31	38.73	Oct. 20	38.77
29	37.47	3	38.73	Sept. 1	38.76	21	38.72
30	37.57	4	38.73	2	38.74	22	38.68
31	37.57	5	38.74	3	38.68	23	38.72
Apr. 1	37.60	6	38.74	4	38.68	24	38.70
2	37.60	7	38.12	5	38.72	25	38.69
3	37.55	8	38.81	6	38.76	26	38.68
4	37.61	9	38.76	7	38.75	27	38.70

24-50-10aa. Nolan. Records available: 1938-42, 1944, 1946-48. Mar. 27, 49.52; July 2, 49.43; Sept. 1, 49.45; Oct. 21, 49.53.

24-52-13cb. Shepard. Lowest observed stage in period of record, 78.55 on Sept. 1. Records available: 1938, 1940, 1942, 1944, 1946-48. Mar. 27, 77.68; July 2, 78.04; Sept. 1, 78.55.

24-52-35aa. Bailey. Records available: 1938-41, 1946-48. July 2, 98.05; Sept. 1, 98.03; Oct. 21, 98.08.

25-47-19aa. John Lawlor. Records available: 1938, 1946-47. No measurements made in 1948.

25-47-31cc. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 18.18 on Oct. 21. Records available: 1946-48. Mar. 25, 16.83; June 30, 17.47; Aug. 31, 17.59; Oct. 21, 18.18.

25-48-4dd. Geological Survey, U.S. Dept. of Interior. Records available: 1946-48. Mar. 27, 63.80; July 1, 63.43; Sept. 1, 63.79.

25-48-14aa. Powell. Lowest observed stage in period of record, 49.85 on Oct. 20. Records available: 1946-48.

Lowest daily water level, from recorder charts

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 28	49.51	Mar. 31	49.63	Apr. 3	49.62	July 1	a49.57
29	49.52	Apr. 1	49.63	4	49.64	Oct. 20	a49.85
30	49.63	2	49.63				

a Tape measurement.

25-48-25bb2. Burnham. Lowest observed stage in period of record, 77.78 on Aug. 31. Records available: 1946-48. Mar. 25, 73.23; July 1, 73.87; Aug. 31, 77.78; Oct. 21, 74.91.

25-48-27db2. Pepplar. Lowest observed stage in period of record, 71.32 on Sept. 1. Records available: 1946-48. Mar. 27, 68.43; Sept. 1, 71.32; Oct. 21, 69.70.

25-48-30ad. Wells. Records available: 1938-42, 1944, 1946-47. No measurements made in 1948.

25-49-14da. Sass. Records available: 1946-48, Mar. 26, 31.70; Oct. 21, 31.55.

25-50-22aa. Hollister. Highest observed stage in period of record, 132.01 on July 2. Records available: 1946-48. Mar. 26, 132.16; July 2, 132.01; Sept. 1, 132.05; Oct. 21, 132.09.

25-50-31ab. Jacobsen. Highest observed stage in period of record, 102.72 on Sept. 1. Records available: 1934-42, 1944, 1946-48. Mar. 27, 102.89; July 2, 102.77; Sept. 1, 102.72; Oct. 21, 102.76.

25-51-14aa. Allen. Records available: 1938-42, 1944, 1946-48. Mar. 27, 88.17; July 2, 88.40; Sept. 1, 88.23; Oct. 21, 88.05.

26-47-17dd. Lawrence. Highest observed stage in period of record, 52.21 on July 1; lowest, 62.29 on Sept. 1. Records available: 1946-48. Mar. 26, 52.91; July 1, 52.21; Sept. 1, 62.29; Oct. 21, 57.07.

26-47-35dd. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 11.83 on Mar. 26; lowest, 13.64 on Oct. 21. Records available: 1946-48. Mar. 26, 11.83; July 1, 12.80; Sept. 1, 13.40; Oct. 21, 13.64.

26-49-13dc. Keder. Records available: 1946-47. Destroyed, measurements discontinued.

26-50-12dc. Rosenberg. Highest observed stage in period of record, 100.56 on July 1. Records available: 1938, 1942, 1946-48. Mar. 26, 100.71; July 1, 100.56; Sept. 1, 100.62; Oct. 21, 101.65.

26-51-25bc. Wilkins. Records available: 1938-42, 1944, 1946-48. Mar. 27, 95.98; July 1, 96.01; Sept. 1, 96.03; Oct. 21, 96.01.

26-52-10bc. Dyer. Lowest observed stage in period of record, 101.02 on Sept. 1. Records available: 1938-40, 1942, 1946-48. Mar. 27, 95.00; July 1, 94.80; Sept. 1, 101.02; Oct. 21, 96.16.

26-52-17ab. Bauer. Highest observed stage in period of record, 73.39 on Oct. 21. Records available: 1938-42, 1944, 1946-48. Mar. 27, 73.50; July 1, 73.42; Sept. 1, 73.44; Oct. 21, 73.39.

27-47-12da. Krejci. Records available: 1934-36, 1946, 1948. Oct. 21, 8.98.

27-47-23ba. Shremik. Highest observed stage in period of record, 16.78 on Oct. 21. Records available: 1938-42, 1944, 1946-48. Mar. 26, 27.83; July 1, 19.78; Sept. 1, 17.38; Oct. 21, 16.78.

27-49-21cb. Wildy. Records available: 1935-42, 1944, 1947-48. Mar. 27, 118.32; July 1, 118.10; Sept. 1, 118.29; Oct. 21, 118.45.

27-50-20aa. Records available: 1938, 1940-42, 1944, 1946-48.
Mar. 27, 174.18; July 1, 174.52; Oct. 21, 174.25.

27-51-6bb. Homrighausen. Lowest observed stage in period of record, 221.17 on Mar. 27. Records available: 1946-48. Mar. 27, 221.17; Sept. 1, 220.71.

28-49-17cc. Durland Trust Co. Records available: 1946-47. Measurements discontinued.

28-51-6dd. University of Nebraska. Records available: 1935-38, 1940-42, 1944-48. Sept. 1, 3.43; Oct. 21, 3.00.

28-51-8bc. Gregg. Highest observed stage in period of record, 85.00 on July 1. Records available: 1938-42, 1944-48. Mar. 27, 85.38; July 1, 85.00; Sept. 1, 85.41; Oct. 21, 85.41.

Boyd County

No measurements made in 1948.

Brown County

Measurements made by personnel of Bureau of Reclamation, U. S. Dept. of Interior, Ainsworth.

29-21-6cd. Anderson. Records available: 1944-45, 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	5.57	Apr. 13	5.65	July 13	5.68	Nov. 15	6.13
Feb. 17	5.57	May 13	5.55	Sept. 15	5.77	Dec. 14	6.32
Mar. 16	5.62	June 16	5.18	Oct. 14	5.75		

29-21-7ab. Deer. Lowest observed stage in period of record, 5.99 on Oct. 14. Records available: 1947-48.

Jan. 13	3.96	Apr. 13	5.44	June 16	5.36	Aug. 23	5.68
Feb. 17	5.56	May 13	5.36	July 13	5.66	Oct. 14	5.99
Mar. 16	5.54						

29-22-4ab. Lowest observed stage in period of record, 3.95 on Sept. 15. Records available: 1944, 1947-48.

Jan. 13	2.47	Apr. 13	1.88	July 13	3.17	Oct. 14	3.54
Feb. 17	2.34	May 13	2.12	Aug. 23	3.60	Nov. 16	3.18
Mar. 16	1.93	June 16	2.70	Sept. 15	3.95	Dec. 14	2.09

30-21-15cd. Highest observed stage in period of record, 74.39 on Nov. 15; lowest, 75.47 on Sept. 14. Records available: 1947-48.

Jan. 13	75.02	Apr. 13	75.08	Sept. 14	75.47	Nov. 15	74.39
Feb. 17	dry	May 12	75.36	Oct. 13	75.02	Dec. 14	74.60
Mar. 17	74.95	Aug. 18	75.23				

30-21-18bc. Highest observed stage in period of record, 55.88 on May 12 and June 15. Records available: 1947-48.

Jan. 13	56.03	Apr. 13	55.94	July 12	55.91	Oct. 13	55.98
Feb. 17	55.98	May 12	55.88	Aug. 18	56.00	Nov. 15	56.00
Mar. 17	55.95	June 15	55.88	Sept. 14	55.96	Dec. 14	56.00

30-21-19cc. City of Ainsworth. Highest observed stage in period of record, 36.80 on Mar. 16; lowest, 40.12 on Jan. 13. Records available: 1947-48.

Jan. 13	40.12	Apr. 13	36.85	July 13	37.20	Oct. 13	37.50
Feb. 25	36.82	May 12	36.89	Aug. 23	37.38	Nov. 15	37.44
Mar. 16	36.80	June 15	37.20	Sept. 15	37.57	Dec. 14	37.37

30-21-26bb. Highest observed stage in period of record, 45.80 on June 15; lowest, 47.82 on Sept. 14. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	47.27	Apr. 13	47.67	Aug. 18	47.23	Nov. 15	47.15
Feb. 17	47.43	May 12	47.60	Sept. 14	47.82	Dec. 14	47.58
Mar. 17	47.54	June 15	45.80	Oct. 13	47.22		

30-21-30bc. Fling. Highest observed stage in period of record, 37.04 on Feb. 17; lowest, 38.45 on Sept. 15. Records available: 1947-48.

Jan. 13	37.10	Apr. 13	37.24	July 13	38.39	Nov. 15	37.87
Feb. 17	37.04	May 13	37.29	Sept. 15	38.45	Dec. 14	37.81
Mar. 16	37.15	June 16	38.38	Oct. 14	38.01		

30-22-15cc. Clark. Highest observed stage in period of record, 41.54 on Mar. 17; lowest, 43.53 on June 16. Records available: 1947-48.

Jan. 13	41.84	Apr. 14	41.56	Sept. 17	42.92	Nov. 22	42.27
Feb. 17	42.14	June 16	43.53	Oct. 14	42.32	Dec. 15	42.18
Mar. 17							

30-22-17cb. Clausen. Lowest observed stage in period of record, 46.59 on Sept. 15. Records available: 1947-48.

Jan. 13	46.00	Apr. 14	45.97	July 13	46.13	Oct. 13	46.39
Feb. 18	45.93	May 13	45.98	Aug. 23	46.12	Nov. 22	46.35
Mar. 17	45.94	June 16	46.24	Sept. 15	46.59	Dec. 15	46.33

30-22-19aa. Highest observed stage in period of record, 38.08 on Feb. 18; lowest, 38.70 on Nov. 22 and Dec. 15. Records available: 1947-48.

Jan. 13	38.09	Apr. 14	38.18	July 13	38.32	Oct. 14	38.68
Feb. 18	38.08	May 13	38.22	Aug. 23	38.48	Nov. 22	38.70
Mar. 17	38.12	June 16	38.34	Sept. 15	38.61	Dec. 15	38.70

30-22-23dd. Rasck. Highest observed stage in period of record, 38.57 on Mar. 24, Apr. 9, Apr. 17; lowest, 39.47 on Sept. 23. Records available: 1944, 1947-48.

Lowest daily water level, from recorder charts

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	38.69	38.67	38.62	38.61	38.69	38.94	38.93	39.18	39.30	39.33	39.18	39.13
2	38.69	38.67	38.61	38.60	38.70	38.94	38.93	39.23	39.26	39.32	39.16	39.10
3	38.74	38.64	38.63	38.60	38.70	38.93	38.91	39.17	39.25	39.30	39.14	39.09
4	38.71	38.66	38.63	38.62	38.69	38.94	38.93	39.17	39.25	39.29	39.16	39.13
5	38.73	38.66	38.59	38.60	38.71	38.98	38.95	39.16	39.30	39.32	39.17	39.00
6	38.69	38.68	38.59	38.64	38.70	39.02	38.95	39.17	39.29	39.30	....	39.11
7	38.68	38.66	38.61	38.64	38.68	39.03	39.00	39.19	39.31	39.32	....	39.09
8	38.73	38.64	38.61	38.62	38.78	39.06	39.18	39.17	39.28	39.30	39.16	39.12
9	38.70	38.65	38.62	38.57	38.72	39.13	39.12	39.21	39.29	39.29	39.16	39.11
10	38.67	38.67	38.61	38.61	38.71	39.14	39.12	39.26	39.28	39.30	39.16	39.11
11	38.69	38.67	38.58	38.60	38.70	39.23	39.17	39.25	39.28	39.27	39.17	39.11
12	38.73	38.63	38.60	38.62	38.70	39.17	39.20	39.27	39.31	39.27	39.16	39.09
13	38.70	38.66	38.59	38.60	38.68	39.18	39.16	39.16	39.30	39.26	39.17	39.10
14	38.68	38.67	38.58	38.58	38.73	39.13	39.15	39.17	39.29	39.25	39.15	39.04
15	38.75	38.63	38.62	38.62	38.70	39.11	39.13	39.15	39.30	39.31	39.16	39.05
16	38.68	38.66	38.61	38.62	38.71	39.09	39.15	39.13	39.30	39.27	39.15	39.07
17	38.65	38.64	38.60	38.57	38.71	39.12	39.15	39.15	39.32	39.23	39.13	39.03
18	38.70	38.62	38.58	38.64	38.74	39.07	39.18	39.16	39.32	39.22	39.16	39.03
19	38.66	38.72	38.60	38.67	38.75	39.06	39.14	39.14	39.35	39.21	39.11	39.03
20	38.66	38.66	38.68	38.66	38.76	39.02	39.15	39.18	39.35	39.22	39.12	39.04
21	38.66	38.63	38.60	38.65	38.77	39.01	39.20	39.17	39.38	39.21	39.13	39.04
22	38.71	38.61	38.58	38.62	38.83	39.02	39.17	39.19	39.46	39.23	39.10	39.02
23	38.66	38.69	38.59	38.70	38.81	39.00	39.16	39.19	39.47	39.19	39.12	39.02
24	38.68	38.65	38.57	38.69	38.81	38.98	39.22	39.20	39.44	39.19	39.10	39.03
25	38.70	38.62	38.59	38.66	38.80	38.97	39.17	39.20	39.45	39.19	39.11	39.03

30-22-23dd--Continued.

Lowest daily water level, from recorder charts

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	38.69	38.60	38.63	38.68	38.79	38.96	39.18	39.23	39.42	39.18	39.11	38.99
27	38.69	38.62	38.62	38.69	38.82	38.95	39.16	39.21	39.40	39.19	39.13	38.99
28	38.66	38.64	38.58	38.67	38.83	38.93	39.23	39.22	39.39	39.17	39.11	39.03
29	38.66	38.63	38.59	38.65	38.84	38.94	39.18	39.24	39.37	39.18	39.14	39.03
30	38.65		38.62	38.73	38.85	38.92	38.17	39.22	.....	39.19	39.13	39.03
31	38.65		38.59		38.86		39.18	39.25		39.18		39.00

30-22-26db. Skinner. Records available: 1937, 1939-45, 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	25.57	Apr. 13	25.55	July 12	25.96	Oct. 14	25.49
Feb. 17	25.23	May 13	25.63	Aug. 23	26.42	Nov. 16	26.38
Mar. 16	25.55	June 16	25.97	Sept. 15	26.54	Dec. 15	26.27

30-22-27dc. Bower. Records available: 1934-43, 1945, 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 23, 1940	15.50	Jan. 13, 1948	16.43	July 12, 1948	16.33		
May 19	16.80	Feb. 17	16.34	Sept. 15	18.15		
Nov. 15, 1941	17.30	Mar. 16	16.27	Oct. 14	17.62		
May 30, 1942	14.20	Apr. 13	16.20	Nov. 16	17.20		
Dec. 28, 1943	16.60	May 13	16.32	Dec. 14	16.74		
June 17, 1945	15.20	June 16	16.16				

30-23-1cc. Highest observed stage in period of record, 62.94 on Apr. 14; lowest, 64.20 on Oct. 14. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	63.49	Apr. 14	62.94	July 13	63.40	Oct. 14	64.20
Feb. 18	63.38	May 14	63.38	Aug. 23	63.40	Nov. 22	63.45
Mar. 11	63.40	June 16	63.28	Sept. 15	63.39	Dec. 15	63.48

30-23-13bc. Miles. Records available: 1941, 1944, 1947-48. Nov. 22, 39.07; Dec. 15, 39.05.

30-23-21aa. Lowest observed stage in period of record, 23.72 on Dec. 15. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	22.94	Apr. 14	23.16	July 13	23.34	Oct. 14	24.70
Feb. 18	22.97	May 14	25.00	Aug. 23	24.07	Nov. 15	25.20
Mar. 17	23.06	June 16	25.27	Sept. 15	25.07	Dec. 15	23.72

p Windmill pumping.

31-22-23dd. Boggy. Lowest observed stage for period of record, 42.95 on Oct. 14. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	42.20	Apr. 14	42.30	July 13	42.30	Oct. 14	42.95
Feb. 17	42.09	May 13	42.25	Aug. 23	42.26	Nov. 16	42.90
Mar. 17	42.03	June 16	42.25	Sept. 15	42.21	Dec. 15	42.37

Buffalo County

8-16-3cb. Sheldon. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 8	12.40	May 3	12.52	Sept. 7	10.97
Mar. 9	12.52	July 3	12.33	Nov. 3	12.10

8-16-10cc. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 3.79 on Sept. 7. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 6	2.00	May 4	2.26	Sept. 7	3.79
Mar. 9	1.77	July 6	3.23	Nov. 3	2.78

8-16-12cc. Garvin. Records available: 1930, 1932-48.

Jan. 6	6.07	May 4	5.49	Sept. 7	5.70
Mar. 9	5.74	July 6	5.12	Nov. 3	5.47

8-17-1da. University of Nebraska. Records available: 1931-48.

Jan. 6	8.72	May 4	8.95	Sept. 7	8.90
Mar. 9	8.55	July 6	9.07	Nov. 3	9.27

8-17-4bc. Richards. Lowest observed stage in period of record, 11.19 on Sept. 7. Records available: 1946-48.

Jan. 6	8.85	May 4	8.55	Sept. 7	11.19
Mar. 9	8.30	July 6	9.69	Nov. 3	10.74

8-17-12dd. University of Nebraska. Highest observed stage in period of record, 0.89 on Mar. 9. Records available: 1931-42, 1945-48.

Jan. 6	1.02	May 4	1.29	Sept. 7	3.61
Mar. 9	.89	July 6	3.35	Nov. 3	2.52

8-18-4cb. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 10.07 on Sept. 7. Records available: 1946-48.

Jan. 6	9.08	May 4	9.42	Sept. 7	10.07
Mar. 9	8.91	July 6	9.75	Nov. 3	9.98

9-13-5cb. Scott. Records available: 1930-48.

Jan. 5	19.44	May 3	18.39	Sept. 3	20.52
Mar. 9	19.19	July 5	18.47	Nov. 3	19.90

9-13-9cc. Smith. Records available: 1930-40, 1945-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	13.05	May 3	12.39	Sept. 3	15.10	Nov. 3	14.07
Mar. 10	12.85	July 5	12.45	Oct. 8	14.38		

9-13-22bc. Stubblefield. Records available: 1930-47. Destroyed, measurements discontinued.

9-14-1dc. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Lowest daily water level, from recorder charts

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	17.64	17.50	17.47	17.12	16.93	16.95	16.95	17.53	18.08	18.47	18.41	18.38
2	17.63	17.50	17.43	17.14	16.94	16.99	16.93	17.50	18.16	18.45	18.30	18.35
3	17.87	17.50	17.39	17.13	16.95	16.95	16.91	17.50	18.25	18.45	18.38	18.35
4	17.68	17.47	17.42	17.08	16.90	16.95	16.90	17.37	18.27	18.45	18.36	18.34
5	17.65	17.49	17.43	17.08	16.89	16.98	16.90	17.37	18.30	18.46	18.40	18.32
6	17.65	17.50	17.42	17.08	16.93	17.01	16.88	17.29	18.32	18.47	18.43	18.34
7	17.59	17.48	17.39	17.06	16.89	16.99	16.87	17.23	18.35	18.46	18.43	18.35
8	17.62	17.52	17.36	17.10	16.87	17.01	16.87	17.20	18.37	18.44	18.43	18.35

9-14-1dc--Continued.

Lowest daily water level, from recorder charts

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
9	17.63	17.52	17.35	17.11	16.87	17.03	16.67	17.16	18.40	18.40	18.41	18.34
10	17.63	17.46	17.37	17.07	16.81	17.00	16.89	17.17	18.40	18.40	18.39	18.37
11	17.57	17.48	17.37	17.00	16.94	17.03	16.88	17.16	18.42	18.45	18.41	18.37
12	17.60	17.49	17.34	17.03	16.95	17.00	16.69	17.16	18.42	18.45	18.40	18.30
13	17.60	17.47	17.34	17.06	16.93	17.00	16.69	17.15	18.43	18.46	18.40	18.32
14	17.60	17.46	17.32	....	16.88	17.05	16.92	17.15	18.45	18.46	18.40	18.31
15	17.59	17.48	17.32	....	16.85	17.05	16.92	17.14	18.48	18.45	18.40	18.32
16	17.60	17.44	17.35	17.05	16.88	17.02	16.95	17.17	18.47	18.46	18.40	18.31
17	17.59	17.45	17.34	17.05	16.89	17.02	16.97	17.23	18.47	18.46	18.39	18.32
18	17.56	17.46	17.29	16.97	16.88	17.07	17.03	17.25	18.47	18.45	18.38	18.33
19	17.58	17.43	17.28	17.01	16.88	17.03	17.01	17.24	18.47	18.46	18.38	18.33
20	17.53	17.49	17.25	17.03	16.89	17.03	17.01	17.27	18.47	18.45	18.37	18.30
21	17.53	17.49	17.27	17.03	16.87	17.07	17.01	17.31	18.47	18.41	18.39	18.29
22	17.55	17.48	17.27	16.97	16.87	17.05	17.03	17.34	18.47	18.45	18.39	18.29
23	17.57	17.46	17.23	16.95	16.89	17.02	17.11	17.38	18.47	18.48	18.36	18.31
24	17.53	17.42	17.22	16.95	16.92	17.01	17.23	17.49	18.46	18.45	18.36	18.32
25	17.55	17.46	17.20	16.96	16.94	17.05	17.27	17.53	18.46	18.43	18.35	18.31
26	17.55	17.45	17.16	16.99	16.95	17.04	17.30	17.58	18.46	18.43	18.36	18.30
27	17.56	17.42	17.22	17.01	16.97	17.01	17.36	17.64	18.46	18.43	18.40	18.33
28	17.55	17.39	17.22	17.02	16.96	16.99	17.40	17.73	18.48	18.44	18.41	18.32
29	17.49	17.46	17.14	16.98	16.95	16.97	17.43	17.84	18.48	18.44	18.38	18.28
30	17.49		17.13	16.92	16.95	16.96	17.43	17.94	18.47	18.45	18.39	18.25
31	17.51		17.12		16.96		17.50	18.01		18.43		18.32

9-14-4cc. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 6	19.42	May 4	18.85	Sept. 3	21.85
Mar. 9	19.11	July 5	18.92	Nov. 3	20.73

9-14-13cb. Mrs. Davis. Records available: 1930-48.

Jan. 5	18.39	May 3	17.97	Nov. 3	19.53
Mar. 9	18.17	July 5	18.29		

9-14-19dd. U.S. 129. Lewis. Records available: 1930-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	23.49	July 28	25.17	Sept. 28	25.18	Nov. 28	25.93
Mar. 9	24.36	Aug. 28	25.79	Oct. 30	25.87	Dec. 28	25.65
29	23.34						

9-14-21cc. Adair. Records available: 1930-40, 1942, 1944-48.

Jan. 6	18.88	May 3	18.33	Aug. 5	19.78	Nov. 2	20.30
Mar. 9	18.70	July 5	18.33	Sept. 3	21.70		

9-14-22bb. Doty. Records available: 1946-48.

Jan. 6	16.53	May 5	16.03	Aug. 3	17.18	Nov. 3	17.68
Mar. 9	16.35	July 5	16.05	Sept. 3	16.15		

9-14-34bb. Nicholson. Records available: 1930-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 6	11.35	May 4	11.04	Nov. 3	13.00
Mar. 9	11.00	Sept. 3	14.65		

9-15-11cb. Aldeen. Records available: 1932-42, 1944-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	25.09	May 4	24.82	Sept. 2	25.79	Nov. 10	26.22
Mar. 9	25.03	July 5	25.10	Nov. 3	26.15		

9-15-16cc. Highest observed stage in period of record, 31.88 on May 4. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 6	32.56	May 4	31.88	Sept. 3	34.15
Mar. 9	33.75	July 5	31.90		

9-15-34bb. Wolford. Lowest observed stage in period of record, 25.35 on Nov. 3. Records available: 1930-37, 1939, 1945-48.

Jan. 6	20.02	July 5	21.47	Nov. 3	25.35
Mar. 9	20.15	Sept. 3	22.37		

9-17-31cd. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 13.01 on Mar. 9. Records available: 1946-48.

Jan. 6	12.58	May 4	11.74	Sept. 7	10.22
Mar. 9	13.01	July 6	10.12	Nov. 3	10.73

9-18-27dd. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Jan. 6	7.03	May 4	7.52	Sept. 7	8.28
Mar. 9	7.25	July 6	8.57	Nov. 3	8.58

9-18-31cc. Mrs. Dworak. Lowest observed stage in period of record, 12.50 on Sept. 7. Records available: 1946-48.

Jan. 6	11.45	May 4	11.36	Sept. 7	12.50
Mar. 8	11.10	July 6	11.17	Nov. 4	12.32

10-13-24bc. Bentley. Records available: 1930-40, 1944, 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	25.17	May 3	24.49	July 13	24.11	Nov. 3	24.86
Mar. 9	24.90	July 5	24.15	Sept. 2	25.47		

10-17-21cd. Buettner. Records available: 1934-42. No measurements made in 1948.

12-14-2cb. Mrs. Starks. Records available: 1934-38, 1942. No measurements made in 1948.

Burt County

No measurements made in 1948.

Butler County

A14-3-8ba. University of Nebraska. Highest observed stage in period of record, 10.18 on Apr. 12. Records available: 1940-42, 1946-48. Apr. 12, 10.18.

A16-1-17bc. Deitzler. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 12	4.64	May 7	3.77	Nov. 1	4.72
Mar. 24	3.00	July 12	4.24		

A16-2-14cc. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 12	6.34	May 7	5.50	Sept. 1	4.88
Mar. 24	5.02	July 12	4.92	Nov. 1	5.67

A16-2-30bc. Foel. Highest observed stage in period of record, 21.45 on Nov. 1. Records available: 1946-48.

Jan. 12	22.09	May 7	21.99	Sept. 1	21.54
Mar. 24	22.02	July 12	22.00	Nov. 1	21.45

A16-3-1dc. Viglicky. Lowest observed stage in period of record, 12.45 on Jan. 12. Records available: 1946-48.

Jan. 12	12.45	May 7	11.63	Sept. 1	11.52
Mar. 24	11.03	July 12	11.63	Nov. 1	12.38

A16-3-8dd. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 2.70 on Mar. 24. Records available: 1946-48.

Jan. 12	4.08	May 7	3.65	Sept. 1	3.80
Mar. 24	2.70	July 12	3.42	Nov. 1	4.10

A16-3-15cd. Fortna. Records available: 1946-48.

Jan. 12	14.22	May 7	13.55	Sept. 1	13.00
Mar. 24	13.54	July 12	13.24	Nov. 1	13.68

A17-4-28cd. Duda. Records available: 1946-48.

Jan. 12	21.58	May 7	20.95	Sept. 1	21.66
Mar. 23	20.77	July 12	21.05	Nov. 1	21.49

Cass County

No measurements made in 1948.

Cedar County

A28-3-4ca. University of Nebraska. Records available: 1934-38, 1940-42, 1946-47. June 23, 1947, 10.05.

A31-2-3lab. Leise. Records available: 1934-40, 1942, 1946. No measurements made in 1948.

Chase County

5-36-7ba. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 15.70 on Feb. 4. Records available: 1946-48.

Feb. 4	15.70	June 11	16.25	Oct. 6	16.24
Apr. 12	15.98	Aug. 5	16.28	Dec. 10	15.78

5-36-11dc. Redden. Records available: 1934-40, 1941-44, 1946-48. June 11, 62.89.

7-38-20dd. Banks. Measuring point lowered 0.2 foot. Records available: 1934-40, 1942-44, 1948. Dec. 10, 69.00.

7-38-28cc. Hust. Drilled irrigation well, diameter 18 inches, depth 143 feet. Measuring point, top of casing, 0.3 foot above land-surface datum. Stevens Type A-35, 60-day automatic water-stage recorder installed Dec. 23, 1948. Highest observed stage in period of record, 75.67 on Dec. 31, 1948; lowest, 76.85 on Dec. 9, 1944.

7-3E-26cc--Continued.

Lowest daily water level, from recorder charts

Date	Water level	Date	Water level	Date	Water level
Dec. 9, 1944	a 75.85	Dec. 24, 1948	75.83	Dec. 28, 1948	75.81
10, 1948	a 75.72	25	75.84	29	75.83
23	75.68	27	75.68	31	75.67

a Tape measurement.

Cherry County

26-32-28ad. Osborne. Records available: 1934-42, 1944, 1947-48.
Feb. 20, 65.45.

31-25-20ad. University of Nebraska. Records available: 1936-48,
Oct. 7, 1947, 4.61; Oct. 18, 1948, 3.57.

33-27-17cb. University of Nebraska. Records available: 1936-48.
Oct. 19, 2.32.

34-27-31da. Nebraska Agricultural College. Records available:
1934-41, 1944-47. No measurements made in 1948.

34-27-32cb. Nebraska Agricultural College. Records available:
1934-35, 1941-43. No measurements made in 1948.

34-31-3ad. University of Nebraska. Records available: 1935-47. No
measurements made in 1948.

34-36-1dc. University of Nebraska. Records available: 1935-45, 1947.
No measurements made in 1948.

34-36-14bc. University of Nebraska. Records available: 1937-41,
1944-47. No measurements made in 1948.

Cheyenne County

No measurements made in 1948.

Clay County

5-6-26bd. Merrill. Abandoned drilled domestic well, diameter 4 inches,
depth 86 feet. Measuring point, top of casing, 1.0 foot above land-surface
datum. Stevens Type F, 6-day automatic water-stage recorder installed
June 5, 1948. Highest observed stage in period of record, 76.81 on Nov. 20,
1948; lowest, 77.09 on July 18, 1948. Records available: 1948.

Lowest daily water level, from recorder charts

Day	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1		77.03	77.07	77.03	77.01	76.99	77.00
2		77.03	77.08	77.04	77.01	76.99	76.99
3		77.03	77.08	77.03	77.01	76.99	76.99
4		77.04	77.07	77.05	77.01	76.98	76.98
5	77.03	77.04	77.07	77.05	77.00	76.99	76.99
6	77.04	77.04	77.06	77.06	76.99	76.99	76.91
7	77.05	77.04	77.05	77.08	76.99	76.98	76.88
8	77.04	77.05	77.05	77.08	76.99	76.98	76.88
9	77.03	77.08	77.03	77.07	76.98	76.99	76.89
10	77.03	77.07	77.03	77.06	76.97	76.99	76.91
11	77.03	77.05	77.02	77.04	76.97	76.99	76.96
12	77.03	77.04	77.02	77.03	76.97	77.00	76.97
13	77.03	.....	77.01	77.03	76.97	77.00	76.97
14	77.03	.....	77.01	77.03	76.97	76.99	76.97
15	77.04	.....	77.01	77.03	76.97	76.99	76.97
16	77.05	.....	77.01	77.02	76.98	76.99	76.98
17	77.06	77.06	77.00	77.02	76.98	76.98	76.98

5-6-26bd--Continued.

Lowest daily water level, from recorder charts

Day	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
18	.....	77.09	77.00	77.02	76.98	76.97	76.97
19	77.07	77.07	77.00	77.02	76.98	76.97	76.97
20	77.07	77.07	76.99	77.03	76.98	76.81	76.96
21	77.06	77.06	77.01	77.03	76.97	.....	76.96
22	77.05	77.06	77.01	77.02	76.97	76.96	76.96
23	77.05	77.06	77.01	77.02	76.97	76.97	76.96
24	77.05	77.06	77.01	77.01	.....	76.98	76.96
25	77.05	77.05	77.01	77.02	77.01	76.98	76.97
26	77.04	77.05	77.01	77.02	.....	76.98	76.97
27	77.04	77.05	77.02	77.02	.....	76.98	76.96
28	77.04	77.05	77.03	77.01	.....	76.99	76.96
29	77.04	77.06	77.03	77.01	.....	76.99	76.97
30	77.04	77.06	77.02	77.01	.....	77.00	76.97
31		77.06	77.03		77.00		76.97

5-7-32ac. University of Nebraska. Records available: 1937-38, 1940-41, 1946. No measurements made in 1948.

Colfax County

A17-2-16bc. Stibal. Records available: 1945-48. Measurements discontinued.

Date	Water level	Date	Water level	Date	Water level
Jan. 13	25.58	May 8	25.56	Sept. 1	25.73
Mar. 23	24.78	July 12	25.85	Nov. 2	25.93

A17-2-22dd. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 6.49 on Jan. 13. Records available: 1946-48.

Jan. 13	6.49	May 7	5.64	Sept. 12	5.52
Mar. 23	5.65	July 12	5.65	Nov. 1	5.48

A17-3-4cc. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 5.19 on Mar. 23. Records available: 1946-48.

Jan. 13	6.03	May 7	5.75	Sept. 1	5.94
Mar. 23	5.19	July 12	5.89	Nov. 1	5.95

A17-3-11dd. Bailey. Records available: 1945-48.

Jan. 12	9.74	May 7	9.36	Sept. 1	9.15
Mar. 23	9.43	July 12	9.05	Nov. 1	9.80

A17-3-18dc. Folda. Highest observed stage in period of record, 1.75 on Mar. 23. Records available: 1946-48.

Jan. 13	4.61	May 8	3.27	Sept. 1	3.86
Mar. 23	1.75	July 12	3.72	Nov. 1	3.91

A17-3-23cc. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 2.15 on Mar. 24. Records available: 1946-48.

Jan. 12	4.66	May 7	3.65	Sept. 1	4.60
Mar. 24	2.15	July 12	3.71	Nov. 1	4.72

A17-3-29aa. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 8.83 on Nov. 1. Records available: 1946-48.

A17-3-29aa--Continued.

Date	Water level	Date	Water level	Date	Water level
Jan. 13	8.74	May 8	8.36	Sept. 1	8.55
Mar. 23	7.66	July 12	8.25	Nov. 1	8.83

A17-4-1cc. Schlemmer. Highest observed stage in period of record, 3.83 on Mar. 23. Records available: 1945-48. Destroyed on Sept. 1, measurements discontinued. Jan. 12, 5.29; Mar. 23, 3.83; May 7, 5.15; July 12, 5.24.

A17-4-4bb. Maxes. Records available: 1945-48.

Jan. 12	15.06	May 7	14.59	Sept. 1	14.85
Mar. 23	14.80	July 12	14.82	Nov. 1	15.14

A20-2-2dd. University of Nebraska. Records available: 1940-42, 1946. No measurements made in 1948.

A20-4-6dd. University of Nebraska. Records available: 1935-42, 1946. No measurements made in 1948.

Cuming County

A21-6-23bb. University of Nebraska. Records available: 1934-44, 1946, 1948. Feb. 10, 5.30.

Custer County

15-23-2bb. University of Nebraska. Records available: 1934-42. No measurements made in 1948.

16-23-35cb. University of Nebraska. Records available: 1937-42. No measurements made in 1948.

17-25-27cc. University of Nebraska. Records available: 1937-42. No measurements made in 1948.

19-18-9aa. Owen. Highest observed stage in period of record, 11.98 on Mar. 27. Records available: 1934-42, 1945, 1948. Mar. 27, 11.98.

Dakota County

No measurements made in 1948.

Dawes County

31-52-3dc. U. S. 60. Moody. Highest observed stage in period of record, 15.84 on May 30. Records available: 1934-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	16.90	May 6	16.86	July 31	17.85	Oct. 30	17.85
Feb. 29	16.88	30	15.84	Aug. 30	16.67	Dec. 1	17.81
Mar. 31	16.88	June 30	15.87	Sept. 30	17.84	31	17.81

32-51-1db. Howard. Records available: 1935-42, 1944-47. No measurements made in 1948.

34-49-11bc. University of Nebraska. Records available: 1940-42, 1945. No measurements made in 1948.

Dawson County

9-19-16ab. Kapp. Lowest observed stage in period of record, 10.70 on Sept. 7. Records available: 1946-48.

9-19-16ab--Continued.

Date	Water level	Date	Water level	Date	Water level
Jan. 6	8.50	May 4	8.38	Sept. 7	10.70
Mar. 5	8.35	July 6	9.10	Nov. 4	10.14

9-19-25bb. Bliss. Lowest observed stage in period of record, 9.72 on Nov. 4. Records available: 1946-48.

Jan. 6	7.68	May 4	7.52	Sept. 7	8.44
Mar. 4	7.75	July 6	6.33	Nov. 4	9.72

9-19-33bb. Gamble. Records available: 1946-48.

Jan. 6	7.53	May 4	7.10	Sept. 7	8.32
Mar. 5	7.29	July 6	7.31	Nov. 4	8.46

9-20-3dd. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 12.92 on Sept. 7. Records available: 1946-48.

Jan. 6	11.14	May 4	10.68	Sept. 7	12.92
Mar. 5	10.82	July 6	11.63	Nov. 4	12.90

9-20-5bc. Rhoadarmer. Lowest observed stage in period of record, 23.50 on Nov. 4. Records available: 1946-48.

Jan. 6	22.42	May 4	21.42	Sept. 7	22.98
Mar. 5	21.36	July 6	22.22	Nov. 4	23.50

9-20-13bc. Brick. Lowest observed stage in period of record, 11.94 on Sept. 7. Records available: 1930-48.

Jan. 6	10.02	May 4	9.64	Sept. 7	11.94
Mar. 5	9.70	July 6	10.59	Nov. 4	11.85

9-20-22cc. Priel. Records available: 1946-48.

Jan. 6	10.65	May 4	10.40	Sept. 7	12.42
Mar. 4	10.34	July 6	11.15	Nov. 4	12.37

9-20-33dd. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 5.28 on Sept. 7. Records available: 1946-48.

Jan. 6	2.89	May 4	3.42	Sept. 7	5.28
Mar. 4	3.01	July 6	4.43	Nov. 4	5.00

9-21-6ad. University of Nebraska. Records available: 1930-38, 1940-48.

Jan. 6	5.80	May 4	5.97	Sept. 7	6.52
Mar. 4	5.50	July 6	5.79	Nov. 4	6.40

9-21-6da. University of Nebraska. Records available: 1930-48. Destroyed on Sept. 7, measurements discontinued. Jan. 6, 4.45; Mar. 4, 4.67; May 4, 4.90; July 6, 4.27.

9-21-7aa. University of Nebraska. Records available: 1930-48.

Jan. 6	7.45	May 4	7.95	Sept. 7	8.20
Mar. 4	7.85	July 6	7.10	Nov. 4	8.70

9-21-7da. University of Nebraska. Lowest observed stage in period of record, 7.32 on Nov. 4. Records available: 1930-48.

Jan. 6	6.87	May 4	7.08	Sept. 7	7.07
Mar. 4	6.85	July 6	6.85	Nov. 4	7.32

9-21-12cb. Myers. Records available: 1932, 1934-40, 1943-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 6	11.53	May 4	11.41	Sept. 7	12.19
Mar. 5	11.59	July 6	11.08	Nov. 4	12.32

9-21-18aa. University of Nebraska. Records available: 1930-48.

Jan. 6	5.45	May 4	5.60	Sept. 7	5.50
Mar. 4	5.43	July 6	5.54	Nov. 4	6.21

9-21-18da. University of Nebraska. Records available: 1930-48.

Jan. 6	5.58	May 4	5.37	Sept. 7	5.98
Mar. 4	5.44	July 6	5.55	Nov. 4	6.22

9-21-19a₁. University of Nebraska. Records available: 1930-40, 1942-48.

Jan. 6	4.35	May 4	4.33	Sept. 7	5.10
Mar. 4	3.90	July 6	4.67	Nov. 4	4.95

9-21-19aa₂. University of Nebraska. Records available: 1930-48.

Jan. 6	1.18	May 4	1.31	Sept. 7	2.10
Mar. 4	.75	July 6	1.70	Nov. 4	1.97

9-21-19da. University of Nebraska. Records available: 1930-48.

Jan. 6	3.87	May 4	3.98	Sept. 7	4.54
Mar. 4	3.48	July 6	4.25	Nov. 4	4.33

9-21-19dd. University of Nebraska. Records available: 1930-48.

Jan. 6	5.45	May 4	5.65	Sept. 7	6.37
Mar. 4	5.33	July 6	6.02	Nov. 4	6.55

9-21-24aa. University of Nebraska. Records available: 1931-43, 1945-48.

Jan. 6	3.90	May 4	4.02	Sept. 7	4.10
Mar. 4	3.86	July 6	3.67	Nov. 3	5.05

9-21-29bc. University of Nebraska. Records available: 1930-48.

Jan. 6	2.89	May 4	3.12	Sept. 7	3.80
Mar. 4	2.82	July 6	3.64	Nov. 4	3.20

9-21-30da. University of Nebraska. Records available: 1930-48.

Jan. 6	6.42	May 4	6.39	Sept. 7	6.88
Mar. 4	6.44	July 7	6.57	Nov. 4	6.53

9-21-31a₁. University of Nebraska. Records available: 1930-48.

Jan. 6	13.59	May 4	13.30	Sept. 7	15.05
Mar. 4	13.54	July 7	13.71	Nov. 4	14.20

9-21-31da. University of Nebraska. Records available: 1930-48.

Jan. 6	9.68	May 4	9.05	Sept. 7	14.94
Mar. 4	9.40	July 7	9.48	Nov. 4	10.33

9-21-31dd. Central Nebraska Public Power and Irrigation District. Records available: 1939-48.

Jan. 6	6.68	May 4	6.16	Sept. 7	7.90
Mar. 4	6.46	July 7	6.72	Nov. 4	7.46

9-22-17dd. University of Nebraska. Records available: 1931-48.
Jan. 8, 2.68; Mar. 3, destroyed by drainage ditch. Measurements discontinued.

9-22-23cd. Mrs. Handley. Records available: 1945-47. Pumphouse locked. No measurements made in 1948.

9-22-25dc. Central Nebraska Public Power and Irrigation District. Records available: 1939-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 8	3.25	May 6	3.40	Sept. 9	4.87
Mar. 3	3.15	July 8	3.72	Nov. 6	4.05

9-23-2dc. Neil. Records available: 1945-48.

Jan. 8	14.97	May 6	16.25	Sept. 9	17.13
Mar. 3	15.34	July 8	16.30	Nov. 5	16.86

9-23-3cc. Rhone. Lowest observed stage in period of record, 13.15 on Sept. 9. Records available: 1947-48.

Jan. 8	10.80	May 6	12.32	Sept. 9	13.15
Mar. 3	11.00	July 7	12.00	Nov. 5	12.98

9-24-1dc. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 14.50 on Nov. 5. Records available: 1946-48.

Jan. 8	15.19	May 6	15.19	Sept. 9	14.74
Mar. 3	15.23	July 7	15.05	Nov. 5	14.50

9-25-31db. Tell Estate. To convert water levels from feet above assumed datum, as published in previous reports, to feet below land-surface datum, subtract from 292.95. Measuring point lowered to top of casing, 0.5 foot above land-surface datum. Highest observed stage in period of record, 190.55 on Aug. 4. Records available: 1934-42, 1948. Aug. 4, 190.55

10-20-21cb. Hill. Records available: 1946-48.

Jan. 6	23.46	May 4	23.70	Sept. 7	25.41
Mar. 5	23.50	July 6	24.09	Nov. 4	25.32

10-20-35bb. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 18.64 on Sept. 7. Records available: 1943-48.

Jan. 6	18.83	May 4	17.00	Sept. 7	18.64
Mar. 4	18.30	July 6	17.30	Nov. 4	18.43

10-21-6da. University of Nebraska. Records available: 1930-36, 1940-48.

Jan. 6	7.23	May 4	7.32	Sept. 7	8.35
Mar. 4	7.20	July 6	7.90	Nov. 4	8.65

10-21-7aa. University of Nebraska. Records available: 1930-48.

Jan. 6	7.37	May 4	7.79	Sept. 7	7.65
Mar. 4	7.49	July 5	7.92	Nov. 4	8.70

10-21-7da. University of Nebraska. Records available: 1930-48.

Jan. 6	7.82	May 4	8.05	Sept. 7	7.40
Mar. 4	7.93	July 6	7.82	Nov. 4	8.92

10-21-18aa. University of Nebraska. Records available: 1930-37, 1940-48.

Jan. 6	7.12	May 4	7.24	Sept. 7	7.24
Mar. 4	7.29	July 6	7.01	Nov. 4	8.48

10-21-18dd. University of Nebraska. Records available: 1930-48.

Jan. 6	11.87	May 4	12.15	Sept. 7	13.06
Mar. 4	12.03	July 6	12.18	Nov. 4	13.58

10-21-19aa. University of Nebraska. Records available: 1930-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 6	13.98	May 4	14.55	Sept. 7	15.82
Mar. 4	14.30	July 6	14.34	Nov. 4	16.00

10-21-19da. University of Nebraska. Records available: 1930-48.

Jan. 6	13.98	May 4	14.50	Sept. 7	15.25
Mar. 4	14.26	July 6	13.68	Nov. 4	15.82

10-21-23ab. Delap. Records available: 1930-48.

Jan. 6	10.79	May 4	10.76	Sept. 7	11.55
Mar. 4	10.74	July 6	11.25	Nov. 4	12.63

10-21-30aa. University of Nebraska. Records available: 1930-48.

Jan. 6	6.77	May 4	7.10	Sept. 7	7.40
Mar. 4	6.97	July 6	6.05	Nov. 4	8.42

10-21-30da. University of Nebraska. Records available: 1930-48.

Jan. 6	7.73	May 4	7.90	Sept. 7	5.77
Mar. 4	7.88	July 6	5.85	Nov. 4	9.13

10-21-31aa. University of Nebraska. Records available: 1930-48.
 Jan. 6, 5.38; Mar. 4, 5.28; May 4, 5.25; July 6, destroyed, measurements discontinued.

10-21-31da. University of Nebraska. Records available: 1930-48.

Jan. 6	6.86	May 4	6.59	Sept. 7	7.20
Mar. 4	6.82	July 6	5.97	Nov. 4	8.00

10-22-11ab. Brunner. Records available: 1946-48.

Jan. 7	7.09	May 5	7.61	Sept. 7	6.24
Mar. 3	7.48	July 7	6.92	Nov. 4	7.21

10-22-29aa. University of Nebraska. Records available: 1931-43,
 1945-48.

Jan. 7	3.67	May 5	3.57	Sept. 7	5.53
Mar. 3	3.43	July 7	4.20	Nov. 4	5.96

10-23-5bb. Ogorsolka. Records available: 1945-48.

Jan. 7	6.52	May 5	6.75	Sept. 7	6.40
Mar. 3	6.28	July 7	5.60	Nov. 4	7.55

10-23-29bb. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 7.70 on Nov. 5. Records available: 1946-48.

Jan. 8	6.54	May 6	7.30	Sept. 9	7.65
Mar. 3	6.48	July 8	6.59	Nov. 5	7.70

10-23-30bc. Heller. Lowest observed stage in period of record, 12 on Sept. 9. Records available: 1945-48.

Jan. 8	9.62	May 6	10.34	Sept. 9	12.05
Mar. 3	9.09	July 7	9.15	Nov. 4	11.35

10-24-7bb. McDowell. Records available: 1946-48.

Jan. 8	12.42	July 7	11.82	Nov. 5	12.44
Mar. 3	12.49	Sept. 9	12.65		

10-24-15cc. Kauffman. Records available: 1945-48.

Jan. 8	4.53	May 6	5.14	Sept. 9	5.20
Mar. 3	4.50	July 8	4.74	Nov. 5	5.28

10-24-17bb. Central Nebraska Public Power and Irrigation District.
Records available: 1938-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 8	2.98	May 6	4.90	Sept. 9	4.91
Mar. 3	3.61	July 7	3.91	Nov. 5	5.23

11-19-4dd. Vermas. Drilled irrigation well, diameter 18 inches, depth 163 feet. Measuring point, hole in turbine base, 4.0 feet below land-surface datum. Records available: 1948. Nov. 16, 47.82.

11-21-31dd. University of Nebraska. Records available: 1930-36, 1940-48.

Jan. 6	24.84	May 4	24.54	Sept. 7	29.35
Mar. 4	25.18	July 5	24.43	Nov. 4	25.76

11-22-28aa. Velte. Records available: 1945-48.

Jen. 7	26.50	May 5	26.15	Sept. 7	26.22
Mar. 4	26.28	July 7	26.71	Nov. 4	27.39

11-23-21bc. Robertson. Records available: 1945-48.

Jen. 7	13.87	May 5	14.70	Sept. 7	12.92
Mar. 3	14.45	July 7	13.94	Nov. 4	14.94

11-23-23cc. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Jan. 7	2.37	May 5	3.30	Sept. 7	3.29
Mar. 4	2.35	July 7	2.80	Nov. 4	3.99

11-24-16bb. Ballmer. Records available: 1945-48.

Jan. 7	6.01	May 5	6.76	Sept. 7	7.55
Mar. 3	6.20	July 7	6.27	Nov. 4	7.42

11-24-20ca. Owings. Records available: 1932, 1934-42, 1944-48.

Jan. 7	11.75	May 5	12.33	Sept. 7	12.91
Mar. 4	12.00	July 7	12.22	Nov. 4	13.73

11-24-24cb. Powell. Records available: 1946-48.

Jan. 7	9.41	May 5	9.80	Sept. 7	9.15
Mar. 4	9.57	July 7	9.05	Nov. 4	10.72

11-25-8ad. Central Nebraska Public Power and Irrigation District.
Records available: 1938-48.

Jan. 7	1.72	May 5	2.89	Sept. 7	3.00
Mar. 1	1.59	July 7	2.64	Nov. 5	2.62

11-25-16bb. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 4.45 on Mar. 1. Records available: 1947-48.

Jan. 7	4.76	May 5	5.35	Sept. 6	5.76
Mar. 1	4.45	July 7	5.05	Nov. 5	5.60

11-25-19cc. Central Nebraska Public Power and Irrigation District.
Records available: 1938-48.

Jan. 8	6.47	May 6	6.05	Sept. 9	6.94
Mar. 2	6.75	July 9	6.60	Nov. 5	7.57

11-25-21cc. Clark. Records available: 1930-42, 1944-48.

Jan. 8	9.54	May 6	9.54	Sept. 9	6.93
Mar. 3	9.50	July 8	9.61	Nov. 5	9.32

11-25-34bc. Clerk. Records available: 1945-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 8	12.19	May 6	12.65	Sept. 9	12.17
Mar. 3	12.48	July 8	12.32	Nov. 5	12.32

12-20-36cc. Thomas. Drilled irrigation well, diameter 18 inches, depth 145.0 feet. Measuring point, hole in turbine base, 1.0 foot above land-surface datum. Records available: 1948. Nov. 16, 35.45.

12-24-30ab. Geiken. Records available: 1946-48.

Jan. 7	44.41	July 7	42.90	Nov. 4	42.78
Mar. 1	42.62	Sept. 7	43.29		

12-25-34cc. Block. Records available: 1932, 1934-40, 1942, 1944-48.

Jan. 7	27.66	May 5	28.59	Sept. 7	28.58
Mar. 1	27.86	July 7	28.05	Nov. 4	28.05

Deuel County

No measurements made in 1948.

Dixon County

No measurements made in 1948.

Dodge County

A17-5-2bb. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Jan. 12	4.20	May 7	3.92	Sept. 1	4.14
Mar. 23	3.59	July 12	3.70	Nov. 1	4.11

A17-6-6aa. University of Nebraska. Records available. 1937-42, 1944-48.

Jan. 12	2.99	May 7	2.50	Sept. 1	2.92
Mar. 23	1.96	July 12	2.40	Nov. 1	3.12

A17-6-8bc. Records available: 1946-48.

Jan. 12	4.12	May 7	3.63	Sept. 1	4.94
Mar. 23	2.56	July 12	4.00	Nov. 1	4.95

A17-6-15ea. Records available: 1947-48. Jan. 12, 2.50; Mar. 23, 2.18; May 7, 2.70; July 12, destroyed, measurements discontinued.

A17-8-4aa. City of Fremont. Records available: 1940-48.

Jan. 13	6.59	May 7	5.95	Sept. 1	6.08
Mar. 23	5.50	July 12	5.67	Nov. 1	6.29

A17-6-4dd. City of Fremont. Records available: 1940-48.

Jan. 13	9.67	May 7	9.40	Sept. 1	9.00
Mar. 23	9.69	July 12	9.38	Nov. 1	9.00

A17-8-9da. City of Fremont. Records available: 1940-48.

Jan. 13	10.00	May 7	9.44	Sept. 1	9.85
Mar. 23	9.75	July 12	10.11	Nov. 1	10.40

A17-6-16ad. City of Fremont. Records available: 1940-48.

Jan. 13	9.70	May 7	9.04	Sept. 1	9.62
Mar. 23	9.45	July 12	9.35	Nov. 1	10.05

A17-6-22cb. City of Fremont. Highest observed stage in period of record, 0.82 on Mar. 23. Records available: 1940, 1942-48.

Jan. 13	5.04	May 7	2.25	Sept. 1	2.89
Mar. 23	.82	July 12	2.32	Nov. 1	4.68

A17-8-28ad. City of Fremont. Records available: 1940-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 13	4.05	May 7	2.34	Sept. 1	3.74
Mar. 23	2.21	July 12	3.28	Nov. 1	3.89

A17-9-24dc. Wieser. Records available: 1934-42, 1944, 1946, 1948. Feb. 10, 8.22.

A18-5-23bb. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Jan. 12	8.10	May 7	8.11	Sept. 1	8.52
Mar. 23	7.70	July 12	7.98	Nov. 1	8.32

A18-6-25cc. Lowest observed stage in period of record, 10.50 on Nov. 1. Records available: 1947-48.

Jan. 12	9.78	May 7	9.12	Sept. 1	9.90
Mar. 23	8.92	July 12	9.58	Nov. 1	10.50

A18-7-36cb. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 5.48 on July 12. Records available: 1947-48.

Jan. 12	4.40	May 7	3.55	Sept. 1	3.50
Mar. 23	2.77	July 12	5.48	Nov. 1	3.80

A18-8-28da. City of Fremont. Records available: 1940-48.

Jan. 13	64.19	May 7	64.61	Sept. 1	64.28
Mar. 23	64.62	July 12	64.55	Nov. 1	63.90

A18-8-28dd. City of Fremont. Records available: 1940-48.

Jan. 13	25.89	May 7	25.75	Sept. 1	25.80
Mar. 23	25.72	July 12	25.80	Nov. 1	25.80

A18-8-33aa. City of Fremont. Records available: 1940-41, 1946-48

Jan. 13	5.55	May 7	5.68	Sept. 1	5.63
Mar. 23	5.35	July 12	5.61	Nov. 1	5.65

A18-9-18db. University of Nebraska. Erroneously published in previous reports as A18-9-18ac. Records available: 1937-44, 1946-48. Feb. 10, 7.70.

Douglas County

No measurements made in 1948.

Dundy County

1-37-7ab. Lingo. Records available: 1946-48.

Feb. 3	61.02	Aug. 3	61.15	Dec. 7	60.92
Apr. 10	60.85	Oct. 6	61.29		

1-37-16dd. Jones. Records available: 1946-48.

Feb. 4	38.77	June 9	38.96	Oct. 6	38.70
Apr. 12	38.87	Aug. 4	38.75	Dec. 7	38.77

1-37-19ba. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Feb. 3	9.30	June 8	11.15	Oct. 5	14.00
Apr. 10	9.63	Aug. 3	11.95	Dec. 7	10.59

1-37-31cd. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 5.85 on Oct. 6. Records available: 1946-48.

Feb. 3	4.80	June 8	4.30	Oct. 6	5.85
Apr. 10	4.44	Aug. 5	4.79	Dec. 7	5.22

1-38-20bc. Morris. Highest observed stage in period of record, 15.50 on June 8. Records available: 1935-36, 1946-48. Feb. 3, 15.72; Apr. 9, 15.71; June 8, 15.50.

1-38-21cb. University of Nebraska. Records available: 1937-43, 1947-48. Oct. 5, 8.43; Dec. 7, 5.89.

1-38-26ca. Jones. Erroneously published as 1-38-25bd in Water Supply Papers 1073 and 1098. Highest observed stage in period of record, 11.84 on Aug. 3. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Feb. 3	13.19	June 8	12.32	Oct. 5	12.41
Apr. 10	12.91	Aug. 3	11.84	Dec. 7	13.02

1-38-28da. Abandoned drilled domestic well, diameter 5 inches, depth 33 feet. Measuring point, top of casing, 1.0 foot above land-surface datum. Highest observed stage in period of record, 19.69 on Apr. 10; lowest, 20.41 on Oct. 5. Records available: 1948.

Apr. 10	19.69	Aug. 3	19.85	Dec. 7	20.18
June 8	19.95	Oct. 5	20.42		

1-38-29ad. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 9.03 on Oct. 5. Records available: 1946-48.

Feb. 3	8.11	June 8	8.40	Oct. 5	9.03
Apr. 10	8.18	Aug. 3	8.68	Dec. 7	8.13

1-39-21ac. Kruttsinger. Highest observed stage in period of record, 4.62 on Feb. 3. Records available: 1935-43, 1946-48.

Feb. 3	4.62	June 8	5.43	Oct. 5	5.74
Apr. 10	5.28	Aug. 3	5.30	Dec. 7	5.20

1-39-22cc. Dundy County. Highest observed stage in period of record, 11.20 on June 8. Records available: 1946-48.

Feb. 3	11.75	June 8	11.20	Oct. 5	12.69
Apr. 10	11.62	Aug. 3	11.38	Dec. 7	11.60

1-39-26aa. Pringle. Lowest observed stage in period of record, 26.50 on Oct. 5. Records available: 1946-48.

Feb. 3	25.64	June 8	25.90	Oct. 5	26.50
Apr. 10	25.34	Aug. 3	25.58	Dec. 7	25.68

1-39-30bb. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 11.04 on Aug. 3. Records available: 1946-48.

Feb. 3	12.08	June 8	11.37	Oct. 5	12.28
Apr. 10	11.94	Aug. 3	11.04	Dec. 7	12.17

1-40-20cb. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Feb. 3	3.40	June 8	3.88	Oct. 5	4.32
Apr. 10	3.42	Aug. 3	3.65	Dec. 7	3.60

1-40-24cd. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 8.21 on Aug. 3. Records available: 1946-48.

Feb. 3	8.40	June 8	8.45	Oct. 5	8.72
Apr. 10	8.29	Aug. 3	8.21	Dec. 7	8.39

1-40-27ab. Minton. Records available: 1946-48.

Feb. 3	19.70	June 8	19.60	Oct. 5	19.60
Apr. 10	19.40	Aug. 3	19.05	Dec. 7	19.35

1-40-29bb. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 10.80 on July 3 and 4. Records available: 1946-48.

Lowest daily water level, from recorder charts

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Dec.
1	12.50	.....	12.33	12.23	12.19	12.12	10.81	.....	11.21	.....	.....
2	12.50	.....	12.33	12.23	12.19	12.11	10.81	.....	11.22	.....	.....
3	12.49	12.42	12.32	12.23	12.19	12.10	10.80	10.87	11.23	.....	.....
4	12.49	12.42	12.32	12.22	12.19	12.11	10.80	10.88	11.25	.....	.....
5	12.49	12.41	12.32	12.22	12.19	12.10	10.81	10.89	11.27	11.52	.....
6	12.49	12.41	12.32	12.22	12.19	12.09	10.81	10.90	11.30	.....	.....
7	12.48	12.41	12.31	12.21	12.19	12.09	10.81	10.90	11.32	.....	11.66
8	12.48	12.40	12.31	12.21	12.19	12.09	10.82	10.91	11.33	.....	.....
9	12.48	12.40	12.31	12.21	12.19	12.10	10.82	10.92	11.34	.....	.....
10	12.48	12.40	12.30	12.20	12.19	12.10	10.81	10.93	11.35	.....	.....
11	12.48	12.39	12.30	12.20	12.19	12.10	10.83	10.95	11.36	.....	.....
12	12.48	12.39	12.30	12.20	12.19	12.11	10.82	10.95	11.37	.....	.....
13	12.48	12.39	12.30	12.21	12.19	12.12	10.83	10.97	11.38	.....	.....
14	12.47	12.38	12.29	12.21	12.19	12.13	10.83	10.98	11.40	.....	.....
15	12.47	12.38	12.29	12.21	12.19	12.10	10.83	11.00	11.41	.....	.....
16	12.47	12.38	12.28	12.22	12.19	12.03	10.83	11.01	11.43	.....	.....
17	12.47	12.37	12.28	12.22	12.19	11.98	10.84	11.02	11.43	.....	.....
18	12.47	12.37	12.28	12.21	12.19	11.94	10.85	11.03	11.45	.....	.....
19	12.47	12.37	12.27	12.20	12.20	11.90	10.85	11.04	11.45	.....	.....
20	12.46	12.36	12.27	12.20	12.21	11.92	10.85	11.05	11.46	.....	11.65
21	12.46	12.36	12.27	12.21	12.22	11.72	10.86	11.06	11.48	.....	.....
22	12.46	12.36	12.26	12.21	12.23	11.57	10.86	11.08	11.48	.....	.....
23	12.45	12.35	12.26	12.21	12.22	11.51	10.87	11.09	11.50	.....	.....
24	12.45	12.35	12.26	12.21	12.22	11.36	.....	11.09	11.50	.....	.....
25	12.45	12.35	12.25	12.21	12.20	11.28	.....	11.10	11.52	.....	.....
26	12.45	12.34	12.25	12.21	12.19	11.23	.....	11.12	11.52	.....	.....
27	12.45	12.34	12.25	12.20	12.16	11.18	.....	11.13	.....	.....	.....
28	12.45	12.34	12.24	12.20	12.17	10.95	.....	11.15	.....	.....	.....
29	12.44	12.33	12.24	12.20	12.14	10.84	.....	11.16	.....	.....	.....
30	12.43	.....	12.24	12.20	12.14	10.82	.....	11.18	.....	.....	.....
31	12.42	.....	12.24	.....	12.13	.....	.....	11.20	.....	.....	.....

1-41-20dd. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 2.52 on Feb. 3. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Feb. 3	2.52	June 8	3.14	Oct. 5	3.65
Apr. 10	2.90	Aug. 3	3.60	Dec. 7	2.56

1-41-27ca. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 3.24 on Feb. 3. Records available: 1946-48

Feb. 3	3.24	June 8	4.52	Oct. 5	4.90
Apr. 10	4.08	Aug. 3	5.05	Dec. 7	4.25

1-42-10cd. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Feb. 3	4.35	June 8	4.65	Oct. 5	5.25
Apr. 10	4.08	Aug. 3	4.69	Dec. 7	4.86

1-42-13bb. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Feb. 3	3.95	June 8	4.44	Oct. 5	4.90
Apr. 10	3.92	Aug. 3	4.11	Dec. 7	4.21

1-42-36aa. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 11.44 on Aug. 3. Records available: 1946-48.

Feb. 3	11.22	June 10	11.03	Oct. 5	10.68
Apr. 10	11.04	Aug. 3	11.44	Dec. 7	11.23

2-36-24ca. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 15.65 on Oct. 6. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Feb. 4	15.08	June 9	15.19	Oct. 6	15.65
Apr. 10	14.86	Aug. 4	15.43	Dec. 9	15.55

2-36-29ac. Howard. Records available: 1946-48.

Feb. 4	22.10	June 9	22.14	Oct. 6	22.77
Apr. 12	21.92	Aug. 4	22.48	Dec. 9	22.40

2-36-31bc. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 22.84 on Oct. 6. Records available: 1946-48.

Feb. 4	21.95	June 9	22.00	Oct. 6	22.84
Apr. 12	21.61	Aug. 4	22.11	Dec. 9	22.29

2-36-32da. Abandoned drilled domestic well, diameter 5 inches, depth 18 feet. Measuring point, top of casing, 0.5 foot above land-surface datum. Highest observed stage in period of record, 7.20 on Aug. 4; lowest, 8.55 on Apr. 12. Records available: 1948.

Apr. 12	8.55	Aug. 4	7.20	Dec. 9	8.25
June 9	8.50	Oct. 6	8.03		

Franklin County

1-13-1bc. Bureau of Reclamation, U. S. Dept. of Interior. Driven observation well, diameter $1\frac{1}{4}$ inches, depth 20.8 feet. Measuring point, top of pipe, 1.0 foot above land-surface datum, 1,758.94 feet above sea level. Records available: 1948. Nov. 17, 14.83; Dec. 21, 14.89.

1-13-1cc. Geological Survey, U. S. Dept. of Interior. Altitude 1,751.78 feet above sea level. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 6	7.06	June 11	6.72	Oct. 8	7.90	Dec. 21	7.96
Apr. 14	5.75	Aug. 6	7.02	Nov. 18	8.11		

a By Bureau of Reclamation, U. S. Dept. of Interior.

1-13-2bc. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 9.56 on Oct. 8. Altitude 1,760.78 feet above sea level. Records available: 1946-48.

Feb. 6	8.43	June 11	8.66	Oct. 8	9.56	Dec. 21	9.23
Apr. 14	8.24	Aug. 6	8.75	Nov. 17	9.33		

a By Bureau of Reclamation, U. S. Dept. of Interior.

1-13-3ca. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48. Feb. 6, 8.12; Apr. 14, 7.45; June 11, destroyed, measurements discontinued.

1-13-4cb. Ziegler. Altitude 1,771.99 feet above sea level. Lowest observed stage in period of record, 13.51 on Aug. 6. Records available: 1946-48.

Feb. 6	12.04	June 11	12.77	Oct. 8	13.25	Nov. 18	13.11
Apr. 14	11.34	Aug. 6	13.51	Nov. 4	13.12	Dec. 21	12.97

a By Bureau of Reclamation, U. S. Dept. of Interior.

1-13-7bb. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 7.19 on Aug. 6. Altitude 1,778.21 feet above sea level. Records available: 1946-48.

Feb. 6	5.41	June 11	6.84	Oct. 8	7.12	Nov. 18	6.62
Apr. 14	4.90	Aug. 6	7.19	Nov. 4	5.73	Dec. 21	6.29

a By Bureau of Reclamation, U. S. Dept. of Interior.

1-13-12ad. Bureau of Reclamation, U. S. Dept. of Interior. Driven observation well, diameter $1\frac{1}{4}$ inches, depth 13.8 feet. Measuring point, top of pipe, 2.0 feet above land-surface datum, 1,745.90 feet above sea level. Records available: 1948. Nov. 18, 7.38; Dec. 21, 6.79.

1-14-1aa. Bureau of Reclamation, U. S. Dept. of Interior. Driven observation well, diameter $1\frac{1}{4}$ inches, depth 9.9 feet. Measuring point, top of pipe, 1.0 foot above land-surface datum, 1,778.53 feet above sea level. Records available: 1948. Nov. 17, 4.66; Dec. 21, 4.47.

1-14-2ac. Bureau of Reclamation, U. S. Dept. of Interior. Driven observation well, diameter $1\frac{1}{4}$ inches, depth 9.6 feet. Measuring point, top of pipe, 1.5 feet above land-surface datum, 1,785.03 feet above sea level. Records available: 1948. Nov. 18, 6.75; Dec. 21, 6.65.

1-14-2cd. Sindt. Lowest observed stage in period of record, 12.36 on Dec. 21. Altitude 1,790.99 feet above sea level. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 6	10.26	June 11	9.37	Oct. 8	11.00	Dec. 21	a 12.36
Apr. 14	8.72	Aug. 6	9.72	Nov. 18	a 11.28		

a By Bureau of Reclamation, U. S. Dept. of Interior.

1-14-3ba. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48. Destroyed on Oct. 8, measurements discontinued. Feb. 5, 5.07; Apr. 14, 2.86; June 11, 3.90; and Aug. 5, 5.10.

1-14-4cc. Bureau of Reclamation, U. S. Dept. of Interior. Driven observation well, diameter $1\frac{1}{4}$ inches, depth 16.5 feet. Measuring point, top of pipe, 2.0 feet above land-surface datum, 1,800.43 feet above sea level. Records available: 1948. Nov. 18, 7.09; Dec. 21, 6.77.

1-14-5ad. Bureau of Reclamation, U. S. Dept. of Interior. Driven observation well, diameter $1\frac{1}{4}$ inches, depth 11.3 feet. Measuring point, top of pipe, 0.5 foot above land-surface datum, 1,798.10 feet above sea level. Records available: 1948. Nov. 17, 5.79; Dec. 21, 5.44.

1-14-6bc. Blank. Altitude 1,808.55 feet above sea level. Lowest observed stage in period of record, 9.05 on Oct. 8. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Feb. 6	8.40	June 11	7.83	Oct. 8	9.05
Apr. 14	7.75	Aug. 5	8.60		

1-14-7bb1. University of Nebraska. Altitude 1,708.18 feet above sea level. Records available: 1940-42, 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 6	4.32	June 11	4.55	Oct. 8	4.05	Dec. 21	a 3.95
Apr. 14	3.87	Aug. 6	4.05	Nov. 18	a 4.21		

a By Bureau of Reclamation, U. S. Dept. of Interior.

1-14-7bb2. Blank. Altitude 1,805.55 feet above sea level. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 6	7.00	June 11	6.85	Oct. 8	7.30	Dec. 21	a 6.59
Apr. 14	6.32	Aug. 6	6.95	Nov. 18	a 6.90		

a By Bureau of Reclamation, U. S. Dept. of Interior.

1-15-3ac. Bureau of Reclamation, U. S. Dept. of Interior. Driven observation well, diameter $1\frac{1}{4}$ inches, depth 23.3 feet. Measuring point, top of pipe, 1.0 foot above land-surface datum, 1,837.93 feet above sea level. Records available: 1948. Nov. 18, 19.03; Dec. 21, 18.97.

1-15-3db. Bureau of Reclamation, U. S. Dept. of Interior. Driven observation well, diameter $1\frac{1}{4}$ inches, depth 12.7 feet. Measuring point, top of pipe, 1.0 foot above land-surface datum, 1,823.82 feet above sea level. Records available: 1948. Nov. 18, 8.40; Dec. 22, 7.94.

1-15-5ca. Geological Survey, U. S. Dept. of Interior. Altitude 1,835.85 feet above sea level. Lowest observed stage in period of record, 7.50 on Dec. 22. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 5	6.19	June 11	5.42	Oct. 7	7.08	Dec. 22	a 7.50
Apr. 14	4.80	Aug. 5	5.22	Nov. 18	a 7.43		

a By Bureau of Reclamation, U. S. Dept. of Interior.

1-15-6bc. Bureau of Reclamation, U. S. Dept. of Interior. Driven observation well, diameter $1\frac{1}{4}$ inches, depth 12.6 feet. Measuring point, top of pipe, 1.0 foot above land-surface datum, 1,853.24 feet above sea level. Records available: 1948. Nov. 18, 9.21; Dec. 22, 8.88.

1-15-7bb. Bureau of Reclamation, U. S. Dept. of Interior. Driven observation well, diameter $1\frac{1}{4}$ inches, depth 15.1 feet. Measuring point, top of casing, 1.0 foot above land-surface datum, 1,847.71 feet above sea level. Records available: 1948. Nov. 18, 11.16; Dec. 22, 11.03.

1-15-7cb. Gardner. Drilled irrigation well, diameter 24 inches, depth 64.0 feet. Measuring point, hole in turbine base, at land-surface datum, 1,861.34 feet above sea level. Records available: 1948. Nov. 18, 23.55; Dec. 22, 22.96.

1-15-8bd. Bureau of Reclamation, U. S. Dept. of Interior. Driven observation well, diameter $1\frac{1}{4}$ inches, depth 15 feet. Measuring point, top of casing, 1.0 foot above land-surface datum, 1,838.09 feet above sea level. Records available: 1948. Nov. 18, 11.50; Dec. 22, 11.13.

1-15-8cb. Townsend. Altitude 1,842.55 feet above sea level. Lowest observed stage in period of record, 12.37 on Oct. 7. Records available: 1946-48.

Feb. 5	10.47	June 11	11.12	Oct. 7	12.37	Dec. 22	a 11.29
Apr. 13	10.39	Aug. 5	10.70	Nov. 18	a 11.98		

a By Bureau of Reclamation, U. S. Dept. of Interior.

1-16-7dd. Bureau of Reclamation, U. S. Dept. of Interior. Driven observation well, diameter $1\frac{1}{4}$ inches, depth 16.6 feet. Measuring point, top of pipe, 1.0 foot above land-surface datum, 1,879.73 feet above sea level. Records available: 1948. Nov. 18, 13.01; Dec. 22, 13.23.

1-16-8bb. Bureau of Reclamation, U. S. Dept. of Interior. Driven observation well, diameter $1\frac{1}{4}$ inches, depth 11.7 feet. Measuring point, top of pipe, 1.0 foot above land-surface datum, 1,873.03 feet above sea level. Records available: 1948. Nov. 18, 8.42; Dec. 22, 8.16.

1-16-9bc. Post. Altitude 1,876.68 feet above sea level. Lowest observed stage in period of record, 14.42 on Oct. 7. Records available: 1946-48.

Feb. 5	13.38	June 11	13.24	Oct. 7	14.42	Dec. 22	a 14.28
Apr. 13	14.85	Aug. 5	13.19	Nov. 18	a 13.90		

a By Bureau of Reclamation, U. S. Dept. of Interior.

1-16-9dd. Bureau of Reclamation, U. S. Dept. of Interior. Driven observation well, diameter $1\frac{1}{4}$ inches, depth 14.4 feet. Measuring point, top of pipe, 1.0 foot above land-surface datum, 1,866.22 feet above sea level. Records available: 1948. Nov. 18, 10.02; Dec. 22, 10.93.

1-16-10bd. Geological Survey, U. S. Dept. of Interior. Altitude 1,857.43 feet above sea level. Lowest observed stage in period of record, 6.20 on Oct. 8. Records available: 1946-48.

Feb. 5	4.54	June 11	4.32	Oct. 8	6.20	Dec. 22	a 5.66
Apr. 13	3.69	Aug. 5	5.13	Nov. 18	a 5.78		

a By Bureau of Reclamation, U. S. Dept. of Interior.

1-16-14ab. Howel. Altitude 1,686.95 feet above sea level. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Feb. 5	40.33	June 11	40.75	Nov. 18	a 41.68
Apr. 13	39.97	Oct. 7	42.10	Dec. 22	a 41.37

a By Bureau of Reclamation, U. S. Dept. of Interior.

1-16-16ad. Bureau of Reclamation, U. S. Dept. of Interior. Driven observation well, diameter $1\frac{1}{4}$ inches, depth 14.4 feet. Measuring point, top of pipe, at land-surface datum, 1,865.79 feet above sea level. Records available: 1948. Nov. 18, 13.47; Dec. 22, 13.13.

2-13-31ad. Altitude 1,832.98 feet above sea level. Highest observed stage in period of record, 52.18 on Nov. 17. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 6	52.91	June 11	52.80	Oct. 8	52.75	Dec. 21	a 52.85
Apr. 14	53.03	Aug. 6	52.72	Nov. 17	a 52.18		

a By Bureau of Reclamation, U. S. Dept. of Interior.

2-13-32dd. Geological Survey, U. S. Dept. of Interior. Altitude 1,770.61 feet above sea level. Lowest observed stage in period of record, 3.20 on Oct. 8. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 6	7.58	June 11	7.72	Oct. 8	9.20	Dec. 21	a 8.25
Apr. 14	6.12	Aug. 6	7.82	Nov. 17	a 8.69		

a By Bureau of Reclamation, U. S. Dept. of Interior.

2-14-33cc. Cyr. Drilled irrigation well, reported depth 38.0 feet. Measuring point, edge of concrete casing, 2.0 feet above land-surface datum, 1,807.48 feet above sea level. Highest observed stage in period of record, 3.27 on Oct. 7; lowest, 10.44 on Nov. 17. Records available: 1948. Oct. 7, 8.27; Nov. 17, 10.44; Dec. 21, 9.98.

2-14-34ad. Abandoned well, diameter 48 inches, depth 120.8 feet. Measuring point, hole in steel lid, 1.8 feet above land-surface datum, 1,896.81 feet above sea level. Highest observed stage in period of record, 50.37 on Oct. 7; lowest 51.10 on Aug. 5. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level
Dec. 16, 1947	50.49	June 11, 1948	50.40	Nov. 22, 1948	a 50.40
Feb. 5, 1948	50.47	Aug. 5	51.10	Dec. 21	a 50.48
Apr. 14	50.42	Oct. 7	50.37		

a By Bureau of Reclamation, U. S. Dept. of Interior.

3-14-36dd. University of Nebraska. Records available: 1934-42. No measurements made in 1948.

4-14-10da. Gilgen Bros. Records available: 1935-40, 1942, 1947-48. Mar. 22, 167.25; Oct. 25, 167.47.

Frontier County

No measurements made in 1948.

Furnas County

1-25-6ba. Shoemaker. Records available: 1934-40, 1942. No measurements made in 1948.

2-25-27cc. Mrs. Hunt. Records available: 1935-42. No measurements made in 1948.

2-25-28dc. Loar. Records available: 1935-40, 1942. No measurements made in 1948.

3-21-2cc. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 10.35 on Oct. 7. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Feb. 5	9.25	June 11	9.73	Oct. 7	10.35
Apr. 13	9.07	Aug. 5	8.63	Dec. 10	9.72

3-21-9bd. Ballard. Records available: 1946-47. Destroyed, measurements discontinued.

3-21-12dc. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Feb. 5	5.26	June 11	6.19	Oct. 7	6.52
Apr. 13	4.80	Aug. 5	4.84	Dec. 10	5.52

3-22-2ba. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 8.84 on Oct. 1. Records available: 1946-48.

Feb. 2	8.44	June 7	8.64	Oct. 1	8.84
Apr. 9	8.00	Aug. 2	7.68	Dec. 6	8.79

3-23-34cc. Lambert. Records available: 1934-41, 1943. No measurements made in 1948.

3-25-4bb. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Lowest daily water level, from recorder charts

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	6.18	5.95	5.80	5.17	5.51	5.97	4.44	5.07	5.77	6.30	6.55	6.23
2	6.17	5.95	5.78	5.17	5.53	5.98	4.46	5.10	5.77	6.31	6.55	6.20
3	6.16	5.96	5.78	5.17	5.55	5.99	4.49	5.11	5.80	6.32	6.55	6.18
4	6.14	5.96	5.77	5.18	5.55	6.00	4.53	5.11	5.82	6.33	6.55	6.14
5	6.14	5.96	5.77	5.19	5.56	6.01	4.58	5.12	5.85	6.34	6.55	6.11
6	6.13	5.95	5.75	5.19	5.56	6.03	4.63	5.13	5.87	6.35	6.54	6.10
7	6.11	5.95	5.74	5.20	5.58	6.05	4.66	5.13	5.90	6.36	6.53	6.09
8	6.10	5.95	5.74	5.21	5.59	6.05	4.70	5.13	5.92	6.38	6.52	6.08
9	6.08	5.95	5.73	5.22	5.60	6.08	4.72	5.14	5.93	6.40	6.50	6.07
10	6.08	5.95	5.73	5.22	5.61	6.10	4.71	5.15	5.95	6.40	6.50	6.06
11	6.07	5.95	5.72	5.23	5.63	6.12	4.72	5.15	5.97	6.42	6.50	6.05
12	6.05	5.95	5.72	5.24	5.64	6.02	4.73	5.16	5.97	6.43	6.49	6.05
13	6.04	5.95	5.72	5.25	5.65	6.02	4.74	5.17	6.00	6.45	6.48	6.05
14	6.02	5.95	5.71	5.26	5.67	6.01	4.75	5.18	6.00	6.45	6.47	6.04
15	6.02	5.95	5.70	5.27	5.68	6.00	4.76	5.19	6.03	6.46	6.46	6.04
16	6.01	5.94	5.67	5.29	5.70	6.00	4.76	5.20	6.04	6.47	6.45	6.03
17	6.00	5.93	5.57	5.30	5.71	5.99	4.76	5.23	6.05	6.48	6.44	6.03
18	6.00	5.93	5.45	5.30	5.72	6.00	4.78	5.25	6.07	6.49	6.43	6.03
19	6.00	5.93	5.32	5.31	5.74	6.00	4.79	5.28	6.00	6.50	6.43	6.03
20	5.99	5.92	5.24	5.34	5.76	6.00	4.81	5.32	6.10	6.51	6.41	6.02
21	5.98	5.92	5.19	5.39	5.79	6.00	4.82	5.37	6.12	6.51	6.40	6.02
22	5.98	5.92	5.17	5.41	5.83	5.85	4.84	5.41	6.14	6.52	6.40	6.02
23	5.97	5.90	5.17	5.43	5.86	5.42	4.87	5.45	6.15	6.52	6.39	6.02
24	5.97	5.89	5.16	5.44	5.87	5.23	4.91	5.50	6.17	6.53	6.37	6.02
25	5.97	5.88	5.16	5.45	5.88	5.09	4.94	5.58	6.19	6.54	6.35	6.02
26	5.97	5.87	5.15	5.46	5.89	5.03	4.98	5.65	6.21	6.54	6.33	6.01
27	5.96	5.85	5.16	5.47	5.91	4.95	5.00	5.72	6.23	6.55	6.30	6.01
28	5.96	5.83	5.16	5.49	5.93	4.71	5.01	5.73	6.25	6.55	6.29	6.00
29	5.96	5.82	5.16	5.50	5.94	4.50	5.02	5.74	6.27	6.55	6.27	6.00
30	5.96		5.16	5.50	5.96	4.46	5.04	5.75	6.28	6.55	6.25	6.00
31	5.95		5.16		5.96		5.05	5.76		6.55		6.00

4-21-32cc. Rhynolds. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Feb. 5	13.59	June 11	14.72	Oct. 7	15.59
Apr. 13	13.30	Aug. 5	14.64	Dec. 10	14.87

4-22-25cc. Hays. Lowest observed stage in period of record, 12.85 on Oct. 7. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Feb. 4	11.74	June 11	11.94	Oct. 7	12.85
Apr. 13	11.24	Aug. 5	11.15	Dec. 10	12.53

4-22-29ad. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Feb. 4	15.90	June 11	16.10	Oct. 7	16.04
Apr. 13	15.88	Aug. 5	15.44	Dec. 10	15.87

4-22-32dd. Mrs. Coker. Lowest observed stage in period of record, 12.20 on Dec. 6. Records available: 1946-48.

Feb. 2	10.03	June 7	10.60	Oct. 1	12.17
Apr. 9	9.32	Aug. 2	10.09	Dec. 6	12.20

4-22-34bb. Payne. Lowest observed stage in period of record, 15.61 on June 11. Records available: 1946-48.

Feb. 4	14.05	June 11	15.61	Dec. 10	15.23
Apr. 13	13.85	Oct. 7	15.55		

4-23-20ab. Larson. Records available: 1946-48.

Feb. 4	27.19	June 11	28.28	Dec. 10	27.82
Apr. 13	27.21	Oct. 7	27.59		

4-23-23bd. Moore. Records available: 1936-44, 1946-48.

Feb. 4	29.34	June 11	29.68	Oct. 7	30.15
Apr. 13	29.26	Aug. 5	29.35	Dec. 10	29.92

4-23-27dd. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Feb. 2	10.64	June 7	10.85	Oct. 1	11.35
Apr. 9	10.15	Aug. 2	9.75	Dec. 6	11.36

4-23-30cc. Bremling Bros. Lowest observed stage in period of record, 54.69 on Aug. 2. Records available: 1946-48.

Feb. 2	52.63	Aug. 2	54.69	Dec. 6	53.81
June 7	52.92	Oct. 1	53.68		

4-23-36aa. Watson. Records available: 1946-48.

Feb. 2	20.45	June 7	20.59	Oct. 1	20.52
Apr. 9	20.12	Aug. 2	19.04	Dec. 6	20.82

4-24-13cd. Thomas. Records available: 1946-48.

Feb. 4	17.52	June 11	18.04	Oct. 7	17.12
Apr. 13	17.64	Aug. 5	16.65	Dec. 10	17.55

4-24-15cc. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Feb. 4	13.37	June 10	13.55	Oct. 7	13.33
Apr. 13	12.97	Aug. 5	12.14	Dec. 10	13.70

4-24-19cc. Furlington. Records available: 1946-48.

Feb. 4	14.26	June 10	14.59	Oct. 7	14.40
Apr. 13	13.76	Aug. 5	14.16	Dec. 10	14.40

4-24-22dd. Geological Survey, U. S. Dept. of Interior. Measuring point raised 3 feet on Oct. 1. Lowest observed stage in period of record, 7.19 on Dec. 6. Records available: 1946-48. Apr. 9, 5.47; June 7, 6.22; Oct. 1, 7.10; Dec. 6, 7.19.

4-24-29cd. Andrews Estate. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Feb. 2	21.08	June 7	21.40	Oct. 1	22.00
Apr. 9	20.86	Aug. 2	21.60	Dec. 6	21.35

4-25-32cd. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 6.58 on Oct. 1. Records available: 1946-48.

Feb. 2	5.35	June 7	5.79	Oct. 1	6.58
Apr. 9	5.05	Aug. 2	5.12	Dec. 6	5.62

4-25-34ad. Sayer. Records available: 1946-48.

Feb. 2	17.02	June 7	17.54	Oct. 1	17.17
Apr. 9	16.29	Aug. 2	17.19	Dec. 6	16.86

Gage County

No measurements made in 1948.

Garden County

17-44-22cc. Morris. Records available: 1935-42, 1944-46, 1948.
Oct. 22, 26.39.

18-46-27cc. University of Nebraska. Erroneously published in previous reports as 17-46-34bb. Records available: 1935-42, 1944, 1946, 1948.
Mar. 26, 4.34; July 2, 3.81; Aug. 31, 3.97; Oct. 22, 4.14.

(Measurements in following wells supplied by Fish and Wildlife Service, U. S. Dept. of Interior.)

20-44-5db. Crescent Lake Migratory Bird Refuge. Records available: 1934-48. June 16, 6.00; Sept. 1, 6.10; Dec. 10, 6.30.

20-44-9ca. Crescent Lake Migratory Bird Refuge. Records available: 1933-39, 1942-48. Mar. 26, 3.90; June 16, 5.20; Sept. 29, 5.20; Dec. 10, 5.40.

20-45-13ab. Crescent Lake Migratory Bird Refuge. Records available: 1934-48. Mar. 26, 2.10; June 16, 2.60; Sept. 29, 2.70; Dec. 8, 3.10.

20-45-17ba. Crescent Lake Migratory Bird Refuge. Highest observed stage in period of record, 3.30 on Mar. 26. Records available: 1934-43, 1945-48. Mar. 26, 3.30; June 18, 4.60; Sept. 29, 4.60; Dec. 8, 4.70.

21-44-29ab. Crescent Lake Migratory Bird Refuge. Records available: 1934-48. Mar. 26, 2.76; June 16, 3.46; Sept. 13, 3.06; Dec. 8, 3.26.

21-44-35ca. U. S. 59. Crescent Lake Migratory Bird Refuge. Records available: 1933-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	2.50	Mar. 23	1.70	Aug. 17	3.70	Oct. 29	3.70
20	2.50	Apr. 22	2.50	25	3.90	Nov. 9	3.70
26	2.50	May 18	2.80	Sept. 1	3.90	22	3.40
30	2.60	June 24	2.60	10	3.90	Dec. 1	3.40
Feb. 5	2.50	July 1	2.70	30	4.00	10	3.20
17	2.20	15	3.60	Oct. 6	4.00	17	3.10
24	2.10	26	3.70	12	3.90	23	3.10
Mar. 16	1.70	Aug. 10	3.80	19	3.80		

21-45-3bd. Crescent Lake Migratory Bird Refuge. Records available: 1933-48.

21-45-3bd--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	3.00	Apr. 6	2.70	Aug. 17	3.70	Oct. 29	4.10
20	2.90	27	2.60	25	3.80	Nov. 9	3.90
30	3.10	June 15	3.40	Sept. 3	3.80	22	3.80
Feb. 5	3.10	July 1	3.50	10	3.80	30	3.80
17	3.10	14	3.20	29	3.90	Dec. 8	3.80
24	3.00	22	3.30	Oct. 6	3.90	17	3.60
Mar. 16	2.90	26	3.30	13	3.90	31	3.80
26	2.80	Aug. 10	3.70	20	4.10		

21-45-10cd. Crescent Lake Migratory Bird Refuge. Highest observed stage in period of record, 1.60 on Mar. 25. Records available: 1933-48. Mar. 25, 1.60; June 18, 2.70; Sept. 29, 4.00; Dec. 8, 3.10.

21-45-27cb. Crescent Lake Migratory Bird Refuge. Records available: 1934-48. Mar. 26, 3.00; June 18, 3.20; Sept. 29, 3.60; Dec. 8, 3.40.

Garfield County

21-16-31ac. Robke. Records available: 1934-42. Destroyed, measurements discontinued.

Gosper County

5-22-3da. Phillips. Drilled abandoned well, diameter 3 inches, depth 158 feet. Measuring point, top of casing, 1.0 foot above land-surface datum, 2,418.62 feet above sea level. Highest observed stage in period of record, 151.04 on June 21; lowest, 151.86 on Oct. 16. Records available: 1948.

Jan. 20	151.10	June 21	151.04	Sept. 13	151.74	Nov. 13	151.39
May 31	151.75	July 24	151.30	Oct. 16	151.86		

5-22-12ab. Berntson. Records available: 1934-42. No measurements made in 1948.

5-22-12bb. University of Nebraska. Records available: 1937-42. Filled with dirt, measurements discontinued.

6-21-29cc. Forrester. Abandoned drilled well, diameter 4 inches, depth 135.0 feet. Measuring point, top of casing, 1.4 feet above land-surface datum. Highest observed stage in period of record, 123.48 on Nov. 13; lowest, 123.72 on Oct. 16. Records available: 1946. July 27, 123.65; Oct. 16, 123.72; Nov. 13, 123.48.

6-22-15cd. Abandoned drilled domestic well, diameter 4 inches, depth 152.3 feet. Measuring point, top of casing, 2.3 feet above land-surface datum. Highest observed stage in period of record, 126.84 on Nov. 13; lowest, 127.14 on Oct. 16. Records available: 1948. July 27, 127.00; Oct. 16, 127.14; Nov. 13, 126.84.

7-21-6bc. Well 182 in previous reports. Larson Estate. To convert water levels from feet above assumed datum, as published in previous reports, to feet below land-surface datum, subtract from 217.45. Altitude 2,467.35 feet above sea level. Highest observed stage in period of record, 108.20 on Nov. 12. Records available: 1934-39, 1948.

Jan. 21	110.16	July 3	108.67	Sept. 13	108.66	Nov. 12	108.20
Apr. 28	109.30	28	108.65	Oct. 14	109.38		

7-21-20bb. Abandoned well, diameter 2½ inches, depth 229 feet. Measuring point, top of pipe, 1.5 feet above land-surface datum, 2,545.71 feet above sea level. Highest observed stage in period of record, 197.42 on Nov. 12, 1948; lowest, 198.97 on Nov. 25, 1947. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level
Nov. 25, 1947	198.97	June 21, 1948	197.69	Oct. 14, 1948	197.67
Apr. 28, 1948	198.45	July 28	197.78	Nov. 12	197.42
May 31,	198.37	Sept. 13	197.97		

7-21-24dc. Abandoned domestic well, diameter 4 inches, depth 195.4 feet. Measuring point, top of casing, 3.0 feet above land-surface datum, 2,487.87 feet above sea level. Highest observed stage in period of record, 171.23 on Nov. 12; lowest, 172.11 on May 28. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level
May 28	172.11	July 20	171.82	Oct. 15	171.39
June 23	171.92	Sept. 13	171.57	Nov. 12	171.23

7-21-33aa. Abandoned drilled stock well, diameter 3 inches, depth 192.0 feet. Measuring point, top of pipe, 1.5 feet above land-surface datum, 2,495.69 feet above sea level. Highest observed stage in period of record, 177.85 on Oct. 29, 1948; lowest, 181.68 on Dec. 17, 1947. Records available: 1947-48.

Dec. 17, 1947	181.68	May 31, 1948	179.23	Oct. 29, 1948	177.85
Apr. 28, 1948	179.44	June 21	178.48		

7-22-8bb. Abandoned drilled well, diameter 3 inches, depth 284 feet. Measuring point, hole in side of pipe, 0.5 foot above land-surface datum, 2,639.94 feet above sea level. Highest observed stage in period of record, 244.65 on Nov. 12, 1948; lowest, 251.65 on Nov. 25, 1947. Records available: 1947-48.

Nov. 25, 1947	251.65	July 3, 1948	246.12	Oct. 15, 1948	244.67
Apr. 28, 1948	247.22	Sept. 13	245.54	Nov. 12	244.65
May 31	246.75				

7-22-13bb. Naumann. Altitude 2,583.87 feet above sea level. Highest observed stage in period of record, 225.32 on Nov. 12. Records available: 1947-48. Measurements discontinued after Nov. 12.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 28	226.40	July 3	226.05	Sept. 13	225.70	Nov. 12	225.32
May 31	226.31	28	225.90	Oct. 16	225.55		

8-21-3dc. Jeffrey Bros. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 8	12.51	May 6	12.98	Sept. 9	13.59
Mar. 4	13.58	July 8	12.82	Nov. 6	13.75

8-21-11aa. Central Nebraska Public Power and Irrigation District. Lowest observed stage in period of record, 6.35 on Sept. 9. Records available: 1938-48.

Jan. 8	5.80	May 6	5.25	Sept. 9	6.35
Mar. 4	5.42	July 8	5.18	Nov. 6	6.18

8-21-30dd. Nyslop. Abandoned well, diameter 3 inches, depth 144 feet. Measuring point, top of casing, 2.0 feet above land-surface datum. Highest observed stage in period of record, 130.80 on Nov. 12; lowest, 132.11 on Jan. 21. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 21	132.11	July 3	131.50	Sept. 13	131.39	Nov. 12	130.80
Apr. 28	132.10	28	131.25	Oct. 14	130.98		

8-22-17dd. Abandoned well, diameter 3 inches, depth 222 feet. Measuring point, top of casing, 1.0 foot above land-surface datum, 2,603.79 feet above sea level. Highest observed stage in period of record, 162.40 on Nov. 12, 1948; lowest, 169.72 on Nov. 25, 1947. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level
Nov. 25, 1947	169.72	Aug. 4, 1948	164.46	Oct. 16, 1948	163.20
Nov. 28, 1948	165.92	Sept. 13	163.64	Nov. 12	162.40

6-22-26cc. Abandoned well, diameter 4 inches, depth 201 feet. Measuring point, top of casing, 2.1 feet above land-surface datum. Records available: 1948. Oct. 16, 167.98; Nov. 12, 168.29.

8-23-12cb. Tilson. Drilled stock well, diameter 4 inches. Measuring point, top of casing, 1.0 foot above land-surface datum. Records available: 1948. Oct. 17, 58.67.

Grant County

24-37-25ac. University of Nebraska. Records available: 1935-42, 1946-48. Mar. 25, 5.04; June 30, 5.54; Sept. 2, 6.18; Oct. 19, 6.06.

24-40-36bb. University of Nebraska. Records available: 1935-42, 1944-48. Mar. 25, 13.85; June 30, 13.89; Sept. 2, 14.18; Oct. 19, 14.26.

Greeley County

17-10-10cb. University of Nebraska. Records available: 1935-42. No measurements made in 1948.

17-11-31ba. Yuma. Drilled irrigation well, diameter 18 inches, reported depth 100 feet. Measuring point, hole in turbine base, at land-surface datum. Records available: 1948. June 28, 35.40; Sept. 30, 35.52.

17-12-6dc. Fuss. Drilled irrigation well, diameter 18 inches, reported depth 92 feet. Measuring point, hole in turbine base, 1.0 foot above land-surface datum. Records available: 1948. June 29, 12.45; Sept. 30, 13.15.

17-12-9bb. Williams. Dug and drilled irrigation well, diameter 96 to 18 inches, depth 33 feet. Measuring point, edge of concrete curb, at land-surface datum. Records available: 1948. Sept. 30, 27.00.

17-12-26aa. Jess. Drilled irrigation well, diameter 18 inches, depth 130 feet. Measuring point, hole in turbine base, 0.5 foot above land-surface datum. Records available: 1948. June 28, 23.65; Sept. 30, 25.99.

19-9-12db. Irrigation well. Measuring point, hole in base, at land-surface datum. Records available: 1948. Apr. 28, 37.27; Sept. 29, 38.69.

20-9-20cc. University of Nebraska. To convert water levels from feet above assumed datum, as published in previous reports, to feet below land-surface datum, subtract from 102. Records available: 1935-42, 1948. Apr. 22, 2.24.

20-9-20db. University of Nebraska. To convert water levels from feet above assumed datum, as published in previous reports, to feet below land-surface datum, subtract from 108.42. Records available: 1937-41, 1948. Apr. 22, 8.60; Sept. 29, 9.15.

20-9-30ca. Gilray. Drilled irrigation well, diameter 16 inches, reported depth 168.0 feet. Measuring point, hole in turbine base, 2.0 feet above land-surface datum. Records available: 1948. Apr. 22, 68.00; Sept. 28, 68.49.

20-9-34aa. Haggerty. Drilled irrigation well, diameter 24 inches, depth 168.0 feet. Measuring point, hole in turbine base, 0.5 foot above land-surface datum. Records available: 1948. Apr. 22, 32.85; Sept. 29, 33.12.

Hall County

(Measurements in wells owned by the city of Grand Island were supplied through the courtesy of the Grand Island Water Department.)

9-19-8cb. Lautenschlager. Drilled irrigation well, diameter 18 inches, reported depth 168.0 feet. Measuring point, hole in turbine base, 0.50 foot above land-surface datum. Records available: 1948. June 2, 72.13; Oct. 22, 72.59.

9-9-12ba. Stulken. Drilled irrigation well, diameter 18 inches, reported depth 168 feet. Measuring point, hole in turbine base, at land-surface datum. Records available: 1948. June 2, 67.75; Oct. 22, 68.15.

9-9-27bc. Alber. Drilled irrigation well, diameter 18 inches, reported depth 167.0 feet. Measuring point, hole in turbine base, 0.50 foot above land-surface datum. Records available: 1948. June 5, 66.65; Oct. 22, 67.15.

9-10-4dc. Hilsbeck. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 9	6.04	May 6	5.48	Sept. 2	6.39
Mar. 8	5.21	July 9	6.09	Nov. 6	6.59

9-10-23ab. Thaden. Drilled irrigation well, diameter 18 inches, reported depth 171.5 feet. Measuring point, hole in turbine base, at land-surface datum. Records available: 1948. June 22, 78.55; Oct. 22, 79.12.

9-10-29db. Rainforth. Highest observed stage in period of record, 69.96 on May 11. Records available: 1947-48. May 11, 69.9²; Oct. 22, 70.00.

9-11-8bc. Gosda. Records available: 1945-48.

Jan. 5	6.87	May 3	6.22	Sept. 3	7.33
Mar. 10	6.22	July 5	6.76	Nov. 3	7.35

9-11-14cb. Cox. Records available: 1946-48.

Jan. 9	7.34	May 6	7.58	Sept. 3	8.82
Mar. 8	7.44	July 9	8.47	Nov. 6	8.30

9-11-21bb. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Jan. 9	8.31	May 6	8.14	Sept. 3	9.13
Mar. 8	7.65	July 9	8.86	Nov. 6	7.85

9-12-1dc. Kipp. Records available: 1930-48.

Jan. 5	7.22	May 3	5.66	Nov. 3	7.32
Mar. 10	6.70	July 5	6.41		

9-12-9ba. Ohlman. Measuring point raised 0.2 foot on July 5. Records available: 1930-48.

Jan. 5	22.14	May 3	21.30	Sept. 3	22.35
Mar. 10	22.95	July 5	20.95	Nov. 3	22.19

10-9-3cb. City of Grand Island. Records available: 1935-48. Feb. 16, 5.25; June 14, 5.08; Sept. 20, 5.34.

10-9-4cb. City of Grand Island. Records available: 1935-48. Feb. 16, 5.08; June 14, 5.15; Sept. 20, 5.45.

10-9-8cc. City of Grand Island. Records available: 1935-47. No measurements made in 1948.

10-9-10bb. Herman. Records available: 1946-48.

Jan. 9	8.38	May 6	7.92	Sept. 3	9.40
Mar. 15	7.78	July 9	8.35	Nov. 2	9.06

10-9-28cc. Records available: 1946-48.

Jan. 9	14.46	May 6	14.23	Sept. 3	14.80
Mar. 8	14.02	July 9	14.52	Nov. 3	14.70

10-10-8cc. Dahlstrom. Records available: 1931-48.

Jan. 5	22.18	May 3	21.38	Sept. 2	23.22
Mar. 15	21.22	July 5	21.28	Nov. 3	22.22

10-10-13dd. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 2.65 on Mar. 15; lowest, 4.62 on Sept. 2. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 9	3.22	May 6	3.79	Sept. 2	4.62
Mar. 15	2.65	July 9	4.57	Nov. 3	3.85

10-11-15dc. Bouton. Records available: 1930-48.

Jan. 5	17.85	May 3	17.03	Sept. 3	19.38
Mar. 15	17.75	July 5	17.50	Nov. 3	18.72

10-11-30bc. Weldon. Records available: 1930-48.

Jan. 5	19.00	May 3	18.75	Nov. 3	19.56
Mar. 10	19.08	July 5	18.71		

10-12-21cc. Knight. Highest observed stage in period of record, 27.76 on July 5. Records available: 1947-48.

Jan. 5	28.45	May 3	27.92	Sept. 3	28.95
Mar. 10	28.20	July 5	27.76	Nov. 3	28.27

11-9-3bc. City of Grand Island. Records available: 1935-36, 1938-47. No measurements made in 1948.

11-9-4cc. City of Grand Island. Records available: 1935-40, 1942-48. May 10, 11.58; July 26, 10.42; Nov. 15, 10.58.

11-9-4cd. City of Grand Island. Records available: 1935-36, 1938-48. May 10, 12.08; July 26, 12.58; Nov. 15, 11.83.

11-9-8da. City of Grand Island. Records available: 1935-48. May 10, 14.66; July 26, 19.25.

11-9-8db. City of Grand Island. Highest observed stage in period of record, 12.00 on May 10. Records available: 1935-46, 1948. May 10, 12.00.

11-9-9aai. City of Grand Island. Records available: 1935-48. May 5, 18.50; July 26, 22.42; Nov. 15, 19.50.

11-9-9bd. City of Grand Island. Records available: 1935-48. May 10, 16.17; July 26, 15.75; Nov. 15, 17.82.

11-9-9cc. City of Grand Island. Lowest observed stage in period of record, 17.66 on Nov. 16. Records available: 1935-36, 1938-48. May 10, 18.92; July 26, 20.42; Nov. 16, 17.66.

11-9-9da. City of Grand Island. Highest observed stage in period of record, 24.83 on Nov. 15. Records available: 1935-48. May 10, 26.08; July 26, 26.30; Nov. 15, 24.83.

11-9-9dd. City of Grand Island. Highest observed stage in period of record, 24.93 on Nov. 15. Records available: 1935-48. May 10, 25.67; July 26, 26.75; Nov. 15, 24.93.

11-9-12dc. City of Grand Island. Records available: 1935-48. Feb. 16, 6.75; June 14, 6.66; Sept. 20, 7.00.

11-9-15bb1. City of Grand Island. Highest observed stage in period of record, 22.00 on Nov. 15. Records available: 1935-48. May 10, 25.16; July 26, 25.75; Nov. 15, 22.00.

11-9-15bb2. City of Grand Island. Highest observed stage in period of record, 25.25 on Nov. 15. Records available: 1935-48. May 10, 26.75; July 26, 27.66; Nov. 15, 25.25.

11-9-15cc. City of Grand Island. Records available: 1935-47. No measurements made in 1948.

11-9-15db. City of Grand Island. Records available: 1935-40. 1942-48. May 10, 7.83; July 26, 8.30; Nov. 15, 6.83.

11-9-15dd. City of Grand Island. Records available: 1935-48. Feb. 16, 7.75; June 14, 6.58; Sept. 20, 7.92.

11-9-16ad. City of Grand Island. Highest observed stage in period of record, 28.42 on Nov. 15. Records available: 1935-48. May 10, 29.83; July 26, 30.92; Nov. 15, 28.42.

11-9-16bc. City of Grand Island. Records available: 1935-48. May 10, 28.16; July 26, 28.83; Nov. 15, 26.75.

11-9-16bd. City of Grand Island. Records available: 1936-42, 1944-48. May 10, 35.42; July 26, 36.92; Nov. 15, 33.83.

11-9-16ca. City of Grand Island. Records available: 1935-48. May 10, 31.66; July 26, 28.42; Nov. 15, 33.83.

11-9-16cb. City of Grand Island. Records available: 1935-48. May 10, 29.25; July 26, 29.92; Nov. 15, 27.92.

11-9-16db. City of Grand Island. Highest observed stage in period of record, 29.08 on Nov. 15. Records available: 1935-48. May 10, 30.16; July 26, 31.25; Nov. 15, 29.08.

11-9-17ba. City of Grand Island. Records available: 1935-48. May 10, 14.52; July 26, 15.16; Nov. 15, 13.00.

11-9-17bd. City of Grand Island. Records available: 1935-48. May 10, 17.92; July 26, 18.83; Nov. 15, 16.50.

11-9-17cd. City of Grand Island. Records available: 1935-36, 1938-48. May 10, 20.50; July 26, 27.42; Nov. 15, 19.25.

11-9-21bb. City of Grand Island. Records available: 1935-48. May 10, 29.25; July 26, 30.08; Nov. 15, 27.42.

11-9-21bd. City of Grand Island. Records available: 1935-48. May 10, 30.92; July 26, 33.00; Nov. 15, 28.64.

11-9-22cb. City of Grand Island. Records available: 1935-48. Feb. 16, 9.83; June 14, 8.75; Sept. 20, 9.25.

11-9-26aa. City of Grand Island. Records available: 1935-48. Feb. 16, 5.34; June 14, 4.75; Sept. 20, 5.25.

11-9-27bc. City of Grand Island. Records available: 1942-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	9.91	Mar. 16	8.77	July 12	8.99	Nov. 2	10.54
Feb. 16	10.03	May 6	8.10	Sept. 3	9.67		

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11-9-28ba. City of Grand Island. Records available: 1935-48. Feb. 16, 11.83; June 14, 13.50; Sept. 20, 13.42.

11-9-29bb. City of Grand Island. Records available: 1935-48. Feb. 16, 20.66; June 14, 20.35; Sept. 20, 19.25.

11-9-32cc. City of Grand Island. Records available: 1935-48. Feb. 16, 4.08; June 14, 3.83; Sept. 20, 4.50.

11-9-34aa. City of Grand Island. Records available: 1935-48. Feb. 16, 5.50; June 14, 4.83; Sept. 20, 5.00.

11-9-34cb. City of Grand Island. Records available: 1935-48. Feb. 16, 5.08; June 14, 4.83; Sept. 20, 5.42.

11-9-35dc. City of Grand Island. Records available: 1935-48. Feb. 16, 3.75; June 14, 3.83; Sept. 20, 4.42.

11-10-1cc. City of Grand Island. Records available: 1935-48. Feb. 16, 6.66; June 14, 6.34; Sept. 20, 6.66.

11-10-11dc. City of Grand Island. Records available: 1935-48. Feb. 16, 6.50; June 14, 6.42; Sept. 20, 6.32.

11-10-13ab. City of Grand Island. Records available: 1935-48. Feb. 16, 9.34; June 14, 9.34; Sept. 11, 9.33.

11-10-14dd. Thomas. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 5	10.30	May 3	10.42	Sept. 2	10.38
Mar. 16	10.65	July 5	10.44	Nov. 3	10.55

11-10-16bb. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 9.57 on Mar. 16. Records available: 1946-48.

Jan. 5	10.05	May 3	9.84	Sept. 2	10.06
Mar. 16	9.57	July 5	9.82	Nov. 3	9.86

11-10-24cb. City of Grand Island. Records available: 1935-48.
Feb. 16, 13.66; June 14, 14.92; Sept. 20, 14.88.11-10-26dd. City of Grand Island. Records available: 1935-39.
1942-48. Feb. 16, 7.75; June 14, 7.50; Sept. 20, 8.08.

11-10-27dc. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Jan. 5	16.64	May 3	16.79	Sept. 2	16.94
Mar. 15	16.98	July 5	17.02	Nov. 2	17.18

11-11-25cc. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Lowest daily water level, from recorder charts

Day	Jan.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	16.38	.....	15.99	15.92	15.96	15.88	16.33	15.91	16.13	15.97	15.90
2	16.38	.....	15.98	15.92	15.95	15.85	16.40	15.97	16.11	15.97	15.90
3	16.39	.....	15.96	15.92	15.92	15.82	16.45	16.08	16.11	15.97	15.90
4	16.40	.....	15.94	15.95	15.92	15.80	16.43	16.05	16.10	15.97	15.90
5	16.40	.....	15.93	15.94	15.92	15.80	16.45	16.04	16.11	15.97	15.92
6	16.40	.....	15.92	15.95	15.93	15.82	16.48	16.03	16.11	15.95	15.93
7	16.38	.....	15.92	15.95	15.93	15.83	16.50	16.04	16.11	15.93	15.90
8	16.40	.....	15.93	15.94	15.93	15.83	16.52	16.03	16.09	15.93	15.89
9	16.42	.....	15.93	15.94	15.93	15.83	16.53	16.07	16.08	15.93	15.90
10	16.42	.....	15.92	15.95	15.93	15.83	16.54	16.09	16.08	15.93	15.88
11	16.40	.....	15.93	15.97	15.92	15.84	16.54	16.11	16.08	15.92	15.90
12	16.42	.....	15.94	15.98	15.92	15.84	16.54	16.12	16.07	15.92	15.89
13	16.42	.....	15.96	15.98	15.95	15.84	16.53	16.12	16.07	15.92	15.85
14	16.42	.....	15.96	15.95	15.95	15.84	16.51	16.13	16.05	15.92	15.85
15	16.42	16.30	15.95	15.95	15.94	15.84	16.49	16.13	16.05	15.94	15.84
16	16.43	16.32	15.94	15.98	15.95	15.85	16.50	16.12	16.06	15.94	15.84
17	16.43	16.32	15.93	15.98	15.95	15.85	16.52	16.13	16.02	15.94	15.85
18	16.42	16.25	15.92	15.97	15.95	15.85	16.53	16.14	16.02	15.94	15.87
19	16.42	16.18	15.93	15.97	15.95	15.85	16.53	16.13	16.02	15.96	15.89
20	16.40	16.13	15.95	15.96	15.95	15.90	16.57	16.13	16.03	15.94	15.89
21	16.40	16.07	15.95	15.96	15.95	15.93	16.53	16.14	16.03	15.91	15.83
22	16.41	16.03	15.94	15.95	15.95	15.95	16.54	16.14	16.03	15.91	15.85
23	16.42	16.01	15.93	15.95	15.95	15.98	16.56	16.15	16.00	15.91	15.87
24	16.42	16.01	15.93	15.95	15.96	16.00	16.57	16.15	16.00	15.93	15.89
25	16.43	16.00	15.93	15.97	15.96	16.02	16.44	16.14	16.00	15.93	15.91
26	16.43	16.00	15.94	15.95	15.96	16.03	16.36	16.13	15.99	15.91	15.93
27	.....	16.03	15.96	15.95	15.96	16.03	16.24	16.12	16.00	15.90	15.95
28	.....	16.03	15.96	15.95	15.95	16.04	16.13	16.11	16.00	15.89	15.96
29	.....	16.00	15.96	15.95	15.93	16.05	16.06	16.12	15.99	15.90	15.97
30	.....	16.00	15.93	15.95	15.90	16.06	15.98	16.13	15.99	15.89	15.99
31	.....	15.99		15.96		16.25	16.00		15.99		16.00

a Interpolated.

11-11-32cb. Hughes. Lowest observed stage in period of record, 36.80 on Sept. 3. Records available: 1930-41; 1943-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 5	36.25	May 3	35.76	Sept. 3	36.80
Mar. 15	35.95	July 5	35.60	Nov. 3	36.05

11-11-36cb. Batie. Records available: 1930-40; 1943-48.

Jan. 5	23.25	May 3	22.75	Nov. 3	22.85
Mar. 15	23.15	July 5	22.50		

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	26.56	May 3	26.39	July 5	26.31	Nov. 3	26.50
Mar. 10	26.48	June 22	26.33	Sept. 3	27.58		

12-9-32aa1. City of Grand Island. Records available: 1935-48.
Feb. 16, 9.25; June 14, 8.75; Nov. 20, 9.25.

Date	Water level	Date	Water level	Date	Water level
Jan. 5	12.55	May 3	11.68	Nov. 2	12.66
Mar. 16	12.22	July 5	11.66		

12-11-24cd. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Jan. 5	9.58	May 3	9.22	Sept. 2	8.45
Mar. 15	9.60	July 5	8.49	Nov. 3	9.59

9-6-34bb. Wild. Records available: 1984-42, 1991, 1992 June 1, 39.12.

9-8-9dc. Phillips. Records available: 1934-42, 1944, 1946, 1948.
Oct. 26. 57.95.

11-5-5ba. Anderson & Madsen. Drilled irrigation well, diameter 18 inches, depth 158.0 feet. Measuring point, hole in turbine base, at land-surface datum. Records available: 1948. May 26, 84.00; Oct. 26, 86.45.

11-5-26cc. Klute. Drilled irrigation well, diameter 18 inches, reported depth 138 feet. Measuring point, hole in turbine base, at land-surface datum. Records available: 1948. June 23, 82.88; Oct. 15, 83.00.

11-6-13cb. Swedberg. Records available: 1934-42, 1944, 1946-48.
June 4, 93.51.

11-8-28bc. Rathje. Highest observed stage in period of record, 29.75 on Mar. 16. Records available: 1946-48.

Jan. 9	30.73	May 6	30.38	Sept. 3	30.73
Mar. 16	29.75	July 12	31.13	Nov. 2	31.02

13-5-19aa. Clayton. Measuring point raised 2 feet on Sept. 1.
Records available: 1946-48.

Jan. 12	26.04	May 7	25.45	Sept. 1	26.70
Mar. 18	25.58	July 12	25.85	Nov. 1	24.92

13-6-27cc. Lock. Records available: 1935-40, 1942, 1944, 1946-48.

Jan. 12	9.55	May 6	9.80	Sept. 1	10.10
Mar. 18	8.40	July 12	9.34	Nov. 1	10.02

1-17-lda. Geological Survey, U. S. Dept. of Interior. Altitude 1,879.45 feet above sea level. Lowest observed stage in period of record, 8.00 on Oct. 7. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 5	6.38	June 11	6.58	Oct. 7	8.00	Dec. 10	7.17
Apr. 13	5.38	Aug. 5	6.35	Nov. 18	a 7.49	22	a 6.93

^a By Bureau of Reclamation, U. S. Dept. of Interior.

1-17-11aa. Bureau of Reclamation, U. S. Dept. of Interior. Driven observation well, diameter $1\frac{1}{4}$ inches, depth 18.0 feet. Measuring point, top of pipe, 1.5 feet above land-surface datum, 1,892.94 feet above sea level. Records available: 1948. Nov. 18, 13.45; Dec. 22, 13.27.

1-17-12cb. Bureau of Reclamation, U. S. Dept. of Interior. Driven observation well, diameter $1\frac{1}{4}$ inches, depth 10.7 feet. Measuring point, top of pipe, 1.0 foot above land-surface datum, 1,881.98 feet above sea level. Records available: 1948. Nov. 18, 7.33; Dec. 22, 7.08.

1-17-12dd. Mrs. Godeken. Erroneously published in previous reports as da. Altitude 1,888.19 feet above sea level. Lowest observed stage in period of record, 18.92 on Dec. 22. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Feb. 5	17.13	June 11	17.00	Nov. 18	17.98
Apr. 13	16.50	Oct. 7	18.02	Dec. 22	18.92

a By Bureau of Reclamation, U. S. Dept. of Interior.

1-17-13bb. Bureau of Reclamation, U. S. Dept. of Interior. Driven observation well, diameter $1\frac{1}{4}$ inches, depth 17.0 feet. Measuring point top of casing, 1.5 feet above land-surface datum, 1,888.80 feet above sea level. Records available: 1948. Nov. 18, 13.83; Dec. 22, 13.84.

1-19-35bc. Rogers. Highest observed stage in period of record, 28.80 on Apr. 2. Records available: 1947-48. Jan. 1, 29.71; Apr. 2, 28.80; June 3, plugged.

2-18-33cd. Feese. Records available: 1934-42, 1944, 1946-48.

Feb. 5	10.49	June 11	10.22	Oct. 7	11.22
Apr. 13	10.05	Aug. 5	9.93	Dec. 10	10.56

2-19-5cb. Short. Records available: 1946-48.

Feb. 5	20.90	June 11	21.62	Oct. 7	22.65
Apr. 13	20.70	Aug. 5	22.95	Dec. 10	21.42

2-19-17da. Korte. Lowest observed stage in period of record, 22.22 on Dec. 10. Records available: 1946-48.

Feb. 5	20.77	June 11	21.32	Oct. 7	22.16
Apr. 13	20.36	Aug. 5	20.60	Dec. 10	22.22

2-19-26bb. Abandoned drilled stock well, diameter 6 inches, depth 43 feet. Measuring point, top of casing, 1.0 foot above land-surface datum. Records available: 1948. Dec. 10, 34.98.

2-19-28dd. University of Nebraska. Records available: 1940-41, 1946-48.

Feb. 5	9.04	June 11	9.34	Oct. 7	9.80
Apr. 13	8.74	Aug. 5	8.12	Dec. 10	9.25

2-19-34bc. Fishbeck. Records available: 1946-48.

Feb. 5	21.15	June 11	21.55	Oct. 7	22.10
Apr. 13	21.03	Aug. 5	20.95	Dec. 10	21.38

3-17-21da. Remke. To convert water levels from feet above assumed datum, as published in previous reports, to feet below land-surface datum, subtract from 51.90. Highest observed stage in period of record, 51.59 on Aug. 5. Records available: 1935-42, 1948. Jan. 22, 51.80; June 8, 51.73; Aug. 5, 51.59; Oct. 26, 51.77.

3-17-27bb. University of Nebraska. To convert water levels from feet above assumed datum, as published in previous reports, to feet below land-surface datum, subtract from 120.38. Records available: 1935-40, 1942, 1948. Jan. 22, 19.88.

3-20-7ab. Struve. Records available: 1946-48. Feb. 5, 29.82; Apr. 13, 29.82; Oct. 7, 30.22; Dec. 10, 30.05.

3-20-16bb. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Feb. 5	7.65	June 11	7.85	Oct. 7	8.74
Apr. 13	6.93	Aug. 5	7.08	Dec. 10	7.95

3-20-18ca. Fish Implement Co. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Feb. 5	14.50	June 11	14.52	Oct. 7	14.95
Apr. 13	14.15	Aug. 5	13.83	Dec. 10	15.05

3-20-22dd. Murdock. Measuring point lowered 1.5 feet after Oct. 7. Records available: 1946-48.

Feb. 5	25.29	June 11	25.90	Oct. 7	25.83
Apr. 13	25.25	Aug. 5	25.38	Dec. 10	25.30

3-20-25cc. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Feb. 5	13.86	June 11	14.42	Oct. 7	15.50
Apr. 13	13.11	Aug. 5	13.42	Dec. 10	15.43

Hayes County

5-32-25bc. Joy. Records available: 1934-43. No measurements made in 1948.

5-33-30cb. Scott. Records available: 1946-48.

Feb. 4	19.26	June 9	19.57	Oct. 6	19.78
Apr. 12	19.34	Aug. 4	19.71	Dec. 9	19.23

5-33-31dc. University of Nebraska. Records available: 1937-44, 1946-48.

Feb. 4	13.54	June 9	13.40	Oct. 6	14.55
Apr. 12	11.75	Aug. 4	13.25	Dec. 9	13.05

5-34-28bc. Schreiber. Highest observed stage in period of record, 57.60 on Apr. 12; lowest, 60.25 on Aug. 4. Records available: 1946-48.

Feb. 4	57.62	June 9	58.42	Oct. 5	58.30
Apr. 12	57.60	Aug. 4	60.25	Dec. 9	57.61

5-34-30ba. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 11.53 on Oct. 5. Records available: 1946-48.

Feb. 4	10.72	June 9	11.31	Oct. 5	11.53
Apr. 12	11.02	Aug. 4	11.38	Dec. 9	10.87

5-34-35ac. Lady. Drilled irrigation well, diameter 18 inches, reported depth 117.0 feet. Measuring point, hole in side of turbine, 0.6 foot above land-surface datum. Records available: 1948. June 9, 30.00; Oct. 6, 30.30; Dec. 9, 29.29.

5-35-17da. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 9.33 on Oct. 6. Records available: 1946-48.

Feb. 4	8.41	June 11	9.15	Oct. 6	9.33
Apr. 12	8.70	Aug. 4	9.32	Dec. 10	8.58

7-34-4ac. Laird & Ward Estate. Records available: 1934-41. No measurements made in 1948.

Hitchcock County

2-33-2aa. Wertz. Lowest observed stage in period of record, 12.05 on Oct. 6. Records available: 1946-48. Feb. 4, 10.53; Apr. 12, 10.06; Oct. 6, 12.05; Dec. 9, 10.90.

2-33-6cb. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 9.66 on Feb. 4; lowest, 11.32 on Oct. 6. Records available: 1946-48.

Feb. 4	9.66	June 9	10.24	Oct. 6	11.32
Apr. 12	9.73	Aug. 4	10.82	Dec. 9	9.96

2-33-10ab. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 7.05 on Apr. 9; lowest, 8.72 on Oct. 4. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Feb. 2	7.24	June 7	7.80	Oct. 4	8.72
Apr. 9	7.05	Aug. 2	8.18	Dec. 6	7.75

2-34-8da. Pollman. Lowest observed stage in period of record, 20.85 on June 9. Records available: 1946-48.

Feb. 4	19.35	June 9	20.85	Dec. 9	19.94
Apr. 13	19.10	Oct. 6	20.72		

2-34-11dc. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 11.95 on Oct. 6. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 2	11.04	June 9	11.30	Oct. 6	11.95	Dec. 3	11.18
Apr. 12	10.16	Aug. 4	11.53	27	11.63	9	11.19

a By Bureau of Reclamation, U. S. Dept. of Interior.

2-35-13bb. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Feb. 4	15.25	June 9	14.82	Oct. 6	15.46	Dec. 3	15.54
Apr. 12	14.67	Aug. 4	15.00	27	15.64	9	15.58

a By Bureau of Reclamation, U. S. Dept. of Interior.

2-35-21bc. Bloomfield. Records available: 1934-41, 1946-48.

Date	Water level	Date	Water level	Date	Water level
Feb. 4	20.28	June 9	20.61	Oct. 6	21.11
Apr. 12	20.50	Aug. 4	20.75	Dec. 9	20.83

2-35-24aa. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Feb. 4	5.32	June 9	5.86	Oct. 6	6.90
Apr. 12	4.88	Aug. 4	6.60	Dec. 9	5.87

3-31-14bc. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Feb. 4	14.62	June 11	14.81	Oct. 6	14.45
Apr. 12	14.69	Aug. 4	15.05	Dec. 10	14.12

3-31-17cd. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 7.18 on Feb. 2. Records available: 1946-48.

Feb. 2	7.18	June 7	8.18	Oct. 4	8.70
Apr. 9	7.66	Aug. 2	8.69	Dec. 6	7.52

3-31-20da. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 8.52 on Dec. 6. Records available: 1946-48.

Feb. 2	8.10	June 7	7.85	Oct. 4	8.40
Apr. 9	7.94	Aug. 2	8.12	Dec. 6	8.52

3-31-29bb. Highest observed stage in period of record, 12.79 on June 7. Records available: 1947-48. Feb. 2, 13.22; Apr. 9, 12.95; June 7, 12.79.

3-32-11bb. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 13.11 on Feb. 4; lowest, 14.15 on Oct. 6. Records available: 1946-48.

Feb. 4	13.11	June 9	13.85	Oct. 6	14.15
Apr. 12	13.42	Aug. 4	14.05	Dec. 9	13.40

3-32-12cc. Mrs. Morthole. Lowest observed stage in period of record, 22.15 on Aug. 4. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Feb. 4	21.52	June 9	22.07	Oct. 6	22.00
Apr. 12	21.72	Aug. 4	22.15	Dec. 9	21.69

3-32-26dd. Meintz. Lowest observed stage in period of record, 29.34 on Aug. 2. Records available: 1946-48.

Feb. 2	28.30	June 7	28.05	Oct. 4	29.32
Apr. 9	28.03	Aug. 2	29.34	Dec. 6	28.92

3-32-31aa. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 7.35 on Oct. 6. Records available: 1946-48.

Feb. 4	6.48	June 9	6.67	Oct. 6	7.35
Aug. 12	6.19	Aug. 4	6.84	Dec. 9	6.63

3-33-35dc. Lawrence. Lowest observed stage in period of record, 12.04 on Oct. 6. Records available: 1935-43, 1946-48.

Feb. 4	10.72	June 9	10.75	Oct. 6	12.04
Apr. 12	10.29	Aug. 4	11.38	Dec. 9	11.32

4-32-30dc. Abandoned drilled domestic well, diameter 4 inches, depth 27.0 feet. Measuring point, edge of casing, 0.5 foot above land-surface datum. Highest observed stage in period of record, 17.89 on Apr. 12; lowest, 18.95 on Oct. 6. Records available: 1948.

Apr. 12	17.89	Aug. 4	18.73	Dec. 9	18.10
June 9	18.47	Oct. 6	18.95		

4-32-33db. Bower. Record available: 1946. No measurements made in 1948.

4-33-8bb. Handel. Lowest observed stage in period of record, 56.05 on Oct. 6. Records available: 1946-48.

Feb. 4	55.09	June 9	55.49	Oct. 6	56.05
Apr. 12	54.94	Aug. 4	55.73	Dec. 9	55.42

4-33-23ad. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 13.86 on Oct. 6. Records available: 1946-48.

Feb. 4	12.73	June 9	13.29	Oct. 6	13.86
Apr. 12	12.66	Aug. 4	13.79	Dec. 9	12.68

Holt County

26-12-24aa. University of Nebraska. Records available: 1937-42. No measurements made in 1948.

27-9-27dd. University of Nebraska. Records available: 1937-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	5.78	Apr. 21	5.79	May 19	5.98	Aug. 4	5.72
Feb. 10	5.94	May 6	5.90	July 8	6.09	Sept. 15	5.58

27-9-34da. U. S. 56. University of Nebraska. Lowest observed stage in period of record, 9.88 on Sept. 29. Records available: 1935-48.

Jan. 13	9.01	Apr. 21	9.37	Aug. 4	9.75	Oct. 12	9.84
Feb. 10	9.08	May 6	9.29	18	9.37	25	9.79
25	9.01	19	9.56	Sept. 1	9.90	Nov. 10	9.68
Mar. 23	9.04	June 23	9.42	15	9.02	Dec. 6	9.18
Apr. 6	9.25	July 8	9.73	29	9.88	21	9.05

27-14-28bc. Petersen. Records available: 1935-42. No measurements made in 1948.

28-14-29aa. University of Nebraska. Records available: 1935-42. No measurements made in 1948.

29-11-9bb. Highest observed stage in period of record, 7.38 on Mar. 22; lowest, 8.08 on Oct. 13. Measurements made by Bureau of Reclamation, U. S. Dept. of Interior. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	7.39	Apr. 15	7.42	July 12	7.63	Oct. 13	8.08
Feb. 16	7.40	May 12	7.58	Aug. 18	7.70	Nov. 15	7.99
Mar. 22	7.38	June 15	7.83	Sept. 14	8.04		

29-11-21bb. Murphy. Measuring point raised 0.7 foot after Mar. 22. Highest observed stage in period of record, 16.87 on Jan. 14; lowest, 25.47 on Feb. 16. Measurements made by Bureau of Reclamation, U. S. Dept. of Interior. Records available: 1947-48.

Jan. 14	16.87	May 12	24.61	Aug. 18	25.39	Nov. 15	24.85
Feb. 16	25.47	June 15	24.82	Sept. 14	24.83	Dec. 14	25.19
Mar. 22	24.64	July 12	24.58	Oct. 13	24.84		

29-12-10cb. School district. Measurements made by Bureau of Reclamation, U. S. Dept. of Interior. Measuring point, lowered 2.0 feet after Jan. 14. Highest observed stage in period of record, 26.89 on Jan. 14; lowest, 27.63 on Feb. 16. Records available: 1947-48.

Jan. 14	26.89	Apr. 15	27.58	July 12	27.55	Nov. 15	27.57
Feb. 16	27.63	May 12	27.60	Sept. 14	27.59	Dec. 14	27.61
Mar. 22	27.55	June 15	27.60	Oct. 13	27.35		

29-13-13dd. Lowest observed stage in period of record, 43.07 on Mar. 22. Measurements made by Bureau of Reclamation, U. S. Dept. of Interior. Records available: 1947-48.

Jan. 14	39.69	May 12	40.00	Aug. 18	42.50	Oct. 13	40.29
Mar. 22	43.07	June 15	40.02	Sept. 14	40.20	Nov. 15	40.19
Apr. 15	39.84	July 12	40.00				

30-13-27cc. Measurements made by Bureau of Reclamation, U. S. Dept. of Interior. Highest observed stage in period of record, 29.78, Mar. 22; lowest, 30.80, Oct. 13. Records available: 1947-48.

Jan. 14	29.89	Apr. 15	30.09	July 12	30.43	Oct. 13	30.80
Feb. 16	29.84	May 12	30.58	Aug. 18	30.60	Dec. 14	30.61
Mar. 22	29.78	June 15	30.60	Sept. 14	30.79		

30-14-23dd. Measurements made by Bureau of Reclamation, U. S. Dept. of Interior. Highest observed stage in period of record, 30.59, Nov. 15; lowest, 32.05, July 12. Records available: 1947-48.

Jan. 14	31.55	Apr. 15	31.85	July 12	32.05	Oct. 13	30.90
Feb. 16	31.84	May 12	32.00	Aug. 18	31.46	Nov. 15	30.59
Mar. 22	31.80	June 15	31.99	Sept. 14	31.50	Dec. 14	31.87

31-14-35cb. Measurements made by Bureau of Reclamation, U. S. Dept. of Interior. Highest observed stage in period of record, 27.71, Jan. 14; lowest, 29.21, June 15. Records available: 1947-48.

Jan. 14	27.71	Mar. 22	29.08	May 12	29.16	July 12	29.20
Feb. 16	29.16	Apr. 15	29.05	June 15	29.21		

Hooker County

24-35-23dd. University of Nebraska. Lowest observed stage in period of record, 20.84 on Oct. 19. Records available: 1935-42, 1944-48. Mar. 25, 20.40; June 30, 20.73; Sept. 2, 20.72; Oct. 19, 20.84.

Howard County

13-9-26dd. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 5	8.35	May 3	7.43	Sept. 2	6.35
Mar. 16	8.11	July 5	5.57	Nov. 2	7.51

13-9-27ca. Placke Estate. Highest observed stage in period of record, 18.50 on July 2. Records available: 1934-42, 1944, 1948. Mar. 29, 18.73; July 2, 18.50.

13-12-29ba. Mrs. Young. Highest observed stage in period of record, 25.84 on Mar. 29. Records available: 1934-42, 1948. Mar. 29, 25.84; July 2, 26.60; Oct. 1, 27.10.

14-10-4ca. Svoboda. Abandoned drilled irrigation well, diameter 4 feet, depth 48 feet. Measuring point, edge of brick curb, at land-surface datum. Records available: 1948. May 21, 29.27; Oct. 1, 29.29.

14-10-14bb. University of Nebraska. Highest observed stage in period of record, 5.85 on June 28. Records available: 1934-42, 1944, 1948. Mar. 29, 5.89; June 28, 5.85; Oct. 1, 6.27.

15-9-9aa. Edwards. Abandoned drilled irrigation well, diameter 18 inches, depth 90 feet. Measuring point, edge of casing, 0.4 foot above land-surface datum. Stevens Type F 8-day automatic water-stage recorder installed Dec. 14, 1948. Highest observed stage in period of record, 32.50 on May 21; lowest, 32.80 on Dec. 25 and 26. Records available: 1948.

Lowest daily water level, from recorder charts

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 21	a 32.50	Dec. 17	32.77	Dec. 24	32.78	Dec. 28	32.71
Oct. 1	a 32.57	18	32.78	25	32.80	29	32.80
Dec. 14	32.69	22	32.77	26	32.77	30	32.78
15	32.74	23	32.77	27	32.72	31	32.79
16	32.77						

a Tape measurement.

15-10-12ca. Hanson. Drilled irrigation well, diameter 18 inches, depth 183 feet. Measuring point, hole in turbine base, 0.5 foot above land-surface datum. Records available: 1948. June 28, 65.65; Oct. 1, 66.59.

15-10-19ab. Ward. Drilled irrigation well, diameter 18 inches, depth 82 feet. Measuring point, hole in turbine base, 1.0 foot above land-surface datum. Highest observed stage in period of record, 8.48 on June 29; lowest, 11.14 on Sept. 30. Records available: 1948. Mar. 30, 10.85; June 29, 8.48; Sept. 30, 11.14.

15-10-34cb. Mrs. Anderson. Drilled irrigation well, diameter 18 inches. Measuring point, hole in turbine base, 0.5 foot above land-surface datum. Records available: 1948. June 29, 19.60; Oct. 1, 19.50.

16-11-7cc. Lind. Drilled irrigation well. Measuring point, hole in turbine base, at land-surface datum. Highest observed stage in period of record, 18.59 on Mar. 30; lowest, 19.59 on Sept. 30. Records available: 1948. Mar. 30, 18.59; June 29, 18.65; Sept. 30, 19.59.

16-11-27dc. Mrs. Augustyn. Measuring point raised 2 feet. Lowest observed stage in period of record, 72.24 on June 28. Records available: 1934-43, 1948. June 28, 72.24.

16-11-32ab. Gerdes. Drilled irrigation well, diameter 24 inches, depth 80 feet. Measuring point, hole in turbine base, 1.0 foot above land-surface datum. Highest observed stage in period of record, 17.58 on Sept. 30; lowest, 18.45 on Mar. 30 and June 29. Records available: 1948. Mar. 30, 18.45; June 29, 18.45; Sept. 30, 17.58.

Jefferson County

No measurements made in 1948.

Johnson County

No measurements made in 1948.

Kearney County

5-13-4bc. Larson. Drilled irrigation well, diameter 18 inches, depth 216 feet. Measuring point, hole in turbine base, 1.3 foot above land-surface datum, 2,109.95 feet above sea level. Highest observed stage in period of record, 120.78 on June 29; lowest, 121.19 on Sept. 14. Records available: 1948. June 29, 120.78; Sept. 14, 121.19; Oct. 11, 120.98; Nov. 16, 120.82.

5-13-18cd. Christensen. Drilled domestic and stock well, diameter 5 inches, depth 118.8 feet. Measuring point, top of casing, 1.0 feet above land-surface datum, 2,109.20 feet above sea level. Highest observed stage in period of record, 106.50 on July 12; lowest, 106.86 on Sept. 14.

Date	Water level	Date	Water level	Date	Water level
July 12	106.50	Sept. 14	106.86	Nov. 16	106.85
Aug. 3	106.58	Oct. 11	106.74		

5-13-33cc. Raun. Altitude 2,114.46 feet above sea level. Highest observed stage in period of record, 138.87 on Apr. 30; lowest, 139.62 on Aug. 3. Records available: 1947-48.

Apr. 30	138.87	June 29	139.26	Sept. 14	139.40
May 21	139.10	Aug. 3	139.62	Oct. 11	139.51

5-14-16cb. Peterson. Altitude 2,180.70 feet above sea level. Highest observed stage in period of record, 140.86 on Oct. 11. Records available: 1948.

Apr. 30	141.60	June 29	141.97	Nov. 16	142.02
May 21	141.82	Oct. 11	140.86		

5-14-33bb. Mrs. Nielson. Abandoned drilled domestic well, diameter 6 inches, depth 172 feet. Measuring point, top of casing, 0.7 foot above land-surface datum. Highest observed stage in period of record, 158.40 on Oct. 11 and Nov. 16; lowest, 158.53 on Sept. 14. Records available: 1948. July 23, 158.47; Sept. 14, 158.53; Oct. 11, 158.40; Nov. 16, 158.40.

5-15-3ba. Thomsen. Highest observed stage in period of record, 104.53 on Dec. 4. Altitude 2,193.73 feet above sea level. Records available: 1947-48.

Lowest daily water level, from recorder charts

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	105.45	106.44	105.53	105.54	105.16	.....
2	105.37	105.54	105.46	105.67	105.27	.....
3	105.59	105.45	105.69	105.38	105.36	.....
4	105.80	105.36	105.75	105.23	105.30	104.97
5	105.69	105.47	105.63	105.42	105.36	105.02
6	105.73	105.40	105.34	105.30	105.43	105.11
7	105.40	105.67	105.30	105.56	105.30	105.12
8	105.48	105.67	105.33	105.70	.....	105.11
9	105.72	105.42	105.49	105.56	.....	105.08
10	105.70	105.37	105.57	105.15	.....	105.16
11	105.39	105.64	105.54	105.22	.....	105.17
12	105.79	105.61	.....	105.49	.....	105.19
13	105.76	105.16	105.33	105.59	.....	105.19
14	105.68	.....	105.05	105.47	.....	105.11
15	105.63	.....	105.30	105.24	.....	105.16
16	105.68	105.46	105.57	105.48	.....	105.17
17	105.63	105.46	105.57	105.37	105.26	105.03
18	105.51	105.29	105.23	104.98	.....	105.26
19	105.51	105.72	105.25	105.42	.....	105.29
20	105.30	105.72	105.24	105.54	.....	105.12
21	105.30	105.62	105.45	105.47	.....	104.79
22	105.66	105.30	105.44	105.10	.....	105.02
23	105.68	105.37	105.33	104.95	.....	105.22
24	105.54	105.65	105.34	105.04	105.26	105.25
25	105.71	105.65	105.21	105.20	105.29	105.10

5-15-3ba--Continued.

Lowest daily water level, from recorder charts						
Day	Jan.	Feb.	Mar.	Apr.	May	June
26	105.77	105.39	105.45	105.47	105.16	105.11
27	105.79	105.13	105.68	105.60	105.05	105.09
28	105.64	105.68	105.63	105.60	105.03	105.15
29	105.25	105.69	105.13	105.39	105.03	105.17
30	105.34		105.13	104.99	105.03	105.20
31	105.45		105.33		105.33	

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	105.08	105.14	105.15	105.09	104.93	104.78
2	105.10	105.14	105.20	105.10	104.95	104.74
3	105.06	105.22	105.17	105.01	104.82	104.69
4	105.01	105.25	105.09	104.37	104.71	104.53
5	105.10	105.18	105.07	104.56	105.01	104.57
6	105.10	105.11	105.20	104.93	105.17	104.59
7	105.09	105.15	105.24	104.94	105.10	104.63
8	105.11	105.13	105.21	105.01	105.03	104.66
9	105.11	105.15	105.17	105.04	104.94	104.66
10	105.04	105.18	105.06	104.99	104.91	104.66
11	104.99	105.16	104.92	105.00	104.97	104.67
12	104.99	105.18	105.06	105.01	104.94	104.74
13	105.10	105.19	105.28	105.00	104.86	104.76
14	105.11	105.17	105.25	105.01	104.93	104.76
15	105.22	105.17	105.09	104.90	104.73	104.90
16	105.20	105.09	105.03	104.96	104.86	104.97
17	105.24	105.10	104.96	104.96	104.78	104.97
18	105.22	105.10	104.97	104.96	104.78	104.70
19	105.01	105.10	104.88	104.85	104.78	104.69
20	104.98	105.29	104.95	104.90	104.96	104.60
21	105.11	105.26	104.97	104.96	105.03	104.98
22	105.20	105.26	104.95	105.08	105.03	105.05
23	105.20	105.27	104.96	105.09	104.74	105.03
24	105.20	105.27	105.20	104.93	104.73	105.00
25	105.08	105.26	105.36	104.77	104.77	105.08
26	105.13	105.31	105.36	104.78	104.81	104.91
27	105.19	105.30	105.18	104.78	105.03	104.60
28	105.16	105.25	105.05	104.80	105.03	104.70
29	105.21	105.25	104.91	104.74	104.95	105.08
30	105.32	105.10	104.90	104.83	104.99	105.03
31	105.21	105.12		104.91		104.95

5-15-9cb. Olson. Abandoned drilled well, diameter 4 inches, depth 120.2 feet. Measuring point, top of casing, 0.5 foot above land-surface datum, 2,196.12 feet above sea level. Highest observed stage in period of record, 111.99 on Sept. 11, 1948; lowest, 112.42 on Dec. 29, 1947. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level
Dec. 29, 1947	112.42	June 28, 1948	112.17	Oct. 13, 1948	112.10
Apr. 30, 1948	112.20	Aug. 3	112.31	Nov. 16	112.00
May 21	112.22	Sept. 11	111.99		

5-16-6ac. Falk. Drilled irrigation well, diameter 18 inches, depth 165 feet. Measuring point, hole in turbine base, 1.0 foot above land-surface datum, 2,257.18 feet above sea level. Highest observed stage in period of record, 120.50 on Nov. 17; lowest, 121.80 on Jan. 1. Records available: 1948.

Jan. 1	121.80	Sept. 13	121.07	Nov. 17	120.50
June 24	121.26	Oct. 12	120.91		

5-16-17bb. Meyers Estate. Altitude 2,207.75 feet above sea level. Records available: 1947-48. Apr. 29, 91.44; Oct. 25, 91.53. Measurements discontinued.

5-16-30da. Caswell. Altitude 2,229.01 feet above sea level. Highest observed stage in period of record, 136.39 on Nov. 17; lowest, 137.65 on Aug. 3. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 30	136.58	June 28	136.66	Sept. 10	136.75	Nov. 17	136.39
May 22	136.65	Aug. 3	137.65	Oct. 12	136.68		

6-13-16db. Youngson. Altitude 2,082.10 feet above sea level. Highest observed stage in period of record, 87.28 on May 21. Records available: 1947-48.

May 10	87.60	June 29	87.30	Sept. 14	87.57	Nov. 16	87.32
21	87.28	Aug. 3	87.63	Oct. 11	87.41		

6-14-4dc. Olson. Records available: 1947-48. Measurements discontinued after 1948.

Date	Water level	Date	Water level	Date	Water level
May 10	79.90	Aug. 2	80.05	Oct. 11	79.83
June 29	79.73	Sept. 15	79.87		

6-14-9bc. Drilled irrigation well. Measuring point, hole in turbine base, 0.3 foot above land-surface datum. Records available: 1949. Oct. 25, 89.54; Nov. 16, 87.95.

6-14-21bb. Peterson. Records available: 1947. Measurements discontinued, replaced by 6-14-21db.

6-14-21db. Larson. Drilled irrigation well, diameter 18 inches. Measuring point, hole in turbine base, 0.5 foot above land-surface datum, 2,156.43 feet above sea level. Highest observed stage in period of record, 103.92 on Oct. 29; lowest, 104.49 on Sept. 3. Records available: 1947-48.

Dec. 31, 1947	104.45	June 29, 1948	104.18	Oct. 29, 1948	103.92
May 21, 1948	104.13	Sept. 13	104.49	Nov. 16	104.08

6-14-25ba. Abandoned drilled well, diameter 4 inches, depth 98.0 feet. Measuring point, top of casing, 1.5 feet above land-surface datum, 2,123.39 feet above sea level. Highest observed stage in period of record, 89.66 on Nov. 16, 1948; lowest, 93.56 on Dec. 31, 1947. Records available: 1947-48.

Dec. 31, 1947	93.56	Aug. 3, 1948	89.90	Oct. 11, 1948	89.84
May 21, 1948	92.20	Sept. 13	89.89	Nov. 16	89.66
June 29	89.86	14	89.95		

6-15-1cb. Youngson. Drilled irrigation well, diameter 18 inches, depth 176 feet. Measuring point, hole in turbine base, 1.0 foot above land-surface datum, 2,172.80 feet above sea level. Highest observed stage in period of record, 70.59 on Nov. 17; lowest, 71.36 on June 29. Records available: 1948. June 29, 71.36; Oct. 24, 70.83; Nov. 17, 70.59.

6-15-1lab. Bang. Drilled irrigation well. Measuring point, hole in turbine base, at land-surface datum, 2,176.96 feet above sea level. Highest observed stage in period of record, 72.36 on Nov. 17; lowest, 75.78 on Aug. 2. Records available: 1948. Aug. 2, 75.78; Sept. 15, 74.24; Oct. 9, 73.91; Nov. 17, 72.36.

6-15-14bb. Stadler. Drilled irrigation well, diameter 24 inches. Measuring point, hole in turbine base, 1.0 foot above land-surface datum, 2,187.10 feet above sea level. Highest observed stage in period of record, 82.40 on Nov. 17; lowest 83.88 on Aug. 3, 1948. Records available: 1947-48.

Dec. 31, 1947	83.55	June 28, 1948	82.99	Oct. 13	82.89
May 10, 1948	83.45	Aug. 3	83.88	Nov. 17	82.40
27	83.07	Sept. 11	83.47		

6-15-22ac. Worth. Drilled irrigation well, diameter 18 inches, depth 207 feet. Measuring point, hole in turbine base, at land-surface datum, 2,197.67 feet above sea level. Highest observed stage in period of record, 96.51 on Oct. 13, 1948; lowest, 97.55 on Dec. 31, 1947. Records available: 1947-48.

Dec. 31, 1947	97.55	June 28, 1948	96.92	Oct. 13, 1948	96.51
June 1, 1948	97.14	Sept. 11	96.91		

6-15-22dc. Rogers. Records available: 1947. Measurements discontinued. Replaced by 6-15-22ac.

6-15-32ab. Stadler. Drilled irrigation well, diameter 18 inches, depth 214 feet. Measuring point, hole in turbine base, 0.4 foot above land-surface datum. Highest observed stage in period of record, 91.64 on Nov. 16; lowest, 91.92 on Sept. 11. Records available: 1948. Sept. 11, 91.92; Oct. 13, 91.80; Nov. 16, 91.64.

6-15-35cc. Stadler. Records available: 1947. Measurements discontinued.

6-16-14ad. Johnson. Drilled irrigation well, diameter 12 inches, depth 210 feet. Measuring point, hole in side of turbine, 0.9 foot above land-surface datum. Records available: 1948. Oct. 23, 82.51; Nov. 7, 81.94.

6-16-20bb1. Carlson. Altitude 2,236.82 feet above sea level. Highest observed stage in period of record, 84.04 on Nov. 17. Records available: 1934-42, 1946-48. Apr. 30, 86.35; May 22, 86.50; Oct. 23, 84.53; Nov. 17, 84.04.

6-16-20bb2. Tilbury. Records available: 1947. Measurements discontinued.

6-16-25cb. Lorenzen. Altitude 2,225.27 feet above sea level. Highest observed stage in period of record; 98.19 on Oct. 11. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level
Apr. 30	98.72	Aug. 3	98.89	Oct. 11	98.19
June 29	98.76	Sept. 11	98.30		

6-16-30da. Anderson. Records available: 1947. Measurements discontinued.

7-13-14cc. Pantenberg. Records available: 1947. Measurements discontinued.

7-13-20aa. Gleason. Altitude 2,088.04 feet above sea level. Highest observed stage in period of record, 55.87 on Nov. 9. Records available: 1947-48. May 10, 56.39; May 21, 56.25; Oct. 6, 56.07; Nov. 9, 55.87.

7-14-12cd. Shearer. Drilled irrigation well, diameter 18 inches, depth 123 feet. Measuring point, hole in base of turbine, 1.5 feet above land-surface datum. Highest observed stage in period of record, 52.55 on Sept. 16; lowest, 52.62 on Nov. 15. Records available: 1948. Sept. 16, 52.55; Oct. 24, 52.60; Nov. 15, 52.62.

7-14-18bc. Newbold. Drilled irrigation well, depth 98 feet. Measuring point, hole in base of turbine, 0.5 foot above land-surface datum. Records available: 1948. Sept. 23, 34.72; Oct. 24, 34.59.

7-14-20ba. Burchall. Drilled irrigation well, diameter 18 inches, depth 183 feet. Measuring point, hole in turbine base, 0.3 foot above land-surface datum. Records available: 1948. Oct. 24, 74.94; Nov. 15, 75.08.

7-14-28cb. Warp. Records available: 1947. Measurements discontinued.

7-14-30db. Oman. Drilled irrigation well, diameter 24 inches, depth 105 feet. Measuring point, hole in turbine base, at land-surface datum, 2,160.23 feet above sea level. Highest observed stage in period of record, 70.08 on Nov. 15, 1948; lowest, 71.70 on Dec. 30, 1947. Records available: 1947-48.

Dec. 30, 1947	71.70	June 18, 1948	71.19	Oct. 11, 1948	70.34
May 10, 1948	71.60	Aug. 2	70.63	Nov. 15	70.08
20	71.30	Sept. 1	70.50		

7-15-11ad. Hokser. Altitude 2,139.16 feet above sea level. Highest observed stage in period of record, 34.27 on Aug. 2 and Oct. 7. Records available: 1947-48.

May 20	34.28	Aug. 2	34.28	Oct. 7	34.27
June 29	34.32	31	34.27		

7-16-8dc. Kring Estate. Measuring point changed on Sept. 3 to 2.9 feet above land-surface datum, altitude 2,179.79 feet above sea level. Highest observed stage in period of record, 17.40 on Nov. 17. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level
Apr. 29	17.92	June 29	17.95	Oct. 11	17.52
May 20	17.94	Sept. 2	17.49	Nov. 17	17.40

7-16-11dd. Black. Altitude 2,169.04 feet above sea level. Highest observed stage in period of record, 26.72 on Nov. 17. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 29	26.82	June 29	26.81	Sept. 2	27.22	Nov. 17	26.72
May 20	26.81	Aug. 2	26.89	Oct. 7	26.81		

7-16-23da. Keene. Drilled irrigation well, diameter 18 inches, depth 100 feet. Measuring point, hole in turbine base, 0.5 foot above land-surface datum, 2,208.80 feet above sea level. Highest observed stage in period of record, 66.20 on Nov. 17, 1948; lowest, 67.85 on Dec. 30, 1947. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level
Dec. 30, 1947	67.85	June 29, 1948	66.96	Oct. 7, 1948	66.59
Apr. 29, 1948	67.15	Aug. 2	67.17	Nov. 17	66.20

7-16-25aa. Schneider. Abandoned domestic well, diameter 6 inches, depth 86 feet. Measuring point, top of casing, 0.3 foot above land-surface datum. Highest observed stage in period of record, 48.50 on Nov. 17; lowest, 48.80 on Sept. 20. Records available: 1948. Sept. 20, 48.80; Oct. 7, 48.72; Nov. 17, 48.50.

8-13-12cb. Hall. Records available: 1946-48.

Jan. 9	6.64	May 6	6.02	Sept. 3	6.54
Mar. 8	6.45	July 9	5.99	Nov. 6	6.74

8-13-16bc. Howard. Records available: 1946-48.

Jan. 9	5.25	May 6	5.02	Sept. 3	6.50
Mar. 8	4.93	July 9	5.37	Nov. 6	6.15

8-14-13db. Yensen. Records available: 1930-48.

Jan. 9	8.13	May 6	7.93	Nov. 6	8.95
Mar. 8	7.75	Sept. 3	9.42		

8-14-19cc. Nielson. Records available: 1946-48.

Jan. 9	4.77	May 6	4.58	Sept. 3	6.03
Mar. 8	4.38	July 9	5.02	Nov. 6	5.73

8-14-23ba. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Jan. 9	4.29	May 6	4.38	Sept. 3	5.62
Mar. 8	3.80	July 9	4.97	Nov. 6	5.60

8-15-21dc. Raffety. Records available: 1946-48.

Jan. 9	5.82	May 6	5.36	Nov. 6	6.82
Mar. 8	5.34	July 9	6.18		

8-16-23dd. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 5.70 on Sept. 8. Records available: 1946-48.

Jan. 9	4.52	May 6	4.20	Sept. 8	5.70
Mar. 8	4.07	July 9	5.15	Nov. 6	5.40

8-16-28aa. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Jan. 9	6.42	May 6	6.22	Sept. 8	7.45
Mar. 8	6.12	July 9	6.86	Nov. 6	7.29

Keith County

13-35-6dd. Published erroneously in previous reports as 13-35-5cc. Central Nebraska Public Power and Irrigation District. Formerly owned by D. Thiessen. Lowest observed stage in period of record, 9.29 on Nov. 8. Records available: 1940-46, 1948.

Date	Water level	Date	Water level	Date	Water level
July 8	8.90	Sept. 13	9.14	Nov. 8	9.29
Aug. 5	9.22	Oct. 9	9.21	Dec. 2	9.17

13-36-3cb. Published erroneously in previous reports as ca. Central Nebraska Public Power and Irrigation District. Records available: 1938-48.

July 8	10.01	Sept. 13	10.04	Nov. 8	9.99
Aug. 5	10.10	Oct. 9	10.03	Dec. 2	9.82

13-36-6bc. Central Nebraska Public Power and Irrigation District. Records available: 1936-48.

July 8	3.91	Sept. 13	5.36	Nov. 8	4.92
Aug. 5	4.60	Oct. 9	5.33	Dec. 2	4.11

13-36-8cc. Geological Survey, U. S. Dept. of Interior. Measurements supplied through courtesy of Platte Valley Public Power and Irrigation District. Records available: 1946-48.

Lowest daily water level, from recorder charts

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	3.26	3.43	2.96	....	....	4.18	3.40	4.43	4.86	....	4.02	3.64
2	3.30	3.44	2.94	....	....	4.19	3.51	4.44	4.86	....	....	3.61
3	3.38	....	2.96	....	3.57	4.21	3.56	4.42	4.87	....	3.98	3.55
4	3.40	....	2.96	....	3.58	3.83	3.60	4.40	4.89	4.91	3.98	3.57
5	3.32	....	2.87	....	3.61	3.37	3.65	4.38	4.91	4.91	3.99	3.60
6	3.29	....	2.75	....	3.61	3.49	3.72	4.38	4.91	4.91	....	3.60
7	3.19	....	2.72	....	3.61	3.55	3.77	4.43	4.84	4.91	....	3.59
8	3.16	....	2.71	....	3.54	3.58	3.77	4.47	....	4.90	3.90	3.55
9	3.15	3.33	2.72	....	3.47	3.65	3.77	4.50	....	4.90	3.88	3.57
10	3.16	3.36	2.72	....	3.47	3.73	3.81	4.53	4.79	4.84	3.84	3.57
11	3.22	3.39	2.76	....	3.46	3.77	3.87	4.56	4.81	4.71	3.84	3.53
12	3.30	3.39	2.80	....	3.46	3.84	3.92	4.58	4.84	4.50	3.82	3.59
13	3.30	3.40	2.80	....	3.48	3.87	3.97	4.60	4.86	4.41	3.83	3.59
14	3.25	3.43	2.77	....	3.54	3.95	3.98	4.61	4.88	4.36	3.84	3.59
15	3.26	3.43	2.55	....	3.62	4.00	3.96	4.64	4.90	4.31	3.85	3.58
16	3.27	3.43	....	2.96	3.68	4.04	3.96	4.66	4.91	4.30	3.87	3.60
17	3.28	....	....	2.96	3.72	4.05	3.96	4.64	4.94	4.22	3.85	3.60
18	3.35	....	2.46	2.98	....	4.08	3.98	4.66	4.95	4.18	3.81	3.61
19	3.38	....	2.52	3.06	3.84	4.08	4.01	4.68	4.96	4.16	3.77	3.61
20	3.42	....	2.56	3.12	3.89	3.96	4.05	4.71	4.96	4.17	3.72	3.62
21	3.43	....	2.61	3.14	3.94	3.73	4.08	....	4.97	4.17	3.72	3.65
22	3.41	....	2.66	3.17	3.98	....	4.10	....	4.98	4.17	3.71	3.66
23	3.41	....	2.70	3.20	4.02	....	4.12	4.85	4.98	4.17	3.66	3.66
24	3.30	2.95	2.71	....	4.06	....	4.17	4.86	4.96	4.15	3.62	3.64
25	3.29	2.97	2.73	....	4.08	3.35	4.23	4.86	4.96	4.14	3.63	3.66
26	3.24	2.97	2.77	....	4.10	3.34	4.27	4.80	4.97	4.12	3.66	3.66
27	3.23	2.97	....	....	4.14	3.25	4.30	4.75	4.97	4.11	3.70	3.66
28	3.27	2.99	....	....	4.17	3.24	4.33	4.78	4.96	4.08	3.70	3.72
29	3.32	2.99	....	....	4.17	3.27	4.34	4.80	4.96	4.05	3.66	3.75
30	3.37	....	....	....	4.17	3.32	4.38	4.81	4.95	4.02	3.65	3.75
31	3.41	....	....	....	4.17	....	4.41	4.84	....	....	....	3.75

13-36-9ad. Geological Survey, U. S. Dept. of Interior. Measurements supplied through courtesy of Platte Valley Public Power and Irrigation District. Records available: 1946-48.

Lowest daily water level, from recorder charts

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	1.35	1.64	0.74	....	....	2.38	2.21	2.97	3.39	....	2.57	2.18
2	1.40	1.63	.70	....	....	2.49	2.29	2.97	3.39	....	....	2.17
3	1.40	....	.75	....	1.46	2.57	2.34	2.96	3.39	....	2.53	2.16
4	1.41	....	.75	....	1.52	2.49	2.40	2.89	3.42	3.18	2.53	2.12

13-36-9ad--Continued.

Lowest daily water level, from recorder charts

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	1.38	....	0.69	....	1.55	b2.13	2.46	2.87	3.44	3.18	2.53	2.12
6	1.38	....	.61	....	1.54	b2.15	2.51	2.88	3.44	3.17	2.53	2.18
7	1.34	....	.64	....	1.59	2.23	2.54	2.95	3.31	3.15	2.53	2.18
8	1.28	....	.64	....	1.62	2.30	2.52	3.01	....	3.13	2.52	2.18
9	1.25	1.63	.67	....	1.64	2.40	2.35	3.05	....	3.12	2.49	2.18
10	1.23	1.66	(a)	....	1.63	2.47	2.44	3.08	3.16	....	2.47	2.18
11	1.18	1.74	(a)	....	1.63	2.50	....	3.11	3.19	3.08	2.45	2.15
12	1.27	1.75	(a)	....	1.64	b2.52	....	3.13	3.22	3.08	2.43	2.12
13	1.35	1.79	(a)	....	1.66	b2.54	....	3.16	3.23	3.03	2.45	2.09
14	1.37	1.78	.51	....	1.72	2.59	....	3.18	3.23	2.95	2.49	2.08
15	1.36	1.75	.52	....	1.79	2.59	....	3.21	3.23	2.89	2.50	2.04
16	1.47	1.73	....	1.17	1.84	2.60	2.32	3.25	3.24	2.86	2.52	2.06
17	1.49	....	....	1.17	1.92	2.64	2.36	3.29	3.25	2.80	2.55	2.07
18	1.49	....	.18	1.19	....	2.68	2.43	3.31	3.25	2.76	2.55	2.07
19	1.53	....	.25	1.25	2.05	2.68	2.50	3.34	3.26	2.75	2.43	2.07
20	1.54	....	.33	1.26	2.12	2.68	2.55	3.37	3.26	2.72	2.35	2.07
21	1.53	....	.36	1.25	2.19	2.33	2.58	....	3.26	2.71	2.32	....
22	1.46	....	.39	1.28	2.24	....	2.62	....	3.26	2.70	2.31	....
23	1.45	....	.40	....	2.30	....	2.66	3.47	3.26	2.69	2.31	....
24	1.40	1.06	.44	....	2.35	....	2.72	3.47	3.21	....	2.26	....
25	1.40	1.04	.47	....	2.40	2.08	2.76	3.46	3.20	2.66	2.21	....
26	1.41	.97	.49	....	2.48	2.08	2.80	3.33	3.21	2.66	2.13	....
27	1.49	.83	.32	....	2.54	2.02	2.84	3.27	....	2.65	2.08	....
28	1.57	.84	.35	....	2.57	1.94	2.87	3.30	....	2.64	2.16	....
29	1.61	.83	.53	....	2.58	2.04	2.88	3.34	....	2.63	2.19	....
30	1.62	....	....	....	2.56	2.12	2.92	3.25	....	2.58	2.19	....
31	1.64	....	....	....	2.28	....	2.95	3.38	....	2.57	....	....

a Float frozen.

b Interpolated.

13-37-3ab. Records available: 1935-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	15.04	June 8	14.12	Sept. 13	15.34	Nov. 8	15.09
Mar. 15	12.23	July 8	14.40	Oct. 9	15.12	Dec. 2	14.89
Apr. 19	13.90						

13-37-5ad. Published erroneously in previous reports as aa. Central Nebraska Public Power and Irrigation District. Records available: 1936-48.

Date	Water level	Date	Water level	Date	Water level
July 8	11.85	Sept. 13	12.48	Nov. 8	12.39
Aug. 5	12.18	Oct. 9	13.06	Dec. 2	12.10

13-38-3ba. Central Nebraska Public Power and Irrigation District. Records available: 1936-48. Aug. 5, 14.15; Dec. 2, 13.95.

13-38-6ca. Published erroneously in previous reports as dc. Central Nebraska Public Power and Irrigation District. Lowest observed stage in period of record, 14.90 on Oct. 9. Records available: 1936-48.

July 8	13.98	Sept. 13	14.88	Nov. 8	14.44
Aug. 5	14.25	Oct. 9	14.90	29	14.41

13-39-34dd. Peters Estate. Records available: 1935-42. No measurements made in 1948.

13-40-19cd. McGinley. Records available: 1935-41, 1944. No measurements made in 1948.

16-38-7aa. U. S. 58. Central Nebraska Public Power and Irrigation District. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District. Lowest observed stage in period of record, 10.50 on Aug. 31. Records available: 1936-48.

16-38-7aa--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	10.00	May 3	10.00	July 31	10.40	Oct. 30	10.00
Feb. 28	10.00	June 1	10.10	Aug. 31	10.50	Dec. 22	10.40
Mar. 31	9.90	30	10.20	Sept. 30	10.40		

16-38-30ab. University of Nebraska. Records available: 1935-42, 1944. No measurements made in 1948.

Keya Paha County

No measurements made in 1948.

Kimball County

No measurements made in 1948.

Knox County

No measurements made in 1948.

Lancaster County

A7-7-35cb. University of Nebraska. Highest observed stage in period of record, 24.40 on Apr. 15. Records available: 1940-42, 1944, 1946, 1948. Apr. 15, 24.40.

A9-5-21aa. Brady. Records available: 1934-42, 1946. No measurements made in 1948.

A9-7-28cc. Potts. Records available: 1935-42, 1946. No measurements made in 1948.

Lincoln County

9-29-4cb. Roethemeyer. Records available: 1934-42, 1944. No measurements made in 1948.

10-32-17cc. Fristo. Records available: 1934-42, 1944. No measurements made in 1948.

11-26-16bb. Central Nebraska Public Power and Irrigation District. Records available: 1938-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 8	9.60	July 7	9.47	Nov. 5	9.35
Mar. 2	10.00	Sept. 9	9.29		

12-26-35db. McWha. Lowest observed stage in period of record, 11.45 on Sept. 8. Records available: 1946-48.

Jan. 7	9.85	May 5	10.35	Sept. 8	11.45
Mar. 1	9.92	July 7	10.12	Nov. 5	11.01

12-27-14aa. University of Nebraska. Records available: 1935-48.

Jan. 7	5.76	May 5	5.55	Sept. 8	5.85
Mar. 1	5.35	July 7	6.30	Nov. 5	6.24

12-27-16aa. Central Nebraska Public Power and Irrigation District. Lowest observed stage in period of record, 5.31 on July 7. Records available: 1938-48.

Jan. 7	4.45	May 5	4.31	Sept. 8	4.78
Mar. 1	4.20	July 7	5.31	Nov. 5	5.29

12-27-20dd. Central Nebraska Public Power and Irrigation District. Records available: 1938-48.

Jan. 8	14.04	May 5	14.16	Sept. 9	14.35
Mar. 2	14.02	July 7	14.40	Nov. 5	14.28

12-27-27ad. Central Nebraska Public Power and Irrigation District. Records available: 1938-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 8	4.44	July 7	5.01	Nov. 5	4.38
Mar. 2	4.37	Sept. 9	4.84		

12-27-28dd. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 12.48 on May 5; lowest, 12.74 on Sept. 9. Records available: 1947-48.

Jan. 8	12.72	May 5	12.48	Sept. 9	12.74
Mar. 2	12.65	July 7	12.66	Nov. 5	12.50

12-27-36ad. Central Nebraska Public Power and Irrigation District. Records available: 1938-48.

Jan. 8	5.02	May 5	5.28	Sept. 9	4.88
Mar. 2	4.94	July 7	5.10	Nov. 5	5.33

12-28-9bc. Central Nebraska Public Power and Irrigation District. Records available: 1938-48.

Jan. 8	4.98	May 5	5.44	Sept. 8	5.69
Mar. 2	4.97	July 7	5.82	Nov. 5	5.05

12-28-14dd. Central Nebraska Public Power and Irrigation District. Highest observed stage in period of record, 27.42 on Jan. 8. Records available: 1938-48.

Jan. 8	27.42	May 5	27.70	Sept. 8	28.29
Mar. 2	27.46	July 7	28.17	Nov. 5	27.76

12-28-15ba. Central Nebraska Public Power and Irrigation District. Records available: 1938-48.

Jan. 8	12.18	May 5	12.40	Sept. 8	12.40
Mar. 2	12.18	July 7	12.40	Nov. 5	12.28

13-27-32bd. Central Nebraska Public Power and Irrigation District. Records available: 1938-48.

Jan. 7	3.33	May 5	3.65	Sept. 8	4.31
Mar. 1	3.12	July 7	4.40	Nov. 5	4.25

13-28-16dd. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 4.19 on Mar. 1; lowest, 6.18 on Sept. 8. Records available: 1947-48.

Jan. 7	4.52	May 5	4.92	Sept. 8	6.18
Mar. 1	4.19	July 7	5.60	Nov. 5	5.95

13-28-21da. Central Nebraska Public Power and Irrigation District. Records available: 1938-48.

Jan. 7	4.15	May 5	3.79	Sept. 8	5.60
Mar. 1	3.86	July 7	5.14	Nov. 5	5.24

13-28-25bc. Roberts. Lowest observed stage in period of record, 6.24 on Sept. 8. Records available: 1946-48.

Jan. 7	4.75	May 5	4.92	Sept. 8	6.24
Mar. 1	4.39	July 7	5.80	Nov. 5	6.08

13-28-26cc. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 2.34 on Mar. 1; lowest, 3.50 on July 7 and Sept. 8. Records available: 1947-48.

Jan. 7	2.67	May 5	2.82	Sept. 8	3.50
Mar. 1	2.34	July 7	3.50	Nov. 5	3.11

13-28-29cc. Langford. Records available: 1938-48.

Jan. 7	5.51	May 5	5.64	Sept. 8	5.85
Mar. 1	5.15	July 7	6.12	Nov. 5	5.90

13-28-31cc. Central Nebraska Public Power and Irrigation District.
Records available: 1938-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 8	5.10	May 5	5.80	Sept. 8	5.05
Mar. 2	5.40	July 7	5.70	Nov. 5	4.68

13-29-6ba. Central Nebraska Public Power and Irrigation District.
Records available: 1938-48.

Jan. 7	4.22	May 5	3.83	Sept. 8	4.07
Mar. 1	3.11	July 7	4.43	Nov. 5	3.76

13-29-20bb. Central Nebraska Public Power and Irrigation District.
Records available: 1936-43, 1945-48.

Jan. 8	6.84	May 5	6.75	Sept. 8	6.93
Mar. 2	6.82	July 7	6.91	Nov. 5	7.11

13-29-25bb. Central Nebraska Public Power and Irrigation District.
Records available: 1938-48.

Jan. 7	4.96	May 5	5.00	Sept. 8	5.37
Mar. 1	4.79	July 7	5.34	Nov. 5	5.28

13-30-3ad. Central Nebraska Public Power and Irrigation District.
Records available: 1938-48.

Jan. 7	4.67	May 5	5.01	Sept. 8	4.68
Mar. 1	4.64	July 7	5.35	Nov. 5	4.95

13-30-4cd. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 7.60 on Jan. 7 and 22. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	7.60	May 5	7.20	Aug. 3	a 7.30	Nov. 5	7.37
22	a 7.60	July 7	7.28	Sept. 8	7.10	Dec. 13	a 7.45
Mar. 1	6.60						

a By Platte Valley Public Power and Irrigation District.

13-30-9cb. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Jan. 7	2.36	Mar. 2	2.02	July 7	2.90	Nov. 5	2.67
22	a 2.40	May 5	2.35	Sept. 8	2.94	Dec. 13	a 2.60

13-30-13dd. Central Nebraska Public Power and Irrigation District.
Records available: 1936-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 8	10.25	May 5	10.22	Sept. 8	11.75
Mar. 2	10.05	July 7	10.89	Nov. 5	11.03

13-30-21bb. University of Nebraska. Highest observed stage in period of record, 11.10 on Apr. 14. Records available: 1934-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	11.57	Apr. 14	a 11.10	Aug. 2	a 12.20	Nov. 5	11.94
22	a 11.20	May 13	11.42	Sept. 9	12.32	Dec. 13	a 11.50
Mar. 17	11.44	July 13	11.22				

a By Platte Valley Public Power and Irrigation District.

13-30-21cd. University of Nebraska. Highest observed stage in period of record, 38.60 on Dec. 13. Records available: 1947-48.

Jan. 8	39.88	Apr. 14	a 39.50	Aug. 2	a 39.10	Nov. 5	38.76
28	a 39.80	May 5	39.40	Sept. 8	39.08	Dec. 13	a 38.60
Mar. 1	39.65	July 7	39.30				

a By Platte Valley Public Power and Irrigation District.

14-30-9ca. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	4.43	Apr. 14	a 4.20	Aug. 2	a 5.30	Nov. 5	5.29
22	a 4.60	May 5	4.35	Sept. 8	5.32	Dec. 13	a 4.90
Mar. 1	4.19	July 7	5.90				

a By Platte Valley Public Power and Irrigation District.

14-30-16db. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	0.46	May 5	1.17	Aug. 2	2.10	Nov. 5	1.15
22	a .50	July 7	2.30	Sept. 8	1.59	Dec. 13	a .70
Apr. 14	a 1.10						

a By Platte Valley Public Power and Irrigation District.

14-30-21cd. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 4.12 on July 7. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	3.52	Apr. 14	a 3.70	Aug. 2	a 3.40	Nov. 5	3.95
22	a 3.20	May 5	3.34	Sept. 8	3.79	Dec. 13	a 3.80
Mar. 1	3.42	July 7	4.12				

a By Platte Valley Public Power and Irrigation District.

14-30-28dc. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 7.53 on July 7. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	5.90	Apr. 14	a 6.25	Aug. 2	a 6.35	Nov. 5	6.44
22	a 5.90	May 5	6.27	Sept. 8	6.38	Dec. 13	a 6.50
Mar. 1	6.15	July 7	7.53				

a By Platte Valley Public Power and Irrigation District.

14-30-33cd. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 8.20 on Dec. 13. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	7.22	May 5	7.35	July 7	8.02	Nov. 5	8.11
Mar. 1	7.35	June 18	a 7.80	Sept. 8	7.82	Dec. 13	8.20
Apr. 14	a 7.25						

14-32-21bb. Great Western Sugar Co. Records available: 1934-36, 1940-41. No measurements made in 1948.

14-33-17da. University of Nebraska. Records available: 1936-46. No measurements made in 1948.

14-23-27aa. Central Nebraska Public Power and Irrigation District. Measurements supplied through courtesy of Platte Valley Public Power and Irrigation District. Records available: 1938-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	10.65	Mar. 18	10.37	June 2	9.98	Aug. 9	9.27
12	10.65	22	10.30	25	9.60	Oct. 11	9.58
19	10.75	Apr. 17	10.45	July 23	9.67	Nov. 8	10.00
Feb. 9	10.87	May 3	10.55	9	9.72	15	10.15
24	10.45	10	10.42	16	9.64	Dec. 13	10.50
Mar. 1	10.35						

14-33-27da. Geological Survey, U. S. Dept. of Interior. Measurements supplied through courtesy of Platte Valley Public Power and Irrigation District. Records available: 1943-48.

Lowest daily water level, from recorder charts

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	4.30	....	....	....	5.09	5.14	4.97	....	....	5.29
2	....	....	4.33	....	....	5.21	5.11	5.13	4.99	....	....	5.30
3	....	5.70	4.36	....	5.09	5.21	5.15	5.12	5.00	....	....	5.31
4	....	5.71	4.38	....	5.10	5.21	5.17	5.12	5.01	....	....	5.32
5	5.56	5.70	4.39	....	5.13	5.21	5.19	5.10	5.02	....	....	5.34
6	5.57	5.70	4.41	....	5.14	5.21	5.21	5.09	5.02	....	....	5.35
7	5.57	5.71	4.45	....	5.15	5.21	5.23	....	5.00	....	....	5.36
8	5.57	5.70	4.47	....	5.17	5.21	5.24	....	....	....	5.26	5.37

14-33-27da--Continued.

Lowest daily water level, from recorder charts												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
9	5.58	5.67	4.50	....	5.19	5.21	5.25	5.07	....	....	5.27	5.39
10	5.58	5.60	4.51	....	5.21	....	5.25	5.07	4.95	....	5.27	5.39
11	5.58	5.52	....	....	5.21	....	5.26	5.06	4.96	5.06	5.28	5.40
12	5.59	5.32	....	....	5.22	....	5.26	5.05	4.96	5.06	5.28	5.41
13	5.60	4.97	....	....	5.23	....	5.27	5.04	4.86	5.05	5.29	5.42
14	5.60	4.72	....	....	5.24	....	5.27	4.93	4.96	5.05	5.29	5.43
15	5.60	4.51	....	....	5.25	....	5.27	4.89	4.96	5.04	5.28	5.44
16	5.61	4.38	....	....	5.25	....	5.26	4.87	4.96	5.05	5.26	5.45
17	5.61	....	....	4.66	5.26	....	5.25	4.86	4.96	5.05	5.25	5.45
18	5.62	....	4.14	4.68	....	....	5.25	4.87	....	5.05	5.22	5.46
19	5.62	....	4.13	4.72	....	....	5.24	4.88	....	5.05	5.22	5.47
20	5.63	....	4.18	4.76	....	....	5.24	4.90	....	5.06	5.21	5.47
21	5.63	....	4.20	4.78	....	....	5.25	4.91	....	5.07	5.22	....
22	5.63	....	4.21	4.81	....	....	....	4.91	....	5.08	5.22	....
23	5.64	....	4.24	4.84	....	....	....	4.92	....	5.08	....	....
24	5.64	4.26	4.25	4.88	....	....	....	4.93	....	5.09	....	....
25	5.65	4.23	4.28	....	....	5.05	....	4.94	....	5.09	....	....
26	5.65	4.16	4.33	....	....	5.05	....	4.94	....	....	....	....
27	....	4.22	4.35	....	....	5.05	....	4.94	....	....	....	....
28	....	4.27	4.35	....	....	5.05	....	4.92	....	....	....	....
29	....	4.29	4.35	....	....	5.06	....	4.92	....	....	....	....
30	....	....	....	....	....	5.07	5.15	4.93	....	....	5.28	....
31	....	....	....	....	....	....	5.14	4.96	....	....	....	....

14-33-32cd. University of Nebraska. Records available: 1936-41. No measurements made in 1948.

15-31-13dd. University of Nebraska. Records available: 1934-42. No measurements made in 1948.

16-31-4ab. University of Nebraska. Records available: 1935-42. No measurements made in 1948.

Logan County

No measurements made in 1948.

Loup County

21-18-22aa. University of Nebraska. To convert water levels from feet above assumed datum, as published in previous reports, to feet below land-surface datum, subtract from 104.58. Records available: 1935-42, 1948. Mar. 27, 3.93.

21-18-26bc. University of Nebraska. Records available: 1937-42. No measurements made in 1948.

24-19-25db. University of Nebraska. Records available: 1934-40, 1942. No measurements made in 1948.

Madison County

21-4-34cb. Engelsgard. Records available: 1935-38, 1940-42. No measurements made in 1948.

22-1-33cb. Christian. Records available: 1935-48. Oct. 18, 0.21.

23-2-5aa. Bredehoft. Records available: 1934-37, 1940-42, 1944-48. Feb. 10, 3.93; Oct. 18, 3.96.

24-2-32dc. Prauner. Records available: 1934-42, 1944-47. No measurements made in 1948.

McPherson County

No measurements made in 1948.

Merrick County

11-8-3dd. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 0.55 on Mar. 17. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 5	1.58	May 3	1.30	Sept. 2	3.25
Mar. 17	.55	July 5	2.41	Nov. 2	2.29

11-8-18ab. City of Grand Island. Measurements supplied through courtesy of Grand Island Water Department. Records available: 1935-48. Feb. 16, 5.56.

11-8-19dc. City of Grand Island. Records available: 1935-45. No measurements made in 1948.

12-7-7aa. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Jan. 5	7.10	May 3	6.72	Sept. 2	6.47
Mar. 17	6.69	July 5	6.19	Nov. 2	7.16

12-8-7dc. Records available: 1946-48.

Jan. 5	10.84	May 3	10.46	Nov. 2	10.52
Mar. 16	10.66	July 5	10.16		

12-8-28dc. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Jan. 5	2.77	May 3	1.90	Sept. 2	2.60
Mar. 17	1.88	July 5	1.94	Nov. 2	3.12

13-6-2bc. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Jan. 13	6.73	May 8	5.80	Sept. 2	6.35
Mar. 18	5.86	July 13	5.85	Nov. 2	6.85

13-6-7bb. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 6.60 on Jan. 5 and Nov. 2. Records available: 1946-48.

Jan. 5	6.60	May 3	5.89	Sept. 2	5.94
Mar. 17	6.02	July 5	5.50	Nov. 2	6.60

13-6-19cb. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 5.75 on Jan. 5 and Nov. 2. Records available: 1946-48.

Jan. 5	5.75	May 3	4.86	Sept. 2	5.02
Mar. 17	5.07	July 5	4.72	Nov. 2	5.75

13-6-28bb. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Jan. 5	6.83	May 3	5.82	Sept. 2	7.22
Mar. 17	6.16	July 5	5.59	Nov. 2	7.12

13-7-4bc. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 3.40 on Mar. 17. Records available: 1946-48.

Jan. 5	6.36	May 3	5.65	Sept. 2	4.61
Mar. 17	3.40	July 5	4.30	Nov. 2	5.35

13-7-29cb. Geological Survey, U. S. Dept. of Interior. Altitude 1,751.29 feet above sea level. Records available: 1946-48.

Jan. 5	2.49	May 3	1.73	Sept. 2	3.50
Mar. 17	2.10	July 5	2.49	Nov. 2	3.07

14-4-18bb. Geological Survey, U. S. Dept. of Interior. Altitude 1,628.15 feet above sea level. Highest observed stage in period of record, 3.10 on Mar. 18. Records available: 1946-48.

Jan. 12	4.33	May 7	4.02	Sept. 1	4.90
Mar. 18	3.10	July 12	4.32	Nov. 1	5.05

14-5-9cc2. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 13	7.06	May 8	6.25	Sept. 2	6.44
Mar. 18	6.54	July 13	6.00	Nov. 2	7.09

14-6-15bb. Geological Survey, U. S. Dept. of Interior. Altitude 1,680.76 feet above sea level. Highest observed stage in period of record, 2.43 on Mar. 17. Records available: 1946-48.

Jan. 13	4.13	May 8	3.21	Sept. 2	4.52
Mar. 17	2.43	July 13	3.29	Nov. 2	4.66

14-7-21cb. H. Trudy. Altitude 1,738.77 feet above sea level. Records available: 1934-42, 1945-48.

Jan. 5	7.56	May 3	6.54	Sept. 2	7.10
Mar. 17	6.55	July 5	5.93	Nov. 2	7.45

14-7-26cc. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 11.04 on July 5. Records available: 1946-48.

Jan. 5	11.67	May 3	11.55	Sept. 2	11.19
Mar. 17	11.09	July 5	11.04	Nov. 2	11.23

15-4-15dd. Geological Survey, U. S. Dept. of Interior. Altitude 1,586.98 feet above sea level. Records available: 1946-48.

Jan. 13	8.77	May 8	7.75	Sept. 2	7.84
Mar. 18	8.14	July 13	7.64	Nov. 2	8.65

15-4-31cc. Geological Survey, U. S. Dept. of Interior. Altitude 1,616.79 feet above sea level. Records available: 1946-48.

Jan. 13	5.00	May 8	3.94	Sept. 2	4.06
Mar. 18	3.83	July 13	3.65	Nov. 2	4.69

15-5-8dd. Geological Survey, U. S. Dept. of Interior. Altitude 1,651.32 feet above sea level. Lowest observed stage in period of record, 14.63 on Nov. 2. Records available: 1946-48.

Jan. 13	12.55	May 8	12.68	Sept. 2	12.40
Mar. 18	12.60	July 13	11.92	Nov. 2	14.63

15-5-27dd. Geological Survey, U. S. Dept. of Interior. Altitude 1,626.39 feet above sea level. Lowest observed stage in period of record, 4.70 on Jan. 13. Records available: 1946-48.

Jan. 13	4.70	May 8	3.87	Sept. 2	3.42
Mar. 18	4.16	July 13	3.35	Nov. 2	4.37

15-8-33bc. Dinsdale Bros. Drilled irrigation well, diameter 18 inches, depth 56.0 feet. Measuring point, hole in turbine base, at land-surface datum. Records available: 1948. May 20, 12.60; Oct. 1, 13.69.

15-8-34bb. Anderson. Abandoned driven domestic well, diameter 1½ inches, depth 38.0 feet. Measuring point, top of plank, 5.0 feet above land-surface datum. Records available: 1948. May 19, 7.80; Oct. 1, 8.90.

16-3-7dd. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 2.94 on May 8. Records available: 1947-48.

Jan. 13	4.40	May 8	2.94	Sept. 2	4.20
Mar. 18	3.67	July 13	3.75	Nov. 2	4.89

16-3-27cc. Pearson. Altitude 1,545.59 feet above sea level. Records available: 1934-42, 1944-48.

Jan. 13	6.66	May 8	5.85	Sept. 2	6.85
Mar. 18	5.35	July 12	5.97	Nov. 2	7.45

Morrill County

20-49-30ac. Stewart. Records available: 1946-48. Mar. 28, 19.18; Aug. 31, 17.38; Oct. 22, 16.67.

20-50-17bb. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48. Mar. 28, 14.93; July 2, 13.40; Aug. 31, 12.23; Oct. 22, 11.88.

20-50-28bb. Smith. Records available: 1934-42, 1944-48. Mar. 28, 13.61; July 1, 14.00; Aug. 31, 13.77; Oct. 22, 13.46.

20-50-32aa. State. Dept. of Roads and Irrigation. Highest observed stage in period of record, 5.80 on June 10. Records available: 1930-48.

Lowest daily water level, from recorder charts

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	4.71	Apr. 20	5.28	June 26	4.42	Sept. 20	4.72
10	4.72	25	5.10	27	4.41	23	4.63
16	4.77	30	5.10	28	4.46	25	4.68
20	4.78	May 5	5.14	29	4.44	30	4.76
25	4.82	10	5.16	30	4.49	Oct. 5	4.72
31	4.74	15	5.36	July 1	4.63	11	4.77
Feb. 2	4.79	21	5.55	2	4.84	15	4.73
5	4.80	24	5.22	5	5.00	20	4.76
10	4.78	25	5.22	10	5.34	25	4.71
15	4.80	30	5.15	15	5.00	30	4.64
20	4.82	June 5	5.35	20	5.14	Nov. 5	4.60
25	4.88	10	5.80	25	5.53	10	4.64
29	4.81	15	5.47	30	5.53	15	4.62
Mar. 5	4.86	17	5.16	Aug. 5	4.95	20	4.66
10	4.93	18	5.06	10	4.92	25	4.60
15	4.82	19	5.03	15	5.16	30	4.68
20	4.82	20	4.96	20	5.30	Dec. 5	4.67
25	4.82	21	4.83	25	5.34	11	4.76
31	4.74	22	4.72	30	5.30	15	4.70
Apr. 5	4.89	23	4.65	Sept. 5	5.15	20	4.74
10	4.94	24	4.58	10	4.79	27	4.84
15	5.16	25	4.47	15	5.08	30	4.82

21-50-33bc. Winters. Highest observed stage in period of record, 17.76 on Aug. 31. Records available: 1946-48. Mar. 28, 38.36; July 2, 32.22; Aug. 31, 17.76, nearly irrigation ditch full of water; Oct. 22, 26.42.

22-50-14bc. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 0.08 on Mar. 28. Records available: 1946-48. Mar. 28, 0.08; July 28, 0.52; Aug. 31, 1.52; Oct. 21, 1.01.

22-50-28bc. Jensen. Highest observed stage in period of record, 81.22 on July 2 and Aug. 31. Records available: 1934-42, 1944, 1946-48. Mar. 28, 81.37; July 2, 81.22; Aug. 31, 81.22; Oct. 22, 81.30.

23-51-29bb. Green. Highest observed stage in period of record, 100.95 on Sept. 1. Records available: 1946-48. Mar. 27, 101.15; July 2, 101.04; Sept. 1, 100.95; Oct. 21, 100.99.

Nance County

15-7-6bb. Abandoned drilled domestic well, diameter 3 inches, depth 81.0 feet. Measuring point, hole in side of pump, 2.0 feet above land-surface datum. Records available: 1948. May 19, 65.90; Sept. 30, 66.00.

16-4-31bc. Geological Survey, U. S. Dept. of Interior. Driven observation well, diameter $1\frac{1}{4}$ inches, depth 12.5 feet. Measuring point, top of pipe, 1.0 foot above land-surface datum. Highest observed stage in period of record, 5.28 on Mar. 18; lowest, 6.76 on Jan. 13.

Date	Water level	Date	Water level	Date	Water level
Jan. 13	6.76	May 8	6.15	Sept. 2	5.87
Mar. 18	5.28	July 13	5.72	Nov. 2	6.29

16-6-14ac. Aldrich. Highest observed stage in period of record, 26.47 on Apr. 23. Records available: 1936-37, 1939-42, 1947-48. Apr. 23, 26.47; Sept. 29, 26.60.

16-7-34cb. Brooks. Drilled irrigation well, diameter 18 inches, depth 58.0 feet. Measuring point, hole in turbine base, 0.5 foot above land-surface datum. Records available: 1948. May 17, 27.65; Sept. 30, 29.02.

16-7-36aa. Russell. Abandoned irrigation well, diameter 60 to 18 inches, depth 32.5 feet. Measuring point, edge of brick curb, 0.5 foot above land-surface datum. Records available: 1948. May 18, 22.16; Sept. 30, 22.52.

17-4-23da. Loup River Public Power District. Driven observation well, diameter $1\frac{1}{4}$ inches, depth 16.0 feet. Measuring point, top of pipe, 3.5 feet below land-surface datum. Records available: 1948. May 19, 15.50; Sept. 28, 18.74.

17-4-24db. Greek Estate. Lowest observed stage in period of record, 6.22 on Sept. 28. Records available: 1934-42, 1948. Apr. 21, 3.30; Sept. 28, 6.22.

17-4-25cd. Loup River Public Power District. Driven observation well, diameter $1\frac{1}{4}$ inches, depth 18.5 feet. Measuring point, top of pipe, 2.0 feet above land-surface datum. Records available: 1948. May 19, 11.27; Sept. 28, 12.08.

17-4-32dd. Loup River Public Power District. Driven observation well, diameter $1\frac{1}{4}$ inches, depth 14.5 feet. Measuring point, top of pipe, 5.0 feet above land-surface datum. Records available: 1948. May 18, 5.80; Sept. 28, 6.42.

17-4-36aa. Loup River Public Power District. Driven observation well, diameter $1\frac{1}{4}$ inches, depth 11.0 feet. Measuring point, top of pipe, 2.0 feet above land-surface datum, 1,556.7 feet above sea level. Records available: 1948. May 18, 4.11; Sept. 28, 5.15.

17-5-35dd. Loup River Public Power District. Driven observation well, diameter $1\frac{1}{4}$ inches, depth 16.0 feet. Measuring point, top of pipe, 3.5 feet above land-surface datum. Records available: 1948. May 19, 6.00; Sept. 28, 6.72.

17-6-19bd. Abandoned drilled domestic well, diameter 7 inches, depth 69.0 feet. Measuring point, top of casing, 3.0 feet above land-surface datum. Records available: 1948. May 20, 39.70.

17-6-34ad. Christiansen. To convert water levels from feet above assumed datum, as published in previous reports, to feet below land-surface datum, subtract from 143.37. Highest observed stage in period of record, 42.60 on July 5. Records available: 1935-42, 1948. July 5, 42.60.

18-4-19ab. Peterson. Drilled stock well, diameter 4 inches, depth 42.0 feet. Measuring point, top of platform, 1.50 feet above land-surface datum. Records available: 1948. May 18, 11.33; Sept. 28, 12.21.

18-7-1ad. Mrs. Anderson. Abandoned drilled domestic well, diameter 4 inches, depth 58.0 feet. Measuring point, top of casing, 2.0 feet above land-surface datum. Records available: 1948. May 20, 38.10.

Nemaha County

No measurements made in 1948.

Nuckolls County

Measurements made by personnel of Bureau of Reclamation, U. S. Dept. of Interior, Superior.

1-5-31cb. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 19.22 on Mar. 24; lowest, 20.43 on Nov. 2. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	19.86	Apr. 16	19.41	Aug. 19	20.00	Nov. 2	20.43
Feb. 19	19.95	May 20	19.48	Sept. 23	20.38	Dec.	20.17
Mar. 24	19.22	July 26	19.65				

1-5-31cc. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	5.10	Apr. 16	2.72	Aug. 19	4.01	Nov. 2	5.00
Feb. 19	4.48	May 20	3.48	Sept. 23	5.22	Dec. 20	3.97
Mar. 24	.85	July 26	2.66				

1-6-30dd. Day. Highest observed stage in period of record, 33.10 on May 1 and July 8. Records available: 1946-48.

Lowest daily water level, from recorder charts

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Dec.
1	33.12	33.17	33.17	33.15	33.10	33.14	33.12	33.15	.....
2	33.12	33.17	33.16	33.16	33.11	33.13	33.12	33.15	.....
3	33.13	33.17	33.18	33.15	33.12	33.13	33.12	33.15	.....
4	33.14	33.17	33.19	33.14	33.12	33.13	33.11	33.15	.....
5	33.14	33.17	33.19	33.14	33.12	33.12	33.11	33.15	.....
6	33.15	33.17	33.18	33.13	33.13	33.13	33.11	33.15	.....
7	33.13	33.18	33.18	33.15	33.13	33.12	33.11	33.14	.....
8	33.14	33.18	33.18	33.16	33.11	33.12	33.10	33.14	.....
9	33.15	33.18	33.18	33.16	33.12	33.12	33.12	33.14	.....
10	33.15	33.17	33.19	33.14	33.13	33.12	33.13	33.14	.....
11	33.13	33.17	.....	33.14	33.14	33.12	33.13	33.14	.....
12	33.15	33.17	.....	33.15	33.14	33.12	33.12	33.13	.....
13	33.15	33.17	.....	33.15	33.14	33.12	33.12	33.12	.....
14	33.15	33.17	.....	33.14	33.13	33.11	33.12	33.13	33.23
15	33.14	33.17	.....	33.13	33.13	33.11	33.12	33.13	33.23
16	33.15	33.16	33.17	33.13	33.13	33.11	33.12	33.13	33.24
17	33.15	33.16	33.17	33.14	33.13	33.11	33.12	33.12	33.24
18	33.13	33.15	33.15	33.13	33.13	33.12	33.12	33.12	33.24
19	33.13	33.17	33.15	33.13	33.13	33.12	33.12	.....	33.23
20	33.18	33.17	33.14	33.13	33.14	33.12	33.12	.....	33.22
21	33.18	33.17	33.15	33.13	33.13	33.11	33.11	.....	33.25
22	33.19	33.16	33.15	33.12	33.13	33.11	33.12	.....	33.25
23	33.19	33.16	33.14	33.11	33.13	33.12	33.16	.....	33.26
24	33.18	33.16	33.15	33.11	33.14	33.12	33.16	.....	33.26
25	33.19	33.16	33.14	33.11	33.14	33.11	33.15	.....	33.26
26	33.20	33.16	33.14	33.12	33.13	33.11	33.15	.....	33.26
27	33.19	33.14	33.16	33.13	33.13	33.11	33.15	.....	33.24
28	33.19	33.17	33.16	33.13	33.13	33.12	33.14	.....	33.23
29	33.17	33.17	33.14	33.13	33.13	33.12	33.14	.....	33.26
30	33.17		33.13	33.11	33.14	33.12	33.15	.....	33.26
31	33.17		33.14		33.14		33.15		33.26

1-6-31cc. Geological Survey, U. S. Dept. of Interior. Well deepened and altitude changed to 1,548.12 feet above sea level. Highest observed stage in period of record, 9.44 on Apr. 16; lowest, 13.53 on Dec. 21. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	10.44	Apr. 16	9.44	July 26	9.53	Nov. 2	13.44
Feb. 19	10.19	May 20	9.95	Sept. 23	12.95	Dec. 21	13.53
Mar. 24	9.56						

1-6-33cb. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 4.00 on Mar. 24; lowest, 6.31 on Sept. 23. Records available: 1947-48.

Jan. 15	4.94	Apr. 16	4.65	Aug. 19	5.98	Nov. 2	6.15
Feb. 19	4.80	May 20	4.80	Sept. 23	6.31	Dec. 20	5.94
Mar. 24	4.00						

1-6-33cc. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 11.39 on July 26; lowest, 12.93 on Nov. 2. Records available: 1947-48.

Jan. 15	12.59	Apr. 16	11.64	Aug. 19	11.75	Nov. 2	12.93
Feb. 19	12.46	May 20	11.75	Sept. 23	12.53	Dec. 20	12.83
Mar. 24	12.05	July 26	11.39				

1-6-35cb. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 12.15 on Mar. 24; lowest, 14.69 on Dec. 20. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	14.11	Apr. 16	12.57	Aug. 19	13.93	Nov. 2	14.46
Feb. 19	14.30	May 20	13.09	Sept. 23	14.22	Dec. 20	14.69
Mar. 24	12.15	July 26	13.76				

1-6-35cc. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 14.01 on Nov. 2. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	13.28	Apr. 16	11.37	Aug. 19	12.76	Nov. 2	14.01
Feb. 19	12.90	May 20	12.09	Sept. 23	13.85	Dec. 20	13.78
Mar. 24	10.83	July 26	11.67				

1-7-19cb. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 11.65 on Oct. 25. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	11.02	Apr. 15	9.40	Aug. 18	10.47	Oct. 25	11.65
Feb. 18	11.00	May 19	9.52	Sept. 24	11.31	Dec. 20	11.60
Mar. 22	9.72	July 22	9.99				

1-7-19dd. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 3.29 on Mar. 22; lowest, 7.80 on Sept. 24. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	6.08	Apr. 15	4.83	Aug. 18	6.81	Oct. 28	7.74
Feb. 18	5.92	May 19	5.47	Sept. 24	7.80	Dec. 20	6.22
Mar. 22	3.29	July 22	5.47				

1-7-27cb. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 20.11 on Mar. 22. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	20.62	Apr. 15	20.32	Aug. 18	20.46	Oct. 25	20.51
Feb. 18	20.65	May 19	20.36	Sept. 24	20.54	Dec. 20	20.42
Mar. 22	20.11	July 22	20.49				

1-7-31da. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 8.52 on Mar. 24; lowest, 11.55 on Oct. 25. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	10.95	Apr. 15	8.87	Aug. 18	10.61	Oct. 25	11.55
Feb. 19	10.93	May 19	9.33	Sept. 23	11.36	Dec. 20	11.39
Mar. 24	8.52	July 26	9.19				

1-7-32bb. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 0.51 on Mar. 24; lowest, 4.95 on Sept. 24. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	3.30	Apr. 15	1.76	Aug. 19	4.11	Oct. 25	4.85
Feb. 19	3.15	May 19	2.79	Sept. 24	4.95	Dec. 20	3.96
Mar. 24	.51	July 26	3.50				

1-7-33ad. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 1.95 on Mar. 24; lowest, 6.70 on Oct. 25. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	5.87	Apr. 15	3.27	Aug. 19	5.55	Oct. 25	6.70
Feb. 19	5.79	May 19	4.19	Sept. 24	6.58	Dec. 20	6.29
Mar. 24	1.95	July 26	4.76				

1-7-33dd. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 8.07 on Mar. 24; lowest, 9.73 on Oct. 25. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	9.56	Apr. 15	8.13	Aug. 19	9.03	Oct. 25	9.73
Feb. 19	9.63	May 19	8.44	Sept. 23	9.63	Dec. 20	9.58
Mar. 24	8.07	July 26	8.65				

1-7-34bb. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 2.53 on Mar. 24; lowest, 7.73 on Sept. 23 and Oct. 25. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	6.02	Apr. 15	4.53	Aug. 19	6.83	Oct. 25	7.73
Feb. 19	6.14	May 19	5.58	Sept. 23	7.73	Dec. 20	6.99
Mar. 24	2.53	July 26	6.09				

1-7-35da. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 9.00 on Dec. 21. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	8.18	Apr. 16	7.23	Aug. 19	7.87	Oct. 25	8.62
Feb. 19	8.29	May 20	7.99	Sept. 23	8.11	Dec. 21	9.00
Mar. 24	7.84	July 26	8.00				

1-7-36cc. University of Nebraska. Destroyed, measurements discontinued. Records available: 1936-40.

1-7-36da. Geological Survey, U. S. Dept. of Interior. Altitude of measuring point corrected to 1,549.78 feet above sea level. Lowest observed stage in period of record, 12.43 on Dec. 21. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	11.45	Apr. 16	11.55	Aug. 19	11.19	Nov. 2	12.27
Feb. 19	11.60	May 20	11.69	Sept. 23	11.68	Dec. 21	12.43
Mar. 24	11.50	July 26	11.25				

1-8-7bb. Geological Survey, Dept. of Interior. Highest observed stage in period of record, 1.16 on May 19. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	5.26	Apr. 15	1.34	Aug. 18	1.20	Oct. 25	1.49
Feb. 18	4.79	May 19	1.16	Sept. 24	1.27	Dec. 20	1.44
Mar. 22	1.74	July 22	1.18				

1-8-14cb. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 13.99 on Mar. 22; lowest, 16.90 on Oct. 25. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	15.22	Apr. 15	14.14	Aug. 18	15.79	Oct. 25	16.90
Feb. 18	15.26	May 19	14.99	Sept. 24	16.66	Dec. 20	15.84
Mar. 22	13.99	July 22	15.18				

1-8-17aa. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 2.73 on Mar. 22; lowest, 6.60 on Oct. 25. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	5.03	Apr. 15	2.87	Aug. 18	5.07	Oct. 25	6.60
Feb. 18	4.64	May 19	3.54	Sept. 24	6.50	Dec. 20	5.21
Mar. 22	2.73	July 22	3.56				

1-8-17da. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 3.29 on Mar. 22; lowest, 7.73 on Oct. 25. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	6.95	Apr. 15	4.78	Aug. 18	6.49	Oct. 25	7.73
Feb. 18	6.75	May 19	5.68	Sept. 24	7.55	Dec. 20	7.13
Mar. 22	3.29	July 22	5.24				

1-8-18cc. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 12.14 on Apr. 15; lowest, 13.63 on Oct. 25. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	13.14	Apr. 15	12.14	Aug. 18	12.51	Oct. 25	13.63
Feb. 18	12.97	May 19	12.49	Sept. 24	13.41	Dec. 20	13.56
Mar. 24	12.27	July 22	12.10				

1-8-21cb. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 10.10 on Mar. 24; lowest, 13.06 on Oct. 25. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	12.02	Apr. 15	10.82	Aug. 18	11.90	Oct. 25	13.06
Feb. 18	11.69	May 19	11.51	Sept. 24	12.95	Dec. 20	12.64
Mar. 24	10.10	July 22	10.64				

1-8-21dc. Teachworth. Lowest observed stage in period of record, 28.92 on Sept. 24. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	27.93	Apr. 15	26.75	July 22	27.01	Oct. 25	28.80
Feb. 18	27.83	May 19	26.94	Sept. 24	28.92	Dec. 20	28.69
Mar. 24	26.97						

1-8-22ab. Smith. Highest observed stage in period of record, 1.31 on Mar. 22; lowest, 5.64 on Sept. 24. Records available: 1946-48.

Jan. 14	3.65	Apr. 15	3.82	Aug. 18	4.25	Oct. 25	5.30
Feb. 18	3.50	May 19	4.54	Sept. 24	5.64	Dec. 20	4.11
Mar. 22	1.31	July 22	3.18				

1-8-22ad. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 7.03 on Mar. 24. Records available: 1947-48.

Jan. 15	8.65	Apr. 15	7.97	Aug. 18	8.99	Oct. 25	9.70
Feb. 18	8.43	May 19	8.72	Sept. 24	9.90	Dec. 20	8.69
Mar. 24	7.03	July 22	7.97				

1-8-22dd. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 7.37 on Apr. 15; lowest, 8.60 on Oct. 25. Records available: 1947-48.

Jan. 15	8.45	Apr. 15	7.37	Aug. 18	7.49	Oct. 25	8.60
Feb. 18	8.12	May 19	7.62	Sept. 24	8.39	Dec. 20	8.42
Mar. 24	7.47	July 22	6.47				

1-8-25aa. Geological Survey, Dept. of Interior. Highest observed stage in period of record, 5.29 on Apr. 15; lowest, 7.60 on Oct. 25. Records available: 1947-48.

Jan. 14	6.45	Apr. 15	5.29	Aug. 18	6.45	Oct. 25	7.06
	6.45	May 19	5.47	Sept. 24	6.94	Dec. 20	6.61
Mar. 22	5.57	July 22	6.05				

1-8-25ad. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 6.47 on Mar. 22. Records available: 1947-48.

Jan. 14	9.53	Apr. 15	7.15	Aug. 18	9.08	Oct. 25	10.12
Feb. 18	9.28	May 19	8.32	Sept. 24	10.18	Dec. 20	9.27
Mar. 22	6.47	July 22	7.35				

1-8-36aa. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 8.46 on Mar. 24. Records available: 1947-48.

Jan. 15	10.76	Apr. 15	10.49	Aug. 19	9.97	Oct. 25	12.01
Feb. 19	10.59	May 19	11.15	Sept. 23	11.91	Dec. 20	11.03
Mar. 24	8.46	July 26	10.26				

2-5-8dd. Mrs. Dillon. Records available: 1934-41, 1946. No measurements made in 1948.

4-7-26aa. Statz. Records available: 1935-41, 1946. No measurements made in 1948.

Otoe County

No measurements made in 1948.

Pawnee County

No measurements made in 1948.

Perkins County

No measurements made in 1948.

Pierce County

No measurements made in 1948.

Phelps County

5-18-2cc. Brown. Altitude of measuring point 2,327.34 feet above sea level. Highest observed stage in period of record, 158.18 on Dec. 27; lowest, 159.81 on Sept. 8. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 29	158.50	June 28	158.65	Oct. 6	159.04	Dec. 27	158.18
June 1	158.70	Sept. 8	159.81	Nov. 9	158.49		

5-18-4ab. Western Public Service Co. Altitude measuring point 2,325.68 feet above sea level. Highest observed stage in period of record, 149.76 on Nov. 9. Records available: 1934-41, 1948.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 21	150.20	May 28	150.52	July 21	150.25	Oct. 7	150.16
Apr. 29	149.92	June 28	150.39	Sept. 9	150.19	Nov. 9	149.76

5-18-6ab. Christian Childrens Home. Altitude of measuring point 2,337.95 feet above sea level. Highest observed stage in period of record, 158.88 on Nov. 15; lowest, 159.54 on July 20. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level
May 26	159.00	July 20	159.54	Nov. 15	158.88
June 21	159.17	Oct. 7	159.51		

5-18-15cb. Rodgers. Drilled domestic and stock well, diameter 2½ inches. Measuring point, top of pipe, 1.7 feet above land-surface datum and 2,314.07 feet above sea level. Highest observed stage in period of record, 157.60 on Dec. 27; lowest, 159.05 on June 1. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 1	159.05	July 21	157.87	Oct. 6	157.78	Dec. 27	157.60
28	158.49	Sept. 9	157.83	Nov. 9	158.00		

5-19-4bc. Abandoned drilled well, diameter 3 inches, depth 213.0 feet. Measuring point, top of pipe, 2.0 feet above land-surface datum, 2,416.00 feet above sea level. Highest observed stage in period of record, 205.85 on Dec. 27; lowest, 208.25 on Jan. 21. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 21	208.25	June 21	208.14	Sept. 10	206.09	Nov. 9	206.26
Apr. 29	207.82	July 10	206.05	Oct. 1	206.30	Dec. 27	205.85
May 7	207.35						

5-19-22da. Warp. Altitude of measuring point 2,780.31 feet above sea level. Highest observed stage in period of record, 202.95 on Dec. 4; lowest 204.00 on Apr. 28 and Dec. 9. Stevens Type F 8-day automatic water-stage recorder installed Apr. 28. Records available: 1947-48.

Lowest daily water level, from recorder charts

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	203.52	203.67	203.52	203.59	203.54	203.58	203.57	203.40
2	203.70	203.51	203.54	203.50	203.46	203.62	203.55	203.40
3	203.71	.....	203.49	203.68	203.44	203.50	203.29	203.29
4	203.62	.....	203.44	203.69	203.35	203.33	203.18	202.95
5	203.70	203.50	203.54	203.54	203.40	202.94	203.67	203.47
6	203.74	203.57	203.54	203.36	203.50	203.39	203.86	203.67
7	203.55	203.54	203.45	203.32	203.59	203.54	203.75	203.68
8	203.05	203.49	203.44	203.34	203.63	203.57	203.76	203.80
9	203.68	203.46	203.53	203.35	203.59	203.59	203.61	204.00
10	203.87	203.57	203.51	203.39	203.48	203.55	203.55	203.74
11	203.81	203.58	203.43	203.41	203.30	203.57	203.60	203.30
12	203.80	203.59	203.46	203.42	203.48	203.61	203.60	203.38
13	203.65	203.59	203.45	203.42	203.67	203.58	203.59	203.57
14	203.35	203.52	203.49	203.51	203.67	203.62	203.59	203.54
15	203.53	203.58	203.49	203.54	203.46	203.48	203.32	203.61
16	203.57	203.58	203.46	203.47	203.40	203.90	203.49	203.78
17	203.61	203.39	203.58	203.43	203.38	203.89	203.35	203.73
18	203.54	203.70	203.49	203.44	203.40	203.55	203.38	203.38
19	203.58	203.77	203.34	203.32	203.29	203.41	203.33	203.38

5-19-22da--Continued.

Lowest daily water level, from recorder charts

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
20	.....	203.49	203.52	203.24	203.56	203.40	203.48	.....	203.26
21	.....	203.41	203.25	203.43	203.60	203.43	203.55	.....	203.69
22	.....	203.42	203.44	203.66	203.42	203.41	203.70	203.65	203.77
23	.....	203.50	203.67	203.67	203.49	203.37	203.72	203.38	203.73
24	.....	203.61	203.73	203.47	203.47	203.63	203.50	203.33	203.79
25	.....	203.64	203.59	203.44	203.44	203.85	203.33	.....	203.95
26	.....	203.50	203.59	203.52	203.58	203.89	203.33	203.48	203.64
27	.....	203.40	203.52	203.50	203.58	203.72	203.32	203.97	203.28
28	204.00	203.47	203.60	203.34	203.62	203.57	203.36	203.97	203.51
29	203.79	203.43	203.65	203.62	203.62	203.40	203.23	203.70	203.88
30	203.32	203.69	203.67	203.73	203.49	203.36	203.39	203.72	203.78
31		203.74		203.61	203.46		203.47		203.76

5-19-35db. Gray. Altitude of measuring point 2,359.67 feet above sea level. Highest observed stage in period of record, 198.48 on July 21. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level
June 28	198.54	Sept. 9	198.69	Nov. 9	198.60
July 21	198.48	Oct. 1	198.59	Dec. 27	199.06

5-20-16dc. Drilled well, diameter 5 inches, depth 44.7 feet. Measuring point, top of casing, 1.2 feet above land-surface datum, 2,271.76 feet above sea level. Highest observed stage in period of record, 38.93 on Sept. 2; lowest, 39.95 on July 22. Records available: 1948. July 22, 39.95; Sept. 2, 38.93; Oct. 7, 39.00.

5-20-32cc. Abandoned drilled domestic well, diameter 4 inches, depth 111.7 feet. Measuring point, top of casing, 1.0 feet above land-surface datum, 2,303.25 feet above sea level. Highest observed stage in period of record, 105.38 on Oct. 7; lowest, 105.84 on Nov. 8. Records available: 1948. July 26, 105.57; Sept. 2, 105.54; Oct. 7, 105.38; Nov. 8, 105.84.

6-17-15ad. Rumste. Altitude of measuring point 2,253.60 feet above sea level. Highest observed stage in period of record, 86.38 on Nov. 10. Records available: 1947-48.

Apr. 29	88.02	Sept. 8	87.15	Nov. 10	86.38
June 24	88.13	Oct. 8	86.67		

6-18-12bc. Welks. Altitude of measuring point 2,283.28 feet above sea level. Highest observed stage in period of record, 86.10 on Nov. 9. Records available: 1947-48.

Apr. 29	87.75	June 24	87.77	Oct. 6	86.71
May 14	87.12	Sept. 8	87.53	Nov. 9	86.10

6-18-13da. Brown. Drilled irrigation well, reported depth 168 feet. Measuring point, hole in pump base, 0.2 foot above land-surface datum, 2,304.54 feet above sea level. Highest observed stage in period of record, 114.74 on Nov. 9; lowest, 116.75 on May 20. Records available: 1948. May 20, 116.75; Sept. 8, 116.02; Oct. 6, 115.27; Nov. 9, 114.74.

6-18-33aa. Burgeson. Altitude of measuring point 2,318.66 feet above sea level. Highest observed stage in period of record, 136.38 on Apr. 29. Records available: 1947-48. Apr. 29, 136.38; July 10, 136.45; Oct. 7, 136.88. Measurements discontinued.

6-19-2aa. Central Nebraska Public Power and Irrigation District. Drilled observation well, diameter 1 inch, depth 151 feet. Measuring point, top of pipe, 1.0 feet above land-surface datum, 2,361.81 feet above sea level. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District. Highest observed stage in period of record, 109.63 on Dec. 30, 1948; lowest, 123.70 on Mar. 9, 1945. Records available: 1945-48.

Mar. 9, 1945	123.70	Jan. 19, 1946	120.54	June 12, 1946	119.87
Apr. 19	123.31	Apr. 10	119.00	Aug. 20	119.03
Nov. 10	121.26	May 9	119.89	Jan. 20, 1947	116.29

6-19-2aa--Continued.

Date	Water level	Date	Water level	Date	Water level
July 31, 1947	115.29	Mar. 6, 1948	113.36	July 20	all 12.23
Sept. 2	115.23	Apr. 11	113.10	Aug. 7	112.10
Oct. 6	114.47	29	all 13.32	Sept. 1	all 11.72
Nov. 18	114.04	May 10	all 13.36	Oct. 4	all 11.16
Dec. 29	114.32	28	all 12.98	Nov. 9	all 10.75
Jan. 10, 1948	114.00	June 23	all 12.77	Dec. 30	109.63
Feb. 7	113.60				

6-19-18ba. Nelson. Abandoned drilled domestic well, diameter 5 inches, reported depth 200 feet. Measuring point, top of casing, 2.2 feet above land-surface datum. Records available: 1948. Dec. 30, 156.26.

6-19-21dc. Abandoned drilled well, diameter 4 inches, depth 165.5 feet. Measuring point, top of casing, 1.8 feet above land-surface datum, 2,577.79 feet above sea level. Highest observed stage in period of record, 150.35 on Oct. 5; lowest, 151.35 on May 5. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 5	151.35	July 20	151.00	Oct. 5	150.35	Dec. 30	150.85
July 1	151.25	Sept. 2	151.07	Nov. 9	150.91		

6-20-10aa. Abandoned drilled well, diameter 2 inches, depth 202.3 feet. Measuring point, top of casing, 3.8 feet above land-surface datum, 2,464.57 feet above sea level. Highest observed stage in period of record, 186.87 on Dec. 30; lowest, 188.01 on May 17. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 17	188.01	July 20	187.85	Oct. 5	187.17		
June 21	187.96	Sept. 2	187.65	Nov. 9	187.40		

6-20-28ad. Johnson Estate. Unused drilled domestic and stock well, diameter 4 inches, depth 212 feet. Measuring point, hole in side of pump, 2.4 feet above land-surface datum. Highest observed stage in period of record, 194.40 on Nov. 10; lowest, 194.78 on July 23. Records available: 1948. July 23, 194.78; Sept. 2, 194.54; Nov. 10, 194.40.

7-17-11cb. Just. Altitude of measuring point 2,205.89 feet above sea level. Highest observed stage in period of record, 27.48 on Nov. 10. Records available: 1947-48.

Apr. 29	27.65	Sept. 8	28.06	Nov. 10	27.48
June 16	27.64	Oct. 6	27.70	Dec. 30	27.49

7-17-30bb. Sodeholm. Altitude of measuring point 2,256.67 feet above sea level. Highest observed stage in period of record, 51.19 on Nov. 10. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 29	52.90	June 24	52.85	Sept. 8	51.93	Nov. 10	51.19
May 14	52.68	July 21	52.24	Oct. 6	51.20		

7-18-3cc. Central Nebraska Public Power and Irrigation District. Drilled observation well, diameter 4 inches, depth 84.7 feet. Measuring point, top of casing, 1.4 feet above land-surface datum, 2,516.19 feet above sea level. Highest observed stage in period of record, 77.11 on Oct. 5; lowest, 80.85 on May 15. Records available: 1948.

May 15	a 80.85	Aug. 7	a 77.95	Oct. 5	77.11	Dec. 11	a 77.42
June 30	78.89	Sept. 9	77.49	Nov. 10	77.29	30	77.80
July 21	a 78.40						

a By Central Nebraska Public Power and Irrigation District.

7-18-27ab. Getty. Altitude of measuring point 2,284.10 feet above sea level. Highest observed stage in period of record, 60.42 on Nov. 9. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level
Apr. 29	62.34	Sept. 8	61.44	Nov. 9	60.42
June 24	62.12	Oct. 6	60.63		

7-18-35ab. Anderson. Drilled irrigation well, diameter 15 inches, reported depth 123.0 feet. Measuring point, top of casing, 0.5 foot above land-surface datum, 2,282.03 feet above sea level. Highest observed stage in period of record, 70.99 on Nov. 9; lowest, 72.74 on May 12. Records available: 1948.

May 12	72.74	Sept. 8	72.12	Nov. 9	70.99
June 24	72.45	Oct. 6	71.26		

7-19-6aa. Central Nebraska Public Power and Irrigation District. Drilled observation well, diameter 4 inches, depth 116.2 feet. Measuring point, top of pipe, 1.4 feet above land-surface datum, 2,366.80 feet above sea level. Highest observed stage in period of record, 59.79 on Dec. 27; lowest, 63.28 on May 10. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 10	a 63.28	July 20	61.93	Sept. 1	61.94	Nov. 10	60.53
25	63.04	Aug. 7	a 62.02	Oct. 4	61.43	Dec. 27	59.79
June 23	62.17						

a By Central Nebraska Public Power and Irrigation District.

7-19-12cc. Central Nebraska Public Power and Irrigation District. Altitude of measuring point, 2,318.72 feet above sea level. Highest observed stage in period of record, 48.65 on Dec. 27. Records available: 1947-48.

Apr. 29	51.78	June 23	50.64	Sept. 1	49.81	Dec. 27	48.65
May 28	51.35	July 20	50.26	Nov. 9	48.94		

7-19-16ac. Cole. Drilled irrigation well, diameter 16 inches, depth 138.0 feet. Measuring point, hole in turbine side, 0.8 foot above land-surface datum, 2,366.12 feet above sea level. Highest observed stage in period of record, 75.49 on Dec. 30, 1948; lowest, 81.40 on July 25, 1947. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level
July 25, 1947	81.40	July 20, 1948	77.35	Oct. 4, 1948	76.45
Apr. 29, 1948	78.35	Sept. 1	77.11	Dec. 30	75.49
July 6	77.96				

7-19-23ad. Central Nebraska Public Power and Irrigation District. Drilled observation well, diameter 1 inch, depth 82 feet. Measuring point, top of pipe, 1.0 foot above land-surface datum, 2,331.84 feet above sea level. Highest observation stage in period of record, 55.7% on Oct. 4, 1948; lowest, 70.60 on Mar. 9, 1945. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District. Records available: 1945-48.

Mar. 9, 1945	70.60	Aug. 5, 1947	61.99	Apr. 29, 1948	a 61.52
Apr. 19	70.38	Sept. 2	61.00	May 28	a 59.15
Nov. 10	67.96	Oct. 2	60.31	June 19	57.98
Jan. 19, 1946	67.60	27	60.33	July 20	a 56.89
Apr. 10	68.13	Nov. 18	a 60.55	Aug. 7	56.52
May 9	67.38	Dec. 7	60.58	Sept. 1	a 56.19
June 12	66.83	Jan. 3, 1948	60.37	Oct. 4	a 55.72
May 21, 1947	63.25	Feb. 7	60.46	Nov. 9	a 55.84
June 20	63.27	Mar. 6	60.72	Dec. 27	a 55.79
July 31	62.16				

a By Geological Survey, U. S. Dept. of Interior.

7-19-26dd. Central Nebraska Public Power and Irrigation District. Drilled observation well, diameter 1 inch, depth 56.0 feet. Measuring point, top of pipe, at land-surface datum, 2,348.21 feet above sea level. Highest observed stage in period of record, 38.88 on Aug. 5, 1947; lowest, 49.89 on Apr. 19, 1945. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District. Records available: 1945-48.

Date	Water level	Date	Water level	Date	Water level
Mar. 9, 1945	49.41	July 31, 1947	39.50	Apr. 29, 1948	48.43
Apr. 19	49.89	Aug. 5	38.88	May 28	47.88
Nov. 10	45.68	Sept. 2	40.66	June 23	47.00
Jan. 19, 1946	47.77	Oct. 2	41.36	July 20	42.57
Apr. 10	49.40	27	42.86	Aug. 7	42.33
May 9	49.85	Nov. 26	44.27	Sept. 1	41.39
June 12	48.87	Dec. 21	44.82	Oct. 4	41.86
Aug. 20	44.29	Jan. 3, 1948	45.30	Nov. 9	42.91
May 21, 1947	48.20	Feb. 7	46.46	27	43.42
June 20	47.35	Mar. 6	46.58	Dec. 27	44.34

7-20-14cc. Drilled domestic and stock well, diameter 3½ inches, depth 193.3 feet. Measuring point, top of casing, 1.9 feet above land-surface datum, 2,473.70 feet above sea level. Highest observed stage in period of record, 165.11 on Dec. 30; lowest, 168.63 on May 18. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 18	168.63	July 20	167.56	Oct. 4	165.98	Dec. 30	165.11
June 23	168.12	Sept. 1	166.67	Nov. 10	165.47		

7-20-28dc. Well 184 in previous reports. Dahlgren. Measurements resumed. Altitude of measuring point 2,451.54 feet above sea level. Highest observed stage in period of record, 159.60 on Oct. 5. Records available: 1934-36, 1948.

Jan. 20	163.40	June 23	160.97	Sept. 2	160.49	Nov. 10	159.90
Apr. 29	161.25	July 20	160.51	Oct. 5	159.60	Dec. 30	159.69

7-20-31cd. Published erroneously in previous report as 1b. Peterson. Altitude of measuring point 2,519.70 feet above sea level. Highest observed stage in period of record, 221.08 on Dec. 4. Records available: 1947-48.

Lowest daily water level, from recorder charts

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	223.06	222.88	222.88	222.71	222.43	222.73
2	222.91	222.87	222.74	223.70	222.60	222.62
3	223.11	222.55	223.01	223.57	222.77	222.42
4	223.12	222.69	223.23	223.32	222.77	222.25
5	223.14	222.68	223.22	223.48	222.53	222.38
6	223.19	.....	222.98	223.16	222.75	.....
7	222.89	.....	222.56	223.35	.....	.....
8	222.85	.....	222.60	223.82	.....	.....
9	222.95	.....	222.77	223.55	.....	.....
10	223.00	222.60	222.96	.....	.....	.....
11	222.92	223.00	222.96	.....	.....	.....
12	223.22	222.99	222.86	.....	.....	222.60
13	223.26	222.63	222.80	223.37	.....	222.61
14	223.27	222.91	222.42	223.37	.....	222.37
15	223.02	222.88	222.39	223.23	.....	222.43
16	223.25	222.82	222.66	223.37	.....	222.46
17	223.24	222.90	222.74	223.36	222.75	222.40
18	222.84	222.86	222.56	222.98	222.77	222.48
19	222.95	223.03	222.41	223.08	222.63	222.60
20	222.70	223.10	222.41	223.37	222.84	222.53
21	222.69	223.11	222.63	.....	222.65	222.12
22	222.68	222.87	222.67	.....	222.70	221.95
23	222.91	222.49	222.64	222.95	222.69	222.31
24	223.10	223.00	222.69	222.88	222.87	222.43
25	223.29	222.99	222.64	222.92	222.85	222.40

7-20-31bb--Continued.

Lowest daily water level, from recorder charts

Day	Jan.	Feb.	Mar.	Apr.	May	June
26	223.40	222.84	222.46	223.20	223.88	222.30
27	223.39	222.37	223.02	223.63	223.75	222.29
28	222.79	222.78	223.02	223.78	223.68	222.35
29	222.66	222.91	222.52	222.78	223.68	222.42
30	222.78		222.39	222.54	222.65	222.45
31	222.79		222.48		223.73	

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	222.36	.....	222.49	222.24	221.84	.....
2	222.35	.....	222.49	222.26	221.84	.....
3	222.35	.....	222.36	222.23	221.65	.....
4	222.35	.....	222.24	222.07	221.25	221.08
5	222.49	.....	222.12	221.68	221.56	221.42
6	222.56	.....	222.15	221.61	221.93	221.66
7	222.56	222.18	222.25	221.76	221.93	221.67
8	222.52	222.09	222.31	221.97	221.95	221.85
9	222.52	222.10	222.31	222.02	221.95	222.05
10	222.47	222.20	222.26	222.02	221.75	221.97
11	222.44	222.23	222.05	222.08	221.82	221.30
12	222.32	222.21	221.96	222.11	221.77	221.31
13	222.38	222.25	222.29	222.15	221.78	221.57
14	222.42	222.29	222.34	222.19	221.79	221.57
15	222.33	222.34	222.26	222.06	221.66	221.55
16	222.32	222.34	222.13	222.31	221.54	221.72
17	222.35	222.33	222.09	222.39	221.54	221.74
18	222.34	222.39	222.11	222.23	221.37	221.52
19	222.18	222.40	222.10	222.00	221.37	221.43
20	222.07	222.55	221.99	221.94	.....	221.17
21	222.08	222.57	222.02	221.99	.....	221.56
22	222.33	222.50	222.03	222.10	221.80	221.74
23	222.41	222.46	221.95	222.19	221.51	221.74
24	222.41	222.49	222.06	222.09	221.48	221.61
25	222.32	222.49	222.49	221.89	221.30	.....
26	222.39	222.61	222.59	221.78	221.40	.....
27	222.42	222.61	222.59	221.69	221.80	.....
28	222.42	222.57	222.50	221.65	221.81	.....
29	222.38	222.62	222.39	221.65	221.81	.....
30	222.57	222.56	222.09	221.61	.....	.....
31	.....	222.45		221.71		221.69

8-17-19db. Bamford. Records available: 1930-37, 1939-43, 1945-48.

Date	Water level	Date	Water level	Date	Water level
Mar. 8	11.00	July 9	11.55	Nov. 6	11.75
May 6	11.40	Sept. 8	12.00		

8-17-21bc. Highest observed stage in period of record, 5.55 on Mar. 8; lowest, 6.95 on Sept. 8. Records available: 1947-48.

Jan. 9	6.00	May 6	5.80	Sept. 8	6.95
Mar. 8	5.55	July 9	6.19	Nov. 6	6.66

8-17-24bc. Skiles. Records available: 1930-48.

Jan. 9	9.04	May 6	8.88	Sept. 8	11.52
Mar. 8	8.83	July 9	9.20	Nov. 6	9.69

8-18-9db. University of Nebraska. Records available: 1931-40, 1942-43, 1945-47. No measurements made in 1948.

8-18-16cc. Nelson. Records available: 1946-48.

Jan. 9	7.40	May 6	7.43	Sept. 8	8.48
Mar. 8	7.29	July 9	7.62	Nov. 6	8.06

8-18-21dd. Central Nebraska Public Power and Irrigation District. Drilled observation well, diameter 4 inches, depth 35.3 feet. Measuring point, top of casing, at land-surface datum, 2,249.21 feet above sea level. Highest observed stage in period of record, 11.26 on May 8; lowest, 11.80 on Dec. 20. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 8	11.26	July 21	11.45	Sept. 9	11.49	Nov. 10	11.70
June 15	11.33	Aug. 7	11.39	Oct. 5	11.58	Dec. 30	11.80

a By Central Nebraska Public Power and Irrigation District.

8-18-24bb. Skiles. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 9	7.98	May 6	7.83	Sept. 8	8.74
Mar. 8	7.83	July 9	7.93	Nov. 6	8.80

8-18-33dd. Central Nebraska Public Power and Irrigation District. Drilled observation well, diameter 4 inches, depth 79.5 feet. Measuring point, top of casing, at land-surface datum, 2,309.88 feet above sea level. Highest observed stage in period of record, 73.15 on Dec. 30; lowest, 76.48 on May 8. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 8	76.48	July 21	74.05	Sept. 9	73.58	Nov. 10	73.24
June 15	74.40	Aug. 7	73.88	Oct. 5	73.42	Dec. 30	73.15

a By Central Nebraska Public Power and Irrigation District.

8-18-34bb. Central Nebraska Public Power and Irrigation District. Drilled observation well, diameter 4 inches, depth 35.5 feet. Measuring point, top of casing, at land-surface datum, 2,257.35 feet above sea level. Highest observed stage in period of record, 20.10 on Oct. 5; lowest, 20.22 on June 15. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 8	20.17	July 21	20.17	Sept. 9	20.15	Nov. 10	20.16
June 15	20.22	Aug. 7	20.18	Oct. 5	20.10	Dec. 30	20.18

a By Central Nebraska Public Power and Irrigation District.

8-19-7dc. Mrs. Labart. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 8	5.08	May 6	5.09	Sept. 8	6.05
Mar. 8	4.62	July 9	5.62	Nov. 5	5.13

8-19-14dc. Crawford. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 8	11.17	May 6	11.24	Sept. 8	12.55
Mar. 8	10.98	July 9	11.37	Nov. 6	12.27

8-19-15cd. Drilled irrigation well, diameter 18 inches, depth 28.0 feet. Measuring point, top of casing, at land-surface datum, 2,285.31 feet above sea level. Records available: 1948. Mar. 18, 1947, 7.04; Oct. 4, 1948, 6.22.

8-19-29cc. Central Nebraska Public Power and Irrigation District. Drilled observation well, diameter 4 inches, depth 100.5 feet. Measuring point, top of casing, 1.80 feet above land-surface datum, 2,365.62 feet above sea level. Highest observed stage in period of record, 63.89 on Dec. 27; lowest, 64.43 on May 10. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 10	64.43	July 20	64.03	Sept. 1	64.03	Nov. 10	63.96
18	64.36	Aug. 7	64.04	Oct. 4	63.98	Dec. 27	63.89
June 23	64.25						

a By Central Nebraska Public Power and Irrigation District.

8-19-33cc. Central Nebraska Public Power and Irrigation District. Drilled observation well, diameter 4 inches, depth 117.0 feet. Measuring point, top of casing, 1.8 feet above land-surface, 2,352.77 feet above sea level. Highest observed stage in period of record, 50.46 on Dec. 27; lowest, 51.70 on May 10. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level
May 10	51.70	July 20	51.33	Dec. 27	50.46
June 23	51.51	Nov. 10	50.70		

8-19-36bb. Central Nebraska Public power and Irrigation District. Drilled observation well, diameter 1 inch, depth 41.0 feet. Measuring point, top of pipe, at land-surface datum, 2,304.82 feet above sea level. Highest observed stage in period of record, 33.23 on Dec. 27, 1948; lowest, 39.48 on Mar. 9, 1945. Measurements supplied through courtesy of Central Nebraska Public Power and Irrigation District. Records available: 1945-48.

Mar. 9, 1945	39.48	July 31, 1947	35.52	Apr. 29, 1948	a34.16
Apr. 19	39.33	Aug. 5	35.35	May 28	a34.11
Jan. 19, 1946	37.91	Sept. 2	35.16	June 23	a34.19
Apr. 10	38.00	Oct. 2	34.66	July 20	a33.78
May 9	37.87	Nov. 18	a34.37	Aug. 7	34.02
June 12	37.82	Dec. 7	34.65	Sept. 1	a34.13
Aug. 20	37.63	Jan. 3, 1948	34.24	Oct. 2	a33.54
May 21, 1947	35.98	Feb. 7	34.40	Nov. 10	a33.46
June 20	36.98	Mar. 6	33.90	Dec. 27	a33.23

a By Geological Survey, U. S. Dept. of Interior.

8-20-8cd. Mrs. Matson. New pump installed measuring point after July 8 is 1.6 feet above land-surface datum. Records available: 1946-48.

Jan. 8	7.35	May 6	6.47	Sept. 9	5.98
Mar. 4	7.53	July 8	6.29	Nov. 6	6.32

8-20-9cd. Jones. Records available: 1938-48.

Jan. 8	3.48	May 6	3.80	Sept. 9	4.22
Mar. 4	3.50	July 8	4.00	Nov. 6	3.51

8-20-12dc. Central Nebraska Public Power and Irrigation District. Drilled observation well, diameter 18 inches, depth 12 feet. Measuring point, top of casing, 2.0 feet above land-surface datum, 2,376.22 feet above sea level. Highest observed stage in period of record, 1.35 on Jan. 8; lowest, 3.00 on Sept. 8. Records available: 1948.

Jan. 8	1.35	May 6	1.70	Sept. 8	3.00
Mar. 4	1.38	July 7	2.60	Nov. 6	1.82

8-20-18dd. High Estate. Drilled domestic and stock well, diameter 4 inches, reported depth 140 feet. Measuring point, top of brick curb, at land-surface datum, 2,436.19 feet above sea level. Highest observed stage in period of record, 106.10 on July 20; lowest, 107.23 on Dec. 30. Records available: 1948.

June 30	106.92	Sept. 1	106.42	Nov. 10	107.01
July 20	106.10	Oct. 1	106.43	Dec. 30	107.23

8-20-23dc. Central Nebraska Public Power and Irrigation District. Drilled observation well, diameter 4 inches, depth 99.8 feet. Measuring point, top of casing, 0.6 foot above land-surface datum, 2,390.03 feet above sea level. Highest observed stage in period of record, 67.06 on Dec. 30; lowest, 71.26 on June 5. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 10	a68.60	July 20	68.80	Sept. 1	67.46	Nov. 10	67.13
June 5	a71.26	Aug. 7	a67.84	Oct. 4	67.08	Dec. 30	a67.06
23	70.27						

a By Central Nebraska Public Power and Irrigation District.

8-20-26dc. Central Nebraska Public Power and Irrigation District. Drilled observation well, diameter 4 inches, depth 90.4 feet. Measuring point, top of pipe, 0.6 foot above land-surface datum, 2,391.22 feet above sea level. Highest observed stage in period of record, 33.97 on June 23; lowest, 64.88 on May 25. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 25	64.88	July 20	43.32	Oct. 4	51.25	Dec. 27	55.14
June 23	34.57	Sept. 1	42.43	Nov. 10	54.12		

Platte County

A17-1-14cc. Loup River Public Power District. Records available: 1935-40, 1942-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 13	9.53	May 8	9.23	Sept. 2	9.20
Mar. 23	9.14	July 12	9.16	Nov. 2	9.62

A17-1-14dd. Loup River Public Power District. Records available: 1935-40, 1942-48.

Jan. 13	5.52	May 8	4.94	Sept. 2	4.93
Mar. 23	4.61	July 13	4.56	Nov. 2	5.35

A17-1-17dd. Loup River Public Power District. Records available: 1935-40, 1942-48.

Jan. 13	8.69	May 8	7.97	Sept. 2	9.07
Mar. 23	7.46	July 13	8.84	Nov. 2	9.59

A17-1-25aa. Loup River Public Power District. Records available: 1935-40, 1942-48.

Jan. 13	8.45	May 8	7.87	Sept. 2	7.72
Mar. 23	7.94	July 13	7.49	Nov. 1	8.29

A17-1-29da. Loup River Public Power District. Records available: 1935-40, 1942-44, 1946-48.

Jan. 13	10.93	May 8	10.27	Sept. 2	11.25
Mar. 23	9.62	July 13	10.97	Nov. 2	11.58

A17-1-36bc. Loup River Public Power District. Records available: 1946-48.

Jan. 13	6.38	May 8	5.48	Sept. 2	6.14
Mar. 23	4.94	July 13	5.82	Nov. 2	6.50

A18-1-28cd. U. S. 150. Loup River Public Power District. Records available: 1935-40, 1942-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	69.30	Apr. 28	69.40	July 31	69.50	Oct. 30	69.40
Mar. 29	69.30	May 28	69.40	Aug. 28	69.60	Nov. 30	69.60

A20-1-18cb. University of Nebraska. Records available: 1935-42, 1946, 1948. No measurements made in 1948.

16-2-2da. Loup River Public Power District. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 13	5.74	May 8	4.07	Sept. 2	5.63
Mar. 23	4.14	July 13	4.40	Nov. 2	6.02

16-2-9cc. Nyffeler. Records available: 1946-48.

Jan. 13	3.65	May 8	2.00	Sept. 2	3.87
Mar. 24	1.95	July 13	3.18	Nov. 2	3.85

16-2-12ab. Ernst. Records available: 1934-42, 1944-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 13	9.61	May 8	8.32	Sept. 2	9.80
Mar. 24	7.83	July 13	8.59	Nov. 2	10.12

17-1-2cc. Loup River Public Power District. Records available: 1935-40, 1942-48.

Jan. 13	10.67	May 8	10.36	Sept. 2	10.30
Mar. 22	10.01	July 13	10.50	Nov. 2	10.68

17-1-5ad. Loup River Public Power District. Records available: 1935-40, 1942-48.

Jan. 13	2.39	May 8	2.04	Sept. 2	1.55
Mar. 18	1.50	July 13	2.54	Nov. 2	2.82

17-1-7ac. Loup River Public Power District. Records available: 1935-40, 1942-48.

Jan. 13	7.50	May 8	6.63	Sept. 2	7.52
Mar. 22	6.15	July 13	7.25	Nov. 2	7.98

17-1-14cc. Loup River Public Power District. Records available: 1935-40, 1942-48.

Jan. 13	10.97	May 8	10.60	Sept. 2	10.92
Mar. 22	9.50	July 13	10.86	Nov. 2	10.88

17-1-34dc. Ernst. Records available: 1946-48.

Jan. 13	8.90	May 8	8.29	Sept. 2	8.95
Mar. 24	7.89	July 13	8.56	Nov. 2	9.29

17-2-2cd. Schacher. Records available: 1934-42, 1946-48.

Jan. 13	6.82	May 8	6.02	Sept. 2	7.82
Mar. 22	5.08	July 12	7.61	Nov. 2	8.27

17-2-4bc. Loup River Public Power District. Records available: 1935-40, 1942-48.

Jan. 13	10.32	May 8	10.39	Sept. 2	11.02
Mar. 22	8.68	July 12	10.73	Nov. 2	11.51

Polk County

13-4-34cc. University of Nebraska. Records available: 1940-41, 1944, 1946, 1948. June 4, 7.98; Oct. 15, 9.52.

14-4-19ab. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 2.36 on Mar. 18. Records available: 1943-48.

Jan. 12	4.37	May 7	3.97	Sept. 1	4.95
Mar. 18	2.36	July 12	4.60	Nov. 1	5.33

15-2-4dc. Records available: 1946-48.

Jan. 12	7.77	May 7	6.91	Sept. 1	6.79
Mar. 22	6.57	July 12	6.32	Nov. 1	7.46

15-2-7bb. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 5.58 on Mar. 19. Records available: 1946-48.

Jan. 12	8.02	May 7	6.59	Sept. 1	7.14
Mar. 19	5.58	July 12	6.44	Nov. 1	7.67

15-3-3dc. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 4.52 on July 12. Records available: 1947-48.

Jan. 12	6.38	May 7	5.30	Sept. 1	5.00
Mar. 18	5.65	July 12	4.52	Nov. 1	6.04

15-3-20cc. Norris. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 12	6.95	May 7	5.45	Sept. 1	6.70
Mar. 18	5.70	July 12	5.90	Nov. 1	7.28

15-3-23dc. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 8.90 on Mar. 18; lowest, 10.72 on Nov. 1. Records available: 1947-48.

Jan. 12	10.33	May 7	8.88	Sept. 1	10.60
Mar. 18	8.90	July 12	9.22	Nov. 1	10.72

15-4-35dc. Carlson. Records available: 1946-48.

Jan. 12	20.20	July 12	19.67	Nov. 1	20.35
May 7	19.70	Sept. 1	19.78		

16-1-14bb. Czafila. Records available: 1946-48.

Jan. 12	5.97	May 7	5.08	Sept. 1	5.39
Mar. 22	5.32	July 12	5.30	Nov. 1	6.00

16-1-36cd. Bigham. Records available: 1946-48.

Jan. 12	21.04	May 7	20.49	Nov. 1	20.85
Mar. 22	20.09	July 12	20.60		

16-2-23dc. Nitsch. Records available: 1946-48.

Jan. 12	7.94	May 7	7.35	Sept. 1	7.83
Mar. 22	6.78	July 12	7.46	Nov. 1	8.14

Red Willow County

2-29-4aa. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 11.52 on Oct. 6. Records available: 1946-48.

Feb. 4	10.39	June 11	10.93	Oct. 6	11.52
Apr. 12	10.14	Aug. 5	10.40	Dec. 10	10.85

2-29-5ab. Wilcox. Lowest observed stage in period of record, 19.92 on Oct. 6. Records available: 1946-48.

Feb. 4	18.35	June 11	19.80	Dec. 10	19.21
Apr. 12	18.31	Oct. 6	19.92		

2-30-1aa. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 11.42 on Aug. 4. Records available: 1946-48.

Feb. 4	9.86	June 11	10.63	Oct. 6	11.38
Apr. 12	9.68	Aug. 4	11.42	Dec. 10	10.30

2-30-12ad. Schmidt. Highest observed stage in period of record, 27.76 on Oct. 6. Records available: 1946-48.

Feb. 4	28.91	June 11	29.62	Oct. 6	27.76
Apr. 12	29.47	Aug. 5	29.34	Dec. 10	29.12

3-26-5bb. Carr. Records available: 1946-48.

Feb. 4	44.57	June 10	43.70	Dec. 10	44.19
Apr. 13	44.08	Oct. 7	44.78		

3-26-5cc. Drilled irrigation well, diameter 24 inches, depth 61.0 feet. Measuring point, hole in turbine base, 0.5 foot above land-surface datum. Highest observed stage in period of record, 16.35 on Apr. 13; lowest, 17.35 on Oct. 7. Records available: 1948.

Apr. 13	16.35	Aug. 5	16.38	Dec. 10	16.96
June 10	16.72	Oct. 7	17.35		

3-26-9cb. Pucha. Records available: 1946-48.

Feb. 2	16.69	June 7	16.90	Oct. 1	16.75
Apr. 9	16.51	Aug. 2	16.04	Dec. 6	16.82

3-26-11bb. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 9.43 on Oct. 4. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Feb. 2	8.85	June 7	8.77	Oct. 4	9.43
Apr. 9	8.52	Aug. 2	8.05	Dec. 6	9.27

3-27-7dc. Helm. Records available: 1946-48.

Feb. 4	9.72	June 10	9.85	Oct. 8	9.25
Apr. 12	9.32	Aug. 5	8.04	Dec. 10	9.52

3-27-8ac. Duckworth. Records available: 1934-44, 1946-48.

Feb. 4	11.60	June 10	11.90	Oct. 7	11.49
Apr. 12	11.54	Aug. 5	10.90	Dec. 10	11.74

3-27-11aa. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48. Feb. 4, 7.64; June 10, 7.66; Aug. 5, 5.88; Oct. 7, well pulled, measurements discontinued.

3-27-11cd. Tiller. Lowest observed stage in period of record, 17.90 on Oct. 4. Records available: 1946-48.

Feb. 2	16.42	June 7	17.08	Oct. 4	17.90
Apr. 9	16.77	Aug. 2	17.35	Dec. 6	17.10

3-27-17cb. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Feb. 2	9.65	June 7	9.77	Oct. 4	10.65
Apr. 9	9.47	Aug. 2	9.62	Dec. 6	10.17

3-28-17da. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Feb. 2	10.92	June 7	11.35	Oct. 4	11.80
Apr. 9	10.50	Aug. 2	10.67	Dec. 6	11.21

3-28-20bb. Tridle. Records available: 1946-48.

Feb. 2	10.68	June 7	11.20	Oct. 4	11.22
Apr. 9	10.30	Aug. 2	10.52	Dec. 6	10.63

3-28-21cd. Vogue. Records available: 1946-48.

Feb. 2	8.95	June 7	9.11	Oct. 4	9.41
Apr. 9	8.92	Aug. 2	8.81	Dec. 6	9.17

3-28-24ac. Abandoned drilled well, diameter 4 inches, depth 23 feet. Measuring point, top of casing, 0.7 foot above land-surface datum. Records available: 1948. Oct. 4, 13.60; Dec. 6, 12.12.

3-29-32db. University of Nebraska. Lowest observed stage in period of record, 7.85 on Oct. 6. Records available: 1940-44, 1946-48.

Feb. 4	5.99	June 11	6.47	Oct. 6	7.85
Apr. 12	5.80	Aug. 4	6.83	Dec. 10	6.58

3-29-35da. Hickman. Records available: 1946-48.

Feb. 4	19.12	June 11	19.79	Oct. 6	18.70
Apr. 12	19.02	Aug. 4	19.61	Dec. 10	18.33

3-30-19bb. Mrs. Cain. Records available: 1946-48.

Feb. 4	6.84	June 11	7.54	Dec. 10	7.61
Apr. 12	6.93	Oct. 6	8.05		

3-30-26cb. Brown. Lowest observed stage in period of record, 10.35 on Oct. 4. Records available: 1946-48.

Feb. 2	8.22	June 7	8.85	Oct. 4	10.35
Apr. 9	8.35	Aug. 2	9.75	Dec. 6	10.08

3-30-29aa. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Feb. 4	3.86	June 11	4.20	Oct. 6	5.03
Apr. 12	3.49	Aug. 4	4.62	Dec. 10	4.17

3-30-34bb. Hauxwell. Lowest observed stage in period of record, 14.73 on Oct. 6. Records available: 1946-48.

Feb. 4	13.42	June 11	14.10	Dec. 10	14.02
Apr. 12	13.30	Oct. 6	14.73		

4-26-34db. Selover. Lowest observed stage in period of record, 21.28 on Oct. 7. Records available: 1946-48.

Feb. 4	20.75	June 10	20.67	Oct. 7	21.28
Apr. 13	20.38	Aug. 5	20.35	Dec. 10	21.19

Richardson County

No measurements made in 1948.

Rock County

30-17-8db. University of Nebraska. Highest observed stage in period of record, 1.68 on Mar. 22. Measurements made by Bureau of Reclamation, U. S. Dept. of Interior, Ainsworth. Records available: 1934-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	2.14	Apr. 15	1.98	July 12	2.90	Oct. 13	3.57
Feb. 16	2.49	May 12	1.86	Aug. 18	2.90	Nov. 15	3.40
Mar. 22	1.68	June 15	2.78	Sept. 14	3.92	Dec. 14	2.80

30-19-10aa. University of Nebraska. Measurements made by Bureau of Reclamation, U. S. Dept. of Interior, Ainsworth. Records available: 1940, 1944-48.

Jan. 14	1.47	May 12	0.96	Aug. 18	1.07	Nov. 15	2.39
Feb. 18	1.78	June 15	2.32	Sept. 14	2.82	Dec. 14	1.97
Apr. 15	.88	July 12	1.68	Oct. 13	2.62		

Saline County

No measurements made in 1948.

Sarpy County

No measurements made in 1948.

Saunders County

A13-9-11dd. City of Lincoln. Records available: 1934-42, 1944, 1946. No measurements made in 1948.

A13-9-12dc. City of Lincoln. Records available: 1936-42, 1944, 1946. No measurements made in 1948.

A13-9-24cc. U. S. 62. City of Lincoln. Highest observed stage in period of record, 0.48 on July 31. Records available: 1933-48.

Jan. 1	6.18	May 1	3.79	July 31	0.48	Oct. 30	4.95
29	6.12	31	5.34	Aug. 30	5.16	Dec. 1	4.28
Mar. 1	1.10	July 1	5.90	Oct. 1	5.85	31	4.93
27	1.90						

A13-9-24dc. City of Lincoln. Records available: 1934-42, 1944, 1946. No measurements made in 1948.

A14-5-35cd. Union Pacific Railroad. Records available: 1935-42, 1944, 1946. No measurements made in 1948.

A17-5-23bb. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 0.71 on Mar. 23. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 12	1.50	May 7	1.38	Sept. 1	2.72
Mar. 23	.71	July 12	1.42	Nov. 1	2.54

Scotts Bluff County

No measurements made in 1948.

Seward County

All-2-23cc. Rolfmeier. Drilled irrigation well, diameter 18 inches, reported depth 127.0 feet. Measuring point, hole in turbine base, 0.5 foot above land-surface datum. Records available: 1948. June 23, 77.43; Oct. 14, 77.86.

All-3-22aa. Kilpatrick Estate. Records available: 1934-42, 1946. No measurements made in 1948.

Sheridan County

24-41-34da. University of Nebraska. Records available: 1935-42, 1944-48. Mar. 25, 7.93; June 30, 7.53; Sept. 2, 8.73; Oct. 19, 8.77.

24-42-27ba. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48. June 30, 12.94; Sept. 2, 13.05; Oct. 19, 13.01.

24-43-15da. University of Nebraska. Records available: 1940-42, 1944-48. Mar. 25, 6.45; June 30, 6.78; Sept. 2, 7.14; Oct. 19, 7.01.

24-44-14da. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48. June 30, 5.13; Sept. 2, 6.05; Oct. 19, 5.68.

24-44-18bb. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48. June 30, 4.79; Sept. 2, 5.31; Oct. 19, 5.19.

24-45-8dd. Geological Survey, U. S. Dept. of Interior. Records available: 1935-42, 1946-48. Sept. 2, 3.28; Oct. 19, 2.91.

24-46-10cb. Geological Survey, U. S. Dept. of Interior. Records available: 1946-48. Mar. 25, 6.32; July 1, 6.46; Sept. 2, 6.90; Oct. 19, 6.86.

25-41-28ad. Ballinger. Records available: 1946-47. No measurements made in 1948.

25-45-32ad. Herrian. Records available: 1946-48.

Lowest daily water level, from recorder charts

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 25	32.46	Mar. 30	32.50	Oct. 22	33.81	Oct. 26	33.80
26	32.48	31	32.51	23	33.82	27	33.77
27	32.50	June 29 a	33.16	24	33.80	28	33.75
28	32.50	Sept. 2 a	33.47	25	33.80	29	33.76
29	32.49						

a Tape measurement.

25-45-33bc. Geological Survey, U. S. Dept. of Interior. Staff gage at north end of Bower Lake. Records available: 1946-47. Measurements discontinued.

26-41-24cd. Records available: 1946-47. No measurements made in 1948.

27-41-29ba. Bixby. Records available: 1946-47. No measurements made in 1948.

27-46-34bb. Records available: 1946-47. No measurements made in 1948.

28-42-15bc. Records available: 1946-47. No measurements made in 1948.

28-46-32ad. Jaggars. Records available: 1946-47. No measurements made in 1948.

31-44-10dd. University of Nebraska. Records available: 1935-42, 1944-47. No measurements made in 1948.

31-46-5dd. Johnson. Records available: 1934-38, 1940-41, 1945, 1947. No measurements made in 1948.

31-46-8ad. University of Nebraska. Records available: 1937-42, 1945-47. No measurements made in 1948.

33-42-36da. Barto. Records available: 1940-41, 1945, 1947. No measurements made in 1948.

Sherman County

14-14-5bc. Macejeski. Drilled irrigation well, diameter 18 inches, reported depth 108 feet. Measuring point, hole in turbine base, 0.8 foot above land-surface datum. Records available: 1948. Mar. 29, 11.42; Oct. 1, 9.71.

14-14-8db. Zimmerman. Drilled irrigation well, diameter 18 inches, depth 155 feet. Measuring point, hole in turbine base, 2.0 feet above land-surface datum. Records available: 1948. Mar. 29, 6.51; Oct. 1, 8.76.

15-14-19cb. Heil. Drilled irrigation well, diameter 18 inches, reported depth 105 feet. Measuring point, top of casing, 2.0 feet above land-surface datum. Records available: 1948. July 1, 5.48; Oct. 1, 6.52.

15-15-24da. Kociemba. Records available: 1934-44. New windmill installed on Mar. 29, measuring point destroyed. No measurements made in 1948.

Sioux County

No measurements made in 1948.

Stanton County

No measurements made in 1948.

Thayer County

No measurements made in 1948.

Thomas County

23-28-9da. University of Nebraska. Records available: 1935-40, 1942, 1945-47. Records available: 1948. Mar. 25, 10.44; June 30, 10.66; Sept. 2, 10.84; Oct. 19, 10.62.

24-30-20ab. University of Nebraska. Records available: 1935-42, 1944-48. Mar. 25, 2.67; June 30, 2.92; Sept. 2, 2.95; Oct. 19, 2.78.

Thurston County

No measurements made in 1948.

Valley County

17-16-26dc. Geological Survey, U. S. Dept. of Interior. Records available: 1943-48.

Lowest daily water level, from recorder charts

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	4.87	5.41	3.92	4.29	5.36	5.75	5.13	5.60	6.05	6.14	5.70	4.75
2	....	5.35	3.90	4.33	5.38	5.79	5.25	5.61	6.08	6.13	5.68	4.74
3	....	5.27	3.92	4.37	5.41	5.88	5.36	5.48	6.11	6.12	5.67	4.72
4	....	5.23	3.94	4.43	5.44	5.97	5.44	5.32	6.13	6.10	5.65	4.64
5	4.80	5.21	3.91	4.48	5.47	6.01	5.52	5.25	6.16	6.10	5.63	4.56
6	4.71	5.20	3.85	4.49	5.30	6.04	5.59	5.27	6.17	6.10	5.58	4.58
7	4.67	5.17	3.91	4.54	5.03	6.07	5.65	5.28	6.15	6.09	5.55	4.61
8	4.55	5.15	3.93	4.62	5.09	6.09	5.71	5.31	6.12	6.07	5.52	4.63
9	4.48	5.19	3.97	4.65	5.18	6.12	5.77	5.36	6.07	6.05	5.50	4.64
10	4.47	5.20	3.98	4.65	5.22	6.15	5.81	5.45	6.05	6.04	5.48	4.64
11	4.47	5.17	....	4.70	5.25	6.17	5.85	5.53	6.05	6.02	5.47	4.64

11-16-26dc--Continued.

Lowest daily water level, from recorder charts												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
12	4.54	....	....	4.74	5.30	6.17	5.84	5.54	6.08	6.00	5.46	4.62
13	4.68	5.05	....	4.75	5.36	6.01	5.84	5.33	6.10	5.99	5.45	4.56
14	4.82	4.98	....	4.78	5.42	5.94	5.82	5.10	6.14	5.98	5.43	4.49
15	4.89	4.94	....	4.82	5.49	5.92	5.82	5.06	6.16	5.97	5.42	4.55
16	4.97	4.86	....	4.88	5.55	5.93	5.85	5.11	6.13	5.95	5.40	4.67
17	5.09	4.78	3.06	4.91	5.61	5.94	5.87	5.21	6.20	5.95	5.39	4.75
18	5.15	4.68	2.97	4.94	5.66	5.80	5.87	5.32	6.22	5.94	5.38	4.77
19	5.20	4.55	3.10	4.99	5.72	5.65	5.72	5.41	6.23	5.92	5.36	4.79
20	5.23	4.49	3.17	5.05	5.78	5.61	5.75	5.50	6.24	5.90	5.34	4.79
21	5.23	4.44	3.26	5.08	5.83	5.46	5.78	....	6.24	5.89	5.33	4.74
22	5.19	4.37	3.31	5.10	5.88	a5.28	5.83	....	6.24	5.88	5.30	4.64
23	5.20	4.31	3.42	5.13	5.89	a5.12	5.89	....	6.23	5.86	5.26	4.57
24	5.29	4.34	3.60	5.15	5.82	5.02	5.96	5.74	6.22	5.85	....	4.48
25	5.32	4.28	3.72	5.13	5.79	5.11	6.00	5.80	6.19	5.83	....	4.47
26	5.33	4.26	3.94	5.14	5.84	5.18	6.04	5.85	6.17	5.81	5.04	4.46
27	5.35	4.19	4.05	5.19	5.90	5.08	6.06	....	6.16	5.80	4.96	4.44
28	....	4.07	4.02	5.24	5.95	4.76	6.09	....	6.15	5.78	4.88	4.48
29	5.43	4.00	4.07	5.28	5.98	4.88	6.09	....	6.15	5.77	4.83	4.50
30	5.43		4.12	5.32	5.98	5.00	5.71	....	6.14	5.75	4.80	4.54
31	5.43		4.22		5.82		5.62	6.02		5.72		4.57

a Interpolated.

18-13-2ac. Rutar. Drilled irrigation well, diameter 18 inches, reported depth 100.0 feet. Measuring point, hole in turbine base, 1.0 foot above land-surface datum. Records available: 1948. June 30, 10.26; Sept. 30, 9.60.

18-13-23dd. Hutchins. To convert water levels in feet above assumed datum, as published in previous reports, to feet below land-surface datum, for measurements prior to 1938 subtract from 122.57, for measurements after 1938 subtract from 124.22. Highest observed stage in period of record, 10.46 on Sept. 30. Records available: 1934-42, 1948. June 30, 10.70; Sept. 30, 10.46.

18-15-12bb. Kokes. Drilled irrigation well, diameter 18 inches, reported depth 121 feet. Measuring point, hole in turbine base, 1.0 foot above land-surface datum. Records available: 1948. July 1, 30.84; Oct. 1, 32.00.

19-13-28bb. Peterson. Drilled irrigation well, diameter 18 inches, reported depth 98.0 feet. Measuring point, hole in turbine base, at land-surface datum. Records available: 1948. June 30, 13.45; Sept. 30, 14.58.

19-13-33cc. Fish. Drilled irrigation well, diameter 18 inches, reported depth 119 feet. Measuring point, hole in turbine base, at land-surface datum. Records available: 1948. June 28, 34.20; Sept. 30, 33.35.

19-14-6dc. Versal. Records available: 1934-42. No measurements made in 1948.

19-14-13da. Sack. Drilled irrigation well, diameter 18 inches, depth 134.0 feet. Measuring point, hole in turbine base, 0.5 foot above land-surface datum. Records available: 1948. June 30, 21.50; Sept. 30, 20.33.

19-14-15db. Kerchal. Drilled irrigation well, diameter 18 inches, reported depth 96.0 feet. Measuring point, hole in turbine base, 0.5 foot above land-surface datum. Records available: 1948. June 30, 4.43; Sept. 30, 6.37.

19-14-36bb. Penas. Drilled irrigation well, diameter 18 inches, reported depth 155.0 feet. Measuring point, hole in turbine base, 1.0 foot above land-surface datum. Records available: 1948. June 30, 29.40; Sept. 30, 29.72.

20-15-34aa. Michalski. Drilled irrigation well, diameter 18 inches, reported depth 122.0 feet. Measuring point, hole in turbine base, at land-surface datum. Records available: 1948. June 30, 57.16; Sept. 30, 57.00.

Washington County

No measurements made in 1948.

Wayne County

No measurements made in 1948.

Webster County

1-9-6cd. Abandoned domestic well, diameter 6 inches, depth 63.0 feet. Measuring point, edge of casing, 1.50 feet above land-surface datum. Highest observed stage in period of record, 48.03 on Apr. 14; lowest, 50.65 on Oct. 8. Records available: 1948. Apr. 14, 48.03; June 11, 49.45; Aug. 6, 49.88; Oct. 8, 50.65.

1-9-9ad. Geological Survey, U. S. Dept. of Interior. Bored observation well, diameter 1½ inches, depth 16.6 feet. Measuring point, top of pipe, 2.0 feet above land-surface datum, 1,646.07 feet above sea level. Highest observed stage in period of record, 2.80 on Oct. 5; lowest, 3.97 on Oct. 25. Records available: 1948. Oct. 5, 2.80; Oct. 25, 3.97; Dec. 20, 3.11.

1-9-9cb. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 5.09 on July 22; lowest, 6.78 on Oct. 25. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	6.22	Apr. 15	5.22	Aug. 18	5.77	Oct. 25	6.78
Feb. 18	6.20	May 19	5.67	Sept. 24	6.52	Dec. 20	6.60
Mar. 23	5.19	July 22	5.09				

1-9-9cc. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 6.51 on Mar. 23; lowest, 8.43 on Dec. 20. Records available: 1947-48.

Jan. 14	7.69	Apr. 15	6.60	Aug. 18	7.29	Oct. 25	8.34
Feb. 18	7.83	May 19	6.87	Sept. 24	8.05	Dec. 20	8.43
Mar. 23	6.51	July 22	6.70				

1-9-11cb. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 6.12 on Sept. 24. Records available: 1946-48.

Jan. 14	4.57	Apr. 15	3.34	Aug. 18	4.79	Oct. 25	5.78
Feb. 18	4.52	May 19	3.66	Sept. 24	6.12	Dec. 20	5.10
Mar. 23	2.66	July 22	3.55				

1-9-13ad. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 9.60 on Oct. 25. Records available: 1946-48.

Jan. 14	8.52	Apr. 15	7.94	Aug. 18	8.20	Oct. 25	9.60
Feb. 18	8.27	May 19	8.48	Sept. 24	9.42	Dec. 20	8.87
Mar. 23	7.30	July 22	6.92				

1-9-14bb. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 5.83 on Mar. 23; lowest, 8.55 on Oct. 25. Records available: 1947-48.

Jan. 14	7.62	Apr. 15	6.42	Aug. 18	7.39	Oct. 25	8.55
Feb. 18	7.12	May 19	6.99	Sept. 24	8.39	Dec. 20	7.89
Mar. 23	5.83						

1-9-14bc. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 10.02 on Mar. 23. Records available: 1947-48.

Jan. 14	10.41	Apr. 15	11.10	Aug. 18	11.08	Oct. 25	12.06
Feb. 18	10.33	May 19	11.49	Sept. 24	12.12	Dec. 20	11.39
Mar. 23	10.02	July 22	10.68				

1-9-16bc. G. Ohmstede. Lowest observed stage in period of record, 17.70 on Aug. 18. Records available: 1946-48.

Jan. 14	12.19	Apr. 15	11.31	Aug. 18	17.70	Oct. 25	13.69
Feb. 18	12.15	May 19	11.99	Sept. 24	14.00	Dec. 20	13.43
Mar. 23	11.70	July 22	11.89				

1-10-1dcl. Records available: 1939-41, 1946-48:

Date	Water level	Date	Water level	Date	Water level
Feb. 6	10.26	June 11	10.12	Oct. 8	10.63
Apr. 14	9.95	Aug. 6	10.34		

1-10-3ad. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 10.08 on Oct. 8. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 6	9.22	June 11	8.98	Oct. 8	10.08	Dec. 21	9.51
Apr. 14	8.32	Aug. 6	9.48	Nov. 17	9.77		

1-10-4ab. Bureau of Reclamation, U. S. Dept. of Interior. Bored observation well, diameter $1\frac{1}{4}$ inches, depth 20 feet. Measuring point, top of pipe, 1.0 foot above land-surface datum and 1,768.78 feet above sea level. Records available: 1948. Nov. 17, 9.56; Dec. 21, 9.43.

1-10-4db. Bureau of Reclamation, U. S. Dept. of Interior. Bored observation well, diameter $1\frac{1}{4}$ inches, depth 14.0 feet. Measuring point, top of pipe, 1.0 foot above land-surface datum and 1,768.07 feet above sea level. Highest observed stage in period of record, 9.50 on Dec. 21; lowest, 9.75 on Nov. 17. Records available: 1948. Oct. 5, 9.60; Nov. 17, 9.75; Dec. 21, 9.50.

1-10-9ad. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 17.89 on Nov. 17. Records available: 1946-48.

Feb. 6	17.30	June 11	17.21	Oct. 8	17.86	Dec. 21	17.77
Apr. 14	16.55	Aug. 6	17.00	Nov. 17	17.89		

1-10-10dd. Bureau of Reclamation, U. S. Dept. of Interior. Bored observation well, diameter $1\frac{1}{4}$ inches, depth 17.0 feet. Measuring point, top of pipe, 2.0 feet above land-surface datum, 1,662.03 feet above sea level. Records available: 1948. Nov. 17, 10.68; Dec. 21, 10.35.

1-10-12ad. Bureau of Reclamation, U. S. Dept. of Interior. Bored observation well, diameter $1\frac{1}{4}$ inches, depth 18.0 feet. Measuring point, top of pipe, 1.0 foot above land-surface datum, 1,651.30 feet above sea level. Records available: 1948. Nov. 17, 9.36; Dec. 21, 9.30.

1-10-12da. Bureau of Reclamation, U. S. Dept. of Interior. Bored observation well, diameter $1\frac{1}{4}$ inches, depth 19.0 feet. Measuring point, top of pipe, 1.0 foot above land-surface datum, 1,646.44 feet above sea level. Records available: 1948. Nov. 17, 8.00; Dec. 21, 8.40.

1-10-12dc. Bureau of Reclamation, U. S. Dept. of Interior. Bored observation well, diameter $1\frac{1}{4}$ inches, depth 15.3 feet. Measuring point, top of pipe, 1.5 feet above land-surface datum, 1,649.23 feet above sea level. Records available: 1948. Nov. 17, 7.88; Dec. 21, 7.38.

1-11-1da. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 10.02 on Dec. 21. Records available: 1946-48.

Feb. 6	9.75	June 11	8.59	Oct. 8	9.81	Dec. 21	10.02
Apr. 14	8.03	Aug. 6	8.45	Nov. 17	9.95		

1-11-5bc. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 7.63 on Dec. 21. Records available: 1946-48.

Feb. 6	7.01	June 11	6.43	Oct. 8	7.42	Dec. 21	7.63
Apr. 14	5.75	Aug. 6	5.79	Nov. 17	7.59		

1-11-5cc. Bureau of Reclamation, U. S. Dept. of Interior. Bored observation well, diameter $1\frac{1}{4}$ inches, depth 13.2 feet. Measuring point, top of pipe, 1.0 foot above land-surface datum, 1,706.66 feet above sea level. Records available: 1948. Nov. 17, 7.50; Dec. 21, 7.18.

1-11-6cc. Bureau of Reclamation, U. S. Dept. of Interior. Bored observation well, diameter $1\frac{1}{4}$ inches, depth 13.5 feet. Measuring point, top of pipe, 2.0 feet above land-surface datum, 1,713.45 feet above sea level. Records available: 1948. Nov. 17, 6.77; Dec. 21, 7.08.

1-11-8bc. Bureau of Reclamation, U. S. Dept. of Interior. Bored observation well, diameter $1\frac{1}{4}$ inches, depth 19.5 feet. Measuring point, top of pipe, 1.0 foot above land-surface datum, 1,710.17 feet above sea level. Records available: 1948. Nov. 18, 11.92; Dec. 21, 11.71.

1-11-9bc. Bureau of Reclamation, U. S. Dept. of Interior. Bored observation well, diameter $1\frac{1}{4}$ inches, depth 12.6 feet. Measuring point, top of pipe, 1.0 foot above land-surface datum, 1,703.26 feet above sea level. Records available: 1948. Nov. 17, 9.33; Dec. 21, 7.74.

1-11-11ab. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 9.29 on Dec. 11. Records available: 1946-48.

Lowest daily water level, from recorder charts

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	7.96	....	7.91	....	7.51	8.21	7.92	8.34	8.53	8.85	9.08	9.14
2	7.97	....	7.85	....	7.54	8.22	7.92	8.35	8.52	8.86	9.08	9.14
3	8.02	....	7.84	....	7.56	....	7.93	....	8.53	8.88	9.08	9.15
4	8.03	....	7.85	....	7.59	....	7.93	....	8.54	8.90	9.08	9.16
5	8.04	....	7.85	....	7.59	....	7.93	....	8.56	8.92	9.08	9.17
6	8.05	8.20	7.84	....	7.61	....	7.97	8.35	8.56	8.93	9.08	9.19
7	8.02	8.23	7.83	....	7.64	....	7.98	8.35	8.56	8.94	9.08	9.20
8	8.02	8.25	7.84	....	7.64	....	7.99	8.35	8.57	8.95	9.08	9.22
9	8.02	8.24	7.86	....	7.65	....	8.01	8.37	8.58	8.95	9.08	9.24
10	8.02	8.25	7.88	....	7.68	....	8.03	8.38	8.60	8.95	9.08	9.28
11	7.95	8.27	7.89	....	7.72	8.40	8.01	8.39	8.62	8.95	9.08	9.29
12	7.99	8.28	7.89	....	7.55	8.40	8.01	8.40	8.63	8.96	9.08	9.28
13	7.99	8.25	7.89	....	7.76	8.41	8.01	8.41	8.63	8.97	9.08	9.24
14	7.99	8.29	7.86	7.15	7.78	8.41	8.03	8.43	8.65	8.98	9.08	9.21
15	7.99	8.29	7.83	7.15	7.79	8.42	8.03	8.44	8.67	8.98	9.08	9.19
16	8.01	8.30	7.78	7.17	7.83	8.44	8.06	8.45	8.68	8.99	9.08	9.18
17	8.02	8.31	7.67	7.19	7.86	8.44	8.08	8.45	8.69	9.00	9.07	9.15
18	8.02	8.30	7.45	7.19	7.90	8.44	8.10	8.46	8.70	9.00	9.09	9.14
19	8.03	8.22	7.08	7.22	7.93	8.46	8.11	8.47	8.71	9.00	9.10	9.11
20	8.03	8.21	6.68	7.27	7.96	8.45	8.12	8.48	8.72	9.01	9.10	9.12
21	8.04	8.18	6.51	7.32	7.98	8.45	8.13	8.49	8.74	9.02	9.12	9.10
22	....	8.15	6.48	7.33	8.01	8.36	8.15	8.50	8.75	9.03	9.12	9.06
23	....	8.12	6.51	7.33	8.04	8.31	8.19	8.51	8.77	9.04	9.12	9.03
24	....	8.16	6.54	7.35	8.06	8.28	8.20	8.53	8.78	9.04	9.13	9.02
25	....	8.18	....	7.37	8.08	8.26	8.22	8.54	8.78	9.05	9.13	8.99
26	....	8.18	....	7.40	8.11	8.24	8.24	8.55	8.79	9.05	9.14	8.98
27	....	8.14	....	7.43	8.12	8.06	8.27	8.56	8.81	9.05	9.14	8.98
28	....	8.11	....	7.48	8.15	7.97	8.29	8.56	8.82	9.05	9.14	8.99
29	....	7.99	....	7.50	8.17	7.93	8.29	8.55	8.83	9.05	9.14	8.96
30	....	....	....	7.50	8.18	7.92	8.30	8.55	8.85	9.06	9.14	8.92
31	....	....	....	....	8.20	....	8.33	8.54	....	9.07	....	8.88

1-11-11bb. Bureau of Reclamation, U. S. Dept. of Interior. Bored observation well, diameter $1\frac{1}{4}$ inches, depth 12 feet. Measuring point, top of pipe, 1.0 foot above land-surface datum, 1,691.68 feet above sea level. Records available: 1948. Nov. 17, 9.84; Dec. 21, 10.08.

1-11-12bc. Bureau of Reclamation, U. S. Dept. of Interior. Bored observation well, diameter $1\frac{1}{4}$ inches, depth 14.0 feet. Measuring point, top of pipe, 1.0 foot above land-surface datum 1,684.89 feet above mean sea level. Records available: 1948. Nov. 17, 8.18; Dec. 21, 8.23.

1-11-16aa. Geological Survey, U. S. Dept. of Interior. Highest observed stage in period of record, 18.74 on Apr. 14 and Dec. 21. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 6	19.21	June 11	18.84	Oct. 8	19.37	Dec. 21	18.74
Apr. 14	18.74	Aug. 6	18.77	Nov. 17	18.87		

1-12-2bb. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 7.12 on Oct. 8. Records available: 1946-48.

Feb. 6	5.62	June 11	5.34	Oct. 8	7.12	Dec. 21	6.72
Apr. 14	4.37	Aug. 6	5.06	Nov. 17	6.84		

1-12-4bb. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 9.58 on Oct. 8. Records available: 1946-48.

Feb. 6	7.74	June 11	6.35	Oct. 8	9.58	Dec. 21	8.08
Apr. 14	5.15	Aug. 6	7.25	Nov. 17	9.18		

1-12-8aa. Geological Survey, U. S. Dept. of Interior. Lowest observed stage in period of record, 6.10 on Oct. 8. Records available: 1946-48.

Feb. 6	4.52	June 11	4.67	Oct. 8	6.10	Dec. 21	4.87
Apr. 14	3.85	Aug. 6	4.84	Nov. 18	5.44		

1-12-9aa. Bureau of Reclamation, U. S. Dept. of Interior. Bored observation well, diameter $1\frac{1}{4}$ inches, depth 15.0 feet. Measuring point, top of pipe, 1.0 foot above land-surface datum, 1,730.66 feet above sea level. Records available: 1948. Nov. 17, 7.39; Dec. 21, 7.05.

2-9-24bd. H. Pederson. Records available: 1934-42, 1946. No measurements made in 1948.

2-10-36db. Somerholder. Highest observed stage in period of record, 26.66 on Apr. 14. Records available: 1934-40, 1942, 1946, 1948. Feb. 6, 26.99; Apr. 14, 26.66; June 11, 26.86; Oct. 8, 27.25.

2-12-34cd. B. McNenny. Records available: 1939-42, 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 6	17.44	June 11	17.62	Oct. 8	17.78	Dec. 21	17.81
Apr. 14	17.50	Aug. 6	17.62	Nov. 17	17.72		

3-10-34cb. R. Adams. Records available: 1934-42, 1946. No measurements made in 1948.

Wheeler County

No measurements made in 1948.

York County

11-1-35bb. Schlechte. Drilled irrigation well, diameter 18 inches, reported depth 283 feet. Measuring point, hole in turbine base, 1.50 feet above land-surface datum. Records available: 1948. June 23, 105.35; Oct. 14, 105.40.

11-3-32db. Moore. Records available: 1934-42, 1944, 1946. No measurements made in 1948.

11-3-36ab. Mother Jewel Home. Irrigation well, diameter 12 inches. Measuring point, plug hole in turbine base, at land-surface datum. Records available: 1948. June 23, 68.00; Oct. 14, 67.95.

11-4-25bc. Tracy. Drilled irrigation well, diameter 18 inches, reported depth 114.0 feet. Measuring point, hole in turbine base, 2 feet above land-surface datum. Records available: 1948. June 24, 66.22; Oct. 14, 66.32.

11-4-31ba. Fenster. Drilled irrigation well, diameter 22 inches, depth 140.00 feet. Measuring point, hole in turbine base, at land-surface datum. Records available: 1948. June 23, 72.40; Oct. 14, 72.65.

11-4-33bb. Leuthje. Drilled irrigation well, diameter 18 inches, reported depth 139.0 feet. Measuring point, hole in turbine base, 2.0 feet above land-surface datum. Records available: 1948. June 24, 68.85; Oct. 14, 69.29.

NORTH DAKOTA

By J. E. Powell

PROGRAM OF WORK

Ground-water investigations and the measurement of water levels in observation wells in North Dakota were continued in 1948 in cooperation with the North Dakota State Water Conservation Commission. At the end of 1948, water levels were being measured in 155 observation wells of which 7 were equipped with automatic water-stage recorders. Water levels in 26 wells were being measured weekly by local observers. Measurements were discontinued in one well. Records of a total of 1,220 water-level measurements are included in this report, and in addition, 1,486 water-level determinations obtained from wells equipped with automatic water-stage recorders.

Field work was done in connection with studies of ground-water conditions in the vicinities of the towns of Minnewaukon, Michigan, Lakota, Portland, Kindred, Wyndmere, Litchville, Neche, and Mohall. Reports on ground-water conditions in the vicinities of Hope and Wimbledon were published in mimeographed form.

PRECIPITATION

The average precipitation for North Dakota in 1948, as reported by the United States Weather Bureau, was 17.45 inches, or 0.34 inch above the 1892-1948 average. Departures from normal precipitation ranged from -6.97 to +8.37 at various stations in the State. The maximum positive departures from the normal occurred in the north-central part of the State and the greatest negative departure took place in the southeastern part of the State. In general, precipitation was below normal in the southern half of the State and above normal in the northern half. In the extreme western part of the State, however, precipitation was above normal in the south and below normal in the northwest. Average precipitation for the State was above normal during the months of February, April, July, November, and December. The greatest monthly departures were -0.40 inch in June and +1.60 inches in July.

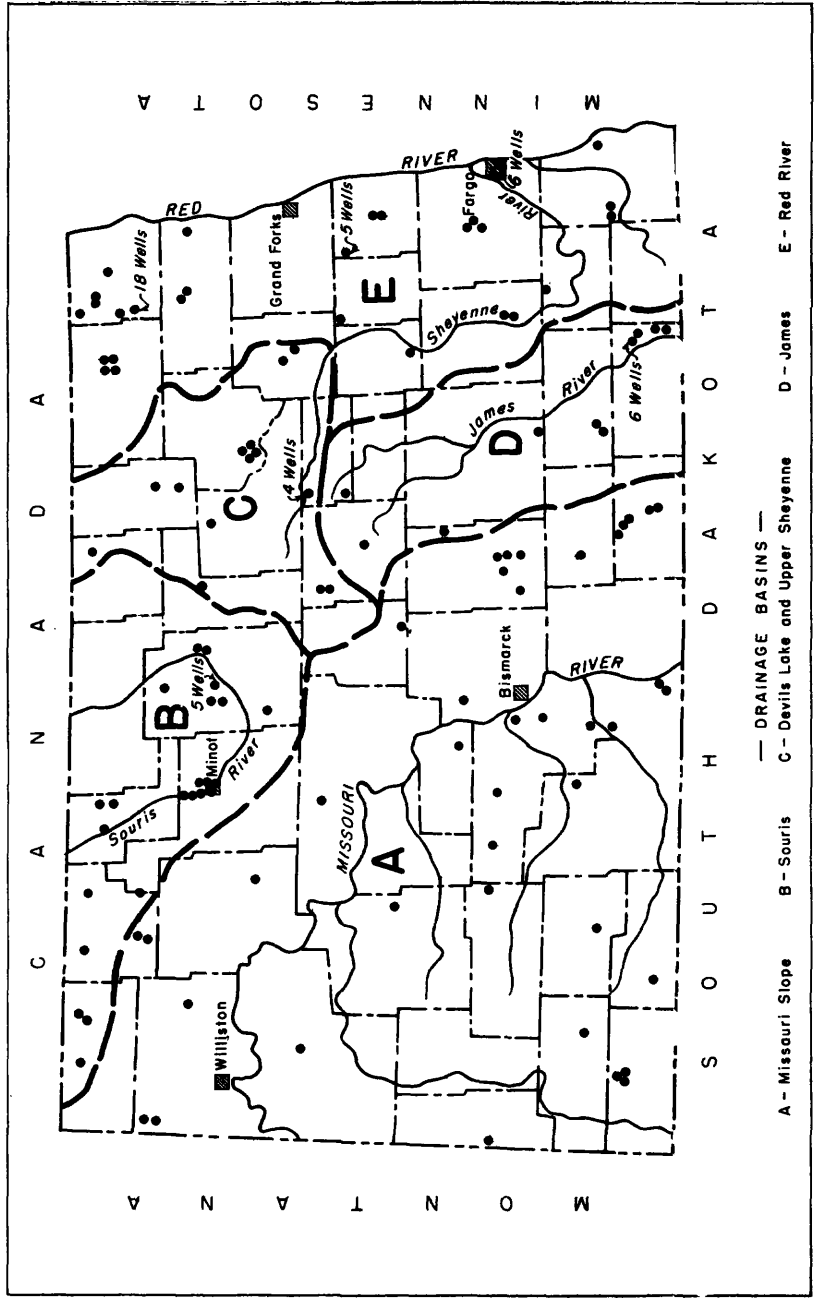


Figure 8.--Map of North Dakota showing drainage basins and distribution of observation wells at end of 1948.

FLUCTUATIONS OF WATER LEVEL

The average monthly water levels for the State from 1937 through 1948 are shown in the following table. These averages are based on water-level measurements in selected observation wells, and were computed from the records from 9 wells distributed throughout the State in which water levels were measured weekly. Four of these wells are in the Red River drainage basin, one in the Souris River drainage basin and three in the Missouri River drainage basin. Figure 9 is a graphical presentation of these data.

Average monthly water levels, in feet above assumed datum planes, in observation wells in North Dakota, 1937-48

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	100.03
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
1946	100.01	100.24	100.18	101.18	101.55	100.97
1947	100.48	100.49	100.33	101.35	101.74	102.25
1948	101.30	101.01	101.10	102.29	104.63	103.74

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
1946	100.60	100.36	100.07	100.70	100.84	100.67
1947	102.37	101.93	101.49	101.48	101.57	101.51
1948	103.27	102.65	101.73	101.52	101.47	101.32

As in previous years, the water levels were low during the winter, the lowest stage of the year occurring in February. The water levels declined slightly from December to March, rose a small amount during March, and rose rapidly during April and May due to recharge from melting snow in conjunction with the thawing of the ground surface. The highest water levels of the year were attained in May, after which they dropped gradually to December. At the end of 1948 the average water level was 0.19 foot lower than at the end of 1947.

The following table shows the general fluctuations and net changes in the ground-water levels during 1948 in several regions in the State according to drainage basins. The regions are (1) the Red River basin, exclusive

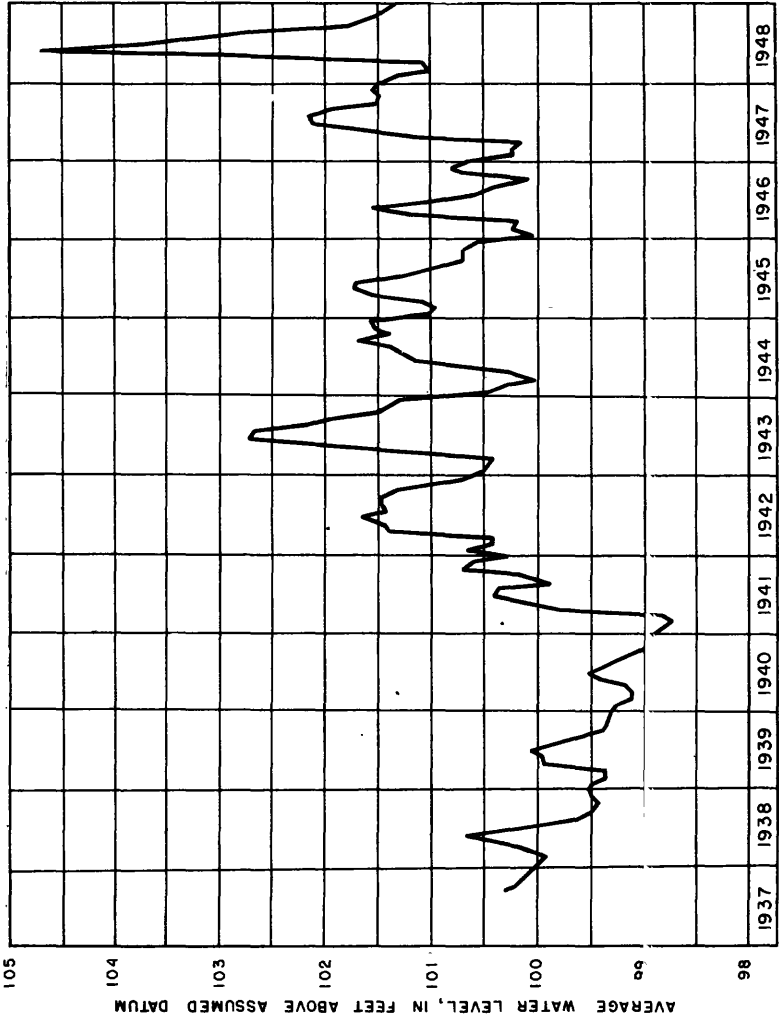


Figure 9.--Graph showing average monthly water level in 9 to 20 selected observation wells in North Dakota, 1937-48.

of the Souris and 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. This table indicates a net rise in water levels for the year in all regions except the Red River basin, where the precipitation for the year was less than average.

Average high and low water levels, in feet below land-surface datum, and average fluctuations and average net changes in water level, in feet, in selected observation wells in five drainage basins in North Dakota in 1948

Basin	Number of wells	High	Low	Fluctuation	Net change
Red River	11	5.98	9.56	4.09	-0.50
Devils Lake and Upper Sheyenne River	6	14.21	14.78	.57	+1.55
James River	4	10.24	12.00	1.76	+.18
Souris River	6	9.17	10.36	1.18	+.48
Missouri River	6	38.07	41.52	3.45	+.44

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Adams County

130.97.14cc1. Mrs. Halverson. Records available: 1940-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 5	48.16	Apr. 5	48.30	Sept. 10	48.55
Feb. 16	48.23	27	48.26		

Barnes County

138.57.5cb1. H. H. Wilkins. Records available: 1939-47. No measurements made in 1948.

138.57.5cb2. H. H. Wilkins. Records available: 1939-47. No measurements made in 1948.

Benson County

156.69.36ca1. H. Biltingsrud. Records available: 1940-48. June 17, 10.53.

Bowman County

131.102.11ba1. City of Bowman. Records available: 1940-42; 1944-46; 1948. Sept. 9, 22.44; Sept. 14, 22.08; Sept. 21, 21.50; Sept. 28, 20.91.

131.102.11ca1. City of Bowman. Records available: 1940-42; 1944-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 19	19.54	Apr. 5	19.17	Sept. 14	20.66	Sept. 28	23.39
Feb. 12	19.13	Sept. 10	20.97	21	20.20		

131.102.11ca2. City of Bowman. Records available: 1940-42; 1944-46; 1948. Sept. 10, 33.25; Sept. 14, 34.52; Sept. 21, 34.33; Sept. 28, 33.89.

Burke County

159.91.4dd1. U. S. Dept. of Interior, Fish and Wildlife Service.
Records available: 1940-46. No measurements made in 1948.

160.91.21cd1. U. S. Dept. of Interior, Fish and Wildlife Service.
Records available: 1940-47. No measurements made in 1948.

162.89.5dd1. Mrs. P. M. Peterson. Records available: 1937-47. No measurements made in 1948.

163.93.34cc2. Records available: 1946-47. No measurements made in 1948.

Burleigh County

141.80.35cc1. Celia De Long. Records available: 1940-46; 1948.
Sept. 13, 15.85.

Cass County

139.48.6ccd1. The Pierce Co. 1019 First Avenue North, Fargo. Records available: 1940-48.

Lowest daily water level, from recorder charts								
Day	Jan.	Feb.	Mar.	July	Sept.	Oct.	Nov.	Dec.
1	34.05	.....	.....	.....	.....	39.80	40.08	38.16
2	34.06	.....	.....	.....	.....	a39.90	40.04	38.11
3	34.06	.....	.....	.....	.....	39.99	39.98	38.04
4	34.04	.....	.....	.....	36.90	40.02	39.87	37.98
5	37.10	40.02	39.78	37.92
6	37.30	40.02	39.69	37.85
7	a33.99	33.70	34.63	37.50	40.04	.....	37.81
8	a33.00	33.66	34.69	37.66	40.10	.....	37.80
9	33.61	34.70	37.78	40.12	.....	37.78
10	33.61	34.78	37.80	40.15	.....	37.70
11	33.61	34.90	37.82	40.18	.....	a37.65
12	33.59	35.02	37.94	40.18	.....	.....
13	33.58	35.14	37.98	40.20	39.20	.....
14	33.88	33.57	35.27	37.99	40.23	39.15	.....
15	37.99	40.23	39.07	.....
16	37.99	40.22	39.00	.....
17	37.99	40.24	38.93	.....
18	38.30	40.24	38.87	a38.40
19	38.78	40.24	a38.76	38.38
20	38.89	40.24	38.75	38.30
21	33.89	.....	.....	38.99	40.26	38.68	38.21
22	33.88	.....	.....	39.07	40.27	38.65	38.21
23	33.84	.....	.....	39.17	40.23	38.59	38.22
24	33.82	.....	.....	39.26	40.30	38.51	38.22
25	33.82	.....	.....	39.35	40.29	38.43	38.26
26	33.81	.....	.....	39.45	40.29	38.36	38.25
27	33.79	.....	.....	39.52	40.28	38.30	38.23
28	33.75	.....	.....	39.58	40.26	38.30	38.18
29	39.64	40.21	38.26	38.14
30	39.71	40.18	38.20	38.14
31	a34.06	.....	.....	.....	.....	40.14	.....	38.11

a Tape measurement.

139.48.7acbl. City of Fargo. In Island Park. Records available: 1940-48.

Lowest daily water level, from recorder charts											
Day	Jan.	Feb.	Mar.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	42.05	.....	.....	43.13	.....	.....	42.57	42.86	42.77	42.81
2	.....	.....	.....	.....	43.15	.....	.....	42.57	42.90	42.77	42.81
3	42.02	.....	.....	.....	43.14	.....	.....	42.57	42.70	42.75	42.79
4	42.04	.....	.....	.....	.....	.....	.....	42.59	42.68	42.73	42.79
5	42.06	.....	.....	.....	42.76	.....	.....	42.60	42.63	42.71	42.68
6	42.06	.....	.....	.....	43.74	.....	.....	42.64	42.59	42.83	42.69
7	42.04	.....	41.89	.....	43.71	.....	.....	42.65	42.61	42.87	42.70
8	42.01	.....	41.85	41.88	43.73	.....	.....	42.66	42.72	42.87	42.73
9	42.08	.....	41.66	.....	43.72	42.35	.....	42.67	42.72	42.86	42.77

Tape measurement.

139.48.7acbl--Continued.

Lowest daily water level, from recorder charts

Day	Jan.	Feb.	Mar.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
10	42.07	.....	41.92	.....	43.75	42.36	.....	42.68	42.72	42.84	42.78
11	42.02	.....	41.94	.....	43.75	42.35	.....	42.67	42.75	42.83	42.73
12	42.06	.....	41.93	.....	43.75	42.35	.....	42.58	42.75	42.83	42.70
13	42.06	.....	41.90	.....	.....	42.37	.....	42.62	42.76	42.83	42.78
14	.....	42.03	.....	.....	.....	42.38	.....	42.61	42.79	42.76	42.78
15	.....	42.01	.....	.....	.....	42.35	.....	42.56	42.76	42.78	42.76
16	.....	41.97	.....	.....	.....	42.33	.....	42.58	42.91	42.77	42.73
17	.....	42.00	.....	.....	.....	.....	.....	42.69	42.92	42.76	42.76
18	.....	42.00	.....	.....	.....	.....	.....	42.65	42.90	42.82	42.76
19	.....	42.03	.....	.....	.....	.....	.....	42.65	42.90	42.83	42.80
20	.....	.....	.....	.....	.....	.....	.....	42.65	42.90	42.82	42.73
21	.....	42.01	.....	.....	.....	.....	.....	42.67	42.91	42.80	42.74
22	.....	42.01	.....	.....	.....	.....	.....	42.68	42.94	42.80	42.79
23	.....	41.96	.....	.....	.....	.....	.....	42.69	42.96	42.79	42.80
24	.....	41.99	.....	.....	.....	.....	.....	42.73	42.95	42.79	42.80
25	.....	41.99	.....	.....	42.17	.....	.....	42.82	42.91	42.76	42.84
26	.....	41.95	.....	.....	.....	.....	.....	42.83	42.92	42.74	42.86
27	.....	41.94	.....	.....	.....	.....	.....	42.83	42.93	42.80	42.82
28	.....	41.90	.....	43.11	.....	.....	.....	42.83	42.93	42.82	42.79
29	.....	.....	.....	43.13	.....	.....	42.55	42.82	42.93	42.81	42.84
30	.....	.....	.....	43.14	.....	.....	42.55	42.83	42.91	42.81	42.84
31	42.03	.....	43.14	.....	.....	42.54	.....	42.75	.....	.....	.....

a Tape measurement.

139.48.18abl. City of Fargo. Records available: 1938-48.

Lowest daily water level, from recorder charts

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	35.58	Feb. 15	35.36	May 31	35.66	July 13	36.06
2	35.52	16	35.32	June 1	35.64	14	36.09
3	35.56	17	35.35	2	35.67	Aug. 29	36.40
4	35.57	18	35.35	3	35.61	30	35.41
5	35.58	19	35.40	4	35.64	31	36.42
6	35.58	20	35.40	5	34.30	Sept. 1	36.46
7	35.53	21	35.34	6	34.29	2	36.48
8	35.52	22	35.34	7	34.29	3	36.49
9	35.60	23	35.30	8	34.33	4	a36.48
10	35.60	24	35.34	9	34.33	5	36.53
11	35.52	25	35.34	10	34.35	6	36.57
12	35.56	26	35.30	25	a35.69	7	36.59
13	35.56	27	35.32	26	35.71	8	36.60
14	35.56	28	35.29	27	35.72	9	36.92
15	35.53	Mar. 7	35.20	28	35.73	10	36.62
16	35.54	8	35.18	29	35.76	11	a36.95
Feb. 1	35.45	9	35.20	30	35.78	12	36.08
2	35.47	10	35.24	July 1	35.78	13	36.12
3	35.47	11	35.25	2	35.77	14	36.12
4	35.42	12	35.23	9	36.00	15	36.10
5	35.44	May 28	35.62	10	36.01	16	36.12
6	35.43	29	35.65	11	36.01	18	a36.82
7	35.47	30	35.66	12	36.02	19	a36.82
14	35.40	31	35.66				

a Tape measurement.

139.49.1ccl. City of Fargo. Records available: 1937-48.

Lowest daily water level, from recorder charts

Jan.	10	45.92	Feb.	1	45.35	Feb.	14	45.09	Feb.	21	a44.94
	11	45.81		2	45.35		15	45.06		22	44.92
	12	45.86		3	45.36		16	44.98		23	44.86
	13	45.85		4	45.28		17	44.98		24	44.88
	14	45.84		5	45.28		18	44.98		25	44.88
	15	45.72		6	45.26		19	44.97		26	44.83
	16	45.82		7	45.25		20	44.97		27	44.78

a Tape measurement.

139.49.1ccl--Continued.

Lowest daily water level, from recorder charts

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 28	44.71	July 13	52.78	Oct. 31	71.23	Dec. 11	45.80
June 5	a55.10	14	52.79	Nov. 1	69.98	12	45.74
7	a47.66	15	52.78	2	69.80	13	45.60
25	a54.70	16	52.78	3	68.10	14	45.58
26	53.70	Sept. 2	a76.25	4	67.40	15	45.32
27	53.70	4	a78.10	6	a65.20	16	45.23
28	54.32	11	a82.48	13	a62.70	17	45.26
29	53.76	25	a86.98	19	a53.00	19	a55.80
30	53.82	Oct. 2	a87.40	4	a57.31	20	55.25
July 1	52.86	8	a89.40	5	57.15	21	54.90
2	52.20	16	a81.00	6	56.99	22	56.40
9	a52.77	18	a86.98	7	56.97	23	56.03
10	52.76	23	a80.30	8	56.96	24	55.10
11	52.77	25	a85.20	9	56.94	25	a55.40
12	52.77	30	a72.00				

a Tape measurement.

139.49.6ad1. Union Stockyards. Records available: 1938-48.

Lowest daily water level, from recorder charts

Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	68.01	70.94	.....	72.38	71.89	72.30	.....
2	.....	68.22	70.95	.....	72.44	71.90	72.29	.....
3	.....	68.58	.....	.....	72.52	72.60	72.29	.....
4	.....	68.76	.....	.....	72.63	72.50	72.30	71.90
5	.....	a70.16	.....	.....	72.63	72.47	72.31	71.89
6	.....	.....	.....	.....	72.60	72.45	72.30	71.89
7	.....	.....	.....	.....	72.57	72.48	72.30	71.87
8	67.25	.....	.....	.....	72.51	72.50	72.30	71.87
9	67.27	70.64	.....	.....	72.50	71.98	72.31	71.87
10	67.13	70.70	.....	.....	72.49	71.96	72.36	71.90
11	67.14	70.70	.....	.....	72.47	72.01	72.38	71.90
12	67.11	70.70	.....	.....	72.18	72.12	72.42	71.91
13	67.15	70.76	.....	.....	72.12	72.20	72.42	71.92
14	67.15	70.84	.....	.....	72.10	72.28	72.40	71.94
15	67.15	70.87	.....	.....	72.10	72.32	72.40	71.95
16	.....	70.92	.....	.....	72.09	72.11	72.42	71.96
17	.....	.....	.....	.....	72.07	72.10	72.44	71.90
18	.....	.....	.....	.....	72.07	72.06	72.48	71.60
19	.....	.....	.....	.....	71.86	72.04	72.50	71.60
20	.....	.....	.....	.....	71.83	72.08	71.88	71.60
21	.....	.....	.....	.....	71.83	72.14	71.88	71.61
22	.....	.....	.....	.....	71.81	72.17	71.82	71.62
23	.....	.....	.....	.....	71.81	72.21	71.79	71.62
24	.....	.....	.....	.....	71.83	72.17	71.78	71.64
25	.....	71.00	.....	.....	71.83	72.14	71.76	71.64
26	.....	71.00	.....	.....	71.80	72.14	71.68	71.64
27	.....	70.99	.....	.....	71.80	72.17	71.61	71.63
28	67.72	70.98	.....	.....	71.82	72.25	.....	71.63
29	67.74	70.94	.....	72.22	71.84	72.35	.....	71.64
30	67.76	70.94	.....	72.26	71.87	72.30	.....	71.64
31	67.92	.....	.....	72.32	.....	72.30	.....	71.64

a Tape measurement.

137.50.29dad4. Village of Kindred. City supply well, diameter 8 inches, depth 45 feet. Drilled in spring 1948. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 15	9.30	Oct. 19	29.55	Oct. 22	26.58	Oct. 25	26.47
17	34.20	20	26.52	23	26.27	26	26.20
18	29.50	21	26.57	24	26.39	27	26.24

137.50-29dad4--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 28	26.31	Nov. 6	26.39	Nov. 14	26.28	Nov. 22	9.52
29	25.78	7	26.42	15	26.43	23	9.44
30	26.37	8	26.45	16	26.53	24	26.05
31	26.29	9	26.38	17	26.57	25	9.66
Nov. 1	26.32	10	26.27	18	26.49	Dec. 3	9.37
2	26.32	11	26.33	19	26.44	12	9.18
3	26.39	12	26.28	20	9.86	20	9.16
4	26.32	13	26.15	21	9.57	27	9.39
5	26.32						

137.50-29dda5. Village of Kindred. Dug well, depth 35 feet. Equipped with hand pump. Measuring point, top of wooden well cover at hole about 1 foot south of pump, 1.00 foot above land-surface datum. Records available: 1948.

Oct. 17	9.30	Oct. 28	9.69	Nov. 8	9.62	Nov. 19	9.35
18	9.30	29	9.70	9	9.58	20	9.66
19	9.48	30	9.69	10	9.51	21	9.59
20	9.56	31	9.68	11	9.36	22	9.62
21	9.56	Nov. 1	9.68	12	9.61	23	9.61
22	9.59	2	9.67	13	9.59	24	9.35
23	9.57	3	9.63	14	9.58	25	8.74
24	9.64	4	9.59	15	9.59	Dec. 3	8.54
25	9.64	5	9.61	16	9.59	12	8.56
26	9.64	6	9.62	17	9.62	20	8.58
27	9.67	7	9.63	18	9.47	27	8.64

137.50-29ddcl. Village of Kindred. City supply well, diameter 8 inches, depth 47 feet. Drilled in fall of 1948. Measuring point, top of 8-inch casing, 1.17 feet above land-surface datum. Records available: 1948. Dec. 3, 8.15; Dec. 12, 8.68; Dec. 20, 7.97; Dec. 27, 8.01.

140.52-14dd1. Mrs. Arthur D. South. Records available: 1937-48. June 5, 7.34; Sept. 2, 11.35.

140.52-14dd3. Mrs. Arthur D. South. Records available: 1937-48. June 5, 9.66; Sept. 2, 11.83.

140.52-14dd4. Mrs. Arthur D. South. Records available: 1937-48. June 5, 16.47; Sept. 2, 11.49.

Cavalier County

161.60-14cd1. City of Langdon. Records available: 1937-48.

Jan. 3	18.46	Apr. 10	19.41	July 10	16.58	Oct. 9	17.73
11	18.46	17	19.41	17	16.63	16	17.93
17	18.54	24	19.02	24	16.71	23	17.89
24	18.71	May 1	18.75	31	16.73	30	17.86
31	18.77	8	18.37	Aug. 7	17.15	Nov. 6	17.92
Feb. 7	18.81	15	17.04	14	16.98	13	17.98
14	18.88	22	16.77	21	17.04	20	17.99
21	19.02	29	16.54	28	17.13	27	18.16
28	19.13	June 5	16.33	Sept. 4	17.21	Dec. 4	18.22
Mar. 6	19.25	12	16.37	11	17.29	11	18.16
13	19.25	19	16.41	18	17.41	18	18.26
20	19.25	26	16.35	25	16.67	24	18.30
27	19.29	July 3	16.46	Oct. 2	17.79	31	18.38
Apr. 3	19.35						

161.60-14dal. City of Langdon. Records available: 1937-48.

Jan. 3	6.98	Feb. 14	8.10	Mar. 20	8.69	Apr. 24	5.48
11	7.15	21	8.31	27	8.96	May 1	4.48
17	7.35	28	8.56	Apr. 3	9.34	8	3.81
24	7.65	Mar. 6	8.85	10	7.98	15	1.56
Feb. 7	8.98	13	8.81	17	7.90	22	1.29

161.60.14dal--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 29	3.77	Aug. 7	3.98	Oct. 2	6.81	Nov. 20	7.97
June 5	4.44	21	3.93	9	7.19	27	7.58
12	4.71	28	4.95	16	7.26	Dec. 4	7.61
19	5.23	Sept. 4	5.21	23	7.58	11	7.65
26	4.89	11	5.65	30	7.95	18	7.98
July 3	5.29	18	6.10	Nov. 6	7.69	24	8.30
10	5.56	25	6.60	13	7.68	31	8.63
31	3.65						

161.60.14dcl. City of Langdon. Records available: 1937-48.

Jan. 3	20.58	Apr. 10	19.58	July 17	20.02	Oct. 10	20.95
11	20.64	17	19.58	24	19.76	16	19.58
17	20.78	24	18.58	31	19.60	23	20.64
24	20.97	May 1	18.43	Aug. 7	19.76	30	20.57
31	21.18	8	18.41	14	19.60	Nov. 6	20.50
Feb. 7	21.35	15	18.46	21	19.74	13	20.43
14	21.43	22	19.02	28	19.91	20	20.53
21	21.56	29	19.27	Sept. 4	20.18	27	20.56
28	21.64	June 5	19.47	11	20.52	Dec. 4	20.57
Mar. 6	21.72	12	19.56	18	20.60	11	20.53
13	21.64	19	19.68	25	20.72	18	20.53
20	21.31	26	19.49	Oct. 2	20.91	24	20.53
27	21.10	July 3	19.97	9	20.63	31	20.52
Apr. 3	20.77	10	19.94				

161.60.23bcl. City of Langdon. Records available: 1937-48.

Jan. 3	27.84	Apr. 10	29.22	July 10	9.80	Oct. 9	12.68
11	29.05	17	20.58	17	9.94	16	12.72
17	33.88	24	25.11	24	9.65	23	13.74
24	42.63	May 1	20.97	31	9.82	30	16.49
Feb. 7	20.72	8	11.96	Aug. 7	10.05	Nov. 6	17.28
14	27.55	15	19.13	14	10.15	13	15.82
21	23.40	22	11.17	21	10.51	20	14.14
28	25.05	29	10.42	28	10.67	27	14.61
Mar. 6	26.05	June 5	10.13	Sept. 4	10.99	Dec. 4	14.80
13	26.55	12	9.78	11	11.42	11	14.79
20	26.80	19	9.63	18	11.72	18	15.00
27	27.22	26	9.51	25	12.05	24	15.20
Apr. 3	26.19	July 3	9.67	Oct. 2	12.34	31	15.40

Dickey County

129.59.7bal. D. C. Botts. Records available: 1940-48. June 14, 8.32; Sept. 3, 8.08.

129.60.24ccl. V. S. Doyen. Records available: 1940-42; 1946. No measurements made in 1948.

130.59.3bcl. M. J. Reinhart. Records available: 1941-48. June 14, 5.35; Sept. 3, 6.65.

130.59.9bcl. H. G. Martin, administrator. Records available: 1940-48. Sept. 3, 7.96.

131.59.16ddl. State of North Dakota. Records available: 1940-48. June 14, 21.59; Sept. 14, 21.80.

131.59.28bal. City of Oakes. Records available: 1940-48.

Jan. 7	8.26	Mar. 4	8.45	Apr. 6	7.38	May 10	6.61
14	8.29	11	8.40	13	7.06	17	6.60
29	8.32	18	8.33	19	7.39	24	6.60
Feb. 16	8.46	24	7.70	26	7.40	31	7.79
26	8.49	30	7.50	May 3	7.39	June 7	7.83

131.59.28bal--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 14	7.95	Aug. 17	8.24	Sept. 22	9.23	Nov. 8	8.47
21	7.84	23	8.30	27	8.52	15	8.46
28	7.80	30	8.38	29	9.21	22	8.47
July 5	7.98	Sept. 1	9.22	Oct. 4	8.64	29	8.45
12	8.15	3	8.50	11	8.58	Dec. 6	8.50
19	8.16	7	8.50	18	8.54	13	8.53
28	7.93	9	8.61	25	8.55	20	8.50
Aug. 2	8.13	16	9.25	Nov. 1	8.53	27	8.56
9	7.96	20	8.59				

131.59.29aal. Fred Sletvold. Records available: 1943-48. June 14, 10.45; Sept. 3, 9.81.

131.59.33cdl. Lynus Sitts, Jr. Records available: 1941-48. June 14, 7.79; Sept. 14, 8.36.

131.64.36al. State of North Dakota. Records available: 1939-44; 1946. No measurements made in 1948.

Divide County

162.97.6dal. Adolf Carison. Records available: 1946-47. No measurements made in 1948.

163.97.22cdl. J. M. Johnson. Records available: 1938-47. No measurements made in 1948.

163.100.34aal. A. U. Anderson. Records available: 194C-46. No measurements made in 1948.

Dunn County

145.92.25adl. S. F. Lesmeister. Records available: 1942-46.

Jan. 16	8.25	Apr. 5	6.67	Sept. 8	8.74	Nov. 5	8.62
30	8.10	12	6.73	10	8.70	12	8.80
Feb. 6	9.96	19	6.67	17	8.62	19	8.77
13	8.96	26	6.64	24	8.61	26	8.82
20	9.06	July 30	8.95	Oct. 1	8.74	Dec. 3	8.78
27	8.69	Aug. 6	8.90	8	8.79	10	8.77
Mar. 5	8.83	13	7.10	15	8.78	17	8.78
12	8.86	20	8.58	22	8.70	24	8.83
19	7.15	27	8.83	29	8.59	31	8.88
26	7.16	Sept. 3	8.75				

Eddy County

148.67.28dal. Pfau Estate. Records available: 1940-48. Flow, in gallons a minute. Sept. 15, 15.

150.66.9bal. Elmer Moe. Records available: 1936; 1938-46; 1948. Sept. 15, 19.00.

150.66.9bdl. Gilbert Olson. Records available: 1936; 1938-48. May 22, 13.30; Sept. 15, 14.45.

150.66.9cbl. U. S. 49. Stockyards. Records available: 1936-48.

May 22	6.58	Oct. 10	7.16	Nov. 9	7.43	Dec. 9	7.59
Sept. 15	7.07	16	7.25	15	7.48	15	7.63
21	7.05	22	7.27	21	7.45	21	7.66
27	7.05	28	7.26	27	7.46	27	7.70
Oct. 4	7.12	Nov. 3	7.33	Dec. 3	7.55		

150.66.9cdl. L. S. Rude. Records available: 1936; 1938-48. May 22, 8.00; Sept. 15, 8.94.

Golden Valley County

139.106.2ddl. Mrs. Tangen. Records available: 1940-42; 1946-47. No measurements made in 1948.

140.106.25cbl. City of Beach. Records available: 1942-47. Measurements discontinued.

Grant County

134.85.10aal. R. O. Ozbun. Records available: 1940-44; 1946-48. Sept. 7, 20.89.

Griggs County

144.59.20bcl. Griffith Loan & Investment Co. Records available: 1940-48. June 19, 18.17; Sept. 16, 18.73.

Hettinger County

133.93.5bdl. L. F. Everhart. Records available: 1938-42; 1946-48. Jan. 7, 51.32; Feb. 4, 51.86; Mar. 1, 49.85.

Kidder County

138.73.9ccl. U. S. 53. Herman Peterson. Records available: 1937-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 16	6.35	Sept. 21	7.67	Oct. 12	7.73	Oct. 26	5.57
Sept. 7	7.67	Oct. 5	7.72	19	7.67	Nov. 2	5.57

139.71.3ccl. Jake Schaurer. Records available: 1940-48. June 16, 10.13; Sept. 4, 10.81.

139.71.10bcl. Village of Tappen. Records available: 1940-48. June 16, 7.21; Sept. 4, 7.72.

139.71.27ccl. Phillip Mitteleider. Records available: 1940-48. June 16, 0.45; Sept. 4, 1.44.

139.72.10cal. Chas. Woessner. Records available: 1940-48. June 16, 11.12; Sept. 4, 12.80.

142.70.23abl. Mrs. Fagereng. Records available: 1940-48. June 16, 13.98; Sept. 4, 18.54.

LaMoure County

133.64.3bcl. Town of Edgeley. Records available: 1940-48. June 14, 23.58; Sept. 3, 26.48.

134.64.24dcl. Mrs. Fidela Davis. Records available: 1939-48. June 14, 40.16.

Logan County

135.72.21bcl. Pete Draeger. Records available: 1940-43; 1946. No measurements made in 1948.

McHenry County

151.77.1dcl. Mrs. H. Notbohm. Records available: 1940-47. Measurements discontinued.

152.79.6bcl. Minneapolis, St. Paul & Sault Ste. Marie Railway Co. June 17, 16.87.

155.79.8aal. Cities Service. Records available: 1940-42; 1945-48. June 17, 7.54; Sept. 15, 5.71.

156.76.11bdl. Village of Towner. Records available: 1940-48. Sept. 15, 12.13.

156.78.36bc1. Denbigh Forest Experimental Station well 1. U. S. Dept. of Agriculture, Forest Service. Records available: 1939-41; 1943-48. June 14, 2.74; Sept. 21, 1.34; Sept. 28, 3.28.

156.78.36bc2. U. S. 50. Denbigh Forest Experimental Station well 2. U. S. Dept. of Agriculture, Forest Service. Records available: 1939-41; 1943-48. June 17, 5.76; Sept. 14, 3.78; Sept. 21, 2.94; Sept. 28, 3.92.

156.78.36bc3. Denbigh Forest Experimental Station well 3. U. S. Dept. of Agriculture, Forest Service. Records available: 1939-41; 1945-48. June 17, 4.12; Sept. 14, 2.43.

156.78.36bc4. Denbigh Forest Experimental Station well 4. U. S. Dept. of Agriculture, Forest Service. Records available: 1939-41; 1944-48. June 17, 3.31; Sept. 14, 2.60.

156.78.36dd1. Denbigh Forest Experimental Station well 5. U. S. Dept. of Agriculture, Forest Service. Records available: 1939-41; 1944-48. No measurements made in 1948.

156.79.33dc1. Harold H. Sullwold. Records available: 1940-48. June 17, 5.82; Sept. 14, 7.55.

157.75.31dc1. U. S. Dept. of Agriculture, Forest Service. Records available: 1940-48. June 18, 3.08; Sept. 14, 4.19.

158.78.3dc1. Walter Arneson. Records available: 1940-48. June 18, 12.29; Sept. 14, 12.25.

McIntosh County

130.69.7cd1. Freida Forrest. Records available: 1938-48. June 14, 6.13; Sept. 15, 12.64.

130.69.7cd2. Freida Forrest. Records available: 1938-48. June 14, 4.83; Sept. 15, 6.32.

132.70.28dal. Dan Nigisch. Records available: 1940-48. June 14, 16.71; Sept. 15, 17.70.

132.71.15aal. U. S. 55. Records available: 1940-46; 1948. Sept. 15, 25.03.

132.71.24ad1. Federal Land Bank. Records available: 1940-48. June 14, 8.58.

McKenzie County

150.100.12ec1. Chas. E. Fleck. Records available: 1938-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	114.10	Apr. 24	114.10	July 17	114.01	Oct. 2	113.81
10	113.75	May 1	114.00	24	113.78	9	113.88
17	113.72	15	114.00	31	114.07	16	114.13
31	114.08	22	113.85	Aug. 7	113.91	23	113.75
Feb. 7	114.19	29	113.94	14	113.94	30	113.83
21	113.68	June 5	113.86	21	113.88	Nov. 6	114.00
Mar. 6	113.78	12	113.95	28	114.03	13	113.73
13	113.77	19	113.90	Sept. 4	113.88	20	113.83
20	114.10	26	114.10	11	113.76	27	114.25
27	113.89	July 3	113.90	18	113.91	Dec. 4	113.90
Apr. 10	113.70	10	113.95	25	114.08	11	113.75
17	113.78						

McLean County

149.84.15bc1. State of North Dakota. Records available: 1937-46; 1948.

Sept. 11	43.60	Sept. 21	43.80	Oct. 7	45.60	Oct. 26	44.20
13	43.87	29	45.40	18	44.60	30	44.40

Mercer County

144.85.22ad1. Maichel Bros. Records available: 1940-48. Sept. 10, 14.34.

Morton County

134.82.36cb1. Albrecht & Johnson. Records available: 1941-48. No measurements made in 1948.

136.81.6dc1. Joe Lanz, Jr. Records available: 1941-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 7	20.94	Oct. 11	20.98	Nov. 8	21.07	Dec. 6	21.09
13	20.89	18	21.00	15	21.06	13	21.15
20	20.85	25	21.02	22	21.04	20	21.18
27	20.93	Nov. 1	21.04	29	21.05	27	21.25
Oct. 4	20.99						

138.81.4bb1. U. S. 54. U. S. Dept. of Agriculture, Soil Conservation Service. Records available: 1937-46. No measurements made in 1948.

139.85.15cc1. Fred Lehde. Records available: 1941-48.

Jan. 3	33.07	Apr. 3	31.60	July 3	32.45	Sept. 25	33.01
11	33.12	10	30.99	10	32.52	Oct. 3	33.12
17	33.20	17	32.05	19	32.57	9	33.03
25	33.21	24	31.93	24	32.57	17	33.13
31	33.29	May 3	32.09	31	32.66	23	33.17
Feb. 7	33.39	8	31.90	Aug. 7	32.71	30	33.14
14	33.44	15	31.93	14	32.73	Nov. 8	33.16
21	33.44	22	32.04	21	32.77	13	33.17
28	33.53	29	32.14	28	32.85	20	33.20
Mar. 6	33.46	June 8	32.17	Sept 4	32.97	27	33.19
13	33.61	12	32.21	8	32.94	Dec. 4	33.25
20	31.38	19	32.34	11	32.93	11	33.28
27	31.59	26	32.37	19	32.98	18	33.38

139.88.32ab1. Henry Polenbergl. Records available: 1941-47. No measurements made in 1948.

Mountrail County

152.89.6aal. Emil Molter. Records available: 1939-47. No measurements made in 1948.

Nelson County

152.58.18daa. Ole Norum. Geological Survey test hole, diameter 4 inches, depth 20 feet. Drilled May 1948. Measuring point, top of collar 4-inch standard pipe casing, 1.50 feet above land-surface datum. Records available: 1948.

May 28	2.81	Oct. 9	6.00	Nov. 6	6.10	Dec. 4	6.10
July 25	3.81	16	6.05	13	6.05	11	6.15
Sept. 17	5.85	23	6.05	20	6.10	18	6.20
28	5.80	30	6.10	27	6.10	25	6.25
Oct. 2	5.95						

Oliver County

141.82.10ba1. Otis Tye. Records available: 1940-46. No measurements made in 1948.

Pembina County

160.56.8dca1. Paul B. Olafson. Records available: 1946-48. Sept. 25, 6.36.

160.56.9ccb1. Ole Soli. Records available: 1946-48. Sept. 25, 5.20.

160.56.9dca1. J. Anderson. Records available: 1946-48. Sept. 25, 6.03.

- 160.56.16aaal. S. J. Hanson. Records available: 1946-48. Sept. 25, 7.76.
- 160.56.16aaa2. Gritherun Thorstenson. Records available: 1946-48. Sept. 25, 20.00.
- 160.56.16aab1. S. J. Hallgrimson. Records available: 1946-48. Sept. 25, 8.49.
- 160.56.16aab2. Lutheran parsonage. Records available: 1946-48. Sept. 25, 8.73.
- 160.56.16aab3. H. J. Hallgrimson. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	10.50	Apr. 5	9.67	July 4	4.90	Oct. 4	7.30
11	10.67	12	9.83	12	5.50	10	7.50
19	10.58	19	8.50	19	5.90	16	8.10
26	10.75	26	3.67	26	5.70	23	7.70
Feb. 2	10.58	May 2	3.67	Aug. 2	6.50	31	7.50
8	10.50	9	3.00	9	6.50	Nov. 7	7.70
15	10.66	15	2.50	16	8.50	14	7.90
23	10.75	24	3.67	22	8.30	22	7.87
Mar. 1	10.50	31	3.50	30	8.90	29	7.70
7	10.50	June 4	3.83	Sept. 5	8.60	Dec. 7	7.70
14	10.66	10	4.67	12	9.50	12	7.70
21	10.50	17	4.83	19	9.60	20	8.10
27	10.33	24	3.67	25	7.82	26	8.20
28	10.17	30	4.50	26	8.70		

- 160.56.16aab4. H. J. Hjaltalin. Records available: 1946-48. Sept. 25, 9.00.
- 160.56.16aac1. Mountain School. Records available: 1946-48. Sept. 25, 6.57.
- 160.56.16aad1. Mr. Paulson. Records available: 1946-48. Sept. 25, 16.16.
- 160.56.16adal. Oscar Byron. Records available: 1946-48. Sept. 25, 11.65.
- 160.56.16ada2. Oscar Byron. Records available: 1946-48. Sept. 25, 11.23.
- 160.59.16ada3. Walter Hallison. Records available: 1946-48. Sept. 25, 15.37.
- 160.59.16ada4. Mr. Olafson. Records available: 1946-48. Sept. 25, 14.48.
- 160.56.16adb1. H. Olafson. Records available: 1946-48. Sept. 25, 8.47.
- 160.56.16acc1. H. Olafson. Records available: 1946-48. Sept. 25, 5.56.
- 160.56.16bdal. H. T. Hjaltalin. Records available: 1946-48.

Sept. 25	6.63	Oct. 17	7.10	Nov. 14	7.40	Dec. 12	7.30
26	9.20	24	6.70	22	6.60	20	7.20
Oct. 4	7.50	31	7.10	29	7.20	26	6.60
10	7.10	Nov. 7	7.20	Dec. 7	7.20		

- 161.56.22bb1. E. J. Lander Co. Records available: 1941-48.

Jan. 3	7.25	Apr. 3	7.58	July 3	5.26	Oct. 2	7.41
10	7.25	10	7.33	10	5.11	9	7.57
17	7.33	17	7.08	17	5.06	16	7.64
24	7.41	24	4.81	24	4.41	23	7.73
31	7.46	May 1	3.58	31	4.87	30	7.71
Feb. 7	7.57	8	3.74	Aug. 7	5.25	Nov. 6	7.74
14	7.67	15	3.74	14	5.37	13	7.78
21	7.73	22	4.06	21	5.59	20	7.80
28	7.74	29	4.44	28	5.96	27	7.83
Mar. 6	7.67	June 5	4.77	Sept. 4	6.21	Dec. 4	7.85
13	7.77	12	5.02	11	6.62	11	7.87
20	7.83	19	5.33	18	6.96	18	7.96
28	7.60	25	5.28	25	7.21	25	7.98

162.53.31cc1. Garnett A Snell. Records available: 1941-48:

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	9.80	Apr. 3	10.31	July 3	7.55	Oct. 2	9.60
10	9.96	10	9.78	10	7.58	9	9.69
17	9.94	17	9.78	17	7.50	16	9.73
24	9.90	24	9.78	24	7.34	23	9.78
31	10.01	May 1	7.96	31	7.11	30	9.62
Feb. 7	10.09	8	7.73	Aug. 7	6.89	Nov. 6	9.65
14	10.04	15	7.69	14	7.60	13	9.68
21	10.19	22	7.10	21	7.89	20	9.70
28	10.28	29	7.23	28	8.20	27	9.75
Mar. 6	10.36	June 5	7.53	Sept. 4	8.52	Dec. 4	9.78
13	10.34	12	7.84	11	8.79	11	9.72
20	10.34	19	8.07	18	9.12	18	9.76
27	10.42	26	7.87	25	9.35	25	9.81

162.55.3dd1. Albert C. McCurdy. Records available: 1941-48.

Jan. 4	9.08	Apr. 11	9.07	July 11	5.85	Oct. 3	7.72
11	9.13	18	8.42	18	6.00	10	7.82
18	9.23	25	7.38	24	5.63	17	7.97
25	9.32	May 1	6.41	25	5.02	24	8.05
Feb. 1	9.42	9	5.97	Aug. 1	5.68	31	8.11
8	9.66	16	5.76	8	6.02	Nov. 7	8.05
15	9.74	23	5.66	15	6.24	14	7.92
22	9.86	30	5.88	22	6.47	21	7.96
27	9.95	June 6	6.03	29	6.76	28	8.04
Mar. 7	10.02	13	6.18	Sept. 5	7.00	Dec. 5	8.09
14	10.02	20	6.58	12	7.22	12	8.01
21	10.04	27	6.26	19	7.38	19	8.18
28	9.76	July 4	6.07	26	7.63	26	8.22
Apr. 4	9.47						

162.55.3dd2. A. C. McCurdy. Records available: 1944-48. July 24, 13.00; Oct. 10, 9.97.

163.56.9aa1. Herman Tesmer. Records available: 1941-44; 1946-48. July 24, 6.35; Oct. 2, 9.23.

Pierce County

156.72.10ba1. Eric Hammel. Records available: 1947-48. June 17, 21.99; Sept. 15, 21.77.

Ramsey County

153.64.5aa1. Ray Young. Records available: 1942-48. June 18, 26.59; Sept. 15, 29.71.

153.64.20cc1. W. H. Summers. Records available: 1942-48. Sept. 15, 49.28.

153.64.25ca1. Camp Grafton Military Reserve. Records available: 1943-48. Sept. 15, 54.17.

153.65.14ac1. Mrs. Bonnie Boland. Records available: 1937-48. June 18, 56.18; Sept. 15, 57.34.

Ransom County

156.56.3ab1. Melfrid Skramstad. Records available: 1940-46; 1948. Sept. 2, 13.99.

Renville County

161.84.13cd2. Fred Paris. Records available: 1940-47. No measurements made in 1948.

161.84.24abl. J. Dighton Taylor. Records available: 1940-46. No measurements made in 1948.

161.85.20aal. Minnesota Trust Co. Records available: 1937-47. No measurements made in 1948.

Richland County

132.49.12dal. Ira Madden. Records available: 1938-46. Measurements discontinued.

133.52.32cdl. Records available: 1946-48. June 13, 7.76; Oct. 9, 6.28.

133.52.33cdd. U. S. 52. John Liljemark. Records available: 1937-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	5.31	Apr. 17	5.06	July 10	3.85	Oct. 9	7.11
10	5.31	24	5.06	17	4.05	16	7.15
17	5.31	May 1	4.93	26	3.70	23	7.15
24	5.35	8	4.81	31	3.70	30	7.11
31	5.35	15	4.43	Aug. 7	3.97	Nov. 6	6.82
Feb. 7	5.39	22	4.43	14	4.05	13	6.57
17	5.31	29	4.47	21	4.31	20	6.49
26	5.31	June 5	4.64	28	6.57	27	6.49
Mar. 6	5.31	12	4.60	Sept. 4	6.72	Dec. 4	6.28
13	5.31	13	4.95	11	6.98	11	6.69
20	5.31	19	4.39	18	7.11	18	7.03
29	5.27	26	3.85	25	6.94	25	7.24
Apr. 3	5.26	July 3	3.77	Oct. 2	7.15	31	7.44
10	5.06						

Rollette County

162.69.17al. Town of Rolla. Records available: 1940-44; 1946-48. June 18, 18.47.

Sheridan County

145.75.28bb1. Bank of North Dakota. Records available: 1938-47. No measurements made in 1948.

Sioux County

130.79.7cl. Mrs. Lookingout. Records available: 1940-47. No measurements made in 1948.

130.80.23dal. Mrs. Mulache. Records available: 1941-47. No measurements made in 1948.

133.82.25bal. Records available: 1946-47. No measurements made in 1948.

Slope County

134.100.14dal. Arthur Nesseth. Records available: 1940-48. Sept. 10, 14.44.

Stark County

139.91.2bal. Roland and George Funk. Records available: 1940-48. Sept. 9, 3.65.

139.96.3bbc. City of Dickinson. City test well, diameter 8 inches, depth 191 feet. Measuring point, top of casing, 1.90 feet above land-surface datum. Drilled in spring 1944. Records available: 1947-48.

139.96.3bbc-- Continued.

Lowest daily water level, from recorder charts, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	129.12	129.92	130.48	129.55	119.24
2	128.50	129.86	130.37	129.95	119.65
3	129.05	129.04	130.16	130.47	120.28
4	129.45	129.37	130.15	129.30	121.18
5	128.04	129.90	a129.48	130.33	122.10
6	129.40	130.45	.....	130.33	122.10
7	129.60	129.78	.....	130.34	121.07
8	129.84	130.43	.....	131.04	114.70
9	129.92	130.44	.....	131.04	121.20
10	130.00	130.97	.....	130.88	.....
11	129.97	.....	130.88	122.80
12	128.00	129.48	.....	131.40	121.35
13	129.35	130.97	.....	130.10	119.60
14	130.00	130.98	a128.47	131.35	120.50
15	130.40	130.65	.....	131.35	124.30
16	129.00	130.65	.....	131.78	124.50
17	129.90	130.82	.....	129.20	113.58
18	129.35	130.90	.....	131.17	112.32
19	a129.33	131.23	.....	130.60	107.90
20	129.77	131.33	.....	120.10	103.32
21	130.06	131.33	a125.93	116.70	101.38
22	130.62	131.25	.....	123.14	99.95
23	129.27	131.25	.....	118.14	98.55
24	129.55	131.50	.....	123.12	.....
25	129.62	131.24	.....	122.28	.....
26	129.79	131.74	.....	.....	.....
27	128.01	129.17	.....	.....	113.81	.....
28	128.31	129.88	.....	a122.70	117.06	112.35
29	128.00	.....	131.76	127.40	116.63	111.69
30	128.04	.....	131.76	127.65	111.50	110.10
31	129.12	.....	130.48	.....	116.06	.....

a Tape measurement.

Lowest daily water level, from recorder charts, 1947

Day	July	Aug.	Sept.	Oct.	Dec.
1	119.60	127.70	.....	108.75	.....
2	122.00	128.12	.....	.....	.....
3	124.33	127.55	.....	.....	.....
4	124.83	128.57	.....	.....	.....
5	118.75	128.60	.....	.....	.....
6	121.17	129.00	.....	a118.80	.....
7	120.76	128.70	.....	.....	.....
8	120.98	124.97	112.90	.....	.....
9	122.40	122.75	115.50	.....	.....
10	125.00	121.30	109.63	.....	.....
11	125.14	122.90	118.00	.....	.....
12	116.80	122.85	120.10	.....	.....
13	112.40	121.55	116.60	117.90	.....
14	110.20	113.00	116.62	117.80	.....
15	110.20	120.80	118.06	117.28	.....
16	120.30	119.64	117.98	117.26	.....
17	122.24	119.64	117.20	117.70	.....
18	122.24	120.20	116.65	117.18	.....
19	.....	120.42	116.45	118.45	.....
20	.....	121.10	115.82	117.38	.....
21	.....	a123.90	a115.52	117.10	.....
22	.....	125.40	a104.69	120.07	.....
23	.....	126.49	.....	119.41	.....
24	.....	126.90	.....	117.65	.....
25	a126.49	123.80	.....	112.30	.....
26	127.14	125.90	.....	108.70	.....
27	127.14	126.60	.....	a107.19	.....
28	123.75	126.67	.....	.....	.....
29	125.50	a113.40	a121.17	.....	116.98
30	126.94	.....	114.10	.....	117.08
31	126.18	.....	.....	.....	117.00

a Tape measurement.

139.96.3bbc- -Continued.

Lowest daily water level, from recorder charts, 1948

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	119.60	124.96	122.60	124.88	128.53	107.60
2	120.00	121.42	123.51	124.10	128.47	107.05
3	120.10	122.32	124.40	123.64	128.70	106.00
4	120.86	123.08	124.60	124.28	128.76	109.40
5	119.80	121.80	123.30	121.10	129.02	107.40
6	121.52	123.18	123.80	124.90	125.10	105.08
7	121.40	123.25	123.46	125.10	123.87	105.58
8	123.58	123.33	122.63	126.22	122.40	109.48
9	118.80	120.00	123.50	125.40	121.75	110.10
10	113.90	121.40	123.38	125.42	121.44	110.65
11	109.75	122.70	123.43	124.65	120.48	111.20
12	108.55	122.90	122.60	124.40	125.80	110.02
13	.....	123.38	123.10	125.40	121.05	107.55
14	.....	122.92	123.29	125.33	118.95	105.65
15	.....	122.23	122.00	125.60	119.05	104.90
16	a119.43	122.33	123.57	125.77	119.18	104.40
17	123.20	123.82	.....	125.40	117.00	103.90
18	124.10	124.00	.....	125.80	117.28	103.50
19	120.92	123.10	.....	125.55	117.68	103.10
20	121.00	124.00	.....	126.40	118.92	103.10
21	122.95	.....	.....	.....	119.07	102.58
22	125.32	.....	.....	127.00	118.97	102.25
23	123.40	.....	123.78	127.36	119.20	112.07
24	123.22	124.30	123.60	127.70	116.14	105.88
25	123.80	123.40	123.40	127.65	115.94	104.88
26	123.78	122.90	124.68	128.20	115.04	.....
27	123.72	122.90	124.72	128.44	115.62	.....
28	123.42	123.12	124.21	128.49	111.40	.....
29	123.88	123.40	121.60	128.40	109.90	105.60
30	124.60	.....	123.20	128.44	109.05	104.15
31	124.92	.....	124.88	.....	108.33	.....

a Tape measurement.

Lowest daily water level, from recorder charts, 1948

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	102.50	113.20	123.06	102.90	127.40	119.02
2	.....	106.10	127.07	101.90	127.22	128.15
3	.....	104.15	a126.09	a101.40	.....	129.46
4	102.28	112.48	127.20	118.30	.....	129.96
5	102.28	110.40	124.40	116.60	130.10	129.04
6	102.15	104.60	103.80	103.60	130.72	122.76
7	.....	102.45	.....	100.21	129.60	121.67
8	113.65	101.45	.....	98.82	128.60	121.76
9	115.40	111.25	.....	.....	129.73	120.56
10	118.05	100.30	a104.40	.....	129.57	112.76
11	114.15	109.00	.....	a101.10	128.10	116.19
12	113.65	.....	.....	97.18	131.08	108.56
13	118.20	119.90	a117.50	97.00	129.74	a110.36
14	114.13	111.20	.....	96.72	127.78	109.05
15	117.80	110.10	.....	96.00	129.26	115.70
16	113.10	120.30	.....	113.96	129.27	117.26
17	118.50	112.10	123.66	112.66	130.73	109.85
18	119.87	112.75	123.52	113.66	.....	106.87
19	119.14	114.95	122.35	112.60	.....	105.58
20	118.65	125.38	125.38	124.30	.....	115.35
21	106.50	126.10	114.30	125.20	.....	119.90
22	.....	125.08	124.58	126.40	a126.05	107.24
23	a101.00	125.00	124.23	126.53	130.60	115.53
24	111.92	126.05	119.18	126.86	131.00	116.40
25	111.26	.....	.....	125.40	131.00	116.68
26	111.08	.....	.....	128.50	130.27	107.90
27	113.90	125.74	102.65	116.32	130.24	105.25
28	114.20	128.30	114.87	129.35	128.30	104.10
29	113.40	124.10	109.68	128.30	129.90	122.48
30	120.76	125.72	104.10	128.15	120.10	117.60
31	114.55	124.57	.....	129.30	.....	117.75

a Tape measurement.

Steele County

148.57.15aal. Mrs. Snortland. Records available: 1940-48. June 19, 9.29; Sept. 16, 8.93.

Stutsman County

137.64.33ccl. Union Central Life Insurance Co. Records available: 1940-48. June 14, 41.40.

Towner County

158.66.20cl. S. L. Isaacson. Records available: 1943-48. June 18, 19.53:

160.66.28bal. Bank of North Dakota. Records available: 1937-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	14.70	May 8	14.34	July 17	14.53	Oct. 2	14.40
10	14.68	15	14.34	24	14.48	9	14.38
17	14.65	22	14.34	31	14.45	16	14.38
24	14.62	29	14.38	Aug. 7	14.45	23	14.38
31	14.56	June 5	14.38	14	14.44	30	14.38
Mar. 27	14.46	12	14.38	21	14.42	Nov. 6	14.36
Apr. 3	14.43	18	14.60	28	14.48	13	14.34
10	14.43	19	14.42	Sept. 4	14.40	20	14.34
17	14.40	26	14.46	11	14.40	27	14.31
24	14.40	July 3	14.51	18	14.42	Dec. 4	14.29
May 1	14.39	10	14.53	25	14.42		

Traill County

146.51.24cdl. A. C. Skyberg. Records available: 1937-48. Sept. 9, 17.33.

146.51.24bcd. A. C. Peterson. Records available: 1946-48. June 5, 10.48.

148.53.18aal. City of Hatton. Records available: 1937-48.

May 15	6.94	July 25	7.95	Aug. 29	9.60	Oct. 17	11.48
June 5	6.68	31	8.24	Sept. 4	10.14	24	11.70
19	7.26	Aug. 7	8.46	11	10.56	31	10.80
27	7.14	14	8.62	18	11.28	Nov. 20	10.12
July 18	7.85	22	9.34	26	11.50		

148.53.18abl. City of Hatton. Records available: 1938-48.

June 19	7.05	Sept. 26	9.01	Oct. 24	9.27	Nov. 20	9.35
Sept. 18	9.03	Oct. 17	9.33	31	9.29		

148.53.18adl. City of Hatton. Records available: 1946-48. June 19, 8.87; Sept. 16, 9.70.

148.53.18ad2. City of Hatton. Records available: 1946-48. Sept. 16, 7.36.

148.53.18ad3. City of Hatton. Records available: 1938-48.

May 15	9.14	July 25	10.20	Aug. 29	11.02	Oct. 17	11.50
June 5	9.37	31	10.34	Sept. 4	11.42	24	11.42
19	9.78	Aug. 7	10.72	11	11.52	31	11.40
27	9.72	14	10.50	18	12.72	Nov. 20	11.38
July 18	10.10	22	10.92	26	11.65		

Walsh County

157.51.16dc2. U. S. 48. Henry Dipple. Records available: 1937-48. July 24, 1.55; Sept. 18, 4.42.

157.55.17cc1. C. D. Lewis. Records available: 1939-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	5.60	Apr. 3	5.59	July 3	3.15	Oct. 2	6.51
10	5.59	10	5.48	10	3.58	9	6.61
17	5.57	17	1.39	17	4.10	16	6.64
24	5.58	24	1.37	24	3.79	23	6.67
31	5.64	May 1	1.56	31	4.14	30	6.66
Feb. 7	5.59	8	1.66	Aug. 7	4.56	Nov. 6	6.62
14	5.73	15	1.99	14	4.81	13	6.60
21	5.77	22	2.32	21	5.20	20	6.58
28	5.78	29	2.67	28	5.54	27	6.54
Mar. 6	5.79	June 5	2.92	Sept. 4	5.81	Dec. 4	6.51
13	5.75	12	3.57	11	6.03	11	6.47
20	5.73	19	3.80	18	6.35	18	6.46
27	5.62	26	3.56	25	6.46	25	6.46

155.57.17cd1. C. D. Lewis. Records available: 1937-38; 1946-48. Sept. 18, 5.01.

Ward County

155.83.14dca1. People's Ice Co. Records available: 1945-46. No measurements made in 1948.

155.83.23baal. City of Minot supply well 2. Records available: 1945-48.

Lowest daily water level, from recorder charts

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	46.70	46.63	47.18	46.64	.....	46.28	45.95	45.23	.....	51.45	50.34	49.56
2	46.73	47.13	46.31	46.68	.....	46.38	46.13	45.83	.....	51.44	50.19	49.60
3	47.33	48.20	46.52	46.58	.....	46.38	46.25	45.73	.....	50.88	50.94	49.60
4	47.51	50.71	47.22	46.64	.....	45.88	46.24	45.71	.....	51.23	50.95	50.30
5	46.72	46.73	46.94	46.03	.....	45.74	45.88	45.73	.....	51.48	50.83	49.72
6	.....	47.31	47.03	45.88	.....	48.00	46.61	45.03	.....	51.38	50.85	50.38
7	.....	47.51	47.05	46.76	.....	48.42	46.36	44.78	.....	50.74	50.21	50.44
8	.....	46.56	46.95	46.28	.....	48.42	46.55	44.72	.....	51.51	50.95	50.58
9	.....	51.47	46.33	45.88	.....	46.34	46.62	44.58	.....	50.68	50.99	50.45
10	.....	49.11	46.52	46.53	.....	46.48	46.59	45.44	.....	50.58	50.14	49.04
11	.....	46.81	46.88	46.61	.....	46.01	46.65	45.38	.....	51.82	50.28	50.36
12	.....	46.58	46.35	45.97	.....	46.16	46.69	45.22	.....	50.60	50.94	49.68
13	.....	47.26	46.34	.....	.....	46.00	46.26	45.18	.....	51.43	50.44	50.67
14	.....	47.38	47.04	.....	.....	46.15	45.63	45.31	51.78	51.68	50.13	49.68
15	.....	46.46	47.04	.....	.....	46.08	46.25	45.28	51.88	51.58	49.94	49.61
16	.....	47.10	46.33	.....	.....	46.20	46.30	45.12	51.99	50.78	50.72	50.38
17	.....	47.28	46.39	.....	.....	46.20	45.48	45.48	52.55	50.49	50.15	49.73
18	.....	46.68	46.58	.....	.....	46.14	45.50	45.48	52.49	51.17	50.08	50.40
19	.....	46.69	46.28	.....	.....	46.34	45.83	45.43	51.91	50.53	50.58	49.51
20	47.26	47.06	46.28	.....	.....	46.28	45.43	45.68	51.82	51.10	50.78	49.40
21	47.06	47.17	46.84	.....	.....	46.05	45.76	45.71	51.73	50.54	49.90	49.68
22	46.71	46.46	46.25	.....	46.33	45.85	45.91	45.68	51.42	51.30	50.43	50.49
23	47.18	46.45	46.25	.....	46.18	45.91	45.78	45.61	51.02	50.43	50.62	50.56
24	47.18	47.13	46.23	.....	46.28	46.03	45.67	47.91	51.33	51.07	50.45	49.97
25	46.68	47.09	46.39	.....	46.25	45.85	45.18	48.26	51.38	50.51	49.81	.....
26	47.40	47.19	46.14	.....	46.21	45.13	45.52	.....	50.58	50.35	50.34	.....
27	47.06	46.70	46.98	.....	45.83	44.88	45.78	.....	51.47	51.25	50.53	.....
28	46.62	47.16	45.97	.....	46.28	45.49	45.67	.....	51.48	50.43	49.81	.....
29	47.06	47.12	46.63	.....	46.12	45.61	45.44	.....	51.52	51.04	49.72	.....
30	50.43	45.96	.....	45.93	45.79	45.72	.....	50.78	50.38	49.61	.....	.....
31	46.65	46.53	.....	46.13	.....	45.83	.....	.....	50.32	.....	.....	.....

156.83.14aa1. Marie Selfors. Records available: 1946-47. No measurements made in 1948.

157.84.5cd1. U. S. Fl. U. S. Dept. of Interior, Fish and Wildlife Service. Records available: 1937-46. No measurements made in 1948.

157.84.21cal. U. S. Dept. of Interior, Fish and Wildlife Service.
 Records available: 1937-46. No measurements made in 1948.
 157.84.21ddl. U. S. Dept. of Interior, Fish and Wildlife Service.
 Records available: 1937-46. No measurements made in 1948.
 160.89.31abl. U. S. Dept. of Interior, Fish and Wildlife Service.
 Records available: 1942-46. No measurements made in 1948.

Wells County

147.70.23aal. Hayden Jones. Records available: 1940-48. June 17,
 3.59.
 150.72.21cdl. City of Harvey. Records available: 1937-48. June 17,
 0.27.
 150.72.28bal. City of Harvey. Records available: 1937-48. Sept. 14,
 9.95.

Williams County

157.96.29ccl. Mrs. Gus B. Swanson Fstate. Records available:
 1938-46. No measurements made in 1948.
 159.103.24adl. Hans O. Lottestad. Records available: 1939-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	25.12	Apr. 11	27.65	July 11	17.68	Oct. 10	22.72
11	25.89	18	23.21	18	18.38	17	22.95
18	26.07	25	18.55	25	18.71	24	23.26
25	26.33	May 2	12.80	Aug. 1	19.13	31	23.33
Feb. 1	26.59	9	12.89	8	19.52	Nov. 7	23.55
8	26.73	16	12.26	15	20.12	14	23.82
15	26.88	23	12.95	22	20.49	21	23.93
22	27.04	30	12.99	29	20.78	28	24.06
27	27.15	June 6	13.63	Sept. 5	21.00	Dec. 5	24.18
Mar. 7	27.22	13	14.28	12	21.38	12	24.30
21	27.40	20	15.30	19	21.69	19	24.46
28	27.50	27	16.30	26	22.06	26	24.57
Apr. 4	27.62	July 4	16.84	Oct. 3	22.46		

159.103.24ad2. Hans O. Lottestad. Records available: 1938-48.

Jan. 3	18.56	Apr. 11	20.56	July 11	12.37	Oct. 10	16.73
11	18.76	18	15.87	18	12.97	17	17.81
18	18.93	25	12.45	25	13.36	24	17.10
25	19.09	May 2	7.25	Aug. 1	13.95	31	17.26
Feb. 1	19.20	9	7.37	8	14.31	Nov. 7	17.47
8	19.38	16	7.45	15	13.58	14	17.52
15	19.75	23	7.65	22	14.97	21	17.68
22	19.97	30	8.65	29	15.18	28	17.80
29	20.12	June 6	9.26	Sept. 5	15.48	Dec. 5	17.97
Mar. 7	20.23	13	9.82	12	15.77	12	18.09
21	20.30	20	10.50	19	15.74	19	18.33
28	20.37	27	11.29	26	16.38	26	18.43
Apr. 4	20.42	July 4	11.69	Oct. 3	16.62		

WISCONSIN

By F. C. Foley

PROGRAM OF WORK

Measurements of water level in observation wells in Wisconsin were continued during 1948 and the program was again expanded. During 1948, 43 wells were added to the observation-well program and measurements were discontinued in 4 wells. Automatic water-stage recorders were installed on 3 of the new wells added during 1948 and a total of 21 recorders were in operation at the end of the year. Measurements of water levels in six wells in northern Wisconsin were made by the Wisconsin Conservation Department.

Investigation of the ground-water resources of Wisconsin in cooperation with the University of Wisconsin continued during 1948. In addition to general studies of water levels throughout the State, detailed studies were continued in eastern Wisconsin, especially in the Milwaukee-Waukesha and Green Bay areas, and a detailed study of the ground-water resources of western Langlade County was started.

FLUCTUATIONS OF WATER LEVEL

Precipitation in Wisconsin in 1948 averaged 24.22 inches, which is 6.31 inches below normal. It was the driest year since 1895 and the second driest on record.

Water levels in water-table wells continued to drop in 1948 as a result of the deficient precipitation. There has been a general lowering of the water table in Wisconsin since 1945 or 1946, more pronounced in the northern part of the State than in the southern. In Water-Supply Paper 1098, records were analyzed for 13 water-table wells in northern Wisconsin.

In 1948 each of the same wells showed a net decline in water level except well Sw-7 which showed a net rise of 0.16 foot. Declines in the other wells ranged from 2.52 feet in well Pt-30, in Portage County, to 0.11 foot in well Ln-25, in Lincoln County. The average for the 13 wells is a

net lowering of 1.20 feet compared to an average net lowering of 0.86 foot in 1947. Six water-table wells in the Coon Creek area, in Vernon and Monroe Counties, showed an average net drop of 0.87 foot in 1948 compared to an average net rise of 0.29 foot in 1947 in the same wells. Figure 10 shows hydrographs for 1947 and 1948 of two representative water-table wells.

Water levels in all deep artesian observation wells in the Milwaukee-Waukesha area showed a net drop during 1948. Five recorder equipped wells showed drops ranging from 7.16 feet to 21.05 feet with an average net lowering of 15.08 feet. The greatest net drop occurred in well M1-79, in Forest Home Cemetery. The recorded seasonal fluctuation in the same 5 wells ranged from 13 feet to about 60 feet in 1948 as compared to from about 9 feet to about 65 feet in the same wells in 1947. The greatest seasonal fluctuation recorded was in well M1-45, in the Milwaukee Journal building.

Highest recorded water levels occurred between April 19 and May 16, except in well M1-79, immediately prior to the normal seasonal decline due to increased pumpage. The seasonal decline started about 1 month earlier in 1948 than in 1947. Lowest water levels occurred between August 28 and October 1. The highest water level was reached in well M1-79 on January 3, and not in May, as it was in other wells in the area, because a new well in Forest Home Cemetery was placed in operation and pumpage from it prevented the water level in the area from rising to the level it would otherwise have reached. Figure 11 shows the hydrograph of well M1-36, a representative well in Milwaukee County.

Well F1-10 on the eastern edge of the city of Fond du Lac showed a net drop of 3.44 feet during 1948 compared to a net drop of 4.09 feet during 1947. The highest water levels were recorded in January, February, and March, when there was little fluctuation. The lowest water level occurred on August 27. The total seasonal fluctuation was 8.62 feet.

Well Bn-9 at 320 North Broadway, Green Bay, owned by the Larsen Canning Company, showed a seasonal fluctuation of 85 feet from its highest water level on April 19 to its lowest on September 21. It also showed a net drop in water level of 6.02 feet during the year. The lowest water level recorded was 296.00 feet below land surface, an all-time recorded low.

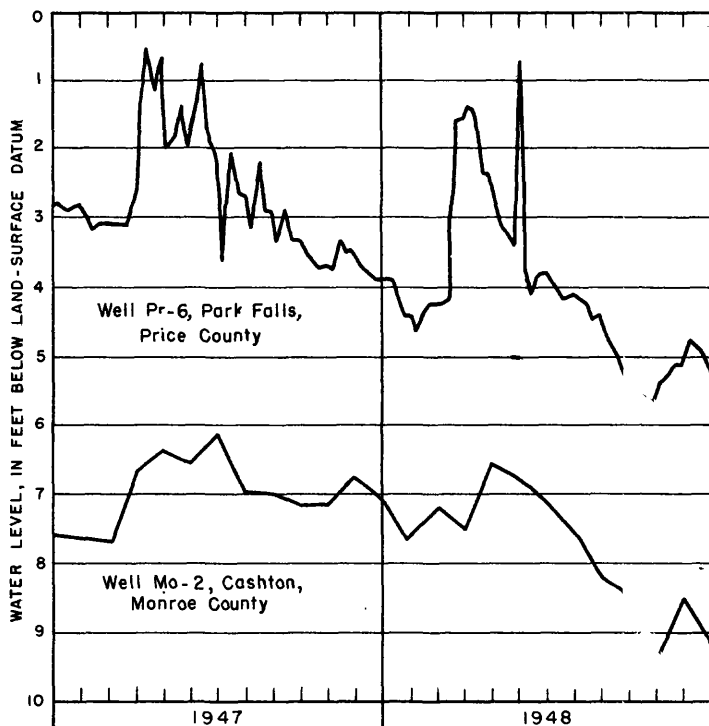


Figure 10.--Graph showing fluctuations of water level in two water-table wells, Pr-6 at Park Falls, and Mo-2 near Cashton, Wisconsin.

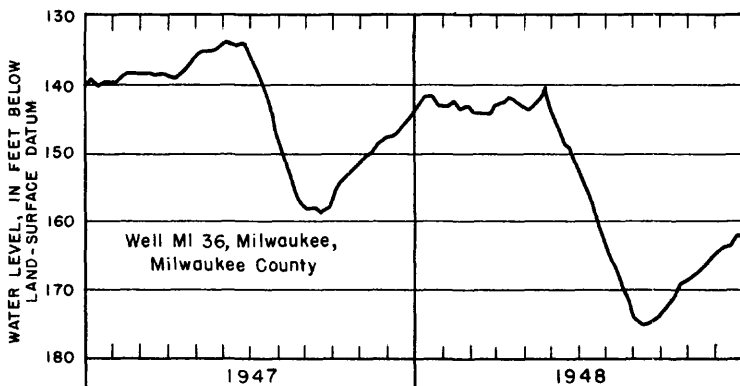


Figure 11.--Graph showing fluctuations of water level in artesian well, M1-36, N. 27th and Hopkins Sts., Milwaukee, Wisconsin.

Artesian wells away from the heavily pumped areas showed no really significant net changes in water levels during 1948. Well Ra-5, at Sturtevant, in Racine County, showed a net lowering of water level of 3.74 feet during 1948 compared to a net lowering of 2.33 feet in 1947. The trend appears to be downward in the Sturtevant area but the record is not yet long enough to be significant. Wells Dg-9 and Dg-10 showed net rises of water levels of 6.45 feet and 1.46 feet respectively compared to rises of 3.55 feet and 1.99 feet in 1947; well Mt-5, in Peshtigo, Marinette County, showed a net lowering of 1.32 feet compared to a net rise of exactly the same amount in 1947.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Ashland County

As 1. Lake Superior District Power Co. NE $\frac{1}{4}$ sec. 6, T. 46 N., R. 4 W., 6 miles south of Ashland, near power dam. Location incorrectly given in previous reports. Records available: 1943-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 20	3.87	Aug. 30	3.95	Oct. 11	4.00	Nov. 23	3.36
26	3.40	Sept. 7	3.99	18	3.85	29	3.34
Aug. 2	3.49	13	4.08	25	3.79	Dec. 6	3.15
9	3.49	20	4.12	Nov. 1	3.77	13	3.30
16	3.71	27	4.15	8	3.57	20	3.15
23	3.81	Oct. 4	4.08	15	3.51	27	3.15

Brown County

Bn 9. Larsen Canning Co. 320 North Broadway, Green Bay. Records available: 1947-48.

Daily high and low water level from recorder charts

Day	January		February		March		April	
	High	Low	High	Low	High	Low	High	Low
1	.....	.....	224.32	229.77	.....	.....	221.50	229.49
2	.....	.....	223.65	230.57	234.55	242.20	222.22	230.00
3	.....	.....	224.32	231.48	234.89	241.62	222.77	229.83
4	.....	.....	224.02	231.15	234.85	243.71	221.29	224.50
5	.....	.....	224.18	231.78	235.50	244.70	221.60	229.60
6	.....	.....	225.38	232.45	233.49	241.42	222.72	229.54
7	.....	.....	225.13	232.18	230.25	234.98	221.77	228.40
8	.....	.....	223.11	227.92	230.53	239.01	221.85	228.58
9	.....	.....	223.42	231.32	229.60	235.62	222.50	228.97
10	.....	.....	224.50	231.07	227.20	236.33	220.90	228.05
11	.....	.....	224.35	231.65	228.32	238.19	218.83	221.25
12	.....	.....	225.63	231.63	229.33	236.19	217.34	224.86
13	227.24	235.00	225.00	229.10	227.40	234.15	215.84	221.63
14	227.54	235.45	225.02	233.45	224.40	229.76	214.69	221.00
15	227.25	234.18	222.89	230.03	223.63	231.07	215.70	222.62
16	226.58	234.42	223.57	230.07	225.12	233.43	215.90	221.76
17	228.30	237.40	226.28	235.43	227.12	235.50	213.82	220.58
18	228.21	233.84	229.14	236.56	225.92	234.85	211.75	215.55
19	227.50	236.11	228.88	236.23	224.40	233.70	210.87	219.02
20	229.90	237.72	229.01	236.02	224.82	233.43	211.98	220.06
21	230.55	238.18	230.17	238.80	222.68	228.25	216.72	225.51
22	229.82	237.05	227.77	233.98	222.00	231.20	220.43	227.70
23	229.40	236.70	227.72	235.38	224.62	231.90	221.78	228.27
24	228.95	235.87	228.92	237.45	225.57	232.87	218.55	225.00

Bn 9--Continued.

Daily high and low water level from recorder charts								
Day	January		February		March		April	
	High	Low	High	Low	High	Low	High	Low
25	224.25	229.89	231.56	239.01	225.98	232.38	221.56	225.42
26	223.82	230.80	231.18	239.49	226.25	233.98	.....	225.98
27	225.23	231.78	.....	.....	225.00	232.94	216.00	.....
28	225.51	231.32	.....	.....	220.50	227.30	214.84	222.72
29	224.62	231.52	.....	.....	219.72	228.44	215.22	223.72
30	225.39	232.77	.....	.....	221.35	229.23	216.29	224.97
31	227.95	236.93	.....	.....	222.08	228.39	.....	.....

Daily high and low water level from recorder charts								
Day	May		June		July		August	
	High	Low	High	Low	High	Low	High	Low
1	215.82	225.45	238.32	250.82	265.03	274.72	.....	.....
2	219.38	222.68	245.00	253.77	267.52	277.49	.....	286.45
3	220.63	.....	244.70	253.35	.....	.....	279.00	288.00
4	.....	.....	245.00	256.99	.....	.....	.....	286.24
5	.....	.....	249.78	256.67	.....	.....	277.62	287.24
6	.....	.....	246.20	250.94	261.12	271.22	278.00	287.88
7	.....	.....	245.15	254.43	.....	.....	278.05	286.75
8	.....	.....	247.19	258.17	.....	.....	273.36	279.88
9	.....	.....	250.17	260.36	.....	.....	272.20	283.46
10	.....	.....	252.40	262.12	.....	.....	275.03	286.09
11	.....	.....	254.12	263.29	.....	.....	277.00	285.88
12	.....	.....	255.30	264.63	.....	.....	277.53	289.01
13	.....	.....	255.86	260.81	.....	.....	279.84	289.61
14	.....	.....	254.96	267.53	.....	.....	281.18	290.35
15	.....	.....	256.40	265.71	.....	.....	282.60	286.65
16	.....	.....	257.22	.....	.....	.....	282.55	293.39
17	.....	.....	.....	.....	.....	.....	284.50	294.03
18	.....	.....	.....	.....	.....	.....	285.45	294.20
19	.....	.....	.....	262.50	.....	.....	286.15	295.41
20	.....	.....	257.83	263.12	.....	.....	286.32	294.56
21	.....	.....	257.18	266.10	.....	.....	286.40	294.21
22	.....	235.05	258.40	267.06	.....	.....	285.50	289.22
23	230.90	235.87	259.83	268.80	.....	.....	284.61	291.07
24	229.85	237.79	.....	.....	.....	.....	284.23	.....
25	230.62	241.79	.....	.....	.....	.....	286.00	295.24
26	234.68	245.89	.....	.....	.....	.....	288.92	.....
27	237.58	246.45	258.29	264.98	281.07	289.35	.....	298.10
28	239.19	249.95	257.78	269.24	281.43	290.33	291.40	298.51
29	243.85	250.86	260.02	.....	280.40	289.38	289.41	295.25
30	243.74	.....	.....	.....	.....	.....	288.67	298.48
31	.....	.....	.....	.....	.....	.....	289.82	297.72

Daily high and low water level from recorder charts								
Day	September		October		November		December	
	High	Low	High	Low	High	Low	High	Low
1	290.71	299.43	.....	.....	265.15	273.72	246.32	249.60
2	290.37	298.49	.....	.....	262.56	272.17	246.50	253.64
3	290.30	300.15	.....	.....	261.43	269.06	246.25	254.30
4	291.79	300.81	.....	.....	262.06	270.19	245.97	253.43
5	288.70	294.57	278.39	287.51	260.81	269.40	243.18	248.70
6	284.38	293.93	279.99	287.32	259.98	269.56	243.02	249.77
7	283.39	293.79	279.51	287.62	258.73	264.19	.....	.....
8	285.88	295.70	279.03	287.68	258.89	269.40	.....	.....
9	286.65	294.50	278.71	286.90	257.00	266.00	.....	.....
10	285.32	293.91	275.01	281.68	256.87	265.60	.....	.....
11	285.62	293.85	275.80	286.28	255.52	264.80	239.35	247.88
12	282.06	285.47	276.10	285.78	256.33	.....	.....	.....
13	281.98	291.93	276.33	284.90	256.37	263.90	235.12	243.54
14	281.32	293.41	276.72	285.06	252.88	261.20	234.05	.....
15	282.75	292.75	277.43	286.35	251.30	259.56	234.58	.....
16	283.88	293.25	274.38	282.84	250.45	260.20	.....	.....
17	284.83	293.75	270.95	277.00	250.45	258.18	.....	.....
18	286.33	295.40	272.69	282.37	251.43	.....	.....	.....

Bn 9--Continued.

Daily high and low water level from recorder charts

Day	September		October		November		December	
	High	Low	High	Low	High	Low	High	Low
19	286.11	291.61	273.15	281.23	250.28	257.72	.....	.....
20	285.49	293.98	274.37	282.19	247.50	255.73	240.54	.....
21	286.28	296.00	275.60	283.55	244.91	249.43	.....	.....
22	286.43	295.07	276.41	284.72	242.53	250.01	.....	.....
23	285.88	294.17	276.42	285.08	242.54	250.24	.....	.....
24	284.41	293.18	271.71	279.88	241.71	248.72	.....	.....
25	283.62	291.51	270.40	279.70	240.49	247.72	236.53	.....
26	281.63	285.87	271.22	279.25	.....	.....	.....	.....
27	281.62	290.60	271.69	280.18	.....	.....	230.92	.....
28	281.83	289.21	272.20	280.68	.....	.....	230.89	.....
29	281.90	289.33	270.20	280.58	243.34	.....	232.32	.....
30	284.21	292.42	269.93	276.82	243.00	.....	.....	.....
31			267.36	272.60			.....	.....

Bn 11. City of DePere. Corner of Broadway and George Streets. Water-stage recorder maintained on well since Aug. 2, 1948. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	98.41	Mar. 1	97.30	Apr. 27	94.61	June 29	105.69
Feb. 3	97.56	30	97.40	May 24	92.11	July 19	107.63

Lowest daily water level, from recorder charts

Day	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	113.75	.....	111.71	107.59
2	110.05	113.98	.....	111.60	108.47
3	110.05	114.68	.....	110.60	108.63
4	108.81	114.97	.....	110.82	107.10
5	108.08	114.75	117.45	112.67	107.44
6	109.32	113.00	117.73	112.00	108.78
7	109.57	113.82	117.52	111.51	108.95
8	109.16	115.02	116.66	111.05	109.06
9	108.89	115.02	116.60	111.83	107.99
10	109.38	115.23	116.65	111.41	108.51
11	108.90	115.92	114.23	111.74	108.31
12	109.03	116.22	113.96	110.11	108.55
13	109.59	115.98	114.70	109.69	108.52
14	109.62	116.32	114.97	108.50	107.49
15	109.62	116.43	114.95	110.12	107.73
16	109.62	116.92	115.69	110.31	107.39
17	110.43	117.10	116.17	110.23	109.72
18	110.68	117.05	115.90	110.40	108.85
19	.....	116.23	115.75	107.93	108.61
20	111.55	115.82	115.80	108.90	107.20
21	111.22	116.32	115.65	109.30	107.44
22	111.22	116.83	115.45	109.01	107.42
23	111.26	116.95	.....	109.41	107.44
24	113.17	117.44	.....	109.70	107.52
25	115.13	117.95	115.20	109.79	107.52
26	115.58	117.61	115.30	109.34	107.30
27	115.73	116.53	115.21	109.68	107.56
28	115.05	116.60	115.10	108.98	107.29
29	113.50	116.87	114.95	107.25	107.24
30	114.74	.....	114.70	106.85	107.18
31	114.50		114.40		107.20

Bn 12. City of DePere. Reid Street. Measurements discontinued after May 24, 1948. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 6	83.88	Mar. 1	84.33	Apr. 27	82.64
Feb. 3	83.72	30	83.26	May 24	79.94

Bn 13. William Herber. SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 18, T. 24 N., R. 20 E. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	15.20	Mar. 30	14.00	June 29	14.89	Sept. 15	17.83
Feb. 3	15.57	Apr. 27	12.93	July 20	15.70	Oct. 13	18.70
Mar. 3	15.19	May 23	13.13	Aug. 12	16.44	Nov. 10	18.71

Bn 14. Village of Pulaski. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 6, T. 25 N., R. 19 E. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 6	33.65	Mar. 3	34.92	Apr. 28	33.14
Feb. 4	33.83	31	33.50	Oct. 13	36.26

a Pumping recently.

Bn 15. Larsen Canning Co. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 35, T. 24 N., R. 19 E. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	1.99	May 23	0.81	Aug. 12	6.00	Oct. 13	9.83
Mar. 30	.78	June 29	3.84	Sept. 15	8.23	Nov. 10	9.81
Apr. 27	.62	July 20	4.48				

Bn 16. Larsen Canning Co. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 35, T. 24 N., R. 19 E. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	9.67	Mar. 30	8.98	June 29	17.06	Sept. 15	16.37
Feb. 3	9.13	Apr. 27	8.63	July 20	10.77	Oct. 13	17.80
Mar. 2	8.37	May 23	8.96	Aug. 12	13.10	Nov. 10	17.76

Bn 19. Green Bay Soap Co. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 21, T. 24 N., R. 20 E. Used drilled industrial well, diameter 12 inches, depth 788 feet. Measuring point to Mar. 30, 1948, air line gage in pump base, 1 foot above land-surface datum; since Mar. 30, 1948, top of breather hole on west side of pump base, 1 foot above land-surface datum. Equipped with turbine pump. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 25	60.00	May 11	53.57	July 20	62.67	Oct. 12	80.57
Mar. 30	50.87	23	45.98	Aug. 12	67.70	Nov. 9	80.80
Apr. 27	53.67	June 29	56.67	Sept. 14	73.80		

a Nearby well pumping.

Bn 43. Harry Nick. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 2, T. 24 N., R. 20 E. Used drilled stock well, diameter 5 inches, depth 297 feet. Measuring point, top of 1 $\frac{1}{2}$ -inch pipe within casing, 2 feet above land-surface datum. Records available: 1948. Mar. 18, 7.72; Oct. 14, 21.78; Nov. 9, 22.79.

Bn 63. Joseph C. Michaels. SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 15, T. 24 N., R. 20 E. Used drilled domestic and stock well, diameter 6 inches, depth 404 feet. Measuring point, top of casing, 5 feet below land-surface datum and 596 feet above mean sea level. Equipped with jet pump. Records available: 1948. Oct. 15, 107.70; Nov. 9, 105.06.

Buffalo County

Bf 1. Owner unknown. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 29, T. 21 N., R. 12 W. Records available: 1947-48. July 15, 30.67; Dec. 7, 30.98.

Burnett County

Bt 2. Wisconsin Conservation Department. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 17, T. 39 N., R. 16 W. Measurements supplied through courtesy of Wisconsin Conservation Department. Records available: 1937, 1946-48.

Bt-2--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	33.37	Apr. 27	33.49	July 31	33.69	Oct. 30	33.86
Feb. 29	33.39	May 31	33.60	Aug. 31	33.80	Nov. 27	33.87
Mar. 31	33.40	June 30	33.65	Sept. 30	33.83	Dec. 31	33.81

Calumet County

Ca 1. Carnation Milk Co. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 18, T. 18 N., R. 20 E. Measurements discontinued after Aug. 16, 1948. Records available: 1946-48. Jan. 5, 53.09; Feb. 2, 52.77; Aug. 16, 53.90.

Ca 4. Harold Krueger. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 12, T. 20 N., R. 19 E. Records available: 1947-48.

Feb. 2	26.59	Apr. 26	26.65	June 28	26.41	Oct. 11	26.77
Mar. 1	26.54	May 24	26.42	July 19	26.60	Nov. 8	26.93
29	26.47						

Ca 5. R. A. Huebner. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 17, T. 20 N., R. 20 E. Records available: 1947-48.

Feb. 2	117.67	Apr. 26	116.21	July 19	97.44	Oct. 11	116.56
Mar. 1	105.03	May 24	96.49	Aug. 16	133.16	Nov. 8	98.64
29	128.29	June 28	96.85	Sept. 13	97.78		

Dane County

Dn 1. Robert Tollafson. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 11, T. 7 N., R. 6 E. Measurements discontinued. Records available: 1946-47.

Dn 3. Gerald Hendrickson. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 32, T. 5 N., R. 8 E. Records available: 1946-48.

Jan. 22	66.75	Apr. 21	66.13	July 14	62.80	Oct. 8	64.58
Feb. 26	67.06	May 20	61.80	Aug. 19	63.21	Nov. 5	63.80
Mar. 24	65.24	June 14	62.50	Sept. 9	62.81	Dec. 4	64.47

Dn 4. J. N. Hanley. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 34, T. 9 N., R. 11 E. Records available: 1946-48.

Lowest daily water level, from recorder charts

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	45.00	45.71	45.62	....	42.77	42.40	42.88	43.36	44.09	45.08	45.82	46.54
2	45.07	45.82	45.43	43.72	43.07	42.35	42.73	43.38	44.05	45.15	45.79	46.37
3	45.08	45.82	45.62	43.83	43.09	42.25	42.69	43.37	44.08	45.20	45.69	46.41
4	45.29	45.84	45.71	43.61	42.98	42.24	42.79	43.40	44.13	45.12	45.63	46.36
5	45.28	45.86	45.67	43.61	42.97	42.33	42.77	43.41	44.14	44.96	45.55	46.23
6	45.22	45.85	45.33	43.61	42.96	42.31	42.84	43.37	44.09	44.97	45.94	46.53
7	45.21	45.96	45.15	43.45	42.99	42.18	42.88	43.33	44.22	44.95	46.12	46.53
8	45.11	46.08	45.28	43.65	43.01	42.32	42.88	43.39	44.26	45.05	46.10	46.67
9	45.45	46.01	45.38	43.69	42.97	42.35	42.89	43.40	44.29	45.11	45.86	46.71
10	45.51	46.00	45.44	43.46	43.04	42.38	42.87	43.33	44.32	45.10	45.90	46.77
11	45.35	45.94	45.42	43.31	43.01	42.43	42.84	43.34	44.27	45.22	46.12	46.52
12	45.40	46.02	45.37	43.51	42.60	42.38	42.87	43.42	44.38	45.26	46.08	46.65
13	45.41	45.80	45.37	43.52	42.06	42.44	42.95	43.52	44.58	45.35	46.14	46.82
14	45.44	46.17	45.15	43.41	42.28	42.49	42.99	43.55	44.60	45.40	46.09	46.82
15	45.40	46.17	44.95	43.23	42.35	42.55	42.97	43.55	44.51	45.35	46.13	46.55
16	45.60	46.02	43.53	43.44	42.35	42.59	42.97	43.49	44.58	45.50	45.98	46.78
17	....	46.03	44.91	43.44	42.43	42.53	43.03	43.54	44.56	45.53	46.18	46.85
18	....	44.62	44.84	43.19	42.74	42.47	43.09	43.64	44.52	45.52	46.14	46.80
19	....	44.71	43.19	43.06	42.82	42.62	43.10	43.70	44.56	45.55	46.08	46.54
20	45.34	45.89	41.87	43.34	42.62	42.62	43.05	43.67	44.60	45.58	46.18	46.48
21	45.32	45.88	43.16	43.38	42.52	42.48	43.01	43.68	44.64	45.57	46.27	46.88
22	45.60	45.75	44.13	43.23	42.52	42.48	43.17	43.76	44.68	45.56	46.23	46.97
23	45.70	45.75	44.31	43.09	42.51	42.57	43.27	43.77	44.75	45.70	46.23	46.99
24	45.65	45.69	44.43	43.07	42.54	42.64	43.28	43.73	44.90	45.71	46.15	46.92

Dn-4--Continued.

Lowest daily water level, from recorder charts

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
25	45.64	45.71	44.31	43.04	42.44	42.70	43.20	43.83	45.00	45.63	46.13	47.12
26	45.73	45.61	43.93	43.06	42.40	42.69	43.21	43.91	45.03	45.59	46.29	47.05
27	45.78	45.57	44.22	43.08	42.31	42.69	43.26	43.99	44.97	45.66	46.40	46.79
28	45.73	43.90	44.22	43.03	42.38	42.64	43.32	43.95	44.93	45.70	46.40	46.79
29	45.66	45.63	43.97	41.70	42.42	42.67	43.31	44.00	44.82	45.73	46.36	47.13
30	45.79		43.95	42.13	42.40	42.83	43.31	44.03	44.84	45.67	46.50	47.14
31	45.78		43.65		42.43		43.34	44.08		45.74		46.99

Dn 5. State of Wisconsin. In State Capitol Building, south wing.
Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	89.08	May 10	86.55	Aug. 5	96.77	Oct. 14	92.83
Feb. 12	90.94	June 10	98.01	Sept. 2	97.61	27	90.66
Mar. 12	89.38	July 16	98.32	29	97.03	Dec. 3	94.40
Apr. 15	87.68						

Dodge County

Dg 3. A. A. Corrigan. NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 15, T. 13 N., R. 13 E. Records available: 1946-48.

May 24	8.90	July 21	11.54	Sept. 15	13.30	Nov. 10	13.44
June 30	10.51	Aug. 12	12.35	Oct. 13	13.49		

Dg 4. City of Horicon. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 5, T. 11 N., R. 16 E. Records available: 1947-48.

Lowest daily water level, from recorder charts

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	116.59	117.07	116.37	115.50	.....	116.59
2	116.43	116.76	116.39	116.31	.....	.....
3	116.79	117.31	115.90	115.59	115.45	.....
4	116.74	116.89	116.64	115.26	116.26	.....
5	116.55	117.20	116.42	116.05	115.45	.....
6	117.01	117.36	116.83	115.50	116.00	.....
7	116.60	116.82	116.06	115.50	115.44	115.70
8	116.86	117.19	116.31	116.40	116.15	116.27
9	116.82	117.26	116.82	115.63	115.26	116.24
10	117.33	117.01	116.44	115.63	115.58	116.56
11	116.70	117.68	116.41	115.81	115.15	117.13
12	117.12	116.91	117.04	115.40	115.18	116.83
13	116.66	117.19	116.32	116.25	115.76	116.70
14	117.01	116.92	116.25	115.48	115.27	116.38
15	116.75	116.84	116.54	115.44	115.71	116.55
16	117.21	117.44	116.59	116.31	114.94	116.71
17	116.84	116.85	116.56	115.62	115.20	117.38
18	117.27	116.66	116.61	115.75	116.07	117.15
19	116.73	117.08	115.79	115.45	116.39	116.51
20	117.14	116.79	116.10	115.62	115.31	116.31
21	116.62	117.26	115.57	116.40	116.16	116.63
22	117.15	116.59	115.66	116.19	115.51	116.48
23	116.86	117.26	116.44	116.02	115.41	117.08
24	117.06	116.71	115.79	115.52	115.59	117.55
25	116.82	116.71	116.59	115.90	115.98	117.95
26	117.05	116.99	115.25	.....	115.92	118.26
27	116.85	116.57	116.08	.....	116.62	117.66
28	117.36	115.90	115.63	.....	.....	117.18
29	117.30	115.85	116.25	.....	.....	117.27
30	116.87		115.41	.....	.....	117.58
31	117.19		116.02		116.11	

Dg-4--Continued.

Lowest daily water level, from recorder charts						
Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	117.35	118.09	119.14	119.03	119.17	118.69
2	117.05	117.66	119.64	118.96	119.19	118.69
3	117.45	117.65	119.80	118.90	119.06	118.35
4	116.75	117.78	119.47	119.43	118.84	118.73
5	117.22	118.33	119.25	119.35	119.04	118.50
6	118.09	117.85	119.45	119.31	119.36	117.82
7	117.61	118.29	119.12	118.92	118.69	118.43
8	117.82	117.62	119.04	118.86	119.36	117.96
9	118.41	118.36	119.17	119.37	118.73	118.75
10	118.43	117.95	119.20	118.70	119.19	118.57
11	118.36	118.37	119.65	118.85	118.88	118.83
12	118.47	118.58	119.02	119.38	119.14	118.45
13	118.89	118.16	119.36	119.00	118.67	119.03
14	117.77	118.09	119.96	119.63	118.84	118.71
15	118.01	117.90	119.86	119.43	118.83	118.89
16	118.30	118.66	120.02	118.88	119.35	118.52
17	118.00	118.51	119.48	118.78	118.66	118.55
18	117.28	117.98	119.18	119.51	118.69	119.01
19	117.64	117.95	118.86	119.01	119.00	118.20
20	118.37	118.05	119.43	119.76	119.00	118.68
21	118.78	118.79	119.48	119.52	118.47	118.96
22	118.30	117.89	118.91	119.25	119.31	118.81
23	117.67	118.92	119.00	119.50	118.78	119.25
24	118.24	118.67	119.53	119.56	118.59	118.79
25	117.47	118.74	119.05	119.83	118.97	119.12
26	117.62	118.94	118.92	119.37	118.73	118.53
27	117.82	119.61	119.05	120.14	118.56	118.57
28	118.27	118.89	119.70	119.70	118.86	119.26
29	117.88	118.84	119.27	119.63	118.57	118.76
30	118.31	119.54	119.06	119.69	119.22	119.27
31	117.67	119.33		118.90		118.91

Dg 9. Ashippun Fire Department. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 30, T. 9 N., R. 17 E. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 10	7.39	June 2	6.79	Aug. 25	12.30	Oct. 20	14.21
Apr. 7	5.42	23	7.92	Sept. 22	13.39	Nov. 24	13.51
May 5	6.35	July 28	10.37				

Dg 10. Ashippun Fire Department. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 30, T. 9 N., R. 17 E. Records available: 1946-48.

Jan. 5	9.61	Apr. 7	8.55	June 23	8.92	Sept. 22	10.80
Feb. 11	9.92	May 5	8.63	July 28	9.60	Oct. 20	11.40
Mar. 10	9.79	June 2	8.68	Aug. 25	10.21	Nov. 24	11.11

Dg 11. F. C. Etscheid. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 1, T. 9 N., R. 13 E. Records available: 1946-48.

Lowest daily water level, from recorder charts											
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. Dec.
1	38.69	40.22	41.28	37.97	30.32	23.05	28.77	32.49	36.51	41.63	43.26 44.52
2	38.94	40.35	41.03	37.86	30.01	23.38	28.89	32.54	36.76	41.65	43.25 44.51
3	38.99	40.36	41.03	37.73	29.79	24.60	29.06	32.61	37.06	41.63	43.27 44.55
4	39.20	40.19	41.08	37.29	29.46	24.96	29.44	32.70	37.48	41.54	43.33 44.63
5	39.21	40.24	41.02	37.26	29.23	25.24	29.65	32.72	37.75	41.50	43.24 44.59
6	39.21	40.29	40.77	37.27	.....	25.25	29.97	32.69	38.09	41.54	43.41 44.80
7	39.15	40.34	40.70	36.98	.....	25.33	30.34	32.91	38.50	41.47	43.50 44.80
8	39.04	40.52	40.77	36.86	.....	25.51	30.51	33.03	38.73	41.46	43.39 44.82
9	39.31	40.53	40.84	36.86	.....	25.58	30.73	33.08	38.80	41.29	43.17 44.82
10	39.39	40.68	40.85	36.54	.....	25.76	30.78	33.17	38.82	41.26	43.22 44.71
11	39.31	40.78	40.78	36.24	28.42	25.96	30.88	33.22	39.12	41.21	43.30 44.53
12	39.54	40.86	40.72	36.28	28.04	26.17	31.05	33.32	39.41	41.12	43.29 44.69

Dg 11--Continued.

Lowest daily water level, from recorder charts

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
13	39.57	40.75	40.74	36.04	27.69	26.30	31.27	33.40	39.60	41.01	43.28	44.89
14	39.62	40.94	40.60	35.81	27.29	26.39	31.40	33.38	39.61	41.02	43.20	44.94
15	39.49	40.94	40.42	35.41	26.79	26.52	31.59	33.46	39.82	40.99	43.22	44.96
16	39.76	40.92	40.60	35.38	26.27	26.74	31.66	33.62	40.18	41.36	43.08	45.17
17	39.76	40.40	40.61	35.37	25.66	26.91	31.73	33.73	40.42	41.56	43.32	45.26
18	39.83	41.10	40.49	35.00	25.04	27.11	31.81	33.92	40.70	41.58	43.35	45.19
19	39.89	41.34	40.21	35.80	24.40	27.23	31.82	33.99	40.95	41.77	43.25	45.03
20	39.92	41.34	40.11	34.79	23.80	27.22	31.82	34.02	41.20	41.82	43.36	45.04
21	39.92	41.29	39.84	34.78	23.47	27.23	31.66	34.24	41.44	41.93	43.43	45.41
22	40.03	41.25	39.85	34.47	23.41	27.36	31.83	34.45	41.45	42.02	43.36	45.56
23	40.26	41.30	39.66	34.20	23.25	27.56	31.93	34.72	41.23	42.17	43.39	45.58
24	40.26	41.34	39.54	33.81	23.21	27.76	31.87	34.97	41.30	42.25	43.41	45.55
25	40.15	41.33	39.43	33.50	23.12	27.82	31.81	35.13	41.38	42.44	43.41	45.66
26	40.17	41.18	39.06	33.08	23.11	27.97	31.80	35.43	41.37	42.67	43.62	45.65
27	40.28	41.13	39.03	32.82	23.06	28.06	32.01	35.65	41.31	42.87	43.98	45.37
28	40.27	41.18	39.00	32.31	23.28	28.24	32.07	35.88	41.37	42.90	43.99	45.38
29	40.05	41.32	38.43	31.71	23.43	28.35	32.06	36.01	41.42	43.05	44.12	45.62
30	40.19		38.39	31.18	23.56	28.61	32.22	36.16	41.50	43.13	44.44	45.65
31	40.17		38.05		23.78		32.33	36.29		43.21		45.51

Dg 12. Baker Canning Co. NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 10, T. 12 N., R. 17 E. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	46.58	Apr. 5	42.75	June 22	46.58	Oct. 18	45.18
Feb. 9	47.04	May 3	38.41	July 26	44.82	Nov. 22	45.02
Mar. 8	45.53	31	39.02	Aug. 23	47.63		

Dg 14. Chicago & Northwestern Railroad. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 21, T. 10 N., R. 15 E. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	45.55	Apr. 7	44.77	June 22	46.98	Oct. 18	45.24
Feb. 11	45.96	May 5	45.01	July 29	47.91	Nov. 22	52.26
Mar. 10	46.53	June 2	46.38	Sept. 20	52.14		

a Pumping recently.

Dg 15. Mayville Construction Co. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 13, T. 12 N., R. 16 E. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	20.74	Apr. 5	19.21	June 22	20.25	Sept. 20	22.15
Feb. 9	21.29	May 3	17.50	July 26	20.82	Oct. 18	23.46
Mar. 8	20.32	31	19.83	Aug. 23	21.49	Nov. 22	22.67

Dg 17. F. C. Etscheid. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 1, T. 9 N., R. 13 E. Used drilled domestic and stock well, depth 90 feet. Measuring point, top edge of pump base on north side, 0.5 foot above land-surface datum. Equipped with lift pump. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 12	65.01	Apr. 26	58.00	July 12	62.24	Oct. 11	57.41
26	65.00	May 3	52.24	19	62.58	18	62.05
Feb. 9	65.48	10	51.14	26	59.00	Nov. 1	69.45
16	68.18	17	29.61	Aug. 2	59.90	8	71.20
23	69.59	24	20.60	16	62.43	29	74.58
Mar. 15	68.98	31	25.30	23	67.22	Dec. 6	73.15
22	69.48	June 7	35.48	30	67.60	13	74.00
Apr. 5	62.83	14	38.99	Sept. 6	67.24	20	74.56
12	61.12	21	44.68	13	68.94	27	76.41
19	59.10	28	49.53	20	66.47		

Door County

Dr 5. City of Sturgeon Bay. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 8, T. 27 N., R. 26 E.
Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	7.98	Mar. 30	+ 0.22	June 29	4.24	Sept. 14	7.84
Feb. 3	8.57	Apr. 27	.22	July 20	6.82	Oct. 12	8.54
Mar. 2	5.91	May 18	1.63	Aug. 13	9.51	Nov. 9	8.95

Dr 7. Fred Peterson. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 30, T. 29 N., R. 27 E. Records available: 1946-48.

Jan. 6	46.42	Apr. 27	30.70	July 20	46.43	Oct. 12	48.16
Feb. 3	48.97	May 18	40.02	Aug. 12	46.41	Nov. 9	50.62
Mar. 2	41.93	June 29	46.40	Sept. 14	46.43		

Douglas County

Ds 1. Wisconsin Conservation Department. Measurements supplied through courtesy of Wisconsin Conservation Department. Records available: 1937-41, 1944-48.

Jan. 31	28.29	Apr. 24	26.75	July 31	28.55	Oct. 30	28.68
Feb. 28	28.34	May 29	28.44	Aug. 28	28.59	Nov. 27	28.71
Mar. 27	28.23	June 26	28.48	Sept. 25	28.63	Dec. 25	28.75

Fond du Lac County

Fl 10. City of Fond du Lac. NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 11, T. 15 N., R. 17 E.
Records available: 1946-48.

Lowest daily water level, from recorder charts

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	49.52	49.21	49.70	50.60	50.28	52.85	54.95	56.47	57.24	56.49	54.21	53.31
2	49.28	49.32	49.68	50.66	49.87	53.30	55.09	56.67	57.29	56.39	54.35	53.42
3	49.57	49.34	49.98	50.69	50.20	53.76	55.77	56.22	57.31	55.99	54.03	53.47
4	49.09	49.33	50.20	50.12	50.20	54.07	55.56	56.48	57.14	56.08	53.78	53.30
5	49.59	49.44	50.13	50.13	50.32	53.67	55.26	56.24	56.35	56.13	54.05	52.96
6	49.77	49.50	49.97	50.26	50.10	53.42	55.69	56.67	56.52	56.20	54.42	53.22
7	.....	49.52	49.39	50.13	50.67	53.15	55.83	56.50	56.64	56.07	54.31	53.37
8	.....	49.23	49.73	50.26	50.88	53.49	55.76	56.01	56.72	56.15	54.36	53.47
9	.....	49.39	49.91	50.42	50.29	53.72	56.05	56.67	56.89	55.95	54.14	53.52
10	.....	49.48	50.18	50.30	50.45	53.94	56.42	56.68	56.88	55.38	54.39	53.58
11	.....	49.45	50.20	49.65	50.68	54.34	56.29	56.70	56.96	55.44	54.61	53.36
12	.....	49.51	50.17	49.03	50.83	54.28	56.43	56.63	56.78	55.53	54.87	53.04
13	49.64	49.36	50.04	49.15	50.77	53.78	56.53	56.94	57.03	55.65	54.49	53.37
14	49.57	49.70	49.43	50.25	50.85	53.92	56.76	56.74	57.15	55.78	54.01	53.46
15	49.39	49.35	49.72	50.13	51.25	54.28	56.54	56.30	57.30	55.75	53.77	53.34
16	49.83	49.42	50.04	50.29	50.51	54.40	56.52	56.25	57.58	55.71	53.71	53.40
17	.....	49.63	50.30	50.36	50.72	54.37	56.38	56.28	57.85	55.40	53.83	53.56
18	.....	49.74	50.36	49.95	51.44	54.76	55.81	56.21	57.81	55.18	53.87	53.33
19	.....	49.70	50.20	50.05	51.52	54.45	56.40	56.08	57.16	55.52	53.68	52.96
20	49.12	50.03	50.36	50.23	51.21	54.03	56.84	56.27	57.14	56.30	53.47	52.84
21	48.92	50.12	49.86	50.35	51.48	54.28	57.01	56.25	57.08	56.41	53.36	53.05
22	49.11	49.65	49.12	50.33	51.86	54.24	57.05	55.87	57.04	56.59	53.24	53.15
23	49.33	49.76	50.18	50.25	51.76	54.55	56.79	56.36	56.66	56.60	53.47	53.55
24	49.59	49.74	50.47	50.31	51.58	54.79	56.52	56.65	56.79	56.13	53.50	53.54
25	49.23	49.80	50.25	49.87	51.97	55.01	56.04	57.24	56.73	56.08	53.32	53.34
26	49.38	49.76	50.04	50.10	52.26	55.00	56.21	57.95	56.21	56.19	53.47	52.80
27	49.58	49.71	50.31	50.36	52.28	54.45	56.66	58.03	56.30	55.89	53.44	52.96
28	49.47	49.84	49.79	50.41	52.58	54.32	56.99	57.85	56.53	55.43	53.26	52.92
29	49.53	49.54	49.90	50.35	52.65	54.74	57.29	57.33	56.58	55.37	53.07	52.93
30	49.67		50.02	50.32	52.47	54.93	57.22	57.18	56.33	55.12	53.09	52.89
31	49.72		50.34		52.24		56.98	57.33		54.68		52.96

Fl 16. Mrs. Amanda Kohn. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 23, T. 13 N., R. 18 E. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	7.56	Apr. 5	5.95	June 22	7.71	Sept. 20	8.31
Feb. 9	7.52	May 3	7.06	July 26	8.14	Oct. 18	7.85
Mar. 8	6.20	31	7.50	Aug. 23	8.23	Nov. 22	6.54

Fl 19. John Steffin. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 30, T. 17 N., R. 19 E. Used drilled stock well, diameter 6 inches, depth 695 feet. Measuring point, top of casing, 1.5 feet above land-surface datum. Equipped with lift pump. Records available: 1948.

Jan. 8	132.75	Mar. 29	133.05	June 28	133.35	Sept. 13	134.68
Feb. 2	132.77	Apr. 26	133.35	July 19	134.09	Oct. 11	134.43
Mar. 1	134.17	May 24	133.30	Aug. 16	134.23	Nov. 8	134.40

Grant County

Gr 1. Carl Doeringfeld. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 7, T. 6 N., R. 2 W. Records available: 1946-48. Oct. 8, 4.80.

Gr 2. Carl Doeringfeld. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 7, T. 6 N., R. 2 W. Records available: 1946-48. Oct. 8, 10.20.

Gr 3. Chester H. Graham. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 17, T. 6 N., R. 2 W. No measurements made in 1948. Records available: 1946-47.

Gr 4. Henry Jones Estate. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 20, T. 6 N., R. 1 W. Records available: 1946-48.

Jan. 23	62.28	Apr. 21	63.16	July 14	63.64	Oct. 8	64.25
Feb. 26	62.61	May 20	63.19	Aug. 19	63.90	Nov. 5	64.39
Mar. 24	62.99	June 14	63.32	Sept. 9	64.10	Dec. 4	64.75

Gr 5. Clarence Gratz. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 6, T. 5 N., R. 2 W. Records available: 1946-48.

Jan. 23	14.23	Apr. 21	14.68	July 14	14.76	Oct. 8	15.10
Feb. 26	14.12	May 20	14.52	Aug. 19	14.96	Nov. 5	15.29
Mar. 24	13.95	June 14	14.59	Sept. 9	16.15	Dec. 4	15.49

Green County

Gn 1. Charles Segner. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 21, T. 2 N., R. 7 E. Records available: 1946-48.

Jan. 22	64.70	Apr. 21	58.06	July 14	57.93	Oct. 8	61.10
Feb. 26	61.42	May 20	50.33	Aug. 19	59.56	Nov. 5	61.54
Mar. 24	58.52	June 14	54.34	Sept. 9	60.46	Dec. 4	61.99

Gn 2. Earl Waddington. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 18, T. 3 N., R. 6 E. Records available: 1946-48.

Jan. 22	135.64	Apr. 21	135.06	July 14	133.97	Oct. 8	133.39
Feb. 26	134.46	May 20	134.63	Aug. 19	133.75	Nov. 5	133.05
Mar. 24	134.80	June 14	134.38	Sept. 9	133.60	Dec. 4	133.20

Gn 3. Owner unknown. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 23, T. 2 N., R. 7 E. Records available: 1947-48.

Jan. 22	33.88	Apr. 21	33.00	July 14	31.90	Oct. 8	32.89
Feb. 26	33.84	May 20	30.59	Aug. 19	32.52	Nov. 5	33.02
Mar. 24	33.22	June 14	30.92	Sept. 9	32.67	Dec. 4	33.29

La 9. Harvey Guenther. SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 35, T. 31 N., R. 10 E. Used driven well, diameter 1 $\frac{1}{2}$ inches, depth 17 feet. Measuring point, top of casing, 1.3 feet below land-surface datum, and 1,470.06 feet above mean sea level. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 22	13.49	Aug. 5	13.72	Sept. 2	13.75	Sept. 23	13.90
July 15	13.59	12	13.77	9	13.81	Oct. 8	14.00
22	13.62	19	13.78	16	13.86	Nov. 19	14.17
29	13.62	26	13.65				

La 17. Prosser Bros. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 3, T. 31 N., R. 11 E. Used driven well, diameter 1 $\frac{1}{2}$ inches, depth 20 feet. Measuring point, top of casing, at land-surface datum and 1,536.54 feet above mean sea level. Records available: 1948.

June 23	15.27	Aug. 12	15.84	Sept. 2	15.84	Sept. 23	15.92
July 15	15.34	19	15.87	9	15.87	Oct. 7	15.99
22	15.53	26	15.79	16	15.90	Nov. 20	16.11
Aug. 5	a 17.27						

a Nearby well pumping recently.

La 22. Gus Wierschke. SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 13, T. 31 N., R. 11 E. Used drilled domestic well, diameter 4 inches. Measuring point, bottom edge of hole in pump base, 2 feet above land-surface datum and 1,558.19 feet above mean sea level. Equipped with lift pump. Records available: 1948.

June 23	11.23	Aug. 26	10.34	Sept. 16	10.37	Oct. 7	10.63
Aug. 12	10.70	Sept. 2	10.57	25	10.44	Nov. 20	10.51
19	10.62	9	10.38				

La 23. Felix Zelowski. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 4, T. 30 N., R. 11 E. Used driven well, diameter 1 $\frac{1}{2}$ inches, depth 16 feet. Measuring point, top of collar on casing, at land-surface datum and 1,471.04 feet above mean sea level. Records available: 1948.

June 24	8.99	Aug. 5	9.46	Sept. 2	9.41	Sept. 23	9.63
July 15	9.33	12	9.47	9	9.54	Oct. 8	9.66
22	9.47	19	9.46	16	9.59	Nov. 19	9.49
29	9.41	26	9.32				

La 26. Geological Survey, U. S. Dept. of Interior. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 7, T. 31 N., R. 11 E. Records available: 1944-48.

Jan. 3	9.03	May 2	7.11	July 24	8.53	Sept. 23	9.71
10	9.16	7	7.18	29	8.70	26	9.54
17	9.22	9	7.16	Aug. 1	8.59	Oct. 3	9.22
24	9.27	16	7.21	5	8.86	8	9.72
31	9.33	22	7.39	8	8.83	10	9.67
Feb. 7	9.41	29	7.54	12	8.97	17	9.76
14	9.48	June 6	7.69	15	8.01	24	9.85
21	9.57	12	7.79	19	9.12	31	9.88
28	9.51	20	8.01	22	9.11	Nov. 7	10.01
Mar. 7	9.58	27	8.99	26	9.09	15	10.02
13	9.63	30	8.22	29	9.13	20	9.92
21	8.01	July 4	8.21	Sept. 2	9.21	21	10.03
27	6.81	11	8.31	5	9.22	27	10.01
Apr. 4	7.31	13	8.43	9	9.31	Dec. 5	10.79
11	7.29	15	8.46	12	9.29	13	10.01
18	7.45	18	8.46	16	9.43	18	10.04
25	7.37	22	8.55	18	9.42	26	10.05

La 30. Felix Zelowski. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 1, T. 31 N., R. 11 E. Used driven well, diameter 1 $\frac{1}{2}$ inches, depth 53 feet. Measuring point, top of casing, 2 feet above land-surface datum and 1,551.38 feet above mean sea level. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 24	23.18	Aug. 12	23.59	Sept. 2	23.73	Sept. 23	23.86
July 15	23.37	19	23.65	9	23.79	Oct. 8	25.95
22	23.43	26	23.66	16	23.81	Nov. 20	24.21
Aug. 5	23.55						

La 44. J. Jacobus. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 32, T. 32 N., R. 11 E. Unused driven domestic well, diameter 1 $\frac{1}{4}$ inches, depth 26.0 feet. Measuring point, copper washer on well-pit cover, 0.5 foot above land-surface datum and 1,548.34 feet above mean sea level. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 26	22.88	Aug. 5	22.91	Sept. 2	23.04	Sept. 23	23.16
July 15	22.80	12	22.96	9	23.09	Oct. 7	23.22
22	22.85	19	22.99	16	23.12	Nov. 20	23.45
29	22.87	26	23.00				

La 45. Star Neva school. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 22, T. 32 N., R. 11 E. Used drilled school well, diameter 4 inches, depth 39.5 feet. Measuring point, bottom edge of hole in pump base, 0.5 foot above land-surface datum and 1,576.29 feet above mean sea level. Equipped with lift pump. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 26	34.39	Aug. 12	34.81	Sept. 2	34.88	Sept. 23	34.99
July 15	34.45	19	34.84	9	34.69	Oct. 7	35.06
22	34.69	26	34.84	16	34.79	Nov. 20	35.26
Aug. 5	34.77						

La 57. Prosser Bros. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 17, T. 31 N., R. 11 E. Unused drilled industrial well, diameter 6 inches, depth 36 feet. Measuring point, top of casing, at land-surface datum and 1,513.88 feet above mean sea level. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 3	13.83	July 22	14.09	Aug. 19	14.53	Sept. 16	14.08
July 9	13.94	29	14.22	26	14.62	23	14.89
13	14.00	Aug. 5	14.33	Sept. 2	14.70	Oct. 8	15.00
15	14.02	12	14.43	9	14.73		

La 64. Wisconsin Conservation Department. NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 20, T. 31 N., R. 11 E. Unused driven observation well, diameter 2 inches, depth 20 feet. Measuring point, top of collar on casing, 0.3 foot above land-surface datum and 1,507.93 feet above mean sea level. Measurements supplied through courtesy of Wisconsin Conservation Department. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 9	15.33	Aug. 12	15.66	Sept. 16	15.84	Nov. 8	16.16
13	15.37	16	15.48	19	15.90	15	16.17
15	15.37	19	15.70	23	15.91	20	16.12
19	15.35	24	15.50	27	16.00	21	16.14
22	15.45	26	15.68	Oct. 4	15.89	29	16.10
26	15.49	29	15.59	8	16.00	Dec. 6	16.13
29	15.53	Sept. 2	15.73	11	16.03	13	16.17
Aug. 2	15.50	6	15.75	17	16.06	20	16.19
5	15.60	9	15.79	24	16.10	27	16.23
9	15.49	13	15.80	Nov. 1	16.15		

La 68. J. Shafel. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 12, T. 31 N., R. 11 E. Used driven well, diameter 1 $\frac{1}{2}$ inches, depth 22.6 feet. Measuring point, top edge of horizontal pipe extending from top of well casing, using -0.50 correction on tape, 1.6 feet above land-surface datum and 1,514.57 feet above mean sea level. Records available: 1948.

La 68--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 12	6.16	Aug. 5	6.62	Aug. 26	6.96	Sept. 23	7.39
15	6.21	12	6.73	Sept. 2	7.04	Oct. 8	7.64
22	6.33	19	6.89	9	7.15	Nov. 20	7.99
29	6.45						

La 71. Fred Anstutz. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 21, T. 31 N., R. 10 E. Unused dug well, depth 20 feet. Measuring point, bottom edge of pump base, 1 foot above land-surface datum and 1,535.00 feet above mean sea level. Equipped with lift pump. Records available: 1948.

July 12	11.43	Aug. 5	11.85	Sept. 2	12.23	Sept. 23	12.49
15	11.48	12	11.93	9	12.32	Oct. 8	12.74
22	11.61	19	12.06	16	12.39	Nov. 20	12.18
29	11.71	26	12.18				

La 74. C. Pickner. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 34, T. 32 N., R. 11 E. Unused driven well, diameter 1 $\frac{1}{4}$ inches, depth 33.9 feet. Measuring point, top of casing, 3.7 feet below land-surface datum and 1,553.32 feet above mean sea level. Records available: 1948.

July 13	24.28	Aug. 12	24.49	Sept. 2	24.60	Sept. 23	24.72
15	24.28	19	24.53	9	24.65	Oct. 7	24.82
22	24.34	26	24.57	16	23.53	Nov. 20	25.09
Aug. 5	24.43						

La 77. Ted Baginski. SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 23, T. 31 N., R. 10 E. Used dug irrigation well, length 90 feet, width 55 feet, depth 15 feet. Measuring point, zero mark on staff gage, 12 feet below land-surface datum and 1,474.22 feet above mean sea level. Readings from staff gage. Records available: 1948.

Aug. 19	5.44	Sept. 2	5.26	Sept. 16	5.43	Oct. 8	5.64
26	5.38	9	5.33	23	5.51	Nov. 19	5.72

a Pumping recently.

La 86. A. F. Hoelt. NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 16, T. 32 N., R. 10 E. Unused drilled stock well, diameter 4 inches. Measuring point, bottom edge of hole in side of pump, 2 feet above land-surface datum and 1,526.00 feet above mean sea level. Equipped with lift pump. Records available: 1948.

July 19	9.40	Aug. 12	9.49	Sept. 2	9.51	Sept. 23	9.74
22	9.32	19	9.59	9	9.58	Oct. 7	9.80
29	9.36	26	9.45	16	9.68	Nov. 20	9.84
Aug. 5	9.44						

La 87. Felix Zelowski. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 10, T. 32 N., R. 10 E. Used driven well, diameter 1 $\frac{1}{4}$ inches, depth 13 feet. Measuring point, top of casing, 1.7 feet above land-surface datum and 1,535.14 feet above mean sea level. Records available: 1948.

July 19	6.83	Aug. 12	6.95	Sept. 9	7.18	Sept. 23	7.30
29	6.86	19	7.01	16	7.24	Oct. 7	7.44
Aug. 5	6.90	Sept. 2	7.11				

La 88. John Lucht. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 27, T. 31 N., R. 11 E. Unused drilled well, diameter 5 inches, depth 102 feet. Measuring point, top of casing, 1 foot above land-surface datum and 1,511.11 feet above mean sea level. Records available: 1948.

July 23	30.17	Aug. 12	30.29	Sept. 2	30.41	Sept. 23	30.54
29	30.21	19	30.34	9	30.45	Oct. 7	30.60
Aug. 5	30.24	26	30.34	16	30.49	Nov. 20	30.82

La 90. Arnold Schmiede. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 24, T. 32 N., R. 11 E. Used dug irrigation well, length 130 feet, width 60 feet. Measuring point, zero mark on staff gage, 14 feet below land-surface datum and 1,545.75 feet above mean sea level. Equipped with suction pump. Readings from staff gage. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 19	9.02	Sept. 2	9.06	Sept. 16	9.16	Oct. 7	9.34
26	9.04	9	9.11	23	9.24	Nov. 20	9.61

La 100. Kretz. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 18, T. 30 N., R. 11 E. Used driven well, diameter 1 $\frac{1}{2}$ inches, depth 19 $\frac{1}{2}$ feet. Measuring point, top of casing on west side, 0.5 foot above land-surface datum and 1,449.17 feet above mean sea level. Records available: 1948.

Aug. 3	10.91	Aug. 19	11.02	Sept. 9	11.09	Oct. 8	11.35
5	10.92	26	10.90	16	11.16	Nov. 19	11.56
12	10.99	Sept. 2	11.03	23	11.23		

La 107. Carlsen. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 26, T. 32 N., R. 12 E. Unused drilled domestic well, diameter 5 inches, depth 127 feet. Measuring point, top of casing, 2.5 feet above land-surface datum and 1,653.34 feet above mean sea level. Records available: 1948.

Aug. 6	114.09	Sept. 2	114.23	Sept. 16	114.32	Oct. 7	114.48
9	114.18	9	114.29	23	114.37	Nov. 20	114.73
26	114.18						

La 108. Frank Psenicka, Jr. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 7, T. 32 N., R. 11 E. Used drilled domestic and stock well, diameter 4 inches, depth 60 feet. Measuring point, top of casing, 5 feet below land-surface datum. Equipped with turbine pump. Records available: 1948.

Aug. 13	50.29	Sept. 2	50.45	Sept. 16	50.58	Oct. 7	50.91
19	51.32	9	50.87	23	50.65	Nov. 20	51.22

a Pumping recently.

La 110. Dolezel. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 26, T. 32 N., R. 10 E. Used drilled domestic well, diameter 4 inches, depth 40 feet. Measuring point, top of casing, 0.5 foot above land-surface datum and 1,514.49 feet above mean sea level. Equipped with lift pump. Records available: 1948

Aug. 13	11.26	Sept. 2	11.31	Sept. 16	11.54	Oct. 8	11.60
19	11.27	9	11.48	23	11.54	Nov. 20	11.41
26	11.21						

La 111. Pilecy. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 4, T. 31 N., R. 10 E. Unused driven domestic well, diameter 1 $\frac{1}{2}$ inches, depth 21 feet. Measuring point, top of pump, 2 feet below land-surface datum and 1,486.31 feet above mean sea level. Equipped with lift pump. Records available: 1948.

Aug. 13	8.26	Sept. 2	8.15	Sept. 16	8.41	Oct. 8	8.66
19	8.24	9	8.30	23	8.54	Nov. 20	8.45
26	8.03						

La 118. Wisconsin Public Service Corporation. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 20, T. 31 N., R. 11 E. Unused driven observation well, diameter 1 $\frac{1}{2}$ inches, depth 21.8 feet. Measuring point, top of inner ring on cap on casing at low side, 0.5 foot above land-surface datum and 1,510.95 feet above mean sea level. Measurements supplied through courtesy of Wisconsin Public Service Corporation. Records available: 1948.

Jan. 5	13.05	Feb. 25	13.38	Apr. 30	11.88	June 3	11.97
19	13.22	Mar. 8	13.50	May 13	11.80	21	12.13
Feb. 2	13.26	18	13.37	20	11.88	30	11.41
18	13.30	Apr. 5	12.22	27	11.88	July 4	8.51

La 118--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 6	12.55	Sept. 13	13.04	Oct. 25	13.44	Nov. 29	13.53
17	12.80	20	13.10	Nov. 1	13.47	Dec. 6	13.53
18	12.80	28	13.18	8	13.51	13	13.55
26	12.89	Oct. 11	13.29	15	13.54	20	13.56
Sept. 9	13.05	18	13.35	22	13.55	27	13.59

La 200. Antigo Water Department. NW $\frac{1}{4}$ sec. 29, T. 31 N., R. 11 E. Unused jetted observation well, diameter 6 inches, depth 14 feet. Measuring point, top of casing, 2 feet above land-surface datum. Water-stage recorder maintained on well since Dec. 14, 1948. Records available: 1948. Dec. 14, 6.18; Dec. 21, 6.19; Dec. 31, 6.46.

Lincoln County

Ln 25. Geological Survey, U. S. Dept. of Interior. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 36, T. 34 N., R. 6 E. Records available: 1944-48.

Jan. 4	6.04	Mar. 9	6.35	June 6	6.15	Sept. 15	6.45
11	6.05	23	5.19	22	5.82	20	6.52
25	6.26	Apr. 11	5.23	July 19	6.31	29	6.65
Feb. 3	6.41	21	5.22	21	5.80	Oct. 11	6.59
10	6.37	May 2	5.25	Aug. 23	5.99	25	6.58
23	6.43	23	5.65	30	6.16	Nov. 29	5.95
Mar. 8	6.26	June 1	6.00				

Marathon County

Mr 1. George Chrudimsky. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 25, T. 30 N., R. 10 E. Used drilled domestic and stock well, diameter 4 inches, depth 85 feet. Measuring point to Sept. 2, 1948, bottom edge of pump base, 0.5 foot above land-surface datum; since Sept. 2, 1948, bottom edge of hole in pump base, 0.6 foot above land-surface datum and 1,471 feet above mean sea level. Equipped with lift pump. Records available: 1948.

Aug. 3	35.97	Aug. 26	35.97	Sept. 23	36.04	Dec. 4	36.53
5	35.99	Sept. 2	35.91	Oct. 8	36.16	11	36.68
12	36.03	9	35.97	Nov. 19	36.53	18	36.62
19	36.07	16	35.97	27	36.54	25	36.66

Mr 3. George Hunt. NW $\frac{1}{4}$ sec. 26, T. 30 N., R. 10 E. Used dug well, diameter 18 inches, depth 12 feet. Measuring point, top of casing on west side, 1 foot above land-surface datum. Equipped with lift pump. Records available: 1948.

Aug. 5	6.53	Aug. 26	5.23	Sept. 16	6.47	Oct. 8	7.68
12	6.61	Sept. 2	5.92	23	6.70	Nov. 19	5.14
19	6.47	9	6.18				

Mr 27. Conrad Kremsreiter. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 24, T. 29 N., R. 11 E. Records available: 1944-48.

Jan. 6	8.02	Apr. 5	7.12	July 8	6.85	Oct. 4	8.56
13	8.09	12	7.01	14	7.01	17	8.72
27	8.27	26	6.69	22	7.00	28	8.91
Feb. 1	8.15	May 2	6.22	27	7.11	Nov. 2	8.98
9	8.38	10	6.21	Aug. 6	7.33	12	9.02
15	8.11	17	6.09	22	7.65	30	9.06
24	8.36	26	6.07	30	7.87	Dec. 6	8.98
Mar. 12	8.47	June 1	6.48	Sept. 8	8.03	13	9.12
15	8.25	7	6.17	14	8.27	19	9.05
22	8.32	21	6.67	27	8.46	28	9.19
29	7.15	29	6.59				

Mr 28. Geological Survey, U. S. Dept. of Interior. NE $\frac{1}{4}$ N $\frac{3}{4}$ sec. 31, T. 27 N., R. 9 E. Records available: 1944-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	21.35	Apr. 12	21.33	July 5	21.71	Oct. 4	22.05
12	21.35	14	21.32	12	21.76	11	22.07
18	21.48	26	21.35	19	21.79	18	22.09
26	21.52	May 3	21.39	26	21.78	25	22.18
Feb. 2	21.55	5	21.41	Aug. 2	21.82	Nov. 1	22.22
9	21.59	10	21.43	9	21.85	8	22.21
16	21.63	17	21.46	16	21.85	15	22.27
23	21.67	24	21.50	23	21.87	19	22.30
Mar. 1	21.70	June 1	21.55	30	21.90	29	22.35
8	21.74	7	21.56	Sept. 7	21.94	Dec. 6	23.00
15	21.79	14	21.55	13	21.95	13	22.42
22	21.52	21	21.67	20	22.00	20	22.45
29	21.27	28	21.68	27	22.02	27	22.48
Apr. 5	21.30						

Marinette County

Mt 1. Mr. Skidmore. SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 6, T. 30 N., R. 24 E. Records available: 1946-48.

Apr. 27	4.98	June 29	7.50	Sept. 14	16.10	Nov. 9	8.32
May 20	6.40	Aug. 12	14.90	Oct. 12	15.15		

Mt 5. City of Peshtigo. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 19, T. 30 N., R. 23 E. Water-stage recorder maintained on well since Aug. 12, 1948. Records available: 1947-48.

Jan. 5	23.94	Mar. 4	25.79	Apr. 27	23.79	June 29	24.78
Feb. 3	25.08	30	23.59	May 20	24.68	July 20	24.96

Lowest daily water level, from recorder charts

Day	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	25.65	26.63	26.04	25.45
2	.....	25.88	26.74	26.50	25.48
3	.....	26.10	26.72	26.65	25.53
4	.....	26.36	25.50	26.75	25.62
5	.....	26.17	26.15	26.78	25.63
6	.....	22.90	26.38	27.04	24.41
7	.....	23.35	26.34	26.84	25.17
8	.....	24.61	26.47	25.42	25.95
9	.....	25.21	.....	25.98	25.75
10	.....	25.57	.....	26.40	25.88
11	.....	25.85	.....	26.64	25.92
12	.....	25.84	26.53	26.65	25.87
13	26.28	24.67	26.75	26.75	24.92
14	26.54	25.32	26.77	26.70	25.38
15	26.45	25.65	26.80	26.40	25.58
16	.....	25.88	26.87	25.83	25.75
17	25.33	26.02	26.88	26.10	25.95
18	25.82	26.23	25.67	26.15	25.98
19	26.01	26.18	26.33	26.13	25.98
20	26.08	25.03	26.62	25.97	25.13
21	26.22	25.69	26.75	25.96	25.52
22	26.20	26.03	26.79	24.73	25.78
23	24.37	26.12	26.92	25.23	25.84
24	25.57	26.32	26.90	25.38	25.84
25	26.21	26.48	25.95	25.47	23.22
26	26.56	26.47	26.45	25.57	20.91
27	26.28	25.38	26.95	25.75	22.75
28	26.38	26.03	27.13	25.75	24.01
29	26.08	26.43	26.95	24.62	24.86
30	24.72	26.47	26.98	25.18	25.07
31	25.60		26.94		25.07

Milwaukee County

Ml 7. Milwaukee County. In Brown Deer Park. Records available: 1947-48. Jan. 6, 47.68; Feb. 10, 47.29; Mar. 16, 46.43; Apr. 11, 42.57.

Ml 8. Milwaukee County. In McGovern Park in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 35, T. 8 N., R. 21 E. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level
Jan. 6	52.70	June 22	124.60	Sept. 21	142.78
Feb. 10	54.68	Aug. 24	142.50	Nov. 23	139.37

a Upper limestone cased off.

Ml 36. A. O. Smith Corporation, 3533 North 27th Street, Milwaukee. Records available: 1946-48.

Lowest daily water level, from recorder charts

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	143.56	143.53	143.81	143.31	143.29	143.51
2	143.09	143.40	143.59	143.60	143.28	143.74
3	143.05	143.42	144.04	143.68	143.32	144.02
4	142.80	143.41	144.46	143.46	143.18	144.58
5	142.75	143.45	144.51	142.93	143.27	145.29
6	142.43	143.45	144.40	142.84	143.42	145.65
7	142.36	143.48	143.91	142.66	143.64	145.86
8	142.14	143.56	143.95	142.77	143.80	146.49
9	142.41	143.32	144.13	142.94	143.79	146.95
10	142.45	143.38	144.30	142.78	143.76	147.33
11	142.42	143.24	144.42	142.16	143.67	147.70
12	141.85	143.18	144.46	142.41	143.65	147.91
13	141.85	142.99	144.55	142.40	143.52	148.15
14	141.82	143.24	144.37	142.25	143.39	148.35
15	141.73	143.26	143.99	142.12	143.27	148.72
16	142.33	142.92	144.18	142.38	143.09	149.02
17	142.45	142.82	144.47	142.38	142.82	149.27
18	142.50	142.87	144.45	142.22	142.75	149.45
19	142.28	143.32	144.47	141.99	142.69	149.84
20	142.18	143.70	144.52	142.19	143.43	149.99
21	.....	143.72	144.36	142.36	142.12	149.84
22	.....	143.72	144.34	142.38	142.12	149.84
23	.....	143.60	.....	142.30	142.18	149.84
24	.....	143.32	.....	142.39	142.16	150.10
25	.....	143.19	.....	142.41	.....	150.39
26	.....	143.35	.....	142.40	142.28	150.60
27	143.31	143.38	.....	142.53	142.41	150.65
28	143.32	143.48	.....	142.82	142.84	150.64
29	143.24	143.85	.....	143.01	143.12	150.84
30	143.53	.....	.....	143.08	143.30	151.27
31	143.58	.....	143.16	.....	143.42	.....

Lowest daily water level, from recorder charts

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	151.51	.....	174.43	174.43	169.07	165.38
2	151.56	.....	174.81	174.52	169.03	165.26
3	151.72	.....	175.13	174.52	168.88	165.06
4	151.81	.....	175.33	174.31	168.63	164.97
5	151.90	165.23	175.34	173.86	168.55	164.65
6	152.11	165.53	175.28	173.61	168.73	164.34
7	152.51	165.87	175.27	173.41	168.86	164.36
8	152.87	166.17	175.44	173.32	168.85	164.45
9	153.21	166.38	175.58	173.30	168.34	164.52
10	153.53	166.67	175.70	173.26	168.22	164.61
11	153.83	167.10	175.63	172.97	168.32	164.40
12	154.18	167.65	175.56	172.76	168.27	164.03
13	154.77	168.17	175.52	172.60	168.09	164.05
14	155.35	168.57	175.50	172.50	168.03	164.05
15	155.77	168.76	175.32	172.35	167.72	163.79
16	156.23	168.94	175.36	171.87	167.38	163.77

Ml 36--Continued.

Lowest daily water level, from recorder charts						
Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
17	156.61	169.22	175.35	171.84	168.20	163.85
18	156.90	169.69	175.30	171.59	168.20	163.8
19	157.13	170.01	175.23	170.91	167.03	166.36
20	157.49	170.19	175.24	170.85	166.61	162.83
21	157.90	170.35	175.18	170.63	166.69	162.86
22	158.77	170.48	175.22	170.48	166.53	163.05
23	159.69	170.49	175.26	170.29	166.26	163.11
24	160.34	170.66	175.35	170.28	166.04	163.06
25	160.62	171.12	175.46	169.93	165.87	163.27
26	160.95	171.69	175.41	169.55	165.69	163.20
27	161.36	172.27	175.09	169.44	165.91	162.69
28	161.78	172.85	174.74	169.44	165.83	162.51
29	161.98	173.26	174.45	169.42	165.49	162.67
30	162.55	173.68	174.27	169.34	165.36	162.68
31	163.03	174.10		169.15		162.68

Ml 45. Milwaukee Journal, 333 West State Street, Milwaukee. Records available: 1946-48.

Daily high and low water level, from recorder charts								
Day	January		February		March		April	
	High	Low	High	Low	High	Low	High	Low
1	94.42	94.84	.....	.....	101.30	101.52	91.48	91.60
2	94.53	95.04	.....	.....	101.29	101.60	91.41	91.52
3	95.04	95.17	.....	.....	101.60	102.20	91.32	91.74
4	95.02	95.29	.....	.....	102.20	102.70	90.76	91.60
5	95.11	95.32	.....	.....	102.62	102.70	90.95	.....
6	95.05	95.28	.....	.....	102.03	102.61	.....	97.78
7	95.10	95.29	95.61	.....	101.91	102.17	92.47	96.03
8	94.93	95.23	93.02	95.61	102.21	102.43	93.09	95.21
9	95.14	95.47	.....	93.02	102.43	102.70	91.80	94.10
10	95.42	95.67	.....	94.60	102.70	102.96	91.03	96.10
11	95.08	95.68	94.60	95.76	102.77	102.96	91.62	94.40
12	95.01	95.52	95.76	95.92	102.82	102.99	90.72	91.62
13	95.53	95.72	95.70	95.92	102.74	102.99	90.06	90.72
14	95.58	95.77	95.91	97.30	102.33	102.75	89.84	90.24
15	95.07	95.48	97.30	97.50	102.20	102.33	89.80	101.00
16	95.48	96.10	97.26	97.59	102.33	102.93	95.82	101.24
17	95.93	96.18	97.59	97.93	102.78	103.18	95.57	98.70
18	95.40	95.93	97.79	97.95	96.40	102.78	92.97	95.87
19	95.41	95.82	97.74	98.61	97.78	99.40	92.79	102.77
20	95.67	95.85	98.49	98.67	96.05	97.78	97.87	103.41
21	95.51	95.78	98.48	98.77	95.97	96.69	95.96	100.70
22	95.53	96.14	98.77	99.26	95.23	96.60	94.71	101.02
23	96.14	96.51	99.26	99.81	94.21	95.23	96.20	100.92
24	96.45	96.66	99.76	100.03	94.50	96.17	96.62	106.03
25	96.53	96.74	100.03	100.24	94.27	99.92	96.55	103.48
26	96.60	96.81	100.24	100.70	95.87	102.24	96.55	106.06
27	96.65	96.83	100.24	100.78	90.24	95.20	98.61	104.80
28	.....	.....	100.30	101.12	93.12	95.20	98.01	102.08
29	.....	.....	101.12	101.57	92.50	93.12	94.26	99.40
30	.....	.....			91.91	92.50	93.19	98.51
31	.....	.....			91.42	91.90		

Daily high and low water level, from recorder charts								
Day	May		June		July		August	
	High	Low	High	Low	High	Low	High	Low
1	93.46	97.91	91.46	.....	111.22	117.65	129.45	136.50
2	91.80	95.88	.....	.....	113.28	120.39	128.71	137.20
3	91.45	95.77	.....	.....	113.85	121.46	131.10	139.67
4	91.61	96.83	.....	.....	110.14	117.38	132.02	139.75
5	92.27	99.60	.....	.....	108.90	113.57	133.13	141.12
6	93.24	99.10	.....	.....	109.42	117.16	134.76	.....

M1 45--Continued.

Daily high and low water level, from recorder charts

Day	May		June		July		August	
	High	Low	High	Low	High	Low	High	Low
7	92.72	98.25	.....	.....	113.00	121.00	134.20	141.47
8	90.02	93.30	.....	109.07	114.51	122.62	131.08	137.69
9	89.00	90.30	103.20	110.82	115.70	122.94	130.56	139.08
10	88.07	90.37	104.53	113.47	116.03	123.67	133.06	141.02
11	87.08	88.07	107.64	114.33	111.88	119.80	134.37	142.40
12	86.24	87.08	106.78	113.72	110.69	122.20	135.60	.....
13	85.76	90.10	104.03	110.02	116.91	123.53	137.80	.....
14	87.43	.....	103.48	112.38	115.50	122.92	137.22	.....
15	88.03	.....	106.16	110.48	115.12	124.22	133.95	139.20
16	.....	.....	103.13	111.68	118.72	127.41	133.16	138.91
17	86.90	94.91	104.95	112.78	122.77	130.43	133.69	137.70
18	89.33	96.99	106.34	112.42	119.92	126.90	133.93	.....
19	90.35	94.12	105.48	111.68	119.06	129.44	135.60	144.93
20	89.70	.....	102.38	109.00	122.80	131.09	138.82	.....
21	.....	.....	101.72	110.40	124.42	132.88	138.82	.....
22	.....	.....	104.98	112.33	125.51	135.34	132.90	141.52
23	.....	.....	106.12	114.36	128.19	134.67	134.27	139.53
24	.....	95.70	107.92	117.21	126.53	134.18	133.20	140.25
25	92.40	100.23	110.86	117.58	124.27	130.81	133.43	140.65
26	94.75	102.09	109.57	116.39	123.45	132.75	133.79	.....
27	95.61	.....	106.48	112.66	126.56	134.10	136.48	142.81
28	95.54	.....	105.67	115.55	128.22	136.47	136.54	143.23
29	93.66	97.52	108.93	118.45	129.30	139.17	132.08	139.79
30	92.09	95.56	112.43	119.00	132.61	139.73	131.15	139.97
31	91.56	92.10	.....	.....	132.23	140.07	132.53	139.62

Daily high and low water level, from recorder charts

Day	September		October		November		December	
	High	Low	High	Low	High	Low	High	Low
1	132.95	138.75	138.58	145.57	118.45	124.26	110.05	110.28
2	130.85	139.60	137.29	142.18	119.23	123.67	110.05	113.95
3	132.92	139.64	132.51	138.46	117.11	122.57	110.92	113.65
4	132.11	139.35	130.48	132.51	118.74	124.99	110.67	114.13
5	128.33	136.00	129.26	133.99	119.28	126.79	109.83	112.81
6	125.44	128.33	130.50	137.20	118.66	124.63	109.60	109.84
7	124.45	134.23	131.45	136.33	117.36	121.36	109.09	109.64
8	128.21	135.38	126.05	135.40	115.48	117.37	109.09	109.35
9	127.92	136.54	123.48	126.05	114.30	115.50	109.13	109.37
10	130.00	136.03	120.34	123.48	114.04	114.31	108.98	109.16
11	129.11	.....	118.70	120.34	113.67	116.74	108.49	108.97
12	126.38	133.20	118.04	121.35	113.58	116.48	108.38	108.73
13	125.45	134.32	118.17	120.18	113.06	113.56	108.54	108.86
14	128.01	135.15	117.95	125.76	112.55	113.04	108.47	108.86
15	128.19	135.50	120.29	125.56	111.92	112.62	107.94	109.47
16	128.69	137.32	120.29	125.88	111.53	114.98	107.91	108.13
17	130.63	136.80	118.48	123.34	112.08	114.04	107.87	108.13
18	129.24	136.58	116.36	118.50	111.73	116.38	107.44	108.03
19	126.74	133.20	115.47	116.36	112.07	115.87	107.00	107.44
20	125.45	134.78	114.96	115.53	111.55	112.07	106.50	107.01
21	128.14	134.98	114.62	115.00	111.08	111.65	106.52	108.00
22	.....	136.07	114.30	116.69	110.46	111.08	107.00	110.90
23	129.02	.....	115.19	117.59	110.01	110.47	110.90	112.40
24	131.42	137.19	114.65	116.80	109.95	110.08	112.40	113.22
25	131.47	139.32	113.96	114.65	110.05	110.43	113.22	114.03
26	131.50	136.90	113.95	121.59	109.97	114.99	113.78	113.93
27	131.05	139.73	117.32	123.15	111.42	114.62	113.70	113.93
28	133.97	.....	118.78	125.13	110.49	111.42	113.63	113.93
29	135.70	143.19	120.41	124.67	109.86	110.58	113.71	114.61
30	136.11	.....	119.76	124.70	109.88	110.22	114.61	114.80
31	.....	.....	119.52	123.10	.....	.....	114.58	114.81

Ml 56. National Enameling & Stamping Co., North 10th Street and West St. Paul Avenue, Milwaukee. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	82.39	Apr. 6	88.70	June 23	90.66	Oct. 19	101.40
Feb. 10	84.20	May 4	85.46	July 27	104.02	Nov. 23	99.65
Mar. 9	91.81	June 1	83.80	Sept. 21	108.17		

Ml 79. Forest Home Cemetery. SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 7, T. 6 N., R. 21 E.
Records available: 1946-48.

Daily high and low water level, from recorder charts

Day	January		February		March		April	
	High	Low	High	Low	High	Low	High	Low
1	172.12	172.97	178.14	179.71	178.20	179.16	179.19	180.05
2	170.61	172.18	177.66	178.92	178.97	179.56	179.96	180.64
3	170.36	171.97	178.83	179.23	179.51	180.43	178.91	180.64
4	171.51	172.38	179.04	179.64	180.37	181.29	177.09	178.91
5	171.59	173.36	179.54	179.94	181.21	181.65	176.69	178.33
6	173.25	174.47	179.76	180.18	180.04	181.57	178.25	179.02
7	174.32	175.01	179.14	180.18	.....	.....	178.83	179.42
8	174.83	175.40	177.78	179.16	.....	180.10	179.38	180.56
9	175.32	176.60	177.24	178.58	180.13	180.87	180.48	181.08
10	175.61	176.72	178.48	179.15	180.81	181.46	178.94	181.02
11	173.95	175.74	179.08	179.56	181.29	182.03	176.88	178.94
12	173.71	175.65	179.45	179.84	181.91	182.40	176.88	178.72
13	175.85	177.02	179.34	179.75	181.17	182.50	176.66	179.61
14	176.96	177.59	178.95	179.77	180.93	181.20	179.50	180.27
15	177.26	178.02	177.62	179.06	178.55	179.84	180.14	180.72
16	178.01	178.94	177.20	178.56	179.80	181.46	180.52	181.79
17	178.38	179.06	178.53	179.10	181.41	182.50	180.55	181.85
18	177.58	178.48	179.04	179.60	182.45	182.77	178.63	180.55
19	177.34	178.43	179.17	180.37	182.25	183.12	178.17	179.56
20	178.26	178.59	180.34	180.82	182.60	183.14	179.45	180.66
21	178.46	178.92	179.42	180.81	180.07	182.60	180.59	181.47
22	178.76	179.56	178.11	179.42	179.67	180.57	181.30	182.05
23	179.45	180.15	177.67	179.04	180.38	181.08	181.82	182.22
24	178.84	180.15	178.98	179.80	180.99	181.48	181.95	189.23
25	177.52	178.84	179.74	180.42	181.22	181.47	181.20	187.79
26	177.02	178.80	180.34	180.94	180.13	181.49	180.01	186.42
27	178.74	179.81	180.67	181.14	179.40	180.22	181.74	189.14
28	179.69	179.95	179.71	180.80	177.31	179.43	182.07	189.84
29	179.83	180.41	178.62	179.82	176.68	178.32	182.73	184.40
30	180.35	181.13			178.25	178.87	183.63	.....
31	179.62	181.27			178.63	179.28		

Daily high and low water level, from recorder charts

Day	May		June		July		August	
	High	Low	High	Low	High	Low	High	Low
1	183.47	185.82	179.55	.....	.....	.....	196.39	203.71
2	182.62	189.44	.....	.....	.....	.....	196.00	205.30
3	181.82	187.92	.....	.....	.....	.....	198.40	206.77
4	182.66	183.46	.....	.....	.....	.....	201.33	208.76
5	182.66	189.42	.....	.....	.....	.....	201.82	210.14
6	182.87	184.35	.....	.....	.....	192.63	202.80	210.97
7	182.53	182.91	.....	.....	.....	.....	203.27	208.65
8	180.71	182.63	.....	.....	184.83	192.88	201.02	207.93
9	178.87	180.68	.....	.....	.....	193.10	200.50	209.59
10	178.50	179.95	.....	.....	.....	.....	.....	.....
11	179.59	179.98	.....	.....	.....	.....	203.89	211.05
12	179.85	180.41	.....	.....	.....	.....	203.64	211.88
13	180.25	180.74	.....	.....	.....	194.51	204.36	212.37
14	180.40	189.13	.....	.....	189.28	195.66	.....	209.62
15	179.51	182.73	.....	196.10	188.09	196.22	201.63	208.38
16	178.90	186.41	188.87	197.05	188.86	197.21	200.59	209.68
17	179.07	185.30	189.73	197.53	188.82	194.82	202.62	210.85
18	.....	.....	190.83	195.50	188.11	195.18	203.63	211.96
19	180.45	188.30	188.95	191.31	188.13	197.75	204.57	212.78

M1 79--Continued.

Daily high and low water level, from recorder charts

Day	May		June		July		August	
	High	Low	High	Low	High	Low	High	Low
20	181.24	182.42	188.38	195.80	190.69	198.11	205.59	213.38
21	181.19	188.31	187.97	189.01	.....	199.64	204.42	210.45
22	180.80	183.28	188.65	196.40	191.92	199.96	203.30	209.78
23	180.33	187.97	189.72	195.69	.....	.....	.....	211.85
24	180.51	181.78	190.29	197.47	.....	197.15	204.71	213.00
25	181.08	181.70	191.30	197.90	.....	197.45	205.59	213.38
26	181.50	182.02	191.30	193.35	.....	199.13	205.42	213.45
27	181.76	182.46	189.93	197.28	193.48	202.28	207.70	215.92
28	182.18	.....	189.15	197.94	195.33	203.80	207.09	.....
29	182.17	184.95	190.61	191.88	196.70	203.95	205.42	212.52
30	181.43	189.38	.....	.....	197.53	198.13	204.34	212.76
31	180.01	182.89	.....	.....	196.80	198.05	205.42	213.57

Daily high and low water level, from recorder charts

Day	September		October		November		December	
	High	Low	High	Low	High	Low	High	Low
1	205.58	213.58	210.08	216.38	201.90	203.09	194.94	195.25
2	205.60	215.78	210.06	213.00	203.00	203.53	194.99	195.32
3	208.32	215.97	207.77	210.09	203.30	203.60	195.32	195.57
4	206.88	214.00	207.08	208.03	201.87	203.70	195.30	195.70
5	204.70	211.00	207.98	208.48	201.16	201.89	194.49	195.33
6	201.70	204.70	208.40	216.34	201.07	201.30	194.49	195.00
7	201.21	211.20	209.20	210.56	200.56	201.22	194.98	195.28
8	204.22	211.02	209.02	209.31	200.01	200.62	195.21	195.65
9	205.13	211.05	207.67	209.16	199.68	200.12	195.59	195.95
10	205.90	211.66	205.98	207.73	199.68	199.98	195.83	196.18
11	204.94	207.29	205.51	206.78	199.73	199.97	195.40	195.89
12	204.14	211.90	206.62	207.22	199.34	199.85	195.02	195.40
13	204.07	213.43	207.09	215.27	199.39	199.57	194.63	195.08
14	206.26	214.28	208.54	209.20	.....	199.30	195.00	195.38
15	206.65	214.54	208.53	208.82	.....	.....	195.10	195.35
16	207.37	214.81	207.60	208.81	.....	198.20	195.10	195.64
17	208.18	216.24	206.07	207.60	198.20	198.43	195.64	195.83
18	208.00	214.49	205.40	206.33	198.11	198.39	195.08	195.90
19	206.98	213.97	206.24	206.78	197.62	198.12	193.95	195.10
20	206.60	207.94	206.67	214.98	.....	.....	193.70	194.00
21	207.77	208.36	207.58	209.00	.....	.....	193.82	194.55
22	208.32	209.03	207.01	207.58	.....	.....	194.55	195.11
23	208.96	216.18	205.67	207.34	196.60	196.73	195.10	195.55
24	210.29	211.03	203.90	205.67	196.53	196.84	194.83	195.56
25	209.25	210.66	203.47	204.06	195.34	196.57	194.00	194.84
26	208.79	216.20	203.97	204.67	195.03	195.33	192.70	194.00
27	208.57	209.73	204.52	204.98	195.11	195.36	192.14	192.68
28	209.02	209.49	204.89	213.51	194.63	195.18	192.39	192.58
29	209.34	212.85	206.05	207.26	194.30	194.69	192.48	193.48
30	209.84	210.25	204.27	206.14	194.63	195.01	193.46	193.74
31	.....	.....	202.35	204.37	.....	.....	193.17	193.71

M1 88. Milwaukee Vinegar Works. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 25, T. 6 N., R. 22 E.
Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	117.99	May 5	116.26	Aug. 25	121.34	Oct. 20	122.15
Feb. 11	118.50	June 23	118.67	Sept. 22	120.58	Nov. 24	121.75
Mar. 10	117.37	July 28	117.81				

M1 91. U. S. Government. In Greendale in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 34, T. 6 N., R. 21 E. Records available: 1946-48.

Jan. 7	208.55	Apr. 6	211.00	June 23	213.04	Sept. 22	223.80
Feb. 11	208.87	May 5	211.04	July 28	216.64	Oct. 20	225.02
Mar. 9	210.44	June 1	215.48	Aug. 24	223.13	Nov. 24	224.40

Ml 94. Milwaukee County. In Whitnall Park in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 32, T. 6 N., R. 21 E. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	206.95	Apr. 6	208.01	June 23	217.58	Sept. 22	220.19
Feb. 11	207.03	May 4	208.39	July 28	213.41	Oct. 20	221.33
Mar. 9	207.45	June 2	209.76	Aug. 25	219.25	Nov. 24	221.18

Ml 118. A. Schaefer. 5465 North 51st Street, Milwaukee. Records available: 1946-48.

Jan. 6	37.80	May 4	26.93	June 22	30.02	Sept. 21	34.36
Feb. 10	37.83	11	26.15	July 27	33.86	Oct. 19	32.20
Mar. 9	36.87	June 1	29.07	Aug. 24	36.38	Nov. 23	31.74
Apr. 6	34.49						

Ml 119. Robert Cerletty. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 3, T. 8 N., R. 21 E. Measuring point, top of 1 $\frac{1}{2}$ -inch pipe in casing, 1.15 feet below land-surface datum. Records available: 1946-48.

June 1	7.35	July 27	10.28	Sept. 21	12.05	Nov. 23	11.96
22	8.10	Aug. 24	12.30	Oct. 19	12.29		

Ml 120. Nunn Bush Shoe Co. North 5th and West Hadley Streets, Milwaukee. Records available: 1946-48.

Lowest daily water level, from recorder charts

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	85.54	85.78	84.75	83.96	83.88	84.05	87.98	90.36	91.95	90.82	90.01	89.47
2	85.13	85.65	84.56	84.32	83.78	84.14	88.05	90.39	91.76	90.98	89.99	89.46
3	85.21	85.63	84.87	84.44	83.77	84.21	88.18	90.58	91.70	90.98	89.99	89.37
4	85.26	85.66	85.27	84.26	83.72	84.52	88.15	90.74	91.66	90.88	89.74	89.35
5	85.32	85.73	85.28	83.93	83.74	84.85	88.02	90.82	91.54	90.60	89.69	89.03
6	85.46	85.71	85.20	83.97	83.70	84.87	87.93	90.81	91.22	90.42	89.93	88.73
7	85.45	85.66	84.56	83.95	83.79	84.59	88.04	90.77	90.94	90.23	90.17	88.81
8	85.41	85.63	84.31	84.09	83.90	84.88	88.12	90.66	90.96	90.15	90.18	89.11
9	85.83	85.63	84.49	84.28	83.75	85.24	88.21	90.57	91.00	90.04	89.92	89.30
10	86.00	85.55	84.64	84.20	83.65	85.57	88.25	90.59	91.00	90.00	89.98	89.45
11	85.99	85.60	84.68	84.55	83.69	85.92	88.15	90.53	90.93	89.78	90.06	89.35
12	85.57	85.41	84.69	83.75	83.76	86.01	88.15	90.58	90.77	89.83	90.02	89.01
13	85.66	85.21	84.70	83.90	83.71	86.09	88.32	90.82	90.88	89.90	90.01	89.06
14	85.68	85.16	84.47	83.79	83.71	86.11	88.60	90.96	91.05	89.98	89.96	89.06
15	85.58	85.22	83.95	83.67	83.55	86.38	88.72	90.93	91.04	89.96	89.72	88.98
16	86.91	84.89	84.08	83.91	83.32	86.53	88.77	90.76	91.09	89.90	89.58	89.05
17	85.95	84.83	84.41	83.93	83.25	86.61	88.92	90.79	91.10	89.89	89.59	89.26
18	85.95	84.82	84.37	83.78	83.52	86.63	89.03	90.94	91.08	89.84	89.59	89.27
19	85.65	84.97	84.24	83.48	83.65	86.76	89.00	91.11	90.88	89.75	89.57	89.90
20	85.52	85.33	84.26	83.86	83.50	86.77	89.12	91.18	90.72	89.78	89.32	88.48
21	85.24	85.30	84.09	84.04	83.51	86.56	89.25	91.21	90.76	89.81	89.36	88.62
22	85.50	85.27	84.22	84.03	83.62	86.60	89.47	91.17	90.78	89.82	89.31	88.95
23	85.91	85.11	84.31	83.89	83.71	86.81	89.75	91.15	90.83	89.86	89.28	89.19
24	85.87	85.02	84.55	83.79	83.80	87.11	89.87	91.22	91.02	89.89	89.18	89.20
25	85.92	84.94	.....	83.77	83.84	87.39	89.78	91.41	91.17	89.70	89.11	89.31
26	85.87	84.82	.....	83.78	84.06	87.50	89.64	91.59	91.25	89.60	89.01	89.22
27	85.97	84.79	84.36	83.91	84.12	87.41	89.87	91.73	91.08	89.68	89.34	88.70
28	85.98	84.52	84.38	84.13	84.33	87.24	90.10	91.81	90.98	89.86	89.31	88.53
29	85.67	84.84	83.99	84.09	84.39	87.41	90.17	91.80	90.81	89.99	89.19	88.59
30	85.88	83.95	83.99	84.26	87.77	90.20	91.64	90.61	89.96	89.38	88.71	
31	85.92	83.79		84.10		90.35	91.90		89.84		88.71	

Ml 121. F. M. Nimphius. 311 Marion Street, Milwaukee. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	57.77	Apr. 7	57.27	June 23	57.73	Sept. 22	58.56
Feb. 11	58.03	May 5	57.56	July 28	58.12	Oct. 20	59.16
Mar. 10	58.08	June 2	57.95	Aug. 25	58.32	Nov. 24	58.95

M1 124. Good Hope Cemetery. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 23, T. 6 N., R. 21 E.
Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	127.68	Apr. 7	129.77	June 23	145.24	Oct. 20	132.75
Feb. 11	128.94	May 5	132.53	Aug. 24	145.13	24	131.01
Mar. 10	129.54						

M1 125. Good Hope Cemetery. South 43d Street and West Cold Spring Road. Unused drilled well, diameter 12 inches, depth 700+ feet. Measuring point, top of casing, 1 foot above land-surface datum and 771.31 feet above mean sea level. Equipped with air-lift pump. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	122.23	Apr. 7	123.67	June 2	1170.53	Oct. 20	125.94
Feb. 11	123.50	May 5	126.00	23	139.86	Nov. 24	125.51
Mar. 10	124.07						

a Nearby well pumping.

M1 130. Milwaukee County. In Greenfield Park, in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 6, T. 6 N., R. 21 E. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	58.30	Apr. 6	57.12	July 28	a60.13	Sept. 22	61.21
Feb. 11	58.75	May 4	57.93	Aug. 25	a62.22	Nov. 24	b61.59
Mar. 9	58.68	June 23	60.10				

a Pumping.

b Pumping recently.

M1 132. White Manor Water Cooperative. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 13, T. 6 N., R. 21 E. Records available: 1946-48.

Lowest daily water level, from recorder charts

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	198.24	202.23	198.55	201.34	.....	201.32
2	197.90	202.46	198.61	201.70	.....	200.98
3	197.86	201.83	199.67	202.16	.....	202.22
4	198.13	198.71	200.72	202.16	.....	203.52
5	198.13	197.48	201.28	202.05	199.14	203.61
6	198.30	198.39	201.51	198.85	198.50	204.29
7	198.49	199.46	202.08	198.40	199.49	204.29
8	198.70	200.30	.....	199.81	200.15	203.61
9	199.57	200.54	.....	200.79	200.32	203.43
10	200.02	200.55	200.50	201.15	200.32	203.61
11	200.02	200.56	198.88	201.56	200.22	.....
12	200.16	201.00	198.50	202.05	200.26	.....
13	200.34	201.01	199.64	202.41	200.68	.....
14	200.59	.....	199.81	202.40	.....	.....
15	200.84	.....	200.03	200.64	.....	203.41
16	201.60	.....	200.67	198.72	.....	.....
17	201.94	199.00	201.14	199.04	.....	.....
18	202.12	197.39	201.40	199.96	.....	.....
19	202.05	198.84	202.17	200.20	202.11	.....
20	202.00	199.97	202.52	200.57	202.43	204.39
21	201.10	200.70	202.41	.....	203.02	204.09
22	201.88	201.19	199.85	.....	201.58	203.47
23	202.47	201.44	198.19	.....	199.76	203.36
24	202.57	201.47	198.23	.....	198.91	204.11
25	200.91	201.51	198.92	.....	199.56	204.88
26	198.52	.....	199.50	199.70	200.52	205.73
27	198.10	.....	200.50	198.27	201.57	205.67
28	198.81	.....	200.64	.....	202.59	205.48
29	199.80	199.95	200.30	.....	203.28	204.88
30	200.96		200.32	.....	202.80	204.98
31	201.76		200.72		201.55	

M1 132--Continued.

Lowest daily water level, from recorder charts

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	205.04	.....	217.69	218.68	213.66	207.51
2	205.21	.....	217.65	219.06	213.21	207.50
3	205.40	.....	217.02	219.06	212.59	207.57
4	205.35	211.83	217.63	218.90	212.15	207.60
5	204.81	212.72	217.61	217.97	212.05	207.57
6	204.45	213.61	217.07	217.16	212.33	207.36
7	203.90	214.29	216.96	216.98	212.51	207.37
8	203.77	214.22	216.33	216.90	212.51	207.55
9	203.84	214.40	215.65	216.95	211.87	207.74
10	204.16	214.07	215.56	216.94	211.34	207.73
11	204.07	214.05	215.90	216.58	211.33	207.68
12	203.89	214.36	216.88	216.12	211.31	207.67
13	203.67	214.88	216.16	215.90	211.02	207.60
14	204.32	215.58	214.99	216.89	211.03	207.60
15	204.67	215.59	215.61	215.88	210.83	207.24
16	205.60	215.13	216.23	216.15	210.37	207.33
17	206.44	214.62	216.83	216.29	210.01	207.42
18	206.50	214.23	217.31	216.29	210.01	207.43
19	207.21	214.59	217.48	215.65	209.81	207.25
20	207.18	214.07	217.55	215.47	209.52	206.96
21	207.53	215.72	217.54	215.11	209.57	206.82
22	207.78	215.68	217.76	214.86	209.37	207.17
23	207.55	216.26	218.00	214.75	209.97	207.37
24	207.46	216.29	218.44	214.74	209.69	207.44
25	207.39	217.05	218.91	214.43	209.52	207.54
26	207.24	217.86	219.01	213.71	209.21	207.51
27	207.53	218.44	218.91	213.35	209.10	206.65
28	208.38	219.14	218.46	213.58	209.09	206.02
29	209.25	219.04	218.12	213.74	207.83	206.04
30	.....	218.55	218.21	213.81	207.51	206.17
31	.....	218.23		213.81		206.18

M1 135. Leonard Budzein. 920 West Armour Avenue, Town of Lake.
Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	8.54	May 5	7.75	Aug. 25	10.40	Oct. 20	11.12
Feb. 11	9.74	June 23	8.49	Sept. 22	11.08	Nov. 24	11.08
Apr. 7	6.54	July 28	9.05				

M1 146. Mr. Huel. 9090 Lake Drive, Milwaukee. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	60.49	Apr. 6	59.13	June 22	59.83	Sept. 21	63.54
Feb. 10	60.34	May 4	59.11	July 27	64.08	Oct. 19	63.22
Mar. 9	59.86	June 1	61.69	Aug. 24	65.63	Nov. 23	62.52

M1 148. Milwaukee County. NE $\frac{1}{4}$ sec. 32, T. 6 N., R. 21 E. Records available: 1946-48.

Lowest daily water level, from recorder charts

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	30.24	30.74	30.11	27.76	27.64	27.05	28.33	29.28	30.08	30.68	31.22	31.94
2	30.30	30.87	29.61	27.95	27.71	27.30	28.37	29.38	30.01	30.78	31.22	31.80
3	30.33	30.87	29.82	27.98	27.82	27.28	28.35	29.35	30.05	30.82	31.10	31.75
4	30.50	30.90	29.94	27.72	27.69	27.25	28.36	29.42	30.10	30.75	31.05	31.70
5	30.50	30.93	29.88	27.56	27.72	27.32	28.31	29.63	30.10	30.58	30.97	31.52
6	30.42	30.89	29.50	27.60	27.71	27.32	28.39	29.59	30.01	30.51	31.43	31.82
7	30.40	30.98	29.27	27.49	27.78	27.02	28.49	29.52	30.10	30.58	31.63	31.91
8	30.25	31.15	29.46	27.80	27.82	27.35	28.52	29.54	30.12	30.73	31.62	32.03
9	30.67	31.09	29.60	27.89	27.79	27.44	28.49	29.70	30.14	30.81	31.26	32.03
10	30.71	31.03	29.64	27.67	27.83	27.45	28.58	29.49	30.15	30.79	.....	32.11
11	30.61	30.95	29.62	27.52	27.57	27.49	28.54	29.54	30.07	30.90	.....	31.98

Ml 148--Continued.

Lowest daily water level, from recorder charts

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
12	30.57	30.97	29.58	27.78	27.89	27.41	28.51	29.66	30.21	30.99	.....	31.94
13	30.56	30.78	29.55	27.78	26.99	27.58	28.62	29.78	30.43	31.04	.....	32.13
14	30.62	31.26	29.55	27.62	26.80	27.58	28.86	29.79	30.47	31.11	.....	32.07
15	30.46	31.26	29.17	27.51	26.61	27.69	28.72	29.76	30.34	31.03	.....	31.83
16	30.77	31.01	29.41	27.77	26.50	27.75	28.83	29.68	30.45	31.00	31.27	32.06
17	30.75	31.06	29.40	27.74	26.66	27.69	28.93	29.68	30.47	31.08	31.62	32.09
18	30.66	31.03	29.26	27.53	26.78	27.61	28.96	29.69	30.40	31.06	31.61	32.08
19	30.51	31.16	28.80	27.42	26.75	27.79	29.05	29.86	30.38	31.00	31.51	31.74
20	.....	31.19	28.80	27.75	26.54	27.82	29.00	29.87	30.45	31.01	31.67	31.68
21	.....	30.99	28.25	27.87	26.54	27.67	28.89	29.76	30.43	30.94	31.79	32.23
22	.....	30.70	28.22	27.70	26.56	27.88	28.95	29.77	30.51	30.94	31.72	32.31
23	.....	30.57	28.06	27.56	26.71	28.19	29.07	29.89	30.50	31.10	31.66	32.30
24	.....	30.49	28.13	27.50	26.76	28.19	29.06	29.89	30.63	31.10	31.54	32.18
25	.....	30.47	28.00	27.50	26.76	27.24	28.66	29.95	30.96	30.95	31.50	32.33
26	.....	30.28	27.60	27.50	26.74	28.09	28.94	30.25	30.83	30.93	31.64	32.24
27	.....	30.28	28.03	27.56	26.68	28.06	29.03	30.20	30.71	30.98	31.96	31.94
28	30.88	30.18	28.04	27.64	26.85	28.01	29.20	30.07	30.68	31.03	31.92	31.88
29	30.70	30.29	27.74	27.60	26.92	28.06	29.16	30.10	30.43	31.09	31.75	32.26
30	30.85		27.76	27.63	26.97	28.26	29.17	30.07	30.44	31.04	31.88	32.26
31	30.85		27.54		27.05		29.22	30.13		31.14		32.13

Ml 153. Lakeside Laboratories. NE $\frac{1}{4}$ sec. 11, T. 8 N., R. 21 E. Unused drilled industrial well, diameter 10 inches, depth 250 feet. Measuring point, top of casing, 1.5 feet above land-surface datum. Water-stage recorder maintained on well since Mar. 25, 1948.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	29.53	Feb. 17	29.47	Mar. 9	28.44	Mar. 23	27.39
Feb. 10	29.70	24	29.42	16	28.13		

Lowest daily water level, from recorder charts

Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	26.73	26.32	26.49	29.31	32.80	35.85	34.38	33.85	33.63
2	26.98	26.24	26.70	29.34	32.99	35.40	34.59	33.85	33.57
3	27.02	26.28	26.93	29.57	33.15	35.44	34.59	33.67	33.50
4	26.79	26.19	27.42	29.69	33.25	35.61	34.54	33.39	33.52
5	26.62	26.17	27.77	29.79	33.48	35.62	34.37	33.29	33.40
6	26.62	26.22	27.89	29.81	33.63	35.51	34.26	33.49	33.64
7	26.55	26.33	27.81	30.02	33.78	35.55	34.04	33.69	33.69
8	26.80	26.39	27.96	30.18	33.81	35.57	33.85	33.71	33.91
9	26.97	26.35	28.09	30.29	33.71	35.32	33.79	33.35	34.00
10	26.78	26.39	28.15	30.42	33.72	35.15	33.73	33.38	34.03
11	26.46	26.27	28.34	30.50	33.70	34.97	33.72	33.41	33.78
12	26.85	26.14	28.31	30.61	33.85	35.04	33.79	33.34	33.79
13	26.88	25.91	28.29	30.74	34.16	35.40	33.85	33.34	33.87
14	26.70	25.70	28.40	30.75	34.37	35.45	34.02	33.27	33.83
15	26.55	25.52	28.53	30.64	34.42	35.36	34.02	33.26	33.63
16	26.81	25.33	28.58	30.57	34.25	35.44	33.92	33.14	33.50
17	26.73	25.40	28.52	30.69	34.06	35.43	33.94	33.27	33.54
18	26.63	25.55	28.42	30.83	34.24	35.38	33.94	33.27	33.54
19	26.46	25.57	28.47	30.91	34.38	35.11	34.03	33.18	33.14
20	26.76	25.32	28.47	31.01	34.47	35.02	34.08	33.07	32.97
21	26.85	25.08	28.28	31.10	34.65	34.73	34.12	33.13	33.16
22	26.76	25.18	28.19	31.32	34.64	34.48	34.12	33.08	33.36
23	26.59	25.45	28.30	31.51	34.74	34.57	34.04	33.10	33.40
24	26.49	25.51	28.45	31.54	34.91	34.69	34.10	33.08	33.30
25	26.39	25.60	28.73	31.54	35.43	34.85	33.85	33.08	33.50
26	27.01	26.37	25.61	28.94	31.55	35.71	34.90	33.78	33.29	33.41
27	27.08	26.39	25.64	28.92	31.78	35.76	34.65	33.90	33.62	33.03
28	27.06	26.53	26.00	28.97	32.06	35.72	34.37	33.96	33.60	32.94
29	26.74	26.51	26.12	29.04	32.14	35.68	34.26	33.92	33.43	33.14
30	26.79	26.39	26.27	29.23	32.37	35.59	34.26	33.85	33.62	33.14
31	26.53		26.40		32.64	35.71		33.77		33.07

Monroe County

Mo 2. Jos. Anderson. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 34, T. 15 N., R. 4 W. Records available: 1935-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	7.63	May 27	6.79	Aug. 25	8.20	Nov. 26	8.49
Feb. 26	7.20	June 15	7.21	Sept. 25	8.50	Dec. 6	8.80
Mar. 27	7.48	26	7.17	Oct. 25	9.38	26	9.16
Apr. 25	6.53	July 26	7.57				

Mo 10. Dennis Shea. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 5, T. 15 N., R. 3 W. Records available: 1935-48.

Jan. 28	9.88	May 29	8.99	Aug. 30	11.09	Nov. 27	11.02
Mar. 1	9.82	June 15	9.82	Sept. 29	10.97	Dec. 6	10.33
29	9.49	28	9.93	Oct. 30	10.58	27	10.54
Apr. 30	9.45	July 30	10.50				

Mo 11. John Sullivan. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 27, T. 16 N., R. 3 W. Records available: 1935-48.

Feb. 29	5.45	June 15	6.48	Aug. 29	7.20	Nov. 29	6.80
Mar. 29	5.80	29	6.30	Sept. 29	7.15	Dec. 6	6.71
Apr. 29	6.25	July 29	7.00	Oct. 29	6.80	29	6.55
May 29	6.35						

Mo 12. Melvin Olson. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 32, T. 16 N., R. 4 W. Records available: 1935-48.

Jan. 30	27.10	May 27	27.07	July 28	27.12	Nov. 29	27.12
Apr. 1	27.06	June 15	27.14	Sept. 29	27.13	Dec. 6	27.15
29	27.10	29	27.11	Oct. 30	27.13	30	27.15

Mo 13. Walter Parks. SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 3, T. 16 N., R. 4 W. Records available: 1935-48.

Jan. 23	10.00	May 25	10.15	Aug. 25	10.65	Nov. 30	10.56
Feb. 25	9.80	June 15	10.36	Sept. 30	10.63	Dec. 6	10.58
Mar. 30	9.40	30	10.36	Oct. 30	10.62	24	10.65
Apr. 29	9.98	July 29	10.46				

Oconto County

Oc 1. Oconto Utilities. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 19, T. 28 N., R. 22 E. Records available: 1946-48.

Mar. 4	14.57	May 20	5.77	Aug. 12	6.81	Oct. 12	1.22
30	6.51	June 29	12.82	Sept. 1	5.89	Nov. 9	1.16
Apr. 27	9.39	July 20	16.50				

Oneida County

On 8. Wisconsin Conservation Department. At McNaughton State Forestry Camp, in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 26, T. 38 N., R. 7 E. Measurements supplied through courtesy of Wisconsin Conservation Department. Records available: 1936-38, 1946-48.

July 30	1.01	Sept. 10	0.99	Oct. 22	1.01	Nov. 27	0.07
Aug. 6	1.00	17	.99	30	1.02	Dec. 4	.80
13	1.01	24	1.00	Nov. 5	.07	11	.80
20	1.14	Oct. 2	1.02	12	.07	18	1.10
28	1.02	9	1.02	20	.07	25	1.20
Sept. 3	.99	15	1.01				

On 22. Wisconsin Valley Improvement Co. Rainbow Snow Course, in NW $\frac{1}{4}$ sec. 18, T. 39 N.; R. 8 E. Measurements supplied through courtesy of Wisconsin Valley Improvement Co. Records available: 1944-48.

Water level at noon, from recorder charts

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	17.40	17.60	17.99	18.37	18.07	17.52	17.60	17.88	18.15	18.34	18.56	18.69
2	17.39	17.61	17.99	18.38	18.06	17.51	17.60	17.90	18.16	18.35	18.57	18.68
3	17.39	17.63	18.03	18.38	18.04	17.49	17.61	17.91	18.16	18.35	18.57	18.68
4	17.38	17.64	18.06	18.35	18.00	17.46	17.62	17.92	18.17	18.36	18.57	18.68
5	17.38	17.65	18.06	18.36	17.98	17.46	17.62	17.92	18.18	18.35	18.58	18.67
6	17.38	17.65	18.05	18.36	17.95	17.44	17.63	17.93	18.18	18.36	18.59	18.68
7	17.38	17.65	18.06	18.33	17.92	17.41	17.64	17.93	18.18	18.36	18.62	18.68
8	17.38	17.68	18.10	18.33	17.90	17.44	17.65	17.95	18.19	18.37	18.63	18.69
9	17.39	17.69	18.12	18.35	17.87	17.45	17.66	17.96	18.20	18.37	18.63	18.69
10	17.40	17.70	18.13	18.31	17.86	17.45	17.67	17.96	18.20	18.38	18.63	18.69
11	17.39	17.70	18.14	18.28	17.83	17.47	17.67	17.97	18.20	18.39	18.65	18.68
12	17.40	17.71	18.15	18.32	17.80	17.47	17.68	17.99	18.21	18.40	18.65	18.67
13	17.41	17.70	18.17	18.32	17.77	17.49	17.70	18.00	18.24	18.40	18.66	18.69
14	17.42	17.72	18.17	18.28	17.74	17.50	17.71	18.01	18.24	18.41	18.65	18.69
15	17.41	17.73	18.18	18.27	17.71	17.53	17.71	18.01	18.23	18.41	18.65	18.67
16	17.45	17.73	18.22	18.28	17.69	17.54	17.72	18.02	18.24	18.42	18.63	18.67
17	17.46	17.75	18.24	18.26	17.69	17.54	17.73	18.03	18.25	18.43	18.64	18.68
18	17.47	17.76	18.24	18.23	17.67	17.54	17.75	18.04	18.25	18.43	18.64	18.68
19	17.47	17.75	18.23	18.23	17.64	17.56	17.76	18.05	18.25	18.45	18.63	18.67
20	17.46	17.80	18.27	18.22	17.59	17.56	17.77	18.05	18.27	18.45	18.62	18.66
21	17.47	17.82	18.28	18.22	17.59	17.56	17.77	18.07	18.27	18.46	18.63	18.67
22	17.49	17.83	18.30	18.20	17.58	17.56	17.78	18.08	18.28	18.46	18.63	18.68
23	17.52	17.86	18.31	18.17	17.58	17.56	17.80	18.08	18.29	18.48	18.63	18.68
24	17.53	17.87	18.34	18.16	17.58	17.56	17.81	18.09	18.30	18.49	18.63	18.67
25	17.54	17.89	18.33	18.15	17.57	17.57	17.80	18.10	18.31	18.49	18.64	18.68
26	17.55	17.91	18.32	18.14	17.56	17.57	17.82	18.11	18.31	18.50	18.65	18.66
27	17.57	17.92	18.36	18.13	17.54	17.57	17.83	18.12	18.31	18.51	18.67	18.66
28	17.56	17.92	18.35	18.12	17.55	17.57	17.85	18.12	18.32	18.52	18.68	18.66
29	17.57	17.99	18.34	18.11	17.55	17.58	17.85	18.14	18.32	18.53	18.68	18.66
30	17.59		18.36	18.08	17.54	17.59	17.85	18.15	18.32	18.53	18.68	18.67
31	17.60		18.35		17.53		17.87	18.16		18.54		18.66

On 23. Geological Survey, U. S. Dept. of Interior. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 22, T. 37 N., R. 6 E. Records available: 1944-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	29.65	Apr. 12	29.32	July 12	30.89	Oct. 4	31.33
12	29.73	18	30.44	19	30.89	11	31.43
19	29.75	26	30.51	21	31.05	18	31.47
21	29.82	May 3	30.55	26	31.01	25	31.46
Feb. 2	29.85	10	30.58	Aug. 2	31.03	Nov. 1	31.54
9	30.01	17	30.56	9	31.06	8	31.55
16	29.90	24	30.66	16	31.10	15	31.59
23	30.05	31	30.60	23	31.15	21	31.65
Mar. 1	29.89	June 7	30.73	27	31.15	28	31.67
8	30.16	13	30.77	Sept. 6	31.23	Dec. 6	31.72
15	30.20	21	30.80	13	31.25	13	31.78
21	30.18	28	30.83	19	31.30	20	31.79
28	30.20	July 5	30.83	27	31.34	27	31.80
Apr. 5	30.35						

On 24. Geological Survey, U. S. Dept. of Interior. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 9, T. 36 N., R. 9 E. Records available: 1944-48.

Jan. 4	20.96	Mar. 3	21.35	Apr. 26	20.99	June 23	21.31
13	21.01	9	21.40	May 6	21.00	July 1	21.35
19	21.05	18	21.40	11	21.00	9	21.40
28	21.07	24	21.30	17	21.00	14	21.42
Feb. 3	21.18	31	21.11	26	20.98	22	21.48
11	21.25	Apr. 5	21.05	June 2	21.14	30	21.47
17	21.25	15	21.00	8	21.19	Aug. 5	21.47
28	21.28	21	21.00	16	21.27	12	21.50

On 24--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 16	21.50	Sept. 25	21.65	Oct. 31	21.85	Dec. 6	19.50
27	21.55	Oct. 2	21.70	Nov. 7	21.89	13	21.88
Sept. 4	21.60	8	21.72	15	21.90	23	21.92
9	21.60	16	21.78	22	21.90	29	21.92
19	21.62	23	21.83	Dec. 1	21.90		

Outagamie County

Ou 2. City of Kaukauna. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 24, T. 21 N., R. 18 E. Records available: 1946-48.

Highest daily water level, from recorder charts

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	2.87	+2.20	+2.85	3.98	2.57	5.90	11.23	9.32	13.66	12.31	4.20	2.30
2	2.47	+3.16	1.77	3.97	+1.28	7.68	11.34	9.77	13.28	10.85	7.01	2.15
3	2.35	+1.18	2.53	1.74	+2.00	9.96	10.90	10.96	13.50	8.67	8.41	2.18
4	+2.02	.15	3.27	+2.03	2.99	10.50	9.45	10.80	10.75	7.08	8.13	.28
5	+3.08	.92	3.70	+2.77	3.01	9.96	8.54	10.23	9.37	9.68	8.33	+2.66
6	1.38	1.39	2.71	.96	3.84	5.87	8.19	10.51	8.64	10.80	6.32	+3.01
7	1.35	.12	+2.34	1.92	3.11	5.22	5.09	10.53	8.42	11.21	2.58	.27
8	1.60	+3.07	+3.21	1.94	2.49	8.26	3.41	9.77	11.13	10.45	2.09	1.33
9	1.70	+3.99	1.32	2.50	+2.04	8.93	2.00	9.59	11.97	10.01	5.51	1.80
10	2.35	.88	2.53	.70	+2.45	9.60	5.33	11.00	12.19	5.25	6.09	2.25
11	+2.60	1.60	2.72	+2.42	1.21	10.47	5.85	11.11	11.92	4.20	6.07	1.77
12	+3.55	1.72	2.84	+3.32	1.82	9.05	5.70	11.71	11.75	8.17	6.35	+1.48
13	1.25	1.43	3.23	1.63	3.70	7.00	9.33	11.95	11.98	8.83	5.30	+2.32
14	....	1.83	+2.05	2.20	2.96	6.34	10.43	11.81	12.60	9.56	1.23	2.37
15	....	+1.30	.57	2.71	3.95	9.10	10.72	11.22	12.60	9.71	.32	2.88
16	....	.82	.97	3.07	1.25	9.93	11.18	11.00	12.76	10.25	3.29	3.82
17	....	2.45	1.89	1.37	.50	10.96	11.50	12.23	12.73	6.27	4.22	3.91
18	....	2.20	1.97	+1.90	3.65	10.61	11.52	12.49	12.51	5.76	4.44	1.95
19	....	1.79	1.31	+8.7	3.01	10.34	11.11	12.21	11.57	8.60	4.23	+1.26
20	.72	2.89	2.10	2.41	4.68	7.32	11.21	12.29	11.44	9.41	2.05	+1.98
21	1.48	2.19	+1.19	3.23	5.89	6.19	11.45	12.00	12.00	9.00	+1.00	1.88
22	1.69	+1.81	+2.45	3.53	6.09	9.43	11.92	9.56	11.51	8.83	+1.44	3.19
23	2.11	+2.69	+1.58	3.51	1.89	10.12	11.66	9.10	11.68	8.73	1.70	3.00
24	....	.63	1.05	4.22	+1.13	11.00	11.37	10.76	11.60	5.12	2.41	+9.96
25	....	1.71	2.41	2.52	2.64	11.74	11.23	12.94	12.01	4.03	2.77	+2.01
26	....	1.75	2.06	1.58	4.60	11.05	11.20	13.80	11.65	7.59	2.51	+2.75
27	1.47	2.16	2.49	3.30	5.62	8.86	11.86	14.58	10.83	8.39	1.45	+2.93
28	2.03	2.11	+2.59	2.96	6.21	8.36	12.23	14.18	11.66	8.83	.26	+1.13
29	2.79	+2.06	+3.61	2.45	5.94	10.51	12.18	13.37	12.28	8.40	+1.10	1.00
30	3.30		1.83	2.55	5.27	11.50	11.90	13.05	12.56	8.33	1.78	....
31	3.18		3.04		3.89		11.10	13.58		6.03		....

Ou 3. Vanden Huefel. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 2, T. 23 N., R. 18 E. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	25.64	Mar. 30	25.83	June 29	24.53	Sept. 15	27.43
Feb. 3	25.63	Apr. 27	24.21	July 20	25.46	Oct. 13	28.52
Mar. 2	25.93	May 23	22.80	Aug. 12	26.41	Nov. 10	28.82

Ou 5. Kaukauna Water & Electric Co. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 4, T. 21 N., R. 19 E. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 2	19.20	Apr. 26	18.42	July 19	21.04	Oct. 11	22.90
Mar. 1	18.65	May 24	18.95	Aug. 16	21.82	Nov. 8	22.89
29	18.27	June 28	20.23	Sept. 13	22.83		

Portage County

Pt 30. Geological Survey, U. S. Dept. of Interior. SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 1,
T. 22 N., R. 8 E. Records available: 1944-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	11.44	Apr. 18	9.99	July 12	11.22	Sept. 26	12.18
11	10.44	25	10.88	17	11.34	Oct. 4	12.30
18	11.55	May 2	10.88	19	11.32	10	12.31
25	11.55	5	10.84	24	11.38	18	12.40
Feb. 1	11.66	9	10.77	Aug. 1	11.50	24	12.51
9	11.55	16	10.00	8	11.58	31	12.51
15	11.11	23	9.71	14	11.67	Nov. 7	12.61
22	12.09	30	10.77	15	11.79	16	12.70
29	11.88	June 6	10.72	23	11.82	21	12.69
Mar. 7	11.88	13	10.92	25	11.82	28	12.80
14	12.99	20	10.91	29	11.82	Dec. 7	12.82
21	10.66	27	11.00	Sept. 5	11.89	12	12.85
28	10.88	July 5	11.14	12	11.98	21	13.97
Apr. 4	9.77	11	11.29	19	12.16	27	13.96
11	9.88						

Price County

Pr 6. Wisconsin Conservation Department. NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 24, T. 40 N.,
R. 1 W. Measurements supplied through courtesy of Wisconsin Conservation
Department. Records available: 1937-38, 1946-48.

Jan. 1	3.93	Apr. 30	2.36	Aug. 7	4.18	Oct. 23	5.64
10	3.93	May 1	2.36	14	4.26	31	5.67
20	3.93	10	3.00	21	4.50	Nov. 1	5.67
31	4.40	20	3.20	28	4.42	6	5.35
Feb. 1	4.40	31	3.46	31	4.43	13	5.28
10	4.68	June 1	.79	Sept. 1	4.43	20	5.12
20	4.37	10	3.80	4	4.45	27	5.06
29	4.26	20	4.13	11	4.66	30	5.10
Mar. 1	4.26	30	3.81	18	4.88	Dec. 1	5.10
10	4.26	July 1	3.81	25	5.13	4	5.08
20	4.17	10	4.01	30	5.32	11	4.77
31	1.56	20	4.18	Oct. 1	5.32	18	4.81
Apr. 1	1.56	31	4.16	9	5.62	25	4.94
10	1.39	Aug. 1	4.16	16	5.59	31	5.12
20	1.46						

Racine County

Ra 3. City of Burlington. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 30, T. 3 N., R. 19 E. Records
available: 1946-48.

Mar. 17	16.66	June 9	13.98	Sept. 1	14.23	Oct. 27	14.94
Apr. 14	15.57	July 7	13.96	28	14.78	Dec. 1	14.76
May 12	13.94	Aug. 4	14.03				

Ra 4. Pure Milk Association. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 34, T. 3 N., R. 20 E.
Records available: 1946-48.

Feb. 18	49.51	May 12	47.57	Aug. 4	47.37	Oct. 27	49.46
Mar. 17	49.52	June 9	45.75	Sept. 1	48.30	Dec. 1	49.77
Apr. 14	48.01	July 7	44.94	29	49.32		

Ra 5. Chicago, Milwaukee & St. Paul Railway Co. In Sturtevant, in
SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 21, T. 3 N., R. 22 E. Records available: 1946-48.

Jan. 15	115.40	Apr. 15	117.00	July 7	117.54	Sept. 29	117.64
Feb. 19	115.48	May 10	119.77	Aug. 4	117.94	Oct. 27	117.90
Mar. 18	117.58	June 9	118.38	Sept. 1	117.65	Dec. 1	118.32

Ra 6. LeRoy Radtke. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 18, T. 4 N., R. 22 E. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 19	19.29	May 10	19.84	Aug. 4	21.56	Oct. 26	24.32
Mar. 18	19.45	June 9	19.73	Sept. 1	22.49	Dec. 1	24.24
Apr. 15	19.52	July 7	21.20	29	28.76		

Ra 8. Harold Wollmer. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 10, T. 4 N., R. 21 E. Records available: 1946-48.

Jan. 15	67.76	Apr. 15	68.58	July 7	68.62	Sept. 29	69.31
Feb. 19	69.74	May 10	65.32	Aug. 4	68.66	Dec. 1	68.26
Mar. 18	68.63	June 9	66.16	Sept. 1	69.77		

Rock County

Ro 3. School for the Blind. In Janesville, in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 2, T. 2 N., R. 12 E. Records available: 1947-48.

Jan. 14	58.22	Apr. 14	56.58	July 7	57.73	Sept. 29	59.07
Feb. 18	58.20	May 12	56.70	Aug. 4	57.03	Oct. 27	57.10
Mar. 17	57.44	June 10	56.70	Sept. 1	57.29	Dec. 1	57.09

St. Croix County

SC 2. Owner unknown. SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 31, T. 28 N., R. 19 W. Records available: 1947-48. June 16, 46.98; Dec. 7, 49.29.

Sauk County

Sk 1. Badger Ordnance Works. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 3, T. 10 N., R. 6 E. Records available: 1946-48.

Lowest daily water level, from recorder charts

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	77.04	.....	76.76	76.22	76.07	76.18	82.25	78.03	77.67	78.24	76.76	77.37
2	76.47	.....	77.11	76.70	75.84	75.95	81.90	77.30	78.12	78.32	76.51	77.79
3	76.15	.....	77.64	76.92	75.25	76.50	81.29	77.14	78.12	78.10	76.81	78.21
4	76.12	.....	77.72	76.60	75.11	77.03	80.99	77.80	77.98	77.33	77.10	78.23
5	75.91	.....	77.59	75.74	75.73	77.18	80.00	78.20	77.94	76.73	77.26	77.64
6	75.79	77.44	77.52	75.63	75.93	76.82	78.82	78.39	77.29	77.22	77.40	76.66
7	76.34	77.44	76.79	76.18	76.32	75.95	78.37	78.39	76.43	77.60	77.28	76.37
8	76.34	77.31	76.10	76.43	76.44	75.69	78.97	77.94	76.35	77.83	76.75	77.02
9	76.78	76.64	.....	76.72	76.15	76.34	79.56	77.12	76.89	77.86	76.22	77.66
10	76.79	76.24	.....	76.73	75.47	77.12	79.91	76.80	77.31	77.46	77.06	78.02
11	76.48	76.79	.....	76.12	75.34	78.25	79.95	77.55	77.32	76.62	77.35	78.02
12	75.41	76.86	77.06	75.66	75.91	78.88	79.44	78.11	76.99	76.57	77.22	77.61
13	75.65	76.66	77.10	75.79	76.00	79.20	79.01	78.35	76.35	77.16	76.60	77.06
14	76.11	77.45	76.60	76.39	76.22	79.60	79.51	78.37	76.34	77.66	76.26	76.60
15	76.75	77.46	75.72	76.51	76.27	80.12	79.82	77.89	76.90	77.74	75.58	77.07
16	76.91	76.72	74.82	76.97	76.08	80.82	80.03	77.01	77.50	77.82	75.46	77.92
17	76.98	76.46	75.56	77.03	75.47	81.13	80.03	76.64	78.00	77.65	76.46	79.07
18	76.86	76.80	75.58	76.64	75.60	81.65	79.45	77.24	78.00	76.94	77.24	79.82
19	76.05	77.12	76.83	75.80	76.24	81.92	78.47	77.77	77.68	76.70	77.64	80.55
20	75.70	77.12	76.83	75.85	76.42	81.87	77.82	77.77	76.90	77.16	77.77	81.10
21	76.30	76.76	76.40	76.45	76.70	81.90	78.40	78.16	76.63	77.71	77.72	82.02
22	77.31	76.76	75.79	76.50	76.72	82.02	78.95	77.84	77.15	77.99	76.98	82.64
23	77.38	76.36	.....	76.39	76.36	82.15	79.20	77.08	77.60	78.05	76.63	83.04
24	77.35	75.69	.....	76.39	75.78	82.29	.....	76.88	77.88	77.72	77.30	83.42
25	77.44	75.88	.....	76.07	75.63	82.39	78.66	77.51	77.94	76.88	77.69	83.88
26	.....	76.53	76.39	75.31	77.32	82.42	77.64	78.14	77.55	76.59	77.64	83.88
27	.....	76.71	76.59	75.28	76.90	82.29	77.43	78.60	76.77	77.14	77.87	83.97
28	.....	77.20	76.41	75.28	77.04	82.02	78.01	78.64	76.41	77.69	77.86	83.96
29	.....	77.71	75.40	75.94	77.30	82.04	78.21	78.20	76.88	77.92	77.21	84.02
30	.....	.....	75.28	76.05	77.32	82.22	78.47	77.32	77.50	77.91	76.97	84.02
31	.....	.....	76.02	.....	76.96	.....	78.52	77.14	.....	77.35	.....	83.89

Sh 5. Lew and Sylvester Jarosinski. NE $\frac{1}{4}$ sec. 4, T. 25 N., R. 18 E. Used drilled industrial well, diameter 6 inches, depth 99 feet. Measuring point, top of casing, 1 foot above land-surface datum. Equipped with suction pump. Records available: 1948.

Date	Water level	Date	Water level	Date	Water level
July 13	15.03	Aug. 13	16.79	Oct. 13	18.37
21	15.40	Sept. 15	19.37	Nov. 10	20.04

Trempealeau County

Tr 1. Owner unknown. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 35, T. 19 N., R. 8 W. Records available: 1947-48. June 15, 141.31; Dec. 7, 142.00.

Vernon County

Ve 4. Albert Storbakken. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 14, T. 14 N., R. 5 W. Records available: 1935-48. June 15, 10.60; Dec. 6, 10.09.

Ve 8. M. H. Willenberg. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 26, T. 14 N., R. 7 W. Records available: 1935-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 23	48.25	May 20	48.27	July 23	48.29	Nov. 24	49.32
Feb. 18	48.23	June 15	48.23	Sept. 30	48.50	Dec. 7	48.42
Mar. 22	48.23	24	48.27	Oct. 19	49.32	22	49.31
Apr. 22	48.24						

Ve 9. F. Lenser. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 14, T. 14 N., R. 7 W. Records available: 1935-48. June 15, 46.64; Dec. 7, 47.14.

Ve 14. Chris Benrud. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 6, T. 14 N., R. 4 W. Records available: 1935-48. June 15, 7.40; Dec. 6, 7.42.

Vilas County

V1 3. Wisconsin Conservation Department. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 9, T. 41 N., R. 10 E. Unused observation well, diameter 8 inches, depth 21 $\frac{1}{2}$ feet. Measuring point, pointer on Kinnison float gage, 562 feet above land-surface datum and 1,658 feet above mean sea level. Measurements supplied through courtesy of Wisconsin Conservation Department.

Aug. 21	9.12	Sept. 25	9.24	Oct. 30	8.84	Dec. 4	8.02
28	9.15	Oct. 2	8.77	Nov. 6	8.69	11	8.07
Sept. 4	8.98	9	8.71	13	8.49	18	8.23
11	9.14	16	8.82	20	7.78	25	8.31
18	9.27	23	8.79	27	8.13		

V1 21. Geological Survey, U. S. Dept. of Interior. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 10, T. 40 N., R. 10 E. Records available: 1944-48.

Jan. 5	15.52	Apr. 5	15.58	July 6	15.89	Sep. 28	16.16
13	15.54	12	15.58	13	15.92	Oct. 13	16.22
20	15.61	20	15.59	20	15.95	20	16.25
29	15.66	27	15.60	22	16.02	25	16.26
Feb. 4	15.71	May 3	15.61	27	15.98	Nov. 3	16.30
10	15.74	10	15.64	Aug. 3	15.98	9	16.32
16	15.79	18	15.68	10	16.00	17	16.35
24	15.85	25	15.70	17	16.03	23	17.38
Mar. 2	15.70	31	15.74	25	16.05	29	16.41
10	15.92	June 8	15.74	31	16.07	Dec. 7	16.42
16	15.98	14	15.79	Sept. 9	16.10	22	16.54
23	15.87	22	15.84	15	16.13	27	16.52
30	15.60	30	15.86	23	16.14		

Walworth County

Ww 1. Village of Genoa Junction. $SE\frac{1}{4}SE\frac{1}{4}$ sec. 35, T. 1 N., R. 18 E. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	26.59	Apr. 14	25.58	July 7	25.65	Sept. 29	26.95
Feb. 18	26.47	May 12	24.98	Aug. 4	26.24	Oct. 27	27.02
Mar. 17	26.11	June 9	25.13	Sept. 1	26.60	Dec. 1	27.09

Ww 2. G. Bergstrom. $SW\frac{1}{4}NW\frac{1}{4}$ sec. 22, T. 1 N., R. 16 E. Records available: 1946-48.

Jan. 14	65.58	Apr. 14	65.26	July 7	64.43	Sept. 29	64.31
Feb. 18	65.96	May 12	65.19	Aug. 4	64.16	Oct. 27	64.54
Mar. 17	65.81	June 9	64.73	Sept. 1	64.25	Dec. 1	64.87

Ww 3. U. S. Government, War Assets Administration. $SE\frac{1}{4}SW\frac{1}{4}$ sec. 21, T. 2 N., R. 15 E. Measurements discontinued. Records available: 1946-48.

Ww 4. United Milk Products. $SE\frac{1}{4}NE\frac{1}{4}$ sec. 33, T. 1 N., R. 15 E. Records available: 1946-48.

Jan. 14	53.46	Apr. 14	52.95	July 7	51.29	Sept. 29	53.52
Feb. 18	53.97	May 12	51.77	Aug. 4	52.31	Oct. 27	54.19
Mar. 17	54.22	June 10	50.37	Sept. 1	52.85	Dec. 1	55.05

Ww 5. H. Phillips. $NE\frac{1}{4}NW\frac{1}{4}$ sec. 36, T. 4 N., R. 16 E. Records available: 1947-48.

Apr. 14	34.35	July 6	34.26	Sept. 1	34.70	Oct. 26	35.13
May 12	34.16	Aug. 4	34.59	28	35.83	Nov. 30	35.00
June 9	34.34						

Ww 9. Stewart Bros. $SW\frac{1}{4}SW\frac{1}{4}$ sec. 33, T. 3 N., R. 15 E. Records available: 1947-48.

Jan. 14	77.26	Apr. 14	76.87	July 7	76.15	Oct. 27	76.26
Feb. 18	77.15	May 12	76.81	Sept. 29	76.08	Dec. 1	76.55
Mar. 17	77.29	June 10	74.40				

Washington County

Wn 1. John Thiesen. $SW\frac{1}{4}SE\frac{1}{4}$ sec. 10, T. 11 N., R. 18 E. Records available: 1946-48.

Jan. 5	50.06	Apr. 7	49.77	June 22	43.67	Sept. 21	45.81
Feb. 11	50.76	May 5	45.68	July 27	44.26	Oct. 19	46.79
Mar. 10	51.53	June 2	43.85	Aug. 24	44.96	Nov. 23	47.88

Wn 2. City of Hartford. East side of North Rural Street, between power house and railroad. Measuring point, top of wooden recorder base, 1 foot above land-surface datum. Water-stage recorder maintained on well since July 22, 1948. Records available: 1946-48.

Jan. 5	41.12	Mar. 10	35.05	May 5	29.41	June 2	32.79
Feb. 11	37.64	Apr. 7	33.05				

Lowest daily water level, from recorder charts

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	40.17	42.30	41.93	40.03
2	40.74	42.06	41.80	40.12
3	36.01	40.98	41.20	41.57	40.91
4	36.07	40.50	40.81	41.36	40.44
5	36.06	40.31	40.47	40.81	40.89

Wk 2--Continued.

Lowest daily water level, from recorder charts

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	73.09	74.03	72.39	73.10	73.35	75.92	79.44	84.10	84.05	82.47	80.74	80.38
27	73.24	73.77	72.89	73.15	73.52	76.29	80.13	84.23	84.60	82.50	81.06	80.13
28	73.05	73.85	72.98	73.23	73.67	76.45	80.28	84.37	84.11	82.17	80.93	80.00
29	72.75	74.27	72.86	73.55	74.53	76.43	80.16	84.20	83.68	82.09	80.72	80.12
30	72.97		72.92	73.07	74.24	76.46	79.94	84.59	83.37	82.01	80.74	80.09
31	72.96		72.67		74.80		80.12	85.03		82.25		79.99

Wk 3. Village of Menomonee Falls. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 10, T. 8 N., R. 20 E. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	22.06	Apr. 6	20.37	July 27	24.43	Oct. 19	24.87
Feb. 10	23.39	June 1	21.95	Sept. 21	25.23	Nov. 30	24.99
Mar. 9	21.26						

Wk 14. Veterans Hospital. SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 2, T. 6 N., R. 19 E. Records available: 1946-48.

Lowest daily water level, from recorder charts

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	274.00	287.73	287.47	288.79	282.83	282.64
2	273.68	286.78	288.34	289.08	281.39	284.15
3	273.71	287.99	289.91	289.38	281.92	285.31
4	273.49	288.53	290.09	287.90	282.84	285.81
5	273.54	288.97	290.59	287.37	283.52	285.60
6	273.96	288.65	289.70	287.70	283.73	284.58
7	277.48	288.40	287.40	288.76	284.62	283.40
8	281.61	287.87	287.90	289.50	283.98	284.28
9	.....	287.80	289.08	290.33	282.01	285.36
10	.....	288.11	289.21	290.34	282.65	286.72
11	.....	289.11	289.35	286.89	284.58	287.64
12	.....	289.12	289.58	287.54	284.53	287.43
13	.....	289.40	289.78	287.90	285.47	286.48
14	287.24	288.72	288.22	289.07	285.03	285.20
15	288.03	288.35	287.60	288.70	284.38	286.38
16	288.61	287.29	289.12	289.92	282.36	286.95
17	288.75	287.80	289.89	288.90	282.84	287.76
18	287.69	288.82	289.66	286.25	283.45	288.46
19	287.09	289.52	288.59	284.21	283.96	288.39
20	287.27	290.03	288.87	285.43	284.62	286.83
21	287.85	288.80	287.60	286.24	286.00	285.48
22	288.67	287.54	287.49	285.58	285.40	286.45
23	288.85	287.75	286.89	284.90	285.59	287.09
24	288.90	288.33	287.87	283.41	283.99	288.07
25	287.68	289.32	288.28	282.25	284.13	287.38
26	287.38	289.32	288.28	282.62	284.33	288.43
27	287.79	289.23	286.50	283.40	284.48	288.49
28	288.32	288.73	285.50	283.93	285.23	287.29
29	288.54	287.73	286.05	284.05	284.81	288.26
30	289.48		286.48	284.03	283.87	289.46
31	289.49		287.88		282.02	

Lowest daily water level, from recorder charts

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	289.62	293.00	296.60	295.24	291.68	293.78
2	289.88	291.43	297.08	293.37	292.86	294.33
3	289.22	292.00	297.08	292.65	293.42	294.68
4	288.43	292.00	297.12	292.52	293.85	294.68
5	287.31	292.27	296.63	293.36	293.90	293.83
6	.....	292.27	294.80	293.72	293.60	292.72
7	.....	292.01	294.40	293.55	290.78	293.12
8	.....	292.01	295.20	293.74	291.77	294.29
9	.....	291.32	295.21	292.85	292.69	294.90

Wk 14--Continued.

Lowest daily water level, from recorder charts

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
10	.....	291.93	294.93	292.36	293.87	295.31
11	.....	292.47	294.86	292.04	294.21	295.29
12	.....	292.57	292.93	.....	294.11	294.15
13	290.42	292.80	293.35	.....	293.64	293.39
14	291.02	292.95	294.15	.....	291.70	294.41
15	291.92	291.62	294.55	.....	291.64	294.60
16	292.62	290.76	295.35	.....	292.75	295.60
17	293.06	291.77	295.70	.....	293.76	295.90
18	293.05	292.30	295.10	.....	294.10	295.90
19	290.80	293.17	294.01	292.94	294.07	293.35
20	291.48	293.40	293.63	293.41	293.64	292.73
21	292.03	293.22	294.55	293.95	291.64	294.18
22	293.28	293.22	295.04	294.00	292.23	295.27
23	293.44	292.43	295.23	293.71	292.84	295.66
24	293.29	293.50	295.51	292.80	293.95	295.76
25	291.75	295.10	295.06	292.00	293.97	295.27
26	290.44	296.34	293.85	292.80	292.52	294.04
27	291.01	297.12	293.24	293.70	292.93	293.26
28	292.10	297.28	294.02	294.20	292.30	293.99
29	292.74	297.00	294.70	294.00	291.33	295.22
30	293.43	295.35	295.12	292.88	293.05	295.79
31	293.27	296.30		290.90		295.80

Wk 20. G. W. Aepler. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 6, T. 7 N., R. 17 E. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	28.69	Apr. 7	28.34	June 23	32.18	Sept. 22	29.87
Feb. 11	29.93	May 5	29.48	July 28	31.35	Oct. 20	30.87
Mar. 10	29.15	June 2	29.93	Aug. 25	32.36	Nov. 24	30.35

Wk 22. Mrs. Bartholomew. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 24, T. 5 N., R. 19 E. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	25.41	Apr. 14	24.43	July 6	25.55	Sept. 27	25.86
Feb. 18	25.73	May 12	23.90	Aug. 3	26.25	Oct. 26	25.82
Mar. 17	25.05	June 8	24.72	31	28.30	Nov. 30	25.91

Wk 29. Mr. Roese, Riviera Tavern. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 14, T. 7 N., R. 18 E. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	58.46	Apr. 7	60.04	June 23	70.50	Sept. 22	67.49
Feb. 11	59.26	May 5	63.84	July 28	69.60	Oct. 20	63.31
Mar. 10	59.59	June, 2	63.96	Aug. 25	75.20	Nov. 24	61.88

Wk 31. Fulton Farms. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 2, T. 5 N., R. 19 E. Water-stage recorder maintained on well since Aug. 4, 1948. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	132.92	Apr. 14	131.57	June 8	130.88	July 28	131.31
Feb. 18	133.07	May 12	131.27	July 6	131.07	Aug. 3	131.43
Mar. 17	132.48						

Lowest daily water level, from recorder charts

Day	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	131.87	132.14	132.43	132.65
2	.....	131.88	132.21	132.43	132.62
3	.....	131.85	132.26	132.38	132.57
4	131.50	131.85	132.23	132.27	132.57
5	131.51	131.86	132.14	132.24	132.48
6	131.49	131.83	132.11	132.37	132.55
7	131.47	131.86	132.07	132.49	132.57
8	131.47	131.87	132.09	132.50	132.68

Wk 31--Continued.

Lowest daily water level, from recorder charts

Day	Aug.	Sept.	Oct.	Nov.	Dec.
9	131.53	131.87	132.11	132.42	132.74
10	131.52	131.93	132.13	132.42	132.76
11	131.48	131.87	132.14	132.50	132.71
12	131.49	131.93	132.20	132.49	132.67
13	131.54	132.04	132.24	132.48	132.80
14	131.60	132.07	132.29	132.46	132.80
15	131.61	132.05	132.28	132.43	132.69
16	131.58	132.06	132.29	132.41	132.71
17	131.55	132.06	132.36	132.46	132.76
18	131.57	132.02	132.37	132.46	132.76
19	131.64	131.99	132.36	132.43	132.60
20	131.64	132.00	132.37	132.40	132.53
21	131.62	132.00	132.46	.....	132.67
22	131.66	132.03	132.46	.....	132.76
23	131.73	132.05	132.46	132.48	132.85
24	131.75	132.12	132.43	132.45	132.81
25	131.73	132.19	132.44	132.43	132.87
26	131.76	132.23	132.40	132.48	132.87
27	131.86	132.20	132.39	132.62	132.87
28	131.81	132.15	132.43	132.63	132.69
29	131.84	132.08	132.40	132.59	132.75
30	131.87	132.06	132.38	132.65	132.75
31	131.91		132.38		132.75

Wk 32. Western United Dairy Co. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 23, T. 5 N., R. 18 E.
Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	46.30	Apr. 14	45.56	July 6	45.25	Sept. 28	46.15
Feb. 18	46.56	May 12	45.99	Aug. 4	45.59	Oct. 26	46.43
Mar. 17	46.18	June 9	44.98	Sept. 1	46.12	Nov. 30	46.72

Wk 34. A. N. McGeoch Co. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 19, T. 5 N., R. 18 E. Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	35.68	Apr. 14	35.93	July 6	34.32	Sept. 28	35.73
Feb. 18	36.02	May 12	32.84	Aug. 4	36.74	Oct. 26	36.07
Mar. 17	34.35	June 9	34.32	Sept. 1	35.51	Nov. 30	36.56

Waushara County

Ws 1. University of Wisconsin Experiment Farm, Hancock. Measurements supplied through courtesy of University of Wisconsin Experiment Farm.
Records available: 1947-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 23	7.72	May 17	7.20	Aug. 2	7.77	Oct. 18	8.75
30	7.82	26	7.16	9	7.86	25	8.84
Feb. 9	7.91	June 2	7.16	16	7.95	Nov. 1	8.94
Mar. 2	7.89	7	7.13	24	8.06	8	9.03
20	5.02	14	7.22	30	8.15	15	9.10
Apr. 3	7.11	21	7.29	Sept. 7	8.23	29	9.26
9	7.17	28	7.35	13	8.32	Dec. 6	9.32
21	7.20	July 6	7.46	20	8.39	14	9.44
29	7.17	12	7.53	28	8.51	20	9.45
May 5	7.21	19	7.61	Oct. 5	8.59	29	9.58
14	7.19	26	7.66	11	8.65		

Winnebago County

W1 1. Oak Hill Cemetery. $SR\frac{1}{4}$ sec. 20, T. 20 N., R. 17 E. Records available: 1946-48.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	57.50	Mar. 31	55.92	June 30	56.09	Sept. 15	58.38
Feb. 4	60.17	Apr. 28	50.95	July 21	55.82	Oct. 13	64.67
Mar. 4	60.88	May 24	54.76	Aug. 12	54.96	Nov. 10	63.30

Wood County

Wd 29. Elmer Aschenbrenner. $NE\frac{1}{4}NE\frac{1}{4}$ sec. 2, T. 23 N., R. 4 E. Records available: 1944-48.

Jan. 12	6.45	Apr. 26	5.88	July 26	6.47	Oct. 18	12.09
20	6.86	May 4	6.03	Aug. 2	6.83	25	11.90
26	6.81	10	6.18	9	7.36	Nov. 2	11.87
Feb. 2	6.83	19	6.16	16	7.78	8	12.43
16	6.82	June 2	6.40	23	10.05	15	12.20
23	6.51	7	6.42	30	9.19	22	12.17
Mar. 1	6.48	14	6.63	Sept. 6	10.00	29	12.18
8	6.47	21	6.67	13	10.46	Dec. 6	12.12
15	6.45	July 5	6.73	20	10.10	13	12.39
Apr. 4	6.00	12	6.68	27	11.43	20	12.43
12	5.86	19	6.73	Oct. 11	12.00	27	12.46
20	5.90	22	6.71				

