

# Water Levels and Artesian Pressure in Observation Wells in the United States in 1947

## Part 1. Northeastern States

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

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GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1096

*Prepared in cooperation with the States of Connecticut, Delaware, Indiana, Maine, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, and Vermont, and other agencies*



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**UNITED STATES DEPARTMENT OF THE INTERIOR**

**Oscar L. Chapman, *Secretary***

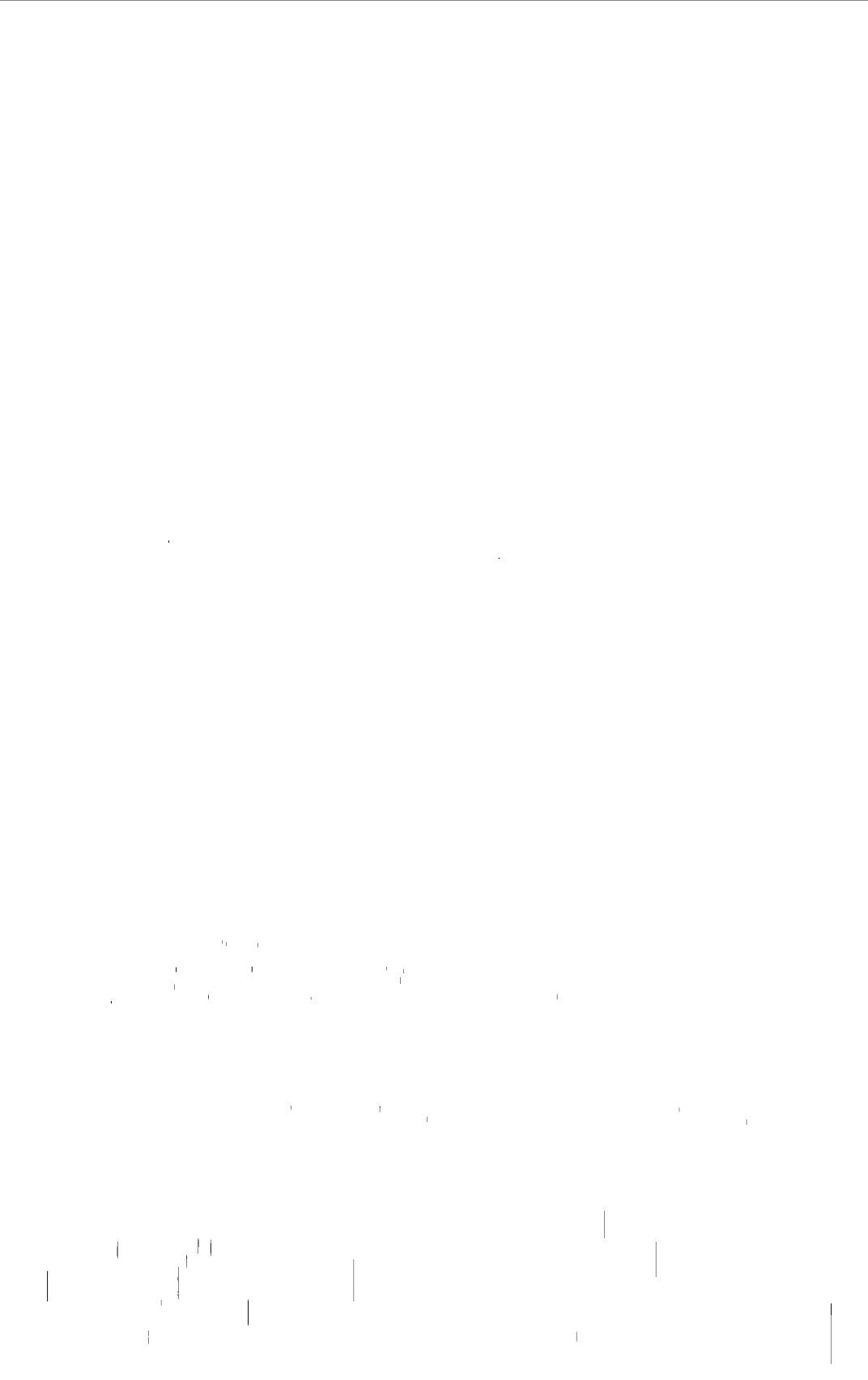
**GEOLOGICAL SURVEY**

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

## PREFACE

This report was prepared by the Geological Survey in cooperation with the States of Connecticut, Delaware, Indiana, Maine, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, and Vermont, 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 1947

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## Part 1. NORTHEASTERN STATES

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### INTRODUCTION

By A. N. Sayre and others

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

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

#### Annual publication of records by Geological Survey

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

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

Well	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

## Scope of present volume

The present volume covers the northeastern States and gives records of water level and artesian pressure in about 1,230 observation wells of the Geological Survey and cooperating agencies in Connecticut, Delaware, Indiana, Maine, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, and Vermont. Of these wells, 291 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 identifying description are given in this report. The numbers in parentheses immediately following a well number are those of the water-supply papers in which earlier records of that well are given and the pages on which they appear. An asterisk indicates that a description of the well is given in the paper whose number is so marked. This report includes about 41,055 individual determinations of water level and artesian pressure.

## Land-surface datum

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

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

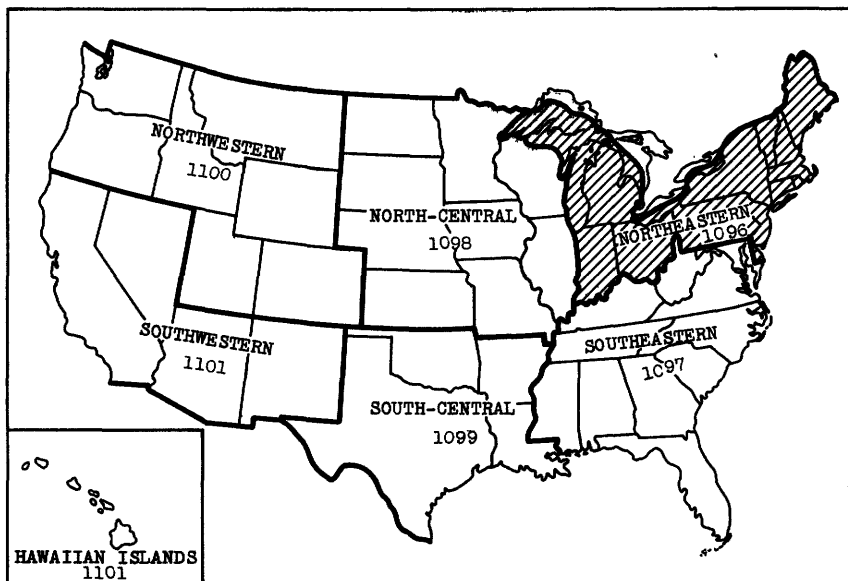


Figure 1.--Outline map of the United States showing sections of the country covered by the six water-supply papers on water levels and artesian pressure in observation wells in 1947. The shaded section represents the part of the country covered by this volume.

following which are given in feet above or below mean sea level: New Haven County, Conn., New Jersey (both land-surface datum and mean sea level), and Long Island, New York. If the water levels or artesian heads are referred to land-surface datum for the first time, a conversion factor is given in the descriptive matter preceding them in order to facilitate comparison of the older and newer records. Wherever the conversion factor is given in earlier reports it is not repeated in this report. New data as to the positions of the measuring point and of the bench marks, in feet above or below land-surface datum planes, will be published in succeeding annual reports.

### Network of key observation wells

During 1942 the Geological Survey established a network of key observation wells in order to make available current information on general ground-water conditions over the country. These wells were selected because the fluctuations of water level in them are believed to be typical and they represent the general fluctuations that occur in the parts of the country in which the wells are situated. At the end of 1947 the network included about 160 wells in 45 States. About 40 of the wells were established expressly for the network in 1942 and about 20 were established in 1943; the other 100 were selected from wells measured regularly in connection with cooperative ground-water investigations. The coverage of the country is still far from adequate, and it is expected that some wells not now included will be added to the network from time to time.

### Changes in ground-water level in 1947 in the northeastern part of the United States

The average precipitation in 7 of the 13 States in the northeastern section of the country was below normal, but it was normal or above in the other 6 States. The fluctuations of both water level and artesian pressure in wells depend, however, on many factors besides the amount of precipitation. In certain of the observation wells there are fluctuations caused by differences in the rate of pumping or artesian flow from other wells in the area, but most of the observation wells are not noticeably affected by pumping or artesian flow. A summary of the changes in ground-water level is given in the chapter for each State.

### Acknowledgments

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

# CONNECTICUT

By R. V. Cushman

## PROGRAM OF WORK

The investigation of ground-water conditions in Connecticut was continued during 1947 in cooperation with the Connecticut State Water Commission. The main purpose of the investigation is the systematic collection of detailed information as to the occurrence and availability of the ground-water resources of Connecticut. As a part of this program, periodic measurements of water level are made in a number of observation wells, scattered throughout the State, to reveal the seasonal fluctuation and the general trend of ground-water levels. During 1947, observations were continued at monthly intervals in 40 wells, and at more frequent intervals in 2 other wells. Of the total, measurements of water level were made in 13 wells in and adjacent to heavily pumped areas in New Haven, in 11 wells in Waterbury, and in a network of 18 wells scattered elsewhere throughout the State. In all, approximately 600 individual measurements were obtained. The locations of wells included in the program in 1947 are shown on figure 2, an index map of Connecticut. The locations of the wells in New Haven are shown on a map of that city published on page 7 of Water-Supply Paper 986. Well locations in Waterbury are shown on the map on page 9 of Water-Supply Paper 1016.

In addition to the water-level observations, samples of water were collected at the beginning of the year from 23 ground-water pumping plants in New Haven for determination of chloride content (salinity) in order to show the trend of salt-water encroachment. In Waterbury, bimonthly samples of ground water were collected from five pumping plants for determination of sulfate content, resulting from in-flow of contaminated water from the Naugatuck River.

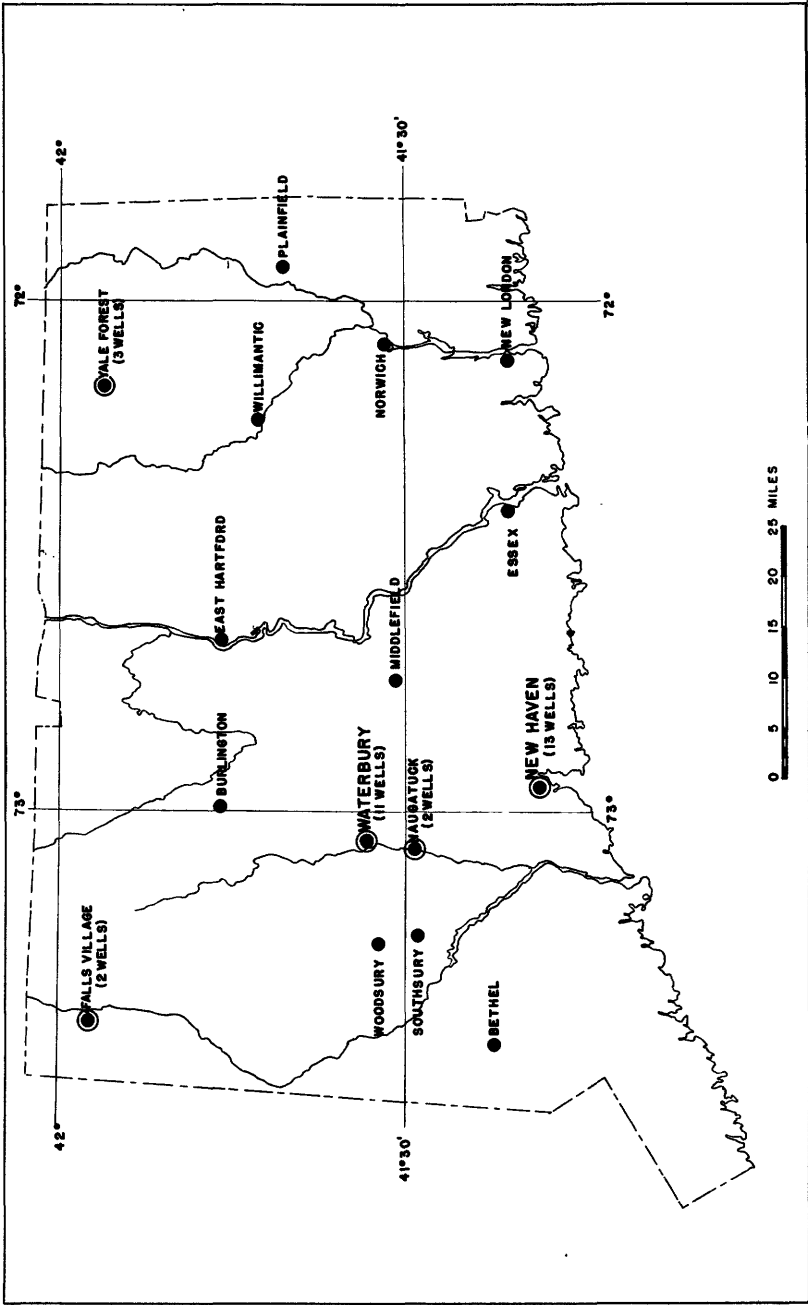


Figure 2.--Map of Connecticut showing location of observation wells, 1947.



## PRECIPITATION

The average annual precipitation for Connecticut for 1947, as recorded at 20 stations of the United States Weather Bureau, was 43.92 inches, or 2.4 inches below the average for the period of record. Precipitation for the year was below normal at most stations. The first 3 months of 1947 were exceedingly mild with precipitation below normal over most of the State. Precipitation was above normal in April, May, June, and July but was followed by an extended dry period which lasted through October and reached near-drought conditions, producing a great fire hazard in woodland areas. Excessive precipitation in November took the form of two severe storms which lashed the coastal areas with gales, high tides and heavy surf. December produced the outstanding weather event of the year with a near-record snowfall, ranging from 12.6 to 36.5 inches, occurring over most of the State at the close of the month. Snow cover was greatest in the northwestern portion of the State and was heavy along the southwestern coastal areas, becoming less deep in an easterly direction.

## FLUCTUATIONS OF WATER LEVEL

Water levels in observation wells in Connecticut were slightly below normal by the beginning of 1947. Below-normal precipitation during the first 3 months of the year caused a further decline in water levels and thereby delayed the beginning of the normal seasonal rise from the middle of December 1946 to the middle of February 1947. Increased rainfall, beginning in April, together with the addition of large amounts of melt water from the heavy snow cover caused water levels to rise rapidly, the highest levels for the year generally being recorded at the end of April and May. The period June through October saw a gradual lowering of the water table throughout the State, largely due to the deficiency in precipitation. Low stages for the year were recorded at the end of the dry spell in October. Declines were checked by above-normal precipitation in November and water levels in most wells continued to rise for the remainder of 1947, reaching about the normal stage by the end of the year.

The following tables summarize the data pertaining to ground-water levels in observation wells in Connecticut. To permit a more convenient means of presentation and analysis, data for the wells in New Haven are summarized separately.

## Summary of data on water levels in observation wells in Connecticut

Summary of data on water levels in observation wells in Connecticut						
Well	First measured	Lowest observed water level, in feet below land-surface datum		Highest observed water level, in feet below land-surface datum		Water level, in feet below land-surface datum on last date of record
		Water level	Date	Water level	Date	
<u>Fairfield County</u>						
Be 1	July 18, 1946	22.64	Oct. 24, 1947	19.35	Apr. 1, 1947	19.40
<u>Hartford County</u>						
Bu 2	Apr. 13, 1946	33.00	Nov. 6, 1947	16.50	June 23, 1946	21.30
EHd 21	Nov. 22, 1934	18.57	Oct. 27, 1947	14.10	June 24, 1947	17.22
<u>Litchfield County</u>						
FV 4	Sept. 11, 1946	14.04	Oct. 24, 1947	1.77	May 6, 1947	5.27
FV 5	Sept. 11, 1946	24.63	Oct. 24, 1947	13.73	May 6, 1947	16.43
W 1	Oct. 4, 1913	33.5	Oct. 10, 1914	21.12	May 17, 1945	28.79
<u>Middlesex County</u>						
E 1	July 16, 1946	2.89	Oct. 27, 1947	.57	May 27, 1947	1.28
M 1	July 17, 1946	11.28	Dec. 23, 1946	5.50	Nov. 28, 1947	6.00
<u>New Haven County</u>						
N 10a/	Jan. 10, 1946	16.45	Oct. 24, 1947	4.15	June 6, 1947	7.89
N 11s/	Jan. 10, 1946	16.64	Oct. 24, 1947	4.25	June 6, 1946	7.80
S 1	Oct. 4, 1913	21.70	Oct. 14, 1916	13.17	June 6, 1946	15.14
Wb 1	Apr. 29, 1943	10.99	Sept. 11, 1944	7.90	May 29, 1943	9.02
Wb 16a/	Feb. 2, 1944	17.80	Feb. 27, 1947	9.58	Jan. 3, 1945	13.64
Wb 25	Feb. 3, 1944	8.62	Aug. 29, 1944	4.27	June 6, 1946	5.47
Wb 70	Feb. 2, 1944	18.87	Oct. 24, 1947	13.08	Apr. 26, 1944	b 18.87
Wb 93	Feb. 18, 1944	28.39	Aug. 29, 1944	25.38	Mar. 4, 1945	26.57
Wb 119	Feb. 18, 1944	12.34	Aug. 29, 1944	2.93	Nov. 30, 1944	5.21
Wb 176	Feb. 18, 1944	14.48	Aug. 29, 1944	3.14	May 4, 1945	6.52
Wb 198	Feb. 18, 1944	18.25	Aug. 29, 1944	5.49	Jan. 10, 1946	13.38
Wb 236	Feb. 18, 1944	8.29	Oct. 24, 1947	2.27	Nov. 30, 1944	5.07
Wb 336a/	June 20, 1944	20.40	Aug. 29, 1944	11.14	May 1, 1947	14.87
Wb 340a/	Aug. 8, 1944	24.87	Sept. 27, 1945	15.83	May 19, 1945	20.90
<u>New London County</u>						
NL 2	July 1, 1937	17.99	Aug. 16, 1937	13.26	Nov. 28, 1947	13.26
NWH 4	July 16, 1946	12.44	Oct. 27, 1947	5.17	Mar. 26, 1947	12.44
<u>Tolland County</u>						
A 1	July 18, 1946	14.12	Oct. 27, 1947	5.49	May 2, 1947	7.47
U 1	July 18, 1946	3.02	Oct. 27, 1947	1.84	May 2, 1947	c 2.17
U 3	July 18, 1946	23.77	Oct. 27, 1947	16.86	May 2, 1947	22.45
<u>Windham County</u>						
P 1	Oct. 1, 1942	31.72	Feb. 3, 1944	28.79 <sup>a</sup>	Jan. 4, 1943	31.04
Wil 1	July 17, 1946	8.90	Oct. 27, 1947	7.31	May 2, 1947	8.90

a Nearby wells pumping.

b Measurements discontinued Oct. 24, 1947.

c Measurements discontinued Nov. 28, 1947.

Summary of data on water levels in observation wells in New Haven, Conn.  
(Measurements refer to mean sea level)

(measurements refer to mean sea level)						
Well	First measured	Lowest observed water level		Highest observed water level		Water level at end of year (feet)
		Feet	Date	Feet	Date	
<u>Residential area</u>						
NHn 170	June 23, 1939	+15.64	Jan. 14, 1942	+18.41	June 23, 1939	+16.79
NHn 175	June 23, 1939	+2.27	Dec. 17, 1941	+4.51	June 23, 1939	+3.16
NHn 183	Dec. 13, 1939	+2.67	Dec. 3, 1941	+5.88	June 12, 1940	+3.91
NHn 270	May 21, 1941	+3.78	Dec. 17, 1941	+5.94	Apr. 28, 1943	+5.11
<u>Air-conditioning area</u>						
NHn 250	Oct. 9, 1940	+ .67	Sept. 25, 1947	+4.79	Oct. 9, 1940	+1.95
<u>Cold-storage area</u>						
NHn 108	May 12, 1939	-3.40	Aug. 26, 1946	+1.26	May 8, 1940	-.89
NHn 110	May 12, 1939	-2.20	Oct. 27, 1944	+ .51	May 12, 1939	-1.83
<u>Industrial area</u>						
NHn 131	June 1, 1939	-5.65	May 26, 1944	-2.06	Feb. 19, 1941	-3.51
NHn 138	Feb. 28, 1940	-5.70	June 23, 1944	-1.83	Jan. 2, 1941	-2.63
NHn 160	June 7, 1939	-19.59	Nov. 1, 1945	+4.15	Mar. 6, 1940	+ .97
NHn 178	July 21, 1939	-6.98	Oct. 28, 1947	+ .04	June 12, 1940	-6.48
NHn 179	July 21, 1939	-6.55	Aug. 28, 1945	-.17	July 17, 1940	-5.79
NHn 235	Oct. 2, 1940	-3.59	Feb. 1, 1945	+ .15	Mar. 30, 1943	-.59

a Measurements discontinued Nov. 26, 1947.

The summary tables show that of the 42 wells for which records of water level are available, the highest observed water levels for the period of record occurred during 1947 in 13 wells, also, the lowest observed water levels for the period of record occurred in October and November 1947 in 15 wells. Some of the wells, indicated by footnotes, are in areas of large withdrawals and are affected by pumping from nearby wells. It is to be noted, however, that the period of record at 13 out of the 42 wells is less than 2 years in length. For the wells in New Haven, which have a period of record of at least 5 years, the lowest water levels on record in the Residential area, where pumping is at a minimum, occurred during the winter of 1941-42. The water level in two wells in New Haven, wells NHn 178 and NHn 250, reached its lowest observed stage during 1947. Both of these wells are near large pumping plants. Water levels in 7 of the 11 wells in Waterbury reached their lowest observed stages during August and September 1944. The effects of pumping in the Air-conditioning, Cold-storage, and Industrial areas of New Haven are shown by the relatively greater range of fluctuations of the water levels in these areas.

The relatively greater annual fluctuations of water level in some wells, notably those in Litchfield and Tolland Counties, and many in Waterbury, is due to the fact that they penetrate glacial till which is less permeable than the stratified drift which supplies wells in such areas as New Haven and Plainfield.

The net changes in water level during 1947 in observation wells are given in the following tables. The net change is the difference in the water level obtained by comparing measurements nearest to December 31, 1946, and December 31, 1947. The tables show that, despite below-normal precipitation, water levels in all but six wells in Connecticut showed a net rise for the year. It is to be noted that the water levels in four of the six wells are affected by nearby pumpage. A net rise in water level in most wells, in direct contrast to below-normal precipitation for 1947, can best be explained by the fact that normal seasonal recharge was generally delayed until February 1947 and, thus, water levels were considerably below normal at the beginning of the year. Water levels were about average at the end of 1947. Thus, the combined result of these factors would account for a net average rise in water levels during 1947.

Net change, in feet, in water levels in observation wells  
in Connecticut during 1947

Well	Net rise (+) or net decline (-)	Well	Net rise (+) or net decline (-)
<u>Fairfield County</u>		<u>New Haven County--Continued</u>	
Be 1	+2.35	Wb 25	+0.12
<u>Hartford County</u>		Wb 70	(b)
Bu 2	+6.20	Wb 93	+ .82
EHD 21	+ .95	Wb 119	+ .79
<u>Litchfield County</u>		Wb 176	+3.66
FV 4	+2.95	Wb 198	+3.52
FV 5	+3.02	Wb 236	+1.64
W 1	+ .19	Wb 336 <sup>a</sup> /	+1.62
<u>Middlesex County</u>		Wb 340 <sup>a</sup> /	+ .86
E 1	-.50	<u>New London County</u>	
M 1	+5.28	NL 2	+2.99
<u>New Haven County</u>		NWH 4	.....
N 10 <sup>a</sup> /	-1.81	<u>Tolland County</u>	
N 11 <sup>a</sup> /	-1.70	A 1	+4.88
S 1	-.42	U 1	(c)
Wb 1	+1.06	U 3	+ .96
Wb 16 <sup>a</sup> /	+1.92	<u>Windham County</u>	
		P 1	+ .23
		Wil 1	....

a Nearby wells pumping.

b Measurements discontinued Oct. 24, 1947.

c Measurements discontinued Nov. 28, 1947.

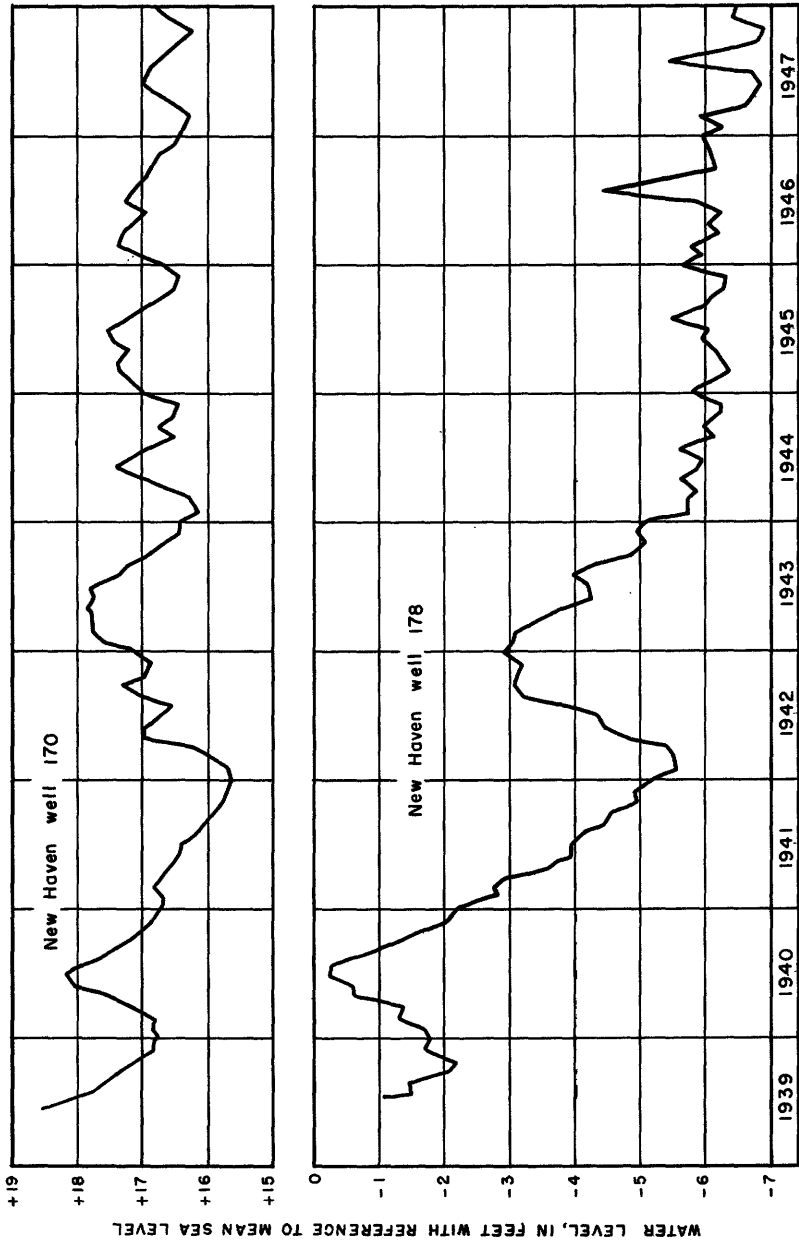


Figure 3.--Graph showing the fluctuations of water levels in two wells in New Haven, Conn.

Net change, in feet, in water levels in observation wells  
in New Haven, Conn., during 1947

Area	Well	Net rise (+) or net decline (-)
Residential	NHn 170	+0.37
	NHn 175	+0.22
	NHn 183	+0.71
	NHn 270	+0.38
	NHn 250	+0.87
Air-conditioning	NHn 108	+0.83
Cold-storage	NHn 110	+0.03
	NHn 131	+0.80
Industrial	NHn 138	+1.14
	NHn 160	-0.34
	NHn 178	-0.51
	NHn 179	(a)
	NHn 235	+0.80

a Measurements discontinued Nov. 26, 1947.

The general relation between the fluctuation of water levels in Connecticut during 1947 to trends in other years, is shown in figure 3, a graph of the water-level measurements for well NHn 170, which is in the Residential area in New Haven. The water level in this well is not greatly affected by pumping from other wells. It may be seen that the water level during the past nine years has shown a slight downward trend, probably due to a net decrease in precipitation. It is also to be noted that the beginning of a seasonal recharge in 1947 was delayed until February, whereas the recharge period is normally begun about the beginning of the year. By way of comparison, figure 3 also shows a graph of the water level for a well (NHn 178) in a heavily pumped area in New Haven. The continued downward trend of the water level in this well indicates that pumpage in the Industrial area continues to exceed the local safe yield.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Fairfield County

Be 1 (\*1071, p. 11). Fred Andrews, 248 Greenwood Ave., Bethel. Cased in Pleistocene stratified drift on slope.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	21.01	May 6	19.45	Aug. 1	21.62	Oct. 24	22.64
Feb. 28	20.65	29	19.70	30	21.92	Dec. 2	19.40
Apr. 1	19.35	June 25	20.47	Oct. 7	22.41		

Hartford County

Bu 2 (\*1071, p. 11). E. E. Edman, State Route 116. About 1,000 feet west of Burlington Center, Burlington. Cased in Pleistocene till on slope.

Water level, in feet below land-surface datum, 1947

May 6	16.66	June 27	17.70	Sept. 2	22.60	Oct. 23	28.60
19	16.50	July 2	18.00	9	23.00	Nov. 6	33.00
29	16.57	19	19.50	17	23.50	12	32.40
June 2	16.80	31	20.00	23	25.00	16	32.50
8	17.10	Aug. 14	20.50	29	26.00	23	29.90
25	17.72	23	21.40	Oct. 6	27.00	Dec. 21	21.30

EHd 21 (\*1071, p. 11). Burnside Ice Co., 790 Tolland St., East Hartford. Cased in Pleistocene stratified drift in valley. Measurements from Nov. 22, 1934, to Dec. 21, 1937, by Connecticut Ground-Water Survey and published on pp. 48-49 (well EH-93) in Bull. GW-6 of that Survey. Measurements from July 18, 1946, by U. S. Geological Survey using same measuring point as used during earlier period.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	17.78	May 27	16.87	July 30	17.50	Oct. 27	18.57
Mar. 31	17.42	June 24	14.10	Sept. 28	18.00	Nov. 28	17.22
May 2	16.90						

Litchfield County

FV 4. Kellog. In Falls Village, on northwest slope of Beebe Hill, about 0.5 mile southeast of Falls Village and 300 feet southeast of U. S. Highway 7, about 30 feet east of well FV 5. Cased in Pleistocene till on slope.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	4.49	May 29	2.84	Aug. 30	8.99	Oct. 24	14.04
Apr. 1	2.40	June 25	4.21	Sept. 26	12.05	Dec. 3	5.27
May 6	1.77	Aug. 1	6.53				

FV 5. Kellog. In Falls Village, on northwest slope of Beebe Hill, about 0.5 mile southeast of Falls Village and 300 feet southeast of U. S. Highway 7, about 30 feet west of well FV 4. Drilled well in Stockbridge limestone.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	17.20	May 6	13.73	Aug. 1	18.79	Oct. 24	24.63
Feb. 28	16.52	June 29	14.62	30	21.54	Dec. 3	16.43
Apr. 1	15.30	June 25	15.79	Sept. 26	23.39		

W1 (\*1016, p. 13; 1023, p. 12; 1071, p. 12). James Crowfoot, Woodbury.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	28.62	May 1	21.60	July 31	26.16	Oct. 25	29.34
Feb. 27	26.20	June 28	22.13	Aug. 30	28.96	Dec. 2	28.79
Mar. 28	22.76	June 27	23.48	Sept. 26	29.32		

Middlesex County

E1 (\*1071, p. 12). John Giza, 53 Warsaw St. About 100 feet west of State Route 80 and 0.5 mile north of Ivoryton. Cased in Pleistocene till in valley.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	0.65	May 2	0.58	June 24	1.00	Oct. 27	2.89
Feb. 26	.80	27	.57	July 30	1.20	Nov. 28	1.28
Mar. 31	.65						

M1 (\*1071, p. 12). Lyman Gunsight Corporation, Middlefield. Cased in Pleistocene till on slope.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	6.20	May 2	6.10	July 30	9.00	Nov. 28	5.50
Feb. 28	7.58	27	6.40	Sept. 28	9.96	Dec. 29	6.00
Mar. 26	5.90	June 25	7.63	Oct. 27	10.82		

New Haven County

N 10 (\*1071, p. 12). Naugatuck Water Co., Beacon Valley Road, Naugatuck. One of group of 8 test wells of Naugatuck public ground-water supply in valley of Beacon Hill Brook about 2 miles above junction with Naugatuck River, about 200 feet southeast of pumping station.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	5.65	May 1	4.80	July 31	14.38	Oct. 24	16.45
Feb. 27	5.84	28	5.03	Aug. 26	15.63	Dec. 2	7.89
Mar. 28	5.13	June 27	12.63	Sept. 30	16.14		

N11 (\*1071, p. 13). Naugatuck Water Co., Beacon Valley Road, Naugatuck. One of group of 8 test wells at site of Naugatuck public ground-water supply in valley of Beacon Hill Brook about 2 miles above junction with Naugatuck River, about 200 feet west of pumping station.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	5.69	May 1	4.70	July 31	14.62	Oct. 24	16.64
Feb. 27	5.86	28	5.00	Aug. 26	15.92	Dec. 2	7.80
Mar. 28	5.20	June 27	13.00	Sept. 30	16.42		

NHn 108 (\*886, p. 58; 906, p. 8; 936, p. 11; 944, p. 12; 986, p. 13; 1016, p. 14; 1023, p. 12; 1071, p. 13). Whiting Realty Co. About 100 feet south of Whiting Street and about 100 feet west of State Street, New Haven.

Water level, in feet below mean sea level, 1947

Jan. 27	1.58	Apr. 29	1.32	July 29	1.89	Oct. 28	1.84
Feb. 25	1.49	May 26	1.22	Aug. 26	1.93	Nov. 26	.92
Mar. 27	1.53	June 26	1.44	Oct. 3	2.01	Dec. 29	.89

NHn 110 (\*886, p. 58; 906, p. 8; 936, p. 12; 944, p. 12; 986, p. 13; 1016, p. 14; 1023, p. 12; 1071, p. 13). Federal Packing Co. On east side of State Street at Whiting Street, New Haven.

Water level, in feet below mean sea level, 1947

Jan. 27	1.88	Apr. 29	1.83	July 29	1.84	Oct. 28	1.89
Feb. 25	1.85	May 26	1.82	Aug. 26	1.85	Nov. 26	1.83
Mar. 27	1.84	June 26	1.84	Sept. 25	1.88	Dec. 29	1.83

NHn 131 (\*886, p. 59; 906, p. 9; 936, p. 13; 944, p. 13; 986, p. 14; 1016, p. 14; 1023, p. 13; 1071, p. 13). New Haven Clock Co. On west side of Wallace Street, about 120 feet north of St. John Street, New Haven.

Water level, in feet below mean sea level, 1947

Jan. 27	4.41	Apr. 29	3.89	July 29	2.58	Oct. 28	3.67
Feb. 25	4.34	May 26	3.71	Aug. 26	3.08	Nov. 26	3.41
Mar. 27	4.24	June 26	3.69	Oct. 3	3.54	Dec. 29	3.51

NHn 138 (\*906, p. 9; 936, p. 14; 944, p. 14; 986, p. 14; 1016, p. 15; 1023, p. 13; 1071, p. 13). Associated Realty Co. On south side of Greene Street, about 130 feet west of East Street, New Haven.

Water level, in feet below mean sea level, 1947

Jan. 27	4.07	Apr. 29	3.30	July 29	1.99	Oct. 28	3.02
Feb. 25	3.77	May 26	3.13	Aug. 26	2.26	Nov. 26	2.60
Mar. 27	3.65	June 26	3.13	Sept. 25	2.74	Dec. 29	2.63

NHn 160 (\*886, p. 61; 906, p. 11; 936, p. 15; 944, p. 15; 986, p. 15; 1016, p. 15; 1023, p. 13; 1071, p. 13). National Folding Box Co. About 25 feet south of Alton Street and about 315 feet west of James Street, New Haven.

Water level, in feet above mean sea level, 1947

Jan. 27	1.69	Apr. 29	2.09	July 29	2.64	Oct. 28	1.03
Feb. 25	1.66	May 26	2.45	Aug. 26	1.84	Nov. 26	.97
Mar. 27	1.84	June 26	2.66	Sept. 25	1.37		

NHn 170 (\*886, p. 61; 906, p. 11; 936, p. 15; 944, p. 15; 986, p. 16; 1016, p. 17; 1023, p. 14; 1071, p. 14). Yale University. About 100 feet southwest of Grove Street and about 200 feet northwest of College Street, New Haven.

Water level, in feet above mean sea level, 1947

Jan. 27	16.32	Apr. 29	16.79	July 29	16.79	Oct. 28	16.19
Feb. 25	16.27	May 26	17.00	Aug. 26	16.61	Nov. 26	16.52
Mar. 27	16.49	June 26	16.95	Sept. 25	16.42	Dec. 29	16.79

NHn 175 (\*886, p. 62; 906, p. 12; 936, p. 16; 944, p. 15; 986, p. 16; 1016, p. 16; 1023, p. 14; 1071, p. 14). Monarch Laundry. About 200 feet north of Derby Avenue and about 70 feet west of Ellsworth Street, New Haven.



## NHn 175--Continued.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	2.84	Apr. 29	3.09	July 29	3.24	Oct. 28	2.88
Feb. 25	2.81	May 26	3.19	Aug. 26	3.19	Nov. 26	3.01
Mar. 27	2.86	June 26	3.26	Sept. 25	3.05	Dec. 29	3.16

NHn 178 (\*886, p. 63; 906, p. 12; 936, p. 16; 944, p. 16; 986, p. 16; 1016, p. 16; 1023, p. 14; 1071, p. 14). Connecticut Co. About 40 feet south of Grand Avenue and about 200 feet west of Haven Street, New Haven.

## Water level, in feet below mean sea level, 1947

Jan. 27	6.27	Apr. 29	6.74	July 29	5.39	Oct. 28	6.98
Feb. 25	5.94	May 26	6.89	Aug. 26	6.31	Nov. 26	6.44
Mar. 27	6.62	June 26	6.74	Sept. 25	6.86	Dec. 29	6.48

NHn 179 (\*886, p. 63; 906, p. 13; 936, p. 16; 944, p. 16; 986, p. 16; 1016, p. 16; 1023, p. 15; 1071, p. 14). Connecticut Co. About 40 feet south of Grand Avenue and about 220 feet west of Haven Street, New Haven. Measurements discontinued after Nov. 26.

## Water level, in feet below mean sea level, 1947

Jan. 27	5.90	May 26	6.33	Aug. 26	5.68	Oct. 28	6.36
Mar. 27	6.18	June 26	6.15	Sept. 25	6.19	Nov. 26	5.79
Apr. 29	6.20	July 29	4.97				

NHn 183 (\*906, p. 13; 936, p. 17; 944, p. 16; 986, p. 16; 1016, p. 16; 1023, p. 15; 1071, p. 14). Frank X. Hald Storage Co. On south side of Davenport Avenue, about 500 feet west of West Street, New Haven.

## Water level, in feet above mean sea level, 1947

Jan. 27	3.27	Apr. 29	3.77	July 29	3.43	Oct. 28	3.02
Feb. 25	3.10	May 26	3.79	Aug. 26	3.27	Nov. 26	3.75
Mar. 27	3.42	June 26	3.64	Sept. 25	3.09	Dec. 29	3.91

NHn 235 (\*906, p. 14; 936, p. 17; 944, p. 16; 986, p. 17; 1016, p. 16; 1023, p. 15; 1071, p. 14). C. Cowles & Co. About 100 feet north of Water Street and about 70 feet west of Chestnut Street, New Haven.

## Water level, in feet below mean sea level, 1947

Jan. 27	1.36	Apr. 29	1.10	July 29	0.80	Oct. 28	1.20
Feb. 25	1.50	May 26	1.04	Aug. 26	.83	Nov. 26	.53
Mar. 27	1.33	June 26	.88	Sept. 25	.99	Dec. 29	.59

NHn 250 (\*906, p. 15; 936, p. 18; 944, p. 17; 986, p. 17; 1016, p. 17; 1023, p. 16; 1071, p. 14). I. Newman & Sons. On north side of Oak Street, about 180 feet east of Factory Street, New Haven.

## Water level, in feet above mean sea level, 1947

Jan. 27	0.93	Apr. 29	1.56	July 29	1.42	Oct. 28	1.37
Feb. 25	.77	May 26	2.25	Aug. 26	.93	Nov. 26	1.97
Mar. 27	.97	June 26	2.16	Sept. 25	.67	Dec. 29	1.95

NHn 270 (\*936, p. 19; 944, p. 18; 986, p. 17; 1016, p. 17; 1023, p. 16; 1071, p. 15). Carl E. Altmann. On east side of Auburn Street, about 190 feet south of Legion Avenue, New Haven.

## Water level, in feet above mean sea level, 1947

Jan. 27	4.55	Apr. 29	4.96	July 29	5.20	Oct. 28	4.58
Feb. 25	4.49	May 26	5.10	Aug. 26	5.02	Nov. 26	5.08
Mar. 27	4.63	June 26	5.21	Sept. 25	4.82	Dec. 29	5.11

S 1 (\*1016, p. 17; 1023, p. 16; 1071, p. 15). James Fleming, Southbury.

## Water level, in feet below land-surface datum, 1947

Jan. 29	14.70	May 1	14.39	July 31	15.45	Oct. 25	16.51
Feb. 27	14.92	28	14.45	Aug. 30	16.10	Dec. 2	15.14
Mar. 28	14.45	June 27	14.83	Oct. 7	16.36		

Wb 1 (\*1016, p. 17; 1023, p. 16; 1071, p. 15). Waterbury Ash Removal Co. Thomaston Avenue, Waterbury.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	10.32	June 11	9.59	Sept. 22	10.82	Nov. 15	9.22
27	9.59	July 17	10.28	Oct. 1	10.89	22	9.80
May 1	9.45	26	9.89	7	10.90	29	9.90
7	9.14	Aug. 15	10.59	15	10.94	Dec. 6	10.18
17	9.61	28	10.71	22	10.94	15	10.24
26	9.46	Sept. 5	10.60	29	10.97	22	9.02
31	9.50	15	10.80	Nov. 4	10.82		

Wb 16 (\*1016, p. 18; 1023, p. 17; 1071, p. 15). Chase Brass Co., Thomaston Avenue, Waterville.

Water level, in feet below land-surface datum, 1947

Feb. 27	17.80	May 28	15.62	Aug. 26	16.85	Oct. 24	12.31
Mar. 28	16.82	June 27	16.58	Sept. 30	13.63	Dec. 2	13.64
May 1	16.35	July 31	16.32				

Wb 25 (\*1016, p. 19; 1023, p. 17; 1071, p. 15). U. S. Time Corporation on northwest corner of Cherry Street and Cherry Avenue, Waterbury.

Water level, in feet below land-surface datum, 1947

Jan. 29	5.36	May 1	4.98	July 31	5.28	Oct. 24	6.39
Feb. 27	5.65	28	5.04	Aug. 26	5.98	Dec. 2	5.47
Mar. 28	5.00	June 27	5.21	Sept. 30	6.08		

Wb 70 (\*1016, p. 19; 1023, p. 17; 1071, p. 15). City of Waterbury. On Thomaston Avenue, Waterbury. Measurements discontinued after Oct. 24.

Water level, in feet below land-surface datum, 1947

Jan. 29	17.45	May 1	17.36	July 31	17.95	Sept. 30	18.75
Feb. 27	17.95	28	17.18	Aug. 26	18.57	Oct. 24	18.87
Mar. 28	16.90	June 27	17.68				

Wb 93 (\*1016, p. 19; 1023, p. 17; 1071, p. 15). Mrs. William Nichols, Sr., 118 Pearl Lake Road, Waterbury.

Water level, in feet below land-surface datum, 1947

Jan. 29	27.09	May 1	26.83	July 31	27.40	Oct. 24	27.89
Feb. 27	27.05	28	26.80	Aug. 26	27.67	Dec. 2	26.57
Mar. 28	26.45	June 27	27.30	Sept. 30	27.66		

Wb 119 (\*1016, p. 20; 1023, p. 17; 1071, p. 16). James O'Connor, 947 Pearl Lake Road, Waterbury.

Water level, in feet below land-surface datum, 1947

Jan. 29	5.20	May 1	4.08	July 31	5.90	Sept. 30	8.92
Feb. 27	5.86	28	5.08	Aug. 26	8.03	Dec. 2	5.21
Mar. 28	5.03	June 27	4.73				

Wb 176 (\*1016, p. 20; 1023, p. 18; 1071, p. 16). Mrs. Frank Bergin, 535 Scott Road, Waterbury.

Water level, in feet below land-surface datum, 1947

Jan. 29	8.45	May 1	6.50	July 31	9.35	Oct. 24	13.15
Feb. 27	8.30	28	7.42	Aug. 26	10.81	Dec. 2	6.52
Mar. 28	5.98	June 27	8.34	Sept. 30	11.95		

Wb 198 (\*1016, p. 21; 1023, p. 18; 1071, p. 16). E. L. Bronson, Pierpont Road, Waterbury.

Water level, in feet below land-surface datum, 1947

Jan. 29	16.15	May 1	12.00	July 31	13.53	Oct. 24	16.62
Feb. 27	14.85	28	11.86	Aug. 26	14.14	Dec. 2	13.38
Mar. 28	11.92	June 27	12.90	Sept. 30	15.25		

Wb 236 (\*1016, p. 21; 1023, p. 18; 1071, p. 16). C. W. Faber, 864 Woodtick Road, Waterbury.

Water level, in feet below land-surface datum, 1947

Jan. 29	4.66	May 1	2.86	July 31	5.22	Oct. 24	8.29
Feb. 27	3.60	28	3.62	Sept. 30	4.67	Dec. 2	5.07
Mar. 28	3.33	June 27	3.80				

Wb 336 (\*1016, p. 22; 1023, p. 19; 1071, p. 16). The Bristol Co., Platts Mills Road, Waterbury.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	14.22	May 1	11.14	July 31	13.45	Oct. 24	16.97
Feb. 27	13.12	28	11.58	Aug. 26	14.56	Dec. 2	14.87
Mar. 28	11.24	June 27	12.70	Sept. 30	15.55		

Wb 340 (\*1016, p. 22; 1023, p. 19; 1071, p. 16). Connecticut Light & Power Co., Eagle Street, Waterbury.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	21.30	May 1	19.43	Aug. 26	21.96	Oct. 24	20.13
Feb. 27	21.55	28	18.86	Sept. 30	21.59	Dec. 2	20.90
Mar. 28	20.05	July 31	21.58				

### New London County

NL 2 (\*1071, p. 16). New London Historical Society, 11 Blinman Street, New London. Measurements from July 1, to Dec. 29, 1937, by Connecticut Ground Water Survey. Published pp. 167-168 (well N 10) Bull. GW-5, Connecticut Ground Water Survey. Measurements from July 16, 1946, by U. S. Geological Survey using measuring point 1.62 feet below measuring point used by earlier Survey.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	14.75	May 2	13.76	July 30	16.20	Oct. 27	16.95
Feb. 26	15.54	27	15.00	Oct. 6	16.86	Nov. 28	13.26
Mar. 31	15.09	June 24	16.10				

NWH 4 (\*1071, p. 17). A. Duch, 20 Church Street, Norwich. Cased in Pleistocene till on steep hillside.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 26	5.60	May 27	5.22	July 30	5.84	Oct. 6	10.66
Mar. 26	5.17	June 24	7.13	Aug. 27	8.45	27	12.44
May 2	5.25						

U 1 (\*1071, p. 17). Yale University Forest, Union. Cased in Pleistocene till on slope. Measurements discontinued Nov. 28, 1947.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	2.06	May 2	1.84	July 30	2.13	Oct. 27	3.02
Feb. 26	2.42	27	1.93	Sept. 28	2.94	Nov. 28	2.17
Mar. 31	1.98	June 24	2.00				

U 3 (\*1071, p. 17). Yale University Forest, Union. Cased in Pleistocene till on upland flat.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	23.10	May 2	16.86	July 30	20.38	Oct. 27	23.77
Feb. 26	21.20	27	17.42	Sept. 28	22.28	Nov. 28	22.45
Mar. 31	18.56	June 24	18.24				

### Windham County

Al (\*1071, p. 17). Yale University Forest, Ashford. Cased in Pleistocene till on upland flat.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	8.62	May 27	6.09	July 30	10.40	Oct. 27	14.18
Mar. 31	6.43	June 24	8.74	Sept. 28	13.30	Nov. 28	7.47
May 2	5.49						

P 1 (\*1016, p. 22; 1023, p. 19; 1071, p. 17). W. P. Lewis, Pleasant Street, Plainfield.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	31.08	Apr. 28	29.60	July 30	30.53	Oct. 27	31.48
Feb. 26	30.79	May 27	29.65	Aug. 27	30.90	Nov. 28	31.14
Mar. 26	30.20	June 24	30.09	Sept. 28	31.18	Dec. 29	31.04

Will 1. American Thread Co., Union and Lower Main Streets, Willimantic. Unused drilled well, diameter 6 inches, depth 83 feet. In Willimantic gneiss in valley. Measuring point, bottom inner edge of tee, at land-surface datum.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
July 17, 1946	7.70	Dec. 24, 1946	8.28	June 24, 1947	7.80
30	7.97	Jan. 28, 1947	7.83	July 30	8.16
Aug. 28	7.35	Feb. 26	8.12	Aug. 27	8.40
Sept. 27	7.85	Mar. 26	7.60	Oct. 6	8.52
Oct. 29	8.10	May 2	7.31	27	8.90
Dec. 3	8.53	27	7.70		

## DELAWARE

By J. M. Birdsall

### PROGRAM OF WORK

The program of ground-water investigations, which was begun in 1943 in cooperation with the Town of Lewes, was continued through 1947. The two observation wells comprising the water-level program are at the Fort Miles pumping station near the Town of Lewes. Test well 1 is equipped with a Friez weekly water-stage recorder and test well 2 is measured manually.

#### FLUCTUATIONS OF WATER LEVEL

The precipitation at Lewes was 5.81 inches in January; 4.42 inches in April; 4.27 inches in May, 5.43 inches in September, and 4.93 inches in November. The above-normal precipitation in these months may be correlated, for the most part, with rising water levels. The precipitation for the other months was considerably less and there was a corresponding decline in the water levels. Since the beginning of record, it would appear that there has been no definite trend either downward or upward, and this would probably indicate that replenishment of the ground-water supply is about equal to withdrawal in this immediate area. It is possible that heavier withdrawals might induce greater recharge and a stable condition at a lower ground-water level. The danger of salt-water intrusion must be considered seriously, however, before plans for additional diversions are made.

#### WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

##### Sussex County

S-1 (\*1016, p. 23; 1023, p. 20; 1071, p. 18). U. S. War Department. Fort Miles test well 1. Extremes of observed water level, in feet below land surface: Highest; 15.6 Dec. 31, 1945; lowest; 19.3 Sept. 15, 16, and 25, 1945.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	18.5	17.0	18.3	17.7	18.4	17.2	....	17.7	17.7	18.4	17.4	18.4
2	18.2	17.9	17.6	18.3	18.1	....	17.5	18.5	17.6	18.6	17.5	18.6
3	17.6	17.9	17.8	18.0	18.1	....	17.4	18.6	17.7	18.5	17.6	18.6
4	17.5	18.0	17.6	18.0	18.1	....	17.4	18.6	17.7	18.5	17.5	18.5
5	17.7	18.3	17.8	18.1	17.8	18.1	17.5	18.5	17.6	18.6	16.8	18.6

S-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
6	17.6	18.4	17.7	18.3	....	18.3	17.6	....	17.3	18.6	16.9	18.3
7	17.5	18.4	17.5	18.5	....	18.2	17.6	....	17.3	18.6	16.9	18.4
8	17.7	17.9	17.3	18.2	17.6	17.8	17.6	18.6	17.5	18.6	16.7	18.4
9	17.8	18.4	17.2	18.1	17.7	18.0	17.5	18.5	17.5	18.1	17.1	18.6
10	17.8	18.9	17.5	18.2	17.5	18.1	17.6	18.4	17.5	18.2	17.4	18.8
11	17.8	18.9	17.5	18.3	17.5	18.2	17.7	18.4	17.5	18.2	17.2	....
12	17.5	18.6	17.4	18.3	17.6	18.1	18.1	18.8	17.7	18.3	17.5	18.3
13	17.3	18.5	17.5	18.3	17.6	18.1	17.7	18.7	17.8	18.3	17.4	18.1
14	16.8	18.4	17.4	18.2	17.5	18.1	18.6	19.1	17.5	18.3	17.3	18.3
15	16.8	18.3	17.5	18.0	17.1	18.3	18.6	19.1	17.4	18.2	17.2	18.4
16	16.9	18.3	17.3	17.9	17.3	18.4	18.7	19.0	18.1	18.2	16.9	18.4
17	17.1	18.2	17.4	18.0	17.3	18.4	18.5	18.8	18.4	18.3	17.5	18.7
18	17.3	18.0	17.5	18.0	17.3	18.3	18.6	18.4	18.5	18.1	17.4	18.7
19	17.3	18.0	17.5	18.2	17.4	18.4	18.6	18.7	18.6	18.1	17.2	....
20	16.9	18.0	17.5	18.1	17.4	18.2	18.5	18.8	18.2	18.2	17.2	....
21	17.3	17.5	17.3	....	17.3	18.0	17.7	18.6	18.3	18.2	17.3	....
22	17.8	18.3	17.0	....	17.3	18.2	17.5	18.3	18.5	18.3	17.3	....
23	17.8	18.5	16.9	17.7	17.4	....	17.6	18.4	18.4	18.3	17.0	....
24	17.6	18.4	17.3	17.9	17.2	....	17.8	18.3	18.3	18.0	17.0	18.1
25	17.3	18.6	17.2	17.9	17.3	....	17.9	18.5	17.9	18.2	17.5	17.7
26	17.1	18.5	17.9	17.8	17.3	....	17.9	18.6	18.1	18.5	17.5	17.6
27	16.9	18.7	18.0	17.8	....	....	17.7	18.4	18.0	18.4	17.5	17.9
28	17.0	18.5	17.7	17.9	....	....	18.1	18.4	18.1	18.4	17.6	17.9
29	17.0	....	17.6	18.0	17.3	....	17.9	18.5	18.2	18.3	17.6	....
30	16.9	....	17.8	18.4	17.3	....	17.8	18.4	18.3	18.3	17.7	19.0
31	17.1	....	17.8	....	17.2	....	17.8	17.7	....	17.7	....	18.8

S-2 (\*1016, p. 24; 1023, p. 21; 1071, p. 19). U. S. War Department.  
 Fort Miles test well 2. Extremes of observed water level, in feet below  
 land-surface datum: Highest; 14.9 May 9, 1944; lowest; 18.0 July 1, 1945.

Water level, in feet, below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	16.7	Apr. 7	16.8	July 9	16.7	Oct. 2	17.0
13	16.6	14	16.7	16	17.0	9	17.0
20	16.4	22	16.2	23	16.8	16	16.8
27	15.6	29	16.6	30	17.1	23	17.0
Feb. 3	16.3	May 7	16.3	Aug. 6	17.0	Nov. 6	16.4
10	16.7	14	16.6	7	16.9	13	16.7
17	16.6	21	16.5	14	17.1	20	16.6
24	16.5	28	16.5	21	16.8	27	16.7
Mar. 3	16.5	June 4	16.6	28	17.0	Dec. 4	16.9
10	16.5	11	16.6	Sept. 4	16.9	11	16.9
17	16.7	18	16.9	11	17.1	23	16.9
24	16.4	25	16.6	18	17.0	30	17.0
31	17.0	July 2	16.8	25	17.0		

# INDIANA

By F. H. Klaer, Jr. and B. W. Swartz

## PROGRAM OF WORK

The observation-well program in Indiana was continued during 1947 in cooperation with the Indiana Department of Conservation, Division of Water Resources, C. H. Bechert, Director, as a part of the State-wide investigation of ground-water resources. In addition to the observation-well program, detailed investigations of ground-water resources were continued in Adams, Boone, and Noble Counties and in the South Bend area of St. Joseph County. Additional work on the effects of surface drainage on ground-water levels and on the levels of nearby lakes was continued.

Starting in May 1947, a monthly summary of water resources, including surface water, ground water, and lakes, was released by the Indiana Department of Conservation to waterworks superintendents, county agricultural agents, well drillers, and other interested persons in Indiana. This release has brought to the general public information on the seasonal changes and general trends in ground-water levels throughout the State.

At the end of 1946, the observation-well program included 174 wells. During the year, the following wells were dropped from the program and measurements of water levels were discontinued:

Boone 15	Howard 3	Marion 14	St. Joseph 28
Elkhart 1	Madison 1	Noble 3	St. Joseph 34
Floyd 5	Madison 2	Putnam 1	St. Joseph 90
Fulton 3	Madison 5	Putnam 2	St. Joseph 91
Grant 1	Marion 13	St. Joseph 16-F	Union 1

The following new wells were added and measurements of water levels were started or resumed:

Adams 3	Madison 3	Marion 27	Posey 2
Gibson 2	Madison 6	Marion 28	Vanderburgh 1
Jay 2	Marion 26	Noble 7	Warrick 1

At the end of 1947, the observation-well program included 166 wells, of which 116 wells were measured weekly, 3 were measured daily, 9 were measured semimonthly, 8 occasionally at irregular intervals, and 30 were equipped with automatic water-stage recorders. The locations of these wells are

shown in figure 4. During 1947, about 8,000 individual measurements of water level were made and about 9,300 additional determinations of water level were computed from recorder charts.

Measurements of water level in seven wells in Clark and Floyd Counties, were continued by the Louisville office of the U. S. Geological Survey, M. I. Rorabaugh, district engineer, in connection with the Louisville, Kentucky, ground-water investigation. As these wells are in Indiana, the measurements are included in this report.

Thirty-two of the observation wells are on municipal property and are measured voluntarily by municipal employees. Twenty-four wells on State property are measured voluntarily by personnel of the Indiana Department of Conservation and 14 wells are measured voluntarily by various industrial personnel and other interested persons. The remaining 96 wells are measured by local observers employed by the U. S. Geological Survey.

#### PRECIPITATION

The average precipitation for the State during 1947 was 0.98 inch above normal, according to the U. S. Weather Bureau. The distribution throughout the year was erratic with heavy precipitation during April, May, and June, and relatively little precipitation during February and March and during November and December. The precipitation for the year is summarized as follows:

Precipitation, in inches, in Indiana, 1947						
Division	Precipitation 1947	Departure from 61-year average	Driest month	Precipitation	Wettest month	Precipitation
Northern	38.80	+2.96	February	0.54	April	6.95
Central	40.56	+1.49	February	.33	April	6.34
Southern	41.24	-1.53	February	.14	April	7.81
Entire State	40.20	+.98	February	.34	April	7.03

Excessive precipitation during April, May, and June, when conditions for recharge were unusually favorable, caused water levels in 71 wells to reach the highest stage of record. Deficient precipitation during October, November, and December allowed water levels in 40 wells to decline to the lowest stage on record.



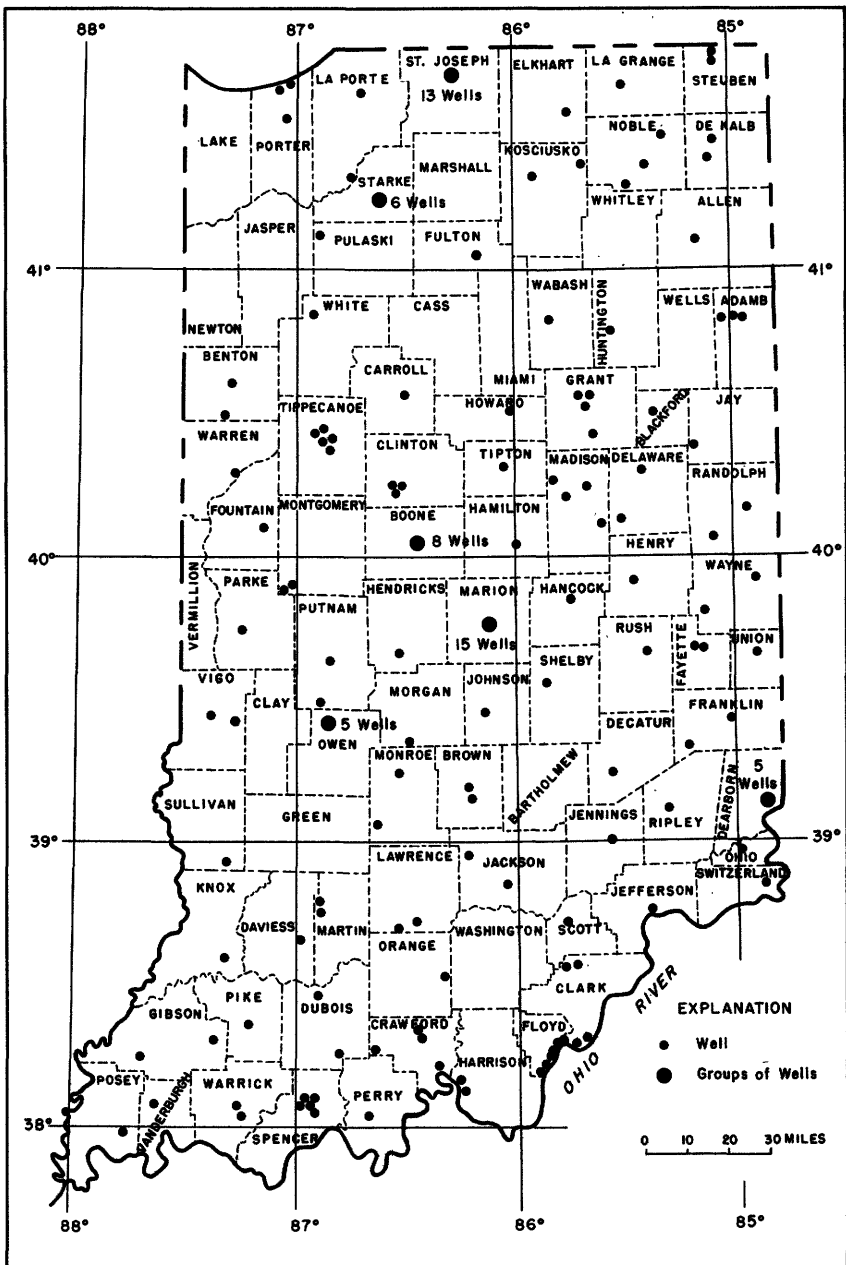


Figure 4.--Map of Indiana showing location of observation wells, 1947.

## FLUCTUATIONS OF WATER LEVEL

Water levels in observation wells in Indiana, in feet  
below land-surface datum, 1947

Well	Date of first measurement	Lowest observed water level		Highest observed water level		Water level on last date of record
		Water level	Date	Water level	Date	
Adams 1a/	May 27, 1944	55.90	Nov. 10, 1945	42.20	Mar. 23, 1946	51.16
Adams 2a/	June 23, 1945	83.71	July 13, 1946	45.60	July 12, 1947	57.93
Adams 3	Apr. 9, 1947	28.99	Oct. 24, 1947	23.41	June 4, 1947	28.57
Allen 3a/	May 25, 1944	12.72	Sept. 6, 1946	7.84	May 26, 1945	11.03
Benton 1a/	May 25, 1944	47.98	Sept. 12, 1946	37.38	June 1, 1944	43.00
Benton 2	May 25, 1944	17.05	Feb. 2, 1945	6.42	Mar. 1, 1946	8.76
Blackford 1	Sept. 27, 1945	7.98	Dec. 28, 1946	.72	Mar. 23, 1946	7.80
Boone 2	Oct. 18, 1935	11.00	Oct. 18, 1940	2.09	Mar. 16, 1938	6.06
Boone 4a/	May 24, 1945	71.30	Sept. 8, 1945	41.55	Feb. 22, 1947	51.20
Boone 10a/	May 24, 1945	53.50	Aug. 15, 1947	13.59	May 10, 1946	34.45
Boone 11a/	Oct. 26, 1945	53.42	Aug. 8, 1947	18.18	May 15, 1946	36.04
Boone 12a/	May 24, 1945	33.34	Aug. 21, 1947	23.15	May 17, 1946	26.60
Boone 13	May 24, 1945	13.47	Dec. 6, 1946	2.83	May 1, 1947	11.21
Boone 14a/	Oct. 26, 1945	50.14	Aug. 23, 1946	35.78	Oct. 4, 1947	39.54
Boone 15a/	Feb. 1, 1946	(b)	July 18, 1947	39.45	Mar. 15, 1946	(b)
Boone 16	Sept. 17, 1946	7.29	Nov. 25, 1946	.56	Apr. 21, 1947	5.95
Brown 2	Dec. 8, 1936	17.65	Jan. 1, 1940	1.90	Feb. 28, 1945	5.16
			Feb. 1, 1940		Apr. 21, 1947	
Brown 3	Dec. 8, 1936	9.84	Nov. 2, 1947	+ .3	Feb. 2, 1945	9.45
Carroll 1	Sept. 28, 1945	11.20	Oct. 5, 1946	2.72	Mar. 16, 1946	9.53
Clark 1	Dec. 2, 1936	26.69	Dec. 31, 1944	.72	Apr. 21, 1947	24.39
Clark 2	Dec. 2, 1936	24.86	Nov. 29, 1944	.45	June 3, 1943	12.05
Clark 3a/	Aug. 26, 1943	33.99	May 12, 1944	20.90	June 24, 1947	22.74
Clark 5	Feb. 21, 1944	17.86	Feb. 21, 1944	6.59	May 9, 1945	15.60
Clinton 1a/	Feb. 7, 1944	54.38	Dec. 2, 1944	26.20	Dec. 26, 1947	26.20
Clinton 2a/	Feb. 7, 1944	71.11	Dec. 3, 1944	42.35	Dec. 30, 1947	42.36
Clinton 3a/	Apr. 20, 1944	41.50	Sept. 12, 1947	13.87	May 15, 1946	38.02
Crawford 1	Mar. 3, 1944	11.73	Oct. 22, 1947	1.99	Feb. 16, 1946	11.62
Crawford 2	July 27, 1944	7.26	Dec. 22, 1944	+ 1.0	Mar. 2, 1945	6.66
Crawford 3	July 27, 1944	18.50	Oct. 27, 1946	5.90	Mar. 8, 1945	15.92
Crawford 4	Aug. 22, 1944	31.76	Sept. 3, 1947	30.33	Mar. 13, 1945	31.26
Davies 1	Feb. 24, 1944	28.30	Mar. 2, 1944	18.53	June 11, 1947	23.10
Dearborn 1-1a/	Nov. 15, 1943	91.69	Sept. 21, 1944	46.83	Feb. 18, 1947	64.00
Dearborn 1-8a/	Oct. 6, 1944	107.89	Oct. 12, 1944	65.56	Mar. 18, 1945	88.82
Dearborn 1-10a/	Feb. 26, 1946	41.10	Dec. 31, 1946	10.60	Apr. 2, 1946	32.22
Dearborn 2a/	Sept. 21, 1944	67.25	Nov. 20, 1944	32	Mar. 12, 1945	63
			Dec. 4, 1944			
Dearborn 3	Sept. 21, 1944	58.00	Nov. 26, 1944	18.24	Mar. 12, 1945	(c)
Dearborn 4	Sept. 21, 1944	45.50	Nov. 13, 1944	(d)	Mar. 12, 1945	43.80
			Nov. 20, 1944			
Dearborn 5	Aug. 29, 1945	41.36	Nov. 2, 1947	18.76	Jan. 14, 1946	38.84
Decatur 1	Sept. 8, 1944	6.64	Oct. 25, 1946	.76	Mar. 14, 1947	2.77
DeKalb 1a/	Nov. 24, 1936	14.5	Aug. 15, 1944	4.5	June 2, 1947	9.5
DeKalb 2	Sept. 7, 1945	17.10	Dec. 6, 1946	1.27	Apr. 4, 1947	3.08
Delaware 2	Mar. 30, 1945	14.80	Dec. 7, 1946	4.20	May 2, 1947	13.66
Delaware 3	Dec. 11, 1946	12.39	Oct. 18, 1947	6.06	Apr. 26, 1947	11.22
Dubois 2	Dec. 1, 1936	18.45	Nov. 13, 1944	5.47	May 15, 1943	(e)
Dubois 5	July 28, 1944	22.16	Dec. 29, 1944	8.28	Mar. 9, 1945	21.36
Elkhart 2	Sept. 10, 1945	6.64	Sept. 9, 1946	.86	Oct. 1, 1945	5.36
Fayette 2	Apr. 24, 1946	14.54	Dec. 27, 1946	2.68	May 20, 1947	8.69
Floyd 1	Dec. 21, 1943	47.06	Nov. 13, 1944	12.65	Feb. 27, 1945	44.88
			Nov. 14, 1944			
Floyd 2	Dec. 21, 1943	(f)	Aug. 20, 1945	9.50	Mar. 23, 1945	44.84
			Aug. 10, 1946			
			Nov. 21, 1946			
Floyd 3	Dec. 21, 1943	22.23	Feb. 18, 1944	7.40	Mar. 23, 1945	18.72
Floyd 4	Dec. 21, 1943	30.23	Feb. 18, 1944	9.70	Mar. 23, 1945	26.76
Floyd 5	Dec. 21, 1943	33.80	Feb. 18, 1944	11.73	Mar. 23, 1945	(g)

\* See footnotes at end of table.

Water levels in observation wells in Indiana, in feet  
below land-surface datum, 1947--Continued.

Well	Date of first measurement	Lowest observed water level		Highest observed water level		Water level on last date of record
		Water level	Date	Water level	Date	
Floyd 6	Feb. 4, 1944	20.08	Feb. 28, 1944	1.53	Feb. 27, 1945	17.51
Fountain 1	May 26, 1944	42.45	Feb. 14, 1945	34.32	June 14, 1944	41.95
Franklin 1a/	Dec. 9, 1936	31.71	Mar. 7, 1945	21.50	May 3, 1947	30.25
Franklin 4	Feb. 18, 1944	44.28	Oct. 16, 1939	16.86	Apr. 7, 1944	31.68
Fulton 3	Sept. 10, 1935	11.18	Jan. 26, 1945	4.27	June 3, 1943	(h)
Gibson 1	Aug. 24, 1944	20.64	Jan. 15, 1944	11.05	Jan. 20, 1947	16.43
Gibson 2	Feb. 20, 1947	26.78	Oct. 12, 1944	3.60	Apr. 10, 1947	26.78
Grant 1a/	Mar. 8, 1945	98.6	Dec. 26, 1947	64.6	Jan. 1, 1947	(i)
			Mar. 31, 1945			
			Apr. 3, 5, 7, 1945			
Grant 2a/	Mar. 8, 1945	86.1	Apr. 30, 1945	58.0	May 13, 1946	66.53
Grant 5a/	Apr. 16, 1945	61.53	Sept. 27, 1947	46.21	Apr. 5, 1946	57.57
Grant 6	June 2, 1945	17.67	Dec. 22, 1946	6.36	May 3, 1947	17.07
Hamilton 2a/	Nov. 2, 1935	27.33	Sept. 15, 1941	14.71	May 19, 1943	23.97
Hancock 1	Apr. 24, 1945	27.91	Aug. 7, 1947	12.95	June 20, 1946	26.38
			Nov. 6, 1946			
			Sept. 4, 1947			
Harrison 1	Dec. 2, 1936	5.65	Nov. 15, 1941	.00	Feb. 25, 1939	2.26
					Feb. 28, 1939	
					Mar. 31, 1939	
					Apr. 15, 1939	
Harrison 3	Oct. 25, 1938	7.8	Sept. 30, 1941	2.00	Mar. 21, 1939	6.90
Hendricks 1	Feb. 25, 1944	8.46	Jan. 29, 1945	(d)	Apr. 17, 1944	6.91
					Apr. 24, 1944	
Henry 2	July 31, 1946	18.15	Nov. 17, 1946	11.79	June 8, 1947	14.95
Howard 4	Mar. 28, 1945	15.22	Jan. 25, 1947	1.30	June 1, 1947	9.85
Huntington 1	Sept. 27, 1945	36.25	Dec. 9, 1946	1.85	Mar. 17, 1946	34.85
Jackson 1a/	Dec. 3, 1936	13.07	Nov. 3, 1947	1.2	Apr. 15, 1939	10.20
Jackson 2	Feb. 16, 1944	18.87	Feb. 16, 1944	10.70	May 20, 1946	16.25
Jay 2a/	July 16, 1947	38.29	Dec. 6, 1947	33.17	July 16, 1947	37.59
Jefferson 2	Mar. 3, 1937	32.5	Aug. 16, 1943	15.33	Apr. 1, 1946	28.26
Jennings 1	Dec. 3, 1936	16.98	Dec. 15, 1943	1.49	Apr. 26, 1947	13.06
Johnson 1	Feb. 22, 1944	10.45	Oct. 25, 1944	2.61	Apr. 11, 1944	7.63
			Oct. 31, 1944			
Knox 1	Aug. 24, 1944	37.22	Feb. 22, 1945	32.77	July 10, 1947	33.80
					July 17, 1947	
Kosciusko 2	Nov. 8, 1938	+1.35	Nov. 8, 1938	+3.25	May 1, 1944	+1.58
Kosciusko 3	Sept. 11, 1945	13.74	Jan. 30, 1947	10.60	Feb. 14, 1946	13.52
LaPorte 1a/	July 4, 1942	17.30	Aug. 23, 1947	3.70	Oct. 6, 1945	10.68
LaPorte 2	July 2, 1942	7.22	Oct. 11, 1946	1.07	June 1, 1943	5.40
Lawrence 1	Feb. 24, 1944	22.45	Sept. 18, 1947	9.09	Mar. 8, 1945	21.67
Lawrence 2	Feb. 23, 1944	21.51	Mar. 15, 1944	8.22	Mar. 7, 1945	21.43
Madison 5a/	May 22, 1944	6.90	Sept. 20, 1946	28.6	Apr. 13, 1946	(j)
			Sept. 26, 1946			
Madison 6	Apr. 1, 1947	11.41	Aug. 12, 1947	4.50	May 19, 1947	7.30
					June 2, 1947	
Madison 7	Jan. 1, 1946	13.9	Aug. 7, 1946	.51	June 9, 1947	4.03
Marion 1a/	Aug. 1, 1935	37.46	Aug. 5, 1941	13.85	Apr. 16, 1938	19.44
Marion 2a/	Oct. 15, 1935	70.55	Sept. 21, 1941	46.40	Mar. 18, 1936	52.84
Marion 3a/	Oct. 15, 1935	71.06	Oct. 7, 1941	48.37	Dec. 29, 1947	48.37
Marion 4a/	Dec. 3, 1937	15.72	May 27, 1941	+3.92	Apr. 16, 1938	4.92
Marion 9a/	July 26, 1939	62.48	Oct. 3, 1942	43.38	Mar. 26, 1941	47.54
Marion 10a/	Aug. 2, 1939	70.78	Aug. 29, 1941	50.64	Feb. 13, 1940	57.21
Marion 16a/	Mar. 19, 1940	114.38	May 1, 1944	56.90	Jan. 28, 1941	101.87
Marion 18	Oct. 11, 1943	28.33	Feb. 5, 1945	13.41	Mar. 20, 1946	23.82
			Feb. 13, 1945			
			Feb. 14, 1945			
Marion 19	Oct. 18, 1943	21.48	Feb. 5, 1945	15.96	June 24, 1946	19.46
Marion 21a/	Mar. 28, 1944	67.28	Aug. 4, 1944	54.00	Dec. 29, 1947	55.64
Marion 22a/	Apr. 11, 1944	90.40	July 14, 1944	65.25	Dec. 28, 1947	70.25
Marion 25a/	May 7, 1945	53.12	Jan. 31, 1947	18.30	May 27, 1946	29.85
Marion 26	Aug. 5, 1947	8.95	Oct. 20, 1947	7.56	Aug. 18, 1947	8.30

\* See footnotes at end of table.

Water levels in observation wells in Indiana, in feet  
below land-surface datum, 1947--Continued

Well	Date of first measurement	Lowest observed water level		Highest observed water level		Water level on last date of record
		Water level	Date	Water level	Date	
Marion 27	Aug. 5, 1947	4.60	Oct. 20, 1947	3.24	Dec. 16, 1947	3.44
Marion 28	Aug. 5, 1947	12.23	Dec. 15, 20, 21, 1947	11.18	Aug. 5, 1947	12.15
Martin 3	Mar. 1, 1944	22.71	Feb. 15, 1945	18.02	June 2, 1947	21.46
Martin 4	Mar. 1, 1944	12.56	Dec. 2, 1944	2.40	Mar. 8, 1944	10.76
Monroe 2	Sept. 15, 1944	25.10	Sept. 11, 1945	6.47	June 3, 1947	24.30
Monroe 3	Sept. 15, 1944	27.44	Feb. 27, 1945	17.80	June 23, 1945	26.22
Montgomery 1	Sept. 27, 1935	15.45	Nov. 16, 1940	3.66	May 17, 1945	11.73
Montgomery 4	Sept. 27, 1935	17.33	Oct. 15, 1940	1.33	Apr. 4, 1938	11.19
Morgan 3	Aug. 14, 1945	8.80	Sept. 11, 1945	2.51	Aug. 14, 1945	4.15
Noble 3	Oct. 9, 1935	24.55	Jan. 12, 1947	9.90	Aug. 2, 1938	(k)
Noble 5	May 1, 1942	9.20	Jan. 20, 1947			
			Feb. 3, 1945	.49	May 17, 1943	5.84
			Feb. 17, 1945			
Noble 6a/	May 28, 1946	25.28	Feb. 28, 1947	18.33	May 24, 1947	22.16
Noble 7	Aug. 10, 1947	22.52	Nov. 24, 1947	21.45	Aug. 10, 1947	22.50
Ohio 1	Sept. 7, 1944	14.46	Dec. 23, 1944	.63	Mar. 2, 1945	14.02
Orange 1	Mar. 1, 1944	14.49	Mar. 1, 1944	(d)	Apr. 9, 1944	11.51
Owen 2	Sept. 10, 1946	25.65	Oct. 15, 1946	10.00	Apr. 12, 1947	19.27
Owen 3	June 5, 1946	109.94	July 17, 1946	108.85	Nov. 27, 1947	108.97
Owen 4	June 20, 1946	80.80	Nov. 2, 1946	68.81	Apr. 19, 1947	77.84
Owen 5	June 5, 1946	13.39	Aug. 3, 1946	1.55	May 3, 1947	12.16
Owen 6	June 5, 1946	9.39	Nov. 3, 1946	3.05	Apr. 26, 1947	7.92
Parke 1	June 14, 1945	8.47	Sept. 30, 1945	2.38	June 21, 1945	4.90
Perry 1	Mar. 3, 1944	10.12	Aug. 13, 1944	1.36	May 25, 1947	8.76
Pike 1	Dec. 1, 1936	12.94	Dec. 30, 1944	3.50	Mar. 31, 1945	9.55
Porter 1a/	Oct. 16, 1935	58.05	Mar. 31, 1945	50.63	Aug. 3, 1943	51.81
Posey 2	Feb. 19, 1947	9.90	Dec. 7, 1947	3.38	Apr. 19, 1947	9.60
					May 4, 1947	
Pulaski 1	Dec. 1, 1935	12.14	Dec. 1, 1935	5.75	June 9, 1947	8.25
Putnam 3	Sept. 10, 1946	132.29	Oct. 21, 1946	130.38	May 27, 1947	131.40
Randolph 1a/	Feb. 8, 1942	18.43	Jan. 31, 1945	12.39	Apr. 15, 1944	15.42
Randolph 2	Dec. 19, 1946	12.84	Dec. 28, 1946	.87	Apr. 26, 1947	9.57
Ripley 1	Sept. 7, 1944	13.10	Jan. 15, 1945	1.58	May 3, 1947	12.28
Rush 1	July 12, 1945	9.88	Aug. 4, 1946	2.74	Mar. 17, 1946	6.52
St. Joseph 1a/	Oct. 16, 1935	14.59	Aug. 1, 1946	4.46	May 25, 1943	9.17
St. Joseph 4T-1a/	Feb. 16, 1945	20.64	July 26, 1945	15.15	June 12, 1947	18.11
			Aug. 2, 1946			
St. Joseph 4T-2	Feb. 16, 1945	9.08	Sept. 20, 1946	4.77	June 2, 1947	8.02
St. Joseph 10-2a/	Jan. 26, 1946	38.09	Feb. 22, 1947	34.45	July 26, 27, July 30, July 31, 1947	35.46
St. Joseph 16-1a/	June 28, 1944	32.25	Sept. 27, 1946	23.2	Mar. 1, 1946	29.90
St. Joseph 16-2a/	Dec. 5, 1909	21.72	Feb. 22, 1945	13.99	Dec. 5, 1909	(p)
St. Joseph 22a/	June 8, 1944	45.36	July 21, 1946	28.83	June 2, 1947	32.49
St. Joseph 28a/	Mar. 8, 1945	18.86	Jan. 30, 1947	16.77	Apr. 11, 1946	(1)
St. Joseph 34a/	Feb. 15, 1945	41.58	Apr. 5, 1945	37.02	Dec. 29, 1946	(m)
St. Joseph 53a/	Mar. 23, 1945	9.05	Oct. 27, 1946	2.10	June 4, 1947	5.44
St. Joseph 85a/	Jan. 19, 1945	15.86	Dec. 5, 1946	10.62	June 12, 1947	13.26
St. Joseph 89a/	Mar. 17, 1945	47.40	Sept. 7, 1946	38.38	June 4, 1947	43.12
St. Joseph 91	Mar. 22, 1945	4.99	Mar. 6, 1947	3.97	June 28, 1945	(n)
			Apr. 17, 1947			
Scott 1a/	May 4, 1942	27.61	Dec. 2, 1944	16.23	May 21, 1946	26.40
			Dec. 3, 1944			
Shelby 1	Apr. 23, 1946	10.08	Dec. 7, 1947	6.05	June 15, 1947	10.07
			Dec. 20, 1947			
Spencer 4	Mar. 2, 1944	8.26	Oct. 7, 1944	.44	Jan. 27, 1945	7.84
			Dec. 7, 1946			
Spencer 5	Mar. 2, 1944	31.88	Nov. 21, 1945	23.50	Mar. 8, 1944	31.62
Spencer 6	Aug. 23, 1944	30.25	Nov. 22, 1944	22.20	June 5, 1946	26.93
			Dec. 20, 1944			
Spencer 7	Aug. 23, 1944	11.31	Dec. 23, 1944	1.31	June 1, 1944	9.27

\* See footnotes at end of table.

Water levels in observation wells in Indiana, in feet  
below land-surface datum, 1947--Continued

Well	Date of first measurement	Lowest observed water level		Highest observed water level		Water level on last date of record
		Water level	Date	Water level	Date	
Spencer 8	Aug. 23, 1944	8.23	Nov. 11, 1944	1.57	Mar. 17, 1945	7.04
Starke 2	Oct. 3, 1935	5.59	Sept. 15, 1941	1.15	Mar. 16, 1944	3.58
Steuben 1	Sept. 16, 1935	4.72	Nov. 1, 1935	+1.00	June 1, 1943	1.65
Steuben 2	Sept. 16, 1935	6.7	Oct. 19, 1946	.03	Apr. 15, 1939	4.52
			Oct. 26, 1946			
			Nov. 2, 1946			
Sullivan 1	Aug. 24, 1944	15.38	Nov. 5, 1944	.70	Apr. 15, 1945	12.08
Switzerland 1	Sept. 7, 1944	21.90	Dec. 2, 1944	3.15	Apr. 12, 1947	18.00
			Dec. 15, 1944			
Tippecanoe 4a/	Apr. 24, 1944	22.16	Aug. 13, 1944	+1.00	May 19, 1945	13.98
Tippecanoe 5a/	Apr. 24, 1944	89.36	Apr. 7, 1947	87.83	May 1, 1944	88.57
Tippecanoe 7	Aug. 10, 1945	166.25	Jan. 17, 1947	164.18	July 16, 1947	165.62
			Jan. 22, 1947			
Tippecanoe 8a/	Nov. 28, 1945	14.05	Oct. 18, 1946	4.98	June 13, 1947	13.11
Tippecanoe 9a/	Feb. 15, 1946	76.53	Oct. 26, 1946	69.65	Dec. 22, 1947	71.31
Tipton 1	Mar. 27, 1945	5.40	Sept. 23, 1945	+6.0	June 10, 1946	2.26
Union 3	Apr. 24, 1946	14.30	Dec. 9, 1946	3.86	May 27, 1947	12.30
Vanderburgh 1	Feb. 20, 1947	9.79	Dec. 28, 1947	.91	May 4, 1947	9.79
Vigo 2a/	Feb. 13, 1946	57.53	Oct. 19, 1947	46.47	June 15, 1947	55.58
					June 16, 1947	
Vigo 3	June 15, 1945	9.19	Nov. 22, 1946	.55	Jan. 11, 1946	7.68
Wabash 2	June 1, 1945	14.05	Sept. 5, 1946	2.07	May 1, 1947	11.56
Warren 1	May 26, 1944	18.84	Aug. 26, 1944	5.73	June 7, 1947	13.59
Warrick 1	Dec. 1, 1936	20.30	Apr. 2, 1947	16.70	Mar. 1, 1944	18.41
Warrick 2	Feb. 18, 1944	15.47	Feb. 18, 1944	(d)	Mar. 16, 1945	13.37
				(d)	Apr. 4, 1945	
Wayne 1	July 11, 1945	31.84	Dec. 17, 1946	25.77	June 16, 1947	30.94
Wayne 2	Dec. 18, 1946	18.80	Dec. 18, 1946	2.56	June 2, 1947	17.83
White la/	Dec. 4, 1935	20.34	Oct. 3, 1941	(o)	Apr. 3, 1936	14.34
					June 5, 1936	

a Affected by pumping.

b Water level below 100 feet; measurements discontinued on July 10, 1947.

c Measurements discontinued June 22, 1947.

d Flowing.

e Obstruction at 16.5 feet.

f Dry at 49.02+

g Measurements discontinued Mar. 12, 1947.

h Measurements discontinued Mar. 3, 1947.

i Measurements discontinued Sept. 24, 1947.

j Measurements discontinued July 31, 1947.

k Measurements discontinued Aug. 3, 1947.

l Measurements discontinued Mar. 21, 1947.

m Measurements discontinued Oct. 10, 1947.

n Measurements discontinued June 9, 1947.

o Overflowing at measuring point, 8.00 feet below land-surface datum.

p Measurements discontinued Nov. 29, 1946.

Water levels in January were at a relatively low stage, but generally rose during the first 3 months of the year. The water levels in many shallow wells reached their highest stage during March in spite of deficient precipitation. Water levels in the majority of wells continued to rise during May, reaching their highest stages for the year in June. During the summer months water levels generally declined, the water levels in many heavily pumped areas reaching their lowest stage for the year in August and September and in the remainder of wells in October, November, or December. A comparison of year-end levels in 148 wells indicates a net rise

in water level during the year in 75 wells, a net decline in 70 wells, and no net change in 3 wells.

Net changes, in feet, in water levels in observation wells in Indiana during 1947

Well	Net rise (+) or net decline (-)	Well	Net rise (+) or net decline (-)	Well	Net rise (+) or net decline (-)
Adams 1a/	+0.71	Gibson 1	-2.73	Owen 5	-1.59
Adams 2a/	-3.29	Grant 2a/	-6.62	Owen 6	-1.32
Allen 3a/	+3.35	Grant 5a/	-3.73	Parke 1	+2.23
Benton 1a/	-0.06	Grant 6	+4.43	Perry 1	-6.37
Benton 2	+1.72	Hancock 1	+6.63	Pike 1	-2.65
Blackford 1	+1.18	Harrison 1	-1.53	Porter 1a/	-7.76
Boone 2	-2.27	Harrison 3	-3.96	Pulaski 1	+2.26
Boone 4a/	+12.62	Hendricks 1	+3.33	Putnam 3	+1.12
Boone 10-Aa/	+11.45	Henry 2	+1.40	Randolph 1a/	+1.19
Boone 11a/	+14.10	Howard 4	+4.57	Randolph 2	+3.27
Boone 12a/	+1.35	Huntington 1	+8.85	Ripley 1	+0.09
Boone 13	+1.84	Jackson 1a/	-1.62	Rush 1	+4.48
Boone 14a/	+8.80	Jackson 2	-2.60	St. Joseph 1a/	+4.51
Boone 16	-1.58	Jefferson 2	+2.20	St. Joseph 4T-1a/	+4.91
Brown 2	-3.31	Jennings 1	-5.71	St. Joseph 4T-2	+3.38
Brown 3	-0.98	Johnson 1	-8.85	St. Joseph 10-2a/	+2.39
Carroll 1	+6.60	Knox 1	+9.90	St. Joseph 16-1a/	+4.40
Clark 1	-4.15	Kosciusko 2	+0.06	St. Joseph 16-2a/	(b)
Clark 2	-5.51	Kosciusko 3	-0.01	St. Joseph 22a/	-1.29
Clark 3	+1.06	LaPorte 1a/	-8.88	St. Joseph 53a/	-0.06
Clark 5	-1.36	LaPorte 2	+5.50	St. Joseph 85a/	+2.34
Clinton 1a/	+21.30	Lawrence 1	-3.18	St. Joseph 89a/	+3.07
Clinton 2a/	+22.79	Lawrence 2	-0.09	Scott 1a/	-5.72
Clinton 3a/	+6.63	Marion 1a/	-5.50	Shelby 1	-9.97
Crawford 1	-4.72	Marion 2a/	+8.81	Spencer 4	-5.78
Crawford 2	-5.30	Marion 3a/	+5.52	Spencer 5	-5.59
Crawford 3	-2.22	Marion 4a/	+3.39	Spencer 6	-1.30
Daviess 1	+1.40	Marion 9a/	+6.66	Spencer 7	-2.28
Dearborn 1-1a/	+5.42	Marion 10a/	+1.23	Spencer 8	-3.38
Dearborn 1-8a/	+11.10	Marion 16a/	+5.58	Starke 2	+3.30
Dearborn 1-10a/	+8.88	Marion 18	+4.58	Steuben 1	+1.75
Dearborn 2a/	(b)	Marion 19	-3.35	Steuben 2	+1.58
Dearborn 4	+4.44	Marion 21a/	+3.50	Sullivan 1	-7.50
Dearborn 5	+1.14	Marion 22a/	+4.48	Switzerland 1	-2.50
Decatur 1	-1.17	Marion 25a/	+5.45	Tippecanoe 4a/	-1.20
DeKalb 1a/	(b)	Martin 3	-0.05	Tippecanoe 5a/	+7.75
DeKalb 2	+7.82	Martin 4	-7.30	Tippecanoe 7	+3.33
Delaware 2	+7.79	Monroe 2	-2.35	Tippecanoe 8a/	-3.36
Delaware 3	-5.57	Monroe 3	+2.28	Tippecanoe 9a/	+2.28
Dubois 5	-1.69	Montgomery 1	-1.50	Tipton 1	-2.26
Elkhart 2	+2.25	Montgomery 4	-0.19	Union 3	+1.80
Fayette 2	+5.84	Morgan 3	-3.30	Vigo 2a/	+1.28
Floyd 1	-1.19	Noble 5	+2.55	Vigo 3	-2.38
Floyd 2	+1.55	Noble 6a/	+1.85	Wabash 2	+1.25
Floyd 3	-5.14	Ohio 1	-1.73	Warren 1	-2.85
Floyd 4	-2.61	Orange 1	-3.06	Warrick 2	-3.64
Floyd 6	-8.85	Owen 2	-3.64	Wayne 1	+4.43
Fountain 1	-5.55	Owen 3	+3.30	Wayne 2	-2.23
Franklin 1a/	-7.75	Owen 4	-3.14	White 1a/	+2.07
Franklin 4	-7.70				

a Affected by pumping.

b No change.

The graphs of water levels in three wells widely spaced in the State are shown in figure 5. They are relatively shallow wells in areas of small ground-water use and are believed to reflect changes in water level due only to natural causes. It is interesting to note that the general upward trend in water levels in wells Montgomery 1 and Clark 1 was continued during 1947.

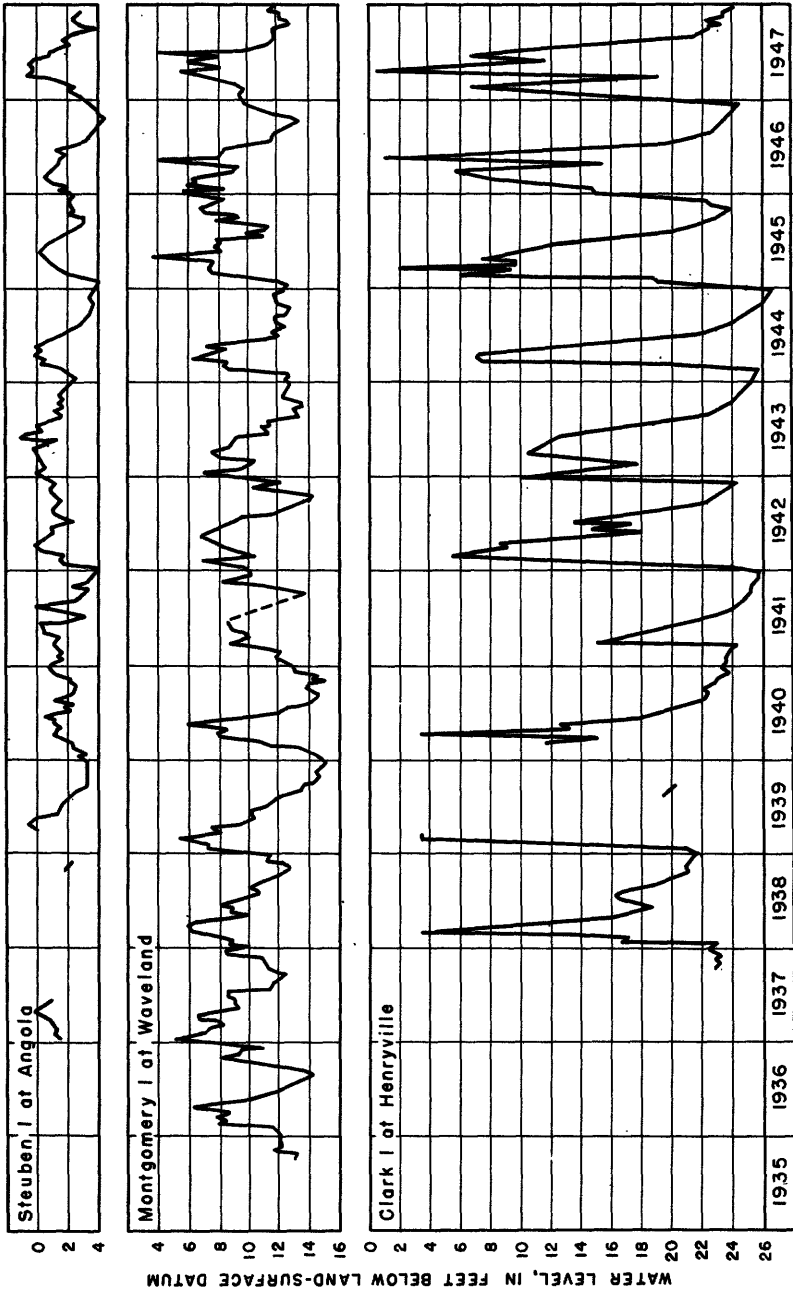


Figure 5.--Graphs showing fluctuations of water levels in three wells in Indiana that represent widely separated parts of State; these wells are not affected by pumping.

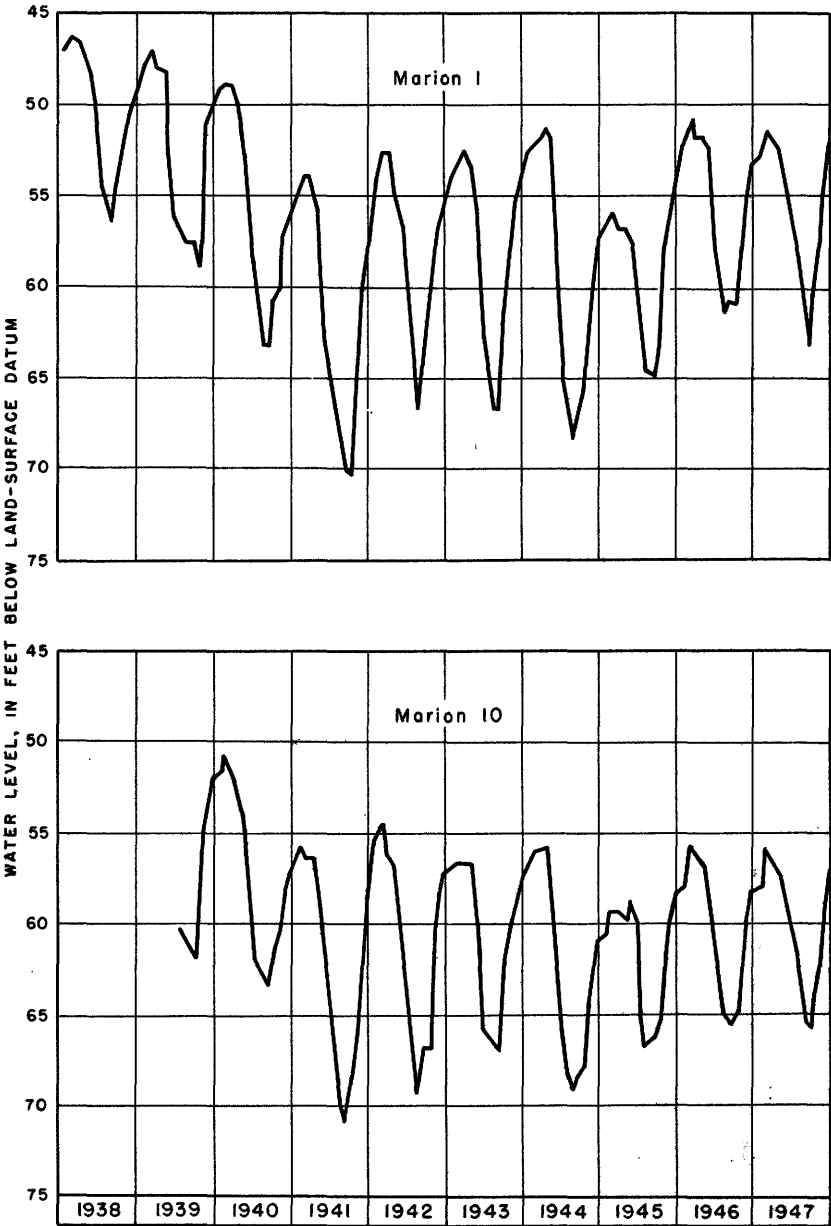


Figure 6.--Graphs of water levels in observation wells Marion 1, ending in gravel, and Marion 10, ending in limestone, in the downtown area of Indianapolis, Marion County, Ind.



Graphs of water levels in two wells in the downtown area of Indianapolis are shown in figure 6. The water levels in these wells are seriously affected by pumping from nearby wells for air-conditioning purposes. The month of August 1947 was the hottest on record and the increased pumpage of ground water for air-conditioning caused the water level in these wells to reach a lower stage than during 1946. However, it is believed that the low stages reached during 1947 indicate only a slowing-up of the generally rising trend of ground-water levels in the downtown area of Indianapolis.

## WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Adams County

Adams 1 (\*1016, p. 36; 1023, p. 32; 1071, p. 30). City of Decatur. In Decatur, 50 feet north of Park street and 120 feet east of North Fifth Street. Measurements made by personnel of Water Department, Ralph E. Roop, superintendent.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	51.95	Apr. 5	48.56	July 5	45.71	Oct. 11	49.87
11	51.71	12	52.10	12	45.42	18	50.53
18	53.11	19	49.00	19	46.10	25	51.03
25	51.76	26	50.12	26	52.20	Nov. 1	50.69
Feb. 1	52.20	May 3	47.68	Aug. 2	46.10	8	51.58
8	51.57	10	48.16	9	46.24	15	51.87
15	52.10	17	47.03	16	47.24	22	50.80
22	51.94	24	46.17	23	47.86	Dec. 1	52.37
Mar. 8	51.15	31	48.59	Sept. 15	47.05	6	51.85
15	50.34	June 7	53.10	20	49.82	13	52.37
22	50.86	14	45.74	27	48.19	20	51.78
29	52.18	28	46.46	Oct. 4	48.17	27	51.16

Adams 2 (\*1023, p. 32; 1071, p. 31). City of Decatur, "7th and Dayton well". At southwest corner of intersection of 7th and Dayton Sts., about 1 foot south of concrete sidewalk. Measurements made by personnel of Water Department, Ralph E. Roop, superintendent.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	64.75	Apr. 5	69.07	July 5	47.85	Oct. 11	73.98
11	63.32	12	64.75	12	45.60	18	74.87
18	64.65	19	67.71	19	47.74	25	75.76
25	58.57	26	73.91	26	55.75	Nov. 1	56.12
Feb. 1	54.75	May 3	47.90	Aug. 2	50.63	8	75.38
8	71.56	10	47.78	9	49.70	15	76.71
15	72.76	17	47.14	16	73.70	22	54.23
22	77.32	24	45.80	23	59.03	Dec. 1	54.05
Mar. 8	55.56	31	46.27	Sept. 15	50.07	6	71.63
15	56.40	June 7	65.75	20	69.38	13	55.65
22	51.47	14	48.85	27	51.84	20	55.97
29	50.77	28	61.74	Oct. 4	49.34	27	57.93

Adams 3. St. Joseph Cemetery. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 33, T. 28 N., R. 14 E., north side of State Road 224 about 1.2 miles west of U. S. Highway 27, west of Decatur. Unused drilled well, diameter 6 inches, depth 107+ feet. Measuring point, top edge of well cover, 0.50 foot above land-surface datum. First measurement Apr. 9, 1947. Automatic water-stage recorder installed Apr. 17, 1947. Measured by Francis J. Geels, sexton, Decatur.

## Adams 3--Continued.

Water level at 2 a.m., in feet below land-surface datum, 1947  
(From recorder charts)

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	.....	26.99	28.29	28.09	28.49	28.80	28.82
2	.....	24.60	.....	27.11	28.32	28.01	28.43	28.80	28.79
3	.....	24.84	.....	27.21	28.33	28.05	28.42	28.74	28.78
4	.....	25.28	23.41	27.18	28.42	28.05	28.44	28.71	28.88
5	.....	25.61	24.22	27.21	28.44	28.00	28.48	28.63	28.51
6	.....	25.98	24.80	.....	28.46	27.98	28.50	28.75	28.58
7	.....	26.03	.....	.....	27.50	28.06	28.53	28.66	28.46
8	.....	26.22	.....	.....	27.60	28.10	28.72	28.63	28.23
9	a 26.13	26.37	.....	.....	27.64	28.08	28.68	28.68	28.39
10	.....	26.50	.....	.....	27.67	28.00	28.68	28.84	28.34
11	.....	26.60	.....	27.26	27.74	28.11	28.67	28.61	28.35
12	.....	26.61	.....	27.33	27.81	28.07	28.73	28.80	28.41
13	.....	26.44	25.59	.....	27.81	27.78	28.77	28.82	28.38
14	.....	25.86	25.68	.....	27.85	27.81	28.80	28.86	28.32
15	.....	25.97	25.89	.....	27.90	27.85	28.81	28.57	28.27
16	.....	25.93	26.14	.....	27.99	28.03	28.84	28.62	28.19
17	.....	25.78	26.23	.....	28.03	28.15	28.86	28.81	28.52
18	26.02	25.20	26.27	26.89	28.05	28.23	28.86	28.80	28.41
19	26.33	25.26	26.45	24.84	28.04	28.21	28.87	28.74	28.53
20	26.40	25.52	26.56	25.31	28.06	28.19	28.94	28.77	28.58
21	25.94	25.65	26.62	25.84	27.99	28.09	28.92	28.82	28.50
22	26.00	25.80	26.70	26.31	27.80	28.16	28.91	28.69	28.44
23	26.12	25.96	26.78	26.54	27.70	28.23	28.90	28.73	28.36
24	26.17	26.12	26.75	26.77	27.69	28.12	28.99	28.60	28.58
25	.....	25.80	26.72	26.93	27.72	28.26	28.93	28.58	28.50
26	.....	24.94	26.75	26.85	27.76	28.35	28.93	28.65	28.31
27	.....	25.46	26.80	26.94	27.86	28.40	28.90	28.69	28.50
28	.....	25.61	26.77	26.97	27.91	28.35	28.82	28.68	28.51
29	.....	25.59	26.90	27.09	27.99	28.25	28.80	28.71	28.60
30	.....	25.61	27.00	27.14	28.00	28.45	28.78	28.90	28.51
31	.....	25.80	.....	27.12	28.01	.....	28.81	.....	28.57

a Tape measurement.

Allen County

Allen 3 (#1016, p. 36; 1023, p. 33; 1071, p. 31). City of Fort Wayne. In Fort Wayne, at Lawton Park, about 700 feet east of Clinton St. and about 800 feet north of East Fourth St. Measurements made by Dudley G. Lester and Leon J. Andrews.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	11.17	Apr. 5	9.83	July 5	10.13	Oct. 4	11.86
11	11.09	12	9.53	12	10.39	11	11.84
18	10.97	19	9.21	19	10.31	18	11.82
25	12.70	26	8.83	26	10.59	25	11.84
Feb. 1	11.00	May 3	8.33	Aug. 2	10.87	Nov. 1	11.64
8	10.88	10	8.78	9	11.19	9	11.72
15	10.50	17	9.03	16	11.38	15	11.71
22	9.98	24	9.02	23	11.42	22	11.67
Mar. 1	10.16	31	8.98	30	11.58	29	11.63
8	10.36	June 7	7.99	Sept. 6	11.60	Dec. 6	11.38
15	10.37	14	8.67	13	11.79	13	11.17
22	10.38	21	9.29	20	11.75	20	11.13
29	10.03	28	9.67	27	11.70	27	11.03

Benton County

Benton 1 (#1016, p. 36; 1023, p. 33; 1071, p. 31). Northern Indiana Public Service Co. In Fowler, in NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 15, T. 25 N., R. 8 W., South Van Buren St., 2 $\frac{1}{2}$  blocks south of U. S. Highway 52. Measurements made by D. C. Daily, chief engineer, Northern Indiana Public Service Co.

## Benton 1--Continued.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 13	43.20	Apr. 17	38.96	June 5	41.91	Aug. 14	40.96
20	39.90	24	41.53	26	42.91	Sept. 25	45.93
27	44.00	May 1	41.98	July 11	43.30	Oct. 23	44.13
Mar. 20	44.50	8	37.91	24	43.00	Nov. 20	40.00
Apr. 3	43.30	15	43.34	31	44.50	Dec. 11	43.00

Benton 2 (\*1016, p. 37; 1023, p. 33; 1071, p. 32). City of Boswell. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 13, T. 24 N., R. 9 W., near northwest corner of intersection of U. S. Highway 41 and State Highway 352. Measurements made by Chas. W. Brady.

Water level, in feet below land-surface datum, 1947											
Jan.	3	12.31	Mar.	28	7.51	July	17	13.33	Oct.	17	12.43
	9	12.54	Apr.	3	7.30		24	11.86		23	12.31
	16	12.55		17	8.97		31	13.09		30	12.77
	24	10.85		25	8.18	Aug.	14	11.25	Nov.	6	11.71
	30	8.65	May	1	7.33		21	10.62		13	11.16
Feb.	6	9.45		16	9.23		28	12.29		20	13.76
	12	9.68		22	8.89	Sept.	4	12.44		30	13.46
	20	9.30		29	10.52		12	14.08	Dec.	4	13.26
	27	9.95	June	12	10.84		19	14.33		10	10.94
Mar.	7	8.45		19	12.54		25	13.72		19	9.23
	15	8.17		26	12.11	Oct.	4	11.46		26	8.76
	20	8.98	July	10	10.27		9	13.13			

Blackford County

Blackford 1 (\*1023, p. 33; 1071, p. 32). Owner unknown. In Hartford City, in SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 35, T. 24 N., R. 10 E., about 500 feet east of State Highway 3 and about 1 $\frac{1}{2}$  blocks north of north corporation line. Measurements made by Harry A. Miles.

Water level, in feet below land-surface datum, 1947							
Jan. 4	7.93	Apr. 5	3.95	July 5	2.97	Oct. 4	5.79
11	7.87	12	2.30	12	3.29	11	5.94
18	7.67	19	1.66	19	3.49	18	6.06
25	6.99	26	.87	26	3.82	25	6.26
Feb. 1	5.25	May 3	.83	Aug. 2	3.93	Nov. 1	6.38
8	4.86	10	1.82	9	4.35	8	5.91
15	4.96	17	1.88	16	4.42	15	6.70
22	5.19	24	1.75	23	4.70	22	6.88
Mar. 1	5.24	31	1.50	30	4.74	29	7.15
8	5.35	June 7	1.54	Sept. 6	4.98	Dec. 6	7.29
15	5.38	14	2.19	13	5.19	13	7.50
22	5.22	21	2.82	20	5.40	20	7.55
29	4.62	28	2.50	27	5.53	27	7.80

Boone County

Boone 2 (\*817, p. 43; 840, p. 73; 845, p. 70; 886, p. 97; 906, p. 21; 936, p. 23; 944, p. 23; 986, p. 25; 1023, p. 34; 1071, p. 33). Elmer P. Slipper, Zionsville. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 4, T. 18 N., R. 1 E., about 2.5 miles east of intersection of U. S. Highway 52 and State Highway 32, 5 feet east of northeast corner of abandoned school building, 43 feet south of center of State Highway 32, and 94 feet west of center of section road. Measurements made by Robert S. Moore and Fred Price, Lebanon Utilities, Inc.

Water level, in feet below land-surface datum, 1947							
Jan. 10	5.09	Apr. 17	3.00	July 10	5.92	Oct. 11	7.10
17	3.56	24	3.51	18	5.77	18	7.24
24	3.90	May 1	2.13	25	6.13	Nov. 8	6.43
31	2.60	22	3.62	Aug. 8	6.66	15	6.54
Feb. 14	5.50	29	3.60	15	7.00	22	6.63
21	5.44	June 5	3.46	21	6.65	29	6.42
28	5.93	12	4.25	28	6.33	Dec. 6	6.27
Mar. 14	5.08	19	5.52	Sept. 5	6.98	13	5.77
21	4.43	26	5.80	27	6.00	20	6.10
28	3.55	July 3	5.43	Oct. 4	6.74	27	6.06
Apr. 10	3.89						

Boone 4 (#1023, p. 34; 1071, p. 33). Lebanon Utilities, Inc. At city water works, 100 feet south of center of Chicago Ave., 42 feet east of center of drive immediately west of boiler room. Measurements made by Fred Price, Lebanon Utilities, Inc.

Water level at 2 a.m., in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	63.30	58.78	63.10	52.00	54.45	61.28	61.00	.....	60.35	60.90	.....	52.30
2	63.55	62.88	63.15	50.30	50.30	52.20	.....	.....	57.80	59.70	.....	59.20
3	63.45	55.15	63.20	52.70	52.90	49.60	.....	.....	60.32	60.90	.....	52.20
4	62.55	60.56	63.20	50.70	54.70	61.80	61.00	.....	60.45	60.70	.....	57.85
5	63.25	60.95	63.20	50.70	58.55	60.35	50.68	.....	.....	57.80	.....	57.40
6	63.10	62.45	63.00	51.80	50.60	54.88	52.08	.....	56.80	48.60	.....	60.28
7	63.00	58.40	63.20	50.70	51.20	54.86	50.10	.....	59.75	59.15	.....	58.45
8	62.40	58.80	55.20	53.10	48.30	58.60	60.90	.....	57.55	56.00	.....	59.15
9	63.11	57.20	63.02	57.10	50.00	54.10	61.12	.....	60.40	60.70	60.26	53.70
10	61.16	59.85	62.10	57.30	50.20	57.87	54.10	.....	60.45	60.61	58.22	58.35
11	62.97	59.20	61.65	55.55	60.25	61.20	57.20	.....	60.40	60.55	59.95	58.50
12	63.10	57.30	62.10	59.10	51.40	61.40	60.85	.....	60.45	52.70	60.08	56.70
13	63.03	55.35	60.90	51.70	53.00	58.35	60.80	.....	.....	47.00	60.21	58.65
14	62.96	51.55	62.00	56.90	54.40	61.32	56.20	.....	58.60	60.72	59.70	59.81
15	.....	55.05	58.00	58.45	60.25	51.36	60.95	60.85	54.40	55.20	58.60	56.40
16	.....	59.80	62.71	58.55	61.60	50.35	61.00	56.30	60.10	58.55	60.05	50.60
17	.....	53.05	59.55	55.15	61.66	58.20	60.20	56.20	60.15	60.08	52.20	53.00
18	.....	59.95	58.88	54.40	57.20	51.35	.....	53.00	60.30	57.76	52.20	57.20
19	.....	54.75	62.75	55.85	52.10	61.00	61.05	60.45	56.90	.....	51.10	52.00
20	.....	52.00	54.40	50.80	61.63	61.16	60.95	57.45	55.35	.....	59.40	53.00
21	.....	47.25	54.60	54.80	54.60	61.21	58.20	60.35	54.35	.....	51.30	50.60
22	62.20	41.55	62.70	51.00	.....	61.16	61.05	60.65	54.50	.....	48.30	48.70
23	63.04	.....	60.40	51.40	53.80	61.15	61.10	60.50	54.90	.....	48.30	50.90
24	63.30	.....	52.60	52.20	53.40	61.06	61.10	52.60	58.30	.....	46.20	53.50
25	63.20	51.35	50.80	58.00	50.75	57.20	61.10	48.60	61.10	.....	49.90	51.80
26	62.80	54.10	55.40	55.20	49.80	60.99	.....	59.20	61.10	.....	60.28	46.20
27	58.55	56.60	56.80	50.00	52.60	56.80	.....	56.60	61.20	.....	58.66	52.60
28	62.84	55.45	62.60	52.40	51.60	57.80	.....	60.60	60.20	.....	55.10	49.80
29	52.28	.....	58.20	59.60	50.80	60.87	.....	60.60	57.20	.....	54.10	46.80
30	62.00	.....	56.20	60.25	60.32	60.95	.....	60.65	59.60	.....	55.02	50.20
31	60.43	.....	48.70	.....	51.20	.....	.....	60.40	.....	.....	.....	51.20

Boone 10-A (#1023, p. 35; 1071, p. 34). Lebanon Utilities, Inc. Near city water works, 165 feet south of center of Chicago Ave., and 148 feet east of center of Kersey St. Measurements made by Fred Price, Lebanon Utilities, Inc.

Water level at 2 a.m., in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	47.34	45.40	43.54	33.82	32.25	34.87	45.82	.....	46.30	48.92	.....	31.35
2	43.58	44.98	40.11	32.89	32.73	32.70	47.05	.....	48.00	47.28	.....	34.35
3	46.27	40.73	38.76	32.81	32.89	33.45	47.50	.....	50.50	47.92	.....	35.60
4	45.72	43.20	37.75	33.67	34.25	36.05	48.31	.....	51.45	48.94	.....	36.40
5	47.37	42.07	36.93	33.00	31.50	35.88	46.40	.....	.....	46.65	.....	34.38
6	44.50	43.38	36.20	32.85	32.41	36.07	45.72	.....	50.75	43.28	.....	34.95
7	46.77	43.57	35.56	36.53	32.35	34.93	42.14	.....	49.38	44.26	.....	35.12
8	45.62	44.30	37.12	32.20	32.28	38.35	46.33	.....	47.32	45.65	.....	32.85
9	46.89	44.56	38.75	32.32	32.60	34.45	46.80	.....	50.00	46.35	36.00	35.38
10	44.92	41.30	35.76	.....	32.55	39.50	47.26	.....	51.47	46.80	34.98	35.63
11	46.91	42.35	36.28	32.10	32.70	42.00	45.80	.....	50.65	48.73	36.06	34.29
12	47.28	44.15	39.63	32.43	30.68	42.50	45.80	.....	51.25	46.80	34.64	34.10
13	44.50	43.96	37.04	32.54	34.55	41.50	48.44	.....	.....	43.28	37.25	36.25
14	46.42	43.88	35.65	30.14	33.75	43.82	44.70	.....	51.92	46.40	36.06	35.80
15	46.83	40.01	35.47	33.57	33.15	41.25	47.93	53.50	47.37	44.14	35.65	33.22
16	46.67	40.55	34.97	32.36	.....	37.00	47.50	49.30	45.98	46.10	34.26	35.48
17	47.60	38.53	33.67	32.09	.....	40.25	47.70	46.55	49.84	44.58	33.80	38.14
18	47.60	41.10	34.30	32.29	.....	40.40	.....	45.45	50.49	46.05	34.78	37.83
19	47.44	44.76	34.32	32.34	.....	38.50	44.60	48.96	51.34	43.24	35.00	36.09
20	43.60	46.66	34.02	32.12	.....	38.75	45.75	46.87	52.10	41.37	33.57	36.51
21	46.94	46.17	33.80	30.58	.....	38.75	40.80	47.20	52.50	44.20	34.00	36.40
22	45.20	46.58	34.15	31.42	.....	40.21	44.85	50.00	46.58	42.63	34.60	33.99
23	46.50	.....	33.90	31.65	37.47	37.00	47.21	51.04	48.50	44.48	33.09	36.25

## Boone 10-A--Continued.

Water level at 2 a.m., in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
24	46.80	.....	32.20	31.91	36.65	42.57	.....	48.06	48.18	42.34	31.90	36.33
25	47.20	47.27	32.60	34.17	37.05	41.50	.....	45.52	48.36	41.79	32.54	36.15
26	47.26	47.55	33.35	32.77	33.55	41.70	.....	48.10	50.54	.....	31.63	33.69
27	45.29	47.71	33.39	32.83	35.98	43.55	.....	48.00	49.36	.....	33.55	32.68
28	47.29	47.89	33.17	31.05	37.95	43.70	.....	46.80	45.65	.....	31.81	31.88
29	46.92		32.93	32.53	36.25	46.66	.....	50.70	43.23	.....	32.57	36.30
30	44.22		33.12	32.73	37.56	40.85	.....	51.11	47.10	.....	32.28	32.79
31	44.75		31.67		36.85		.....	51.33		.....		34.45

Boone 11 (\*1023, p. 35; 1071, p. 34). Lebanon Utilities, Inc. At city water works, about 110 feet south of center of Chicago Ave., 35 feet west of center of Kersey St. Measurements made by Fred Price, Lebanon Utilities, Inc.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	48.30	Apr. 17	37.06	July 10	48.13	Oct. 11	48.77
17	48.96	24	36.54	18	48.73	18	46.29
24	49.34	May 1	36.88	25	50.54	Nov. 8	40.20
31	46.92	8	36.72	Aug. 8	53.42	15	38.80
Feb. 21	48.07	22	40.50	15	52.69	22	38.05
28	48.61	29	41.39	21	49.95	29	36.80
Mar. 14	39.35	June 5	38.19	28	49.56	Dec. 6	39.00
21	38.97	12	44.77	Sept. 5	50.57	13	39.88
28	37.30	19	43.34	27	48.72	20	39.66
Apr. 3	38.14	26	45.54	Oct. 4	47.83	27	36.04
10	39.98	July 3	49.22				

Boone 12 (\*1023, p. 35; 1071, p. 34). Lebanon Utilities, Inc. Near city water works, about 35 feet south of center of Franklin St., and 18 feet east of center of Klotz St. extended. Measurements made by Fred Price, Lebanon Utilities, Inc.

Water level, in feet below land-surface datum, 1947

Jan. 10	27.85	Apr. 10	26.37	July 10	31.23	Oct. 11	30.74
17	27.92	17	26.77	18	31.26	18	31.21
24	27.14	24	27.56	25	31.81	Nov. 8	32.32
31	27.14	May 1	27.03	Aug. 8	32.76	15	31.58
Feb. 14	26.50	22	28.65	15	32.84	22	31.53
21	26.44	29	28.57	21	33.34	29	30.32
28	26.04	June 5	28.88	28	33.33	Dec. 6	29.00
Mar. 14	25.64	12	29.94	Sept. 5	30.87	13	28.17
21	25.71	19	30.46	27	31.58	20	27.62
28	25.84	26	30.38	Oct. 4	31.47	27	26.60
Apr. 3	26.34	July 3	31.15				

Boone 13 (\*1023, p. 35; 1071, p. 35). Lebanon Utilities, Inc. In Memorial Park, about 300 feet east of State Highway 39, 4 feet south of southeast corner of tool shop, and about 20 feet north of center of road east of park entrance at west side and near northern end of park. Measurements made by Fred Price, Lebanon Utilities, Inc.

Water level, in feet below land-surface datum, 1947

Jan. 10	12.73	Apr. 10	8.07	July 10	6.87	Oct. 11	9.85
17	12.56	17	7.18	18	7.48	18	10.05
24	11.88	24	7.00	25	8.21	Nov. 8	10.44
31	10.90	May 1	2.83	Aug. 8	9.07	15	10.54
Feb. 14	10.17	22	3.19	15	9.20	22	10.77
21	10.28	29	5.20	21	9.15	29	11.09
28	10.36	June 5	3.57	28	9.36	Dec. 6	11.12
Mar. 14	10.28	12	4.13	Sept. 5	9.64	13	11.15
21	10.03	19	5.30	27	8.44	20	11.43
28	9.17	26	5.98	Oct. 4	9.55	27	11.21
Apr. 3	8.90	July 3	6.20				

Boone 14 (\*1023, p. 35; 1071, p. 35). Lebanon Utilities, Inc. About 187 feet east along north sidewalk of Big Four right-of-way, 82 feet north of center of East Elm St. Measurements made by Fred Price, Lebanon Utilities, Inc.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	39.97	Apr. 10	40.43	July 3	48.53	Oct. 11	44.80
17	39.78	17	40.65	10	48.65	18	47.14
24	39.05	24	42.67	18	48.59	Nov. 8	48.00
31	38.84	May 1	41.78	25	48.20	15	45.56
Feb. 14	38.26	22	45.20	Aug. 15	49.44	22	46.10
21	38.14	29	44.35	21	50.02	29	42.20
28	37.83	June 5	45.70	28	49.76	Dec. 6	41.88
Mar. 14	37.64	12	47.02	Sept. 5	44.19	13	41.24
21	38.40	19	47.25	27	38.74	20	40.40
28	38.40	26	47.09	Oct. 4	35.78	27	39.54

Boone 15 (\*1071, p. 35). Lebanon Ice & Storage Co. In Lebanon, on northeast corner of Elm and Meridian Sts., in NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 31, T. 19 N., R. 1 E., about 220 feet east and 200 feet south of water company's stand pipe, and about 300 feet north of county road. Measurements made by Fred Price, Lebanon Utilities, Inc. Measurements discontinued July 10, 1947.

Water level, in feet below land-surface datum, 1947

Jan. 10	42.64	Feb. 28	40.43	Apr. 24	51.15	June 12	88.34
17	42.47	Mar. 14	40.49	May 1	82.35	19	89.06
24	41.86	21	86.05	22	81.55	26	89.08
31	41.69	28	40.64	29	82.44	July 3	94.58
Feb. 14	40.15	Apr. 10	48.58	June 5	86.71	10	96.95
21	40.97	17	48.39				

Boone 16 (\*1071, p. 36). Leland H. Dale. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 23, T. 18 N., R. 1 W., about 3 miles south of Lebanon and about 1 mile west of State Highway 39. Measurements made by Leland H. Dale.

Water level, in feet below land-surface datum, 1947

Jan. 3	2.90	Mar. 11	4.14	July 16	5.30	Oct. 2	4.97
15	1.90	19	2.44	30	4.87	9	5.26
23	1.64	31	.90	Aug. 3	4.94	14	5.47
Feb. 1	.92	Apr. 21	.56	13	5.30	Nov. 1	5.84
7	2.40	May 13	2.60	23	5.08	28	6.10
17	2.26	22	2.10	Sept. 1	5.41	Dec. 24	6.04
24	3.18	June 2	1.95	13	5.70	30	5.95
Mar. 7	3.90	July 2	3.80	23	4.94		

### Brown County

Brown 2 (\*840, p. 73; 845, p. 70; 886, p. 98; 906, p. 21; 936, p. 23; 944, p. 23; 986, p. 25; 1016, p. 37; 1023, p. 36; 1071, p. 36). Brown County State Park. Near head of valley northwest of blockhouse. Measurements made by Ted Rains and Ray Skinner, Brown County State Park.

Water level, in feet below land-surface datum, 1947

Feb. 17	3.06	May 13	2.30	July 20	3.93	Sept. 21	4.67
23	3.10	20	1.97	27	3.71	28	4.92
Mar. 3	3.10	26	2.19	Aug. 4	2.33	Oct. 5	5.44
10	3.10	June 1	2.34	10	2.86	13	5.82
18	2.80	8	2.19	17	2.44	20	6.32
31	2.20	16	4.83	24	2.62	26	7.16
Apr. 14	2.10	23	3.86	31	2.73	Nov. 2	7.63
21	1.90	30	4.83	Sept. 8	2.30	Dec. 8	5.16
28	2.07	July 7	3.86	14	3.91	28	5.16
May 4	2.03	13	3.86				

Brown 3 (#840, p. 74; 845, p. 70; 886, p. 98; 906, p. 21; 946, p. 23; 944, p. 23; 986, p. 25; 1016, p. 37; 1023, p. 36; 1071, p. 36). Brown County State Park. In front of Hoosier's Nest cabin, near tower at entrance to Brown County Game Preserve. Measurements made by Ted Rains and Ray Skinner, Brown County State Park.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 17	3.79	May 13	3.30	July 20	4.37	Sept. 28	6.83
23	4.40	20	1.42	27	4.34	Oct. 5	7.32
Mar. 3	4.30	26	1.37	Aug. 4	3.85	13	8.54
10	4.20	June 1	2.32	10	3.91	20	8.92
18	4.10	8	1.22	17	3.92	26	9.54
31	3.80	16	1.15	24	3.86	Nov. 2	9.84
Apr. 14	1.70	23	4.35	31	3.91	Dec. 4	8.71
21	1.20	30	4.41	Sept. 8	3.80	8	9.47
28	1.97	July 7	4.32	14	4.86	28	9.45
May 4	1.63	13	4.36	21	5.91		

#### Carroll County

Carroll 1 (#1023, p. 36; 1071, p. 36). Roy R. Richter, Flora. SW. corner SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 33, T. 25 N., R. 1 W., in building about 15 feet east of owner's residence. Measurements made by Roy R. Richter.

Water level, in feet below land-surface datum, 1947

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
4	9.76		5	4.74		5	8.23		4	9.82	
11	9.00		12	4.86		12	7.83		11	10.22	
18	8.67		19	4.99		19	7.27		18	10.33	
25	8.90		26	4.35		26	8.30		25	10.54	
Feb. 1	6.50		May 3	3.88		Aug. 1	8.69		Nov. 1	10.05	
8	7.28		10	5.52		9	8.76		8	10.42	
15	7.85		17	5.64		16	8.15		15	10.70	
22	8.35		24	5.10		23	9.04		22	10.27	
Mar. 1	8.63		31	5.30		30	9.05		29	10.30	
8	8.80		June 7	3.37		Sept. 6	9.43		Dec. 6	5.10	
15	8.07		14	6.14		13	7.40		13	8.10	
22	8.20		21	7.15		20	7.95		20	9.09	
29	6.64		28	7.67		27	8.25		27	9.53	

#### Clark County

Clark 1 (#840, p. 74; 845, p. 70; 886, p. 98; 906, p. 21; 936, p. 24; 944, p. 23; 986, p. 25; 1016, p. 38; 1023, p. 36; 1071, p. 37). Clark State Forest. Sec. 36, T. 2 N., R. 6 E., Schlamm well, on west side of trail 9, about an eighth of a mile north of trail 10, near Henryville. Equipped with automatic water-stage recorder. Measurements made by Kenneth Cook and R. C. Collings, Clark State Forest.

Water level at 2 a.m., in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	19.98	7.05	17.10	15.13	6.52	7.25	14.22	18.44	21.10	22.46	22.26	.....
2	19.84	7.76	17.28	12.34	1.81	3.74	14.37	18.56	21.15	22.51	22.29	.....
3	13.02	8.47	17.47	8.07	1.89	1.77	14.52	18.67	21.21	22.55	22.30	.....
4	11.77	8.97	17.66	8.03	2.17	3.00	14.65	18.79	21.27	22.58	22.32	23.97
5	11.72	9.52	17.87	5.12	3.09	4.09	14.78	18.90	21.30	22.61	22.34	23.99
6	11.86	10.08	18.08	2.22	4.23	5.29	14.91	19.01	21.35	22.64	22.35	24.00
7	12.14	10.65	18.27	4.36	5.24	5.79	15.03	19.12	21.40	22.68	23.33	24.02
8	12.47	11.26	18.41	5.91	6.45	6.17	15.17	19.11	21.46	22.70	23.34	24.04
9	12.83	11.84	18.58	5.06	7.27	4.82	15.32	19.23	21.51	22.73	23.36	24.05
10	13.21	12.40	18.74	5.00	7.96	5.49	15.47	19.31	21.56	22.26	23.39	24.07
11	13.55	12.97	18.89	5.75	8.63	6.47	15.60	19.41	21.61	22.29	23.41	24.08
12	13.84	13.46	19.05	1.45	9.24	7.28	15.75	19.51	21.65	22.31	23.43	24.10
13	14.08	13.79	19.20	2.82	9.80	7.85	15.89	19.62	21.70	22.34	23.46	24.13
14	14.27	14.07	19.30	3.96	10.29	8.39	16.02	19.71	21.74	22.37	23.49	24.15
15	14.45	14.29	19.29	5.11	10.84	8.98	16.16	19.81	21.79	22.40	23.52	24.16
16	13.99	14.51	19.16	2.39	11.32	9.56	16.30	19.90	21.83	22.42	23.53	24.17

Clark 1--Continued.

Water level at 2 a.m., in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
17	13.21	14.71	19.03	1.71	11.75	10.07	16.43	19.99	21.89	22.93	23.55	24.19
18	12.87	14.90	18.97	2.62	11.62	10.48	16.57	20.08	.....	22.94	23.59	24.26
19	12.84	15.09	18.97	3.74	11.43	10.97	16.71	20.18	21.97	22.96	23.62	24.28
20	12.67	15.29	18.78	4.80	11.45	11.33	16.86	20.27	22.01	22.99	23.64	24.24
21	7.95	15.49	19.01	.72	11.26	11.72	17.00	20.36	22.04	23.02	23.67	24.27
22	8.00	15.68	19.04	1.63	2.49	12.10	17.13	20.42	22.07	23.05	23.70	24.29
23	9.18	15.86	19.10	2.25	4.30	12.47	17.27	20.50	22.12	23.08	23.73	24.30
24	9.78	16.05	19.14	3.14	5.55	12.82	17.41	20.58	22.17	23.10	23.75	24.32
25	10.15	16.26	18.53	4.10	5.27	13.11	17.58	20.65	22.21	23.11	23.76	24.34
26	10.46	16.47	17.53	3.80	1.88	13.37	17.72	20.72	22.24	23.15	23.77a	24.35
27	10.68	16.69	17.11	4.19	3.17	13.57	17.86	20.80	22.29	23.17	23.79a	24.37
28	10.96	16.91	16.83	5.20	4.26	13.76	17.98	20.87	22.34	23.19	.....	24.39
29	11.32		16.23	6.21	5.43	13.92	18.13	20.92	22.38	23.21	.....	24.40
30	11.61		15.61	6.80	6.10	14.08	18.24	20.99	22.42	23.23	.....	24.41
31	6.51		15.31		6.68		18.36	21.05		22.25		24.39

a Estimated.

Clark 2 (\*840, p. 74; 845, p. 70; 886, p. 98; 906, p. 21; 936, p. 24; 944, p. 23; 986, p. 25; 1016, p. 38; 1023, p. 37; 1071, p. 37). Clark State Forest. NW $\frac{1}{4}$  lot 282, Clark Military Grant, at former Purdue camp site. Measurements made by Kenneth Cook.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	10.90	Apr. 5	0.78	July 3	4.87	Oct. 2	11.15
10	10.98	11	.55	10	5.46	9	11.38
17	10.86	18	1.25	17	5.76	16	11.52
24	10.12	25	1.10	24	6.25	23	11.57
31	8.94	May 2	.89	31	6.90	Nov. 6	11.64
Feb. 7	8.45	9	1.98	Aug. 7	7.59	13	11.70
14	8.29	16	1.80	14	8.27	20	11.74
21	8.15	24	1.75	21	8.73	26	11.75
28	7.86	29	1.78	29	9.17	Dec. 3	11.83
Mar. 7	7.58	June 5	2.44	Sept. 4	9.68	10	11.87
14	6.79	12	2.70	11	10.19	17	11.95
21	5.78	19	3.57	18	10.53	30	12.05
28	3.65	26	4.07	25	10.86		

Clark 3 (\*986, p. 26; 1016, p. 38; 1023, p. 38; 1071, p. 38). Public Service Co. of Indiana. In Jeffersonville, in public water-supply well field, Tenth and Fulton Sts. Measurements made by T. Himmel, Public Service Co. of Indiana.

Water level, in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	23.82	23.79	24.74	23.01	23.04	21.28	21.23	24.00	24.13	24.37	22.11	23.53
2	23.76	24.55	24.54	22.94	23.01	21.33	21.22	23.43	24.18	24.23	22.73	23.93
3	23.83	24.56	24.57	22.91	22.99	21.34	21.24	23.12	24.20	24.18	23.49	23.65
4	23.86	24.58	24.63	22.93	23.04	21.29	21.23	23.60	24.19	23.97	24.12	22.65
5	23.77	24.60	24.83	22.94	23.08	21.31	21.21	23.33	24.19	24.00	23.42	23.23
6	23.79	24.59	24.90	.....	22.89	21.31	21.00	24.50	24.22	23.70	23.95	22.00
7	23.82	24.57	24.87	.....	22.93	21.27	21.28	23.43	24.19	24.23	24.19	23.01
8	23.96	24.59	24.75	.....	22.95	21.29	21.27	23.79	23.91	24.35	22.72	23.28
9	24.10	24.60	24.90	.....	22.94	21.31	21.27	23.60	24.41	24.34	23.22	22.82
10	24.14	24.62	23.72	.....	22.96	21.32	21.26	23.05	24.43	24.51	23.55	22.94
11	24.40	24.65	23.66	.....	22.93	21.30	21.27	23.58	24.42	24.29	23.79	23.53
12	25.06	24.84	23.66	.....	22.59	21.30	21.54	23.60	24.52	24.34	23.05	23.47
13	24.71	24.87	23.65	.....	22.60	21.31	21.26	23.61	24.31	24.28	22.79	22.53
14	24.69	24.37	23.63	.....	22.59	21.80	21.37	23.62	24.41	23.27	22.33	22.39
15	24.71	24.35	23.66	.....	22.54	21.89	21.40	23.62	24.08	24.04	22.30	23.53
16	24.73	24.61	23.65	.....	22.52	22.07	21.41	23.92	24.32	24.28	22.31	23.85
17	24.75	24.60	23.66	.....	22.52	22.13	21.43	23.65	24.10	24.13	22.20	23.51
18	24.74	24.60	23.66	.....	22.46	22.12	21.93	23.61	24.28	23.74	23.08	23.53
19	24.75	24.57	23.68	.....	22.47	22.11	22.36	23.62	24.55	24.28	23.12	23.83



## Clark 3--Continued.

Water level, in feet below land-surface datum, 1947											
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. Dec.
20	24.71	24.59	23.65	22.83	22.18	21.79	22.40	23.93	24.71	24.05	23.79 22.77
21	24.68	24.56	23.66	22.85	22.25	21.83	22.48	24.07	24.28	23.97	23.45 23.51
22	24.70	24.55	23.67	22.89	22.04	21.81	22.82	24.14	24.08	23.55	22.75 23.73
23	24.75	24.45	23.21	22.95	22.05	20.91	22.84	24.10	24.34	23.95	23.43 23.53
24	24.74	24.51	23.62	22.87	22.05	20.90	22.83	24.13	24.36	24.31	22.03 23.16
25	24.23	24.56	23.63	22.88	21.95	20.93	22.85	23.83	24.99	23.95	22.92 22.49
26	24.45	24.60	23.63	22.86	21.96	20.96	22.84	23.82	24.62	22.85	23.04 22.55
27	24.51	24.65	23.62	22.84	21.96	20.94	22.83	24.03	24.43	23.69	22.89 22.48
28	24.78	24.86	23.63	22.93	21.95	20.97	23.01	24.10	24.56	24.09	23.31 22.24
29	24.75		23.46	22.97	21.95	20.96	23.95	24.21	23.85	22.85	22.75 22.52
30	24.73		22.75	22.99	21.94	21.02	24.17	24.14	24.04	23.01	22.56 23.17
31	24.16		22.77		21.17		23.12	24.10		22.99	22.74

Clark 5 (\*1016, p. 40; 1023, p. 39; 1071, p. 38). Owner unknown. About 40 feet north of Kenwood Ave., about 100 feet east of its intersection with Gutford Road. Maintained in connection with Louisville, Ky., project, by Geological Survey, U. S. Dept. of Interior.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	12.26	Apr. 30	8.08	July 18	10.70	Nov. 1	15.18
Feb. 20	10.31	June 19	9.33	Aug. 28	13.21	Dec. 31	15.60
Mar. 11	11.40						

## Clinton County

Clinton 1 (\*1016, p. 40; 1023, p. 39; 1071, p. 38). Frankfort Water Co. In Frankfort, about 380 feet north of Washington St. and about 240 feet east of Jackson St. Measurements made by S. E. Stern, Frankfort Water Co.

Water level, in feet below land-surface datum, 1947							
Jan. 10	48.67	Mar. 28	47.30	June 13	43.50	Oct. 3	40.42
17	49.41	Apr. 4	46.04	20	43.53	10	39.89
24	49.61	11	45.45	25	46.23	17	39.08
31	50.30	18	44.59	Aug. 1	44.96	31	36.84
Feb. 7	49.57	25	43.44	11	44.66	Nov. 7	39.03
14	49.95	May 2	41.24	15	43.76	14	39.15
21	50.53	9	41.74	22	44.94	21	36.78
28	50.87	16	42.27	29	42.95	Dec. 5	32.39
Mar. 7	49.26	23	42.50	Sept. 5	40.74	12	30.55
14	50.34	31	41.08	12	40.40	19	29.73
21	48.30	June 6	42.35	19	41.97	26	26.20

Clinton 2 (\*1016, p. 41; 1023, p. 39; 1071, p. 39). Frankfort Ice Co. In Frankfort, about 150 feet west of alley on east side of ice plant and about 60 feet north of centerline of tracks of Toledo, St. Louis & Western Railroad Co. Measurements made by S. E. Stern, Frankfort Water Co.

Water level at 2 a.m., in feet below land-surface datum, 1947 (From recorder charts)											
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. Dec.
1	65.10	66.54	66.75	65.58	60.08	58.69	.....	62.72	.....	.....	54.86 .....
2	64.78	66.63	66.52	65.34	59.64	58.30	.....	62.44	59.19	.....	54.63 .....
3	64.61	65.99	66.66	65.59	59.49	58.92	.....	62.19	.....	.....	54.18 .....
4	65.20	65.95	66.86	65.35	59.28	59.25	.....	62.43	.....	58.33	54.50 .....
5	64.97	65.92	67.01	63.86	59.05	59.26	.....	.....	.....	58.18	54.65 .....
6	64.81	65.80	67.04	63.84	59.04	59.24	.....	.....	59.29	57.97	..... 50.66
7	64.67	65.78	67.05	64.24	58.75	59.26	.....	.....	59.39	58.20	55.69 49.67
8	64.98	66.01	66.74	64.18	58.79	59.27	.....	.....	58.08	58.05	55.99 48.83
9	65.24	66.27	66.95	63.92	58.69	59.32	.....	.....	59.20	.....	56.41 49.59
10	65.45	66.38	67.02	63.85	58.74	59.38	.....	.....	59.27	57.98	56.43 49.18
11	64.97	66.58	66.81	63.33	58.70	59.68	.....	.....	.....	57.88	56.35 49.04
12	65.10	66.72	66.84	63.62	58.40	60.28	.....	61.65	59.44	57.75	56.72 48.81
13	65.12	66.67	66.65	63.72	58.37	60.08	.....	61.50	59.42	57.43	57.17 48.55

## Clinton 2--Continued.

Water level at 2 a.m., in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
14	65.00	66.32	66.26	63.15	58.64	59.98	.....	61.48	59.34	57.71	57.29	47.63
15	65.36	66.15	66.84	62.96	58.99	60.11	.....	61.40	59.21	57.53	56.15	46.66
16	65.29	66.10	66.79	62.48	59.10	60.10	.....	61.37	59.54	.....	55.87a	46.30
17	65.80	66.26	66.65	62.65	59.30	60.18	.....	61.24	59.58	57.26	56.20	46.85
18	65.70	66.41	66.99	62.35	59.11	60.13	.....	61.10	.....	57.06	56.06	46.70
19	65.46	66.64	67.08	62.38	59.10	60.35	.....	61.20	59.46	56.78	55.57	46.80
20	64.84	66.49	66.65	62.08	59.11	60.45	.....	61.23	59.27	56.68	55.28	46.56
21	65.47	66.50	66.15	61.99	58.97	60.34	.....	61.32	58.87	56.68	55.20	45.76
22	66.20	66.54	66.25	62.08	59.43	60.36	.....	61.60	58.93	56.57	54.50	44.83
23	65.80	66.32	65.78	61.82	59.55	60.39	.....	60.61	59.35	.....	54.33	44.86
24	65.62	66.24	65.18	61.60	59.75	60.45	.....	60.22	59.19	56.06	63.26	44.93
25	65.88	66.67	65.25	61.69	59.10	60.22	.....	59.87	.....	.....	53.68	44.14
26	65.60	66.79	65.55	61.72	59.17	60.27	62.57	59.61	59.45	.....	53.61	43.47
27	65.59	66.85	65.64	61.06	59.41	60.34	62.48	59.64	.....	.....	53.38	43.97
28	66.06	66.91	65.44	61.08	59.08	.....	62.38	.....	.....	.....	53.18	43.20
29	65.80	.....	65.94	60.65	58.80	.....	62.61	.....	.....	.....	.....	42.68
30	65.33	.....	66.33	60.09	59.37	.....	62.71	.....	.....	.....	.....	42.35
31	65.03	.....	65.93	.....	59.19	.....	62.75	.....	.....	.....	.....	42.36

a Estimated.

Clinton 3 (#1016, p. 41; 1023, p. 40; 1071, p. 39). Frankfort Light Plant. In Frankfort, at southeast corner of settling ponds at municipal light plant. Water level affected by pumped well 500 feet north. Measurements made by S. E. Stern, Frankfort Water Co.

Water level, at 2 a.m., in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	38.81	38.96	38.24	25.90	.....	35.48	.....	37.39	39.96	.....	.....	.....
2	39.28	38.26	37.86	25.96	.....	34.62	.....	37.75	39.59	.....	.....	.....
3	38.79	37.60	37.77	25.83	21.30	35.53	.....	37.51	40.18	.....	.....	.....
4	40.00	.....	37.97	26.40	20.98	35.88	.....	37.46	.....	.....	.....	.....
5	40.03	.....	38.50	23.43	20.24	35.93	.....	37.86	40.97	.....	.....	.....
6	39.28	.....	39.00	23.78	20.30	36.24	.....	37.90	41.17	.....	.....	38.88
7	38.68	.....	39.31	23.66	20.60	36.14	.....	38.19	41.20	.....	.....	39.07
8	38.60	32.88	.....	22.50	21.73	36.59	.....	38.51	40.71	.....	39.82	38.67
9	.....	32.84	.....	22.29	22.37	36.98	.....	.....	41.01	.....	39.65	38.24
10	.....	32.55	.....	21.78	22.84	37.10	.....	.....	41.37	.....	39.24	37.99
11	38.58	32.57	.....	21.20	.....	36.65	.....	.....	.....	.....	38.89	37.94
12	38.72	32.53	.....	21.00	.....	36.62	.....	38.70	41.50	.....	38.19	37.70
13	38.27	32.68	.....	.....	.....	36.52	.....	38.97	.....	.....	38.14	37.64
14	38.37	32.45	.....	.....	.....	36.52	.....	39.16	.....	.....	37.49	37.60
15	38.27	32.40	.....	.....	.....	36.33	.....	39.27	.....	.....	.....	37.13
16	.....	32.35	.....	.....	.....	36.17	.....	39.36	.....	.....	.....	37.10
17	.....	32.12	.....	.....	35.32	36.54	.....	39.37	.....	.....	.....	37.64
18	38.54	32.80	.....	.....	35.62	36.48	.....	39.20	.....	.....	.....	38.29
19	38.97	33.47	.....	21.56	35.71	36.56	.....	39.35	.....	.....	.....	38.33
20	39.18	33.80	.....	21.51	35.85	36.45	.....	39.76	.....	.....	.....	38.92
21	38.75	37.30	.....	20.64	35.73	36.40	.....	40.01	.....	.....	.....	38.69
22	38.50	37.95	.....	20.73	35.81	35.25	.....	40.26	.....	.....	38.88	37.59
23	38.23	37.99	.....	20.66	35.10	35.52	.....	40.24	.....	.....	39.18	37.36
24	38.08	37.88	.....	20.74	34.53	35.31	.....	40.02	.....	.....	38.95	37.46
25	38.21	37.86	.....	20.48	34.25	35.56	.....	39.83	.....	.....	39.22	37.40
26	37.92	38.18	.....	20.67	34.88	35.75	37.21	40.08	.....	.....	38.57	36.73
27	37.88	38.16	.....	21.84	35.57	35.89	37.07	40.40	.....	.....	38.50	37.14
28	38.62	38.01	.....	22.60	35.72	.....	36.88	.....	.....	.....	37.93	37.84
29	38.96	.....	26.83	23.08	35.81	.....	37.42	40.41	.....	.....	.....	37.94
30	38.94	.....	26.44	22.92	36.17	.....	37.32	40.57	.....	.....	.....	38.22
31	39.08	.....	26.28	.....	36.20	.....	37.24	40.27	.....	.....	.....	38.02

Crawford County

Crawford 1 (\*1016, p. 42; 1023, p. 41; 1071, p. 40). J. F. Blevins. In English, in SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 25, T. 3 S., R. 1 W., west of State Highway 37, 2.3 miles south of junction with State Highway 64. Measurements made by Everett Enlow.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 12	2.27	June 18	7.83	Aug. 6	9.78	Sept. 24	11.25
18	3.68	25	8.65	13	10.06	Oct. 1	9.85
May 14	5.08	July 2	8.53	20	10.41	8	11.57
21	6.21	10	8.89	27	9.86	15	11.58
28	7.15	16	9.17	Sept. 3	10.03	22	11.73
June 5	4.99	24	7.94	10	11.10	29	11.72
11	5.96	30	7.16	17	10.58	Dec. 4	11.62

Crawford 2 (\*1016, p. 42; 1023, p. 41; 1071, p. 40). Zenis R. Parkhill. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 26, T. 3 S., R. 1 E., 2 miles northwest of Leavenworth, about 400 feet northwest of Mansfield Church and about 30 feet southwest of edge of road. Measurements made by Zenis R. Parkhill.

Water level, in feet below land-surface datum, 1947

Jan. 3	1.63	Apr. 4	0.79	July 4	3.32	Oct. 3	5.20
10	1.83	11	1.31	11	2.55	10	5.32
17	1.07	18	1.20	18	1.99	17	5.47
24	1.11	25	1.62	25	2.88	24	4.46
31	1.58	May 2	1.22	Aug. 1	3.45	31	5.77
Feb. 7	2.33	9	2.54	8	3.67	Nov. 7	5.87
14	3.11	16	2.97	15	4.03	14	6.02
21	3.32	23	2.89	22	4.18	21	6.04
28	3.67	30	2.99	29	4.36	28	6.24
Mar. 7	3.96	June 6	1.62	Sept. 5	4.49	Dec. 5	6.30
14	2.75	13	2.83	12	4.75	12	6.79
21	3.99	20	2.90	19	5.89	19	6.30
28	1.71	27	3.05	26	5.02	26	6.66

Crawford 3 (\*1016, p. 43; 1023, p. 41; 1071, p. 40). J. Elmer Faulkenburg. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 31, T. 3 S., R. 1 W., about 100 feet south of county road, about 50 feet east of Crawford-Perry County line, near St. Croix. Measurements made by J. Elmer Faulkenburg.

Water level, in feet below land-surface datum, 1947

Jan. 23	10.30	May 5	13.20	July 3	14.10	Oct. 20	16.00
27	11.10	12	14.70	22	15.40	24	16.00
Mar. 9	15.46	19	14.60	28	15.10	Nov. 24	16.30
23	15.90	28	14.80	Aug. 11	15.10	Dec. 3	15.30
28	11.90	June 5	12.10	25	17.80	4	15.92

Crawford 4 (\*1016, p. 43; 1023, p. 41; 1071, p. 41). Indiana State Highway Commission. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 30, T. 2 S., R. 1 E., on north side of State Highway 37. Measurements made by Everett Enlow.

Water level, in feet below land-surface datum, 1947

Feb. 18	31.26	July 2	31.16	Aug. 20	31.17	Oct. 1	31.63
May 14	31.21	10	31.20	27	31.11	8	31.19
21	31.27	16	31.26	Sept. 3	31.76	15	31.16
28	31.17	24	31.59	10	31.02	22	31.82
June 5	31.09	30	31.18	17	31.66	29	31.05
11	31.15	Aug. 6	31.13	24	31.07	Dec. 4	31.26
25	31.15	13	31.15				

Daviess County

Daviess 1 (\*1016, p. 43; 1023, p. 42; 1071, p. 41). John Harbin. In Cannelburg, in NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 29, T. 3 N., R. 5 W., 50 feet south of post office. Measurements made by Monte Summers.

## Davies 1--Continued.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	23.50	Apr. 10	21.99	July 16	20.27	Oct. 15	22.20
9	21.00	17	21.62	23	20.40	22	22.29
17	23.20	25	21.08	30	20.35	29	22.31
23	22.95	May 1	21.50	Aug. 6	20.58	Nov. 5	22.29
30	21.70	14	19.57	13	20.80	12	22.45
Feb. 7	22.60	20	19.56	20	21.00	19	22.50
20	22.40	28	19.56	27	21.10	25	22.58
27	22.40	June 4	18.63	Sept. 3	21.25	Dec. 3	22.68
Mar. 6	22.50	11	18.53	10	21.39	11	22.80
13	22.40	18	19.60	17	21.49	17	22.97
21	22.50	25	19.54	24	21.60	24	23.05
27	21.95	July 2	18.55	Oct. 1	21.77	30	23.10
Apr. 3	22.38	9	20.17	8	21.97		

## Dearborn County

Dearborn 1-1 (#986, p. 26; 1016, p. 43; 1023, p. 42; 1071, p. 41).  
 Schenley Distillers, Inc. Old Quaker plant, Greendale, Lawrenceburg.  
 Measurements made by Frank C. Caveman, Schenley Distillers, Inc. Measurements discontinued Dec. 29, 1947.

Water level, in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	64.51	60.48	62.23	58.98	63.25	61.00	68.50	67.65	69.71	60.00		
2	67.81	60.62	62.58	58.65	64.28	60.50	67.50	70.00	60.20			
3	68.71	66.08	60.58	62.23	64.31	61.43	69.90	70.50	60.00			
4	68.31	62.58	63.65	61.23	50.92	65.00	69.88	60.15				
5	64.42	62.00	61.00	52.85	53.15	65.23	70.00	60.00				
6	69.18	64.51	63.65	52.85	52.85	65.78	72.33	61.42				
7	69.06	65.00	63.00	60.58	52.00	54.15	65.20	72.75	61.00			
8	69.18	65.71	62.73	59.81	57.00	60.92	65.28	66.43	72.16	60.50		
9	68.00	61.00	61.00	57.85	63.94	64.78	65.00	72.25	61.00			
10	69.02	66.08	63.77	61.23	64.00	65.00	65.28	71.00	61.75			
11	69.00	65.31	60.40	64.51	64.65	65.00	70.75	61.17				
12	60.10	64.58	56.60	64.42	65.28	65.75	70.58	60.29				
13	69.06	58.98	64.00	56.50	63.65	65.00	65.25	86.27	60.10			
14	69.00	57.75	64.31	60.48	56.60	63.77	64.00	65.78	86.00	58.98		
15	68.93	57.59	65.54	56.08	63.15	65.50	64.65	87.00	59.00			
16	69.18	65.00	60.40	57.15	64.00	65.78	65.28	87.25	60.50			
17	69.00	57.81	65.31	59.81	64.65	65.00	87.50	61.25				
18	68.96	46.83	62.21	59.00	63.94	65.00	65.00	73.00	62.40	61.00		
19	60.58	63.77	56.20	60.92	64.78	64.78	74.08	63.39	61.75			
20	69.08	60.00	63.59	56.25	59.25	64.65	64.65	75.00	62.29	61.20		
21	68.93	60.58	64.59	59.81	57.20	60.40	64.78	64.50	74.83	61.64	60.24	
22	66.08	61.00	63.00	59.25	57.20	63.25	64.50	64.28	70.75	61.75	60.00	
23	65.00	60.00	63.59	59.00	64.20	64.25	65.00	64.65	71.25	61.42	62.35	
24	65.71	63.65	58.98	65.00	64.28	63.94	70.00	62.35	63.39			
25	64.51	60.17	63.04	58.50	65.78	64.65	64.28	70.58	60.24	63.50		
26	60.40	62.58	64.78	64.78	65.23	63.00	69.60	60.50	63.75			
27	64.42	61.00	62.73	65.78	64.28	65.20	69.00	70.00	61.64	63.10		
28	64.83	60.40	63.58	65.78	64.00	69.71	61.75	63.30				
29	64.51	63.00	58.56	64.25	64.27	63.79	69.18	69.00	61.42	64.00		
30	65.00	58.50	64.88	64.00	63.60	68.71	67.25	69.25	61.00	.....		
31	65.71	62.00	63.00	62.49	68.00	70.00	.....					

Dearborn 1-8 (\*1016, p. 45; 1023, p. 43; 1071, p. 42). Schenley  
 Distillers, Inc. Old Quaker plant, Greendale, Lawrenceburg. Measurements  
 made by Frank C. Caveman.

Water level at 2 a.m., in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	98.30	92.75	89.38	90.68	.....	.....
2	.....	93.35	87.95	88.85	.....	.....
3	.....	91.80	86.35	91.35	.....	.....

## Dearborn 1-8--Continued.

Water level at 2 a.m., in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
4	.....	91.22	88.35	91.60	.....	.....
5	.....	90.48	88.70	90.68	.....	.....
6	96.55	89.85	90.20	89.80	.....	.....
7	97.90	89.80	90.10	89.00	.....	.....
8	97.60	89.00	90.22	89.20	.....	.....
9	97.38	87.60	91.02	88.20	.....	.....
10	.....	86.70	91.30	89.30	.....	.....
11	.....	89.90	90.64	90.60	.....	.....
12	.....	88.05	92.05	89.10	.....	.....
13	.....	87.95	91.05	88.70	.....	.....
14	.....	89.80	91.90	86.75	84.50	.....
15	97.33	88.22	92.75	88.70	84.85	.....
16	.....	87.35	91.30	87.26	85.35	.....
17	98.28	86.00	93.00	88.65	85.00	.....
18	97.95	88.36	92.45	89.40	84.10	76.05
19	96.70	88.55	92.80	89.80	82.10	73.95
20	94.90	87.70	92.03	88.75	83.90	.....
21	96.80	88.55	94.70	88.00	87.00	75.62
22	96.05	88.81	94.40	87.45	88.25	75.33
23	94.00	87.60	92.20	88.10	86.60	74.85
24	84.60	85.45	90.20	89.10	88.10	74.90
25	94.98	87.70	88.90	89.40	85.30	75.15
26	94.10	88.15	90.60	90.88	84.75	75.00
27	91.40	88.35	92.60	88.40	85.73	.....
28	91.65	88.88	93.30	85.12	81.40	.....
29	92.70	.....	94.30	87.60	81.40	.....
30	93.00	.....	93.40	.....	81.18	.....
31	92.35	.....	91.10	.....	.....	.....

Water level at 2 a.m., in feet below land-surface datum, 1947  
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	85.60	89.65	100.21	95.24	90.20
2	.....	85.40	91.13	100.28	94.20	86.18
3	.....	85.65	91.50	100.25	93.40	85.60
4	81.00	85.10	92.55	101.30	94.90	85.40
5	.....	85.58	93.62	98.73	92.85	87.90
6	78.70	85.89	94.23	98.00	92.26	88.20
7	.....	86.60	93.70	98.76	90.45	88.50
8	.....	86.65	93.60	99.06	90.35	87.80
9	.....	86.62	94.88	98.80	89.05	88.70
10	.....	88.20	94.80	99.38	88.04	87.05
11	81.62	86.20	95.52	99.43	89.58	86.15
12	80.90	86.70	95.15	100.01	89.20	85.15
13	.....	88.53	96.45	98.56	88.75	84.84
14	.....	89.10	95.28	99.57	87.65	84.38
15	82.63	88.27	94.60	.....	88.38	83.60
16	81.63	89.40	96.28	.....	86.49	82.93
17	82.45	88.96	96.55	.....	85.85	83.47
18	82.62	87.46	97.05	.....	86.45	83.33
19	81.90	87.10	97.37	.....	86.60	83.16
20	.....	90.40	97.52	.....	86.75	83.25
21	.....	89.27	97.63	.....	86.63	82.93
22	.....	89.50	96.39	101.96	86.23	82.89
23	82.04	90.02	97.53	102.09	85.32	83.30
24	81.95	90.40	97.50	102.10	84.52	84.00
25	82.70	90.91	97.60	102.09	85.45	84.83
26	82.96	90.60	97.80	101.94	85.41	84.20
27	83.68	90.50	98.28	101.94	85.42	84.55
28	82.45	91.85	96.95	101.91	84.40	88.45
29	82.68	90.68	96.70	97.00	86.10	84.85
30	84.50	92.08	97.80	96.70	87.50	86.90
31	85.65	90.60	.....	95.91	.....	88.82

Dearborn 1-10 (\*1071, p. 42). Schenley Distillers, Inc. Old Quaker plant, Lawrenceburg, 10 feet east of well 10 and 170 feet west of well 11. Measurements made by personnel of Schenley Distillers, Inc.

Water level at 2 a.m., in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	a36.60	24.28	18.36	16.58	23.61	28.64	.....	38.02	30.30	
2	.....	.....	.....	24.40	17.91	16.61	24.05	28.83	.....	36.01	30.30	
3	.....	.....	.....	24.55	17.87	16.71	24.35	29.21	.....	35.48	30.46	
4	.....	a23.60a27.44	.....	24.62	18.00	16.99	24.65	29.70	.....	35.29	30.60	
5	.....	.....	36.78	22.98	18.07	17.31	24.92	30.30	.....	35.10	30.58	
6	.....	.....	34.60	22.50	18.10	17.61	25.15	30.84	.....	34.88	30.44	
7	a40.77	.....	34.03	22.65	18.16	17.88	25.36	31.33	.....	34.70	30.50	
8	.....	.....	33.82	22.80	18.00	18.12	25.72	31.42	35.80	34.55	30.13	
9	.....	.....	33.91	22.98	16.99	18.38	26.08	31.91	36.59	34.40	30.10	
10	.....	.....	33.92	23.15	16.92	18.60	26.33	32.39	37.23	34.28	30.12	
11	.....	a29.85a26.60	34.00	23.23	17.00	18.82	26.40	32.86	37.78	34.00	30.19	
12	.....	.....	34.08	20.72	17.04	17.12	26.73	33.31	38.22	33.70	30.29	
13	a35.60	.....	34.07	19.30	17.07	19.25	27.07	33.74	35.45	33.80	30.39	
14	.....	.....	33.18	19.62	17.10	19.38	27.37	34.09	35.73	33.80	30.48	
15	.....	.....	33.67	20.00	16.83	19.60	27.60	34.00	36.00	33.76	30.59	
16	.....	.....	32.71	20.38	16.29	19.86	28.00	34.30	36.40	33.60	30.72	
17	.....	.....	32.79	20.78	16.21	20.12	28.49	34.48	36.69	33.45	30.82	
18	.....	a26.03a27.27	32.85	20.99	16.32	20.32	28.50	34.74	36.98	33.32	30.90	
19	.....	.....	32.93	21.01	16.36	20.60	29.51	34.96	37.24	33.25	30.97	
20	.....	.....	.....	21.14	16.40	20.72	28.52	35.20	37.45	33.20	31.04	
21	a35.77	.....	.....	21.45	16.44	20.84	28.16	35.40	37.70	33.18	31.10	
22	.....	.....	.....	21.78	16.44	20.96	27.46	35.49	37.90	33.15	31.16	
23	.....	.....	25.75	22.10	16.44	21.20	27.49	35.59	38.13	33.08	31.19	
24	.....	.....	25.84	22.40	16.45	21.50	27.49	35.72	38.32	32.95	31.25	
25	.....	a28.24a31.19	25.94	22.57	16.47	21.64	27.48	35.92	38.51	32.99	31.30	
26	.....	.....	26.03	22.57	16.50	21.90	27.50	36.15	38.71	32.97	31.40	
27	.....	.....	26.10	21.42	16.50	22.02	27.60	36.32	36.45	32.97	31.60	
28	a33.69	.....	24.29	20.64	16.59	22.17	27.72	36.49	36.81	32.94	31.61	
29	.....	.....	23.95	20.67	16.60	22.52	27.94	36.04	37.20	31.40	31.70	
30	.....	.....	24.13	20.49	16.58	22.84	28.28	36.06	37.50	30.57	31.97	
31	.....	.....	.....	18.99	.....	23.12	28.57	.....	37.81	32.22	.....	

a Tape measurements.

Dearborn 2 (\*1016, p. 45; 1023, p. 44; 1071, p. 43). City of Lawrenceburg. In Lawrenceburg at municipal water plant. Third and Shipping St. Measured by air line to nearest foot. Length of air line used in computations for 1944, 1945, and 1946 was incorrect. Measurements published for 1944, should be corrected by subtracting 0.7 foot. Measurements made by R. C. Patton, Lawrenceburg Water Department.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 18	54	Apr. 27	55	Oct. 19	65	Dec. 14	63
Apr. 6	56	May 18	55	26	65	21	63
13	54	Oct. 12	64	Nov. 2	65		

Dearborn 3 (\*1016, p. 45; 1023, p. 44; 1071, p. 43). City of Lawrenceburg. In Lawrenceburg, 31.5 feet south of centerline of Second St. and 26.7 feet west of centerline of Water St. Measurements made by R. C. Patton, Lawrenceburg Water Department. Well filled with dirt and measurements discontinued June 22, 1947.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 18	46.67	Apr. 13	47.66	May 18	43.68	June 1	39.41
Apr. 3	48.22	27	44.34	26	39.89	22	40.05
6	47.71						

Dearborn 4 (\*1016, p. 46; 1023, p. 44; 1071, p. 43). City of Lawrenceburg. In Lawrenceburg, 43.4 feet north of centerline of High St. and 2.5 feet east of curb line of Mulberry St. Measurements made by R. C. Patton, Lawrenceburg Water Department.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 18	37.78	Apr. 27	31.62	June 22	32.79	Nov. 2	45.40
Apr. 3	34.72	May 18	33.18	Oct. 12	44.90	Dec. 14	44.18
6	34.14	26	26.30	19	45.16	21	43.80
13	31.17	June 1	28.46	26	45.37		

Dearborn 5 (\*1023, p. 44; 1071, p. 43). City of Lawrenceburg. In Lawrenceburg, at north side of East Center St. in northeast corner of alley between Arch and St. Clair Sts. Measurements made by R. C. Patton, Lawrenceburg Water Department.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 18	33.00	Apr. 27	27.22	June 22	27.73	Nov. 2	41.36
Apr. 3	30.39	May 18	29.26	Oct. 12	40.75	Dec. 14	39.48
6	29.92	26	21.99	19	41.09	21	38.84
13	26.80	June 1	24.24	26	41.32		

#### Decatur County

Decatur 1 (\*1016, p. 46; 1023, p. 45; 1071, p. 43). Decatur County "public well". In Letts. Measurements made by M. S. Elliott.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	1.56	Apr. 4	2.84	July 5	3.50	Oct. 3	3.64
10	2.29	11	2.01	11	3.84	10	4.93
17	2.07	18	2.84	18	4.43	17	4.57
24	1.80	25	2.66	25	4.92	24	4.79
31	1.82	May 2	2.82	Aug. 1	4.00	31	3.57
Feb. 7	1.02	9	3.00	8	3.98	Nov. 7	3.49
14	1.02	16	3.76	15	4.50	14	3.32
21	1.14	23	3.89	22	4.30	21	3.82
28	1.00	30	3.44	29	3.77	28	3.67
Mar. 7	1.03	June 6	3.89	Sept. 5	4.02	Dec. 5	3.75
14	.76	13	3.73	12	3.92	19	3.35
21	2.05	20	4.90	19	3.77	26	2.77
28	2.37	27	3.82	26	3.82		

#### De Kalb County

De Kalb 1 (\*817, p. 44; 840, p. 75; 845, p. 71; 886, p. 98; 906, p. 22; 936, p. 24; 944, p. 24; 986, p. 27; 1016, p. 46; 1023, p. 45; 1071, p. 44). Auburn Water Department well 3. At Auburn Water Works. Measurements made by Ted Haynes, Auburn Water Department.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	11.50	Apr. 7	10.50	July 7	10.50	Oct. 6	8.50
13	10.50	14	7.50	14	11.50	20	9.50
20	10.50	21	8.50	21	9.50	27	9.50
27	9.50	28	8.50	28	11.50	Nov. 3	8.50
Feb. 3	11.50	May 7	8.50	Aug. 4	13.50	10	9.50
10	10.50	12	7.50	11	12.50	17	9.50
17	10.50	19	8.50	18	12.50	24	8.50
24	9.50	26	10.50	26	12.50	Dec. 1	10.50
Mar. 3	10.50	June 2	4.50	Sept. 2	10.50	8	8.50
10	9.50	9	9.50	8	11.50	15	12.50
17	10.50	16	7.50	15	8.50	22	7.50
24	12.50	23	8.50	22	9.50	29	9.50
31	8.50	30	8.50	29	8.50		

De Kalb 2 (\*1023, p. 45; 1071, p. 44). Worth Wareham. SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 3, T. 34 N., R. 13 E., about 0.3 mile north of U. S. Highway 6 and 100 feet east of U. S. Highway 27. Measurements made by Worth Wareham.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	11.40	Apr. 4	1.27	July 4	6.50	Oct. 3	9.17
10	11.70	11	2.88	11	6.82	10	9.19
17	3.80	18	2.77	18	6.20	17	9.50
24	3.28	25	2.85	25	6.83	24	9.70
31	3.76	May 2	1.78	Aug. 1	7.75	31	9.40
Feb. 7	3.80	9	1.88	8	7.91	Nov. 7	8.60
14	3.96	16	1.81	15	8.12	14	8.40
21	3.81	23	2.10	22	8.51	21	8.10
28	3.75	30	2.76	29	8.79	28	8.07
Mar. 7	3.71	June 6	3.00	Sept. 5	8.82	Dec. 5	8.00
14	3.60	13	3.84	12	8.84	12	7.97
21	2.80	20	4.50	19	8.83	19	4.30
28	1.30	27	4.89	26	9.20	26	3.08

Delaware County

Delaware 2 (\*1023, p. 45; 1071, p. 44). Merlin V. Painter. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 7, T. 19 N., R. 8 E. Measurements made by Merlin V. Painter.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	14.15	Apr. 5	8.04	July 5	8.65	Sept. 27	12.15
11	13.60	12	6.64	12	9.17	Oct. 4	12.38
18	14.07	19	6.40	18	8.77	11	12.60
25	11.56	26	5.38	26	8.33	Nov. 1	13.04
31	9.55	May 2	4.20	Aug. 2	9.84	9	13.07
Feb. 8	8.74	9	5.74	9	10.30	15	13.32
15	9.20	17	5.64	16	10.60	22	13.35
22	9.57	25	5.67	23	10.75	28	13.42
28	9.78	31	5.95	30	10.97	Dec. 6	13.54
Mar. 10	10.48	June 7	5.23	Sept. 6	11.28	13	13.62
15	10.28	14	6.35	13	11.30	20	13.64
22	10.08	21	7.32	20	11.95	27	13.66
29	8.39	27	7.77				

Delaware 3 (\*1071, p. 44). Harry C. Stafford. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 5, T. 21 N., R. 10 E., about 2 miles east of U. S. Highway 35 and about 1 mile north of State Route 28. Measurements made by Harry C. Stafford.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	10.67	Apr. 4	6.95	July 5	10.19	Oct. 4	12.15
11	9.39	11	6.65	12	10.57	11	12.39
18	8.29	19	7.25	19	10.50	18	12.39
25	7.98	26	6.06	Aug. 2	10.60	Nov. 1	12.05
Feb. 1	7.18	May 3	7.15	9	11.13	8	11.88
8	9.60	10	8.29	16	10.81	15	11.96
15	9.41	17	7.42	23	10.99	22	11.91
22	9.73	24	7.90	30	11.38	29	11.95
Mar. 1	9.99	June 7	7.05	Sept. 6	11.74	Dec. 6	11.39
8	10.44	14	8.56	13	11.82	13	11.27
15	9.01	21	9.37	20	12.09	20	11.28
22	9.01	28	9.77	27	12.00	27	11.22
29	8.29						

Dubuois County

Dubuois 2 (\*840, p. 75; 936, p. 24; 944, p. 24; 986, p. 27; 1016, p. 46; 1023, p. 46; 1071, p. 45). Ferdinand State Forest. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 18, T. 3 S., R. 3 W., north side of road near foot of hill at entrance to forest. Measurements made by Ray C. Taber, Ferdinand State Forest.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 11	11.85	May 5	6.93	July 28	13.94	Oct. 20	(a)
17	12.35	12	9.04	Aug. 4	14.96	27	(a)
24	12.70	19	8.78	11	15.04	Nov. 3	16.16
Mar. 3	13.64	26	7.78	18	15.29	10	16.37
10	13.65	June 2	7.23	26	15.27	17	16.44
17	11.12	9	9.36	Sept. 1	15.49	24	16.21
24	11.40	16	11.26	8	15.69	Dec. 1	(a)
31	10.30	23	11.86	15	15.37	7	16.29
Apr. 7	7.06	30	12.31	22	15.51	15	(a)
14	6.60	July 7	12.72	29	15.69	22	(a)
21	5.70	14	12.88	Oct. 6	16.01	29	(a)
28	7.44	21	13.33	13	(a)		

a Dry.

Dubuois 5 (\*1016, p. 47; 1023, p. 46; 1071, p. 45). Harry Baker. In Haysville, in NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 25, T. 1 N., R. 5 W., near southeast corner of intersection of State Route 45 and Main St. Measurements made by Joe M. Popp.



## Dubois 5--Continued.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	18.50	Apr. 5	16.46	July 5	16.82	Oct. 4	20.71
11	17.85	12	14.06	12	16.20	11	20.81
18	17.25	19	13.57	19	16.84	18	20.71
25	16.10	26	12.86	26	17.81	25	21.07
Feb. 1	15.87	May 4	11.38	Aug. 2	18.20	Nov. 1	20.70
8	15.26	10	12.07	9	18.70	8	20.80
15	17.46	17	13.78	16	19.29	15	20.85
22	18.13	24	14.47	23	19.70	22	21.10
Mar. 1	18.59	31	14.84	30	19.10	29	21.12
8	18.84	June 7	13.77	Sept. 6	19.58	Dec. 6	21.18
15	18.05	14	14.82	13	20.09	13	21.29
22	17.55	21	15.82	20	20.36	20	21.35
29	17.05	28	16.34	27	20.59	27	21.36

Elkhart County

Elkhart 1 (\*936, p. 24; 986, p. 27; 1016, p. 47; 1023, p. 46; 1071, p. 45 ). Elkhart City Waterworks. "Bucklen" well. Measurements discontinued Sept. 12, 1945.

Elkhart 2 (\*1023, p. 46; 1071, p. 45 ). Grace Leer. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 29, T. 36 N., R. 7 E., about 1,000 feet south of New York Central Railroad, 3 miles west and 1-5/8 miles north of Millersburg. Measurements made by Gerald W. Leer.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	5.64	Apr. 7	2.72	July 7	5.48	Oct. 5	5.55
13	5.65	14	3.55	14	5.57	13	6.15
20	4.76	21	2.79	21	5.17	20	4.65
27	4.78	28	4.18	28	5.51	Nov. 2	5.78
Feb. 4	3.86	May 5	4.58	Aug. 4	5.90	9	5.83
10	4.80	12	4.94	11	5.77	16	5.75
17	5.06	19	4.90	18	5.87	23	5.80
25	5.35	26	4.53	25	6.02	Dec. 1	5.85
Mar. 3	5.45	June 2	4.75	Sept. 1	5.55	8	4.89
9	5.53	9	4.40	8	5.30	15	5.05
17	4.99	16	4.89	15	5.15	21	5.26
24	4.90	23	5.16	22	5.20	28	5.36
31	4.20	30	5.34				

Fayette County

Fayette 2 (\*1017, p. 46 ). Mrs. Irene Kerr. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 8, T. 14 N., R. 12 E., about 5 $\frac{1}{2}$  miles northwest of Connersville. Measurements made by Mrs. Irene Kerr.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	14.31	Apr. 9	2.99	July 8	6.30	Oct. 2	6.72
14	14.25	15	2.94	16	6.15	8	7.15
22	13.67	24	2.81	23	6.80	14	7.59
28	12.94	29	2.78	29	7.29	22	7.48
Feb. 6	7.95	May 7	2.86	Aug. 5	6.11	30	7.87
11	7.83	13	3.45	12	7.29	Nov. 5	8.07
18	7.77	20	2.68	19	6.07	11	8.24
25	7.83	28	3.00	27	3.41	25	8.52
Mar. 4	7.94	June 5	2.95	Sept. 3	5.29	Dec. 4	8.70
12	7.98	10	3.19	10	5.75	11	8.74
18	5.12	17	4.16	16	6.25	18	8.73
26	4.56	24	4.97	23	5.87	30	8.69
Apr. 2	3.60	July 1	5.67				

Floyd County

Floyd 1 (50-13-27) (\*1016, p. 47; 1023, p. 47; 1071, p. 46). Mr. Shane. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 28, T. 3 S., R. 6 E., in field, 110 feet west of Ohio River bank, 240 feet east of a point on River Road about 0.23 mile north of an east-west line through the Middle Creek stone bridge. Measurements made by personnel of the Geological Survey, U. S. Dept. of Interior, Louisville, Ky.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	37.26	Apr. 30	31.28	July 18	43.77	Nov. 1	45.80
Feb. 20	42.41	June 19	30.74	Aug. 28	44.30	Dec. 31	44.88
Mar. 11	43.81						

Floyd 2 (50-13-26) (\*1016, p. 48; 1023, p. 47; 1071, p. 46). Mr. Randall. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 22, T. 3 S., R. 6 E., on land beside electric fence about 150 feet west of a point on River Road, 0.7 mile north of Middle Creek stone bridge. Measurements made by personnel of the Geological Survey, U. S. Dept. of Interior, Louisville, Ky.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	39.44	Apr. 30	29.50	July 18	39.41	Nov. 1	43.93
Feb. 20	40.89	June 19	29.84	Aug. 28	41.56	Dec. 31	44.84
Mar. 11	44.21						

Floyd 3 (50-14-1) (\*1016, p. 48; 1023, p. 47; 1071, p. 46). Mr. Heil. SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 22, T. 3 S., R. 6 E., about 150 feet west of River Road and 150 feet north of fence about 2.2 miles north of Middle Creek stone bridge, and about 1.3 miles south of New Albany city limits. Measurements made by personnel of the Geological Survey, U. S. Dept. of Interior, Louisville, Ky.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	11.39	Apr. 30	10.74	July 18	13.08	Nov. 1	18.85
Feb. 20	12.78	June 18	11.82	Aug. 28	15.65	Dec. 31	18.72
Mar. 11	13.95						

Floyd 4 (50-14-2) (\*1016, p. 49; 1023, p. 48; 1071, p. 47). Mr. Shane. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 22, T. 3 S., R. 6 E., in open field 60 feet west of River Road, and 1.1 miles north of Middle Creek stone bridge, and about 2.4 miles south of New Albany city limits. Measurements made by personnel of the Geological Survey, U. S. Dept. of Interior, Louisville, Ky.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	21.22	Apr. 30	16.47	July 18	21.90	Nov. 1	25.44
Feb. 20	21.43	June 19	17.21	Aug. 28	23.15	Dec. 31	26.76
Mar. 11	21.78						

Floyd 5 (50-14-3) (\*1016, p. 49; 1023, p. 48; 1071, p. 47). Mr. Shane. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 22, T. 3 S., R. 6 E., in field, 45 feet west of River Road, about 1.1 miles north of Middle Creek stone bridge, and about 2.4 miles south of New Albany city limits. Measurements made by personnel of the Geological Survey, U. S. Dept. of Interior, Louisville, Ky. Water levels, in feet below land-surface datum, 1947: Jan. 14, 22.60; Feb. 20, 24.95; Mar. 11, 26.15. Measurements discontinued and well destroyed Mar. 12, 1947.

Floyd 6 (50-15-1) (\*1016, p. 49; 1023, p. 48; 1071, p. 47). Mr. Royse. SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 15, T. 3 S., R. 1 E., about 150 feet west of River Road, about 1.4 miles south of New Albany city limits. Measurements made by personnel of the Geological Survey, U. S. Dept. of Interior, Louisville, Ky.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	14.77	Apr. 30	9.25	July 18	12.93	Nov. 1	16.43
Feb. 20	13.29	June 19	11.45	Aug. 28	14.71	Dec. 31	17.51
Mar. 11	14.38						

Fountain County

Fountain 1 (\*1016, p. 47; 1023, p. 48; 1071, p. 47). City of Hillsboro. In Hillsboro, at northeast corner of Regal Store, north of intersection of State Highways 34 and 341. Measurements made by Everett Kay and L. E. Davidson.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	41.50	Apr. 9	41.89	July 8	40.09	Oct. 8	41.44
14	41.52	15	41.72	16	40.25	15	41.70
23	41.50	22	41.70	24	40.68	21	41.79
28	41.60	May 1	39.75	30	40.71	28	41.82
Feb. 4	41.62	6	40.45	Aug. 6	40.72	Nov. 4	41.78
11	41.73	13	40.27	12	40.82	11	41.79
18	41.66	21	40.67	19	41.02	18	41.75
25	41.68	27	40.14	28	41.24	25	41.74
Mar. 5	41.86	June 3	40.24	Sept. 2	41.36	Dec. 2	41.75
12	41.85	10	39.71	10	41.49	9	41.71
18	41.85	17	39.64	16	41.65	16	41.84
26	41.88	25	39.82	23	41.37	23	41.87
Apr. 1	41.82	July 2	40.04	30	41.32	31	41.95

Franklin County

Franklin 1 (\*840, p. 75; 845, p. 71; 886, p. 99; 944, p. 24; 986, p. 27; 1016, p. 49; 1023, p. 49; 1071, p. 47). Brookville Water Department. At south end of pumping plant in Brookville. Public-supply well. Measurements made by Walter Cleaver, Brookville Water Department.

Water level, in feet below land-surface datum, 1947

Jan. 4	27.75	Apr. 5	27.25	June 28	27.50	Oct. 4	29.25
11	28.00	12	26.50	July 5	28.50	11	30.50
18	28.50	19	26.50	12	28.50	18	30.75
25	27.00	26	25.50	26	28.50	25	30.00
Feb. 1	25.50	May 3	21.50	Aug. 2	28.25	Nov. 1	31.00
8	26.25	10	22.50	9	28.75	8	30.50
15	27.50	17	25.50	16	28.25	22	30.75
22	28.00	24	25.50	23	28.75	29	30.00
Mar. 1	28.25	June 1	25.50	29	28.50	Dec. 6	30.50
8	28.50	7	25.50	Sept. 13	28.50	13	30.25
15	27.25	14	25.50	20	28.25	20	30.00
22	28.25	21	26.50	27	28.50	27	30.25
29	28.25						

Franklin 4 (\*1016, p. 50; 1023, p. 49; 1071, p. 48). Henry H. Harmeyer. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 12, T. 10 N., R. 11 E., about 2 miles northwest of Batesville. Measurements made by Henry H. Harmeyer.

Water level, in feet below land-surface datum, 1947

Jan. 3	37.38	Apr. 11	38.62	July 11	33.48	Oct. 3	30.74
10	37.46	18	38.17	18	33.56	10	31.86
17	38.68	25	38.48	25	31.82	17	29.46
24	38.44	May 2	35.66	Aug. 1	32.89	24	30.36
31	38.84	9	34.28	8	33.94	31	29.06
Feb. 7	38.56	16	33.76	15	34.68	Nov. 7	30.08
14	38.22	23	31.44	22	34.52	14	28.76
21	36.66	30	32.36	29	35.72	21	29.38
28	38.44	June 6	35.38	Sept. 5	30.42	28	28.82
Mar. 7	38.64	13	34.98	5	31.98	Dec. 5	28.46
14	36.73	20	32.88	12	32.52	12	30.06
21	37.98	27	34.16	19	30.24	19	30.32
28	38.88	July 4	32.68	26	30.76	26	31.68
Apr. 4	39.03						

Fulton 3 (\*817, p. 45; 840, p. 76; 845, p. 72; 886, p. 99; 906, p. 22; 936, p. 25; 986, p. 28; 1016, p. 50; \*1023, p. 49; 1071, p. 48). City of Rochester. At Federal Fish Hatchery, east of Rochester. Measurements made by R. A. Stewart. Water levels, in feet below land-surface datum, 1947: Jan. 20, 8.12; Feb. 10, 8.56; Feb. 24, 8.80; Mar. 3, 8.99. Well destroyed and measurements discontinued Mar. 3, 1947.

Gibson County

Gibson 1 (\*1016, p. 51; 1023, p. 50; 1071, p. 48). Oakland City College Farm. In Oakland City, on West Street, south of State Highway 64. Measurements made by John D. McCarty.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	12.44	Apr. 7	14.43	July 21	15.40	Oct. 13	15.68
13	12.80	14	14.00	28	14.80	20	15.56
20	11.05	28	13.50	Aug. 4	15.44	27	14.65
27	12.47	May 12	14.10	11	14.50	Nov. 3	15.18
Feb. 5	12.50	19	13.85	18	14.60	10	15.49
10	14.37	26	13.83	25	14.88	17	15.48
17	15.35	June 2	14.17	Sept. 2	14.00	24	15.37
24	15.33	9	14.42	8	13.42	Dec. 1	15.80
Mar. 3	14.70	16	14.64	15	14.16	8	14.84
12	15.08	23	14.34	22	13.47	15	16.26
17	14.92	30	14.50	30	15.40	22	16.65
23	14.80	July 7	14.58	Oct. 6	15.52	29	16.43
31	13.30	14	15.22				

Gibson 2. James C. Gardner. W $\frac{1}{2}$ NE $\frac{1}{4}$  sec. 12, T. 3 S., R. 12 W., about  $3\frac{1}{2}$  blocks west of center of Ownesville. Unused drilled well, diameter 6 inches, depth 90 feet. Measuring point, east edge of top of concrete pump base, at land-surface datum. First measured Feb. 20, 1947. Measured by J. C. Gardner, Jr.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 20	13.03	May 1	8.60	July 17	18.90	Oct. 9	24.78
27	15.55	8	10.35	24	19.90	16	25.32
Mar. 6	14.60	16	14.03	31	20.30	23	25.55
13	15.25	22	14.68	Aug. 7	20.95	30	26.36
20	15.67	June 12	16.30	14	21.40	Nov. 6	26.35
27	12.34	19	17.40	21	22.30	Dec. 5	26.35
Apr. 3	11.30	26	17.64	Sept. 4	22.90	11	26.19
10	3.60	July 3	18.15	18	24.45	18	19.75
17	10.07	11	18.60	Oct. 2	24.95	26	26.78

Grant County

Grant 1 (\*1023, p. 50; 1071, p. 49). Marion Water Works. About 135 feet north of 9th St., 36 feet west of Whites Ave., extended, in city well field south of Big Four railroad tracks, and 110 feet south of public-supply well 6. Well filled; measurements discontinued Sept. 25. Measurements made by personnel of Marion Water Works, Wilmer Wilson, superintendent.

Water level, in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	64.6	72.2	70.8	72.6	68.9	67.6	71.3	68.6	85.6
2	65.8	74.2	70.1	70.8	68.7	68.1	72.0	72.3	84.5
3	65.8	71.3	70.4	71.1	68.8	75.4	71.1	72.5	83.5
4	66.8	72.1	70.7	70.7	68.7	71.1	69.2	75.6	83.4
5	68.6	72.3	69.9	70.4	68.9	70.4	68.6	80.6	82.9
6	71.9	71.1	70.5	70.6	68.8	70.7	69.1	77.2	82.8
7	74.3	70.9	70.6	72.5	68.9	69.4	73.7	79.3	87.6
8	....	71.2	69.5	71.1	69.1	69.4	69.8	78.3	83.6
9	68.6	72.8	69.5	72.0	69.1	69.3	68.8	78.0	81.0
10	68.6	70.5	69.5	71.1	69.1	70.7	69.6	80.0	82.6
11	79.2	71.3	69.4	71.7	68.8	70.7	69.1	82.6	85.4
12	72.2	71.2	69.3	71.6	68.6	68.1	68.8	80.9	85.5
13	72.2	71.1	....	71.1	68.3	77.2	66.4	81.7	84.7
14	77.4	71.5	68.8	72.4	68.5	73.2	68.8	82.9	82.2
15	81.2	69.8	70.5	71.0	68.7	72.3	70.0	79.3	85.5
16	81.2	71.0	69.5	71.6	68.7	75.4	71.6	81.4	82.0
17	80.9	69.7	68.8	70.8	68.6	74.9	69.6	77.0	82.6
18	79.2	69.8	69.8	70.6	68.7	71.7	71.4	80.9	84.7
19	73.6	69.7	70.6	69.1	68.4	71.5	70.1	82.1	81.2

## Grant 1--Continued.

Water level, in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
20	71.6	70.5	75.7	68.8	72.2	72.9	69.7	82.7	82.2
21	72.6	71.6	70.7	69.2	69.3	75.0	70.1	81.8	81.9
22	75.4	70.6	70.2	69.6	69.2	71.3	70.1	82.6	80.8
23	73.8	71.1	70.7	69.0	69.2	71.4	72.3	80.9	86.5
24	75.6	70.4	71.1	69.2	69.1	75.3	70.8	85.6	81.4
25	73.4	70.2	70.7	69.2	68.8	72.1	72.9	83.4	....
26	73.1	70.3	71.4	69.0	68.9	76.1	73.5	82.7	....
27	73.6	70.1	70.7	69.1	68.9	72.5	71.3	81.4	....
28	73.0	70.7	70.6	....	67.6	73.2	74.3	80.9	....
29	70.9	....	70.7	69.2	69.5	73.2	71.6	81.2	....
30	72.2	....	71.1	68.6	69.9	72.6	73.1	80.9	....
31	73.3	....	70.7	....	68.7	....	71.6	91.5	....

Grant 2 (\*1023, p. 51; 1071, p. 50). Marion Water Works. At pumping station, west of reservoir, and north of railroad. Measurements made by personnel of Marion Water Works, Wilmer Wilson, superintendent.

Water level at 2 a.m., in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	59.86	66.51	63.70	65.92	62.58	61.70	65.01	....	77.20	73.94	69.11	....
2	59.51	66.16	62.13	64.41	62.38	61.10	64.65	....	77.54	73.38	68.80	....
3	59.40	65.50	62.01	64.25	62.46	65.48	64.43	....	76.77	73.11	76.23	....
4	59.76	66.20	61.95	63.88	62.48	64.58	63.20	....	76.46	72.95	69.40	67.21
5	61.36	65.43	61.93	63.48	62.43	64.86	62.60	....	76.25	71.98	68.70	66.56
6	61.80	65.12	....	63.49	62.47	63.92	62.11	....	77.23	73.20	68.42	67.15
7	66.13	64.90	....	65.57	62.23	63.35	63.90	71.45	77.77	73.01	67.93	66.60
8	68.16	64.90	61.48	64.37	62.43	63.70	63.99	71.38	77.03	72.56	67.79	66.43
9	66.95	64.88	61.51	65.02	62.49	63.20	62.93	72.55	77.59	74.70	67.68	66.66
10	68.90	64.89	61.49	64.29	62.23	64.75	62.68	72.38	76.98	76.87	67.80	67.30
11	69.71	64.89	61.38	64.98	62.20	64.70	62.64	74.00	77.62	77.75	68.33	66.78
12	66.42	64.85	61.20	....	61.90	64.02	62.70	74.38	78.17	77.20	67.90	66.53
13	64.94	64.80	61.05	....	61.68	67.56	62.65	74.55	78.25	76.95	67.62	66.34
14	68.47	64.52	60.63	....	61.75	66.75	62.55	74.59	76.40	75.90	67.37	66.10
15	70.13	63.52	60.95	....	....	65.52	64.55	75.04	77.77	74.55	68.10	65.94
16	70.76	63.47	60.85	....	....	67.77	63.52	74.25	77.30	72.99	67.35	66.77
17	71.62	63.48	60.70	....	62.23	65.78	63.24	75.02	77.09	72.10	67.25	66.32
18	71.94	63.26	60.80	....	62.10	65.05	65.90	72.89	77.60	73.42	68.28	65.98
19	68.20	63.42	60.77	62.80	62.11	64.78	....	75.37	77.95	74.02	67.32	65.95
20	66.29	64.17	63.77	62.75	64.91	66.27	....	75.67	77.00	73.28	66.83	65.90
21	70.89	63.37	63.70	62.80	62.95	65.30	....	76.05	76.57	73.05	66.60	65.85
22	68.98	62.99	63.63	62.86	....	64.84	....	76.19	74.67	72.62	66.20	65.60
23	67.48	62.61	63.38	62.67	....	64.58	....	75.52	76.53	....	66.13	68.00
24	66.85	62.42	64.38	62.58	....	66.36	....	76.05	75.58	....	65.30	66.93
25	66.81	62.39	63.79	62.76	....	66.39	66.37	76.56	75.42	....	66.50	66.26
26	66.21	62.32	62.72	62.82	....	65.36	67.01	75.83	74.87	....	66.88	65.77
27	67.00	62.18	63.62	62.52	....	66.06	64.58	76.30	75.77	....	....	65.70
28	67.39	63.75	63.71	63.72	....	65.20	64.59	75.14	73.65	....	....	66.75
29	66.79	....	63.53	62.97	....	64.86	65.58	75.29	73.20	....	....	67.30
30	65.79	....	63.90	62.55	....	66.09	67.73	75.28	74.69	69.90	....	67.90
31	67.17	....	63.78	....	62.48	....	65.44	76.20	....	69.49	....	66.53

Grant 5 (\*1023, p. 51; 1071, p. 50). Anaconda Wire & Cable Co. In Marion, about 150 feet east of main track of Big Four Railroad and 130 feet south of East 8th St. Measurements made by C. C. Bishop, plant engineer, Anaconda Wire & Cable Co.

Water level at 2 a.m., in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	55.13	55.03	57.28	56.33	55.04	56.10	55.70	59.34	58.92	60.89	60.95	58.01
2	53.75	53.75	57.06	56.95	55.24	54.74	56.15	59.61	57.97	61.15	60.35	58.69
3	....	52.21	56.90	56.33	55.44	55.07	56.43	59.32	58.77	61.43	59.36	59.16
4	55.42	53.11	57.26	....	54.08	55.33	56.50	58.21	59.33	61.75	59.80	59.59
5	54.25	54.09	57.41	56.73	52.51	55.32	55.65	58.78	59.73	61.40	....	59.86
6	52.80	54.81	57.57	55.70	53.41	56.21	55.28	59.30	60.07	60.24	....	60.04

## Grant 5--Continued.

Water level at 2 a.m., in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
7	51.66	55.38	57.69	54.26	54.28	56.50	54.18	59.75	59.49	60.43	60.76	59.90
8	50.81	55.78	57.73	54.99	54.86	55.85	54.96	60.12	58.54	60.70	60.93	58.63
9	50.13	55.82	57.48	55.41	55.35	54.37	55.68	60.39	59.15	60.57	60.91	59.16
10	49.58	55.76	57.25	55.81	55.74	55.18	56.14	59.93	59.68	59.50	59.90	59.52
11	49.33	56.20	57.56	56.11	54.86	55.86	56.61	59.92	60.06	58.59	60.22	59.88
12	48.80	56.43	57.78	56.33	53.28	56.47	57.05	59.58	60.40	57.74	60.27	60.08
13	48.46	56.67	57.90	55.25	54.20	56.90	56.84	60.04	60.66	56.92	60.45	60.22
14	48.20	56.81	58.00	53.81	54.84	57.22	55.79	60.40	60.14	57.86	60.58	60.11
15	47.94	56.86	57.99	54.74	55.32	56.54	56.51	60.73	59.29	58.60	60.66	59.84
16	47.70	55.46	57.70	55.28	55.80	55.11	57.06	61.06	59.78	59.30	60.46	59.26
17	47.60	54.04	57.41	55.74	56.26	55.84	56.54	60.13	60.16	59.81	59.18	59.66
18	47.50	54.95	57.54	55.94	55.14	56.19	57.91	58.56	60.48	60.22	59.44	59.94
19	47.24	55.70	57.66	56.14	53.78	56.62	58.23	58.85	.....	59.62	59.73	60.14
20	46.91	56.18	57.74	55.30	54.81	57.08	58.12	59.20	.....	58.68	59.97	60.26
21	47.10	56.66	57.80	53.97	55.40	57.38	57.09	59.52	.....	59.37	60.15	59.34
22	49.10	56.79	57.66	54.78	55.03	56.93	57.57	59.77	.....	59.91	60.22	58.16
23	50.75	56.55	56.26	55.37	56.43	55.70	58.02	60.07	.....	59.25	59.89	58.90
24	52.26	56.38	55.66	55.87	56.79	56.26	58.35	59.49	.....	60.53	59.50	59.36
25	53.46	56.78	56.10	56.24	56.21	56.66	58.63	58.52	.....	60.77	59.87	58.95
26	52.41	57.00	.....	56.23	54.89	56.78	58.91	.....	61.77	60.16	60.19	57.59
27	51.14	57.17	56.47	54.67	55.76	56.87	58.72	.....	61.93	59.25	60.28	57.97
28	52.56	57.33	56.73	53.10	56.26	57.11	57.59	.....	61.83	59.79	59.00	56.65
29	53.64	.....	56.93	54.19	56.86	56.44	58.15	60.52	60.51	60.23	59.44	55.52
30	54.50	.....	56.05	54.89	57.20	55.10	58.58	60.63	60.60	60.50	59.35	56.76
31	54.81	.....	54.67	.....	57.01	.....	59.02	59.87	.....	60.76	.....	57.57

Grant 6 (\*1023, p. 52; 1071, p. 51). Joseph Wesco. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 18, T. 23 N., R. 8 E. Measurements made by Blanch Rush.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	17.45	Apr. 5	9.84	July 5	11.66	Oct. 4	15.82
11	17.20	12	8.64	12	11.89	11	15.87
18	16.90	19	7.83	18	12.80	18	16.60
24	16.30	26	6.88	25	13.77	25	16.68
31	14.16	May 3	6.36	Aug. 2	13.85	Nov. 1	16.60
Feb. 8	12.20	11	7.76	9	13.84	8	16.82
14	12.66	17	8.85	16	14.72	15	16.82
22	13.20	24	8.72	23	15.02	21	16.84
Mar. 1	13.77	30	7.61	30	15.06	29	16.80
8	13.84	June 6	6.76	Sept. 6	15.98	Dec. 6	16.85
15	13.80	14	8.79	13	15.72	20	16.81
22	13.10	20	10.50	20	15.75	27	17.07
29	10.86	28	10.84	27	15.78		

Hamilton County

Hamilton 2 (\*817, p. 45; 840, p. 77; 845, p. 72; 886, p. 99; 906, p. 23; 936, p. 25; 944, p. 25; 986, p. 28; 1016, p. 51; 1023, p. 53; 1071, p. 51). Public Service Co. of Indiana. In Noblesville, at water plant, "old ice plant well". Measurements made by Glenn Beaver, Public Service Co. of Indiana.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 13	22.30	Apr. 19	23.02	Sept. 8	22.60	Oct. 22	22.80
21	23.26	May 1	22.00	19	22.80	29	22.90
28	23.45	21	21.60	22	22.70	Nov. 10	23.02
Mar. 6	23.42	June 6	21.70	29	22.70	23	23.51
14	23.50	12	21.40	Oct. 5	22.80	Dec. 15	23.99
Apr. 4	22.80	Aug. 25	22.40	14	23.00	29	23.97
10	23.08	Sept. 2	21.50				

Hancock County

Hancock 1 (\*1071, p. 52). Cleveland, Cincinnati, Chicago, & St. Louis Railway Co. In Maxwell, in NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 8, T. 16 N., R. 7 E. Measurements made by J. L. Gant.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	25.15	Apr. 10	24.95	May 28	24.91	Aug. 7	27.91
Feb. 5	27.37	15	24.57	June 4	24.49	13	27.85
13	25.95	17	24.77	July 2	25.11	19	25.60
20	25.93	23	24.95	8	25.50	30	27.12
26	25.19	May 3	24.45	17	25.20	Sept. 4	27.91
Mar. 7	24.83	8	24.60	25	25.97	10	26.91
19	26.55	18	25.48	30	25.98	Oct. 27	26.50
27	26.72	24	25.13	Aug. 2	26.87	Nov. 1	26.38
Apr. 3	25.41						

Harrison County

Harrison 1 (\*845, p. 73; 886, p. 99; 906, p. 23; 936, p. 26; 944, p. 25; 986, p. 28; 1016, p. 52; 1023, p. 53; 1071, p. 52). Harrison County State Forest. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 24, T. 4 S., R. 2 E., on south side of truck trail 1, near Lowe Pond. Measurements made by K. I. Shumaker, Harrison County State Forest.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	0.86	Apr. 6	0.98	July 6	1.55	Oct. 5	3.25
12	1.30	13	.75	13	1.87	12	3.38
20	.93	20	.92	28	2.04	20	2.97
26	.81	27	1.34	Aug. 3	2.06	26	3.06
Feb. 2	1.01	May 4	1.82	11	2.47	Nov. 2	2.41
9	1.57	11	2.07	17	2.46	9	2.42
16	1.52	18	2.03	24	2.83	16	1.62
23	1.77	25	.61	31	3.06	23	2.18
Mar. 2	1.94	June 1	2.07	Sept. 7	3.09	30	2.18
9	1.28	8	2.11	14	3.05	Dec. 14	1.55
16	.97	15	2.42	21	3.30	21	1.90
23	1.72	23	2.07	28	2.99	28	2.26
30	.62	30	2.04				

Harrison 3 (\*845, p. 73; 886, p. 99; 906, p. 23; 936, p. 26; 944, p. 25; 986, p. 28; 1016, p. 52; 1023, p. 53; 1071, p. 52). Harrison County State Forest. SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 2, T. 4 S., R. 2 E., on south side of truck trail 1, about 350 yards northwest of service building. Measurements made by K. I. Shumaker, Harrison County State Forest.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	3.05	Apr. 6	3.13	July 6	5.15	Oct. 5	6.45
12	3.10	13	2.95	13	5.10	12	6.62
20	2.53	20	3.10	28	5.00	20	6.60
26	3.10	27	3.09	Aug. 3	5.15	26	6.85
Feb. 2	3.09	May 4	3.05	11	5.41	Nov. 2	6.67
9	3.11	11	3.13	17	5.57	19	6.73
16	3.30	18	3.13	24	5.78	16	6.72
23	3.41	25	2.57	31	5.95	23	6.77
Mar. 2	3.66	June 1	3.13	Sept. 7	6.06	30	6.79
9	3.12	8	3.21	14	6.18	Dec. 14	6.81
16	3.09	15	4.20	21	6.29	21	6.88
23	3.13	23	4.71	28	6.33	28	6.90
30	2.92	30	4.96				

Hendricks County

Hendricks 1 (\*1016, p. 52; 1023, p. 54; 1071, p. 53). Brocia A. Smith. W $\frac{1}{2}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 14, T. 14 N., R. 1 W., at southeast corner of abandoned township school about 1.5 miles south of Clayton. Measurements made by B. A. Smith.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	5.11	Mar. 24	4.43	June 9	0.04	Aug. 11	5.00
13	5.93	31	3.49	16	1.19	18	4.80
20	4.90	Apr. 7	2.88	23	1.78	25	4.89
27	3.80	14	2.06	30	2.50	Sept. 5	5.25
Feb. 3	3.18	28	.95	July 7	3.06	15	5.40
17	3.80	May 5	.63	14	3.06	23	5.50
24	4.30	13	1.90	21	3.96	29	5.35
Mar. 3	4.71	19	2.18	28	4.34	Dec. 22	6.90
9	5.27	June 2	2.08	Aug. 4	4.61	29	6.91
17	4.57						

Henry County

Henry 2 (\*1071, p. 53). Gilbert M. Casey. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 18, T. 17 N., R. 9 E., about 2 miles west of Cadiz, about 20 feet west of road fence. Measurements made by G. M. Casey.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	15.25	Mar. 31	13.12	June 22	13.95	Oct. 12	14.72
12	15.14	Apr. 7	13.04	29	14.45	20	14.95
19	14.52	14	12.80	July 6	13.80	26	15.90
26	13.59	20	12.57	13	13.25	Nov. 2	16.00
Feb. 2	13.22	28	12.10	20	12.55	9	16.08
9	13.65	May 4	12.05	27	13.05	16	16.18
16	13.85	11	12.60	Aug. 31	14.10	23	15.40
23	14.05	18	12.92	Sept. 7	14.35	30	15.32
Mar. 2	14.30	26	12.65	14	14.45	Dec. 7	15.14
10	14.74	June 1	12.05	21	14.38	14	15.28
16	13.90	8	11.79	28	14.25	21	15.12
24	13.17	15	12.75	Oct. 4	14.41	28	14.95

Howard County

Howard 3 (\*944, p. 25; 986, p. 29; 1016, p. 53; 1023, p. 54; 1071, p. 53). Pittsburg Plate Glass Co., Kokomo. Measurements discontinued Oct. 23, 1946.

Howard 4 (\*1023, p. 54; 1071, p. 53). Owner unknown. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 24, T. 24 N., R. 4 E., 0.75 mile north of Vermont, 30 feet east of road. Measurements made by Abe D. Bontroger.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	14.67	Apr. 5	4.50	July 5	5.79	Oct. 4	10.05
11	14.80	12	2.56	12	6.54	11	10.34
18	14.95	19	2.20	19	6.96	18	10.40
25	15.22	25	2.00	26	7.43	25	10.60
Feb. 3	10.95	May 3	2.00	Aug. 2	7.72	Nov. 1	10.78
8	9.55	10	3.29	9	8.35	8	11.03
15	8.96	17	2.37	16	8.45	15	11.26
22	8.94	24	2.69	23	8.80	22	11.34
Mar. 1	8.90	June 1	1.30	30	9.05	29	11.41
8	9.07	7	2.27	Sept. 6	9.34	Dec. 6	10.95
15	9.01	14	3.64	13	9.40	13	10.12
22	8.19	21	4.55	20	9.69	20	9.75
28	6.66	28	5.26	27	9.80	27	9.85



Huntington County

Huntington 1 (\*1023, p. 54; 1071, p. 54). S. Woodward Schell. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 12, T. 27 N., R. 8 E. Measurements made by S. Woodward Schell.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	35.70	Apr. 13	2.20	July 20	6.80	Oct. 13	35.90
12	32.20	27	2.29	27	18.20	20	35.80
19	28.50	May 4	3.06	Aug. 3	24.90	26	32.90
27	14.50	11	2.95	10	28.10	Nov. 2	35.80
Feb. 2	7.80	18	3.15	18	33.80	10	35.70
9	4.90	24	3.25	24	32.30	18	35.50
16	4.80	June 1	2.40	31	35.00	23	35.20
Mar. 1	3.80	8	2.40	Sept. 7	33.30	Dec. 1	35.10
9	4.40	15	3.80	14	33.60	8	35.08
16	3.78	22	3.70	21	32.90	15	34.90
23	4.34	29	6.97	28	33.70	23	34.82
30	3.20	July 6	5.30	Oct. 5	36.00	29	34.85
Apr. 6	2.75						

Jackson County

Jackson 1 (\*840, p. 78; 845, p. 74; 886, p. 100; 906, p. 24; 936, p. 27; 944, p. 26; 986, p. 29; 1016, p. 53; 1023, p. 55; 1071, p. 54). Jackson State Forest. In Brownstown, in NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 19, T. 5 N., R. 5 E., near northeast corner of office of abandoned Civilian Conservation Corps camp, Jackson State Forest. Measurements made by Roscoe Overshiner and T. K. Rosenbarger, Indiana Department of Conservation.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	7.50	Apr. 7	4.25	July 7	7.44	Oct. 6	11.93
13	7.75	14	3.80	14	6.20	13	12.21
20	6.67	21	3.46	21	6.73	21	12.65
27	6.88	28	3.26	28	6.75	28	13.33
Feb. 3	6.17	May 5	3.00	Aug. 4	7.53	Nov. 3	13.07
10	7.06	12	5.30	12	8.77	10	12.75
17	7.40	19	3.80	18	11.17	17	12.58
24	7.45	26	4.20	25	10.67	Dec. 1	11.55
Mar. 2	7.64	June 2	2.66	Sept. 2	11.16	8	11.00
10	7.90	9	4.39	8	11.37	15	10.89
17	6.60	16	6.20	15	12.40	22	10.53
24	6.30	23	5.54	22	11.40	30	10.20
31	5.90	30	6.10	29	11.75		

Jackson 2 (\*1016, p. 53; 1023, p. 55; 1071, p. 55). Hiram H. Martin. W $\frac{1}{2}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 24, T. 6 N., R. 2 E., about 1 mile south and about 2 miles east of Norman. Measurements made by Doyle Fish.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	12.95	Mar. 2	12.75	Sept. 15	13.35	Nov. 10	15.39
12	12.50	9	13.29	22	13.73	17	15.95
19	12.50	Aug. 2	10.84	29	14.17	23	16.31
26	12.20	10	12.29	Oct. 6	14.49	30	16.64
Feb. 2	12.60	18	12.54	13	14.75	Dec. 7	16.24
10	12.28	25	12.78	20	14.84	15	16.40
16	12.39	31	12.83	27	15.46	21	16.34
23	12.64	Sept. 8	13.28	Nov. 2	15.54	29	16.25

Jay County

Jay 2. Armstrong Cork Co. In Dunkirk, in NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 9, T. 22 N., R. 12 E. Unused drilled well, diameter 3 inches, depth 85 feet. Measuring point, top of 3-inch pipe, 2.30 feet above land-surface datum. First measurement July 16, 1947. Measured by J. T. Martin, plant engineer, Armstrong Cork Co.

Jay 2--Continued.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 16	33.17	Aug. 18	34.49	Sept. 13	35.77	Dec. 13	36.14
25	34.50	22	35.84	27	35.84	20	33.69
Aug. 1	36.25	30	33.49	Dec. 6	38.29	29	37.59
9	34.40	Sept. 6	33.87				

Jefferson County

Jefferson 2 (\*840, p. 79; 845, p. 74; 886, p. 101; 906, p. 24; 936, p. 28; 944, p. 26; 986, p. 29; 1016, p. 54; 1023, p. 55; 1071, p. 55). Clifty Falls State Park. At superintendent's house. Measurements made by Owen H. Vestal, Clifty Falls State Park.

Water level, in feet below land-surface datum, 1947

Jan. 6	30.49	Mar. 31	27.70	July 7	27.20	Oct. 13	28.13
13	30.49	Apr. 7	27.90	14	27.51	20	28.09
16	27.89	14	26.70	21	27.54	27	28.07
20	30.40	21	22.30	Aug. 4	27.58	Nov. 3	28.10
27	28.03	28	23.70	11	28.44	10	28.09
Feb. 3	27.20	May 5	24.20	17	27.62	17	28.08
10	28.70	12	23.90	Sept. 1	27.22	24	28.10
17	28.60	22	26.40	8	27.80	Dec. 1	28.11
24	28.50	June 2	26.10	15	27.26	8	28.22
Mar. 3	28.97	9	26.10	22	27.60	15	28.24
10	27.80	16	26.60	29	28.22	22	28.24
17	27.84	23	26.90	Oct. 6	28.19	29	28.26
24	27.86	30	29.20				

Jennings County

Jennings 1 (\*840, p. 79; 845, p. 74; 886, p. 101; 906, p. 24; 936, p. 28; 944, p. 26; 986, p. 29; 1016, p. 54; 1023, p. 56; 1071, p. 55). Muscatatuck State Park. SE $\frac{1}{4}$  sec. 3, T. 6 N., R. 8 E. Automatic water-stage recorder installed on Sept. 17, 1947. New measuring point, top of recorder shelf, 2.13 feet above old measuring point and 2.13 feet above land-surface datum. Measurements made by Logan Summerfield and Max Whitcomb.

Water level at 2 a.m., in feet below land-surface datum, 1947

(From recorder charts)

Jan. 4	a 5.25	Sept. 20	12.80	Oct. 16	13.52	Nov. 9	14.34
11	a 6.73	21	12.78	17	13.56	10	14.36
18	a 6.08	22	12.75	18	13.60	11	14.36
25	a 5.39	23	12.73	19	13.64	12	14.32
Feb. 1	a 4.19	24	12.72	20	13.68	13	14.31
6	a 6.37	25	12.75	21	13.72	14	14.32
15	a 7.05	26	12.89	22	13.71	15	14.31
22	a 7.72	27	12.84	23	13.80	16	14.26
Mar. 1	a 8.33	28	12.87	24	13.84	17	14.23
8	a 9.00	Oct. 1	12.93	25	13.89	18	14.22
15	a 6.27	2	12.97	26	13.94	19	14.21
22	a 5.74	3	13.00	27	13.99	20	14.20
29	a 4.64	4	13.04	28	14.00	21	14.19
Apr. 5	a 1.82	5	13.08	29	14.06	22	14.19
26	a 1.49	6	13.12	30	14.09	23	14.15
May 3	a 2.55	7	13.16	31	14.12	24	14.07
10	a 4.15	8	13.20	Nov. 1	14.15	25	13.92
17	a 1.64	9	13.23	2	14.18	26	13.69
24	a 1.65	10	13.27	3	14.21	27	13.59
Sept. 3	a 12.03	11	13.32	4	14.23	28	13.49
11	a 12.69	12	13.36	5	14.26	29	13.44
17	12.87	13	13.41	6	14.27	30	13.41
18	12.84	14	13.45	7	14.30	Dec. 1	13.40
19	12.82	15	13.48	8	14.32	2	13.37

a Tape measurement at another hour.

## Jennings 1--Continued.

Water level at 2 a.m., in feet below land-surface datum, 1947  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Dec. 3	13.37	Dec. 11	13.35	Dec. 18	13.32	Dec. 25	13.15
4	13.36	12	13.37	19	13.31	26	13.12
5	13.34	13	13.38	20	13.29	27	13.10
6	13.33	14	13.39	21	13.27	28	13.08
7	13.34	15	13.39	22	13.23	29	13.08
8	13.31	16	13.35	23	13.17	30	13.07
9	13.33	17	13.32	24	13.16	31	13.06
10	13.35						

Johnson County

Johnson 1 (\*1016, p. 54; 1023, p. 56; 1071, p. 55). City of Bargserville. W<sup>1</sup>/<sub>2</sub>SE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec. 35, T. 13 N., R. 3 E. Measurements made by D. D. Core.

Water level, in feet below land-surface datum, 1947

Jan. 7	7.18	Apr. 9	5.95	July 22	6.05	Oct. 21	7.49
14	6.34	16	5.39	29	6.30	28	7.67
21	5.98	22	5.38	Aug. 12	6.00	Nov. 4	7.74
29	5.65	29	4.99	19	5.75	12	7.49
Feb. 4	4.63	May 6	4.71	26	5.66	18	7.59
11	5.45	14	5.18	Sept. 9	6.14	25	7.63
18	5.84	27	4.78	16	6.36	Dec. 2	7.61
25	6.14	June 3	2.69	24	6.61	10	7.79
Mar. 4	6.60	12	3.89	30	6.77	17	8.04
11	7.00	17	4.38	Oct. 7	7.09	23	7.87
18	6.79	25	4.91	14	7.18	31	7.63
25	6.48	July 8	5.58				

Knox County

Knox 1 (\*1016, p. 55; 1023, p. 56; 1071, p. 56). William M. Downey. In Monroe City, 1 block north of State Highway 61 on lot 60. Measurements made by William M. Downey.

Water level, in feet below land-surface datum, 1947

Jan. 2	34.42	Apr. 3	34.37	July 3	32.79	Oct. 2	33.26
9	34.75	10	34.34	10	32.77	9	33.29
16	34.68	17	34.25	17	32.77	16	33.30
23	34.62	24	34.22	24	32.83	23	33.38
30	34.60	May 1	33.95	31	32.83	30	33.44
Feb. 6	34.52	8	33.76	Aug. 7	32.87	Nov. 6	33.44
13	34.45	15	33.48	14	32.93	13	33.54
20	34.40	22	33.42	21	32.97	20	33.58
27	34.35	29	33.35	28	32.93	27	33.62
Mar. 6	34.37	June 5	33.17	Sept. 4	33.05	Dec. 4	33.65
13	34.39	12	33.10	11	33.10	11	33.75
20	34.35	19	32.97	18	33.27	18	33.76
27	34.30	26	32.82	25	33.23	25	33.80

Kosciusko County

Kosciusko 2 (\*845, p. 74; 886, p. 101; 936, p. 28; 944, p. 26; 986, p. 29; 1016, p. 55; 1023, p. 56; 1071, p. 56). Wawasee State Fish Hatchery. Flowing well at sunken garden. Measurements made by W. E. Bowse, Norman Clouse, and George Fry.

## Kosciusko 2--Continued.

Water level, in feet above land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	1.40	Apr. 5	1.95	July 5	2.04	Oct. 4	1.56
11	1.56	12	1.83	12	1.96	11	1.58
18	1.44	19	1.95	19	1.98	18	1.63
25	1.50	26	1.77	26	1.92	24	1.50
Feb. 1	1.50	May 3	1.75	Aug. 2	1.87	Nov. 1	1.54
8	1.67	10	2.00	9	1.77	8	1.62
15	1.77	17	2.17	16	1.73	15	1.46
22	1.67	24	2.21	23	1.63	22	1.46
Mar. 1	1.64	31	2.21	30	1.71	29	1.42
8	1.55	June 7	2.35	Sept. 6	1.67	Dec. 6	1.46
15	1.63	12	2.56	13	1.71	13	1.48
22	1.58	21	2.21	20	1.69	20	1.46
29	1.75	28	2.23	27	1.48	27	1.58

Kosciusko 3 (\*1023, p. 56; 1071, p. 56). Millard G. Stookey.  
SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 1, T. 33 N., R. 5 E. Measurements made by Millard G. Stookey.

Water level, in feet below land-surface datum, 1947											
Jan.	2	13.59	Mar.	8	13.58	May	2	12.26	July	11	12.28
	9	13.64		14	13.34		9	12.22		25	12.36
	16	13.72		21	13.26		16	11.78	Aug.	15	12.66
	30	13.74		28	13.22		23	11.74		22	12.70
Feb.	1	13.67	Apr.	4	13.21		30	11.81		29	12.73
	15	13.52		11	13.00	June	6	12.02	Dec.	19	13.47
	22	13.44		18	12.88	July	4	12.22		26	13.52
Mar.	1	13.40		25	12.66						

## La Porte County

La Porte 1 (\*944, p. 26; 986, p. 30; 1016, p. 55; 1023, p. 57; 1071, p. 57). City of LaPorte. Well 4 at pumping station of La Porte Water Works. Water level affected by pumping for public supply from this and 3 other similar wells at pumping station. Measurements made by Arthur C. Baker, La Porte Water Works, Ray D. Gangwer, superintendent.

Water level, in feet below land-surface datum, 1947											
Jan.	4	9.11	Apr.	12	6.48	July	12	12.70	Oct.	11	11.70
	11	8.51		19	10.28		19	7.70		18	9.70
	18	9.09		26	8.20		26	13.70		25	13.26
	25	9.11	May	3	8.21	Aug.	2	11.68	Nov.	1	13.70
Feb.	1	8.70		10	7.70		9	12.70		8	11.68
	8	8.26		17	7.70		16	13.70		15	8.70
	15	8.70		24	7.68		23	17.30		22	12.68
	22	9.70		31	4.28		30	5.2		29	11.06
Mar.	1	9.21	June	7	8.70	Sept.	6	10.31	Dec.	6	10.68
	8	11.28		14	8.70		14	10.28		13	12.29
	15	8.70		21	8.28		20	10.70		20	12.28
	22	9.28		28	9.48		27	9.70		27	10.68
	29	9.42	July	5	12.68	Oct.	4	12.28			

La Porte 2 (\*994, p. 27; 986, p. 30; 1016, p. 55; 1023, p. 57; 1071, p. 57). Kankakee State Game Preserve. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 10, T. 33 N., R. 3 W., about 500 feet north of State Highway 8, on west side of Kankakee River. Measurements made by J. L. Short and Herbert Busse, superintendent, Kankakee State Game Preserve.

Water level, in feet below land-surface datum, 1947											
Jan.	3	5.87	Mar.	7	5.45	May	11	3.40	July	18	5.35
	10	5.88		14	5.43		16	3.52		25	5.68
	17	5.52		21	5.55		23	3.29	Aug.	8	6.10
	23	5.45		28	5.07		30	3.27		15	6.35
	31	5.17	Apr.	4	4.52	June	13	3.20		22	6.60
Feb.	7	4.67		11	4.03		20	3.55		29	6.55
	14	4.65		19	3.86		27	4.14	Sept.	1	6.30
	21	5.07		25	3.15	July	4	4.60		12	6.03
	28	5.29	May	2	3.00		11	5.10		19	6.10

## La Porte 2--Continued.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 26	5.98	Oct. 24	6.55	Nov. 21	5.60	Dec. 12	5.18
Oct. 3	6.10	31	6.10	28	5.60	19	5.16
10	6.18	Nov. 7	6.00	Dec. 5	5.30	26	5.40
17	6.25	14	5.90				

Lawrence County

Lawrence 1 (\*1016, p. 56; 1023, p. 57; 1071, p. 57). David S. Cox. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 7, T. 3 N., R. 1 W., north of Georgia. Measurements made by David S. Cox.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	16.16	Apr. 3	18.30	July 3	20.34	Oct. 2	21.79
9	15.99	10	15.52	10	20.49	9	21.80
16	14.84	17	13.78	17	20.59	16	21.79
23	14.38	24	15.95	24	20.77	23	21.81
30	13.87	May 1	11.14	31	20.68	30	21.81
Feb. 6	16.22	8	14.56	Aug. 7	21.04	Nov. 6	21.80
13	18.45	15	17.72	14	21.39	13	21.79
20	19.09	22	12.88	21	21.62	20	21.76
27	19.23	29	16.52	28	21.75	27	21.68
Mar. 6	20.22	June 5	13.75	Sept. 4	21.75	Dec. 4	21.67
13	20.23	12	17.85	11	21.76	11	21.76
20	18.24	19	18.96	18	22.45	18	21.69
27	18.35	26	19.79	25	21.79	25	21.67

Lawrence 2 (\*1016, p. 56; 1023, p. 58; 1071, p. 58). Roscoe Ingram. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 36, T. 4 N., R. 1 W., north of Mitchell between Monon Railroad and Robertsville Pike. Measurements made by Roscoe Ingram.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	21.03	Apr. 9	19.20	July 16	21.43	Oct. 15	21.43
8	20.61	16	19.54	23	21.43	22	21.44
15	20.86	23	19.89	30	21.38	29	21.42
22	19.21	30	15.81	Aug. 6	21.39	Nov. 5	21.41
29	20.60	May 14	21.31	13	21.41	12	21.39
Feb. 12	21.41	21	18.61	20	21.44	19	21.39
19	21.40	28	20.86	27	21.44	26	21.41
26	21.45	June 4	18.00	Sept. 3	21.43	Dec. 4	21.38
Mar. 5	21.44	11	21.21	10	21.44	10	21.43
12	21.46	18	20.17	17	21.43	17	21.32
19	21.29	25	21.38	24	21.38	24	21.42
26	21.29	July 2	21.41	Oct. 1	21.43	31	21.43
Apr. 2	21.33	9	21.42	8	21.43		

Madison County

Madison 2 (\*817, p. 47; 840, p. 79; 845, p. 75; 886, p. 101; 906, p. 25; 936, p. 29; 940, p. 27; 986, p. 30; 1016, p. 56; 1023, p. 58; 1071, p. 58). Anderson Water Department well 2. In Anderson. Measurements discontinued Aug. 7, 1946.

Madison 3 (\*817, p. 47; 840, p. 79; 845, p. 75; 886, p. 101; \*906, p. 25; \*936, p. 29; 986, p. 30). Albert Closser. In Frankton, in NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 6, T. 20 N., R. 7 E., about 2 blocks east of old Civilian Conservation Corps camp. Measurements resumed Feb. 13, 1947. Measurements made by Helen I. Whitcomb, Frankton.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 13	22.24	Apr. 2	22.27	May 13	19.96	June 24	19.74
18	22.19	9	21.06	20	19.78	30	19.94
25	22.27	14	21.27	27	19.62	July 9	20.35
Mar. 11	22.51	22	21.08	June 1	19.53	16	20.49
17	22.35	28	20.64	9	19.29	23	21.87
25	22.20	May 6	20.18	18	19.55	Aug. 1	21.10

## Madison 3--Continued.

Water level, in feet below land-surface datum, 1947								
Date	Water level	Date	Water level	Date	Water level	Date	Water level	
Aug. 6	21.29	Sept. 20	22.25	Oct. 21	23.35	Nov. 25	23.55	
14	21.59		23	22.95	28	23.18	Dec. 3	23.60
22	21.91		Oct. 2	22.96	Nov. 5	23.45	10	23.78
27	22.05	9		23.25	12	23.18	17	23.86
Sept. 5	22.34	14	23.17	20	23.45	26	23.98	
12	22.54							

Madison 5 (#1016, pp. 56-57; 1023, p. 58; 1071, p. 58). Elwood Water Works. At city well field. Measurements made by Roy Chance, Elwood Water Works. Measurements discontinued July 31, 1947.

Water level, in feet below land-surface datum, 1947											
Jan.	3	58	Feb.	20	59	Apr.	10	54	June	6	58
	9	59		27	59		19	54		14	51
	18	54	Mar.	7	56		26	50		20	67
	24	57		13	54	May	3	51		27	61
	30	57		20	57		9	56	July	5	61
Feb.	7	58		27	58		17	58		12	55
	13	60	Apr.	5	51		24	59		31	68

Madison 6. Russel Wann. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 26, T. 21 N., R. 7 E., about 100 feet west of county road near old house foundation. Unused driven well, diameter 1 $\frac{1}{2}$  inches, depth 35 feet. Measuring point, top edge of pitcher pump, 2.5 feet above land-surface datum. First measurement Apr. 1, 1947. Measured by Julius E. Ball, R. F. D. 3, Alexandria.

Water level, in feet below land-surface datum, 1947							
Apr. 1	6.19	Apr. 28	6.11	June 2	4.50	Aug. 12	11.41
6	6.14	May 6	5.19	10	4.62	20	9.50
14	5.07	19	4.50	25	7.42	Sept. 17	7.30
21	5.49	26	4.70	July 9	8.43		

Madison 7 (\*Formerly Madison 1 in 817, p. 47; 840, p. 79; 845, p. 75; 886, p. 101; 906, p. 25; 936, p. 28; \*944, p. 27; 986, p. 30; 1016, p. 56; 1023, p. 58; Madison 7 in 1071, p. 59). Mounds State Park. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 16, T. 19 N., R. 8 E., on west side of State Route 32 about 0.3 mile south of entrance to park. Measured by personnel of Mounds State Park.

Water level, in feet below land-surface datum, 1947							
Apr. 28	2.64	June 9	0.51	July 21	1.00	Sept. 23	3.72
May 5	.70	July 1	1.10	28	1.30	30	4.03
21	1.30	8	2.08	Sept. 15	3.42		

## Marion County

Marion 1 (#817, p. 48; 840, p. 80; 845, p. 75; 886, p. 102; 906, p. 25; 936, p. 29; \*944, p. 27; 986, p. 30; 1016, p. 57; 1023, p. 59; 1071, p. 59). Indianapolis Water Co. "motor well 15." In Riverside well field Indianapolis. Measurements generally made at 10:00 a.m. by personnel of Indianapolis Water Co., L. S. Finch, chief engineer.

Water level, in feet below land-surface datum, 1947											
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. Dec.
1	18.68	.....	18.74	18.08	17.36	17.70	.....	.....	.....	20.28	..... 18.96
2	.....	.....	18.54	17.99	17.08	17.70	.....	17.82	.....	.....	..... 19.18
3	.....	.....	18.66	18.24	16.96	.....	.....	.....	.....	20.58	..... a19.22
4	.....	.....	18.72	.....	16.88	27.05	.....	17.80	20.30	19.30	..... 20.10
5	.....	.....	20.22	.....	17.02	.....	17.58	18.20	a18.96	19.20	..... 20.20
6	18.68	.....	18.92	.....	17.09	.....	17.56	.....	.....	20.60	..... 20.20
7	..... a19.89	18.80	.....	17.26	.....	17.60	18.44	.....	19.23	a19.34	19.90
8	..... a20.22	18.76	.....	17.22	.....	17.72	.....	18.64	19.38	19.20	a19.60
9	..... a18.74	.....	.....	.....	.....	17.86	.....	19.54	.....	19.00	.....
10	..... a19.42	18.68	.....	.....	.....	17.84	.....	.....	.....	19.00	.....
11	..... a19.62	18.76	21.62	.....	19.04	17.80	.....	.....	.....	.....	a20.34
12	..... a20.50	18.83	19.68	.....	18.98	17.82	.....	19.80	.....	19.18	.....

a Gravel wells in-service.

## Marion 1--Continued.

Water level, in feet below land-surface datum, 1947											
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. Dec.
13	.....	a22.52	.....	17.68	17.30	.....	.....	.....	.....	.....	19.30
14	.....	a19.30	.....	17.66	17.40	17.26	17.72	.....	.....	.....	.....
15	.....	a24.78	.....	17.84	17.49	17.04	.....	.....	18.90	.....	.....
16	.....	.....	.....	17.90	17.51	17.16	.....	.....	19.06	.....	.....
17	.....	22.40	.....	17.84	.....	.....	.....	.....	19.10	.....	.....
18	19.52	.....	.....	17.80	17.60	.....	.....	.....	.....	19.14	.....
19	18.24	20.50	.....	17.78	17.78	.....	.....	.....	.....	19.08	.....
20	.....	22.69	.....	.....	.....	.....	.....	.....	.....	18.94a33.24	.....
21	18.54	.....	.....	.....	a19.32	.....	.....	.....	.....	19.22a33.90	.....
22	a18.32	.....	18.46a31.58	17.66	17.32	.....	a19.20	.....	.....	19.56	19.66
23	18.84	.....	18.14	33.66	18.06	17.48	.....	.....	.....	19.26	23.62
24	.....	.....	a18.24a33.58	17.42	.....	.....	a19.50	.....	.....	.....	20.72
25	.....	.....	18.24	.....	17.20	.....	.....	.....	.....	19.10	19.32
26	.....	.....	18.18a19.04	17.26	17.64	17.90	.....	.....	.....	.....	19.50
27	.....	.....	18.12	.....	17.42	.....	17.68	.....	19.12	.....	19.48
28	19.58	.....	18.12	17.62	.....	.....	17.88	.....	.....	.....	19.18
29	18.28	.....	18.10	.....	17.96	.....	18.06	19.58	19.76	.....	19.44
30	a18.28	.....	17.82	.....	17.85	.....	18.06	.....	19.18	.....	.....
31	.....	.....	17.96	.....	.....	.....	18.10	.....	.....	.....	.....

a Gravel wells in service.

Marion 2 (\*817, p. 48; 840, p. 80; 886, p. 102; 906, p. 26; 936, p. 32; 944, p. 28; 986, p. 31; 1023, p. 59; 1071, p. 60). Security Trust Bank Building, 150 East Washington St., Indianapolis. Measurements made by personnel of Geological Survey, U. S. Dept. of Interior.

Water level at 2 a.m., in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	53.59	52.96	51.83	51.45	52.52	53.94	56.35	58.60	61.58	60.60	58.17	54.53
2	53.46	53.02	51.78	51.58	52.65	53.89	56.64	58.76	61.51	60.31	58.02	54.43
3	53.37	52.93	51.73	51.58	52.72	53.93	56.90	58.85	61.52	60.03	57.83	54.39
4	53.38	52.83	51.72	51.71	52.77	53.94	57.07	58.66	61.66	59.82	57.62	54.36
5	53.32	52.80	51.72	51.73	52.88	53.93	57.19	58.95	61.75	59.70	57.48	54.32
6	53.24	52.73	51.71	51.99	52.81	54.13	57.29	59.07	61.90	59.59	57.38	54.33
7	53.17	52.68	51.71	52.18	52.72	54.33	57.31	59.22	62.08	59.44	57.19	54.26
8	53.14	52.67	51.67	52.13	52.72	54.59	57.40	59.37	62.20	59.31	57.06	54.15
9	53.13	52.65	51.67	52.00	52.70	54.70	57.50	59.52	62.33	59.24	56.93	54.14
10	53.12	52.59	51.64	51.96	52.63	54.93	57.50	59.66	62.48	59.11	56.76	54.08
11	53.04	52.56	51.62	51.95	52.59	55.29	57.48	59.68	62.66	58.98	56.57	54.04
12	53.03	52.52	51.61	52.16	52.51	55.64	57.58	59.71	62.87	59.03	56.46	54.00
13	53.02	52.48	51.58	52.29	52.50	55.86	57.73	59.80	62.99	59.08	56.34	53.95
14	52.96	52.42	51.49	52.17	52.63	56.14	57.75	59.92	63.12	58.98	56.21	53.88
15	53.00	52.36	51.34	52.11	52.80	56.14	57.82	60.10	63.12	58.87	56.05	53.76
16	53.02	52.35	51.35	52.07	53.09	55.91	57.85	60.22	62.88	58.79	55.93	53.67
17	53.09	52.29	51.47	52.13	53.34	55.70	57.90	60.35	.....	58.79	55.87	53.72
18	53.09	52.24	51.46	52.09	53.72	55.59	58.03	60.31	62.41	58.84	55.79	53.65
19	53.07	52.24	51.47	52.07	53.88	55.50	58.22	60.33	62.50	58.98	55.65	53.64
20	52.91	52.21	51.46	52.16	54.00	55.50	58.30	60.42	62.72	59.11	55.55	53.63
21	52.92	52.16	51.48	52.19	54.08	55.50	58.19	60.53	62.90	59.10	55.45	53.58
22	53.00	52.14	51.51	52.21	54.07	55.55	58.03	60.64	63.12	59.05	55.33	53.49
23	52.92	52.10	51.50	52.25	54.05	55.70	57.87	60.74	62.89	58.99	55.28	53.41
24	52.85	52.02	51.43	52.38	54.07	55.67	57.77	60.86	62.55	59.15	55.13	53.50
25	52.83	51.96	51.40	52.49	54.20	55.65	57.79	60.82	62.32	59.22	55.04	53.34
26	52.83	51.94	51.48	52.52	54.14	55.65	57.94	60.83	62.11	59.25	54.98	53.23
27	52.85	51.91	51.53	52.50	54.10	55.75	58.09	60.96	61.80	59.25	54.90	53.20
28	52.87	51.89	51.51	52.49	54.06	55.91	58.02	61.10	61.46	59.06	54.79	53.08
29	52.85	.....	51.47	52.41	54.08	56.11	58.07	61.25	61.12	58.78	54.70	52.99
30	52.76	.....	51.54	52.37	54.14	56.19	58.23	61.38	60.88	58.54	54.64	52.88
31	52.83	.....	51.50	.....	54.03	.....	58.39	61.51	.....	58.36	.....	52.84

Marion 3 (\*817, p. 48; 840, p. 80; 845, p. 75; 886, p. 102; 906, p. 27; 936, p. 32; 944, p. 29; 986, p. 32; 1016, p. 58; 1023, p. 60; 1071, p. 60). Emmerich Manual Training High School, Indianapolis. Measurements made by personnel of Geological Survey, U. S. Dept. of Interior.

## Marion 3--Continued.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	53.30	Apr. 14	50.90	July 14	49.70	Oct. 13	52.63
13	53.61	21	50.98	28	50.47	20	51.46
20	52.69	28	51.31	Aug. 4	50.82	27	51.43
27	53.24	May 5	50.53	11	51.19	Nov. 3	52.05
Feb. 3	52.13	12	49.85	18	52.12	11	51.82
10	52.44	19	49.56	25	52.14	17	51.45
17	51.68	26	50.05	Sept. 2	51.98	24	50.52
24	51.58	June 2	49.38	8	53.02	Dec. 1	49.52
Mar. 3	51.66	9	49.03	15	52.92	8	49.91
10	51.08	16	50.18	22	53.32	15	49.39
24	50.36	23	50.65	29	52.92	22	49.06
31	51.00	30	49.69	Oct. 6	52.58	29	48.37
Apr. 7	50.88	July 7	50.48				

Marion 4 (\*840, p. 80; 845, p. 76; 886, p. 103; 906, p. 27; 936, p. 32; 944, p. 29; 986, p. 32; 1016, pp. 58, 59; 1023, p. 60; 1071, p. 61). Layne-Northern Co., Inc. In Indianapolis, in valley of Lick Creek, about 100 feet north of creek, about 700 feet west of South Meridian St., and about 350 feet south of Edwards Ave. Measurements made by personnel of Geological Survey, U. S. Dept. of Interior.

Water level, in feet below land-surface datum, 1947							
Jan. 6	5.11	Apr. 14	4.45	June 30	1.58	Sept. 22	4.18
13	5.06	21	3.98	July 7	1.93	29	4.20
20	4.98	28	3.91	14	2.63	Oct. 6	4.44
27	4.86	May 5	3.52	21	2.52	13	4.60
Feb. 3	4.77	12	3.33	28	3.02	20	4.67
17	4.59	19	3.26	Aug. 4	3.01	Nov. 17	4.83
24	4.57	26	3.19	11	3.81	Dec. 1	4.80
Mar. 3	4.62	June 2	3.12	18	4.33	8	4.79
7	4.55	9	2.33	25	4.11	15	4.82
10	4.56	16	1.86	Sept. 2	3.87	22	4.86
31	4.52	23	1.81	8	4.27	29	4.92
Apr. 7	4.35						

Marion 9 (\*886, p. 103; 906, p. 27; 936, p. 32; 944, p. 30; 986, p. 32; 1016, p. 59; 1023, p. 61; 1071, p. 61). In Indianapolis, at former American Brewery, West Ohio St., at Indianapolis Water Co. canal. Measurements made by Geological Survey, U. S. Dept. of Interior.

Water level, in feet below land-surface datum, 1947							
Jan. 6	48.10	Apr. 7	46.94	July 7	48.01	Oct. 6	50.19
13	48.00	14	47.20	14	48.12	13	50.08
20	47.57	21	47.33	21	48.52	20	49.87
27	46.90	28	47.27	28	48.57	27	49.95
Feb. 3	46.50	May 5	47.33	Aug. 4	48.79	Nov. 3	49.93
10	46.24	12	47.26	11	48.67	10	49.72
17	45.81	19	47.41	18	48.86	17	49.54
24	45.56	26	47.65	25	49.25	24	49.28
Mar. 3	46.40	June 2	47.47	Sept. 2	49.59	Dec. 1	48.96
10	46.61	9	47.43	8	50.03	8	48.98
17	46.85	16	47.68	15	50.32	15	48.27
24	46.84	23	47.75	22	50.46	22	47.86
31	45.89	30	47.89	29	50.47	29	47.54

Marion 10 (\*886, p. 104; 906, p. 27; 936, p. 32; 944, p. 30; 986, p. 33; 1016, p. 59; 1023, p. 61; 1071, p. 61). Federal Building, Meridian and Ohio Sts., Indianapolis. Measurements made by personnel of Geological Survey, U. S. Dept. of Interior.

Water level, in feet below land-surface datum, 1947							
Jan. 6	58.01	Feb. 10	56.31	Mar. 17	56.25	Apr. 21	56.91
13	58.13	17	56.09	24	56.16	28	57.14
20	57.94	24	55.92	31	56.52	May 5	57.31
27	58.02	Mar. 3	56.72	Apr. 7	56.65	12	58.41
Feb. 3	57.80	10	56.58	14	56.70	19	59.23



## Marion 10--Continued.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 26	59.87	July 21	61.47	Sept. 15	64.96	Nov. 11	61.12
June 2	58.36	28	63.19	22	64.94	17	60.73
9	60.23	Aug. 4	63.78	29	63.92	Dec. 1	58.96
16	61.19	11	64.42	Oct. 6	64.25	8	58.63
23	61.49	18	64.90	13	64.07	15	58.36
30	62.03	25	65.51	20	64.32	22	57.89
July 7	61.85	Sept. 2	65.40	27	62.52	29	57.21
14	62.08	8	65.97	Nov. 3	61.96		

Marion 16 (\*906, p. 30; 936, p. 33; 944, p. 31; 986, p. 34; 1016, p. 60; 1023, p. 62; 1071, p. 62). At former American Hominy Co.'s plant E, Madison Ave. and Palmer St., Indianapolis. Measurements made by personnel of Geological Survey, U. S. Dept. of Interior.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	99.91	May 5	107.99	July 14	107.94	Sept. 15	88.20
20	102.99	12	107.53	21	107.99	22	77.97
Feb. 3	104.33	19	105.52	28	108.05	29	85.79
Mar. 10	106.78	26	106.43	Aug. 4	101.75	Oct. 6	86.26
24	104.21	June 2	104.94	12	100.25	13	109.65
31	104.73	9	106.53	18	107.00	20	109.38
Apr. 7	106.05	16	107.32	25	99.71	Nov. 3	107.90
14	108.31	23	105.47	Sept. 2	95.25	24	104.86
21	104.71	30	105.53	8	77.60	Dec. 22	101.87
28	105.88	July 7	105.11				

Marion 18 (\*986, p. 34; 1016, p. 60; 1023, p. 62; 1071, p. 62). Anna M. Stelzner. 4948 Vermont St., Speedway City. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 6, T. 15 N., R. 3 E., 500 feet north of Vermont St., west of junction with Cassell Drive. Measurements made by personnel of Geological Survey, U. S. Dept. of Interior.

Water level at 2 a.m., in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	24.41	22.45	23.06	22.19	20.23	18.65	19.15	21.64	22.43	.....	23.69	23.85
2	24.36	22.47	23.04	22.14	19.93	.....	19.32	21.71	22.42	.....	23.69	23.84
3	24.25	22.51	23.03	22.10	19.71	.....	19.51	21.76	22.43	.....	23.68	23.83
4	24.19	22.46	23.05	22.10	19.54	.....	19.69	21.80	22.48	.....	23.66	23.83
5	24.15	22.45	23.08	22.06	19.34	.....	20.32	21.84	22.53	.....	23.64	23.81
6	24.06	22.44	23.12	21.99	19.26	.....	19.93	21.87	22.55	.....	23.63	23.79
7	23.98	22.40	23.16	21.98	19.15	.....	20.02	21.91	22.60	23.10	23.65	23.79
8	23.89	22.42	23.17	22.01	19.15	.....	20.11	21.99	22.66	23.12	23.63	23.74
9	23.83	22.48	23.17	22.01	19.17	.....	20.23	22.08	22.70	23.14	23.65	23.77
10	23.83	22.57	23.20	21.99	19.19	14.19	20.32	22.17	22.74	23.18	23.70	23.81
11	23.78	22.65	23.22	21.93	19.22	14.63	20.38	22.26	22.78	23.20	23.70	23.81
12	23.72	22.75	23.23	.....	19.18	15.02	20.44	22.37	22.81	23.23	23.71	23.84
13	23.71	22.82	23.21	.....	19.12	15.48	20.50	22.48	22.83	23.28	23.75	23.86
14	23.68	22.84	23.11	.....	19.02	15.81	20.52	22.58	22.85	23.31	23.81	23.86
15	23.65	22.81	23.06	21.15	19.05	16.15	20.54	22.65	22.86	23.34	23.81	23.83
16	23.62	22.80	23.02	21.15	19.09	16.53	20.57	22.72	22.88	23.36	23.76	23.77
17	23.60	22.80	22.95	21.16	19.14	16.88	20.63	22.74	22.93	23.39	23.78	23.81
18	23.58	22.82	22.90	21.18	19.15	17.12	20.71	22.73	22.98	23.41	23.84	23.82
19	23.52	22.84	22.88	21.20	19.18	17.39	20.77	22.68	23.02	23.43	23.85	23.84
20	23.42	22.88	22.83	21.21	19.16	17.64	20.91	22.64	23.03	23.48	23.86	23.87
21	23.30	22.88	22.77	21.21	19.16	17.84	.....	22.60	23.01	23.52	23.87	23.88
22	23.32	22.90	22.70	21.25	19.16	18.02	21.00	22.58	22.95	23.56	23.87	23.88
23	23.30	22.91	22.67	21.28	19.17	18.18	21.10	22.57	22.97	23.59	23.86	23.84
24	23.18	22.90	22.59	21.28	19.08	.....	21.23	22.55	.....	23.63	23.83	23.85
25	23.11	22.92	22.47	21.30	18.91	.....	21.38	22.54	22.94	23.67	23.76	23.87
26	23.05	22.96	22.42	21.29	18.84	18.51	21.49	22.52	22.94	23.71	23.75	23.84
27	23.01	23.00	22.39	21.03	18.81	18.62	21.56	22.51	22.96	23.73	23.76	23.83
28	22.99	23.04	22.34	20.81	18.76	18.71	21.57	22.49	22.98	23.70	23.76	23.82
29	22.98	.....	22.28	20.66	18.68	18.85	21.59	22.47	22.95	23.68	23.78	23.83
30	22.93	.....	22.23	20.49	18.69	19.01	21.61	22.46	.....	23.68	23.81	23.83
31	22.50	.....	22.22	.....	18.72	.....	21.62	22.44	.....	23.69	.....	23.82

Marion 19 (\*986, p. 35; 1016, p. 61; 1023, p. 63; 1071, p. 63).  
Peoria & Eastern Railway Co. In Indianapolis, on Tenth St. at Big Four  
Railroad tracks, 60 feet south of center line of Tenth St. and 250 feet  
west of Exeter Ave. Measurements made by personnel of Geological Survey,  
U. S. Dept. of Interior.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	19.04	Apr. 7	18.91	July 7	16.95	Oct. 13	18.45
13	19.06	14	18.73	14	17.04	20	18.67
20	18.93	21	18.59	21	17.20	27	18.72
27	19.00	28	18.40	28	17.34	Nov. 3	18.77
Feb. 3	18.78	May 5	18.13	Aug. 4	17.46	Aug. 11	18.86
10	18.66	12	17.90	18	17.65	17	18.96
17	18.58	19	17.74	25	17.77	24	18.96
24	18.56	26	17.60	Sept. 2	17.90	Dec. 1	19.14
Mar. 3	18.63	June 2	17.45	8	18.00	8	19.22
10	18.72	9	17.20	15	18.13	15	19.30
17	18.77	16	16.94	22	18.22	22	19.37
24	18.80	23	16.80	29	18.30	29	19.46
31	18.88	30	16.84	Oct. 6	18.40		

Marion 21 (\*1016, p. 62; 1023, p. 63; 1071, p. 63). Continental  
Baking Co., 339 East Market St., Indianapolis. Measurements made by  
personnel of Geological Survey, U. S. Dept. of Interior.

## Water level at 2 a.m., in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	58.68	59.62	58.24	57.39	57.81	57.66	59.40	60.88	60.96	61.50	60.00	56.90
2	.....	59.67	57.80	57.41	57.83	56.73	59.38	60.98	.....	61.22	59.64	57.21
3	.....	58.45	57.27	57.81	58.08	57.71	59.42	60.07	61.73	61.06	59.04	57.28
4	.....	58.94	57.89	57.72	57.34	57.69	59.28	59.51	61.92	.....	59.35	57.42
5	.....	58.98	58.10	57.54	56.67	57.80	58.64	60.29	61.88	60.90	59.24	57.00
6	.....	58.86	58.22	57.03	57.51	58.13	58.20	60.16	62.12	60.29	59.56	57.36
7	58.83	58.88	58.19	56.58	57.70	58.24	57.87	60.20	62.02	60.70	59.36	56.80
8	59.06	59.03	57.79	57.35	58.04	57.75	58.22	60.25	61.37	60.69	59.44	56.15
9	59.23	58.93	57.67	57.42	58.28	57.10	58.16	60.24	61.86	60.81	59.33	56.89
10	59.36	58.45	57.15	57.53	57.64	57.91	57.90	59.88	61.98	60.62	58.89	56.74
11	59.13	58.98	57.77	57.41	57.24	58.60	57.88	59.38	62.11	60.50	58.85	56.94
12	.....	59.10	57.82	57.82	56.37	59.30	57.86	60.77	62.16	60.31	59.23	56.91
13	.....	59.10	57.77	57.19	57.12	59.45	57.44	61.09	62.24	59.88	59.35	56.76
14	59.08	58.91	57.49	56.32	57.64	59.69	57.03	61.29	62.08	60.25	59.32	56.30
15	59.32	58.82	57.91	57.04	57.88	59.38	58.19	61.50	61.43	60.18	58.77	55.66
16	59.27	58.72	57.54	57.03	58.09	58.54	58.78	61.70	62.02	60.23	58.77	56.10
17	59.65	57.90	56.70	57.55	58.42	59.45	59.20	61.34	62.10	60.32	58.47	56.37
18	59.55	58.42	57.54	57.56	57.78	59.76	59.52	60.69	62.60	60.17	58.79	56.34
19	59.22	58.79	57.67	57.79	56.97	63.13	59.81	61.65	62.26	60.01	58.75	56.49
20	58.09	58.75	57.69	56.99	57.84	60.09	59.19	61.89	62.67	59.71	58.76	56.48
21	59.03	58.74	57.60	56.44	58.04	60.18	58.26	62.03	61.96	60.20	58.81	56.21
22	59.47	58.77	57.91	57.37	58.56	59.56	59.41	62.20	61.60	60.24	58.66	55.54
23	59.19	58.36	57.11	57.52	58.80	59.17	59.77	62.20	62.17	60.38	58.56	55.84
24	59.13	57.67	56.23	57.73	59.10	59.98	60.04	61.82	61.85	60.42	57.46	56.03
25	59.20	58.26	57.12	58.01	58.30	59.90	60.33	61.38	61.96	60.44	57.95	55.43
26	58.90	58.43	57.48	58.20	57.87	60.06	60.50	61.97	61.99	60.30	58.10	54.56
27	58.80	58.48	57.70	57.27	58.73	60.24	59.95	62.12	61.96	59.58	57.92	54.87
28	59.28	58.50	57.71	56.79	58.81	60.00	59.03	62.20	61.53	59.82	57.26	54.64
29	59.10		57.59	57.36	58.86	59.52	60.13	62.29	61.03	59.87	57.59	54.00
30	58.86		57.80	57.42	58.80	59.25	60.49	62.32	61.56	59.94	57.66	54.42
31	59.37		56.94		57.91		60.60	61.90		60.02		55.64

Marion 22 (\*1016, p. 62; 1023, p. 64; 1071, p. 64). Arthur Baxter. In Indianapolis, about 290 feet north of Georgia St. and about 160 feet east of East St. Measurements made by personnel of Geological Survey, U. S. Dept. of Interior.

Water level at 2 a.m., in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	71.50	79.41	78.77	78.13	78.27	70.83	74.01	81.00	.....	80.85	79.00	69.97
2	73.75	76.97	73.00	78.36	78.37	69.05	74.78	81.00	.....	80.62	75.95	74.71
3	77.90	74.50	.....	78.74	78.58	74.63	74.67	76.80	81.28	80.28	75.60	75.12
4	78.44	78.68	78.19	78.72	70.03	73.45	74.40	76.25	81.66	80.51	77.95	75.22
5	77.16	78.91	78.58	78.62	68.57	75.41	73.00	78.40	81.74	78.75	78.17	75.67
6	76.68	78.78	78.74	70.13	77.70	76.54	71.80	76.95	81.96	77.25	78.15	75.16
7	78.36	78.89	78.06	68.62	78.15	77.25	71.55	76.98	81.25	79.81	78.53	73.63
8	78.60	79.16	76.59	77.50	78.70	72.20	71.63	76.62	80.32	80.19	78.42	71.48
9	78.78	74.38	72.75	78.09	78.87	70.49	72.17	76.42	81.73	80.41	77.05	.....
10	78.84	76.15	73.03	78.42	72.22	75.25	71.20	75.75	81.95	80.58	75.50	.....
11	78.73	78.83	77.85	78.20	69.50	78.45	71.88	76.55	82.07	80.37	77.59	.....
12	78.79	79.07	78.20	78.60	68.66	79.72	72.49	80.40	82.11	78.57	77.94	.....
13	78.68	79.09	78.19	70.33	76.57	79.96	70.85	80.98	81.90	77.46	78.16	.....
14	78.82	79.00	78.33	69.82	78.32	80.13	.....	81.20	80.68	79.71	78.10	.....
15	78.95	78.88	78.30	77.21	77.89	76.33	78.00	81.36	79.52	79.85	77.60	.....
16	78.93	76.15	74.50	78.02	78.54	73.62	78.92	81.50	.....	79.90	75.00	72.77
17	79.08	72.45	72.91	78.57	78.64	79.44	79.19	79.90	.....	80.13	74.10	.....
18	79.01	78.40	77.99	78.61	72.15	80.03	79.56	79.37	.....	79.85	76.98	.....
19	77.25	78.87	78.39	78.76	70.15	80.52	79.75	81.48	.....	77.25	77.27	.....
20	74.63	78.82	78.45	70.57	77.82	80.49	76.43	81.75	.....	76.23	77.20	.....
21	78.56	79.01	78.50	69.09	78.31	80.50	73.53	81.89	.....	79.12	77.27	.....
22	79.09	79.09	78.30	76.98	78.67	76.72	78.95	81.95	.....	79.66	77.16	.....
23	78.89	76.01	71.97	77.59	79.27	76.70	79.86	81.98	81.64	79.82	75.42	72.81
24	78.95	74.67	69.05	78.00	79.63	80.26	80.00	80.45	81.36	79.77	73.00	71.63
25	78.81	79.09	77.53	78.50	73.42	80.17	80.34	.....	81.56	79.90	75.94	65.60
26	78.04	79.60	78.27	78.64	75.33	80.26	80.58	81.50	81.54	78.80	76.22	65.32
27	78.17	79.67	78.50	71.78	78.38	.....	78.63	81.69	81.50	76.70	73.25	66.90
28	79.10	79.73	78.60	70.64	79.24	76.95	76.68	81.80	80.60	78.77	70.70	65.25
29	79.14	.....	78.55	77.56	79.10	74.58	79.88	81.88	78.95	78.90	74.05	68.12
30	78.87	.....	75.87	78.14	74.60	73.57	80.65	81.87	80.72	79.09	73.23	70.46
31	79.16	73.30	.....	71.05	.....	80.77	80.55	.....	79.02	.....	70.25	.....

Marion 25 (1023, p. 65; 1071, p. 65). Electric Steel Castings Co. In Speedway City, on Main St. just north of Tenth St., 552 feet east of centerline of Main St. and 393 feet north of centerline of Tenth St. Measurements made by personnel of Geological Survey, U. S. Dept. of Interior.

Water level at 2 a.m., in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	39.85	51.98	30.85	28.52	31.27	21.60	39.46	41.48	24.70	36.73	36.27	25.88
2	36.35	47.16	25.37	30.82	32.10	20.23	38.16	38.00	.....	36.88	34.00	30.00
3	.....	46.77	22.98	31.55	30.45	26.20	38.90	29.80	34.56	35.50	27.12	31.60
4	.....	50.68	29.08	31.90	24.39	28.55	36.86	26.82	39.80	36.00	33.80	32.40
5	.....	51.68	31.00	30.10	22.00	29.31	35.60	37.80	40.20	33.79	35.10	32.74
6	.....	52.37	32.00	24.40	28.51	33.09	31.06	41.10	41.30	27.10	36.60	32.00
7	.....	52.70	32.61	22.29	29.92	32.50	29.38	45.20	36.99	34.28	38.10	26.50
8	.....	52.78	31.00	28.70	30.69	29.28	35.20	43.90	28.90	35.90	35.70	23.60
9	.....	46.82	25.18	30.55	31.25	27.54	37.15	40.50	38.40	35.90	29.60	29.90
10	.....	45.03	22.89	31.70	29.93	36.80	38.54	30.65	40.83	37.00	25.62	32.70
11	.....	50.19	29.00	33.40	23.88	39.68	38.54	30.65	40.83	37.00	25.62	32.20
12	.....	42.88	30.93	33.30	21.55	39.33	37.09	37.97	42.55	36.47	33.60	33.90
13	.....	41.44	31.97	25.98	27.70	39.75	27.90	34.40	40.85	28.90	36.47	32.70
14	48.43	41.09	32.30	23.10	30.15	39.65	24.54	35.30	34.73	36.15	36.62	27.15
15	.....	39.16	30.79	28.90	30.80	32.03	35.41	.....	29.53	39.39	35.14	24.18
16	.....	33.42	24.90	30.60	32.80	28.74	40.02	.....	37.25	40.22	30.66	29.30
17	.....	31.06	22.60	31.56	33.65	34.30	40.59	.....	37.31	39.32	26.10	31.00
18	.....	36.67	28.74	32.58	25.40	36.00	42.84	.....	38.75	38.00	33.70	31.70
19	.....	38.21	30.66	30.90	22.68	36.47	38.73	34.58	41.10	32.55	35.45	33.80
20	.....	35.00	31.64	24.73	29.60	36.75	31.00	39.40	40.20	27.22	36.63	31.50
21	44.68	34.30	32.00	22.30	30.33	36.00	25.90	41.00	34.95	36.10	36.95	26.60
22	.....	32.25	30.50	29.10	30.87	30.40	32.20	43.35	28.45	36.25	35.68	23.78

## Marion 25--Continued.

Water level at 2 a.m., in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
23	.....	26.20	25.20	30.43	31.25	28.26	33.80	41.45	35.20	37.00	28.55	29.48
24	.....	23.70	22.53	31.76	33.80	36.30	35.60	30.75	36.30	37.65	26.88	30.92
25	.....	29.49	28.39	31.91	23.08	36.80	37.35	27.00	37.00	36.30	33.00	28.60
26	.....	31.16	30.55	29.98	22.74	37.85	34.99	36.55	41.97	34.10	35.00	25.18
27	.....	31.95	31.65	24.28	29.95	41.15	30.20	37.90	36.50	27.55	34.25	23.53
28	.....	32.60	32.22	21.99	30.25	42.85	24.90	38.26	34.77	33.78	29.10	22.87
29	51.74		30.50	28.31	31.70	34.02	33.60	37.13	27.80	35.30	31.10	21.51
30	52.57		25.68	30.33	29.55	31.01	35.50	31.62	35.62	36.50	28.05	27.75
31	52.82		22.87		24.10		36.70	27.46		37.37		29.85

Marion 26. Otto Schakel. E $\frac{1}{2}$ SE $\frac{1}{4}$  sec. 26, T. 15 N., R. 4 E., 50 feet west of southwest corner of house. Unused dug well, diameter 36 inches, depth 13.6 feet. Measuring point, top edge of stone block on pump platform, 0.40 foot above land-surface datum. First measurement Aug. 5, 1947. Measured by Louis Schakel, R. F. D. 5, Indianapolis.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 5	8.27	Sept. 15	8.12	Oct. 20	8.95	Dec. 1	8.51
11	8.57	22	7.75	27	8.46	8	8.30
18	7.56	29	8.47	Nov. 3	8.32	16	8.36
25	8.10	Oct. 6	8.59	10	8.79	22	8.23
Sept. 1	8.30	13	8.80	17	8.30	29	8.30
9	8.58						

Marion 27. Otto Schakel. E $\frac{1}{2}$ SE $\frac{1}{4}$  sec. 26, T. 15 N., R. 4 E., 200 feet west of house. Unused dug well, diameter 42 inches, depth 14.1 feet. Measuring point, top of well cover at pump opening, 0.50 foot above land-surface datum. First measurement Aug. 5, 1947. Measured by Louis Schakel, R.F.D. 5, Indianapolis.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 5	4.10	Sept. 15	3.69	Oct. 20	4.60	Dec. 1	3.79
11	4.45	22	3.30	27	4.48	8	3.75
18	3.35	29	3.96	Nov. 3	4.15	16	3.24
25	3.85	Oct. 6	4.16	10	4.37	22	3.30
Sept. 1	4.01	13	4.41	17	3.48	29	3.44
9	4.58						

Marion 28. Manuel W. Rabourn. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 17, T. 14 N., R. 5 E., at rear of owner's house. Unused dug well, diameter 42 inches, depth 23.6 feet. Measuring point, top of well cover, at land-surface datum. First measurement Aug. 5, 1947. Automatic water-stage recorder installed Sept. 17, 1947. Measurements made by Manuel W. Rabourn, R. R. 1, Acton.

Water level at 2 a.m., in feet below land-surface datum, 1947

(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 5	a 11.15	Sept. 29	11.43	Oct. 17	11.73	Nov. 4	11.91
11	a 11.33	30	11.43	18	11.73	5	11.91
18	a 11.57	Oct. 1	11.43	19	11.75	6	11.91
25	a 11.68	2	11.44	20	11.76	7	11.92
Sept. 1	a 11.47	3	11.45	21	11.78	8	11.92
8	a 11.43	4	11.46	22	11.80	9	11.92
15	a 11.45	5	11.47	23	11.82	10	11.94
18	11.45	6	11.48	24	11.84	11	11.94
1 <sup>c</sup>	11.46	7	11.50	25	11.86	12	11.95
20	11.47	8	11.53	26	11.88	13	11.96
21	11.47	9	11.55	27	11.90	14	11.98
22	11.46	10	11.57	28	11.89	15	11.98
23	11.46	11	11.59	29	11.89	16	11.98
24	11.44	12	11.61	30	11.89	17	12.00
25	11.44	13	11.63	31	11.90	18	12.02
26	11.43	14	11.66	Nov. 1	11.90	19	12.03
27	11.43	15	11.68	2	11.90	20	12.04
28	11.43	16	11.70	3	11.91	21	12.05

a Tape measurement at another hour.

## Marion 28--Continued.

Water level at 2 a.m., in feet below land-surface datum, 1947  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Nov. 22	12.07	Dec. 2	12.14	Dec. 12	12.20	Dec. 22	12.22
23	12.07	3	12.15	13	12.21	23	12.21
24	12.08	4	12.16	14	12.22	24	12.21
25	12.07	5	12.17	15	12.23	25	12.21
26	12.08	6	12.17	16	12.21	26	12.20
27	12.08	7	12.17	17	12.22	27	12.19
28	12.09	8	12.17	18	12.22	28	12.18
29	12.10	9	12.18	19	12.22	29	12.18
30	12.12	10	12.19	20	12.23	30	12.17
Dec. 1	12.13	11	12.19	21	12.23	31	12.15

Martin County

Martin 3 (\*1016, p. 63; 1023, p. 66; 1071, p. 65). John Ketcham. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 13, T. 4 N., R. 5 W., on west side of State Highway 45, 1.3 miles south of intersection with State Highway 58. Measurements made by George W. Melton.

Water level, in feet below land-surface datum, 1947

Jan. 5	21.24	Mar. 31	20.58	June 22	19.89	Sept. 15	21.44
12	21.03	Apr. 7	19.95	30	20.38	22	21.46
20	20.99	14	19.92	July 8	20.48	30	21.58
27	20.94	21	19.69	13	21.04	Oct. 6	21.62
Feb. 2	20.91	28	19.62	21	20.85	13	21.78
10	20.51	May 5	19.27	28	20.95	27	21.63
17	19.99	12	19.26	Aug. 5	20.96	Nov. 3	21.65
24	19.93	19	19.50	11	21.03	10	21.67
Mar. 3	21.03	26	19.53	18	21.08	24	21.79
10	20.51	June 2	18.02	25	21.09	Dec. 1	21.83
17	20.95	8	19.65	Sept. 1	21.11	15	21.84
24	20.63	15	19.72	8	21.09	29	21.46

Martin 4 (\*1016, p. 63; 1023, p. 66; 1071, p. 65). John Ketcham. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 12, T. 4 N., R. 5 W., on west side of State Highway 45, 1.3 miles south of intersection with State Highway 58, about 300 feet north of Martin 3. Measurements made by George W. Melton.

Water level, in feet below land-surface datum, 1947

Jan. 5	3.17	Mar. 31	2.79	June 22	3.28	Sept. 15	6.17
12	3.07	Apr. 7	2.78	30	3.31	22	6.18
20	3.02	14	2.72	July 8	3.44	30	6.77
27	3.00	21	2.98	13	3.48	Oct. 6	6.78
Feb. 2	2.78	28	2.96	21	3.52	13	7.02
10	3.00	May 5	3.09	28	3.59	27	10.13
17	2.73	12	3.11	Aug. 5	3.65	Nov. 3	10.33
25	3.26	19	3.28	11	5.08	10	9.41
Mar. 3	3.39	26	3.29	18	5.44	24	10.79
10	3.35	June 2	3.04	25	6.13	Dec. 1	10.79
17	3.20	8	3.17	Sept. 1	6.14	15	10.79
24	3.00	15	3.20	8	6.09	29	10.76

Monroe County

Monroe 2 (\*1023, p. 66; 1071, p. 66). State of Indiana, Morgan-Monroe State Forest. On Maggie Farr farm, in NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 13, T. 10 N., R. 1 W. Measurements made by Fred O. Hacker, superintendent, Morgan-Monroe State Forest.

Water level, in feet below land-surface datum, 1947

Jan. 14	20.90	Feb. 11	18.90	Mar. 18	20.99	Apr. 22	19.08
22	17.20	18	19.10	25	21.90	29	19.21
29	19.00	25	19.00	Apr. 8	16.45	May 6	11.40
Feb. 5	20.15	Mar. 4	19.80	16	13.35	13	14.56

## Monroe 2--Continued.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May. 20	11.40	July 15	21.91	Sept. 2	24.13	Oct. 21	24.31
27	14.06	21	22.58	9	24.04	28	23.55
June 3	6.47	29	22.66	16	23.80	Nov. 4	24.25
10	8.79	Aug. 5	22.95	23	23.90	11	24.23
17	14.26	12	23.12	30	25.02	18	24.28
24	15.45	19	23.48	Oct. 7	24.05	Dec. 9	24.00
July 2	20.19	26	23.56	14	24.15	30	24.30
8	21.27						

Monroe 3 (\*1016, p. 64; 1023, p. 66; 1071, p. 66). Dustin McDonald. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 31, T. 8 N., R. 2 W., west side of county road, 2 miles south of Stanford. Measurements made by George B. Harp.

Water level, in feet below land-surface datum, 1947

Jan. 17	26.60	May 30	-20.50	Nov. 8	26.08	Dec. 6	26.25
31	24.74	June 20	21.54	15	26.08	13	26.24
Mar. 21	25.94	27	22.09	22	26.28	21	26.08
May 12	21.64	July 5	22.74	29	26.25	27	26.22
16	22.20						

Montgomery County

Montgomery 1. (\*817, p. 49; 840, p. 82; 845, p. 79; 886, p. 109; 906, p. 30; 936, p. 35; 944, p. 32; 986, p. 35; 1016, p. 64; 1023, p. 67; 1071, p. 66). W. H. Moore. In Waveland, in NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 36, T. 17 N., R. 6 W., at site of burned house. Measurements made by Chester E. Heslar and G. W. Newell.

Water level at 2 a.m., in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	9.52	7.77	5.11	6.20	8.42	10.83	11.80	11.75	12.34	12.28
2	....	....	9.42	7.66	5.39	5.98	8.59	10.91	11.81	11.76	12.36	12.17
3	....	....	9.51	7.82	5.76	5.38	8.74	10.88	11.94	11.79	12.33	12.19
4	9.98	....	9.61	7.54	6.13	5.55	8.85	10.95	12.00	11.84	12.31	12.24
5	9.87	....	9.66	....	6.44	5.88	8.95	10.97	11.93	11.93	12.27	11.99
6	9.75	....	9.67	....	6.80	6.28	9.02	11.01	....	12.01	12.41	12.01
7	9.78	....	9.68	....	6.91	4.92	9.10	11.06	....	12.08	12.39	11.94
8	....	....	9.58	....	7.15	4.36	9.24	11.13	....	12.12	12.38	11.63
9	....	....	9.64	....	7.36	4.71	9.34	11.18	....	12.21	12.44	11.78
10	....	....	9.71	....	7.54	5.23	9.36	11.22	....	12.28	12.57	11.69
11	9.96	....	9.68	....	7.67	5.80	9.39	11.31	....	12.31	12.38	11.63
12	9.98	....	9.66	....	7.69	6.41	9.47	11.41	....	12.38	12.43	11.67
13	10.04	....	9.58	....	7.73	6.65	9.55	11.46	11.83	12.47	12.47	11.68
14	9.88	....	9.10	....	7.85	6.75	9.60	11.50	11.77	12.51	12.45	11.63
15	9.71	....	9.03	....	8.08	7.01	9.67	11.57	11.76	12.51	12.25	11.55
16	9.18	....	8.88	....	7.95	7.32	9.68	11.52	11.60	12.53	12.22	11.47
17	9.08	....	8.73	....	7.79	7.50	9.68	11.51	11.52	12.55	12.40	11.73
18	8.98	....	8.82	....	7.47	7.55	9.71	11.52	....	12.59	12.44	11.64
19	8.94	....	8.87	....	7.43	7.57	9.69	11.54	....	12.65	12.38	....
20	8.54	....	8.82	....	7.21	7.28	9.75	11.58	....	12.77	12.38	....
21	8.49	....	8.69	....	6.57	7.31	9.74	11.65	....	12.82	12.41	....
22	....	....	8.55	....	5.70	7.47	9.92	11.72	....	12.85	12.34	....
23	....	....	8.26	....	5.74	7.64	10.06	11.76	....	12.89	12.35	11.51
24	....	....	7.88	....	6.10	7.83	10.19	11.80	....	12.95	12.18	11.70
25	....	....	7.50	....	5.76	7.64	10.33	11.87	....	13.00	12.13	11.72
26	....	....	7.33	5.79	5.79	7.69	10.38	11.73	....	13.03	12.17	11.54
27	....	9.65	7.29	5.59	6.13	7.78	10.38	11.73	11.48	13.00	12.18	11.63
28	....	9.66	7.26	5.99	6.19	7.91	10.41	11.67	11.50	....	12.16	11.65
29	....	....	7.34	6.23	6.31	8.12	10.54	11.68	11.46	....	12.18	11.73
30	....	....	7.63	5.54	5.83	8.30	10.65	....	11.63	....	12.33	....
31	....	....	7.76	....	5.98	....	10.71	11.73	....	....	....	....

Montgomery 4 (\*817, p. 49; 840, p. 82; 845, p. 79; 886, p. 109; 906, p. 30; 936, p. 35; 944, p. 32; 1071, p. 67). Mrs. W. L. Glenn. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 13, T. 17 N., R. 6 W., 2.2 miles north of State Route 47 on State Route 59. Measurements made by Harriet and Marguerite Hillabold and Glenn R. Newell.

Water level at 2 a.m., in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	11.00	.....	10.69	10.29	2.50	2.91	6.05	9.83	11.40	.....	12.67	.....
2	11.00	10.47	10.70	10.27	2.51	2.38	6.21	9.96	11.43	.....	12.56	.....
3	10.98	10.46	10.71	10.25	2.66	2.34	6.36	10.01	11.49	.....	12.44	.....
4	10.97	10.47	10.72	10.23	2.79	2.61	6.51	10.09	11.59	.....	12.33	.....
5	10.97	10.47	10.73	10.20	2.93	2.87	6.69	10.19	11.61	11.78	12.25	.....
6	10.96	.....	10.74	10.00	3.11	3.14	6.79	10.29	11.63	11.81	12.14	.....
7	10.96	.....	10.74	9.64	3.25	2.32	6.88	10.42	11.69	11.88	12.07	11.32
8	10.95	.....	10.74	9.55	3.36	2.20	7.05	10.46	11.76	11.94	12.00	11.29
9	10.95	.....	10.73	9.50	3.48	2.47	7.22	10.56	11.84	12.00	11.94	11.28
10	10.95	.....	10.73	9.47	3.60	2.81	7.34	10.68	11.91	12.07	11.89	11.28
11	10.94	.....	10.73	9.44	3.74	3.22	7.41	10.81	11.96	12.13	11.84	11.27
12	10.93	10.60	10.72	9.35	3.86	3.53	7.53	10.94	12.02	12.20	11.77	11.27
13	10.91	10.62	10.71	9.25	3.98	3.73	7.70	11.07	11.97	12.28	11.71	11.27
14	10.88	10.63	10.68	9.17	4.10	3.91	7.84	11.21	11.95	12.35	11.67	11.27
15	10.86	10.63	10.65	9.12	4.23	4.08	8.02	11.30	11.97	12.43	11.61	11.27
16	10.83	10.62	10.62	9.08	4.33	4.25	8.08	11.32	11.91	12.51	11.55	11.27
17	10.81	10.62	10.60	9.04	4.36	4.43	8.14	11.32	11.87	12.60	11.52	11.27
18	10.79	10.61	10.58	8.94	4.34	4.54	8.25	11.36	11.85	12.67	11.49	11.26
19	10.78	10.60	10.56	8.88	4.25	4.63	8.30	11.41	11.85	12.73	11.46	.....
20	10.75	10.60	10.54	8.83	4.19	4.72	8.38	11.44	11.88	12.80	11.44	.....
21	10.73	10.59	10.52	8.78	4.08	4.89	8.46	11.42	.....	12.88	11.43	.....
22	10.73	10.59	10.49	8.70	2.55	5.05	8.56	11.43	.....	12.96	11.41	.....
23	10.72	10.59	10.46	8.62	2.58	5.20	8.68	11.46	.....	13.03	11.40	11.24
24	10.70	10.60	10.44	8.55	2.85	5.35	8.79	11.51	.....	13.11	11.38	11.24
25	10.67	10.62	10.42	8.51	2.65	5.42	8.93	11.59	.....	13.17	11.36	11.24
26	10.66	10.64	10.40	8.72	2.52	.....	9.05	11.58	.....	13.23	11.35	11.23
27	10.64	10.66	10.38	8.05	2.73	5.62	9.16	11.49	.....	13.28	11.34	11.23
28	10.63	10.67	10.36	5.86	2.67	5.73	9.26	11.44	.....	13.23	11.33	11.23
29	10.61	.....	10.34	5.70	2.76	5.84	9.39	11.41	.....	13.10	11.33	11.23
30	10.59	.....	10.31	3.91	2.51	5.94	9.53	11.38	.....	12.95	11.33	.....
31	.....	.....	10.30	.....	2.72	.....	9.69	11.40	.....	12.80	.....	11.19

a Estimated.

#### Morgan County

Morgan 3 (\*1023, p. 67; 1071, p. 67) State of Indiana. Morgan-Monroe State Forest. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 27, T. 11 N., R. 1 E. Measurements made by Fred O. Hacker, superintendent, Morgan-Monroe State Forest.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	3.85	Apr. 22	3.75	July 8	4.08	Sept. 23	3.92
22	3.72	29	3.82	15	4.21	30	4.90
29	3.70	May 6	3.80	21	4.11	Oct. 7	4.32
Feb. 5	2.75	13	3.81	29	4.08	14	4.27
11	3.90	20	3.78	Aug. 5	4.03	21	6.25
18	3.30	27	3.78	12	4.31	28	4.36
25	3.00	June 3	3.52	19	4.10	Nov. 4	4.15
Mar. 4	2.70	10	3.68	26	4.14	11	4.62
18	2.70	17	3.50	Sept. 2	4.27	18	4.55
25	3.75	24	3.91	9	4.05	Dec. 9	4.33
Apr. 8	3.75	July 2	3.81	16	4.15	30	4.15
16	3.10						

Noble County

Noble 3 (\*840, p. 83; 845, p. 80; 886, p. 109; 906, p. 31; 936, p. 36; 944, p. 33; 986, p. 36; 1016, p. 65; 1023, p. 68; 1071, p. 68 ). Della May Kitt. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 23, T. 33 N., R. 9 E., about 1.1 miles northwest of Merriam, across road from owner's residence. Measurements made by Arthur McClellan. Measurements discontinued and well destroyed on or about Aug. 3, 1947.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	24.48	Mar. 3	24.08	Apr. 20	23.28	June 8	22.32
12	24.55	10	24.09	27	23.29	15	22.33
20	24.55	16	24.14	May 4	23.03	23	22.41
26	24.50	23	23.97	11	22.84	29	22.49
Feb. 10	24.14	30	23.81	19	22.56	July 13	22.60
16	24.14	Apr. 8	23.72	25	22.38	20	22.70
25	24.10	13	23.60	June 2	22.19	Aug. 3	22.57

Noble 5 (\*944, p. 33; 986, p. 36; 1016, p. 65; 1023, p. 69; 1071, p. 68). Rolla Becker. N $\frac{1}{2}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 13, T. 34 N., R. 10 E., about 1 mile north of State Highway 8 and about 4 miles southwest of Kendallville. Measurements made by Keith Becker.

## Water level, in feet below land-surface datum, 1947

Jan. 3	8.15	Apr. 3	1.48	July 16	5.12	Oct. 16	7.32
17	7.39	15	2.40	Aug. 4	5.98	Nov. 6	7.51
Feb. 3	5.66	May 3	2.83	16	6.57	17	7.32
15	5.13	June 3	2.45	Sept. 4	6.67	Dec. 4	6.29
Mar. 3	5.35	16	4.10	15	6.62	17	5.84
17	4.47	July 3	4.83	Oct. 3	7.04		

Noble 6 (\*1071, p. 69). City of Kendallville. At municipal water plant, about 73 feet west of east shore of Bixler Lake and 182 feet north of centerline of Diamond Street, and about 68 feet west of Noble 1. Well is affected by pumping. Measurements made by Don S. Deibele, chief engineer, Kendallville Water Department.

## Water level at 2 a.m., in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
1	24.07	.....	24.50	24.12	.....	19.37	19.81	21.54	22.03	22.05
2	22.49	.....	24.48	24.06	.....	19.14	19.93	21.58	21.85	21.80
3	23.55	.....	24.08	24.07	.....	19.25	19.89	21.52	22.03	21.84
4	23.66	.....	24.05	23.96	.....	19.32	19.96	21.53	22.12	21.92
5	23.76	.....	24.10	23.87	.....	19.32	19.94	21.69	22.16	22.10
6	23.76	.....	25.15	23.88	.....	19.38	19.89	21.73	22.26	21.88
7	23.73	.....	.....	23.87	.....	19.44	19.76	21.77	22.33	21.93
8	23.65	.....	.....	23.90	.....	19.41	19.88	.....	22.29	.....
9	23.71	.....	.....	23.87	.....	19.27	20.18	21.86	.....	21.87
10	23.73	.....	.....	24.20	.....	19.26	20.35	21.68	.....	21.88
11	23.72	23.68	24.72	25.02	.....	19.37	20.47	21.83	.....	22.00
12	23.73	23.63	24.60	23.50	.....	19.43	20.53	21.92	.....	21.91
13	23.55	23.53	.....	24.92	.....	19.57	20.56	22.07	.....	21.69
14	23.52	25.12	.....	23.72	.....	19.38	20.48	22.07	.....	21.82
15	23.66	23.73	24.17	23.69	.....	19.41	20.62	22.13	.....	21.93
16	23.81	23.64	24.05	23.73	.....	19.48	20.66	.....	.....	21.98
17	23.63	23.55	23.79	23.79	.....	19.53	20.72	.....	22.30	22.08
18	23.57	23.55	24.85	24.94	.....	.....	20.59	.....	22.26	22.10
19	23.56	23.58	24.95	23.87	.....	19.65	20.78	21.81	22.12	21.90
20	23.64	23.63	24.27	23.81	.....	19.71	20.73	21.92	22.05	21.89
21	23.73	23.63	24.27	23.75	19.00	19.75	20.55	22.08	22.01	21.99
22	23.85	24.71	24.23	.....	18.80	19.78	20.67	22.13	21.94	22.15
23	23.74	25.04	24.17	.....	18.64	19.65	.....	22.20	21.96	22.13
24	23.85	24.05	24.15	.....	18.33	19.77	.....	22.30	21.93	22.29
25	23.75	24.03	24.22	.....	19.26	19.68	.....	22.30	21.95	22.34
26	23.75	24.15	24.21	.....	19.44	19.76	.....	22.25	21.96	22.30
27	23.97	25.11	24.29	.....	19.47	19.85	.....	22.20	21.91	22.05
28	.....	25.28	24.28	.....	19.43	19.95	.....	22.34	21.77	22.16
29	.....	.....	24.23	.....	19.36	19.90	.....	22.46	21.86	.....
30	.....	.....	24.27	.....	19.45	19.81	.....	22.47	21.96	.....
31	.....	.....	24.17	.....	19.44	.....	.....	22.25	.....	.....



Noble 7. Arthur McClellan. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 23, T. 33 N., R. 9 E., about 1.1 miles northwest of Merriam, across road from former observation well Noble 3. Unused driven well, diameter 1 $\frac{1}{4}$  inches, depth 29 feet. Measuring point, top edge of cellar-way floor, 5.5 feet above top of 1 $\frac{1}{4}$ -inch pipe and 3.0 feet above land-surface datum. First measurement believed to be Aug. 10, 1947. Measurements made by Arthur McClellan.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 10	21.45	Sept. 21	22.08	Oct. 27	22.33	Dec. 1	22.47
17	21.51	28	22.09	Nov. 3	22.35	8	22.50
24	21.60	Oct. 5	22.16	10	22.40	14	22.48
31	21.67	13	22.24	17	22.34	21	22.48
Sept. 7	21.95	20	22.25	24	22.52	28	22.50
14	21.84						

Ohio County

Ohio 1 (\*1016, p. 66; 1023, p. 69; 1071, p. 69). Arthur H. Hannah. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 16, T. 3 N., R. 2 W., about 1.5 miles north and about 0.7 mile west of Aberdeen. Measurements made by Arthur H. Hannah.

Water level, in feet below land-surface datum, 1947

Jan. 4	12.12	Apr. 5	5.09	July 5	6.30	Oct. 4	13.92
11	9.76	12	4.34	12	7.18	11	13.91
18	8.23	19	3.61	19	8.36	18	13.88
25	7.09	26	3.83	26	9.03	25	13.83
Feb. 1	5.01	May 3	3.79	Aug. 2	9.87	Nov. 1	13.76
8	3.72	10	5.09	9	11.51	8	13.56
15	2.93	17	5.12	16	12.73	15	13.69
22	2.84	24	4.39	23	13.28	22	13.73
Mar. 1	2.79	31	4.08	30	13.38	29	13.77
8	4.84	June 7	3.19	Sept. 6	13.52	Dec. 6	13.81
15	6.18	14	3.36	13	13.62	13	13.90
22	5.73	21	3.79	20	13.74	20	13.98
29	5.34	28	5.06	27	13.90	27	14.02

Orange County

Orange 1 (\*1016, p. 66; 1023, p. 69; 1071, p. 70). Herman D. Winger. SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 7, T. 1 N., R. 2 E., at abandoned house, 1.25 miles south of Millersburg on west side of county road. Measurements made by Edward M. Couch.

Water level, in feet below land-surface datum, 1947

Jan. 4	4.55	Apr. 7	1.06	July 7	4.48	Oct. 13	8.38
13	3.38	14	1.22	15	4.66	20	8.47
18	1.19	22	1.02	19	4.96	27	8.84
27	1.12	28	1.13	28	4.88	Nov. 3	8.60
Feb. 4	1.40	May 5	1.33	Aug. 2	5.12	10	9.38
10	2.05	12	2.42	9	5.51	15	9.53
17	2.05	19	2.57	18	6.88	24	9.86
24	2.85	26	1.44	26	6.63	Dec. 1	10.28
Mar. 3	2.90	June 2	.36	Sept. 8	7.13	9	10.62
8	2.94	9	2.24	15	7.43	16	11.04
18	1.40	14	2.96	20	7.57	22	11.98
22	1.66	23	3.73	29	7.43	29	11.51
29	.67	July 1	4.52	Oct. 6	8.07		

Owen County

Owen 2 (\*1071, p. 70). Agnes Stuckey. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 35, T. 12 N., R. 4 W., at Lower Cataract Falls, near Cataract. Measurements made by Miss Agnes Stuckey.

## Owen 2--Continued.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	17.44	May 6	17.69	Aug. 5	19.11	Oct. 15	19.64
27	17.99	16	16.67	13	19.49	29	18.09
Feb. 14	18.43	28	18.00	20	16.54	Nov. 5	19.32
21	18.57	June 6	14.94	27	18.82	12	19.54
28	18.76	18	15.00	Sept. 2	19.13	19	19.68
Mar. 7	19.00	26	17.90	9	19.15	26	19.11
29	17.95	July 2	18.13	17	17.30	Dec. 3	19.29
Apr. 6	16.00	9	18.34	24	17.08	10	19.41
12	10.00	15	18.24	Oct. 1	18.75	16	19.59
20	17.58	23	18.51	8	19.19	23	19.27
26	11.93	30	18.91				

Owen 3 (\*1071, p. 70). Ben Lambert. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 34, T. 12 N., R. 4 W., about 2 miles west of Cataract. Measurements made by Glendon C. Bandy.

Water level, in feet below land-surface datum, 1947

Jan. 2	109.27	Apr. 3	109.17	July 3	109.15	Oct. 2	109.14
9	109.27	10	109.18	10	109.15	9	109.12
16	109.20	17	109.16	17	109.15	16	109.10
23	109.20	24	109.19	24	109.24	23	109.16
30	109.04	May 1	109.10	31	109.20	30	109.08
Feb. 6	109.13	8	109.17	Aug. 7	109.20	Nov. 6	109.03
13	109.32	15	109.16	15	109.22	13	109.09
20	109.24	22	109.14	21	109.22	20	109.03
27	109.22	29	109.10	28	109.17	27	108.85
Mar. 6	109.25	June 5	109.15	Sept. 4	109.16	Dec. 4	109.01
13	109.27	12	109.07	11	109.17	11	108.97
20	109.17	19	109.11	18	109.20	18	108.95
27	109.11	26	109.10	25	109.06	25	108.97

Owen 4 (\*1071, p. 71). Jackson Township School. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 29, T. 12 N., R. 4 W., about 1 mile southwest of Cunot. Measurements made by Pauline R. Coffey.

Water level, in feet below land-surface datum, 1947

Jan. 4	73.10	Apr. 5	70.82	July 7	77.73	Oct. 4	78.52
11	71.15	12	74.19	12	76.61	11	78.61
18	71.60	19	68.81	19	76.77	18	78.99
25	71.90	26	69.54	28	78.19	25	79.78
Feb. 1	71.75	May 3	73.57	Aug. 2	78.51	Nov. 1	79.69
8	71.83	10	73.89	11	78.32	8	78.80
15	71.62	17	72.72	18	78.72	15	78.76
21	71.57	26	72.29	23	78.94	22	79.19
Mar. 1	71.51	31	74.41	30	78.79	29	79.22
8	73.69	June 7	72.67	Sept. 6	78.81	Dec. 6	77.93
15	73.56	14	75.87	13	78.75	13	76.59
22	72.11	21	74.50	20	78.48	20	77.96
29	70.35	28	74.66	27	78.52	27	77.84

Owen 5 (\*1071, p. 71). Ed Laudig. W $\frac{1}{2}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 30, T. 12 N., R. 4 W., about 2.5 miles west of Cunot. Measurements made by Ed Laudig.

Water level, in feet below land-surface datum, 1947

Jan. 4	6.65	Apr. 12	1.77	July 19	6.78	Oct. 11	9.45
12	5.65	19	1.84	26	7.36	18	10.66
18	4.07	26	1.66	Aug. 2	8.75	25	10.53
26	2.66	May 3	1.55	9	8.63	Nov. 1	10.64
Feb. 1	2.47	12	3.67	16	7.95	8	10.56
8	3.78	18	1.56	23	9.25	14	10.58
16	3.76	25	1.95	30	8.75	22	10.86
22	3.94	31	2.65	Sept. 6	9.06	29	11.21
Mar. 8	6.47	June 14	3.97	13	8.62	Dec. 6	11.34
15	6.45	21	2.67	20	8.76	13	11.78
22	4.67	28	3.54	27	9.85	20	11.07
29	2.98	July 5	4.68	Oct. 6	10.35	27	12.16
Apr. 5	1.76	12	6.27				

Owen 6 (\*1071, p. 71). Ed Laudig. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 24, T. 12 N., R. 5 W. Measurements made by Ed Laudig.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	5.46	Apr. 12	3.32	July 19	6.38	Oct. 11	8.03
12	5.57	19	5.23	26	6.38	18	8.22
18	5.38	26	3.05	Aug. 2	7.17	25	7.93
26	5.17	May 3	4.31	9	7.57	Nov. 1	8.03
Feb. 1	4.58	12	5.46	16	7.46	8	8.18
8	6.17	18	3.46	23	7.17	14	8.05
16	6.45	25	4.24	30	7.75	22	8.08
22	6.46	31	5.24	Sept. 6	7.06	29	7.34
Mar. 8	7.73	June 14	5.53	13	8.35	Dec. 6	7.57
15	6.47	21	5.38	20	8.25	13	7.70
22	6.06	28	5.78	27	7.24	20	7.04
29	5.36	July 5	6.86	Oct. 6	7.37	27	7.92
Apr. 5	3.36	12	7.18				

#### Parke County

Parke 1 (\*1023, p. 69; 1071, p. 71). Donald C. Stutler. E $\frac{1}{2}$ SE $\frac{1}{4}$  sec. 3, T. 15 N., R. 8 W. Measurements made by Donald C. Stutler.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	5.22	Mar. 27	3.95	June 27	4.00	Oct. 2	5.35
9	5.08	Apr. 3	3.87	July 3	4.50	9	5.08
16	4.90	10	3.86	10	4.65	16	5.20
23	4.86	24	3.80	17	4.74	23	5.28
30	4.72	May 1	3.78	24	4.85	30	5.22
Feb. 6	4.65	8	3.63	Aug. 8	5.10	Nov. 6	5.14
13	4.03	15	3.55	15	5.50	20	5.15
20	4.06	22	3.50	22	5.80	27	4.95
27	4.10	29	3.45	Sept. 4	5.81	Dec. 4	4.80
Mar. 6	4.16	June 5	3.53	11	5.50	11	4.82
13	4.32	12	3.50	18	5.10	18	4.90
20	3.98	20	3.75	25	5.43	25	4.90

#### Perry County

Perry 1 (\*1016, p. 66; 1023, p. 70; 1071, p. 72). Owner unknown. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 21, T. 5 S., R. 2 W., about 1.8 miles northeast of Gatchel along State Highway 37. Measurements made by Charles H. Goffinet.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	2.70	Apr. 6	1.96	July 6	2.53	Oct. 5	9.46
12	4.09	13	2.71	13	5.40	12	9.46
19	3.17	20	3.37	21	6.65	20	9.47
26	2.80	27	3.10	27	7.20	27	9.60
Feb. 2	3.26	May 4	3.02	Aug. 3	7.62	Nov. 2	9.26
9	4.20	11	4.80	10	8.01	9	9.92
16	5.03	18	7.10	17	8.31	16	8.07
23	5.43	25	1.36	24	8.57	22	9.83
Mar. 2	5.79	June 2	1.92	31	9.09	30	8.96
9	5.58	8	4.70	Sept. 7	9.30	Dec. 7	6.55
16	3.23	15	6.02	14	9.22	14	8.01
23	4.56	22	7.00	21	9.35	21	8.70
30	2.52	29	6.31	28	9.37	28	8.76

#### Pike County

Pike 1 (\*840, p. 83; 845, p. 80; 886, p. 109; 906, p. 32; 936, p. 36; 944, p. 33; 986, p. 36; 1016, p. 64; 1023, p. 70; 1071, p. 72). A. J. Heuring. In Winslow, in front of residence at Lafayette and Main Sts. Measurements made by Denzel Russell and Minnard Beadles, Pike State Forest.

## Pike 1--Continued.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	6.89	Apr. 2	6.77	June 24	5.98	Sept. 30	8.75
14	6.30	8	6.00	30	5.98	Oct. 7	8.70
21	6.14	15	5.10	July 8	7.30	21	9.30
28	5.99	22	5.41	15	7.40	Nov. 2	9.30
Feb. 4	6.00	28	5.29	22	7.42	12	9.15
18	6.65	May 6	5.24	Sept. 2	8.42	18	9.10
25	6.66	13	6.83	4	8.44	25	9.10
Mar. 4	7.10	27	6.58	10	8.50	Dec. 2	9.30
11	7.24	June 3	6.64	17	8.57	9	9.35
19	6.99	10	5.00	23	8.67	16	9.55
25	6.74						

## Porter County

Porter 1 (\*817, p. 50; 840, p. 83; 845, p. 80; 886, p. 108; 906, p. 32; 936, p. 36; 944, p. 33; 986, p. 36; 1016, p. 67; 1023, p. 70; 1071, p. 72). Valparaiso Water Department test well. At well 1 pumphouse at Flint Lake, about 3 miles north of Valparaiso along State Highway 49. Measurements made by J. F. Bradley, engineer, Valparaiso Water Department.

## Water level, in feet below land-surface datum, 1947

Jan. 1	51.10	Apr. 30	51.25	Aug. 31	51.40	Nov. 12	51.20
15	50.80	May 15	51.30	Sept. 15	51.25	19	51.40
Feb. 1	51.15	31	51.75	30	51.25	26	51.55
28	51.45	June 15	51.50	Oct. 7	51.10	Dec. 9	52.00
Mar. 16	51.70	July 1	51.30	15	51.05	17	51.80
30	51.80	16	51.45	23	51.10	23	51.68
Apr. 16	51.50	Aug. 15	52.55	30	51.15	31	51.81

## Posey County

Posey 2. Warren Wade Estate. Porter Cox, trustee. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 5, T. 5 S., R. 12 W., in Civilian Conservation Corp camp site near Wadesville. Unused drilled well, diameter 6 inches, depth 236 feet. Measuring point, top of 6-inch casing, at land-surface datum. First measured Feb. 19, 1947. Measured by Robert L. Wiggins, R. F. D. 1, Poseyville.

## Water level, in feet below land-surface datum, 1947

Feb. 19	3.87	May 4	3.38	June 21	4.13	Aug. 16	5.29
Mar. 1	3.87	10	3.81	28	4.10	23	5.50
8	4.34	17	3.66	July 5	3.95	30	5.77
15	4.10	24	3.66	12	4.20	Dec. 5	9.37
22	3.89	31	3.68	19	4.30	7	9.90
Apr. 5	3.93	June 8	3.76	26	4.52	14	9.80
19	3.38	14	3.95	Aug. 2	4.71	21	9.60
26	3.63						

## Pulaski County

Pulaski 1 (\*817, p. 51; 840, p. 84; 845, p. 81; 886, p. 108; 906, p. 32; 936, p. 38; 944, p. 34; 1016, p. 67; 1023, p. 71; 1071, p. 73). Jasper-Pulaski State Game Preserve. In basement of superintendent's residence. Measurements made by Frank Shortz, superintendent, Jasper-Pulaski State Game Preserve.

## Water level, in feet below land-surface datum, 1947

Jan. 7	8.12	Feb. 24	7.83	Apr. 14	6.80	June 3	5.99
13	8.15	Mar. 3	8.07	21	6.79	9	5.75
20	7.67	10	8.28	28	6.65	16	6.05
27	7.85	18	8.13	May 5	6.36	23	6.34
Feb. 3	7.58	24	7.54	12	6.54	30	6.53
10	7.92	31	7.47	20	6.30	July 7	6.96
17	7.89	Apr. 7	7.33	27	6.10	15	7.15

## Pulaski 1--Continued.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 21	7.50	Sept. 8	9.01	Oct. 27	9.19	Dec. 2	8.50
28	7.75	15	9.01	Nov. 3	9.26	8	8.60
Aug. 4	7.90	30	9.11	11	9.11	15	8.23
18	8.58	Oct. 6	9.04	17	9.12	22	8.24
25	8.66	13	9.22	24	8.66	29	8.25
Sept. 1	8.74	20	9.30				

## Putnam County

Putnam 1 (\*1023, p. 71; 1071, p. 73). Paul K. McMahan. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 14, T. 14 N., R. 5 E. Measurements discontinued Sept. 8, 1946.

Putnam 3 (\*1071, p. 73). Frederic A. Danforth. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 17, T. 12 N., R. 4 W., about 1 mile north of Cunot. Measurements made by Frederic A. Danforth.

Water level, in feet below land-surface datum, 1947

Jan. 7	131.51	Apr. 7	131.43	July 1	131.19	Sept. 23	131.50
14	131.44	29	131.45	9	131.36	Oct. 2	131.68
21	131.38	May 9	131.35	15	131.34	14	131.55
28	131.36	13	131.34	27	131.34	22	131.45
Feb. 4	131.42	20	131.21	29	131.30	30	131.00
10	131.47	27	130.38	Aug. 5	131.45	Nov. 3	131.27
18	131.48	June 3	131.25	13	131.45	25	131.35
25	131.43	10	131.19	20	131.35	Dec. 6	131.40
Mar. 4	131.40	20	131.09	Sept. 9	131.41	23	131.40
25	131.40	24	131.15	19	131.50		

## Randolph County

Randolph 1 (\*944, p. 34; 986, p. 37; 1016, p. 68; 1023, p. 72; 1071, p. 74). Artie V. Keys. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 26, T. 20 N., R. 14 E., in rear of owner's residence, about 3 miles east and 1 mile south of Winchester. Measurements made by Artie V. Keys.

Water level, in feet below land-surface datum, 1947

Jan. 15	15.79	Apr. 15	13.18	July 15	14.54	Oct. 15	16.16
31	14.01	30	12.41	31	14.85	31	15.91
Feb. 15	14.30	May 15	13.27	Aug. 15	15.25	Nov. 15	15.95
28	14.63	31	13.15	31	15.45	30	16.02
Mar. 15	14.61	June 15	13.27	Sept. 15	15.64	Dec. 15	15.92
31	13.65	30	14.16	30	15.97	31	15.42

Randolph 2 (\*1071, p. 74). James A. Lane. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 22, T. 19 N., R. 13 E., about 1 mile northeast of Huntsville. Measurements made by James A. Lane.

Water level, in feet below land-surface datum, 1947

Jan. 4	12.83	Apr. 5	1.29	July 12	5.40	Sept. 27	8.80
11	10.90	12	1.09	18	6.94	Oct. 4	8.78
18	10.77	17	1.45	26	6.81	11	8.79
25	11.27	26	.87	Aug. 2	6.91	18	9.16
Feb. 1	12.01	May 3	1.90	9	6.80	Nov. 1	9.50
8	9.33	10	2.77	16	6.83	15	9.20
15	8.95	17	2.77	23	6.90	22	9.25
22	8.01	June 7	1.65	30	6.82	29	9.30
Mar. 1	7.27	14	2.98	Sept. 1	6.80	Dec. 1	9.60
8	6.76	21	4.00	6	7.20	13	9.59
15	4.00	28	4.61	13	7.55	20	9.59
22	3.48	July 5	4.99	20	8.89	27	9.57
29	6.42	9	5.70				

Ripley County

Ripley 1 (\*1016, p. 68; 1023, p. 72; 1071, p. 74). Cleve Fagan. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 18, T. 8 N., R. 11 E., 2.8 miles west of Osgood on county road. Measurements made by Cleve Fagan.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 27	5.79	June 8	3.50	Aug. 16	8.30	Nov. 1	11.70
Apr. 5	3.80	14	3.50	23	8.50	8	11.80
12	3.70	21	3.80	30	9.20	15	11.80
19	3.40	28	4.00	Sept. 7	9.40	22	12.35
26	3.30	July 7	4.10	14	10.53	29	11.80
May 3	1.58	12	4.50	20	11.26	Dec. 6	12.00
10	3.40	19	5.50	27	11.30	13	12.20
17	3.40	26	5.50	Oct. 4	11.59	20	11.90
24	3.30	Aug. 2	6.50	10	11.40	27	12.28
31	3.20	8	7.30				

Rush County

Rush 1 (\*1023, p. 72; 1071, p. 74). Wilbert H. Hahn. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 8, T. 14 N., R. 10 E. Measurements made by Wilbert H. Hahn.

Water level, in feet below land-surface datum, 1947

Jan. 4	4.94	Mar. 8	5.26	June 20	4.28	Aug. 29	5.89
11	4.67	15	4.64	27	5.44	Sept. 26	6.86
20	3.50	29	4.08	July 4	5.54	Oct. 3	6.70
25	3.98	Apr. 11	3.55	18	3.93	17	6.79
Feb. 1	4.37	18	3.84	25	4.44	Dec. 5	6.98
8	4.39	27	2.89	Aug. 1	4.86	12	7.02
15	4.69	May 11	3.85	8	5.51	19	6.71
22	4.86	16	4.25	18	5.52	26	6.52
Mar. 1	4.91						

St. Joseph County

St. Joseph 1 (\*817, p. 52; 840, p. 85; 845, p. 82; 886, p. 110; 906, p. 33; 936, p. 38; 944, p. 34; 986, p. 37; 1016, p. 69; 1023, p. 72; 1071, p. 74). Mishawaka Water & Light Department. In Mishawaka, at pumping plant. Measurements made by A. R. Klein, superintendent, Mishawaka Water & Light Department.

Water level, in feet below land-surface datum, 1947

Jan. 1	9.16	Apr. 1	7.83	July 1	8.34	Sept. 30	11.08
16	9.25	15	4.70	16	12.00	Oct. 16	10.98
31	10.16	May 1	5.33	Aug. 1	11.83	Nov. 1	10.75
Feb. 14	9.67	16	7.17	16	12.33	15	9.66
Mar. 1	9.58	June 1	5.75	Sept. 1	9.66	Dec. 1	10.08
15	10.25	16	6.92	15	10.50	16	9.17

St. Joseph 4T-1 (\*1023, p. 73; 1071, p. 75). City of South Bend. Olive Park pumping station. About 1,250 feet west of Olive St. and 200 feet south of New York Central Railroad. Measurements made by Ed Fleming, city engineering department.

Water level, in feet below land-surface datum, 1947

Jan. 16	19.13	Mar. 27	18.82	June 12	15.15	Oct. 3	17.30
23	18.88	Apr. 3	18.68	27	16.09	10	17.76
Feb. 3	19.07	17	16.98	July 14	17.62	22	18.08
20	18.70	May 10	16.92	Sept. 5	18.25	31	17.72
27	18.60	16	17.20	11	18.39	Nov. 14	18.14
Mar. 6	18.60	24	16.30	18	17.91	Dec. 1	18.11
21	18.74	June 2	15.27				

St. Joseph 4T-2 (\*1023, p. 73; 1071, p. 75). City of South Bend. On east curb line of Lombardy Drive, 1 block south of Sample St., 900 block. Measurements made by Ed Fleming, city engineering department.

## St. Joseph 4T-2--Continued.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 16	8.41	Mar. 27	7.60	June 12	5.34	Oct. 3	7.24
23	8.51	Apr. 3	7.12	27	6.66	10	7.47
Feb. 3	8.05	17	5.88	July 14	6.66	22	7.70
20	8.10	May 10	5.62	Aug. 5	7.52	31	7.62
27	8.22	16	6.05	Sept. 11	7.40	Nov. 14	7.68
Mar. 6	8.17	24	5.39	18	7.06	Dec. 1	8.02
21	8.15	June 2	4.77				

St. Joseph 10-2 (\*1071, p. 75). City Dairy Co. In South Bend, on South Main St., about 175 feet west of centerline of Main St. and 14 feet north of centerline of east-west alley, 4 feet inside building. Measurements made by E. Fleming, City Engineer's office.

Water level at 2 a.m., in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
1	37.85	.....	38.09	37.91	37.20	.....	34.78	34.48	34.78	35.01	35.31
2	37.85	38.02	38.08	37.91	37.16	.....	34.76	34.48	34.79	35.01	.....
3	37.86	38.02	38.08	37.91	37.14	35.88	34.73	34.49	34.80	35.02	.....
4	37.87	38.03	38.07	37.90	37.10	35.83	34.71	34.50	34.81	35.03	.....
5	37.87	38.03	38.07	37.90	37.06	35.78	.....	34.50	34.79	35.04	.....
6	37.88	38.04	38.06	37.89	37.02	35.74	.....	34.50	34.82	35.05	.....
7	37.88	38.04	38.06	37.89	36.99	35.70	.....	34.51	34.84	35.06	.....
8	37.89	38.04	38.05	37.87	36.95	35.66	34.62	34.53	34.85	35.07	35.37
9	37.89	38.04	38.04	37.85	36.91	35.61	34.60	34.54	34.85	35.08	35.38
10	37.90	38.05	38.04	37.83	36.88	35.56	34.57	34.55	34.86	35.08	35.40
11	37.91	39.05	38.03	37.80	36.83	35.52	34.56	34.55	34.87	35.09	35.39
12	37.91	38.05	38.02	37.79	36.79	35.49	.....	34.55	34.88	35.10	35.43
13	37.92	38.06	38.01	37.77	36.74	35.43	34.55	34.54	.....	35.11	35.44
14	37.92	38.06	38.00	37.74	36.70	35.39	34.53	34.55	34.88	35.12	35.46
15	37.93	38.06	37.99	37.71	36.66	35.35	34.52	34.57	34.89	35.13	.....
16	37.93	38.06	37.99	37.67	36.62	35.32	34.50	34.59	34.89	35.14	.....
17	37.94	38.07	37.98	37.65	36.58	35.27	34.49	34.60	34.90	35.14	.....
18	37.94	38.07	37.98	37.62	36.55	35.22	34.49	34.60	34.91	.....	.....
19	37.95	38.07	37.97	37.59	36.49	35.19	34.47	34.61	34.91	35.16	.....
20	37.95	38.07	37.96	37.55	36.45	35.15	.....	34.62	34.91	35.17	.....
21	37.96	38.07	37.96	37.53	36.40	35.11	.....	34.64	34.90	35.18	.....
22	37.96	38.09	37.96	37.49	36.37	35.07	.....	34.66	34.91	35.19	.....
23	37.96	38.09	37.95	37.46	36.33	35.03	.....	34.67	34.93	35.20	.....
24	37.97	38.09	37.94	37.43	36.29	34.99	.....	34.68	34.93	35.22	.....
25	37.99	38.09	37.94	37.40	36.24	34.95	34.46	34.68	34.95	35.23	.....
26	37.99	38.09	37.94	.....	36.20	34.91	34.45	34.69	34.96	35.24	.....
27	37.99	38.09	37.94	37.34	36.16	34.88	34.45	34.71	34.98	35.24	.....
28	38.00	38.09	37.93	37.31	36.11	34.86	34.46	34.72	34.98	35.25	.....
29	38.00	.....	37.92	37.27	36.05	34.83	34.46	34.74	34.97	35.26	.....
30	38.00	.....	37.93	37.23	36.03	34.81	34.45	34.76	35.00	35.28	.....
31	38.02	.....	37.92	.....	.....	.....	34.45	34.77	.....	35.29	.....

St. Joseph 16-1 (\*1016, p. 69; 1023, p. 73; 1071, p. 76). Singer Manufacturing Co. In South Bend, at Olive St. and Western Ave. Seriously affected by automatic intermittent pumping of supply well. Measurements made by personnel of Singer Manufacturing Co., J. R. Kerr, chief engineer.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 14	29.88	May 21	21.45	Aug. 18	28.47	Nov. 3	29.10
28	29.90	June 9	26.68	26	29.17	10	28.50
Mar. 7	29.90	16	27.40	Sept. 9	28.70	17	28.65
14	30.03	23	27.20	15	28.68	24	28.62
28	30.75	30	27.70	22	29.10	Dec. 1	28.98
Apr. 4	29.70	July 3	28.40	29	27.82	5	29.07
22	29.54	12	28.70	Oct. 5	28.50	15	28.78
May 3	29.8	19	28.30	12	28.15	22	29.02
9	30.1	Aug. 4	29.48	20	28.50	29	29.90
17	29.25	11	28.58	27	28.48		

St. Joseph 16-F (\*1016, p. 69; 1023, p. 74; 1071, p. 76 ). Singer Manufacturing Co. In South Bend, at Olive St. and Western Ave. "Fire well". Measurements discontinued Nov. 29, 1946.

St. Joseph 22 (\*1016, p. 69; 1023, p. 74; 1071, p. 76). Palace Theater. In South Bend, at Colfax Ave. and Michigan St. West well in basement of theater. Measurements made by O. A. Lambert, engineer, Palace Theater.

Water level at 2 a.m., in feet below land-surface datum, 1947

(From recorder charts)												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	32.35	.....	34.40	32.72	32.26	29.86	38.25	41.70	38.12	36.22	35.33	.....
2	33.41	.....	33.66	33.04	32.39	28.83	39.00	41.46	36.32	36.81	34.21	32.05
3	31.91	32.14	31.85	33.60	32.04	29.85	39.43	40.29	37.42	36.93	33.38	33.65
4	31.31	32.85	32.69	34.74	31.89	31.37	40.40	39.94	38.90	37.24	32.93	33.89
5	33.03	32.56	33.32	34.26	30.99	32.79	40.57	41.00	38.37	37.38	33.78	33.61
6	31.99	33.72	33.98	32.79	31.27	34.10	39.60	42.38	38.92	36.77	33.60	33.78
7	31.21	34.92	34.44	31.03	32.33	34.88	36.37	43.43	38.25	.....	34.15	33.20
8	.....	33.89	34.34	31.20	32.74	33.59	37.80	43.42	36.94	.....	33.84	31.55
9	34.27	33.37	34.20	31.98	32.88	33.75	39.47	43.08	38.86	.....	33.65	31.71
10	34.57	32.20	32.35	32.61	32.87	34.69	40.35	43.45	40.00	.....	32.99	31.98
11	34.70	32.87	33.02	32.62	32.82	36.05	39.71	42.50	38.66	.....	33.52	32.67
12	33.98	33.53	34.04	32.31	30.98	36.88	39.65	42.80	38.28	35.42	33.83	32.83
13	32.16	34.23	34.82	31.95	32.20	35.87	39.76	43.93	39.86	35.09	33.79	33.31
14	32.49	34.04	.....	30.51	32.77	35.94	38.40	44.40	38.78	35.21	33.98	32.51
15	32.86	33.87	.....	31.20	33.10	34.68	38.93	43.67	36.52	35.63	34.16	31.05
16	33.56	33.43	.....	32.12	33.51	31.91	40.14	42.68	36.26	36.57	33.79	32.13
17	33.98	31.73	32.83	32.62	33.90	32.24	.....	42.59	36.05	37.05	33.10	32.32
18	34.49	32.25	32.92	33.23	.....	32.13	.....	40.95	37.07	37.72	33.01	32.68
19	32.41	32.92	33.38	33.33	.....	32.69	.....	41.50	38.29	37.42	33.10	33.38
20	31.62	33.67	33.68	31.77	31.85	33.58	.....	42.85	39.61	.....	33.33	33.78
21	32.50	34.20	34.12	29.41	33.45	34.40	.....	43.05	40.26	.....	33.44	32.90
22	32.77	34.32	34.10	30.19	33.15	34.93	35.33	43.58	.....	.....	33.56	31.68
23	33.77	33.63	33.03	30.95	33.58	34.50	35.66	43.48	36.15	37.12	33.39	31.38
24	35.01	32.05	30.72	30.62	35.39	36.40	36.40	42.60	35.85	37.57	32.68	32.01
25	35.52	32.73	31.45	30.40	31.47	37.25	38.24	40.65	36.15	37.64	33.06	32.38
26	34.88	33.33	32.20	32.32	29.95	.....	40.01	41.43	36.40	36.93	33.68	30.50
27	32.88	33.97	33.36	32.76	30.58	.....	41.08	40.89	36.39	35.68	33.70	30.29
28	32.93	34.27	33.93	30.89	20.88	.....	38.43	41.73	34.97	35.35	32.42	30.82
29	33.72	.....	33.97	32.23	31.12	.....	38.42	42.33	.....	35.31	33.00	30.38
30	30.10	.....	33.52	31.64	31.10	.....	39.55	41.57	35.27	35.18	31.88	31.00
31	.....	.....	32.60	.....	30.25	.....	40.96	40.25	.....	35.27	.....	32.49

St. Joseph 28 (\*1023, p. 75; 1071, p. 77 ). 820th Army Air Forces Depot (Oliver Equipment Co.). In South Bend, at 1217 S. Walnut St. Measurements made by Ed Fleming, city engineering department. Measurements discontinued Mar. 28, 1947.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level
Jan. 16	18.85	Jan. 30	18.86	Mar. 6	18.60
23	18.85	Feb. 20	18.60	21	18.43

St. Joseph 34 (\*1023, p. 75; 1071, p. 77 ). White Swan Laundry. In South Bend, at 117 E. Sample St. Drilled well, diameter 12 inches, depth 81 feet. Measurements made by Ed Fleming, city engineering department. Measurements discontinued Aug. 22, 1947.

Water level at 2 a.m., in feet below land-surface datum, 1947

(From recorder charts)								
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
1	40.77	40.82	40.62	.....	.....	.....	37.57	.....
2	40.63	40.81	40.61	.....	.....	.....	37.83	.....
3	40.66	40.67	40.52	.....	39.45	.....	37.65	.....
4	40.74	40.74	40.56	.....	39.37	.....	37.64	.....
5	40.72	40.79	40.63	.....	39.27	.....	37.65	.....
6	40.62	40.78	40.58	.....	39.27	.....	.....	.....
7	40.69	40.77	40.56	.....	39.24	.....	.....	a38.53

a Tape measurement.



## St. Joseph 34--Continued.

Water level, at 2 a.m., in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
8	40.71	40.78	40.52	.....	39.23	.....	37.53	.....
9	40.73	40.76	40.54	.....	39.19	.....	37.54	.....
10	40.74	40.64	40.43	.....	39.14	.....	.....	.....
11	40.75	40.72	40.47	.....	39.08	.....	37.57	.....
12	40.73	40.70	40.47	.....	38.94	.....	.....	.....
13	40.62	40.70	40.48	.....	38.95	.....	37.55	.....
14	40.70	40.67	40.50	.....	.....	37.84	37.56	a38.72
15	40.72	40.64	40.45	39.83	.....	.....	.....	.....
16	40.73	40.67	41.12	.....	.....	.....	.....	.....
17	40.73	40.55	40.46	.....	38.85	.....	.....	.....
18	40.77	40.59	40.47	.....	.....	.....	.....	.....
19	40.72	40.63	40.45	39.63	.....	.....	.....	.....
20	40.58	40.64	40.45	.....	.....	.....	.....	.....
21	40.68	40.65	40.43	.....	.....	37.63	.....	.....
22	40.72	40.64	40.39	.....	.....	37.61	.....	a39.16
23	40.70	40.66	.....	.....	.....	.....	.....	.....
24	40.68	40.52	.....	.....	.....	.....	.....	.....
25	40.70	40.58	.....	.....	.....	.....	37.75	.....
26	40.60	40.62	.....	.....	.....	.....	37.74	.....
27	40.54	40.63	.....	38.55	.....	.....	.....	.....
28	40.63	40.64	.....	39.40	.....	.....	.....	.....
29	40.66	.....	.....	39.43	.....	37.62	.....	.....
30	.....	.....	.....	.....	.....	37.65	.....	.....
31	.....	.....	.....	.....	38.63	.....	.....	.....

a Tape measurement.

St. Joseph 53 (\*1023, p. 76; 1071, p. 78). St. Mary's Convent, Holy Cross. About half a mile west of U. S. Highway 31, in NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 1, T. 38 N., R. 2 E., 3 feet south and 118.5 feet west of southwest corner of power house. Measurements made by Thomas Bowland.

Water level at 2 a.m., in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	5.33	6.19	6.56	5.48	2.73	2.57	4.75	....	4.78	4.57	6.54	5.68
2	5.40	6.73	6.05	5.56	4.10	2.60	4.28	4.80	4.38	4.90	4.53	5.67
3	6.10	6.93	6.70	5.28	2.83	2.16	6.60	4.60	4.70	4.80	8.48	5.60
4	6.28	6.82	6.56	4.93	3.60	2.10	....	7.68	5.30	4.59	5.97	5.50
5	6.58	6.79	6.28	4.88	2.85	4.25	....	7.10	4.35	4.60	4.80	5.46
6	6.23	6.98	7.12	5.10	3.90	2.85	....	5.42	4.55	4.65	4.62	5.44
7	6.50	....	6.58	4.53	3.71	2.35	7.10	....	4.63	4.62	4.58	5.60
8	6.54	....	6.79	4.33	3.72	3.65	4.65	....	4.53	4.61	4.64	5.61
9	6.39	7.05	6.63	....	....	3.60	4.19	5.10	4.60	5.40	4.60	5.46
10	6.68	7.28	7.10	3.95	3.53	2.31	4.67	4.85	7.74	7.85	4.60	5.51
11	6.30	7.04	7.69	4.45	3.72	4.58	....	4.85	6.60	4.53	4.40	5.41
12	6.68	7.03	7.51	4.16	3.80	2.49	4.57	4.85	7.61	4.90	4.52	5.64
13	6.26	7.17	7.22	4.32	5.10	2.54	4.95	5.00	5.85	4.60	5.75	5.77
14	6.37	7.15	7.21	4.21	3.53	5.45	5.45	4.85	4.35	4.60	4.98	5.84
15	6.67	7.08	6.27	4.17	3.75	2.71	4.20	....	7.60	4.48	5.73	5.89
16	5.83	7.08	5.95	4.37	4.60	4.35	4.15	4.70	7.63	5.03	5.62	5.55
17	6.19	6.58	6.30	4.51	3.68	4.63	4.60	5.60	4.45	7.93	5.68	5.90
18	5.80	7.25	6.15	4.65	3.26	3.85	....	4.61	4.70	4.72	5.62	6.02
19	6.09	7.25	6.23	4.63	3.60	3.82	4.65	4.65	4.47	4.85	5.75	5.69
20	5.86	7.31	6.26	4.50	4.03	4.25	4.17	5.25	6.05	4.73	5.62	5.55
21	5.96	7.43	5.82	3.95	2.93	....	4.01	8.08	7.60	4.52	5.79	5.66
22	5.64	6.74	6.06	3.45	3.10	3.60	4.60	....	6.67	5.55	5.61	5.70
23	6.06	7.07	5.95	3.62	2.42	3.10	4.55	5.45	5.03	6.40	5.60	5.54
24	6.10	....	5.90	3.72	2.35	4.73	4.30	....	5.87	5.85	5.49	5.43
25	5.98	7.09	5.60	3.28	3.10	3.60	....	....	5.25	4.58	5.72	5.60
26	6.01	7.18	5.44	4.32	3.47	3.53	7.60	....	5.02	5.60	5.88	5.66
27	6.17	6.91	5.45	4.58	4.58	4.68	4.60	....	4.66	4.60	5.51	5.45
28	7.41	7.32	5.60	4.13	2.63	4.63	5.10	4.50	4.43	4.64	5.32	5.38
29	7.43	....	5.35	2.85	2.52	4.75	4.44	4.78	4.46	4.75	5.55	5.55
30	6.73	....	5.52	4.60	2.57	3.54	4.61	4.85	4.62	4.67	5.51	5.50
31	6.71	5.41	....	3.18	....	4.55	4.55	....	7.50	....	5.44	....

St. Joseph 85 (\*1023, p. 77; 1071, p. 78). New Jersey, Indiana & Illinois Railroad. In South Bend, near intersection of Indiana Ave. and Olive St., in NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 15, T. 37 N., R. 2 E. Measurements made by Ed Fleming, city engineering department.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 16	14.81	Apr. 3	14.08	June 12	10.62	Oct. 3	12.55
23	14.76	17	12.54	27	11.00	10	12.69
Feb. 3	14.63	May 10	11.89	July 14	11.67	22	12.94
20	15.03	16	11.97	Sept. 5	12.90	31	13.00
27	14.35	24	11.56	11	12.92	Nov. 14	13.13
Mar. 6	14.57	June 2	11.13	18	12.58	Dec. 1	13.26
21	14.31						

St. Joseph 89 (\*1023, p. 78; 1071, p. 79). Mr. Morgan. In South Bend, about 1 $\frac{1}{2}$  blocks west of Ironwood Drive and half a block south of U. S. Highway 20. Measurements made by Ed Fleming, city engineering department.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 18	46.28	Mar. 27	46.10	June 4	38.38	Sept. 11	42.97
23	46.30	Apr. 3	46.06	12	41.13	18	42.92
30	46.05	17	44.86	July 3	41.53	Oct. 3	43.03
Feb. 20	46.28	May 9	43.02	10	41.88	31	43.39
Mar. 6	46.36	23	42.25	Aug. 22	43.49	Nov. 28	43.12
22	46.13						

St. Joseph 90 (\*1023, p. 78; 1071, p. 79). Owner unknown. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 29, T. 38 N., R. 4 E., at north side of Douglas Road and Elm Road intersection. Measurements discontinued Sept. 21, 1946.

St. Joseph 91 (\*1023, p. 78; 1071, p. 80). Owner unknown. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 27, T. 38 N., R. 2 E., near Portage Road, at brick house across from County Infirmary. Measurements made by Ed Fleming, city engineering department. Measurements discontinued June 9, 1947.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 18	4.91	Feb. 20	4.97	Mar. 27	4.97	May 23	4.97
23	4.97	Mar. 6	4.99	Apr. 3	4.97	June 9	4.91
30	4.97	22	4.98	17	4.99		

### Scott County

Scott 1 (\*944, p. 35; 986, p. 38; 1016, p. 71; 1023, p. 79; 1071, p. 80). Scottsburg Water Department well 3. Near northeast corner of intersection of Hyland and Thomas Sts. Measurements made by C. E. Robbins, superintendent, Scottsburg Water Department.

Water level at 2 a.m., in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	20.41	18.75	21.33	21.32	18.46	21.32	19.40	21.39	23.50	24.61	25.43	26.23
2	19.45	19.10	21.48	21.02	18.48	20.40	19.22	21.58	22.75	24.64	25.48	.....
3	20.06	18.07	21.37	20.45	18.75	20.42	19.16	21.03	23.95	24.71	25.40	.....
4	20.81	18.93	21.95	21.36	19.44	19.25	19.95	20.77	24.52	24.72	25.55	.....
5	19.90	19.13	22.30	21.20	19.40	.....	19.25	.....	24.54	25.19	25.42	.....
6	19.98	19.74	23.39	20.53	20.20	19.14	19.70	.....	24.46	25.05	25.68	.....
7	20.85	19.85	23.82	20.86	19.80	17.90	19.15	22.72	23.92	25.15	25.46	.....
8	20.24	19.83	23.06	20.30	20.05	17.49	19.35	23.33	23.30	25.21	25.60	.....
9	20.26	20.27	24.13	19.21	21.12	16.30	20.00	22.79	24.32	25.36	25.70	26.60
10	20.27	20.94	23.49	19.10	20.70	17.15	18.98	22.69	.....	25.40	25.61	26.38
11	20.15	21.20	24.30	19.65	21.56	18.05	18.78	22.28	.....	25.23	25.28	26.49
12	20.28	21.26	24.05	19.85	20.85	19.63	19.72	23.01	24.80	25.39	25.53	26.56
13	20.32	20.52	24.09	20.48	21.56	20.18	20.32	22.88	23.54	25.37	25.62	26.44
14	20.17	20.81	24.06	19.90	21.00	19.65	19.90	23.02	24.42	25.23	25.64	26.45
15	21.54	20.05	23.20	20.55	21.55	20.34	19.15	22.40	24.32	25.25	25.28	26.20
16	21.18	20.00	23.07	19.70	21.50	.....	18.83	23.03	23.92	.....	25.57	.....
17	21.85	20.57	22.45	20.32	20.12	20.35	18.75	23.07	24.86	.....	25.74	26.21

## Scott 1--Continued.

Water level at 2 a.m., in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
18	21.58	20.30	23.07	19.24	20.27	19.45	20.05	22.90	24.55	.....	25.64	26.24
19	21.87	20.18	22.33	18.70	19.65	18.60	20.43	23.01	24.73	.....	25.60	26.26
20	20.52	20.29	22.02	19.98	.....	19.46	20.10	23.15	25.10	.....	25.68	26.37
21	21.69	20.64	22.70	18.92	.....	19.63	20.13	23.28	25.20	24.98	25.74	26.32
22	21.50	20.88	22.94	18.63	19.80	19.09	.....	23.35	24.70	25.03	25.54	26.34
23	22.15	20.95	23.35	19.42	18.74	19.37	.....	23.62	24.57	25.08	25.52	26.36
24	22.00	20.64	22.68	18.50	18.50	20.38	.....	23.98	24.88	25.17	25.11	26.58
25	22.47	21.17	23.03	18.60	19.18	.....	22.88	22.22	24.98	25.63	25.50	26.44
26	22.10	21.12	22.93	19.04	19.13	18.75	22.72	23.53	24.92	25.41	25.46	26.04
27	20.96	21.40	22.27	19.40	19.25	18.80	21.55	23.46	25.36	24.60	26.16	26.22
28	21.07	21.60	22.24	17.10	19.10	19.05	21.05	23.77	25.26	25.03	26.40	26.26
29	20.85		21.59	18.68	19.03	20.35	21.30	23.96	24.91	25.22	26.35	26.22
30	19.55		22.09	18.70	19.55	19.99	20.72	24.28	24.59	25.45	26.45	26.21
31	18.94		21.01		20.30		20.71	24.47		25.43		26.40

Shelby County

Shelby 1 (\*1071, p. 81). Clarence Milner. SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 16, T. 13 N., R. 6 E., about half a mile south of Fairland. Measurements made by Clarence C. Milner.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	8.70	Apr. 6	8.42	July 6	7.75	Oct. 5	9.62
12	8.65	13	8.09	13	8.14	12	9.69
19	8.60	20	8.28	20	8.25	19	9.75
26	8.63	27	7.12	27	8.49	26	9.81
Feb. 2	8.22	May 4	6.37	Aug. 3	8.71	Nov. 2	9.84
9	7.88	11	6.89	10	8.91	9	9.88
16	8.17	18	7.02	17	9.08	16	9.96
23	8.41	25	7.18	24	8.99	23	9.99
Mar. 2	8.67	June 1	7.10	31	9.14	30	10.01
9	8.80	8	7.01	Sept. 4	9.28	Dec. 7	10.08
16	8.68	15	6.05	14	9.36	14	10.06
23	8.68	22	6.74	21	9.46	20	10.08
30	8.57	29	7.33	28	9.52	27	10.07

Spencer County

Spencer 4 (\*1016, p. 71; 1023, p. 79; 1071, p. 81). Andrew Wetzel. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 10, T. 5 S., R. 5 W., 0.5 mile east of Buffaloville and about 100 feet north of road. Measurements made by Raymond J. F. Meier.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	3.74	Apr. 6	2.19	July 5	3.18	Oct. 11	7.40
11	2.82	12	2.72	12	3.66	18	7.43
18	2.69	19	2.98	19	3.86	25	7.67
25	2.27	26	2.76	Aug. 2	4.15	Nov. 1	7.54
Feb. 1	2.88	May 4	2.50	9	4.81	8	7.56
8	3.16	11	3.27	16	5.28	15	7.58
15	3.54	18	3.28	23	5.73	22	8.19
22	3.56	25	2.76	30	6.09	29	8.13
Mar. 1	3.76	31	3.25	Sept. 6	6.20	Dec. 6	7.78
8	3.68	June 7	3.30	13	6.76	13	7.86
15	2.76	14	3.98	20	6.98	20	7.84
22	3.24	21	4.51	27	6.93	27	7.84
29	2.25	28	4.23	Oct. 4	7.18		

Spencer 5 (1016, p. 72; 1023, p. 80; 1071, p. 82). Lincoln State Park. In Lincoln City, in SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 32, T. 4 S., R. 5 W., at caretaker's house. Measurements made by Raymond Potter and C. F. Heady.

## Spencer 5--Continued.

Water level, in feet below land-surface datum, 1947					
Date	Water level	Date	Water level	Date	Water level
Jan. 2	30.35	Apr. 9	27.28	July 10	30.29
8	30.56	16	26.29	16	30.43
15	30.58	23	26.22	29	30.52
22	29.98	30	27.41	Aug. 13	30.77
29	29.88	May 7	27.66	20	30.83
Feb. 5	29.70	14	28.90	27	30.93
12	30.00	21	29.40	Sept. 4	30.92
20	30.10	29	29.76	10	31.11
Mar. 5	30.36	June 4	29.41	17	31.16
12	30.12	11	29.81	24	31.20
19	29.97	18	30.07	Oct. 1	31.34
26	29.89	25	30.20	8	31.38
Apr. 2	28.29				
Oct. 15	31.44				
22	31.51				
30	31.53				
Nov. 5	31.51				
12	31.59				
20	31.59				
26	31.61				
Dec. 3	31.62				
10	31.57				
17	31.59				
24	31.61				
31	31.62				

Spencer 6 (\*1016, p. 72; 1023, p. 80; 1071, p. 82). Lincoln State Park. In Lincoln City, in NW $\frac{1}{4}$  sec. 5, T. 5 S., R. 5 W., about 300 feet southwest of memorial building, in pumphouse. Measurements made by Raymond Potter and C. F. Heady.

Water level, in feet below land-surface datum, 1947					
Date	Water level	Date	Water level	Date	Water level
Jan. 2	25.12	Apr. 9	23.11	July 10	25.01
8	24.69	16	22.82	16	24.58
15	24.57	23	22.73	29	25.22
22	24.16	30	22.67	Aug. 13	25.84
29	23.80	May 7	22.71	20	26.30
Feb. 5	23.56	14	23.10	27	26.57
12	23.78	21	23.49	Sept. 4	26.86
20	23.94	29	23.85	10	27.07
Mar. 5	24.37	June 4	23.90	17	27.39
12	24.42	11	24.09	24	27.59
19	24.03	18	24.61	Oct. 1	27.95
26	23.82	25	25.11	8	28.10
Apr. 2	23.39				
Oct. 15	28.21				
22	28.41				
30	28.32				
Nov. 5	28.18				
12	28.04				
20	27.82				
26	27.64				
Dec. 3	27.64				
10	27.52				
17	27.19				
24	26.96				
31	26.93				

Spencer 7 (\*1016, p. 72; 1023, p. 80; 1071, p. 82). Lincoln State Park. In Lincoln City, in SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 8, T. 5 S., R. 5 W., about 2,500 feet northeast of fire tower, 75 feet southwest of Spencer 8, near east boundary of park. Measurements made by Raymond J. F. Meier.

Water level, in feet below land-surface datum, 1947					
Date	Water level	Date	Water level	Date	Water level
Jan. 4	6.40	Apr. 6	1.50	July 5	5.94
11	6.39	12	1.82	12	5.97
18	5.84	19	2.22	19	6.68
25	4.18	26	1.84	26	6.70
Feb. 1	4.58	May 4	1.40	Aug. 2	5.74
8	5.77	11	3.81	9	6.38
15	6.30	18	4.31	16	6.46
22	6.30	25	5.42	23	6.89
Mar. 1	6.31	31	6.13	30	6.93
8	6.31	June 7	4.36	Sept. 6	6.96
15	6.29	14	4.38	13	7.21
22	5.33	21	4.41	20	8.31
29	2.60	28	5.92	27	8.36
Oct. 4	9.49				
11	8.79				
18	8.87				
25	8.93				
Nov. 1	8.91				
8	9.08				
15	9.13				
22	9.28				
29	9.29				
Dec. 6	9.26				
13	9.27				
20	9.27				
27	9.27				

Spencer 8 (\*1016, p. 72; 1023, p. 81; 1071, p. 82). Lincoln State Park. In Lincoln City, in SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 8, T. 5 S., R. 5 W., about 2,500 feet northeast of fire tower, 75 feet northeast of Spencer 7, near east boundary of park. Measurements made by Raymond J. F. Meier.

Water level, in feet below land-surface datum, 1947					
Date	Water level	Date	Water level	Date	Water level
Jan. 4	5.99	Feb. 15	5.48	Mar. 29	4.91
11	5.98	22	5.49	Apr. 6	2.75
18	5.98	Mar. 1	5.51	12	1.96
25	5.67	8	5.49	19	2.04
Feb. 1	5.49	15	5.51	26	2.06
8	5.47	22	5.37	May 4	2.43
May 11	2.36				
18	2.64				
25	2.64				
31	2.98				
June 7	2.35				
14	2.42				

## Spencer 8--Continued.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 21	2.51	Aug. 9	3.72	Sept. 27	6.04	Nov. 15	6.90
28	3.32	16	3.72	Oct. 4	6.23	22	6.98
July 5	3.35	23	5.27	11	6.57	29	7.04
12	3.36	30	4.61	18	6.66	Dec. 6	7.08
19	3.48	Sept. 6	4.72	25	6.80	13	7.04
26	3.50	13	5.32	Nov. 1	6.83	20	7.03
Aug. 2	3.58	20	5.71	8	6.88	27	7.04

Starke County

Starke 2 (\*817, p. 53; 840, p. 86; 845, p. 83; 886, p. 111; 906, p. 33; \*936, p. 39; 944, p. 36; 986, p. 38; 1016, p. 73; 1023, p. 81; 1071, p. 83). S. A. Craigmile. At mint still, about 0.25 mile northeast of owner's residence, near junction of State Highways 10 and 29. Measurements made by Ernest Warkentien, Bass Lake State Fish Hatchery.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	3.77	Apr. 3	2.68	July 3	3.78	Oct. 2	3.83
9	4.02	10	2.94	10	3.98	9	4.16
16	3.59	17	2.88	17	4.10	16	4.32
23	3.57	24	2.51	24	4.29	23	4.24
30	2.94	May 1	2.47	31	4.38	30	3.99
Feb. 6	3.41	8	3.10	Aug. 7	4.52	Nov. 6	4.00
13	3.68	15	3.13	14	4.69	13	3.76
20	3.69	22	2.68	21	4.81	20	3.68
27	3.86	29	3.02	28	4.83	28	3.72
Mar. 6	3.89	June 5	2.79	Sept. 4	4.51	Dec. 4	3.66
13	3.86	12	2.95	11	4.46	11	3.30
20	3.71	19	3.31	18	4.37	18	3.41
27	2.57	26	3.58	25	3.95	26	3.58

Steuben County

Steuben 1 (\*817, p. 53; 840, p. 87; 845, p. 83; 886, p. 111; 906, p. 34; 936, p. 40; 944, p. 36; 986, p. 38; 1016, p. 73; 1023, p. 82; 1071, p. 84). Pokagon State Park. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 33, T. 38 N., R. 13 E., near superintendent's residence, on south side of area formerly used for buffalo pen. Measurements made by M. B. Cooper, Pokagon State Park.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	3.4	Apr. 5	+0.2	July 5	0.70	Oct. 18	3.11
11	2.9	12	+1	12	.76	25	3.19
18	2.6	19	+75	19	1.34	Nov. 1	3.02
25	2.4	26	+44	26	1.54	8	3.04
Feb. 1	2.3	May 3	+46	Aug. 2	1.88	15	2.66
8	2.2	10	+05	9	1.97	22	2.67
15	2.0	17	+30	16	2.34	25	2.60
22	2.2	24	+31	30	1.64	29	2.36
Mar. 1	2.3	21	+58	Sept. 6	1.58	Dec. 6	3.82
8	2.4	June 7	+16	27	2.59	13	2.79
15	2.0	14	+24	Oct. 4	2.73	20	1.67
22	2.2	21	.29	11	3.95	27	1.65
29	1.3						

Steuben 2 (\*817, p. 53; 840, p. 87; 845, p. 83; 886, p. 111; 906, p. 34; 936, p. 40; 944, p. 36; 986, p. 39; 1016, p. 74; 1023, p. 82; 1071, p. 84). Pokagon State Park. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 33, T. 38 N., R. 13 E., on north side of area formerly used for buffalo pen, north of Steuben 1. Measurements made by M. B. Cooper, Pokagon State Park.

## Steuben 2--Continued.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	6.1	Apr. 5	0.7	July 5	3.88	Oct. 18	5.67
11	5.9	12	.5	12	3.92	25	5.83
18	5.6	19	.28	19	3.79	Nov. 1	5.88
25	5.5	26	.55	26	4.24	8	5.92
Feb. 1	5.4	May 3	.52	Aug. 2	4.43	15	.87
8	4.6	10	.87	9	4.73	22	2.62
15	4.4	17	.68	16	4.85	25	3.99
22	4.3	24	.66	30	5.29	29	4.99
Mar. 1	4.4	31	.44	Sept. 6	5.34	Dec. 6	5.20
8	4.5	June 7	.80	27	5.51	13	4.98
15	4.1	14	.54	Oct. 4	5.69	20	4.57
22	3.4	21	1.77	11	5.73	27	4.52
29	3.2						

Sullivan County

Sullivan 1 (\*1016, p. 74; 1023, p. 82; 1071, p. 84). William Koenig. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 19, T. 6 N., R. 8 W., east side of county road, about 3.8 miles southeast of Carlisle. Measurements made by John R. Howard.

Water level, in feet below land-surface datum, 1947

Jan. 5	4.48	Mar. 23	3.55	July 13	8.45	Oct. 12	10.57
12	4.39	30	3.28	20	8.08	19	10.73
19	2.85	Apr. 6	1.49	Aug. 17	9.20	Nov. 9	11.16
Feb. 9	4.86	13	1.05	24	9.10	16	11.32
16	6.04	20	1.78	31	9.33	Dec. 5	11.79
23	6.14	27	1.39	Sept. 7	9.30	12	12.81
Mar. 2	6.77	May 4	1.46	14	9.20	19	12.01
9	7.21	11	1.28	21	9.10	26	12.08
16	5.71	18	1.11				

Switzerland County

Switzerland 1 (\*1016, p. 74; 1023, p. 83; 1071, p. 85). Nellie M. Walker. SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 8, T. 2 N., R. 1 W., 1.0 mile east of Posey Township School, on north side of State Highway 250. Measurements made by Nellie M. Walker.

Water level, in feet below land-surface datum, 1947

Jan. 4	9.80	Mar. 28	14.50	June 28	15.10	Oct. 4	18.65
10	10.40	Apr. 4	10.05	July 3	15.90	11	18.85
17	8.85	12	3.15	11	16.30	18	18.55
24	7.95	18	3.45	19	16.45	25	20.70
Feb. 1	8.05	May 2	3.95	Aug. 1	17.05	Nov. 1	20.55
8	10.20	10	8.65	9	16.55	8	20.25
15	13.10	17	9.10	29	17.45	15	19.35
21	14.10	23	6.85	Sept. 6	18.10	22	19.10
28	14.80	31	6.15	12	18.65	29	18.75
Mar. 8	15.75	June 7	8.70	20	18.70	Dec. 13	18.40
15	16.20	14	12.55	26	18.55	20	18.00
21	16.20	21	13.65				

Tippecanoe County

Tippecanoe 4 (\*1016, p. 75; 1023, p. 83; 1071, p. 85). Lafayette Water Department well 7. At city well field, Canal St. at Tippecanoe St. (extended), on east bank of Wabash River. Measurements made by Robert D. Southworth, Lafayette Water Department, Glen J. Garman, superintendent.

## Tippecanoe 4--Continued.

Water level at 2 a.m., in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	15.58	6.01	14.22	11.45	....	9.70	....	19.02	19.67	15.10	15.15	15.02
2	15.34	4.63	14.16	12.08	0.30	9.62	....	19.11	....	15.40	15.35	16.12
3	15.35	5.40	14.18	12.18	.17	5.05	....	18.97	....	15.18	15.03	16.00
4	15.18	7.31	14.21	12.17	.80	1.32	....	18.95	....	15.15	....	20.82
5	14.86	8.80	14.70	11.79	1.89	.15	....	19.85	....	15.48	14.91	18.50
6	14.40	10.28	14.54	11.80	3.55	.52	....	19.81	....	15.20	14.98	18.95
7	14.16	11.07	14.96	10.70	5.30	2.48	18.20	20.55	....	15.15	....	18.85
8	14.18	11.52	14.77	10.02	6.41	1.23	18.50	19.75	....	15.55	15.24	13.50
9	14.19	11.33	14.68	10.49	7.33	.17	18.60	19.02	15.25	15.32	15.18	13.85
10	14.46	11.30	14.60	....	8.10	.12	18.54	19.99	15.25	....	15.22	13.68
11	14.66	11.38	14.42	....	8.68	1.74	18.47	19.18	....	....	....	13.98
12	14.19	11.60	14.75	....	9.18	3.90	17.81	20.56	....	....	....	13.93
13	14.14	11.71	14.54	....	9.64	5.63	18.39	19.30	....	....	....	13.94
14	....	11.75	14.42	....	10.08	6.49	....	20.26	....	15.36	....	13.98
15	....	11.89	13.33	....	10.73	7.53	17.85	20.92	....	15.75	....	....
16	....	11.83	12.20	....	10.52	8.09	18.65	19.25	14.75	15.82	....	....
17	....	11.90	....	....	9.78	8.62	17.45	19.75	15.23	....	....	....
18	....	12.60	12.40	....	....	9.40	17.25	19.85	15.35	15.20	14.80	....
19	....	12.72	13.00	....	....	9.68	17.58	19.27	15.35	15.56	14.90	....
20	....	13.18	13.24	....	....	9.99	18.20	19.25	15.52	14.98	14.60	....
21	13.64	13.15	13.68	....	....	10.62	17.65	18.32	15.25	15.06	20.86	....
22	13.94	13.27	13.60	7.73	....	10.97	17.40	21.25	14.95	15.28	15.75	....
23	12.82	13.45	13.80	7.30	....	11.02	17.77	20.60	14.84	15.02	15.34	....
24	13.18	13.28	13.50	7.74	....	....	18.00	19.11	14.54	15.40	15.10	....
25	13.48	13.41	13.00	8.70	....	....	18.10	20.05	14.75	15.24	15.10	....
26	13.68	13.68	12.27	8.37	....	....	18.24	20.04	14.58	15.25	15.58	....
27	13.62	13.67	10.83	6.99	8.90	....	18.31	20.04	14.65	15.24	15.28	....
28	13.61	13.63	10.80	5.70	9.00	....	18.57	18.92	14.59	15.18	15.18	....
29	13.62	....	10.97	6.41	9.60	....	18.45	19.20	14.70	15.09	15.16	....
30	13.75	....	11.33	....	10.09	....	19.22	19.65	14.66	15.47	15.19	....
31	11.19	....	11.21	....	9.73	....	18.60	19.87	....	15.19	....	....

Tippecanoe 5 (\*1016, p. 75; 1023, p. 84; 1071, p. 86). Fairfield Manufacturing Co. In Lafayette, in main building, Earl Ave. and Wallace St. Measurements made by personnel of Fairfield Manufacturing Co., C. C. Crook, chief engineer.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	88.92	Apr. 7	89.36	July 21	88.93	Oct. 13	88.79
13	88.90	21	89.01	28	88.74	20	88.90
20	88.38	28	89.08	Aug. 4	88.82	27	88.47
27	89.31	May 12	88.71	11	88.80	Nov. 3	88.67
Feb. 3	88.89	19	88.78	18	88.82	10	88.92
10	88.98	26	88.86	25	88.72	17	89.06
17	89.08	June 2	88.54	Sept. 2	88.73	24	88.10
24	88.82	9	88.84	8	88.87	Dec. 1	88.59
Mar. 3	89.10	16	88.93	15	88.74	8	88.62
10	89.08	23	88.89	22	88.96	15	88.38
17	88.99	30	88.87	29	88.52	22	88.43
24	88.58	July 7	88.84	Oct. 6	88.75	29	88.57
31	89.08	14	88.61				

Tippecanoe 7 (\*1023, p. 85; 1071, p. 86). State of Indiana, Purdue University. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 13, T. 23 N., R. 5 W., at research housing pump-house. Measurements made by Wilbur C. Killin and L. A. Washburn.

Water level at 2 a.m., in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	166.09	....	165.70	....	165.45	164.89
2	165.98	....	165.65	....	165.35	164.80
3	165.92	....	165.75	....	165.43	165.05
4	166.14	....	165.78	....	165.58	164.97
5	166.01	....	165.81	....	165.44	164.85

## Tippecanoe 7--Continued.

Water level at 2 a.m., in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
6	165.97	.....	165.83	.....	165.40	164.85
7	.....	.....	165.84	.....	165.35	164.87
8	166.08	.....	165.76	.....	165.36	164.75
9	166.12	.....	.....	.....	165.39	164.82
10	166.12	.....	.....	.....	165.37	.....
11	165.95	.....	165.84	.....	165.32	.....
12	166.04	.....	165.83	.....	165.17	.....
13	166.03	.....	165.69	.....	165.05	.....
14	165.97	a165.73	165.59	a165.67	165.15	.....
15	.....	.....	165.77	165.68	165.16	.....
16	.....	.....	165.76	165.47	165.11	.....
17	166.25	.....	165.71	165.66	165.09	.....
18	166.18	165.83	165.80	165.58	165.05	.....
19	166.07	165.97	165.80	165.65	165.07	.....
20	165.77	165.83	165.75	165.53	165.05	.....
21	166.09	165.84	165.67	165.65	164.87	.....
22	166.25	165.81	165.89	165.66	165.14	.....
23	.....	165.74	165.69	165.57	165.11	.....
24	.....	165.74	165.59	165.57	165.13	.....
25	.....	165.81	165.80	165.66	164.91	.....
26	.....	165.84	.....	165.71	165.06	.....
27	a166.00	165.81	.....	165.51	165.10	.....
28	166.18	165.83	.....	165.67	164.95	.....
29	165.89	.....	.....	165.48	164.75	.....
30	.....	.....	.....	165.34	165.10	.....
31	.....	.....	.....	.....	165.05	.....

a Tape measurement.

Water level at 2 a.m., in feet below land-surface datum, 1947  
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	164.41	164.80	165.22	165.52	165.78
2	.....	164.38	164.82	165.13	165.52	165.80
3	.....	164.37	164.85	165.11	165.45	165.80
4	164.29	164.45	164.83	165.10	165.47	165.90
5	164.26	164.42	164.70	165.15	165.37	165.64
6	164.19	164.41	164.86	165.15	165.60	165.81
7	164.28	164.46	164.91	165.17	165.40	165.64
8	164.32	164.52	164.94	165.15	165.50	165.71
9	164.26	164.52	164.88	165.21	165.61	165.90
10	164.20	164.55	164.88	165.20	165.63	165.76
11	164.20	164.58	164.87	165.17	165.42	165.86
12	164.25	164.60	164.91	165.22	165.68	165.87
13	164.21	164.56	164.87	165.25	165.75	165.83
14	164.20	164.55	164.93	165.25	165.71	165.72
15	164.15	164.59	164.98	165.23	165.37	165.66
16	164.18	164.64	165.07	165.21	165.61	165.76
17	164.23	164.68	165.11	165.21	165.82	165.81
18	.....	164.70	165.12	165.21	165.77	165.77
19	164.32	164.70	165.07	165.28	165.74	165.85
20	164.29	164.70	165.02	165.38	165.77	165.85
21	164.29	164.73	164.88	165.38	165.79	165.83
22	164.36	164.74	165.09	165.39	165.65	165.72
23	164.37	164.70	165.16	165.40	165.76	165.70
24	164.42	164.72	165.05	165.47	165.41	165.86
25	164.43	164.72	165.16	165.43	165.61	165.74
26	164.37	164.72	165.22	165.43	165.73	165.62
27	164.29	164.77	165.24	165.35	165.74	165.67
28	164.33	164.78	165.13	165.36	165.79	165.71
29	164.37	164.79	165.05	165.46	165.87	165.70
30	164.33	164.79	165.26	165.49	165.93	165.60
31	164.31	164.77	.....	165.55	.....	165.62

a Tape measurement.



Tippecanoe 8 (\*1023, p. 85; 1071, p. 87). West Lafayette Water Co. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 17, T. 23 N., R. 4 W., at West Lafayette Water Works. Measurements made by L. A. Washburn, West Lafayette Water Co.

Water level at 2 a.m., in feet below land-surface datum, 1947

(From recorder charts)											
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. Dec.
1	12.75	12.25	11.32	.....	8.48	8.27	....	11.26	12.53	13.03	13.63 13.58
2	12.72	11.69	11.39	.....	7.94	8.33	....	11.35	12.54	13.05	13.63 13.57
3	12.70	11.12	11.47	.....	7.30	8.31	....	11.40	12.55	13.07	13.62 13.57
4	12.68	10.71	11.54	.....	6.77	7.98	....	11.45	12.58	13.11	13.62 13.57
5	12.65	10.45	11.62	.....	6.38	....	8.73	11.51	12.60	13.13	13.62 13.58
6	12.62	10.29	11.71	.....	6.17	....	8.88	11.58	12.62	13.16	13.62 13.58
7	.....	10.22	11.79	.....	6.10	....	9.02	11.67	12.64	13.18	13.62 13.58
8	12.58	10.21	11.87	11.14	6.11	....	9.18	11.73	12.65	13.21	13.63 13.54
9	12.56	10.21	11.94	11.03	6.17	....	9.33	11.80	12.67	13.24	13.63 13.50
10	12.54	10.22	12.00	10.92	6.27	....	9.48	11.86	12.70	13.27	13.64 13.47
11	12.54	10.25	12.07	10.86	6.38	....	9.60	11.92	12.72	13.31	13.64 13.42
12	12.59	10.26	12.13	10.80	6.51	....	9.72	12.00	12.74	13.34	13.64 13.37
13	12.62	10.27	12.20	10.66	6.68	4.98	9.84	12.08	12.76	13.37	13.65 13.33
14	12.65	10.29	12.25	10.43	6.86	5.05	9.93	12.16	12.77	13.39	13.65 13.31
15	12.68	10.32	12.27	10.29	7.03	5.14	10.03	12.23	12.78	13.42	13.65 13.28
16	12.70	10.35	12.25	10.22	7.22	5.25	10.12	12.28	12.79	13.45	13.64 13.26
17	12.69	10.38	12.17	10.19	7.36	5.40	10.00	12.30	12.81	13.48	13.64 13.26
18	12.67	10.42	12.13	10.17	7.49	5.58	.....	12.32	12.84	13.50	13.63 13.25
19	12.65	10.49	12.11	10.11	7.60	5.76	10.33	12.35	12.87	13.52	13.63 13.25
20	12.63	10.56	12.10	10.04	7.70	....	10.39	12.36	12.80	13.52	13.63 13.24
21	12.65	10.65	12.10	9.93	7.79	....	10.43	12.37	12.94	13.53	13.63 13.24
22	12.67	10.77	12.12	9.90	7.87	....	10.48	12.39	12.96	13.54	13.63 13.22
23	12.67	10.86	12.14	9.72	7.88	....	10.54	12.42	12.97	13.54	13.64 13.20
24	12.65	10.95	12.16	9.56	7.87	....	10.61	12.44	12.98	13.55	13.63 13.18
25	12.64	11.03	12.17	9.46	7.87	....	10.69	12.47	12.98	13.57	13.63 13.17
26	12.65	11.10	12.15	9.40	7.89	....	10.78	12.50	12.99	13.59	13.64 13.15
27	12.65	11.16	12.05	9.30	7.95	....	10.86	12.51	13.00	13.60	13.64 13.14
28	12.67	11.24	11.90	9.10	7.99	....	10.93	12.51	13.01	13.61	13.63 13.13
29	12.67	.....	11.78	8.91	8.05	....	11.01	12.52	13.01	13.61	13.60 13.12
30	12.67	.....	11.70	8.78	8.13	....	11.09	12.52	13.02	13.62	13.59 13.12
31	12.61	.....	11.62	.....	8.20	.....	11.17	12.53	.....	13.62	13.11

a Estimated.

Tippecanoe 9 (\*1071, p. 88). Aluminum Co. of America well 1. At Lafayette, in NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 34, T. 23 N., R. 4 W., near intersection of Earl Ave. and U. S. Highway 52. Measurements made by M. M. Ross, Aluminum Co. of America.

Water level at 2 a.m., in feet below land-surface datum, 1947

(From recorder charts)											
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. Dec.
1	71.87	73.29	73.22	71.92	71.81	69.80	71.25	72.10	70.08	72.06	72.64 71.15
2	71.65	71.73	70.59	72.20	71.80	70.82	72.23	72.00	70.91	72.00	71.25 71.70
3	72.90	71.02	70.87	72.55	71.60	71.77	71.73	70.80	71.60	71.80	71.17 72.15
4	73.59	72.40	72.69	72.30	70.79	72.48	70.87	70.90	71.45	71.98	71.80 72.50
5	71.30	72.17	73.25	71.85	71.37	72.00	70.28	71.80	71.15	70.75	71.78 72.30
6	70.75	71.73	73.38	70.65	71.95	72.30	70.04	71.87	71.98	71.38	72.61 72.84
7	72.56	70.67	73.62	71.90	71.52	72.85	71.30	72.00	70.95	71.88	71.88 70.66
8	72.30	70.43	73.15	72.30	71.40	70.97	71.70	71.25	71.45	71.45	72.03 70.05
9	73.11	70.90	71.20	72.55	72.43	70.61	72.13	71.70	72.14	72.68	71.54 71.80
10	73.27	70.59	71.30	73.13	71.74	71.05	71.55	70.45	71.37	72.83	71.22 71.07
11	72.24	71.25	73.11	72.69	70.89	71.49	71.67	70.85	71.55	72.64	72.24 70.97
12	71.47	72.20	73.00	73.10	71.56	72.11	73.67	72.33	70.95	71.30	71.80 71.04
13	71.73	72.60	73.11	72.10	71.45	72.16	70.55	72.55	70.80	71.95	71.30 71.22
14	72.97	72.64	72.90	71.27	71.46	71.70	70.01	73.03	70.55	73.14	72.30 70.30
15	73.25	72.68	72.97	72.83	71.65	70.20	70.75	71.99	70.55	71.66	71.98 69.80
16	72.70	71.73	71.40	.....	70.65	70.34	70.80	72.10	71.30	72.17	71.48 70.98
17	73.49	71.50	71.65	.....	71.16	71.55	71.85	70.80	71.50	71.73	71.01 72.65
18	73.40	73.08	72.95	.....	70.72	71.26	71.43	70.95	73.15	72.36	71.23 71.90
19	71.94	73.45	73.31	.....	70.43	71.81	71.50	71.80	73.05	70.80	71.88 72.17
20	71.28	73.70	71.77	.....	71.30	71.02	70.60	72.70	71.04	70.69	72.30 70.62
21	72.90	73.16	72.82	.....	70.83	72.15	71.23	72.15	70.30	72.78	72.10 70.75
22	73.68	72.34	73.13	.....	71.14	71.30	70.97	73.18	71.15	71.71	72.23 69.65

## Tippecanoe 9--Continued.

Water level at 2 a.m., in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
23	73.29	71.40	71.13	.....	71.80	70.51	72.57	72.81	71.35	71.54	71.47	71.00
24	72.52	71.30	71.12	.....	71.41	71.22	71.55	71.02	71.85	73.03	70.96	72.06
25	73.03	72.90	72.45	72.30	70.14	71.32	71.91	70.86	72.20	72.14	72.30	70.32
26	71.27	73.20	72.30	72.35	71.15	72.03	72.34	71.31	72.71	70.95	71.84	69.80
27	71.35	72.25	72.06	71.04	71.20	72.88	70.25	71.80	71.90	71.28	72.09	70.60
28	73.20	73.15	72.40	72.19	70.87	71.42	70.80	72.52	70.50	72.27	71.12	70.25
29	73.15		72.53	72.50	71.02	70.62	71.80	72.38	70.15	73.10	70.68	69.88
30	72.42		71.35	72.58	71.25	70.70	71.76	71.97	72.05	71.42	71.30	71.00
31	72.47		71.85		70.05		72.19	71.16		72.52		71.31

## Tipton County

Tipton 1 (\*1023, p. 85; 1071, p. 88). William B. Richardson. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 28, T. 22 N., R. 4 E. Measurements made by William B. Richardson.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 12	1.90	Apr. 20	1.10	July 19	2.34	Oct. 11	2.44
20	2.10	26	1.11	26	2.67	18	2.73
27	1.60	May 11	1.87	Aug. 1	2.72	25	2.64
Feb. 2	.80	17	1.88	9	3.41	Nov. 1	2.04
9	2.20	24	1.82	16	3.39	8	2.15
17	2.70	31	1.86	23	3.74	15	2.07
23	2.80	June 7	.88	30	3.30	22	2.09
Mar. 2	2.50	14	1.98	Sept. 6	3.52	29	2.20
9	2.00	21	2.02	13	3.49	Dec. 6	1.59
Apr. 1	2.00	28	2.09	20	3.51	13	2.01
6	1.70	July 5	2.17	27	2.76	20	2.14
13	1.80	12	2.20	Oct. 4	2.35	27	2.26

## Union County

Union 1 (\*1023, p. 85; 1071, p. 89). Town of College Corner. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 36, T. 10 N., R. 1 W., "Old Fire Well". Measurements discontinued Jan. 5, 1946.Union 3 (\*1071, p. 89). Joe Cannell. SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 13, T. 11 N., R. 2 W., 1.5 miles south of Liberty and about half a mile east of State Route 101. Measurements made by Henry Carnes.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	13.9	Mar. 17	7.01	June 2	4.10	Sept. 15	10.89
6	13.8	25	5.57	8	4.51	28	11.27
13	14.1	Apr. 1	5.56	16	4.90	Oct. 4	11.88
20	13.9	8	5.38	23	4.71	14	12.06
27	13.4	13	5.57	July 1	4.76	27	12.47
Feb. 3	12.3	22	4.61	7	6.91	Nov. 8	12.39
10	9.91	28	4.53	14	6.37	22	11.9
17	8.00	May 5	4.41	27	6.21	Dec. 8	12.30
24	7.30	13	4.72	Aug. 11	6.77	22	12.20
Mar. 6	6.35	18	4.28	16	6.80	31	12.30
10	8.79	27	3.86	26	5.91		

## Vanderburg County

Vanderburg 1. Flora Buente. E $\frac{1}{2}$ NW $\frac{1}{4}$  sec. 8, T. 5 S., R. 11 W., 0.75 mile west of Armstrong. Unused dug well, diameter 42 inches, depth 21 feet. Measuring point, top course of brick on northeast side, at land-surface datum. First measurement Feb. 20, 1947. Measured by Gilbert Fehrenbacher, R. R. 7, Evansville.

## Vanderburg 1--Continued.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 20	3.88	May 11	2.55	July 27	7.82	Oct. 13	8.76
23	3.98	20	2.25	Aug. 3	7.91	19	8.83
Mar. 2	4.02	26	2.52	10	8.10	Nov. 2	9.10
9	4.38	June 1	3.25	17	8.22	9	9.20
16	3.59	8	3.59	24	8.40	16	9.25
23	3.33	15	4.60	31	8.49	23	9.28
30	2.45	22	5.41	Sept. 7	8.60	30	9.39
Apr. 6	1.20	29	5.73	14	8.73	Dec. 7	9.51
20	1.79	July 6	6.34	21	8.82	14	9.60
27	1.52	13	6.78	28	8.87	21	9.71
May 4	.91	20	7.36	Oct. 5	8.95	28	9.79

Vigo County

Vigo 2 (\*1071, p. 89 ). Commerical Solvents Corporation test hole 1. In Terre Haute, on Washington Ave. at First St., 156 feet west of centerline of South First St. and 177 feet south of centerline of Washington Ave. extended. Measurements made by personnel of Commercial Solvents Corporation, A. C. Miller, plant engineer.

Water level at 2 a.m., in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	56.88	55.75	.....	53.88	50.26	49.18	50.81	53.39	.....	56.22	56.92	56.67
2	56.75	55.41	.....	53.92	.....	49.14	50.93	53.42	.....	56.38	56.80	56.67
3	56.80	55.10	.....	53.98	49.88	49.25	51.03	53.40	.....	56.50	56.66	56.65
4	56.84	54.90	56.10	53.94	49.55	49.13	51.17	53.40	54.84	56.60	56.63	56.60
5	56.90	54.80	55.66	53.92	49.17	48.89	51.29	53.50	54.91	56.56	56.64	56.57
6	56.79	54.71	55.48	53.84	48.88	48.69	51.38	53.63	54.99	56.53	56.65	56.56
7	56.84	54.74	55.44	53.68	48.67	48.44	51.49	53.75	54.96	56.68	56.63	56.46
8	56.94	54.82	55.44	53.54	48.58	48.13	51.63	53.84	54.95	56.76	56.68	56.39
9	56.97	54.97	55.35	53.39	48.52	.....	51.77	53.92	55.05	56.90	56.60	56.36
10	57.01	55.06	55.22	53.32	48.56	.....	51.91	53.91	55.11	57.00	56.54	56.27
11	57.01	55.17	55.21	53.27	48.66	.....	52.00	53.89	55.13	57.12	56.52	.....
12	56.86	55.29	55.28	53.26	48.81	46.94	52.08	53.98	55.19	57.22	56.54	56.14
13	56.69	55.40	55.37	53.10	49.02	46.71	52.14	54.06	55.20	57.11	56.55	56.10
14	56.58	55.35	55.41	52.84	49.20	46.78	52.22	54.13	55.19	57.20	56.53	56.09
15	56.56	55.44	55.44	52.65	49.44	46.47	52.34	54.20	55.00	57.28	56.54	56.10
16	56.52	55.40	55.21	52.50	.....	46.47	52.44	.....	55.08	57.37	56.55	56.13
17	56.44	55.40	54.97	52.51	49.79	46.73	52.53	54.21	55.07	57.46	56.46	56.17
18	56.31	55.52	54.85	52.52	49.84	47.12	52.65	54.25	55.15	57.51	56.44	55.95
19	56.12	55.45	54.77	52.51	49.73	47.50	52.73	54.28	55.28	57.53	56.44	55.72
20	55.92	55.55	54.74	52.38	49.75	47.84	52.73	54.36	55.40	57.37	56.49	55.60
21	55.88	55.66	54.76	52.16	49.70	48.03	52.74	54.38	54.45	57.35	56.47	55.52
22	55.92	55.77	54.78	52.08	49.53	48.43	52.81	54.37	55.22	57.40	56.64	55.46
23	55.97	55.77	54.70	51.94	49.26	48.86	52.83	54.38	55.43	57.41	56.64	55.54
24	56.06	55.74	54.61	51.80	49.11	49.25	52.88	54.38	55.54	57.43	56.58	55.58
25	56.08	55.84	54.62	51.62	48.91	49.60	52.93	54.40	55.72	57.47	56.63	55.95
26	55.93	55.92	54.54	51.47	48.79	49.71	53.00	54.45	55.86	57.48	56.63	55.72
27	55.80	55.99	54.51	51.14	48.82	.....	53.09	54.48	55.97	57.28	56.65	55.60
28	55.90	56.04	54.41	50.79	48.97	.....	53.15	54.44	55.98	57.24	56.61	55.52
29	55.96	.....	54.30	50.57	49.08	.....	53.28	54.52	55.92	57.14	56.65	55.46
30	56.08	.....	54.14	50.40	49.22	.....	53.35	.....	56.07	57.02	56.73	55.54
31	56.00	.....	53.95	.....	49.26	.....	53.34	.....	.....	.....	.....	55.58

Vigo 3 (\*1023, p. 86; 1071, p. 90 ). Owner unknown. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 29, T. 12 N., R. 8 W. Measurements made by Robert May.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	4.15	Jan. 31	1.44	Feb. 28	3.93	Mar. 28	2.60
10	3.88	Feb. 7	3.17	Mar. 7	4.21	Apr. 4	2.82
17	2.67	14	3.71	14	2.49	11	.71
24	2.56	21	3.77	21	2.10	18	2.24

## Vigo 3--Continued.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 25	0.68	July 6	3.78	Sept. 7	6.78	Nov. 9	7.49
May 2	1.09	13	4.10	14	7.10	16	7.65
9	2.90	20	4.20	21	7.22	23	7.75
16	1.28	27	4.63	28	7.49	Dec. 2	7.82
June 1	2.77	Aug. 3	4.97	Oct. 5	7.67	7	7.88
8	1.40	10	5.35	12	7.78	15	7.89
15	3.11	17	5.62	19	7.90	22	7.81
22	2.68	24	6.02	26	7.90	29	7.68
29	2.92	31	6.49	Nov. 2	7.49		

Wabash County

Wabash 2 (\*1023, p. 86; 1071, p. 90). Mrs. Robert S. Gearhart, NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 25, T. 27 N., R. 6 E. Measurements made by Robert S. Gearhart.

Water level, in feet below land-surface datum, 1947

Jan. 2	12.76	Apr. 3	5.03	July 3	6.54	Oct. 2	12.57
9	12.70	10	3.40	10	7.40	9	13.02
16	11.90	17	2.47	17	7.80	16	13.25
23	11.34	24	2.46	24	8.80	23	13.33
30	9.90	May 1	2.07	31	9.28	30	13.80
Feb. 6	7.10	8	2.62	Aug. 7	10.16	Nov. 6	13.16
13	7.98	15	3.20	14	9.76	13	13.06
20	7.99	22	2.70	21	11.24	20	12.86
27	8.00	29	2.78	28	11.58	27	12.56
Mar. 6	8.06	June 5	2.42	Sept. 4	11.86	Dec. 4	12.52
13	8.08	12	3.02	11	12.22	11	12.12
20	7.75	19	4.35	18	12.36	18	12.08
27	6.53	27	5.39	25	12.12	25	11.56

Warren County

Warren 1 (\*1016, p. 76; 1023, p. 86; 1071, p. 90). City of Williamsport. In Williamsport, on Market St., 200 feet east of Main St. Measurements made by Oscar D. George.

Water level, in feet below land-surface datum, 1947

Jan. 4	10.30	Apr. 5	7.16	July 5	14.05	Oct. 4	16.45
11	10.54	12	6.21	12	15.28	11	17.30
18	9.70	19	6.53	19	15.53	18	16.74
25	9.58	26	6.18	26	16.53	25	18.02
Feb. 1	6.84	May 3	6.44	Aug. 2	17.15	Nov. 1	16.30
8	8.21	10	7.89	9	15.85	8	16.48
15	9.95	17	9.80	16	16.20	15	15.10
22	10.35	24	8.29	23	16.91	22	16.04
Mar. 1	11.20	31	8.07	30	17.40	29	15.69
8	11.78	June 7	5.73	Sept. 6	17.76	Dec. 6	13.96
15	11.05	14	7.52	13	16.66	13	12.79
22	9.82	21	9.44	20	16.52	20	12.80
29	6.85	28	11.65	27	16.42	27	13.59

Warrick County

Warrick 1 (\*840, p. 88; 886, p. 112; 906, p. 35; 936, p. 41; 944, p. 37; 986, p. 39; 1016, p. 76; 1023, p. 86). Sunlight Stripper Co. On east side of railroad tracks about 0.7 mile north of Boonville along Folsomville road and about 0.1 mile east of road north of Scales Lake State Forest. Measurements resumed. Measurements made by W. H. Beard, Scales Lake State Forest.

Water level, in feet below land-surface datum, 1947

Feb. 19	18.54	Mar. 12	18.60	Apr. 2	20.30	May 21	17.82
26	18.36	19	18.23	May 14	17.89	28	17.80
Mar. 5	18.40	26	17.20	16	17.85	June 4	17.95

## Warrick 1--Continued.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 11	17.76	July 16	17.82	Aug. 20	18.00	Dec. 5	18.41
18	17.96	30	17.75	27	17.90	12	18.41
July 2	17.96	Aug. 6	18.20	Sept. 24	19.20	19	18.41
9	17.84	13	17.90				

Warrick 2 (\*1016, p. 77; 1023, p. 87; 1071, p. 91). Scales Lake State Forest. About 0.45 mile east of entrance to Scales Lake State Forest and about 60 feet north of Old Tennyson Road. Measurements made by W. H. Beard, Scales Lake State Forest.

Water level, in feet below land-surface datum, 1947

Jan. 8	2.40	Mar. 12	4.00	May 14	3.57	July 30	6.99
15	2.82	19	3.00	21	2.34	Aug. 6	8.90
22	2.83	26	2.50	28	3.24	13	8.70
29	2.55	Apr. 2	2.80	June 4	2.44	20	8.80
Feb. 5	2.84	9	2.00	11	3.96	27	8.70
12	3.00	16	1.80	18	4.00	Sept. 24	10.10
19	3.53	23	1.90	July 2	5.44	Dec. 5	13.37
26	4.05	30	1.80	9	5.98	12	13.37
Mar. 5	4.10	May 7	2.30	16	6.34	19	13.37

## Wayne County

Wayne 1 (\*1023, p. 87; 1071, p. 91). C. E. Rodenberg. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 25, T. 16 N., R. 12 E. Measurements made by Marshall B. Rodenberg.

Water level, in feet below land-surface datum, 1947

Jan. 2	31.43	Mar. 24	30.50	June 16	25.77	Oct. 6	29.40
7	31.42	30	30.50	23	25.94	20	29.77
13	31.44	Apr. 7	30.45	30	26.15	28	29.93
20	31.48	14	30.37	July 7	26.42	Nov. 4	30.09
27	31.43	21	30.26	Aug. 4	27.54	9	30.20
Feb. 3	31.28	28	30.06	18	28.03	Dec. 2	30.50
10	31.08	May 13	28.62	25	28.20	8	30.65
18	30.88	19	28.29	Sept. 3	28.50	15	30.87
Mar. 3	30.58	28	27.94	9	28.68	22	30.97
10	30.64	June 2	27.78	15	28.50	29	30.94
17	30.59	10	25.96	29	29.24		

Wayne 2 (\*1071, p. 91). Lewis W. Hormel. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 5, T. 14 N., R. 1 W., about 2 miles north of Chester. Measurements made by Lewis W. Hormel.

Water level, in feet below land-surface datum, 1947

Jan. 6	13.90	Apr. 7	3.00	July 7	11.80	Oct. 6	15.96
13	12.80	14	4.64	14	11.71	13	15.16
20	10.50	21	4.66	21	12.00	20	15.49
27	5.90	28	3.78	27	12.37	27	15.86
Feb. 3	4.90	May 5	3.15	Aug. 4	12.62	Nov. 3	15.64
10	6.80	12	7.12	11	12.86	10	16.12
17	9.50	18	5.67	18	12.61	17	16.42
24	10.70	25	4.72	25	13.52	24	16.48
Mar. 3	10.80	June 2	2.36	Sept. 1	13.61	Dec. 1	16.87
10	12.80	9	4.86	7	13.84	8	16.87
17	10.50	16	7.50	15	14.19	15	17.78
24	11.00	23	8.62	22	14.22	22	17.82
31	6.13	30	10.12	29	14.72	29	17.83

White County

White 1 (\*817, p. 54; \*840, p. 88; \*936, p. 41; \*944, p. 37; 986, p. 39; 1016, p. 77; 1023, p. 87; 1071, p. 91). Town of Monon. In basement of municipal building. Measurements made by John M. Winkley.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	15.69	Apr. 7	12.08	July 7	12.05	Oct. 6	15.20
13	15.94	14	10.66	14	12.61	13	15.54
20	15.67	21	10.57	21	12.34	20	15.33
27	15.53	28	11.08	28	12.85	27	15.77
Feb. 3	13.63	May 5	10.11	Aug. 4	14.46	Nov. 3	15.65
10	14.76	12	10.43	11	15.94	10	16.22
17	13.55	19	9.84	18	16.18	17	15.98
24	14.67	26	10.42	25	16.84	24	15.40
Mar. 3	14.21	June 2	9.83	Sept. 1	16.02	Dec. 1	16.09
10	14.53	9	9.09	8	16.34	8	15.32
17	14.34	16	10.60	15	15.84	15	14.32
24	14.33	23	10.60	22	15.68	22	15.19
31	13.44	30	11.74	29	15.10	29	14.34

# MAINE

By L. M. Page, Jr.

## PROGRAM OF WORK

The program of periodic measurements of water level was continued in 1947 at five observation wells in Maine. Measurements were made in three wells in the southern part of the State, at Amherst, Cornish, and Mercer, and in two others in the northern part of the State, at Portage and Sherman Mills. Readings were made about once a week and in all, 255 measurements were made during the year.

### FLUCTUATIONS OF WATER LEVEL

The water levels in wells in Maine usually show a definite seasonal pattern which is different from that found in southern New England. During the winter, when the ground is frozen and covered with snow, the water levels fall steadily. In March or April a rise usually occurs as a result of temperatures high enough to melt the snow cover. During the growing season a drop usually occurs beginning after the spring thaw and continues through the summer months to September or October. This is followed by a rise which continues until cold weather, after which water levels usually decline throughout the winter.

Fluctuations of water level in Maine during 1947 followed, in general, the usual seasonal pattern except in the well at Mercer where water levels failed to rise after the growing season. Cold weather in the early part of January caused a drop in water levels at all the wells but precipitation and rising temperatures during the latter part of the month caused a rise in water level at all of the wells, except at Portage, and a net rise for the month at Amherst. The heavy precipitation during the first part of February and a thaw in the middle of March were reflected by rises in water level at all of the wells. At Cornish and Mercer a net rise in water level was recorded for February and March followed by a decline during April. Above-average precipitation and temperature in the northern part of the

State during February and March and a snowfall in the middle of April caused the water levels at Portage and Sherman Mills to show a net rise for each of these three months. The water level at Amherst followed a similar pattern except for a drop in February. The beginning of the growing season was marked by a decline in the water levels which continued through the summer at all of the wells except Sherman Mills where above average precipitation caused a rise in water level during June and July, and at Cornish where heavy rainfall during the middle of June caused a net rise in water level for the month. Very low precipitation occurred throughout Maine during the autumn months and resulted in the lowest observed water levels for the periods of record at three of the five observation wells. The well at Portage was dry from September 21 to November 2, and Cornish reached a new low stage on November 10. Above-average precipitation during November and the end of the growing season caused the water levels to rise through December in all of the wells except Mercer, where the water level continued to drop, and on December 15 reached the lowest observed level of record.

Comparison of water levels at the end of 1946 and 1947 indicate considerable decrease in ground-water storage during 1947 at all of the observation wells.

Precipitation for the State as a whole during 1947 was 36.66 inches or about 3.48 inches below normal, and about 0.40 inch less than in 1946. Normal for the State is 40.14 inches. Precipitation was below normal for the year at 25 of 34 stations as compared with 24 of 33 stations in 1946. During February, May, June, July, and November precipitation for the State as a whole was normal or above normal. It was below normal for the remainder of the year particularly during October when drought conditions prevailed and rainfall for the State during the month was 0.44 inch.

Summary of water levels in observation wells in Maine,  
in feet below land-surface datum

Well	First measured	Lowest observed water level		Highest observed water level		Water level on last date of record in 1947
		Water level	Date	Water level	Date	
Amherst 1, US 158	Nov. 5, 1943	(a)	Sept. 10, 17, 1944	3.40	Jan. 1, 1945	9.56
Cornish 1, US 159	Nov. 6, 1943	18.30	Nov. 10, 1947	8.10	May 6, 1945	14.60
<u>Mercer 1, US 102</u>	Nov. 5, 1942	11.58	Dec. 15, 1947	4.30	Mar. 24, 1946	11.52

a Dry. Water level below 14.0 feet below land-surface datum.



Summary of water levels in observation wells in Maine,  
in feet below land-surface datum--Continued

Well	First measured	Lowest observed water level		Highest observed water level		Water level on last date of record in 1947
		Water level	Date	Water level	Date	
Portage 1, US 103	Nov. 4, 1942	(a)	Sept. 21- Nov. 2, 1947	0.68	Apr. 1, 1945	6.62
Sherman Mills 1, US 105	July 14, 1939	16.00	Nov. 10, 1946	.68	May 6, 1940	13.35

a Dry. Water level below 10.5 feet below land-surface datum.

Net change in feet, in water levels in observation wells in Maine, 1947

Well	Net decline
Amherst 1, US 158	3.70
Cornish 1, US 159	.65
Mercer 1, US 102	5.57
Portage 1, US 103	1.87
Sherman Mills 1, US 105	7.95

## WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

## Aroostook County

US 103 (\*986, p. 41; 1016, p. 80; 1023, p. 92; 1071, p. 93).  
Portage 1. H. L. Stevens. On west side of State Route 11, about 1.0 mile north of Portage Lake post office, in Portage Lake.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	5.54	Apr. 20	1.74	July 13	6.49	Oct. 12	(a)
12	6.10	27	.86	20	6.85	19	(a)
19	6.56	May 4	.79	Aug. 3	7.46	26	(a)
26	6.79	11	1.05	10	7.84	Nov. 2	(a)
Feb. 2	6.82	18	1.27	17	8.39	9	9.25
10	6.80	25	2.87	24	8.67	16	6.85
16	4.44	June 1	3.01	31	9.05	23	5.48
Mar. 2	5.89	8	2.94	Sept. 7	9.60	30	6.56
9	6.37	15	2.97	14	9.88	Dec. 7	6.08
16	6.59	22	3.02	21	(a)	14	7.26
Apr. 6	2.22	29	4.30	Oct. 5	(a)	28	6.62
13	1.45	July 6	5.60				

a Dry. Water level below 10.5 feet below land-surface datum.

US 105 (\*986, p. 42; 1016, p. 80; 1023, p. 92; 1071, p. 94).  
Sherman Mills 1. C. C. Young. On west side of U. S. Route 2, about 6 miles south of Island Falls, in Sherman Mills.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	8.35	Apr. 6	1.15	July 6	7.45	Oct. 5	14.20
12	10.30	13	.70	13	9.40	12	14.45
19	11.70	20	.83	20	7.75	19	14.65
26	7.70	27	.90	27	4.00	26	14.85
Feb. 2	10.00	May 4	.75	Aug. 3	3.70	Nov. 2	15.05
9	1.30	11	1.10	10	6.85	9	15.22
16	2.40	18	1.85	17	10.20	16	14.95
23	4.58	25	3.65	24	10.60	23	14.22
Mar. 2	8.15	June 1	7.45	31	12.35	30	14.12
9	10.20	8	6.10	Sept. 7	12.90	Dec. 7	14.65
16	6.80	15	6.45	14	13.30	14	14.90
23	5.60	22	3.30	21	13.65	21	9.60
30	1.32	29	5.60	28	13.85	28	13.35

Hancock County

US 158 (\*986, p. 43; 1016, p. 80; 1023, p. 92; 1071, p. 94).  
Amherst 1. George C. Orcutt. On south side of State Route 9, about 0.3 mile west of junction with State Route 181, in Amherst.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	6.28	Apr. 6	5.92	July 13	6.06	Oct. 12	12.32
12	6.71	13	5.80	20	6.68	19	12.64
19	6.18	20	5.51	27	6.62	27	12.98
26	5.55	27	5.79	Aug. 3	7.35	Nov. 2	13.25
Feb. 2	5.46	May 4	4.23	10	8.16	9	13.48
9	4.94	11	4.32	17	8.93	16	13.58
16	5.80	19	5.03	28	9.67	22	13.32
23	6.10	25	5.64	31	10.10	30	10.98
Mar. 2	6.67	June 1	5.72	Sept. 7	10.43	Dec. 7	10.49
9	6.45	8	5.14	14	10.85	14	10.60
16	5.54	15	5.25	21	11.29	21	9.80
23	5.54	29	6.50	28	11.69	28	9.56
30	5.52	July 6	6.48	Oct. 5	12.00		

Somerset County

US 102 (\*986, p. 43; 1016, p. 81; 1023, p. 93; 1071, p. 95). Mercer 1. J. Harrison Farrand. On northwest side of Bog Stream Road, about 2.2 miles north of Mercer.

Water level, in feet below land-surface datum, 1947

Jan. 5	6.15	Apr. 6	4.66	July 7	6.83	Oct. 5	9.98
13	6.29	13	4.84	13	6.70	12	10.24
19	6.32	21	5.20	20	6.93	19	10.48
26	5.86	27	5.48	27	6.95	26	10.73
Feb. 2	5.98	May 4	4.58	Aug. 3	7.10	Nov. 2	10.85
9	5.18	11	5.20	10	7.44	9	11.02
16	5.56	20	5.29	17	7.74	16	10.96
23	5.70	25	5.52	24	8.12	24	11.18
Mar. 2	5.80	June 3	5.05	31	8.45	30	11.29
9	5.84	9	5.53	Sept. 7	8.73	Dec. 7	11.42
16	4.88	15	5.55	14	9.09	15	11.58
23	4.93	23	6.02	21	9.35	21	11.54
30	4.92	29	6.28	28	9.77	28	11.52

York County

US 159 (\*986, p. 44; 1016, p. 81; 1023, p. 93; 1071, p. 95).  
Cornish 1. J. P. Small. On south side of Main Street, about 0.2 mile west of Little River Crossing, in Cornish.

Water level, in feet below land-surface datum, 1947

Jan. 1	14.30	Mar. 30	9.91	July 6	11.98	Oct. 5	17.90
5	14.92	Apr. 6	9.91	13	12.92	12	17.92
12	14.98	13	9.91	20	12.98	19	17.95
16	15.91	20	9.96	27	12.96	26	17.90
19	15.91	27	10.92	Aug. 3	11.98	Nov. 2	18.10
26	14.92	May 4	10.96	10	12.95	10	18.30
Feb. 2	13.96	11	8.98	17	13.94	16	17.50
9	9.98	18	9.99	24	14.93	23	17.40
16	11.94	25	11.91	31	14.91	30	17.10
23	11.97	June 1	11.94	Sept. 7	15.96	Dec. 7	15.40
Mar. 2	12.96	8	10.91	14	15.99	14	14.50
9	12.98	15	9.94	21	16.93	21	14.50
16	9.91	22	9.92	28	16.95	28	14.60
23	9.91	29	11.00				

# MASSACHUSETTS

By H. N. Halberg

## PROGRAM OF WORK

Investigations of the ground-water resources of Massachusetts, begun in 1938, were continued in 1947 in cooperation with the Massachusetts Department of Public Works. Periodic observations were continued in 33 wells in Middlesex County, in the vicinity of Lowell, in the Aberjona Valley area, and in the vicinity of Fresh Pond in Arlington and Cambridge; in 1 well each in Berkshire, Essex, Hampden, and Franklin Counties; and in 2 wells in Worcester County. During the year an observation well was established at Cheshire, in Berkshire County, one at Sterling, in Worcester County, and two at Ipswich, in Essex County. During the year observations were discontinued at one well at Topsfield, in Essex County. Water-stage recorders were operated throughout the year on three wells--on one well at Wilmington, in Middlesex County, and on two wells at Leominster and Winchendon, in Worcester County. Water-level measurements were made weekly in the three wells established during the year, and monthly in the other wells, except in three wells in Lowell and four in Woburn in which measurements were made once during the year.

During 1944 and 1945 studies were made of ground-water conditions in the Fresh Pond, Cambridge area. This work was described in a paper by Roberts and the writer<sup>1/</sup> presented at Cambridge in September.

## FLUCTUATIONS OF WATER LEVEL

The following tables summarize the data pertaining to ground-water levels in Massachusetts.

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<sup>1/</sup> Halberg, H. N. and Roberts, C. M., Recovery of ground-water supplies by pumping from water-table ponds: Am. Geophys. Union Trans., vol. 30, No. 2, pp. 283-292, April 1949.

Summary of water levels in observation wells in Massachusetts,  
in feet below land-surface datum

Well	First measured	Lowest observed water level		Highest observed water level		Water level on date of last record, 1947
		Water level	Date	Water level	Date	
Arlington 174	July 29, 1944	13.76	Sept. 11, 1944	5.82	Mar. 12, 1945	12.60
Brimfield 12	Feb. 6, 1936	(a)	(a)	7.32	June 7, 1943	15.24
Cambridge 667	Oct. 30, 1944	22.40	Oct. 30, 1944	5.71	May 18, 1945	20.88
Cambridge 798	Aug. 7, 1944	16.72	Sept. 11, 1944	.93	May 18, 1945	15.80
Chelmsford 68	July 27, 1939	10.89	Oct. 31, 1947	5.69	Apr. 23, 1940	9.58
Chelmsford 69	Aug. 22, 1939	6.05	Aug. 23, 1941	.11	Feb. 24, 1943	2.13
Cheshire 1	Apr. 1, 1947	11.90	Oct. 4, 1947	7.20	May 2, 1947	8.6
Great Barrington 1	Mar. 4, 1936	22.89	Sept. 29, 1947	15.51	Aug. 1, 1945	21.56
Ipswich 1	Oct. 15, 1947	17.42	Nov. 10, 1947	15.39	Dec. 8, 1947	15.43
Ipswich 2	Oct. 15, 1947	11.80	Nov. 3, 1947	9.80	Dec. 29, 1947	9.80
Leominster 11	July 13, 1939	9.21	Oct. 31, 1939	.81	May 22, 1943	4.24
Lowell 4	May 26, 1939	12.65	Oct. 31, 1947	7.56	May 7, 1940	
Lowell 14	May 29, 1939	22.46	Nov. 7, 1939	9.67	May 7, 1940	15.94
Lowell 26	Aug. 9, 1939	12.65	Oct. 18, 1941	1.97	Apr. 2, 1940	
					May 7, 1940	
Lowell 33	May 29, 1939	11.33	Oct. 4, 1941	6.29	Mar. 1, 1945	
Lowell 41	Aug. 22, 1939	20.74	Oct. 17, 1942	4.66	Feb. 15, 1941	16.42
Lowell 43	May 28, 1940	24.82	Apr. 30, 1947	10.62	June 4, 1940	24.50
Montague 5	Jan. 16, 1936	5.10	Aug. 30, 1944	.78	Apr. 27, 1944	4.00
Reading 1	Aug. 25, 1939	(b)	Dec. 26, 1941	13.73	Apr. 30, 1940	20.56
Reading 3	June 20, 1940	5.63	Nov. 1, 1941	1.14	Nov. 30, 1944	2.30
Sterling 1	Apr. 3, 1947	12.01	Oct. 31, 1947	3.01	Apr. 3, 1947	3.86
Topsfield 13	Feb. 8, 1936	17.48	Dec. 6, 1939	7.20	Apr. 22, 1939	15.98
Wilmington 10	July 18, 1940	(c)	Dec. 13, 1941	.73	Nov. 30, 1944	4.49
Wilmington 29	July 24, 1940	11.70	Sept. 27, 1941	8.40	Mar. 28, 1942	10.65
Wilmington 44	July 26, 1940	7.61	Oct. 11, 1941	.86	Dec. 7, 1945	4.72
Wilmington 56	Aug. 12, 1940	7.97	Oct. 4, 1941	2.06	Mar. 1, 1945	4.51
Wilmington 58	July 27, 1940	12.65	Nov. 1, 1941	2.77	Mar. 23, 1942	8.27
Winchendon 13	July 18, 1939	12.66	Nov. 21, 22, 23 1947	1.97	Mar. 9, 1946	10.17
Winchester 4	Aug. 22, 1939	(d)	Dec. 27, 1941	7.45	May 7, 1940	11.35
Winchester 14	June 13, 1940	14.99	Dec. 14, 1941	5.62	Mar. 23, 1942	10.13
Winchester 18	July 15, 1940	(e)	(e)	1.15	Mar. 23, 1942	9.52
Woburn 1	Aug. 14, 1939	9.73	Sept. 29, 1943	4.47	Nov. 30, 1944	7.26
Woburn 3	Aug. 18, 1939	2.41	Aug. 16, 1941	f .93	Oct. 31, 1947	
Woburn 4	Sept. 12, 1939	2.57	Sept. 26, 1939	f .01	Nov. 30, 1944	1.22
Woburn 5	Sept. 12, 1939	1.00	Sept. 19, 1939	f .22	Dec. 24, 1942	
Woburn 17	July 15, 1940	(g)	Dec. 26, 1941	4.13	Nov. 30, 1944	6.06
Woburn 19	June 20, 1940	14.85	Oct. 18, 1941	4.84	Dec. 28, 1945	6.35
Woburn 21	June 21, 1940	9.69	Oct. 25, 1941	5.76	Mar. 12, 1945	7.70
Woburn 23	July 15, 1940	3.10	Sept. 27, 1941	.53	Mar. 1, 1945	
Woburn 36	June 28, 1940	5.86	Dec. 31, 1947	1.77	May 10, 1941	5.86
Woburn 38	June 28, 1940	18.15	Dec. 14, 1941	7.62	Mar. 2, 1945	11.23
Woburn 49	July 10, 1940	4.25	Dec. 5, 1941	f1.59	Feb. 8, 1941	.12
Woburn 53	July 13, 1940	10.69	Sept. 27, 1941	7.93	Mar. 23, 1942	

a Dry Nov. 6, Dec. 4, 1944, Oct. 31, 1947. Water level below 16.3 feet below land-surface datum.

b Dry. Water level below 21.9 feet below land-surface datum.

c Dry. Water level below 9.0 feet below land-surface datum.

d Dry. Water level below 22.6 feet below land-surface datum.

e Dry Dec. 26, 1941, Nov. 28, 1942, Oct. 30, 1943, Aug. 31, 1944, Sept. 28, Oct. 30, 1945, Aug. 29, Sept. 30, Oct. 31, 1947. Water level below 14.1 feet below land-surface datum.

f Above land-surface datum.

g Dry. Water level below 12.0 feet below land-surface datum.

Net change, in feet, in water levels in observation wells in Massachusetts, 1947

Well	Net change	Well	Net change	Well	Net change
Arlington 174	a -4.35	Montague 5	+0.40	Winchester 14	+0.56
Brimfield 12	b +.56	Reading 1	+1.13	Winchester 18	+2.20
Cambridge 667	a -9.50	Reading 3	+2.20	Woburn 1	-.16
Cambridge 798	c -9.33	Wilmington 10	+4.48	Woburn 4	+0.07
Chelmsford 68	-.58	Wilmington 29	-.15	Woburn 17	+5.58
Chelmsford 69	-.13	Wilmington 44	-.14	Woburn 19	+1.17
Great Barrington 1	+0.09	Wilmington 56	-.17	Woburn 21	+4.49
Leominster 11	+2.26	Wilmington 58	+6.68	Woburn 36	-2.75
Lowell 14	+6.60	Winchendon 13	-.10	Woburn 38	d -.50
Lowell 41	+4.47	Winchester 4	-1.18	Woburn 49	+5.54
Lowell 43	-2.18				

a Net change to Jan. 1, 1948.

b Net change to Dec. 9, 1947.

c Net change to Jan. 5, 1948.

d Net change to Nov. 29, 1947.

As shown in the preceding table, there was a net rise in water level in 16 of the wells in the State for which readings were made throughout the year, and a net drop in 13 wells.

Precipitation during the year for the State as a whole was 40.95 inches, or 0.12 inch more than in 1946, and 2.01 inches below normal. The maximum annual total was 49.52 inches at Heath, in Franklin County, and the minimum 34.17 inches at Swampscott, in Essex County. Total precipitation at Boston during the year was 37.91 inches or 0.16 inch less than in 1946 and 2.23 inches below normal. At Amherst the precipitation was 38.32 inches or 0.29 inch less than in 1946 and 5.66 inches below normal.

At the beginning of the year the water table throughout the State was at a low stage for the time of year. In general, water levels throughout the State rose appreciably in January, declined in February, and rose during March and April. Following this, the seasonal decline occurred from May through September and October. Low stages occurred in October as the result of deficient precipitation during the month. Substantial recovery of ground-water storage during November resulted from heavy rains, following which water levels at the end of December, in the eastern and western sections of the State, were practically unchanged from November levels. In the central part of the State there were both rises and declines in water levels during December. A slight net increase in ground-water storage occurred, in general, throughout the State during the year except in certain local areas which were affected by withdrawals of ground water.

At the end of January the water table in eastern and north-central sections of the State was at a high stage for the time of year but it was well below average in the western part. At the end of February practically all water levels in the State were below average, with those in the western part far below. In spite of the rise in March throughout the State, the water table was at its lowest March level in the eastern part of the State and below average in the rest of the State. However, further recovery in April brought the water table to average and above in eastern Massachusetts, and above average in the central part. In the western part of the State, however, water levels remained far below average. This pattern continued in effect to the end of May, except in western Massachusetts where the water levels rose to slightly above average.

Water levels in eastern Massachusetts continued well above average through September and dropped below average in October. In the central and western sections of the State water levels were below average through October reaching low stages in that month as the result of deficient precipitation. The only exception was in the well at Montague where the water level was slightly above average at the end of October.

During November there was appreciable recovery throughout the State and water levels in eastern Massachusetts returned to above average. In the central part water levels were both below and above average being above at Leominster, about at average at Montague, and far below average at Brimfield and Winchendon. In the western part of the State water levels at Great Barrington were below average throughout the year except at the end of May, and at an all-time low for its period of record at the end of September. At the end of the year, water levels throughout the State were below average and appreciably so in the western part of the State.

The water level in observation well Lowell 43 at the Lowell Water Works pumping station, on Pawtucket Boulevard, reached a new low stage for its period of record at the end of April. It was at or close to its lowest monthly level each month during the year, and a loss of ground-water storage was indicated by a net drop in water level of 2.18 feet during the year. Well Lowell 41 at the Cook well field pumping station of the Lowell Water Works was also far below average during the entire year. However, there

was a slight gain in storage during the year, and at the end of December the water level, although low, was 3 feet above that of December 1943, the lowest December stage of record.

In southern Middlesex County large net declines in water levels in wells Arlington 174, Cambridge 667, and Cambridge 798 indicated a total net loss in ground-water storage in that area during the year. These wells are near Fresh Pond in Cambridge, a water-table pond utilized as a reservoir by the Cambridge Water Department, with the nearby glacial deposits used for ground-water storage. The water levels in the wells fluctuate with the pond level.

The water levels in seven wells scattered throughout the State reached new low stages for their periods of record, all of which resulted from the low precipitation during the autumn except in well Lowell 43.

#### WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

##### Berkshire County

Cheshire 1. Adams Fire District. About 0.25 mile southeast of State Highway 8, about 2.25 miles south of Adams. Unused driven well, diameter  $2\frac{1}{2}$  inches, depth 85 feet below land surface. Measuring point, painted arrow on north side of top of casing at land surface. Land surface is about 950 feet above mean sea level.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level
Apr. 1	7.80	May 29	7.86	Dec. 13	8.6
May 2	7.20	Oct. 4	11.90		

Great Barrington 1 (\*944, p. 41; \*986, p. 48; 1016, p. 86; 1023, p. 97; 1071, p. 100). US 96. E. L. Kopf. On northwest corner of North Plains Road and Division Street (State Highway 41).

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	20.78	Apr. 29	19.43	July 30	20.45	Oct. 30	22.24
Feb. 27	21.16	May 29	19.01	Aug. 29	21.35	Nov. 29	21.62
Mar. 29	19.58	June 28	20.00	Sept. 29	22.89	Dec. 30	21.56

Essex County

Ipswich 1. Massachusetts Department of Conservation. About 60 feet south of south side of Linebrook Road, about 3.5 miles west of Ipswich. Used dug domestic well, diameter 34 inches, depth 18.4 feet below land surface. Measuring point, painted arrow on top of brick on north side of cemented brick curb around well, at land-surface datum, which is about 85 feet above mean sea level.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 15	17.16	Nov. 3	17.34	Nov. 24	16.22	Dec. 15	15.66
20	17.09	10	17.42	Dec. 1	15.71	21	15.45
27	17.27	17	16.41	8	15.59	29	15.43

Ipswich 2. Massachusetts Department of Conservation. About 18 feet north of north side of Gravelly Brook Road, about 0.6 mile west of junction with Topsfield-Ipswich road, and about 4.0 miles southwest of Ipswich. Used dug domestic well, diameter 48 inches, depth 12.2 feet below land surface. Measuring point, top of sharp stone in northeast corner of well casing, at land-surface datum which is about 60 feet above mean sea level.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 15	11.58	Nov. 3	11.80	Nov. 24	10.59	Dec. 15	10.19
20	11.66	10	11.79	Dec. 1	10.11	21	9.82
27	11.78	17	10.64	8	10.13	29	9.80

Topsfield 13 (\*944, p. 41; \*986, p. 48; 1016, p. 86; 1023, p. 97; 1071, p. 100). Mr. Tainter. About 1.5 miles east of Newburyport Turnpike (U.S. Highway 1), 0.7 mile south of Ipswich-Topsfield road, and 2.3 miles east of Topsfield. Discontinued Oct. 6, 1947.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	11.62	Apr. 27	9.03	July 29	13.92	Sept. 29	16.94
Feb. 27	11.78	May 29	10.86	Aug. 28	15.02	Oct. 6	15.98
Mar. 29	9.76	June 30	12.64				

Franklin County

Montague 5 (\*944, p. 41; \*986, p. 49; 1016, p. 86; 1023, p. 97; 1071, p. 100). US 114. C. A. Kurtyka. On west side of Turners Falls-Montague road, about 1.3 miles north of Montague.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	2.10	Apr. 30	2.55	July 31	4.32	Oct. 31	3.86
Feb. 28	3.50	May 31	3.30	Aug. 31	4.49	Nov. 30	3.23
Mar. 31	2.55	June 30	3.80	Sept. 30	4.45	Dec. 31	4.00

Hampden County

Brimfield 12 (\*944, p. 42; \*986, p. 49; 1016, p. 86; 1023, p. 98; 1071, p. 100). US 95. Norman Goodrich. On south side of Palmer-Brimfield road (U.S. Highway 20), about 30 feet south of abandoned section of old Highway 20, 2.3 miles west of Brimfield.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	15.80	Mar. 29	11.55	July 14	13.26	Oct. 4	15.35
28	15.65	May 3	11.67	17	13.31	31	(a)
Mar. 2	14.00	June 2	12.10	Aug. 30	14.36	Dec. 9	15.24

a Dry. Water level below 16.3 feet below land-surface datum.



Middlesex County

Arlington 174 (\*1023, p. 98; 1071, p.100). Massachusetts Department of Public Health. At northwest corner of Margaret and Dorothy Roads.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	8.01	May 1	8.12	July 31	8.50	Oct. 31	12.20
Mar. 3	7.69	29	8.56	Aug. 29	10.17	Nov. 28	12.60
Apr. 1	8.15	June 28	8.16	Sept.30	10.79		

Cambridge 667 (\*1023, p. 99; 1071, p. 101). Cambridge Water Department. On Fresh Pond golf course, 270 feet east of Blanchard Road and 950 feet south of Concord Avenue.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	7.17	May 1	6.55	July 31	8.87	Oct. 31	20.64
Mar. 3	7.28	29	9.04	Aug. 29	14.00	Nov. 28	20.88
Apr. 1	7.74	June 28	7.32	Sept.30	17.54		

Cambridge 798 (\*1023, p. 100; 1071, p. 101). Massachusetts Department of Public Health. On Fresh Pond golf course, 450 feet south of Concord Avenue, 970 feet east of Blanchard Road.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	2.49	May 1	1.88	July 31	4.06	Oct. 31	15.60
Mar. 3	2.43	29	4.26	Aug. 29	9.14	Nov. 28	15.80
Apr. 1	3.01	June 28	2.66	Sept.30	12.57		

Chelmsford 68 (\*886, p. 254; 906, p. 39; 936, p. 44; 944, p. 42; \*986, p. 49; 1016, p. 86; 1023, p. 98; 1071, p. 101). Wannalancit Trotting Park. In northeast corner of abandoned trotting track, 2,100 feet east of Middlesex Street (U.S. Highway 3), 1,300 feet north of intersection of Trotting Park Lane and Boston & Maine Railroad tracks, 0.5 mile north of Vinal Square, North Chelmsford.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	8.37	Apr. 30	7.60	July 30	8.64	Oct. 31	10.89
Feb. 28	8.36	May 29	8.00	Aug. 29	9.84	Nov. 29	9.18
Mar. 31	7.70	June 28	8.57	Sept.30	9.93	Dec. 31	9.58

Chelmsford 69 (\*886, p. 254; 906, p. 39; 936, p. 45; 944, p. 42; \*986, p. 49; 1016, p. 86; 1023, p. 99; 1071, p. 101). City of Lowell, Washington test well 2. About 2,100 feet southeast of Chelmsford Street, 300 feet southwest of Ecuador Road, and 1.7 miles northeast of Chelmsford Center, Chelmsford.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	0.76	Apr. 30	1.44	July 30	1.42	Oct. 31	2.70
Feb. 28	1.70	May 29	1.15	Aug. 29	2.70	Nov. 29	2.06
Mar. 31	1.76	June 28	2.00	Sept.30	2.49	Dec. 31	2.13

Lowell 4 (\*886, p. 254; 906, p. 39; 936, p. 45; 944, p. 43; \*986, p. 49; 1016, p. 87; 1023, p. 99; 1071, p. 101). U. S. Rubber Co. About 135 feet north of Marginal Street, and about 1,000 feet east of Pawtucket Street bridge over Boston & Maine Railroad tracks, Lowell. Water levels, in feet below land-surface datum, 1947: Oct. 1, 11.24; Oct. 31, 12.55.

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Lowell 14 (\*886, p. 255; 906, p. 40; 936, p. 46; 944, p. 44; \*986, p. 50; 1016, p. 87; 1023, p. 101; 1071, p. 101). Rogers Hall School. About 90 feet north of Rogers Street and 2,000 feet east of Fort Hill, Lowell.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	16.06	Apr. 30	14.52	July 30	15.11	Oct. 31	16.36
Feb. 27	16.85	May 29	13.08	Aug. 29	14.08	Nov. 29	16.52
Mar. 31	15.46	June 28	12.17	Sept. 30	15.27	Dec. 31	15.94

Lowell 26 (\*886, p. 256; 906, p. 41; 936, p. 47; 944, p. 45; \*986, p. 51; 1016, p. 87; 1023, p. 101; 1071, p. 101). Alfred Cimon (well 1). About 55 feet northeast of Pawtucket Boulevard Extension and 4,500 feet west of East Avenue, Lowell. Water levels, in feet below land-surface datum, 1947: Oct. 1, 11.88; Oct. 31, 12.39.

Lowell 33 (\*886, p. 256; 906, p. 41; 936, p. 47; 944, p. 45; \*986, p. 51; 1016, p. 87; 1023, p. 101; 1071, p. 102). Thomas Varnum. About 400 feet south and 50 feet west of intersection of Varnum Avenue and West Meadow Road, Lowell. Water levels, in feet below land-surface datum, 1947: Oct. 1, 9.71; Oct. 31, 10.54.

Lowell 41 (\*886, p. 257; 906, p. 42; 936, p. 47; 944, p. 45; \*986, p. 51; 1016, p. 88; 1023, p. 101; 1071, p. 102). City of Lowell (Cook test well 3). About 50 feet north and 75 feet east of northeast corner of owner's Cook well field pump house, which is about 1,300 feet southwest of intersection of Plain and Manufacturers Streets, Lowell.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	15.89	Apr. 30	16.74	July 30	16.93	Oct. 31	20.00
Feb. 27	15.56	May 29	15.60	Aug. 29	19.72	Nov. 29	14.56
Mar. 31	14.65	June 28	15.43	Sept. 30	17.79	Dec. 31	16.42

Lowell 43 (\*906, p. 42; 936, p. 47; 944, p. 46; \*986, p. 51; 1016, p. 88; 1023, p. 101; 1071, p. 102). City of Lowell (test well 26). About 230 feet south of Pawtucket Boulevard, about 415 feet east of Boulevard Avenue, 30 feet southwest of southeast corner of Pawtucket Boulevard pump house, Lowell.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	22.51	Apr. 30	24.82	July 30	20.00	Oct. 31	22.92
Feb. 28	24.59	May 29	23.60	Aug. 29	20.89	Nov. 29	21.88
Mar. 31	24.36	June 28	22.42	Sept. 30	20.98	Dec. 31	24.50

Reading 1 (\*886, p. 257; 906, p. 42; 936, p. 48; 944, p. 46; \*986, p. 51; 1016, p. 88; 1023, p. 102; 1071, p. 102). William Kelch. About 50 feet northwest of West Street, 1,000 feet northwest of intersection of West and Willow Streets, and about 1.4 miles northwest of Reading.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	20.11	Apr. 30	17.27	July 31	19.95	Oct. 30	21.93
Feb. 27	19.20	May 29	16.94	Aug. 29	20.79	Nov. 29	20.84
Mar. 31	17.82	June 28	18.64	Sept. 30	21.45	Dec. 30	20.56

Reading 3 (\*906, p. 43; 936, p. 48; 944, p. 46; \*986, p. 52; 1016, p. 88; 1023, p. 102; 1071, p. 102). Merle W. Farr. About 500 feet southeast of intersection of West Street and County Road and about 1.2 miles southwest of Reading.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	1.87	Apr. 30	1.71	July 31	2.48	Oct. 30	4.25
Feb. 27	2.08	May 29	1.74	Aug. 29	2.71	Nov. 29	2.30
Mar. 31	1.88	June 28	2.26	Sept. 30	3.52	Dec. 30	2.50

Wilmington 10 (\*906, p. 43; 936, p. 48; 944, p. 47; \*986, p. 52; 1016, p. 88; 1023, p. 102; 1071, p. 102). L. Chisholm. About 75 feet southeast of Hopkins Street, 1,100 feet southwest of Shawsheen Avenue, and 2.1 miles west of Wilmington Center. New measuring point beginning Aug. 21, 1947, hole near southwest corner of well cover, 0.45 foot above land-surface datum which is 113.63 feet above mean sea level.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	2.15	May 29	2.15	Aug. 21	4.96	Nov. 1	7.43
Feb. 27	3.27	June 28	3.65	29	5.52	29	4.21
Mar. 31	2.08	July 31	3.43	Sept. 30	6.48	Dec. 30	4.49
Apr. 30	1.65						

Wilmington 29 (\*906, p. 43; 936, p. 49; 944, p. 47; \*986, p. 52; 1016, p. 88; 1023, p. 102; 1071, p. 103). Oliver R. Surette. About 40 feet east of Andover Street, 2,700 feet northeast of intersection of Andover and Woburn Streets, and 2.5 miles northeast of Wilmington Center.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	9.94	Apr. 30	9.95	July 31	10.39	Nov. 1	11.18
Feb. 27	10.20	May 29	9.96	Aug. 29	10.89	29	10.59
Mar. 31	10.04	June 28	10.40	Sept. 30	11.05	Dec. 30	10.65

Wilmington 44 (\*906, p. 44; 936, p. 49; 944, p. 47; \*986, p. 52; 1016, p. 88; 1023, p. 102; 1071, p. 103). US 1. Mrs. Anne M. McMahon. About 700 feet northwest of intersection of Federal Street and Middlesex Avenue and 0.4 mile northeast of Wilmington Center.

Water level at noon, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	3.23	4.46	4.15	3.25	4.12	4.93	4.35	5.96	6.20	6.58	4.41
2	....	3.35	4.43	4.17	2.96	4.19	4.98	4.50	5.98	6.22	6.53	4.47
3	....	3.53	2.62	3.85	2.63	4.24	5.05	4.62	5.77	6.26	6.53	4.52
4	4.67	3.65	2.73	3.60	2.15	4.19	5.10	4.72	5.66	6.27	6.52	4.56
5	4.65	3.61	2.93	3.60	2.35	4.18	5.16	4.80	5.67	6.32	6.51	4.58
6	4.65	3.59	2.97	3.22	2.42	4.25	5.20	4.89	5.72	6.34	6.52	4.60
7	4.65	3.72	3.01	3.19	2.66	4.33	5.24	4.98	5.79	6.35	6.54	4.34
8	4.65	3.80	3.13	3.37	2.80	4.38	5.28	5.03	5.85	6.38	6.53	4.64
9	4.68	3.86	3.25	3.53	3.01	4.16	5.33	5.09	5.89	6.41	6.48	4.65
10	4.71	3.95	3.37	3.66	3.20	3.95	5.37	5.13	5.96	6.43	6.45	4.66
11	4.72	4.04	3.43	3.73	3.35	3.99	5.42	5.18	6.03	6.45	6.42	4.66
12	4.74	4.12	3.44	3.79	3.48	4.08	5.45	5.22	6.08	6.46	6.23	4.69
13	4.79	4.19	3.46	3.85	3.58	4.21	5.46	5.27	6.13	6.46	4.04	4.70
14	4.80	4.24	3.37	3.90	3.66	4.31	5.47	5.32	6.15	6.47	3.75	4.72
15	4.80	4.27	3.02	3.92	3.69	4.32	5.53	5.39	6.13	6.48	3.89	4.74
16	4.63	4.27	3.01	3.96	3.75	4.38	5.58	5.46	6.08	6.50	4.03	4.70
17	4.33	4.28	3.12	3.83	3.82	4.43	5.40	5.43	6.03	6.51	4.16	4.35
18	4.22	4.28	3.32	3.72	3.87	4.49	5.36	5.42	6.03	6.52	4.28	4.17
19	4.20	4.30	3.48	3.86	3.90	4.54	5.39	5.42	6.05	6.53	4.39	4.19
20	4.17	4.32	3.57	3.94	3.91	4.60	5.45	5.48	6.10	6.54	4.49	4.23
21	2.32	4.30	3.64	3.97	3.94	4.66	5.52	5.52	6.13	6.55	4.57	4.36
22	2.64	4.30	3.71	3.86	3.90	4.68	5.51	5.55	6.15	6.57	4.64	4.46
23	3.04	4.34	3.76	3.17	3.79	4.73	4.96	5.58	6.08	6.58	4.66	4.53
24	3.33	4.36	3.80	3.12	3.79	4.77	4.49	5.63	6.03	6.60	4.66	4.60
25	3.20	4.39	3.78	3.34	3.86	4.76	4.48	5.70	6.02	6.62	4.34	4.64
26	3.14	4.41	3.83	3.35	3.67	4.70	4.57	5.77	6.04	6.62	4.09	4.64
27	3.01	4.44	3.90	3.32	3.65	4.72	4.68	5.79	6.08	6.63	4.10	4.63
28	3.01	4.45	3.95	3.44	3.79	4.76	4.78	5.80	6.13	6.64	4.16	4.66
29	3.25		4.00	3.57	3.91	4.82	4.20	5.83	6.16	6.65	4.25	4.70
30	3.41		4.05	3.68	3.99	4.87	4.10	5.87	6.17	6.64	4.34	4.72
31	3.40		4.11		4.06		4.19	5.91		6.61		4.72

a Estimated.

Wilmington 56 (\*944, p. 47; \*986, p. 52; 1016, p. 89; 1023, p. 103; 1071, p. 103). D. P. Falkner. East side of Woburn Street, about 700 feet north of Lowell Street and 1.4 miles southeast of Wilmington Center, Wilmington.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	3.13	Apr. 30	3.87	July 31	4.47	Nov. 1	6.38
Feb. 27	4.45	May 29	4.01	Aug. 29	5.86	29	4.06
Mar. 31	4.30	June 28	4.98	Sept. 30	5.85	Dec. 30	4.51

Wilmington 58 (\*906, p. 44; 936, p. 49; 944, p. 48; \*986, p. 52; 1016, p. 89; 1023, p. 103; 1071, p. 104). Mrs. R. Malatesta. About 3 feet south of Butters Row, 1,600 feet west of Main Street, and 1.5 miles south of Wilmington Center.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	6.22	Apr. 30	6.79	July 31	9.36	Nov. 1	11.71
Feb. 27	7.79	May 29	7.13	Aug. 29	10.54	29	8.69
Mar. 31	7.09	June 28	8.78	Sept. 30	11.13	Dec. 30	8.27

Winchester 4 (\*886, p. 257; 906, p. 44; 936, p. 49; 944, p. 44; \*986, p. 53; 1016, p. 89; 1023, p. 103; 1071, p. 104). Town of Winchester (test well AA). About 60 feet south of Royal Street, 800 feet east of Pond Street, and 1,000 feet west of Sylvester Avenue, Winchester.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	8.89	Apr. 30	9.25	July 31	10.75	Oct. 31	13.18
Feb. 28	10.08	May 29	8.71	Aug. 29	11.45	Nov. 29	11.08
Mar. 31	9.26	June 28	9.74	Sept. 30	11.38	Dec. 31	11.35

Winchester 14 (\*906, p. 44; 936, p. 50; 944, p. 49; \*986, p. 53; 1016, p. 89; 1023, p. 103; 1071, p. 104). K. W. B. Cox. About 105 feet north of Forest Street, 360 feet northeast of west intersection of Forest Street and Forest Circle, and 1.7 miles northeast of Winchester.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	8.74	Apr. 30	9.12	July 31	12.07	Oct. 30	13.43
30	8.82	May 29	10.06	Aug. 29	12.12	Nov. 29	9.05
Feb. 28	10.83	June 28	11.64	Sept. 30	12.62	Dec. 30	10.13
Mar. 31	10.14						

Winchester 18 (\*944, p. 49; \*986, p. 53; 1016, p. 89; 1023, p. 103; 1071, p. 104). Thomas N. Vinson. About 60 feet east of Ridge Street, 40 feet north of High Street, about 1.9 miles west of Winchester.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	4.06	Apr. 30	7.59	July 31	12.48	Oct. 31	(a)
Mar. 3	5.76	May 29	8.15	Aug. 29	(a)	Nov. 29	11.77
31	7.90	June 28	10.75	Sept. 30	(a)	Dec. 31	9.52

a Dry. Water level below 14.1 feet below land-surface datum.

Woburn 1 (\*886, p. 258; 906, p. 45; 936, p. 50; 944, p. 50; \*986, p. 53; 1016, p. 89; 1023, p. 104; 1071, p. 104). E. P. Fox. About 255 feet south of Green Street, 250 feet west of Highland Street, 0.5 mile south of Woburn.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	6.53	Apr. 30	7.10	July 31	7.52	Nov. 1	8.29
Feb. 28	7.99	May 29	6.64	Aug. 29	6.51	29	6.29
Mar. 31	7.54	June 28	7.65	Sept. 30	8.39	Dec. 31	7.26

Woburn 3 (#886, p. 258; 906, p. 45; 936, p. 50; 944, p. 50; #986, p. 53; 1016, p. 90; 1023, p. 104; 1071, p. 104). Lord Tannery. About 70 feet north of Lord Tannery well field concrete pump pit, 670 feet north of Ashburton Avenue, 200 feet east of Boston and Maine Railroad tracks, 2.7 miles north of Woburn. Water levels, in feet below land-surface datum, 1947: Oct. 1, 0.75; Oct. 31, 0.93.

Woburn 4 (#886, p. 258; 906, p. 46; 936, p. 51; 944, p. 50; #986, p. 53; 1016, p. 90; 1023, p. 104; 1071, p. 105). Consolidated Chemical Industries, Inc. (well 10). About 800 feet north of intersection of Merrimac and New Boston Streets, 350 feet west of New Boston Street, 3 miles north of Woburn.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	1.00	Apr. 30	1.11	July 31	1.18	Oct. 31	1.57
Feb. 27	1.30	May 29	1.06	Aug. 29	1.46	Nov. 29	1.18
Mar. 31	1.23	June 28	1.29	Sept. 30	1.58	Dec. 30	1.22

Woburn 5 (#886, p. 259; 906, p. 46; 936, p. 51; 944, p. 51; #986, p. 54; 1016, p. 90; 1023, p. 104; 1071, p. 105). Consolidated Chemical Industries, Inc. About 1,000 feet south of intersection of Merrimac and New Boston Streets, 350 feet east of New Boston Street, 2.6 miles north of Woburn. Water levels, in feet below land-surface datum, 1947: Oct. 1, 0.20; Oct. 31, 0.14.

Woburn 17 (#906, p. 46; 936, p. 51; 944, p. 51; #986, p. 54; 1016, p. 90; 1023, p. 104; 1071, p. 105). J. D. Coakley. About 70 feet north of north end of Ingalls Street, 370 feet north of intersection of Montvale Avenue and Ingalls Street, and 0.8 mile east of Woburn. New measuring point beginning Aug. 20, 1947, north edge of angle iron at hole in well cover, 0.10 foot below land-surface datum which is 180.75 feet above mean sea level.

Water level, in feet below land-surface datum, 1947

Jan. 29	4.77	Apr. 30	5.65	Aug. 20	8.21	Oct. 30	9.36
30	4.78	May 29	5.72	29	7.50	Nov. 29	5.69
Feb. 27	5.76	June 28	6.92	Sept. 30	8.74	Dec. 30	6.06
Mar. 31	5.49						

Woburn 19 (#906, p. 47; 936, p. 52; 944, p. 51; #986, p. 54; 1016, p. 90; 1023, p. 105; 1071, p. 105). Tanner's Degreasing Co., Inc. About 230 feet north of Montvale Avenue and 300 feet west of Albany Street, East Woburn.

Water level, in feet below land-surface datum, 1947

Jan. 29	6.49	Apr. 30	6.60	July 31	6.73	Oct. 30	7.78
30	6.59	May 29	6.51	Aug. 29	7.21	Nov. 29	6.25
Feb. 27	7.49	June 28	6.81	Sept. 30	8.07	Dec. 30	6.35
Mar. 31	6.16						

Woburn 21 (#906, p. 47; 936, p. 52; 944, p. 51; #986, p. 54; 1016, p. 90; 1023, p. 105; 1071, p. 105). Morris Kaplan. About 150 feet south of Webster Street, 1,100 feet west of Kimball Lane, North Woburn.

Water level, in feet below land-surface datum, 1947

Jan. 29	7.30	Apr. 30	6.60	July 31	7.38	Oct. 31	8.66
Feb. 27	7.25	May 29	6.35	Aug. 29	7.91	Nov. 29	7.68
Mar. 31	6.72	June 28	6.96	Sept. 30	8.19	Dec. 30	7.70

Woburn 23 (#906, p. 47; 936, p. 52; 944, p. 52; #986, p. 54; 1016, p. 91; 1023, p. 105; 1071, p. 105). F. H. Bowser. About 490 feet south-west of intersection of Main and Elm Streets, 0.6 mile south of North Woburn. Water levels, in feet below land-surface datum, 1947: Oct. 1, 2.13; Oct. 31, 1.97.

Woburn 36 (#906, p. 47; 936, p. 52; 944, p. 52; #986, p. 54; 1016, p. 91; 1023, p. 105; 1071, p. 105). Town of Woburn (test well 12-A). About 100 feet east of Willow Street, 365 feet south of Lexington Street, 320 feet west of owner's Unit E pump, 1.2 miles southwest of Woburn.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	3.17	Apr. 30	3.04	July 31	3.48	Oct. 31	4.80
Feb. 28	3.19	May 29	2.95	Aug. 29	3.78	Nov. 29	5.00
Mar. 31	3.09	June 28	3.06	Sept. 30	4.13	Dec. 31	5.86

Woburn 38 (#906, p. 48; 936, p. 53; 944, p. 52; #986, p. 55; 1016, p. 91; 1023, p. 105; 1071, p. 106). Town of Woburn. On Woburn Country Club golf course, about 300 feet northwest of owner's Unit D pump house, which is about 60 feet west of Woburn Parkway and 1.1 miles southwest of Woburn.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	9.55	Apr. 30	9.93	July 31	10.78	Oct. 31	14.03
Feb. 28	10.49	May 29	9.33	Aug. 29	10.96	Nov. 29	11.23
Mar. 31	9.70	June 28	10.25	Sept. 30	12.27		

Woburn 49 (#906, p. 48; 936, p. 53; 944, p. 52; #986, p. 55; 1016, p. 91; 1023, p. 105; 1071, p. 106). Leo Pias. About 260 feet south of Locust Street, 560 feet east of Cambridge Road, and 1.3 miles west of Woburn.

Water level, in feet with reference to land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	+0.46	Apr. 30	+0.70	July 31	+0.40	Oct. 31	-2.63
Feb. 28	+0.49	May 29	+0.89	Aug. 29	-.21	Nov. 29	-.33
Mar. 31	+0.70	June 28	+0.57	Sept. 30	-1.30	Dec. 30	-1.12

Woburn 53 (#906, p. 48; 936, p. 53; 944, p. 53; #986, p. 55; 1016, p. 91; 1023, p. 106; 1071, p. 106). P. Flowers. About 240 feet north of Kilby Street, 550 feet west of Hart Street, about 0.6 mile north of Woburn. Water levels, in feet below land-surface datum, 1947: Oct. 1, 9.40; Oct. 31, 9.57.

#### Worcester County

Leominster 11 (#886, p. 259; 906, p. 48; 936, p. 53; 944, p. 53; #986, p. 55; 1016, p. 91; 1023, p. 106; 1071, p. 106). US 128. C. S. Pierce. About 100 feet east of Nashua Street, 300 feet west of Boston & Maine Railroad tracks, 0.7 mile south of North Leominster, 1.2 miles east of Leominster.

Water level at noon, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	1.70	3.36	2.87	1.61	3.77	5.13	6.66	7.92	7.88	8.64	4.28
2	....	1.75	3.34	2.84	1.83	3.90	5.26	6.76	7.95	7.93	8.64	4.33
3	....	1.98	1.72	1.66	1.52	3.97	5.41	6.85	7.96	7.98	8.64	4.35
4	....	2.04	1.98	1.94	1.50	3.50	5.53	6.93	7.98	8.03	8.62	4.31
5	....	1.61	2.14	1.81	1.71	3.67	5.66	6.99	8.02	8.07	8.61	4.32
6	4.29	1.76	2.23	1.48	1.55	3.84	5.79	7.05	8.04	8.11	8.60	4.33
7	4.25	2.06	1.96	1.68	1.80	4.01	5.91	7.10	a8.05	8.16	8.60	4.39
8	4.26	2.14	1.89	1.98	1.93	3.96	6.02	7.19	a8.08	8.19	8.60	4.35
9	4.30	2.27	1.98	2.14	2.18	3.00	6.12	7.19	8.11	8.22	8.55	4.28

a Estimated.

## Leominster 11--Continued.

Water level at noon, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
10	4.32	2.44	1.91	2.30	2.38	3.15	6.22	7.23	8.14	8.25	8.54	4.30
11	4.33	2.59	1.89	2.38	2.57	3.37	6.30	7.26	8.17	8.27	8.47	4.30
12	4.37	2.73	1.84	2.38	2.73	3.58	6.38	7.29	8.20	8.29	8.25	4.31
13	4.41	2.84	1.64	2.54	2.90	3.83	6.45	7.33	8.23	8.31	6.85	4.34
14	4.41	2.87	1.39	2.66	2.78	3.98	6.53	7.37	8.22	8.34	5.42	4.39
15	4.38	2.89	1.51	2.71	2.92	3.83	6.60	7.42	8.22	8.36	5.00	4.44
16	4.06	2.89	1.59	2.83	3.05	4.00	6.67	7.45	8.18	8.37	4.87	4.36
17	3.82	2.89	1.69	2.32	3.21	4.15	6.73	7.47	8.13	8.40	4.83	3.89
18	3.73	2.91	1.89	2.51	3.29	4.27	6.78	7.50	8.05	8.41	4.83	3.77
19	3.68	2.96	2.08	2.69	3.23	4.34	6.80	7.52	7.97	8.42	4.83	3.83
20	3.61	3.03	2.15	2.83	3.30	4.41	6.84	7.55	7.92	8.44	4.84	3.94
21	2.85	3.06	2.18	2.75	3.44	4.47	6.89	7.58	7.90	8.46	4.86	4.00
22	2.66	3.11	2.29	2.65	3.31	4.56	6.92	7.61	7.88	8.47	4.87	4.08
23	2.79	3.16	2.36	1.76	3.22	4.68	6.84	7.64	7.88	8.50	4.81	4.12
24	2.87	3.18	2.40	1.73	3.38	4.78	6.56	7.68	7.87	8.52	4.65	4.19
25	2.60	3.21	2.20	2.02	3.38	4.62	6.37	7.73	7.84	8.54	4.33	4.23
26	2.05	3.24	2.29	1.86	2.56	4.43	6.32	7.77	7.82	8.56	4.17	4.21
27	1.60	3.25	2.55	2.07	2.36	4.57	6.34	7.78	7.81	8.57	4.17	4.16
28	1.82	3.31	2.65	2.09	3.09	4.74	6.43	7.82	7.82	8.59	4.18	4.16
29	1.78		2.68	2.30	3.28	4.88	6.48	7.84	7.83	8.61	4.19	4.19
30	1.81		2.68	2.43	3.44	5.01	6.50	7.86	7.85	8.62	4.24	4.23
31	1.67		2.83		3.63		6.56	7.89		8.63		4.24

a Estimated.

Sterling 1. Nunzio Lanciani. About 45 feet north of north side of Justice Hill Road, about 0.8 mile northwest of junction with South Nelson Road, and about 3 miles northwest of Sterling. Unused dug domestic well, diameter 24 inches, depth 15.0 feet below land surface. Measuring point, edge of notch cut in center of 2 by 4-inch board on south side of opening, at land-surface datum which is about 695 feet above mean sea level.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 3	3.01	June 13	3.99	Aug. 22	9.74	Oct. 24	11.71
11	3.17	20	4.62	29	10.28	31	12.01
18	3.24	27	4.66	Sept. 6	10.45	Nov. 7	11.76
25	3.19	July 4	6.15	12	10.73	14	5.86
May 2	3.14	11	7.05	19	10.51	21	5.44
9	3.18	18	7.71	26	10.18	28	4.33
16	3.36	25	7.25	Oct. 3	10.41	Dec. 5	4.38
23	3.32	Aug. 1	7.98	10	10.87	12	4.09
30	3.54	8	8.89	17	11.37	19	3.55
June 6	3.59	15	9.54	22	11.62	26	3.86

Winchendon 13 (\*886, p. 260; 906, p. 50; 936, p. 55; 944, p. 54; \*986, p. 56; 1016, p. 92; 1023, p. 106; 1071, p. 107). W. B. Hart. About 10 feet east of Forristall Road, 800 feet south of intersection of Forristall and Crosby Roads and 1.5 miles northeast of Winchendon.

Water level at noon, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	10.06	4.02	....	3.98	3.67	4.56	6.37	8.94	10.91	11.95	12.52	12.65
2	10.06	3.86	5.69	3.89	3.41	4.74	6.51	9.02	10.99	11.96	12.54	12.60
3	10.03	4.00	5.65	3.20	3.47	4.85	6.70	9.11	11.00	11.98	12.55	12.56
4	10.02	4.05	5.85	3.14	3.34	4.14	6.88	9.20	11.03	12.01	12.56	12.52
5	10.00	3.35	5.91	3.02	3.35	4.21	7.06	9.28	11.07	12.03	12.58	12.47
6	9.99	3.37	5.99	2.47	3.29	4.40	7.23	9.36	11.11	12.05	12.60	12.42
7	9.98	3.61	6.01	2.55	3.46	4.66	7.38	9.45	11.19	12.07	12.61	12.37

a Estimated.

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Winchendon 13--Continued.

Water level at noon, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
8	9.96	3.83	6.03	2.82	3.49	4.73	7.53	9.52	11.23	12.09	12.63	12.32
9	9.96	....	6.04	2.92	3.70	4.32	7.68	9.60	11.27	12.11	12.65	12.26
10	9.96	....	6.10	3.14	3.89	4.38	7.81	9.68	11.32	12.13	12.67	12.21
11	9.97	....	6.16	3.06	4.01	4.61	7.91	9.75	11.35	12.15	12.68	12.15
12	9.97	....	6.19	2.92	4.10	4.83	8.01	9.82	11.39	12.17	12.69	12.09
13	9.99	....	6.09	3.08	4.19	5.07	8.10	9.89	11.42	12.19	12.70	12.03
14	10.02	....	4.67	3.29	4.23	5.22	8.19	9.95	11.46	12.21	12.71	11.98
15	10.03	4.82	3.16	3.45	4.25	4.98	8.28	10.02	11.50	12.23	12.72	11.91
16	10.04	4.87	2.90	3.63	4.31	5.05	8.37	10.08	11.53	12.25	12.73	11.83
17	10.03	4.90	3.05	a3.45	4.43	5.24	8.46	10.15	11.56	12.26	12.74	11.76
18	10.00	4.93	a3.30	3.59	4.50	5.40	8.47	10.22	11.59	12.28	12.74	11.70
19	9.95	5.02	a3.6	3.81	4.54	5.48	8.43	10.27	11.63	12.30	12.75	11.63
20	9.88	5.08	3.57	3.96	4.57	5.60	8.43	10.34	11.66	12.31	12.75	11.55
21	9.75	a5.0	3.51	4.07	4.70	5.71	8.48	10.38	11.69	12.33	12.76	11.46
22	9.38	....	3.42	4.16	4.71	5.84	8.54	10.45	11.71	12.35	12.76	11.35
23	8.72	....	3.44	3.86	4.52	5.99	8.58	10.90	11.74	12.37	12.76	11.24
24	8.22	....	3.08	3.01	4.56	6.15	8.98	10.55	11.76	12.39	12.75	11.13
25	7.85	....	2.60	3.16	4.70	5.99	8.55	10.60	11.79	12.41	12.75	11.00
26	7.59	....	a2.7	3.31	3.50	5.79	8.54	10.65	11.82	12.43	12.74	10.86
27	7.27	....	a3.1	3.43	3.58	5.74	8.58	10.70	11.85	12.45	12.73	10.72
28	6.64	....	a3.5	3.58	3.81	5.86	8.64	10.75	11.87	12.46	12.72	10.65
29	6.09	....	a3.6	a3.65	4.02	6.10	8.71	10.79	11.90	12.47	12.70	10.49
30	5.72	....	3.73	a3.75	4.19	6.24	8.79	10.83	11.92	12.49	12.68	10.33
31	5.23	....	3.94	....	4.39	....	8.86	10.88	....	12.52	....	10.17

a Estimated.



## MICHIGAN

By J. G. Ferris, E. A. Moulder, and Norman Billings

### PROGRAM OF WORK

The State-wide investigation of the ground-water resources of Michigan was continued during 1947 in cooperation with the Geological Survey Division of the Michigan Department of Conservation. Intensive surveys of ground-water conditions in the Alma, Battle Creek, Flint, Holland, and Kalamazoo areas started in 1946 were expanded during the year. In the Flint area, it was found that a drift-filled channel in the Saginaw sandstones was so limited in width and intake area that peak load wells proposed by the city of Flint for emergency water supply would deplete several hundred domestic and industrial wells presently pumping from these deposits and wholly dependent on this source for continued supply. Although the results of this survey were of a negative nature from the standpoint of developing large capacity wells by the city of Flint, it did outline an extended aquifer of considerable economic importance to suburban and rural well users.

The survey of the Battle Creek area played an important part in fixing the location of a water treatment plant by determining that present well developments in the Marshall sandstone of this area are vastly superior to the drift supplies. In the Holland area, the survey revealed a great thickness of drift deposits occurring as a fill within a preglacial channel which is cut through the underlying Coldwater shale. An overlying aquiclude of considerable thickness protects these deep deposits of sand and gravel from the surface contamination which has been a serious problem in the operation of present shallow wells in this area. In the Kalamazoo area, the investigation showed the presence of a deep and broad preglacial valley which is filled with permeable drift deposits. The vertical and areal distribution of these deposits are now being outlined by test drilling. It was also determined that the entrenchment of surface streams into the ground-water reservoir at several locations provides very favorable opportunities for induced infiltration of surface water to nearby wells. In the Alma area,

it was found that the greater part of the existing municipal water-supply development is furnished by permeable deposits of sand and gravel which occur as a fill within an interglacial channel which is incised in a thick till sheet. The trend and distribution of these deposits have been outlined as a part of this survey and quantitative studies of the capacity of this aquifer are in progress.

In connection with the above-mentioned intensive surveys of ground-water resources and as a part of the State-wide inventory of water resources, a water-level observation program has been conducted in selected wells to determine the trends and the changes of storage in the ground-water reservoirs. About 6,300 individual measurements of water level were made in 1947 in more than 200 observation wells. Included in this group were 37 observation wells equipped with automatic water-stage recorders from which continuous records of water level were obtained. Water levels were measured at periods ranging from semiweekly to monthly in 209 additional wells. During the year, 38 observation wells were added and measurements were discontinued on 15 wells in the State-wide program. Included in the net increase of 23 observation wells were 12 wells equipped with automatic water-stage recorders.

#### FLUCTUATIONS OF WATER LEVEL

The Grayling recorder well, Gr Gr 6, near Grayling, in Crawford County, may be used as an index of the trends of ground-water level in shallow water-table aquifers in the northern part of the Lower Peninsula of Michigan. From the continuous record of water level, obtained from this well by an automatic water-stage recorder, it is possible to follow in some detail the response of ground-water level to the influence of recharge from precipitation and discharge primarily by underflow and evapotranspiration. The water level in the Grayling recorder well at the start of the year was 7.30 feet below land surface and it remained rather steady during the first half of January. Relatively mild weather during the middle and latter parts of the month resulted in some snow melt and consequent recharge to the ground-water reservoir with a net rise in water level during the month of 0.25 foot. Below-normal temperatures through the latter part of January, February, and most of March stopped further recharge from the snow cover and ground-water levels declined about 0.1 foot by the latter part of March. A period of relatively mild temperatures from the 19th to the 24th, inclusive,

coupled with a storm on March 24 and 25 caused sufficient recharge in the area to raise ground-water levels at the end of March to 0.4 foot above the mid-March water level.

Although the mean temperature for April was below normal, all daily maximum temperatures recorded at Grayling were considerably above freezing. Particularly heavy precipitation during the first week of the month, which resulted in severe flooding in the southern part of the State, resulted in a rise of 2.43 feet from April 1 to the high for the year on April 12. Water levels, in general, declined during the balance of the month with the exception of moderate recharge from the precipitation of April 22 to 24, inclusive. The month of May was the fourth coldest and fifth wettest since 1887. Heavy precipitation during the first week of the month returned water levels to a high of 4.26 feet below land surface on May 5 or 0.05 foot below the April 12 high of 4.21 feet below land surface. Some additional recharge occurred during the middle part of May, but, in general, the balance of the month was marked by a slight decline in ground-water level. Although the relatively cold temperatures during May greatly delayed spring planting they also held evapotranspiration demands to a minimum.

Precipitation during June was slightly below normal with temperatures throughout the State also averaging somewhat below normal. With the seasonal rise of air temperatures, however, the evapotranspiration demand was sufficiently increased to cause a marked decline of water level from 4.77 feet below land surface on June 1 to 5.85 feet on June 30, or a net decline of 1.08 feet. Temperatures during July were slightly below normal and precipitation near normal. Notwithstanding the near-normal precipitation, water levels continued to decline under the influence of the evapotranspiration demand to reach a level of 6.87 feet below land surface by July 31. The month of August was the warmest on record and the third warmest of all months since 1887. Precipitation for the month was somewhat below normal and most of this rainfall occurred during the latter part of the month. Accelerated evapotranspiration demand, occasioned by the above-normal temperatures, resulted in a sharp decline of water level through most of the month with some decrease in the rate of decline during the latter part of the month as a result of precipitation during this period.

Water levels continued to decline through the first part of September to reach the lowest stage for the year of 8.09 feet below land surface on September 13. Precipitation of 2 inches or more occurred during the storms of September 10 to 12 and 19 to 21, inclusive, and considerable recharge to the water table raised the ground-water level to 7.10 feet below land surface on September 30 or a net rise of 0.99 foot from the September 13 low. October was the warmest on record and the first October without snow in 61 years of record. Precipitation for the month was 0.32 inch or 2.6 inches below normal. Water levels declined throughout the month to a level of 7.43 feet below land surface--a net decline of 0.33 foot.

Mild temperatures and moderate precipitation in November resulted in sufficient recharge to stop the downward trend of the water table in the first part of the month. A period of warm weather from November 17 to 25, inclusive, coupled with moderate precipitation on November 22 resulted in a rise of water level through the last part of the month and a net rise for the month of 0.49 foot. Above-freezing temperatures in the first part of December plus moderate precipitation on December 8 resulted in a net rise of water level of 0.11 foot during the month. The end-of-the-year water level of 6.85 feet below land surface represents a net rise of 0.45 foot during the year.

In the southern part of the Lower Peninsula, the water-level highs for the year were recorded during periods ranging from April 10 to as late as mid-June. Most observation wells in this area are finished in artesian strata or water-table aquifers with relatively great depths to water. In addition, many of the observation wells in this area are affected by the withdrawal of large quantities of water for industrial or public supply. The great depth to water in the water-table aquifers and the large distances to outcrop areas of the artesian aquifers contribute to the considerable lag in the time of arrival of the recharge influences. In some cases the peak water levels for the year lagged as much as 2 months beyond the peak stage of the shallow water-table wells in the northern part of the Lower Peninsula.

With one exception, in each of the areas previously noted under intensive investigation, there was a net rise of water level or artesian pressure during the year ranging from 1 foot to more than 3 feet. The exception was the

Lansing area where most observation wells showed the continued decline of water level which has progressed from the start of record in this area and which indicates localized overdevelopment of the water resource.

The abnormally high precipitation which set record intensity rates for many stations in the southern part of the State during the storm of April 4 to 6, inclusive, resulted in rapid and large rises of ground-water level in some observation wells in the Battle Creek and Kalamazoo areas. In both areas the artesian aquifers are intersected by the Kalamazoo River and the amount of pressure rise was dependent, in part, on the proximity of the observation well to this outcrop of the aquifer. Water level rises ranged from 2 feet to as much as 10 feet and the peak occurrence lagged the high-water stage of the river by several days.

#### WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

##### Allegan County

##### Martin Township

An Mn 1 (\*1071, p. 111). Michigan Department of Conservation. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 1, T. 2 N., R. 11 W. Measurements discontinued Sept. 25, 1947.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	1.78	Mar. 12	1.76	May 14	1.63	July 24	1.92
14	1.52	19	1.60	20	1.54	31	1.95
Feb. 5	1.81	Apr. 1	1.35	28	1.33	Aug. 7	2.16
12	1.75	23	1.35	June 4	1.34	14	2.18
19	1.77	May 1	1.32	July 10	1.81	Sept. 25	2.12
Mar. 5	1.90	7	1.54	17	1.69		

##### Calhoun County

##### City of Battle Creek

Ch BC 140 (\*1071, p. 112). Oliver Farm Implement Co., 423 East Michigan Avenue. About 150 feet northeast of Michigan Avenue and about 470 feet southeast of Union Street.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	20.50	Mar. 7	21.90	May 2	16.93	June 20	17.59
10	21.20	14	21.85	9	16.84	July 9	19.04
24	21.07	20	20.88	16	17.65	16	19.75
31	20.99	Apr. 3	19.16	22	17.34	23	19.94
Feb. 7	20.78	11	15.00	29	17.04	30	20.69
14	21.08	18	16.12	June 6	16.50	Aug. 6	21.12
21	21.35	25	16.00	13	17.07	21	21.67
28	21.56						

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Ch BC 150 (\*1071, p. 112). H. B. Sherman Manufacturing Co., 22 Barney Street. About 430 feet southeast of Washington Avenue and 80 feet north-east of Kalamazoo Street.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	16.59	Mar. 7	17.55	May 9	12.78	July 30	16.68
10	17.23	14	17.21	16	12.74	Aug. 6	16.96
16	17.01	21	16.56	22	12.43	13	17.02
24	16.85	28	15.97	29	14.03	21	16.85
31	16.67	Apr. 3	15.70	June 6	14.05	28	16.93
Feb. 7	17.22	11	10.49	13	14.56	Oct. 4	16.02
14	17.39	18	10.97	20	14.39	18	16.40
21	17.05	25	12.10	July 9	15.86	25	16.98
28	17.34	May 2	12.62	16	16.14		

Ch BC 160 (\*1071, p. 112). Post Cereals Division, General Foods Corporation. About 400 feet northwest of Angell Street and 240 feet south-west of Lafayette Street.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	8.73	8.42	8.71	7.40	5.81	5.77	6.79	7.79	7.57	....	9.36	8.75
2	8.79	8.28	8.62	7.38	5.71	....	6.87	....	7.53	....	9.28	8.81
3	8.80	8.23	8.59	7.21	5.80	....	6.93	....	7.66	....	9.22	8.81
4	....	8.36	8.77	7.12	5.74	....	....	....	7.76	a8.56	9.32	8.75
5	....	8.43	8.80	6.96	5.76	....	....	....	a7.91	8.52	9.32	8.71
6	....	8.49	8.80	5.29	5.87	a5.71	....	a8.08	7.83	8.52	9.37	8.64
7	....	8.57	8.81	4.97	5.89	....	....	8.01	7.76	8.63	9.38	8.49
8	....	8.59	8.84	4.83	5.96	....	....	8.06	7.75	8.68	9.31	8.35
9	....	8.54	8.63	4.75	6.01	....	a7.22	8.08	7.92	8.71	9.22	8.33
10	a9.14	8.51	8.57	4.85	6.09	....	7.17	8.00	7.98	8.75	9.15	8.26
11	9.04	8.64	8.63	a4.95	6.08	....	7.21	7.95	8.01	8.78	9.34	8.28
12	8.94	8.70	8.62	4.95	6.10	....	7.26	8.09	7.91	8.74	9.35	8.32
13	8.80	8.72	8.55	....	6.21	a6.12	7.23	8.15	....	8.68	9.29	8.36
14	8.97	8.65	8.47	....	6.03	6.01	....	8.20	....	8.85	9.37	b8.31
15	8.67	....	b8.39	....	6.13	6.02	....	8.25	....	9.04	9.22	....
16	8.63	....	....	....	6.15	6.05	a7.49	8.28	....	....	9.09	....
17	8.60	....	....	....	6.23	6.13	7.29	8.21	....	....	....	....
18	8.57	....	....	a5.48	5.98	6.18	7.33	8.18	....	a9.07	....	....
19	8.43	....	....	5.38	5.93	6.25	7.30	8.30	....	....	....	....
20	8.35	....	....	5.30	5.97	a6.39	7.23	8.30	....	....	9.18	a8.48
21	....	a8.67	a8.31	5.23	5.87	6.38	7.17	a8.41	....	....	9.25	8.44
22	....	8.62	....	5.35	5.65	6.39	7.27	8.33	....	....	9.14	8.38
23	....	8.52	....	5.38	5.66	6.43	7.34	8.33	....	....	8.99	8.52
24	a8.62	8.52	....	5.40	5.60	6.57	7.38	8.28	....	....	8.88	8.59
25	8.53	8.65	....	5.43	b5.53	6.63	7.42	8.16	....	a8.50	8.86	b8.45
26	8.55	8.71	....	5.49	....	6.55	7.47	8.08	a8.23	9.38	8.85	....
27	8.27	8.70	....	5.48	....	6.61	7.43	8.06	....	9.39	8.84	a8.43
28	8.37	8.74	a7.65	5.56	....	6.68	7.43	8.06	....	....	8.79	b8.40
29	8.33	....	7.55	5.67	a5.82	6.65	7.55	8.11	....	....	8.80	b8.38
30	8.34	....	7.45	5.72	5.75	6.69	7.65	7.92	....	9.41	8.77	....
31	8.40	....	7.38	....	5.73	....	7.74	7.66	....	9.39	....	....

a Wetted-tape measurement.

b Estimated.

Ch BC 168 (\*1023, p. 112; 1071, p. 113). Guy Elliott. About 400 feet west of Waubesacon Road and about 2,600 feet south of Morley Road.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	27.48	Mar. 7	27.58	Apr. 25	24.88	June 13	24.04
24	27.40	14	27.43	May 2	24.65	20	23.97
31	27.44	21	27.20	9	24.60	25	24.12
Feb. 7	27.42	28	26.93	16	24.54	July 9	24.35
14	27.39	Apr. 3	26.73	22	24.39	16	24.49
21	27.47	11	25.70	29	24.30	23	24.61
28	27.53	18	25.25	June 6	24.15	30	24.75

Ch BC 168--Continued.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 6	24.87	Oct. 4	25.91	Nov. 8	26.27	Dec. 6	26.40
13	25.27	11	25.95	15	26.24	13	26.33
21	25.49	18	26.10	22	26.36	20	26.37
Sept. 12	25.70	25	26.18	29	26.43	27	26.45
26	25.88	Nov. 1	26.24				

Ch BC 170 (\*1023, p. 112; 1071, p. 113). Honer Brewing Co. 39 feet north of Hamblin Street and 290 feet west of McCambly Street.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	8.54	Mar. 28	8.16	June 20	7.40	Oct. 11	8.62
10	9.70	Apr. 3	7.62	25	8.13	18	9.67
16	9.52	11	3.26	July 9	8.69	25	9.67
24	8.76	18	4.55	16	9.23	Nov. 1	9.17
31	8.46	25	5.14	31	9.85	8	9.01
Feb. 7	9.58	May 2	5.62	Aug. 6	10.13	15	8.54
14	9.79	9	5.99	13	10.09	22	8.48
21	9.54	16	6.03	21	10.14	29	7.55
28	9.91	22	5.69	28	9.77	Dec. 13	6.93
Mar. 7	10.17	29	6.96	Sept. 26	9.89	20	7.86
14	9.56	June 6	6.58	Oct. 4	8.56	27	7.11
21	9.20	13	7.54				

Ch BC 172 (\*1023, p. 112; 1071, p. 113). Kellogg Cereal Food Co. 90 feet north of Porter Street and 110 feet east of Stiles Street.

Water level at 2:00 a.m., in feet below land-surface datum, 1947											
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. Dec.
1	41.05	43.00	43.95	.....	36.65	32.65	38.00	43.00	.....	42.30a	41.53
2	41.39	.....	43.95	.....	36.72	32.52	38.15	43.15	.....	42.45	.....
3	42.18	.....	.....	.....	36.85	32.58	38.30	42.80	.....	42.55	.....
4	42.63	.....	43.50	.....	34.90	35.70	38.35	42.83	.....	43.77	.....
5	42.60	.....	43.80	.....	33.50	35.50	36.00	43.10	.....	38.35	.....
6	.....	.....	44.05	.....	35.25a	35.64	34.80	42.96	.....	37.60	.....
7	.....	44.00	44.15	.....	36.16	35.70	35.40	42.76	.....	38.40	.....
8	.....	40.80	44.20	.....	36.50	35.96	.....	42.82	.....	42.35	.....
9	.....	.....	44.19	.....	36.70	33.13a	39.45	42.90	.....	42.50	.....
10	43.46	.....	.....	.....	36.80	35.35	39.50	42.78	.....	.....	41.85
11	43.15	42.05	42.74	.....	36.85	35.89	39.76	42.65	.....	41.11	.....
12	.....	42.25	42.85	.....	34.25	36.15	40.15	43.25	.....	.....	42.10
13	.....	42.60	43.00	.....	36.25	36.25	40.15	43.45	.....	.....	42.25a
14	42.50	43.00	42.94	.....	36.80	36.68	40.10	43.65	.....	.....	42.50
15	42.50	43.20	43.05	.....	36.98	36.50	40.69	43.60	.....	.....	42.35
16	43.15	42.86	42.88	.....	37.15	34.33	40.71	43.55	.....	.....	42.10
17	43.37	.....	40.73	.....	37.35	36.50	41.10	43.25	.....	.....	.....
18	43.40	42.40	42.23a	36.16	37.15	36.70	.....	43.00	.....	42.37	.....
19	43.00	42.90	42.33	36.20	33.95	36.95	.....	43.70a	43.54	.....	.....
20	39.00	43.35	42.30	35.60	37.00	37.15	.....	43.60	43.50	.....	41.20
21	42.55	43.60	42.27	32.95	37.15	37.29	.....	43.92	43.40	.....	40.90
22	.....	43.59	42.30	34.35	37.40	37.00	.....	43.92	.....	.....	41.11
23	.....	43.55	41.86	35.90	37.31	35.00a	41.71	43.77	42.40	.....	41.15
24	43.25	.....	41.45	36.05	37.15	37.20	41.80	43.50	42.65	.....	40.68
25	.....	43.21	41.45	36.25	36.77	37.25	42.07	43.50	42.75a	41.32	.....
26	.....	43.64	41.35	36.25	36.60	37.40	42.27	43.75	42.65b	40.55	.....
27	.....	43.78	41.10	36.15	36.70	37.46	42.30	43.80	42.50	.....	45.90
28	.....	43.75	40.85	34.55	36.85	37.70	42.25	44.10	42.30	.....	.....
29	.....	.....	.....	36.25	36.65	37.65	42.45	44.15	.....	40.72	.....
30	.....	.....	.....	36.35	33.03	37.75	42.57	44.17	.....	.....	.....
31	43.10	.....	.....	.....	33.00	.....	42.85	43.37	.....	.....	.....

a Wetted-tape measurement.

b Estimated.

## Battle Creek Township

Ch Bc 2 (\*886, p. 267; 906, p. 58; \*936, p. 60; 944, p. 60; \*986, p. 61; 1016, p. 96; 1023, p. 111; 1071, p. 114). City of Battle Creek. Armstrong test well 3 at Goguaac pumping station of city waterworks. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 14, T. 2 S., R. 8 W. Pipe cut off 1.83 feet. Measuring point beginning Dec. 1, 1947, 0.57 foot above land-surface datum. Measurements by C. A. Bunce, operator.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	a 25.0	Apr. 16	a 22.3	July 6	19.6	Oct. 15	18.6
14	a 24.6	22	a 20.6	14	a 22.6	15	a 21.6
19	23.2	23	a 22.1	16	a 22.6	22	19.6
22	a 25.3	29	20.6	25	20.6	23	a 21.6
25	23.0	30	a 22.6	25	a 22.6	29	19.6
29	a 25.0	May 3	20.6	27	19.6	29	a 21.6
Feb. 2	23.0	5	a 22.6	Aug. 7	a 21.6	Nov. 5	20.6
4	a 24.4	11	20.6	10	19.6	5	a 21.6
15	23.1	15	a 22.9	18	19.6	11	20.6
24	a 24.4	17	20.5	20	a 22.6	14	a 21.6
25	a 24.4	24	a 22.6	28	19.6	19	20.6
Mar. 2	23.1	29	a 22.6	28	a 21.6	21	a 21.6
3	a 22.6	June 6	20.6	Sept. 2	a 21.6	23	20.6
8	23.3	6	a 22.6	10	19.6	Dec. 3	a 21.4
11	a 22.6	12	19.6	16	20.6	4	19.4
16	20.6	16	a 22.6	24	a 21.6	8	19.4
17	a 21.6	18	19.6	27	19.6	8	a 21.4
24	a 22.1	20	a 22.6	30	a 22.6	16	18.4
26	20.6	26	20.6	Oct. 1	19.6	19	a 21.4
Apr. 7	20.6	30	a 22.6	1	a 21.6	26	18.4
9	a 21.6	July 4	a 22.6	8	19.6	26	a 21.4
15	20.6						

a Nearby wells operating.

The average daily withdrawal of ground water from wells at the Goguaac pumping station in 1947 ranged from 1.16 million gallons in November to 1.59 million gallons in August and averaged 1.30 million gallons for the year.

Ch Bc 50 (\*1071, p. 114). E. H. Arnett, 447 North Twenty-second Street. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 3, T. 2 S., R. 8 W., about 400 feet south of Upton Avenue and about 700 feet west of Twenty-second Street.

## Water level, in feet below land-surface datum, 1947

Jan. 10	5.82	May 9	2.99	Aug. 13	5.19	Oct. 25	5.33
24	4.84	16	2.63	21	5.28	Nov. 1	5.20
Feb. 7	4.80	June 13	2.69	28	5.14	8	5.18
14	5.27	20	3.18	Sept. 5	4.94	15	5.10
21	5.27	25	3.49	12	4.97	22	5.08
28	5.43	July 9	4.04	26	4.93	29	5.08
Mar. 7	5.46	16	4.28	Oct. 4	4.95	Dec. 13	5.02
14	5.00	23	4.32	11	4.96	20	4.48
21	4.12	30	4.60	18	5.25	27	4.50
Apr. 3	2.84	Aug. 6	4.89				

Ch Bc 55 (\*1071, p. 115). Dominic Conto, 630 Upton Avenue. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 3, T. 2 S., R. 8 W., about 200 feet north of Upton Avenue and 30 feet west of Twentieth Street.

## Water level, in feet below land-surface datum, 1947

Jan. 3	5.74	Mar. 14	4.53	May 16	2.86	July 16	3.56
10	5.85	21	4.50	22	2.64	23	3.71
24	5.35	28	4.17	29	2.48	30	3.97
Feb. 31	5.17	Apr. 3	3.83	June 6	2.56	Aug. 6	4.47
7	5.14	11	2.57	13	2.63	13	4.50
14	5.08	18	2.63	20	2.84	21	4.45
21	5.07	25	2.60	25	3.17	28	4.55
28	5.12	May 2	2.62	30	3.16	Sept. 5	4.36
Mar. 7	5.14	9	2.85	July 9	3.43	12	4.41



## Ch Bc 55--Continued.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 26	4.51	Oct. 25	4.75	Nov. 15	4.50	Dec. 13	4.26
Oct. 4	4.57	Nov. 1	4.70	22	4.45	20	4.24
11	4.69	8	4.65	29	4.56	27	4.28
18	4.69						

Ch Bc 60 (\*1071, p. 115). Eaton Manufacturing Co. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 3, T. 2 S., R. 8 W., about 490 feet north of Avenue C and 30 feet west of Twentieth Street.

## Water level, in feet below land-surface datum, 1947

Jan. 3	19.18	Mar. 14	19.12	May 16	15.38	July 23	16.73
10	19.59	21	18.90	22	14.83	Aug. 13	17.20
24	19.16	28	18.72	29	14.60	21	18.30
31	19.12	Apr. 3	17.94	June 6	14.27	28	18.35
Feb. 7	19.02	11	15.15	13	14.77	Sept. 5	18.26
14	19.28	18	15.46	20	15.35	12	18.50
21	19.31	25	14.78	25	15.73	26	18.42
28	19.54	May 2	14.87	July 9	16.04	Nov. 1	18.84
Mar. 7	19.51	8	15.29	16	16.20		

Ch Bc 137 (\*1023, p. 112; \*1071, p. 115). City of Battle Creek. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 14, T. 2 S., R. 8 W., about 530 feet west of Capital Avenue, S.W. and 70 feet north of George B. Place.

## Water level, in feet below land-surface datum, 1947

Jan. 3	12.70	Apr. 3	11.97	July 9	8.93	Oct. 11	9.95
10	12.68	11	10.83	16	9.01	18	10.05
16	12.66	18	10.39	23	8.98	25	10.15
24	12.53	25	9.99	30	9.05	Nov. 1	10.23
31	12.45	May 2	9.67	Aug. 6	9.28	8	10.27
Feb. 7	12.35	9	9.50	13	9.46	15	10.39
14	12.30	16	9.48	21	9.75	22	10.54
21	12.40	22	9.18	28	9.66	29	10.66
28	12.30	29	8.94	Sept. 5	9.39	Dec. 6	10.72
Mar. 7	12.14	June 6	8.70	12	9.49	13	10.78
14	12.20	13	8.64	26	9.69	20	10.87
20	12.11	20	8.71	Oct. 4	9.85	27	10.95
28	11.97	25	8.81				

Ch Bc 169 (\*1023, p. 112; \*1071, p. 115). Phillip E. Slayton. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 3, T. 2 S., R. 8 W., about 70 feet west of Twentieth Street and about 100 feet south of Avenue A.

## Water level, in feet below land-surface datum, 1947

Jan. 3	8.19	Apr. 11	2.61	July 9	4.69	Oct. 11	5.97
10	9.33	18	2.55	16	4.24	18	6.03
24	7.14	25	2.50	23	4.57	25	6.24
31	7.24	May 2	2.38	30	5.72	Nov. 1	6.08
Feb. 7	7.00	9	2.96	Aug. 6	6.75	8	5.86
14	6.94	16	2.88	13	6.80	15	5.60
21	6.85	22	2.44	21	5.62	22	5.49
28	7.03	29	2.17	28	5.56	29	5.98
Mar. 7	6.95	June 6	1.74	Sept. 5	5.70	Dec. 6	5.68
14	6.22	13	2.38	12	5.80	13	5.49
21	5.63	20	2.89	26	5.74	20	5.70
28	5.50	25	3.54	Oct. 4	6.02	27	5.75
Apr. 3	4.91						

## Emmet Township

Ch Em 10 (\*1071, p. 116). C. W. Cronkhite, 1302 East Michigan Avenue. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 10, T. 2 S., R. 7 W., about 150 feet south of East Michigan Avenue (U. S. Highway 12), and about 1.3 miles east of Raymond Avenue.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	15.49	Apr. 11	14.09	July 16	12.51	Oct. 11	13.24
10	15.49	18	13.70	23	12.57	18	13.31
16	15.43	25	13.43	30	12.69	25	13.39
31	15.37	May 1	13.25	Aug. 6	12.81	Nov. 1	13.47
Feb. 7	15.40	9	13.11	13	12.83	8	13.54
14	15.45	16	13.55	21	12.88	15	13.57
21	15.45	22	12.72	28	12.92	22	13.67
28	15.47	29	12.81	Sept. 5	12.80	29	13.74
Mar. 7	15.54	June 6	12.66	12	12.89	Dec. 13	13.82
14	15.21	13	12.53	26	13.07	20	13.91
20	15.11	20	12.48	Oct. 4	13.14	27	13.95
Apr. 3	14.97	July 9	12.47				

Ch Em 60 (\*1023, p. 111; 1071, p. 116). City of Battle Creek test well. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 18, T. 2 S., R. 7 W., 58 feet south of Golden Avenue and about 530 feet west of Union City Road.

## Water level, in feet below land-surface datum, 1947

Jan. 3	1.99	Mar. 28	0.85	June 25	0.81	Oct. 4	1.64
10	2.04	Apr. 3	.57	July 9	1.05	11	1.74
16	1.70	18	a .07	16	1.23	18	1.78
24	1.50	25	a .14	23	1.28	25	1.81
31	1.47	May 2	.04	30	1.46	Nov. 1	1.69
Feb. 7	1.61	9	.47	Aug. 6	1.70	8	1.63
14	1.73	16	.51	13	1.99	15	1.59
21	1.87	22	a .22	21	1.32	22	1.56
28	1.89	29	.05	28	1.62	29	1.67
Mar. 7	2.31	June 6	.07	Sept. 5	1.51	Dec. 13	1.17
14	1.21	13	.47	12	1.36	20	1.34
20	1.34	20	.63	26	1.44	27	1.51

a Above land-surface datum.

Ch Em 64 (\*1023, p. 112; 1071, p. 116). City of Battle Creek test well. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 17, T. 2 S., R. 7 W., about 350 feet east of Overton Street and about 1,060 feet north of Golden Avenue.

## Water level, in feet below land-surface datum, 1947

Jan. 3	10.30	Apr. 3	8.98	June 25	8.08	Oct. 4	9.32
10	9.67	11	6.70	July 9	8.51	11	9.53
16	9.63	18	7.40	16	8.64	18	9.75
24	9.70	25	7.20	23	8.57	25	9.91
31	9.93	May 2	7.63	30	8.85	Nov. 1	9.65
Feb. 7	9.35	9	7.84	Aug. 6	9.20	8	9.59
14	9.15	16	8.12	13	9.15	15	9.62
21	9.50	22	7.54	21	9.26	22	9.58
28	9.99	29	7.36	28	9.00	29	9.66
Mar. 7	10.47	June 6	7.07	Sept. 5	8.69	Dec. 13	9.55
14	9.83	13	6.84	12	8.93	20	9.64
20	9.70	20	7.80	26	9.08	27	9.76
28	9.27						

## Pennfield Township

Ch Pf 1 (\*886, p. 267; 906, p. 58; \*936, p. 59; 944, p. 59; \*986, p. 61; 1016, p. 96; \*1023, p. 110; 1071, p. 116). City of Battle Creek. Well 22 at Verona pumping station of city waterworks. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 32, T. 1 S., R. 7 W.

Ch Pf 1--Continued.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	5.89	....	6.51	6.21	5.31	4.36	5.01	6.31	....	5.86	a5.93	4.62
2	5.83	....	6.38	6.66	5.41	4.21	5.01	6.49	4.41	5.91	5.81	5.70
3	a7.07	....	5.87	5.01	5.06	4.89	5.41	6.51	4.94	5.49	5.56	5.11
4	6.66	6.55	6.86	....	5.02	4.75	5.56	6.47	5.91	a5.73	5.69	5.65
5	6.96	6.81	6.53	....	4.61	4.69	4.96	6.91	b5.87	5.79	5.94	4.70
6	6.01	6.46	6.78	....	5.04	a5.53	5.01	7.46	5.88	5.59	5.88	5.61
7	7.07	6.41	6.56	....	5.41	5.09	4.72	7.48	5.91	5.96	5.79	4.64
8	6.26	6.31	6.74	....	5.54	4.73	a5.55	7.59	5.43	6.01	5.91	5.08
9	....	5.86	6.66	....	a5.90	4.25	5.21	7.41	5.26	5.91	5.76	5.28
10	a7.37	5.88	5.96	....	5.50	4.76	4.98	7.00	....	6.02	5.41	5.09
11	6.21	5.53	6.36	a5.17	5.26	4.86	4.93	6.52	5.66	5.67	5.53	5.08
12	6.58	6.28	5.51	4.91	4.93	5.21	5.03	6.46	5.76	5.90	5.79	5.04
13	6.03	6.61	6.51	4.91	5.36	5.22	5.74	7.11	6.18	5.46	5.73	4.95
14	6.71	6.43	6.51	4.51	5.45	4.81	5.36	7.14	5.62	5.48	5.48	4.90
15	6.03	5.91	6.56	4.94	5.33	5.16	5.66	7.00	5.17	5.91	5.62	4.41
16	6.26	5.86	6.69	5.02	5.56	4.70	5.06	6.90	5.53	5.98	5.36	5.16
17	6.51	5.83	....	5.34	5.59	4.86	5.05	6.89	5.58	5.75	4.96	5.26
18	5.94	6.31	6.05	4.91	5.44	4.86	5.07	6.41	5.67	5.84	5.24	5.30
19	....	6.39	6.36	5.06	4.74	5.31	5.06	6.61	5.74	5.71	5.31	5.41
20	....	6.41	6.54	4.65	5.37	5.69	4.93	5.89	5.91	5.59	5.47	5.94
21	....	5.85	6.46	4.48	5.55	5.11	4.81	a6.57	5.96	5.71	5.21	5.55
22	....	5.82	6.36	4.61	5.46	4.91	4.91	6.31	5.26	6.31	5.46	5.81
23	....	6.28	6.51	4.92	5.49	4.63	4.91	6.11	5.56	5.91	4.82	....
24	a6.63	5.81	6.81	5.01	5.11	5.73	4.91	6.28	5.30	5.91	4.76	a6.21
25	6.32	6.28	4.66	5.31	5.28	5.51	5.03	6.23	5.38	6.28	5.18	5.03
26	6.36	5.95	5.86	5.18	4.50	5.13	5.19	5.81	5.11	6.22	5.11	5.36
27	5.86	6.66	6.21	5.11	5.20	5.10	5.18	6.00	5.63	....	5.06	5.33
28	6.12	6.39	6.46	4.69	5.21	4.81	5.00	6.22	5.30	....	4.76	5.31
29	6.61	....	6.66	5.19	5.21	5.21	5.24	6.29	5.17	....	5.06	5.66
30	6.61	....	6.31	5.17	4.82	5.02	5.50	5.61	5.69	....	5.06	5.74
31	5.93	....	6.01	....	4.44	....	6.46	5.83	....	....	....	5.06

a Wetted-tape measurement.

b Estimated.

The average daily withdrawal of ground water from the wells at the Verona pumping station in 1947 ranged from 4.12 million gallons in February to 7.85 million gallons in August and averaged 5.40 million gallons for the year.

Ch Pf 58 (\*1023, p. 111; 1071, p. 117). City of Battle Creek test well. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 31, T. 1 S., R. 7 W., about 5,300 feet west of Capital Avenue, N.E., and 42 feet north of Roosevelt Avenue.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	3.79	Apr. 3	3.06	June 25	1.02	Oct. 4	2.03
10	3.82	11	2.29	July 9	1.00	11	2.13
16	3.73	18	2.03	16	1.06	18	2.20
24	3.66	25	1.83	23	1.04	25	2.31
31	3.68	May 2	1.71	30	1.23	Nov. 1	2.34
Feb. 7	3.67	9	1.66	Aug. 6	1.45	8	2.36
14	3.56	16	1.55	13	1.81	15	2.37
21	3.62	22	1.39	21	1.90	22	2.38
28	3.67	29	1.25	Sept. 5	1.74	29	2.43
Mar. 7	3.71	June 7	1.10	12	1.93	Dec. 13	2.38
14	3.59	13	1.05	19	2.06	20	2.42
21	3.40	20	1.00	26	2.08	28	2.33
28	3.21						

Ch Pf 102 (\*1071, p. 117). Kenneth N. Sablin. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 10, T. 1 S., R. 7 W., about 200 feet south of State Highway M-78 and about 730 feet east of State Highway M-66.

## Ch Pf 102--Continued.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	4.98	Mar. 28	3.70	June 13	2.19	Oct. 4	3.22
16	4.95	Apr. 3	3.37	20	2.25	11	3.41
24	4.89	11	1.99	25	2.47	18	3.46
31	4.85	18	3.02	31	2.63	Nov. 1	3.52
Feb. 7	4.83	25	2.21	Aug. 6	3.10	8	3.63
14	4.78	May 2	1.95	13	3.23	15	3.54
21	4.64	9	2.37	28	3.28	29	3.80
28	4.55	16	2.40	Sept. 5	3.20	Dec. 6	3.76
Mar. 7	4.77	22	2.08	12	3.08	13	3.71
14	4.63	29	2.05	26	2.95	20	3.81
21	4.58	June 6	1.96				

Ch Pf 105 (\*1071, p. 118). Mrs. Harriet Rice, 1601 Capital Avenue, N.E. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 32, T. 1 S., R. 7 W., about 120 feet east of Capital Avenue, and 1,500 feet north of Bridge Street.

## Water level, in feet below land-surface datum, 1947

Jan. 3	13.83	Apr. 3	12.45	June 25	10.46	Oct. 4	12.82
10	13.87	11	9.83	July 16	11.02	11	12.84
16	13.77	18	9.98	23	11.15	18	12.96
24	13.61	25	9.83	30	11.39	25	13.03
31	13.49	May 2	10.11	Aug. 6	11.89	Nov. 1	12.92
Feb. 7	13.39	8	10.35	13	12.39	8	13.24
14	13.31	16	10.61	21	12.65	15	13.16
21	13.25	22	10.55	28	12.78	22	13.20
28	13.26	29	9.96	Sept. 5	12.59	29	13.20
Mar. 7	13.34	June 6	9.63	12	12.77	Dec. 6	13.17
14	13.02	13	9.93	19	12.84	13	13.16
21	12.86	20	10.25	26	12.91	20	12.90
28	12.68						

Ch Pf 108 (\*1071, p. 118). William Shanzenbaker. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 29, T. 1 S., R. 7 W., about 90 feet south of Milton Avenue and 40 feet west of Danklefsen Drive. Plugged with stones; measurements discontinued Apr. 25, 1947.

## Water level, in feet below land-surface datum, 1947

Jan. 3	9.05	Jan. 31	8.46	Feb. 28	8.43	Mar. 28	7.03
10	9.08	Feb. 7	8.49	Mar. 7	8.52	Apr. 3	6.52
16	8.94	14	8.39	14	8.13	11	3.54
24	8.67	21	8.38	21	7.67	18	4.38

Ch Pf 110 (\*1071, p. 118). Mrs. Ernestine H. Bean. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 31, T. 1 S., R. 7 W., about 120 feet east of North Avenue and 20 feet south of Alton Avenue.

## Water level, in feet below land-surface datum, 1947

Jan. 3	56.07	Mar. 28	56.00	June 25	52.92	Oct. 11	53.56
10	56.07	Apr. 11	55.42	July 9	52.59	18	53.65
16	56.10	18	54.62	16	52.53	25	53.71
24	56.12	25	54.32	23	52.47	Nov. 1	53.78
31	56.17	May 2	54.07	30	52.71	8	53.81
Feb. 7	56.15	9	54.57	Aug. 6	52.72	15	53.83
14	56.15	16	53.76	13	52.97	22	53.96
21	56.17	22	53.64	21	53.15	29	54.05
28	56.22	29	53.47	Sept. 12	53.33	Dec. 13	53.76
Mar. 7	56.24	June 13	52.89	26	53.44	20	54.14
21	56.16	20	52.57	Oct. 4	53.48	27	54.19

Cass County

## Mason Township

Cs Ma 1 (\*1023, p. 113; 1071, p. 119). Vernie Allen. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 16, T. 8 S., R. 14 W.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	53.85	Apr. 6	(a)	July 6	50.60	Oct. 5	49.57
12	53.87	13	53.90	13	50.40	12	49.55
19	53.89	20	53.67	20	50.31	19	49.56
25	54.09	27	53.45	27	50.13	26	49.56
Feb. 2	54.17	May 4	53.28	Aug. 4	50.07	Nov. 2	49.59
9	54.20	11	52.95	11	49.95	9	49.66
16	54.19	18	52.66	17	49.90	16	49.67
23	54.50	25	52.38	24	49.87	23	49.68
Mar. 3	54.50	June 1	52.10	31	49.68	30	49.83
10	55.03	8	51.88	Sept. 7	49.70	Dec. 7	49.80
17	54.50	15	51.61	14	49.76	14	49.81
24	54.53	22	51.17	21	49.61	21	49.85
30	(a)	28	50.86	28	49.52	28	49.88

a Dry.

Charlevoix County

(No measurements made in 1947.)

Cheboygan County

(No measurements made in 1947.)

Clinton County

## City of St. Johns

Ct SJ 1. City of St. Johns waterworks well A. 75 feet south of Gibbs Street and 96 feet east of Ottawa Street. Unused public-supply well, diameter 8 inches, reported depth 350 feet. Measuring point, top of 8-inch casing, 3.68 feet above land-surface datum. Measurements by Frank Burwell, superintendent.

## Water level, in feet below land-surface datum, 1947

Mar. 28	39.9	Apr. 2	38.9	Apr. 10	38.3	Apr. 30	a 43.7
31	38.8	2	a 43.8	21	36.7	May 14	a 43.5
31	a 50.5	3	a 47.7	23	38.8	17	a 49.2
Apr. 1	a 46.6	9	a 50.5	30	38.6		

a Nearby wells operating.

## Village of Elsie

Ct ES 1. Village of Elsie. About 70 feet north of northeast corner of bridge over Baker Creek and 230 feet east of Ovid Street. Unused test well, diameter 12 inches, measured depth 298 feet below land surface. Measuring point, top of recorder shelf, at land-surface datum. Automatic water-stage recorder installed Aug. 6, 1947.

## Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	33.47	34.82	33.14	26.10
2	.....	33.44	34.68	33.00	25.57
3	.....	33.70	35.00	32.41	25.37
4	.....	a 34.17	34.93	31.63	25.57
5	.....	34.13	35.16	31.83	25.18
6	a 33.74	33.63	35.19	31.76	25.26
7	33.77	34.30	35.34	31.28	25.49

a Wetted-tape measurement.

Ct ES 1--Continued.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Aug.	Sept.	Oct.	Nov.	Dec.
8	34.32	34.86	35.42	31.28	24.95
9	34.75	34.63	34.60	31.28	24.82
10	34.53	34.84	35.15	31.52	24.78
11	34.50	35.19	35.08	31.57	24.68
12	34.31	35.12	35.37	31.57	24.67
13	34.19	34.91	35.42	31.43	24.41
14	34.12	35.31	35.55	31.31	24.02
15	34.63	35.66	35.43	30.61	23.70
16	35.09	35.97	34.98	29.75	23.35
17	35.03	35.72	35.23	29.39	23.43
18	34.79	35.55	35.09	29.12	23.02
19	34.89	35.36	34.41	28.96	22.87
20	35.08	34.89	33.97	28.36	22.54
21	35.52	34.56	33.39	28.00	22.38
22	35.75	34.54	33.43	27.60	22.04
23	35.50	34.02	33.77	27.18	22.10
24	35.21	34.25	32.98	27.38	22.28
25	35.22	34.62	32.35	27.09	21.98
26	35.53	35.02	31.99	27.58	21.29
27	.....	35.20	32.46	27.46	21.21
28	a 34.28	35.32	32.47	27.27	21.87
29	34.08	35.13	32.46	26.92	22.36
30	33.70	34.99	32.52	26.67	22.56
31	33.08	.....	32.42	.....	23.07

a Wetted-tape measurement.

Ct ES 2. Village of Elsie. About 40 feet east of First Street and 120 feet south of Maple Street. Unused public-supply well, diameter 8 inches, measured depth 281 feet below land surface. Measuring point, top of recorder shelf, 0.65 foot above land-surface datum. Automatic water-stage recorder installed Aug. 6, 1947.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	68.79	70.75	69.08	58.55
2	.....	.....	70.13	68.42	58.74
3	.....	.....	70.82	66.55	59.50
4	.....	b 68.10	70.55	66.62	58.70
5	.....	69.84	71.25	67.17	58.70
6	a 69.97	68.83	70.82	66.82	60.47
7	a 70.08	70.15	71.43	66.38	58.25
8	70.60	.....	71.14	66.55	57.20
9	70.91	.....	71.60	66.50	58.22
10	70.42	.....	70.68	66.88	58.85
11	70.31	a 70.57	70.67	66.11	58.50
12	69.99	70.90	71.25	66.75	58.29
13	69.79	70.52	71.06	66.67	57.65
14	69.79	71.24	70.45	65.99	57.35
15	70.68	71.66	71.35	63.85	56.75
16	71.18	71.93	70.32	63.20	56.40
17	70.88	71.36	71.14	62.60	55.82
18	70.51	71.17	70.71	63.80	55.50
19	70.82	70.92	69.67	62.05	55.38
20	70.99	70.34	68.79	61.30	55.27
21	71.69	70.07	66.65	61.20	55.13
22	71.84	68.60	68.88	60.55	54.95
23	71.26	68.50	69.35	61.72	55.20
24	70.82	70.05	67.90	61.35	55.80
25	70.90	70.37	67.42	61.43	54.48
26	.....	71.20	66.97	62.20	53.12
27	.....	70.83	67.91	61.65	.....
28	a 67.79	71.41	67.13	60.95	.....
29	69.35	71.16	68.09	60.20	.....
30	68.81	69.11	68.13	60.10	.....
31	67.93	.....	67.87	.....	.....

a Wetted-tape measurement.

b Estimated.

Ct ES 3. Village of Elsie. About 60 feet east of Ovid Street and about 110 feet north of south corporate limits. Unused drilled well, diameter 12 inches, measured depth 45.3 feet below land surface. Measuring point, top of recorder shelf, 2.17 feet above land-surface datum. Automatic water-stage recorder installed Aug. 5, 1947.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	b 22.40	23.04	23.35
2	.....	.....	b 22.73	23.42	23.35
3	.....	.....	b 17.83	23.51	23.29
4	.....	a 23.69	17.83	23.69	23.15
5	a 23.54	23.78	22.38	23.61	22.81
6	b 22.85	23.98	18.13	23.54	22.59
7	a 23.60	23.96	22.55	23.68	22.61
8	23.72	23.91	19.03	23.58	22.35
9	23.65	24.08	22.59	23.54	22.50
10	23.66	24.07	22.83	23.71	22.58
11	23.63	23.91	19.33	23.70	22.56
12	23.65	23.80	20.83	23.60	22.60
13	23.59	23.91	20.33	a 23.45	22.66
14	23.72	23.98	19.83	23.46	22.64
15	23.85	24.06	22.19	23.59	22.64
16	23.82	23.95	20.33	23.25	22.61
17	23.79	23.97	22.55	23.34	22.82
18	23.83	23.99	22.64	23.38	22.78
19	24.06	23.89	21.03	.....	22.85
20	23.58	23.97	21.93	.....	22.93
21	b 24.00	24.00	19.13	.....	22.86
22	23.87	23.83	18.23	.....	22.91
23	23.87	.....	22.37	.....	22.83
24	23.93	.....	23.15	.....	22.91
25	24.01	a 18.75	23.30	a 23.13	22.91
26	23.85	22.53	18.33	23.15	22.82
27	b 23.68	b 18.83	16.53	23.24	22.92
28	23.58	b 22.19	22.81	23.19	22.95
29	23.71	b 21.83	22.71	23.24	23.04
30	.....	b 19.83	23.23	23.31	23.04
31	.....	.....	23.55	.....	23.04

a Wetted-tape measurement.

b Estimated.

#### DeWitt Township

Ct Dw 159 (\*1023, p. 114; 1071, p. 120). Michigan Department of Health, Quarantine Farm. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 32, T. 5 N., R. 2 W., about 220 feet west of DeWitt Road and 670 feet north of Sheridan Road.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	50.66	Mar. 29	52.69	June 25	50.90	Oct. 23	53.74
11	50.40	Apr. 12	51.87	July 14	51.17	30	53.01
18	50.56	19	51.52	28	50.52	Nov. 6	52.97
25	50.77	26	51.58	Aug. 8	50.65	13	53.15
Feb. 1	51.09	May 1	51.60	18	51.01	20	53.45
8	51.82	8	51.19	25	51.03	25	53.73
15	51.83	17	51.14	Sept. 10	50.46	Dec. 2	53.26
22	51.82	22	51.20	26	52.22	9	53.20
Mar. 1	51.90	29	51.27	Oct. 2	53.32	17	53.27
8	52.27	June 7	51.08	9	53.55	23	53.27
22	52.45	13	51.03	16	53.69	31	52.95

Crawford County

## Beaver Creek Township

Cr Bc 1 (\*840, pp. 133, 136; \*886, p. 268; 906, p. 59; 936, p. 61; 944, p. 61; \*986, p. 62; 1016, p. 98; 1023, p. 114; 1071, p. 120). SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 28, T. 25 N., R. 3 W. Erroneously reported as in sec. 29 in previous water-supply papers. Reported as well 8 prior to 1946.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	10.43	Apr. 18	9.52	July 14	9.72	Oct. 14	10.14
Feb. 14	10.57	May 15	9.35	Aug. 13	10.05	Nov. 14	10.24
Mar. 12	10.72	June 12	9.53	Sept. 16	10.12	Dec. 15	10.26

## Frederic Township

Cr Fr 1 (\*840, pp. 135, 141; 845, p. 154; 886, p. 269; 906, p. 60; 936, p. 62; 944, p. 63; \*986, p. 64; 1016, p. 99; 1023, p. 116; 1071, p. 121). NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 2, T. 27 N., R. 4 W. Reported as well 42 prior to 1946.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	5.65	Apr. 17	3.84	July 14	5.03	Oct. 15	5.30
Feb. 13	5.68	May 14	4.12	Aug. 13	5.44	Nov. 13	5.45
Mar. 12	5.72	June 13	4.53	Sept. 17	5.49	Dec. 15	5.26

Cr Fr 2 (\*886, p. 268; 906, p. 60; 936, p. 62; 944, p. 63; \*986, p. 64; 1016, p. 100; 1023, p. 117; 1071, p. 121). NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 14, T. 27 N., R. 4 W. Reported as well 51 prior to 1946.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	13.48	Apr. 17	11.86	July 14	12.15	Oct. 15	12.55
Feb. 13	13.56	May 14	11.63	Aug. 13	12.55	Nov. 13	12.83
Mar. 12	13.70	June 13	11.68	Sept. 17	12.73	Dec. 15	12.70

Cr Fr 3 (\*845, p. 155; 886, p. 269; 906, p. 60; 936, p. 62; 986, p. 65; 1016, p. 100; 1023, p. 117; 1071, p. 121). SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 14, T. 28 N., R. 4 W. Reported as well 50 prior to 1946. No measurements made in 1947.

## Grayling Township

Cr Gr 1 (\*840, pp. 134, 137; 845, p. 154; 886, p. 269; 906, p. 59; 936, p. 61; 944, p. 61; \*986, p. 63; 1016, p. 98; 1023, p. 115; 1071, p. 121). SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 12, T. 26 N., R. 2 W. Reported as well 9 prior to 1946.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	2.06	Apr. 17	1.90	July 14	1.97	Oct. 15	2.03
Feb. 13	2.05	May 14	1.94	Aug. 13	2.29	Nov. 13	1.92
Mar. 12	2.05	June 13	1.98	Sept. 17	2.04	Dec. 15	1.93

Cr Gr 2 (\*840, pp. 134, 137; 845, p. 154; 886, p. 269; 906, p. 59; 936, p. 61; 944, p. 61; \*986, p. 63; 1016, p. 98; 1023, p. 115; 1071, p. 121). NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 19, T. 26 N., R. 3 W. Reported as well 26 prior to 1946.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	10.78	Apr. 18	8.57	July 14	9.62	Oct. 14	10.23
Feb. 14	10.78	May 15	8.68	Aug. 13	10.18	Nov. 14	10.50
Mar. 12	10.81	June 12	9.05	Sept. 16	10.45	Dec. 15	10.38

Cr Gr 3 (\*840, pp. 134, 137; 845, p. 154; 886, p. 269; 906, p. 59; 936, p. 61; 944, p. 61; \*986, p. 63; 1016, p. 98; 1023, p. 115; 1071, p. 121). SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 12, T. 26 N., R. 3 W. Reported as well 28 prior to 1946.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	8.89	Apr. 17	7.58	July 14	7.53	Oct. 15	8.24
Feb. 13	9.00	May 14	6.85	Aug. 13	7.91	Nov. 13	8.43
Mar. 12	9.14	June 13	7.14	Sept. 17	8.26	Dec. 15	8.56



Cr Gr 4 (\*840, pp. 134, 138; 845, p. 154; 886, p. 269; 906, p. 59; 936, p. 62; 944, p. 62; \*986, p. 63; 1016, p. 98; 1023, p. 115; 1071, p. 121). NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 6, T. 26 N., R. 4 W. Reported as well 9 prior to 1946.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	3.87	Apr. 17	0.40	July 14	1.68	Oct. 15	2.79
Feb. 13	3.71	May 14	.19	Aug. 13	2.32	Nov. 13	3.25
Mar. 12	3.82	June 13	.39	Sept. 16	3.02	Dec. 15	2.63

a Above land-surface datum.

Cr Gr 5 (\*840, pp. 134, 138; 845, p. 154; 886, p. 269; 906, p. 59; 936, p. 62; 944, p. 62; \*986, p. 63; 1016, p. 98; 1023, p. 115; 1071, p. 122). NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 10, T. 26 N., R. 4 W. Reported as well 10 prior to 1946.

Water level, in feet below land-surface datum, 1947

Jan. 13	5.79	Apr. 17	3.28	July 14	5.09	Oct. 15	5.81
Feb. 13	5.58	May 14	3.21	Aug. 13	6.18	Nov. 13	5.92
Mar. 12	5.63	June 13	3.92	Sept. 16	6.40	Dec. 15	5.13

Cr Gr 6 (\*986, p. 63; 1016, p. 99; 1023, p. 115; 1071, p. 122). Michigan Department of Conservation Game Refuge Tile well. Formerly Grayling recorder well. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 10, T. 26 N., R. 4 W.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	7.30	7.06	7.12	6.64	4.93	4.77	5.89	6.90	7.83	7.10	7.44	6.96
2	7.31	7.06	7.13	6.63	4.59	4.84	5.93	6.93	7.85	7.11	7.45	6.96
3	7.31	7.06	7.13	6.57	4.35	4.92	5.98	6.97	7.87	7.11	7.46	6.96
4	7.31	7.05	7.13	6.46	4.37	4.99	6.03	7.00	7.89	7.11	7.46	6.91
5	7.31	7.05	7.14	6.32	4.26	5.05	6.08	7.04	7.91	7.12	7.47	6.86
6	7.32	7.06	7.15	5.66	4.28	5.09	6.13	7.08	7.93	7.12	7.48	6.84
7	7.32	7.06	7.15	5.17	4.39	5.12	6.18	7.12	7.96	7.13	7.48	6.84
8	7.32	7.06	7.16	5.12	4.54	5.16	6.23	7.16	7.98	7.14	7.48	6.80
9	7.32	7.07	7.16	5.13	4.65	5.20	6.28	7.21	8.00	7.15	7.48	6.67
10	7.33	7.07	7.16	4.98	4.73	5.23	6.33	7.25	8.03	7.16	7.48	6.63
11	7.33	7.08	7.17	4.54	4.79	5.27	6.37	7.30	8.05	7.17	7.47	6.62
12	7.33	7.09	7.17	4.21	4.85	5.30	6.38	7.34	8.07	7.18	7.47	6.62
13	7.33	7.10	7.17	4.39	4.89	5.33	6.39	7.39	8.09	7.19	7.46	6.63
14	7.33	7.11	7.13	4.43	4.64	5.23	6.42	7.44	7.97	7.20	7.46	6.63
15	7.23	7.11	7.12	4.43	4.65	5.23	6.45	7.48	7.94	7.22	7.46	6.64
16	7.18	7.10	7.11	4.48	4.69	5.24	6.47	7.53	7.93	7.23	7.44	6.64
17	7.17	7.09	7.10	4.55	4.74	5.26	6.50	7.58	7.92	7.25	7.44	6.65
18	7.16	7.08	7.10	4.61	4.79	5.29	6.53	7.62	7.92	7.26	7.45	6.66
19	7.16	7.09	7.11	4.66	4.84	5.35	6.56	7.67	7.92	7.27	7.44	6.67
20	7.15	7.09	7.11	4.75	4.89	5.40	6.58	7.71	7.92	7.29	7.43	6.69
21	7.15	7.09	7.10	4.81	4.94	5.45	6.60	7.76	7.92	7.30	7.42	6.70
22	7.15	7.09	7.10	4.87	4.88	5.49	6.62	7.71	7.45	7.31	7.39	6.72
23	7.15	7.09	7.09	4.92	4.90	5.54	6.64	7.70	7.18	7.33	7.13	6.73
24	7.16	7.09	7.01	4.69	4.92	5.59	6.66	7.70	7.11	7.34	7.11	6.74
25	7.15	7.10	6.78	4.69	4.95	5.63	6.69	7.71	7.10	7.36	6.97	6.76
26	7.15	7.10	6.68	4.74	4.84	5.68	6.72	7.71	7.10	7.38	6.96	6.77
27	7.12	7.11	6.66	4.80	4.85	5.72	6.75	7.73	7.10	7.39	6.96	6.79
28	7.10	7.11	6.65	4.85	4.88	5.75	6.78	7.74	7.10	7.40	6.95	6.80
29	7.08		6.63	4.90	4.90	5.80	6.81	7.76	7.11	7.41	6.95	6.82
30	7.06		6.63	4.95	4.68	5.85	6.84	7.78	7.10	7.42	6.95	6.83
31	7.05		6.64		4.71		6.87	7.80		7.43		6.85

a Estimated.

Cr Gr 7 (\*840, pp. 134, 138; 845, p. 154; 886, p. 269; 906, p. 59; 936, p. 62; 944, p. 62; \*986, p. 64; 1016, p. 99; 1023, p. 116; 1071, p. 122). NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 5, T. 26 N., R. 4 W. Reported as well 12 prior to 1946.

Cr Gr 7--Continued.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	6.26	Apr. 17	3.14	July 14	4.34	Oct. 15	5.35
Feb. 13	6.05	May 14	2.80	Aug. 13	5.13	Nov. 13	5.80
Mar. 12	6.22	June 13	3.40	Sept. 16	5.72	Dec. 15	5.21

## Lovells Township

Cr Lv 1 (\*840, pp. 134, 139-140; 845, p. 154; 886, p. 269; 906, p. 60; 936, p. 62; 944, p. 62; \*986, p. 64; 1016, p. 99; 1023, p. 116; 1071, p. 122). SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 20, T. 27 N., R. 1 W.

Water level, in feet below land-surface datum, 1947

Jan. 13	5.14	Apr. 17	3.11	July 14	3.07	Oct. 15	3.62
Feb. 13	5.32	May 14	2.53	Aug. 13	3.85	Nov. 13	4.00
Mar. 12	5.50	June 13	2.72	Sept. 17	3.85	Dec. 15	4.05

Cr Lv 2 (\*840, pp. 134, 139; 845, p. 154; 886, p. 269; 906, p. 60; 936, p. 62; 944, p. 62; \*986, p. 64; 1016, p. 99; 1023, p. 116; 1071, p. 123). NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 22, T. 27 N., R. 1 W.

Water level, in feet below land-surface datum, 1947

Jan. 13	5.98	Apr. 17	3.91	July 14	4.35	Oct. 15	4.53
Feb. 13	6.07	May 14	3.72	Aug. 13	4.79	Nov. 13	4.80
Mar. 12	6.19	June 13	3.96	Sept. 17	4.56	Dec. 15	4.90

Cr Lv 3 (\*840, pp. 134, 139; 845, p. 154; 886, p. 269; 906, p. 60; 936, p. 64; 944, p. 62; \*986, p. 64; 1016, p. 99; 1023, p. 116; 1071, p. 123). SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 4, T. 27 N., R. 1 W.

Water level, in feet below land-surface datum, 1947

Jan. 13	4.09	Apr. 17	2.86	July 14	3.72	Oct. 15	3.77
Feb. 13	4.13	May 14	3.14	Aug. 13	3.97	Nov. 13	3.84
Mar. 12	4.26	June 13	3.42	Sept. 17	3.83	Dec. 15	3.74

Cr Lv 4 (\*840, pp. 135, 141; 845, p. 154; 886, p. 269; 906, p. 60; 936, p. 62; 944, p. 63; \*986, p. 65; 1016, p. 100; 1023, p. 116; 1071, p. 123). NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 8, T. 28 N., R. 1 W.

Water level, in feet below land-surface datum, 1947

Jan. 13	8.07	Apr. 17	5.89	July 14	5.48	Oct. 15	5.95
Feb. 13	8.29	May 14	4.92	Aug. 13	6.08	Nov. 13	6.40
Mar. 12	8.47	June 13	4.97	Sept. 17	5.85	Dec. 15	6.65

Cr Lv 5 (\*840, pp. 135, 141; 845, p. 154; 886, p. 269; 906, p. 60; 936, p. 62; 944, p. 63; \*986, p. 65; 1016, p. 100; 1023, p. 117; 1071, p. 123). NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 20, T. 28 N., R. 1 W.

Water level, in feet below land-surface datum, 1947

Jan. 13	6.84	Apr. 17	4.63	July 14	4.79	Oct. 15	5.43
Feb. 13	6.90	May 14	3.95	Aug. 13	5.44	Nov. 13	5.73
Mar. 12	6.97	June 13	4.16	Sept. 17	5.38	Dec. 15	5.85

Cr Lv 6 (\*986, p. 65; 1016, p. 100; 1023, p. 117; 1071, p. 123). NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 30, T. 28 N., R. 2 W.

Water level, in feet below land-surface datum, 1947

Jan. 13	3.78	Apr. 17	1.33	July 14	2.11	Oct. 15	3.06
Feb. 13	3.68	May 14	1.45	Aug. 13	3.68	Nov. 13	3.34
Mar. 12	3.85	June 13	2.37	Sept. 17	3.29	Dec. 15	2.87

Eaton County

## City of Charlotte

Ea CH 1. City of Charlotte. About 250 feet east of U. S. Highway 27 and 320 feet south of Territorial Road. Unused dug well, diameter 20 feet, measured depth 25.0 feet below land surface. Measuring point, top of gallery floor, 0.5 foot above land-surface datum. Automatic water-stage recorder installed Mar. 5, 1947.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	11.51	11.25	10.64	13.16	12.79	13.85	13.63	14.37	15.22
2	.....	11.47	11.18	10.68	13.22	12.85	13.79	13.70	14.37	15.27
3	.....	11.24	10.89	10.60	13.27	12.91	13.77	13.76	14.37	15.31
4	.....	10.94	10.64	10.54	13.33	12.97	13.77	a13.81	14.38	15.35
5	a14.45	10.65	10.50	10.66	13.37	13.04	a13.79	13.81	14.38	15.39
6	14.47	9.93	10.48	a10.84	13.41	13.13	13.80	13.83	14.39	15.40
7	14.48	8.04	10.50	11.04	13.41	13.23	13.82	13.87	14.40	15.39
8	14.49	8.18	10.55	11.18	.....	13.31	13.83	13.90	14.42	15.36
9	14.50	8.58	10.62	11.26	.....	13.38	13.86	13.94	14.43	15.34
10	14.50	8.81	10.70	11.39	a13.01	13.43	13.90	13.98	14.45	15.33
11	14.52 a	9.04	10.79	11.54	12.89	13.46	13.91	14.01	14.47	15.32
12	14.52	9.29	10.87	11.69	12.78	13.54	13.85	14.04	14.48	15.33
13	a14.46	9.51	10.97	11.84	12.69	13.64	13.65	14.05	14.50	15.34
14	a14.38	9.73	11.02	11.94	12.60	13.73	13.50	14.08	14.54	15.37
15	14.08	9.97	10.88	11.97	12.55	13.81	13.41	14.11	14.55	15.38
16	13.79	10.22	10.82	12.01	12.50	13.87	13.39	14.14	14.56	15.41
17	13.60	10.47	10.81	12.11	12.46	13.91	13.40	14.16	14.57	15.43
18	13.48	10.69	10.80	12.19	12.43	13.93	13.46	14.19	14.59	15.46
19	a13.36	a10.86	10.72	12.28	12.42	14.00	13.52	14.20	14.60	15.49
20	a13.24	.....	10.70	12.37	12.40	14.05	13.59	14.20	14.63	15.51
21	a13.12	.....	10.70	12.46	12.38	14.04	13.64	14.23	14.66	15.52
22	.....	.....	10.60	12.54	12.38	a14.03	13.62	14.25	14.69	15.54
23	.....	.....	10.48	12.62	12.39	14.05	13.50	14.28	14.74	15.55
24	.....	.....	10.43	12.71	12.40	14.09	13.42	14.31	14.80	15.62
25	.....	a10.97	10.40	12.79	12.44	14.11	13.40	14.33	14.87	15.67
26	.....	11.01	10.38	12.86	12.48	14.15	13.41	14.35	14.93	15.68
27	.....	11.08	10.39	12.93	12.53	14.12	13.44	14.35	15.00	15.68
28	a11.62	11.18	10.43	13.00	12.55	14.11	13.49	14.36	a15.06	15.70
29	11.55	11.29	10.48	13.07	12.59	14.12	13.53	14.37	a15.12	15.71
30	11.50	11.27	10.53	13.11	12.65	14.07	13.58	14.37	15.18	15.74
31	11.50	.....	10.58	.....	12.72	13.95	.....	14.37	.....	15.74

a Estimated.

## Delta Township

Ea Dt 214 (\*1023, p. 117; \*1071, p. 123). John Schneeberger. SE $\frac{1}{4}$ N $\frac{1}{4}$  sec. 10, T. 4 N., R. 3 W., 160 feet west of Creitz Road and 0.5 mile north of Saginaw Street.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	33.62	Apr. 3	33.55	Aug. 8	32.29	Oct. 30	32.54
11	33.39	12	34.73	14	32.23	Nov. 6	32.60
18	33.73	26	34.16	18	32.44	13	32.84
25	33.60	29	32.28	25	32.41	20	32.81
Feb. 1	33.73	May 3	32.34	Sept. 10	32.40	25	32.45
8	33.60	10	32.67	26	32.62	Dec. 2	32.53
15	33.60	17	32.32	Oct. 2	32.37	9	32.84
22	33.61	24	32.33	8	32.46	17	32.54
Mar. 1	33.70	31	32.10	16	32.44	23	32.63
8	33.88	June 7	31.88	23	32.63	31	32.60
22	33.74	July 25	32.11				

Ea Dt 215 (\*1023, p. 118; 1071, p. 124). Bernard B. Bosworth. S<sub>4</sub>SW<sub>4</sub> sec. 9, T. 4 N., R. 3 W., about 90 feet north of Saginaw Street and about 500 feet east of Broadbent Road.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	15.86	Mar. 29	15.71	July 28	11.33	Oct. 30	14.05
11	15.79	Apr. 12	10.66	Aug. 8	11.83	Nov. 6	14.44
18	16.15	19	10.81	18	12.25	13	14.06
25	15.97	26	9.63	25	12.45	20	13.42
Feb. 1	15.94	May 1	10.06	Sept. 10	12.82	25	13.00
8	15.84	8	9.59	26	12.38	Dec. 2	12.85
15	15.68	17	9.83	Oct. 2	12.30	9	12.49
22	15.79	22	8.87	9	12.83	17	11.96
Mar. 1	15.81	June 7	7.65	16	13.00	23	12.01
8	15.85	13	7.96	23	13.53	31	12.09
22	14.85	25	8.49				

Ea Dt 217 (\*1023, p. 118; 1071, p. 124). F. B. Marsh. SE<sub>4</sub>SE<sub>4</sub> sec. 24, T. 4 N., R. 3 W., 250 feet northwest of U. S. Highway 27 and 300 feet southwest of Waverly Road along highway.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	18.37	Mar. 29	1.75	June 25	7.42	Oct. 23	18.38
11	18.24	Apr. 12	.48	July 14	13.21	30	18.37
18	18.42	19	.60	28	15.86	Nov. 6	18.43
25	18.42	26	1.69	Aug. 8	16.79	13	18.42
Feb. 1	18.20	May 1	2.25	18	17.47	20	18.50
8	18.33	8	2.00	25	17.75	25	18.46
15	18.45	15	3.15	Sept. 10	18.04	Dec. 2	18.56
22	18.54	22	1.75	26	15.87	9	18.45
Mar. 1	18.58	29	1.90	Oct. 2	18.23	17	18.50
8	18.60	June 7	2.85	9	18.28	23	18.53
14	2.35	12	3.25	16	18.37	31	18.57
22	3.90						

### Genesee County

#### City of Flint

Ge FL 351. City of Flint. About 200 feet south of Atherton Road and 10 feet west of Day Street. Pilot well, diameter 2 inches, measured depth 183.2 feet below land surface. Measuring point, top of 2-inch pipe, 1.0 foot above land-surface datum. Casing pulled and measurements discontinued May 17, 1947.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 7	8.12	Apr. 5	6.69	Apr. 18	6.48	May 10	6.24
17	7.72	12	6.81	28	6.36	17	6.16
28	7.43						

Ge FL 352. City of Flint. About 325 feet north of Atherton Road and 30 feet west of its intersection with Day Street. Pilot well, diameter 2 inches, measured depth 158.1 feet below land surface. Measuring point, top of 2-inch pipe, 1.6 feet above land-surface datum.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 7	4.50	July 25	2.87	Oct. 3	3.29	Nov. 17	3.34
17	4.02	Aug. 4	3.10	7	3.23	26	3.40
28	3.88	11	3.65	14	3.57	Dec. 1	3.43
Apr. 5	3.00	18	3.93	21	3.24	8	3.03
12	3.03	25	3.73	28	3.24	15	3.12
18	2.82	Sept. 1	3.65	Nov. 4	3.19	22	3.25
28	2.62	17	3.51	10	3.47	29	3.36
July 14	2.97	25	3.56				

Ge Fl 353 (\*1071, p. 124). City of Flint, community well. 23 feet south of Brandon Street and 25 feet west of Barney Avenue.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	55.74	Apr. 12	53.09	Aug. 11	55.37	Oct. 28	55.29
10	55.61	18	53.32	18	55.63	Nov. 4	54.92
18	55.52	28	53.40	25	54.75	10	55.02
24	55.20	May 10	53.84	Sept. 1	55.41	17	55.05
Feb. 14	55.23	17	53.58	17	55.29	26	54.89
22	55.19	24	53.41	25	54.99	Dec. 1	55.10
28	55.29	June 2	53.16	Oct. 3	54.98	15	54.55
Mar. 7	55.53	9	52.95	7	55.07	22	54.73
17	54.49	17	53.37	14	55.22	29	54.86
28	54.15	23	53.92	21	55.14		

Ge Fl 354. City of Flint. About 100 feet north of Atherton Road and 30 feet west of its intersection with Day Street. Pilot well, diameter 2 inches, measured depth 167.3 feet below land surface. Measuring point, top of 2-inch pipe, 1.3 feet above land-surface datum.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 7	3.85	Aug. 11	2.60	Oct. 14	2.82	Nov. 26	2.63
17	3.19	18	2.62	21	2.48	Dec. 1	2.66
28	3.05	25	2.98	28	2.47	8	2.27
Apr. 12	2.19	Sept. 1	2.99	Nov. 4	2.61	15	2.57
18	1.98	Oct. 3	2.59	10	2.65	22	2.49
28	1.85	7	2.47	17	2.56	29	2.63

Ge FL 491 (\*1071, p. 125). Consumers Power Co. 130 feet south of Sunnyside Avenue and 140 feet east of Franklin Avenue. Automatic water-stage recorder installed Jan. 27, 1947.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	27.08	27.43	27.67	26.66	.....	27.50	28.38	29.19	28.62	28.16	27.88
2	.....	27.10	27.38	27.54	26.57a	26.56	27.65	.....	29.01	28.50	28.10	27.90
3a	27.90	27.19	27.55	27.58	26.63	26.65	27.75	.....	29.09a	28.30	27.99	27.89
4	.....	27.01	27.67	27.59	26.60	26.75	27.71a	28.41	29.12	28.29	27.90	27.99
5	.....	26.97	27.72a	26.63	26.53	26.67	27.65	28.45	29.03	28.25	27.90	27.71
6	.....	26.90	27.66	26.63	.....	26.68	27.60	28.54	29.10	28.19	27.99	27.70
7	.....	26.83	27.54	26.47	.....	26.69	27.66	28.66	29.18	28.14	28.10	27.58
8	.....	26.94	27.46	26.53	.....	26.61	.....	28.91	29.27	28.11	28.01	27.18
9	.....	27.00	27.46	26.46	.....	26.64a	27.78	29.00	29.24	28.19	27.94	27.57
10a	27.90	27.21	27.58	26.68a	26.84	26.80	27.76	28.98	29.24	28.21	28.04	27.67
11	.....	27.32	27.54	26.51	26.80	26.91	27.74	29.01	29.27	28.17	27.80	27.61
12	.....	27.26	27.44	26.63	26.64	27.12	27.78	29.10	29.13	28.12	27.92	27.69
13	.....	27.20	27.26	26.90	26.59	27.15	27.84	29.16	29.16	28.03	27.97	27.71
14	.....	27.04	26.89	26.75	26.56	26.97	27.86	29.25	29.20	28.10	28.05	27.54
15	.....	26.87	27.25	26.81	26.74	26.93	27.84	29.38	29.03	28.16	27.86	27.45
16	.....	26.95	27.34	26.82	26.68	26.99	28.00	29.52	.....	28.16	27.62	27.27
17	.....	27.15	27.34	26.75	26.83a	26.94	28.13	29.49a	29.04	28.15	27.72	27.62
18a	27.98	27.05	27.51	26.77	26.64	26.94	28.15	29.48	29.05	28.17	27.77	27.66
19	.....	27.22	27.60	26.86	26.66	26.98	28.06	29.56	29.07	28.14	27.75	27.82
20	.....	27.18	27.58	26.73	26.60	27.04	28.11	29.60	29.15	28.19	27.79	27.87
21	.....	27.12	27.54	26.61	26.68	27.11	28.03	29.57	29.09	28.21	27.79	27.73
22	.....	27.12a	27.61	26.60	26.72	27.16	.....	29.61	28.95	28.18	27.67	27.73
23	.....	27.10	27.56	26.49	26.74	27.14	.....	29.62	29.01	28.04	27.59	27.74
24a	27.60	27.15	27.40	26.42	26.76	27.12	.....	29.57	28.87	28.14	27.44	27.96
25	.....	27.29	27.20	26.63	26.60	27.13a	28.09	29.55a	28.87	28.03	.....	27.90
26	.....	27.27	27.39	.....	26.51	27.20	28.06	29.54	28.85	28.03a	27.30	27.65
27a	27.28	27.22	27.54	.....	26.61	27.27	28.05	29.52	28.80	27.98	27.78	27.74
28	27.30	27.33	27.58a	26.68	26.63	27.28	28.14	29.35	28.68	27.89	27.72	27.71
29	27.29	.....	27.56	26.63	26.58	27.46	28.16	29.32	28.46	27.97	27.81	27.79
30	26.99	.....	27.74	26.49	26.68	27.55	28.20	29.23	28.64	27.97	27.93	27.65
31	26.85	.....	27.70	.....	26.68	.....	28.28	29.18	.....	28.10	.....	27.30

a Wetted-tape measurement.

Ge FL 500 (\*1071, p. 125). Consumers Power Co. About 2,500 feet east of Dort Highway and 540 feet north of Court Street.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	21.71	20.71	20.43	19.70	18.57	.....	20.08	20.95	22.30	21.13	20.60	19.50
2	21.64	20.67	20.33	19.59	18.48a	18.93	20.15	.....	22.19	21.02	20.53	19.51
3	21.50	20.63	20.31	19.57	18.55	18.95	20.19	.....	22.25a	20.90	20.42	19.52
4	21.55	20.48	20.38	19.58	18.76	19.01	20.21a	21.11	22.27	20.85	20.30	19.59
5	21.44	20.48	20.48a	19.17	18.71	19.01	20.23	21.13	22.26	20.80	20.19	19.40
6	21.41	20.42	20.55	.....	.....	19.06	20.23	21.17	22.29	20.75	20.16	19.45
7	21.39	20.37	20.56	.....	.....	19.09	20.26	21.24	22.31	20.72	20.14	19.47
8	21.39	20.41	20.54	.....	.....	19.06	.....	21.35	22.27	.....	20.02	19.30
9	21.43	20.41	20.52	.....	.....	19.08a	20.37	21.46	22.23	.....	20.00	19.46
10	21.45	20.43	20.50	.....a	18.76	19.09	20.36	21.57	22.25	.....	20.09	19.43
11	21.32	20.52	20.49	.....	18.74	19.15	20.38	21.66	22.24	.....	19.93	19.34
12	21.42	20.59	20.48a	18.91	18.67	19.30	20.42	21.75	22.10	.....	19.97	19.31
13	21.41	20.60	20.40	18.95	18.65	19.32	20.44	21.83	22.07	.....	19.97	19.33
14	21.31	20.53	20.18	18.83	18.66	19.26	20.49	21.90	22.05a	20.77	20.01	19.29
15	21.34	20.43	20.23	18.84	18.79	19.29	20.41	22.01	21.99	20.78	19.90	19.24
16	21.29	20.44	20.19	18.80	18.78	19.37	20.45	22.12	.....	20.81	19.73	19.12
17	21.28	20.42	20.13	18.77a	18.93a	19.42	20.50	22.18a	22.02	20.81	19.77	19.25
18	21.21	20.35	20.18	18.73	18.83	19.42	20.52	22.19	22.02	20.82	19.74	19.24
19	21.15	20.45	20.21	18.75	18.85	19.51	20.49	22.25	22.00	20.79	19.69	19.34
20	21.00	20.45	20.20	18.71	18.81	19.57	20.55	22.26	22.02	20.86	19.67	19.39
21	20.93	20.41	20.16	18.66	18.87	19.63	20.52	22.22	21.95	20.87	19.68	19.31
22	.....	20.38a	20.10	18.66	18.92	19.69	.....	22.24	21.73	20.88	19.62	19.30
23	.....	20.32	20.07	18.69	18.99	19.75	.....	22.25	21.70	20.87	19.56	19.25
24a	20.93	20.26	19.97	18.82	19.05	19.75	.....	22.25	21.61	20.95	19.46	19.33
25	21.00	20.32	.....	18.62	19.00	19.73a	20.74	22.24a	21.63	20.92	.....	19.31
26	20.96	20.36	.....	.....	18.97	19.76	20.73	22.24	21.60	20.89a	19.38	19.19
27	20.90	20.38	.....	.....	19.01	19.81	20.72	22.25	21.53	20.83	19.42	19.25
28	20.90	20.41a	19.72a	18.64	19.00	19.86	20.75	22.28	21.41	20.80	19.39	19.25
29	20.93	.....	19.66	18.59	18.96	19.95	20.79	22.34	21.19	20.84	19.45	19.28
30	20.72	.....	19.73	18.51	19.04	20.04	20.81	22.31	21.19	20.72	19.52	.....
31	20.58	.....	19.75	.....	19.07	.....	20.85	22.31	.....	20.64	.....	.....

a Wetted-tape measurement.

#### Burton Township

Ge Bu 1. Burton Theater. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 31, T. 7 N., R. 7 E., 170 feet west of Saginaw Street and 160 feet south of Boatfield Avenue. Air-conditioning well, diameter 6 inches, reported depth 200 feet below land surface. Measuring point, top of 6-inch casing, 6.70 feet below land-surface datum. Automatic water-stage recorder installed Jan. 13, 1947, and removed Apr. 15, 1947.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	a 17.68	Feb. 1	b 17.80	Feb. 20	19.39	Mar. 12	17.89
14	17.76	2	17.85	21	18.98	13	17.80
15	17.75	3	17.49	22	18.58	14	17.46
16	a 17.70	4	17.44	23	18.12	15	17.41
17	17.86	5	17.48	24	18.00	16	17.61
18	18.00	6	17.40	25	17.79	17	17.47
19	a 18.72	7	17.43	26	17.87	18	17.46
20	18.92	8	17.44	27	17.75	19	17.44
21	19.22	9	17.37	28	17.88	20	17.39
22	19.65	10	17.64	Mar. 1	a 18.12	21	17.31
23	19.43	11	17.48	2	18.30	22	a 17.48
24	18.71	12	17.59	4	18.35	23	17.26
25	18.60	13	17.52	5	18.37	24	17.15
26	18.16	14	17.45	6	18.21	25	16.93
27	18.18	15	17.31	7	a 17.95	26	17.05
28	17.96	16	17.34	8	17.91	27	17.38
29	18.16	17	17.57	9	17.86	28	17.11
30	17.99	18	17.30	10	17.85	29	17.12
31	17.68	19	17.99	11	17.90	30	17.26

a Wetted-tape measurement.

b Estimated.

## Ge Bu 1--Continued.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 31	17.37	Apr. 4	17.00	Apr. 8	16.86	Apr. 12	16.70
Apr. 1	17.08	5 a	16.50	9	16.66	13	16.78
2	16.99	6	16.63	10	17.05	14	16.79
3	17.04	7	16.77	11	16.82	15	16.64

a Wetted-tape measurement.

Ge Bu 7 (#1071, p. 125). City of Flint. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 31, T. 7 N., R. 7 E., 330 feet west of Saginaw Street and 30 feet south of Bristol Road. Casing pulled and measurements discontinued Apr. 1, 1947.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Jan. 3	a 11.84	Jan. 25	13.66	Feb. 16	12.04	Mar. 11	b 12.87
4	11.79	27	a 12.70	17	12.47	14	a 12.91
5	11.71	28	12.61	18	12.04	15	12.91
6	11.71	29	b 12.87	19	13.22	16	13.17
7	11.96	30	12.77	20	14.56	17	13.09
10	a 12.08	31	12.43	21	13.59	18	12.89
11	11.68	Feb. 1	12.52	22	13.57	19	b 12.91
12	12.04	2	12.67	23	b 12.87	20	b 12.87
13	11.89	3	12.24	24	13.10	21	12.75
14	12.20	4	12.17	26	13.07	22	a 12.37
15	a 11.87	5	12.50	27	a 12.45	23	12.17
16	a 12.38	6	12.12	28	13.37	24	b 12.04
17	12.76	7	12.29	Mar. 1	13.62	25	b 11.87
18	13.32	8	12.07	2	14.16	27	b 12.52
19	a 14.56	9	12.06	3	14.52	28	12.98
20	14.86	10	12.25	4	13.74	29	12.27
21	a 15.62	11	12.19	5	13.77	30	12.17
22	15.52	12	12.22	b 6	b 13.07	31	12.53
23	14.92	14	a 12.12	7	b 13.02	Apr. 1	11.97
24	14.52	15	12.08	8	12.89		

a Wetted-tape measurement.

b Estimated.

Ge Bu 8. City of Flint. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 30, T. 7 N., R. 7 E., 240 feet south of Hemphill Road and 260 feet east of Saginaw Street. Drilled test well, diameter 6 inches, reported depth 221 feet below land surface. Measuring point, top of recorder shelf, 2.0 feet above land-surface datum. Automatic water-stage recorder installed Jan. 27, 1947.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	28.34	26.05	24.90	.....	25.93	26.19	26.89	25.90	25.83	25.92
2	.....	.....	a28.55	26.49	24.74a	24.24	25.37	.....	26.00	26.00	25.81	25.93
3	.....	.....	a29.06	25.95	24.82	24.30	25.65	.....	26.17a	25.85	25.68	26.07
4	.....	.....	a27.58	26.35	24.82	24.46	26.40a	25.64	26.35	26.16	25.74	26.06
5	.....	.....	a27.73a	25.43	24.59	24.53	25.35	26.19	26.15	25.75	26.27	25.80
6	.....	.....	27.10	25.42	.....	24.11	26.40	26.19	26.13	26.15	26.13	25.80
7	.....	.....	27.07	25.35	.....	25.53	25.35	27.07	26.27	26.15	26.25	25.81
8	.....	.....	26.13	26.93	25.64	.....	24.50	.....	26.16	26.42	26.23	26.22
9	.....	.....	26.18	26.74	25.30	.....	25.15a	25.78	26.20	26.39	26.28	26.13
10	.....	.....	26.80	26.70	26.35a	24.74	25.05	26.13	25.98	26.50	26.47	26.19
11	.....	.....	26.24	27.10	25.46	24.90	25.10	26.05	26.70	26.43	25.85	25.96
12	.....	.....	26.46	26.72	25.82	25.28	26.35	25.58	26.34	26.21	26.10	26.03
13	a26.45	.....	26.33	27.16	25.36	24.95	25.62	26.55	26.86	26.15	27.34	26.07
14	.....	.....	26.26	26.37	25.85	24.90	25.33	26.02	27.40	26.25	26.85	26.10
15	.....	.....	26.13	26.35	25.52	24.93	25.50	25.50	27.25	26.03	26.38	26.05
16	.....	.....	26.13	26.64	25.37	24.80	24.63	25.56	26.87	.....	26.98	25.90
17	.....	.....	26.58	26.76	25.85	24.95a	24.54	25.56	27.62a	26.17	26.33	25.85
18	.....	.....	26.06	26.29	25.10	24.67	24.85	25.75	26.90	26.32	26.05	25.88
19	.....	.....	a28.51	26.43	25.63	24.87	25.32	25.32	27.25	26.15	25.89	25.88
20	.....	.....	a28.58	26.38	25.12	24.78	24.53	25.75	26.95	26.30	25.83	26.03
21	.....	.....	a27.27	26.20	25.17	24.76	24.91	25.73	26.86	26.17	25.92	25.91
22	.....	.....	b27.75a	26.44	25.15	24.70	24.70	.....	26.76	25.90	25.85	25.90
23	.....	.....	26.80	26.12	25.10	24.80	25.30	.....	26.60	25.99	25.67	25.85

a Wetted-tape measurement.

b Estimated.

## Ge Bu 8--Continued.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
24	.....	27.35	26.08	25.61	24.77	25.55	.....	26.70	25.97	25.85	25.70	25.70
25	.....	26.55	25.91	24.85	24.60	24.90a	25.19	26.65a	26.29	25.80	.....	25.71
26	.....	27.30	25.99	.....	24.58	25.44	25.40	26.89	25.90	25.88a	25.68	25.55
27a	26.73a	26.45	26.85	.....	24.53	25.25	25.30	26.45	26.75	25.76	25.83	25.59
28	.....	28.27	25.96a	25.12	24.60	25.42	25.29	26.30	25.91	25.70	25.78	25.62
29	.....	.....	26.65	24.91	24.41	25.60	25.29	26.60	26.62	25.77	25.84	25.70
30	.....	.....	26.22	24.71	24.45	25.55	25.50	26.86	26.25	26.62	25.90	25.69
31a	26.36	.....	26.80	.....	24.43	.....	25.34	26.30	.....	25.75	.....	25.68

a Wetted-tape measurement.

Ge Bu 11. City of Flint. Sk<sub>4</sub>Sk<sub>4</sub> sec. 31, T. 7 N., R. 7 E., 35 feet north of Maple Road and 1,900 feet west of Saginaw Street. Drilled test well, diameter 6 inches, reported depth 245 feet below land surface. Measuring point, top of recorder shelf, 1.1 feet above land-surface datum. Automatic water-stage recorder installed Jan. 16, 1947.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	.....	.....	25.37	.....	25.68	.....	26.82	26.47	25.99b	25.92
2	.....	.....	.....	26.34	25.21a	24.74	.....	.....	26.75	26.35	26.01	25.92
3	.....	26.92	.....	.....	25.24	.....	.....	.....	26.70a	26.27	25.97	25.91
4	.....	b26.82	.....	b26.31	25.27	.....	.....	a26.00	26.72b	26.28	25.92	26.00
5	.....	26.78	.....	a26.03	25.21	.....	b25.86	.....	26.68	26.27	25.93	25.87
6	.....	26.78	.....	.....	.....	.....	b25.85	.....	26.64	26.27	26.02	25.83
7	.....	a26.61a	27.23	.....	.....	.....	.....	.....	26.72	26.30	26.04	25.85
8	.....	.....	27.20	.....	.....	.....	.....	.....	26.80	26.29	26.01	25.66
9	.....	.....	27.13	.....	.....	a24.94a	25.87	.....	b26.85	26.32	26.04	25.82
10	.....	.....	27.13	.....	a25.39	.....	.....	.....	b26.86	26.32	26.15	25.88
11	.....	.....	27.12	26.05	25.35	.....	.....	a26.53	26.32	26.33	26.02	25.80
12	.....	.....	27.16a	26.00	25.30	.....	.....	.....	26.59	26.27	26.04	25.80
13	.....	.....	27.06	.....	25.31	.....	.....	.....	26.59	26.40	26.05	25.77
14	.....	a26.68	26.89	26.00	25.26	.....	a26.05	.....	26.59	26.61	26.11	25.71
15	.....	26.62	.....	25.97	25.26	.....	25.99	.....	26.60	26.54	26.03	25.65
16a	26.36	.....	.....	25.91	25.17	.....	25.91	.....	.....	26.51	25.92	25.53
17a	27.02	.....	26.77	25.83	25.24a	25.10	25.87	.....	a26.70	26.46	26.00	25.65
18a	27.04a	26.63	.....	25.80	25.15b	25.10	25.86a	27.18	26.70	26.40	26.01	25.60
19a	27.39a	26.99	.....	25.74	25.16	.....	25.80	27.20	26.66	26.20	25.99	25.68
20a	27.25a	27.41	26.75	25.76	25.12	.....	25.32b	27.20	26.63	26.19	25.99	25.74
21a	27.89a	27.38	26.69	25.73	25.09	.....	b25.72	27.19	.....	26.17	26.02	25.69
22a	28.04	27.35a	26.73	.....	.....	.....	.....	27.18	.....	.....	25.94	25.68
23	28.04	27.25	26.67	25.67	.....	a25.24	.....	27.12	.....	26.12	25.90	25.64
24	27.75	27.07	26.53	25.57a	25.15	.....	.....	27.09	.....	b26.20	25.81	25.72
25	.....	27.10	26.30	25.64b	25.07	.....	a25.75	27.11a	26.57	26.15	.....	25.72
26	27.46	27.04	26.35	.....	b25.01	.....	25.74	27.08	26.55	26.12a	25.76	25.59
27b	27.37a	26.97	26.49	.....	.....	.....	25.74	27.01	26.51	26.08	25.91	25.61
28	.....	a27.17	26.50a	25.60b	25.01	.....	25.73	26.94	26.55	26.03	25.78	25.59
29	27.28	.....	26.38	25.54b	24.90	.....	.....	26.97	26.37	26.01	25.82	25.65
30	27.11	.....	.....	25.36	.....	a25.70	.....	26.90	26.45	25.94	25.90	25.65
31a	26.92	.....	.....	.....	.....	.....	.....	26.86	.....	25.97	.....	25.63

a Wetted-tape measurement.

b Estimated.

Ge Bu 300 (\*1071, p. 126). William F. Brooks, Jr., 3505 Columbine Avenue. About 280 feet north of Bristol Road and 75 feet east of Columbine Avenue.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	4.09	Apr. 18	3.15	Aug. 4	4.33	Oct. 28	3.88
10	4.32	28	3.29	11	4.64	Nov. 4	3.26
18	4.64	May 10	3.52	18	4.94	10	3.53
24	3.55	17	2.95	25	4.40	17	3.17
Feb. 7	3.67	24	2.65	Sept. 1	4.47	26	3.41
14	3.92	June 2	2.34	17	3.60	Dec. 1	3.54
21	3.74	9	2.53	25	3.20	8	2.44
28	4.13	17	3.38	Oct. 3	3.68	15	3.32
Mar. 7	3.95	23	3.35	7	3.86	22	3.60
17	3.20	July 14	4.40	14	4.10	29	3.80
Apr. 12	2.72	25	3.60	21	3.68		



Ge Bu 301. City of Flint. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 30, T. 7 N., R. 7 E., 140 feet south of Hemphill Road and 260 feet east of Saginaw Street. Pilot well, diameter 2 inches, measured depth 153.4 feet below land surface. Measuring point, top of 2-inch pipe, 1.4 feet above land-surface datum.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 7	23.35	June 2	20.63	Aug. 18	23.17	Oct. 28	22.00
14	22.77	9	21.49	25	23.02	Nov. 4	22.22
22	22.78	17	20.94	Sept. 1	22.79	10	22.39
28	22.31	23	21.42	8	22.71	17	22.18
Apr. 5	21.83	30	22.33	17	22.56	26	22.07
12	22.14	July 9	22.17	25	22.67	Dec. 1	22.18
18	21.50	14	22.37	Oct. 3	22.24	8	21.96
28	21.50	25	21.57	7	22.30	15	21.82
May 10	21.13	Aug. 4	22.02	14	23.00	22	21.89
17	21.05	11	22.80	21	22.19	29	21.92
24	21.06						

Ge Bu 302 (#1071, p. 126). Clifford Chapel. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 31, T. 7 N., R. 7 E., about 1,200 feet south of Bristol Road. Measurements discontinued Oct. 28, 1947.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	15.89	Feb. 28	15.77	Aug. 11	8.38	Oct. 7	6.33
10	16.25	Mar. 7	15.60	18	9.85	14	6.64
18	15.98	17	14.10	Sept. 1	11.63	21	6.63
24	16.22	Aug. 4	6.54	Oct. 3	6.00	28	7.02
Feb. 21	17.41						

Ge Bu 303 (#1071, p. 126). Clifford Clute. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 29, T. 7 N., R. 7 E., about 360 feet east of Fern Avenue and 80 feet north of Bristol Road.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 24	2.73	May 17	1.57	Aug. 18	3.98	Nov. 4	2.45
Feb. 7	2.87	24	1.05	25	3.60	10	2.65
14	2.95	June 2	.72	Sept. 1	3.70	17	2.11
21	2.82	9	1.48	25	2.47	26	2.44
28	4.29	17	2.43	Oct. 3	2.84	Dec. 1	2.70
Mar. 7	2.95	23	3.08	7	3.13	8	1.26
17	2.23	July 14	3.50	14	3.31	15	2.36
Apr. 12	1.05	25	2.95	21	2.82	22	2.27
18	1.62	Aug. 4	3.54	28	3.13	29	2.33
28	2.25	11	3.82				
May 10	2.43						

Ge Bu 304 (#1071, p. 126). Burton Township. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 30, T. 7 N., R. 7 E., 70 feet east of Euston Street and 70 feet south of Carman Street. Measurements discontinued Dec. 27, 1946.

Ge Bu 492 (#1071, p. 126). Arthur W. Arndt. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 32, T. 7 N., R. 7 E., 710 feet west of Saginaw Street and 120 feet north of Maple Road.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	20.76	Apr. 18	19.53	Aug. 4	19.79	Oct. 21	19.97
10	20.52	28	19.27	11	20.36	28	19.82
19	20.48	May 10	19.18	18	20.98	Nov. 4	19.69
24	21.45	17	19.10	25	20.87	10	19.92
Feb. 7	20.36	24	19.02	Sept. 1	20.62	17	19.78
14	20.46	June 2	18.51	8	20.63	26	19.54
21	21.04	9	18.70	17	20.47	Dec. 1	19.65
28	20.77	17	18.90	25	20.32	8	19.49
Mar. 7	21.06	23	19.03	Oct. 3	20.04	15	19.38
22	20.35	July 9	19.70	7	20.04	22	19.39
28	20.95	14	19.84	14	20.35	29	19.40
Apr. 12	19.70	25	19.54				

## 136 WATER LEVELS AND ARTESIAN PRESSURE, 1947, NORTHEASTERN STATES

Ge Bu 495. City of Flint. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 30, T. 7 N., R. 7 E., about 650 feet south of Hemphill Road and 260 feet east of Saginaw Street. Pilot well, diameter 2 inches, measured depth 120.4 feet below land surface. Measuring point, top of 2-inch pipe, 1.0 foot above land-surface datum. Measurements discontinued May 10, 1947.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 7	26.55	Mar. 28	25.50	Apr. 12	25.36	Apr. 28	24.70
14	25.96	Apr. 5	25.02	18	24.72	May 10	24.34
22	25.98						

Grand Traverse County

(No measurements made in 1947.)

Gratiot County

## City of Alma

Gr AL 6 (\*1071, p. 128). City of Alma. About 365 feet east of Lincoln Avenue and 65 feet south of Elizabeth Street. Recorder removed May 29, 1947.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May
1	.....	24.87	25.58	25.60	21.25
2	.....	24.75	24.70	24.90	20.62
3	.....	24.25	23.85	25.23	21.85
4	a 23.85	25.37	24.85	25.06	.....
5	24.00	25.70	24.10	.....	.....
6	.....	25.45	25.62	.....	.....
7	.....	24.85	25.68	.....	.....
8	.....	24.46	25.22	.....	a 21.16
9	.....	24.93	24.15	.....	21.10
10	.....	24.10	23.17	25.45	20.43
11	a 25.62	25.46	24.56	25.18	20.41
12	25.65	25.60	25.18	25.03	20.15
13	25.65	26.31	24.64	.....	21.70
14	26.05	.....	22.85	.....	.....
15	26.05	a 25.60	23.45	.....	a 21.72
16	25.67	25.05	21.97	a 22.37	21.85
17	25.50	24.13	22.02	22.55	21.90
18	25.80	23.86	24.25	21.93	21.17
19	25.08	25.12	25.04	21.47	21.15
20	23.83	25.65	25.35	20.91	21.15
21	.....	25.51	24.30	b 21.48	20.60
22	.....	25.33	24.75	b 20.75	20.93
23	.....	24.31	24.55	b 21.52	20.47
24	.....	23.50	24.75	b 21.25	20.37
25	a 24.34	24.55	24.95	22.18	20.27
26	24.25	25.40	25.10	23.57	20.45
27	23.55	24.96	25.45	23.79	20.85
28	24.83	25.45	25.65	23.06	20.37
29	25.52		25.84	a 21.44	20.50
30	25.65		25.85	21.13	.....
31	24.95		25.65	.....	.....

a Wetted-tape measurement.

b Estimated.

Gr AL 23 (\*1071, p. 128). City of Alma. About 380 feet east of Lincoln Avenue and 65 feet south of Elizabeth Street.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 7	25.73	Sept. 18	26.34	Oct. 30	23.50	Dec. 2	21.55
14	26.24	25	25.16	Nov. 6	20.45	9	22.28
21	26.15	Oct. 2	25.94	13	28.17	16	24.37
28	24.86	9	23.56	18	23.97	24	a 56.10
Sept. 4	27.20	16	23.75	25	23.72	30	a 57.05
11	26.32	23	22.43				

a Nearby well operating.

Gr AL 42. Leonard Refineries. About 490 feet east of Elmwood Avenue and 480 feet south of Eastward Street extended. Drilled test well, diameter  $1\frac{1}{2}$  inches, measured depth 81.6 feet below land surface. Measuring point, top of  $1\frac{1}{4}$ -inch pipe, 2.4 feet above land-surface datum.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 8	31.90	June 6	28.03	Sept. 18	58.39	Nov. 13	52.24
14	29.57	10	27.85	25	57.15	18	56.70
22	31.01	23	27.66	Oct. 2	54.78	25	55.87
Apr. 23	27.78	July 22	28.82	9	56.53	Dec. 2	45.52
May 1	26.67	Aug. 7	42.47	16	58.23	9	51.96
15	31.58	14	48.45	23	57.09	16	58.76
22	27.79	21	50.46	30	53.70	24	59.47
30	27.15	28	52.48	Nov. 6	40.89	30	59.80

Gr AL 45. Leonard Refineries. About 700 feet east of Elmwood Avenue and 300 feet south of Eastward Street extended. Drilled test well, diameter  $1\frac{1}{2}$  inches, measured depth 83.6 feet below land surface. Measuring point, top of  $1\frac{1}{2}$ -inch pipe, 3.8 feet above land-surface datum.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 8	25.93	Aug. 7	38.34	Oct. 2	53.53	Nov. 18	54.33
15	26.33	14	43.67	9	54.57	25	53.74
22	26.04	21	45.66	16	56.20	Dec. 2	43.96
June 6	26.27	28	48.91	23	55.32	9	50.77
10	26.04	Sept. 4	60.22	30	51.71	16	56.88
23	25.72	11	57.00	Nov. 6	41.29	24	57.22
July 22	27.30	25	55.22	13	50.09	30	57.57

Gr AL 54. Leonard Refineries. About 260 feet east of Elmwood Avenue and 90 feet south of Eastward Street extended. Unused industrial well, diameter 8 inches, reported depth 132 feet below land surface. Measuring point, top of recorder shelf, 2.1 feet above land-surface datum. Automatic water-stage recorder installed Dec. 9, 1947.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Dec. 10	53.6	Dec. 16	56.2	Dec. 22	58.3	Dec. 27	57.2
11	56.0	17	56.5	23	56.7	28	57.4
12	55.7	18	56.8	24 a	57.4	29	57.0
13	56.5	19	57.3	25	58.1	30	57.4
14	56.9	20	58.0	26	57.3	31	58.2
15	57.3	21	59.0				

a Wetted-tape measurement.

Gr AL 95 (\*1071, p. 128). Robert McKee. 115 feet west of Gratiot Avenue and 220 feet south of Hastings Street.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	16.72	Mar. 28	14.41	Aug. 7	14.23	Oct. 23	14.81
11	16.60	Apr. 15	12.70	14	14.92	30	15.04
18	16.15	23	12.04	21	15.28	Nov. 6	13.99
25	16.23	May 1	11.88	28	15.17	13	14.53
Feb. 1	16.34	8	11.83	Sept. 4	15.64	18	14.62
8	16.17	15	12.39	11	15.50	25	14.32
15	16.13	22	11.35	18	15.77	Dec. 2	13.80
22	15.88	30	11.22	25	15.17	9	13.73
Mar. 1	15.75	June 6	11.48	Oct. 2	14.45	16	13.89
8	15.68	10	11.20	9	14.64	24	14.53
14	14.40	23	11.03	16	14.84	30	14.20
22	14.89	July 22	13.57				

Gr AL 96 (\*1071, p. 128). Clifton A. Mapes. 90 feet west of Gratiot Avenue and 200 feet south of Walnut Street. Measurements discontinued Sept. 4, 1947.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 8	31.25	Apr. 15	30.31	May 22	29.38	July 22	28.92
Mar. 14	31.07	May 8	26.69	June 6	29.06	Sept. 4	31.48
28	30.83	15	29.51	23	28.50		

## 138 WATER LEVELS AND ARTESIAN PRESSURE, 1947, NORTHEASTERN STATES

Gr AL 98 (\*1071, p. 128). Marshall Dallas. Superior Sign Shop. 190 feet south of Superior Street and 100 feet east of State Street.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	26.88	Mar. 8	27.80	June 23	23.97	Oct. 30	27.88
18	27.89	14	25.75	July 23	26.65	Nov. 6	21.14
25	26.96	22	28.01	Aug. 14	30.08	25	25.77
Feb. 1	28.30	28	28.79	21	29.49	Dec. 2	23.73
8	27.92	Apr. 23	24.64	Sept. 1	29.84	9	24.51
15	27.74	May 2	24.67	18	30.46	16	27.28
22	28.30	8	24.25	25	28.78	30	28.62
Mar. 1	26.74	22	24.90				

Gr AL 99. Emily Hercik. 85 feet west of Court Avenue and 140 feet north of Downie Street. Unused domestic well, diameter 2 inches, measured depth 54.1 feet below land surface. Measuring point, top of 2-inch coupling, 0.9 foot above land-surface datum.

Water level, in feet below land-surface datum, 1947

Apr. 17	19.50	June 10	26.88	Sept. 18	34.27	Nov. 13	27.19
18	17.65	23	26.37	25	32.85	18	29.65
23	26.05	July 23	28.62	Oct. 2	25.66	25	29.48
May 1	26.02	Aug. 7	31.33	9	27.32	Dec. 2	25.66
8	25.84	14	34.07	16	30.93	9	28.01
15	27.26	21	33.22	23	29.87	16	31.43
22	26.63	28	32.17	30	30.83	24	33.25
30	25.92	Sept. 4	34.47	Nov. 6	24.19	30	31.92
June 6	27.40	11	33.68				

Gr AL 103 (\*1071, p. 128). Vane Mills. 95 feet north of Chatterton Street and 115 feet east of Pine Avenue.

Water level, in feet below land-surface datum, 1947

Jan. 4	7.55	Mar. 22	6.36	June 23	6.57	Oct. 30	7.32
11	7.50	28	6.15	July 22	7.23	Nov. 6	7.25
18	7.15	Apr. 15	5.80	Aug. 28	8.86	13	7.07
25	6.84	23	5.88	Sept. 4	7.89	18	7.02
Feb. 1	6.86	May 1	5.94	11	7.43	25	7.00
8	7.04	8	6.00	18	7.68	Dec. 2	7.02
15	7.07	15	5.90	25	7.12	9	6.44
22	6.96	22	5.60	Oct. 2	7.17	16	6.72
Mar. 1	7.11	30	5.77	9	7.37	24	6.81
8	6.95	June 6	5.92	16	7.50	30	6.88
14	6.09	10	5.50	23	7.60		

Gr AL 106 (\*1071, p. 129). Harold J. Farwell. 90 feet west of Euclid Avenue and 140 feet north of Walnut Street.

Water level, in feet below land-surface datum, 1947

Jan. 4	17.17	Mar. 28	16.97	Aug. 7	18.57	Oct. 23	18.22
11	15.94	Apr. 23	14.88	14	19.17	30	18.57
18	14.56	May 1	14.76	21	24.51	Nov. 6	14.93
25	16.72	8	14.96	28	22.96	13	16.64
Feb. 1	17.47	15	15.43	Sept. 4	21.87	18	17.97
8	17.38	22	15.08	11	20.53	25	17.76
15	17.29	30	14.63	18	20.92	Dec. 2	15.67
22	17.66	June 6	15.22	25	20.11	9	16.82
Mar. 1	17.30	10	14.75	Oct. 2	16.38	16	18.68
8	17.61	23	14.62	9	16.99	24	20.25
14	13.27	July 23	16.07	16	18.63	30	19.50
22	16.80						

Gr AL 135. Thomas Thompson. About 350 feet north of Ely Street and 70 feet west of Wheeler Avenue. Unused domestic well, diameter 2 inches, measured depth 58.6 feet below land surface. Measuring point, top of 2-inch pipe, 0.2 foot above land-surface datum.

## Gr AL 135--Continued.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 23	30.55	July 22	32.78	Sept. 25	40.90	Nov. 18	38.16
May 8	30.44	Aug. 7	36.88	Oct. 2	39.16	25	37.96
15	31.85	14	39.54	9	35.96	Dec. 2	34.61
22	31.14	21	39.43	16	39.65	9	35.45
30	30.28	28	38.37	23	37.96	16	40.34
June 6	31.94	Sept. 4	43.42	30	38.59	24	40.83
10	31.77	11	42.17	Nov. 6	30.79	30	42.64
23	31.42	18	42.73	13	35.95		

Gr AL 148. Alvin F. Tennant. About 300 feet south of Michigan Avenue and 65 feet west of Hayes Avenue. Unused domestic well, diameter  $1\frac{1}{2}$  inches, measured depth 14.9 feet below land surface. Measuring point, top of  $1\frac{1}{2}$ -inch pipe, 0.4 foot below land-surface datum.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 29	12.29	June 10	11.60	Aug. 28	12.50	Nov. 18	12.45
Apr. 23	11.99	23	11.96	Sept. 18	12.51	25	12.40
May 8	11.86	July 22	12.29	25	12.33	Dec. 2	12.43
15	11.89	Aug. 7	12.58	Oct. 16	12.50	9	12.26
22	11.81	14	12.47	23	12.50	24	12.34
30	11.74	21	12.48	Nov. 6	12.51	30	12.38
June 6	11.71						

Gr AL 174. Donald Cramer. About 230 feet north of Ely Street and 80 feet west of Grover Avenue. Unused domestic well, diameter  $1\frac{1}{2}$  inches, measured depth 20.5 feet below land surface. Measuring point, top of pump base, 2.5 feet above land-surface datum.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 21	10.20	Sept. 25	10.14	Oct. 30	10.56	Dec. 2	10.61
28	10.33	Oct. 2	10.19	Nov. 6	10.60	9	10.07
Sept. 4	10.39	9	10.37	13	10.58	16	10.13
11	10.29	16	10.48	18	10.59	24	10.18
18	10.47	23	10.58	25	10.57	30	10.20

Gr AL 215. Ray Shaw. About 300 feet south of Marshall Street and 55 feet east of Allen Avenue. Unused domestic well, diameter  $1\frac{1}{2}$  inches, reported depth 20 feet. Measuring point, top of pump base, 6.4 feet above land-surface datum. Measurements discontinued Nov. 25, 1947.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 24	4.82	June 6	4.54	Oct. 16	5.44	Nov. 5	5.27
May 30	4.48						

Gr AL 218. Glen Urie. 160 feet west of Pleasant Avenue and 75 feet north of Rosedale Street. Unused domestic well, diameter  $1\frac{1}{2}$  inches, measured depth 18.8 feet below land surface. Measuring point, top of  $1\frac{1}{2}$ -inch pipe, 0.5 foot below land-surface datum. Measurements discontinued Aug. 28, 1947.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 28	14.26	May 22	12.44	June 10	11.73	Aug. 14	13.37
Apr. 23	13.23	30	12.10	23	12.12	21	13.50
May 8	12.74	June 6	11.88	July 22	12.87	28	13.59
15	12.63						

Gr AL 230 (\*1071, p. 129). Fred M. Taylor. 290 feet south of Eastward Street and 65 feet east of Linwood Avenue.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	8.48	Feb. 22	7.57	May 1	6.92	June 23	6.80
11	8.41	Mar. 1	8.19	8	6.58	July 22	7.28
18	8.18	8	8.03	15	6.37	Aug. 7	7.50
25	8.02	14	7.52	22	5.94	21	7.75
Feb. 1	7.98	22	7.49	30	6.08	28	7.60
8	8.12	28	7.34	June 6	6.16	Sept. 4	7.75
15	8.10	Apr. 23	6.89	10	5.79	25	7.18

## Gr AL 230--Continued.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 2	7.49	Oct. 30	7.89	Nov. 13	7.74	Nov. 25	7.75
9	7.66	Nov. 6	7.92	18	7.81	Dec. 2	7.81
16	7.78						

Gr AL 240. C. V. Peet. 100 feet south of Superior Street and 65 feet west of Pleasant Avenue. Unused domestic well, diameter  $1\frac{1}{4}$  inches, measured depth, 15.3 feet below land surface. Measuring point, top of  $1\frac{1}{4}$ -inch pipe, 0.2 foot above land-surface datum.

Water level, in feet below land-surface datum, 1947

Mar. 28	9.74	July 22	8.98	Sept. 18	9.73	Nov. 18	9.85
Apr. 23	8.88	Aug. 7	9.25	25	9.43	25	9.80
May 15	8.38	15	9.45	Oct. 2	9.47	Dec. 2	9.85
22	8.13	22	9.55	16	9.75	9	9.41
June 6	7.94	28	9.60	23	9.90	24	9.98
10	7.69	Sept. 11	9.64	30	9.85	30	9.50
23	8.34						

Gr AL 249. Mary J. Patterson. 140 feet east of Grove Avenue and 90 feet south of Eastward Street. Unused domestic well, diameter  $1\frac{1}{4}$  inches, measured depth 19.0 feet below land surface. Measuring point, top of  $1\frac{1}{4}$ -inch pipe, 1.7 feet above land-surface datum.

Water level, in feet below land-surface datum, 1947

Aug. 21	7.80	Sept. 25	7.93	Oct. 30	8.32	Dec. 2	8.39
28	7.87	Oct. 2	7.96	Nov. 6	8.38	9	8.26
Sept. 4	8.02	9	8.06	13	8.36	16	8.12
11	8.06	17	8.20	18	8.39	24	8.05
18	8.12	23	8.29	25	8.38	30	8.05

Gr AL 252. Elwin E. Peterson. 120 feet west of Wright Avenue and 50 feet north of Virginia Street. Unused domestic well, diameter  $1\frac{1}{4}$  inches, measured depth 17.7 feet below land surface. Measuring point, top of  $1\frac{1}{4}$ -inch pipe, 1.2 feet above land-surface datum.

Water level, in feet below land-surface datum, 1947

Mar. 24	12.28	June 23	10.15	Sept. 18	12.60	Nov. 13	12.79
Apr. 23	11.02	July 22	11.35	25	12.32	18	12.70
May 8	10.49	Aug. 7	11.93	Oct. 2	12.37	25	12.56
15	10.38	14	12.14	9	12.31	Dec. 2	12.67
22	9.90	21	12.37	16	12.61	9	12.25
30	9.62	28	12.46	23	12.66	16	12.32
June 6	8.96	Sept. 4	12.51	30	12.72	24	12.43
10	8.88	11	12.47	Nov. 6	12.76	30	12.61

Gr AL 253. John Hilsinger. 95 feet west of Moyer Avenue and 75 feet north of Marshall Street. Unused domestic well, diameter  $1\frac{1}{4}$  inches, measured depth 8.1 feet below land surface. Measuring point, top of  $1\frac{1}{4}$ -inch pipe, 1.8 feet above land-surface datum.

Water level, in feet below land-surface datum, 1947

Mar. 22	5.82	June 23	5.20	Sept. 18	5.80	Nov. 13	5.82
28	5.78	July 22	5.86	25	5.54	18	5.82
May 8	5.34	Aug. 7	5.90	Oct. 2	5.71	25	5.79
15	5.50	14	5.94	9	5.78	Dec. 2	5.80
22	5.20	21	5.94	16	5.82	9	5.41
30	5.33	28	5.82	23	5.82	16	5.68
June 6	5.35	Sept. 4	5.87	30	5.82	24	5.79
10	5.28	11	5.67	Nov. 6	5.83	30	5.80

Gr AL 254. Clifford H. Gould. 85 feet east of Pennsylvania Avenue and 45 feet north of Maryland Street. Unused domestic well, diameter  $1\frac{1}{4}$  inches, measured depth 17.2 feet below land surface. Measuring point, top of  $1\frac{1}{4}$ -inch tee, 1.8 feet below land-surface datum.

## Gr AL 254--Continued.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 29	8.69	June 23	6.66	Sept. 18	8.67	Nov. 13	9.08
Apr. 23	7.20	July 23	7.80	25	8.46	18	9.00
May 8	6.46	Aug. 7	8.08	Oct. 2	8.51	25	9.07
15	6.14	14	8.27	9	8.76	Dec. 2	9.11
22	5.34	21	8.43	16	8.74	9	8.86
30	5.29	28	8.45	23	8.91	16	8.86
June 6	5.37	Sept. 4	8.52	30	8.93	24	8.86
10	4.72	11	8.48	Nov. 6	9.00	30	8.88

Gr AL 255 (\*1071, p. 129). Mattie J. Patterson. 130 feet south of Hastings Street and 85 feet west of River Avenue.

Water level, in feet below land-surface datum, 1947

Jan. 4	23.20	Mar. 28	24.43	Aug. 7	25.98	Oct. 23	24.13
11	19.53	Apr. 15	22.62	14	28.02	30	25.02
18	19.29	23	21.58	21	27.34	Nov. 6	18.62
25	22.58	May 1	21.57	28	26.11	13	22.03
Feb. 1	24.46	8	20.72	Sept. 4	28.24	18	24.18
8	23.73	15	21.56	11	27.70	25	23.89
15	23.81	22	21.89	18	28.25	Dec. 2	20.62
22	24.46	30	21.13	25	26.84	9	22.73
Mar. 1	23.38	June 6	22.61	Oct. 2	23.22	16	25.63
8	23.75	10	22.24	9	22.08	24	27.21
14	16.23	23	20.77	16	25.23	30	26.09
22	23.99	July 22	23.48				

Gr AL 256. L. A. Halker. About 500 feet north of Michigan Avenue and 100 feet east of Bridge Avenue. Unused domestic well, diameter 2 inches, measured depth 25.8 feet below land surface. Measuring point, top of 2-inch pipe, 0.1 foot above land-surface datum.

Water level, in feet below land-surface datum, 1947

May 8	13.37	Aug. 7	16.22	Oct. 2	16.88	Nov. 18	16.88
15	13.50	14	17.55	9	16.76	25	17.10
22	13.47	20	18.47	16	17.45	Dec. 2	15.59
30	13.16	28	18.37	23	17.33	9	15.66
June 6	13.38	Sept. 4	19.73	30	17.40	16	17.52
10	13.23	11	19.05	Nov. 6	15.29	24	18.83
23	13.68	18	19.39	13	15.78	30	18.54
July 23	14.50	25	18.53				

Gr AL 258 (\*1071, p. 129). Joel R. McCarty. 100 feet west of Prospect Avenue and 50 feet north of north track of Ann Arbor Railroad.

Water level, in feet below land-surface datum, 1947

Jan. 4	22.12	Mar. 28	26.95	Aug. 7	24.96	Oct. 23	18.67
11	25.48	Apr. 15	24.15	14	25.57	30	20.57
18	25.00	23	18.58	21	26.06	Nov. 6	16.23
25	22.92	May 8	19.13	28	23.46	13	21.15
Feb. 1	23.90	15	19.93	Sept. 4	25.72	18	20.97
8	24.09	22	19.24	11	25.11	25	21.35
15	24.13	30	18.75	18	26.37	Dec. 2	17.77
22	23.97	June 6	20.87	25	24.00	9	18.77
Mar. 1	24.75	10	21.30	Oct. 2	24.16	16	21.99
8	24.05	23	19.71	9	21.15	24	25.14
14	20.49	July 22	21.90	16	22.26	30	25.09
22	23.79						

Gr AL 260 (\*1071, p. 129). R. V. Brown. About 300 feet south of Hastings Street and 115 feet west of River Avenue.

Water level, in feet below land-surface datum, 1947

Jan. 4	22.63	Feb. 8	22.93	Mar. 14	5.24	May 1	3.50
11	21.56	15	23.54	22	17.14	8	2.96
18	17.95	22	24.08	28	13.59	22	2.31
25	21.74	Mar. 1	22.47	Apr. 15	10.88	30	2.53
Feb. 1	24.15	8	19.79	23	17.00	June 6	2.84

Gr AL 260--Continued.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 10	2.42	Sept. 4	26.20	Oct. 16	24.61	Nov. 25	16.49
23	2.38	11	25.23	23	23.27	Dec. 2	15.07
July 22	16.93	18	26.67	30	24.32	9	2.79
Aug. 7	22.70	25	5.19	Nov. 6	16.88	16	6.07
14	25.11	Oct. 2	19.66	13	20.00	24	4.45
21	25.32	9	22.87	18	24.07	30	4.79
28	23.94						

The average daily withdrawal from the municipal wells in Alma in 1947 ranged from 1.44 million gallons in November to 2.38 million gallons in September and averaged 2.09 million gallons for the year.

## City of St. Louis

Gr ST 1. City of St. Louis. 290 feet north of North Street and 45 feet east of Mill Street. Unused public-supply well, diameter 8 inches, measured depth 195.6 feet below land surface. Measuring point, top of concrete pump base, 2.4 feet above land-surface datum. Automatic water-stage recorder installed Sept. 11, 1947.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Sept. 11	a 33.35	Oct. 19	25.0	Nov. 13	25.2	Dec. 8	23.7
12	26.3	20	23.9	14	25.7	8	25.2
13	26.3	21	25.1	14	24.9	10	25.6
14	26.1	22	25.4	16	24.2	11	31.9
15	25.6	23	27.2	18	a 33.06	12	31.9
16	26.1	24	25.8	19	25.2	13	33.2
17	25.9	25	25.9	20	25.3	14	32.8
18	25.6	26	24.7	21	25.3	15	26.6
19	25.8	27	24.3	22	25.4	16	25.8
20	25.7	28	25.2	23	25.3	17	25.7
21	24.9	29	25.3	24	23.6	18	25.5
25	a 34.48	30	26.2	25	25.1	19	25.3
26	26.7	31	25.6	26	25.1	20	25.2
27	26.5	Nov. 1	25.9	27	26.0	21	24.0
28	25.2	2	25.6	28	26.0	22	24.1
29	b 23.3	3	24.6	29	25.6	23	24.1
Oct. 2	a 33.82	4	24.6	30	24.8	24	a 29.60
3	25.6	5	25.1	Dec. 1	23.9	25	24.3
4	25.2	6	25.6	2	25.4	26	22.4
5	24.4	7	25.6	3	25.8	27	24.5
7	25.1	8	25.9	4	25.6	28	b 23.9
8	25.4	9	24.9	5	26.1	29	b 23.7
9	26.3	10	23.9	6	26.3	30	25.0
16	a 33.05	11	24.3	7	25.4	31	24.7
18	25.2	12	24.9				

a Wetted-tape measurement.

b Estimated.

## Village of Ithaca

Gr IH 1. Village of Ithaca. 180 feet north of Center Street and 45 feet east of Maple Street. Unused public-supply well, diameter 10 inches, reported depth 785 feet. Measuring point, top of 10-inch casing, 1.03 feet above land-surface datum. Automatic water-stage recorder installed May 19, 1947.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	80.11	.....	81.03	82.07	.....	80.84	80.50
2	.....	80.01	.....	81.07	.....	s80.92	80.85	80.44
3	.....	80.24	.....	82.07	.....	80.92	80.74	80.37
4	.....	80.33	.....	82.43	a81.54	80.89	80.59	80.63
5	.....	80.15	.....	.....	81.82	81.07	80.44	80.17
6	.....	80.00	.....	.....	81.97	80.97	80.47	80.25

a Wetted-tape measurement.



Gr IH 1--Continued.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
7	.....	.....	.....	a81.27	82.42	80.80	80.57	80.25
8	.....	.....	.....	81.87	.....	80.80	80.35	79.79
9	.....	.....	.....	81.87	.....	a80.89	80.39	80.38
10	.....	a80.32	80.92	82.22	.....	80.84	80.72	80.50
11	.....	.....	80.57	82.09	a81.67	80.77	80.42	80.37
12	.....	.....	b81.17	82.00	81.97	80.77	80.59	80.44
13	.....	.....	81.57	81.84	81.92	b81.12	80.67	80.40
14	.....	.....	b81.27	81.82	82.12	80.87	80.80	80.17
15	.....	.....	80.79	.....	81.97	80.77	80.62	80.04
16	.....	.....	b81.12	.....	.....	80.95	80.52	79.85
17	.....	.....	b81.27	.....	.....	80.70	80.62	80.22
18	.....	.....	b81.07	.....	a81.56	b81.02	80.69	80.12
19	a80.16	.....	.....	.....	82.07	b81.22	80.63	80.31
20	80.10	.....	b81.22	.....	b81.77	b81.22	80.66	80.46
21	80.16	.....	b81.22	a82.44	b81.92	80.88	80.20	80.27
22	80.20	.....	80.84	82.12	.....	80.82	80.49	80.26
23	80.24	.....	80.76	81.97	.....	a81.01	80.44	80.13
24	80.32	.....	80.77	82.37	.....	81.03	80.24	a80.34
25	80.11	.....	80.79	82.03	a81.34	80.86	80.10	80.22
26	80.04	.....	b81.07	81.62	.....	80.92	80.23	79.85
27	80.23	.....	b81.22	81.58	.....	b81.12	80.37	80.04
28	80.12	.....	81.32	a81.77	.....	80.68	80.29	80.01
29	79.91	.....	b81.27	81.97	.....	80.70	80.47	80.16
30	a80.22	a80.79	81.64	81.95	.....	80.69	80.66	80.10
31	80.24	.....	81.75	b82.47	.....	80.79	.....	80.03

a Wetted-tape measurement.

b Estimated.

## Village of Perrinton

Gr PE 1. Glenn Corson. 100 feet east of Robinson Street and 70 feet north of South Street. Unused domestic well, diameter 30 inches, measured depth 30.9 feet below land surface. Measuring point, top of recorder shelf, 0.25 foot above land-surface datum. Automatic water-stage recorder installed May 21, 1947.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	11.13	14.63	17.17	18.14	17.40	17.51	17.33
2	.....	11.24	14.76	17.24	18.10	17.35	17.56	17.29
3	.....	11.24	14.89	17.28	18.10	17.29	17.59	17.25
4	.....	11.27	a15.01	17.34	18.11	17.22	17.59	16.89
5	.....	11.29	a15.12	a17.39	18.10	17.16	17.57	16.65
6	.....	11.30	a15.23	a17.42	18.09	17.13	17.54	16.38
7	.....	11.35	a15.35	a17.45	18.09	17.10	17.55	16.22
8	.....	11.43	a15.47	17.49	18.11	17.08	17.51	15.49
9	.....	11.55	a15.58	17.56	18.13	17.09	17.50	14.85
10	.....	11.65	15.68	17.61	18.13	17.07	17.55	14.67
11	.....	11.76	15.76	17.67	18.12	17.07	17.58	14.57
12	.....	11.93	15.85	17.72	18.09	17.07	17.58	14.54
13	.....	12.09	15.93	17.77	18.05	17.06	17.61	14.55
14	.....	12.20	16.00	17.80	17.99	17.07	17.67	14.55
15	.....	12.32	16.06	17.83	17.92	17.08	17.69	14.52
16	.....	12.48	16.13	17.89	17.90	17.08	17.64	14.49
17	.....	12.63	16.20	17.95	17.90	17.08	17.63	14.54
18	.....	12.75	16.27	18.00	17.91	17.07	17.66	14.58
19	.....	12.91	16.32	18.05	17.90	17.06	17.68	14.68
20	.....	13.07	16.41	18.09	17.88	17.09	17.69	14.79
21	a9.20	13.23	16.48	18.10	17.83	17.13	17.69	14.84
22	9.49	13.39	16.58	18.15	17.73	17.17	17.67	14.90
23	9.76	13.56	16.67	18.19	17.74	17.20	17.60	14.94
24	10.03	13.71	16.74	18.21	17.68	17.30	17.54	a15.02
25	10.24	13.83	16.84	18.23	17.63	17.37	17.42	15.10
26	10.34	13.95	16.93	18.23	17.60	17.40	a17.36	15.10
27	10.44	14.07	16.97	18.25	17.58	17.42	17.34	15.13
28	10.56	14.19	17.00	18.28	17.55	17.41	17.30	15.16

a Estimated.

Gr PE 1--Continued.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
29	10.69	14.32	17.03	18.28	17.46	17.42	17.30	15.24
30	10.81	14.48	17.08	18.31	17.41	17.43	17.32	15.32
31	10.98		17.11	18.10		17.46		15.38

a Estimated.

## Pine River Township

Gr Pr 16. Thomas Thompson. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 28, T. 12 N., R. 3 W., 330 feet south of Ann Arbor Railroad crossing and 90 feet west of Smith Road. Unused domestic well, diameter 2 inches, measured depth 37.4 feet below land surface. Measuring point, top of 2-inch pipe, 2.0 feet above land-surface datum.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 23	23.57	Aug. 14	22.47	Oct. 2	22.67	Nov. 18	22.90
May 8	23.38	21	22.61	9	22.78	25	22.89
15	23.26	28	22.65	16	22.75	Dec. 2	22.92
22	22.90	Sept. 4	22.67	23	22.84	9	22.75
June 6	22.60	11	22.72	30	22.85	16	22.77
10	22.34	18	22.76	Nov. 6	22.88	24	23.03
July 23	22.41	25	22.68	13	22.92	30	22.73
Aug. 7	22.46						

## Ingham County

## City of Lansing

Ig LS 2 (\*886, pp. 270, 271; 936, pp. 63, 64; 944, p. 64; \*986, p. 67; 1016, p. 101; 1023, p. 119; 1071, p. 130). City of Lansing. At Cedar pumping station, near northeast corner of Cedar and Kalamazoo Streets. Measurements discontinued Jan. 9, 1947. Water level, in feet below land-surface datum, 1947: Jan. 9, 50.13.

Ig LS 3 (\*886, pp. 270, 271-272; 906, pp. 60, 61; 936, pp. 63, 64; 944, p. 64; \*986, p. 67; 1016, p. 101; \*1023, p. 120; 1071, p. 130). City of Lansing well 5. Northwest corner of crossing of Pennsylvania Avenue and Grand Trunk Western Railway tracks.

Water level, in feet below land-surface datum, 1947

Jan. 4	30.17	Mar. 22	33.80	June 13	26.39	Oct. 23	34.21
11	31.96	29	32.69	25	26.43	30	34.31
18	32.55	Apr. 12	24.96	July 14	27.62	Nov. 6	34.13
25	32.70	19	25.75	29	28.57	13	33.47
Feb. 1	32.81	26	25.28	Aug. 8	31.42	20	33.58
8	32.77	May 1	24.99	25	32.53	Dec. 4	32.77
15	33.00	8	25.75	Sept. 10	32.90	9	32.18
22	33.51	15	25.76	26	33.64	17	31.55
Mar. 1	33.85	22	26.26	Oct. 10	33.69	23	31.32
8	33.68	29	25.69	16	33.75	31	27.82
15	33.57	June 7	25.78				

Ig LS 4 (\*886, pp. 265, 270, 271; 906, pp. 60, 61; 936, pp. 63, 64; 944, p. 64; \*986, p. 67; 1016, p. 102; \*1023, p. 120; 1071, p. 130). City of Lansing well 9. About 500 feet east of Pennsylvania Avenue and just north of Grand Trunk Western Railway tracks.

Water level, in feet below land-surface datum, 1947

Jan. 4	37.50	Feb. 15	39.18	Mar. 29	38.65	May 15	31.73
11	37.82	22	38.61	Apr. 12	32.12	22	32.39
18	38.47	Mar. 1	39.85	19	32.19	29	31.57
25	38.74	8	39.57	26	31.82	June 7	31.37
Feb. 1	39.25	15	39.63	May 1	31.12	13	31.75
8	39.10	22	39.69	8	31.55	25	31.48

## Ig LS 4--Continued.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 14	33.23	Sept. 26	41.13	Nov. 6	41.51	Dec. 9	39.47
29	33.85	Oct. 10	40.87	13	41.10	17	38.68
Aug. 8	39.98	16	40.93	20	40.80	23	38.48
25	40.35	23	41.42	25	40.65	31	35.94
Sept. 10	40.60	30	41.59	Dec. 4	40.19		

Ig LS 5 (\*886, pp. 270, 271; 906, pp. 60, 61; 944, p. 64; \*986, p. 67; 1016, p. 102; 1023, p. 120; \*1071, p. 130). City of Lansing well 7. Just north of Red Cedar River, on approximate line of Mifflin Avenue.

Water level, in feet below land-surface datum, 1947

Jan. 9	33.52	May 6	36.35	July 11	43.11	Oct. 31	53.28
Mar. 11	35.35	16	38.35	Aug. 25	39.51	Dec. 8	41.95
Apr. 19	35.77	June 20	39.11				

Ig LS 6 (\*886, pp. 270, 271; 906, pp. 60-61; 936, pp. 63, 64; 944, p. 64; \*986, p. 67; 1016, p. 102; \*1023, p. 120; 1071, p. 131). City of Lansing. Logan well, at Lapeer and Logan Streets.

Water level, in feet below land-surface datum, 1947

Jan. 4	104.82	Mar. 29	109.36	June 25	112.96	Oct. 23	116.38
11	105.17	Apr. 12	108.47	July 14	113.09	30	116.43
25	106.58	19	109.73	28	112.88	Nov. 6	117.60
Feb. 1	106.47	26	109.84	Aug. 8	115.23	13	117.71
8	105.78	May 1	109.98	18	115.82	20	115.79
15	105.22	10	110.08	25	115.57	25	114.96
22	106.80	17	110.16	Sept. 10	115.95	Dec. 4	116.84
Mar. 1	108.07	24	110.51	26	117.03	9	116.77
8	108.35	30	112.11	Oct. 2	116.76	17	117.64
15	108.67	June 7	112.39	8	117.48	31	115.48
22	109.02	13	112.21	16	116.10		

Ig LS 7 (\*886, pp. 270, 271; 906, pp. 60, 61; 936, pp. 63, 64; 944, p. 64; \*986, p. 67; 1016, p. 102; \*1023, p. 121; 1071, p. 131). City of Lansing. Seymour well, about 500 feet east of Grand River Avenue and on north side of Josephine Street.

Water level, in feet below land-surface datum, 1947

Jan. 4	90.20	Mar. 29	111.13	Oct. 8	115.96	Nov. 13	118.56
Feb. 15	101.28	July 14	101.79	16	115.67	20	117.00
22	99.99	28	100.83	23	115.36	25	116.17
Mar. 1	106.85	Sept. 10	113.42	30	115.56	Dec. 17	114.16
8	105.38	26	117.14	Nov. 6	117.99	31	99.65
22	110.19	Oct. 2	116.01				

Ig LS 8 (\*886, pp. 265, 270, 271; 906, pp. 60, 61; 936, pp. 63, 64; 944, p. 65; \*986, p. 68; 1016, p. 102; \*1023, p. 122; \*1071, p. 131). City of Lansing. Townsend Street well, 110 feet east of Townsend Street and 14 feet north of Olds Avenue extended.

Water level, in feet below land-surface datum, 1947

Jan. 4	35.48	Mar. 22	36.69	June 13	34.46	Oct. 16	37.73
11	35.61	Apr. 12	37.35	25	35.59	30	37.83
18	36.00	19	33.56	July 14	35.71	Nov. 6	38.95
25	35.70	26	33.95	28	35.93	13	39.13
Feb. 1	35.63	May 1	33.99	Aug. 8	37.71	20	36.11
8	35.63	8	33.75	18	37.87	25	35.24
15	35.77	15	33.55	25	38.04	Dec. 4	35.76
22	35.90	22	33.69	Sept. 10	38.25	9	35.05
Mar. 1	36.48	30	33.70	26	37.42	17	35.74
8	36.67	June 7	33.60	Oct. 8	37.89	31	33.18
15	36.47						

Ig LS 9 (\*1023, p. 123; 1071, p. 132). City of Lansing. 280 feet west of Cedar Street and 250 feet south of Jay Street.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	56.23b	56.77	.....	.....	b47.15	53.86	55.42	55.15	54.61	56.95	54.79
2	.....	56.07	55.56	.....	.....	.....	54.25b	55.45b	55.30	54.68	56.75	55.27
3	.....	55.88	54.98	.....	b50.05	.....	54.29	.....	.....	54.78	56.25b	55.60
4	a55.42	55.78	55.85	.....	49.18	.....	54.23	.....	.....	55.09	56.33	56.08
5	.....	55.90	56.05a	53.77	48.29	.....	53.23	.....	.....	55.55	56.48	55.87
6	.....	56.02	56.33	53.62	48.34	.....	51.40	.....	.....	53.83	56.89	56.31
7	.....	56.19	56.60	52.90	48.04a	47.85	50.70	.....	.....	55.03	57.39	56.18
8	.....	56.38	56.75	51.65	48.05	47.96b	52.25a	55.51	.....	55.68	57.37	55.23
9	.....	56.27	56.88	50.76	48.05	47.93	.....	56.58	.....	55.50	57.27	55.25
10	.....	55.04	.....	50.22	48.03	48.05	.....	56.00a	57.28	55.75	56.03	55.61
11	a55.23	55.67	.....	49.44	47.85	48.37	.....	55.63	57.45	55.58	56.40	55.85
12	54.72b	55.82	.....	49.17	47.44	48.90	.....	56.23	57.63	55.98	56.88	56.17
13	54.28b	55.96	.....	48.96	47.29	48.33	.....	56.22	57.74	55.93	57.03	56.32
14	54.73b	56.09	.....	.....	47.57	48.20	.....	56.50	57.84	56.00	57.21	56.04
15	55.26b	56.23a	57.66	.....	47.70	47.82	.....	56.80	56.60	56.11	57.02	55.21
16	55.35	55.93	57.58	.....	47.57	47.20	.....	.....	56.14	56.56	56.84	55.53
17	55.61	54.81	57.41	.....	47.85	48.78	.....	.....	56.36	56.96	55.60b	55.95
18	55.62	55.03	57.48	.....	47.45	49.86a	54.72a	55.84	.....	57.30	56.08	56.08
19	55.62	55.52	57.50a	47.50	47.46	50.97	55.27	57.23	.....	57.44	56.44	56.29
20	55.41	55.67	57.46	.....	47.32	51.60	54.30	57.49	.....	57.22	56.69	56.36
21	55.88	55.78	57.52	.....	47.21b	52.10	52.39	57.52	.....	56.48	56.86	56.13
22	56.03	55.91	57.65	.....	47.56	.....	51.85	57.56	.....	56.77	56.86	55.81
23	55.91	55.73	57.41	.....	47.60	.....	51.70	57.61	.....	57.37	56.80	55.97
24	55.92	55.40	57.35	.....	47.74a	52.67	51.85	57.66	.....	57.09	56.03	56.26
25	56.17	55.81	57.38	.....	47.41	52.97	51.85	57.43	.....	56.73	56.13	56.22
26	55.90	56.17	56.71a	49.85	47.51	53.43	53.19	57.76a	55.49	57.01	56.46	54.72
27	55.84	56.35b	56.60	.....	47.61	53.75	53.91	57.79	55.46	56.02	56.70	55.05
28	55.65	56.67	.....	.....	47.33	54.04	54.23	57.72	55.22	56.71	55.15	53.75
29	55.75	.....	a57.10	.....	47.16	54.06	54.78	57.84	53.08	56.93	55.81	53.50
30	55.72	.....	57.41	.....	47.58	53.77	55.01	57.79	54.31	56.87	55.97	53.94
31	55.95	.....	.....	.....	47.58	.....	55.24	57.74	.....	56.93	.....	b54.40

a Wetted-tape measurement.

b Estimated.

Ig LS 51 (\*1071, p. 133). General Motors Corporation, Oldsmobile Drop Forge. 65 feet west of Verlinden Avenue and 30 feet south of Osborn Road.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	.....	a107.66	a109.50	.....	a110.72	.....
2	.....	.....	.....	.....	.....	.....
3	106.6	.....	.....	.....	.....	.....
4	106.9	.....	.....	.....	.....	.....
5	.....	.....	.....	.....	.....	.....
6	.....	.....	.....	.....	.....	.....
7	.....	.....	.....	.....	.....	.....
8	.....	a107.30	a109.06	.....	a111.28	a110.97
9	.....	107.3	.....	.....	.....	110.3
10	.....	107.0	.....	.....	.....	109.7
11	a105.81	107.4	.....	.....	.....	109.5
12	.....	.....	.....	a108.90	.....	.....
13	.....	.....	.....	.....	.....	a110.14
14	.....	.....	.....	.....	a109.07	109.8
15	.....	a107.71	a109.11	.....	.....	109.8
16	.....	107.8	108.9	.....	.....	.....
17	.....	107.4	b108.2	.....	a109.39	.....
18	a107.85	107.8	.....	.....	109.1	.....
19	.....	.....	.....	a111.62	.....	.....
20	.....	.....	.....	.....	.....	.....
21	.....	.....	.....	.....	.....	.....
22	.....	a107.90	a109.51	.....	.....	.....
23	.....	.....	.....	.....	.....	.....
24	.....	.....	.....	.....	a110.09	a111.63
25	a108.69	.....	.....	.....	.....	111.3
26	.....	.....	.....	a109.37	.....	111.6

a Wetted-tape measurement.

b Estimated.

Ig LS 51--Continued.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June
27	.....	.....	.....	.....	.....	112.6
28	.....	.....	.....	.....	.....	.....
29	.....	.....	a110.55	.....	.....	.....
30	.....	.....	.....	.....	.....	a111.38
31	.....	.....	.....	.....	a110.67	.....

a Wetted-tape measurement.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	112.4	.....	.....	.....	115.3	112.7
2	112.4	.....	.....	a113.92	113.9	112.7
3	.....	.....	.....	114.2	112.9	114.9
4	.....	.....	.....	.....	113.2	113.6
5	.....	.....	.....	.....	114.3	112.9
6	.....	.....	.....	.....	116.8	113.3
7	.....	.....	.....	.....	113.9	114.7
8	.....	a112.44	.....	a117.69	114.3	112.9
9	.....	113.2	.....	117.5	113.0	113.6
10	.....	b112.1	a113.68	b117.3	112.8	112.7
11	.....	.....	115.7	.....	113.1	112.6
12	.....	.....	112.8	.....	113.2	112.7
13	.....	.....	.....	.....	113.7	113.2
14	.....	.....	.....	.....	113.8	112.6
15	.....	.....	.....	.....	113.6	112.6
16	.....	.....	.....	a113.07	112.5	116.3
17	.....	.....	.....	113.1	112.2	a115.98
18	a111.80	a112.81	.....	b113.8	112.7	116.7
19	112.5	113.1	.....	.....	112.9	117.3
20	b111.3	b113.4	.....	.....	115.0	118.3
21	.....	.....	.....	.....	114.9	114.3
22	.....	.....	.....	.....	115.5	112.8
23	.....	.....	.....	a115.41	115.1	115.9
24	.....	.....	.....	115.4	112.6	116.9
25	.....	a113.06	.....	b116.0	114.0	114.9
26	109.7	b115.9	a115.24	.....	116.5	111.3
27	109.6	.....	117.1	.....	115.7	111.1
28	109.9	.....	.....	.....	113.2	110.6
29	.....	.....	.....	.....	115.2	110.4
30	.....	.....	.....	a115.05	115.2	112.3
31	.....	.....	.....	115.9	.....	b115.9

a Wetted-tape measurement.

b Estimated.

Ig LS 60 (\*1023, p. 124; 1071, p. 133). Consumers Power Co. gas plant. About 480 feet west of Chestnut Street and 15 feet south of Grand River.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	87.20	Mar. 29	103.53	June 25	103.07	Oct. 23	106.09
11	91.12	Apr. 12	102.89	July 14	98.51	30	108.27
13	93.68	19	100.47	28	96.11	Nov. 6	109.77
25	93.46	26	103.21	Aug. 8	105.95	13	109.70
Feb. 1	93.12	May 1	103.12	18	106.00	20	109.59
8	94.15	10	100.73	25	104.04	25	105.70
15	94.03	17	100.92	Sept. 10	104.57	Dec. 2	102.94
22	94.62	24	101.92	26	110.50	9	103.57
Mar. 1	98.76	29	103.98	Oct. 2	109.59	17	104.55
8	99.60	June 7	102.24	9	110.19	23	103.34
15	100.17	13	104.14	16	107.96	31	98.79
22	100.60						

Ig LS 75 (\*1023, p. 124; 1071, p. 134). Motor Wheel Corporation. On northwest corner of Saginaw and Summit Streets. No measurements made in 1947.

Ig LS 76 (\*1023, p. 124; 1071, p. 134). Lansing Co. About 230 feet west of Cedar Street and 255 feet south of Saginaw Street.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	102.05	Feb. 22	103.57	May 17	102.27	Nov. 6	a106
11	102.86	Mar. 1	103.98	June 23	94.72	13	105.83
18	104.09	8	103.54	July 14	93.43	25	a104
25	102.42	22	103.82	Sept. 26	103.76	Dec. 9	103.33
Feb. 2	103.56	29	103.59	Oct. 10	100.12	23	102.49
8	100.91	May 8	102.01	30	102.48	31	102.41
15	104.21						

a Estimated.

Ig LS 110 (\*1023, p. 125; 1071, p. 135). City of Lansing. About 150 feet west of Cedar Street and 50 feet south of Jay Street.

Water level, in feet below land-surface datum, 1947

Jan. 4	63.82	Mar. 29	69.17	June 23	59.39	Oct. 23	67.74
11	65.62	Apr. 5	62.07	July 18	62.47	30	66.72
25	68.79	12	59.91	28	62.31	Nov. 6	67.60
Feb. 1	69.07	19	53.62	Aug. 8	64.88	13	67.86
8	69.33	26	57.03	18	65.41	20	66.10
15	67.67	May 3	56.42	25	66.63	25	65.60
22	62.56	10	55.21	Sept. 10	66.74	Dec. 4	66.18
Mar. 1	64.81	17	55.89	26	64.75	9	65.15
8	65.67	24	54.16	Oct. 2	63.72	17	66.27
15	64.76	June 7	53.86	9	64.71	23	66.32
22	71.03	13	54.07	16	64.75	31	64.83

Ig LS 153 (\*1023, p. 125; 1071, p. 135). City of Lansing. About 120 feet north of Main Street and 80 feet east of Bensch Street. Measurements discontinued May 22, 1947.

Water level, in feet below land-surface datum, 1947

Jan. 4	a79	Feb. 22	a86	Mar. 8	a85	May 1	78.15
Feb. 8	a85	Mar. 1	a87	Apr. 26	a83	22	78.37
15	a83						

a Air-line gage measurement.

Ig LS 157 (\*1023, p. 125; 1071, p. 135). City of Lansing. 145 feet north of Main Street and 36 feet west of Fairview Street.

Water level, in feet below land-surface datum, 1947

Jan. 4	53.60	Apr. 26	59.34	June 25	60.51	Nov. 6	71.96
Feb. 15	54.61	May 1	58.70	July 14	63.29	13	69.91
22	56.91	8	59.10	Aug. 18	64.40	20	67.50
Mar. 8	55.99	17	59.28	Sept. 10	66.31	25	66.70
22	48.95	22	58.89	26	61.54	Dec. 4	66.06
29	49.98	29	58.23	Oct. 16	73.70	17	63.40
Apr. 12	58.44	June 7	58.58	23	74.17	23	63.09
19	60.11	13	60.72	30	72.38	31	60.18

Ig LS 182 (\*1023, p. 126; 1071, p. 136). Atlas Drop Forge Co. Well 2 in southwest quadrant of intersection of Davis Avenue extended and Mt. Hope Avenue. No measurements made in 1947.

Ig LS 183 (\*1023, p. 126; 1071, p. 136). Atlas Drop Forge Co. Well 1 on south side of Mt. Hope Avenue between Todd and Davis Avenues extended.

Water level, in feet below land-surface datum, 1947

Oct. 30	34.27	Nov. 13	a 62.60	Nov. 25	32.33	Dec. 9	32.70
Nov. 6	33.23	20	a 61.40	Dec. 2	32.13	31	34.47

a Well operating.

The average daily withdrawal of ground water from municipal-supply wells in Lansing, during 1947, ranged from 13.4 million gallons in January to 18.7 million gallons in August and averaged 15.0 million gallons for the year.

## Lansing Township

Ig Ls 10 (\*1023, p. 123; \*1071, p. 136). Glen A. Ballans. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 18, T. 4 N., R. 2 W., 86 feet south of Washtenaw Street and 70 feet east of Hungerford Street.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	85.93	May 29	80.00	Aug. 25	78.92	Nov. 6	79.34
11	84.85	June 7	79.87	Sept. 10	79.65	13	79.40
Apr. 12	84.80	13	80.30	25	79.26	20	79.12
19	88.43	25	79.83	Oct. 2	78.86	Dec. 2	78.69
26	85.04	July 14	78.27	9	79.12	9	77.80
May 8	78.78	28	78.33	16	79.48	17	77.59
17	78.97	Aug. 8	79.19	23	79.38	23	77.46
22	79.52	18	79.62	30	79.33	31	77.57

Ig Ls 30 (\*1023, p. 123; \*1071, p. 136). George R. Byrnes. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 6, T. 4 N., R. 2 W., about 0.6 mile southwest of U. S. Highway 16 and 105 feet southeast of Delta River Drive. Measurements discontinued May 22, 1947.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	47.86	Feb. 1	48.39	Mar. 29	48.90	May 1	48.90
11	47.94	15	48.50	Apr. 12	47.84	8	48.00
18	48.19	22	48.61	19	48.58	17	48.15
25	48.28	Mar. 22	48.90	26	48.17	22	48.95

Ig Ls 35 (\*1023, p. 124; \*1071, p. 137). Tank Bros. Dairy. SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 7, T. 4 N., R. 2 W., about 0.5 mile east of Waverly Road and 280 feet north of Willow Street.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	62.79	Mar. 29	63.05	July 14	63.59	Oct. 30	64.22
11	62.52	Apr. 12	63.42	28	63.41	Nov. 6	64.35
18	62.94	19	63.79	Aug. 8	63.71	13	64.50
25	62.98	26	63.41	18	63.86	20	64.61
Feb. 1	63.04	May 1	63.61	25	63.61	25	64.32
8	62.99	8	63.71	Sept. 10	63.68	Dec. 2	64.80
15	62.93	17	63.80	26	63.62	9	65.00
22	62.98	22	63.44	Oct. 2	64.07	17	64.77
Mar. 1	63.26	June 7	63.14	9	64.23	23	64.85
8	63.83	13	62.98	16	64.11	31	64.18
22	63.52	25	63.33	23	64.42		

Ig Ls 91 (\*1023, p. 125; \*1071, p. 137). City of East Lansing. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 12, T. 4 N., R. 2 W., on south side of State Highway M-78, about 200 feet northeast of Touraine Avenue. Measurements discontinued Nov. 13, 1947.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	68.09	Mar. 8	68.45	May 8	67.10	Aug. 8	72.06
11	65.88	22	68.61	June 25	69.25	Oct. 10	72.59
25	68.72	29	67.49	July 14	68.58	Nov. 13	72.93
Mar. 1	67.09						

Ig Ls 265 (\*1023, p. 126; \*1071, p. 138). Frank Clever. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 24, T. 4 N., R. 2 W., about 900 feet west of Harrison Road, 350 feet south of main line of Grand Trunk Western Railway and about 1.2 miles south of East Lansing.

Ig Ls 265--Continued.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	Aug.	Sept.	Oct.	Nov.	Dec.
1	30.65	36.32	36.29	34.12	.....	33.83	.....	.....	39.10	38.25	43.22
2	.....	36.13	36.01	33.96	.....	33.47	.....	.....	b38.97	38.29	43.25
3	.....	35.56	35.96	34.28	a34.13	b33.60	.....	.....	38.84	37.95	a43.55
4	a31.25	35.16	35.92	34.22	34.15	.....	.....	.....	38.88	37.74	43.93
5	31.77	35.28	35.92	34.25	33.95	.....	.....	.....	38.85	37.61	43.60
6	31.43	35.47	36.05	34.04	33.99	.....	.....	.....	38.67	b37.89	43.77
7	31.60	35.48	36.14	34.15	33.85	a33.99	.....	.....	39.93	b38.17	43.60
8	32.07	35.80	36.00	33.83	33.97	.....	.....	.....	39.18	b37.97	.....
9	32.76	35.87	36.06	33.81	34.10	.....	.....	.....	39.17	b37.96	a43.78
10	33.13	35.94	35.96	33.93	b34.36	.....	.....	a41.78	38.92	b37.76	43.83
11	33.26	36.11	35.90	33.99	34.38	.....	.....	41.94	39.02	b38.30	43.71
12	33.47	36.08	35.94	b34.26	.....	.....	.....	.....	38.53	b39.40	43.74
13	33.24	36.12	35.74	b34.57	.....	.....	.....	.....	38.24	b38.23	43.82
14	33.53	36.07	35.47	b34.32	.....	.....	.....	.....	38.25	37.94	43.58
15	33.66	35.85	35.53	b34.22	.....	.....	.....	.....	b38.54	37.42	.....
16	34.21	35.96	35.46	b34.35	.....	.....	.....	.....	b38.76	37.09	.....
17	34.42	35.90	35.27	b34.21	a34.10	.....	.....	.....	38.87	36.91	a43.29
18	34.48	35.75	35.21	b34.31	34.12	.....	.....	.....	39.08	36.91	43.24
19	34.54	35.86	35.19	b34.34	33.95	.....	a43.54	.....	38.95	36.67	43.40
20	33.81	35.95	35.13	34.43	33.70	.....	44.07	.....	38.75	b36.68	43.34
21	34.23	36.01	34.85	.....	33.80	.....	44.70	.....	.....	37.03	43.06
22	34.44	36.02	34.79	.....	33.85	.....	44.97	.....	.....	38.09	42.53
23	34.93	36.23	34.45	.....	34.07	.....	45.08	.....	a38.51	39.53	42.30
24	35.27	36.04	34.29	.....	a34.14	.....	44.80	.....	38.68	41.42	42.15
25	35.76	35.97	33.77	.....	34.00	.....	b44.60	.....	38.62	42.38	41.84
26	35.59	36.04	34.02	a34.35	33.95	.....	.....	a39.94	38.69	43.02	40.71
27	35.23	36.11	33.98	.....	33.87	.....	.....	39.89	38.22	43.71	40.10
28	35.30	36.13	34.01	.....	33.95	.....	.....	39.72	37.84	43.55	39.52
29	35.80	.....	33.78	.....	b33.90	.....	.....	39.33	37.87	43.50	39.20
30	35.93	.....	34.07	.....	.....	.....	.....	39.03	37.84	43.49	39.20
31	36.09	.....	34.04	.....	a33.93	.....	.....	.....	38.10	b39.50	.....

a Wetted-tape measurement.

b Estimated.

Ig Ls 266 (\*1023, p. 126; \*1071, p. 139). Michigan State College. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 25, T. 4 N., R. 2 W., about 360 feet south of Mt. Hope Avenue, 190 feet east of Harrison Road, and 1.7 miles south of East Lansing.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	26.41	Apr. 19	26.07	July 14	24.67	Oct. 30	26.18
11	26.85	26	25.82	28	24.69	Nov. 6	26.22
18	27.26	May 1	25.64	Aug. 8	25.97	13	26.49
25	27.41	8	25.60	18	26.66	20	26.18
Feb. 8	27.29	15	25.38	25	26.75	25	26.06
15	27.52	22	25.10	Sept. 10	26.53	Dec. 4	28.07
22	27.62	29	24.68	26	26.34	9	27.96
Mar. 29	25.38	June 7	24.31	Oct. 10	26.34	17	27.77
Apr. 5	26.67	13	24.48	16	26.24	23	27.63
12	26.14	25	24.16	23	25.88	31	26.61

Ig Ls 270 (\*1023, p. 127; \*1071, p. 139). Harris L. Fleming. NW $\frac{1}{4}$  sec. 34, T. 4 N., R. 2 W., about 90 feet north of Irvington Street and 100 feet west of Pennsylvania Avenue.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	23.72	Mar. 29	22.44	June 25	21.45	Oct. 23	23.04
11	23.68	Apr. 12	21.38	July 14	22.00	30	23.02
18	23.60	19	20.83	29	22.31	Nov. 6	23.03
25	23.35	26	21.51	Aug. 8	22.74	13	22.77
Feb. 1	23.36	May 1	21.43	18	23.18	20	22.83
8	23.50	8	21.51	25	23.01	25	22.75
15	23.29	15	21.45	Sept. 10	23.06	Dec. 2	22.88
22	23.36	22	21.20	26	22.66	9	22.36
Mar. 1	23.46	29	20.90	Oct. 2	22.58	17	22.43
8	23.58	June 7	20.90	10	22.91	23	22.59
15	22.60	12	21.19	16	22.98	31	21.68
22	22.75						



Ig Ls 271 (\*1023, p. 127; \*1071, p. 140). Harry DeLaere. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 31, T. 4 N., R. 2 W., about 305 feet east of Waverly Road and 25 feet north of Maybel Street.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	23.51	Mar. 29	22.82	June 25	20.23	Oct. 23	22.31
11	23.42	Apr. 12	21.65	July 14	20.92	30	22.22
18	23.62	19	21.42	28	21.22	Nov. 6	22.29
25	23.48	26	21.04	Aug. 8	21.68	13	22.41
Feb. 1	23.45	May 1	20.84	18	21.91	20	22.42
8	23.29	8	20.90	25	21.89	25	22.18
15	23.27	15	20.86	Sept. 10	22.02	Dec. 2	22.40
22	23.33	22	20.75	26	22.15	9	22.37
Mar. 1	23.41	29	20.12	Oct. 2	22.01	17	22.04
8	23.56	June 7	19.94	9	22.16	23	22.09
15	23.36	12	19.95	16	22.16	31	22.11
22	23.12						

Ig Ls 805. Waverly Hills Association. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 19, T. 4 N., R. 2 W., about 500 feet east of Waverly Road and 20 feet north of bank of Grand River. Unused domestic well, diameter 2 inches, measured depth 87.4 feet below land-surface. Measuring point, top of  $\frac{1}{4}$ -inch extension pipe, 5.2 feet above land-surface datum. Water levels, in feet below land-surface datum, 1947: Dec. 17, 1.11; Dec. 23, 1.47; Dec. 31, 1.01.

### Kalamazoo County

#### City of Kalamazoo

Ko KO 1 (\*886, pp. 264, 273, 274; \*906, pp. 61, 62; 936, pp. 64, 65; 944, p. 66; 986, p. 68; 1016, pp. 102, 103; 1023, p. 127; 1071, p. 140). City of Kalamazoo. Well B at Burdick Street pumping station, about 400 feet north of Lake Street and 110 feet east of Burdick Street. No measurements made in 1947.

Ko KO 2 (\*886, pp. 264, 273, 274; \*906, p. 62; \*936, pp. 64, 65; 944, p. 66; 986, pp. 68, 69; 1016, p. 103; 1023, p. 127; 1071, p. 140). City of Kalamazoo. Well C at Burdick Street pumping station, about 410 feet south of Born Court and 170 feet west of Burdick Street. No measurements made in 1947.

Ko KO 3 (\*886, pp. 264, 273, 274; \*906, p. 62; 936, p. 65; 944, p. 66; 986, p. 69; 1016, p. 103; 1023, p. 140). City of Kalamazoo. Pilot well between supply wells 1 and 2, at Balch Street pumping station, 160 feet east of Park Street extended and 100 feet south of Balch Street. Well damaged by construction, measurements discontinued.

Ko KO 114 (\*1071, p. 140). City of Kalamazoo, Burdick Street station. 165 feet east of Burdick Street and 40 feet south of Wall Street extended.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	26.45	25.35	24.43	22.93	16.35	16.57	16.41	19.70	21.21	20.29	20.38	19.73
2	26.30	25.30	.....	22.82	16.15	16.17	16.46	19.35	20.95	20.27	20.25	19.69
3	26.30	25.27	.....	22.75	16.00	14.25	17.12	18.95	20.88	20.31	20.20	19.68
4	26.33	25.17	.....	22.65	15.97	14.13	16.97	18.82	20.84	20.27	20.12	19.74
5	26.22	25.13	.....	22.55	15.97	14.40	16.81	19.63	20.82	20.25	20.10	19.67
6	26.20	25.11	.....	19.10	15.96	14.65	16.63	20.16	20.83	20.23	20.41	19.71
7	26.13	25.09	.....	16.92	16.08	14.76	16.45	20.50	20.78	20.18	20.35	19.64
8	26.10	25.09	a24.34	15.25	16.18	14.87	16.47	21.19	20.75	20.20	20.37	19.55
9	26.15	25.03	.....	13.60	16.26	14.90	16.48	21.15	20.72	20.27	.....	19.56
10	26.16	25.05	.....	13.00	16.32	14.95	16.57	a21.45	.....	20.27	.....	19.55
11	26.17	24.97	.....	12.93	16.41	15.04	17.42	20.60	.....	20.29	.....	19.59
12	26.12	24.93	.....	13.00	16.32	15.99	17.48	20.30	.....	20.31	a20.34	19.57
13	26.10	24.85	.....	13.62	16.34	15.81	17.16	20.57	a21.30	20.18	20.29	19.64
14	26.05	24.79	.....	14.02	16.39	15.70	17.05	21.35	21.17	20.15	20.27	19.74
15	26.02	24.73	a23.89	14.36	16.45	15.76	17.97	21.47	21.00	20.17	20.25	19.72
16	26.04	24.80	.....	14.55	16.50	15.70	18.20	21.62	20.94	20.23	20.21	19.68

a Wetted-tape measurement.

## 152 WATER LEVELS AND ARTESIAN PRESSURE, 1947, NORTHEASTERN STATES

Ko KO 114--Continued.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
17	26.06	24.77	.....	15.65	16.60	15.72	17.74	21.33	20.90	20.29	.....	19.80
18	26.05	24.69	.....	15.62	16.60	15.77	18.33	21.02	20.88	20.32	.....	19.82
19	25.99	24.70	.....	15.53	16.57	15.78	18.62	22.00	20.83	20.35a	20.34	19.88
20	25.83	24.69	.....	15.47	16.54	15.83	18.00	22.21	20.85	20.32	20.34	19.95
21	25.77	24.67	.....	15.33	16.57	15.89	17.71	22.35	20.84	20.26	20.32	.....
22	25.78	24.68b	23.64	15.80	16.32	15.97	17.60	22.54	20.72	20.30	20.28	.....
23	25.51	24.68	23.67	15.49	16.40	16.02	17.58	22.66	20.59	20.33	20.25	.....
24	25.63	24.60	23.60	15.54	16.41	16.12	17.54	22.82	20.52	20.43	20.15	.....
25	25.55	24.55	23.45	15.62	16.38	16.16	17.63	22.48	20.55	20.44	19.97	.....
26	25.58	24.47	23.33	15.72	16.38	16.16	18.51	22.32	20.48	20.50	19.92	.....
27	25.46	24.45	23.25	15.55	16.40	16.19	18.33	21.97	20.46	20.33	19.90a	19.69
28	25.42	24.43	23.18	15.63	16.46	16.24	18.05	22.17	20.44	20.32	19.86	19.64
29	25.39			23.12	15.61	16.46	16.35	18.55	.....	20.37	20.36	19.83
30	25.35			23.12	15.65	16.56	16.37	19.07a	21.47	20.32	20.36	19.82
31	25.35			23.07		16.61		19.45	21.42		20.38	19.61

a Wetted-tape measurement.

b Estimated.

Ko KO 136 (\*1071, p. 141). Sutherland Paper Co. About 1,900 feet west of Pitcher Street and 640 feet north of Patterson Street.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	14.78	Mar. 28	9.56	June 18	9.16	Oct. 11	13.54
9	15.99	Apr. 2	9.46	July 8	10.57	18	14.55
16	15.44	10	2.06	15	11.84	25	14.63
24	14.91	16	5.29	23	11.95	Nov. 1	13.90
30	12.87	24	6.54	30	12.54	8	14.14
Feb. 6	14.36	May 1	8.29	Aug. 5	12.41	15	13.54
13	15.79	7	8.10	13	13.43	22	14.02
20	15.22	15	9.75	20	14.00	29	13.79
27	16.43	21	10.24	26	13.12	Dec. 13	13.23
Mar. 6	16.08	27	6.83	Sept. 3	11.15	20	13.35
13	15.81	June 5	7.09	Oct. 4	13.62	27	13.58
20	11.65						

Ko KO 137 (\*1071, p. 141). Sutherland Paper Co. 195 feet east of Pitcher Street and 145 feet south of Prouty Street extended.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	19.99	Mar. 28	18.55	June 18	15.47	Oct. 11	19.36
9	20.34	Apr. 2	17.90	July 8	15.69	18	19.52
16	20.38	10	10.37	15	16.20	25	19.70
24	20.35	16	11.26	23	16.71	Nov. 1	19.94
30	20.12	24	12.98	30	17.28	8	20.09
Feb. 6	19.77	May 1	14.05	Aug. 5	17.05	15	20.16
13	19.84	7	14.75	13	17.99	22	20.09
20	19.87	15	15.42	20	18.33	27	19.65
27	19.86	21	15.77	26	18.58	Dec. 13	19.76
Mar. 6	19.78	27	15.45	Sept. 3	18.42	20	19.54
13	19.51	June 5	14.82	Oct. 4	19.41	27	18.55
20	19.12						

Ko KO 186 (\*1071, p. 142). Sutherland Paper Co. 540 feet south of Michigan Avenue and 130 feet west of Wallace Avenue extended.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	16.83	Mar. 20	18.08	June 5	10.09	Oct. 11	15.59
9	16.72	27	17.97	July 9	11.00	18	15.78
16	16.84	Apr. 2	17.39	15	11.17	25	15.91
24	16.94	10	11.86	23	11.60	Nov. 1	16.03
30	17.17	16	8.66	30	11.94	8	16.13
Feb. 6	17.26	24	8.80	Aug. 7	12.38	15	16.20
13	17.42	May 1	8.92	13	12.98	22	16.30
20	17.53	7	9.19	Sept. 3	14.78	29	16.36
27	17.67	15	9.49	12	15.19	Dec. 13	16.39
Mar. 6	17.73	21	9.81	26	15.38	20	16.39
14	18.04	28	9.97	Oct. 4	15.53	27	16.39

Ko KO 211 (\*1071, p. 142). Consumers Power Co. 150 feet east of King's Highway extended and 65 feet north of Michigan Avenue.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	14.04	Mar. 20	13.01	July 15	12.10	Oct. 18	13.19
9	13.95	27	11.80	23	12.14	25	13.12
16	13.62	Apr. 2	11.59	30	12.74	Nov. 1	12.91
24	13.65	May 1	9.79	Aug. 7	12.77	8	12.94
30	13.25	7	9.88	13	12.85	15	12.72
Feb. 6	13.98	15	10.46	26	12.77	22	12.98
13	13.79	21	9.88	Sept. 3	12.66	29	13.04
20	13.83	27	9.52	26	12.38	Dec. 13	12.22
27	13.98	June 5	9.22	Oct. 4	12.72	20	12.72
Mar. 6	14.01	July 9	11.73	11	12.66	27	12.84
14	13.35						

Ko KO 222 (\*1071, p. 142). Eck-Rich Sausage Co. 360 feet east of Portage Street and 130 feet north of Second Street.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	20.42	Mar. 27	15.85	June 18	10.35	Oct. 4	14.16
9	17.75	Apr. 2	15.17	July 10	11.45	11	14.09
23	17.65	10	11.20	18	13.93	18	14.57
30	17.25	16	11.43	23	12.65	25	14.80
Feb. 5	17.18	24	11.80	31	13.53	Nov. 1	16.99
14	17.19	May 1	9.55	Aug. 7	14.65	8	17.60
20	17.10	7	9.96	20	14.14	15	14.84
27	17.05	15	13.29	26	14.26	22	14.82
Mar. 6	17.11	22	12.95	Sept. 3	16.78	29	17.36
13	16.99	27	11.24	12	13.30	Dec. 13	17.10
20	19.35	June 5	9.04	26	16.59		

Ko KO 227 (\*1071, p. 142). Hanselman Building Corporation. 100 feet north of Michigan Avenue and 25 feet west of Burdick Street.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	25.89	Mar. 27	25.54	July 10	22.28	Oct. 18	22.61
9	26.14	Apr. 10	24.04	15	21.69	25	23.76
16	26.00	16	23.52	23	22.35	Nov. 1	23.81
23	26.20	24	23.75	31	22.66	8	23.81
Feb. 6	26.62	May 8	23.35	Aug. 7	22.97	15	23.84
14	26.45	15	22.91	20	22.25	22	23.60
20	26.12	21	23.17	26	22.05	27	24.33
27	25.65	27	23.04	Sept. 12	21.73	Dec. 13	23.90
Mar. 6	26.30	June 5	21.03	Oct. 4	23.16	20	23.95
20	25.70	18	20.68	11	23.24	27	23.84

Ko KO 228 (\*1071, p. 142). Wiggington Co. 275 feet north of Kalamazoo Avenue and 140 feet east of Church Street.

Water level, at 2:00 a.m., in feet below land-surface datum, 1947												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	23.5	23.7	23.3	22.5	21.1	....	....	21.3	21.5	22.5	22.7	22.2
2	23.4	23.1	22.8	22.5	a21.60	....	....	21.2	21.5	22.0	22.5	22.4
3	23.5	23.3	23.0	22.5	21.1	....	....	21.1	b22.0	....	22.3	22.5
4	23.5	23.5	23.3	....	20.6	....	....	21.1	21.9	a21.93	22.8	22.6
5	23.4	23.3	23.3	....	b20.6	a20.97	....	21.4	21.9	21.6	22.8	22.5
6	23.4	23.2	23.4	....	21.2	....	....	21.4	21.9	21.6	22.9	22.5
7	23.6	23.2	23.4	....	21.0	b20.5	....	21.4	21.6	22.0	22.8	22.3
8	23.6	23.2	23.4	....	20.9	b20.3	a21.23	21.4	21.6	21.9	22.8	22.5
9	23.7	23.0	22.8	....	20.9	b20.2	20.8	21.5	21.9	21.9	21.8	22.3
10	23.6	22.9	23.1	a22.30	21.0	....	20.9	21.3	21.9	22.0	21.6	22.5
11	23.7	23.1	23.3	21.5	20.8	....	20.9	21.3	a22.03	22.0	22.7	22.5
12	23.1	23.1	23.3	21.4	....	a21.44	20.9	21.6	21.9	22.1	22.8	22.5
13	23.4	23.2	23.4	21.2	21.0	....	20.9	21.5	21.9	22.1	22.6	22.6
14	23.6	23.1	23.4	21.7	21.0	....	....	21.6	21.9	22.0	22.8	22.4
15	23.6	23.2	23.4	21.8	21.1	....	....	21.7	21.8	22.0	22.8	22.3
16	23.6	22.8	22.8	21.7	21.1	....	....	21.7	21.9	22.1	22.1	22.5
17	23.8	23.2	22.8	21.6	21.1	....	....	21.5	22.2	22.2	22.2	22.5

a Wetted-tape measurement.

b Estimated.

Ko KO 228--Continued.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
18	23.7	23.3	22.9	21.6	20.7	....	....	21.6	22.2	22.2	22.7	22.5
19	23.1	23.3	22.9	21.6	....	a21.18	....	21.7	a22.82	....	22.7	22.6
20	23.4	23.4	22.8	21.3	20.9	....	....	a22.22	22.4	....	22.7	22.6
21	23.6	23.3	22.9	20.7	20.9	....	....	21.8	22.1	....	22.8	....
22	....	23.4	22.8	21.4	20.9	....	....	22.1	22.0	....	22.8	....
23	a24.10	22.8	22.7	21.4	20.9	....	a21.66	22.1	22.3	....	22.1	....
24	23.8	23.0	22.6	21.3	20.9	....	21.1	21.6	22.4	....	21.9	....
25	23.7	23.2	22.7	21.3	....	a21.14	21.1	21.6	22.5	a22.28	22.8	....
26	23.2	23.3	22.7	21.2	....	....	21.1	21.9	22.5	22.4	22.9	....
27	23.4	23.4	22.7	21.0	20.7	....	20.9	22.0	22.3	22.4	22.6	a21.85
28	23.6	23.3	22.7	20.9	20.7	....	20.9	21.9	22.1	22.7	22.3	22.1
29	23.6	....	22.6	21.0	20.7	....	21.1	22.1	22.1	22.8	22.4	22.1
30	23.6	....	22.5	21.1	....	....	21.2	21.9	22.4	b22.7	21.9	22.3
31	23.6	....	22.4	....	....	....	21.2	21.6	b22.7	....	22.4	....

a Wetted-tape measurement.

b Estimated.

Ko KO 240. Reed Land Co. About 300 feet east of Factory Street and 280 feet north of Lane Court extended. Unused industrial well, diameter 6 inches, measured depth 41.0 feet below land surface. Measuring point, top of 6-inch tee, 1.75 feet above land-surface datum. Automatic water-stage recorder installed Mar. 7, 1947.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	7.03	6.08	5.75	6.56	7.54	7.47	7.58	8.27	8.19
2	....	7.01	5.88	5.01	6.63	7.53	7.48	7.62	8.23	8.22
3	....	6.68	5.97	4.72	6.69	7.49	b7.59	b7.66	8.18	8.22
4	....	6.72	5.96	4.97	6.72	7.48	7.70	a7.68	8.26	8.08
5	....	5.52	5.97	b5.18	6.70	7.62	7.74	7.66	8.29	7.96
6	....	4.08	6.11	5.39	6.70	7.71	7.74	7.65	8.30	7.82
7	a8.38	4.54	6.17	5.50	6.54	7.77	7.75	7.73	8.31	7.69
8	8.36	4.95	6.25	5.47	a6.63	7.75	7.73	7.77	8.30	7.56
9	8.27	5.24	6.33	5.55	....	7.75	7.79	7.80	8.26	7.51
10	8.20	b5.45	6.38	5.68	....	7.71	7.84	7.84	8.25	7.54
11	....	5.20	6.35	5.82	....	7.69	....	7.85	8.25	7.60
12	....	5.10	6.29	5.96	....	7.81	b7.86	b7.82	8.14	7.67
13	a8.02	5.30	6.40	b6.01	....	7.86	7.57	b7.81	8.16	7.73
14	7.93	5.35	6.04	....	....	7.86	7.53	7.86	8.20	7.65
15	7.85	5.57	6.13	....	a6.92	7.93	7.52	7.89	8.20	7.63
16	7.79	5.69	6.19	....	....	7.93	7.60	7.92	8.12	7.71
17	7.74	5.77	6.28	....	....	7.89	7.69	7.94	8.07	7.81
18	7.80	5.79	5.88	....	....	7.88	7.75	7.96	8.11	7.85
19	7.83	5.74	5.84	b6.26	....	7.98	7.80	7.95	8.14	7.90
20	7.83	5.47	5.98	6.32	....	b8.04	7.85	7.94	8.17	7.95
21	7.82	5.06	6.01	6.37	....	8.06	7.79	7.99	8.20	7.90
22	7.85	5.35	5.45	6.35	....	8.07	7.15	8.03	8.23	7.90
23	7.75	5.51	5.59	6.36	....	8.09	7.10	8.06	8.24	7.98
24	7.65	5.63	5.57	6.45	7.17	8.04	7.19	8.10	8.14	8.03
25	7.31	5.73	5.51	6.49	7.23	7.74	7.29	8.13	8.19	8.02
26	7.18	5.83	5.44	6.34	7.26	7.87	7.38	....	8.24	7.95
27	7.21	5.75	5.67	6.41	7.19	7.52	7.45	....	8.26	7.95
28	7.16	5.88	5.78	6.48	b7.19	7.68	7.43	8.20	8.20	7.95
29	7.14	5.95	5.71	6.47	7.31	7.78	7.41	8.22	8.19	7.96
30	7.07	5.98	5.76	6.48	7.42	7.48	7.53	8.23	8.24	8.05
31	7.02	....	5.74	....	7.48	7.46	....	8.25	....	8.11

a Wetted-tape measurement.

b Estimated.

Ko KO 242 (#1071, p. 143). Kalamazoo Creamery. 200 feet east of Portage Street and 180 feet south of Lake Street.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	25.58	24.02	17.52	16.85	16.87	18.63	20.65	21.11	21.66	21.97
2	a26.86	....	25.59	23.91	....	16.73	16.94	18.69	20.67	21.14	21.66	21.91
3	26.86	....	25.33	23.84	....	16.63	16.99	18.73	a20.69	21.14	21.64	21.89
4	26.74	....	25.29	23.73	....	16.48	17.03	18.80	20.80	b21.32	21.64	21.95

a Wetted-tape measurement.

b Estimated.

Ko KO 242--Continued.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	26.67	.....	25.54	23.57	.....	16.28	17.05	18.84	20.83	21.33	21.63	21.81
6	26.65a	26.03	25.51	22.98	.....	16.24	17.07	18.91	20.86	21.35	21.70	21.97
7	26.81	26.03	25.51	22.40	.....	16.14	17.11	18.96	20.90	21.40	21.69	21.92
8	26.80	26.02	25.51	21.86a	17.50	16.07b	17.16	19.05	20.93	21.41	21.67	21.86
9	26.85	25.99	25.48	21.32	17.52	16.04	17.23	19.08	20.97	21.28	21.71	21.94
10	26.85	25.95	25.34b	20.83	17.53	16.13	17.25	18.99	21.02	21.27	21.73	21.79
11	26.84	25.96	25.39	.....	17.56	16.17	17.30	19.03b	21.09	21.29	21.64	21.83
12	26.86	25.94	25.36	.....	17.51	16.10	17.36	19.12	21.09	21.31	21.74	21.83
13	26.83	25.92	25.31	.....	17.48	16.02	17.40	19.19	21.10	21.32	21.76	21.80
14	26.82	.....	.....	.....	17.51	16.00	17.42	19.26	21.13	21.33	21.77	21.74
15	.....	.....	.....	.....	17.57	16.04	17.58	19.36	20.97	21.35	21.70	21.72
16	.....	.....	.....	.....	17.45	16.11	17.64	19.46	21.11	21.37	21.70	21.71
17	.....	.....	.....	18.80	17.50	16.29	17.73	19.53	21.23	21.38	21.78	21.78
18	.....	.....	.....	18.69	17.38	16.32	17.76	19.60	21.26	21.58	21.93	21.76
19	.....	.....	.....	18.60	17.39	16.37	17.86	19.68a	21.26	21.41	21.79	21.80
20	.....	25.74a	25.02	18.40	17.35	16.41	17.92b	19.77	21.26	21.42	21.93	21.81
21	.....	25.73	24.97	18.23	17.44	16.46	17.96	19.84	21.26	21.46	21.85	21.78
22	.....	25.68	24.95	18.12	17.44	16.51	18.05	19.92	21.27	21.48	21.80	21.76
23	26.49	25.65	24.88	17.97	17.33	16.56	18.13	19.99	21.28	21.48	21.83	21.84
24	26.49	25.62	24.82	17.91	17.29	16.59	18.20	20.21	21.23	21.53	21.75	21.86
25	.....	25.60	24.67	17.85	17.17	16.63	18.23	20.29	21.10	21.53	21.79	21.67
26	.....	25.61	24.56	17.78	17.14	16.53	18.26	20.35	21.09	21.61	21.83	21.62
27	.....	25.57	24.46	17.65	17.15	16.62	18.27	20.28	21.11	21.32	21.95	21.63
28	.....	25.61	24.57	17.65	17.08	16.71	18.34	20.51	21.06	21.58	21.95	21.65
29	.....	.....	24.31	17.65	17.03	16.77	18.38	20.43	21.01	21.59	21.98	21.67
30	26.22	.....	24.26	17.44	17.17	16.85	18.47	20.44	21.12	21.61	22.02	21.65
31	.....	.....	24.11	.....	16.93	.....	18.54	20.61	.....	21.64	.....	21.67

a Wetted-tape measurement.

b Estimated.

Ko KO 284 (\*1071, p. 144). St. Regis Paper Co. 240 feet north of Alcott Street and 230 feet west of Portage Street.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	52.4	51.68	49.9	a46.04	45.1	36.9	45.34	41.3	47.1	47.2	41.74
2	a61.24	52.5	51.52b	50.2	46.1	.....	36.9	45.41	40.5	47.1	47.19	46.79
3	61.26	46.3	45.53	50.1	46.0	.....	36.8	45.46b	46.3	b47.0	41.5	46.89
4	60.87	.....	51.15	50.0	45.9	.....	36.5	b39.4	46.8	a47.11	46.84	47.04
5	60.71	.....	51.40	49.9	39.7	a44.36	36.3	a45.13	46.8	47.20	46.93	46.81
6	b50.6	a52.08	51.44	.....	45.7	44.44	36.5	45.3	46.9	43.6	47.14	46.97
7	60.39	52.1	51.4	.....	45.8	44.36	.....	46.2	47.0	46.93	47.16	46.9
8	60.76	52.2	51.3	.....	45.9	44.32a	45.26	46.3	41.4	47.01	47.22	41.6
9	60.54	52.1	51.4	.....	43.3	38.04	43.36	46.6	46.7	47.13	47.2	46.9
10	60.45	46.3	45.4	a49.43	45.7	44.00	43.53	46.2	46.9	47.14	41.7	47.1
11	60.33	52.1	50.9	48.6	45.7	44.18	43.65	40.2	b46.9	47.15	46.7	47.2
12	60.32	52.1	51.1	48.3	.....	44.34	43.76	46.1	47.1	47.1	47.0	47.2
13	52.4	51.9	51.1	48.1	.....	44.37	43.84	46.7	47.1	41.6	47.1	47.1
14	54.90	51.8	50.9	41.9	.....	44.35	37.75	46.8	47.1	44.7	47.1	47.03
15	54.54	51.8	51.1	47.4	a45.72	44.40	43.68	47.2	41.4	44.7	47.1	41.97
16	54.13	51.9	51.0	.....	45.7	38.02	43.93	47.1	46.8	46.7	.....	46.76
17	53.96	47.8	44.7	a47.30	45.7	44.07	44.04	46.4	47.1	47.0	.....	45.22
18	53.75	51.7	50.6	47.3	45.6	44.29	44.11	40.6	47.1	47.0	.....	45.36
19	53.62	51.8	50.7	47.3	.....	44.41	44.23	46.1	b47.1	47.1	.....	45.23
20	b47.6	51.8	50.7	47.2	.....	44.4	44.24b	47.2	47.2	41.5	.....	45.46
21	.....	51.8	50.8	.....	a45.32	44.4	38.14	47.5	47.1	46.8	.....	45.51
22	.....	51.7	50.9	.....	45.44	44.4	44.08	47.6	41.5	46.9	a47.08	41.81
23	a53.86	51.6	50.7	.....	45.43	38.1	44.76	47.6	46.9	47.0	47.17	46.92
24	54.00	45.7	44.6	a46.50	45.43	44.1	45.11	47.5	47.0	47.1	42.14	47.22
25	53.99	56.0	.....	46.6	45.25	44.3	38.86	41.4	47.1	47.1	46.85	42.14
26	53.87	52.1	.....	46.5	.....	44.4	44.81	46.6	47.1	47.1	47.06	41.29
27	b47.9	51.9	a50.42	46.2	45.02b	44.4	38.60	46.9	47.2	41.6	47.08	46.72
28	.....	51.76	50.4	.....	45.21	.....	b38.1	47.0	46.6	46.8	47.12	46.96
29	.....	.....	50.3	.....	45.0	.....	a44.93	47.0	43.7	47.1	47.12	41.80
30	a51.86	.....	50.4	.....	45.2	a37.87	45.00	47.1	47.0	47.1	47.16	46.84
31	52.3	.....	44.5	.....	45.2	.....	45.19	47.0	.....	47.2	.....	47.16

a Wetted-tape measurement.

b Estimated.

Ko KO 311 (#1071, p. 144). Columbian Hotel. 90 feet south of Michigan Avenue and 90 feet west of Pitcher Street.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	19.14	Mar. 14	19.26	May 27	14.17	Oct. 18	17.36
9	19.46	20	18.67	June 5	14.23	25	17.45
16	19.32	27	18.09	18	14.89	Nov. 1	18.03
23	19.38	Apr. 2	17.75	23	15.45	8	17.81
30	18.97	10	14.44	July 31	15.84	15	17.65
Feb. 5	19.12	16	14.20	Aug. 7	16.25	22	17.69
14	19.25	24	14.36	Sept. 3	17.46	29	17.84
20	19.13	May 2	14.53	12	17.14	Dec. 13	17.70
27	19.04	8	14.93	Oct. 4	17.24	20	17.56
Mar. 6	19.29	15	14.66	11	17.18	27	17.45

The average daily withdrawal of ground water from municipal-supply wells in Kalamazoo during 1947 ranged from 7.58 million gallons in March to 13.77 million gallons in August and averaged 9.20 million gallons for the year.

#### City of Parchment

Ko PT 6 (#1071, p. 145). Kalamazoo Vegetable Parchment Co. test well 6. About 950 feet north of Oak Grove Avenue and 75 feet west of Wilson Avenue.

Water level, in feet below land-surface datum, 1947

Jan. 3	12.56	Apr. 10	9.81	July 8	11.08	Oct. 4	12.41
9	12.60	16	9.56	15	11.51	11	12.57
24	12.37	24	9.69	23	11.86	18	12.52
30	12.26	May 1	9.93	30	12.09	25	12.62
Feb. 5	12.18	7	10.13	Aug. 5	12.31	Nov. 1	12.67
13	12.45	15	10.51	13	12.52	8	12.67
20	12.37	21	10.58	20	12.72	15	12.59
27	12.46	27	10.23	26	12.79	22	12.73
Mar. 6	12.63	June 5	9.83	Sept. 3	12.48	29	12.54
13	12.47	12	10.06	12	12.36	Dec. 13	12.09
20	12.03	19	10.36	19	12.45	20	12.31
28	11.67	25	10.68	25	12.48	27	12.12
Apr. 2	11.43						

Ko PT 40. Kalamazoo Vegetable Parchment Co. About 520 feet west of Riverview Drive and 390 feet south of Superior Avenue. Unused supply well, diameter 12 inches, measured depth 30.9 feet below land surface. Measuring point, top of recorder shelf, 1.7 feet above land-surface datum. Automatic water-stage recorder installed June 4, 1947.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	14.38	15.85	15.35	15.36	15.59	15.85
2	.....	14.45	15.82	14.98	15.36	15.44	15.75
3	.....	14.59	15.78	b15.15	b15.37	15.35	15.74
4	a13.10	14.55	15.67	15.24	a15.47	15.70	15.66
5	13.07	14.50	15.92	15.36	15.44	15.76	15.60
6	13.12	14.50	16.00	15.28	15.43	15.65	15.44
7	13.04	14.51	16.03	15.28	15.48	15.59	15.25
8	13.02	b14.70	16.12	15.30	15.56	15.55	15.06
9	13.02	14.78	.....	15.41	15.62	15.46	15.04
10	13.22	14.88	.....	15.55	15.66	15.32	14.99
11	13.41	15.00	.....	b15.56	15.63	15.26	15.33
12	b13.47	15.00	.....	15.38	15.57	15.33	15.47
13	13.57	14.96	a16.21	15.30	15.53	15.29	15.31
14	13.67	14.89	16.21	15.15	15.69	15.25	15.50
15	13.64	15.15	16.25	15.15	15.76	15.23	15.50
16	13.60	15.26	16.28	15.23	15.81	15.23	15.72
17	13.70	15.21	16.16	15.31	15.77	15.21	15.84
18	13.74	15.09	16.14	15.35	15.90	15.29	15.94
19	13.79	15.08	16.24	b15.45	15.67	15.39	15.71

a Wetted-tape measurement.

b Estimated.

Ko PT 40--Continued.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
20	13.83	15.01	16.23	15.42	15.65	15.42	15.64
21	13.95	15.10	16.19	15.39	15.77	15.43	15.55
22	14.04	15.13	16.21	15.19	15.82	15.70	15.56
23	14.10	a15.20	16.24	15.04	15.79	15.91	15.51
24	14.34	15.25	16.12	15.03	15.81	15.72	15.57
25	14.51	15.33	16.04	15.10	15.79	15.88	15.53
26	14.44	15.37	16.13	15.10	15.75	15.67	15.15
27	14.47	15.37	15.84	15.09	15.74	15.64	15.11
28	14.45	15.30	15.96	15.06	15.77	15.63	15.01
29	14.31	15.45	15.82	15.30	15.72	15.68	15.29
30	14.15	15.69	15.72	15.37	15.61	15.68	15.28
31		15.78	15.52		15.52		15.40

a Estimated.

## Village of Vicksburg

Ko VB 6 (\*1071, p. 145). Lee Paper Co. well 6A. About 400 feet west of west edge of mill pond and 200 feet south of Washington Street extended.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	3.61	3.39	3.62	....	2.35	2.70	1.6	....	c0.7	2.52	2.47	....
2	3.78	3.42	3.63	c1.10	1.15	2.47	...	ac.72	a2.90	2.57	2.45	....
3	3.65	c.15	.05	b2.5	1.17	2.33	....	....	2.38	2.58	2.33	....
4	3.70	3.37	3.37	b2.3	2.00	2.28	....	....	2.44	2.72	2.50	....
5	3.60	3.33	3.47	b2.2	2.06	2.31	...	....	2.43	2.78	2.34	....
6	.07	3.32	3.60	b1.9	2.18	2.33	....	....	2.52	2.70	2.35	....
7	3.57	3.38	3.48	c2.02	2.07	2.17	a1.72	....	2.56	2.75	2.33	....
8	3.62	3.44	3.55	1.45	2.21	2.13	1.8	....	2.57	2.75	2.37	....
9	3.65	3.50	3.42	1.63	2.24	c1.43	1.8	....	2.85	2.74	2.4	....
10	3.67	3.29	3.44	1.73	2.23	.63	2.34	....	2.68	2.75	a3.05	....
11	3.69	3.35	3.37	1.67	c1.46	1.5	2.28	a.20	2.66	2.79	2.19	....
12	3.87	3.54	b3.33	1.75	c1.42	1.6	1.8	b.2	2.58	2.80	2.33	....
13	3.70	3.42	3.18	c1.83	2.5	1.5	1.8	....	2.69	c.35	2.23	....
14	3.89	3.43	3.18	c1.72	2.7	1.5	2.41	....	2.67	2.72	2.22	....
15	3.82	3.30	3.09	1.70	2.7	1.6	1.8	....	c.38	2.85	2.29	a2.84
16	3.65	c.08	3.07	1.72	2.5	1.5	2.3	....	2.57	2.83	2.20	....
17	3.63	c.12	c.30	1.88	2.8	1.4	2.0	....	2.64	2.85	2.27	....
18	3.60	3.28	2.99	1.78	2.6	b1.6	1.6	a2.59	2.63	2.83	2.33	....
19	.05	3.34	2.98	2.05	2.6	a1.60	1.7	2.67	2.67	2.46	2.42	....
20	c.11	3.47	2.91	1.82	a2.60	1.59	1.9	2.22	2.73	2.32	2.36	....
21	3.35	3.38	2.93	1.75	2.38	1.61	c1.2	2.67	2.70	2.42	2.32	....
22	3.33	3.36	2.94	1.8	2.37	1.63	....	2.80	2.62	2.47	2.47	....
23	3.33	3.39	2.95	.9	1.32	c1.41	....	2.85	2.62	2.37	c.25	....
24	3.39	3.47	2.86	1.6	1.88	1.68	a2.67	2.95	2.57	2.35	c.36	....
25	3.41	3.49	....	.8	1.74	1.68	....	2.68	2.67	2.47	2.15	....
26	3.35	3.56	....	1.7	c1.49	1.67	....	2.7	2.73	c.21	2.22	....
27	3.56	3.50	....	1.8	2.80	1.6	....	2.6	2.76	c.22	....	....
28	3.52	3.61	....	cbl.4	2.82	1.6	....	2.6	c.38	2.37	....	....
29	3.37	....	1.80	2.68	1.5	....	2.6	c.57	2.33	....	....	....
30	3.35	....	2.22	2.72	1.6	....	2.6	2.50	2.28	....	....	....
31	3.35	ac.99	....	2.53	....	....	c.6	....	2.31	....	....	....

a Wetted-tape measurement.

b Estimated.

c Above land-surface datum.

Ko VB 7 (\*1071, p. 145). Lee Paper Co. well 7A. About 500 feet west of west edge of mill pond and 250 feet south of Washington Street extended.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	4.28	4.29	4.33	3.36	2.57	3.03	2.45	b3.40	1.48	2.79	3.01	2.88
2	4.30	4.25	4.39	3.23	1.73	2.51	2.47	b3.5	....	2.84	3.15	....
3	4.34	1.62	1.70	2.77	1.60	2.49	2.55	....	....	2.86	3.07	....
4	4.34	4.03	....	2.86	2.47	2.57	....	....	....	....	3.05	....

b Estimated.

Ko VB 7--Continued.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	4.33	4.19	....	2.80	2.58	2.62	....	....	....	....	3.03	....
6	1.78	4.26	....	2.14	2.63	2.66	....	....	....	....	3.02	....
7	4.10	4.29	....	.17	2.66	2.47	....	....	....	....	3.00	....
8	4.25	....	....	2.02	2.80	2.45	2.56	....	....	....	3.05	....
9	4.30	....	....	2.05	2.80	.45	2.74	....	....	....	3.05	....
10	4.34	....	a4.47	2.15	2.84	1.10	2.70	....	a3.24	....	1.31	....
11	4.37	4.28	4.16	2.08	.66	2.05	2.69	b3.5	3.23	....	2.56	....
12	4.41	4.34	4.03	2.16	.50	2.12	2.90	3.47	3.05	....	2.63	....
13	4.38	4.27	3.90	.27	2.71	2.11	2.97	3.38	3.09	....	2.68	....
14	4.52	4.35	3.82	.17	2.90	2.08	2.95	3.41	3.13	....	2.72	....
15	4.34	4.22	3.95	2.03	3.00	2.18	3.00	3.43	1.37	2.80	2.70	....
16	4.33	1.65	4.00	2.14	3.05	2.18	2.97	3.48	2.88	2.85	2.64	2.91
17	4.44	1.43	1.45	2.18	3.12	2.24	2.70	3.49	3.00	2.88	2.72	2.97
18	4.47	3.76	3.71	2.19	2.85	....	2.98	1.78	3.03	2.89	2.76	3.00
19	1.75	3.95	3.82	2.27	3.05	a2.22	2.86	3.42	3.05	2.93	2.77	2.78
20	1.52	4.02	3.84	2.15	a3.06	2.25	2.95	3.31	3.07	....	2.79	....
21	3.91	4.05	3.86	2.15	2.85	2.33	.78	3.52	3.06	....	2.80	....
22	4.16	4.08	3.95	2.25	2.74	2.39	....	3.59	2.73	3.00	2.78	a2.62
23	4.17	4.15	3.92	1.40	2.10	.55	....	3.62	2.86	2.99	1.12	2.47
24	4.20	4.20	3.75	2.08	2.29	2.22	....	3.67	2.89	3.00	.94	2.48
25	4.18	4.30	3.59	1.63	2.22	2.30	....	3.48	2.96	3.01	2.59	1.18
26	4.07	4.36	3.70	2.17	.58	2.12	b3.00	3.49	2.97	1.26	2.72	.94
27	4.31	4.35	3.68	2.29	2.75	2.25	b3.20	3.35	2.98	1.03	2.78	....
28	4.25	4.39	3.65	.36	2.85	2.32	b3.2	3.45	....	2.62	2.81	....
29	4.20	....	3.72	2.16	2.80	2.34	b3.3	3.44	....	2.84	2.86	....
30	4.14	....	3.68	2.43	2.90	2.41	b3.4	3.27	2.70	2.92	2.89	....
31	4.22	....	.97	....	2.96	....	b3.4	1.60	....	2.97	....	....

a Wetted-tape measurement.

b Estimated.

## Kalamazoo Township

Ko Ko 5 (\*1071, p. 146). City of Kalamazoo, Henson property SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 11, T. 2 S., R. 11 W., about 1,380 feet east and 450 feet north of center of section.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	9.48	Apr. 16	8.27	July 8	8.08	Oct. 11	8.39
24	9.39	24	8.22	15	8.14	18	8.47
30	9.36	May 1	8.33	23	8.20	25	8.51
Feb. 6	9.38	7	8.34	30	8.21	Nov. 1	8.49
13	9.36	15	8.34	Aug. 5	8.29	8	8.52
20	9.47	21	8.24	13	8.40	15	8.48
27	9.51	28	8.10	26	8.42	22	8.57
Mar. 6	9.55	June 5	7.79	Sept. 3	8.42	29	8.60
13	9.39	12	7.95	12	8.38	Dec. 13	8.51
20	9.20	18	8.00	26	8.35	20	8.60
Apr. 2	8.99	25	8.03	Oct. 4	8.41	27	8.62
10	8.10						

Ko Ko 15 (\*1071, p. 146). City of Kalamazoo, Michigan Avenue station. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 14, T. 2 S., R. 11 W., about 290 feet east of Wallace Avenue and 30 feet south of Schipper's Lane.

Water level, in feet below land-surface datum, 1947

Jan.		Mar.		May		July	
3	13.18	6	13.44	7	7.56	30	a 20.45
9	13.14	14	13.34	15	8.02	Aug. 7	a 22.13
16	13.10	20	12.89	21	8.20	13	a 22.66
24	13.12	27	12.35	28	7.92	Sept. 3	a 23.27
30	13.10	Apr. 2	10.59	June 5	7.73	12	a 23.77
Feb. 6	13.10	10	3.55	30	8.78	26	a 23.70
13	13.19	16	5.71	July 9	8.95	Oct. 4	a 23.78
20	13.18	24	6.59	15	13.08	11	a 23.69
27	13.27	May 1	6.96	23	13.27	18	a 24.39

a Nearby wells operating.



## Ko Ko 15--Continued.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 25	a 24.39	Nov. 15	a 24.39	Nov. 29	20.21	Dec. 20	15.61
Nov. 1	a 24.39	22	a 24.39	Dec. 13	15.49	27	14.13
8	a 24.29						

a Nearby wells operating.

Ko Ko 42 (\*1071, p. 147). Western Michigan College of Education, Gateway golf course. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 20, T. 2 S., R. 11 W., about 1,000 feet north of U. S. Highway 12 and 500 feet west of Vande Giessen Road.

Water level, in feet below land-surface datum, 1947

Jan. 16	36.35	Apr. 10	35.00	July 8	34.16	Oct. 4	34.52
24	36.33	16	34.86	18	34.20	25	34.68
30	36.27	24	34.67	23	34.25	Nov. 1	34.71
Feb. 6	36.30	May 1	34.62	31	34.31	8	34.72
14	36.18	8	34.62	Aug. 7	34.37	15	34.70
20	36.23	15	34.60	12	34.42	22	34.88
28	36.26	21	34.55	20	34.44	29	34.75
Mar. 6	36.23	27	34.47	26	34.45	Dec. 13	34.62
14	36.22	June 6	34.20	Sept. 3	34.48	20	34.99
20	36.21	18	34.19	12	34.50	27	35.01
Apr. 2	35.82	24	34.21	26	34.47		

Ko Ko 43 (\*1071, p. 147). Oakwood, Inc. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 29, T. 2 S., R. 11 W., about 350 feet west of Oakland Drive and 20 feet north of Whites Road extended.

Water level, in feet below land-surface datum, 1947

Jan. 3	29.12	Apr. 10	28.77	July 8	27.03	Oct. 11	26.81
24	29.17	17	28.64	15	26.96	18	26.78
30	29.05	24	28.46	22	26.91	25	27.04
Feb. 6	29.18	May 1	28.31	31	26.87	Nov. 1	27.07
14	29.21	8	28.17	Aug. 7	27.07	8	27.10
20	29.22	15	28.04	12	26.88	15	27.11
28	29.27	21	27.93	20	26.97	22	27.20
Mar. 6	29.25	27	27.79	26	26.88	29	27.18
14	29.29	June 5	27.67	Sept. 3	26.82	Dec. 13	27.00
20	29.29	18	27.28	26	26.70	20	27.28
28	29.21	24	27.22	Oct. 4	26.73	27	27.31
Apr. 2	29.13						

Ko Ko 121 (\*1071, p. 147). Allied Paper Co., Monarch Division. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 34, T. 2 S., R. 11 W., about 160 feet west of New York Central railroad spur on east side of building and 150 feet south of Cork Street.

Water level, in feet below land-surface datum, 1947

Jan. 3	9.97	Mar. 28	9.60	June 24	8.50	Oct. 11	8.91
9	9.94	Apr. 2	9.58	July 8	8.50	18	8.90
16	9.93	10	9.22	15	8.54	25	8.92
24	9.88	16	9.17	23	8.58	Nov. 1	8.94
30	9.86	24	9.00	29	8.58	8	8.94
Feb. 6	9.84	May 1	8.91	Aug. 7	8.60	15	8.93
14	9.84	8	8.79	20	8.78	22	8.96
20	9.83	15	8.79	26	8.87	29	8.94
28	9.84	21	8.73	Sept. 3	8.85	Dec. 6	8.88
Mar. 6	9.83	27	8.69	12	8.86	13	8.86
13	9.81	June 5	8.54	25	8.88	20	8.89
20	9.75	18	8.60	Oct. 4	8.89	27	8.92

Ko Ko 136 (\*1071, p. 147). Millwood Community well 1. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 35, T. 2 S., R. 11 W., about 100 feet south of Winton Avenue and 90 feet east of Moreland Street.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	41.72	41.57	41.53	40.91	37.82	36.65	36.27	37.82	37.94	38.28	38.88	39.13
2	41.52	41.60	42.10	40.92	37.17	36.41	36.47	37.57	37.89	38.25	38.96	39.12
3	41.49	41.67	41.62	40.83	37.17	36.49	36.62	38.22	38.12	38.42	39.05	39.05

b Estimated.

Ko Ko 136--Continued.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
4	41.95	41.61	41.60	40.76	37.17	36.43	36.77	36.07	37.88a	39.14	39.12	39.22
5	41.60	41.55	41.61	40.85	37.47b	36.42	36.47	36.67	38.05	38.41	38.79	39.02
6	41.60	41.51	41.61	40.42	37.15	36.30	36.77	.....	37.84	38.24	38.97	39.11
7	41.67	41.51	41.62	40.51	36.97	36.17	36.04	.....	38.02	38.44	39.08	.....
8	41.69	41.58	41.59	40.19	37.01	36.05b	36.97	.....	38.09	38.42	38.97	.....
9	41.67	41.55	42.12	39.96	37.57	35.99	36.34	.....	38.02	.....	39.10	.....
10	41.62	41.69	41.72b	39.82	36.97	35.96	36.16	.....	38.06	.....	39.04	.....
11	41.56	41.87	41.67a	40.15	37.17	35.93	36.20	.....	37.97a	41.44	38.70	.....
12	42.22	41.70	41.74	38.44	36.82	35.97	36.63a	42.23	38.57	38.57	39.30	.....
13	41.70	41.74	41.51	39.50	36.96	35.62	36.90	38.97	37.90	38.67	38.87a	40.26
14	41.62	41.60	41.42	39.13	37.21	36.23	36.99	39.02	38.04	38.62	38.85	39.17
15	42.07	41.53	41.43	39.17	36.82	35.67	36.94	38.89	38.58	38.57	38.81	39.15
16	41.66	41.67	41.77	38.79	37.01	35.40	36.36	38.77	38.27	38.67	39.17	39.47
17	41.71	41.71	41.45	38.62	36.80	35.65	36.24	38.97	38.04	38.70	39.11	39.42
18	41.62	41.56	41.40	38.81	36.82	35.32	36.23	38.97	38.12	38.57	38.90	39.29
19	42.22	41.62	41.34	38.61	36.67	35.48	36.26	39.22b	38.42	38.73	39.11	39.55
20	41.66	41.65	41.28	38.42	36.90	35.76	36.30b	39.72	38.21	38.72	39.03	39.33
21	42.04	41.58	41.20	38.17	36.58	35.91	36.41	38.82	38.28	38.80	38.93	39.32
22	.....	41.61	41.23	38.22	37.13	36.17	36.44	38.87	38.01	38.82	38.98	39.82
23a	41.49	41.51	41.67	37.97	37.32	36.25	36.33	39.21	38.33	39.17	39.07	39.58
24	41.55	41.64	41.18	38.32	37.52	36.62	36.54	39.39	37.96	39.42	39.47	39.44
25	41.57	41.63	41.03	37.61	36.79	35.68	36.96	38.34	38.09	38.92	39.17	39.56
26	41.95	41.56	41.17	37.90	36.77	35.64	37.17	38.14	38.25	39.10	39.12	39.62
27	41.53	41.67	41.13	37.62	36.78	35.75	37.32	38.07	38.54	38.81	39.03	39.54
28	41.55	41.57	41.14	37.66	36.66	35.72	36.82	37.97	38.20	38.97	39.16	39.60
29	41.57	.....	41.15	38.11	36.62	35.97	37.12	38.27	38.29	38.97	39.11	39.72
30	41.44	.....	41.04	37.32	36.72	36.07	37.64	38.03	38.30	38.97	39.72	39.62
31	41.52	.....	40.90	.....	36.61	.....	37.87	37.96	.....	38.79	.....	39.62

a Wetted-tape measurement.

b Estimated.

## Portage Township

Ko Pg 47. Upjohn Co. streptomycin plant. SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 14, T. 3 S., R. 11 W., about 1,620 feet south of Bishop Road and 1,080 feet east of Portage Street. Drilled industrial well, diameter 16 inches, measured depth 103 feet below land surface. Measuring point, top of recorder shelf, 4.6 feet above land-surface datum. Automatic water-stage recorder installed Apr. 23, 1947, removed Dec. 17, 1947.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	a16.66	16.71	16.25	17.36	18.36	18.79	19.50	19.70
2	.....	16.65	16.50	16.30	17.40	18.38	18.81	19.52	19.73
3	.....	16.66	16.14	16.34	17.44	b18.40	b18.83	19.54	19.71
4	.....	16.65	16.00	16.37	17.48	18.42	b18.86	19.56	19.70
5	.....	16.66	b15.91	16.39	17.52	18.44	18.89	19.59	19.68
6	.....	16.68	15.87	16.40	17.56	18.46	18.90	19.61	19.65
7	.....	16.68	15.83	16.45	17.60	18.50	18.92	19.62	19.61
8	.....	16.71	15.79	b16.49	17.64	18.52	18.95	b19.65	19.67
9	.....	16.71	15.77	16.53	17.69	18.55	18.97	.....	.....
10	.....	16.74	15.76	16.55	17.73	18.58	19.00	.....	.....
11	.....	18.96	15.75	16.59	17.77	b18.59	19.03	.....	.....
12	.....	19.08	15.82	16.63	17.80	18.58	19.03	.....	.....
13	.....	19.10	a18.13	16.65	17.82	18.55	19.05	.....	a19.45
14	.....	19.15	.....	16.69	17.85	18.58	19.07	.....	19.45
15	.....	19.17	.....	16.75	17.90	18.60	19.11	.....	19.44
16	.....	a16.99	.....	16.76	17.94	18.65	19.14	.....	19.44
17	.....	16.92	.....	16.80	17.98	18.66	19.16	.....	19.90
18	.....	16.85	.....	16.83	18.02	18.69	19.18	.....	.....
19	.....	16.84	a15.95	16.89	18.05	b18.70	19.20	.....	.....
20	.....	16.83	15.97	16.93	b18.09	.....	19.23	.....	.....
21	.....	16.82	16.00	16.97	18.12	.....	19.25	.....	.....
22	.....	16.80	16.03	17.01	18.15	.....	19.30	.....	.....
23	a17.10	16.78	16.06	17.01	18.20	.....	19.32	.....	.....

a Wetted-tape measurement.

b Estimated.

Ko Pg 47--Continued.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
24	17.08	16.77	.....	17.05	18.23	.....	19.34	.....	.....
25	17.05	16.73	a16.14	17.10	18.26	b18.65	19.36	.....	.....
26	17.03	16.72	16.12	17.13	18.28	18.67	19.36	.....	.....
27	16.97	16.74	16.14	17.40	18.27	18.69	19.38	.....	.....
28	.....	16.71	16.16	17.21	18.32	18.71	19.40	.....	.....
29	.....	16.65	16.20	17.25	18.34	18.72	19.44	a19.71	.....
30	.....	16.72	16.24	17.28	18.33	18.77	19.46	19.72	.....
31	.....	16.73	.....	17.31	18.34	.....	19.48	.....	.....

a Wetted-tape measurement.

b Estimated.

## Schoolcraft Township

Ko Sc 4 (\*1023, p. 128; 1071, p. 148). H. H. Chamberlain. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 21, T. 4 S., R. 11 W., about 1.5 miles east of Schoolcraft and 0.5 mile south of the Schoolcraft-Vicksburg Road.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	15.69	Apr. 9	13.89	July 7	11.74	Oct. 6	12.77
13	15.75	13	13.45	14	11.89	12	12.90
20	15.72	21	13.22	20	11.95	20	12.97
27	15.65	28	12.93	28	11.98	26	13.10
Feb. 1	15.62	May 5	12.63	Aug. 4	12.20	Nov. 3	13.00
10	15.60	12	12.63	11	12.25	10	13.27
17	15.66	19	12.44	17	12.39	17	13.29
25	15.72	26	12.39	25	12.42	24	13.38
Mar. 3	15.76	June 2	12.32	Sept. 1	12.46	Dec. 1	13.47
10	15.79	9	12.06	8	12.52	8	13.52
17	15.34	16	11.89	15	12.59	15	13.58
24	15.10	23	11.79	22	12.59	29	13.69
30	14.85	30	11.75	29	12.74		

Kalkaska County

## Clearwater Township

Ka Cw 13 (\*944, p. 67; \*986, p. 69; 1016, p. 103; 1023, p. 128; 1071, p. 148). NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 27, T. 27 N., R. 5 W.

Water level, in feet below land-surface datum, 1947

Jan. 13	15.72	Apr. 17	14.89	July 14	14.19	Oct. 15	15.00
Feb. 13	15.98	May 14	14.32	Aug. 13	14.51	Nov. 13	15.27
Mar. 12	16.22	June 13	14.10	Sept. 16	14.81	Dec. 15	15.50

Ka Cw 100 (\*886, p. 274; \*906, p. 62; 936, p. 65; 944, p. 67; \*986, p. 69; 1016, p. 103; 1023, p. 128; 1071, p. 148). NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 36, T. 27 N., R. 5 W.

Water level, in feet below land-surface datum, 1947

Jan. 13	13.53	Apr. 17	12.45	July 14	11.93	Oct. 15	12.48
Feb. 13	13.66	May 14	11.50	Aug. 13	12.36	Nov. 13	12.97
Mar. 12	13.79	June 13	11.52	Sept. 16	12.75	Dec. 15	13.15

Missaukee County

(No measurements made in 1947.)

Montmorency County

## Albert Township

My Ab 7 (\*1071, p. 149). Michigan Department of Conservation. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 27, T. 29 N., R. 2 E., about 200 feet east of Avery Lake Road and 20 feet south of county road 612.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 30	a 0.86	June 30	a 0.50	Aug. 29	0.87	Oct. 23	1.09
May 29	a .98	Aug. 1	.13	Sept. b	1.37	Nov. 28	.55

a Above land-surface datum.

b Last quarter of month.

## Briley Township

My Br 6 (\*840, pp. 156, 157; 845, p. 156; 886, p. 275; 906, p. 63; 936, p. 66; 944, p. 67; \*986, p. 70; 1016, p. 104; 1023, p. 129; \*1071, p. 149). NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 11, T. 31 N., R. 2 E.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	11.15	June 30	8.80	Aug. 29	10.50	Oct. 23	10.87
Apr. 30	8.24	Aug. 1	9.71	Sept. a	10.70	Nov. 28	10.52
May 29	7.83						

a Last quarter of month.

My Br 8 (\*1071, p. 150). Michigan Department of Conservation. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 6, T. 30 N., R. 2 E., 150 feet south and 40 feet east of 90-degree bend in road.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level
June 30	2.20	Sept. a	2.44	Nov. 28	2.77
Aug. 29	2.45	Oct. 23	2.72		

a Last quarter of month.

My Br 15 (\*840, pp. 156, 157; 845, p. 156; 886, p. 275; 906, p. 63; 936, p. 66; 944, p. 67; \*986, p. 70; 1016, p. 104; 1023, p. 129; 1071, p. 150). NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 14, T. 31 N., R. 2 E. No measurements made in 1947.

My Br 18 (\*845, p. 156; 886, p. 275; 906, p. 63; 936, p. 66; 944, p. 67; \*986, p. 70; 1016, p. 104; 1023, p. 129; 1071, p. 150). SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 15, T. 31 N., R. 2 E. No measurements made in 1947.

My Br 28 (\*845, p. 156; 886, p. 275; 906, p. 63; 936, p. 66; 944, p. 67; \*986, p. 70; 1016, p. 104; 1023, p. 129; 1071, p. 150). SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 34, T. 31 N., R. 2 E. No measurements made in 1947.

## Hillman Township

My Hm 1 (\*840, pp. 156, 160; 845, p. 156; 886, p. 275; 906, p. 63; 936, p. 66; 944, p. 68; \*986, p. 70; 1016, p. 104; 1023, p. 129; 1071, p. 150). NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 8, T. 31 N., R. 4 E.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 30	1.68	June 30	2.07	Aug. 29	2.37	Oct. 23	2.27
May 29	1.54	Aug. 1	2.43	Sept. a	2.01	Nov. 28	2.37

a Last quarter of month.

My Hm 12 (\*840, pp. 156, 160; 845, p. 156; 886, p. 275; 906, p. 63; 936, p. 66; 944, p. 68; \*986, p. 70; 1016, p. 104; 1023, p. 129; 1071, p. 150). SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 20, T. 31 N., R. 4 E. No measurements made in 1947.

My Hm 22 (\*840, pp. 156, 158; 845, p. 156; 886, p. 275; 906, p. 63; 936, p. 66; 944, p. 68; \*986, p. 70; 1016, p. 104; 1023, p. 129; 1071, p. 150). NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 9, T. 31 N., R. 3 E. No measurements made in 1947.

My Hm 23 (\*840, pp. 156, 160; 845, p. 156; \*1071, p. 150). NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 34, T. 31 N., R. 4 E.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	0.78	May 29	0.20	Aug. 29	0.48	Oct. 23	0.61
Mar. 11	.70	June 30	.37	Sept. a	1.42	Nov. 28	.66
Apr. 30	.22	Aug. 1	.43				

a Last quarter of month.

My Hm 30 (\*840, pp. 156, 158; 845, p. 156; 886, p. 275; 906, p. 63; 936, p. 66; 944, p. 68; \*986, p. 70; 1016, p. 104; 1023, p. 129; 1071, p. 151). SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 7, T. 31 N., R. 3 E. No measurements made in 1947.

Loud Township

My Ld 6 (\*1071, p. 151). Michigan Department of Conservation. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 21, T. 29 N., R. 3 E., about 2.3 miles west of State Highway M-33 and 230 feet south of county road 612.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	5.26	May 29	2.99	Aug. 29	4.35	Oct. 23	4.84
Mar. 11	5.60	June 30	3.20	Sept. a	4.64	Nov. 28	5.05
Apr. 30	3.77	Aug. 1	3.66				

a Last quarter of month.

Rust Township

My Rs 4 (\*1071, p. 151). Michigan Department of Conservation. About the center of SW $\frac{1}{4}$  sec. 5, T. 29 N., R. 4 E., about 2.3 miles east of State Highway M-33 and 50 feet northwest of dirt road.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level
Apr. 30	11.63	June 30	9.95	Aug. 29	11.29
May 29	10.36	Aug. 1	10.39	Sept. a	11.03

a Last quarter of month.

My Rs 18 (\*840, pp. 155, 157; 845, p. 156; \*1071, p. 151). NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 26, T. 30 N., R. 4 E.

Water level, in feet above land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 11	0.74	June 30	0.55	Aug. 29	0.92	Oct. 23	0.38
Apr. 30	.90	Aug. 1	.51	Sept. a	.62	Nov. 28	.76
May 29	1.05						

a Last quarter of month.

Oakland County

City of Pontiac

Oa PT 1 (\*886, pp. 266, 276; 906, p. 63; 936, p. 66; 944, p. 68; \*986, p. 71; 1016, p. 104; 1023, p. 129; 1071, p. 152). City of Pontiac. Well 6 at Walnut Street pumping station, about 200 feet west of supply well 1.

Water level, in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	88.3	....	....	....	....	....	....	97.3	92.1	94.5	....	91.9
2	....	....	....	95.9	89.3	84.1	....	....	....	....	....	....
3	88.3	89.3	90.3	....	....	....	....	....	92.3	94.8	93.8	92.3
4	....	....	....	95.9	....	87.0	....	97.3	....	....	....	....
5	....	90.5	91.3	....	86.3	....	....	....	97.3	....	93.3	93.4
6	91.1	....	....	....	....	86.3	....	99.3	....	96.3	....	....

## Oa PT 1--Continued.

Water level, in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
7	....	84.3	94.8	93.8	86.9	....	....	....	....	....	95.5	....
8	87.9	....	....	....	....	....	....	99.3	96.9	96.3	....	92.0
9	....	....	....	94.7	89.4	87.5	....	....	....	....	....	....
10	90.0	86.4	92.9	....	....	....	....	....	97.3	96.0	92.7	92.5
11	....	....	....	93.9	....	90.0	....	98.3	....	....	....	....
12	....	91.3	94.0	....	88.3	....	....	....	97.3	....	94.1	92.1
13	91.6	....	....	....	....	91.6	....	99.3	....	93.8	....	....
14	....	90.1	93.3	92.3	87.3	....	....	....	....	....	94.6	....
15	92.1	....	....	....	....	....	....	98.3	94.3	94.0	....	90.3
16	....	....	....	93.3	88.0	89.9	....	....	....	....	....	....
17	90.8	87.7	94.3	....	....	....	....	....	96.1	97.2	91.0	92.3
18	....	....	....	89.8	....	89.4	....	97.7	....	....	....	....
19	....	90.3	95.1	....	88.0	....	....	....	96.9	....	91.8	92.9
20	85.6	....	....	....	....	87.1	....	98.3	....	96.1	....	....
21	....	91.5	92.3	90.1	88.7	....	90.8	....	....	....	93.2	....
22	91.0	....	....	....	....	....	....	98.5	....	96.3	....	89.7
23	....	....	....	92.3	89.9	86.4	89.6	....	94.5	....	....	....
24	90.3	87.9	92.9	....	....	....	....	....	94.8	95.3	91.1	91.6
25	....	....	....	92.8	....	91.3	94.3	99.3	....	....	....	....
26	....	90.6	91.3	....	86.5	....	....	....	95.2	....	92.6	88.4
27	....	....	....	....	....	93.3	....	99.3	....	94.1	....	....
28	....	87.3	95.3	90.9	92.0	....	89.2	....	....	....	91.7	....
29	89.6	....	....	....	....	....	....	95.3	94.5	95.3	....	89.2
30	....	....	....	89.9	86.5	92.8	98.3	....	....	....	....	....
31	88.2	....	....	....	....	....	....	....	....	94.6	....	90.1

Oa PT 2 (\*886, pp. 266, 277; 906, p. 64; 936, pp. 66, 67-68; 944, p. 68; \*986, p. 71; 1016, p. 106; 1023, p. 130; 1071, p. 152). City of Pontiac. Well 21 in Walnut Street well group, about 40 feet northwest of supply well 3.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 20	95.7	June 2	96.3	June 11	100.1	June 23	96.9
May 26	96.9	6	94.8	20	95.9	July-25	98.1
30	96.6	9	98.7				

Oa PT 3 (\*886, pp. 266, 276; 906, p. 64; 936, p. 66; 944, p. 68; \*986, p. 71; 1016, p. 106; 1023, p. 131; 1071, p. 153). City of Pontiac. Just outside pump house of East Boulevard supply well, near intersection of East Boulevard and Mount Clemens Street.

Water level, in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	38.6	....	....	....	....	....	....	43.4	44.1	45.6	....	45.9
2	....	....	....	43.5	27.8	27.5	....	....	....	....	....	....
3	38.1	44.6	45.4	....	....	....	....	....	....	....	45.2	45.6
4	....	....	....	43.6	....	28.3	....	43.1	....	....	....	....
5	....	45.5	....	....	25.0	....	....	....	44.6	....	45.3	45.7
6	36.9	....	....	....	....	29.6	....	....	....	44.6	....	....
7	....	45.6	....	39.9	25.8	....	....	....	....	....	45.3	....
8	39.6	....	....	....	....	....	....	....	....	....	....	....
9	....	....	....	39.9	26.3	29.3	....	44.1	46.6	44.9	....	45.1
10	39.1	42.6	44.4	....	....	....	....	....	46.9	45.0	45.5	45.1
11	....	....	....	38.4	....	30.3	....	44.6	....	....	....	....
12	....	43.8	45.0	....	23.8	....	....	....	46.0	....	45.3	45.5
13	38.8	....	....	....	....	31.4	....	44.9	....	45.0	....	....
14	....	45.0	45.3	33.2	24.9	....	....	....	....	....	45.3	....
15	40.1	....	....	....	....	....	....	45.6	43.1	44.8	....	45.5
16	....	....	....	33.1	24.9	31.5	....	....	....	....	....	....
17	43.6	43.3	44.2	....	....	....	....	....	42.9	44.6	45.4	45.6
18	....	....	....	33.8	....	31.9	....	....	....	....	....	....
19	....	45.0	45.0	....	28.1	....	....	....	44.1	....	45.3	45.9
20	42.8	....	....	....	....	33.4	....	....	....	44.3	....	....
21	....	45.6	45.3	29.4	28.3	....	41.0	....	....	....	45.4	....

## Oa PT 3--Continued.

Water level, in feet below land-surface datum, 1947											
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. Dec.
22	44.9	....	....	....	....	....	....	....	....	44.9	.... 45.7
23	....	....	....	29.9	26.6	32.7	41.3	....	45.1	....	....
24	46.0	44.8	44.7	....	....	....	....	....	44.9	49.1	45.5 46.0
25	....	....	....	29.3	....	33.6	41.9	45.7	....	....	....
26	....	45.6	47.2	....	26.1	....	....	....	45.4	....	45.6 46.3
27	44.0	....	....	....	....	34.9	....	45.2	....	45.2	....
28	....	46.0	45.0	26.6	27.2	....	42.5	....	....	....	45.7
29	46.0	....	....	....	....	....	....	44.9	45.6	45.2	.... 45.6
30	....	....	....	27.6	27.9	36.2	42.7	....	....	....	....
31	46.1	....	....	....	....	....	....	....	....	45.0	.... 45.9

Oa PT 4 (\*1071, p. 153). G. A. Blaylock. Old Pierce well, about 150 feet west of Lake Avenue and 120 feet north of Grand Trunk railroad tracks.

## Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. Dec.
1	92.7	92.9	93.4	96.6	93.2	87.4	98.6	....	....	96.5	97.0 92.4
2	92.6	92.8	92.2	96.7	....	86.0	99.1	....	a94.2	96.5	95.5 93.7
3	92.2	90.2	90.9	97.3	....	90.4	99.3	....	97.4	98.7	95.3 94.5
4	93.6	91.7	93.3	96.9	88.9	92.6	99.8	a96.33	97.6	97.8	96.2 ....
5	92.7	93.5	94.1	97.3	87.5	89.0	96.4	99.8	98.0	98.3	95.6 ....
6	91.0	93.5	96.5	96.1	90.6	89.0	96.1	101.0	99.3	96.8	96.3 ....
7	90.5	94.0	....	95.3	90.1	93.3	94.3	101.7	97.7	97.9	97.0 ....
8	92.8	94.2	....	96.4	91.1	89.7	94.3	101.6	97.1	98.6	96.9 a92.7
9	95.0	92.7	....	96.6	89.9	89.7	96.4	101.5	99.8	98.5	95.3 94.0
10	94.4	91.7	a96.00	97.5	93.2	b91.7	98.3	99.1	100.8	98.3	94.8 94.1
11	94.8	....	....	96.7	90.2	94.3	98.5	97.8	100.7	97.8	95.2 93.4
12	94.0	....	99.2	96.1	97.5	95.9	99.1	99.8	101.0	97.4	96.0 93.5
13	91.1	....	98.5	96.7	89.6	95.1	98.3	101.5	100.9	96.3	97.2 94.5
14	95.9	....	98.5	92.7	90.5	....	96.2	102.1	99.1	97.5	97.0 93.6
15	94.7	....	97.2	94.3	91.6	....	97.7	101.5	97.9	98.3	96.3 91.5
16	91.1	....	96.3	95.1	91.8	a97.9	97.7	100.4	97.4	99.0	94.5 92.6
17	92.7	....	95.9	92.6	91.8	....	97.8	98.9	99.1	99.9	94.6 93.5
18	93.5	....	96.9	92.1	88.5	....	98.8	98.2	99.5	100.1	94.3 93.3
19	91.9	....	98.2	96.1	87.4	....	....	100.9	100.0	97.9	93.9 93.6
20	87.2	a93.88	97.5	93.0	89.6	....	....	101.9	100.4	96.9	94.4 94.6
21	....	92.86	97.6	91.6	94.0	....	a99.8	101.9	97.9	98.5	95.1 91.8
22	....	93.46	97.9	94.3	93.7	....	90.1	102.0	97.3	98.3	95.3 91.1
23	....	91.68	96.9	94.3	93.8	a99.1	91.5	102.2	98.0	97.3	93.4 93.1
24	....	90.39	95.5	95.2	93.1	94.6	93.4	101.8	97.2	96.9	92.2 94.8
25	....	92.1	95.7	95.4	90.6	b93.5	93.7	99.8	97.4	98.7	93.6 92.6
26	....	93.4	97.2	95.7	87.0	95.8	94.9	100.9	97.0	97.5	94.1 90.6
27	a90.5	94.2	97.3	91.8	92.2	95.6	91.9	99.2	97.0	96.3	94.6 92.4
28	91.1	93.3	98.8	90.5	b91.9	....	90.4	....	95.6	97.2	92.9 90.9
29	92.0	....	96.9	91.9	91.4	....	95.2	....	94.0	96.7	94.6 90.9
30	92.5	....	96.3	91.5	b91.3	a93.4	b98.7	....	95.1	96.8	93.4 91.0
31	92.0	a95.7	....	88.6	....	....	....	....	....	96.9	.... 92.7

a Wetted-tape measurement.

b Estimated.

The average daily withdrawal of ground water from the municipal wells in Pontiac during 1946 ranged from 5.91 million gallons in March to 9.92 million gallons in July and averaged 7.95 million gallons for the year. During 1947, the withdrawal ranged from 8.18 million gallons in January to 11.84 million gallons in August and averaged 9.98 million gallons for the year.

Otsego County

## Otsego Lake Township

Os Ok 105 (\*840, p. 163; 845, p. 157; 886, p. 277; 906, p. 64; 936, p. 68; 944, p. 69; \*986, p. 72; 1016, p. 106; 1023, p. 131; 1071, p. 154). SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 32, T. 29 N., R. 3 W.

Os Ok 105--Continued.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	2.64	Apr. 17	0.67	July 14	1.91	Oct. 15	2.30
Feb. 13	2.68	May 14	.78	Aug. 13	2.46	Nov. 13	2.46
Mar. 12	2.73	June 13	1.38	Sept. 17	2.43	Dec. 15	2.33

Os Ok 106 (\*840, p. 163; 845, p. 157; 886, p. 277; 906, p. 64; 936, p. 68; 944, p. 69; \*986, p. 72; 1016, p. 107; 1023, p. 132; 1071, p. 154). SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 29, T. 29 N., R. 5 W.

## Water level, in feet below land-surface datum, 1947

Jan. 13	8.20	Apr. 17	5.81	July 14	6.90	Oct. 15	7.78
Feb. 13	8.23	May 14	5.56	Aug. 13	7.39	Nov. 13	7.81
Mar. 12	8.27	June 13	6.24	Sept. 17	7.75	Dec. 15	7.81

Ottawa County

## Holland Township

Ot Ho 2 (\*1023, p. 132; 1071, p. 154). City of Holland. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 28, T. 5 N., R. 15 W., 507 feet west of Waverly Road and 28 feet south of 8th Street.

## Water level, in feet below land-surface datum, 1947

Jan. 3	41.25	Apr. 28	42.65	July 14	40.34	Oct. 21	(a)
10	41.04	May 5	42.56	21	40.72	28	(a)
17	41.38	12	40.24	Aug. 4	41.77	Nov. 4	(a)
24	41.22	19	39.86	11	41.95	11	(a)
31	41.69	26	40.13	25	(a)	18	(a)
Feb. 14	41.15	June 2	40.25	Sept. 2	(a)	25	(a)
21	41.46	9	40.09	9	(a)	Dec. 2	(a)
Mar. 1	41.55	16	40.27	16	(a)	9	(a)
10	42.05	23	39.58	23	(a)	16	41.38
14	41.83	30	39.99	30	(a)	23	41.17
Apr. 14	42.89	July 7	40.28	Oct. 7	(a)	30	40.46
21	42.71						

a Dry.

Ot Ho 3. City of Holland. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 28, T. 5 N., R. 15 W., about 1,200 feet west of Waverly Road and 85 feet south of 8th Street. Unused drilled well, diameter 26 inches, measured depth 110.0 feet below land surface. Measuring point, top of recorder shelf, 4.8 feet above land-surface datum. Automatic water-stage recorder installed Sept. 3, 1947.

## Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Sept.	Oct.	Nov.	Dec.
1	.....	49.90	48.65	46.89
2	.....	49.76	48.44	47.00
3	50.74	49.70	48.29	46.86
4	50.94	49.68	48.18	47.08
5	51.00	49.50	48.01	46.50
6	51.06	49.33	48.21	46.87
7	51.11	49.40	47.95	46.60
8	50.97	49.44	47.95	46.49
9	50.89	49.53	47.87	47.06
10	51.07	49.57	48.10	46.86
11	51.10	49.55	47.67	46.76
12	50.83	49.41	47.74	46.75
13	51.18	49.26	47.73	46.55
14	51.13	49.32	47.68	46.41
15	50.72	49.18	47.30	46.43
16	50.62	49.15	47.14	46.43
17	50.58	49.06	47.55	46.64
18	50.49	48.99	47.50	46.50
19	50.76	48.87	47.40	46.49
20	51.08	48.95	47.37	46.45

a Wetted-tape measurement.



Ot Ho 3--Continued.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Sept.	Oct.	Nov.	Dec.
21	51.23	48.83	47.29	46.30
22	50.90	48.88	47.09	46.16
23	b50.60	48.89	47.10	46.14
24	50.31	48.98	46.90	46.40
25	50.56	48.84	47.07	46.06
26	50.35	48.67	47.05	45.97
27	50.33	48.65	47.12	45.83
28	50.11	48.59	47.12	45.92
29	49.86	48.63	47.14	46.06
30	50.06	48.63	47.13	45.79
31		48.67		45.80

a Wetted-tape measurement.

b Estimated.

Ot Ho 4. City of Holland. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 27, T. 5 N., R. 15 W., about 840 feet north of 16th Street and 80 feet east of Waverly Road. Unused drilled well, diameter 26 inches, measured depth 157.5 feet below land surface. Measuring point, top of recorder shelf, 2.5 feet above land-surface datum. Automatic water-stage recorder installed Sept. 3, 1947.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Sept.	Oct.	Nov.	Dec.
1	.....	62.58	62.25	61.69
2	.....	62.38	62.20	61.58
3	a62.13	62.32	62.03	61.39
4	62.17	62.25	61.82	61.87
5	62.02	62.37	61.59	60.92
6	62.22	62.38	61.98	61.41
7	62.31	62.42	61.86	61.22
8	62.36	62.41	61.73	60.92
9	62.28	62.49	61.90	61.77
10	62.21	62.44	62.36	61.76
11	62.23	62.26	61.73	61.51
12	62.23	62.24	62.14	61.60
13	62.19	62.25	62.27	61.54
14	62.27	62.25	62.36	61.17
15	62.40	62.17	61.83	61.07
16	62.57	62.26	61.61	60.95
17	62.63	62.23	62.30	61.58
18	62.59	62.22	62.26	61.45
19	62.46	62.19	62.28	61.73
20	62.38	62.32	62.38	61.74
21	62.09	62.36	62.70	61.49
22	62.49	62.32	62.04	61.36
23	62.62	62.23	61.97	61.28
24	62.37	62.59	61.43	61.62
25	62.70	62.27	61.43	61.37
26	62.68	62.17	61.64	60.93
27	62.70	61.98	61.76	61.19
28	62.47	61.92	61.68	61.30
29	62.19	62.07	61.83	61.51
30	b62.51	62.12	62.07	61.26
31		62.18		61.36

a Wetted-tape measurement.

b Estimated.

Ot Ho 5 (\*1023, p. 132; 1071, p. 154). City of Holland. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 28, T. 5 N., R. 15 W., 730 feet west of Waverly Road and 28 feet south of 8th Street.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	42.38	Feb. 21	42.69	Apr. 14	43.48	May 26	41.26
10	42.22	1	43.03	21	43.34	June 2	41.54
17	42.54	10	43.45	28	43.14	9	41.40
24	42.43	14	43.45	May 5	42.91	16	41.43
31	42.77	29	43.92	12	41.03	23	41.28
Feb. 14	42.44	Apr. 7	44.05	19	40.89	30	41.81

## Ot Ho 5--Continued.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 7	42.11	Sept. 2	44.98	Oct. 21	44.24	Dec. 2	42.89
14	42.50	9	45.11	28	44.01	9	42.92
21	42.64	16	45.29	Nov. 4	43.81	16	42.55
Aug. 4	43.79	23	45.17	11	43.56	23	42.36
11	44.15	30	45.06	18	43.39	30	42.02
25	44.89	Oct. 7	44.62	25	43.00		

Ot Ho 6 (\*1071, p. 155). City of Holland. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 28, T. 5 N., R. 15 W., about 1,020 feet north of 16th Street and 430 feet west of Waverly Road.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	55.14	Apr. 14	56.23	July 7	55.48	Oct. 21	57.01
10	54.86	21	56.42	14	55.28	28	56.75
17	55.28	28	56.37	21	55.62	Nov. 4	56.53
24	54.94	May 5	56.36	Aug. 4	56.00	11	56.48
31	55.46	12	55.74	11	56.36	18	56.79
Feb. 14	54.98	19	55.50	25	56.85	25	56.20
21	55.25	26	55.74	Sept. 2	57.01	Dec. 2	56.28
Mar. 1	55.25	June 2	55.67	9	57.10	9	56.46
10	55.64	9	55.52	16	57.41	16	55.89
14	55.21	16	55.90	23	57.24	23	56.01
29	55.72	23	55.82	30	57.49	30	55.85
Apr. 7	56.66	30	55.53	Oct. 7	57.12		

Ot Ho 7 (\*1071, p. 155). City of Holland. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 28, T. 5 N., R. 15 W., about 30 feet west of Waverly Road and 30 feet north of 16th Street.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	70.55	Apr. 14	71.55	July 7	71.96	Oct. 21	72.97
10	70.49	21	71.75	14	71.55	28	72.70
17	70.64	28	71.79	21	71.85	Nov. 4	72.56
24	70.39	May 5	71.85	Aug. 4	71.74	11	72.73
31	71.17	12	71.31	11	71.83	18	73.29
Feb. 14	70.55	19	71.18	25	71.94	25	72.68
21	70.89	26	71.49	Sept. 2	72.05	Dec. 2	73.14
Mar. 1	71.02	June 2	71.34	9	72.10	9	73.48
10	71.39	9	71.18	16	72.39	16	72.89
14	70.76	16	71.85	23	72.27	23	73.00
29	71.14	23	72.02	30	72.67	30	72.71
Apr. 7	72.00	30	72.05	Oct. 7	72.38		

Ot Ho 8 (\*1071, p. 155). City of Holland. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 34, T. 5 N., R. 15 W., about 3,970 feet east of Waverly Road and 15 feet south of 24th Street.

Water level, in feet above land-surface datum, 1947							
Date	Water level		Date	Water level			
	6-inch	8-inch		6-inch	8-inch		
Jan. 3	0.12	....	Apr. 14	4.33	....		
10	.21	....	21	4.67	....		
17	.30	....	28	4.96	....		
24	.57	1.05	May 5	5.00	....		
31	1.88	1.52	12	4.87	....		
Feb. 14	1.22	.62	19	5.00	....		
21	1.32	.66	26	5.16	....		
Mar. 1	1.42	1.89	June 2	5.27	....		
10	1.46	1.40	9	5.27	....		
14	1.56	1.32	16	5.13	4.71		
29	2.58	....	23	4.85	4.15		
Apr. 7	3.55	....	30	4.65	3.80		

Ot Ho 8--Continued.

Water level, in feet above land-surface datum, 1947

Date	Water level		Date	Water level	
	6-inch	8-inch		6-inch	8-inch
July 7	4.41	3.45	Oct. 21	1.67	1.60
14	2.50	3.16	28	1.58	1.49
21	2.54	2.94	Nov. 4	1.48	1.41
Aug. 4	2.39	2.32	11	1.56	1.54
11	2.09	2.05	18	1.52	1.63
25	1.96	....	25	1.52	1.80
Sept. 2	1.81	....	Dec. 2	1.51	1.80
9	1.72	....	9	1.81	3.36
16	1.85	....	16	2.05	2.81
23	1.93	....	23	2.21	3.54
30	1.93	2.09	30	2.35	3.07
Oct. 7	1.83	1.87			

Ot Ho 9 (\*1071, p. 156). City of Holland. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 28, T. 5 N., R. 15 W., about 960 feet north of 16th Street and 60 feet west of Waverly Road.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	57.99	Apr. 14	59.06	July 7	58.09	Oct. 21	60.90
10	57.63	21	59.24	14	57.92	28	59.64
17	58.15	28	59.22	21	58.32	Nov. 4	59.33
24	57.80	May 5	59.22	Aug. 4	58.61	11	59.44
31	58.38	12	58.61	11	58.94	18	59.57
Feb. 14	58.13	19	58.37	25	59.45	25	59.09
21	58.13	26	58.61	Sept. 2	59.74	Dec. 2	59.06
Mar. 1	58.15	June 2	58.50	9	59.85	9	59.44
10	58.57	9	58.33	16	60.18	16	58.83
14	58.34	16	58.81	23	60.00	23	58.98
29	58.53	23	58.54	30	60.36	30	58.68
Apr. 7	59.50	30	58.21	Oct. 7	60.92		

Ot Ho 10 (\*1071, p. 156). City of Holland. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 27, T. 5 N., R. 15 W., about 750 feet north of 16th Street and 150 feet east of Waverly Road.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	61.41	Apr. 14	62.41	July 7	61.65	Oct. 21	63.41
10	61.10	21	62.61	14	61.40	28	62.97
17	61.58	28	62.61	21	61.81	Nov. 4	62.74
24	61.16	May 5	62.42	Aug. 4	62.04	11	62.84
31	61.75	12	62.09	11	62.35	18	63.20
Feb. 14	61.23	19	61.88	25	62.78	25	62.38
21	61.53	26	62.13	Sept. 2	63.04	Dec. 2	62.54
Mar. 1	61.58	June 2	62.01	9	63.15	9	62.85
10	61.99	9	61.86	16	63.46	16	62.33
14	61.46	16	62.58	23	63.34	23	62.43
29	61.88	23	62.01	30	63.69	30	62.17
Apr. 7	62.85	30	61.73	Oct. 7	63.33		

The average daily withdrawal of water from municipal wells at Holland in 1947 ranged from 1.63 million gallons in November to 3.24 million gallons in August and averaged 2.15 million gallons for the year.

Presque Isle County

(No measurements made in 1947.)

Roscommon County

## Au Sable Township

Ro As 30 (\*840, pp. 170, 178; 845, p. 159; 886, pp. 278-279; 906, p. 66; 936, pp. 69-70; 944, p. 71; \*986, p. 75; 1016, p. 109; 1023, p. 135; 1071, p. 157). NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 34, T. 24 N., R. 1 W.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	(a)	Apr. 18	16.72	July 15	15.74	Oct. 14	16.97
Feb. 14	(a)	May 15	15.97	Aug. 13	16.10	Nov. 14	(a)
Mar. 13	17.05	June 12	15.62	Sept. 17	16.64	Dec. 15	(a)

a Dry.

## Backus Township

Ro Bk 3 (\*840, pp. 169, 174-175; 845, p. 158; 886, p. 278; 906, p. 65; 936, p. 69; 944, p. 70; \*986, p. 74; 1016, p. 108; 1023, p. 133; 1071, p. 157). SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 6, T. 22 N., R. 2 W. No measurements made in 1947.

Ro Bk 9 (\*840, pp. 169, 174; 845, p. 158; 886, p. 278; 906, p. 65; 936, p. 69; 944, p. 70; \*986, p. 74; 1016, p. 108; 1023, p. 133; 1071, p. 157). NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 14, T. 22 N., R. 2 W.

Water level, in feet below land-surface datum, 1947

Jan. 14	5.92	Apr. 18	4.12	July 15	4.97	Oct. 14	6.00
Feb. 14	5.82	May 15	4.16	Aug. 13	5.72	Nov. 14	5.70
Mar. 13	5.86	June 12	4.38	Sept. 16	6.63	Dec. 15	5.18

Ro Bk 15 (\*840, pp. 169, 174; 845, p. 158; 886, p. 278; 906, p. 65; 936, p. 69; 944, p. 70; \*986, p. 74; 1016, p. 108; 1023, p. 133; 1071, p. 157). NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 17, T. 22 N., R. 2 W.

Water level, in feet below land-surface datum, 1947

Jan. 14	4.37	Apr. 18	1.92	July 15	2.53	Oct. 14	3.70
Feb. 14	4.27	May 15	1.86	Aug. 13	3.40	Nov. 14	3.54
Mar. 13	4.37	June 12	1.75	Sept. 16	4.38	Dec. 15	2.96

Ro Bk 16 (\*840, pp. 169, 174; 845, p. 158; 886, p. 278; 906, p. 65; 936, p. 69; 944, p. 71; \*986, p. 74; 1016, p. 108; 1023, p. 134; 1071, p. 157). NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 18, T. 22 N., R. 2 W.

Water level, in feet below land-surface datum, 1947

Jan. 14	5.82	Apr. 18	3.23	July 15	3.53	Oct. 14	4.85
Feb. 14	5.83	May 15	2.93	Aug. 13	4.51	Nov. 14	4.81
Mar. 13	5.92	June 12	2.70	Sept. 16	5.52	Dec. 15	4.23

## Denton Township

Ro Dt 7 (\*840, pp. 169, 175; 845, p. 159; 886, p. 278; 906, p. 65; 936, p. 69; 944, p. 71; \*986, p. 74; 1016, p. 108; 1023, p. 134; 1071, p. 157). SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 22, T. 22 N., R. 3 W.

Water level, in feet below land-surface datum, 1947

Jan. 14	7.76	Apr. 18	5.84	July 15	4.24	Oct. 14	6.22
Feb. 14	7.93	May 15	4.43	Aug. 13	5.22	Nov. 14	6.46
Mar. 13	7.58	June 12	4.00	Sept. 16	6.25	Dec. 15	5.97

Ro Dt 20 (\*840, pp. 170, 175; 845, p. 159; 886, p. 278; 906, p. 65; 936, p. 69; 944, p. 71; \*986, p. 74; 1016, p. 109; 1023, p. 134; 1071, p. 158). SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 31, T. 22 N., R. 3 W.

Water level, in feet below land-surface datum, 1947

Jan. 14	7.44	Apr. 18	6.19	July 15	6.76	Oct. 14	7.69
Feb. 14	7.39	May 15	6.10	Aug. 13	7.60	Nov. 14	7.45
Mar. 13	7.41	June 12	6.32	Sept. 16	7.95	Dec. 15	7.12

Ro Dt 26 (\*840, pp. 170, 175; 845, p. 159; 886, p. 278; 906, p. 65; 936, p. 69; 944, p. 71; \*986, p. 74; 1016, p. 109; 1023, p. 134; 1071, p. 158). SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 34, T. 22 N., R. 3 W.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	7.76	June 12	4.57	Sept. 16	6.11	Nov. 14	6.66
Apr. 18	6.65	July 15	4.74	Oct. 14	6.34	Dec. 15	6.63
May 15	5.12	Aug. 13	5.35				

#### Gerrish Township

Ro Gr 1 (\*840, pp. 171, 180; 845, p. 159; 886, p. 278; 906, p. 66; 936, p. 69; 944, p. 72; \*986, p. 76; 1016, p. 110; 1023, p. 136; 1071, p. 158). NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 24, T. 24 N., R. 3 W.

Water level, in feet below land-surface datum, 1947

Jan. 14	10.95	Apr. 18	9.52	July 14	8.36	Oct. 14	9.77
Feb. 14	11.07	May 15	8.47	Aug. 13	8.88	Nov. 14	10.08
Mar. 12	11.24	June 12	7.97	Sept. 16	9.51	Dec. 15	10.23

Ro Gr 7 (\*840, pp. 171, 180; 845, p. 159; 886, p. 278; 906, p. 66; 936, p. 69; 944, p. 72; \*986, p. 77; 1016, p. 111; 1023, p. 136; 1071, p. 158). SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 15, T. 24 N., R. 3 W.

Water level, in feet below land-surface datum, 1947

Jan. 14	12.75	Apr. 18	10.04	July 14	10.38	Oct. 14	12.12
Feb. 14	12.61	May 15	9.10	Aug. 13	11.42	Nov. 14	12.40
Mar. 12	12.73	June 12	9.45	Sept. 16	12.17	Dec. 15	12.12

Ro Gr 17 (\*840, pp. 171, 180; 845, p. 159; 886, p. 279; 906, p. 66; 936, p. 70; 944, p. 73; \*986, p. 77; 1016, p. 111; 1023, p. 136; 1071, p. 158). NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 3, T. 24 N., R. 3 W.

Water level, in feet below land-surface datum, 1947

Jan. 14	12.82	Apr. 18	11.80	July 14	11.82	Oct. 14	12.23
Feb. 14	12.90	May 15	11.36	Aug. 13	12.09	Nov. 14	12.46
Mar. 12	13.04	June 13	11.65	Sept. 16	12.34	Dec. 15	12.49

#### Higgins Township

Ro Hg 1 (\*817, p. 85; \*840, pp. 170, 179; \*845, p. 160; \*886, p. 279; \*906, p. 67; \*936, p. 70; \*944, p. 72; \*986, p. 75; 1016, p. 110; \*1023, p. 135; 1071, p. 158). Michigan Department of Conservation, Roscommon recorder well. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 20, T. 24 N., R. 2 W., about 0.6 mile east of U. S. Highway 27 and 82 feet south of section road. Published incorrectly in previous reports as SW $\frac{1}{4}$  sec. 17.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	6.13	5.83	3.85	a3.63	4.14	a4.66	5.37	a5.09	5.40	5.41
2	....	....	a6.13	5.80	3.82	a3.64	4.16	a4.68	a5.39	5.09	5.40	5.41
3	....	....	a6.13	5.76	3.70	3.68	4.18	a4.70	....	5.10	5.41	5.41
4	....	....	6.13	5.69	3.61	3.70	4.21	a4.72	....	5.11	5.41	5.42
5	a6.09	....	6.13	5.65	3.55	3.70	4.23	4.76	....	5.13	5.41	5.42
6	6.12	....	6.13	5.38	a3.50	3.71	4.26	4.78	....	5.14	5.41	5.41
7	6.12	....	6.13	4.97	3.44	3.73	a4.28	4.81	....	5.16	5.41	5.42
8	6.12	....	6.13	4.82	3.42	3.75	a4.31	4.85	a5.38	5.17	5.39	5.41
9	6.13	....	6.13	4.73	3.42	3.77	4.37	4.87	5.38	a5.19	5.39	5.37
10	6.13	a6.06	6.14	4.69	3.42	3.78	4.39	4.90	5.39	5.19	5.40	5.34
11	6.14	6.07	a6.14	4.60	3.42	3.79	4.39	4.93	5.39	5.20	5.40	5.31
12	6.14	6.07	6.14	4.33	3.42	3.83	4.40	a4.96	5.35	5.21	5.40	5.31
13	6.14	6.07	6.14	4.21	3.42	3.85	4.42	5.00	5.32	5.21	5.40	a5.30
14	6.14	6.07	6.13	a4.13	3.44	3.83	4.43	5.02	5.29	5.22	5.40	5.28
15	6.13	6.07	6.12	a4.08	3.46	3.84	a4.21	5.05	5.32	5.23	5.40	5.28
16	6.10	6.08	6.12	a4.03	3.47	3.87	a4.24	5.08	5.35	5.24	5.40	5.28
17	6.09	6.08	6.12	a4.00	3.50	a3.89	a4.29	5.11	5.36	a5.26	5.40	5.28
18	6.08	6.08	6.12	a3.98	3.50	a3.90	a4.33	5.14	5.37	5.27	5.40	5.29

a Estimated.

Ro Hg 1--Continued.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
19	6.08	6.08	6.12	a3.98	3.50	a3.93	a4.36	a5.14	5.39	5.28	5.41	5.31
20	....	6.09	6.12	a3.97	a3.52	a3.94	a4.38	a5.15	5.39	5.31	5.41	5.31
21	....	6.09	6.07	a3.96	a3.53	a3.96	a4.39	5.15	5.38	5.32	5.41	5.31
22	....	6.09	6.08	3.94	a3.55	a3.98	a4.43	5.18	5.17	5.34	5.41	5.31
23	....	6.10	6.09	3.93	a3.55	a4.00	a4.46	5.21	a5.10	5.35	5.41	5.31
24	....	6.10	5.98	3.91	a3.56	4.01	a4.48	5.25	5.08	5.37	5.38	5.33
25	....	6.11	a5.87	3.90	a3.58	4.02	a4.50	a5.29	5.07	5.37	5.36	5.34
26	....	6.11	a5.83	3.89	a3.59	4.04	a4.53	5.30	5.07	5.37	5.36	5.34
27	....	6.12	5.82	3.87	a3.59	4.06	a4.55	5.32	5.07	5.38	5.36	5.34
28	....	6.12	5.82	3.87	a3.60	4.07	a4.57	5.34	5.07	5.38	5.36	5.36
29	....		5.82	3.87	a3.61	4.10	a4.60	5.34	5.07	5.39	5.40	5.36
30	....		5.82	3.85	a3.61	4.12	a4.62	5.35	5.08	5.39	5.41	5.36
31	....		a5.82		a3.63		a4.64	5.37		5.39		5.37

a Estimated.

Ro Hg 81 (\*840, pp. 170, 179; 845, p. 159; 886, p. 278; 906, p. 66; 936, p. 69; 944, p. 72; \*986, p. 76; 1016, p. 110; 1023, p. 136; 1071, p. 159). NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 3, T. 24 N., R. 2 W.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	4.94	Apr. 18	4.30	July 15	3.00	Oct. 14	3.70
Feb. 14	5.17	May 15	3.39	Aug. 13	3.28	Nov. 14	3.92
Mar. 13	5.36	June 12	3.06	Sept. 16	3.52	Dec. 15	4.16

Ro Hg 88 (\*840, pp. 170, 179; 845, p. 159; 886, p. 278; 906, p. 66; 936, p. 69; 944, p. 72; \*986, p. 76; 1016, p. 110; 1023, p. 136; 1071, p. 159). NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 1, T. 24 N., R. 2 W.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	10.58	Apr. 18	8.34	July 15	8.18	Oct. 14	9.67
Feb. 14	10.55	May 15	7.37	Aug. 13	8.91	Nov. 14	9.93
Mar. 13	10.58	June 12	7.56	Sept. 16	9.60	Dec. 15	9.82

Ro Hg 107 (\*840, pp. 170-179; 845, p. 159; 886, p. 278; 906, p. 66; 936, p. 69; 944, p. 72; \*986, p. 76; 1016, p. 110; 1023, p. 136; 1071, p. 159). SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 7, T. 24 N., R. 2 W.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	7.80	Apr. 18	5.72	July 14	6.71	Oct. 14	7.28
Feb. 14	7.84	May 15	5.57	Aug. 13	7.20	Nov. 14	7.29
Mar. 12	7.93	June 13	6.15	Sept. 16	7.47	Dec. 15	7.33

Ro Hg 150 (\*840, pp. 171, 179; 845, p. 159; 886, p. 278; 906, p. 66; 936, p. 69; 944, p. 72; \*986, p. 76; 1016, p. 110; 1023, p. 136; 1071, p. 159). NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 19, T. 24 N., R. 2 W.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	4.95	Apr. 18	2.06	July 15	2.49	Oct. 14	4.42
Feb. 14	4.99	May 15	2.00	Aug. 13	4.23	Nov. 14	4.55
Mar. 12	5.22	June 12	2.40	Sept. 16	4.41	Dec. 15	4.03

Ro Hg 1000 (\*886, p. 278; 906, p. 66; 936, p. 69; 944, p. 72; \*986, p. 76; 1016, p. 110; 1023, p. 136; 1071, p. 159). NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 21, T. 24 N., R. 2 W.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	7.58	Apr. 18	4.59	July 14	3.52	Oct. 14	6.23
Feb. 14	7.58	May 15	2.97	Aug. 13	4.30	Nov. 14	5.97
Mar. 12	7.72	June 12	3.02	Sept. 16	5.17	Dec. 15	5.98

## Markey Township

Ro Mk 5 (\*840, pp. 170-178; 845, p. 159; 886, p. 278; 906, p. 65; 936, p. 69; 944, p. 71; \*986, p. 75; 1016, p. 109; 1023, p. 135; 1071, p. 160). SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 25, T. 23 N., R. 3 W.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	5.71	Apr. 18	3.98	July 15	4.96	Oct. 14	5.67
Feb. 14	5.58	May 15	3.92	Aug. 13	5.75	Nov. 14	5.52
Mar. 13	5.74	June 12	4.24	Sept. 16	6.13	Dec. 15	5.14

Ro Mk 75 (\*845, p. 158; 886, p. 278; 906, p. 65; 936, p. 69; 944, p. 71; \*986, p. 75; 1016, p. 109; 1023, p. 135; 1071, p. 160). SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 12, T. 23 N., R. 3 W.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	9.27	Apr. 18	7.92	July 15	7.79	Oct. 14	8.50
Feb. 14	9.24	May 15	7.64	Aug. 13	8.11	Nov. 14	8.67
Mar. 13	9.37	June 12	7.63	Sept. 16	8.59	Dec. 15	8.38

## Richfield Township

Ro Rf 5 (\*840, pp. 169, 174; 845, p. 158; 886, p. 278; 906, p. 65; 936, p. 69; 944, p. 70; \*986, p. 73; 1016, p. 108; 1023, p. 133; 1071, p. 160) NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 11, T. 22 N., R. 1 W.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	5.38	Apr. 18	3.09	July 15	2.85	Oct. 14	4.69
Feb. 14	5.49	May 15	2.56	Aug. 13	3.94	Nov. 14	4.48
Mar. 13	5.52	June 12	2.43	Sept. 16	4.90	Dec. 15	4.20

Ro Rf 50 (\*886, p. 278; 906, pp. 65-66; 936, p. 69; 944, p. 71; \*986, p. 75; 1016, p. 109; 1023, p. 133; 1071, p. 160). SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 31, T. 23 N., R. 1 W.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	6.58	Apr. 18	3.87	July 15	3.37	Oct. 14	5.27
Feb. 14	6.58	May 15	3.18	Aug. 13	4.21	Nov. 14	5.69
Mar. 13	6.67	June 12	3.00	Sept. 16	5.16	Dec. 15	5.23

## Roscommon Township

Ro Ro 3 (\*840, pp. 168, 171-172; 845, p. 158; 886, p. 278; 906, p. 65; 936, p. 69; 944, p. 70; \*986, p. 73; 1016, p. 107; 1023, p. 133; 1071, p. 160). NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 2, T. 21 N., R. 3 W.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	16.28	Apr. 18	16.17	July 15	14.66	Oct. 14	15.28
Feb. 14	16.53	May 15	15.08	Aug. 13	14.76	Nov. 14	15.50
Mar. 13	16.57	June 12	14.50	Sept. 16	15.06	Dec. 15	15.70

Ro Ro 8 (\*840, pp. 169, 172-173; 845, p. 158; 886, p. 278; 906, p. 65; 936, p. 69; 944, p. 70; \*986, p. 73; 1016, p. 107; 1023, p. 133; 1071, p. 161). NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 13, T. 21 N., R. 4 W.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	4.42	June 12	2.57	Sept. 16	4.78	Nov. 14	4.25
Apr. 18	2.04	July 15	2.72	Oct. 14	4.34	Dec. 15	3.47
May 15	2.27	Aug. 13	4.05				

Ro Ro 15 (\*840, pp. 168, 171-172; 845, p. 158; 886, p. 278; 906, p. 65; 936, p. 69; 944, p. 70; \*986, p. 73; 1016, p. 107; 1023, p. 133; 1071, p. 161). NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 5, T. 21 N., R. 3 W.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	10.12	Apr. 18	9.25	July 15	9.50	Oct. 14	9.93
Feb. 14	10.13	May 15	9.15	Aug. 13	9.73	Nov. 14	9.90
Mar. 13	10.17	June 12	9.25	Sept. 16	9.94	Dec. 15	9.81

Ro Ro 50 (\*886, p. 278; 906, p. 65; 936, p. 69; 944, p. 70; \*986, p. 73; 1016, p. 108; 1023, p. 133; 1071, p. 161). NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 4, T. 21 N., R. 4 W.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	5.68	Apr. 18	2.12	July 15	3.95	Oct. 14	6.09
Feb. 14	5.52	May 15	2.17	Aug. 13	5.45	Nov. 14	5.90
Mar. 13	5.57	June 12	2.54	Sept. 16	6.26	Dec. 15	5.18

Saginaw County

Village of Chesaning

Sg CH 8. A. B. Adelman. Community well, 30 feet east of Clark Street and 20 feet south of Church Street. Unused domestic well, diameter 4 inches, measured depth 149.5 feet below land surface. Measuring point, top of 4-inch casing, 0.3 foot above land-surface datum.

Water level, in feet below land-surface datum, 1947

Apr. 3	14.54	Apr. 6	26.50	Apr. 9	20.45	Aug. 26	40.17
4	14.95	7	29.68	June 10	31.48	Sept. 5	38.58
5	21.46	8	24.05	July 15	29.24		

St. Joseph County

City of Three Rivers

Sp TR 1 (\*886, p. 279; 906, p. 67; 936, pp. 70, 71; 944, p. 73; \*986, p. 77; 1016, p. 111; 1023, p. 137; 1071, p. 161). City of Three Rivers. About 350 feet south of West Michigan Street, on an island at the confluence of the St. Joseph and Rock Rivers.

Water level, in feet below land-surface datum, 1947

May 5	0.08	July 19	a 0.40	Sept. 6	4.30	Nov. 15	1.90
10	.70	26	2.15	13	4.25	22	2.05
17	a 1.95	31	1.65	20	a .30	29	4.40
June 14	.30	Aug. 2	2.06	27	5.50	Dec. 6	.35
21	a .80	9	2.42	Oct. 4	3.90	13	1.30
28	a .90	16	3.20	25	a .13	20	1.60
July 5	.60	23	5.10	31	a .30	27	a .50
12	a 2.58	30	1.36	Nov. 8	1.00		

a Above land-surface datum.

Florence Township

Sp Fr 2 (\*1023, p. 137; 1071, p. 161). J. C. Barnhart. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 6, T. 7 S., R. 11 W.

Water level, in feet below land-surface datum, 1947

Jan. 2	15.46	Apr. 3	14.23	July 3	9.69	Oct. 9	11.77
9	15.67	10	13.27	10	9.80	16	11.91
16	15.33	17	12.67	17	9.90	23	12.05
23	15.25	24	12.20	24	10.08	30	12.18
30	15.21	May 1	11.64	31	10.20	Nov. 6	12.30
Feb. 6	15.16	8	11.45	Aug. 7	10.36	13	12.42
13	15.15	15	11.38	14	10.55	20	12.55
20	15.08	22	11.02	21	10.72	27	12.70
27	15.06	29	10.43	Sept. 4	11.06	Dec. 4	12.81
Mar. 6	15.07	June 5	9.81	11	11.19	11	12.90
13	15.04	12	9.47	18	11.35	18	12.97
20	14.74	19	9.44	25	11.49	25	13.04
27	14.41	26	9.50	Oct. 2	11.63		



Washtenaw County

## Pittsfield Township

Wa Pf 1 (\*906, pp. 67-68; 936, p. 71; 944, p. 73; \*986, p. 77; 1016, p. 111; 1023, p. 137; 1071, p. 162). City of Ann Arbor. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 16, T. 3 S., R. 6 E., about 200 feet south of main building of Steere Farm pumping station of city water works. Measurements by city personnel.

Water level, in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	1.59	2.31	....	....	....	....	1.32	1.49	1.73	1.97	2.32
2	5.02	....	2.05	....	a .60	....	.05	1.33	....	1.74	2.05	....
3	....	1.38	2.10	.32	a .60	....	.05	1.25	1.43	1.76	2.08	....
4	5.12	1.30	....	....	....	a .60	.00	....	....	....	....	2.32
5	....	3.99	1.90	....	....	a .60	.05	....	1.23	....	2.06	....
6	....	3.82	....	....	....	a .60	.05	1.25	1.70	1.87	2.07	2.08
7	....	3.96	1.65	.50	a .60	a .60	.05	1.24	....	1.56	2.09	....
8	5.52	3.85	1.50	....	....	....	....	1.31	1.47	1.87	2.10	1.85
9	5.51	....	1.45	.95	a .60	a .60	.15	1.39	....	1.90	2.10	....
10	5.59	3.00	1.63	.60	a .60	....	.20	....	....	1.87	2.11	....
11	5.63	....	....	.65	a .60	a .60	.22	1.50	1.48	1.77	....	1.84
12	5.68	....	1.19	.70	(b) a .60	a .60	.30	....	1.48	....	2.13	....
13	5.74	4.33	.84	.65	....	a .60	.15	1.52	....	1.97	....	1.81
14	....	....	1.82	.70	a .60	a .60	.49	1.54	1.19	....	2.11	1.76
15	5.82	4.32	1.30	....	....	....	....	1.60	1.17	2.01	2.12	....
16	2.80	4.44	1.24	.60	a .60	a .60	.46	1.62	....	2.09	....	....
17	2.35	....	3.87	.45	....	....	.55	1.64	1.34	2.09	....	1.79
18	5.00	....	....	.45	a .60	a .60	....	1.64	....	....	....	1.79
19	5.15	4.42	3.45	.00	a .60	a .60	.54	....	1.31	2.18	3.33	1.80
20	....	4.41	3.73	....	....	a .60	....	1.45	1.32	1.81	3.00	....
21	....	4.66	4.07	....	a .60	a .60	.57	1.62	....	....	2.17	....
22	2.30	....	3.66	....	a .60	a .60	....	1.64	....	1.84	....	1.81
23	2.20	4.63	....	a .60	a .60	a .60	.61	a .60	....	1.92	....	....
24	1.90	4.65	....	a .60	a .60	....	.93	1.45	....	1.94	2.10	....
25	....	....	4.10	a .60	a .60	a .60	.93	1.41	....	1.99	....	2.05
26	1.80	....	....	a .60	a .60	a .60	.94	....	....	....	2.33	....
27	1.65	....	4.05	....	....	a .60	....	1.95	....	1.98	....	2.08
28	....	2.20	....	a .60	a .60	a .23	1.00	1.84	1.60	....	2.40	....
29	1.71	....	....	a .60	a .60	a .24	....	1.62	....	....	....	1.45
30	1.62	....	3.40	a .60	....	a .24	1.05	1.47	....	1.96	....	....
31	1.60	....	1.65	....	a .60	....	1.15	....	....	1.99	....	2.00

a Above land-surface datum.

b Flowing.

## York Township

Wa Yk 20 (\*1071, p. 162). Ypsilanti State Hospital. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 9, T. 4 S., R. 6 E., about 1,050 feet south of Willis Road and 110 feet east of Moon Road.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	54.28	54.32	54.33	54.85	54.75	54.27	53.28	52.64
2	.....	54.09	54.20	54.41	54.86	54.58	54.24	53.24	52.63
3	.....	54.14	54.30	54.45	54.85	54.64	54.18	53.16	52.69
4	.....	54.16	54.34	54.43	54.88	54.65	54.11	53.07	52.70
5	54.27	54.11	54.28	54.41	54.92	54.60	54.05	53.01	52.40
6	.....	.....	a54.26	54.40	54.95	54.58	54.01	53.08	52.49
7	.....	.....	54.19	54.44	54.96	54.60	54.01	53.08	52.47
8	.....	.....	54.13	54.50	55.03	54.60	53.98	52.96	52.22
9	a54.32	.....	54.13	54.50	55.07	54.57	54.02	52.93	52.61
10	54.41	.....	54.08	54.49	55.08	54.57	53.99	53.05	52.65
11	54.25	.....	54.09	a54.50	55.12	54.54	53.93	....	52.60
12	54.28	.....	54.24	b54.53	55.15	54.43	53.91	....	52.52
13	54.45	.....	54.19	54.52	55.15	54.37	53.88	....	52.47
14	54.30	55.89	54.03	54.48	55.15	54.38	53.87	b52.98	52.39
15	54.33	55.46	54.04	54.44	55.17	54.33	53.83	52.88	52.33
16	54.23	55.20	54.10	54.48	a55.22	54.41	53.85	52.76	52.16
17	54.25	55.16	54.09	54.49	.....	54.48	53.80	52.88	52.40

a Estimated.

b Wetted-tape measurement.

## 176 WATER LEVELS AND ARTESIAN PRESSURE, 1947, NORTHEASTERN STATES

Wa Yk 20--Continued.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
18	54.22	54.89	54.10	54.47	55.10	54.51	53.73	52.88	52.31
19	54.30	54.87	54.18	54.48	55.15	54.48	53.52	52.87	52.40
20	54.23	54.70	54.19	54.50	55.17	54.44	53.55	52.87	52.48
21	.....	54.56	54.21	54.44	55.13	54.30	53.55	52.88	52.42
22	.....	54.65	54.21	54.53	55.13	54.21	53.56	52.78	52.41
23	.....	54.67	54.21	54.56	55.09	54.33	53.56	52.78	52.36
24	.....	54.67	54.19	54.64	55.04	54.24	53.66	52.63	52.49
25	b54.30	54.48	54.18	54.70	54.99	54.33	53.53	52.60	52.41
26	54.31	54.46	54.20	54.67	54.99	54.36	53.49	52.63	52.22
27	54.15	54.52	54.21	54.63	55.00	54.35	53.40	52.66	52.32
28	54.35	54.42	54.20	54.63	54.98	54.29	53.28	52.60	52.27
29	54.26	54.30	54.26	54.69	54.94	54.13	53.26	52.64	52.34
30	54.17	54.41	54.33	54.72	54.80	54.25	53.27	52.72	52.31
31	.....	54.41	.....	54.73	54.78	.....	53.28	.....	52.30

a Estimated.

b Wetted-tape measurement.

Wa Yk 22 (\*1071, p. 163). Ynsilanti State Hospital. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 10, T. 4 S., R. 6 E., about 2,200 feet south of Willis Road and 15 feet east of Warner Road.

Water level at 2:00 a.m., in feet below land-surface datum, 1947

Day	Jan.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	76.4	.....	78.50	78.77	77.98	78.68	80.31	77.82	75.45	72.79	.....
2	76.2	.....	78.36	78.62	77.89	78.74	80.24	77.59	75.33	72.76	.....
3	76.1	.....	78.44	78.67	77.92	78.81	80.13	77.55	75.22	72.68	.....
4	76.28	.....	78.44	78.68	78.00	78.83	80.06	77.43	75.12	72.55	.....
5	76.24	.....	78.31	78.60	77.97	78.86	79.98	77.25	75.03	72.45a	71.76
6	76.19	.....	78.10	78.69a	77.91	78.89	79.87	77.14b	74.99	72.42	71.81
7	76.19	.....	78.25	78.55	77.88	78.98	79.75	77.09	74.89	72.45	71.86
8	76.14	.....	78.36	78.67	77.86	79.14	79.69	77.04	74.81	72.34b	71.62
9	76.18	.....	b78.28	78.71	77.87	79.23	79.66	76.95	74.78	72.34	71.80
10	76.20	.....	78.36	78.73	77.87	79.28	79.60	76.84	74.71	72.47b	71.84
11	76.02	.....	78.22	78.74	77.89b	79.37	79.56	76.73	74.61b	72.36b	71.79
12	76.02	.....	78.23	78.66	78.03a	79.57	79.49	76.58	74.53	.....a	71.83
13	76.11a	77.85	78.44	78.57	78.10	79.60	79.40	76.47	74.43	.....	71.83
14	76.04	.....	78.43	78.48	78.02	79.66	79.27	76.41	74.36a	72.35	71.77
15	76.05	.....	78.42	78.58	78.05	79.68	79.18	76.33	74.25	72.26	71.69
16	.....	.....	78.44a	78.54	78.17	79.78	.....	76.35	74.15	72.10	71.49
17	a76.11	.....	78.40	78.57	78.22	79.88	.....	76.37	73.98	72.23	71.71
18	76.08	.....	78.40	78.44	78.25	79.96a	79.07	76.34	73.78	72.26	71.63
19	76.07	.....	78.50	78.41	78.34	80.01	79.03	76.25	73.56	72.22	71.72
20	75.89	.....	78.56	78.21	78.42	80.15	78.92	76.14	73.55	72.19	71.76
21	75.80a	77.75	78.54	78.20	78.47	80.20	78.84	75.94	73.48	72.19	71.67
22	76.04	.....	78.64	78.06	78.51	80.33	78.79	75.77	73.40	72.11	71.66
23	76.05	.....	78.65	78.10	.....	80.42	78.72	75.84	73.32	72.01	.....
24	75.92	.....	78.59	78.06	.....	80.54	78.61	75.70	73.35	71.87	.....
25	75.96	.....	78.73	77.97	78.52	80.64	78.50	75.67	73.26	71.73	.....
26	.....	.....	78.78	77.91	78.52	80.62	78.42	75.67	73.19	71.75a	71.55
27	.....	.....	78.69	77.95b	78.53	80.56	78.35	75.67	73.09	71.82b	71.62
28	.....	.....	78.85	77.93	78.53	80.48	78.26	75.61	72.94	71.80	71.55
29	.....	.....	78.86	77.88	78.58	80.49	78.15	75.41	72.86	71.87	.....
30	.....	.....	78.73	77.93	78.66	80.45	77.98	75.47	72.80	71.99	.....
31	a75.55a	78.54	.....	78.00	.....	80.32b	77.89	72.80	.....	.....	.....

a Wetted-tape measurement.

b Estimated.

Wexford County

(No measurements made in 1947.)

## NEW HAMPSHIRE

By H. L. Free, Jr.

### PROGRAM OF WORK

Periodic measurements of water level, begun in New Hampshire in 1942 at one observation well near Bristol, in the town of Hill, Merrimack County, were continued in 1947. Twelve measurements were made at this well during the year.

The Manchester Water Works continued periodic measurements of water level, begun in 1942, at one observation well in Auburn, Rockingham County. A water-stage recorder was in operation on this well throughout the year.

An observation well was established at New London, Merrimack County, on October 6, 1947. Twelve weekly water-level measurements were made in this well during the year.

### FLUCTUATIONS OF WATER LEVEL

The fluctuations of water level in the well near Bristol appear to be due largely to precipitation and seasonal variations in temperature. Precipitation at nearby Franklin was 40.47 inches during the year, which is 0.6 inch above normal and about 0.2 inch less than in 1946. The water level in this well was above average from January through April and at the end of June, and below average in May and from July until the end of the year. It was at or near a new high stage for the month at the end of January, February, and April. The highest observed water level occurred at the end of April; the lowest observed water level occurred from the end of September through the end of December when the well was dry.

The abrupt rise in water level in the well near Bristol in March was due partly to temperatures high enough to melt part of the snow cover and to well above normal precipitation. The water level rose through the end of April, when it reached its highest recorded stage for the period 1942-47. From the end of April it declined steadily until the end of September, when, for the first time since it was established, the well was dry. Even in

November, when the precipitation, including very little snow, was far above normal, the well was dry. The water level did not recover by the date of the last measurement at the end of December. A considerable decrease in ground-water storage during 1947 was indicated by a net drop in water level of more than 2.6 feet during the year.

The water level in the well at Auburn also apparently reflects changes in precipitation and seasonal fluctuations in temperature. Precipitation at nearby Manchester during 1947 was 40.57 inches, or 1.42 inches above normal and about 1.38 inches more than in 1946. Although the total precipitation for 1947 exceeded that for 1946, there was a net drop in water level during the year of about 0.6 foot. This may be due, in part, to the failure of the water levels to recover from the lowest level of record, which occurred on November 8. The water level in this well was slightly above average at the end of January, February, and March and at the end of May and June; it was well below average throughout the rest of the year.

The water level in this well rose from the first of January to the end of March, partly as a result of above-normal precipitation during much of this period. Temperatures above freezing during the latter part of January and during much of February and March also contributed to the steady rise in water level during this period. The water level declined, except for occasional small rises, from the end of March until the early part of November, due to the needs of plants and to deficient precipitation in August, September, and October. Far above normal precipitation in November contributed to the sharp rise in water level in that month.

In the well at New London the water level dropped steadily from October 6, when it was established, until the end of the year. Although the period of record of this well is not long enough to indicate any trends, the decline in water level noted is probably the result of deficient rainfall.

#### WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

##### Merrimack County

US 91 (\*986, p. 79; 1016, p. 115; 1023, p. 140; 1071, p. 166).  
Bristol 1. J. E. Norcross. In town of Hill, about 0.2 mile south of  
Smith River, 1.0 mile west of U. S. Route 3A and 2 miles south of Bristol.  
Extremes of observed water level, in feet below land-surface datum: Lowest,  
9.81 Oct. 8, 1942; highest, 3.61 Apr. 2, 1945.

US 91--Continued.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	7.70	Apr. 30	3.20	July 30	8.97	Oct. 30	(a)
Mar. 1	8.00	May 31	8.00	Sept. 30	(a)	Nov. 29	(a)
30	4.30	June 30	8.10	Oct. 6	(a)	Dec. 30	(a)

a Dry. Water level below 10.8 feet below land-surface datum.

New London 1. W. S. Mariner. About 750 feet northeast of State Route 114, 2.1 miles southeast of New London. Unused dug domestic well, diameter 36 inches, depth 21.0 feet. Measuring point, cross chiselled on east side of rock casing, at land-surface datum, which is about 1,020 feet above mean sea level. First measured Oct. 6, 1947.

## Water level, in feet below land-surface datum, 1947

Oct. 6	13.69	Nov. 2	14.60	Nov. 23	15.07	Dec. 14	15.40
12	13.75	9	14.80	30	15.14	21	15.54
19	14.10	16	15.00	Dec. 7	15.25	28	15.68
26	14.58						

## Rockingham County

Auburn 8 (#1016, p. 115; 1023, p. 140; 1071, p. 166). Manchester Water Works. About 250 feet east of the intersection of Hookset and Depot Roads, 0.9 mile north of Auburn. Extremes of observed water level, in feet below land-surface datum: Lowest, 4.11 Sept. 12, 1944; highest, 0.71 Mar. 9, 1946, noon reading from recorder chart. Measurements made by Manchester Water Works.

## Water level at noon, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	2.07	1.71	1.73	1.47	1.52	1.90	2.17	2.12	3.56	4.21	5.48	2.87
2	2.07	1.72	1.73	1.46	1.54	1.90	2.29	2.23	3.58	4.27	5.52	2.91
3	2.05	1.78	1.46	1.32	1.38	1.88	2.30	2.28	2.58	4.31	5.56	2.92
4	2.04	1.78	1.58	1.38	1.37	1.67	2.37	2.34	2.80	4.35	5.56	2.88
5	2.04	1.54	1.61	1.31	1.45	1.75	2.44	2.40	2.92	4.40	5.57	2.87
6	2.05	1.66	1.62	1.31	1.38	1.82	2.49	2.46	3.05	4.45	5.61	2.87
7	2.06	1.69	1.57	1.37	1.46	1.87	2.51	2.52	3.15	4.49	5.63	2.89
8	2.07	1.72	1.57	1.39	1.46	1.78	2.53	2.51	3.28	4.53	5.65	2.89
9	2.08	1.72	1.58	1.41	1.50	1.54	2.50	2.57	3.40	4.58	5.56	2.90
10	2.09	1.72	1.57	1.42	1.55	1.68	2.27	2.56	3.51	4.64	5.39	2.92
11	2.10	1.73	1.57	1.43	1.55	1.73	2.44	2.65	3.62	4.68	5.39	2.92
12	2.12	1.72	1.58	1.45	1.57	1.79	2.58	2.73	3.70	4.73	4.84	2.93
13	2.13	1.72	1.55	1.48	1.60	1.87	2.48	2.75	3.78	4.78	3.09	2.94
14	2.15	1.72	1.16	1.49	1.52	1.76	2.64	2.80	3.83	4.80	3.12	2.98
15	2.05	1.70	1.20	1.50	1.58	1.75	2.77	2.88	3.76	4.85	3.21	2.98
16	1.88	1.68	1.29	1.53	1.60	1.83	2.65	2.35	3.67	4.90	3.27	2.73
17	1.95	1.65	1.32	1.41	1.63	1.88	2.25	2.33	3.76	4.93	3.25	2.39
18	1.95	1.63	1.36	1.49	1.63	1.88	2.15	2.46	3.87	4.95	3.27	2.44
19	1.98	....	1.40	1.54	1.63	1.83	2.36	2.58	3.94	....	3.27	2.52
20	1.87	....	1.40	1.55	1.66	1.80	2.30	2.72	3.97	5.10	3.28	2.66
21	1.84	....	1.39	1.54	1.69	1.87	2.47	2.78	4.02	5.12	3.33	2.70
22	1.88	....	1.40	1.50	1.65	1.93	2.05	2.83	4.02	5.19	3.37	2.74
23	1.91	....	1.40	1.51	1.65	1.98	1.77	2.95	3.47	5.23	3.33	2.74
24	1.95	1.70	1.39	1.51	1.70	1.99	1.98	3.07	3.53	5.27	3.07	2.74
25	1.95	1.70	1.33	1.56	1.74	1.77	2.17	3.17	3.65	5.32	2.38	2.74
26	1.90	1.71	1.55	1.56	1.62	1.86	2.31	3.25	3.76	5.35	2.47	2.74
27	1.66	1.71	1.42	1.57	1.72	1.98	2.42	3.15	4.01	5.38	2.59	2.71
28	1.77	1.72	1.42	1.57	1.75	2.07	2.50	3.28	4.05	5.42	2.68	2.71
29	1.79	....	1.43	1.59	1.79	2.13	1.78	3.34	4.11	5.45	2.75	2.70
30	1.82	....	1.44	1.61	1.81	2.19	1.92	3.42	4.17	5.48	2.80	2.70
31	1.69	....	1.46	....	1.85	....	2.00	3.47	....	5.49	....	2.70

a Estimated.

## NEW JERSEY

By J. M. Birdsall

### PROGRAM OF WORK

The cooperative investigation of the ground-water resources of New Jersey was continued throughout 1947 in cooperation with the New Jersey Department of Conservation, Division of Water Policy and Supply. During the year about 3,400 individual measurements of water levels were made in addition to the continuous records obtained by the use of water-stage recorders. At the end of the year approximately 150 wells were being observed. Measurements were made monthly or less frequently in some of the wells, biweekly and weekly in others, and several times a day in one. Continuous records from water-stage recorders were obtained for 51 wells during the year. The State and Federal Governments owned 44 of these recorders, and the rest were owned by various public water-supply companies and by industries.

### PRECIPITATION

The precipitation in New Jersey was above normal in January, April, May, and November with May of this year the wettest since 1894, and November the wettest since 1932, the average precipitation being about twice the normal amount. For the other 8 months the precipitation was below normal. For the year as a whole it was 45.83 inches, or slightly above normal. According to the Climatological Data of the U. S. Weather Bureau (New Jersey Section), the year was unusually free from destructive storms.

### FLUCTUATIONS OF WATER LEVEL

The Morrell well (29.11.1.2.3.) is a shallow key observation well near Old Bridge, in Middlesex County, and is considered to be a reasonably reliable index of the amount of water stored in the ground, particularly during the growing season. The water level responds quickly to precipitation, and due to the location, it is not affected by pumping. From the

hydrograph of this well for 1947, it would appear that the ground-water storage was rather uniformly high during the first 5 months of the year as was the case in 1946. Between June 8 and July 7, the water level declined from about 74 feet above mean sea level to about 71.43 feet. This decline was checked by precipitation as noted at the nearby Runyon station on a number of days until July 22 when the water level had risen to about 73.50 feet above mean sea level. From this date until the end of October, there was a pronounced decline until the water level was approximately 69.60 feet above mean sea level. This decline may be attributed to the usual heavy transpiration by vegetation during the growing season and to subnormal precipitation. From then until November 12 a sharp rise in the water level to approximately 74.15 feet above mean sea level was noted which was probably the result of an average precipitation of about twice the normal amount. The level remained up until the end of the year when it was approximately 73.80 feet above mean sea level.

In Salem County new high levels were observed in 10 wells during 1947. There were no new lows. The highs occurred during March, April, May, June, and July, and probably reflect a distribution of pumpage.

In the Atlantic City area the artesian pressure in the Atlantic City 800-foot sand, a part of the Kirkwood formation, exhibited a seasonal fluctuation similar to that in 1946 and preceding years. In the Longport well, which is typical of the wells tapping this artesian aquifer, the daily average water level was 38.6 feet below mean sea level at the beginning of the year. This fell to a daily average of 58.8 feet on August 14 with extreme low of 60.1 feet below mean sea level on the same day. Thereafter the average rose to 39.7 feet below mean sea level on December 31. The fluctuations of artesian pressure in this area are believed to be the result of pumping.

In the Camden area a new low was recorded in the New Jersey Water Company well 10 on July 1, 1947, when the water level stood 26.2 feet below mean sea level. This was probably due to a shift in the distribution of pumpage.

In the Runyon area, Middlesex County, new lows were recorded as follows: 48.3 feet below mean sea level September 15, 1947, in Old Deep well 8 and 54.9 feet below mean sea level September 26, 1947, in Old Deep well 1. Each of the wells taps the Farrington sand, member of the Raritan

formation, and both are equipped with water-stage recorders. These lows probably reflect a shift in the distribution of pumpage as well as some over-all increase in pumpage from the sand.

At Bradley Beach, in the Asbury Park area of Monmouth County, a record high of 11.28 feet above mean sea level was noted November 13, 1947, at the Bradley Beach 650-foot well. This may have been the result of repairs to the well which were made during the year in an attempt to revive its productive capacity.

In the East Paterson area, Bergen County, Garfield well 11, a new low of 3.9 feet below mean sea level was noted on October 26, 27, 28, and 29, 1947. This is a 12-inch well, 353 feet deep, has a water-stage recorder and draws from Triassic sandstone. This is probably a result of increased pumpage and may also have been affected by a shift in its distribution.

#### WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

##### Atlantic County

##### Atlantic City area

36.13.2.9.1 (\*845, p. 197; \*886, p. 342; 906, p. 76; 936, p. 78; 944, p. 78; \*986, p. 85; 1016, p. 119; 1023, p. 145; 1071, p. 170). Atlantic City Water Department 600-foot well. Extremes of observed water level, in feet below mean sea level: Highest, 3.05 Mar. 28, 1925; lowest, 25.47 Sept. 28 and 29, 1929.

Water level at end of day, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	33.6	33.0	32.6	32.3	32.1	3.25	34.0	35.7	36.7	36.4	35.4
2	....	33.6	33.0	32.6	32.3	32.1	32.5	34.0	35.7	36.8	36.3	35.4
3	....	....	32.9	32.6	32.2	32.1	32.6	34.1	35.7	36.8	36.2	35.4
4	....	....	32.9	32.6	32.2	32.1	32.6	34.2	35.8	36.8	35.9	35.4
5	....	....	32.9	32.6	32.2	32.1	32.6	34.2	35.9	36.8	35.9	35.4
6	....	....	32.9	32.6	32.2	32.2	32.7	34.3	35.9	36.8	35.9	35.3
7	....	....	32.9	32.6	32.2	32.2	32.7	34.3	35.9	36.8	35.9	35.3
8	....	....	32.9	32.6	32.2	32.2	32.7	34.4	36.0	36.8	35.9	35.3
9	....	....	32.9	32.6	32.2	32.2	32.8	34.4	36.0	36.8	35.9	35.2
10	....	....	32.9	32.6	32.2	32.2	32.8	34.5	36.1	36.8	35.9	35.2
11	....	....	32.9	32.6	32.2	32.2	32.9	34.6	36.1	36.8	35.9	35.2
12	....	....	32.9	32.6	32.2	32.2	32.9	34.6	36.2	36.8	35.9	35.2
13	....	33.4	32.9	32.6	32.2	32.2	33.0	34.7	36.2	36.8	35.9	35.2
14	....	33.4	32.9	32.5	32.2	32.2	33.1	34.7	36.2	36.8	....	35.2
15	....	33.4	32.9	32.5	32.2	32.2	33.1	34.8	36.3	36.8	....	35.1
16	34.0	33.4	32.9	32.5	32.2	32.2	33.2	34.8	36.3	36.8	....	35.1
17	34.0	33.3	32.8	32.5	32.2	32.2	33.2	34.9	36.4	36.8	....	35.1
18	33.7	33.3	32.8	32.4	32.2	32.2	33.2	34.9	36.4	36.8	....	35.1
19	33.7	33.3	32.8	32.4	32.2	32.2	33.2	35.0	36.4	36.7	....	35.1
20	33.6	33.1	32.8	32.4	32.2	32.3	33.3	35.1	36.5	36.7	....	....
21	33.6	33.0	32.8	32.4	32.1	32.3	33.4	35.1	36.5	36.7	....	....
22	33.6	33.0	32.8	32.4	32.1	32.3	33.4	35.2	36.5	36.7	35.8	....
23	33.6	33.0	32.7	32.4	32.1	32.3	33.5	35.2	36.6	36.7	35.7	....
24	33.6	33.0	32.7	32.4	32.1	32.4	33.5	35.3	36.6	36.7	35.5	....
25	33.6	33.0	32.6	32.3	32.1	32.4	33.6	35.3	36.6	36.7	35.5	....



36.13.2.9.1--Continued.

Water level at end of day, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	33.6	33.0	32.6	32.3	32.1	32.4	33.7	35.4	36.6	36.7	35.4	....
27	33.6	33.0	32.6	32.3	32.1	32.4	33.7	35.4	36.7	36.7	35.4	....
28	33.6	33.0	32.6	32.3	32.1	32.4	33.8	35.5	36.7	36.7	35.4	....
29	33.6		32.6	32.3	32.1	32.5	33.8	35.5	36.7	36.6	35.4	....
30	33.6		32.6	32.3	32.1	32.5	33.9	35.6	36.7	36.6	35.4	....
31	33.6		32.6		32.1		33.9	35.6		36.5		....

Water level at end of day, in feet below mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	21.8	21.2	20.8	20.5	20.3	20.7	22.2	23.9	24.9	24.6	23.6
2	....	21.8	21.2	20.6	20.5	20.3	20.7	22.2	23.9	25.0	24.5	23.6
3	....	....	21.1	20.8	20.4	20.3	20.8	22.3	23.9	25.0	24.4	23.6
4	....	....	21.1	20.8	20.4	20.3	20.8	22.4	24.0	25.0	24.1	23.6
5	....	....	21.1	20.8	20.4	20.3	20.8	22.4	24.1	25.0	24.1	23.6
6	....	....	21.1	20.8	20.4	20.4	20.9	22.5	24.1	25.0	24.1	23.5
7	....	....	21.1	20.8	20.4	20.4	20.9	22.5	24.1	25.0	24.1	23.5
8	....	....	21.1	20.8	20.4	20.4	20.9	22.6	24.2	25.0	24.1	23.5
9	....	....	21.1	20.8	20.4	20.4	21.0	22.6	24.2	25.0	24.1	23.4
10	....	....	21.1	20.8	20.4	20.4	21.0	22.7	24.3	25.0	24.1	23.4
11	....	....	21.1	20.8	20.4	20.4	21.1	22.8	24.3	25.0	24.1	23.4
12	....	....	21.1	20.8	20.4	20.4	21.1	22.8	24.4	25.0	24.1	23.4
13	....	21.6	21.1	20.8	20.4	20.4	21.2	22.9	24.4	25.0	24.1	23.4
14	....	21.6	21.1	20.7	20.4	20.4	21.3	22.9	24.4	25.0	....	23.4
15	....	21.6	21.1	20.7	20.4	20.4	21.3	23.0	24.5	25.0	....	23.3
16	22.2	21.6	21.1	20.7	20.4	20.4	21.4	23.0	24.5	25.0	....	23.3
17	22.2	21.5	21.0	20.7	20.4	20.4	21.4	23.1	24.6	25.0	....	23.3
18	21.9	21.5	21.0	20.6	20.4	20.4	21.4	23.1	24.6	25.0	....	23.3
19	21.9	21.5	21.0	20.6	20.4	20.4	21.4	23.2	24.6	24.9	....	23.3
20	21.8	21.3	21.0	20.6	20.4	20.5	21.5	23.3	24.7	24.9	....	....
21	21.8	21.2	21.0	20.6	20.3	20.5	21.6	23.3	24.7	24.9	....	....
22	21.8	21.2	21.0	20.6	20.3	20.5	21.6	23.4	24.7	24.9	24.0	....
23	21.8	21.2	20.9	20.6	20.3	20.5	21.7	23.4	24.8	24.9	23.9	....
24	21.8	21.2	20.9	20.6	20.3	20.6	21.7	23.5	24.8	24.9	23.7	....
25	21.8	21.2	20.8	20.5	20.3	20.6	21.8	23.5	24.8	24.9	23.7	....
26	21.8	21.2	20.8	20.5	20.3	20.6	21.9	23.6	24.8	24.9	23.6	....
27	21.8	21.2	20.8	20.5	20.3	20.6	21.9	23.6	24.9	24.9	23.6	....
28	21.8	21.2	20.8	20.5	20.3	20.6	22.0	23.7	24.9	24.9	23.6	....
29	21.8		20.8	20.5	20.3	20.7	22.0	23.7	24.9	24.8	23.6	....
30	21.8		20.8	20.5	20.3	20.7	22.1	23.8	24.9	24.8	23.6	....
31	21.8		20.8		20.3		22.1	23.8		24.7		....

36.23.1.9.6 (\*777, p. 99; \*817, p. 172; 840, p. 242; 845, p. 198; \*886, p. 342; 906, p. 84; 936, p. 79; 944, p. 79; 986, p. 87; 1016, p. 121; 1023, p. 147; 1071, p. 172). Longport Water Dept. Longport 14th Avenue well. In Water-Supply Paper 1016 lowest extreme, in feet with reference to mean sea level, should be -54.5. Extremes of observed water level, in feet with reference to mean sea level: Highest, about +19 in 1895; lowest, -60.1 Aug. 14, 1947.

Average daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	44.0	....	39.6	41.5	....	45.4	53.3	....	....	....	49.4	47.6
2	....	....	38.8	41.2	....	45.8	53.8	....	....	....	49.9	47.7
3	....	....	39.8	41.0	41.9	45.8	54.3	....	....	....	49.6	47.5
4	....	....	40.4	41.4	....	45.8	54.7	....	....	....	49.2	47.5
5	....	....	40.2	41.5	42.1	46.3	55.5	....	....	....	49.2	47.0
6	....	....	40.1	41.7	42.4	46.7	56.5	....	....	....	49.3	47.0
7	....	....	39.7	42.0	42.4	46.5	56.9	....	6.13	....	49.1	46.7
8	....	....	39.5	41.9	42.8	45.9	56.6	....	....	....	48.7	46.7

36.23.1.9.6--Continued.

Average daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
9	....	....	39.4	41.6	43.1	45.9	5.65	....	....	....	49.4	47.1
10	43.8	....	39.7	41.8	....	46.0	56.3	....	....	....	49.3	46.7
11	43.7	....	39.5	41.9	....	46.5	56.5	....	....	....	48.8	46.0
12	43.4	....	39.6	....	....	46.8	56.4	....	....	....	48.6	45.4
13	43.0	....	39.5	....	....	47.5	57.0	....	....	....	49.2	45.8
14	42.6	42.6	....	....	42.9	....	57.5	64.2	....	....	48.8	46.0
15	42.7	42.2	....	....	42.6	....	57.8	63.9	....	....	....	45.9
16	42.7	42.0	41.3	....	42.9	48.0	....	....	....	....	....	45.9
17	43.2	41.8	41.4	....	42.9	48.5	....	....	....	....	48.8	46.5
18	....	41.4	41.6	41.9	42.8	48.7	....	....	....	52.7	48.5	46.6
19	....	41.8	41.4	....	42.9	48.2	....	....	....	52.6	48.2	46.1
20	....	....	41.1	....	43.1	48.5	....	....	....	52.5	48.1	45.9
21	....	....	40.8	....	43.3	49.1	57.5	62.0	....	52.4	48.1	45.7
22	....	....	40.6	....	43.6	49.6	57.1	....	....	52.5	47.8	45.6
23	....	40.4	40.9	42.0	43.6	50.5	57.1	....	....	52.5	47.7	45.2
24	....	40.1	40.7	42.2	43.8	50.9	57.8	....	....	52.5	47.2	45.4
25	....	40.2	40.6	....	43.8	51.3	58.3	....	....	52.0	47.7	44.8
26	....	40.1	41.9	....	43.9	52.0	....	....	....	52.2	47.7	....
27	....	40.3	41.7	42.4	43.8	51.6	....	63.1	....	52.0	47.6	....
28	....	40.2	41.0	....	43.9	51.9	....	62.1	....	51.8	....	45.2
29	....	....	41.1	42.7	44.0	52.2	....	....	....	51.4	....	45.7
30	....	....	41.6	42.6	....	52.8	....	....	....	50.8	47.7	45.6
31	....	....	41.6	....	....	....	....	....	....	50.0	....	45.1

Average daily water level, in feet below mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	38.6	....	34.2	36.1	....	40.0	47.9	....	....	....	44.0	42.2
2	....	....	35.4	35.8	....	40.4	48.4	....	....	....	44.5	42.3
3	....	....	34.4	35.6	36.5	40.4	48.9	....	....	....	44.2	42.1
4	....	....	35.0	36.0	....	40.4	49.3	....	....	....	43.8	42.1
5	....	....	34.8	36.1	36.7	40.9	50.1	....	....	....	43.8	41.6
6	....	....	34.7	36.3	37.0	41.3	51.1	....	....	....	43.9	41.6
7	....	....	34.3	36.6	37.0	41.1	51.5	....	55.9	....	43.7	41.3
8	....	....	34.1	36.5	37.4	40.5	51.2	....	....	....	43.3	41.3
9	....	....	34.0	36.2	37.7	40.5	51.1	....	....	....	44.0	41.7
10	38.4	....	34.3	36.4	....	40.6	50.9	....	....	....	43.9	41.3
11	38.3	....	34.1	36.5	....	41.1	51.1	....	....	....	43.4	40.6
12	38.0	....	34.2	....	....	41.4	51.0	....	....	....	43.2	40.0
13	37.6	....	34.1	....	....	42.1	51.6	....	....	....	43.8	40.4
14	37.2	37.2	....	....	37.5	....	52.1	58.8	....	....	43.4	40.6
15	37.3	36.8	....	....	37.2	....	52.4	58.5	....	....	....	40.5
16	37.3	36.6	35.9	....	37.5	42.6	....	....	....	....	....	40.5
17	37.8	36.4	36.0	....	37.5	43.1	....	....	....	....	43.4	41.1
18	....	36.0	36.2	36.5	37.4	43.3	....	....	....	47.3	43.1	41.2
19	....	36.4	36.0	....	37.5	42.8	....	....	....	47.2	42.8	40.7
20	....	....	35.7	....	37.7	43.1	....	....	....	47.1	42.7	40.5
21	....	....	35.4	....	37.9	43.7	52.1	56.6	....	47.0	42.7	40.3
22	....	....	35.2	....	38.2	44.2	51.7	....	....	47.1	42.4	40.2
23	....	35.0	35.5	36.6	38.2	45.1	51.7	....	....	47.1	42.3	39.8
24	....	34.7	35.3	36.8	38.4	45.5	52.4	....	....	46.1	41.8	40.0
25	....	34.8	35.2	....	38.4	45.9	52.9	....	....	46.6	42.3	39.4
26	....	34.7	36.5	....	38.5	46.6	....	....	....	46.8	42.3	....
27	....	34.9	36.3	37.0	38.4	46.2	....	57.7	....	46.6	42.2	....
28	....	34.8	35.6	....	38.5	42.8	....	56.7	....	46.4	....	39.8
29	....	....	35.7	37.3	38.6	46.8	....	....	....	46.0	....	40.3
30	....	....	36.2	37.2	....	47.4	....	....	....	45.4	42.3	40.2
31	....	....	36.2	....	....	....	....	....	....	44.6	....	39.7

Bergen County

## East Paterson area

26.3.1.7.3 (\*817, p. 192; 840, p. 245; 845, p. 202; 886, p. 343; 906, p. 85; 936, p. 80; 944, p. 80; 986, p. 89; 1016, p. 123; 1023, p. 148; 1071, p. 173). City of Garfield well 11. In Water-Supply Paper 1016 the extreme highest observed water level should be +56.2 and the extreme lowest should be -1.8 with reference to mean sea level. Extremes of observed water level, in feet with reference to mean sea level: Highest, +56.2 Mar. 8, 1926; lowest, -3.9 Oct. 26, 27, 28, 29, 1947.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	62.5	62.5	62.3	52.1	51.9	48.2	49.3	58.0	56.8	67.5	67.8	59.2
2	59.9	62.0	60.2	49.6	51.8	49.2	48.5	57.8	58.1	68.0	67.8	59.1
3	60.7	61.3	60.6	51.4	50.7	48.1	50.5	57.8	59.7	68.3	65.5	58.9
4	61.9	60.8	61.5	49.8	49.0	50.5	47.4	56.7	61.0	68.5	64.3	58.8
5	61.8	60.7	60.9	48.0	50.7	47.8	47.7	57.5	61.6	68.5	65.2	58.2
6	60.7	62.2	60.2	50.7	51.0	49.8	45.9	58.9	61.7	68.3	66.2	55.1
7	60.7	62.2	60.8	52.8	51.9	50.1	47.5	59.4	58.5	68.6	67.1	51.5
8	61.6	62.5	61.0	51.8	51.2	....	44.6	59.4	59.7	68.7	67.9	53.6
9	62.2	62.8	60.6	52.6	52.0	50.2	45.0	58.4	61.0	68.7	68.3	57.3
10	62.5	62.7	60.8	52.1	52.1	50.6	47.6	56.0	62.3	68.9	68.5	58.7
11	62.5	63.2	60.5	51.4	50.9	51.8	50.0	57.2	63.8	69.2	69.1	60.2
12	61.0	63.6	60.4	50.8	52.5	52.6	50.7	58.0	64.6	69.2	69.5	61.0
13	60.6	64.0	60.1	49.6	53.7	53.0	46.1	59.7	65.2	69.1	70.0	61.6
14	60.2	64.1	59.0	50.7	52.7	52.1	50.6	60.9	65.2	69.1	70.0	61.9
15	61.8	63.8	59.8	52.2	48.1	50.2	52.1	61.7	64.9	69.2	70.0	61.5
16	62.4	63.9	58.1	52.6	52.4	51.7	51.6	61.8	65.3	69.6	69.7	62.3
17	62.9	63.7	58.2	52.6	52.8	51.7	52.6	57.0	65.5	69.8	66.4	62.9
18	64.0	63.7	58.0	50.4	48.1	51.0	54.1	49.0	66.0	70.0	66.5	63.4
19	64.1	63.7	57.7	51.2	50.7	52.2	52.1	47.3	66.4	70.0	66.5	64.0
20	63.6	64.1	57.4	46.9	48.7	52.5	52.4	47.4	66.5	69.8	66.3	64.7
21	64.6	64.1	57.5	48.9	49.3	52.0	53.6	57.5	66.4	69.8	65.9	64.8
22	65.0	63.4	56.4	48.5	48.2	51.6	54.4	59.3	65.3	70.0	65.9	64.2
23	65.3	63.1	55.0	49.9	48.0	51.4	55.1	60.7	65.7	70.2	64.1	64.2
24	65.8	61.5	54.4	49.3	49.8	50.8	54.5	60.6	65.8	70.3	61.2	63.8
25	66.3	61.8	54.5	49.8	48.2	47.9	55.6	58.7	65.8	70.4	61.6	64.0
26	66.3	61.8	53.1	51.9	47.7	49.5	56.4	61.0	65.8	70.5	61.9	61.8
27	64.9	61.8	53.1	51.4	49.7	50.7	56.0	61.2	65.9	70.5	60.3	61.2
28	65.0	61.6	54.0	52.0	49.9	49.3	56.1	61.9	66.3	70.5	59.7	60.6
29	64.0		52.5	51.6	51.1	48.5	57.1	63.0	66.5	70.5	59.5	61.0
30	63.4		52.9	51.4	44.6	50.1	58.0	63.0	67.1	69.7	58.6	61.1
31	62.2		53.6		48.8		58.3	59.3		67.7		61.1

Lowest daily water level, in feet above mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	4.1	4.1	4.3	14.5	14.7	18.4	17.3	8.6	9.8	-0.9	-1.2	7.4
2	6.7	4.6	6.4	17.0	14.8	17.4	18.1	8.8	8.5	-1.4	-1.2	7.5
3	5.9	5.3	6.0	15.2	15.9	18.5	16.1	8.8	6.9	-1.7	1.1	7.7
4	4.7	5.8	5.1	16.8	17.6	16.1	19.2	9.9	5.6	-1.9	2.3	7.8
5	4.8	5.9	5.7	18.6	15.9	18.8	18.9	9.1	5.0	-1.9	1.4	8.4
6	5.9	4.4	6.4	15.9	15.6	16.8	20.7	7.7	4.9	-1.7	.4	11.5
7	5.9	4.4	5.8	13.8	14.7	16.5	19.1	7.2	8.1	-2.0	-.5	15.1
8	5.0	4.1	5.6	14.8	15.4	....	22.0	7.2	6.9	-2.1	-1.3	13.0
9	4.4	3.8	6.0	14.0	14.6	16.4	21.6	8.2	5.6	-2.1	-1.7	9.3
10	4.1	3.9	5.8	14.5	14.5	16.0	19.0	10.6	4.3	-2.3	-1.9	7.9
11	4.1	3.4	6.1	15.2	15.7	14.8	16.6	9.4	2.8	-2.6	-2.5	6.4
12	5.6	3.0	6.2	15.8	14.1	14.0	15.9	8.6	2.0	-2.6	-2.9	5.6
13	6.0	2.6	6.5	17.0	12.9	13.6	20.5	6.9	1.4	-2.5	-3.4	5.0
14	6.4	2.5	7.6	15.9	13.9	14.5	16.0	5.7	1.4	-2.5	-3.4	4.7
15	4.8	2.8	6.8	14.4	18.5	16.4	14.5	4.9	1.7	-2.6	-3.4	5.1
16	4.2	2.7	8.5	14.0	14.2	14.9	15.0	4.8	1.3	-3.0	-3.1	4.3
17	3.7	2.9	8.4	14.0	13.8	14.9	14.0	9.6	1.1	-3.2	.2	3.7
18	2.6	2.9	8.6	16.2	18.5	15.6	12.5	17.6	.6	-3.4	.1	3.2

26.3.1.7.3--Continued.

Lowest daily water level, in feet above mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
19	2.5	2.9	8.9	15.4	15.9	14.4	14.5	19.3	0.2	-3.4	0.1	2.6
20	3.0	2.5	9.2	19.7	17.9	14.1	14.2	19.2	.1	-3.2	.3	1.9
21	2.0	2.5	9.1	17.7	17.3	14.6	13.0	9.1	.2	-3.2	.7	1.8
22	1.6	3.2	10.2	18.1	18.4	15.0	12.2	7.3	1.3	-3.4	.7	2.4
23	1.3	3.5	11.6	16.7	18.6	15.2	11.5	5.9	.9	-3.6	2.5	2.4
24	.8	5.1	12.2	17.3	16.8	15.8	12.1	6.0	.8	-3.7	5.4	2.8
25	.3	4.8	12.1	16.8	18.4	18.7	11.0	7.9	.8	-3.8	5.0	2.6
26	.3	4.8	13.5	14.7	18.9	17.1	10.2	5.6	.8	-3.9	4.7	4.8
27	1.7	4.8	13.5	15.2	16.9	15.9	10.6	5.4	.7	-3.9	6.3	5.4
28	1.6	5.0	12.6	14.6	16.7	17.3	10.5	4.7	.3	-3.9	6.9	6.0
29	2.6		14.1	15.0	15.5	18.1	9.5	3.6	.1	-3.9	7.1	5.6
30	3.2		13.7	15.2	22.0	16.5	8.6	3.6	-.5	-3.1	8.0	5.5
31	4.4		13.0		17.8		8.3	7.3		-1.1		5.5

Camden County

## Camden area

31.2.2.5.2 (\*817, p. 174; 840, p. 242; 845, p. 200; 886, p. 343; 906, p. 85; 936, p. 80; 944, p. 80; 986, p. 90; 1016, p. 124; 1023, p. 150; 1071, p. 174). City of Camden. Morris Station test well 3. Extremes of observed water level, in feet below mean sea level: Highest, 0.3 Mar. 19, 1936; lowest, 35.84 June 14, 1926.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	Aug.	Oct.	Nov.	Dec.
1	....	13.1	....	....	....	....	....	....	12.7	....
2	....	....	....	....	....	....	....	....	12.5	....
3	....	....	....	13.3	....	....	....	....	12.5	....
4	....	....	....	13.2	....	....	....	....	12.5	12.9
5	....	....	....	13.1	....	....	....	....	12.7	12.9
6	....	....	....	12.6	....	....	....	....	12.8	12.5
7	....	....	....	12.9	....	....	....	....	12.4	12.1
8	....	....	....	13.3	....	....	....	....	12.1	12.7
9	....	....	....	13.3	....	....	....	....	12.4	13.2
10	....	....	....	13.2	....	....	....	....	12.4	13.3
11	....	....	13.8	13.1	....	....	....	....	12.2	13.1
12	....	....	13.8	12.8	....	11.5	....	....	12.6	13.2
13	....	....	13.7	12.6	....	11.6	....	....	12.7	12.5
14	....	....	13.6	12.6	12.0	10.7	....	....	12.5	12.2
15	....	....	13.2	12.7	12.0	10.1	....	....	....	13.0
16	....	....	13.0	13.0	11.7	10.9	....	....	....	13.0
17	13.3	....	13.3	13.2	11.8	11.1	....	....	....	13.5
18	13.0	....	13.8	13.1	10.9	11.0	....	....	....	13.5
19	12.8	....	13.8	13.0	10.8	11.0	12.0	....	....	13.5
20	13.0	....	13.6	12.6	11.6	11.1	12.2	....	....	13.2
21	13.0	....	13.5	12.4	11.5	11.1	12.2	....	....	12.3
22	13.4	....	12.9	12.8	11.2	10.0	12.5	....	....	13.1
23	13.3	....	12.8	12.8	11.3	10.7	12.8	....	....	13.1
24	13.0	....	13.0	12.8	11.1	10.8	12.8	....	....	13.2
25	13.0	....	13.1	12.6	11.0	11.2	....	....	....	12.8
26	12.6	....	....	....	10.1	....	....	....	....	12.1
27	13.1	....	....	....	10.0	....	....	....	....	12.2
28	13.2	....	....	....	10.7	....	....	....	....	12.1
29	13.4	....	....	....	10.9	....	....	....	....	13.1
30	13.4	....	....	....	11.0	....	....	13.3	....	13.4
31	13.3	....	....	....	11.1	....	....	13.1	....	13.3

## 31.2.2.5.2--Continued.

Lowest daily water level, in feet below mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	Aug.	Oct.	Nov.	Dec.
1	...	7.3	...	...	...	...	...	...	6.9	...
2	...	...	...	...	...	...	...	...	6.7	...
3	...	...	...	7.5	...	...	...	...	6.7	...
4	...	...	...	7.4	...	...	...	...	6.7	7.1
5	...	...	...	7.3	...	...	...	...	6.9	7.1
6	...	...	...	6.8	...	...	...	...	7.0	6.7
7	...	...	...	7.1	...	...	...	...	6.6	6.3
8	...	...	...	7.5	...	...	...	...	6.3	6.9
9	...	...	...	7.5	...	...	...	...	6.6	7.4
10	...	...	...	7.4	...	...	...	...	6.6	7.5
11	...	...	8.0	7.3	...	...	...	...	6.4	7.3
12	...	...	8.0	7.0	...	5.7	...	...	6.8	7.4
13	...	...	7.9	6.8	...	5.8	...	...	6.9	6.7
14	...	...	7.8	6.8	6.2	4.9	...	...	6.7	6.4
15	...	...	7.4	6.9	6.2	4.3	...	...	...	7.2
16	...	...	7.2	7.2	5.9	5.1	...	...	...	7.2
17	7.5	...	7.5	7.4	6.0	5.3	...	...	...	7.7
18	7.2	...	8.0	7.3	5.1	5.2	...	...	...	7.7
19	7.0	...	8.0	7.2	5.0	5.2	6.2	...	...	7.7
20	7.2	...	7.8	6.8	5.8	5.3	6.4	...	...	7.4
21	7.2	...	7.7	6.6	5.7	5.3	6.4	...	...	6.5
22	7.6	...	7.1	7.0	5.4	4.2	6.7	...	...	7.3
23	7.5	...	7.0	7.0	5.5	4.9	7.0	...	...	7.3
24	7.2	...	7.2	7.0	5.3	5.0	7.0	...	...	7.4
25	7.2	...	7.3	6.8	5.2	5.4	...	...	...	7.0
26	6.8	...	...	...	4.3	...	...	...	...	6.3
27	7.3	...	...	...	4.2	...	...	...	...	6.4
28	7.4	...	...	...	4.9	...	...	...	...	6.3
29	7.6	...	...	...	5.1	...	...	...	...	7.3
30	7.6	...	...	...	5.2	...	...	7.5	...	7.6
31	7.5	...	...	...	5.3	...	...	7.3	...	7.5

31.2.4.5.1 (\*845, p. 201; \*886, p. 344; 906, p. 86; 936, p. 81; 944, p. 81; \*986, p. 91; 1016, p. 124; 1023, p. 151; 1071, p. 176). New Jersey Water Co. well 10. Extremes of observed water level, in feet with reference to mean sea level: Highest, +1.26 Mar. 19, 1933; lowest, -26.2 July 1, 1947.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	21.8	22.4	24.2	24.3	24.5	21.8	29.8	27.0	25.3	...	26.1	24.3
2	22.4	22.0	23.0	22.2	23.4	23.2	29.5	26.5	27.2	...	25.8	24.4
3	22.2	23.2	23.7	22.5	23.2	23.0	28.5	23.4	27.1	...	26.9	24.3
4	21.7	22.6	24.2	22.4	22.4	26.2	26.9	27.1	28.1	...	25.8	23.9
5	20.8	23.3	23.8	21.8	22.6	26.1	26.7	28.0	27.0	...	27.1	23.9
6	22.2	23.9	23.5	21.7	25.3	26.5	26.4	29.0	26.9	...	26.4	23.7
7	22.4	23.5	23.4	24.4	23.4	22.0	25.0	...	25.3	...	25.7	23.6
8	22.7	23.2	23.3	24.3	23.2	20.6	24.1	...	28.0	...	25.5	23.8
9	22.8	23.2	23.3	22.1	22.9	22.9	25.3	...	26.8	...	25.2	23.6
10	22.8	23.8	23.3	26.7	22.9	25.7	23.9	...	28.1	...	27.0	23.6
11	22.7	24.0	24.0	24.5	22.8	26.6	26.3	...	28.8	...	25.9	23.3
12	22.5	23.6	24.2	24.6	26.4	26.8	26.6	...	28.3	...	27.3	23.5
13	23.0	23.4	23.3	24.0	26.2	24.0	26.2	...	28.8	...	25.9	23.5
14	22.7	23.5	22.3	25.0	23.5	22.5	25.9	...	27.6	...	25.3	23.5
15	22.3	23.2	22.0	25.9	22.9	22.0	25.9	...	28.0	...	25.1	24.3
16	22.7	22.2	21.6	23.1	23.2	25.5	26.6	...	26.7	...	24.2	23.7
17	23.2	23.7	22.4	25.3	23.2	26.8	23.3	...	27.8	...	27.1	24.3
18	22.2	23.3	22.4	25.7	21.5	23.6	25.0	...	26.8	...	26.3	23.7
19	21.7	23.3	22.4	25.7	25.1	23.4	23.1	27.0	26.9	...	24.6	23.3
20	22.4	23.0	24.0	24.8	23.9	24.3	22.0	26.5	26.1	...	25.9	22.9
21	22.8	23.6	22.6	23.4	23.7	23.0	25.5	24.4	28.7	...	23.8	22.8
22	23.5	23.7	22.2	25.8	22.9	22.4	24.0	27.1	26.6	...	23.6	24.4

## 31.2.4.5.1--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
23	23.5	23.1	22.1	25.4	23.0	26.5	25.8	27.6	....	....	23.5	24.7
24	23.7	23.6	23.7	25.9	23.1	23.9	26.8	27.1	....	....	23.5	23.7
25	22.9	23.6	24.6	23.6	21.3	24.7	27.1	29.7	....	....	24.1	23.2
26	21.7	23.5	22.5	25.5	22.7	24.7	25.2	28.1	....	....	24.0	22.7
27	23.1	24.0	22.7	24.6	22.7	28.5	23.9	25.8	....	....	23.6	22.9
28	22.9	24.0	22.5	25.9	25.8	24.5	27.5	23.9	....	....	23.8	22.3
29	22.9		23.9	24.9	25.9	25.0	28.4	25.3	....	....	24.1	23.8
30	22.6		21.2	23.7	20.9	28.6	27.2	24.3	....	....	23.8	24.0
31	23.0		23.4		21.8		25.0	25.7		24.1		24.1

Lowest daily water level, in feet below mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	18.2	18.8	20.6	20.7	20.9	18.2	26.2	23.4	21.7	....	22.5	20.7
2	18.8	18.4	19.4	18.6	19.8	19.6	25.9	22.9	23.6	....	22.2	20.8
3	18.6	19.6	20.1	18.9	19.6	19.4	24.9	19.8	23.5	....	23.3	20.7
4	18.1	19.0	20.6	18.8	18.8	22.6	23.3	23.5	24.5	....	22.2	20.3
5	17.2	19.7	20.2	18.2	19.0	22.5	23.1	24.4	23.4	....	23.5	20.3
6	18.6	20.3	19.9	18.1	21.7	22.9	22.8	25.4	23.3	....	22.8	20.1
7	18.8	19.9	19.8	20.8	19.8	18.4	21.4	....	21.7	....	22.1	20.0
8	19.1	19.6	19.7	20.7	19.6	17.0	20.5	....	24.4	....	21.9	20.2
9	19.2	19.6	19.7	18.5	19.3	19.3	21.7	....	23.2	....	21.6	20.0
10	19.2	20.2	19.7	23.1	19.3	22.1	20.3	....	24.5	....	23.4	20.0
11	19.1	20.4	20.4	20.9	19.2	22.0	22.7	....	25.2	....	22.3	19.7
12	18.9	20.0	20.6	21.0	22.8	23.2	23.0	....	24.7	....	23.7	19.9
13	19.4	19.8	19.7	20.4	22.6	20.4	22.6	....	25.2	....	22.3	19.9
14	19.1	19.9	18.7	21.4	19.9	18.9	22.3	....	24.0	....	21.7	19.9
15	18.7	19.6	18.4	22.3	19.3	18.4	22.3	....	24.4	....	21.5	20.7
16	19.1	18.6	18.0	19.5	19.6	21.9	23.0	....	23.1	....	20.6	20.1
17	19.6	20.1	18.8	21.7	19.6	23.2	19.7	....	24.2	....	23.5	20.7
18	18.6	19.7	18.8	22.1	17.9	20.0	21.4	....	23.2	....	22.7	20.1
19	18.1	19.7	18.8	22.1	21.5	19.8	19.5	23.4	23.3	....	21.0	19.7
20	18.8	19.4	20.4	21.2	20.3	20.7	18.4	22.9	22.5	....	22.3	19.3
21	19.2	20.0	19.0	19.8	20.1	19.4	21.9	20.8	25.1	....	20.2	19.2
22	19.9	20.1	18.6	22.2	19.3	18.8	20.4	23.5	23.0	....	20.0	20.8
23	19.9	19.5	18.5	21.8	19.4	22.9	22.2	24.0	....	....	19.9	21.1
24	20.1	20.0	20.1	22.3	19.5	20.3	23.2	23.5	....	....	19.9	20.1
25	19.3	20.0	21.0	20.0	17.7	21.1	23.5	26.1	....	....	20.5	19.6
26	18.1	19.9	18.9	21.9	19.1	21.1	21.6	24.5	....	....	20.4	19.1
27	19.5	20.4	19.1	21.0	19.1	24.9	20.3	22.2	....	....	20.0	19.3
28	19.3	20.4	18.9	22.3	22.2	20.9	23.9	20.3	....	....	20.2	18.7
29	19.3		20.3	21.3	22.3	21.4	24.8	21.7	....	....	20.5	20.2
30	19.0		17.6	20.1	17.3	25.0	23.6	20.7	....	....	20.2	20.4
31	19.4		19.8		18.2		21.4	22.1		20.5		20.5

Cape May County

## Atlantic City area

36.31.9.1.9 (\*845, p. 199; 886, p. 345; 906, p. 87; 936, p. 82; 944, p. 82; 986, p. 92; 1016, p. 126; 1023, p. 152; 1071, p. 177). Sea Isle City Water Dept. well 1. Extremes of observed water level, in feet below land surface: Highest, 9.0 Apr. 7, 1930; lowest, 15.6 Sept. 13, 1931.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	13.1	12.9	12.8	12.8	13.0	13.7	14.2	14.3	13.8	14.2
2	....	....	12.7	12.9	12.7	12.8	13.0	13.8	14.2	14.4	14.0	14.2
3	....	....	13.1	12.8	12.7	12.7	13.1	13.8	14.3	14.5	14.0	14.2
4	....	....	13.2	12.8	12.6	12.7	13.1	13.9	14.3	14.5	13.8	14.2
5	....	....	13.2	12.8	12.6	12.8	13.1	13.9	14.3	14.5	13.8	14.1

36.31.9.1.9--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
6	....	....	13.2	12.8	12.6	12.7	13.2	13.8	14.3	14.6	13.9	14.2
7	....	13.1	13.1	12.8	12.6	12.7	13.2	13.8	14.3	14.5	13.9	14.1
8	....	13.0	13.1	12.8	12.7	12.6	13.2	13.9	14.3	14.4	13.9	14.1
9	....	13.2	13.0	12.8	12.7	12.6	13.3	13.9	14.3	14.4	14.1	14.3
10	....	13.4	13.0	12.8	12.8	12.6	13.3	13.9	14.3	14.4	14.1	14.3
11	....	13.4	13.0	12.8	12.8	12.7	13.4	14.0	14.4	14.4	14.1	14.1
12	....	13.4	13.0	12.8	12.8	12.7	13.4	14.1	14.4	14.4	14.0	14.1
13	....	13.3	13.0	12.8	12.8	12.7	13.4	14.1	14.4	14.4	14.1	14.1
14	....	13.3	12.8	12.7	12.6	12.7	13.4	14.2	14.4	14.4	14.1	14.1
15	....	13.2	12.8	12.6	12.6	12.7	13.5	14.2	14.3	14.4	14.1	14.1
16	13.1	13.0	12.8	12.6	12.7	12.8	13.5	14.3	14.4	14.4	14.0	14.0
17	13.2	13.0	12.8	12.7	12.7	12.8	13.5	14.2	14.5	14.4	14.1	14.1
18	13.3	13.0	12.9	12.8	12.7	12.8	13.5	14.1	14.5	14.3	14.1	14.2
19	13.3	13.0	12.9	12.8	12.7	12.8	13.6	14.1	14.4	14.3	14.0	14.2
20	13.1	13.0	12.9	12.8	12.6	12.8	13.6	14.1	14.3	14.3	14.1	14.2
21	....	12.7	12.8	12.7	12.6	12.9	13.5	13.9	14.3	14.3	14.1	14.1
22	....	12.9	12.8	12.5	12.7	12.9	13.5	14.0	14.3	14.3	14.1	14.1
23	....	13.0	12.8	12.6	12.7	12.9	13.5	14.0	14.4	14.3	14.0	14.0
24	....	13.0	12.7	12.6	12.7	12.9	13.6	14.1	14.4	14.3	14.0	14.1
25	....	13.0	12.6	12.6	12.6	12.9	13.7	14.1	14.2	14.3	14.0	14.1
26	....	13.0	12.9	12.6	12.6	12.9	13.7	14.1	14.3	14.4	14.1	14.0
27	....	13.1	12.9	12.6	12.7	12.9	13.8	14.1	14.3	14.4	14.1	14.0
28	....	13.2	12.8	12.7	12.7	13.0	13.7	14.1	14.3	14.3	14.1	14.0
29	....	....	12.8	12.8	12.6	13.0	13.7	14.2	14.3	14.3	14.2	14.2
30	....	....	12.9	12.8	12.7	13.0	13.7	14.2	14.3	14.2	14.2	14.2
31	....	....	12.9	....	12.7	....	13.7	14.2	....	14.1	....	14.2

## Essex County

## Canoe Brook area

25.15.7.5.4 (\*886, p. 345; 906, p. 88; 936, p. 82; 944, p. 83; 986, p. 92; 1016, p. 126; 1023, p. 152; 1071, p. 178). Commonwealth Water Co. well 30. Extremes of observed water level, in feet below land surface: Highest, 11.8 Aug. 25, 1931; lowest, 63.4 Sept. 5, 1929.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	38.2	32.2	31.8	31.4	44.9	27.4	40.7	50.4	39.1	43.9	52.2	35.6
2	38.0	32.0	31.5	32.0	43.2	28.6	37.8	48.5	38.6	43.8	51.5	....
3	38.2	31.0	27.1	40.3	41.7	31.6	37.9	40.8	44.0	47.8	51.3	50.3
4	38.6	31.8	30.5	42.4	37.3	29.9	38.4	40.2	43.7	45.6	51.8	51.3
5	38.4	31.8	32.7	38.6	41.0	33.0	36.9	....	40.0	43.8	48.9	51.5
6	38.4	32.3	32.1	39.6	42.1	30.8	37.3	....	39.6	45.5	47.4	52.3
7	32.7	32.4	32.1	41.4	39.9	30.8	37.9	....	39.5	44.2	47.0	52.5
8	....	32.4	30.0	44.2	36.0	27.8	40.8	....	49.1	43.7	44.7	52.5
9	28.1	29.8	28.3	45.1	32.8	28.0	41.1	....	49.6	43.8	38.5	52.3
10	30.2	31.1	28.8	45.5	33.8	29.4	39.6	....	49.7	43.7	38.1	51.7
11	29.9	31.7	27.9	45.5	33.8	29.9	38.1	....	52.1	43.6	38.1	51.7
12	27.9	32.4	26.7	45.5	38.6	39.0	38.6	....	57.0	43.6	37.3	52.4
13	28.9	32.4	24.4	45.7	39.0	37.8	38.1	....	55.8	43.6	37.2	52.6
14	30.4	32.1	22.8	45.6	35.5	31.7	37.4	....	53.3	43.0	38.3	52.7
15	30.4	....	29.8	44.3	34.8	30.1	....	....	52.1	43.6	44.8	52.6
16	29.4	....	34.6	45.2	38.1	28.0	37.4	....	53.0	43.6	47.0	52.0
17	31.2	....	33.3	43.7	36.8	29.1	39.3	....	53.0	43.7	47.5	48.9
18	31.9	....	34.1	45.5	33.4	29.3	43.6	....	52.9	43.9	48.3	49.5
19	32.1	....	33.3	45.5	37.8	26.5	41.9	....	48.4	43.9	48.7	49.8
20	30.4	31.7	33.1	44.5	35.0	28.7	37.4	....	46.1	42.5	49.5	50.2
21	32.2	31.3	32.6	41.4	31.7	28.7	36.1	....	45.4	43.1	51.0	50.9
22	32.8	31.0	33.1	43.3	31.5	28.1	36.0	39.0	44.9	43.1	51.6	51.5
23	32.9	31.0	32.7	43.6	38.2	29.9	35.5	39.1	44.9	43.7	51.6	52.0
24	32.8	30.8	32.9	43.6	38.4	28.6	37.2	39.3	45.1	44.2	48.8	52.5
25	32.7	31.6	32.8	43.7	32.1	29.1	37.8	46.4	45.1	44.6	46.6	52.8
26	32.7	31.6	33.4	43.6	37.1	30.5	38.7	47.3	44.4	44.5	47.7	52.8
27	30.9	31.2	33.8	43.8	40.2	36.0	38.8	44.8	44.0	44.5	47.7	52.4

25.15.7.5.4--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
28	32.1	31.7	33.9	43.3	44.7	33.9	38.5	40.4	44.0	50.2	47.1	52.3
29	32.6		33.2	43.7	43.5	32.1	43.2	46.3	46.0	51.5	42.2	52.3
30	32.6		33.2	44.9	42.1	35.9	48.4	45.0	44.5	52.0	37.9	52.3
31	32.2		33.0		30.6		50.4	40.6		52.4		52.2

26.21.1.5.6 (\*817, p. 189; 840, p. 244; 845, p. 202; 886, p. 355; 906, p. 88; 936, p. 83; 944, p. 83; 986, p. 93; 1016, p. 127; 1023, p. 153; 1071, p. 178). Short Hills Water Co. well 10. Extremes of observed water level, in feet below land-surface: Highest, 3.40 May 12, 1933; lowest, 28.78 Oct. 31, 1941.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	16.93	May 12	14.08	Aug. 21	15.40	Oct. 30	19.05
Feb. 19	19.06	June 12	14.52	Sept. 24	16.96	Dec. 2	16.71
Apr. 3	12.60						

Middlesex and Monmouth Counties

Runyon area

Average of the water levels in water table wells near Runyon, N. J., in feet above an assumed datum, 1947

Date	Wells less than 25 feet in depth		Wells 25 feet or more in depth	
	No. of wells	Water level	No. of wells	Water level
Oct. 24	6	7.36	4	6.70

Middlesex County

Runyon area

29.1.4.6.8 (\*840, p. 247; 845, p. 203; 886, p. 356; 906, p. 90; 936, p. 84; 944, p. 84; 986, p. 93; 1016, p. 127; 1023, p. 153; 1071, p. 179). Clyde Bowne. Browntown test well. Extremes of observed water level, in feet above mean sea level: Highest, 28.14 Apr. 9 and 10, 1939; lowest, 21.83 Nov. 18, 1932.

Water level at end of day, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	7.61	7.17	....	6.74	6.36	5.78	5.91	....	7.05	7.78	8.30	7.91
2	7.61	7.17	....	6.74	6.30	5.78	5.93	6.46	7.07	7.80	8.31	7.92
3	7.61	7.17	7.06	6.74	6.26	5.78	5.94	6.46	7.10	7.83	8.32	7.92
4	7.61	7.12	7.05	....	6.17	5.78	5.96	6.48	7.12	....	8.33	7.97
5	7.61	....	7.03	6.67	6.07	5.78	5.99	6.50	7.14	7.87	8.34	7.92
6	7.61	....	7.01	6.52	6.01	....	6.02	6.52	7.15	7.88	8.34	7.93
7	7.60	....	6.97	6.49	5.98	5.78	6.05	6.54	7.17	7.90	8.35	7.93
8	7.59	7.13	6.92	6.49	5.98	5.78	6.07	6.56	7.20	7.92	....	7.94
9	7.59	7.13	6.88	6.48	5.98	5.78	6.10	6.59	7.22	7.95	8.36	7.94
10	7.59	7.13	6.88	6.48	....	5.78	6.12	6.61	7.25	7.96	8.36	7.94
11	7.58	7.15	6.88	6.46	5.98	5.78	6.14	6.63	7.27	7.98	8.37	7.95
12	7.58	7.16	6.88	6.44	5.98	5.78	6.15	6.65	7.30	8.01	8.34	7.95
13	7.58	7.17	6.87	6.44	5.97	5.78	6.18	6.67	7.31	8.02	8.31	7.95
14	7.58	7.18	6.76	6.44	5.97	5.80	6.20	6.69	7.33	8.04	8.25	7.95
15	7.57	7.19	6.75	6.44	5.97	5.80	6.22	6.71	7.36	8.05	8.19	7.96
16	7.53	7.19	6.74	6.42	5.98	5.80	6.24	6.73	7.39	8.07	8.05	7.96
17	7.53	7.19	....	6.41	5.98	5.80	6.26	6.74	7.42	8.08	8.04	7.96
18	7.52	7.19	....	6.41	....	5.80	6.27	6.76	7.46	8.10	8.04	7.96



29.1.4.6.8--Continued.

Water level at end of day, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
19	7.51	7.20	6.73	6.40	....	5.81	....	6.78	7.49	8.11	8.04	7.96
20	7.32	7.19	6.73	6.39	....	5.81	....	6.80	7.51	8.12	8.04	7.97
21	7.28	7.18	6.72	6.39	....	5.81	6.27	6.81	7.53	8.13	8.04	7.98
22	7.28	....	6.72	6.39	5.98	5.82	6.28	6.83	7.55	8.15	8.04	7.98
23	7.28	....	6.72	6.39	5.91	5.82	6.29	6.85	7.58	8.17	8.02	7.98
24	7.28	....	6.72	6.39	5.85	5.83	6.30	6.87	7.60	8.19	7.93	7.98
25	7.26	....	6.69	6.39	5.80	5.85	6.31	6.89	7.62	8.21	7.91	....
26	7.25	....	....	6.38	5.79	5.85	6.32	....	7.65	8.23	7.91	....
27	7.22	....	....	6.38	5.79	5.86	6.33	....	7.68	8.24	7.91	....
28	7.22	....	6.70	6.37	5.79	5.87	....	6.96	7.71	8.25	7.91	....
29	7.22	....	6.70	6.37	....	5.88	....	6.99	7.73	8.27	7.91	....
30	7.18	....	6.71	6.37	5.78	5.90	....	7.02	7.76	8.28	7.91	....
31	7.17	....	6.72	....	5.78	....	....	7.03	....	8.29	....	7.96

Water level at end of day, in feet above mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	24.00	24.44	....	24.87	25.25	25.83	25.70	....	24.56	23.83	23.31	23.70
2	24.00	24.44	....	24.87	25.31	25.83	25.68	25.15	24.54	23.81	23.30	23.69
3	24.00	24.44	24.55	24.87	25.35	25.83	25.67	25.15	24.51	23.78	23.29	23.69
4	24.00	24.49	24.56	....	25.44	25.83	25.65	25.13	24.49	....	23.28	23.64
5	24.00	....	24.58	24.94	25.54	25.83	25.62	25.11	24.47	23.74	23.27	23.69
6	24.00	....	24.60	25.09	25.60	....	25.59	25.09	24.46	23.73	23.27	23.68
7	24.01	....	24.64	25.12	25.63	25.83	25.56	25.07	24.44	23.71	23.26	23.68
8	24.02	24.48	24.69	25.12	25.63	25.83	25.54	25.05	24.41	23.69	....	23.67
9	24.02	24.48	24.73	25.13	25.63	25.83	25.51	25.02	24.39	23.66	23.25	23.67
10	24.02	24.48	24.73	25.13	....	25.83	25.49	25.00	24.36	23.65	23.25	23.67
11	24.03	24.46	24.73	25.15	25.63	25.83	25.47	24.98	24.34	23.63	23.24	23.66
12	24.03	24.45	24.73	25.17	25.63	25.83	25.46	24.96	24.31	23.60	23.27	23.66
13	24.03	24.44	24.74	25.17	25.64	25.83	25.43	24.94	24.30	23.59	23.30	23.66
14	24.03	24.43	24.85	25.17	25.64	25.81	25.41	24.92	24.28	23.57	23.36	23.66
15	24.04	24.42	24.86	25.17	25.64	25.81	25.39	24.90	24.25	23.56	23.42	23.65
16	24.08	24.42	24.87	25.19	25.63	25.81	25.37	24.88	24.22	23.54	23.36	23.65
17	24.08	24.42	....	25.20	25.63	25.81	25.35	24.87	24.19	23.53	23.57	23.65
18	24.09	24.42	....	25.20	....	25.81	25.34	24.85	24.15	23.51	23.57	23.65
19	24.10	24.41	24.88	25.21	....	25.80	....	24.83	24.12	23.50	23.57	23.65
20	24.29	24.42	24.88	25.22	....	25.80	....	24.81	24.10	23.49	23.57	23.64
21	24.33	24.43	24.89	25.22	....	25.80	25.34	24.80	24.08	23.48	23.57	23.63
22	24.33	....	24.89	25.22	25.63	25.79	25.33	24.78	24.06	23.46	23.57	23.63
23	24.33	....	24.89	25.22	25.70	25.79	25.32	24.76	24.03	23.44	23.59	23.63
24	24.33	....	24.89	25.22	25.76	25.78	25.31	24.74	24.01	23.42	23.68	23.63
25	24.35	....	24.92	25.22	25.81	25.76	25.30	24.72	23.99	23.40	23.70	....
26	24.36	....	....	25.23	25.82	25.76	25.29	....	23.96	23.38	23.70	....
27	24.39	....	....	25.23	25.82	25.75	25.28	....	23.93	23.37	23.70	....
28	24.39	....	24.91	25.24	25.82	25.74	....	24.65	23.90	23.36	23.70	....
29	24.39	....	24.91	25.24	....	25.73	....	24.62	23.88	23.34	23.70	....
30	24.43	....	24.90	25.24	25.83	25.71	....	24.59	23.85	23.33	23.70	....
31	24.44	....	24.89	....	25.83	....	....	24.58	....	23.32	....	23.65

28.5.4.8.1 (#845, p. 203; 886, p. 357; 906, p. 91; 936, p. 84; 944, p. 84; 986, p. 94; 1016, p. 129; 1023, p. 155; 1071, p. 180). Duhermal observation well 1. Extremes of observed water level, in feet above mean sea level: Highest, 7.67 July 31, 1945; lowest, 4.06 Dec. 12, 1941.

Water level at end of day, in feet below land-surface datum, 1947  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	14.34	Feb. 14	13.79	Feb. 25	13.74	Mar. 4	13.68
2	14.30	18	13.77	26	13.76	21	13.44
7	14.23	19	13.77	27	13.80	22	13.41
14	14.19	20	13.73	28	13.83	23	13.38

28.5.4.8.1--Continued.

Water level at end of day, in feet below land-surface datum, 1947  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 24	13.35	May 9	a12.83	July 7	13.07	Sept. 16	a13.67
25	13.33	10	a12.82	8	13.04	23	a13.80
Apr. 1	13.45	11	a12.81	9	13.06	30	a13.83
2	13.41	12	a12.80	10	13.09	Oct. 7	a14.01
8	13.30	13	a12.78	11	13.11	14	a14.04
9	13.29	20	a12.55	12	13.14	21	a14.17
22	12.94	27	a12.47	13	a13.13	28	a14.20
29	12.99	June 3	a12.44	14	a13.16	Nov. 4	a13.95
30	12.99	10	a12.44	15	a13.19	11	a13.73
May 1	12.97	17	a12.62	22	a13.10	18	a13.58
2	12.89	24	a12.68	29	a13.17	25	a13.35
3	12.88	July 1	12.91	Aug. 5	a13.24	Dec. 2	a13.39
4	12.87	2	12.94	12	a13.30	9	a13.53
5	12.85	3	12.96	19	a13.28	16	a13.66
6	12.85	4	12.98	26	a12.97	23	a13.97
7	a12.86	5	13.01	Sept. 2	a13.50	30	a13.82
8	a12.85	6	13.04	9	a13.60		

a Measurement furnished by Duhermal Water Board.

Water level at end of day, in feet above mean sea level, 1947  
(From recorder charts)

Jan. 1	4.36	Apr. 9	5.41	June 17	a6.08	Aug. 19	a5.42
2	4.40	22	5.76	24	a6.02	26	a5.73
7	4.47	29	5.71	July 1	5.79	Sept. 2	a5.20
14	4.51	30	5.71	2	5.76	9	a5.10
Feb. 14	4.91	May 1	5.73	3	5.74	16	a5.03
18	4.93	2	5.81	4	5.72	23	a4.90
19	4.93	3	5.82	5	5.69	30	a4.87
20	4.97	4	5.83	6	5.66	Oct. 7	a4.69
25	4.96	5	5.85	7	5.63	14	a4.66
26	4.94	6	5.85	8	5.66	21	a4.53
27	4.90	7	a5.84	9	5.61	28	a4.50
28	4.87	8	a5.85	10	5.61	Nov. 4	a4.77
Mar. 4	5.02	9	a5.87	11	5.59	11	a4.97
21	5.26	10	a5.88	12	5.56	18	a5.12
22	5.29	11	a5.89	13	a5.57	25	a5.35
23	5.32	12	a5.90	14	a5.54	Dec. 2	a5.31
24	5.35	13	a5.92	15	a5.51	9	a5.17
25	5.37	20	a6.15	22	a5.60	16	a5.04
Apr. 1	5.25	27	a6.23	29	a5.53	23	a4.73
2	5.29	June 3	a6.26	Aug. 5	a5.46	30	a4.88
8	5.40	10	a6.26	12	a5.40		

a Measurement furnished by Duhermal Water Board.

28.5.4.8.7 (\*845, p. 204; 886, p. 358; 906, p. 91; 936, p. 85; 944, p. 85; 986, p. 96; 1016, p. 130; 1023, p. 156; 1071, p. 181). Duhermal observation well 2. Extremes of observed water level, in feet above mean sea level: Highest, 15.65 Apr. 11, 1939; lowest, 8.84 Dec. 10, 1941. No measurements made in 1947.

28.4.9.3.5 (\*845, p. 206; 886, p. 359; 906, p. 93; 936, p. 86; 944, p. 85; 986, p. 96; 1016, p. 130; 1023, p. 156; 1071, p. 181). Duhermal observation well 4. Extremes of observed water level, in feet with reference to mean sea level: Highest, +11.75 Apr. 20, 1939; lowest, -0.85 Oct. 22, 23, 1943.

Water level at end of day, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	22.61	21.23	19.86	17.79	19.83	19.48	19.95	20.77	.....	.....
2	.....	.....	21.17	21.00	19.74	18.49	19.87	19.54	20.21	20.93	.....	19.13
3	.....	.....	21.31	20.89	19.51	18.79	19.93	19.06	20.25	21.00	.....	.....
4	.....	.....	21.26	20.85	19.01	18.98	20.19	19.56	20.31	20.85	.....	.....

28.4.9.3.5--Continued.

Water level at end of day, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	.....	.....	21.47	20.58	19.17	19.03	20.22	19.64	20.35	20.40	.....	.....
6	.....	.....	21.56	20.02	19.07	19.06	20.29	19.68	20.33	20.79	.....	.....
7	.....	21.36	21.59	20.54	19.12	18.95	20.24	19.77	19.90	20.88	.....	.....
8	.....	21.36	21.48	20.54	19.11	18.32	20.23	19.79	20.18	20.94	.....	.....
9	.....	19.81	19.53	20.63	19.26	18.72	20.11	19.21	20.15	21.00	.....	20.40
10	.....	19.66	21.10	20.57	19.10	18.83	20.22	17.66	20.16	21.00	.....	.....
11	.....	20.76	21.30	20.46	18.60	18.91	20.17	19.07	20.19	.....	19.93	.....
12	.....	21.06	.....	20.53	19.26	19.04	19.89	19.29	20.23	.....	19.81	.....
13	.....	21.14	.....	20.34	19.36	19.10	19.81	19.37	20.22	.....	.....	.....
14	.....	21.26	.....	20.54	19.57	19.09	20.28	19.55	20.45	21.01	.....	.....
15	.....	21.14	.....	20.51	19.61	18.52	.....	19.66	20.36	21.06	.....	.....
16	.....	21.09	.....	20.24	19.69	19.11	.....	19.67	20.50	21.10	.....	19.92
17	.....	21.36	.....	20.16	19.47	19.16	.....	19.15	20.65	21.11	.....	19.44
18	.....	21.40	21.26	20.08	19.31	19.26	.....	19.42	20.65	21.02	.....	19.79
19	.....	.....	21.15	20.00	19.52	19.34	.....	19.54	20.73	20.55	.....	19.83
20	.....	.....	21.28	19.95	19.47	19.38	.....	19.65	20.71	20.83	.....	.....
21	.....	.....	21.32	19.97	19.37	18.86	.....	19.64	20.64	20.87	.....	.....
22	.....	.....	21.28	19.98	19.29	18.67	19.41	19.66	20.81	20.24	.....	.....
23	.....	.....	20.16	19.94	18.93	19.26	.....	19.66	20.77	.....	.....	20.26
24	.....	.....	20.89	20.07	18.54	19.42	.....	19.31	20.85	.....	.....	.....
25	.....	21.66	21.12	20.03	17.87	19.56	19.29	19.84	20.88	.....	.....	.....
26	.....	21.70	21.19	19.96	18.41	19.63	18.82	19.86	20.91	.....	.....	.....
27	.....	21.74	21.13	19.97	18.46	19.69	17.57	19.90	20.83	.....	.....	.....
28	.....	21.75	21.22	20.05	18.61	19.66	18.76	19.90	20.29	20.93	.....	.....
29	.....	.....	21.15	20.09	18.74	19.58	19.03	19.88	20.60	20.95	.....	.....
30	.....	.....	20.99	20.14	17.93	19.76	19.18	19.87	20.77	20.90	.....	.....
31	21.36	.....	21.21	.....	17.85	.....	19.39	19.87	.....	.....	.....	.....

Water level at end of day, in feet above mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	1.50	1.88	3.25	5.32	3.28	3.63	3.16	2.34	.....	.....
2	.....	.....	1.94	2.11	3.37	4.62	3.24	3.57	2.90	2.18	.....	3.98
3	.....	.....	1.80	2.22	3.60	4.32	3.18	4.05	2.86	2.11	.....	.....
4	.....	.....	1.85	2.28	4.10	4.13	2.92	3.55	2.80	2.26	.....	.....
5	.....	.....	1.64	2.53	3.94	4.08	2.89	3.47	2.76	2.71	.....	.....
6	.....	.....	1.55	3.09	4.04	4.05	2.82	3.43	2.78	2.32	.....	.....
7	.....	1.75	1.52	2.57	3.99	4.16	2.87	3.34	3.21	2.23	.....	.....
8	.....	1.75	1.63	2.57	4.00	4.79	2.88	3.32	2.93	2.17	.....	.....
9	.....	3.30	3.58	2.48	3.85	4.39	3.00	3.90	2.96	2.11	.....	2.71
10	.....	3.45	2.01	2.54	4.01	4.28	2.89	5.45	2.95	2.11	.....	.....
11	.....	2.35	1.81	2.65	4.51	4.20	2.94	4.04	2.92	.....	3.18	.....
12	.....	2.05	.....	2.58	3.85	4.07	3.22	3.82	2.88	.....	3.30	.....
13	.....	1.97	.....	2.77	3.75	4.01	3.30	3.74	2.89	.....	.....	.....
14	.....	1.85	.....	2.57	3.54	4.02	2.83	3.56	2.66	2.10	.....	.....
15	.....	1.97	.....	2.60	3.50	4.59	.....	3.45	2.75	2.05	.....	.....
16	.....	2.02	.....	2.87	3.42	4.00	.....	3.44	2.61	2.01	.....	3.19
17	.....	1.75	.....	2.95	3.64	3.95	.....	3.96	2.46	2.00	.....	3.67
18	.....	1.71	1.85	3.03	3.80	3.85	.....	3.69	2.46	2.09	.....	3.32
19	.....	.....	1.96	3.11	3.59	3.77	.....	3.57	2.38	2.56	.....	3.28
20	.....	.....	1.83	3.16	3.64	3.73	.....	3.46	2.40	2.28	.....	.....
21	.....	.....	1.79	3.14	3.74	4.25	.....	3.47	2.47	2.24	.....	.....
22	.....	.....	1.83	3.13	3.82	4.44	3.70	3.45	2.30	2.87	.....	.....
23	.....	.....	2.95	3.17	4.18	3.85	.....	3.45	2.34	2.42	.....	2.85
24	.....	.....	2.22	3.04	4.57	3.69	.....	3.80	2.26	.....	.....	.....
25	.....	1.45	1.99	3.08	5.24	3.55	3.82	3.27	2.23	.....	.....	.....
26	.....	1.41	1.92	3.15	4.70	3.48	4.29	3.25	2.20	.....	.....	.....
27	.....	1.37	1.98	3.14	4.65	3.42	5.54	3.21	2.28	.....	.....	.....
28	.....	1.36	1.89	3.06	4.50	3.45	4.35	3.21	2.82	2.18	.....	.....
29	.....	.....	1.96	3.02	4.37	3.53	4.08	3.23	2.51	2.16	.....	.....
30	.....	.....	2.12	2.97	5.18	3.35	3.93	3.24	2.34	2.21	.....	.....
31	1.75	.....	1.90	.....	5.26	.....	3.72	3.24	.....	.....	.....	.....

28.5.7.1.5 (\*886, p. 359; 906, p. 93; 936, p. 86; 944, p. 86; 986, p. 97; 1016, p. 132; 1023, p. 157; 1071, p. 182). Duhermal observation well 5. Extremes of observed water level, in feet above mean sea level: Highest, 14.94 Apr. 7, 8, 1939; lowest, 6.17 Oct. 14, 1943.

Water level at end of day, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	12.25	11.22	11.53	10.98	9.84	9.00	10.17	10.82	12.29	12.73	13.28	11.26
2	12.23	11.18	11.21	10.85	9.84	9.03	10.25	10.88	11.92	12.85	13.27	11.31
3	12.22	11.18	11.21	10.72	9.80	9.18	10.30	10.91	11.92	13.24	13.25	11.32
4	12.16	11.16	11.09	10.65	9.64	9.23	10.39	10.96	11.96	13.25	13.12	11.40
5	12.08	11.08	11.04	10.39	9.49	9.24	10.48	11.01	11.98	13.25	13.02	11.37
6	12.05	11.16	10.97	10.20	9.26	9.32	10.56	11.05	12.01	13.00	12.99	11.48
7	12.08	11.18	10.87	10.20	9.32	9.20	10.58	11.11	12.01	13.08	12.94	11.46
8	12.04	11.19	10.82	10.07	9.35	...	10.59	11.12	12.06	13.18	12.70	11.52
9	12.01	11.22	10.81	10.16	9.35	...	10.59	11.13	12.09	13.17	...	11.59
10	12.01	11.09	10.80	10.12	9.30	9.12	10.63	11.11	12.09	13.18	...	11.58
11	12.04	11.16	10.80	10.08	9.28	9.17	10.66	11.13	12.11	13.20	12.16	11.63
12	12.08	11.19	10.80	10.04	9.22	9.28	10.72	11.14	12.13	13.15	11.72	11.68
13	12.08	11.20	10.70	10.08	9.24	9.33	10.77	11.20	12.16	13.16	11.49	11.69
14	12.03	11.20	10.69	10.08	9.37	9.34	10.85	11.26	12.21	13.23	11.37	11.72
15	11.97	11.20	10.64	10.10	9.39	9.38	10.68	11.31	12.17	13.23	11.24	11.64
16	11.91	11.25	10.54	10.03	9.42	9.46	10.52	11.33	12.26	13.25	11.20	11.68
17	11.84	11.29	10.63	10.02	9.47	9.51	10.43	11.23	12.31	13.28	11.20	11.60
18	11.84	11.31	10.71	10.04	9.44	9.53	10.44	11.25	12.33	13.31	11.19	11.65
19	11.78	11.34	10.69	10.06	9.48	9.60	10.43	11.30	12.39	13.31	11.20	11.66
20	11.63	11.22	10.71	10.05	9.38	9.67	10.44	11.39	12.40	13.34	11.22	11.61
21	11.61	11.27	10.75	10.08	9.36	9.69	10.45	11.39	12.41	13.34	11.25	11.64
22	11.57	11.35	10.83	10.08	9.06	9.72	10.41	11.48	12.47	13.26	11.21	11.67
23	11.52	11.38	10.76	10.14	8.88	9.76	10.47	11.48	12.50	13.35	11.17	11.71
24	11.51	11.41	10.74	10.09	8.90	9.79	10.45	11.54	12.52	13.38	11.10	11.69
25	11.50	11.48	10.80	10.05	8.87	9.84	10.47	11.59	12.57	13.39	11.13	11.45
26	11.36	11.50	10.88	10.09	8.87	9.88	10.50	11.68	12.61	13.25	11.15	11.51
27	11.32	11.56	10.87	10.12	8.90	9.93	10.38	11.70	12.63	13.36	11.10	11.58
28	11.27	11.58	10.90	10.13	8.93	9.99	10.48	11.74	12.63	13.34	11.14	11.67
29	11.23		10.90	10.13	8.96	10.03	10.58	11.78	12.64	13.31	11.20	11.74
30	11.17		11.00	10.14	8.96	10.11	10.64	11.76	12.71	13.31	11.23	11.73
31	11.28		11.00		8.98		10.75	11.82		13.29		11.76

Water level at end of day, in feet above mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	8.83	9.86	9.55	10.10	11.24	12.08	10.91	10.26	8.79	8.35	7.80	9.82
2	8.85	9.90	9.87	10.23	11.24	12.05	10.83	10.20	9.16	8.23	7.81	9.77
3	8.86	9.90	9.87	10.36	11.28	11.90	10.78	10.17	9.16	7.84	7.83	9.76
4	8.92	9.92	9.99	10.43	11.44	11.85	10.69	10.12	9.12	7.83	7.96	9.68
5	9.00	10.00	10.04	10.69	11.59	11.84	10.60	10.07	9.10	7.83	8.06	9.71
6	9.03	9.92	10.11	10.88	11.82	11.76	10.52	10.03	9.07	7.92	8.09	9.60
7	9.00	9.90	10.21	10.88	11.76	11.88	10.50	9.97	9.07	8.00	8.14	9.62
8	9.04	9.89	10.26	10.91	11.73	...	10.49	9.96	9.02	7.90	8.38	9.56
9	9.07	9.86	10.27	10.92	11.73	...	10.49	9.95	8.99	7.91	...	9.49
10	9.07	9.99	10.28	10.96	11.78	11.96	10.45	9.97	8.99	7.90	...	9.50
11	9.04	9.92	10.28	11.00	11.80	11.91	10.42	9.95	8.97	7.88	8.92	9.45
12	9.00	9.89	10.28	11.04	11.86	11.80	10.36	9.94	8.95	7.93	9.36	9.40
13	9.00	9.88	10.38	11.00	11.84	11.75	10.31	9.88	8.92	7.92	9.59	9.39
14	9.05	9.88	10.39	11.00	11.71	11.74	10.23	9.82	8.87	7.85	9.71	9.36
15	9.11	9.88	10.44	10.98	11.69	11.70	10.40	9.77	8.91	7.85	9.84	9.44
16	9.17	9.83	10.54	11.05	11.66	11.62	10.56	9.75	8.82	7.83	9.88	9.40
17	9.24	9.79	10.45	11.06	11.61	11.57	10.65	9.85	8.77	7.80	9.88	9.48
18	9.24	9.77	10.37	11.04	11.64	11.55	10.64	9.83	8.75	7.77	9.89	9.43
19	9.30	9.74	10.39	11.02	11.60	11.48	10.65	9.78	8.69	7.77	9.88	9.42
20	9.45	9.86	10.37	11.03	11.70	11.41	10.64	9.69	8.68	7.74	9.86	9.47
21	9.47	9.81	10.33	11.00	11.72	11.39	10.63	9.69	8.67	7.74	9.83	9.44
22	9.51	9.73	10.25	11.00	12.02	11.36	10.67	9.60	8.61	7.82	9.87	9.41
23	9.56	9.70	10.32	10.94	12.20	11.32	10.61	9.60	8.58	7.73	9.91	9.37
24	9.57	9.67	10.34	10.99	12.18	11.29	10.63	9.54	8.56	7.70	9.98	9.39
25	9.58	9.60	10.28	11.03	12.21	11.24	10.61	9.49	8.51	7.69	9.95	9.63

28.5.7.1.5--Continued.

Water level at end of day, in feet above mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	9.72	9.58	10.20	10.99	12.21	11.20	10.58	9.40	8.47	7.73	9.93	9.57
27	9.76	9.52	10.21	10.96	12.18	11.15	10.70	9.38	8.45	7.72	9.98	9.41
28	9.81	9.50	10.18	10.95	12.15	11.09	10.60	9.34	8.45	7.74	9.84	9.41
29	9.85		10.18	10.95	12.12	11.05	10.50	9.30	8.44	7.77	9.88	9.34
30	9.91		10.08	10.94	12.12	10.97	10.44	9.32	8.37	7.77	9.85	9.35
31	9.80		10.08		12.10		10.33	9.26		7.79		9.32

28.4.9.5.1 (\*886, p. 360; 906, p. 94; 936, p. 87; 944, p. 87; 986, p. 98; 1016, p. 133; 1023, p. 158; 1071, p. 183). Duhermal observation well 9. Extremes of observed water level, in feet above mean sea level: Highest, 14.85 June 1, 1940; lowest, 8.45 Sept. 29, Oct. 13, 14, 1943. No measurements made in 1947.

28.4.9.8.2 (\*845, p. 206; 886, p. 361; 906, p. 94; 936, p. 88; 944, p. 87; 986, p. 99; 1016, p. 133; 1023, p. 158; 1071, p. 183). Duhermal observation well 10. Extremes of observed water level, in feet above mean sea level: Highest, 21.98 Feb. 8, 1941; lowest, 12.56 Sept. 28, Oct. 1, 1943. No measurements made in 1947.

28.4.9.3.1 (\*886, p. 361; 906, p. 95; 936, p. 88; 944, p. 88; 986, p. 100; 1016, p. 134; 1023, p. 159; 1071, p. 185). Duhermal observation well 11. Extremes of observed water level, in feet with reference to mean sea level: Highest, +14.23 June 1, 1940; lowest, -1.90 Jan. 22, 23, 24, 1943.

Water level at end of day, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	29.4	29.6	31.8	31.6	30.0	27.7	27.7	26.5	26.3	26.9	27.0	26.4
2	29.5	29.6	31.6	31.5	30.0	27.7	27.7	26.6	26.3	26.9	....	....
3	29.5	29.6	31.7	31.4	30.0	27.8	27.6	26.5	....	27.0	....	....
4	29.5	29.6	31.6	31.4	29.9	27.8	27.7	26.5	26.4	27.0	26.9	....
5	29.5	29.6	31.7	31.3	29.9	27.7	27.7	26.5	....	27.0	26.8	26.4
6	29.5	29.6	31.7	31.1	29.8	27.7	27.7	26.5	26.4	27.0	26.9	....
7	29.5	29.7	31.6	31.2	29.8	27.6	27.5	26.5	26.3	27.0	26.9	....
8	29.5	29.7	31.6	31.2	29.8	27.5	27.4	26.5	26.4	27.0	26.7	26.4
9	29.6	29.6	31.5	31.3	29.8	27.6	27.4	26.4	26.5	27.0	....	26.5
10	29.6	29.6	31.6	31.3	29.8	27.6	27.4	26.2	26.5	27.0	....	26.4
11	29.6	29.7	31.7	31.2	29.7	27.7	27.2	26.3	....	....	26.6	26.5
12	29.4	29.7	31.7	31.2	29.7	27.7	27.2	26.4	....	....	26.6	26.5
13	29.6	29.7	31.6	31.1	28.7	27.7	27.3	26.4	....	....	26.5	26.4
14	29.5	32.3	31.6	31.1	28.5	27.7	27.4	26.4	....	27.0	26.5	26.4
15	29.5	31.9	31.6	31.1	28.6	27.6	27.2	26.4	....	27.1	26.5	26.4
16	29.5	32.0	31.5	29.6	28.6	27.7	27.2	26.4	26.7	27.1	26.5	26.4
17	29.5	32.0	31.6	29.5	28.6	27.7	27.0	26.3	26.7	27.0	26.5	26.3
18	29.5	....	31.6	28.5	28.5	27.7	26.9	26.3	26.7	27.1	26.5	26.4
19	29.4	....	31.6	29.4	28.4	27.7	26.7	26.3	26.7	27.0	26.5	26.4
20	29.4	....	31.6	29.3	28.2	27.8	26.6	26.3	26.7	27.0	26.5	26.4
21	29.5	....	31.6	29.3	28.2	27.7	26.6	26.3	26.7	27.1	26.5	26.4
22	29.5	....	31.7	29.3	28.1	27.6	26.5	26.3	26.7	26.9	26.5	26.4
23	29.5	....	31.6	29.2	28.0	27.6	26.5	26.3	26.7	27.1	26.4	26.4
24	29.5	....	31.6	29.3	28.0	27.6	26.6	26.2	26.7	27.1	26.3	26.3
25	29.5	31.8	31.6	29.2	....	27.7	26.6	26.3	26.8	....	26.4	25.4
26	29.4	31.8	31.6	29.2	....	27.7	26.6	....	26.8	....	26.4	26.0
27	29.5	31.8	31.6	29.2	27.9	27.7	26.5	26.3	26.8	....	26.4	26.1
28	29.6	31.8	31.6	29.1	28.0	27.7	26.6	26.3	26.7	27.2	26.4	26.2
29	29.6		31.6	29.1	27.9	27.6	26.7	26.3	26.7	27.0	26.5	26.2
30	29.6		31.6	30.1	27.8	27.6	26.7	26.3	26.8	27.0	26.4	26.2
31	29.7		31.6		27.7		26.6	26.3		27.0		26.2

## 28.4.9.3.1--Continued.

Water level at end of day, in feet above mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	6.0	5.8	3.6	3.8	5.4	7.7	7.7	8.9	9.1	8.5	8.4	9.0
2	5.9	5.8	3.8	3.9	5.4	7.7	7.7	8.9	9.1	8.5	...	...
3	5.9	5.8	3.7	4.0	5.4	7.6	7.8	8.9	...	8.4	...	...
4	5.9	5.8	3.8	4.0	5.5	7.6	7.7	8.9	9.0	8.4	8.5	...
5	5.9	5.8	3.7	4.1	5.5	7.7	7.7	8.9	...	8.4	8.6	9.0
6	5.9	5.8	3.7	4.3	5.6	7.7	7.7	8.9	9.0	8.4	8.5	...
7	5.9	5.7	3.8	4.2	5.6	7.8	7.9	8.9	9.1	8.4	8.5	...
8	5.9	5.7	3.8	4.2	5.6	7.9	8.0	8.9	9.0	8.4	8.7	9.0
9	5.8	5.8	3.9	4.1	5.6	7.8	8.0	9.0	8.9	8.4	...	8.9
10	5.8	5.8	3.8	4.1	5.6	7.8	8.0	9.2	8.9	8.4	...	9.0
11	5.8	5.7	3.7	4.2	5.7	7.7	8.2	9.1	...	...	8.8	8.9
12	6.0	5.7	3.7	4.2	5.7	7.7	8.2	9.0	...	...	8.8	8.9
13	5.8	5.7	3.8	4.3	6.7	7.7	8.1	9.0	...	...	8.9	9.0
14	5.9	3.1	3.8	4.3	6.9	7.7	8.0	9.0	...	8.4	8.9	9.0
15	5.9	3.5	3.8	4.3	6.8	7.8	8.2	9.0	...	8.3	8.9	9.0
16	5.9	3.4	3.9	5.8	6.8	7.7	8.2	9.0	8.7	8.3	8.9	9.0
17	5.9	3.4	3.8	5.9	6.8	7.7	8.4	9.1	8.7	8.4	8.9	9.1
18	5.9	...	3.8	5.9	6.9	7.7	8.6	9.1	8.7	8.3	8.9	9.0
19	6.0	...	3.8	6.0	7.0	7.7	8.7	9.1	8.7	8.4	8.9	9.0
20	6.0	...	3.8	6.1	7.2	7.6	8.8	9.1	8.7	8.4	8.9	9.0
21	5.9	...	3.8	6.1	7.2	7.7	8.8	9.1	8.7	8.3	8.9	9.0
22	5.9	...	3.7	6.1	7.3	7.8	8.9	9.1	8.7	8.5	8.9	9.0
23	5.9	...	3.8	6.2	7.4	7.8	8.9	9.1	8.7	8.3	9.0	9.0
24	5.9	...	3.8	6.1	7.4	7.8	8.8	9.2	8.7	8.3	9.1	9.1
25	5.9	3.6	3.8	6.2	...	7.7	8.8	9.1	8.6	...	9.0	10.0
26	6.0	3.6	3.8	6.2	...	7.7	8.8	...	8.6	...	9.0	9.4
27	5.9	3.6	3.8	6.2	7.5	7.7	8.9	9.1	8.6	...	9.0	9.3
28	5.8	3.6	3.8	6.3	7.4	7.7	8.8	9.1	8.7	8.2	9.0	9.2
29	5.8	...	3.8	6.3	7.5	7.8	8.7	9.1	8.7	8.4	8.9	9.2
30	5.8	...	3.8	5.3	7.6	7.8	8.7	9.1	8.6	8.4	9.0	9.2
31	5.7	...	3.8	...	7.7	...	8.8	9.1	...	8.4	...	9.2

28.4.4.2.1 (\*845, p. 207; \*886, p. 364; 906, p. 98; 936, p. 89; 944, p. 89; \*986, p. 101; 1016, p. 136; 1023, p. 161; 1071, p. 186).  
Robert D. Fischer test well. Extremes of observed water level, in feet below land-surface datum: Highest, 10.58 Apr. 26, 27, 1939; lowest, 16.29 Jan. 30, 1942.

Water level at end of day, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	15.32	15.28	15.17	14.75	14.05	13.07	13.06	13.69	14.36	14.98	15.53	15.03
2	15.32	15.27	15.15	14.72	14.04	13.05	13.08	13.71	14.38	15.03	15.55	15.03
3	15.33	15.26	15.13	14.72	14.03	13.04	13.11	13.73	14.40	15.05	15.56	15.02
4	15.35	15.24	15.13	14.71	14.00	13.03	13.12	13.75	14.42	15.07	15.48	15.02
5	15.35	15.23	15.13	14.68	13.96	13.01	13.14	13.77	14.44	15.09	15.54	15.01
6	15.36	15.23	15.13	14.66	13.93	12.99	13.16	13.79	14.46	15.10	15.57	15.02
7	15.36	15.22	15.13	14.66	13.87	12.97	13.18	13.81	14.48	15.11	15.59	15.02
8	15.37	15.21	15.12	14.64	13.81	12.94	13.20	13.83	14.51	15.13	15.44	15.01
9	15.37	15.20	15.12	14.60	13.76	12.93	13.21	13.86	14.53	15.16	15.49	15.02
10	15.38	15.20	15.11	14.55	13.71	12.93	13.23	13.88	14.55	15.18	15.49	15.02
11	15.38	15.20	15.10	14.50	13.66	12.92	13.25	13.90	14.57	15.20	15.45	15.02
12	15.40	15.20	15.08	14.46	13.61	12.92	13.26	13.92	14.59	15.22	15.34	15.04
13	15.41	15.20	15.06	14.44	13.56	12.91	13.29	13.94	14.61	15.23	15.35	15.04
14	15.41	15.19	15.03	14.39	13.54	12.89	13.31	13.96	14.63	15.25	15.30	15.04
15	15.42	15.19	15.01	14.37	13.52	12.89	13.32	13.98	14.65	15.27	15.25	15.04
16	15.43	15.18	15.00	14.33	13.48	12.89	13.34	14.01	...	15.29	15.21	15.02
17	15.44	15.18	14.97	14.31	13.45	12.89	13.36	14.02	...	15.31	15.19	15.04
18	15.45	15.18	14.96	14.29	13.42	12.89	13.37	14.04	...	15.33	15.16	15.05
19	15.45	15.18	14.94	14.28	13.39	12.91	13.40	14.06	...	15.34	15.15	15.06
20	15.41	15.18	14.92	14.25	13.36	12.92	13.42	14.09	...	15.36	15.13	15.08
21	15.44	15.18	14.90	14.23	13.34	12.93	13.44	14.11	...	15.38	15.12	15.08
22	15.45	15.16	14.89	14.22	13.32	12.93	13.47	14.14	...	15.40	15.10	15.08

28.4.4.2.1--Continued.

Water level at end of day, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
23	15.43	15.16	14.87	14.20	13.30	12.93	13.49	14.16	.....	15.42	15.09	15.09
24	15.41	15.16	14.85	14.17	13.28	12.93	13.52	14.18	.....	15.44	15.06	15.11
25	15.39	15.16	14.83	14.16	13.25	12.95	13.54	14.20	14.85	15.45	15.05	15.11
26	15.36	15.16	14.83	14.14	13.24	12.95	13.55	14.22	14.88	15.46	15.05	15.10
27	15.34	15.16	14.82	14.13	13.21	12.97	13.57	14.25	14.90	15.48	15.05	15.11
28	15.32	15.17	14.80	14.12	13.17	13.00	13.59	14.26	14.92	15.50	15.04	15.13
29	15.30		14.79	14.10	13.14	13.03	13.61	14.30	14.93	15.49	15.03	15.15
30	15.29		14.79	14.08	13.12	13.05	13.63	14.31	14.96	15.51	15.03	15.15
31	15.28		14.77		13.10		13.65	14.34		15.50		15.16

29.11.1.2.3 (\*777, p. 100; \*817, p. 182; 840, p. 246; \*845, p. 208; 886, p. 366; \*906, p. 100; 936, p. 89; 944, p. 89; 986, p. 102; 1016, p. 136; 1023, p. 161; 1071, p. 186). Joseph Morrell well. Extremes of observed water level, in feet above mean sea level: Highest, 75.08 Mar. 28, 1932; lowest, 68.05 Oct. 6, 1932, not affected by pumping.

Water level at end of day, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	0.55	0.84	1.04	1.20	0.45	....	2.76	2.86	3.83	4.72	....	....
2	.56	.87	.22	.22	.60	1.56	2.86	....	3.87	4.74	4.57	1.03
3	.47	.50	.45	.46	....	1.62	2.95	3.06	3.90	4.76	2.35	1.03
4	....	.59	.56	.60	.36	1.70	3.05	3.15	3.93	....	2.22	1.10
5	.59	....	.56	.25	.25	1.76	3.13	3.24	....	4.81	2.20	1.05
6	.66	....	.34	.43	.47	1.77	3.21	3.35	....	4.82	2.15	1.04
7	.68	....	....	.61	.58	....	3.31	3.39	3.97	4.85	....	1.07
8	.70	....	....	.70	.71	.70	2.61	3.40	3.98	4.87	....	.98
9	.74	.86	....	.57	.81	.95	2.43	....	4.01	4.89	.93	1.04
10	.79	.94	.66	.70	....	1.15	2.38	3.30	4.03	....	1.08	1.06
11	.69	.97	.70	.76	....	1.37	....	3.21	4.05	....	.71	1.09
12	....	.98	.72	....	1.02	1.63	....	3.24	....	....	.56	....
13	.75	1.00	.72	.89	1.09	1.71	2.64	3.34	....	4.98	.67	....
14	.47	.95	.47	.80	1.10	1.62	2.61	3.44	....	4.99	.76	1.17
15	.33	.82	.61	.82	1.14	1.73	2.56	3.53	4.23	5.01	.80	1.16
16	.44	.76	....	.58	1.18	1.84	1.43	3.59	4.28	5.02	.87	.58
17	.53	.82	.78	.71	1.23	1.94	....	3.56	4.32	5.03	.95	.63
18	.60	.88	.86	.81	1.18	1.81	....	3.47	4.37	5.04	1.01	.72
19	.67	.92	.88	....	1.22	1.95	....	3.47	4.42	....	....	.79
20	.29	.96	.93	....	.69	2.02	1.27	3.49	....	5.05	....	....
21	.52	1.00	.97	.94	.72	....	1.54	3.49	4.51	5.06	....	.85
22	.64	....	1.01	.87	.32	2.15	1.20	....	4.54	5.06	....	.89
23	.70	1.03	1.02	.95	.49	2.23	1.51	....	4.57	5.07	.82	.89
24	.74	1.07	1.00	.97	....	2.16	1.76	3.67	4.59	....	.50	.92
25	.78	1.08	.99	1.04	.81	2.27	....	3.69	....	....	.65	....
26	....	1.01	1.02	....	.91	2.30	....	3.72	....	5.11	.75	....
27	.58	1.00	1.06	....	1.07	2.42	2.33	3.74	....	5.11	.81	....
28	.67	1.04	1.09	1.10	1.23	....	2.35	3.75	....	5.11	.87	1.01
29	.72		1.11	1.13	1.25	2.58	2.49	....	4.67	5.10	....	....
30	.70		1.15	1.17	1.20	2.66	2.65	3.78	4.69	5.07	....	....
31	.74		1.18	....	....		2.75	3.80		4.99		....

Water level at end of day, in feet above mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	74.17	73.88	73.68	73.52	74.27	....	71.96	71.86	70.89	70.00	....	....
2	74.16	73.85	74.50	74.50	74.12	73.16	71.86	....	70.85	69.98	70.15	73.69
3	74.25	74.22	74.27	74.26	....	73.10	71.77	71.66	70.82	69.96	72.37	73.69
4	....	74.13	74.16	74.12	74.36	73.02	71.67	71.57	70.79	....	72.50	73.62
5	74.13	....	74.16	74.47	74.47	72.96	71.59	71.48	....	69.91	72.52	73.67
6	74.06	....	74.38	74.29	74.25	72.95	71.51	71.37	....	69.90	72.57	73.68
7	74.04	....	....	74.11	74.14	....	71.41	71.33	70.75	69.87	....	73.65
8	74.02	....	....	74.02	74.01	74.02	72.11	71.32	70.74	69.85	....	73.74

29.11.1.2.3--Continued.

Water level at end of day, in feet above mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
9	73.98	73.86	.....	74.15	73.91	73.77	72.29	.....	70.71	69.83	73.79	73.68
10	73.93	73.78	74.06	74.02	.....	73.57	72.34	71.42	70.69	.....	73.64	73.66
11	74.03	73.75	74.02	73.96	.....	73.35	.....	71.51	70.67	.....	74.01	73.63
12	.....	73.74	74.00	.....	73.70	73.09	.....	71.48	.....	.....	74.16	.....
13	73.97	73.72	74.00	73.83	73.63	73.01	72.08	71.38	.....	69.74	74.05	.....
14	74.25	73.77	74.25	73.92	73.62	73.10	72.11	71.28	.....	69.73	73.96	73.55
15	74.39	73.90	74.11	73.90	73.59	72.99	72.16	71.19	70.49	69.71	73.92	73.56
16	74.28	73.96	.....	74.14	73.54	72.88	73.29	71.13	70.44	69.70	73.85	74.14
17	74.19	73.90	73.94	74.01	73.49	72.78	.....	71.16	70.40	69.69	73.77	74.09
18	74.12	73.84	73.86	73.91	73.54	72.91	.....	71.25	70.35	69.68	73.71	74.00
19	74.05	73.80	73.84	.....	73.50	72.77	.....	71.25	70.30	.....	.....	73.93
20	74.43	73.76	73.79	.....	74.03	72.70	73.45	71.23	.....	69.67	.....	.....
21	74.20	73.72	73.75	73.78	74.00	.....	73.18	71.23	70.21	69.66	.....	73.87
22	74.08	.....	73.71	73.85	74.40	72.57	73.52	.....	70.18	69.66	.....	73.83
23	74.02	73.69	73.70	73.77	74.23	72.49	73.21	.....	70.15	69.65	73.90	73.83
24	73.98	73.65	73.72	73.75	.....	72.56	72.96	71.05	70.13	.....	74.22	73.80
25	73.94	73.64	73.73	73.68	73.91	72.45	.....	71.03	.....	.....	74.07	.....
26	.....	73.71	73.70	.....	73.81	72.42	.....	71.00	.....	69.61	73.97	.....
27	74.14	73.72	73.66	.....	73.65	72.30	72.39	70.98	.....	69.61	73.91	.....
28	74.05	73.68	73.63	73.62	73.49	.....	72.37	70.97	.....	69.61	73.85	73.71
29	74.00	.....	73.61	73.59	73.47	72.14	72.23	.....	70.05	69.62	.....	.....
30	74.02	.....	73.57	73.55	73.52	72.06	72.07	70.94	70.03	69.65	.....	.....
31	73.98	.....	73.54	.....	.....	.....	71.97	70.92	.....	69.73	.....	.....

28.5.4.7.2 (\*845, p. 210; 886, p. 368; 906, p. 101; 936, p. 91; 944, p. 91; 986, p. 104; 1016, p. 137; 1023, p. 162; 1071, p. 187). Perth Amboy Water Department. Old Bridge observation well. Measurements discontinued.

28.5.4.3.9 (\*845, p. 227; 886, p. 368; 906, p. 102; 936, p. 91; 944, p. 91; 986, p. 105; 1016, p. 139; 1023, p. 163; 1071, p. 188). Perth Amboy Water Department. Runyon old deep well 1. Extremes of observed water level, in feet with reference to mean sea level: Highest, 12.8 Mar. 1, 1943, Mar. 26, 1944; lowest, -54.9 Sept. 26, 27, 1947.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 12	45.6	Apr. 5	52.5	June 1	53.8	Oct. 8	71.8
13	45.6	6	52.3	July 5	54.5	9	72.1
14	45.5	7	51.4	6	52.8	10	72.1
15	45.5	8	51.6	7	51.4	11	72.1
16	35.3	9	51.7	8	51.9	12	71.8
17	32.0	10	51.8	9	52.4	13	71.7
18	49.0	11	51.9	10	52.8	14	71.7
19	50.5	12	52.2	11	53.0	15	72.1
20	51.0	13	52.7	12	53.0	16	72.2
21	51.0	May 17	51.2	13	52.6	17	72.2
22	50.8	18	50.8	14	52.3	18	71.9
23	50.8	19	51.0	15	52.7	19	71.4
24	50.3	20	51.2	Sept. 26	73.1	20	70.7
25	50.5	21	51.8	27	73.1	Nov. 4	72.2
26	51.0	22	52.5	28	72.5	5	72.5
27	51.0	23	53.4	29	72.6	6	73.0
28	51.1	24	53.4	30	71.7	7	73.0
29	51.1	25	53.2	Oct. 1	72.1	8	72.9
30	50.9	26	52.6	2	72.4	9	69.2
31	51.0	27	53.0	3	72.4	10	60.8
Apr. 1	51.1	28	54.1	4	72.3	11	59.2
2	52.0	29	54.5	5	72.2	12	58.5
3	52.4	30	54.6	6	71.3	13	58.1
4	52.5	31	54.3	7	71.6	14	57.8



## 28.5.4.3.9--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Nov. 15	57.6	Dec. 5	56.0	Dec. 8	55.2	Dec. 11	56.5
16	56.8	6	56.1	9	55.7	12	56.7
Dec. 3	55.6	7	55.9	10	56.2	13	56.7
4	55.9						

Lowest daily water level, in feet below mean sea level, 1947  
(From recorder charts)

Mar. 12	27.4	Apr. 9	33.5	July 11	34.8	Oct. 18	53.7
13	27.4	10	33.6	12	34.8	19	53.2
14	27.3	11	33.7	13	34.4	20	52.5
15	27.3	12	34.0	14	34.1	Nov. 4	54.0
16	17.1	13	34.5	15	34.5	5	54.3
17	13.8	May 17	33.0	Sept. 26	54.9	6	54.8
18	30.8	18	32.6	27	54.9	7	54.8
19	32.3	19	32.8	28	54.3	8	54.7
20	32.8	20	33.0	29	54.4	9	51.0
21	32.8	21	33.6	30	53.5	10	42.6
22	32.6	22	34.3	Oct. 1	53.9	11	41.0
23	32.6	23	35.2	2	54.2	12	40.3
24	32.1	24	35.2	3	54.2	13	39.9
25	32.3	25	35.0	4	54.1	14	39.6
26	32.8	26	34.4	5	54.0	15	39.4
27	32.8	27	34.8	6	53.1	16	38.6
28	32.9	28	35.9	7	53.4	Dec. 3	37.4
29	32.9	29	36.3	8	53.6	4	37.7
30	32.7	30	36.4	9	53.9	5	37.8
31	32.8	31	36.1	10	53.9	6	37.9
Apr. 1	32.9	June 1	35.6	11	53.9	7	37.7
2	33.8	July 5	36.3	12	53.6	8	37.0
3	34.2	6	34.6	13	53.5	9	37.5
4	34.3	7	33.2	14	53.5	10	38.0
5	34.3	8	33.7	15	53.9	11	38.3
6	34.1	9	34.2	16	54.0	12	38.5
7	33.2	10	34.6	17	54.0	13	38.5
8	33.4						

29.1.4.1.1 (\*840, p. 248; 845, p. 229; \*886, p. 369; 906, p. 103; 936, p. 92; 944, p. 92; 986, p. 106; 1016, p. 140; 1023, p. 165; 1071, p. 189). Perth Amboy Water Department. Runyon old deep well 8.  
Extremes of observed water level, in feet with reference to mean sea level:  
Highest, +12.2 Apr. 8, 1943; lowest, -48.3 Sept. 15, 1947.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	36.3	44.3	....	38.4	39.0	....	43.8	....	59.3	60.4	....	43.9
2	36.4	44.2	....	39.9	39.1	....	44.1	....	59.2	60.8	61.4	43.3
3	36.9	44.0	....	40.3	38.7	....	44.1	43.8	60.4	60.8	60.7	44.0
4	....	43.8	45.5	....	38.0	....	43.7	42.8	61.0	....	60.3	44.4
5	....	43.8	45.7	....	37.3	....	42.0	43.8	61.2	....	60.7	44.7
6	....	....	45.7	39.8	....	....	40.5	44.2	61.1	59.5	61.3	....
7	....	....	45.8	38.8	....	....	39.0	....	61.1	59.7	61.3	....
8	....	....	45.8	39.1	40.4	43.8	39.7	....	60.4	60.0	....	....
9	46.5	44.6	46.5	39.1	39.6	43.7	40.3	....	61.6	60.3	....	....
10	48.5	44.5	45.5	....	....	44.0	40.9	....	62.2	60.3	....	....
11	49.6	44.6	45.9	....	....	44.8	41.2	56.2	62.9	60.3	....	....
12	51.3	44.8	46.0	....	38.5	45.4	....	57.3	63.2	60.4	....	....
13	51.3	44.9	46.0	40.7	38.5	45.6	40.7	....	....	60.0	....	....
14	51.8	....	45.9	40.7	39.0	....	40.6	....	63.1	59.9	....	44.1
15	52.1	....	45.9	40.2	39.2	....	41.0	....	66.3	60.3	....	42.9
16	52.7	44.6	36.0	40.2	39.2	43.7	41.4	....	65.9	60.5	....	43.2

## 29.1.4.1.1--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
17	....	44.5	....	40.2	39.0	44.8	42.0	....	63.7	60.5	45.2	43.9
18	....	44.7	....	39.8	....	45.3	42.0	....	62.8	60.4	45.5	44.8
19	48.5	45.2	....	....	....	45.3	....	....	62.4	....	45.5	45.4
20	46.8	45.2	38.6	39.2	....	45.3	....	....	....	....	45.1	45.4
21	46.4	45.3	38.4	38.5	....	45.3	40.2	....	61.6	....	45.0	44.8
22	46.1	....	38.1	38.5	....	44.5	42.1	....	61.0	....	44.9	43.5
23	....	44.7	38.0	38.6	41.3	43.5	42.8	....	61.2	....	46.0	44.5
24	....	44.7	37.6	38.8	41.4	43.7	42.8	60.4	61.4	....	45.2	44.6
25	....	45.2	37.7	39.0	41.1	44.5	42.7	59.9	61.7	....	44.7	44.1
26	45.0	45.5	....	38.9	40.3	45.3	42.7	61.6	61.7	60.4	45.3	43.3
27	44.4	45.7	....	38.9	40.8	44.6	41.7	61.9	61.6	61.1	45.3	....
28	44.4	45.9	....	38.7	42.3	44.4	....	61.9	61.0	61.8	44.8	....
29	44.4	....	38.5	38.4	....	44.0	....	62.2	59.8	62.0	....	....
30	44.4	....	38.3	38.8	....	43.3	....	62.2	60.0	62.0	44.3	....
31	44.3	....	38.3	....	42.4	....	....	59.4	....	....	....	....

Lowest daily water level, in feet below mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	18.3	26.3	....	20.4	21.0	....	25.8	....	41.3	42.4	....	25.9
2	18.4	26.2	....	21.9	21.1	....	26.1	....	41.2	42.8	43.4	25.3
3	18.9	26.0	....	22.3	20.7	....	26.1	25.8	42.4	42.8	42.7	26.0
4	....	25.8	27.5	....	20.0	....	25.7	24.8	43.0	....	42.3	26.4
5	....	25.8	27.7	....	19.3	....	24.0	25.8	43.2	....	42.7	26.7
6	....	....	27.7	21.8	....	....	22.5	26.2	43.1	41.5	43.3	....
7	....	....	27.8	20.8	....	....	21.0	....	43.1	41.7	43.3	....
8	....	....	27.8	21.1	22.4	25.8	21.7	....	42.4	42.0	....	....
9	28.5	26.6	28.5	21.1	21.6	25.7	22.3	....	43.6	42.3	....	....
10	30.5	26.5	27.5	....	....	26.0	22.9	....	44.2	42.3	....	....
11	31.6	26.6	27.9	....	....	26.8	23.2	38.2	44.9	42.3	....	....
12	33.3	26.8	28.0	....	20.5	27.4	....	39.3	45.2	42.4	....	....
13	33.3	26.9	28.0	22.7	20.5	27.6	22.7	....	....	42.0	....	....
14	33.8	....	27.9	22.7	21.0	....	22.6	....	45.1	41.9	....	26.1
15	34.1	....	27.9	22.2	21.2	....	23.0	....	48.3	42.3	....	24.9
16	34.7	26.6	18.0	22.2	21.2	25.7	23.4	....	47.9	42.5	....	25.2
17	....	26.5	....	22.2	21.0	26.8	24.0	....	45.7	42.5	27.2	25.9
18	....	26.7	....	21.8	....	27.3	24.0	....	44.8	42.4	27.5	26.8
19	30.5	27.2	....	....	....	27.3	....	....	44.4	....	27.5	27.4
20	28.8	27.2	20.6	21.2	....	27.3	....	....	....	....	27.1	27.4
21	28.4	27.3	20.4	20.5	....	27.3	22.2	....	43.6	....	27.0	26.8
22	28.1	....	20.1	20.5	....	26.5	24.1	....	43.0	....	26.9	25.5
23	....	26.7	20.0	20.6	23.3	25.5	24.8	....	43.2	....	28.0	26.5
24	....	26.7	19.6	20.8	23.4	25.7	24.8	42.4	43.4	....	27.2	26.6
25	....	27.2	19.7	21.0	23.1	26.5	24.7	41.9	43.7	....	26.7	26.1
26	27.0	27.5	....	20.9	22.3	27.3	24.7	43.6	43.7	42.4	27.3	25.3
27	26.4	27.7	....	20.9	22.8	26.6	23.7	43.9	43.6	43.1	27.3	....
28	26.4	27.9	....	20.7	24.3	26.4	....	43.9	43.0	43.8	26.8	....
29	26.4	....	20.5	20.4	....	26.0	....	44.2	41.8	44.0	....	....
30	26.4	....	20.3	20.8	....	25.3	....	44.2	42.0	44.0	26.3	....
31	26.3	....	20.3	....	24.4	....	....	41.4	....	....	....	....

28.5.4.7.3 (\*845, p. 212; 886, p. 369; 906, p. 103; 936, p. 93; 944, p. 93; 986, p. 107; 1016, p. 141; 1023, p. 166; 1071, p. 191). Perth Amboy Water Department. Runyon well 123. Extremes of observed water level, in feet above mean sea level: Highest, 6.14 Sept. 22, 1938; lowest, 0.53 Jan. 23, 1940. Water-stage recorder removed from well in May 1947.

## 28.5.4.7.3--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	2.28	Jan. 29	1.87	Mar. 7	2.01	Apr. 9	1.87
6	2.37	30	1.87	8	2.00	10	1.81
7	2.31	31	2.13	9	2.02	11	1.82
8	2.44	Feb. 1	2.18	10	2.06	12	1.98
9	2.50	2	2.25	11	2.00	13	2.00
12	2.13	16	2.08	12	1.96	14	1.68
13	1.76	17	2.06	13	1.95	15	1.81
14	1.41	18	1.96	14	1.73	16	1.53
15	1.60	19	2.08	15	1.80	17	1.83
16	1.68	23	2.50	29	2.17	27	1.85
17	1.91	24	2.50	30	2.35	28	1.83
19	2.37	25	2.54	Apr. 1	2.27	29	1.87
20	1.94	26	2.53	2	2.23	30	1.95
21	2.13	27	2.58	6	1.64	May 1	1.75
26	2.11	Mar. 4	2.05	7	1.94	4	1.43
27	1.89	5	2.20	8	1.98	5	1.27
28	1.93	6	2.23				

Lowest daily water level, in feet above mean sea level, 1947  
(From recorder charts)

Jan. 5	1.30	Jan. 29	1.71	Mar. 7	1.57	Apr. 9	1.71
6	1.21	30	1.71	8	1.58	10	1.77
7	1.27	31	1.45	9	1.56	11	1.76
8	1.14	Feb. 1	1.40	10	1.52	12	1.60
9	1.08	2	1.33	11	1.58	13	1.58
12	1.45	16	1.50	12	1.62	14	1.90
13	1.82	17	1.52	13	1.63	15	1.77
14	1.17	18	1.62	14	1.85	16	2.05
15	1.98	19	1.50	15	1.78	17	1.75
16	1.90	23	1.08	29	1.41	27	1.73
17	1.67	24	1.08	30	1.23	28	1.75
19	1.21	25	1.04	Apr. 1	1.31	29	1.71
20	1.64	26	1.05	2	1.35	30	1.63
21	1.45	27	1.00	6	1.94	May 1	1.83
26	1.47	Mar. 4	1.53	7	1.64	4	2.15
27	1.69	5	1.38	8	1.60	5	2.31
28	1.65	6	1.35				

28.5.4.6.3.A (\*936, p. 94; 944, p. 93; 986, p. 109; 1016, p. 142; 1023, p. 167; 1071, p. 192). Perth Amboy Water Department test well A2. No measurements made in 1947.

28.5.4.6.6 (\*936, p. 95; 944, p. 93; 986, p. 109; 1016, p. 142; 1023, p. 167; 1071, p. 192). Perth Amboy Water Department test well A3. No measurements made in 1947.

28.5.4.6.6.A (\*936, p. 96; 944, p. 93; 986, p. 109; 1016, p. 142; 1023, p. 167; 1071, p. 192). Perth Amboy Water Department test well A40. No measurements made in 1947.

28.5.4.6.2.A (\*845, p. 230; 886, p. 356; 906, p. 89; 936, p. 97; 944, p. 94; 986, p. 109; 1016, p. 142; 1023, p. 167; 1071, p. 192). Perth Amboy Water Department test well B2. No measurements made in 1947.

28.5.4.6.2.B (\*845, p. 230; 886, p. 356; 906, p. 89; 936, p. 97; 944, p. 94; 986, p. 109; 1016, p. 142; 1023, p. 167; 1071, p. 192). Perth Amboy Water Department test well B3. No measurements made in 1947.

28.5.4.6.5 (\*845, p. 231; 886, p. 356; 906, p. 89; 936, p. 97; 944, p. 94; 986, p. 109; 1016, p. 142; 1023, p. 167; 1071, p. 192). Perth Amboy Water Department test well B4. No measurements made in 1947.

28.5.4.5.9 (\*936, p. 97; 944, p. 94; 986, p. 109; 1016, p. 143; 1023, p. 167; 1071, p. 192). Perth Amboy Water Department test well B5. No measurements made in 1947.

28.5.4.3.7 (\*845, p. 231; 886, p. 357; 906, p. 90; 936, p. 98; 944, p. 94; 986, p. 109; 1016, p. 143; 1023, p. 167; 1071, p. 192). Perth Amboy Water Department test well C1. No measurements made in 1947.

28.5.4.3.6 (\*845, p. 233; 886, p. 357; 906, p. 90; 936, p. 99; 944, p. 94; 986, p. 109; 1016, p. 143; 1023, p. 168; 1071, p. 192). Perth Amboy Water Department test well D1. No measurements made in 1947.

28.5.4.3.2. (\*845, p. 233; 886, p. 357; 906, p. 91; 936, p. 100; 944, p. 94; 986, p. 109; 1016, p. 143; 1023, p. 168; 1071, p. 192). Perth Amboy Water Department test well D2. No measurements made in 1947.

29.1.4.5.2 (\*845, p. 213; 886, p. 362; 906, p. 96; 936, p. 101; 944, p. 94; 986, p. 110; 1016, p. 143; 1023, p. 168; 1071, p. 192). H. C. Perrine farm well F2. No measurements made in 1947.

29.1.4.3.9 (\*817, p. 186; 840, p. 251; 845, p. 214; 886, p. 362; 906, p. 96; 936, p. 101; 944, p. 94; 986, p. 110; 1016, p. 143; 1023, p. 168; 1071, p. 192). Clyde Bowne farm well F3. No measurements made in 1947.

29.1.5.1.4 (\*845, p. 215; 886, p. 363; 906, p. 96; 936, p. 101; 944, p. 94; 986, p. 110; 1016, p. 143; 1023, p. 168; 1071, p. 192). A. E. Brown farm well F4. No measurements made in 1947.

29.1.5.1.9 (\*845, p. 215; 886, p. 363; 906, p. 96; 936, p. 101; 944, p. 97; 986, p. 110; 1016, p. 143; 1023, p. 168; 1071, p. 192). A. Hanley farm well F5. No measurements made in 1947.

29.1.5.6.3 (\*845, p. 216; 886, p. 363; 906, p. 96; 936, p. 101; 944, p. 95; 986, p. 110; 1016, p. 143; 1023, p. 168; 1071, p. 192). Owner unknown. Farm well F9. No measurements made in 1947.

29.1.5.6.3.A (\*845, p. 217; 886, p. 363; 906, p. 96; 936, p. 102; 944, p. 95; 986, p. 110; 1016, p. 143; 1023, p. 168; 1071, p. 193). Maude Lamberton farm well F10. No measurements made in 1947.

29.1.5.4.6 (\*845, p. 218; 886, p. 363; 906, p. 97; 936, p. 102; 944, p. 95; 986, p. 110; 1016, p. 143; 1023, p. 168; 1071, p. 193). Charles Schnuck farm well F11. No measurements made in 1947.

29.1.5.4.8 (\*845, p. 218; 886, p. 363; 906, p. 97; 936, p. 102; 944, p. 95; 986, p. 110; 1016, p. 144; 1023, p. 168; 1071, p. 193). George Burlew farm well F12. No measurements made in 1947.

29.1.5.4.8.A (\*845, p. 219; 886, p. 363; 906, p. 97; 936, p. 102; 944, p. 95; 986, p. 110; 1016, p. 144; 1023, p. 169; 1071, p. 193). George Burlew farm well F13. No measurements made in 1947.

29.1.5.7.2 (\*817, p. 187; 840, p. 251; \*845, p. 220; 886, p. 363; 906, p. 97; 936, p. 102; 944, p. 95; 986, p. 110; 1016, p. 144; 1023, p. 169; 1071, p. 193). Mr. Jurman farm well F14. No measurements made in 1947.

29.1.5.7.5.A (\*845, p. 220; 886, p. 364; 906, p. 97; 936, p. 102; 944, p. 95; 986, p. 110; 1016, p. 144; 1023, p. 169; 1071, p. 193). Amos Burlew farm well F16. No measurements made in 1947.

29.1.4.7.6 (\*845, p. 221; 886, p. 364; 906, p. 97; 936, p. 102; 944, p. 95; 986, p. 111; 1016, p. 144; 1023, p. 169; 1071, p. 193). A. Freda farm well F20. No measurements made in 1947.

29.1.4.9.8 (\*845, p. 222; 886, p. 364; 906, p. 97; 936, p. 102; 944, p. 95; 986, p. 111; 1016, p. 144; 1023, p. 169; 1071, p. 193). Mrs. A. Green farm well F21. No measurements made in 1947.

29.1.7.3.5 (\*845, p. 222; 886, p. 364; 906, p. 97; 936, p. 102; 944, p. 95; 986, p. 111; 1016, p. 144; 1023, p. 169; 1071, p. 193). Reuben Miller farm well F22. No measurements made in 1947.

29.11.1.2.5 (\*845, p. 224; 886, p. 364; 906, p. 98; 936, p. 103; 944, p. 95; 986, p. 111; 1016, p. 144; 1023, p. 169; 1071, p. 193). Ambrose Green farm well F26. No measurements made in 1947.

29.11.1.2.5.A (\*845, p. 225; 886, p. 364; 906, p. 98; 936, p. 103; 944, p. 95; 986, p. 111; 1016, p. 144; 1023, p. 169; 1071, p. 193 ). Mrs. J. Green farm well F27. No measurements made in 1947.

29.1.1.7.8 (\*845, p. 234; 886, p. 365; 906, p. 98; 936, p. 103; 944, p. 96; 986, p. 111; 1016, p. 144; 1023, p. 169; 1071, p. 193 ). Perth Amboy Water Department test well G1. No measurements made in 1947.

29.1.1.7.8.A (\*845, p. 234; 886, p. 365; 906, p. 99; 936, p. 103; 944, p. 96; 986, p. 111; 1016, p. 144; 1023, p. 169; 1071, p. 193 ). Perth Amboy Water Department test well G2. No measurements made in 1947.

29.1.1.7.9 (\*845, p. 235; 886, p. 365; 906, p. 99; 936, p. 103; 944, p. 96; 986, p. 111; 1016, p. 145; 1023, p. 169; 1071, p. 193 ). Perth Amboy Water Department test well G3. No measurements made in 1947.

29.1.1.8.4 (\*845, p. 235; 886, p. 365; 906, p. 99; 936, p. 103; 944, p. 96; 986, p. 111; 1016, p. 145; 1023, p. 170; 1071, p. 193 ). Perth Amboy Water Department test well G4. No measurements made in 1947.

29.1.1.7.9.A (\*936, p. 103; 944, p. 96; 986, p. 111; 1016, p. 145; 1023, p. 170; 1071, p. 193 ). Perth Amboy Water Department test well G20. No measurements made in 1947.

29.1.4.2.4 (\*936, p. 104; 944, p. 96; 986, p. 112; 1016, p. 145; 1023, p. 170; 1071, p. 193 ). Owner unknown. Test well H1. No measurements made in 1947.

29.1.4.1.4 (\*845, p. 236; 886, p. 365; 906, p. 99; 936, p. 104; 944, p. 96; 986, p. 112; 1016, p. 145; 1023, p. 170; 1071, p. 193 ). Owner unknown. Test well J1. No measurements made in 1947.

29.1.4.1.6 (\*845, p. 236; \*886, p. 366; 906, p. 99; 936, p. 105; 944, p. 96; 986, p. 112; 1016, p. 145; 1023, p. 170; 1071, p. 194 ). Owner unknown. Test well J2. No measurements made in 1947.

29.1.4.2.7 (\*845, p. 237; \*886, p. 366; 906, p. 99; 936, p. 105; 944, p. 96; 986, p. 112; 1016, p. 145; 1023, p. 170; 1071, p. 194 ). Owner unknown. Test well J3. No measurements made in 1947.

29.1.4.2.7.A (\*845, p. 237; 886, p. 366; 906, p. 99; \*936, p. 105; 944, p. 96; 986, p. 112; 1016, p. 145; 1023, p. 170; 1071, p. 194 ). Owner unknown. Test well J4. No measurements made in 1947.

29.1.4.5.2.A (\*845, p. 238; 886, p. 366; 906, p. 99; 936, p. 105; 944, p. 96; 986, p. 112; 1016, p. 145; 1023, p. 170; 1071, p. 194 ). Owner unknown. Test well J5. No measurements made in 1947.

28.5.4.5.6 (\*845, p. 238; 886, p. 366; 906, p. 100; 936, p. 105; 944, p. 97; 986, p. 112; 1016, p. 145; 1023, p. 170; 1071, p. 194 ). Perth Amboy Water Department test well L1. No measurements made in 1947.

28.5.4.6.7.A (\*845, p. 239; 886, p. 366; 906, p. 100; 936, p. 105; 944, p. 97; 986, p. 112; 1016, p. 146; 1023, p. 170; 1071, p. 194 ). Perth Amboy Water Department test well L2. No measurements made in 1947.

28.5.4.6.7.B (\*845, p. 239; 886, p. 366; 906, p. 100; 936, p. 106; 944, p. 97; 986, p. 112; \*1016, p. 146; 1023, p. 171; 1071, p. 194 ). Perth Amboy Water Department test well L3. No measurements made in 1947.

28.5.4.4.9.A (\*936, p. 106; 944, p. 97; 986, p. 113; 1016, p. 146; 1023, p. 171; 1071, p. 194 ). Perth Amboy Water Department test well N1. No measurements made in 1947.

28.5.4.4.9.B (\*936, p. 107; 944, p. 97; 986, p. 113; 1016, p. 146; 1023, p. 171; 1071, p. 194 ). Perth Amboy Water Department test well N2. No measurements made in 1947.

28.5.4.8.1.A (\*936, p. 107; 944, p. 97; 986, p. 113; 1016, p. 146; 1023, p. 171; 1071, p. 194 ). Perth Amboy Water Department test well N3. No measurements made in 1947.

29.1.1.7.5.A (\*936, p. 107; 944, p. 97; 986, p. 113; 1016, p. 146; 1023, p. 171; 1071, p. 194 ). Owner unknown. Test well P1. No measurements made in 1947.

29.1.1.7.5.B (\*936, p. 108; 944, p. 97; 986, p. 113; 1016, p. 146; 1023, p. 171; 1071, p. 194 ). Owner unknown. Test well P2. No measurements made in 1947.

29.1.4.1.8 (\*936, p. 108; 944, p. 97; 986, p. 113; 1016, p. 146; 1023, p. 171; 1071, p. 194). Perth Amboy Water Department test well R1. No measurements made in 1947.

29.1.4.4.2.A (\*936, p. 109; 944, p. 97; 986, p. 113; 1016, p. 146; 1023, p. 171; 1071, p. 194). Perth Amboy Water Department test well R2. No measurements made in 1947.

29.1.4.4.1.A (\*817, p. 185; 840, p. 250; \*845, p. 240; \*886, p. 370; 906, p. 104; 936, p. 110; 944, p. 97; 986, p. 113; 1016, p. 146; 1023, p. 171; 1071, p. 194). Perth Amboy Water Department test well S1. No measurements made in 1947.

28.5.1.8.4 (\*886, p. 370; 906, p. 104; 936, p. 110; 944, p. 98; 986, p. 113; 1016, p. 146; 1023, p. 171; 1071, p. 194). Borough of Sayreville test well 4. Extremes of observed water level, in feet with reference to mean sea level: Highest, +11.55 Mar. 27, 1944; lowest, -32.9 Oct. 25, 1935. Following are corrected water levels for 1946. Water levels, in feet with reference to land-surface datum, 1946: Jan. 21, +0.62; Jan. 24, -0.08; Jan. 27, -0.68; Feb. 5, -1.28. Water level, in feet with reference to mean sea level datum, 1946: Feb. 22, +2.50.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	16.99	20.07	21.58	19.03	19.81	21.85	24.33	24.25	31.26	31.90	32.85	23.44
2	17.48	19.80	21.03	19.84	19.99	22.53	24.46	23.80	30.20	32.38	32.27	23.67
3	18.15	19.74	.....	20.61	19.57	23.23	24.21	23.35	32.20	32.61	31.65	24.30
4	17.68	19.67	21.43	20.74	18.83	24.40	23.43	22.22	33.18	33.22	31.46	24.61
5	17.52	19.57	21.61	20.61	18.03	24.95	21.68	23.95	33.23	32.13	32.11	24.73
6	16.82	19.65	21.50	20.13	24.51	24.68	20.02	24.56	33.17	31.17	32.83	24.55
7	16.85	19.66	21.45	18.97	24.21	24.61	18.98	.....	32.77	32.11	32.45	24.18
8	16.73	19.65	21.48	19.41	21.43	23.93	20.15	.....	31.95	32.16	32.08	23.38
9	18.55	20.18	21.77	19.69	20.48	23.47	20.93	.....	.....	32.48	30.93	24.16
10	.....	20.18	.....	19.86	.....	24.58	21.04	.....	34.38	32.24	27.40	24.80
11	21.44	20.47	.....	20.66	.....	25.71	21.53	.....	35.27	31.93	26.68	24.96
12	23.00	20.67	21.80	20.75	19.83	.....	21.50	.....	35.70	31.53	26.16	25.21
13	23.28	20.75	21.76	20.97	19.28	.....	20.48	30.61	35.51	31.45	25.99	24.98
14	23.70	.....	21.47	20.73	19.86	.....	20.44	30.71	35.37	31.88	25.83	23.83
15	24.03	20.33	21.23	21.30	20.13	24.96	21.42	.....	38.36	32.77	25.38	22.23
16	24.58	20.15	19.78	20.63	19.83	24.26	21.53	.....	37.51	32.30	24.88	23.42
17	24.92	20.28	17.03	20.71	19.53	25.75	22.11	.....	35.17	32.56	25.21	24.34
18	24.73	.....	17.00	20.43	19.04	25.76	22.19	29.29	34.25	.....	25.80	25.40
19	23.88	21.04	18.83	20.13	19.28	25.73	21.81	30.62	.....	31.33	25.40	.....
20	22.71	.....	19.55	19.35	19.38	25.73	21.03	31.71	.....	.....	25.28	25.61
21	22.49	.....	18.87	18.53	19.78	25.37	19.73	30.05	32.73	.....	24.88	24.63
22	22.30	.....	18.62	19.07	20.91	24.26	21.78	32.52	32.68	38.38	24.68	23.65
23	21.03	.....	18.41	19.36	22.18	23.68	23.53	32.21	.....	36.68	.....	24.96
24	21.15	.....	18.08	19.55	22.03	24.35	23.07	31.90	33.12	.....	.....	24.91
25	20.85	21.13	18.29	19.75	21.33	25.28	22.95	31.42	33.40	33.35	.....	24.78
26	.....	21.38	19.93	19.73	20.68	25.25	22.66	.....	.....	32.50	.....	22.93
27	.....	21.54	18.98	19.46	21.66	25.28	21.68	34.19	32.95	31.38	25.43	23.40
28	.....	21.68	19.03	18.95	23.01	24.70	21.18	.....	32.23	32.58	24.38	23.28
29	.....	.....	18.90	19.29	23.61	24.09	22.31	.....	30.83	33.31	24.37	.....
30	20.13	.....	18.68	19.65	23.55	23.31	23.30	.....	31.35	.....	23.90	23.70
31	.....	.....	19.03	.....	22.16	.....	23.95	.....	.....	33.20	.....	24.38

Lowest daily water level, in feet below mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	11.26	14.34	15.85	13.30	14.08	16.12	18.60	18.52	24.47	26.17	27.12	17.71
2	11.75	14.07	15.30	14.11	14.26	16.80	18.73	18.07	.....	26.65	26.54	17.94
3	12.42	14.01	.....	14.88	13.84	17.60	18.48	17.62	26.47	26.88	25.92	18.57
4	11.95	13.94	15.70	15.01	13.10	18.67	17.70	16.49	27.45	27.49	25.73	18.88
5	11.79	13.84	15.88	14.88	12.30	19.22	15.95	18.22	27.50	26.40	26.38	19.00
6	11.09	13.92	15.77	14.40	18.78	18.95	14.29	18.63	27.44	25.44	27.10	18.82
7	11.12	13.93	15.72	13.24	18.48	18.88	13.25	.....	27.04	26.38	26.72	18.45
8	11.00	13.92	15.75	13.68	15.70	18.20	14.42	.....	26.22	26.43	26.35	17.65

## 28.5.1.8.4--Continued.

Lowest daily water level, in feet below mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
9	12.82	14.45	16.04	13.96	14.75	17.74	15.20	.....	.....	26.75	25.20	18.43
10	.....	14.45	.....	14.13	.....	18.85	15.31	.....	28.65	26.51	21.67	19.07
11	15.71	14.74	.....	14.93	.....	19.98	15.80	.....	29.54	26.20	20.95	19.23
12	17.27	14.94	16.07	15.02	14.10	.....	15.57	.....	29.97	25.80	20.43	19.48
13	17.55	15.02	16.03	15.24	13.55	.....	14.75	24.88	29.78	25.72	20.26	19.25
14	17.97	.....	15.74	15.00	14.13	.....	14.71	24.98	29.64	26.15	20.10	18.10
15	18.30	14.60	15.50	15.57	14.40	19.23	15.69	.....	32.63	27.04	19.65	16.50
16	18.85	14.42	14.05	14.90	14.10	18.53	15.80	.....	31.78	26.57	19.15	17.69
17	19.19	14.55	11.30	14.98	13.80	20.02	16.38	.....	29.44	26.83	19.48	18.61
18	19.00	.....	11.27	14.70	13.31	20.03	16.46	23.56	28.52	.....	20.07	19.67
19	18.15	15.31	13.10	14.40	13.55	20.00	16.08	24.89	.....	25.60	19.67	.....
20	16.98	.....	13.82	13.62	13.65	20.00	15.30	25.98	.....	.....	19.55	19.88
21	16.76	.....	13.14	12.80	14.05	19.64	14.00	24.32	27.00	.....	19.15	18.90
22	16.57	.....	12.89	13.34	15.18	18.53	16.05	26.99	26.95	32.65	18.95	19.92
23	16.10	.....	12.68	13.63	16.45	17.95	17.80	26.48	.....	30.95	.....	19.23
24	15.42	.....	12.35	13.82	16.30	18.62	17.34	26.17	27.39	.....	.....	19.18
25	15.12	15.40	12.56	14.02	15.60	19.55	17.22	25.69	27.67	27.60	.....	19.05
26	.....	15.65	14.20	14.00	14.95	19.52	16.93	.....	.....	26.77	.....	17.20
27	.....	15.81	13.25	13.73	15.93	19.55	15.95	28.46	27.22	25.65	19.70	17.67
28	.....	15.95	13.30	13.22	17.28	18.97	15.45	.....	26.50	26.85	18.65	17.55
29	.....	.....	13.17	13.56	17.88	18.36	16.58	.....	25.10	27.58	18.64	.....
30	14.40	.....	12.95	13.92	17.82	17.58	17.57	.....	25.62	.....	18.17	17.97
31	.....	.....	13.50	.....	16.43	.....	18.22	25.53	.....	27.47	.....	18.65

Monmouth County

## Asbury Park area

29.24.7.1.6 (\*817, p. 176; 840, p. 243; \*845, p. 196; 886, p. 375; 906, p. 105; 936, p. 111; 944, p. 99; 986, p. 116; 1016, p. 148; 1023, p. 173; 1071, p. 197 ). Avon Water Department well 1. Extremes of observed water level, in feet below mean sea level: Highest, 4.46 Apr. 12, 1937; lowest, 132.00 Aug. 4, 1925, pumping.

## Water level, in feet, 1947

Date	Below land-surface datum	Below mean sea level
Mar. 10	63.33	35.06
Apr. 21	67.17	38.92
21	66.52	38.25
May 29	60.68	32.41
June 26	78.90	50.63
Aug. 21	103.09	74.82
21	101.24	72.97
Sept. 25	83.13	54.86
25	83.12	54.85
Nov. 13	69.44	41.17
Dec. 10	66.30	38.03

29.24.4.8.4 (\*817, p. 178; 840, p. 243; \*845, p. 197; 886, p. 375; 906, p. 105; 936, p. 111; 944, p. 99; 986, p. 116; 1016, p. 148; 1023, p. 173; 1071, p. 197 ). Monmouth Consolidated Water Co. Bradley Beach 650-foot well. Extremes of observed water level, in feet with reference to mean sea level: Highest, about +11.28 Nov. 13, 1947; may be due to repairs during year; lowest, 136.68 Aug. 27, 1925.

## Water level, in feet, 1947

Date	Below land-surface	With reference to mean sea level
Mar. 10	43.18	-26.64
Apr. 21	42.45	-25.91
Nov. 13	5.26	+11.28
Dec. 10	6.23	+10.31

## Runyon area

29.11.2.1.1 (\*845, p. 226; 886, p. 375; 906, p. 106; 936, p. 111; 944, p. 99; 986, p. 116; 1016, p. 148; 1023, p. 173; 1071, p. 197). Edward Huffrey farm well F30. Extremes of observed water level, in feet above mean sea level: Highest, 72.59 Mar. 6, 1925; lowest, 59.93 June 28, 1929. The highest extreme has been incorrectly reported from 1940 through 1945. In Water-Supply Paper 936, page 111, water level, in feet above mean sea level should read 64.47 feet on June 23, 1941. No measurements made in 1947.

29.1.8.9.4 (\*845, p. 227; 886, p. 375; 906, p. 106; 936, p. 112; 944, p. 99; 986, p. 116; 1016, p. 148; 1023, p. 173; 1071, p. 197). W. Gibson farm well F31. Extremes of observed water level, in feet above mean sea level: Highest, 85.48 Apr. 16, 1935; lowest, 80.02 Oct. 21, 1925. In Water-Supply Paper 1016, page 148, lowest extreme of observed water level should read 80.02 Oct. 21, 1925. No measurements made in 1947.

29.11.1.2.9 (\*817, p. 185; 840, p. 247; 845, p. 208; 886, p. 375; 906, p. 106; 936, p. 112; 944, p. 99; 986, p. 116; 1016, p. 148; 1023, p. 173; 1071, p. 197). Rulif Hulsart well. Extremes of observed water level, in feet above mean sea level: Highest, 100.40 Apr. 19, 1939; lowest, 95.47 Feb. 18, 1940. Following are corrected water levels for 1944 (Water-Supply Paper 1016, page 149).

Water level at end of day, in feet above mean sea level, 1944

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 2	96.58	Mar. 3	96.64	Apr. 29	98.92	July 25	98.04
7	96.57	Apr. 9	98.17	May 1	99.06	Oct. 11	97.65

Water level at end of day, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	16.79	16.66	16.22	15.72	14.95	15.32	15.71	16.40	17.03	17.42	16.81
2	.....	16.78	16.64	16.20	15.69	14.94	15.34	15.74	16.42	17.04	17.42	16.84
3	.....	16.76	16.64	16.19	15.65	14.95	15.36	15.77	16.43	17.04	17.46	16.86
4	.....	16.74	16.62	16.16	15.64	14.95	15.38	15.79	16.46	17.09	17.42	16.87
5	.....	16.74	16.56	16.14	15.62	14.94	15.41	15.80	16.48	17.12	17.40	16.87
6	.....	16.74	16.53	16.12	15.59	14.93	15.43	15.82	16.50	17.13	17.31	16.91
7	.....	16.73	16.49	16.09	15.54	14.92	15.37	15.87	16.50	17.14	17.26	16.92
8	.....	16.73	16.45	16.06	15.53	14.87	15.45	15.87	16.52	17.16	17.23	16.92
9	.....	16.73	16.43	16.04	15.52	14.88	15.46	15.88	16.55	17.17	17.21	16.92
10	.....	16.73	16.39	16.02	15.47	14.88	15.48	15.90	16.58	17.20	17.16	16.93
11	.....	16.73	16.36	15.99	15.44	14.87	15.48	15.97	16.60	17.22	17.13	17.00
12	.....	16.73	16.35	15.97	15.42	14.89	15.50	15.98	16.61	17.23	17.08	17.01
13	.....	16.73	16.34	15.95	15.39	14.91	15.52	16.00	16.63	17.24	17.04	17.03
14	.....	16.72	16.33	15.93	15.39	14.87	15.53	16.00	16.66	17.24	17.02	17.04
15	.....	16.72	16.31	15.92	15.38	14.92	15.56	16.02	16.69	17.25	16.97	17.02
16	.....	16.71	16.29	15.89	15.34	14.94	15.58	16.07	16.71	17.26	16.86	17.04
17	16.98	16.70	16.30	15.88	15.34	14.95	15.57	16.09	16.72	17.27	16.80	17.04
18	16.98	16.70	16.31	15.86	15.33	14.96	15.54	16.10	16.75	17.28	16.76	17.04
19	16.97	16.70	16.29	15.85	15.30	15.02	15.54	16.11	16.76	17.31	16.74	17.05
20	16.95	16.70	16.29	15.84	15.26	15.05	15.54	16.13	16.79	17.32	16.74	17.06
21	16.94	16.68	16.26	15.84	15.24	15.08	15.55	16.17	16.80	17.32	16.73	17.06
22	16.94	16.66	16.26	15.83	15.23	15.12	15.55	16.18	16.82	17.34	16.74	17.06
23	16.93	16.66	16.25	15.81	15.16	15.13	15.58	16.20	16.84	17.34	16.74	17.06
24	16.91	16.66	16.24	15.79	15.14	15.14	15.59	16.22	16.87	17.35	16.74	17.06
25	16.91	16.66	16.24	15.77	15.09	15.16	15.59	16.24	16.89	17.36	16.74	17.06
26	16.85	16.66	16.24	15.76	15.06	15.19	15.60	16.28	16.92	17.36	16.74	17.06
27	16.85	16.66	16.24	15.76	15.04	15.23	15.61	16.30	16.93	17.38	16.74	17.07
28	16.84	16.66	16.23	15.74	15.02	15.25	15.63	16.31	16.94	17.39	16.75	17.14
29	16.83		16.23	15.74	14.99	15.26	15.66	16.34	16.94	17.41	16.76	17.14
30	16.81		16.24	15.73	14.98	15.29	15.68	16.36	16.96	17.42	16.80	17.14
31	16.80		16.22		14.96		15.70	16.38		17.42		17.15



29.11.1.2.9--Continued.

Water level at end of day, in feet above mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	96.55	96.68	97.12	97.62	98.39	98.02	97.63	96.94	96.31	95.92	96.53
2	.....	96.56	96.70	97.14	97.65	98.40	98.00	97.60	96.92	96.30	95.92	96.50
3	.....	96.58	96.70	97.15	97.69	98.39	97.98	97.57	96.91	96.30	95.88	96.48
4	.....	96.60	96.72	97.18	97.70	98.39	97.96	97.55	96.88	96.25	95.92	96.47
5	.....	96.60	96.78	97.20	97.72	98.40	97.93	97.54	96.86	96.22	95.94	96.47
6	.....	96.60	96.81	97.22	97.75	98.41	97.91	97.52	96.84	96.21	96.03	96.43
7	.....	96.61	96.85	97.25	97.80	98.42	97.97	97.47	96.84	96.20	96.08	96.42
8	.....	96.61	96.89	97.28	97.81	98.47	97.89	97.47	96.82	96.18	96.11	96.42
9	.....	96.61	96.91	97.30	97.82	98.46	97.88	97.46	96.79	96.17	96.13	96.42
10	.....	96.61	96.95	97.32	97.87	98.46	97.86	97.44	96.76	96.14	96.18	96.41
11	.....	96.61	96.98	97.35	97.90	98.47	97.86	97.37	96.74	96.12	96.21	96.34
12	.....	96.61	96.99	97.37	97.92	98.45	97.84	97.36	96.73	96.11	96.26	96.33
13	.....	96.61	97.00	97.39	97.95	98.43	97.82	97.34	96.71	96.10	96.30	96.31
14	.....	96.62	97.01	97.41	97.95	98.47	97.81	97.34	96.68	96.10	96.32	96.30
15	.....	96.62	97.03	97.42	97.96	98.42	97.78	97.32	96.65	96.09	96.37	96.32
16	.....	96.63	97.05	97.45	98.00	98.40	97.76	97.27	96.63	96.08	96.48	96.30
17	96.36	96.64	97.04	97.46	98.00	98.39	97.77	97.25	96.62	96.07	96.54	96.30
18	96.36	96.64	97.03	97.48	98.01	98.38	97.80	97.24	96.59	96.06	96.58	96.30
19	96.37	96.64	97.05	97.49	98.04	98.32	97.80	97.23	96.58	96.03	96.60	96.29
20	96.39	96.64	97.05	97.50	98.08	98.29	97.80	97.21	96.55	96.02	96.60	96.28
21	96.40	96.66	97.08	97.50	98.10	98.26	97.79	97.17	96.54	96.02	96.61	96.28
22	96.40	96.68	97.08	97.51	98.11	98.22	97.79	97.16	96.52	96.00	96.60	96.28
23	96.41	96.68	97.09	97.53	98.18	98.21	97.76	97.14	96.50	96.00	96.60	96.28
24	96.43	96.68	97.10	97.55	98.20	98.20	97.75	97.12	96.47	95.99	96.60	96.28
25	96.43	96.68	97.10	97.57	98.25	98.18	97.75	97.10	96.45	95.98	96.60	96.28
26	96.49	96.68	97.10	97.58	98.28	98.15	97.74	97.06	96.42	95.98	96.60	96.28
27	96.49	96.68	97.10	97.58	98.30	98.11	97.73	97.04	96.41	95.96	96.60	96.27
28	96.50	96.68	97.11	97.60	98.32	98.09	97.71	97.03	96.40	95.95	96.59	96.20
29	96.51		97.11	97.60	98.35	98.08	97.68	97.00	96.40	95.93	96.58	96.20
30	96.53		97.10	97.61	98.36	98.05	97.66	96.98	96.38	95.92	96.54	96.20
31	96.54		97.12		98.38		97.64	96.96		95.92		96.19

Salem County

## Penns Grove area

30.23.1.8.5 (\*936, p. 112; 944, p. 100; 986, p. 118; 1016, p. 49; 1023, p. 174; 1071, p. 198 ). Department of Conservation, Division of Water Policy and Supply. Penns Grove observation well 6. Extremes of observed water level, in feet below land-surface datum: Highest, 3.38 Aug. 14, 1942; lowest, 6.16 Sept. 27, 1941.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	4.44	Apr. 15	4.59	June 24	4.56	Aug. 30	4.91
18	4.37	29	4.74	July 8	4.72	Sept. 12	5.13
Feb. 1	4.30	May 13	4.37	July 22	4.38	26	4.93
15	4.60	27	3.89	Aug. 5	5.02	Oct. 22	5.31
Mar. 18	4.52	June 10	4.13	16	4.84	Nov. 20	4.44
Apr. 1	4.79						

30.23.4.1.9 (\*936, p. 113; 944, p. 100; 986, p. 118; 1016, p. 150; 1023, p. 175; 1071, p. 199 ). Department of Conservation, Division of Water Policy and Supply. Penns Grove observation well 7. Extremes of observed water level, in feet below land-surface datum: Highest, 2.83 Aug. 14, 1942; lowest, 7.08 Nov. 22, 1941.

## 30.23.4.1.9--Continued.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	4.03	Apr. 15	4.20	June 24	4.00	Aug. 30	4.70
18	3.98	29	4.15	July 8	4.29	Sept. 12	5.04
Feb. 1	3.97	May 13	3.78	22	4.10	26	5.27
15	4.10	27	3.59	Aug. 5	4.58	Oct. 22	5.73
Mar. 18	4.07	June 10	3.80	16	4.34	Nov. 19	3.96
Apr. 1	4.22						

30.22.6.6.7 (\*936, p. 113; 944, p. 101; 986, p. 118; 1016, p. 150; 1023, p. 175; 1071, p. 199). Department of Conservation, Division of Water Policy and Supply. Penns Grove observation well 9. Extremes of observed water level, in feet below land-surface datum: Highest, 2.51 Mar. 25, 1944; lowest, 6.75 Sept. 25, 1943.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	3.49	Apr. 1	3.76	June 24	3.75	Aug. 30	4.90
18	3.31	15	3.59	July 8	4.48	Sept. 12	5.32
Feb. 1	3.30	29	3.69	22	3.93	26	5.20
15	3.60	May 13	3.16	Aug. 5	4.87	Oct. 22	6.00
Mar. 3	3.22	27	2.68	16	4.46	Nov. 19	3.57
18	3.42	June 10	3.00				

30.22.6.9.3 (\*936, p. 113; 944, p. 101; 986, p. 118; 1016, p. 150; 1023, p. 175; 1071, p. 199). Department of Conservation, Division of Water Policy and Supply. Penns Grove observation well 10. Extremes of observed water level in feet below land-surface datum: Highest, 1.63 Mar. 13, 1941; lowest, 6.89 Oct. 24, 1943. In Water-Supply Paper 1071 date of highest extreme of observed water level should read Mar. 13, 1941.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	2.70	Mar. 18	2.53	June 10	2.33	Aug. 5	2.50
18	2.37	Apr. 15	2.67	24	3.29	16	2.09
Feb. 1	2.47	29	2.90	July 8	3.30	30	2.18
15	2.84	May 13	2.74	22	3.40	Nov. 19	2.65
Mar. 3	2.21	27	2.09				

30.23.4.7.8 (\*936, p. 114; 944, p. 101; 986, p. 119; 1016, p. 150; 1023, p. 175; 1071, p. 199). Department of Conservation, Division of Water Policy and Supply. Penns Grove observation well 11. Extremes of observed water level in feet below land-surface datum: Highest, 5.20 Dec. 11, 1940; lowest, 10.77 Feb. 12, 1942.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	8.23	Apr. 1	8.50	June 24	6.12	Aug. 30	6.79
18	8.38	15	8.53	July 8	6.19	Sept. 13	7.08
Feb. 1	8.48	29	8.53	22	6.36	27	6.93
15	8.48	May 13	7.60	Aug. 5	6.51	Oct. 23	7.75
Mar. 3	8.50	27	6.84	16	6.71	Nov. 20	8.13
18	8.50	June 10	6.34				

30.22.8.3.5 (\*936, p. 114; 944, p. 101; 986, p. 119; 1016, p. 151; 1023, p. 175; 1071, p. 199). Department of Conservation, Division of Water Policy and Supply. Penns Grove observation well 12. Extremes of observed water level, in feet with reference to land-surface datum: Highest, +0.90 May 27, 1947; lowest, -2.32 Oct. 11, 1941.

Water level, in feet with reference to land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	-0.36	Apr. 1	-0.20	June 24	+0.20	Aug. 30	-0.84
18	-1.14	15	-1.17	July 8	-1.29	Sept. 13	-0.93
Feb. 1	+0.06	29	-0.09	22	-1.14	27	-0.74
15	-1.10	May 13	+0.55	Aug. 5	-0.64	Oct. 23	-1.24
Mar. 3	+0.04	27	+0.90	16	-0.78	Nov. 20	-0.06
18	.00	June 10	+0.67				

30.22.9.2.1 (#936, p. 114; 944, p. 102; 986, p. 119; 1016, p. 151; 1023, p. 176; 1071, p. 200). Department of Conservation, Division of Water Policy and Supply. Penns Grove observation well 13. Extremes of observed water level, in feet below land-surface datum: Highest, 0.83 Mar. 13, 1941; lowest, 7.08 Oct. 24, 1943.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	3.54	Apr. 1	2.87	June 24	2.77	Aug. 30	4.25
18	2.59	15	2.79	July 8	3.70	Sept. 12	4.72
Feb. 1	2.15	29	2.90	22	2.74	26	4.86
15	2.67	May 13	2.02	Aug. 5	4.13	Oct. 22	5.59
Mar. 3	1.79	27	1.16	16	3.86	Nov. 19	2.21
18	2.19	June 10	1.37				

30.22.9.6.2 (#936, p. 115; 944, p. 102; 986, p. 119; 1016, p. 151; 1023, p. 176; 1071, p. 200). Department of Conservation, Division of Water Policy and Supply. Penns Grove observation well 14. Extremes of observed water level, in feet above mean sea level: Highest, 22.59 Feb. 24, 1945; lowest, 16.55 Oct. 24, 1943.

Water level, in feet, 1947

Date	Below land-surface datum	Above mean sea level
Jan. 4	5.34	20.04
18	4.48	20.90
Feb. 1	4.26	21.12
15	4.82	20.56
Mar. 3	4.13	21.25
18	4.37	21.01
Apr. 1	4.95	20.43
15	4.97	20.41
29	4.97	20.41
May 13	3.74	21.64
27	3.13	22.25
June 10	3.52	21.86
24	4.67	20.71
July 8	5.68	19.70
22	4.58	20.80
Aug. 5	5.96	19.42
16	6.26	19.12
30	6.39	18.99
Sept. 12	6.83	18.55
26	7.06	18.32
Oct. 22	7.57	17.81
Nov. 19	4.55	20.83

30.22.9.5.8 (#936, p. 115; 944, p. 102; 986, p. 120; 1016, p. 152; 1023, p. 176; 1071, p. 200). Department of Conservation, Division of Water Policy and Supply. Penns Grove observation well 15. Extremes of observed water level, in feet above mean sea level: Highest, 12.00 June 10, 1947; lowest, 3.15 Nov. 6, 1942.

Water level, in feet, 1947

Jan. 4	17.71	6.07
18	17.69	6.09
Feb. 1	17.06	6.72
15	16.58	7.20
Mar. 3	16.56	7.22
18	16.31	7.47
Apr. 1	16.14	7.64
15	16.04	7.74
29	16.81	6.97
May 13	13.06	10.72
27	12.04	11.74
June 10	11.78	12.00
24	12.13	11.65

30.22.9.5.8--Continued.

Water level, in feet, 1947		
Date	Below land-surface datum	Above mean sea level
July 8	12.97	10.81
22	13.56	10.22
Aug. 5	14.16	9.62
16	14.78	9.00
30	15.43	8.35
Sept. 12	16.04	7.74
26	16.60	7.18
Oct. 22	17.54	6.24
Nov. 19	17.88	5.90

30.22.9.4.9 (\*936, p. 116; 944, p. 102; 986, p. 121; 1016, p. 153; 1023, p. 177; 1071, p. 201). Penns Grove Water Co. observation well 22. Extremes of water level, in feet above mean sea level: Highest, 14.42 Aug. 18, 1939; lowest, dry on various dates in 1942, 1943, 1944, 1945.

Water level, in feet, 1947		
Jan. 4	13.54	0.84
18	13.54	.84
Feb. 1	13.42	.96
15	13.40	.98
Mar. 3	13.36	1.02
18	13.07	1.31
Apr. 1	12.74	1.64
15	12.48	1.90
29	12.20	2.18
May 13	11.08	3.30
27	10.24	4.14
June 10	9.80	4.58
24	9.83	4.55
July 8	10.24	4.14
22	10.60	3.78
Aug. 5	11.00	3.38
16	10.48	3.90
30	10.51	3.87
Sept. 13	12.18	2.20
27	12.01	2.37
Oct. 23	12.97	1.41
Nov. 20	13.15	1.23

30.22.9.7.3 (\*936, p. 117; 944, p. 103; 986, p. 121; 1016, p. 153; 1023, p. 178; 1071, p. 201). Department of Conservation, Division of Water Policy and Supply. Penns Grove observation well 24. Extremes of observed water level, in feet with reference to mean sea level: Highest, +7.83 June 14, 1947; lowest, -5.62 Nov. 30, Dec. 3, 1942. In Water-Supply Paper 1071, highest observed water level, in feet with reference to mean sea level should read +7.26 June 21, 24, 1946.

Water level at end of day, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	14.65	14.52	14.24	13.51	10.48	10.88	12.07	13.59	15.21	17.30	18.30
2	.....	14.70	.....	14.17	13.27	10.51	10.94	12.14	13.66	15.27	17.38	18.32
3	.....	14.59	.....	14.30	13.01	10.51	10.98	12.18	13.71	15.33	17.40	18.33
4	.....	14.53	.....	14.23	12.83	10.58	11.04	12.24	13.75	15.39	17.49	18.36
5	14.84	14.54	.....	14.14	12.63	10.48	11.08	12.29	13.81	15.48	17.54	18.30
6	14.93	14.48	.....	14.15	12.47	10.46	11.12	12.32	13.87	15.52	17.63	18.42
7	14.84	14.48	.....	14.25	12.30	10.47	11.12	12.38	13.91	15.57	17.67	18.37
8	14.93	14.49	.....	14.19	12.20	10.40	11.21	12.44	13.98	15.63	17.72	18.45
9	14.98	14.48	.....	14.24	12.10	10.38	11.25	12.49	14.03	15.71	17.79	18.51
10	14.95	14.59	14.54	14.19	12.02	10.37	11.28	12.56	14.07	15.78	17.81	18.49
11	14.92	14.64	14.55	14.09	11.89	10.36	11.31	12.61	14.13	15.85	17.70	18.54
12	15.04	14.62	14.53	14.17	11.79	10.41	11.34	12.63	14.16	15.91	17.86	18.58
13	.....	14.54	14.38	14.19	11.70	10.42	11.39	12.68	14.21	15.96	17.87	18.60
14	.....	14.45	14.41	14.12	11.75	10.37	11.42	12.72	14.27	16.04	17.88	18.62

30.22.9.7.3--Continued.

Water level at end of day, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
15	.....	14.41	14.37	14.13	11.69	10.40	11.46	12.79	14.32	16.10	17.81	18.51
16	.....	14.43	14.32	14.08	11.62	10.42	11.50	12.86	14.42	16.16	17.87	18.68
17	15.04	14.46	14.36	14.12	11.60	10.43	11.53	12.90	14.49	16.21	17.93	18.70
18	15.05	14.48	14.44	14.09	11.57	10.45	11.54	12.92	14.52	16.27	17.96	18.75
19	14.97	14.53	14.37	14.08	11.54	10.52	11.59	12.94	14.56	16.34	17.96	18.79
20	.....	14.35	.....	14.00	11.53	10.58	11.61	13.02	14.61	16.42	17.99	18.80
21	.....	14.37	.....	14.04	11.44	10.61	11.60	13.04	14.61	16.50	18.02	18.82
22	.....	14.41	14.40	14.05	11.35	10.61	11.66	13.09	14.72	16.59	17.99	18.84
23	.....	14.44	14.35	13.96	11.23	10.62	11.74	13.13	14.79	16.68	18.03	18.85
24	.....	14.45	14.28	13.97	11.19	10.62	11.78	13.19	14.81	16.77	18.00	18.93
25	.....	14.51	14.33	13.91	10.95	10.66	11.81	13.24	14.89	16.82	18.08	18.93
26	14.78	14.55	14.45	13.90	10.85	10.69	11.83	13.32	14.96	16.87	18.13	18.94
27	14.80	14.61	14.40	13.95	10.77	10.74	11.84	13.39	15.03	16.94	18.18	18.94
28	14.78	14.65	14.40	13.93	10.68	10.78	11.87	13.42	15.05	17.00	18.22	.....
29	14.71	.....	.....	13.84	10.60	10.82	11.92	13.48	15.07	17.07	18.26	.....
30	14.62	.....	14.35	13.79	10.60	10.85	11.97	13.51	15.16	17.14	18.28	.....
31	14.74	.....	14.32	.....	10.56	.....	12.01	13.56	.....	17.22	.....	.....

Water level at end of day, in feet with reference to mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	+3.49	+3.62	+3.90	+4.63	+7.66	+7.26	+6.07	+4.55	+2.93	+0.84	-0.16
2	.....	+3.44	.....	+3.97	+4.87	+7.71	+7.20	+6.00	+4.48	+2.87	+7.6	-1.18
3	.....	+3.55	.....	+3.84	+5.13	+7.63	+7.18	+5.96	+4.43	+2.81	+7.4	-1.19
4	.....	+3.61	.....	+3.91	+5.31	+7.56	+7.10	+5.90	+4.39	+2.75	+6.5	-2.22
5	+3.30	+3.60	.....	+4.00	+5.51	+7.66	+7.06	+5.85	+4.33	+2.68	+6.0	-1.16
6	+3.21	+3.66	.....	+3.99	+5.67	+7.68	+7.02	+5.82	+4.27	+2.62	+5.1	-2.28
7	+3.30	+3.66	.....	+3.89	+5.84	+7.67	+7.02	+5.76	+4.23	+2.57	+4.7	-2.23
8	+3.21	+3.65	.....	+3.95	+5.94	+7.74	+6.93	+5.70	+4.16	+2.51	+4.2	-3.31
9	+3.16	+3.66	.....	+3.90	+6.04	+7.76	+6.89	+5.65	+4.11	+2.43	+3.5	-3.37
10	+3.19	+3.55	+3.60	+3.95	+6.12	+7.77	+6.86	+5.58	+4.07	+2.36	+3.3	-3.35
11	+3.22	+3.50	+3.59	+4.05	+6.25	+7.78	+6.83	+5.53	+4.01	+2.29	+4.4	-4.40
12	+3.10	+3.52	+3.61	+3.97	+6.35	+7.73	+6.80	+5.51	+3.98	+2.23	+2.8	-4.44
13	.....	+3.60	+3.76	+3.95	+6.44	+7.72	+6.75	+5.46	+3.93	+2.18	+2.7	-4.46
14	.....	+3.69	+3.73	+4.02	+6.39	+7.77	+6.72	+5.42	+3.87	+2.10	+2.6	-4.48
15	.....	+3.73	+3.77	+4.01	+6.45	+7.74	+6.68	+5.35	+3.82	+2.04	+3.3	-3.37
16	.....	+3.71	+3.82	+4.06	+6.52	+7.72	+6.64	+5.28	+3.72	+1.98	+2.7	-5.54
17	+3.10	+3.68	+3.78	+4.02	+6.54	+7.71	+6.61	+5.24	+3.65	+1.93	+2.1	-5.56
18	+3.09	+3.66	+3.70	+4.05	+6.57	+7.69	+6.60	+5.22	+3.62	+1.87	+1.8	-6.61
19	+3.17	+3.61	+3.77	+4.06	+6.60	+7.62	+6.55	+5.20	+3.58	+1.80	+1.8	-6.65
20	.....	+3.79	.....	+4.14	+6.61	+7.56	+6.53	+5.12	+3.53	+1.72	+1.5	-6.66
21	.....	+3.77	.....	+4.10	+6.70	+7.53	+6.54	+5.10	+3.53	+1.64	+1.2	-6.68
22	.....	+3.73	+3.74	+4.09	+6.79	+7.53	+6.48	+5.05	+3.42	+1.55	+1.5	-7.70
23	.....	+3.70	+3.79	+4.16	+6.91	+7.52	+6.40	+5.01	+3.35	+1.46	+1.1	-7.71
24	.....	+3.69	+3.86	+4.17	+6.95	+7.52	+6.36	+4.95	+3.33	+1.37	+1.4	-7.79
25	.....	+3.63	+3.81	+4.23	+7.18	+7.48	+6.33	+4.90	+3.25	+1.32	+0.6	-7.79
26	+3.36	+3.59	+3.69	+4.24	+7.28	+7.45	+6.31	+4.82	+3.18	+1.27	+0.1	-8.80
27	+3.34	+3.53	+3.74	+4.19	+7.37	+7.40	+6.30	+4.75	+3.11	+1.20	-0.4	-8.80
28	+3.36	+3.49	+3.74	+4.21	+7.46	+7.36	+6.27	+4.72	+3.09	+1.14	-0.8	.....
29	+3.43	.....	+4.30	+7.54	+7.32	+6.22	+4.64	+3.07	+1.07	-1.2	.....	.....
30	+3.52	.....	+3.79	+4.35	+7.54	+7.29	+6.17	+4.63	+2.98	+1.00	-1.4	.....
31	+3.40	.....	+3.82	.....	+7.58	.....	+6.13	+4.58	.....	+92	.....	.....

30.32.2.2.3 (#936, p. 118; 944, p. 103; 986, p. 122; 1016, p. 155; 1023, p. 179; 1071, p. 202 ). Department of Conservation, Division of Water Policy and Supply. Penns Grove observation well 31. Extremes of observed water level in feet with reference to mean sea level: Highest, +2.41 May 27, 1947; lowest, -4.23 Nov. 22, 1941, Oct. 24, 1943. In Water-Supply Paper 1016, p. 155; highest observed water level should read +0.26 Mar. 13, 1941.

## Water level, in feet, 1947

Date	Below land-surface datum	With reference to mean sea level
Jan. 4	4.67	+0.53
18	4.08	+1.12
Feb. 1	3.78	+1.42
15	4.13	+1.07
Mar. 3	3.60	+1.60
18	3.29	+1.91
Apr. 1	3.62	+1.58
15	3.40	+1.80
29	3.57	+1.63
May 13	3.19	+2.01
27	2.79	+2.41
June 10	3.61	+1.59
24	4.42	+ .78
July 8	4.99	+ .21
22	4.48	+ .72
Aug. 5	5.38	- .18
16	5.96	- .76
30	6.03	- .83
Sept. 13	6.26	-1.06
27	6.03	- .83
Oct. 23	7.08	-1.88
Nov. 20	5.19	+ .01

30.22.8.9.5 (#936, p. 119; 944, p. 104; 986, p. 123; 1016, p. 155; 1023, p. 179; 1071, p. 203 ). Department of Conservation, Division of Water Policy and Supply. Penns Grove observation well 32. Extremes of observed water level, in feet with reference to mean sea level: Highest, +2.10 May 27, 1947; lowest, -1.06 Nov. 22, 1941.

## Water level, in feet, 1947

Date	Below land-surface datum	Above mean sea level
Jan. 4	2.84	1.04
18	2.65	1.23
Feb. 1	2.55	1.33
15	2.83	1.05
Mar. 3	2.35	1.53
18	2.65	1.23
Apr. 1	2.90	.98
15	2.89	.99
29	2.85	1.03
May 13	2.17	1.71
27	1.78	2.10
June 10	2.04	1.84
24	2.53	1.35
July 8	2.82	1.06
22	2.46	1.42
Aug. 5	2.99	.89
16	3.21	.67
30	3.25	.63
Sept. 13	3.40	.48
27	3.20	.68
Oct. 23	3.74	.14
Nov. 20	2.87	1.01

30.22.9.8.6 (#936, p. 119; 944, p. 104; 986, p. 123; 1016, p. 156; 1023, p. 180; 1071, p. 203 ). Department of Conservation, Division of Water Policy and Supply. Penns Grove observation well 35. Extremes of observed water level, in feet above mean sea level: Highest, 18.66 Nov. 29, 1940; lowest, 0.35 Oct. 9, 1942.

Water level, in feet, 1947		
Date	Below land-surface datum	Above mean sea level
Jan. 4	14.46	6.15
18	14.30	6.31
Feb. 1	13.89	6.72
15	13.73	6.88
Mar. 3	13.81	6.80
18	13.79	6.82
Apr. 1	13.94	6.67
15	13.99	6.62
29	13.91	6.70
May 13	12.23	8.38
27	11.60	9.01
June 10	11.47	9.14
24	11.66	8.95
July 8	12.13	8.48
22	12.01	8.60
Aug. 5	12.63	7.98
16	13.07	7.54
30	13.10	7.51
Sept. 12	13.98	6.63
26	14.53	6.08
Oct. 22	15.50	5.11
Nov. 19	15.23	5.38

30.32.9.8.4 (#936, p. 119; 944, p. 104; 986, p. 124; 1016, p. 156; 1023, p. 180; 1071, p. 203 ). Department of Conservation, Division of Water Policy and Supply. Penns Grove observation well 36. Extremes of observed water level, in feet with reference to mean sea level: Highest, +5.58 June 10, 1947; lowest, -9.39 Dec. 4, 1942.

Water level, in feet, 1947		
Date	Below land-surface datum	With reference to mean sea level
Jan. 4	24.28	+2.13
18	24.23	+2.08
Feb. 1	24.20	+2.21
15	24.09	+2.32
Mar. 3	27.27	+2.14
18	24.00	+2.41
Apr. 1	24.07	+2.34
15	23.83	+2.58
29	24.65	+1.76
May 13	21.87	+4.54
27	21.19	+5.22
June 10	20.83	+5.58
24	21.06	+5.35
July 8	21.38	+5.03
22	21.99	+4.42
Aug. 5	22.61	+3.80
16	23.16	+3.25
30	23.20	+3.21
Sept. 12	24.77	+1.64
26	25.70	+ .71
Oct. 22	27.75	-1.34
Nov. 19	29.62	-3.21

30.32.2.3.3 (\*936, p. 120; 944, p. 104; 986, p. 124; 1016, p. 157; 1023, p. 181; 1071, p. 204 ). Department of Conservation, Division of Water Policy and Supply. Penns Grove observation well 41. Extremes of observed water level, in feet above mean sea level: Highest, 11.26 June 3, 1946; lowest, 4.66 Oct. 15, 1943.

Water level at end of day, in feet with reference  
to land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
1	.....	.....	-0.19	.....	+0.80	+0.47	-0.54	-1.15	-2.00	-2.81	-3.11
2	.....	.....	+25	-.07	+.82	+.38	-.61	-1.25	-2.05	-2.87	-3.11
3	.....	.....	+28	-.09	+.77	+.26	-.69	-1.32	-2.12	-2.91	-2.38
4	.....	.....	+26	-.13	+.80	+.12	-.80	-1.39	-2.15	-2.93	-1.93
5	.....	.....	+25	-.05	+.95	+.06	-.88	-1.45	-2.19	-2.97	-1.83
6	.....	.....	+23	-.06	+.93	+.12	-.98	-1.52	-2.19	-2.99	-1.80
7	.....	.....	+21	-.20	+.84	+.36	-1.04	-1.58	-2.19	-3.01	-1.43
8	.....	.....	+18	-.25	+.66	+.49	-1.09	-1.63	-2.19	-3.02	-1.01
9	.....	.....	+09	-.09	+.55	+.46	-1.14	-1.63	-2.20	-3.07	-.97
10	.....	.....	+02	-.10	+.46	+.36	-1.19	-1.71	-2.23	-3.10	-.92
11	.....	.....	+.03	-.10	+.42	+.32	-1.26	-1.76	-2.23	-3.13	-.45
12	.....	.....	-.06	-.16	+.37	+.18	-1.33	-1.81	-2.25	-3.16	-.37
13	-.81	.....	+.03	-.27	+.33	+.06	-1.44	-1.87	-2.27	-3.17	-.35
14	-.47	.....	+.29	-.23	+.36	+.27	-1.48	-1.93	-2.34	-3.19	-.36
15	-.31	-.35	+.30	-.21	+.30	+.35	-1.55	-1.99	-2.37	-3.23	-.32
16	-.24	-.35	+.28	+.20	+.25	+.26	-1.60	-2.07	-2.47	-3.23	-.32
17	-.24	-.35	+.17	+.21	+.20	+.15	-.67	-1.67	-2.53	-3.23	-.39
18	-.24	-.37	+.05	+.18	+.26	+.19	-.32	-1.66	-2.57	-3.25	-.44
19	-.25	-.43	.00	+.10	+.33	+.19	-.18	-1.67	-2.61	-3.27	.....
20	+.15	-.43	-.01	+.05	+.53	+.06	-.19	-1.67	-2.66	-3.31	.....
21	+.16	-.43	-.03	+.04	+.73	-.05	-.19	-1.73	-2.68	-3.35	.....
22	+.01	-.47	.00	+.01	+.96	-.15	-.36	-1.83	-2.67	-3.40	.....
23	-.05	-.51	-.02	-.03	+.96	-.26	-.44	-1.93	-2.65	-3.43	.....
24	-.05	-.53	+.08	-.07	+.93	-.30	-.51	-2.01	-2.65	-3.46	.....
25	-.05	-.44	+.14	-.11	+.91	-.38	-.57	-2.07	-2.59	-3.47	.....
26	+.15	-.30	-.05	-.14	+.93	-.43	-.65	-2.00	-2.59	-3.49	.....
27	+.20	-.24	-.11	-.21	+.81	-.49	-.75	-1.77	-2.64	-3.52	.....
28	+.20	-.23	-.16	-.33	+.70	-.56	-.77	-1.74	-2.68	-3.19	.....
29	+.19	.....	-.18	-.38	+.68	-.51	-.87	-1.79	-2.70	-3.08	.....
30	+.18	.....	-.29	-.30	+.71	-.48	-.96	-1.84	-2.76	-3.06	.....
31	+.13	.....	-.33	.....	+.55	.....	-1.03	-1.91	.....	-3.08	.....

Water level at end of day, in feet above mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
1	.....	.....	10.08	.....	11.07	10.74	9.73	9.12	8.27	7.46	7.16
2	.....	.....	10.52	10.20	11.09	10.65	9.66	9.02	8.22	7.40	7.16
3	.....	.....	10.55	10.18	11.04	10.53	9.58	8.95	8.15	7.36	7.09
4	.....	.....	10.53	10.14	11.07	10.39	9.47	8.88	8.12	7.34	8.34
5	.....	.....	10.52	10.22	11.22	10.33	9.39	8.82	8.08	7.30	8.44
6	.....	.....	10.50	10.21	11.20	10.39	9.29	8.75	8.08	7.28	8.47
7	.....	.....	10.48	10.07	11.11	10.63	9.23	8.69	8.08	7.26	8.84
8	.....	.....	10.45	10.02	10.93	10.76	9.18	8.64	8.08	7.25	9.26
9	.....	.....	10.36	10.18	10.82	10.73	9.13	8.64	8.07	7.20	9.30
10	.....	.....	10.29	10.17	10.73	10.63	9.08	8.56	8.04	7.17	9.35
11	.....	.....	10.24	10.17	10.69	10.59	9.01	8.51	8.04	7.14	9.82
12	.....	.....	10.21	10.11	10.64	10.45	8.94	8.46	8.02	7.11	9.90
13	9.46	.....	10.30	10.00	10.60	10.33	8.83	8.40	8.00	7.10	9.92
14	9.80	.....	10.56	10.04	10.63	10.54	8.79	8.34	7.93	7.08	9.91
15	9.96	9.92	10.57	10.06	10.57	10.62	8.72	8.28	7.90	7.04	9.95
16	10.03	9.92	10.55	10.47	10.52	10.53	8.67	8.20	7.80	7.04	9.95
17	10.03	9.92	10.44	10.48	10.47	10.42	9.60	8.60	7.74	7.04	9.88
18	10.03	9.90	10.32	10.45	10.53	10.46	9.95	8.61	7.70	7.02	9.83
19	10.02	9.84	10.27	10.37	10.60	10.46	10.09	8.60	7.66	7.00	.....
20	10.42	9.84	10.26	10.32	10.80	10.33	10.08	8.60	7.61	6.96	.....
21	10.43	9.84	10.24	10.31	11.00	10.22	10.08	8.54	7.59	6.92	.....
22	10.28	9.80	10.27	10.28	11.23	10.12	9.91	8.44	7.60	6.87	.....
23	10.22	9.76	10.25	10.24	11.23	10.01	9.83	8.34	7.62	6.84	.....
24	10.22	9.74	10.35	10.20	11.20	9.97	9.76	8.26	7.62	6.81	.....



## 30.32.2.3.3--Continued.

Water level at end of day, in feet above mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
25	10.22	9.83	10.41	10.16	11.18	9.89	9.70	8.20	7.68	6.80	....
26	10.42	9.97	10.22	10.13	11.20	9.84	9.62	8.27	7.68	6.78	....
27	10.47	10.03	10.16	10.06	11.08	9.78	9.52	8.50	7.63	6.75	....
28	10.47	10.04	10.11	9.94	10.97	9.71	9.50	8.53	7.59	7.08	....
29	10.46		10.09	9.89	10.95	9.76	9.40	8.48	7.57	7.19	....
30	10.45		9.98	9.97	10.98	9.79	9.31	8.43	7.51	7.21	....
31	10.40		9.94		10.82		9.24	8.36		7.19	

30.32.2.3.9 (\*936, p. 120; 944, p. 105; 986, p. 125; 1016, p. 158; 1023, p. 182; 1071, p. 205). Department of Conservation, Division of Water Policy and Supply. Penns Grove observation well 51. Extremes of observed water level, in feet above mean sea level: Highest, 11.05 Mar. 3, 1947; lowest, 3.94 Oct. 24, 1943.

## Water level, in feet, 1947

Date	Below land-surface datum	Above mean sea level
Jan. 4	2.37	10.34
18	1.91	10.80
Feb. 1	2.07	10.64
15	2.50	10.21
Mar. 3	1.66	11.05
18	2.04	10.67
Apr. 1	2.66	10.05
15	2.38	10.33
29	2.63	10.08
May 13	2.51	10.20
27	1.96	10.75
June 10	2.48	10.23
24	3.40	9.31
July 8	4.53	8.18
22	2.85	9.86
Aug. 5	4.60	8.11
16	5.40	7.31
30	5.21	7.50
Sept. 12	5.77	6.94
26	6.10	6.61
Oct. 22	6.76	5.95
Nov. 19	2.93	9.78

30.32.2.5.1 (\*936, p. 121; 944, p. 105; 986, p. 126; 1016, p. 158; 1023, p. 182; 1071, p. 206). Department of Conservation, Division of Water Policy and Supply. Penns Grove observation well 52. Extremes of observed water level, in feet with reference to mean sea level: Highest, +2.00 Mar. 29, 1946; lowest, -13.65 Feb. 12, 1942.

## Water level, in feet, 1947

Date	Below land-surface datum	With reference to mean sea level
Jan. 4	10.07	-2.91
18	9.46	-2.30
Feb. 1	9.48	-2.32
15	9.78	-2.62
Mar. 3	8.79	-1.63
18	6.56	+0.60
Apr. 1	6.02	+1.14
15	5.70	+1.46
29	6.62	+0.54
May 13	7.12	+0.04
27	8.08	-0.92
June 10	9.87	-2.71
24	11.20	-4.04

30.32.2.5.1--Continued.

## Water level, in feet, 1947

Date	Below land-surface datum	With reference to mean sea level
July 8	11.96	-4.80
22	12.63	-5.47
Aug. 5	12.70	-5.54
16	13.80	-6.64
30	13.80	-6.64
Sept. 13	13.73	-6.57
27	13.57	-6.41
Oct. 23	15.57	-8.41
Nov. 20	13.96	-6.80

30.32.2.6.5 (#936, p. 121; 944, p. 105; 986, p. 126; 1016, p. 159; 1023, p. 183; 1071, p. 206). Department of Conservation, Division of Water Policy and Supply. Penns Grove observation well 54. Extremes of observed water level, in feet above mean sea level: Highest, flowing, Mar. 13, 1941; lowest, 5.63 Oct. 24, 1943.

## Water level, in feet, 1947

Date	Below land-surface datum	Above mean sea level
Jan. 4	2.74	10.05
18	2.03	10.76
Feb. 1	1.63	11.16
15	2.11	10.68
Mar. 3	1.80	10.99
18	1.56	11.23
Apr. 1	3.08	9.71
15	2.03	10.76
29	2.00	10.79
May 13	1.56	11.23
27	.97	11.82
June 10	1.41	11.38
24	2.12	10.67
July 8	3.01	9.78
22	1.86	10.93
Aug. 5	3.08	9.71
16	3.86	8.93
30	3.80	8.99
Sept. 12	4.49	8.30
26	4.90	7.89
Nov. 19	2.90	9.89

30.32.3.5.5 (#936, p. 121; 944, p. 106; 986, p. 127; 1016, p. 159; 1023, p. 183; 1071, p. 206). Department of Conservation, Division of Water Policy and Supply. Penns Grove observation well 55. Extremes of observed water level, in feet above mean sea level: Highest, 7.22 Dec. 2, 1940, and Dec. 1, 1944; lowest, 1.93 Oct. 20, 24, 1943.

## Water level, in feet, 1947

Jan. 4	1.44	6.78
18	1.38	6.84
Feb. 1	1.63	6.59
15	1.59	6.63
Mar. 3	1.05	7.17
18	1.60	6.62
Apr. 1	2.02	6.20
15	1.80	6.42
29	2.09	6.13
May 13	1.89	6.33
27	1.47	6.75
June 10	1.59	6.63
24	2.31	5.91
July 8	2.77	5.45
22	1.60	6.62

## 30.32.3.5.5--Continued.

Water level, in feet, 1947		
Date	Below land-surface datum	Above mean sea level
Aug. 5	3.06	5.16
16	3.70	4.52
30	3.78	4.44
Sept. 12	3.97	4.25
26	4.20	4.02
Nov. 19	2.06	6.16

30.32.2.5.8 (\*936, p. 122; 944, p. 106; 986, p. 127; 1016, p. 160; 1023, p. 184; 1071, p. 207). Department of Conservation, Division of Water Policy and Supply. Penns Grove observation well 62. Extremes of observed water level, in feet below land-surface datum: Highest, 7.70 Mar. 29, 1946; lowest, 20.90 Feb. 13, 1942.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	14.03	Apr. 1	8.99	June 24	13.20	Aug. 30	15.71
18	13.46	15	8.27	July 8	12.94	Sept. 13	16.43
Feb. 1	13.16	29	9.34	22	14.61	27	16.34
15	12.74	May 13	9.43	Aug. 5	15.13	Oct. 23	17.65
Mar. 3	12.47	27	10.38	16	15.62	Nov. 20	17.80
18	9.86	June 10	11.93				

30.32.2.9.1 (\*936, p. 122; 944, p. 106; 986, p. 128; 1016, p. 160; 1023, p. 184; 1071, p. 207). Department of Conservation, Division of Water Policy and Supply. Penns Grove observation well 63. Extremes of observed water level, in feet above mean sea level: Highest, 15.73 Apr. 15, 1947; lowest, 8.09 Oct. 24, 1943.

Water level, in feet, 1947		
Date	Below land-surface datum	Above mean sea level
Jan. 4	4.89	12.92
18	3.93	13.88
Feb. 1	3.57	14.24
15	4.00	13.81
Mar. 3	3.25	14.56
18	3.40	14.41
Apr. 1	4.03	13.78
15	2.08	15.73
29	3.98	13.83
May 13	3.53	14.28
27	2.97	14.84
June 10	3.57	14.24
24	4.56	13.25
July 8	5.59	12.22
22	3.89	13.92
Aug. 5	5.59	12.22
16	6.38	11.43
30	6.42	11.39
Sept. 13	7.34	10.47
26	7.67	10.14
Oct. 23	8.32	9.49
Nov. 19	5.74	12.07

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30.32.2.9.5 (\*936, p. 122; 944, p. 106; 986, p. 128; 1016, p. 161; 1023, p. 185; 1071, p. 207). Department of Conservation, Division of Water Policy and Supply. Penns Grove observation well 64. In Water-Supply Paper 1016, p. 161; highest extreme should read +2.00 Mar. 13, 1941; lowest, -1.42 Sept. 25, 1943. In Water-Supply Paper 1023, p. 185, lowest extreme of observed water level should read -1.42 Sept. 25, 1943. Extremes of observed water level, in feet with reference to mean sea level: Highest, +2.06 Feb. 24, 1945; lowest, -1.42 Sept. 25, 1943.

## Water level, in feet, 1947

Date	Below land-surface datum	With reference to mean sea level
Jan. 4	3.58	+1.44
18	3.64	+1.58
Feb. 1	3.71	+1.31
15	3.76	+1.26
Mar. 18	3.80	+1.22
Apr. 1	3.89	+1.13
15	3.88	+1.14
29	3.89	+1.13
May 13	3.80	+1.22
27	3.65	+1.37
June 10	3.49	+1.53
24	3.97	+1.05
July 8	3.98	+1.04
22	3.64	+1.58
Aug. 5	4.30	+.72
16	4.53	+.49
30	4.59	+.43
Sept. 13	4.48	+.54
26	4.34	+.68
Oct. 23	5.12	-.10
Nov. 19	3.85	+1.17

30.32.6.1.6 (\*936, p. 123; 944, p. 106; 986, p. 129; 1016, p. 161; 1023, p. 185; 1071, p. 208). Department of Conservation, Division of Water Policy and Supply. Penns Grove observation well 65. Extremes of observed water level, in feet above mean sea level: Highest, 8.80 Mar. 25, 1944; lowest, 1.88 Oct. 24, 1943.

## Water level, in feet, 1947

Date	Below land-surface datum	Above mean sea level
Jan. 4	4.09	6.76
18	3.13	7.72
Feb. 1	3.08	7.77
15	3.50	7.35
Mar. 3	3.15	7.70
18	2.74	8.11
Apr. 1	3.29	7.56
15	3.10	7.75
29	3.25	7.60
May 13	2.76	8.09
27	2.38	8.47
June 10	2.57	8.28
24	3.53	7.32
July 8	4.50	6.35
22	2.92	7.93
Aug. 5	4.72	6.13
16	5.56	5.29
30	5.62	5.23
Sept. 13	6.49	4.36
26	6.86	3.99
Nov. 19	5.40	5.45

30.32.1.9.5 (\*936, p. 123; 944, p. 107; 986, p. 129; 1016, p. 162; 1023, p. 186; 1071, p. 208). Department of Conservation, Division of Water Policy and Supply. Penns Grove observation well 71. Extremes of observed water level, in feet below land-surface datum: Highest, 4.30 May 13, 1947; lowest, 10.87 Dec. 6, 1941.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	7.81	Apr. 1	6.12	June 24	5.20	Aug. 30	6.19
18	7.30	15	6.00	July 8	5.71	Sept. 13	7.19
Feb. 1	5.47	29	5.73	22	4.58	27	7.01
15	6.53	May 13	4.30	Aug. 5	5.39	Oct. 23	8.26
Mar. 3	6.44	27	4.38	16	6.10	Nov. 20	7.38
18	6.03	June 10	4.55				

30.32.5.1.3 (\*936, p. 123; 944, p. 107; 986, p. 129; 1016, p. 162; 1023, p. 186; 1071, p. 208). Department of Conservation, Division of Water Policy and Supply. Penns Grove observation well 72. Extremes of observed water level, in feet below land-surface datum: Highest, 3.12 Mar. 8, 1945; lowest, 9.13 Oct. 24, 1943.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	5.10	Apr. 1	3.89	June 24	4.60	Aug. 30	6.07
18	4.04	15	3.83	July 8	5.39	Sept. 13	6.60
Feb. 1	3.69	29	3.98	22	3.77	27	6.40
15	4.12	May 13	3.63	Aug. 5	5.30	Oct. 23	7.50
Mar. 3	3.60	27	3.24	16	6.00	Nov. 19	5.50
18	3.31	June 10	3.57				

30.32.4.6.4 (\*936, p. 124; 944, p. 107; 986, p. 130; 1016, p. 162; 1023, p. 186; 1071, p. 208). Department of Conservation, Division of Water Policy and Supply. Penns Grove observation well 73. Extremes of observed water level, in feet below land-surface datum: Highest, 0.90 July 22, 1947; lowest, 5.52 Sept. 25, 1943.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	1.39	Apr. 1	1.57	June 10	1.47	Aug. 16	2.58
18	1.39	15	1.45	24	1.98	30	2.68
Feb. 1	1.46	29	1.60	July 8	2.37	Sept. 13	2.61
15	1.56	May 13	1.48	22	.90	27	2.52
Mar. 3	1.18	27	1.30	Aug. 5	3.03	Nov. 19	1.65
18	1.33						

30.32.5.4.6 (\*936, p. 124; 944, p. 107; 986, p. 130; 1016, p. 162; 1023, p. 186; 1071, p. 209). Department of Conservation, Division of Water Policy and Supply. Penns Grove observation well 74. Extremes of observed water level, in feet below land-surface datum: Highest, 1.17 Dec. 3, 1940; lowest, 7.87 Oct. 24, 1943.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	6.47	Apr. 1	5.48	June 24	5.37	Aug. 30	5.90
18	6.14	15	5.57	July 8	5.59	Sept. 13	6.43
Feb. 1	5.60	29	5.50	22	5.66	27	6.51
15	5.58	May 13	5.30	Aug. 5	5.63	Oct. 23	7.05
Mar. 3	6.63	27	5.29	16	5.84	Nov. 19	6.14
18	5.49	June 10	5.30				

30.32.5.7.7 (\*936, p. 125; 944, p. 108; 986, p. 130; 1016, p. 163; 1023, p. 186; 1071, p. 209 ). Department of Conservation, Division of Water Policy and Supply. Penns Grove observation well 84. Extremes of observed water level, in feet below land-surface datum: Highest, at land surface Feb. 14, 1946; lowest, 6.70 Oct. 24, 1943.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	0.30	Apr. 1	1.20	June 24	1.99	Aug. 30	3.72
18	.13	15	.51	July 8	2.70	Sept. 13	4.03
Feb. 1	.50	29	1.39	22	.80	27	3.83
15	.84	May 13	1.33	Aug. 5	2.88	Oct. 23	5.04
Mar. 3	.02	27	.48	16	3.67	Nov. 19	2.06
18	.56	June 10	1.14				

30.31.9.6.6 (\*936, p. 125; 944, p. 108; 986, p. 130; 1016, p. 163; 1023, p. 187; 1071, p. 209 ). Department of Conservation, Division of Water Policy and Supply. Penns Grove observation well 91. Extremes of observed water level, in feet below land-surface datum: Highest, 2.80 Mar. 25, 1944; lowest, 7.49 Oct. 11, 1941.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	3.46	Apr. 1	4.00	June 24	4.66	Aug. 30	5.29
18	3.26	15	3.99	July 8	5.06	Sept. 13	4.88
Feb. 1	3.56	29	4.13	22	3.30	27	4.58
15	3.99	May 13	3.94	Aug. 5	4.86	Oct. 23	5.33
Mar. 3	3.57	27	3.58	16	5.28	Nov. 20	3.63
18	3.22	June 10	4.20				

30.32.7.6.9 (\*936, p. 125; 944, p. 108; 986, p. 131; 1016, p. 163; 1023, p. 187; 1071, p. 209 ). Department of Conservation, Division of Water Policy and Supply. Penns Grove observation well 92. Extremes of observed water level, in feet below land-surface datum: Highest, 2.45 Feb. 14, 1943; lowest, 11.87 Dec. 6, 1941.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	8.96	Apr. 1	5.62	June 24	6.85	Aug. 30	8.11
18	7.33	15	6.05	July 8	7.63	Sept. 13	9.04
Feb. 1	5.26	29	5.93	22	4.64	27	8.81
15	6.19	May 13	5.24	Aug. 5	6.96	Oct. 23	10.20
Mar. 3	6.55	27	4.96	16	8.00	Nov. 19	8.97
18	4.54	June 10	6.31				

30.22.9.4.3 (\*936, p. 126; 944, p. 108; 986, p. 131; 1016, p. 163; 1023, p. 187; 1071, p. 209 ). Logwood Inn. Penns Grove observation well E14. Extremes of observed water level, in feet above mean sea level: Highest, 16.69 May 24, 1940; lowest, 9.54 Oct. 20, 1943.

Water level, in feet, 1947

Date	Below land-surface datum	Above mean sea level
Jan. 4	9.60	11.54
18	8.87	12.27
Feb. 1	7.90	13.24
15	7.91	13.23
Mar. 3	7.93	13.21
18	7.38	13.76
Apr. 1	7.40	13.74
15	7.52	13.62
29	7.42	13.72
May 13	5.37	15.77
27	4.57	16.57
June 10	4.80	16.34
24	4.64	16.50
July 8	7.16	13.98
22	7.36	13.78
Aug. 5	7.88	13.26

## 30.22.9.4.3--Continued.

Water level, in feet, 1947		
Date	Below land-surface datum	Above mean sea level
Aug. 16	7.74	13.40
30	7.80	13.34
Sept. 13	9.16	11.98
27	8.96	12.18
Oct. 22	10.22	10.92
Nov. 20	8.31	12.83

30.22.9.5.4 (\*936, p. 126; 944, p. 108; 986, p. 131; 1016, p. 164; 1023, p. 187; 1071, p. 210 ). George Schmid. Penns Grove observation well E15. Extremes of observed water level, in feet above mean sea level  
Highest, 15.12 Apr. 23, 1940; lowest, 5.79 Nov. 7, 1943.

Water level, in feet, 1947		
Jan. 4	12.53	7.38
18	12.23	7.68
Feb. 1	11.42	8.49
15	11.07	8.84
Mar. 3	11.17	8.74
18	10.60	9.31
Apr. 1	10.55	9.36
15	10.44	9.47
29	10.38	9.53
May 13	7.84	12.07
27	7.62	12.29
June 10	7.79	12.12
24	7.83	12.08
July 8	8.88	11.03
22	9.11	10.80
Aug. 5	9.80	10.11
16	9.61	10.30
30	9.69	10.22
Sept. 13	11.26	8.65
27	10.98	8.93
Oct. 23	12.34	7.57
Nov. 20	11.75	8.16

30.32.2.6.4 (\*936, p. 127; 944, p. 109; 986, p. 132; 1016, p. 164; 1023, p. 188; 1071, p. 210 ). Owner unknown. Penns Grove observation well E16. Extremes of observed water level, in feet above mean sea level:  
Highest, 14.85 Mar. 14, 1943; lowest, 10.21 Oct. 24, 1943.

Water level, in feet, 1947		
Jan. 4	1.40	13.65
18	.62	14.43
Feb. 1	.64	14.41
15	.92	14.13
Mar. 3	.26	14.79
18	.66	14.39
Apr. 1	1.13	13.92
15	1.13	13.92
29	1.08	13.97
May 13	1.03	14.02
27	3.41	11.64
June 10	.96	14.09
24	.81	14.24
July 8	1.10	13.95
22	1.03	14.02
Aug. 5	1.18	13.87
16	1.98	13.07
30	2.10	12.95
Sept. 12	2.37	12.68
26	2.00	13.05
Oct. 23	4.14	10.91
Nov. 19	1.84	13.21

30.32.9.9.8 (\*936, p. 127; 944, p. 109; 986, p. 132; 1016, p. 165; 1023, p. 188; 1071, p. 210 ). Penns Grove Water Supply Co. Penns Grove observation well R5. Extremes of observed water level, in feet above mean sea level: Highest, 10.30 Apr. 24, 1940; lowest, 4.10 Oct. 24, 1943.

Water level, in feet, 1947			
Date	Below land-surface datum	Above mean sea level	
Jan. 4	1.38	8.46	
18	1.11	8.73	
Feb. 1	1.02	8.82	
15	3.13	6.71	
Mar. 3	.88	8.96	
18	.99	8.85	
Apr. 1	1.32	8.52	
15	1.27	8.57	
29	1.34	8.50	
May 13	.57	9.27	
27	.06	9.78	
June 10	.28	9.56	
24	.88	8.96	
July 8	1.29	8.55	
22	.66	9.18	
Aug. 5	1.58	8.26	
16	2.02	7.82	
30	2.10	7.74	
Sept. 12	2.36	7.48	
26	2.58	7.26	
Oct. 22	3.21	6.63	
Nov. 19	1.53	8.31	

30.23.7.1.4 (\*936, p. 128; 944, p. 109; 986, p. 133; 1016, p. 165; 1023, p. 189; 1071, p. 211 ). Penns Grove Water Supply Co. Penns Grove observation well R7. Extremes of observed water level, in feet above mean sea level: Highest, 24.05 Feb. 24, 1945; lowest, 18.82 Oct. 20, 1943.

Water level, in feet, 1947		
Jan. 4	2.48	22.07
18	1.90	22.65
Feb. 1	1.62	22.93
15	2.89	21.66
Mar. 3	1.84	22.71
18	1.70	22.85
Apr. 1	2.14	22.41
15	2.10	22.45
29	2.08	22.47
May 13	1.45	23.10
27	1.03	23.52
June 10	1.23	23.32
24	1.90	22.65
July 8	2.64	21.91
22	1.89	22.66
Aug. 5	2.20	22.35
16	3.24	21.31
30	3.30	21.25
Sept. 13	3.56	20.99
27	3.09	21.46
Oct. 23	4.38	20.17
Nov. 20	1.79	22.76



30.32.3.6.5 (\*936, p. 128; 944, p. 109; 986, p. 133; 1016, p. 166; 1023, p. 189; 1071, p. 211 ). Penns Grove Water Supply Co. Penns Grove observation well R8. Extremes of observed water level, in feet above mean sea level: Highest, 7.31 Feb. 24, 1945; lowest, 2.09 Oct. 10, 1943.

## Water level, in feet, 1947

Date	Below land-surface datum	Above mean sea level
Jan. 4	4.96	5.17
18	3.73	5.40
Feb. 1	3.53	5.60
15	2.76	6.37
Mar. 3	3.72	5.41
18	3.59	5.54
Apr. 1	3.80	5.33
15	3.78	5.35
29	3.74	5.39
May 13	3.24	5.89
27	3.03	6.10
June 10	3.23	5.90
24	3.57	5.56
July 8	4.03	5.10
22	3.57	5.56
Aug. 5	4.21	4.92
16	4.61	4.52
30	4.73	4.40
Sept. 12	3.92	5.21
26	4.23	4.90
Oct. 23	5.65	3.48
Nov. 19	4.14	4.99

## NEW YORK

### UPSTATE NEW YORK

By E. S. Simpson and G. R. Ayer

#### PROGRAM OF WORK

Periodic measurement of water levels in observation wells in Upstate New York was continued during 1947. Records for 21 wells are included in this report. Of these, four are equipped with weekly type automatic water-stage recorders and are operated in cooperation with the New York State Department of Conservation. Four others, similarly equipped, and 13 which are measured periodically with a tape or tape gage, are operated in cooperation with the New York State Water Power and Control Commission, and under the active sponsorship of the New York Departments of Commerce, Health, and Public Works, and Office of the Geologist, New York State Science Service.

#### FLUCTUATIONS OF WATER LEVEL

Water levels in wells Cn 1, C 100, C 101, and D 157 were about normal early in January followed by substantial rises late in the month which held through early February. A rapid recession followed so that late in February and during early March all wells were somewhat below normal. During July all wells were considerably above normal with new highs for the month recorded at two of the wells. A gradual but very definite recession started in August and continued throughout September and October and into early November at which time new November lows were observed at three out of the four wells. Rapid recovery took place during the middle and latter part of the month, however, so that all wells were only slightly below normal at the close of the year, with an average net loss in level for the year of about 0.6 foot.

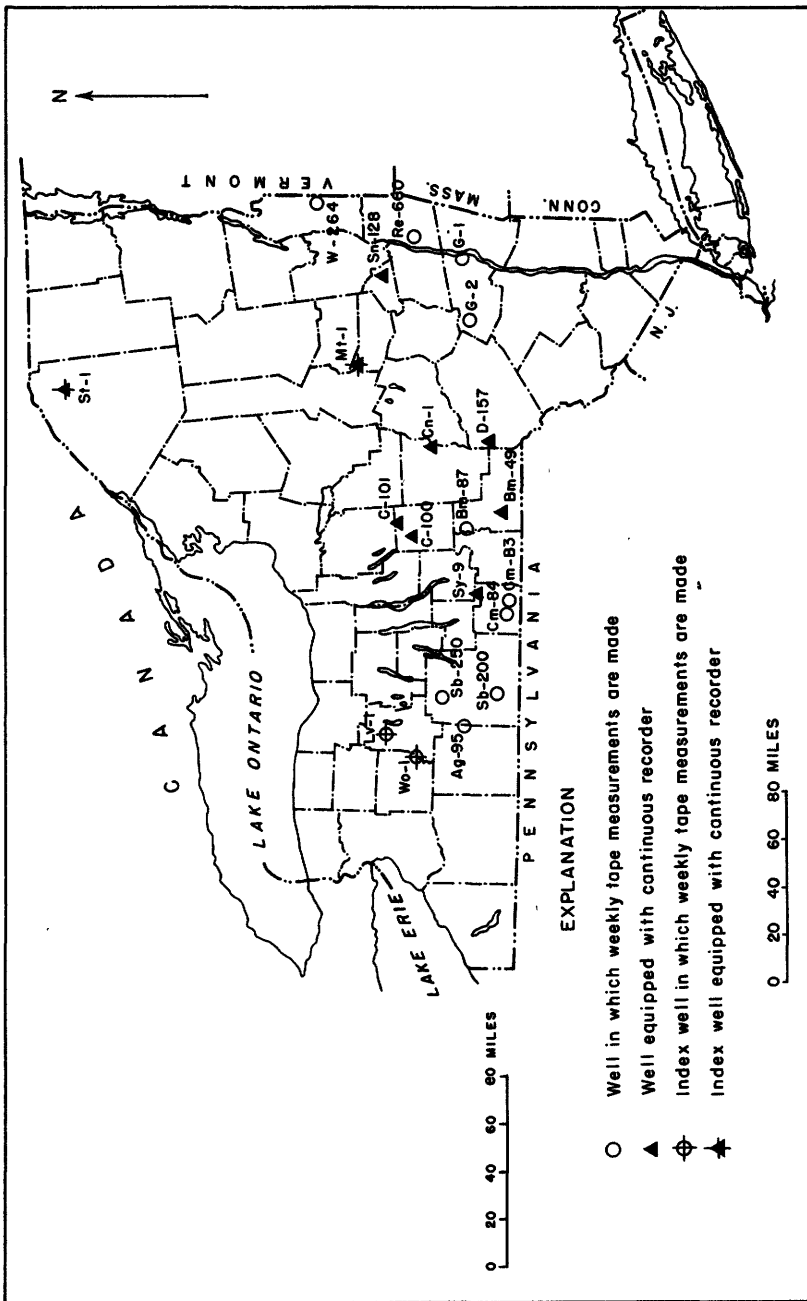


Figure 7.--Index map showing location of observation wells in upstate New York, 1947.

Water-level records for 8 of the 21 wells appear for the first time in this report. In the paragraphs that follow a brief description is given for each of the eight new wells of the principal geologic and topographic features affecting ground-water levels in the general areas in which these wells are situated.

Wells Ag 95, Bm 87, Cm 83, Cm 84, Sy 9, and Sb 200 are all in the southwestern plateau province of New York State, and in the watersheds of tributaries to the Susquehanna River. The southwestern plateau province occupies the southwestern portion of New York from Lake Erie to the Catskill Mountains, and from the Pennsylvania border to the Mohawk valley. It is mostly underlain by a thick series of shales and sandstones of Devonian age which have a gentle regional dip towards the south or southwest of 30 to 50 feet a mile. The plateau is well dissected by streams so that the topography is steeply rolling. Summit elevations vary from 500 to 600 feet on the northern side of the plateau to over 2,000 feet on the eastern and western sides. In the localities occupied by the wells, summit elevations are between 1,600 and 2,200 feet, and the main valleys are eroded about 600 to 1,000 feet below summit levels. The region was also affected by glaciation which deposited a relatively thin mantle of till on the hillsides and uplands, but filled the main valleys with unconsolidated deposits up to several hundred feet thick. Thus, many streams meander along valley flats consisting of unconsolidated glacial deposits and which range in width from a few hundred feet to several miles.

Well Ag 95, near Almond, is on a hillside about 400 feet below the summit and about 250 feet above Canacadea Creek which flows at an elevation of 1,300 feet above sea level, 0.5 mile east of the well.

Well Bm 87 is near the summit of the plateau which is about 1,600 feet above sea level in this vicinity. The Tioughnioga River, about 5.5 miles east of Bm 87, is the nearest large stream and flows at an elevation of about 1,000 feet above sea level.

Well Cm 83 is on a hillside about 100 feet below the summit. The Chemung River is the nearest large stream and flows at 800 feet above sea level, 4.0 miles south of Cm 83.

Well Cm 84 is drilled in the flood plain (or valley flat) of the Chemung River. The river flows around the well on the north and east about a mile away, and at about 830 feet elevation or 20 feet below the land surface at the well. Water levels in this well may be influenced by stream stage, especially during high water or flood flows.

Well Sy 9 is on a hillside about 100 feet below the summit. Summit elevations in the vicinity reach about 2,000 feet above sea level, while the nearest large stream is Cayuta Creek, 1.2 miles southwest of the well, where it flows at an elevation of 1,100 feet above sea level.

Well Sb 200 is in the valley of Tuscarora Creek, about 500 feet north of the creek and about 40 feet above it. The creek flows at 1,380 feet above sea level at this place and summit elevations in the vicinity are about 1,900 feet above sea level.

Wells Re 660 and W 264 are in the northern part of the Hudson Valley province, which is a depression lying between the western highlands of New England and the eastern highlands of New York. In the localities occupied by the wells it is underlain by folded and metamorphosed shales, limestones and grits of Cambrian age, and the topography is characterized by an abundance of rocky hills or ridges ranging in height from about 100 to about 500 feet.

Re 660 is on a gently sloping field surrounded by hills rising about 150 feet above the land surface at the well. A small unnamed creek which is reduced to a trickle in late summer, flows past the well about 200 feet away.

W 264 is in a valley flat between the confluence of Beaver Brook and White Creek. The hills and ridges that surround the well rise about 410 feet above the land surface at the well. Water levels in this well may be influenced by stream stage, especially during high water or flood flows.

Summary of data on ground-water levels in Upstate New York,  
in feet below land-surface datum

Well No.	Date of measurement	Lowest observed water level		Highest observed water level		Water level on last date of record 1947
		Water level	Date	Water level	Date	
Ag 95	Aug. 27, 1946	4.91	Nov. 1, 1947	1.19	Apr. 5, 1947	3.77
Bm 49	Feb. 8, 1946	14.10	Nov. 7, 1947	6.99	May 28, 1946	13.60
Bm 87	Jan. 30, 1947	8.88	Nov. 1, 1947	1.69	Apr. 5, 1947	6.61
Cm 83	Aug. 29, 1946	11.10	Nov. 1, 1947	3.00	May 3, 1947	6.70
Cm 84	Feb. 20, 1947	17.23	Nov. 3, 1947	15.43	May 26, 1947	16.94
Cn 1	Oct. 27, 1934	6.13	Oct. 10, 1936	.00	(b)	c .83
C 100	Oct. 22, 1938	6.15	Oct. 26, 1939	.00	(b)	c 1.87
C 101	Aug. 26, 1933	(a)	Aug. 17- Oct. 12, 1936	.00	(b)	c 1.06
D 157	Oct. 24, 1934	9.24	Sept. 7- Nov. 1, 1939			
G 1	Dec. 13, 1945	12.65	Oct. 27, 1935	.00	(b)	c 4.33
G 2	Jan. 8, 1946	9.96	Sept. 22, 1947	1.90	May 5, 1947	5.42
Lv 1	Nov. 17, 1942	8.51	Sept. 15, 1946	5.56	Jan. 8, 1946	9.08
Mt 1	Oct. 3, 1942	9.89	Nov. 25, 1944	.3	Mar. 15, 1945	5.00
Re 660	Apr. 7, 1946	13.31	Sept. 17, 1946	4.76	Apr. 24, 1943	c 7.72
St 1	Oct. 4, 1942	17.00	Oct. 25, 1947	7.74	May 9, 1947	12.01
Sn 128	Apr. 10, 1946	34.66	Sept. 28, 1946	3.00	Apr. 6, 1947	7.16
Sy 9	Oct. 1, 1946	9.01	Mar. 13, 1947	26.98	May 7, 1947	33.49
			Oct. 25- 28, 1947	1.37	Apr. 6, 1947	c 7.86
Sb 200	Sept. 16, 1946	11.57	Dec. 13, 1947	4.41	Apr. 5, 1947	11.57
Sb 250	July 2, 1937	33.0	Dec. 21, 1939	22.76	May 26, 1943	27.18
W 264	July 26, 1946	11.14	Oct. 27, 1947	8.06	Apr. 27, 1947	10.65
Wo 1	Nov. 18, 1942	12.40	Dec. 3, 1944	.5	Apr. 5, 1947	5.88

a Dry.

b This level observed many times during period of record.

c Water level at noon on Dec. 31, 1947, from recorder charts.

## WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Allegany County

Ag 95. Lat. 42°20'04", long. 77°44'24". In wooden well house 100 feet north of Mullikin residence, and 30 feet west of gravel road between Almond and Bishopville. Abandoned dug farm-supply well, stone lined, diameter 30 inches, depth 14.2 feet below measuring point. Measuring point, blue keel arrow on north side of square opening in concrete floor of well house, 1.2 feet above land-surface datum. Approximate elevation of land surface, 1,550 feet above mean sea-level datum.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Aug. 27, 1946	a 4.05	Jan. 13, 1947	2.98	May 31, 1947	2.12
Sept. 2	4.20	20	1.49	June 7	2.15
9	4.53	27	1.53	14	2.54
16	4.47	Feb. 3	1.88	21	3.16
23	4.39	10	2.13	28	3.66
30	4.40	17	2.71	July 5	3.91
Oct. 7	4.37	24	3.07	12	3.53
14	4.40	Mar. 3	3.34	19	3.68
21	4.25	10	3.52	26	3.68
28	4.13	17	1.30	Aug. 2	3.99
Nov. 4	3.82	24	1.23	9	4.13
12	3.94	31	2.06	16	4.26
19	3.68	Apr. 5, 1947	1.19	23	4.13
25	3.89	14	2.18	30	b 5.66
Dec. 2	3.66	19	2.05	Sept. 6	4.28
9	4.06	26	1.62	13	4.20
16	4.10	May 3	1.83	20	4.21
23	3.95	10	2.30	27	4.18
30	3.24	17	1.99	Oct. 4	4.24
Jan. 6, 1947	2.75	24	2.15	11	4.48

a Record begins.

b Pumped all week.

Ag 95--Continued.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Oct. 18, 1947	4.60	Nov. 15, 1947	4.72	Dec. 13	4.03
25	4.70	22	4.56	20	3.76
Nov. 1	4.91	29	4.35	27	3.77
8	4.77	Dec. 6	4.10		

Broome County

Bm 49 (\*1071, p. 216). Lat. 42°07'11", long. 75°57'24". Village of Johnson City. Inside concrete pump house, at northwest corner of ball park on east side of North Broad Street, opposite Carlton Street.

Daily noon water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	11.89	10.27	11.87	10.51	9.98	9.96	10.70	10.37	11.36	12.80	13.99	13.11
2	11.83	10.37	11.83	10.49	9.89	10.02	10.70	10.44	11.35	12.83	14.02	13.13
3	11.64	10.48	11.84	10.26	9.75	9.67	10.75	10.52	11.40	12.89	14.05	13.12
4	11.47	10.47	11.93	10.23	9.76	9.66	10.80	10.59	11.44	12.93	14.07	13.17
5	.....	10.60	11.96	9.54	9.76	9.75	10.84	10.66	11.48	12.97	14.05	13.12
6	.....	10.73	11.98	7.63	9.41	9.80	10.89	10.73	11.54	13.02	14.08	13.18
7	.....	10.83	12.01	8.33	9.36	9.90	10.83	10.79	11.60	13.05	14.10	13.21
8	.....	10.89	11.99	8.83	9.14	9.65	10.42	10.85	11.66	13.09	13.98	13.16
9	.....	10.96	11.97	9.13	9.36	9.70	10.38	10.92	11.72	13.15	13.55	13.20
10	.....	11.07	11.97	9.41	9.54	9.71	10.44	10.61	11.78	13.20	13.45	13.18
11	.....	11.19	12.00	9.56	9.66	9.80	10.49	10.68	11.83	13.24	13.31	13.19
12	.....	11.26	11.99	9.70	9.74	9.92	10.55	10.75	11.88	13.28	13.10	13.23
13	.....	11.28	11.78	9.88	9.81	10.00	10.62	10.82	11.94	13.31	12.92	13.24
14	.....	11.27	10.72	9.92	9.88	10.01	10.68	10.90	12.02	13.37	12.86	13.25
15	.....	11.25	9.77	10.04	9.96	9.72	10.73	10.99	12.09	13.41	12.81	13.27
16	.....	11.31	9.77	10.05	9.99	9.80	10.79	11.08	12.15	13.46	12.78	13.20
17	.....	11.38	9.94	10.16	10.08	9.91	10.79	10.42	12.23	13.49	12.84	13.22
18	.....	11.37	10.18	10.21	10.04	9.98	10.83	10.40	12.27	13.53	12.87	13.21
19	.....	11.47	10.35	10.31	9.99	10.07	10.88	10.46	12.30	13.57	12.90	13.25
20	.....	11.50	10.41	10.31	10.02	10.15	10.95	10.57	12.36	13.63	12.94	13.27
21	.....	11.49	10.45	10.17	10.06	10.22	10.98	10.67	12.39	13.67	12.99	13.28
22	.....	11.51	10.50	10.10	9.38	10.27	10.13	10.74	12.37	13.71	13.01	13.32
23	.....	11.58	10.50	10.11	9.40	10.30	10.02	10.81	12.44	13.74	13.02	13.36
24	.....	11.63	10.32	10.13	9.56	10.33	10.11	10.88	12.48	13.80	12.99	.....
25	.....	11.70	9.59	10.23	9.62	10.39	10.20	10.95	12.53	13.83	12.97	.....
26	.....	11.74	9.69	10.10	9.67	10.44	10.28	11.04	12.59	13.86	13.00	13.46
27	.....	11.78	9.93	10.03	9.80	10.49	10.34	11.15	12.65	13.89	13.04	13.48
28	.....	11.85	10.08	10.12	9.84	10.55	10.36	11.22	12.68	13.93	13.06	13.51
29	.....	.....	10.16	10.12	9.89	10.62	10.44	11.31	12.70	13.95	13.08	13.56
30	.....	.....	10.35	10.15	9.82	10.67	10.50	11.29	12.75	13.98	13.11	.....
31	10.25	.....	10.47	.....	9.90	.....	10.44	11.30	.....	13.95	.....	13.60

a Estimated.

Bm 87. Lat. 42°19'40", long. 76°05'58". On Frawley property, about 120 feet north of Frawley garage, 0.5 mile west of county road 517, and 1.9 miles south of Center Isle. Abandoned dug supply well, stone lined, diameter 36 inches, depth 18.5 feet below measuring point. Measuring point, blue crayon arrow on 4- by 4-inch timber, at land-surface datum, and approximately 1,520 feet above mean sea-level datum.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	2.97	Mar. 8	7.59	Apr. 19	4.75	May 31	3.79
Feb. 1	2.61	15	7.14	26	3.51	June 7	4.72
8	4.60	22	4.22	May 3	2.99	14	6.63
15	6.12	29	2.96	10	2.91	21	5.52
22	6.63	Apr. 5	1.69	17	4.25	28	7.77
Mar. 1	7.29	12	3.45	24	3.53	July 5	8.51

Bm 87--Continued.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 12	8.43	Aug. 30	7.23	Oct. 11	8.68	Nov. 22	4.87
19	8.42	Sept. 6	5.73	18	8.74	29	5.66
26	4.13	14	7.74	25	8.83	Dec. 6	4.58
Aug. 2	6.66	20	7.75	Nov. 1	8.88	13	4.47
9	7.67	27	8.18	8	8.87	20	4.78
16	8.26	Oct. 4	8.51	15	4.22	27	6.61
23	8.32						

Chemung County

Cm 83. Lat. 42°04'43", long. 76°41'01". In yard of Daly residence, 40 feet east of paved county road, about 4.2 miles north of State Route 17 at Lowman, and 1.0 mile south of intersection with paved road between East Elmira and Chemung Center. Dug auxiliary farm well, stone lined, diameter 30 inches, depth 21.0 feet below measuring point. Measuring point, top edge of 1½-inch hole drilled through 3-inch plank well cover, at land-surface datum and approximately 1,480 feet above mean sea-level datum. Pumpage usually 12 gallons a day or less.

Water level, in feet below land-surface datum, 1946-47					
Date	Water level	Date	Water level	Date	Water level
Aug. 29, 1946	6.36	Feb. 3, 1947	5.20	July 26, 1947	7.30
Sept. 2	7.43	10	5.30	Aug. 1	6.20
9	8.50	17	6.70	9	7.70
16	9.20	24	7.40	16	8.90
23	9.80	Mar. 3	8.25	23	8.20
30	8.10	10	9.20	30	7.80
Oct. 7	6.60	17	9.25	Sept. 6	6.35
14	5.50	22	8.50	13	5.50
17	4.68	29	6.70	20	6.90
21	3.90	Apr. 5	3.30	27	8.00
28	3.50	12	3.20	Oct. 4	9.05
Nov. 4	4.00	May 3	3.00	11	9.90
11	3.10	10	3.28	18	10.30
18	5.66	17	3.38	25	10.80
25	6.50	24	3.65	Nov. 1	11.10
Dec. 2	7.40	31	3.80	8	11.00
9	8.10	June 7	4.15	15	9.20
16	8.40	14	4.80	22	5.30
22	8.70	21	5.50	29	5.20
30	9.10	28	6.85	Dec. 6	5.66
Jan. 6, 1947	8.80	July 3	8.00	13	5.40
13	8.20	16	7.10	20	5.50
20	7.10	20	6.00	27	6.70
27	6.38				

Cm 84. Lat. 42°04'17", long. 76°42'45". In Remington Rand plant, South Main Street, Elmira, 260 feet north of water tower and 144 feet west of wire boundary fence. Abandoned drilled industrial supply well, diameter 6 inches, depth 256.8 feet below measuring point. Measuring point, top of metal base plate used for former pump mounting, at south side of well, at land-surface datum and approximately 850 feet above mean sea-level datum. Kinnison type float-tape gage installed Apr. 15, 1947.

Water level, in feet below land-surface datum, 1947					
Date	Water level	Date	Water level	Date	Water level
Feb. 20	16.37	Mar. 24	16.60	Apr. 28	15.86
24	16.57	31	16.50	May 5	15.89
Mar. 3	16.64	Apr. 7	15.70	12	15.79
11	16.83	14	15.95	19	15.76
17	16.62	21	16.10	26	15.43
				June 2	15.47
				9	15.48
				16	15.80
				23	16.09
				July 7	16.45



Cm 84--Continued.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 14	16.49	Sept. 2	16.63	Oct. 13	17.02	Nov. 24	16.96
21	16.30	8	16.61	20	17.11	Dec. 1	16.98
28	16.46	15	16.78	27	17.21	8	16.98
Aug. 4	16.70	22	16.73	Nov. 3	17.23	15	16.95
11	16.77	29	16.83	10	17.13	22	16.88
18	16.79	Oct. 6	16.91	17	16.99	29	16.94
25	16.75						

Chenango County

Cm 1 (\*777, p. 128; 817, p. 198; 840, p. 256; \*845, p. 302; \*886, p. 496; \*906, p. 108; 936, p. 130; 944, p. 111; \*986, p. 135; 1016, p. 168; 1023, p. 199; 1071, p. 217). Lat.  $42^{\circ}31'55''$ , long.  $75^{\circ}25'30''$ . About 50 feet upstream from gaging station, 100 feet to the left (north) of Sage Brook, and about 2.5 miles west of South New Berlin.

Water level, in feet below land-surface datum, 1947

Jan. 6	0.70	Apr. 17	0.64	July 14	0.63	Oct. 13	3.30
13	.74	21	.61	21	.64	20	3.63
20	.03	28	.57	28	.61	27	3.80
27	.66	May 5	.34	Aug. 4	.70	Nov. 3	3.89
Feb. 3	.73	12	.63	11	.96	10	3.77
10	.76	19	.56	18	.82	17	3.88
17	.75	26	.36	25	1.27	24	3.90
24	.80	June 2	.58	Sept. 1	1.50	Dec. 1	3.97
Mar. 10	.75	9	.41	8	1.51	8	3.53
18	.49	16	.49	15	2.03	15	3.85
24	.01	23	.56	22	2.40	22	3.82
31	.55	30	.71	29	2.46	29	3.83
Apr. 7	.25	July 7	.71	Oct. 6	2.54		

Cortland County

C 100 (\*845, p. 303; 886, p. 470; \*906, p. 109; 936, p. 131; 944, p. 111; \*986, p. 136; 1016, p. 168; 1023, p. 199; 1071, p. 218). Lat.  $42^{\circ}42'00''$ , long.  $76^{\circ}06'50''$ . About 70 feet to the right (west) of creek and about 2.5 miles above (north of) gaging station in East Homer.

Water level, in feet below land-surface datum, 1947

Jan. 4	0.76	Apr. 6	2.51	July 17	1.10	Oct. 14	4.29
12	1.21	13	2.66	24	1.59	21	4.52
18	1.82	23	2.40	31	2.20	28	4.71
25	1.73	May 1	.53	Aug. 7	2.68	Nov. 6	4.94
Feb. 1	1.68	11	.60	15	2.13	12	4.15
8	1.23	18	1.28	21	2.03	18	4.55
16	1.51	28	1.27	24	2.27	22	4.97
21	1.80	June 4	1.17	Sept. 1	2.71	30	1.05
Mar. 1	2.16	12	1.78	8	2.72	Dec. 6	1.18
9	2.30	19	1.74	16	3.15	13	1.72
16	2.77	25	2.32	23	3.43	20	1.33
23	2.61	July 2	2.51	Oct. 1	3.76	27	1.87
29	2.82	9	2.29	5	3.92		

C 101 (\*777, p. 137; 817, p. 198; 840, p. 255; \*845, p. 301; 886, p. 469; 906, p. 108; \*936, p. 430; 944, p. 112; \*986, p. 136; 1016, p. 169; 1023, p. 199; 1071, p. 218). Lat.  $42^{\circ}46'00''$ , long.  $76^{\circ}01'10''$ . About 300 feet upstream from gaging station, 500 feet to the left (east) of Shackham Brook, and about 5 miles north of Truxton.

Water level, in feet below land-surface datum, 1947

Jan. 4	0.57	Feb. 1	0.07	Mar. 1	1.22	Apr. 6	1.00
11	.59	8	.18	16	1.04	13	1.00
18	.32	15	.21	23	1.05	19	1.02
25	.14	21	.37	30	1.00	27	1.04

C 101--Continued.

Water level, in feet below land-surface datum, 1947					
Date	Water level	Date	Water level	Date	Water level
May 4	0.08	July 6	0.99	Sept. 7	1.76
11	.11	13	.10	14	1.94
18	.16	20	.17	21	2.12
25	.05	27	.20	28	2.33
June 1	.06	Aug. 3	.33	Oct. 5	2.51
8	.00	10	1.06	12	2.67
15	.06	17	1.20	19	2.83
22	.33	24	1.38	26	3.02
29	.73	31	1.56		
				Nov. 1	3.24
				9	2.97
				15	1.65
				22	1.72
				29	1.76
				Dec. 6	1.40
				13	1.12
				27	1.03

Delaware County

D 157 (\*777, p. 128; 817, p. 199; 840, p. 256; 845, p. 302; 886, p. 469; 906, p. 109; \*936, p. 131; 944, p. 112; 986, p. 136; 1016, p. 169; 1023, p. 200; 1071, p. 218). Lat. 42°09'35", long. 75°23'35". About 150 feet to left (east) of gaging station, about 1 mile upstream (north) from China, and 2 miles west of Upper Barboursville.

Water level, in feet below land-surface datum, 1947					
Jan. 1	3.58	Apr. 19	3.64	July 20	4.12
5	2.61	27	2.03	27	3.74
13	3.28	May 4	1.61	Aug. 3	4.58
19	2.13	11	2.54	10	4.78
26	1.08	17	3.53	17	5.23
Feb. 2	1.78	24	2.29	25	5.76
9	3.68	June 1	3.43	31	6.00
16	4.50	9	4.31	Sept. 7	5.78
24	a4.88	15	1.13	14	6.18
Mar. 24	.68	21	3.88	21	6.45
31	2.17	29	4.73	28	6.57
Apr. 6	2.89	July 6	5.13	Oct. 5	6.85
12	1.91	13	2.65		
				Nov. 2	4.76
				10	1.98
				17	2.41
				23	2.72
				30	2.46
				Dec. 7	3.04
				14	2.74
				21	2.96
				29	4.16

a Estimated.

Greene County

G 1 (\*1071, p. 219). Lat. 42°23'20", long. 73°48'19". On Andersen farm, about 10 feet northeast of residence, 130 feet northwest of asphalt road and about 2 miles north of village of West Coxsackie. Abandoned dug supply well, stone lined, diameter 36 inches, depth 18.6 feet below measuring point. Measuring point, blue keel arrow at south edge of square hole in 3-inch plank well cover, at land-surface datum and approximately 125 feet above mean sea-level datum.

Water level, in feet below land-surface datum, 1947					
Jan. 6	8.47	Apr. 15	3.51	July 14	8.37
13	8.72	21	4.24	21	8.77
27	6.87	28	3.22	29	8.43
Feb. 3	4.76	May 5	1.90	Aug. 4	8.98
10	4.85	12	3.70	12	9.54
18	5.74	19	4.64	18	9.81
24	6.38	26	3.75	26	10.65
Mar. 3	7.36	June 3	4.59	Sept. 2	11.35
10	7.51	10	5.44	8	12.03
17	2.35	16	5.97	15	12.50
24	3.41	24	6.38	22	12.65
31	3.52	30	6.76	29	12.18
Apr. 7	2.05	July 7	8.24	Oct. 6	11.82
				Oct. 13	11.73
				20	11.57
				27	11.43
				Nov. 3	10.50
				10	7.51
				17	3.90
				24	4.55
				Dec. 1	4.44
				8	5.27
				15	4.98
				22	5.00
				29	5.42

G 2 (\*1071, p. 219). Lat.  $42^{\circ}17'41''$ , long.  $74^{\circ}21'17''$ . In barn on Ferris farm, south side of State Route 23 about 0.9 mile west of Ashland post office. Abandoned driven supply well, 2-inch diameter galvanized-iron pipe, depth 14.8 feet below measuring point. Measuring point, top of pitcher pump jacket, east side, 4.0 feet above land-surface datum which is approximately 1,380 feet above mean sea level datum.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	8.44	Apr. 8	8.10	July 5	9.3	Oct. 4	9.7
13	8.49	14	8.1	12	9.44	11	9.76
21	7.85	21	8.2	19	9.50	18	9.4
27	8.26	28	8.3	26	9.54	Nov. 1	9.66
Feb. 3	8.09	May 3	8.1	Aug. 2	9.56	8	8.63
10	8.93	10	7.26	9	9.6	15	8.81
17	8.68	16	7.96	16	9.67	22	8.8
25	8.77	24	8.1	23	9.68	29	8.7
Mar. 3	9.87	31	8.2	30	9.74	Dec. 6	8.8
10	8.77	June 7	8.62	Sept. 7	9.67	13	9.4
17	7.22	14	8.86	13	9.79	20	9.1
24	8.03	21	9.0	20	9.8	29	9.08
31	8.20	28	9.15	27	9.8		

#### Livingston County

Lv 1 (\*1023, p. 200; 1071, p. 219). Lat.  $42^{\circ}48'00''$ , long.  $77^{\circ}48'46''$ . About 100 feet north of North Street and 0.15 mile east of Main Street, in Geneseo.

Water level, in feet below land-surface datum, 1947

Jan. 27	4.56	Apr. 25	3.97	July 28	5.64	Oct. 25	6.46
Feb. 24	4.94	May 26	4.50	Aug. 25	5.79	Nov. 25	6.10
Mar. 25	4.23	June 25	5.18	Sept. 25	5.67	Dec. 24	5.00

#### Montgomery County

Mt 1 (\*1023, p. 201; 1071, p. 220). Lat.  $43^{\circ}01'43''$ , long.  $74^{\circ}42'38''$ . About 50 feet southwest of Groff residence, 0.35 mile east of gravel road and 1.7 miles north of U. S. Highway 5, 1.8 miles west of St. Johnsville. Stevens Type F weekly water-stage recorder installed on Aug. 12, 1947.

Daily noon water level, in feet below land-surface datum, 1947  
(From recorder charts)

Jan. 16	a7.72	Sept. 1	8.71	Sept. 29	8.99	Oct. 24	9.36
Feb. 3	a6.70	2	8.73	30	9.00	25	9.37
20	a7.79	3	8.72	Oct. 1	9.01	26	9.37
Mar. 10	a8.07	4	8.72	2	9.02	27	9.38
31	a6.58	5	8.73	3	9.04	28	9.40
Apr. 28	a5.92	6	8.75	4	9.05	29	9.40
June 2	a6.46	7	8.78	5	9.07	30	9.40
9	a6.10	8	8.82	6	9.09	31	9.34
30	a7.04	9	8.85	7	9.11	Nov. 1	9.21
July 28	a7.37	10	8.88	8	9.12	2	9.14
Aug. 13	8.15	11	8.90	9	9.15	3	9.08
14	8.20	15	8.89	10	9.17	4	9.04
15	8.24	16	8.90	11	9.19	5	9.00
16	8.28	17	8.93	12	9.20	6	8.97
17	8.32	18	8.95	13	9.22	7	8.95
18	8.35	19	8.97	14	9.23	8	8.91
19	8.38	20	8.97	15	9.24	9	8.73
20	8.41	21	8.95	16	9.26	10	8.55
21	8.45	22	8.92	17	9.27	11	8.43
22	8.49	23	8.91	18	9.28	12	8.32
23	8.53	24	8.89	19	9.29	13	8.18
24	8.56	25	8.89	20	9.30	14	8.05
25	8.60	26	8.91	21	9.31	15	7.96
26	8.62	27	8.94	22	9.33	16	7.90
27	8.63	28	8.97	23	9.34	17	7.87

a Tape measurement.

Mt 1--Continued.

Daily noon water level, in feet below land-surface datum, 1947  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Nov. 18	7.86	Nov. 29	7.85	Dec. 10	7.57	Dec. 21	7.30
19	7.86	30	7.85	11	7.53	22	7.33
20	7.86	Dec. 1	7.85	12	7.52	23	7.36
21	7.87	2	7.85	13	7.51	24	7.42
22	7.88	3	7.85	14	7.52	25	7.46
23	7.88	4	7.84	15	7.49	26	7.50
24	7.87	5	7.78	16	7.41	27	7.53
25	7.86	6	7.74	17	7.35	28	7.58
26	7.86	7	7.71	18	7.32	29	7.64
27	7.87	8	7.67	19	7.32	30	7.69
28	7.85	9	7.62	20	7.30	31	7.72

Rensselaer County

Re 660. Lat. 42°37'11", long. 73°39'20". About 75 feet west of Hardgrove residence on State Route 152, 3.0 miles east of State Route 40, at DeFreestville. Abandoned dug farm well, stone lined, diameter 48 inches, depth 15.0 feet below measuring point. Measuring point, head of 6d finishing nail driven horizontally into edge of plank in well cover and 0.11 foot below top of concrete well curb, at land-surface datum and about 450 feet above mean sea-level datum. Kinnison-type float-gage installed Aug. 15, 1947.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Apr. 7, 1946	a10.44	Dec. 21, 1946	12.14	May 18	9.32
11	a10.45	24	12.16	25	9.88
18	a10.62	Jan. 2, 1947	12.14	June 1	9.69
21	a10.79	12	12.03	11	10.26
July 15	a11.57	19	11.80	16	10.42
21	a11.83	21	10.84	30	9.86
28	a12.05	25	10.44	July 5	10.23
29	a12.09	26	10.26	13	10.81
30	a12.09	27	9.72	16	11.00
Aug. 2	a12.14	31	8.83	22	11.25
3	a12.13	Feb. 1	8.42	26	11.37
5	a12.15	8	9.07	30	11.55
9	a12.24	12	9.70	Aug. 2	11.70
15	12.19	15	9.87	3	11.74
18	12.20	22	10.31	8	11.93
21	12.28	27	10.62	15	12.15
24	12.33	Mar. 6	10.85	17	12.21
Sept. 1	12.49	9	10.78	23	12.31
7	12.65	14	8.45	29	12.47
21	12.86	15	8.22	30	12.50
22	12.86	19	8.52	Sept. 6	12.71
26	12.82	22	8.98	13	12.87
Oct. 2	12.51	25	9.17	20	13.05
6	11.98	29	9.21	27	13.12
10	11.88	Apr. 3	9.74	Oct. 4	13.18
15	11.90	5	9.76	11	13.21
19	11.91	6	8.95	18	13.27
28	11.87	9	8.60	25	13.31
31	11.84	14	9.22	Nov. 1	13.23
Nov. 7	11.86	19	9.70	8	13.21
12	11.93	21	9.83	15	12.61
17	11.96	22	9.90	22	12.19
23	12.00	23	9.77	29	12.10
28	12.05	24	9.45	Dec. 6	12.18
Dec. 1	12.03	27	9.27	13	12.06
8	12.11	May 2	9.51	20	12.05
12	12.13	9	7.74	27	12.01
13	12.13				

a Tape measurement.

St. Lawrence County

St 1 (\*1023, p. 201; 1071, p. 220). Lat. 44°51'52", long 74°46'53". About 155 feet west of Compeau residence and 95 feet south of dirt road at Brasher Center.

Daily noon water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	a6.49	....	....	5.05	5.55	6.71	5.32	8.68	9.80	....	9.47
2	....	....	....	5.05	5.69	6.81	5.49	8.75	9.80	....	9.45
3	....	....	....	5.01	5.04	6.91	5.70	8.81	9.81	....	9.43
4	....	....	....	5.06	5.06	7.00	5.89	8.85	9.81	....	9.35
5	....	....	....	5.00	5.06	7.08	6.07	8.88	9.81	....	9.20
6	....	....	3.00	4.93	5.08	7.16	6.23	8.91	9.82	....	9.02
7	....	....	4.11	4.85	5.13	7.07	6.39	8.96	9.85	....	8.83
8	....	7.48	4.22	4.96	5.06	5.04	6.55	9.00	9.87	....	8.63
9	....	7.51	4.31	5.07	5.03	5.04	6.70	9.05	9.90	....	8.48
10	....	7.54	4.20	5.08	5.05	5.06	a6.83	9.11	9.94	....	8.32
11	a6.92	7.57	4.02	5.09	5.06	5.07	a6.96	9.16	9.96	....	8.16
12	7.06	7.60	4.16	5.18	5.09	5.14	7.08	9.22	10.00	....	8.01
13	7.07	7.61	4.42	5.33	5.22	5.25	7.19	9.28	10.04	....	a7.87
14	7.07	7.59	4.61	5.31	5.29	5.39	7.28	9.33	10.08	....	a7.75
15	7.01	5.06	4.81	5.41	5.03	5.55	7.37	9.38	10.12	10.69	7.65
16	6.75	5.06	4.99	5.51	5.04	5.34	7.45	9.43	10.17	10.54	7.54
17	6.36	5.07	5.06	5.65	5.05	5.39	7.53	9.49	10.22	10.41	7.43
18	6.25	5.09	4.60	5.75	5.07	5.42	7.61	9.54	10.26	10.28	7.27
19	6.26	5.19	4.71	5.63	5.12	5.04	7.69	9.59	10.31	10.16	7.10
20	5.92	5.34	4.92	5.62	5.20	5.06	7.76	9.64	10.36	10.06	6.99
21	5.14	5.44	5.05	5.06	5.35	5.12	7.83	9.67	10.41	9.97	6.92
22	....	5.52	5.06	4.93	5.51	5.23	7.90	9.69	10.47	a9.87	a6.80
23	....	5.60	5.07	5.04	5.71	5.27	7.96	9.73	10.51	a9.79	6.91
24	5.45	5.09	5.08	5.05	5.88	5.43	8.03	9.74	10.57	a9.71	6.93
25	5.06	4.96	5.13	5.06	6.04	5.59	8.10	9.75	10.62	9.65	6.95
26	5.06	4.53	5.22	5.07	6.10	5.74	8.19	9.76	10.67	9.61	6.97
27	5.04	4.55	5.29	5.08	6.20	5.83	8.27	9.76	10.73	9.58	7.00
28	4.87	4.56	5.22	5.20	6.33	5.05	8.36	9.77	10.79	9.54	7.04
29	4.78	....	5.30	5.26	a6.46	5.07	8.45	9.77	10.84	9.52	7.11
30	4.97	....	5.31	5.30	6.60	5.08	8.53	9.79	a10.89	9.50	7.15
31	5.05	....	....	5.43	....	5.13	8.61	....	a10.94	....	7.16

a Estimated.

Schenectady County

Sn 128 (\*1071, p. 220). Lat. 42°49'26", long. 73°59'22". City of Schenectady. On southwest side of State Route 5S, about 700 feet northwest of Schermernhorn Road and about 600 feet southwest of Mohawk River.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	33.06	28.93	32.78	32.90	31.68	29.86	31.32	30.85	31.79	....	....	31.55
2	32.98	28.42	32.62	32.89	30.63	30.06	31.60	31.30	31.33	....	....	31.73
3	33.16	29.12	33.12	32.73	29.42	30.12	31.51	31.48	31.23	31.46	....	31.81
4	33.17	29.62	33.62	32.19	29.52	26.99	31.55	31.41	31.47	31.56	31.12	31.88
5	33.15	30.22	33.91	31.81	29.70	....	31.22	31.54	31.90	31.45	31.08	31.62
6	32.66	30.60	34.00	30.70	29.70	....	31.19	31.54	31.94	31.00	31.22	31.50
7	32.80	30.88	34.18	28.30	26.98	....	31.15	31.62	31.73	31.18	31.39	31.76
8	32.92	30.87	34.35	27.96	27.02	....	31.19	31.60	....	31.35	31.39	31.59
9	33.02	30.93	34.30	28.71	28.43	....	30.17	31.60	....	31.57	31.15	31.50
10	33.15	31.34	34.40	29.41	....	29.79	30.28	31.54	....	31.74	30.42	31.20
11	33.22	31.51	34.62	29.76	....	30.10	30.66	31.14	....	31.81	31.02	31.05
12	33.32	31.49	34.62	29.58	30.90	30.29	30.67	31.23	....	31.79	31.04	31.15
13	33.31	31.55	34.66	28.81	31.58	....	30.80	31.33	....	31.10	30.49	31.11
14	33.41	31.43	34.49	29.80	31.79	....	31.02	31.33	....	31.06	30.88	31.13
15	33.46	....	33.89	30.97	31.67	....	31.49	31.37	....	31.22	31.09	31.41
16	33.46	....	30.21	31.30	30.60	29.64	31.50	31.49	....	31.59	31.25	31.20
17	33.29	....	30.04	31.30	30.48	29.83	31.26	31.44	....	31.91	31.26	31.48
18	33.18	31.93	30.83	31.42	30.47	30.09	30.79	30.98	....	32.23	31.30	31.74
19	33.11	32.05	31.48	31.49	30.10	30.46	30.58	31.25	....	32.23	31.29	31.93

Sn 128--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
20	33.09	32.20	31.92	31.41	30.23	30.61	30.35	31.42	.....	31.83	31.44	31.90
21	33.23	32.30	32.13	31.60	30.25	31.87	30.44	31.48	.....	31.64	31.45	31.85
22	33.08	32.33	32.22	31.83	30.11	31.90	30.48	31.60	.....	31.70	31.47	32.30
23	31.99	32.47	32.14	31.93	28.31	31.84	29.50	31.63	30.97	31.86	31.50	32.32
24	31.71	32.89	32.23	31.90	28.77	32.25	29.97	31.35	31.16	31.95	31.47	32.54
25	31.63	32.96	31.98	31.98	29.34	32.23	30.19	31.48	31.18	31.99	31.46	32.48
26	31.11	32.98	30.56	31.75	29.31	32.33	30.57	31.97	31.30	31.97	31.81	32.56
27	29.82	32.85	30.72	31.60	29.44	32.31	30.84	32.02	31.30	31.42	31.83	32.57
28	29.59	32.79	31.47	31.39	29.68	31.66	30.81	32.10	30.95	31.36	31.49	32.44
29	29.23		31.80	31.42	29.88	31.45	30.42	32.26	31.06	31.52	31.57	33.14
30	29.42		32.44	31.73	29.82	30.82	30.45	32.38	31.05	.....	31.53	33.32
31	29.52		32.57		29.79		30.69	32.38		.....		33.52

a Estimated.

Schuyler County

Sy 9. Lat. 42°16'40", long. 76°39'41". Arnot Forest experimental area. About 16 feet west of Soil Conservation Service observer's house. Abandoned dug farm well, stone lined, diameter 39 inches, depth 15.6 feet below measuring point. Measuring point, top of concrete well curb at center east side of well, at land-surface datum and approximately 1,890 feet above mean-sea level. Stevens Type F weekly water-stage recorder installed Sept. 30, 1946.

Daily noon water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Oct.	Nov.	Dec.
1	a 6.43	4.60	8.15
2	5.62	....	8.19
3	5.14	....	8.24
4	4.91	5.27	8.22
5	4.87	5.56	8.20
6	4.92	5.82	8.21
7	5.00	6.05	8.22
8	5.11	6.21	8.20
9	5.28	6.46	8.15
10	5.51	6.77	8.06
11	5.76	7.00	7.98
12	5.99	7.15	7.92
13	4.80	7.26	7.81
14	3.67	7.34	7.78
15	3.68	7.48	7.78
16	3.83	7.58	7.80
17	4.03	7.60	7.79
18	4.07	7.68	7.84
19	4.03	7.71	7.90
20	3.98	7.71	7.97
21	4.08	7.74	7.92
22	4.22	7.70	7.92
23	4.41	7.72	8.02
24	4.64	7.80	8.04
25	4.84	7.86	8.09
26	4.66	7.94	8.14
27	4.02	7.94	8.24
28	3.89	8.02	8.24
29	3.97	8.09	8.21
30	4.14	8.18	8.17
31	4.33		8.21

a Estimated.

Sy 9--Continued.

Daily noon water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	8.26	3.89	....	3.35	2.96	3.01	7.87	8.36	7.25	8.65	....	5.63
2	8.24	4.03	....	3.36	2.91	3.48	7.92	8.44	7.02	8.67	....	5.77
3	8.05	....	8.31	3.36	2.49	2.05	8.03	8.48	6.12	8.71	....	5.90
4	....	....	a8.46	3.36	2.45	2.35	8.13	8.52	5.52	8.73	....	5.97
5	....	....	8.53	2.79	2.57	2.43	8.21	8.56	5.28	a8.65	8.80	5.82
6	....	....	8.58	1.37	2.30	2.84	8.24	8.59	5.29	8.61	8.69	5.66
7	6.16	....	8.63	1.81	2.27	3.39	8.14	8.61	5.45	8.61	8.58	5.58
8	6.09	....	8.66	2.35	2.32	3.55	7.66	8.63	5.65	8.64	8.44	5.44
9	6.17	....	8.68	2.63	2.41	3.78	7.67	8.67	5.90	8.69	8.01	5.13
10	6.32	....	8.72	2.82	2.48	4.09	7.82	8.23	6.16	8.75	7.93	4.80
11	6.42	....	8.77	2.85	2.79	4.47	7.94	8.20	6.44	8.79	7.83	4.67
12	6.50	....	8.82	2.56	3.13	4.87	7.96	8.21	6.67	8.82	7.02	4.74
13	6.20	....	8.84	2.36	3.48	5.27	8.01	8.21	....	8.83	5.87	4.85
14	5.95	....	6.93	2.47	3.35	5.54	8.02	8.18	....	8.83	4.90	5.00
15	5.69	....	4.52	2.76	2.95	5.47	8.07	8.15	....	8.85	4.39	5.18
16	4.03	....	4.40	2.75	3.12	5.32	8.18	7.63	....	8.87	4.17	5.25
17	3.97	7.54	4.56	2.59	3.46	5.11	8.04	7.33	....	8.90	4.21	5.49
18	4.11	7.63	....	2.78	3.61	5.01	8.10	7.07	....	8.90	4.24	5.64
19	4.34	7.76	....	3.11	2.99	5.16	8.10	6.69	....	8.91	4.27	5.85
20	4.38	7.86	....	3.22	3.10	5.40	8.20	6.39	....	8.93	4.35	6.03
21	3.41	....	....	3.01	3.42	5.69	8.35	6.22	....	8.94	4.47	6.16
22	....	....	....	2.36	2.23	6.02	8.35	6.08	8.06	8.95	4.55	6.35
23	....	8.01	....	1.73	2.35	6.35	8.26	6.12	8.06	8.96	4.62	a6.53
24	4.35	7.99	a4.88	2.16	2.49	6.61	8.45	6.23	8.20	8.99	4.66	6.79
25	4.45	....	3.39	2.45	2.68	6.84	8.53	6.37	8.33	9.01	4.73	7.00
26	4.24	....	....	2.40	2.21	7.09	....	6.49	8.45	9.01	4.88	7.11
27	4.02	....	....	2.40	2.39	7.31	....	6.68	8.54	9.01	5.05	7.25
28	4.10	....	....	2.45	2.59	7.49	8.43	6.86	8.61	9.01	5.15	a7.39
29	4.21	....	....	2.65	3.10	7.64	8.44	7.03	8.61	9.00	5.31	a7.57
30	4.32	....	....	2.95	2.36	7.76	8.43	7.21	8.61	....	5.48	7.73
31	3.98	....	3.35	....	2.54	....	8.38	7.07	....	....	....	7.86

a Estimated.

Steuben County

Sb 200. Lat. 42°05'34", long. 77°25'18". In field on Calkins farm, 45 feet north of State Route 17, 1.3 miles west of Woodhull, and 135 feet east of Calkins residence. Abandoned dug supply well, stone lined, diameter 24 inches, depth 16.4 feet below measuring point. Measuring point, top of west edge of 1½-inch hole drilled through 2-inch plank in well cover, at land-surface datum and approximately 1,420 feet above mean sea-level datum.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Sept. 16, 1946	10.12	Mar. 10, 1947	10.61	July 26	7.48
Oct. 11	8.43	18	8.89	Aug. 4	9.08
15	8.80	22	8.74	9	9.57
21	7.80	29	7.91	16	10.92
29	6.29	Apr. 5	4.41	23	6.46
Nov. 4	6.49	12	5.13	30	5.00
11	8.00	19	5.48	Sept. 6	5.26
18	8.22	26	4.71	13	7.96
Dec. 2	10.22	May 3	4.59	20	8.89
9	10.45	10	4.93	27	9.97
16	10.96	17	5.13	Oct. 11	10.98
30	9.77	24	4.80	18	11.00
Jan. 7, 1947	7.27	31	6.35	25	11.16
13	7.51	June 7	5.64	Nov. 3	11.21
20	6.46	14	6.68	8	11.20
27	6.38	21	7.47	16	11.28
Feb. 3	5.23	28	8.24	22	11.43
11	7.47	July 5	9.13	30	11.50
17	7.70	12	6.08	Dec. 7	11.55
Mar. 3	9.73	19	6.79	13	11.57

Sb 250 (\*1071, p. 221). Lat. 42°30'02", long 77°27'47". On Burke farm about 30 feet south of farm road, 0.4 mile west of Stobel residence, and 1.5 miles east of Cohocton.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	27.08	Mar. 16	27.20	May 26	26.67	Aug. 7	28.11
11	27.24	23	27.15	June 1	26.60	10	28.28
21	25.84	29	27.02	9	26.91	16	29.11
26	26.65	Apr. 4	26.59	17	27.13	23	26.22
Feb. 2	26.78	11	27.00	24	27.25	Sept. 1	27.11
9	27.23	18	26.79	30	27.30	8	27.11
17	27.74	26	26.25	July 9	27.61	16	27.28
20	28.00	May 4	26.39	14	27.79	Oct. 26	29.97
Mar. 2	29.39	12	26.72	20	28.03	Dec. 2	30.67
9	30.15	20	26.73	29	28.25	20	27.18

#### Washington County

W 264. Lat. 43°10'27", long 73°19'43". Village of Salem fire well. In village, on east side of State Route 22, about 100 feet south of Delaware & Hudson Railroad crossing. Dug well, in gravel, diameter 36 inches, depth 14.7 feet below measuring point. Measuring point, top of concrete well curb at midpoint, north side of rectangular opening, at land-surface datum and about 490 feet above mean sea-level datum.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
July 26, 1946	9.6	Dec. 30, 1946	10.58	June 18, 1947	9.43
Aug. 5	10.45	Jan. 6, 1947	10.58	23	9.67
12	10.64	13	10.6	30	9.74
19	10.72	20	10.18	July 7	9.95
26	10.75	27	9.4	14	10.16
Sept. 3	10.70	Feb. 3	8.7	21	9.85
9	10.80	10	9.28	28	9.9
16	11.0	17	9.67	Aug. 4	10.03
23	11.0	24	9.97	18	10.1
Oct. 7	10.6	Mar. 3	10.18	Sept. 29	11.0
14	10.65	10	10.22	Oct. 6	11.02
21	10.6	17	8.4	13	11.09
30	10.59	24	8.67	20	11.10
Nov. 4	10.62	Apr. 7	8.06	27	11.14
11	10.61	14	8.44	Nov. 3	11.09
18	10.6	21	8.85	17	10.78
21	10.62	28	9.1	24	10.81
26	10.64	May 5	9.3	Dec. 1	10.76
Dec. 2	10.65	12	8.47	8	10.72
9	10.7	19	9.02	15	10.68
16	10.68	26	9.4	22	10.67
24	10.62	June 9	9.48	30	10.65

#### Wyoming County

Wo 1 (\*1023, p. 202; 1071, p. 223). Lat. 42°37'39", long. 78°00'03". About 2.5 miles east of village of Castile, 0.8 mile east of De Golyor Road and 0.15 mile south of Buffalo Street extended.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	2.79	Feb. 22	3.44	Apr. 11	2.55	June 1	2.42
11	3.28	Mar. 1	3.78	19	2.03	8	2.73
18	2.42	9	4.00	26	1.91	15	3.35
25	1.95	15	1.82	May 3	1.29	22	3.76
Feb. 2	2.2	22	1.75	10	2.29	29	4.05
8	3.06	29	1.89	18	2.68	July 6	4.49
17	3.49	Apr. 5	.5	25	2.62	13	4.20



Wo 1--Continued.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 20	4.31	Aug. 31	6.56	Oct. 12	8.83	Nov. 22	10.32
27	4.33	Sept. 7	6.54	19	9.17	29	10.41
Aug. 3	4.92	14	7.20	26	9.52	Dec. 6	9.59
10	6.25	21	7.87	Nov. 3	9.81	13	7.21
17	6.35	28	8.12	9	9.98	21	5.72
24	6.38	Oct. 5	8.41	15	10.15	27	5.88

LONG ISLAND

By N. J. Lusczynski and H. D. Wilson, Jr.

## PROGRAM OF WORK

The investigation of ground-water conditions on Long Island was continued during 1947 in cooperation with the New York State Water Power and Control Commission, the Nassau County Department of Public Works, the Suffolk County Board of Supervisors, and also the Suffolk County Water Authority. The basic phase of this investigation comprised the periodic measurements of water levels in about 240 observation wells, 31 of which were equipped with automatic water-stage recorders. During the year about 4,200 individual measurements were made, manual readings being made approximately 1 month apart.

## GEOLOGY

On Long Island there are a number of water-bearing beds that yield large supplies of water to wells that tap them. There are five more or less well recognized water-bearing zones. The upper and most productive consists of extensive beds of glacial outwash which in most places are not overlain with impervious material. The second zone, the Jameco gravel, also a glacial outwash deposit, is distributed only around the borders of the island and is usually covered by the Gardiners clay, an interglacial deposit. The third and fourth zones consist of widespread beds of Cretaceous sands and gravels of supposed Magothy age. The third zone lies in the upper part of the Magothy deposits and generally consists of coarse to medium sand. In the center of the island these sands are open to the overlying glacial outwash whereas around the borders of the island they are covered by either the Gardiners clay or the Jameco gravel. The fourth zone, in the lower part of the Magothy beds, consists of coarse sand and gravel, and is generally overlain by beds and lenses of clay distributed within the Magothy deposits. The fifth and lowermost zone, the Lloyd sand, lies just above the bedrock floor of the island and is generally covered by beds of Raritan clay. The

Lloyd sand, also of Cretaceous age, consists of beds of sand and gravel which extend through most of Long Island.

The shallow-lying upper glacial beds constitute a reservoir in which large quantities of water are stored and into which water derived from precipitation can readily sink. As a result, the water table in these beds responds more or less rapidly to changes in the rate of precipitation. In contrast, the deeper sands that lie beneath clay beds are under artesian pressure and are fed at a more or less constant rate by water percolating down from the overlying formations, through relatively small intake areas. The safe yield of the upper glacial beds is governed more or less by the average rate of precipitation whereas that of the deeper sands is limited by the capacity of the beds to transmit water from the areas of intake to the points of withdrawal. Because of these features the movement of water levels in wells that penetrate the deeper sands is controlled chiefly by changes in rate of withdrawal.

#### FLUCTUATIONS OF WATER LEVEL

The relation between precipitation and the fluctuation of water levels has been discussed at considerable length by Leggette<sup>1/</sup> and by Jacob<sup>2/</sup> and the effect of ground-water withdrawal on water levels in deep wells has been reported by Leggette.<sup>3/</sup> The position of water table for most of Long Island has been defined by Jacob.<sup>4/</sup>

Most of the observation wells on Long Island are screened in the upper glacial beds, from which over half of the withdrawals are taken, but a number of them penetrate the deeper beds. The observation wells that appear

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1/ Leggette, R. M., Section entitled "Ground-water recharge on Long Island" in the U. S. Geol. Survey Water-Supply Paper 867, pp. 529-552, 1940. Leggette, R. M., Long Island section in U. S. Geol. Survey Water-Supply Paper 886, pp. 473-482, 1941.

2/ Jacob, C. E., "Correlation of ground-water levels and precipitation on Long Island:" State of New York Water Power and Control Commission Bulletin GW-14, 1945.

3/ Leggette, R. M., "The mutual interference of artesian wells on Long Island, New York:" Am. Geophys. Union Trans., pp. 490-494, 1937.

4/ Jacob, C. E., "The water table in the western and central parts of Long Island, New York:" State of New York Water Power and Control Commission, Bulletin GW-12, 1945.

in the present report and which penetrate the deeper water-bearing formations are listed in the following table:

Source formations of deeper observation wells on Long Island, N. Y.

Jameco gravel (J)	Magothy sands (M)	Lloyd sand (L)
K19	N9	K1057
K523	N157	N7
K525	N180	N67
K533	N575	N511
Q350	N844	N657
Q1237	N1244	N2071
Q1459	N1245	Q64
	N1613	Q273
	Q471	Q278
	S58	Q282
	S203	Q283
	S2314	Q287
		Q470
		Q543
		Q577
		Q1222
		S202

Generally speaking, Long Island may be divided into two hydrologic provinces with regard to the water-table aquifer. At the western end of the island excessive pumping for a number of years has lowered the water table below sea level in a large area in Kings County and adjacent parts of Queens County. In the other parts of the island the perennial recharge exceeds ground-water withdrawals with the result that the water table stands above sea level except at a few places along the shores where local overdevelopment has occurred. In the higher parts of the island the water table stands as much as 80 feet above mean sea level.

In the overdeveloped area at the western end of Long Island the water table responds more or less rapidly to changes in the distribution of pumping and also the over all rate of withdrawal, whereas the other parts of the island, the major fluctuations of ground-water level are chiefly the result of differences in amount and distribution of precipitation.

Prior to 1933, overdevelopment of the ground-water resources in Kings County had produced progressively declining water levels. As a result of this overdevelopment a "crater-like" depression was formed on the water table, the bottom of which was as much as 30 feet below sea level with the water level in pumping wells being at even greater depths. Increased pumpage due to the development of the ground-water supplies for industrial and air-conditioning purposes further aggravated the situation for a few years even though State legislation was enacted in 1933 requiring that water pumped from new wells, for the purposes of cooling, be returned to the ground.

However, since 1942, the water table in the overpumped area of Brooklyn has shown signs of recovery and has followed more or less the general upward trend of water levels in other parts of Long Island. This is clearly indicated by graphs plotted on figure 8 for the average water level of 14 selected wells in Nassau and Suffolk Counties, and for Well K30, an observation well near the center of the "crater" in Brooklyn. As discussed by Jacob,<sup>5/</sup> the general recovery of water levels on Long Island corresponds quite closely with the trend of the average rate of precipitation. In Brooklyn, the rise in water levels since 1942 also expresses a more favorable balance between natural (and artificial) recharge and pumpage, which has resulted, in part, from the beneficial effects of the State law that requires the return of the ground water pumped for cooling, and in part, to a reduction in industrial pumpage as indicated by Johnson.<sup>6/</sup>

On Long Island the usual trend of water levels consists of an ascending stage during the early months of the year with the peak being reached in approximately the month of May. Thereafter the stage declines far into the latter part of the year with a recovery commencing in late December or January of the following year. In somewhat of a contrast to this pattern, the year 1947 was characterized by low water-table levels in Queens, Nassau, and Suffolk Counties in Long Island; the recession which began in the summer of 1946 continued with only slight interruptions almost to the end of 1947. The few small recoveries during the first 10 months of 1947 were inappreciable, as most of the heavy rains occurred during the growing season and were more or less local. However, the downward trend of water levels was reversed by November and December subsequent to heavy precipitation occurring during the nongrowing season. Very heavy rains fell during November with most of it precipitating in heavy storms within the first 12 days of the month. The rainfall, together with the seasonally reduced pumping, caused most wells in Queens, Nassau, and Suffolk Counties to recover from the low levels reached in the fall.

In Brooklyn (Kings County), at the western end of Long Island, a general recession of the water table occurred during the first 6 months of the year. However, a large decrease in pumpage in the Flatbush area caused an

<sup>5/</sup> Jacob, C. E., op. cit. (Bull. GW-14).

<sup>6/</sup> Johnson, A. H., Ground-water recharge on Long Island: Jour. Am. Water Works Assoc. pp. 1159-1166, November 1948.

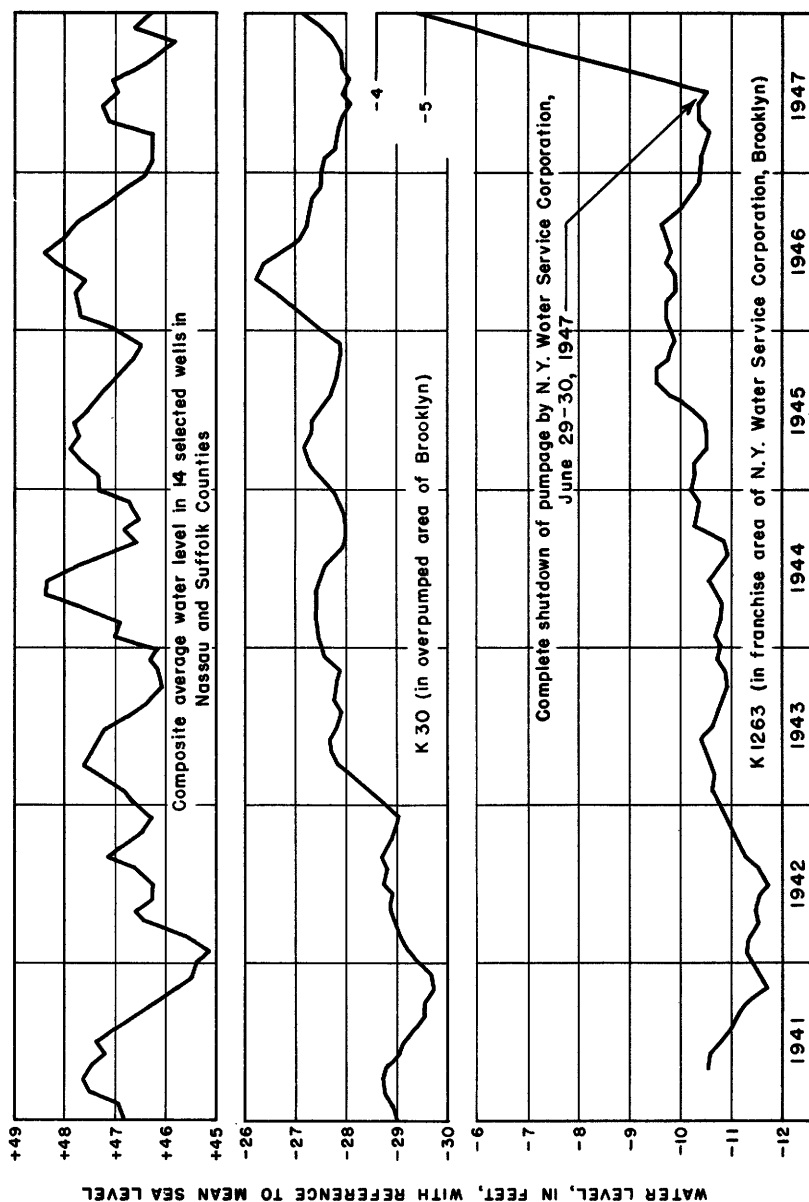


Figure 8.--Graph showing trend of water levels in water-table wells, Long Island, N. Y., 1941-47.

appreciable rise for the last 6 months of the year. On June 29 and 30, the New York Water Service Corporation, as a result of condemnation proceedings by the city of New York, permanently ceased to operate about 35 wells which tapped the water table and underlying artesian aquifers. This shutdown of about 27 million gallons a day represents a reduction of nearly 50 percent in the net ground-water withdrawal in Brooklyn. Recoveries of 2 to 7 feet in the water table were observed during the last 6 months of the year in the vicinity of those wells in which pumping ceased. The abrupt rise at well K1263 (fig. 8), beginning in July and carrying through the remainder of the year, is representative of the recovery which occurred in the many observation wells measured in the Flatbush area following the shutdown. Water levels for several of these observation wells appear in the present report and are listed in the following table:

<u>Observation wells in Flatbush area of Brooklyn</u>		
K196	K525	K1264
K521	K533	K1479
K523	K1263	K1511

No appreciable rise in the water table has been observed at any great distance from the franchise area of the New York Water Service Corporation as indicated by the level at well K30 (fig. 8), about 2 miles north of the franchise area. At this well rise in water level of only 0.3 foot during 1947 was noted. However, with the pumpage reduced appreciably during 1947 in Brooklyn, water levels should continue to recover for some time to come and perhaps follow more closely the trend of water levels in Central Long Island.

Tables presented below include a summary of data pertaining to ground-water levels for Long Island, the net change in water levels during 1947, and monthly, weekly, or daily water-level records. All readings are referred to mean sea level (Sandy Hook datum).

Summary of data on ground-water levels on Long Island, N. Y.

Well No.	Date of first measurement	Lowest observed water level, with reference to mean sea level		Highest observed water level, with reference to mean sea level		Water level on last date of record in 1947 (feet)
		Water level (feet)	Date	Water level (feet)	Date	
K19	Sept. 10, 1940	a-26.80	Sept. 26, 1941	a-21.34	Dec. 31, 1947	a-21.34
K30	June 14, 1935	a-29.75	Nov. 8, 1941	a-24.34	June 14, 1935	a-27.20
K65	Nov. 8, 1937	-28.34	Aug. 25, 1939	-24.01	Apr. 9, 1938	-25.56
K67	Nov. 8, 1937	-20.91	Sept. 15, 1947	-18.49	Mar. 25, 1938	-20.05
K92	Dec. 11, 1937	-29.69	Dec. 11, 1937	-21.26	Mar. 3, 1944	-21.55
K97	Apr. 5, 1944	-26.58	Oct. 27, 1944	-24.55	Dec. 16, 1947	-24.55
K196	Sept. 12, 1942	-4.76	Mar. 5, 1944	-.81	Dec. 16, 1947	-.81
K521	Jan. 1, 1947	a+2.62	Feb. 12, 1497	a+4.48	Jan. 21, 1947	a+3.32
K523	Mar. 6, 1944	-1.91	Feb. 6, 1945	a+.36	Dec. 31, 1947	a+.36
K525	Dec. 13, 1945	a+.46	Mar. 10, 1947	a+2.25	Dec. 31, 1947	a+2.25
			Mar. 14, 1947			
K533	Sept. 8, 1932	a-23.89	Sept. 16, 1942	a-11.44	Dec. 31, 1947	a-11.44
K539	Oct. 28, 1939	-8.28	Feb. 21, 1942	-2.20	July 26, 1946	-3.33
K989	June 4, 1945	-39.01	Jan. 25, 1947	-20.51	Oct. 5, 1946	-35.93
K1057	Mar. 29, 1939	(b)	.....	(b)	.....	a+8.4
K1141	Oct. 24, 1936	-7.76	July 1, 1947	-4.63	Sept. 30, 1938	-5.57
K1173	May 16, 1945	-6.58	Sept. 28, 1945	-3.60	Mar. 14, 1947	-5.06
K1194	May 18, 1945	-3.64	Oct. 31, 1947	-2.00	Aug. 8, 1945	-3.43
K1198	Nov. 2, 1940	-8.45	May 14, 1942	-4.33	Aug. 29, 1946	-5.00
K1199	Nov. 16, 1940	-17.17	Jan. 1, 1944	-14.51	Dec. 16, 1947	-14.51
K1235	Jan. 25, 1941	-10.65	June 27, 1942	-7.65	Dec. 16, 1947	-7.65
K1236	Jan. 25, 1941	-19.42	Oct. 4, 1941	-17.09	Nov. 20, 1947	-17.14
K1237	Jan. 18, 1941	-36.53	Jan. 24, 1947	-31.56	Apr. 12, 1941	-34.56
K1263	Apr. 21, 1933	-11.97	July 21, 1936	-5.60	Dec. 16, 1947	-5.60
K1264	Apr. 21, 1933	-15.56	Apr. 3, 1947	-9.18	Dec. 18, 1947	-9.18
			May 7, 1947			
K1265	Apr. 21, 1933	-11.55	Aug. 22, 1942	-6.34	Apr. 21, 1933	-8.70
K1266	Apr. 21, 1933	-7.49	June 27, 1942	-2.02	Apr. 21, 1933	-4.92
K1296	Sept. 6, 1941	-8.27	Mar. 7, 1942	-1.10	Dec. 5, 1944	-.99
K1347	Oct. 15, 1942	-24.16	Sept. 10, 1945	-19.58	Mar. 18, 1946	-21.85
K1479	Dec. 7, 1946	a-10.79	Feb. 27, 1947	a-4.18	Dec. 31, 1947	a-4.18
			Feb. 28, 1947			
			Mar. 1, 1947			
K1495	May 18, 1945	+1.80	Aug. 13, 1947	+2.93	Jan. 8, 1946	+2.79
			Dec. 17, 1947			
K1511	Oct. 24, 1946	a-20.33	Apr. 6, 1947	a-13.44	Dec. 29, 1947	a-13.44
			Apr. 8, 1947			
K1591	June 27, 1947	a-2.10	Oct. 27, 1947	-1.40	June 27, 1947	a-1.71
			Oct. 28, 1947			
N7	July 24, 1936	a+3.00	Aug. 18, 1947	a+12.75	Mar. 9, 1941	a+8.53
N9	July 3, 1936	+20.99	Sept. 11, 1936	+23.57	Sept. 23, 1938	+22.08
N53	Jan. 21, 1934	+12.05	Feb. 17, 1940	+16.49	Apr. 15, 1939	+13.86
N67	Dec. 5, 1946	+11.26	Sept. 9, 1947	+15.51	Dec. 5, 1946	+14.90
N157	Sept. 22, 1932	+75.71	May 5, 1933	a+88.84	Oct. 31, 1939	+84.44
N180	Oct. 30, 1945	a+18.17	Jan. 13, 1947	a+20.49	June 8, 1946	a+19.21
			Oct. 24, 1947			
N511	Jan. 9, 1947	+19.23	Aug. 6, 1947	+21.22	Feb. 7, 1947	+20.32
N575	Nov. 30, 1946	+54.97	Aug. 15, 1947	+58.27	May 17, 1947	+55.25
N657	Feb. 12, 1945	+11.63	Nov. 10, 1947	+14.48	Feb. 12, 1945	a+14.1
N844	Oct. 3, 1939	a+78.87	Apr. 16, 1942	a+85.48	Aug. 5, 1939	+80.03
N1102	Apr. 21, 1939	+53.81	July 31, 1942	+58.64	July 28, 1939	+56.80
N1103	Apr. 21, 1939	+54.06	Nov. 1, 1943	+60.46	June 30, 1939	+58.15
N1104	Apr. 21, 1939	+55.27	May 1, 1942	+61.15	June 2, 1939	+57.49
N1105	Apr. 21, 1939	+52.88	Mar. 30, 1942	+58.85	June 2, 1939	+54.48
N1107	Apr. 21, 1939	+41.64	Feb. 27, 1942	+48.21	Apr. 28, 1939	+43.79
N1108	Apr. 21, 1939	+36.94	Jan. 30, 1942	+45.62	Apr. 28, 1939	+38.54
N1109	Apr. 21, 1939	+25.28	Jan. 30, 1942	+30.04	Apr. 21, 1939	+26.86
N1110	Apr. 21, 1939	+18.68	Dec. 1, 1941	+21.05	Apr. 21, 1939	+20.00
					June 6, 1946	

\* See footnotes at end of table.

Summary of data on ground-water levels on Long Island, N. Y.--Continued

Well No.	Date of first measurement	Lowest observed water level, with reference to mean sea level		Highest observed water level, with reference to mean sea level		Water level on last date of record in 1947 (feet)
		Water level (feet)	Date	Water level (feet)	Date	
N1111	Apr. 21, 1939	+11.62	Oct. 25, 1947	+14.79	June 6, 1946	+12.46
N1112	Jan. 6, 1939	+6.84	Dec. 13, 1941	+10.24	June 6, 1946	+9.50
N1126	Mar. 12, 1938	+55.27	Jan. 31, 1942	+62.21	Apr. 29, 1939	+56.98
N1132	Apr. 2, 1938	+6.06	Feb. 24, 1940	+9.77	Sept. 23, 1938	+8.51
N1140	Jan. 7, 1939	+58.32	Feb. 7, 1942	+66.09	Apr. 29, 1939	+59.59
N1147	Jan. 6, 1939	+16.62	Dec. 13, 1941	+19.72	Apr. 8, 1939	+18.12
N1160	Jan. 7, 1939	+63.37	Jan. 31, 1942	+70.90	Apr. 15, 1939	+64.70
N1167	Mar. 12, 1938	+9.56	Oct. 25, 1947	+12.92	Apr. 15, 1939	+10.92
N1185	Apr. 2, 1938	+10.36	Feb. 7, 1945	+15.39	Apr. 8, 1939	+11.36
N1198	Jan. 6, 1939	+63.46	Feb. 7, 1942	+70.49	May 6, 1939	(c)
N1204	Jan. 6, 1939	+5.58	Feb. 17, 1940	+12.26	Apr. 8, 1939	+9.38
N1212	Jan. 1, 1943	+85.72	Jan. 20, 1943	+88.18	Nov. 22, 1946	+85.01
N1216	Jan. 7, 1939	+62.31	Feb. 14, 1942	+69.16	May 20, 1939	(c)
N1222	Jan. 6, 1939	+1.27	Jan. 31, 1942	+9.67	Apr. 8, 1939	+6.94
N1234	Jan. 7, 1939	+59.01	Feb. 14, 1942	+66.64	May 6, 1939	+60.79
N1240	Jan. 6, 1939	-1.08	Jan. 24, 1942	+11.29	Apr. 8, 1939	+6.69
N1244	May 31, 1940	+71.31	Oct. 30, 1942	+76.50	May 31, 1940	+72.95
N1245	Feb. 2, 1940	+75.96	Oct. 30, 1942	+82.88	Feb. 2, 1940	+77.47
N1246	May 31, 1940	+77.14	Aug. 31, 1942	+82.12	May 31, 1940	+78.16
N1247	Apr. 21, 1939	+70.52	July 31, 1942	+76.98	July 28, 1939	+71.58
N1249	Apr. 21, 1939	+50.34	Jan. 30, 1942	+58.18	Apr. 21, 1939	+53.07
N1250	Apr. 21, 1939	+43.20	Jan. 30, 1942	+49.64	Apr. 21, 1939	+45.84
N1251	Apr. 21, 1939	+35.57	Jan. 30, 1942	+40.54	Apr. 29, 1944	+38.07
N1252	Apr. 21, 1939	+22.48	Jan. 30, 1942	+26.29	June 5, 1946	+24.85
N1253	Jan. 6, 1939	+11.31	Jan. 31, 1942	+16.89	Apr. 8, 1939	+14.36
N1255	May 12, 1913	+58.57	Nov. 11, 1918	+65.59	Apr. 15, 1939	+59.61
N1256	May 12, 1913	+70.30	Feb. 27, 1933	+80.97	May 20, 1939	+76.16
N1257	Aug. 17, 1932	+5.83	Dec. 13, 1941	+10.17	Apr. 8, 1939	+7.83
N1259	Feb. 5, 1909	+47.83	Jan. 24, 1933	+56.43	Apr. 29, 1939	+51.43
N1260	June 6, 1903	+16.52	Dec. 20, 1916	+23.68	Apr. 8, 1939	+20.50
N1262	Oct. 5, 1931	+32.66	Oct. 5, 1942	+36.20	Apr. 8, 1939	+34.37
N1263	Nov. 3, 1911	+46.22	Oct. 31, 1932	+54.98	Apr. 22, 1939	+49.62
N1264	Mar. 7, 1932	+2.70	Feb. 17, 1940	+9.41	Apr. 8, 1939	+5.83
N1265	Mar. 9, 1939	+2.43	Dec. 1, 1941	+4.34	Dec. 31, 1942	+3.56
N1269	Mar. 9, 1939	+3.41	Mar. 1, 1945	+9.57	Mar. 14, 1939	+4.23
N1271	Mar. 9, 1939	+1.19	Sept. 5, 1944	+3.66	Dec. 31, 1942	+2.27
N1273	Nov. 1, 1939	+4.34	Jan. 2, 1940	+7.79	June 5, 1946	+6.18
N1275	Nov. 1, 1939	+1.89	Oct. 31, 1941	+4.87	June 5, 1946	+2.86
N1278	Nov. 3, 1939	+4.87	Jan. 30, 1942	+8.13	June 5, 1946	+6.27
N1280	Jan. 2, 1940	+2.22	Jan. 30, 1942	+10.79	June 5, 1946	+7.41
N1282	Nov. 1, 1939	+3.34	Apr. 1, 1940	+2.58	Jan. 2, 1942	+1.52
N1285	Nov. 1, 1939	+2.12	Jan. 31, 1940	+4.16	Dec. 7, 1945	+2.82
N1288	Nov. 1, 1939	+2.21	Jan. 2, 1940	+5.21	June 5, 1946	+3.24
N1461	Apr. 27, 1943	+74.34	Oct. 10, 1943	+77.40	June 4, 1946	+75.04
N1462	May 6, 1943	+61.26	Nov. 1, 1947	+64.68	Aug. 8, 1946	+61.61
N1463	May 6, 1943	+36.61	Oct. 28, 1947	+40.75	May 7, 1944	+37.74
			Nov. 3, 1947			
N1464	May 13, 1943	+13.13	Nov. 21, 1944	+17.59	Apr. 29, 1944	+15.50
N1613	July 3, 1936	+21.73	Dec. 6, 1941	+24.38	Apr. 15, 1939	+22.98
N1614	Apr. 2, 1913	+61.90	Feb. 27, 1933	+71.03	May 1, 1914	+67.15
N1615	Mar. 17, 1913	+41.49	Oct. 27, 1932	+47.17	Mar. 28, 1939	+43.50
N1616	Mar. 17, 1913	+74.05	Feb. 27, 1933	+85.42	June 1, 1939	+80.21
N1632	Nov. 30, 1940	+41.29	Feb. 28, 1942	+44.91	July 26, 1946	+42.69
N1683	Dec. 3, 1940	+53.46	Jan. 31, 1942	+57.39	Sept. 24, 1946	+55.21
N1684	Nov. 30, 1940	+55.33	Feb. 7, 1942	+59.97	May 4, 1945	+56.94
N1828	June 10, 1942	+58.35	Nov. 28, 1947	+62.93	May 7, 1944	+58.35
N1829	June 10, 1942	+66.10	Nov. 1, 1947	+69.39	Sept. 15, 1944	+66.59
N1830	June 3, 1942	+49.05	June 7, 1942	+52.74	Aug. 28, 1946	+50.43
N2071	Feb. 12, 1946	+11.09	June 4, 1947	+14.62	Mar. 15, 1946	+12.42

\* See footnotes at end of table.



Summary of data on ground-water levels on Long Island, N. Y.--Continued

Well No.	Date of first measurement	Lowest observed water level, with reference to mean sea level		Highest observed water level, with reference to mean sea level		Water level on last date of record in 1947 (feet)
		Water level (feet)	Date	Water level (feet)	Date	
Q64	Mar. 26, 1947	a-68.90	Nov. 2, 1947	-42.80	July 11, 1947	a-49.24
Q273	Mar. 15, 1935	a+1.12	Mar. 21, 1942	a+8.47	Apr. 20, 1939	a+3.05
Q278	June 4, 1946	-2.35	Sept. 3, 1947	+5.11	Nov. 29, 1946	+4.47
Q282	June 10, 1946	-10.26	Sept. 3, 1947	-4.65	Nov. 29, 1946	-7.62
Q283	June 10, 1946	-10.26	Sept. 3, 1947	-4.69	Nov. 29, 1946	-7.65
Q287	Apr. 13, 1939	(b)	.....	(b)	.....	a+7.7
Q350	Mar. 17, 1937	a-.67	Oct. 23, 1947	+3.51	Apr. 29, 1939	a-.42
Q470	Sept. 21, 1933	a-12.75	July 15, 1937	a+6.78	Jan. 8, 1938	a+.90
Q471	Mar. 31, 1939	+13.69	Mar. 31, 1939	+17.45	Sept. 30, 1946	+15.25
Q543	May 17, 1932	(b)	.....	(b)	.....	a+8.3
Q577	Feb. 28, 1946	a-14.50	Aug. 14, 1947	a+6.83	Apr. 15, 1946	a+2.29
Q1089	Oct. 10, 1911	-4.42	Oct. 17, 1932	+4.04	Sept. 23, 1938	+1.64
Q1090	Oct. 10, 1911	+1.19	Oct. 17, 1932	+8.29	May 12, 1913	+2.28
Q1222	Apr. 1, 1940	-9.19	Feb. 28, 1942	+4.35	Dec. 1, 1945	+1.60
Q1223	Jan. 28, 1933	+5.78	Dec. 12, 1946	+10.23	Apr. 4, 1939	+6.62
Q1224	Apr. 20, 1933	+5.76	Nov. 25, 1947	+12.41	May 29, 1939	+5.76
Q1225	Apr. 20, 1933	+26.37	Nov. 25, 1947	+32.19	Apr. 4, 1939	+26.37
Q1237	Feb. 10, 1939	a-6.38	Mar. 1, 1942	a+5.03	May 4, 1939	a-2.45
Q1248	Oct. 12, 1940	+34.25	Nov. 3, 1947	+37.10	May 30, 1944	+34.47
Q1249	Oct. 19, 1940	+30.32	Nov. 3, 1947	+33.41	Sept. 26, 1946	+30.38
Q1250	Oct. 19, 1940	+19.36	Feb. 7, 1942	+22.02	July 8, 1946	+20.08
Q1251	Oct. 19, 1940	+9.85	Feb. 14, 1942	+13.02	Oct. 19, 1940	+10.52
Q1252	Oct. 26, 1940	+11.07	Nov. 3, 1947	+13.70	Feb. 15, 1941	+11.39
Q1253	Nov. 2, 1940	+6.66	Nov. 25, 1947	+4.58	Apr. 26, 1941	+6.66
Q1254	Oct. 26, 1940	-3.26	Oct. 8, 1947	+2.29	Apr. 12, 1941	-3.25
Q1255	Oct. 12, 1911	-6.30	Nov. 3, 1947	+12.03	May 12, 1914	-6.04
Q1256	Oct. 26, 1940	-6.98	Mar. 14, 1942	-2.44	Aug. 8, 1945	-4.20
Q1266	Oct. 25, 1946	a-6.68	Sept. 23, 1947	a-2.98	Oct. 25, 1946	a-4.02
Q1281	Oct. 11, 1911	-3.62	Mar. 7, 1942	+8.59	June 4, 1913	-2.20
Q1282	Jan. 31, 1933	-.51	Nov. 26, 1947	+2.49	May 10, 1941	-.51
Q1283	Oct. 12, 1911	+2.10	Nov. 3, 1947	+13.33	Nov. 10, 1911	+2.36
Q1284	Oct. 12, 1911	+4.67	Nov. 3, 1947	+11.55	June 2, 1913	+5.81
Q1285	Apr. 20, 1933	+4.66	Nov. 3, 1947	+8.05	May 31, 1941	+4.80
Q1286	Apr. 20, 1933	+8.05	Nov. 3, 1947	+11.29	Apr. 26, 1941	+7.10
Q1287	Apr. 20, 1933	+10.85	Oct. 9, 1945	+15.80	Oct. 5, 1934	+12.87
Q1288	Apr. 20, 1933	+16.12	Nov. 3, 1947	+22.06	Oct. 5, 1934	+16.94
Q1289	Apr. 20, 1933	+30.10	Feb. 7, 1942	+34.56	Nov. 8, 1934	+30.22
Q1290	Apr. 20, 1933	+13.61	Mar. 4, 1947	+19.48	Oct. 5, 1934	+15.84
Q1292	May 10, 1941	+26.41	Feb. 28, 1942	+29.07	Aug. 29, 1946	+26.69
Q1459	June 27, 1947	a-1.39	Oct. 25, 1947	a-.60	June 27, 1947	a-1.00
			Oct. 28, 1947			
S56	Aug. 14, 1944	a+22.39	Aug. 30, 1944	a+24.87	June 6, 1946	a+23.26
			Oct. 27, 1947			
			Oct. 28, 1947			
S202	May 25, 1936	a+36.93	Feb. 1, 1939	a+47.17	Apr. 10, 1937	+39.25
S203	Feb. 14, 1937	a+70.94	Feb. 17, 1937	a+77.13	Oct. 31, 1939	+71.50
S1803	Oct. 18, 1912	+14.93	Oct. 25, 1941	+18.19	Apr. 22, 1913	+16.34
S1805	Oct. 16, 1912	+37.90	Oct. 27, 1932	+47.01	Apr. 8, 1939	+41.52
S1806	Oct. 18, 1912	+50.61	Jan. 5, 1933	+61.69	Apr. 22, 1939	+54.70
S1807	Oct. 19, 1912	+20.59	Sept. 12, 1932	+23.48	Oct. 14, 1938	+21.63
S1808	Oct. 21, 1912	+9.45	Sept. 12, 1932	+12.94	Sept. 23, 1938	+10.99
S1809	Oct. 21, 1912	+25.00	Nov. 2, 1932	+32.56	Apr. 15, 1939	+27.55
S1810	Oct. 21, 1912	+45.24	Feb. 23, 1933	+56.19	Apr. 29, 1939	+48.82
S1811	Feb. 28, 1937	+51.41	Aug. 28, 1941	+55.56	Apr. 20, 1940	+51.97
S1812	Apr. 17, 1937	+44.66	Dec. 23, 1947	+51.09	May 27, 1939	+44.66
S1813	Nov. 4, 1939	+36.82	Oct. 30, 1947	+39.64	June 15, 1940	+36.92
S1814	Nov. 4, 1939	+35.01	Feb. 14, 1942	+38.28	June 29, 1940	+35.52
S1815	Dec. 2, 1939	+43.39	Apr. 1, 1947	+47.81	June 29, 1940	+43.68
S1816	Dec. 2, 1939	+54.72	Mar. 3, 1947	+59.93	June 1, 1940	+55.87
S1817	Dec. 2, 1939	+50.10	Oct. 27, 1947	+53.95	June 1, 1940	+51.05

\* See footnotes at end of table.

Summary of data on ground-water levels on Long Island, N. Y.--Continued

Well No.	Date of first measurement	Lowest observed water level, with reference to mean sea level		Highest observed water level, with reference to mean sea level		Water level on last date of record in 1947 (feet)
		Water level (feet)	Date	Water level (feet)	Date	
S2314	Mar. 27, 1943	+58.64	Oct. 27, 1947	+60.49	May 30, 1944	+58.72
S2454	Sept. 21, 1940	+6.70	Oct. 4, 1941	+8.56	June 5, 1946	+7.35
S2455	June 23, 1933	a+19.98	Nov. 6, 1937	a+24.85	Sept. 23, 1938	+21.77
S3112	Aug. 30, 1941	+51.65	Feb. 7, 1942	+56.41	May 30, 1944	+52.87
S3496	Nov. 2, 1942	+46.33	Dec. 23, 1947	+48.83	Aug. 2, 1943	+46.33
S3497	Nov. 2, 1942	+45.80	Dec. 22, 1947	+48.56	Aug. 2, 1943	+45.80
S3498	Sept. 11, 1942	+43.38	Dec. 22, 1947	+45.49	July 30, 1946	+43.38
S3512	Apr. 24, 1942	+65.89	Dec. 23, 1947	+68.76	June 26, 1944	+65.89
S3513	Apr. 24, 1942	a+60.11	Dec. 31, 1947	+63.32	May 27, 1943	a+60.11
S3514	May 15, 1942	a+65.31	Dec. 17, 1947	+68.18	Sept. 27, 1944	a+65.39
					Mar. 27, 1945	
S3515	Mar. 5, 1907	+31.03	Jan. 2, 1947	+34.64	May 8, 1907	+32.10
S3516	Mar. 5, 1907	+35.76	Dec. 2, 1909	+39.72	July 24, 1907	+36.81
S3517	Apr. 2, 1907	+11.60	Dec. 4, 1909	+13.86	Mar. 2, 1908	+12.61
S3518	Mar. 22, 1907	+30.15	Oct. 27, 1947	+33.04	May 8, 1907	+31.13
S3519	Mar. 22, 1907	+23.69	Dec. 3, 1909	+26.69	Aug. 21, 1942	+25.24
S3521	Feb. 28, 1907	+36.07	Apr. 2, 1947	+38.44	Aug. 2, 1907	+36.34
S3522	Feb. 6, 1907	+19.11	Nov. 1, 1944	+20.12	June 11, 1946	+19.42
S3524	Mar. 8, 1907	+21.47	Dec. 30, 1943	+23.28	Apr. 6, 1908	+22.22
S3526	Jan. 30, 1943	+26.11	Mar. 31, 1944	+28.42	Jan. 7, 1947	+26.72
S3527	Mar. 7, 1907	+31.29	Mar. 1, 1944	+35.69	June 4, 1908	+31.38
S3529	Mar. 8, 1907	+24.07	Nov. 29, 1944	+28.07	Apr. 27, 1907	+25.31
S3530	Mar. 8, 1907	+31.68	Nov. 29, 1944	+34.78	Aug. 5, 1908	+32.04
S3531	Aug. 9, 1907	+9.14	Dec. 11, 1909	+10.37	May 7, 1908	+9.65
S3532	Apr. 21, 1907	+45.59	Dec. 23, 1947	+51.74	June 8, 1908	+45.59
S3533	Apr. 4, 1907	+44.82	Oct. 29, 1947	+49.48	June 8, 1908	+44.86
S3534	June 9, 1907	+26.73	Dec. 31, 1942	+31.75	June 9, 1907	.....
S3535	Aug. 13, 1907	+18.06	Apr. 3, 1947	+21.75	Aug. 13, 1908	+18.07
S3536	Apr. 10, 1907	+22.83	Nov. 29, 1944	+28.62	June 5, 1908	+23.58
S3537	Jan. 11, 1908	+14.46	Oct. 28, 1947	+16.35	Jan. 11, 1908	+14.84
S3538	Jan. 11, 1908	+14.79	Nov. 30, 1942	+17.56	Aug. 19, 1908	+15.41
S3539	Apr. 12, 1907	+22.24	Apr. 3, 1947	+26.72	June 5, 1908	+22.44
S3540	Mar. 9, 1909	+18.91	Apr. 3, 1947	+23.02	May 8, 1908	+19.28
S3541	Mar. 9, 1909	+11.38	Nov. 30, 1942	+14.06	July 8, 1908	+11.85
S3542	Apr. 12, 1907	+18.55	Apr. 3, 1947	+22.89	June 10, 1908	+18.89
S3543	Mar. 18, 1907	+15.84	Dec. 31, 1942	+19.49	June 10, 1908	+16.54
S3544	Mar. 18, 1907	+10.27	Nov. 30, 1942	+13.17	Apr. 4, 1908	+11.28
S3545	Mar. 12, 1907	+34.16	Apr. 4, 1947	+38.00	June 7, 1907	+34.43
			May 7, 1947			
S3727	July 13, 1943	+29.80	Oct. 30, 1947	+32.34	June 1, 1944	+30.17
S3728	May 28, 1943	+19.47	Apr. 3, 1947	+21.76	June 9, 1944	+20.14
S3729	Sept. 10, 1943	+27.34	Apr. 4, 1947	+29.55	July 3, 1946	+27.52
S3730	Sept. 21, 1943	+33.55	Dec. 22, 1947	+35.75	July 31, 1946	+33.55
S3731	May 28, 1943	+22.43	Apr. 3, 1947	+24.78	July 5, 1946	+23.04
S3732	Oct. 5, 1943	+51.57	Oct. 29, 1947	+57.38	Feb. 28, 1945	+51.75
S3735	Oct. 1, 1943	+63.25	Nov. 25, 1947	+65.95	Oct. 1, 1946	+63.25
S3736	July 19, 1943	+41.90	Dec. 23, 1947	+44.75	Aug. 2, 1943	+41.90
S3737	Aug. 17, 1943	+54.94	Nov. 25, 1947	+57.13	Sept. 24, 1943	+54.94
S3738	Aug. 19, 1943	+54.81	Apr. 4, 1947	+57.12	Aug. 19, 1943	.....
S3739	July 20, 1943	+26.41	Oct. 30, 1947	+28.89	June 1, 1944	+26.97
S3760	Nov. 6, 1943	+24.75	Jan. 30, 1945	+25.99	Dec. 3, 1946	+24.88
S3868	June 26, 1944	+37.18	Mar. 1, 1945	+38.15	Oct. 1, 1946	+37.58
S3869	June 22, 1944	+53.43	Oct. 25, 1947	+55.41	Oct. 1, 1946	+53.43
S3870	June 16, 1944	+53.38	Nov. 25, 1947	+54.97	Oct. 1, 1946	+53.38
S3871	June 15, 1944	+46.25	Feb. 1, 1945	+48.62	Nov. 4, 1946	+46.70
S3955	May 31, 1944	+52.57	May 2, 1946	+54.43	Oct. 1, 1946	+52.80
S3956	May 31, 1944	+30.99	July 8, 1947	+32.22	Sept. 6, 1945	+31.10
S4134	Mar. 10, 1945	a+11.35	Oct. 25, 1945	a+13.00	Mar. 3, 1946	a+12.17
S4268	Aug. 2, 1945	+48.54	Dec. 23, 1947	+50.56	Oct. 1, 1946	+48.54
S4269	Aug. 2, 1945	+12.78	Oct. 29, 1947	+14.77	Aug. 28, 1946	+13.24

\* See footnotes at end of table.

Summary of data on ground-water levels on Long Island, N. Y.--Continued

Well No.	Date of first measurement	Lowest observed water level, with reference to mean sea level		Highest observed water level, with reference to mean sea level		Water level on last date of record in 1947 (feet)
		Water level (feet)	Date	Water level (feet)	Date	
S4270	Aug. 1, 1945	+51.19	Apr. 1, 1947	+53.18	Aug. 30, 1946	+51.59
S4271	Aug. 2, 1945	+9.24	Oct. 27, 1947	+10.60	Oct. 26, 1946	+9.59
			Oct. 29, 1947		Nov. 9, 1946	
					Nov. 22, 1946	
S4367	Aug. 2, 1945	+54.29	Oct. 27, 1947	+56.20	Nov. 1, 1946	+54.42
S4523	Aug. 2, 1945	+8.25	Oct. 29, 1947	+9.57	Mar. 6, 1946	+9.00
S4524	Aug. 2, 1945	+5.57	Oct. 29, 1947	+7.84	Mar. 6, 1946	+6.36
S4525	Oct. 4, 1945	+16.76	Oct. 29, 1947	+19.96	Sept. 30, 1946	+17.24
S4526	Aug. 2, 1945	+7.60	Oct. 29, 1947	+9.39	Apr. 10, 1946	+8.02
S4529	Oct. 4, 1945	+11.05	Oct. 29, 1947	+12.55	Sept. 30, 1946	+11.38
S4530	Aug. 2, 1945	+14.34	Oct. 3, 1947	+17.01	Mar. 6, 1946	+15.01
S4827	Dec. 4, 1946	+55.50	Dec. 22, 1947	+57.67	Dec. 4, 1946	+55.50
S4828	Dec. 4, 1946	+66.66	Dec. 22, 1947	+68.61	Jan. 8, 1947	+66.66
S4829	Sept. 30, 1946	+37.35	Dec. 25, 1947	+39.09	Sept. 30, 1946	+37.35

a Based on instrumental records.

b Water levels affected by tidal fluctuation; extremes not determined as water levels were computed on different bases for period of record.

c Record incomplete for year.

Net change in water level in wells on Long Island, N. Y., 1947

Well No.	Net change (feet)	Well No.	Net change (feet)	Well No.	Net change (feet)	Well No.	Net change (feet)
K19 (J)	+3.41	N1102	+0.25	N1265	+0.57	Q1224	-1.47
K30	+3.32	N1103	-1.19	N1269	-.24	Q1225	-1.49
K65	-.16	N1104	-1.78	N1271	+.84	Q1237(J)	-2.40
K67	-.22	N1105	-1.51	N1273	+1.11	Q1248	-1.92
K92	+.88	N1107	-.25	N1275	+.70	Q1249	-1.91
K97	+1.37	N1108	-1.02	N1278	+1.15	Q1250	-.14
K196	+3.15	N1109	+.48	N1280	+3.84	Q1251	+.04
K523	+1.78	N1110	+.45	N1282	+.04	Q1252	-.69
K525 (J)	+1.71	N1111	-.20	N1285	+.44	Q1253	1.68
K533 (J)	+5.20	N1112	+.48	N1288	+.75	Q1254	-1.23
K539 (J)	-.52	N1126	-1.21	N1461	-1.66	Q1255	-1.93
K889	-4.03	N1132	+1.09	N1462	-1.04	Q1256	-.72
K1057(L)	-.2	N1140	-1.13	N1463	+.60	Q1266	+.63
K1141	+1.92	N1147	+1.09	N1464	+2.56	Q1281	-.57
K1173	+1.12	N1160	-.21	N1613(M)	+.36	Q1282	-1.03
K1194	-.56	N1167	+.29	N1614	-1.56	Q1283	-1.32
K1198	-.23	N1185	-.10	N1615	+.56	Q1284	-1.52
K1199	+.77	N1204	+1.67	N1616	-2.03	Q1285	-1.10
K1235	+.50	N1212	-2.53	N1682	-1.35	Q1286	-2.27
K1236	+.96	N1222	+4.77	N1683	-1.49	Q1287	+1.05
K1237	+1.74	N1234	-.66	N1684	-.97	Q1288	+.22
K1263	+4.73	N1240	+5.87	N1828	-.56	Q1289	-1.59
K1264	+6.15	N1244(M)	-1.69	N1829	-.41	Q1290	+.07
K1265	+.55	N1245(M)	-2.14	N1830	-1.26	Q1292	-1.42
K1266	+.14	N1246	-1.63	N2071(L)	-.86	S58 (M)	+.51
K1296	+.37	N1247	-1.41	Q273 (L)	-1.03	S202 (L)	-.40
K1347	+.13	N1249	+1.03	Q278 (L)	-1.19	S203 (M)	-1.64
K1479	+6.40	N1250	+1.35	Q282 (L)	-.85	S1803	+.66
K1495	+.85	N1251	+1.32	Q283 (L)	-.87	S1805	+1.17
K1511	+6.62	N1252	+1.37	Q287 (L)	.0	S1806	+.63
N7 (L)	+.50	N1253	+2.21	Q350 (J)	-.84	S1807	+.52
N9 (M)	+.45	N1255	-.37	Q470 (L)	-.70	S1808	+.38
N53	+1.17	N1256	-2.21	Q471 (M)	-1.22	S1809	+1.58
N67 (L)	-.61	N1257	+1.06	Q543 (L)	-.2	S1810	-.76
N157 (M)	-1.83	N1259	-.10	Q577 (L)	+3.46	S1811	-.13
N180 (M)	+.96	N1260	+1.82	Q1089	+.22	S1812	-1.12
N575 (M)	-.86	N1262	+.17	Q1090	-1.03	S1813	-.55
N657 (L)	+.5	N1263	-.17	Q1222(L)	-.28	S1814	-.53
N844 (M)	-1.98	N1264	+1.07	Q1223	-.21	S1815	-1.19

Net change in water level in wells on Long Island, N. Y., 1947--Continued

Well No.	Net change (feet)	Well No.	Net change (feet)	Well No.	Net change (feet)	Well No.	Net change (feet)
S1816	+0.03	S3519	+0.74	S3727	-0.64	S3956	-1.02
S1817	+0.36	S3521	-0.42	S3728	-0.23	S4134	+0.01
S2314(M)	-0.18	S3522	+0.14	S3729	-0.96	S4268	-1.75
S2454	-0.02	S3524	+0.10	S3730	-1.54	S4269	-1.17
S2455	+1.42	S3526	-1.21	S3731	-0.40	S4270	-0.95
S3112	+0.60	S3527	-1.43	S3732	-2.03	S4271	-0.77
S3496	-1.88	S3529	-0.07	S3735	-2.31	S4367	-1.64
S3497	-1.83	S3530	-0.96	S3736	-1.75	S4523	-0.22
S3498	-1.32	S3531	-0.02	S3737	-1.42	S4524	-0.14
S3512	-1.37	S3532	-1.87	S3739	-0.31	S4525	-2.32
S3513	-1.18	S3533	-1.29	S3760	-1.11	S4526	-0.87
S3514	-1.73	S3534	.....	S3868	-0.50	S4529	-1.17
S3515	+0.71	S3535	-1.21	S3869	-1.51	S4530	-0.72
S3516	+0.31	S3536	-1.23	S3870	-1.30	S4827	-2.17
S3517	+0.41	S3538	-0.46	S3871	-1.79	S4828	-1.84
S3518	+0.54	S3545	-1.11	S3955	-1.48	S4829	-1.50

A - Artesian aquifers.

J - Jameco

L - Lloyd.

M - Magothy.

All others are water-table wells tapping upper glacial beds.

The net change table reveals that water levels in Queens, Nassau, and Suffolk Counties at the end of 1947, were, for the most part, lower than those at the end of 1946. Many of the low levels measured in the fall of 1947 were also below those of 1941-2 but decidedly above those measured during the severe drought of the early thirties. As shown in the summary table, the lowest levels reported in 1947 were record lows for the period of record in more than 60 percent of the wells under observation in Queens and Suffolk Counties indicating that ground-water storage decreased considerably during the year. In many cases, however, the shortness of the period of record diminishes the long-time significance of the observed record lows.

According to records furnished by the New York State Water Power and Control Commission, by the city of New York Department of Water Supply, Gas and Electricity, and by the Nassau County Department of Public Works, the combined public-supply pumpage for Kings, Queens, and Nassau Counties averaged 144.8 million gallon a day which is an increase of about 2.9 percent over 1946. The total pumpage would have been greater by about 13 million gallons a day had the New York Water Service Corporation not discontinued its pumpage in Brooklyn in June 1947. These figures are for public-supply withdrawals only and they do not include those for the large quantities of water withdrawn from private wells for industrial and other purposes. Unfortunately, there are no complete data available for public supply or industrial pumpage for Suffolk County at the present time.

## WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

## Kings County

K19 (\*906, p. 116; 936, p. 140; 944, p. 124; 986, p. 146; 1016, p. 179; 1023, p. 213; 1071, p. 235). Kew Pacific Garage. Dean Street and Fifth Avenue, Brooklyn.

Mean daily water level, in feet below mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	24.64	24.59	24.54	24.54	24.68	24.53	23.78	23.41	.....	22.78	22.36	21.75
2	24.54	24.52	24.38	24.53	24.71	24.54	23.75	23.39	22.93	22.70	22.35	21.77
3	24.63	.....	24.38	24.59	24.73	24.65	23.73	23.30	23.05	.....	22.26	21.76
4	24.67	.....	24.48	24.62	24.64	24.72	23.64	23.23	23.08	.....	22.20	21.79
5	24.59	.....	24.50	24.59	24.58	24.72	23.51	23.23	23.09	.....	22.21	21.75
6	24.58	.....	24.53	24.53	24.66	24.70	23.45	23.22	23.09	22.59	22.22	21.75
7	24.58	.....	24.57	24.53	24.68	24.74	23.43	23.22	23.02	22.63	22.24	21.69
8	24.60	24.58	24.55	24.60	24.68	24.65	23.50	23.22	22.99	22.64	22.24	21.62
9	.....	24.51	24.50	24.62	24.70	24.63	23.53	23.21	23.05	22.66	22.16	21.72
10	24.64	24.50	24.44	24.66	24.72	24.71	23.55	23.18	23.07	22.66	22.14	21.73
11	24.60	24.57	24.50	24.62	24.67	24.77	23.56	23.16	23.08	22.64	22.12	21.72
12	24.57	24.56	24.51	24.62	24.57	24.82	23.52	23.18	23.08	22.54	22.08	21.70
13	24.55	.....	24.51	24.59	24.64	24.86	23.43	23.20	23.07	22.47	22.12	21.66
14	.....	24.53	24.46	24.50	24.69	24.82	23.39	23.21	23.00	22.52	22.16	21.60
15	.....	24.52	24.51	24.61	24.71	24.77	23.45	23.22	22.95	22.55	.....	21.55
16	.....	24.47	24.44	24.63	24.70	24.75	23.47	.....	23.01	22.54	.....	21.57
17	24.66	24.45	24.40	24.67	24.72	24.82	23.46	.....	23.04	22.54	.....	21.64
18	24.61	24.50	24.51	24.69	24.61	24.84	23.46	23.12	23.03	22.53	.....	21.59
19	24.55	24.56	24.55	24.71	24.58	24.86	23.45	23.15	23.01	22.44	22.03	21.59
20	24.46	24.56	24.53	24.61	24.66	24.87	23.37	23.21	22.96	22.44	22.02	21.55
21	24.61	24.49	24.53	24.58	24.70	24.88	23.31	23.24	22.84	22.49	22.02	21.48
22	24.66	24.49	24.58	24.65	24.71	24.79	23.33	23.24	22.88	22.49	21.97	21.46
23	24.65	24.43	24.50	24.68	24.73	24.75	23.38	23.24	22.96	22.47	21.88	21.47
24	24.62	24.39	24.42	24.65	24.73	24.82	23.42	23.19	22.94	22.50	21.82	21.50
25	24.65	24.46	24.46	24.68	24.63	24.86	23.45	23.13	22.92	22.42	21.90	.....
26	24.56	24.49	24.56	24.68	24.58	24.92	23.45	23.18	22.92	22.35	21.92	.....
27	24.54	.....	24.57	24.57	24.66	24.95	23.34	23.22	22.92	22.33	21.89	.....
28	24.59	24.49	24.57	24.58	24.68	24.92	23.30	23.24	22.82	22.36	21.81	.....
29	24.63	.....	24.56	24.64	24.69	24.87	23.36	23.24	22.74	22.36	21.84	.....
30	24.60	.....	24.54	24.64	24.68	24.21	23.38	.....	22.77	22.36	21.79	.....
31	24.62	.....	24.50	.....	24.60	.....	23.39	.....	.....	.....	.....	21.34

K30 (\*817, p. 201; \*840, p. 258; 845, p. 307; 886, p. 483; 906, p. 116; 936, p. 141; 944, p. 125; 986, p. 147; 1016, p. 180; 1023, p. 214; 1071, p. 236). C. J. Tagliabue Manufacturing Co. Park and Nostrand Avenues, Brooklyn.

Water level at noon, in feet below mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	27.54	27.62	27.50	27.84	27.96	27.99	28.01	28.11	27.97	27.94	27.80	27.53
2	27.48	27.60	27.73	27.85	27.98	27.94	28.05	28.13	27.93	27.94	27.76	27.52
3	27.47	27.56	27.73	27.92	28.00	27.94	28.08	28.09	27.93	27.95	27.72	27.51
4	27.50	27.52	27.75	27.93	27.95	28.00	28.09	28.05	27.98	27.94	27.71	27.53
5	27.46	27.55	27.77	27.92	27.92	28.02	28.07	28.06	.....	27.89	27.72	27.48
6	27.47	27.55	27.79	27.88	27.94	28.03	28.03	28.10	.....	27.87	27.76	27.51
7	27.42	27.56	27.81	27.86	27.96	28.06	27.97	28.11	.....	27.86	27.76	27.47
8	27.45	27.61	27.80	27.88	28.00	28.00	28.00	28.13	.....	27.86	27.70	27.40
9	27.47	27.58	27.78	27.89	28.02	27.96	28.03	28.12	.....	27.90	27.72	27.42
10	27.50	27.58	27.75	27.95	28.02	27.98	28.05	28.09	.....	27.89	27.70	27.41
11	27.48	27.62	27.76	27.94	.....	28.00	28.09	28.05	.....	27.89	27.68	27.42
12	27.47	27.65	27.78	27.96	.....	28.03	28.10	28.04	28.00	27.85	27.72	27.42
13	27.43	27.66	27.77	27.94	27.95	28.06	28.07	28.06	28.01	27.81	27.72	27.42
14	27.42	27.67	27.75	27.88	28.00	28.05	28.03	28.08	27.96	27.81	.....	27.39
15	27.42	27.68	27.81	27.92	28.02	28.02	28.03	28.10	27.94	27.83	.....	27.35
16	27.44	27.66	27.77	27.91	28.02	27.98	28.05	28.11	27.95	27.83	.....	27.35
17	27.48	27.65	27.74	27.96	28.02	27.99	28.08	28.07	28.00	27.83	.....	27.38
18	27.48	27.66	27.78	27.98	28.01	28.03	28.09	28.01	28.01	27.83	.....	27.35
19	27.45	27.70	27.80	27.99	27.97	28.05	28.10	28.00	27.99	27.79	.....	27.38
20	27.36	27.71	27.82	27.97	27.97	28.07	28.07	28.05	28.05	27.77	27.67	27.38
21	27.43	27.72	27.83	27.91	28.01	28.08	28.03	28.06	27.98	27.77	27.68	27.32

K30--Continued.

Water level at noon, in feet below mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
22	27.46	27.74	27.86	27.94	28.02	28.03	28.03	28.06	27.95	27.79	27.67	.....
23	27.48	27.74	27.81	27.95	28.05	27.99	28.06	28.06	27.96	27.79	27.63	.....
24	27.51	27.70	27.76	27.95	28.06	27.99	28.08	28.03	27.89	27.83	27.58	27.31
25	27.53	27.73	27.77	27.98	28.02	28.03	28.10	28.00	28.00	27.82	27.60	27.27
26	27.50	27.75	27.82	27.99	28.01	28.05	28.11	28.00	28.02	27.77	27.60	27.22
27	27.48	27.78	27.86	27.98	28.01	28.07	28.07	27.99	28.02	27.74	27.62	27.24
28	27.50	27.79	27.87	27.91	28.03	28.08	28.03	27.98	27.98	27.74	27.57	27.22
29	27.53		27.86	27.92	28.03	28.04	28.04	28.04	27.92	27.75	27.57	27.21
30	27.54		27.87	27.94	28.06	28.00	28.07	28.02	27.93	27.77	27.56	27.20
31	27.58		27.83		28.05		28.07	27.98		27.79		27.20

K65 (\*840, p. 259; 845, p. 308; 886, p. 484; 906, p. 117; 936, p. 142; 944, p. 125; 986, p. 148; 1016, p. 181; 1023, p. 214; 1071, p. 237). A. Ludwig Co. well 2. 123 Middleton Street, Brooklyn.

Water level, in feet below mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 24	25.32	June 30	25.73	July 30	25.90	Oct. 14	25.69
Mar. 5	25.47	July 1	25.71	Aug. 13	25.73	31	25.66
Apr. 4	25.70	2	25.76	27	25.8	Nov. 20	25.52
May 7	25.71	7	25.71	Sept. 15	25.83	26	25.53
27	25.71	16	25.70	30	25.72	Dec. 16	25.56
June 24	25.65	23	25.93	Oct. 7	25.75		

e Estimated.

K67 (840, p. 259; 845, p. 308; 886, p. 484; 906, p. 117; 936, p. 143; 944, p. 126; 986, p. 148; 1016, p. 181; 1023, p. 214; 1071, p. 237). Young Men's Christian Association. 179 Marcy Avenue, Brooklyn.

Water level, in feet below mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 24	19.86	July 1	20.50	Aug. 13	20.80	Oct. 14	20.34
Mar. 5	20.00	2	20.53	27	20.84	31	20.30
Apr. 4	20.10	7	20.57	Sept. 15	20.91	Nov. 20	20.14
May 7	20.17	16	20.68	30	20.48	26	20.13
27	20.30	23	20.80	Oct. 7	20.41	Dec. 16	20.05
June 24	20.47	30	20.80				

K92 (\*840, p. 260; 845, p. 309; 886, p. 484; 906, p. 117; 936, p. 143; 944, p. 126; 986, p. 149; 1016, p. 181; 1023, p. 214; 1071, p. 237). St. Johns University, 75 Lewis Avenue, Brooklyn.

Water level, in feet below mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	22.51	June 30	22.71	July 30	22.81	Oct. 14	22.47
Mar. 5	22.57	July 1	22.69	Aug. 13	22.83	31	22.23
Apr. 4	22.61	2	22.70	27	22.81	Nov. 20	21.85
May 7	22.66	7	22.71	Sept. 15	22.75	26	21.73
27	22.67	16	22.77	30	22.65	Dec. 16	21.55
June 24	22.69	23	22.82	Oct. 7	22.57		

K97 (\*1016, p. 182; 1023, p. 215; 1071, p. 237). Colony Foods. Grand & Lexington Avenues, Brooklyn.

Water level, in feet below mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 24	25.91	June 30	25.42	July 30	25.52	Oct. 14	25.14
Mar. 5	25.87	July 1	25.93	Aug. 13	25.47	31	25.02
Apr. 4	25.90	2	25.91	Sept. 2	25.38	Nov. 19	24.77
May 7	25.96	7	25.77	18	25.33	26	24.67
27	25.92	16	25.62	30	25.24	Dec. 16	24.55
June 24	25.93	23	25.57	Oct. 7	25.22		

K196 (\*986, p. 149; 1016, p. 182; 1023, p. 215; 1071, p. 237).  
Knickerbocker Ice Co. well 1. Twelfth Avenue and 37th Street, Brooklyn.

Water level, in feet below mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 24	4.08	June 30	3.52	July 31	3.49	Oct. 14	1.64
Mar. 5	3.36	July 1	3.40	Aug. 13	2.79	30	1.29
Apr. 4	4.23	2	3.43	27	2.25	Nov. 19	1.02
May 7	3.37	7	3.25	Sept. 15	1.94	26	.92
27	3.37	16	3.63	29	1.68	Dec. 16	.81
June 24	3.54	22	3.72	Oct. 7	1.55		

K521. New York Water Service Corporation, 1065 Utica Avenue, Brooklyn. Abandoned drilled well, diameter 18 inches, depth 450 feet. Measuring point, hole in wooden shelf of recorder shelter, 3.0 feet below land-surface datum and 31.00 feet above mean sea level prior to Nov. 21, 1947, and 34.51 feet above mean sea level thereafter. First measured by Geological Survey on Jan. 1, 1947.

Mean daily water level, in feet above mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	3.13	3.4	2.98	3.10	3.74	3.61	3.36	2.85	2.92	2.78	....	3.24
2	3.36	3.38	3.33	3.26	3.77	3.63	3.36	2.82	3.03	2.74	....	3.20
3	3.42	3.29	3.38	3.37	3.90	3.66	3.31	2.86	2.96	2.66	....	3.21
4	3.31	3.39	3.32	3.40	3.98	3.51	3.32	2.89	2.98	2.65	....	3.14
5	3.34	3.56	3.2	3.52	4.01	3.45	3.33	2.88	2.88	2.68	....	3.17
6	3.27	3.43	3.1	3.63	4.04	3.47	3.29	2.87	2.89	2.68	....	3.18
7	3.48	3.45	....	3.51	3.93	3.44	3.28	2.89	2.89	2.66	....	3.18
8	3.67	3.54	3.2	3.33	3.80	3.60	3.31	2.87	2.88	2.67	3.9	3.36
9	3.59	3.34	3.27	3.38	3.59	3.69	3.21	2.83	2.82	2.67	....	3.17
10	3.6	3.00	3.27	3.36	3.46	3.63	3.11	2.83	2.81	2.71	....	2.99
11	3.8	2.69	3.24	3.41	3.49	3.58	3.05	2.84	....	2.77	....	3.17
12	3.84	2.62	3.23	3.50	3.55	3.55	3.04	2.81	2.8	2.81	....	3.22
13	3.82	2.66	3.22	3.40	3.63	3.45	3.03	2.77	2.76	2.91	....	3.23
14	....	2.81	3.40	3.44	3.68	3.51	3.02	2.73	2.82	2.94	....	3.26
15	....	3.00	3.40	3.54	3.76	3.57	3.03	2.71	2.93	2.89	3.4	3.29
16	....	....	3.40	3.59	3.80	3.52	3.06	2.68	2.92	....	....	3.48
17	4.2	....	3.47	3.72	3.78	3.45	3.11	2.74	2.76	....	....	3.13
18	4.10	....	3.34	3.7	3.84	3.43	3.12	2.87	2.65	....	....	2.98
19	4.03	....	3.20	3.6	3.87	3.42	3.11	2.90	2.67	....	....	....
20	4.36	....	3.25	3.59	3.92	3.36	3.07	2.85	2.7	....	....	2.9
21	4.48	3.63	3.37	3.70	3.89	3.36	3.10	2.89	2.91	....	3.2	3.11
22	4.04	3.51	3.52	....	3.92	3.37	3.18	2.92	3.02	....	3.25	3.13
23	3.83	3.24	3.55	....	3.85	3.39	3.11	2.88	2.79	....	3.45	3.29
24	3.95	3.18	3.64	....	3.82	3.42	2.97	2.89	2.77	....	3.55	3.24
25	3.86	3.16	3.80	....	3.83	....	2.87	2.89	2.83	....	3.63	3.33
26	3.77	3.10	3.55	....	3.83	3.3	2.86	2.90	2.84	....	3.41	....
27	3.82	3.02	3.17	....	3.72	3.28	2.90	2.86	2.78	....	3.29	....
28	3.76	2.94	3.12	....	3.66	3.30	2.96	2.90	2.81	....	3.32	....
29	....	....	3.29	....	3.69	3.32	2.95	2.87	2.89	....	3.31	3.3
30	....	....	3.30	3.7	3.69	3.33	2.93	2.85	2.90	....	3.26	3.04
31	....	....	3.09	....	3.62	....	2.93	2.84	....	....	....	3.32

K523 (\*1023, p. 215; 1071, p. 237). New York Water Service Corporation, 267 Newkirk Avenue, Brooklyn.

Water level at noon, in feet with reference to mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	-1.48	-1.54	-1.48	-1.33	-1.24	-1.31	-1.09	....	....	a-0.35	....
2	....	-1.48	-1.54	-1.47	-1.33	-1.23	-1.29	-1.09	....	....	....	....
3	....	-1.48	-1.55	-1.47	-1.32	-1.23	-1.28	-1.08	....	....	....	....
4	-1.43	-1.48	-1.55	-1.47	-1.32	-1.23	-1.26	-1.07	....	a-.57	....	....
5	-1.43	-1.48	-1.55	-1.46	-1.32	-1.23	-1.25	-1.06	a-.82	....	....	....
6	-1.42	-1.48	-1.55	-1.46	-1.32	-1.22	-1.25	-1.06	....	....	....	a+.13
7	-1.43	-1.48	-1.55	-1.45	-1.31	-1.22	-1.24	-1.05	....	a-.52	....	....
8	-1.43	-1.48	-1.55	-1.45	-1.30	-1.21	-1.23	-1.04	....	....	a-.29	....

a Tape measurement.

K523--Continued.

Water level at noon, in feet with reference to mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
9	-1.43	-1.48	-1.55	-1.44	-1.30	-1.21	-1.23	-1.03	.....	.....	.....	.....
10	-1.43	-1.48	-1.55	-1.43	-1.29	-1.21	-1.22	-1.03	.....	.....	.....	.....
11	-1.43	-1.48	-1.55	-1.42	-1.29	-1.21	-1.22	-1.02	.....	a-.52	.....	.....
12	-1.43	-1.49	-1.54	-1.41	-1.29	-1.21	-1.21	-1.01	a-.77	.....	.....	.....
13	-1.44	-1.50	-1.53	-1.41	-1.29	-1.22	-1.00	-1.00	.....	a-.46	a-.23	a+.21
14	-1.44	-1.50	-1.51	-1.41	-1.28	-1.22	-1.20	-.99	.....	.....	.....	.....
15	-1.43	-1.50	-1.51	-1.40	-1.28	-1.23	-1.21	-.98	.....	.....	a-.18	.....
16	-1.44	-1.51	-1.51	-1.39	-1.28	-1.24	-1.20	.....	.....	.....	.....	.....
17	-1.44	-1.51	-1.51	-1.39	-1.27	-1.25	-1.19	.....	.....	.....	.....	.....
18	-1.44	-1.52	-1.51	-1.39	-1.27	-1.26	-1.19	.....	a-.71	.....	.....	.....
19	-1.46	-1.52	-1.51	-1.38	-1.27	-1.27	-1.19	.....	.....	.....	.....	.....
20	-1.46	-1.52	-1.50	-1.37	-1.27	-1.28	-1.18	.....	a-.70	.....	.....	a+.27
21	-1.46	-1.52	-1.49	-1.36	-1.27	-1.29	-1.17	.....	.....	.....	.....	.....
22	-1.47	-1.52	-1.49	-1.36	-1.27	-1.29	-1.16	a-.95	.....	.....	a-.08	.....
23	-1.47	-1.52	-1.49	-1.35	-1.27	-1.29	-1.16	.....	.....	.....	.....	.....
24	-1.47	-1.52	-1.49	-1.35	-1.26	-1.29	-1.15	.....	.....	.....	.....	.....
25	-1.47	-1.53	-1.49	-1.34	-1.26	-1.30	-1.15	.....	.....	a-.40	.....	.....
26	-1.47	-1.53	-1.49	-1.34	-1.26	-1.30	-1.14	.....	.....	.....	.....	.....
27	-1.48	-1.53	-1.49	-1.34	-1.26	-1.31	-1.13	.....	a-.63	.....	.....	.....
28	-1.48	-1.53	-1.48	-1.34	-1.25	.....	-1.12	.....	.....	.....	.....	.....
29	-1.48	.....	-1.47	-1.33	-1.25	-1.32	-1.11	a-.90	.....	.....	a+.03	.....
30	-1.47	.....	-1.47	-1.33	-1.25	-1.32	-1.11	.....	.....	.....	.....	+36
31	-1.48	.....	-1.48	.....	-1.24	.....	-1.10	.....	.....	.....	.....	+36

a Tape measurement.

K525 (\*1071, p. 238). New York Water Service Corporation, 363 Dahill Road, Brooklyn. Measuring point lowered 0.72 foot to 45.93 feet above mean sea level on Nov. 20, 1947.

Mean daily water level, in feet above mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	0.53	0.55	0.47	0.50	0.62	.....	0.61	0.98	1.23	1.47	1.71	1.98
2	.53	.54	.47	.51	.62	.....	.64	.98	1.25	1.48	1.72	1.99
3	.54	.53	.48	.52	.62	.....	.66	.99	1.25	1.49	1.73	2.01
4	.54	.54	.47	.51	.63	.....	.68	1.00	1.26	1.50	1.74	2.02
5	.55	.55	.47	.51	.64	.....	.70	1.01	1.27	1.51	1.74	2.03
6	.55	.53	.47	.51	.64	.72	.72	1.02	1.29	1.52	1.74	2.05
7	.55	.53	.47	.51	.64	.72	.74	1.03	1.30	1.53	1.75	2.06
8	.56	.54	.47	.51	.65	.73	.76	1.03	1.30	1.54	1.77	2.09
9	.57	.54	.47	.51	.65	.73	.77	1.04	1.31	1.54	1.76	2.08
10	.57	.54	.46	.51	.65	.73	.78	1.05	1.31	1.55	1.77	2.09
11	.57	.53	.46	.52	.66	.73	.79	1.05	1.32	1.55	1.79	2.10
12	.57	.52	.46	.53	.66	.73	.80	1.06	1.33	1.56	1.80	2.11
13	.56	.52	.46	.53	.67	.72	.81	1.07	1.34	1.58	1.80	2.12
14	.56	.52	.48	.53	.67	.72	.82	1.09	1.35	1.59	....	2.13
15	.57	.52	.49	.53	.67	.71	.82	1.10	1.36	1.59	....	2.14
16	.58	.52	.49	.55	.67	.69	.84	1.10	1.36	1.60	....	2.16
17	.58	.51	.49	.56	.67	.68	.85	1.11	1.36	1.62	....	2.15
18	.58	.51	.49	.56	.67	.67	.85	1.12	1.37	1.63	....	2.16
19	.58	.50	.50	.56	.67	.66	.86	1.13	1.38	1.63	....	2.16
20	.58	.50	.50	.57	.68	.65	.87	1.14	1.38	1.63	1.83	2.17
21	.58	.50	.50	.58	.68	.64	.88	1.14	1.41	1.64	1.84	2.18
22	.58	.50	.50	.58	.68	.63	.89	1.15	1.41	1.64	1.86	2.18
23	.58	.50	.50	.59	.68	.63	.90	1.16	1.41	1.65	1.88	2.19
24	.58	.50	.50	.59	.68	.63	.91	1.17	1.43	1.64	1.91	2.19
25	.58	.49	.52	.59	.68	.62	.92	1.18	1.43	1.66	1.91	2.20
26	.58	.49	.51	.59	.68	.61	.93	1.19	1.44	1.67	1.92	2.23
27	.58	.49	.51	.59	.68	.60	.94	1.19	1.44	1.68	1.93	2.23
28	.58	.48	.51	.59	.68	.58	.95	1.20	1.45	1.68	1.94	....
29	.57	.....	.51	.60	.68	.58	.95	1.20	1.46	1.70	1.96	2.23
30	.57	.....	.51	.61	.68	.59	.96	1.22	1.47	1.70	1.97	2.24
31	.57	.....	.50	.....	.68	.....	.97	1.23	.....	1.71	.....	2.25



K533 (\*777, p. 120; \*817, p. 200; \*840, p. 261; 845, p. 310; 886, p. 486; \*906, p. 118; 936, p. 144; 944, p. 127; 986, p. 150; 1016, p. 182; 1023, p. 215; 1071, p. 239). New York Water Service Corporation test well. On southwest side of East 98th Street, near Rutland Road, Brooklyn.

Mean daily water level, in feet below mean sea level, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	16.63	16.64	16.74	16.79	16.78	16.78	16.37	14.95	14.19	13.50	.....	12.08
2	16.56	16.64	16.66	16.74	16.79	16.75	16.24	14.93	14.15	13.47	.....	12.07
3	16.55	16.64	16.67	16.78	16.80	16.78	16.15	14.88	14.16	13.45	.....	12.03
4	16.57	16.56	16.73	16.82	16.78	16.84	16.06	14.85	14.14	13.43	.....	12.04
5	16.56	16.58	16.74	16.77	16.77	16.81	15.99	14.82	14.10	13.41	.....	11.98
6	16.56	16.63	16.76	16.76	16.76	16.80	15.92	14.80	14.09	13.38	12.55	11.98
7	16.55	16.63	16.76	16.77	16.77	16.82	15.86	14.77	14.09	13.36	12.57	11.95
8	16.54	16.63	16.75	16.81	16.78	16.80	15.80	14.74	14.05	13.32	12.49	11.88
9	16.58	16.65	16.75	16.78	16.81	16.79	15.77	14.71	14.05	13.31	.....	11.93
10	16.60	16.65	16.76	16.82	16.82	16.81	15.73	14.70	14.03	13.29	.....	11.91
11	16.57	16.69	16.77	16.78	16.80	16.82	15.68	14.68	.....	13.27	.....	11.88
12	16.58	16.70	16.79	16.76	16.77	16.83	15.62	14.65	13.96	13.24	.....	11.87
13	16.63	16.68	16.78	16.81	16.76	16.85	15.58	14.61	13.96	13.19	.....	11.85
14	16.61	16.66	16.71	16.78	16.77	16.84	15.54	14.59	13.91	13.17	.....	11.82
15	16.58	16.64	16.75	16.77	16.81	16.86	15.49	14.57	13.89	13.16	12.42	11.80
16	16.57	16.64	16.75	16.75	16.79	16.86	15.45	14.56	13.88	13.13	12.38	.....
17	16.65	16.65	16.73	16.77	16.79	16.87	15.41	14.52	13.90	13.10	12.39	.....
18	16.59	16.68	16.77	16.79	16.76	16.86	15.37	14.51	13.84	13.07	12.38	.....
19	16.59	16.71	16.79	16.81	16.75	16.85	15.36	14.47	13.79	13.04	12.36	.....
20	16.51	16.70	16.76	16.79	16.75	16.82	15.33	14.47	13.79	13.03	12.34	11.65
21	16.55	16.63	16.75	16.79	16.80	16.89	15.26	14.46	13.72	13.02	12.33	11.61
22	16.59	16.64	16.76	16.82	16.80	16.88	15.23	14.41	13.69	13.02	12.29	11.61
23	16.58	16.67	16.76	16.82	16.81	16.86	15.22	14.40	13.72	12.97	12.23	11.57
24	16.57	16.68	16.72	16.78	16.79	16.85	15.21	14.37	13.68	12.99	12.17	11.58
25	16.56	16.69	16.68	16.80	16.76	16.86	15.16	14.34	13.65	12.95	12.18	11.56
26	16.56	16.71	16.75	16.79	16.77	16.89	15.13	14.33	13.64	12.90	12.19	11.49
27	16.57	16.72	16.79	16.77	16.81	16.88	15.08	14.32	13.63	12.87	12.19	11.47
28	16.58	16.75	16.78	16.81	16.78	16.89	15.04	14.29	13.60	12.85	12.14	.....
29	16.61		16.77	16.81	16.78	16.90	15.02	14.27	13.54	.....	12.14	.....
30	16.60		16.78	16.78	16.79	16.64	15.00	14.27	13.51	.....	12.11	11.47
31	16.61		16.80		16.80		14.96	14.22	.....	.....		11.44

K539 (\*906, p. 120; 936, p. 146; 944, p. 128; 986, p. 151; 1016, p. 182; 1023, p. 216; 1071, p. 239). New York City Department of Water Supply, Gas and Electricity, Atlantic Avenue and Logan Street, Brooklyn.

Water level, in feet below mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	3.17	June 30	3.16	Aug. 13	3.37	Oct. 14	3.56
Mar. 5	3.26	July 3	3.15	27	3.43	31	3.61
Apr. 4	3.34	7	3.15	Sept. 15	3.50	Nov. 20	3.50
May 6	3.16	16	3.23	29	3.43	26	3.42
26	3.15	23	3.28	Oct. 6	3.56	Dec. 16	3.33
June 24	3.15	30	3.30				

K889 (\*1071, p. 240). Finest Steam Laundry, 199 Bogart Street, Brooklyn. Measuring point raised 4.42 feet to 20.81 feet above mean sea level on Mar. 22, 1947.

Water level, in feet below mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 30	36.69	July 23	35.29	Sept. 16	37.00	Oct. 31	37.15
July 1	36.32	30	35.58	30	37.13	Nov. 20	36.87
2	36.46	Aug. 13	36.15	Oct. 7	37.17	26	36.76
7	35.95	27	36.56	14	37.22	Dec. 17	35.93
16	35.21						

K1057 (\*840, p. 260; \*845, p. 309; \*886, p. 487; 906, p. 120; \*936, p. 147; \*944, p. 129; 1016, p. 183; 1023, p. 216; 1071, p. 240). U. S. Navy, Floyd Bennett Airport, Barren Island. Water levels are affected by tidal fluctuations.

Mean daily water level, in feet above mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	8.6	8.5	8.6	8.6	9.3	9.3	8.8	7.7	7.2	...	8.5	8.1
2	9.0	8.6	9.4	8.8	9.7	9.4	8.7	7.6	7.4	...	8.2	8.1
3	8.9	8.4	9.1	9.0	9.6	9.5	8.6	7.7	7.2	...	8.1	8.1
4	8.7	8.9	8.4	8.8	9.7	9.3	8.7	7.7	7.1	...	8.6	8.0
5	8.6	8.9	8.4	9.0	9.7	9.2	8.7	7.7	7.2	7.1	8.5	8.2
6	8.6	8.7	8.3	9.1	...	9.3	8.5	7.7	7.2	7.2	8.4	8.1
7	8.9	9.0	8.6	8.8	...	9.3	8.6	7.7	7.1	7.1	8.3	8.3
8	8.5	9.0	8.7	8.7	...	9.7	8.6	7.7	7.0	7.3	8.7	8.5
9	8.3	8.3	8.8	9.0	...	9.5	8.4	7.5	7.0	7.4	8.2	7.9
10	8.4	7.8	8.7	8.8	...	9.4	8.2	7.5	7.0	7.4	7.9	8.1
11	8.6	7.9	8.6	8.8	9.0	9.3	8.1	7.4	6.9	7.4	8.3	8.4
12	8.7	8.0	8.6	8.8	9.2	9.2	8.1	7.3	7.0	7.4	8.4	8.3
13	8.8	8.1	8.5	8.7	9.3	9.1	8.0	7.2	7.0	7.5	7.8	8.3
14	9.1	8.4	9.0	9.0	9.6	9.3	8.1	7.2	7.2	7.6	7.9	8.2
15	9.1	8.7	8.8	9.0	9.5	9.3	8.2	7.2	7.3	7.5	8.2	8.3
16	9.0	8.8	8.9	9.3	9.4	9.2	8.0	7.2	7.1	7.5	8.4	8.7
17	8.6	8.8	8.9	9.3	9.3	9.2	8.1	7.4	6.9	7.5	8.0	7.8
18	8.5	9.1	8.6	9.2	9.5	9.1	8.1	7.3	6.8	7.6	7.9	7.7
19	8.6	8.6	8.5	9.0	9.5	9.0	8.1	7.3	6.8	7.8	8.1	7.9
20	9.5	8.7	8.7	9.2	9.6	9.0	8.0	7.2	7.2	7.8	8.1	8.2
21	9.0	9.3	9.1	9.5	9.6	9.0	8.1	7.4	7.3	7.7	8.0	8.4
22	8.1	8.5	9.2	9.5	9.5	8.8	8.2	7.2	7.3	7.6	8.1	8.4
23	8.4	8.4	9.0	9.1	9.4	8.9	7.9	7.1	7.0	7.5	8.4	8.7
24	8.8	8.6	9.1	9.1	9.4	9.0	7.6	7.1	...	7.4	8.7	8.5
25	8.9	8.6	9.5	9.0	9.6	8.9	7.5	7.2	...	7.4	8.4	8.6
26	9.1	8.5	8.7	9.3	9.6	8.8	7.6	7.2	...	7.4	8.3	9.1
27	9.3	8.4	8.3	9.3	9.4	8.8	7.7	7.2	...	7.6	8.2	8.8
28	9.2	8.4	8.7	9.1	9.5	8.8	7.8	7.2	...	7.7	8.2	...
29	8.9		9.0	9.1	9.5	8.8	7.9	7.1	...	7.9	8.1	...
30	9.1		8.5	9.3	9.5	8.7	7.8	7.1	...	8.1	8.1	a8.1
31	8.9		8.5		9.4		7.8	7.2		8.5		a8.4

a Estimated.

K1141 (\*840, p. 262; \*845, p. 311; 886, p. 488; 906, p. 122; 1071, p. 240). New York City Department of Water Supply, Gas and Electricity. Avenue D and Remsen Avenue, Brooklyn.

Water level, in feet below mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	7.52	July 1	7.76	Aug. 14	7.04	Oct. 20	6.37
Mar. 5	7.50	2	7.74	27	6.88	29	6.27
Apr. 3	7.40	7	7.31	Sept. 16	6.79	Nov. 20	5.62
May 7	7.15	16	7.17	29	6.54	26	5.62
27	7.23	22	7.23	Oct. 6	6.47	Dec. 17	5.57
June 24	7.32	30	7.14	14	6.42		

K1173 (\*1071, p. 241). Rugby Can Co. 5819 Foster Ave., Brooklyn.

Water level, in feet below mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	6.28	July 1	5.81	Aug. 13	6.16	Oct. 20	5.87
Mar. 14	3.60	2	5.99	27	6.18	29	5.68
Apr. 3	3.69	7	6.14	Sept. 16	6.16	Nov. 20	4.99
May 7	4.28	16	6.21	29	5.85	26	5.03
27	4.87	22	6.21	Oct. 6	5.80	Dec. 17	5.06
June 24	5.40	30	6.62	14	5.81		

K1194 (\*906, p. 122; \*936, p. 148; 944, p. 130; 986, p. 152; 1071, p. 241). New York City Department of Water Supply, Gas and Electricity. Atlantic and Nichols Avenues, Brooklyn.

K1194--Continued.

Water level, in feet below mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	2.99	June 30	3.04	Aug. 13	3.36	Oct. 14	3.60
Mar. 5	3.09	July 2	3.05	27	3.45	31	3.64
Apr. 4	3.08	7	3.06	Sept. 15	3.54	Nov. 20	3.51
May 6	2.99	16	3.17	29	3.59	26	3.47
26	2.97	23	3.22	Oct. 6	3.62	Dec. 16	3.43
June 24	3.05	30	3.26				

K1198 (\*906, p. 122; 936, p. 148; 944, p. 130; 986, p. 152; 1016, p. 183; 1023, p. 216; 1071, p. 241). New York City Department of Water Supply, Gas and Electricity. Cleveland and Fulton Streets, Brooklyn.

Water level, in feet below mean sea level, 1947

Jan. 27	4.92	June 30	5.03	Aug. 13	5.24	Oct. 14	5.34
Mar. 5	4.92	July 2	5.00	27	5.29	31	5.33
Apr. 4	5.15	7	5.06	Sept. 15	5.33	Nov. 20	5.19
May 6	5.03	16	5.13	29	5.30	26	5.10
29	5.01	23	5.18	Oct. 6	5.37	Dec. 16	5.00
June 24	5.05	30	5.18				

K1199 (\*906, p. 123; 936, p. 149; 944, p. 131; 986, p. 152; 1016, p. 216; 1071, p. 241). New York City Department of Water Supply, Gas and Electricity. Jefferson and Howard Avenues, Brooklyn.

Water level, in feet below mean sea level, 1947

Jan. 27	15.22	June 30	15.35	Aug. 13	15.32	Oct. 14	15.11
Mar. 5	15.29	July 2	15.28	27	15.30	31	14.99
Apr. 4	15.34	7	15.33	Sept. 15	15.23	Nov. 20	14.65
May 7	15.26	16	15.36	30	15.16	26	14.84
29	15.28	23	15.38	Oct. 7	15.16	Dec. 16	14.51
June 24	15.35	30	15.33				

K1235 (\*936, p. 149; 944, p. 131; 986, p. 153; 1016, p. 183; 1023, p. 216; 1071, p. 241). New York City Department of Water Supply, Gas and Electricity. Fulton Street and Pennsylvania Avenue, Brooklyn.

Water level, in feet below mean sea level, 1947

Jan. 27	7.96	June 30	8.52	Aug. 13	8.81	Oct. 14	8.67
Mar. 14	8.39	July 2	8.67	27	8.64	31	8.60
Apr. 4	7.82	7	8.57	Sept. 15	8.64	Nov. 20	7.90
May 6	8.49	16	8.77	29	8.12	26	8.59
29	8.27	23	8.66	Oct. 6	8.42	Dec. 16	7.65
June 24	8.16	30	8.75				

K1236 (\*936, p. 149; 944, p. 131; 986, p. 153; 1016, p. 184; 1023, p. 216; 1071, p. 241). New York City Department of Water Supply, Gas and Electricity. Lexington and Patchen Avenues, Brooklyn.

Water level, in feet below mean sea level, 1947

Jan. 27	18.21	June 30	18.25	Aug. 13	18.21	Oct. 14	18.02
Mar. 5	18.06	July 2	18.11	27	18.07	31	17.83
Apr. 4	18.19	7	18.20	Sept. 15	18.13	Nov. 20	17.09
May 7	18.29	16	18.24	30	17.57	26	17.69
29	18.23	23	18.18	Oct. 7	18.02	Dec. 16	17.14
June 24	18.21	30	18.23				

K1237 (\*936, p. 150; 944, p. 131; 986, p. 153; 1016, p. 184; 1023, p. 217; 1071, p. 242). Department of Water Supply, Gas and Electricity. Delmonico Place and Hopkins Street, Brooklyn.

Water level, in feet below mean sea level, 1947

Jan. 24	36.53	June 30	35.86	July 30	36.02	Oct. 14	35.59
Mar. 5	36.15	July 1	35.87	Aug. 13	35.09	31	35.61
Apr. 4	36.47	2	35.88	27	35.57	Nov. 20	34.93
May 7	36.42	7	35.75	Sept. 15	35.68	26	34.98
27	36.12	16	35.87	30	35.23	Dec. 16	34.56
June 24	35.81	23	35.92	Oct. 7	35.47		

K1263 (\*936, p. 150; 944, p. 132; 986, p. 153; 1016, p. 184; 1023, p. 217; 1071, p. 242). New York City Department of Water Supply, Gas and Electricity. East 16th Street and Cortelyou Road, Brooklyn.

Water level, in feet below mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	10.35	June 30	10.49	July 31	9.71	Oct. 13	7.15
Mar. 5	10.46	July 1	10.48	Aug. 14	9.18	30	6.73
Apr. 4	10.49	2	10.46	27	8.73	Nov. 19	6.13
May. 7	10.33	7	10.31	Sept. 15	8.18	26	5.93
27	10.34	16	10.15	29	7.63	Dec. 16	5.60
June 24	10.49	22	9.97	Oct. 7	7.33		

K1264 (\*936, p. 151; 944, p. 132; 986, p. 153; 1016, p. 185; 1023, p. 217; 1071, p. 242). New York City Department of Water Supply, Gas and Electricity. East 37th Street and Snyder Avenue, Brooklyn.

Water level, in feet below mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	15.39	June 30	15.39	July 31	13.67	Oct. 13	10.81
Mar. 5	15.50	July 1	15.29	Aug. 14	13.00	20	10.61
Apr. 3	15.56	2	15.20	27	12.44	29	10.38
May 7	15.56	7	14.89	Sept. 15	12.02	Nov. 19	9.76
27	15.50	16	14.66	29	11.27	26	9.39
June 24	15.48	22	14.11	Oct. 6	11.02	Dec. 18	9.18

K1265 (\*936, p. 151; 944, p. 132; 986, p. 154; 1016, p. 185; 1023, p. 217; 1071, p. 242). New York City Department of Water Supply, Gas and Electricity. Riverdale Avenue and Thatford Street, Brooklyn.

Water level, in feet below mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	9.64	July 1	9.86	Aug. 14	9.76	Oct. 14	9.32
Mar. 14	9.75	2	9.88	27	9.62	31	9.10
Apr. 3	9.82	7	9.92	Sept. 16	9.49	Nov. 20	8.82
May 7	9.68	16	10.03	30	9.36	26	8.80
27	9.65	23	10.08	Oct. 7	9.30	Dec. 17	8.70
June 24	9.79	30	9.86				

K1266 (\*936, p. 152; 944, p. 133; 986, p. 154; 1016, p. 185; 1023, p. 217; 1071, p. 242). New York City Department of Water Supply, Gas and Electricity. Vermont Street and Livonia Avenue, Brooklyn.

Water level, in feet below mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	5.18	July 1	5.11	Aug. 14	5.36	Oct. 14	5.34
Mar. 5	4.85	2	5.12	27	5.26	31	5.36
Apr. 3	5.29	7	5.16	Sept. 16	5.27	Nov. 20	5.07
May 6	5.08	16	5.22	30	5.33	26	5.04
27	5.06	23	5.27	Oct. 7	5.36	Dec. 17	4.92
June 24	5.14	30	5.30				

K1296 (\*936, p. 152; 944, p. 133; 986, p. 154; 1016, p. 185; 1023, p. 217; 1071, p. 242). New York City Department of Water Supply, Gas and Electricity. Blake Avenue and Crystal Street, Brooklyn.

Water level, in feet below mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	1.34	July 1	1.01	Aug. 14	1.45	Oct. 14	1.63
Mar. 5	1.33	2	1.02	27	1.43	31	1.75
Apr. 3	1.34	7	1.04	Sept. 16	1.43	Nov. 20	1.05
May 6	.95	16	1.10	30	1.32	26	1.04
27	.94	23	1.25	Oct. 7	1.58	Dec. 17	.99
June 24	.99	30	1.28				

K1347 (\*986, p. 154; 1016, p. 186; 1023, p. 217; 1071, p. 242). R. K. O. Albee Theater. DeKalb Avenue and Fulton Street, Brooklyn.

Water level, in feet below mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	22.03	Feb. 1	21.91	Mar. 1	21.78	Mar. 29	21.57
11	21.97	8	21.86	8	21.70	Apr. 5	21.59
18	21.94	15	21.85	15	21.67	12	21.41
25	21.95	22	21.62	22	21.63	19	21.27

K1347--Continued.

Water level, in feet below mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 26	21.21	June 13	22.27	July 16	23.68	Oct. 7	22.35
May 3	21.23	20	21.95	23	23.26	14	22.21
10	21.32	24	22.02	30	23.73	31	22.00
17	21.21	30	21.43	Aug. 13	23.62	Nov. 19	21.93
23	21.11	July 1	23.24	27	23.62	26	21.97
29	22.27	2	22.50	Sept. 15	23.13	Dec. 16	21.85
June 6	21.54	7	22.48	30	23.25		

K1479. New York Water Service Corporation, Foster Avenue and New York Avenue, Brooklyn. Abandoned drilled public-supply well No. 138 in well field, diameter 8 inches, depth 60 feet. Measuring point, hole in wooden shelf of recorder shelter, 22.48 feet above mean sea level, and 3.5 feet above land-surface datum. First measured by Geological Survey on Dec. 7, 1946.

Mean daily water level, in feet below mean sea level, 1946  
(From recorder charts)

Dec. 7	10.40	Dec. 14	10.44	Dec. 20	10.50	Dec. 26	10.55
8	10.39	15	10.45	21	10.51	27	10.56
9	10.39	16	10.46	22	10.51	28	10.55
10	10.41	17	10.47	23	10.52	29	10.55
11	10.42	18	10.48	24	10.53	30	10.57
12	10.43	19	10.49	25	10.50	31	10.58
13	10.43						

Mean daily water level, in feet below mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	10.58	10.71	10.79	10.75	.....	10.40	9.42	7.65	6.84	6.17	5.52	4.85
2	10.58	10.71	10.78	10.74	.....	10.40	9.22	7.63	6.81	6.14	5.50	4.83
3	10.58	10.71	10.72	10.74	10.6	10.40	9.12	7.60	6.79	6.13	5.48	4.80
4	10.58	10.71	10.71	10.74	.....	10.40	9.02	7.58	6.77	6.11	5.44	4.78
5	.....	10.71	10.72	10.72	.....	10.40	8.92	7.55	6.74	6.09	5.39	4.74
6	.....	10.73	10.73	10.67	.....	10.40	8.84	7.52	6.73	6.07	5.37	4.73
7	.....	10.73	10.74	10.66	.....	10.40	8.76	7.50	6.70	6.06	5.37	4.70
8	.....	10.74	10.75	10.66	.....	10.39	8.69	7.47	6.68	6.01	5.34	4.66
9	.....	10.74	10.75	10.65	.....	10.39	8.63	7.44	6.65	6.00	5.31	4.66
10	.....	10.75	10.75	10.67	10.6	10.39	8.57	7.42	6.63	5.99	5.28	4.64
11	10.64	10.75	10.75	10.66	.....	10.38	8.51	7.40	6.61	5.97	5.25	4.62
12	10.64	10.75	10.75	10.66	.....	10.38	8.45	7.37	6.58	5.96	5.17	4.60
13	10.64	10.75	10.75	10.66	.....	10.38	8.40	7.34	6.56	5.93	5.11	4.59
14	10.64	10.75	10.75	10.65	.....	10.38	8.35	7.31	6.54	5.91	5.11	4.57
15	10.65	10.75	10.76	10.64	.....	10.38	8.31	7.28	6.52	5.85	5.09	4.55
16	10.65	10.75	10.76	10.63	.....	10.38	8.26	7.28	6.49	5.59	5.08	4.51
17	10.66	10.75	10.75	10.63	10.5	10.38	8.20	7.21	6.49	5.65	5.08	4.52
18	10.67	10.75	10.75	10.63	.....	10.38	8.15	7.22	6.46	5.69	5.07	4.48
19	10.67	10.76	10.75	.....	.....	10.38	8.11	7.18	6.43	5.70	5.07	4.47
20	10.66	10.76	10.75	10.60	.....	10.39	8.07	7.16	6.41	5.69	5.06	4.45
21	10.67	10.78	10.75	.....	.....	10.40	8.02	7.14	6.37	5.69	5.05	4.42
22	10.68	10.77	10.76	.....	.....	10.40	7.98	7.11	6.34	5.69	5.03	4.39
23	10.68	10.76	10.75	.....	.....	10.40	7.91	7.08	6.34	5.66	4.99	4.36
24	10.68	10.76	10.74	.....	10.4	10.39	7.87	7.05	6.31	5.68	4.96	4.36
25	10.69	10.77	10.74	.....	.....	10.39	7.85	7.01	6.29	5.64	4.93	4.34
26	10.68	10.78	10.75	10.60	.....	10.40	7.83	6.99	6.28	5.62	4.93	4.29
27	10.68	10.79	10.75	.....	10.40	10.40	7.79	6.97	6.26	5.60	4.92	4.27
28	10.69	10.79	10.75	.....	10.41	10.40	7.76	6.94	6.24	5.59	4.90	....
29	10.70		10.75	.....	10.41	10.40	7.73	6.92	6.21	5.56	4.88	4.22
30	10.70		10.75	.....	10.40	9.92	7.70	6.89	6.18	5.54	4.87	4.20
31	10.71		10.75		10.40		7.67	6.87		5.53		4.18

K1495 (\*1071, p. 243). New York City Department of Water Supply, Gas and Electricity, Avenue S and E 16th Street, Brooklyn.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	1.83	June 24	2.35	July 30	2.04	Oct. 6	1.90
24	1.82	July 1	2.20	Aug. 13	1.80	14	1.86
Mar. 5	1.98	2	2.15	27	1.87	Nov. 19	2.60
Apr. 4	2.08	7	1.98	Sept. 15	1.91	26	2.70
May 7	2.16	16	1.88	30	2.06	Dec. 17	2.79
27	2.16	22	1.99				

K1511. New York Water Service Corporation, 517 Utica Avenue, Brooklyn. Abandoned drilled public-supply well, diameter 12 inches, depth 225 feet. Measuring point, hole in wooden shelf of recorder shelter, 29.89 feet above mean sea level prior to Nov. 8, 1947, and 29.69 feet above mean sea level thereafter. Land-surface datum 35 feet above mean sea level. First measured by Geological Survey on Oct. 24, 1946.

Mean daily water level, in feet below mean sea level, 1946

(From recorder charts)

Oct. 24	19.85	Nov. 8	19.89	Nov. 23	19.93	Dec. 18	20.02
25	19.84	9	19.90	30	19.97	19	20.02
26	19.86	10	19.91	Dec. 5	19.98	20	20.02
27	19.87	11	19.91	6	19.99	21	20.01
28	19.88	12	19.92	7	20.00	22	20.03
29	19.88	13	19.92	8	20.01	23	20.03
30	19.87	14	19.92	9	20.01	24	20.03
31	19.87	15	19.93	10	20.00	25	20.04
Nov. 1	19.88	16	19.94	11	20.01	26	20.04
2	19.88	17	19.94	12	20.00	27	20.05
3	19.88	18	19.95	13	20.00	28	20.04
4	19.89	19	19.94	14	20.01	29	20.04
5	19.89	20	19.93	15	20.01	30	20.06
6	19.89	21	19.93	16	20.02	31	20.06
7	19.89	22	19.91	17	20.02		

Mean daily water level, in feet below mean sea level, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	20.07	20.11	20.23	20.30	20.29	20.26	20.25	18.31	16.95	15.98	14.47	13.51
2	20.06	20.12	20.22	20.30	20.29	20.26	20.19	18.27	16.90	15.94	14.46	13.50
3	20.06	20.12	20.23	20.31	20.29	20.26	20.12	18.22	16.87	15.89	14.45	13.51
4	20.08	20.11	20.24	20.32	20.29	20.26	20.06	18.17	16.84	15.82	14.39	13.56
5	20.08	20.11	20.24	20.32	20.28	20.26	19.98	18.11	16.81	15.74	14.33	13.55
6	20.08	20.12	20.25	20.33	20.28	20.25	19.91	18.06	16.78	15.66	14.32	13.59
7	20.09	20.12	20.25	20.33	20.28	20.25	19.83	18.02	16.75	15.57	14.31	.....
8	20.10	20.13	20.25	20.33	20.28	20.24	19.75	17.96	16.72	15.50	14.31	13.55
9	20.11	20.13	20.25	20.32	20.28	20.24	19.70	17.92	16.70	15.43	14.31	13.63
10	20.11	20.14	20.26	20.32	20.29	20.23	19.63	17.88	16.67	15.37	14.29	13.63
11	20.11	20.14	20.26	20.32	20.29	20.23	19.56	17.83	16.63	15.31	14.25	13.61
12	20.12	20.15	20.26	20.31	20.28	20.24	19.51	17.78	16.59	15.27	14.21	13.62
13	20.13	20.15	20.27	20.32	20.27	20.24	19.44	17.73	16.56	15.20	14.17	13.61
14	20.13	20.16	20.26	20.32	20.27	20.24	19.37	17.69	16.53	15.14	14.13	13.60
15	20.13	20.16	20.27	20.32	20.27	20.25	19.30	17.65	16.50	15.09	14.09	13.58
16	20.13	20.17	20.27	20.31	20.27	20.25	19.24	17.62	16.47	15.04	14.06	13.54
17	20.13	20.18	20.27	20.31	20.28	20.26	19.17	17.58	16.46	14.98	14.03	13.61
18	20.11	20.18	20.27	20.31	20.27	20.27	19.09	17.54	16.43	14.93	13.98	13.56
19	20.10	20.19	20.27	20.31	20.27	20.27	19.03	17.48	16.37	14.89	13.94	13.59
20	20.06	20.19	20.27	20.31	20.27	20.28	18.97	17.44	16.35	14.85	13.90	13.55
21	20.05	20.18	20.27	20.31	20.27	20.28	18.92	17.40	16.31	14.81	13.85	13.51
22	20.05	20.19	20.27	20.31	20.27	20.28	18.85	17.35	16.27	14.78	13.81	13.51
23	20.04	20.20	20.27	20.31	20.28	20.25	18.80	17.31	16.25	14.74	13.75	13.48
24	20.03	20.20	20.27	20.30	20.28	20.29	18.74	17.27	16.20	14.74	13.68	13.50
25	20.03	20.21	20.26	20.30	20.27	20.29	18.70	17.22	16.16	14.71	13.64	.....
26	20.04	20.21	20.28	20.29	20.28	20.30	18.64	17.18	16.14	14.67	13.63	.....
27	20.05	20.22	20.28	20.29	20.27	20.31	18.58	17.15	16.12	14.63	13.61	.....
28	20.06	20.23	20.28	20.29	20.27	20.32	18.52	17.10	16.10	14.59	13.58	.....
29	20.07		20.27	20.29	20.26	20.32	18.48	17.06	16.05	14.55	13.56	13.44
30	20.08		20.28	20.29	20.27	20.31	18.43	17.02	16.01	14.52	13.53	.....
31	20.09		20.29		20.27		18.37	16.98		14.49	.....	.....

a Estimated.

K1591. New York City Department of Water Supply, Gas and Electricity, Blake Avenue and Crystal Street, Brooklyn. Abandoned drilled public-supply well, diameter 6 inches, depth about 150 feet. Measuring point, hole in wooden shelf of recorder shelter, 11.22 feet above mean sea level, and 1.2 feet above land-surface datum. First measured by Geological Survey on June 27, 1947.

Mean daily water level, in feet below mean sea level, 1947  
(From recorder charts)

Day	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	1.44	1.73	1.81	1.94	2.05	1.50
2	....	1.46	1.74	1.77	1.95	2.04	1.59
3	....	1.50	1.75	1.80	1.96	2.02	1.58
4	....	1.50	1.76	1.81	1.98	1.95	1.59
5	....	1.51	1.75	1.81	1.98	1.92	1.56
6	....	1.52	1.76	1.82	1.99	1.92	1.57
7	....	1.53	1.77	1.84	1.99	1.93	1.59
8	....	1.53	1.78	1.85	1.98	1.85	1.54
9	....	1.56	1.79	1.86	2.01	1.87	1.59
10	....	1.58	1.81	1.86	2.02	1.91	1.62
11	....	1.59	1.82	1.86	2.02	1.86	1.60
12	....	1.59	1.81	1.85	2.02	1.75	1.62
13	....	1.60	1.81	1.85	2.01	1.75	1.62
14	....	1.61	1.82	1.86	2.01	1.73	1.63
15	....	1.62	1.82	1.85	2.02	1.69	1.63
16	....	1.61	1.83	1.85	2.03	1.65	1.58
17	....	1.61	1.83	1.88	2.03	1.64	1.67
18	....	1.61	1.82	1.88	2.03	1.65	1.66
19	....	1.60	1.79	1.85	2.03	1.64	1.69
20	....	1.63	1.81	1.86	2.05	1.63	1.70
21	....	1.63	1.82	1.83	a2.06	1.63	1.67
22	....	1.61	1.81	1.81	a2.07	1.63	1.67
23	....	1.65	1.82	1.88	a2.08	1.59	1.65
24	....	1.67	1.82	1.88	a2.08	1.56	1.69
25	....	1.68	1.83	1.88	2.09	1.55	1.71
26	....	1.68	1.81	1.91	2.09	1.58	1.62
27	1.40	1.67	1.82	1.93	2.10	1.61	1.64
28	1.42	1.66	1.80	1.94	2.10	1.59	a1.66
29	1.44	1.68	1.79	1.91	2.07	1.59	1.69
30	1.45	1.70	1.81	1.90	2.07	1.60	1.71
31		1.70	1.78		2.06		1.71

a Estimated.

#### Nassau County

N7 (\*840, p. 263; 845, p. 311; 886, p. 488; \*906, p. 123; \*936, p. 153; 944, p. 133; 986, p. 155; 1016, p. 186; 1023, p. 218; 1071, p. 243). Citizens Water Supply Co. About 130 feet north of Remsen Street and 150 feet west of Corona Avenue, Valley Stream.

Water level at noon, in feet above mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	7.84	7.52	8.39	8.67	9.46	7.99	6.16	4.15	3.55	a5.8	6.99	7.91
2	7.99	7.49	8.73	8.96	9.47	8.00	6.04	4.00	3.78	a5.8	6.99	7.96
3	8.15	7.37	9.04	8.90	9.48	8.07	5.83	3.87	3.83	a5.9	7.09	8.01
4	7.97	7.63	8.83	8.81	9.56	7.75	....	3.79	3.88	5.91	7.36	8.05
5	7.98	7.78	8.76	9.02	9.59	7.66	....	3.76	4.05	6.03	7.49	8.05
6	7.96	7.65	8.69	9.20	9.67	7.74	....	3.70	4.12	6.08	7.51	8.20
7	7.95	7.66	8.59	9.07	9.61	7.71	....	3.66	4.16	6.16	7.42	8.12
8	8.03	7.81	8.59	8.94	9.53	7.69	5.46	3.55	4.23	6.32	7.72	8.39
9	7.88	7.82	8.62	9.03	9.37	7.70	5.09	3.49	4.28	6.33	7.69	8.32
10	7.68	7.86	8.58	8.84	9.22	7.66	4.97	3.37	4.39	6.29	7.56	8.13
11	7.75	7.64	8.51	8.95	9.19	7.62	4.85	3.27	4.52	6.33	7.72	8.22
12	7.71	7.52	8.48	9.05	9.26	7.61	4.82	3.28	4.66	6.31	8.02	8.20
13	7.40	7.56	8.48	8.88	9.43	7.42	4.75	3.34	4.76	6.40	7.84	8.21
14	7.50	7.75	8.91	8.91	9.49	7.43	4.67	3.32	4.81	6.54	7.76	8.23
15	7.62	7.99	8.82	9.04	9.26	7.40	4.61	3.30	4.87	6.55	7.80	8.25
16	7.72	8.11	8.82	9.10	9.23	7.32	4.57	3.20	4.94	6.55	7.95	8.67
17	7.59	8.14	8.91	9.24	9.11	7.21	4.54	3.08	4.74	6.59	7.94	8.35
18	7.68	8.17	8.83	9.20	9.08	7.07	4.61	3.00	4.73	6.69	7.84	8.43

a Estimated.

N7--Continued.

Water level at noon, in feet above mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
19	7.60	8.15	8.70	9.16	8.99	6.98	4.66	3.06	4.93	6.75	7.80	8.22
20	8.01	8.10	8.78	9.16	9.01	6.83	4.58	3.10	4.92	6.78	7.77	8.16
21	8.09	....	8.91	9.16	8.84	6.71	4.54	3.06	5.07	6.79	7.73	8.27
22	7.81	8.7	8.92	9.10	8.76	6.65	4.61	3.18	5.34	6.73	7.72	8.29
23	7.70	....	8.86	9.12	8.60	6.60	4.53	3.22	5.19	6.80	7.96	8.45
24	7.75	....	9.05	9.32	8.53	6.58	4.37	3.25	5.27	6.61	8.08	8.38
25	7.74	8.56	9.42	9.27	8.52	6.59	4.28	3.29	5.43	6.59	8.36	8.30
26	7.67	8.61	9.24	9.32	8.47	6.53	4.26	3.33	5.40	6.70	8.22	8.60
27	7.74	8.60	8.90	9.41	8.38	6.50	4.27	3.26	5.39	6.75	8.07	7.81
28	7.71	8.48	8.88	9.24	....	6.42	4.32	3.21	5.43	6.81	8.03	....
29	7.65	....	8.89	9.25	....	6.33	4.30	3.22	5.58	6.96	8.02	....
30	7.71	....	8.83	9.38	....	6.22	4.26	3.22	5.75	7.01	7.95	....
31	7.75	....	8.68	....	....	....	4.26	3.46	....	7.05	....	8.53

a Estimated.

N9 (#840, p. 264; 845, p. 312; 886, p. 489; #906, p. 124; 936, p. 153; #944, p. 134; 986, p. 156; 1016, p. 187; 1023, p. 218; 1071, p. 244). Citizens Water Supply Co. well Valley Stream 7. West side of Corona Avenue, 650 feet north of Remsen Street, in Valley Stream.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	21.69	Apr. 29	22.10	Aug. 6	21.70	Oct. 25	21.36
Feb. 27	21.68	May 28	22.19	Sept. 9	21.79	Nov. 28	22.08
Mar. 31	21.77	July 2	21.94	Oct. 4	21.57		

N53 (#777, p. 123; #817, p. 201; #840, p. 265; 845, p. 312; 886, p. 489; #906, p. 124; 936, p. 154; 954, p. 134; #986, p. 156; 1016, p. 188; 1023, p. 219; 1071, p. 244). Village of Rockville Center. In basement of municipal power station, Morris and Maple Avenues, Rockville Center.

Water level, in feet above mean sea level, 1947

Jan. 30	12.81	Apr. 29	14.00	Aug. 6	13.59	Oct. 25	12.76
Feb. 27	12.83	May 28	14.17	Sept. 9	13.48	Nov. 28	13.86
Mar. 31	13.23	July 2	13.79	Oct. 4	13.07		

N67 (#777, p. 122; #817, p. 201; #840, p. 266; #845, p. 313; 886, p. 490; 906, p. 125; 936, p. 154; 944, p. 135; 986, p. 157; 1016, p. 188). Village of Freeport. Sunrise Highway about 200 feet west of Long Beach Avenue, Freeport. Measurements resumed. Readings since Dec. 5, 1946, represent about 12-hour static levels.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level
Dec. 5, 1946	15.51	June 2, 1947	15.04	Oct. 7, 1947	12.80
Jan. 29, 1947	15.04	Aug. 5	11.41	Nov. 12	14.66
Mar. 31	15.09	Sept. 9	11.26	28	14.90
Apr. 29	15.54				

N157 (#777, p. 122; #817, p. 201; #840, p. 267; 845, p. 314; 886, p. 491; #906, p. 125; 936, p. 155; 944, p. 135; 986, p. 158; 1016, p. 189; #1023, p. 219; 1071, p. 244). J. N. Hill. About 0.4 mile south of Cedar Swamp Road and 450 feet west of Wheatley Road, Wheatley Hills,

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 4	85.94	June 2	85.41	Sept. 10	84.88	Nov. 1	84.48
Apr. 4	85.59	July 7	85.19	Oct. 6	84.82	Dec. 6	84.44
30	85.73	Aug. 6	85.05				



N180 (#1071, p. 244). New York City Department of Water Supply, Gas and Electricity. On northeast corner of Condit Street and Seamens Neck Road, Seaford.

Water level at noon, in feet above mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	18.18	18.45	18.26	18.42	19.39	19.73	19.60	19.37	18.90	18.60	18.63	19.13
2	18.41	18.45	18.54	18.63	19.43	19.77	19.56	19.32	19.00	18.61	18.63	19.13
3	18.48	18.39	18.64	18.58	19.44	19.82	19.48	19.29	18.88	18.52	18.64	19.15
4	18.35	18.62	18.46	18.60	19.55	19.65	19.48	19.28	18.86	18.54	18.77	19.08
5	18.41	.....	18.46	18.80	19.54	19.70	19.46	19.28	18.88	18.52	18.78	19.20
6	18.35	.....	18.43	18.94	19.57	19.79	19.44	19.26	18.83	18.48	18.70	19.13
7	18.43	18.54	18.47	18.92	19.55	19.72	19.45	19.28	18.81	18.47	18.63	19.10
8	18.41	18.66	18.54	18.94	19.51	19.83	19.47	19.23	18.80	18.52	18.91	19.27
9	18.26	.....	18.55	19.12	19.43	19.83	19.40	19.21	18.75	18.46	18.76	19.08
10	18.19	18.41	18.53	19.05	19.38	19.78	19.45	19.11	18.75	18.46	18.59	18.98
11	18.34	18.23	18.49	19.20	19.41	19.77	19.43	19.07	18.74	18.49	18.66	19.07
12	18.27	18.20	18.50	19.24	19.49	19.77	19.45	19.08	18.75	18.45	19.00	19.07
13	18.17	18.25	18.54	19.12	19.57	19.67	19.40	19.08	18.73	18.50	18.90	19.07
14	18.35	18.34	18.82	19.23	19.55	19.76	19.36	19.07	18.73	18.48	18.98	19.07
15	18.45	18.44	18.65	19.28	19.54	19.74	19.47	19.05	18.75	18.42	19.11	19.05
16	18.47	18.48	18.65	19.32	19.62	19.69	19.55	19.00	18.72	18.40	19.23	19.25
17	18.31	18.41	18.68	19.33	19.60	19.65	19.61	19.01	18.61	18.40	19.15	18.98
18	18.36	18.43	18.57	19.30	19.71	19.65	19.64	19.07	18.64	18.41	19.08	19.04
19	18.25	18.37	18.51	19.23	19.67	19.68	19.65	19.11	18.76	18.41	19.09	18.87
20	18.58	18.40	18.59	19.27	19.77	19.62	19.59	19.07	18.66	18.39	19.13	18.89
21	18.51	.....	18.64	19.28	19.73	19.63	19.58	19.05	18.77	18.36	19.12	18.98
22	18.54	.....	18.64	19.30	19.75	19.66	19.64	19.06	18.82	18.29	19.16	18.92
23	18.24	18.41	18.64	19.32	19.74	19.64	19.58	18.99	18.65	18.34	19.30	19.07
24	18.36	18.41	18.72	19.40	19.74	19.69	19.49	18.98	18.66	18.17	19.34	18.96
25	18.43	18.41	18.88	19.29	19.79	19.71	19.46	18.98	18.74	18.26	19.40	18.99
26	18.46	18.38	18.63	19.28	19.76	19.67	19.47	18.96	18.67	18.29	19.27	19.26
27	18.50	18.34	18.43	19.34	19.74	19.65	19.47	18.94	18.61	18.29	19.17	19.21
28	18.51	18.26	18.47	19.19	19.78	19.69	19.51	18.97	18.61	18.31	19.23	.....
29	18.50	.....	18.52	19.24	19.82	19.58	19.47	18.92	18.70	18.48	19.19	.....
30	18.55	.....	18.46	19.33	19.78	19.59	19.44	18.88	18.74	18.51	19.14	.....
31	18.54	.....	18.39	.....	19.74	.....	19.47	18.96	.....	18.61	.....	.....

N511. Irving Cox Estate. 1,000 feet west of Horseshoe Road, half a mile north of Clefts Road, Mill Neck. Abandoned drilled domestic supply well, diameter 3 inches, depth 330 feet. Measuring point, square cut on concrete rim of overflow basin, 12.18 feet above mean sea level. Land-surface datum 7 feet above mean sea level. Water levels are affected by tidal fluctuation. Measurements made at or near high tide. First measured by Geological Survey Jan. 9, 1947.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	19.95	Mar. 29	20.78	July 14	19.68	Sept. 27	19.70
Feb. 7	21.22	May 2	20.73	Aug. 6	19.23	Nov. 3	20.42
Mar. 10	20.10	June 4	20.18	Sept. 12	19.68	Dec. 3	20.32

N575. Frederick Loeser & Co. 833 Franklin Avenue, Garden City. Abandoned drilled well, diameter 14 inches, depth 572 feet. Measuring point, top of casing, 78.27 feet above mean sea level. Water levels affected by pumpage in vicinity. First measured by Geological Survey Nov. 30, 1946.

Water level, in feet above mean sea level, 1946-47

Date	Water level	Date	Water level	Date	Water level
Nov. 30, 1946	57.89	Jan. 18, 1947	57.20	Mar. 15, 1947	57.10
Dec. 7	55.95	25	56.98	22	57.18
14	56.60	Feb. 1	57.14	29	57.18
21	55.88	8	55.40	Apr. 5	56.20
28	56.11	15	55.61	12	56.04
Jan. 4, 1947	57.15	Mar. 1	56.87	19	55.69
11	57.30	8	57.21	26	56.42

N575--Continued.

Water level, in feet above mean sea level, 1946-47

Date	Water level	Date	Water level	Date	Water level
May 3, 1947	58.24	July 3, 1947	55.52	Aug. 29, 1947	57.17
10	58.24	8	55.85	Sept. 5	56.99
17	58.27	11	57.64	12	55.30
24	57.49	18	58.22	19	55.90
31	57.02	25	57.69	27	55.65
June 7	57.45	Aug. 1	55.35	Oct. 4	56.77
14	57.65	8	56.13	Nov. 1	55.48
20	58.21	15	54.97	Dec. 6	56.02
27	55.98	22	57.10	31	55.25

N657 (\*1071, p. 245). Town of North Hempstead, West Shore Road, Bar Beach. Water levels affected by tidal fluctuations. Measuring point raised 2.22 feet to 18.04 feet above mean sea level on Nov. 11, 1947.

Mean daily water level, in feet above mean sea level, 1947  
(From recorder charts after Nov. 11)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	13.84	May 29	14.18	Oct. 3	13.57	Nov. 30	14.1
18	13.63	June 6	14.07	Nov. 11	13.3	Dec. 1	14.0
24	13.43	12	14.35	12	13.0	2	14.0
30	13.97	20	13.98	16	13.4	7	14.1
Feb. 13	13.43	26	13.69	17	13.5	8	14.3
27	13.33	July 4	13.20	18	14.2	9	13.7
Mar. 6	13.75	10	13.38	19	14.3	10	14.2
13	13.61	17	13.48	20	14.3	11	14.3
20	13.91	24	13.69	21	14.1	12	14.1
27	13.46	29	13.35	22	14.3	14	14.1
Apr. 3	14.24	Aug. 7	13.26	23	14.4	21	14.1
10	13.84	14	13.19	24	14.6	22	14.1
18	13.93	21	13.52	25	14.1	23	14.5
25	14.00	28	13.58	26	14.3	27	14.3
May 2	14.50	Sept. 4	13.68	27	14.2	28	14.0
8	14.00	12	12.95	28	14.2	30	13.8
16	14.21	19	13.35	29	14.0	31	14.1
23	14.04	26	13.21				

N844 (\*906, p. 126; 936, p. 155; \*944, p. 136; 986, p. 158; 1016, p. 190; 1023, p. 219; 1071, p. 246). Long Island Railroad. Jerusalem Avenue, about 110 feet north of railroad tracks, Hicksville.

Water level, in feet above mean sea level, 1947

Jan. 31	81.73	Apr. 30	80.98	Aug. 7	80.73	Nov. 1	80.06
Feb. 28	81.41	June 2	81.01	Sept. 9	80.52	Dec. 6	80.03
Apr. 7	81.04	July 7	80.86	27	80.42		

N1102 (\*886, p. 491; 906, p. 128; 936, p. 156; 944, p. 137; 986, p. 159; 1016, p. 191; 1023, p. 219; 1071, p. 246). Nassau County Department of Public Works. Willets and Valley Roads, Lake Success.

Water level, in feet above mean sea level, 1947

Jan. 28	57.57	Apr. 29	57.32	Aug. 6	57.02	Oct. 25	56.62
Feb. 27	57.48	May 28	57.36	Sept. 9	56.81	Dec. 6	56.47
Mar. 31	57.17	July 2	57.21	Oct. 7	56.76	26	56.80

N1103 (\*886, p. 493; 906, p. 128; 936, p. 156; 944, p. 137; 986, p. 160; 1016, p. 191; 1023, p. 219; 1071, p. 246). Nassau County Department of Public Works. North side of Marcus Avenue and 253 feet east of Lakeville Road, Lake Success. Elevation of measuring point raised to 145.57 feet on Feb. 2, 1946.

Water level, in feet above mean sea level, 1947

Jan. 28	59.17	Apr. 29	58.72	Aug. 6	57.30	Oct. 25	58.02
Feb. 27	59.02	May 28	58.47	Sept. 9	58.35	Dec. 6	58.09
Mar. 31	58.74	July 2	58.39	27	57.07	26	58.15

N1104 (\*886, p. 493; 906, p. 128; 936, p. 156; 944, p. 137; 986, p. 160; 1016, p. 191; 1023, p. 220; 1071, p. 246). Nassau County Department of Public Works. Rhodes Street and 80th Avenue, New Hyde Park.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	58.99	Apr. 29	58.15	Aug. 6	58.87	Oct. 25	58.01
Feb. 27	58.82	May 28	58.48	Sept. 9	58.56	Dec. 6	57.70
Mar. 31	58.30	July 2	58.98	27	58.40	26	57.49

N1105 (\*886, p. 493; 906, p. 128; 936, p. 156; 944, p. 137; 986, p. 160; 1016, p. 191; 1023, p. 220; 1071, p. 246). Nassau County Department of Public Works. Emerson and Whittier Avenues, New Hyde Park.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	55.85	Apr. 29	55.19	Aug. 6	55.54	Oct. 25	54.67
Feb. 27	55.55	May 28	55.62	Sept. 9	55.18	Dec. 6	54.57
Mar. 31	55.05	July 2	55.93	Oct. 4	54.96	26	54.48

N1107 (\*886, p. 493; 906, p. 128; 936, p. 157; 944, p. 138; 986, p. 160; 1016, p. 192; 1023, p. 220; 1071, p. 247). Nassau County Department of Public Works. Bertha Street and Kingston Avenue, South Floral Park.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	43.68	Apr. 29	44.37	Aug. 6	43.93	Oct. 25	43.15
Feb. 27	43.53	May 28	44.57	Sept. 9	43.52	Dec. 6	43.79
Mar. 31	43.55	July 2	44.36	Oct. 4	43.35		

N1108 (\*886, p. 492; 906, p. 128; 936, p. 157; 944, p. 138; 986, p. 161; 1016, p. 192; 1023, p. 220; 1071, p. 247). Nassau County Department of Public Works. Jacob Street and Rosalind Avenue, Elmont.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	38.47	Apr. 29	39.11	Aug. 6	39.47	Oct. 25	38.33
Feb. 27	38.35	May 28	39.41	Sept. 9	39.37	Nov. 28	38.54
Mar. 31	38.53	July 2	39.58	Oct. 4	38.34		

N1109 (\*886, p. 492; 906, p. 128; 936, p. 157; 944, p. 138; 986, p. 161; 1016, p. 192; 1023, p. 220; 1071, p. 247). Nassau County Department of Public Works. Dutch Broadway and Henry Street, Elmont.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	26.46	Apr. 29	27.35	Aug. 6	27.09	Oct. 25	26.05
Feb. 27	26.36	May 28	27.31	Sept. 9	26.98	Nov. 28	26.86
Mar. 31	26.65	July 2	27.26	Oct. 4	26.45		

N1110 (\*886, p. 492; 906, p. 128; 936, p. 157; 944, p. 138; 986, p. 161; 1016, p. 193; 1023, p. 220; 1071, p. 247). Nassau County Department of Public Works. On east side of Henry Street about 500 feet south of Southern State Parkway, North Valley Stream.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	19.66	Apr. 29	20.24	Aug. 6	19.53	Oct. 25	19.03
Feb. 27	19.70	May 28	20.36	Sept. 9	19.70	Nov. 28	20.00
Mar. 31	19.75	July 2	19.97	Oct. 4	19.35		

N1111 (\*886, p. 492; 906, p. 129; 936, p. 157; 944, p. 138; 986, p. 161; 1016, p. 193; 1023, p. 220; 1071, p. 247). Nassau County Department of Public Works. Fletcher and Teneyck Avenues, Valley Stream.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	12.69	Apr. 29	12.79	Aug. 6	13.82	Oct. 25	11.62
Feb. 27	12.55	May 28	14.32	Sept. 9	14.05	Nov. 28	12.46
Mar. 31	12.57	July 2	14.05	Oct. 4	12.80		

N1112 (\*886, p. 492; 906, p. 129; 936, p. 157; 944, p. 138; 986, p. 161; 1016, p. 193; 1023, p. 221; 1071, p. 247). Nassau County Department of Public Works. Sunrise Highway and 2d Street, Valley Stream.

N1112--Continued.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	9.01	Apr. 29	9.42	Aug. 6	8.98	Oct. 25	8.19
Feb. 27	9.01	May 28	9.31	Sept. 9	8.81	Nov. 28	9.50
Mar. 31	8.99	July 2	9.24	Oct. 4	8.31		

N1126 (\*845, p. 322; 886, p. 494; 906, p. 129; 936, p. 158; 944, p. 139; 986, p. 162; 1016, p. 193; 1023, p. 221; 1071, p. 248). Nassau County Department of Public Works. At northwest corner of Stewart Avenue and Sackville Road, Garden City.

Water level, in feet above mean sea level, 1947

Feb. 7	57.70	Apr. 29	57.77	Aug. 5	58.15	Nov. 1	57.19
28	57.49	June 2	58.28	Sept. 10	57.77	Dec. 6	57.15
Apr. 7	57.46	July 2	58.35	Oct. 7	57.43	31	56.98

N1132 (\*845, p. 320; 886, p. 494; 906, p. 130; 936, p. 158; 944, p. 139; 986, p. 163; 1016, p. 194; 1023, p. 221; 1071, p. 248). Nassau County Department of Public Works. West side of Lakewood Boulevard, 111 feet south of Sunrise Highway, Lynbrook.

Water level, in feet above mean sea level, 1947

Jan. 30	7.61	Apr. 29	8.41	Aug. 6	7.52	Oct. 25	7.42
Feb. 27	7.63	May 28	8.49	Sept. 9	7.96	Nov. 28	8.51
Mar. 31	7.82	July 2	8.04	Oct. 4	7.55		

N1140 (\*886, p. 495; 906, p. 130; 936, p. 158; 944, p. 139; 986, p. 163; 1016, p. 194; 1023, p. 221; 1071, p. 248). Nassau County Department of Public Works. On west side of Kellum Place, 37 feet north of Ninth Street, Garden City.

Water level, in feet above mean sea level, 1947

Feb. 7	60.13	Apr. 29	60.22	Aug. 5	61.12	Nov. 1	59.84
28	59.93	June 2	60.88	Sept. 9	60.64	Dec. 6	59.67
Apr. 7	59.82	July 2	61.35	Oct. 4	60.31	31	59.59

N1147 (\*886, p. 495; 906, p. 130; 936, p. 159; 944, p. 140; 986, p. 163; 1016, p. 194; 1023, p. 221; 1071, p. 248). Nassau County Department of Public Works. On north side of Seaman Avenue, 310 feet east of Knollwood Road, Baldwin.

Water level, in feet above mean sea level, 1947

Jan. 30	17.22	Apr. 29	17.98	Aug. 6	17.35	Oct. 25	16.92
Feb. 27	17.18	May 28	18.11	Sept. 9	17.36	Nov. 28	18.12
Mar. 31	17.37	July 2	17.72	Oct. 4	17.09		

N1160 (\*886, p. 495; 906, p. 130; 936, p. 159; 944, p. 140; 986, p. 163; 1016, p. 194; 1023, p. 221; 1071, p. 248). Nassau County Department of Public Works. On south side of Stewart Avenue, about 75 feet east of Mitchel Field.

Water level, in feet above mean sea level, 1947

Jan. 31	64.71	Apr. 29	65.57	Aug. 5	65.09	Nov. 1	63.97
Feb. 28	64.68	May 28	65.75	Sept. 9	64.59	Dec. 6	64.89
Mar. 31	64.69	July 2	65.46	Oct. 6	64.36	31	64.70

N1167 (\*845, p. 321; 886, p. 496; 906, p. 131; 936, p. 159; 944, p. 140; 986, p. 163; 1016, p. 195; 1023, p. 221; 1071, p. 248). Nassau County Department of Public Works. On east side of North Ocean Avenue, 38 feet north of Brooklyn Avenue, Freeport.

Water level, in feet above mean sea level, 1947

Jan. 30	10.54	Apr. 29	11.28	Aug. 5	10.03	Oct. 25	9.56
Feb. 27	10.60	May 28	11.11	Sept. 9	9.92	Nov. 28	10.92
Mar. 31	10.79	July 2	10.75	Oct. 4	9.82		

N1185 (\*845, p. 421; 886, p. 496; 906, p. 132; 936, p. 161; 944, p. 142; 986, p. 166; 1016, p. 195; 1023, p. 222; 1071, p. 248). Nassau County Department of Public Works. Northwest corner of West Grand Avenue and Lindgren Street, Merrick.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	11.63	Apr. 29	12.41	Aug. 5	12.34	Oct. 25	10.54
Feb. 27	11.62	May 28	12.79	Sept. 9	11.05	Nov. 28	11.36
Mar. 31	11.62	July 2	12.76	Oct. 4	10.74		

N1198 (\*886, p. 496; 906, p. 133; 936, p. 161; 944, p. 142; 986, p. 166; 1016, p. 195; 1023, p. 222; 1071, p. 249). Nassau County Department of Public Works. On east side of Newbridge Road, 73 feet north of Motor Parkway, about 2.5 miles south of Hicksville. Measurements discontinued after Nov. 1, 1947.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	65.23	Apr. 29	65.31	Aug. 5	65.21	Oct. 4	64.65
Feb. 28	64.91	May 28	65.52	Sept. 8	64.86	Nov. 1	64.40
Mar. 31	64.84	July 2	65.44				

N1204 (\*886, p. 497; 906, p. 133; 936, p. 162; 944, p. 143; 986, p. 166; 1016, p. 195; 1023, p. 222; 1071, p. 249). Nassau County Department of Public Works. At northwest corner of Harris Court and John Street, Bellmore.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	8.00	Apr. 29	9.73	Aug. 5	11.15	Oct. 25	8.09
Feb. 27	7.96	May 28	11.88	Sept. 9	9.05	Nov. 28	8.81
Mar. 31	7.82	July 2	11.79	Oct. 4	8.63	Dec. 31	9.38

N1212 (\*986, p. 166; 1016, p. 196; 1023, p. 222; 1071, p. 249). Nassau County Department of Public Works. Jericho Turnpike, about 1.3 miles east of Broadway, Locust Grove.

Water level at noon, in feet above mean sea level, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	87.45	87.38	87.23	.....	86.81	86.44	86.30	85.90	85.74	85.54	85.25	85.17
2	87.79	87.41	87.61	.....	86.78	86.49	86.22	85.90	85.93	85.59	85.32	85.15
3	87.90	87.37	87.41	.....	86.73	86.58	86.18	85.93	85.70	85.51	85.44	85.22
4	87.57	87.82	87.19	.....	86.85	86.21	86.24	85.96	85.74	85.52	85.61	85.05
5	87.78	87.64	87.21	87.08	86.72	86.34	86.21	85.98	85.76	85.57	85.48	85.37
6	87.53	87.50	87.16	87.08	86.68	86.54	86.18	85.96	85.69	85.55	85.35	85.12
7	87.84	87.65	87.16	86.86	86.70	86.36	86.19	85.99	85.69	85.57	85.28	85.16
8	87.72	87.68	87.27	86.75	86.57	86.47	86.19	85.91	85.69	85.65	85.79	85.46
9	87.61	87.44	87.19	86.98	86.52	86.41	86.09	85.97	85.66	85.48	85.30	85.07
10	87.56	87.44	87.13	86.67	86.48	86.34	86.12	86.03	85.69	85.49	85.18	85.08
11	87.82	87.27	87.05	87.00	86.54	86.38	86.14	86.03	85.72	85.52	85.40	85.10
12	87.62	87.17	87.04	86.98	86.63	86.39	86.21	85.93	85.78	85.48	85.48	85.10
13	87.36	87.27	87.09	86.73	86.74	86.31	86.16	85.99	85.74	85.60	.....	85.14
14	87.60	87.46	87.60	86.94	86.58	86.44	86.13	85.96	85.73	85.55	.....	85.06
15	87.72	87.58	87.19	86.88	86.43	86.37	86.13	85.91	85.72	85.50	.....	85.11
16	87.72	87.53	87.19	87.08	86.58	86.33	86.15	85.83	85.58	85.50	.....	85.35
17	87.38	87.37	87.25	86.82	86.51	86.31	86.16	85.78	85.46	85.55	.....	84.92
18	87.64	87.33	87.03	86.84	86.68	86.31	86.14	85.81	85.58	85.57	.....	85.23
19	87.44	87.13	86.97	86.72	86.56	86.32	86.17	85.92	85.84	85.58	.....	84.95
20	88.01	87.26	87.15	86.86	86.66	86.21	86.02	85.82	85.62	85.49	.....	85.04
21	87.60	.....	87.18	86.74	86.50	86.22	86.04	85.78	85.80	85.47	.....	85.17
22	87.36	.....	87.05	86.64	86.48	86.28	86.12	85.84	85.79	85.42	85.27	84.99
23	87.43	.....	87.07	86.72	86.48	86.32	85.97	85.82	85.52	85.55	85.41	85.20
24	87.61	.....	87.21	86.95	86.51	86.38	85.91	85.85	85.61	85.27	85.54	84.92
25	87.54	.....	87.23	86.78	86.58	86.37	85.98	85.85	85.68	85.40	85.36	85.02
26	87.60	.....	87.03	86.76	86.43	86.31	86.05	85.86	85.53	85.48	85.21	85.37
27	87.48	.....	86.82	86.93	86.40	86.30	86.10	85.70	85.48	85.46	85.06	85.11
28	87.52	.....	86.99	86.58	86.53	86.26	86.14	85.79	85.61	85.44	85.23	.....
29	87.53	.....	87.10	86.68	86.57	86.23	86.04	85.74	85.64	85.50	85.19	.....
30	87.63	.....	86.85	86.85	86.39	86.23	86.02	85.72	85.70	85.45	85.13	84.92
31	87.47	.....	86.77	.....	86.33	.....	86.03	85.90	.....	85.43	.....	85.01

N1215 (\*986, p. 168; 1016, p. 197). Nassau County Department of Public Works. Bloomington Road and Broadway, Hicksville. Water level, in feet above mean sea level, 1945: Jan. 11, 73.37. Measurements discontinued Jan. 11, 1945.

N1216 (\*886, p. 497; 906, p. 133; 936, p. 162; 944, p. 143; 986, p. 168; 1016, p. 198; 1023, p. 223; 1071, p. 250). Nassau County Department of Public Works. On north side of Central Boulevard, 500 feet west of Wantagh Road, Central Park. Water levels, in feet above mean sea level, 1947: Jan. 31, 65.02; Feb. 28, 64.52; Mar. 31, 64.47; Apr. 29, 64.48. Measurements discontinued Apr. 29, 1947.

N1222 (\*886, p. 497; 906, p. 134; 936, p. 162; 944, p. 143; 986, p. 169; 1016, p. 199; 1023, p. 223; 1071, p. 250). Nassau County Department of Public Works. At southwest corner of Cecelia Place and John Street, Seaford.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	2.68	Apr. 29	5.66	Aug. 5	8.23	Oct. 25	3.98
Feb. 27	3.01	May 28	8.94	Sept. 9	5.88	Nov. 28	6.52
Mar. 31	3.60	July 2	8.85	27	5.16	Dec. 31	6.94

N1234 (\*886, p. 498; 906, p. 134; 936, p. 162; 944, p. 143; 986, p. 170; 1016, p. 200; 1023, p. 223; 1071, p. 250). Nassau County Department of Public Works. On southwest side of Plainview Road, 400 feet northwest of Bethpage State Parkway, Central Park.

Water level, in feet above mean sea level, 1947

Jan. 31	61.06	Apr. 29	61.15	Aug. 5	61.58	Nov. 1	60.61
Feb. 28	60.71	May 28	61.52	Sept. 8	61.24	28	60.79
Apr. 7	60.61	July 3	61.54	27	61.05		

N1240 (\*886, p. 498; 906, p. 134; 936, p. 163; 944, p. 144; 986, p. 170; 1016, p. 201; 1023, p. 223; 1071, p. 250). Nassau County Department of Public Works. 44 feet south of Sunrise Highway and 62 feet east of Manhattan Avenue, Massapequa Park.

Water level, in feet above mean sea level, 1947

Jan. 31	1.78	Apr. 30	6.85	Aug. 7	8.09	Oct. 25	3.17
Feb. 28	2.04	June 2	10.30	Sept. 10	5.57	Nov. 28	6.69
Apr. 7	3.63	July 7	10.14	27	4.68		

N1244 (\*906, p. 135; 936, p. 163; 944, p. 144; 986, p. 171; 1016, p. 201; 1023, p. 223; 1071, p. 250). Nassau County Department of Public Works. On north side of Jericho Turnpike, 60 feet west of Avery Road, about 2.5 miles east of Syosset.

Water level, in feet above mean sea level, 1947

Jan. 31	74.60	Apr. 30	74.02	Aug. 7	73.35	Nov. 1	72.84
Feb. 28	74.45	June 2	73.79	Sept. 10	73.14	28	72.95
Apr. 7	74.19	July 7	73.54				

N1245 (\*906, p. 135; 936, p. 163; 944, p. 144; 986, p. 171; 1016, p. 202; 1023, p. 224; 1071, p. 250). Nassau County Department of Public Works. On west side of Plainview-Cold Spring Harbor Road, about 1 mile south of Jericho Turnpike and about 2 miles northeast of Plainview.

Water level, in feet above mean sea level, 1947

Jan. 31	79.54	Apr. 30	78.98	Aug. 7	78.13	Nov. 1	77.58
Feb. 28	79.32	June 2	78.69	Sept. 9	77.89	28	77.47
Apr. 7	79.12	July 7	78.37	Oct. 6	77.69		

N1246 (\*906, p. 135; 936, p. 163; 944, p. 144; 986, p. 171; 1016, p. 202; 1023, p. 224; 1071, p. 251). Nassau County Department of Public Works. On east side of Plainview-Melville Road, just west of Suffolk County line, Plainview.

## N1246--Continued.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	79.77	May 30	79.15	Aug. 7	78.58	Nov. 1	78.16
Feb. 28	79.56	June 2	78.90	Sept. 10	78.47	28	78.16
Apr. 7	79.17	July 7	78.70	27	78.23		

N1247 (\*886, p. 498; 906, p. 135; 944, p. 145; 986, p. 172; 1016, p. 202; 1023, p. 224; 1071, p. 251). Nassau County Department of Public Works. 500 feet north of motor parkway, 200 feet west of Suffolk County line, Bethpage.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	72.47	Apr. 30	71.71	Aug. 7	71.50	Nov. 1	71.48
Mar. 4	72.19	June 2	71.74	Sept. 10	71.66	28	71.38
Apr. 7	71.81	July 7	71.74	27	71.63		

N1249 (\*906, p. 136; 936, p. 164; 944, p. 145; 986, p. 172; 1016, p. 202; 1023, p. 224; 1071, p. 251). Nassau County Department of Public Works. At northeast corner of Secatogue Avenue and Wall Street, Farmingdale.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	52.02	Apr. 30	53.27	Aug. 7	53.40	Oct. 25	51.89
Feb. 28	51.78	June 2	53.47	Sept. 10	52.81	Nov. 28	53.07
Apr. 7	52.57	July 7	52.93	27	52.50		

N1250 (\*886, p. 499; 906, p. 136; 936, p. 164; 944, p. 145; 986, p. 172; 1016, p. 202; 1023, p. 224; 1071, p. 251). Nassau County Department of Public Works. 37 feet northwest of Old Carman's Road and about 2,200 feet northwest of Great Neck Road, Farmingdale.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	44.75	Apr. 30	46.08	Aug. 7	45.92	Oct. 25	44.45
Feb. 28	44.56	June 2	46.26	Sept. 10	45.32	Nov. 28	45.84
Apr. 7	45.42	July 7	45.59	27	45.00		

N1251 (\*886, p. 499; 906, p. 136; 936, p. 164; 944, p. 145; 986, p. 172; 1016, p. 203; 1023, p. 224; 1071, p. 251). Nassau County Department of Public Works. About 275 feet west of County Line Road, about 800 feet north of Southern State Parkway, and about 2 miles south of Farmingdale.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	37.05	Apr. 30	38.40	Aug. 7	38.10	Oct. 25	36.56
Feb. 28	36.81	June 2	38.63	Sept. 10	37.40	Nov. 28	38.07
Apr. 7	38.20	July 7	37.94	27	37.10		

N1252 (\*906, p. 136; 936, p. 164; 944, p. 145; 986, p. 173; 1016, p. 203; 1023, p. 224; 1071, p. 251). Nassau County Department of Public Works. At southwest corner of County Line Road and Smith Street, about 1 mile north of Amityville.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	23.72	Apr. 30	24.98	Aug. 7	24.72	Oct. 25	23.60
Feb. 28	23.59	June 2	25.23	Sept. 10	24.28	Nov. 28	24.83
Apr. 7	24.81	July 7	24.73	27	24.03		

N1253 (\*886, p. 499; 906, p. 137; 936, p. 164; 986, p. 173; 1016, p. 203; 1023, p. 225; 1071, p. 252). Nassau County Department of Public Works. At northeast corner of Clocks Boulevard and Pine Street, about 1 mile east of Massapequa Park.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	12.46	Apr. 30	14.39	Aug. 7	14.97	Oct. 25	13.03
Feb. 28	12.56	June 2	15.43	Sept. 10	14.00	Nov. 28	14.36
Apr. 7	13.53	July 7	15.06	27	13.59		

N1255 (\*840, p. 277; 845, p. 319; 886, p. 500; \*906, p. 137; 936, p. 165; 986, p. 174; 1016, p. 204; 1023, p. 225; 1071, p. 252). Nassau County Department of Public Works. On east side of Clinton Road near St. James Street, Garden City.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 7	59.88	Apr. 29	60.90	Aug. 5	60.18	Nov. 1	59.06
Mar. 4	59.87	June 2	61.12	Sept. 9	59.64	Dec. 6	59.99
31	59.91	July 2	60.70	Oct. 6	59.26	31	59.61

N1256 (\*777, p. 125; \*817, p. 202; \*840, p. 277; 845, p. 319; 886, p. 500; \*906, p. 138; 936, p. 165; 986, p. 174; 1016, p. 204; 1023, p. 225; 1071, p. 252). Nassau County Department of Public Works. At junction of Hillside Avenue and Bacon Road, Westbury.

Water level, in feet above mean sea level, 1947

Jan. 31	77.49	Apr. 30	77.45	Aug. 7	77.24	Nov. 1	76.32
Feb. 27	77.28	June 2	77.67	Sept. 10	76.84	Dec. 6	76.51
Apr. 7	77.15	July 7	77.36	Oct. 6	76.54	31	76.16

N1257 (\*840, p. 278; 845, p. 319; \*886, p. 500; 906, p. 138; 936, p. 165; \*944, p. 146; 986, p. 175; 1016, p. 204; 1023, p. 225; 1071, p. 252). New York City Department of Water Supply, Gas and Electricity. Carman and Scranton Avenues, East Rockaway.

Water level, in feet above mean sea level, 1947

Jan. 30	6.80	Apr. 29	7.81	Aug. 6	7.69	Oct. 25	7.04
Feb. 27	6.93	May 28	7.84	Sept. 9	7.33	Nov. 28	7.83
Mar. 31	7.26	July 2	7.70	Oct. 4	7.50		

N1259 (\*777, p. 125; \*840, p. 279; 845, p. 320; 886, p. 501; 906, p. 138; 936, p. 166; 944, p. 146; 986, p. 175; 1016, p. 205; 1023, p. 225; 1071, p. 252). Geological Survey, U. S. Dept. of Interior. About 600 feet south of Union Avenue on west side of Hicksville-Massapequa road, about 2 miles south of Central Park.

Water level, in feet above mean sea level, 1947

Jan. 31	51.14	Apr. 29	51.95	Aug. 5	51.78	Oct. 25	50.95
Feb. 28	51.01	May 28	52.04	28	51.56	Nov. 28	51.47
Mar. 31	51.10	July 2	51.93	Sept. 27	51.24	Dec. 31	51.43

N1260 (\*777, p. 126; 817, p. 281; 845, p. 322; 886, p. 501; \*906, p. 139; 936, p. 166; 944, p. 147; 986, p. 176; 1016, p. 205; 1023, p. 225; 1071, p. 253). Nassau County Department of Public Works. On west side of Main Street, 100 feet south of Pittsburgh Avenue, Massapequa.

Water level, in feet above mean sea level, 1947

Jan. 31	18.78	Apr. 29	20.47	Aug. 5	20.56	Oct. 25	18.85
Feb. 27	18.66	May 28	21.02	Sept. 9	19.87	Nov. 28	20.28
Mar. 31	19.16	July 2	20.72	27	19.50	Dec. 31	20.30

N1262 (\*840, p. 282; 845, p. 323; 886, p. 502; 906, p. 139; 936, p. 166; 944, p. 147; 986, p. 176; 1016, p. 205; 1023, p. 226; 1071, p. 253). New York City Department of Water Supply, Gas and Electricity. East side of Wantagh Avenue, about 0.25 mile south of Southern State Parkway, Wantagh.

Water level, in feet above mean sea level, 1947

Jan. 31	34.16	Apr. 29	34.64	Aug. 5	34.24	Oct. 25	33.89
Feb. 28	34.11	May 28	34.71	Sept. 9	34.06	Nov. 28	34.37
Mar. 31	34.20	July 2	34.40	27	33.95		

N1263 (\*840, p. 283; 845, p. 323; 886, p. 502; \*906, p. 139; 936, p. 167; 944, p. 147; 986, p. 176; 1016, p. 206; 1023, p. 226; 1071, p. 253). Nassau County Department of Public Works. At northeast corner of Wantagh and Farmingdale (Seamans Neck) Roads, about 1.3 miles north of Southern State Parkway and about 2 miles south of Central Park.



## N1263--Continued.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	49.48	Apr. 29	50.13	Aug. 5	49.99	Oct. 25	48.89
Feb. 28	49.25	May 28	50.35	Sept. 8	49.52	Nov. 28	49.72
Mar. 31	49.32	July 2	50.06	27	49.27	Dec. 31	49.62

N1264 (\*840, p. 285; 845, p. 323; 886, p. 502; 906, p. 140; 936, p. 167; 944, p. 147; 986, p. 176; 1016, p. 206; 1023, p. 226; 1071, p. 253). New York City Department of Water Supply, Gas and Electricity. On west side of Newbridge Road about 300 feet south of Sunrise Highway, Bellmore.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	4.57	Apr. 29	6.18	Aug. 5	7.19	Oct. 25	4.00
Feb. 27	4.10	May 28	8.45	Sept. 9	5.14	Nov. 28	5.79
Mar. 31	4.09	July 2	8.18	Oct. 4	4.67	Dec. 31	5.83

N1265 (\*906, p. 140; \*936, p. 167; 944, p. 148; 986, p. 177; 1016, p. 206; 1023, p. 226; 1071, p. 253). Nassau County Department of Public Works. At southwest corner of Albany Avenue and Merrick Road, Freeport. Water levels, in feet above mean sea level, 1947: May 21, 3.98; Dec. 16, 3.56.

N1269 (\*906, p. 140; 936, p. 168; 944, p. 148; 986, p. 177; 1016, p. 206; 1023, p. 226; 1071, p. 253). Nassau County Department of Public Works. At southwest corner of Babylon Turnpike and Poplar Street, Merrick. Water levels, in feet above mean sea level, 1947: May 21, 7.18; Dec. 16, 4.23.

N1271 (\*906, p. 141; 936, p. 168; \*944, p. 148; 986, p. 177; 1016, p. 206; 1023, p. 226; 1071, p. 253). Nassau County Department of Public Works. At northeast corner of Beach Drive and Florence Street, Merrick. Water levels, in feet above mean sea level, 1947: May 21, 2.98; Dec. 16, 2.27.

N1273 (\*906, p. 141; 936, p. 168; 944, p. 148; 986, p. 177; 1016, p. 207; 1023, p. 226; 1071, p. 254). Nassau County Department of Public Works. At northwest corner of Cypress Street and Walters Avenue, Wantagh. Water levels, in feet above mean sea level, 1947: May 20, 6.71; Dec. 15, 6.18.

N1275 (\*906, p. 141; 936, p. 168; 944, p. 148; 986, p. 177; 1016, p. 207; 1023, p. 226; 1071, p. 254). Nassau County Department of Public Works. At northeast corner of Byron and Willow Streets, Wantagh. Water levels, in feet above mean sea level, 1947: May 20, 3.19; Dec. 15, 2.86.

N1278 (\*906, p. 142; 936, p. 168; 944, p. 148; 986, p. 177; 1016, p. 207; 1023, p. 226; 1071, p. 254). Nassau County Department of Public Works. At southeast corner of Nassau Street and Bay Drive, Massapequa. Water levels, in feet above mean sea level, 1947: May 21, 6.52; Dec. 15, 6.27.

N1280 (\*906, p. 142; 936, p. 169; 944, p. 149; 986, p. 177; 1016, p. 207; 1023, p. 226; 1071, p. 254). Nassau County Department of Public Works. At northwest corner of Harmony Drive and Park Boulevard, Massapequa. Water levels, in feet above mean sea level, 1947: May 21, 8.55; Dec. 15, 7.41.

N1282 (\*906, p. 143; 936, p. 169; \*944, p. 149; 986, p. 177; 1016, p. 207; 1023, p. 226; 1071, p. 254). Nassau County Department of Public Works. On west side of Wantagh State Parkway, about 0.9 mile south of Merrick Road, Wantagh. Water levels, in feet above mean sea level, 1947: May 20, 1.91; Dec. 15, 1.52.

N1285 (\*906, p. 143; 936, p. 169; \*944, p. 149; 986, p. 178; 1016, p. 207; 1023, p. 227; 1071, p. 254). Nassau County Department of Public Works. At northwest corner of Spruce and Melvin Streets, Wantagh. Water levels, in feet above mean sea level, 1947: May 20, 3.20; Dec. 15, 2.82.

N1288 (\*906, p. 143; 936, p. 169; 944, p. 149; 986, p. 178; 1016, p. 207; 1023, p. 227; 1071, p. 254). Nassau County Department of Public Works. On west side of Bay View Avenue at St. Regis Street, Wantagh. Water levels, in feet above mean sea level, 1947: May 21, 3.71; Dec. 15, 3.24.

N1461 (\*986, p. 178; 1016, p. 207; 1023, p. 227; 1071, p. 254). Nassau County Department of Public Works. Along tracks of Long Island Railroad about 235 feet southeast of New South Road, South Hicksville.

Water level at noon, in feet above mean sea level, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	76.68	76.41	76.10	75.79	75.82	75.78	75.60	75.29	74.97	74.87	74.81	75.03
2	76.70	76.41	76.14	75.80	75.82	75.81	75.59	75.28	74.98	74.88	74.81	75.04
3	76.72	76.39	76.17	75.78	75.82	75.82	75.56	75.27	74.96	74.87	74.82	75.05
4	76.66	76.44	76.09	75.76	75.83	75.76	75.56	75.26	74.95	74.87	74.86	75.06
5	76.66	76.47	76.07	75.77	75.84	75.75	75.55	75.26	74.94	74.88	74.86	75.06
6	76.65	76.40	76.05	75.79	75.85	75.78	75.54	75.24	74.93	74.89	74.84	75.08
7	76.65	76.38	76.04	75.78	75.84	75.77	75.53	75.23	74.92	74.89	74.81	75.07
8	76.67	76.40	76.02	75.77	75.84	75.77	75.53	75.20	74.91	.....	74.86	75.09
9	76.62	76.37	76.01	75.80	75.82	75.77	75.51	.....	74.90	.....	74.84	75.08
10	76.60	76.36	76.00	75.77	75.81	75.76	75.50	.....	74.89	.....	74.80	75.05
11	76.62	76.32	75.98	75.80	75.82	75.75	75.48	.....	74.88	74.83	74.81	75.06
12	76.61	76.30	75.96	75.83	75.84	75.75	75.48	.....	74.87	.....	74.88	75.06
13	76.57	76.29	75.95	75.79	75.87	75.73	75.47	.....	74.86	.....	74.84	75.05
14	76.57	76.29	76.02	75.79	75.89	75.73	75.45	.....	74.85	.....	74.88	75.05
15	76.57	76.29	75.97	75.80	75.85	75.73	75.44	75.10	74.85	74.90	74.92	75.05
16	76.58	76.29	75.96	75.80	75.85	75.72	75.43	75.09	74.83	74.87	74.96	75.10
17	76.54	76.26	75.66	75.82	75.85	75.70	75.42	75.08	74.81	74.87	74.98	75.04
18	76.54	76.24	75.93	75.80	75.86	75.70	75.41	75.08	74.80	74.88	74.98	75.06
19	76.52	76.21	75.91	75.77	75.88	75.69	75.41	75.08	74.81	74.88	74.98	75.04
20	76.59	76.20	75.91	75.76	75.89	75.68	75.40	75.07	74.80	74.87	74.98	75.03
21	76.58	76.27	75.91	75.76	75.88	75.66	75.40	75.07	74.81	74.86	74.98	75.05
22	76.50	76.27	75.90	75.74	75.87	75.65	75.40	75.06	74.86	74.84	74.99	75.06
23	76.48	76.21	75.89	75.74	75.85	75.64	75.38	75.04	74.80	74.85	75.02	75.07
24	76.49	76.19	75.89	75.78	75.84	75.65	75.37	75.04	74.81	74.83	75.04	75.06
25	76.48	76.18	75.95	75.78	75.85	75.65	75.35	75.03	74.83	74.82	75.06	75.05
26	76.47	76.16	75.89	75.79	75.85	75.63	75.34	75.03	74.81	74.84	75.04	75.09
27	76.47	76.15	75.85	75.80	75.83	75.63	75.34	75.01	74.81	74.84	75.03	75.10
28	76.45	76.12	75.84	75.78	75.82	75.62	75.33	75.00	74.81	74.84	75.03	.....
29	76.44		75.84	75.77	75.83	75.61	75.32	74.98	74.85	74.85	75.03	.....
30	76.44		75.82	75.80	75.81	75.60	75.32	74.96	74.89	74.85	75.03	75.04
31	76.46		75.80		75.78		75.31	74.98		74.84		75.04

N1462 (\*986, p. 179; 1016, p. 209; 1023, p. 227; 1071, p. 255). Nassau County Department of Public Works. Along tracks of Long Island Railroad at Bloomingdale Road, Island Trees.

Water level, in feet above mean sea level, 1947 (Noon readings from recorder charts beginning Dec. 6)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	62.52	May 17	62.19	Sept. 27	61.67	Dec. 13	61.61
11	62.43	24	62.26	Oct. 4	61.60	14	61.61
18	62.33	31	62.26	11	61.51	15	61.61
25	62.23	June 7	62.28	18	61.43	16	61.63
Feb. 1	62.15	14	62.28	25	61.31	17	61.61
8	62.09	20	62.25	Nov. 1	61.26	18	61.63
15	61.98	July 3	62.18	8	61.29	19	61.63
Mar. 1	61.81	8	62.15	15	61.43	20	61.63
8	61.91	11	62.11	22	61.51	21	61.64
15	61.84	25	62.13	29	61.56	22	61.64
22	61.79	Aug. 1	62.12	Dec. 6	61.59	23	61.64
29	61.75	8	62.07	7	61.57	24	61.64
Apr. 5	61.72	15	62.03	8	61.58	25	61.64
12	61.98	22	61.97	9	61.58	26	61.65
19	62.02	29	61.92	10	61.58	27	61.65
26	62.07	Sept. 5	61.87	11	61.59	30	61.61
May 3	62.09	12	61.85	12	61.60	31	61.61
10	62.16	19	61.74				

N1463 (\*986, p. 180; 1016, p. 210; 1023, p. 228; 1071, p. 255). Nassau County Department of Public Works. Southern State Parkway and Seamens Neck Road, Jerusalem.

## N1463--Continued.

Water level at noon, in feet above mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	37.13	37.20	37.09	37.27	38.36	38.46	38.12	37.90	37.45	37.04	36.64	37.99
2	37.13	37.22	37.15	37.31	38.32	38.46	38.10	37.88	37.45	37.02	36.62	37.99
3	37.12	37.22	37.21	37.38	38.31	38.48	38.07	37.86	37.43	37.00	36.61	38.00
4	.....	37.23	37.25	37.35	38.35	38.45	38.06	37.85	37.42	36.98	36.65	37.99
5	37.09	37.27	37.28	37.40	38.35	38.44	38.04	37.83	37.41	36.95	36.69	38.00
6	37.08	.....	37.30	37.71	38.37	38.44	38.02	37.82	37.40	36.94	36.70	37.99
7	37.07	.....	37.32	37.83	38.36	38.44	37.99	37.80	37.37	36.92	36.72	37.99
8	37.07	37.27	37.34	37.89	38.38	38.45	37.98	37.78	37.36	36.91	36.77	38.01
9	37.06	37.27	37.35	37.96	38.38	38.44	37.96	37.76	37.34	36.90	36.80	37.98
10	37.06	37.27	37.35	38.01	38.38	38.42	38.04	37.75	37.32	36.88	36.84	37.96
11	37.04	37.26	37.36	38.07	38.37	38.41	37.95	37.73	37.30	36.87	36.87	37.96
12	37.04	37.25	37.36	38.12	38.38	38.40	37.94	37.70	37.29	36.86	37.23	.....
13	37.03	37.25	37.36	38.16	38.39	38.38	37.93	37.68	37.28	36.85	37.57	.....
14	37.03	37.25	37.41	38.18	38.39	38.38	37.92	37.65	37.27	36.84	37.65	37.93
15	37.03	37.23	37.40	38.22	38.38	38.36	38.12	37.63	37.26	36.82	37.70	.....
16	37.03	37.23	37.39	38.24	38.39	38.34	38.13	37.62	37.25	36.81	37.72	.....
17	37.02	37.22	37.39	38.29	38.39	38.32	38.10	37.64	37.23	36.79	37.75	.....
18	37.00	37.21	37.39	38.30	38.40	38.29	38.08	37.60	37.21	36.77	37.78	.....
19	37.00	37.20	37.39	38.30	38.41	38.28	38.10	37.59	37.20	36.75	37.80	.....
20	37.11	37.18	37.39	38.33	38.44	38.25	38.08	37.60	37.19	36.74	37.82	37.85
21	37.06	37.18	37.39	38.33	38.44	38.24	38.06	37.57	37.18	36.73	37.84	37.85
22	37.05	37.17	37.39	38.33	38.43	38.23	38.07	37.55	37.17	36.71	37.86	37.84
23	37.07	37.16	37.37	38.33	38.43	38.21	38.05	37.54	37.15	36.70	37.88	37.85
24	37.09	37.15	37.37	38.34	38.43	38.21	38.03	37.53	37.14	36.68	37.89	37.83
25	37.12	37.14	37.40	38.34	38.45	38.20	38.01	37.52	37.13	36.65	37.95	.....
26	37.13	37.13	37.37	38.35	38.45	38.19	37.99	37.50	37.10	36.64	37.96	.....
27	37.14	37.12	37.35	38.35	38.45	38.17	37.99	37.55	37.09	36.63	37.97	.....
28	37.15	37.10	37.33	38.33	38.45	38.16	37.99	37.50	37.08	36.61	37.98	.....
29	37.16	.....	37.33	38.32	38.45	38.14	37.97	37.48	37.07	36.72	37.99	.....
30	37.17	.....	37.30	38.32	38.48	38.13	37.94	37.47	37.06	36.64	37.99	37.74
31	37.19	.....	37.28	.....	38.46	.....	37.93	37.46	.....	36.69	.....	37.74

N1464 (\*986, p. 181; 1016, p. 211; 1023, p. 229; 1071, p. 256). Nassau County Department of Public Works. 100 feet east of Grant Avenue on north-side of Franklin Avenue, Seaford.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	13.48	Apr. 29	15.37	Aug. 5	15.96	Oct. 25	13.83
Feb. 27	13.51	May 28	16.29	Sept. 9	14.94	Nov. 28	15.33
Mar. 31	13.95	July 2	16.25	27	14.53	Dec. 31	15.50

N1613 (\*840, p. 263; 845, p. 312; \*886, p. 489; \*906, p. 144; 936, p. 170; 944, p. 149; 986, p. 182; 1016, p. 212; 1023, p. 229; 1071, p. 257). Citizens Water Supply Co. well Valley Stream 5. About 1,500 feet west of Corona Avenue and 96 feet north of Southern State Parkway, North Valley Stream.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	22.71	Apr. 29	23.42	Aug. 6	22.65	Oct. 25	22.03
Feb. 27	22.70	May 28	23.57	Sept. 9	22.57	Nov. 28	22.98
Mar. 31	22.85	July 2	23.14	Oct. 4	22.30		

N1614 (\*906, p. 144; 936, p. 170; 944, p. 150; 986, p. 183; 1016, p. 212; 1023, p. 229; 1071, p. 257). New York City Department of Water Supply, Gas and Electricity. On west side of Herricks Road, about 150 feet north of Florence Road, Mineola.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 7	68.15	Apr. 30	68.70	Aug. 5	68.45	Nov. 1	67.16
Mar. 4	67.91	May 28	68.92	Sept. 9	67.95	Dec. 6	67.33
31	67.84	July 7	68.77	Oct. 7	67.53	31	67.15

N1615 (\*906, p. 145; 936, p. 170; 944, p. 150; 986, p. 183; 1016, p. 213; 1023, p. 230; 1071, p. 257). New York City Department of Water Supply, Gas and Electricity. On east side of Merrick Avenue, 324 feet north of Luddington Road, East Meadow.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	43.00	Apr. 29	44.32	Aug. 5	43.47	Oct. 25	42.51
Feb. 27	43.12	May 28	44.42	Sept. 9	42.97	Nov. 28	43.83
Mar. 31	43.42	July 2	44.00	Oct. 4	42.71	Dec. 31	43.50

N1616 (\*906, p. 146; 936, p. 170; 944, p. 150; 986, p. 183; 1016, p. 213; 1023, p. 230; 1071, p. 257). New York City Department of Water Supply, Gas and Electricity. On east side of Post Avenue at Argyle Road, Westbury.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	81.83	Apr. 30	81.42	Aug. 7	81.46	Nov. 1	80.62
Feb. 28	81.59	June 2	81.83	Sept. 10	81.25	Dec. 6	80.46
Apr. 7	81.33	July 7	81.74	27	80.97	31	80.21

N1682 (\*906, p. 151; 936, p. 171; 944, p. 151; 986, p. 184; 1016, p. 213; 1023, p. 230; 1071, p. 257). Nassau County Department of Public Works. On southwest corner of Crocus and Elm Avenues, Bellerose.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	43.67	Apr. 29	43.69	Aug. 6	43.74	Oct. 25	42.74
Feb. 27	43.39	May 28	44.09	Sept. 9	43.30	Dec. 6	42.76
Mar. 31	43.23	July 2	44.13	Oct. 4	42.99	26	42.69

N1683 (\*906, p. 151; 936, p. 171; 944, p. 151; 986, p. 184; 1016, p. 213; 1023, p. 230; 1071, p. 257). Nassau County Department of Public Works. At northwest corner of Sixth Street and Stewart Avenue, New Hyde Park. Measuring point raised to 83.13 feet above mean sea level Apr. 29, 1947.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 7	55.91	Apr. 29	56.54	Aug. 5	56.21	Nov. 1	55.35
28	55.76	June 2	56.68	Sept. 10	55.84	Dec. 6	55.65
Apr. 7	56.11	July 2	56.58	Oct. 7	55.45	31	55.21

N1684 (\*906, p. 151; 936, p. 172; 944, p. 151; 986, p. 184; 1016, p. 214; 1023, p. 230; 1071, p. 258). Nassau County Department of Public Works. About 150 feet west of Madison Avenue and 690 feet north of Stewart Avenue, Garden City.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 7	57.31	Apr. 29	58.67	Aug. 5	58.01	Nov. 1	56.63
28	57.24	June 2	58.77	Sept. 9	57.34	Dec. 6	57.25
Apr. 7	57.58	July 7	58.58	Oct. 7	56.96	31	56.94

N1828 (\*886, p. 499; 906, p. 136; 936, p. 164; 986, p. 184; 1016, p. 214; 1023, p. 230; 1071, p. 258). Replaces N1248. Nassau County Department of Public Works. On northwest side of Melville Road near Suffolk County line, and about 40 feet northeast of well N1248, Farmingdale.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	58.86	Apr. 30	59.91	Aug. 7	59.93	Nov. 1	58.56
Feb. 28	58.73	June 2	59.95	Sept. 10	59.42	28	58.35
Apr. 7	59.11	July 7	59.49	Oct. 6	59.00		

N1829 (\*845, p. 321; 886, p. 496; 906, p. 131; 936, p. 160; 944, p. 153; 986, p. 186; 1016, p. 215; 1023, p. 231; 1071, p. 258). Replaces N1180. Nassau County Department of Public Works. On south side of Stewart Avenue, 700 feet west of Newbridge Avenue and about 15 feet southeast of well N1180, Salisbury.

N1829--Continued.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	66.79	Apr. 29	67.11	Aug. 5	66.85	Nov. 1	66.10
Feb. 28	66.54	May 28	67.21	Sept. 9	66.53	Dec. 6	66.88
Mar. 31	66.38	July 2	67.02	Oct. 4	66.18	31	66.59

N1830 (#944, p. 153; 988, p. 187; 1016, p. 216; 1023, p. 231; 1071, p. 259). Nassau County Department of Public Works. West side of Tyson Avenue just north of Creedmoor spur of Long Island Railroad, Floral Park.

## Water level, in feet above mean sea level, 1947

Jan. 30	51.33	Apr. 29	51.33	Aug. 6	51.40	Oct. 25	50.55
Feb. 27	51.08	May 28	51.64	Sept. 9	51.14	Dec. 6	50.62
Mar. 31	50.84	July 2	51.71	Oct. 4	51.34	26	50.43

N2071 (\*1071, p. 259). Appleby Estate. 50 feet south of Herb Hill Road and about 2,000 feet west of Columbia Ribbon & Carbon Co., Glen Cove. Water level affected by tidal fluctuation. Measurements made at or near high tide.

## Water level, in feet above mean sea level, 1947

Jan. 9	12.53	Mar. 29	12.96	July 14	12.28	Sept. 27	11.74
29	12.58	May 2	12.62	Aug. 7	8.44	Nov. 3	12.67
Mar. 10	12.98	June 4	11.09	Sept. 12	11.26	Dec. 3	12.42

Queens County

Q64. American Ice Co. 83d Street and 45th Avenue, Elmhurst. Unused drilled industrial well (No. 6), diameter 10 inches, depth 560 feet. Measuring point, top of 10-inch casing, 35.53 feet above mean sea level prior to Sept. 25, 1947, and hole in wooden shelf of recorder shelter, 35.76 feet above mean sea level, thereafter. Land-surface datum is 35.0 feet above mean sea level. First measured by Geological Survey, Mar. 26, 1947.

Water level, in feet below mean sea level, 1947 (Mean daily water levels from recorder charts beginning Sept. 25)

Day	Mar.	Apr.	May	June	July	Sept.	Oct.	Nov.	Dec.
1	.....	.....	.....	.....	44.19	.....	.....	68.84	66.65
2	.....	.....	.....	.....	.....	59.41	66.67	68.90	66.61
3	.....	.....	.....	.....	.....	.....	66.83	68.81	66.56
4	.....	.....	.....	.....	.....	.....	66.92	68.63	66.62
5	.....	.....	.....	.....	.....	.....	66.96	68.58	66.59
6	.....	.....	56.86	.....	.....	.....	66.99	68.67	66.67
7	.....	.....	.....	.....	.....	.....	67.07	68.76	66.79
8	.....	.....	.....	.....	.....	.....	67.07	68.51	66.69
9	.....	.....	.....	.....	.....	.....	67.23	68.43	66.90
10	.....	.....	.....	.....	.....	.....	67.31	68.49	67.06
11	.....	.....	.....	.....	42.80	.....	67.37	68.40	67.11
12	.....	.....	.....	.....	.....	.....	67.46	68.22	67.25
13	.....	.....	.....	.....	.....	.....	67.45	68.42	67.22
14	.....	.....	.....	.....	.....	.....	67.47	68.52	67.19
15	.....	.....	.....	.....	.....	.....	67.56	68.50	67.19
16	.....	57.57	.....	.....	.....	.....	67.64	68.42	66.64
17	.....	.....	.....	.....	.....	.....	67.71	68.51	.....
18	.....	.....	.....	.....	.....	.....	67.72	68.60	.....
19	.....	.....	.....	.....	.....	.....	67.80	68.62	.....
20	.....	.....	.....	.....	.....	.....	67.90	68.64	62.33
21	.....	.....	.....	.....	.....	.....	68.01	68.69	60.92
22	.....	.....	.....	.....	.....	.....	68.18	68.65	59.66
23	.....	.....	.....	.....	.....	.....	68.22	68.50	58.27
24	.....	57.65	.....	.....	.....	.....	68.45	68.37	57.18
25	.....	.....	.....	.....	.....	65.93	68.50	68.31	55.99
26	63.95	.....	.....	43.61	.....	.....	68.50	68.40	54.41
27	.....	.....	.....	.....	.....	.....	68.55	68.41	53.07
28	.....	.....	.....	.....	.....	.....	68.57	67.70	.....
29	.....	.....	49.10	.....	.....	.....	68.53	67.06	.....
30	.....	.....	.....	.....	.....	.....	68.69	66.81	50.15
31	.....	.....	.....	.....	46.04	.....	.....	.....	49.24

Q273 (\*817, p. 201; \*840, p. 268; 845, p. 315; \*886, p. 503; 906, p. 153; 936, p. 173; 944, p. 154; 986, p. 188; 1016, p. 217; 1023, p. 232; 1071, p. 259). New York City Department of Water Supply. On south side of Grand Central Parkway about 1,000 feet east of Queens Boulevard, Forest Hills.

Water level at noon, in feet above mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	3.95	3.86	3.58	3.43	4.50	4.06	3.52	3.19	....	2.93	2.77	2.93
2	4.10	3.81	3.76	3.64	4.38	4.11	3.51	3.10	....	....	2.75	2.97
3	4.27	3.73	3.98	3.70	4.27	4.20	3.43	3.05	....	....	2.84	3.01
4	4.25	3.92	3.77	3.57	4.26	4.01	3.41	3.04	....	2.86	3.07	3.02
5	4.22	4.11	3.64	3.70	4.22	3.93	3.39	3.04	2.96	....	3.12	3.07
6	4.22	4.04	3.66	3.79	4.21	4.03	3.36	3.03	2.92	....	3.05	3.17
7	4.15	3.99	3.52	3.74	4.16	4.04	3.37	3.02	2.85	....	2.95	3.07
8	4.24	4.00	3.55	3.60	4.07	4.03	3.44	2.99	2.83	....	3.20	3.21
9	4.15	3.92	3.57	3.78	3.97	3.94	3.36	2.98	2.82	....	3.14	3.13
10	4.00	3.84	3.61	3.82	3.91	3.87	3.35	2.94	2.83	2.92	2.96	2.97
11	4.02	3.64	3.44	4.00	3.94	3.82	3.37	2.85	2.86	2.91	2.98	3.05
12	4.03	3.61	3.41	4.20	4.04	3.80	3.40	2.87	2.90	2.86	3.30	3.05
13	3.81	3.54	3.44	4.16	4.19	3.69	3.41	2.92	2.92	2.88	3.12	3.02
14	3.84	3.68	3.73	4.20	4.26	3.71	3.40	2.89	2.91	2.94	3.03	3.01
15	3.97	3.84	3.74	4.30	4.10	3.75	3.36	2.87	2.90	2.91	3.05	3.03
16	4.07	3.89	3.69	4.42	4.09	3.72	3.39	2.83	2.93	2.86	3.17	3.29
17	4.00	3.80	3.70	4.53	4.14	3.68	3.38	2.84	2.72	2.87	3.14	3.13
18	3.98	3.72	3.61	4.46	4.23	3.65	3.39	2.81	2.68	2.95	3.05	3.16
19	3.92	3.62	3.48	4.41	4.25	3.61	3.43	2.91	2.84	2.96	3.01	3.07
20	4.14	3.62	3.55	4.40	4.34	3.56	3.35	2.95	2.87	2.90	2.99	3.02
21	4.21	3.91	3.66	4.40	4.33	3.51	3.31	2.89	2.92	2.83	2.97	3.12
22	3.94	3.96	3.67	4.35	4.31	3.52	3.38	2.91	3.08	2.75	3.00	3.11
23	3.81	3.91	3.60	4.35	4.25	3.58	3.28	2.93	2.96	2.76	3.17	3.18
24	3.89	3.84	3.68	4.52	4.27	3.67	3.17	2.94	2.93	2.64	3.25	3.12
25	3.92	3.79	3.89	4.59	4.33	3.72	3.15	2.93	3.00	2.62	3.38	3.06
26	3.90	3.73	3.81	4.60	4.37	3.70	3.20	2.92	2.94	2.70	3.22	3.30
27	3.94	3.73	3.62	4.63	4.31	3.61	3.25	2.93	2.83	2.74	3.04	3.42
28	3.89	3.65	3.59	4.49	4.28	3.61	3.31	2.95	2.80	2.76	2.99	....
29	3.86		3.60	4.44	4.28	3.54	3.28	2.92	2.89	2.86	2.97	....
30	3.92		3.67	4.51	4.28	3.50	3.25	2.85	3.00	2.86	2.94	3.05
31	4.01		3.43		4.10		3.28	....		2.88		3.05

Q278 (\*1071, p. 260). New York City Department of Water Supply, Gas and Electricity. Alley Pond Parkway and Horace Harding Boulevard, Douglaston.

Water level, in feet with reference to mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	-0.28	Apr. 30	+2.83	July 11	-0.31	Oct. 8	-0.37
Mar. 6	+2.03	May 29	+2.94	31	-0.38	Nov. 3	+0.95
28	+1.56	June 26	+1.41	Sept. 3	-2.35	26	+4.47

Q282 (\*1071, p. 260). New York City Department of Water Supply, Gas and Electricity. Underhill Avenue and 171st Street, Flushing.

Water level, in feet below mean sea level, 1947

Jan. 29	8.08	Apr. 30	5.45	July 11	8.68	Oct. 8	8.83
Mar. 4	7.48	June 15	7.27	31	9.03	Nov. 12	7.49
28	7.28	26	7.83	Sept. 3	10.26	26	7.62

Q283 (\*1071, p. 260). New York City Department of Water Supply, Gas and Electricity. Underhill Avenue and 171st Street, Flushing.

Water level, in feet below mean sea level, 1947

Jan. 29	8.10	Apr. 30	5.49	July 11	8.68	Oct. 8	8.87
Mar. 4	7.51	June 15	7.29	31	9.04	Nov. 12	7.52
28	7.29	26	7.86	Sept. 3	10.26	26	7.65

Q287 (\*886, p. 504; 906, p. 153; 936, p. 174; 944, p. 155; 986, p. 189; 1016, p. 218; 1023, p. 232; 1071, p. 260). Broad Channel Corporation. Southeast side of Shad Creek Road, about 100 feet southwest of Ninth Road, Broad Channel. Water levels affected by tidal fluctuation.

Mean daily water level, in feet above mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	7.7	7.5	...	7.8	8.6	8.3	a7.2	5.9	5.4	6.0	7.4	7.2
2	8.0	7.4	8.6	8.0	8.8	8.4	7.2	5.8	5.5	5.8	6.7	7.2
3	8.0	7.5	7.7	8.2	8.8	8.4	7.0	5.8	5.3	5.9	6.9	7.3
4	7.7	7.9	7.4	7.9	8.7	8.2	7.0	5.7	5.3	5.9	7.6	7.1
5	7.8	7.8	7.5	8.0	8.7	8.0	6.9	5.8	5.4	5.9	7.5	7.4
6	7.7	7.7	7.6	8.0	8.5	8.1	6.8	5.8	5.3	6.0	7.4	7.3
7	8.0	8.0	7.7	7.8	8.5	8.2	6.8	5.8	5.3	6.0	a7.2	7.5
8	7.5	7.8	7.8	7.8	8.1	8.5	6.8	5.6	5.3	6.2	a7.5	7.6
9	7.5	7.0	7.8	8.0	8.0	a8.2	6.6	5.7	5.4	6.3	7.1	a7.0
10	7.6	6.8	7.6	7.6	8.0	a8.2	6.4	5.6	5.3	6.3	7.1	a7.0
11	7.7	6.8	7.6	7.8	8.1	a8.1	6.4	5.5	5.4	6.4	7.6	7.6
12	7.8	6.8	7.5	7.8	8.2	8.1	6.5	5.4	...	6.4	7.4	7.5
13	7.7	7.0	7.5	7.8	8.4	a7.9	6.4	5.4	...	6.5	7.2	7.4
14	8.0	7.3	8.1	8.2	8.7	8.1	6.4	5.5	5.8	6.5	7.1	7.5
15	8.0	7.7	7.9	8.2	8.5	8.1	6.5	...	5.8	6.5	7.2	7.6
16	8.0	7.7	8.0	8.5	8.4	a8.0	6.5	...	5.8	6.4	7.5	7.8
17	7.5	7.7	7.9	8.3	8.4	a8.0	6.6	...	5.4	6.5	7.0	7.2
18	7.5	8.0	7.6	8.3	8.6	a8.0	6.5	...	5.3	6.7	7.2	7.2
19	7.6	7.4	7.7	8.2	8.6	a7.9	6.4	...	5.4	6.8	7.4	7.5
20	8.4	7.7	8.0	8.4	8.6	a7.7	6.3	5.3	5.9	6.8	7.3	...
21	8.0	8.2	8.3	8.6	8.6	7.6	6.3	5.6	6.0	6.6	7.2	7.6
22	7.0	7.4	8.3	8.5	8.4	7.5	6.3	5.2	5.9	6.6	7.3	7.5
23	7.4	7.6	8.1	8.2	a8.2	a7.6	6.2	5.3	5.7	...	7.6	7.9
24	7.8	...	8.2	8.2	8.3	a7.7	5.9	5.2	5.8	...	8.1	7.5
25	7.8	...	8.6	8.3	8.8	a7.6	5.8	5.4	...	...	a7.6	7.9
26	8.1	...	7.5	8.5	a8.7	a7.4	5.8	5.3	...	6.3	a7.8	8.2
27	8.1	...	7.5	8.6	a8.6	7.4	5.9	5.3	...	6.6	7.4	7.9
28	8.0	...	7.8	8.3	8.6	7.3	6.0	5.4	5.8	6.7	a7.3	...
29	7.9	...	8.0	8.4	8.7	...	6.1	5.3	6.0	7.0	6.9	...
30	8.1	...	7.7	8.6	8.7	...	6.0	5.3	6.0	7.2	7.2	7.4
31	7.9	...	7.6	...	8.3	...	6.0	5.4	...	7.5	...	7.7

a Estimated.

Q350 (\*804, p. 269; 845, p. 315; 886, p. 504; 906, p. 154; \*936, p. 174; 944, p. 155; 986, p. 190; 1016, p. 218; 1023, p. 232; 1071, p. 260). Aqueduct deep test well of New York Water Service Corporation. 700 feet east of Centerville Street, 200 feet north of owners Aqueduct pumping station, Aqueduct, and about half a mile south of Rockaway Boulevard.

Water level, in feet with reference to mean sea level, 1947 (Mean daily levels from recorder charts beginning June 26)

Day	Jan.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	....	....	-0.22	-0.17	-0.02	-0.24	-0.27	+0.13
2	....	....	....	....	....	-.30	-.18	-.05	-.25	-.28	+1.2
3	....	....	+1.6	....	....	-.39	-.18	-.05	-.31	-.25	+0.9
4	....	+1.9	....	....	....	-.27	-.08	-.07	-.40	-.20	+0.9
5	....	....	....	....	....	-.16	-.22	-.02	-.45	-.15	+1.1
6	....	....	....	+6.2	....	-.14	-.32	-.03	-.46	-.12	+0.7
7	....	....	....	....	....	-.10	-.36	-.08	-.50	-.11	+0.3
8	....	....	....	....	....	-.08	-.26	-.05	....	-.07	+0.8
9	....	....	....	....	....	+1.0	-.19	-.13	....	-.06	+0.4
10	....	....	....	....	....	+1.9	-.15	-.13	....	-.08	....
11	....	....	....	....	....	+2.5	-.08	-.26	....	-.06	....
12	....	....	....	....	....	+2.2	-.17	-.28	-.52	....	....
13	....	....	....	....	....	+1.4	-.30	-.35	-.49	....	....
14	....	....	....	....	....	+1.6	-.50	-.36	-.54	....	-1.0
15	....	....	....	....	....	+1.0	-.65	-.29	-.58	....	-.09
16	....	....	....	....	....	+1.8	-.64	-.25	-.57	+1.7	-.06
17	....	....	....	....	....	+3.1	-.40	-.16	-.56	+1.7	-.08
18	....	....	....	....	....	+2.9	-.20	-.12	-.56	+1.6	-.05
19	....	....	....	....	....	+3.0	-.15	-.09	-.56	+1.7	-.05
20	....	....	....	....	....	+3.8	-.19	-.12	-.57	+1.9	-.13
21	....	....	....	....	....	+3.9	....	-.10	-.64	+1.8	-.12

Q350--Continued.

Water level, in feet with reference to mean sea level, 1947 (Mean daily levels from recorder charts beginning June 26)

Day	Jan.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
22	....	....	....	....	....	+0.42	....	-0.03	-0.67	+0.17	-0.12
23	....	....	....	....	....	+0.42	-0.29	-0.02	-0.65	+0.19	-0.13
24	....	....	....	....	....	+0.39	-0.34	+0.02	-0.57	+0.20	-0.17
25	....	....	....	....	....	+0.37	-0.40	+0.02	-0.51	+0.23	-0.22
26	....	....	....	+0.61	+0.36	+0.28	-0.57	-0.02	-0.48	+0.18	....
27	....	....	....	....	+0.23	+0.18	-0.37	-0.10	-0.47	+0.13	....
28	+0.26	....	....	....	+0.22	+0.24	....	-0.14	-0.46	+0.14	....
29	....	....	....	....	+0.07	+0.24	....	-0.13	-0.40	+0.16	....
30	....	....	....	....	-0.06	+0.04	-0.05	-0.20	-0.33	+0.13	-0.32
31	....	....	....	....	....	-0.14	.00	....	-0.28	....	-0.45

Q470 (\*777, p. 123; \*817, p. 201; \*840, p. 269; \*845, p. 315; \*886, p. 505; \*906, p. 155; 936, p. 175; 944, p. 156; 986, p. 191; 1016, p. 218; 1023, p. 233; 1071, p. 261). New York City Department of Water Supply. Cross Island Parkway about 325 feet south of Northern Boulevard, Bayside.

Water level at noon, in feet with reference to mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	+0.08	+0.55	+0.93	+1.80	+2.69	+1.31	+0.09	-2.34	-0.68	+0.02	+0.30
2	....	+0.08	+0.61	+0.94	+1.98	+2.62	+1.26	-0.27	-2.20	-0.56	+0.04	+0.27
3	....	-0.23	+0.74	+0.97	+2.10	+2.58	+1.22	-0.63	-2.07	-0.55	+0.10	+0.25
4	+1.35	-0.31	+0.75	+0.95	+2.19	+2.51	+1.15	-0.92	-1.98	-0.53	+0.22	+0.25
5	+1.28	-0.32	+0.74	+0.93	+2.29	+2.43	+1.08	-1.16	-1.86	-0.50	+0.34	+0.24
6	+1.26	-0.39	+0.72	+0.98	+2.37	+2.38	+1.02	....	-1.73	-0.45	+0.43	+0.32
7	+1.21	-0.43	+0.75	+1.02	+2.40	+2.34	+0.96	....	-1.62	-0.40	+0.46	+0.39
8	+1.18	-0.43	+0.76	+1.02	+2.43	+2.32	+0.92	-1.77	-1.49	-0.38	+0.50	+0.50
9	+1.13	-0.43	+0.77	....	+2.61	+2.33	+0.82	-1.93	-1.39	-0.37	+0.61	+0.57
10	+0.99	-0.44	+0.76	....	+2.85	+2.32	+0.71	-2.01	-1.30	-0.39	+0.62	+0.58
11	+0.86	-0.44	+0.79	....	+3.08	+2.30	+0.60	-2.04	-1.27	-0.42	+0.65	+0.62
12	+0.76	-0.44	+0.82	+1.01	+3.31	+2.28	+0.52	-2.10	-1.26	-0.42	+0.76	+0.65
13	+0.71	-0.43	+0.78	+1.00	+3.52	+2.24	+0.46	-2.17	-1.27	-0.39	+0.78	+0.66
14	+0.69	-0.38	+0.78	+1.02	+3.69	+2.20	+0.44	-2.26	-1.29	-0.36	+0.79	+0.68
15	+0.71	-0.29	+0.78	+1.07	+3.79	+2.15	+0.42	-2.37	-1.25	-0.35	+0.78	+0.69
16	+0.72	-0.19	+0.79	+1.13	+3.83	+2.09	+0.38	-2.51	-1.19	-0.36	+0.82	+0.77
17	+0.67	-0.09	+0.83	+1.23	+3.85	+2.04	+0.32	-2.63	-1.18	-0.38	+0.86	+0.77
18	+0.59	-0.01	+0.84	+1.25	+3.83	+1.98	+0.32	-2.65	-1.17	-0.37	+0.86	+0.76
19	+0.60	+0.03	+0.82	+1.27	+3.82	+1.91	+0.31	-2.66	-1.16	-0.36	+0.86	+0.74
20	+0.72	+0.04	+0.82	+1.29	+3.79	+1.81	+0.31	-2.67	-1.15	-0.18	+0.84	+0.73
21	+0.88	....	+0.83	+1.34	+3.71	+1.73	+0.31	-2.66	-1.11	+0.19	+0.82	+0.76
22	+0.90	....	+0.86	+1.39	+3.62	+1.64	+0.34	-2.60	-1.03	+0.26	+0.79	+0.78
23	+0.88	....	+0.87	+1.39	+3.50	+1.59	+0.37	-2.58	-0.98	+0.12	+0.80	+0.83
24	+0.90	....	+0.92	+1.41	+3.39	+1.57	+0.37	-2.55	-0.94	-0.06	+0.84	+0.85
25	+0.85	....	+1.01	+1.43	+3.29	+1.55	+0.35	-2.52	-0.87	-0.23	+0.85	+0.81
26	+0.74	....	+1.03	+1.47	+3.20	+1.53	+0.33	-2.53	-0.82	-0.34	+0.75	+0.84
27	+0.67	....	+0.97	+1.50	+3.11	+1.50	+0.32	-2.53	-0.79	-0.40	+0.63	+0.92
28	+0.58	....	+0.94	+1.52	+3.02	+1.46	+0.33	-2.51	-0.77	-0.38	+0.52	+0.96
29	+0.47	....	+0.95	+1.52	+2.94	+1.41	+0.34	-2.50	-0.70	-0.26	+0.43	+0.95
30	+0.36	....	+0.96	+1.64	+2.87	+1.35	+0.34	-2.50	-0.72	-0.16	+0.35	+0.92
31	+0.22	....	+0.94	....	+2.78	....	+0.33	-2.44	....	-0.05	....	+0.80

Q471 (\*906, p. 155; 936, p. 176; 944, p. 157; 986, p. 192; 1016, p. 220; 1023, p. 233; 1071, p. 261). New York City Department of Water Supply, Gas and Electricity, well Bayside 11. About 310 feet south of Northern Boulevard and 110 feet west of Cross Island Parkway (Belt Parkway), Bayside. Measuring point raised 0.81 foot to 18.48 feet above mean sea level July 1, 1946.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	16.06	Apr. 30	15.42	July 11	16.88	Oct. 8	15.37
29	15.46	May 29	16.92	31	16.93	Nov. 3	15.59
Mar. 6	15.47	June 26	15.21	Sept. 3	15.49	26	15.25
28	15.20						



Q543 (\*840, p. 271; \*845, p. 316; \*886, p. 506; 906, p. 156; 936, p. 176; 944, p. 157; 986, p. 192; 1016, p. 220; 1023, p. 234; 1071, p. 262). New York City Department of Water Supply, Gas and Electricity well Rockaway Park 3. Rockaway Beach Boulevard and Beach 110th Street, Rockaway Park. Measuring point lowered 0.15 foot to 14.70 feet above mean sea level Mar. 25, 1945. Water levels affected by tidal fluctuation.

Mean daily water level, in feet above mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	8.5	8.1	8.3	8.3	9.3	9.3	8.2	7.1	6.4	6.8	8.4	7.9
2	8.8	8.0	9.2	...	9.7	9.4	8.0	7.0	6.6	6.5	7.9	7.9
3	8.6	8.0	8.2	...	9.6	9.3	7.9	7.0	6.4	6.6	8.0	8.1
4	8.5	8.5	8.0	...	9.6	9.1	7.9	7.0	6.5	6.8	8.6	7.7
5	8.4	8.4	7.9	...	9.6	9.1	7.9	7.0	6.4	6.8	8.4	8.1
6	8.3	8.2	8.1	8.8	9.4	9.1	7.8	7.0	6.5	6.7	8.2	...
7	8.7	8.5	8.4	8.5	9.4	9.1	7.9	7.0	6.5	6.7	8.1	...
8	8.1	8.1	8.6	8.6	9.0	9.4	7.9	6.9	6.4	6.9	8.5	...
9	8.1	7.7	8.6	8.9	8.7	9.2	7.7	6.7	6.4	7.0	...	...
10	8.2	7.4	8.4	8.6	8.8	9.1	7.5	6.7	6.3	7.1	...	...
11	8.5	7.7	8.4	8.8	9.0	9.0	7.3	6.7	6.3	7.1	...	...
12	8.6	7.6	8.3	8.7	9.0	8.8	7.4	6.4	6.5	7.1	...	...
13	8.6	7.8	8.3	8.7	9.2	8.8	7.3	6.4	6.4	7.2	...	...
14	8.9	8.1	8.8	9.1	9.6	9.0	7.4	6.4	6.7	7.3	...	8.2
15	8.9	8.5	8.7	9.0	9.4	8.9	7.4	6.4	6.8	7.2	...	8.3
16	8.9	8.5	8.8	9.4	9.3	8.9	7.5	6.4	6.5	7.3	8.3	8.5
17	8.3	8.5	8.6	9.2	9.2	8.9	7.5	6.6	6.2	7.3	7.7	7.8
18	8.3	8.9	8.3	9.2	9.4	8.8	7.5	6.5	6.3	7.3	8.1	7.9
19	8.5	8.2	8.4	9.1	9.5	a8.7	7.2	6.3	6.4	...	8.1	8.3
20	9.4	8.4	8.6	9.2	9.6	a8.6	7.1	6.2	6.9	...	8.1	8.4
21	8.8	9.0	9.0	9.5	9.5	8.5	7.2	6.6	6.9	...	7.9	8.5
22	7.7	8.1	...	9.5	9.3	8.4	7.4	6.4	6.8	...	8.1	8.4
23	8.1	8.0	...	9.1	9.3	8.6	7.1	6.4	6.6	...	8.3	9.0
24	8.6	8.1	...	9.0	9.4	8.6	6.8	6.3	6.7	...	8.7	8.4
25	8.8	8.1	...	8.9	9.6	8.4	6.7	6.5	6.9	...	8.1	8.6
26	9.1	8.1	...	9.4	9.6	8.3	6.8	6.4	6.9	7.0	8.1	8.7
27	9.1	7.8	...	9.4	9.5	8.3	6.9	6.5	6.7	7.5	7.8	8.2
28	9.0	7.9	8.5	9.1	9.5	8.2	7.1	6.5	6.8	7.6	7.9	...
29	8.8	...	8.9	9.1	9.6	8.0	7.1	6.3	6.9	7.8	7.7	...
30	8.7	...	8.5	9.4	9.5	8.2	7.2	6.4	6.9	8.1	7.8	7.9
31	8.5	...	8.3	...	9.4	...	7.2	6.4	...	8.5	...	8.3

Q577 (\*1071, p. 262). State of New York, Creedmoor Hospital. Hillside Avenue and Winchester Boulevard, Creedmoor. Water levels affected by near-by pumpage.

Lowest daily water level, in feet with reference to mean sea level, 1946  
(From recorder charts)

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	-2.48	-0.48	-4.90	-6.61	-9.85	-10.80	-5.62	-4.38	-4.40	-1.81
2	....	....	....	-.82	-4.85	-4.70	-10.90	-11.30	-4.62	-3.68	-4.93
3	....	....	....	-.45	-6.00	-5.28	-10.90	-9.91	-6.82	-4.00	-3.50
4	....	....	....	+27	-4.12	-6.29	-9.98	-9.80	-6.48	-3.88	-4.48
5	....	....	....	-.11	-4.03	-6.80	-9.97	-9.40	-5.57	-4.03	-6.79
6	....	....	....	-.11	-3.94	-6.61	-10.90	-10.86	-5.40	-3.52	-6.25
7	....	....	....	-.75	-5.18	-6.45	-9.50	-10.98	-5.28	-3.50	-6.59
8	....	-1.85	....	-.41	....	-5.40	-9.50	-10.05	-4.30	-3.80	-6.59
9	....	....	....	-.35	....	-5.06	-10.00	-11.10	-4.47	-5.12	-5.71
10	....	....	....	-1.10	-6.20	-6.90	-10.51	-10.11	-4.70	-3.62	-4.19
11	....	....	....	-.99	-6.18	-7.31	-10.50	-9.83	-4.84	-3.79	-4.21
12	....	....	....	+0.09	-1.10	-7.13	-10.69	-9.94	-5.11	-3.40	-3.61
13	....	....	....	+29	+3.38	-6.77	-10.58	-11.10	-5.30	-4.00	-3.55
14	....	....	....	+32	+1.30	-7.50	-8.38	-11.10	-5.20	-2.91	-4.40
15	....	....	....	-.80	+1.90	-5.60	-9.61	-10.85	-5.46	-5.28	-5.10
16	....	....	....	-.18	+2.13	-5.88	-10.42	-10.30	-6.70	-4.49	-3.90
17	....	....	....	-.50	-5.48	-7.15	-11.00	-9.80	-5.08	-3.40	-3.29
18	....	....	....	-1.07	-5.18	-6.50	-11.10	-8.70	-5.31	-3.54	-3.01
19	....	-1.30	-1.35	-5.11	-7.70	-11.10	-8.80	-5.18	-4.76	-4.59	-4.39
20	....	....	-.65	-1.35	-5.60	-6.51	-11.10	-8.30	-5.32	-3.52	-3.49
21	....	....	-.32	+4.0	-5.78	-6.38	-10.21	-9.40	-5.60	-4.25	-3.05

Q577--Continued.

Lowest daily water level, in feet with reference to mean sea level, 1946  
(From recorder charts)

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
22	.....	-0.30	-1.65	-6.48	-6.60	-11.11	-9.23	-4.70	-4.80	-3.03	-4.84
23	.....	-.28	-.70	-7.15	-8.10	-10.10	-9.28	-5.03	-5.33	-2.26	-4.84
24	.....	+0.08	-1.08	-6.70	-7.71	-9.40	-9.42	-6.39	-4.00	-2.00	-5.62
25	.....	-.02	-1.72	-7.60	-7.90	-9.66	-8.40	-6.41	-3.80	-2.20	-5.72
26	.....	-.50	-2.36	-6.15	-9.10	-9.40	-8.20	-5.22	-5.00	-2.48	-7.00
27	.....	-.30	-2.23	-6.20	-10.52	-9.60	-9.32	-5.64	-3.68	-3.49	-6.90
28	-2.88	-.10	-1.52	.....	-10.92	-9.51	-8.44	-4.72	-4.45	-2.10	-6.90
29	.....	-.21	-2.62	.....	-10.00	-9.19	-6.56	-4.41	-3.73	-4.41	-5.24
30	.....	+1.0	-4.81	-4.90	-9.68	-11.11	-8.23	-4.98	-3.65	-2.29	-6.30
31	.....	+4.48	.....	-7.25	.....	-11.11	-5.81	.....	-3.62	.....	-6.75

Highest and lowest daily water level, in feet with reference  
to mean sea level, 1947  
(From recorder charts)

Day	January		February		March		April		May		June	
	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
1	-1.50	-6.48	-3.66	-7.91	+0.76	-3.97	+2.61	-5.02	+3.17	-2.65	-0.16	-5.36
2	-1.00	-6.27	-1.38	-7.48	+7.6	-3.14	+2.57	-4.45	+2.60	-3.50	-.27	-6.89
3	-1.49	-6.44	-1.50	-8.11	+3.00	-3.21	+1.90	-3.39	+3.06	-2.74	-.30	-7.79
4	-2.83	-6.50	-3.67	-8.17	+8.5	-5.77	+2.00	-3.51	+3.44	-1.40	-.92	-7.75
5	-.86	-7.46	-1.66	-8.17	+1.76	-3.71	+2.04	-3.30	+4.00	-1.93	.....	.....
6	-1.90	-6.14	-2.05	-8.15	+1.50	-3.87	+2.83	-2.70	+3.36	-2.15	.....	.....
7	-1.69	-7.96	-1.49	-6.69	+2.04	-3.78	+3.39	-2.86	+3.48	-4.27	.....	.....
8	-1.52	-7.02	.....	-5.59	+2.26	-3.81	+2.72	-3.37	+2.92	-2.57	-1.11	-7.07
9	-1.99	-8.01	+6.02	-6.12	+2.92	-4.80	+2.78	-4.59	+2.37	-3.19	-1.21	-7.04
10	-1.72	-7.12	-.47	-5.09	+1.19	-3.24	+2.14	-3.44	+2.80	-3.43	-1.80	-8.79
11	-2.18	-7.07	+4.2	-6.41	+5.6	-3.60	+2.07	-4.06	+4.10	-.40	-1.90	-8.80
12	-1.02	-7.07	+4.7	-5.59	+1.73	-5.21	+2.02	-3.90	+3.40	-2.68	-1.97	-7.90
13	-1.56	-7.44	.....	-6.59	-.84	-3.85	+2.83	-2.57	+3.84	-3.33	-2.51	-8.25
14	-1.41	-7.22	-.08	-6.30	+2.27	-5.01	+3.03	-3.02	+3.25	-4.21	.....	-7.30
15	-1.53	-7.19	+2.0	-4.57	+2.49	-5.17	+1.82	-2.85	+2.45	-3.60	-2.11	-6.69
16	-2.28	-7.43	+1.44	-4.19	+3.02	-4.62	+2.70	-2.71	+1.67	-4.57	-2.03	-6.83
17	-1.00	-7.28	+1.55	-3.79	+1.67	-3.47	+2.01	-3.18	+1.20	-4.44	-2.89	-8.20
18	-1.05	-6.76	+1.43	-6.03	+2.22	-4.17	+2.59	-3.24	+1.90	-4.07	-3.05	-9.07
19	-.84	-5.99	+6.0	-4.85	+1.67	-4.82	+2.52	-2.62	+1.88	-4.30	-3.28	-9.05
20	-1.0	-5.76	-.22	-4.85	+6.8	-4.60	+2.77	-1.93	+4.46	-5.37	-3.49	-7.47
21	+0.08	-6.46	-.35	-4.37	+2.80	-5.10	+2.13	-2.17	+3.0	-5.12	-3.69	-8.04
22	-.52	-6.75	+1.85	-4.83	+2.11	-4.36	+1.60	-2.41	-.23	-6.92	-3.06	-7.16
23	-.53	-6.06	+2.80	-1.82	+2.53	-3.12	+1.71	-3.02	-.33	-5.90	-3.44	-8.38
24	-.83	-7.14	+1.43	-4.22	+2.53	-3.22	+3.09	-3.22	-.50	-5.37	-4.00	-9.40
25	-1.50	-6.84	+1.68	-4.00	+2.26	-3.39	+3.00	-2.94	+2.2	-5.26	-3.90	-8.10
26	-.95	-6.55	+2.08	-4.15	+2.10	-4.18	+2.60	-2.86	+5.3	-6.13	-3.60	-8.57
27	-2.07	-6.39	+8.1	-4.12	+1.77	-3.67	+3.14	-2.40	-.26	-6.33	-3.87	-8.18
28	-1.15	-8.59	+1.90	-3.88	+1.72	-3.68	+2.28	-2.42	-.66	-5.97	-3.90	-8.69
29	-1.43	-8.09	.....	.....	+2.98	-3.60	+1.94	-2.80	-1.14	-6.36	-2.64	-9.30
30	-1.47	-8.74	.....	.....	+1.89	-3.80	+3.20	-3.04	-.69	-6.43	-2.52	-10.83
31	-1.57	-9.32	.....	.....	+2.96	-4.95	.....	.....	-.55	-6.10	.....	.....

Highest and lowest daily water level, in feet with reference  
to mean sea level, 1947  
(From recorder charts)

Day	July		August		September		October		November		December	
	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
1	-3.11	-9.92	-7.47	-11.30	-3.93	-10.00	-2.35	-6.64	-1.40	-5.78	+1.50	-4.31
2	-3.03	-9.60	-6.74	-12.43	-4.19	-10.20	-.78	-6.80	-.24	-5.15	+1.40	-4.48
3	-5.49	-11.14	-7.01	-10.93	-6.30	-10.00	-2.32	-7.02	+7.1	-5.11	+6.4	-5.44
4	-4.14	-10.00	-5.93	-12.35	-5.50	-8.56	-1.11	-6.70	+1.5	-5.40	+1.50	-5.97
5	-3.25	-10.44	-5.80	-12.47	-6.11	-9.38	-1.00	-7.29	-.57	-4.76	+1.21	-5.82
6	-3.15	-9.20	-7.77	-13.13	-2.95	-9.40	+1.9	-6.08	-1.30	-6.39	+1.52	-5.47
7	-3.07	-11.18	-8.10	-13.78	-3.58	-6.20	-.20	-6.60	-1.30	-5.90	+1.90	-4.01
8	-5.96	.....	-8.50	-12.80	-3.68	-7.64	-1.86	-6.40	+4.42	-4.94	+2.30	-4.90
9	.....	.....	-7.59	-11.84	-3.80	-7.48	-.41	-7.63	+9.9	-4.40	+2.30	-5.47

a Estimated.

Q577--Continued.

Highest and lowest daily water level, in feet with reference  
to mean sea level, 1947  
(From recorder charts)

Day	July		August		September		October		November		December	
	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
10	.....	.....	-7.27	-11.30	-2.54	-9.18	-0.27	-7.70	-0.52	-6.44	+1.90	-5.00
11	.....	.....	-7.45	-12.87	-5.45	-9.18	-.70	-7.70	+3.37	-4.46	+1.80	-3.74
12	-4.70	-10.46	-6.53	-13.00	-4.44	-9.38	-.17	-6.23	-.22	-6.21	-.02	-4.55
13	-4.06	-10.29	-7.47	-13.34	-3.19	-8.29	+5.5	-6.94	+6.4	-6.27	+1.34	-3.58
14	-3.92	-11.17	-8.40	-14.50	-3.44	-8.05	+5.3	-7.26	-1.15	-5.09	+2.42	-3.47
15	-5.10	-11.50	-12.50	-14.30	-2.43	-8.81	-1.61	-7.46	+6.4	-4.39	+2.59	-4.62
16	-4.71	-10.30	.....	.....	-3.00	-8.10	-.25	-7.42	+1.49	-4.30	.....	-3.56
17	-3.60	-11.00	.....	.....	-2.57	-8.83	-.10	-7.72	+1.50	-6.02	.....	-4.18
18	.....	.....	.....	.....	-4.09	-9.11	-.54	-7.34	.....	-6.26	.....	-4.95
19	-4.53	-9.60	.....	.....	-3.88	-9.29	-.42	-5.93	+1.08	-6.15	.....	-4.14
20	-4.36	-10.94	.....	.....	-4.90	-8.20	+4.0	-5.52	+4.0	-4.87	.....	-3.80
21	-4.80	-9.67	.....	.....	-1.85	-8.06	-1.08	-5.79	-1.17	-5.06	+9.9	-3.49
22	-5.86	-11.00	.....	.....	-1.75	-8.53	-1.53	-7.16	-.50	-5.15	+1.21	-3.79
23	-4.59	-11.37	-7.79	-12.65	-3.06	-7.00	-.62	-7.54	-.29	-4.32	+1.39	-3.94
24	-4.53	-10.87	-5.69	-12.68	-2.06	-8.73	-.94	-7.95	+1.86	-5.36	+1.21	-4.30
25	-5.09	-10.35	-7.90	-12.71	-2.36	-8.16	-.48	-7.64	+1.07	-4.85	+1.53	-3.33
26	-6.05	-11.00	-6.66	-13.40	-1.36	-7.17	-.62	-5.53	-2.99	-5.47	+2.34	-4.45
27	-4.17	-9.40	-7.79	-13.46	-1.49	-7.27	-.11	-7.40	+1.27	-4.37	+2.70	-3.26
28	-4.39	-9.53	-8.49	-13.70	-2.10	-6.21	-.23	-7.46	+1.14	-4.75	.....	.....
29	-5.47	-10.08	-8.61	-12.64	-.67	-6.50	-.28	-7.33	+4.48	-4.40	.....	.....
30	-6.85	-10.34	-5.60	-10.90	-1.96	-6.59	-2.01	-5.90	+1.64	-4.18	+2.60	-4.69
31	-6.25	-12.10	-4.00	-10.50	.....	.....	-.12	-7.34	.....	+2.29	-4.83	.....

a Estimated.

Q1089 (\*840, p. 274; 845, p. 318; \*886, p. 506; \*936, p. 177; 944, p. 158; 986, p. 194; 1016, p. 220; 1023, p. 234; 1071, p. 263). New York City Department of Water Supply, Gas and Electricity. On north side of North Conduit Avenue, about 800 feet east of Far Rockaway Branch of Long Island Railroad, Aqueduct.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	1.53	May 26	2.00	July 11	1.48	Oct. 8	1.09
Mar. 4	1.52	June 26	1.74	30	1.52	Nov. 3	1.37
Apr. 3	1.47	30	1.70	Sept. 2	1.46	26	1.64
May 6	1.96						

Q1090 (\*840, p. 275; 845, p. 318; 886, p. 507; 906, p. 157; 936, p. 178; 944, p. 159; 986, p. 195; 1016, p. 220; 1023, p. 234; 1071, p. 263). New York City Department of Water Supply, Gas and Electricity. On east side of Hawktree Creek Road, about 350 feet south of 133d Avenue, Aqueduct.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	3.04	May 26	3.28	July 11	3.08	Oct. 8	2.40
Mar. 6	3.07	June 26	3.20	30	2.93	Nov. 3	2.28
Apr. 3	2.83	30	3.19	Sept. 2	2.63	25	2.28
May 6	3.19						

Q1222 (\*906, p. 158; 936, p. 178; 944, p. 159; 986, p. 195; 1016, p. 221; 1023, p. 235; 1071, p. 263). New York City Department of Water Supply, Gas and Electricity well Whitestone 9. About 200 feet east of 142d Street, about 850 feet north of 20th Avenue, Whitestone. Water levels are affected by tidal fluctuation.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	1.48	May 6	2.43	July 11	1.46	Oct. 7	0.73
Mar. 4	1.53	29	2.29	31	2.56	Nov. 3	1.49
30	1.43	June 26	1.77	Sept. 3	2.06	26	1.60

Q1223 (\*906, p. 159; \*936, p. 178; 944, p. 159; 986, p. 195; 1016, p. 221; 1023, p. 235; 1071, p. 263). New York City Department of Water Supply, Gas and Electricity. On northeast corner of Rockaway Boulevard and 142d Place, South Ozone Park.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	6.47	May 26	7.44	July 11	7.17	Oct. 7	6.34
Mar. 4	6.54	June 26	7.42	30	7.03	Nov. 3	5.95
Apr. 3	6.55	30	7.37	Sept. 2	7.25	26	6.62
May 6	7.06						

Q1224 (\*906, p. 159; \*936, p. 179; 944, p. 159; 986, p. 195; 1016, p. 221; 1023, p. 235; 1071, p. 264). New York City Department of Water Supply, Gas and Electricity. On north side of 102d Avenue, about 100 feet east of Van Wyck Boulevard, Jamaica.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	6.83	May 26	7.01	July 2	6.79	Sept. 2	6.21
Mar. 4	6.75	June 25	6.84	3	6.94	Oct. 7	6.54
Apr. 3	6.98	30	6.91	11	6.86	Nov. 3	6.25
May 6	6.67	July 1	6.82	Aug. 1	6.58	25	5.76

Q1225 (\*906, p. 160; \*936, p. 179; 944, p. 160; 986, p. 195; 1016, p. 222; 1023, p. 235; 1071, p. 264). New York City Department of Water Supply, Gas and Electricity. Southeast corner of 109th Avenue and 200th Street.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	27.52	May 26	28.09	July 11	27.76	Oct. 7	26.73
Mar. 4	27.30	June 25	27.92	30	27.54	Nov. 3	26.84
Apr. 3	27.40	30	27.91	Sept. 3	27.10	25	26.37
May 6	27.83						

Q1237 (\*906, p. 160; 936, p. 179; 944, p. 160; 986, p. 196; 1016, p. 222; 1023, p. 235; 1071, p. 264). New York City Department of Water Supply. Belt Parkway, about 1,450 feet west of 150th Street, Baisley Park.

Water level at noon, in feet with reference to mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	-0.35	-1.06	-1.25	-1.13	+0.15	+1.28	-1.28	-1.66	+0.13	+0.58	-1.23	-1.67
2	.00	-1.29	-1.11	-1.01	+.23	+1.29	-1.38	-1.83	+.30	+.68	-1.15	-1.67
3	+.25	-1.20	-.88	.....	+.65	+1.19	-1.44	-2.01	+.01	.....	-1.24	-1.71
4	+.13	-.67	-1.17	.....	+.79	+1.09	-1.51	-1.63	-.10	.....	-1.18	-1.74
5	-.29	.....	-1.30	-.78	+.67	+1.02	-1.53	-1.94	-.10	+.70	-1.02	-1.75
6	-.46	.....	-1.36	-.63	+.95	+.91	-1.61	-2.28	-.06	+.55	-1.02	-1.69
7	-.77	.....	-1.27	-.66	+1.02	.....	-1.63	-2.33	-.11	-.10	-1.14	-1.75
8	-.81	-.15	-1.09	-.75	.....	+1.00	-1.40	-1.53	-.13	-.45	-1.09	-1.59
9	-.95	.....	-1.05	-1.05	.....	+1.25	-.47	-1.25	-.27	-.53	-1.08	-1.73
10	-.88	.....	-1.07	-1.20	.....	+.95	-.20	-1.55	-.14	-1.05	-1.27	-1.97
11	-.73	.....	-1.34	-1.23	+.40	+.70	-.44	-.75	-.26	-1.30	-1.30	-1.90
12	-.63	.....	-1.44	-1.20	+.35	+.36	-.14	-1.28	-.34	-1.47	-.98	-1.87
13	-.68	.....	-1.47	-1.36	+.17	-.35	-.92	-1.85	-.49	-1.60	-1.22	-1.91
14	-.96	.....	-1.11	-1.35	.00	+.07	-.60	-2.30	-.65	-1.67	-1.28	-1.95
15	-1.03	-.93	-1.01	-1.23	+.40	+.69	-1.15	-2.60	-.38	-1.70	-1.28	-1.98
16	-1.04	-1.18	-1.19	-1.17	+.65	+.75	-1.04	-2.67	-.45	-1.78	-1.15	-1.84
17	-1.44	-1.33	-1.10	-1.08	+.66	+.36	-.17	-1.46	-.10	-1.84	-1.21	-2.06
18	-1.67	-1.33	.....	-1.11	+.41	-.01	+.11	-.66	-.01	-1.86	-1.37	-2.02
19	-1.90	-1.33	.....	-1.18	+.63	+.74	+.40	-.57	+.13	-1.78	-1.43	-2.38
20	-1.77	-1.41	.....	-1.25	+.61	.....	+.60	-1.02	.00	-1.75	-1.37	-2.44
21	-1.64	-.90	.....	-1.23	+.37	+1.01	+.55	-.42	+.05	-1.80	-1.33	-2.38
22	-1.55	-.97	.....	-1.15	+.66	.....	+.41	-.25	+.56	-1.80	-1.36	-2.38
23	-1.44	-1.15	.....	-1.06	+.77	.....	+.60	-.29	+.25	-1.83	-1.25	-2.28
24	-1.30	-1.26	.....	-1.04	+.72	.....	+.20	-.70	+.06	-1.99	-1.15	-2.25
25	-1.21	-1.23	.....	-1.08	+.70	.....	-.14	-.80	+.45	-2.01	-1.08	-2.24
26	-1.10	-1.13	.....	-1.10	+.81	.....	-.54	-1.35	.....	-2.08	-1.26	-1.94
27	-.94	-1.59	.....	-1.18	+.67	+.08	-.75	.....	+.13	-2.09	-1.48	-1.85

Q1237--Continued.

Water level at noon, in feet with reference to mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
28	-0.66	-1.29	.....	-0.96	+0.43	-0.41	-0.56	.....	+0.05	-2.09	-1.55	.....
29	-.05		.....	-.63	+.67	-.57	-.37	.....	+.31	-1.96	-1.58	.....
30	-.38		.....	-.50	+.98	-.75	-.52	-.25	+.40	-1.89	-1.62	-2.44
31	-.50		.....		+1.21		-1.33	+1.10		-1.61		-2.45

Q1248 (\*906, p. 161; \*936, p. 180; 944, p. 161; 986, p. 197; 1016, p. 223; 1023, p. 236; 1071, p. 265). New York City Department of Water Supply, Gas and Electricity. At 100th Road and Belt Parkway, Queens Village.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	36.10	May 26	36.71	July 11	36.05	Oct. 7	34.54
Mar. 4	35.88	June 25	36.70	30	36.60	Nov. 3	34.25
Apr. 3	35.83	30	36.75	Sept. 2	34.95	25	34.47
May 6	36.56						

Q1249 (\*906, p. 161; \*936, p. 180; 944, p. 161; 986, p. 197; 1016, p. 223; 1023, p. 236; 1071, p. 265). New York City Department of Water Supply, Gas and Electricity. On northwest corner of 106th Avenue and 216th Street, Queens Village.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	31.71	May 26	32.32	July 11	31.96	Oct. 7	30.62
Mar. 4	31.66	June 25	32.08	30	31.69	Nov. 3	30.32
Apr. 3	31.55	30	32.17	Sept. 2	31.10	25	30.38
May 6	31.93						

Q1250 (\*906, p. 161; \*936, p. 181; 944, p. 161; 986, p. 197; 1016, p. 224; 1023, p. 236; 1071, p. 265). New York City Department of Water Supply, Gas and Electricity. At southwest corner of Liberty and Camden Avenues, Hollis.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	20.18	May 26	20.79	July 11	20.49	Oct. 7	19.67
Mar. 4	20.06	June 25	20.63	30	20.33	Nov. 3	19.72
Apr. 3	20.17	30	20.70	Sept. 3	20.02	25	20.08
May 6	20.69						

Q1251 (\*906, p. 161; \*936, p. 181; 944, p. 161; 986, p. 198; 1016, p. 224; 1023, p. 236; 1071, p. 265). New York City Department of Water Supply, Gas and Electricity. At northwest corner of 107th Avenue and 172d Street, Jamaica.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	10.31	May 26	11.33	July 2	11.08	Sept. 2	10.45
Mar. 4	10.27	June 25	11.10	3	11.07	Oct. 7	10.17
Apr. 3	10.44	30	11.09	11	10.93	Nov. 3	9.95
May 6	11.29	July 1	11.09	30	10.74	25	10.52

Q1252 (\*906, p. 161; \*936, p. 181; 944, p. 162; 986, p. 198; 1016, p. 224; 1023, p. 236; 1071, p. 265). New York City Department of Water Supply, Gas and Electricity. At northeast corner of Liberty Avenue and 157th Street, Jamaica.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	11.95	May 26	12.37	July 2	12.05	Oct. 7	11.23
Mar. 4	11.91	June 25	12.20	3	12.04	Nov. 3	11.07
Apr. 3	11.90	30	12.12	11	11.85	25	11.39
May 6	12.33	July 1	12.10	Sept. 2	11.38		

Q1253 (\*906, p. 161; \*936, p. 182; 944, p. 162; 986, p. 198; 1016, p. 224; 1023, p. 236; 1071, p. 265). New York City Department of Water Supply, Gas and Electricity. At northeast corner of 101st Avenue and 121st Street, Richmond Hill.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	2.14	May 26	1.88	July 2	1.68	Sept. 2	1.12
Mar. 4	1.99	June 26	1.66	3	1.68	Oct. 8	.99
Apr. 3	1.80	30	1.59	11	1.59	Nov. 3	1.11
May 6	1.68	July 1	1.69	30	1.56	25	.66

Q1254 (\*906, p. 162; \*936, p. 182; \*944, p. 162; 986, p. 198; 1016, p. 225; 1023, p. 237; 1071, p. 266). New York City Department of Water Supply, Gas and Electricity. At northwest corner of 101st Avenue and 108th Street, Richmond Hill.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	2.24	May 26	2.60	July 2	2.56	Sept. 2	3.00
Mar. 6	2.46	June 26	2.59	3	2.57	Oct. 8	3.26
Apr. 3	2.68	30	2.59	11	2.67	Nov. 3	3.25
May 6	2.72	July 1	2.58	30	2.74	25	3.25

Q1255 (\*936, p. 182; 944, p. 162; 986, p. 199; 1016, p. 225; 1023, p. 237; 1071, p. 266). New York City Department of Water Supply, Gas and Electricity. At northwest corner of Atlantic Avenue and Woodhaven Boulevard, Woodhaven.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	4.67	May 26	5.31	July 2	5.51	Sept. 2	6.20
Mar. 4	4.99	June 24	5.13	3	5.36	Oct. 8	6.25
Apr. 3	4.79	30	5.29	11	5.57	Nov. 3	6.30
May 6	5.38	July 1	5.54	30	5.79	26	6.04

Q1256 (\*906, p. 162; \*936, p. 184; 944, p. 163; 986, p. 199; 1023, p. 237; 1071, p. 266). New York City Department of Water Supply, Gas and Electricity. At southeast corner of 95th Avenue and 82 Street, Woodhaven.

Water level, in feet below mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	3.63	May 26	3.55	July 2	3.65	Sept. 2	4.40
Mar. 14	3.71	June 24	3.84	3	3.66	Oct. 8	4.45
Apr. 3	3.73	30	3.65	11	3.82	Nov. 3	4.52
May 6	3.60	July 1	3.65	Aug. 1	4.06	26	4.20

Q1266. New York Water Service Corporation well 6. 91st Street between 101st and 97th Avenues. Unused drilled public-supply well, diameter 8 inches, depth 97 feet. Measuring point, hole in recorder shelf, 20.54 feet above mean sea level and 4 feet below land-surface datum. First measured by Geological Survey Oct. 25, 1946.

Mean daily water level, in feet below mean sea level, 1947  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 25	2.98	Nov. 11	3.08	Nov. 30	3.20	Dec. 16	3.30
26	2.99	12	3.09	Dec. 1	3.19	17	3.30
27	3.01	13	3.10	2	3.22	18	3.31
28	3.01	14	3.10	3	3.23	19	3.32
29	3.01	15	3.11	4	3.23	20	3.32
30	3.02	16	3.13	5	3.23	21	3.30
31	3.02	17	3.13	6	3.24	22	3.33
Nov. 1	3.05	18	3.14	7	3.25	23	3.34
2	3.05	19	3.14	8	3.25	24	3.34
3	3.05	23	3.17	9	3.25	25	3.35
4	3.05	24	3.18	10	3.25	26	3.36
5	3.06	25	3.18	11	3.26	27	3.36
6	3.07	26	3.18	12	3.26	28	3.35
7	3.06	27	3.19	13	3.26	29	3.36
8	3.06	28	3.20	14	3.28	30	3.38
9	3.08	29	3.20	15	3.29	31	3.39
10	3.09						

## Q1266--Continued.

Mean daily water level, in feet below mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	3.40	3.55	3.68	3.73	3.52	3.48	5.67	6.25	6.53	4.51	4.74	4.13
2	3.39	3.55	3.66	3.72	3.51	3.47	5.67	6.23	6.53	4.49	4.68	4.13
3	3.39	3.55	3.66	3.73	3.51	3.47	5.74	6.25	6.52	4.46	4.64	4.12
4	3.41	3.53	3.69	3.74	3.50	3.48	5.75	6.25	6.54	4.45	4.58	4.11
5	3.41	3.54	3.69	3.72	3.50	3.46	5.79	6.26	6.55	4.45	4.55	4.10
6	3.42	3.56	3.69	3.71	3.49	3.46	5.81	6.28	6.56	4.45	4.53	4.10
7	3.41	3.56	3.69	3.71	3.49	3.46	5.83	6.29	6.57	4.43	4.50	4.10
8	3.42	3.57	3.69	3.71	3.49	3.46	5.86	6.30	6.58	4.42	4.47	4.08
9	3.43	3.57	3.70	3.69	3.49	3.46	5.90	6.31	6.58	4.42	4.47	4.08
10	3.44	3.58	3.70	3.70	3.49	3.45	5.90	6.32	6.59	4.42	4.46	4.07
11	3.43	3.59	3.70	3.70	3.49	3.45	5.94	6.35	6.60	4.41	4.44	4.07
12	3.44	3.60	3.71	3.66	3.49	3.45	5.96	6.35	6.60	4.41	4.41	4.05
13	3.46	3.60	3.70	3.67	3.48	3.45	5.98	6.36	6.63	4.40	4.40	4.05
14	3.46	3.60	3.68	3.65	3.48	3.46	6.01	6.37	6.62	4.40	4.37	4.05
15	3.46	3.59	3.69	3.64	3.49	3.46	....	6.40	6.65	4.39	4.35	4.05
16	3.46	3.60	3.69	3.62	3.49	3.47	....	6.40	6.64	4.39	4.33	4.03
17	3.47	3.61	3.69	3.62	3.48	3.48	6.04	6.41	6.65	4.38	4.31	4.04
18	3.48	3.61	3.70	3.62	3.47	3.49	6.05	6.42	6.67	4.38	4.30	4.03
19	3.48	3.63	3.70	3.60	3.47	3.49	6.05	6.43	6.67	4.38	4.28	4.03
20	3.46	3.62	3.70	3.60	3.47	3.51	6.08	6.43	6.67	4.38	4.27	4.04
21	3.48	3.61	3.70	3.59	3.47	3.52	6.09	6.45	6.66	4.38	4.26	4.04
22	3.50	3.63	3.70	3.59	3.48	3.52	6.09	6.48	6.67	....	4.23	4.04
23	3.50	3.64	3.70	3.59	3.48	3.52	6.10	6.47	6.68	....	4.22	4.04
24	3.50	3.64	3.69	3.57	3.48	3.52	6.11	6.48	....	....	4.20	4.03
25	3.51	3.65	3.67	3.56	3.48	3.52	6.12	6.48	....	6.41	4.18	4.03
26	3.51	3.65	3.70	3.54	3.48	3.52	6.13	6.48	....	6.48	4.18	4.03
27	3.52	3.66	3.72	3.54	3.48	3.71	6.15	6.50	4.68	6.53	4.17	4.02
28	3.52	3.67	3.71	3.55	3.48	....	6.15	6.50	4.63	6.57	4.15	4.02
29	3.53		3.71	3.54	3.47	....	....	6.51	4.58	6.60	4.14	4.02
30	3.54		3.73	3.53	3.47	5.57	....	6.50	4.54	....	4.14	4.02
31	3.54		3.73		3.48	....	....	6.52	....	....		4.02

Q1281 (\*936, p. 184; 944, p. 163; 986, p. 199; 1016, p. 225; 1023, p. 237; 1071, p. 266). New York City Department of Water Supply, Gas and Electricity. At southwest corner of Liberty Avenue and Woodhaven Boulevard, Ozone Park.

Water level, in feet below mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	1.83	May 26	1.57	July 2	1.79	Sept. 2	2.41
Mar. 4	1.91	June 26	1.71	3	1.81	Oct. 8	2.54
Apr. 3	2.03	30	1.73	11	1.97	Nov. 3	2.45
May 6	1.67	July 1	1.76	30	2.02	26	2.20

Q1282 (\*936, p. 185; 944, p. 163; 986, p. 199; 1016, p. 225; 1023, p. 237; 1071, p. 266). New York City Department of Water Supply, Gas and Electricity. At northeast corner of Liberty Avenue and 113th Street, Richmond Hill.

Water level, in feet with reference to mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 14	+0.19	May 26	+0.55	July 11	-0.20	Oct. 8	+0.10
Apr. 3	-1.16	June 26	-1.17	30	-2.28	Nov. 3	-3.58
May 6	-2.29	30	+3.33	Sept. 2	-3.30	26	-5.51

Q1283 (\*936, p. 186; 944, p. 163; 986, p. 199; 1016, p. 226; 1023, p. 237; 1071, p. 266). New York City Department of Water Supply, Gas and Electricity. At southeast corner of Rockaway Boulevard and 121st Street, South Ozone Park.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	3.05	May 26	3.45	July 11	3.27	Oct. 8	2.27
Mar. 4	2.75	June 26	3.33	30	3.01	Nov. 3	2.10
Apr. 3	2.84	30	3.29	Sept. 2	2.60	26	2.36
May 6	3.23						

Q1284 (\*936, p. 187; 944, p. 164; 986, p. 200; 1016, p. 226; 1023, p. 237; 1071, p. 267). New York City Department of Water Supply, Gas and Electricity. At northwest corner of Rockaway Boulevard and Lincoln Street, South Ozone Park.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	6.31	May 26	6.81	July 11	6.12	Oct. 7	5.79
Mar. 6	5.95	June 26	6.47	30	5.65	Nov. 3	4.67
Apr. 3	7.34	30	6.29	Sept. 2	5.39	26	5.81
May 6	6.77						

Q1285 (\*936, p. 187; 944, p. 164; 986, p. 200; 1016, p. 226; 1023, p. 238; 1071, p. 267). New York City Department of Water Supply, Gas and Electricity. At northwest corner of 132d Street and 111th Avenue, South Ozone Park.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	5.54	May 26	5.75	July 11	5.54	Oct. 8	4.74
Mar. 4	5.17	June 26	5.76	30	5.41	Nov. 3	4.66
Apr. 3	5.02	30	5.73	Sept. 2	4.97	25	4.80
May 6	5.59						

Q1286 (\*936, p. 188; 944, p. 164; 986, p. 200; 1016, p. 226; 1023, p. 238; 1071, p. 267). New York City Department of Water Supply, Gas and Electricity. On east side of 144th Place, about 315 feet south of Jamaica Avenue, Jamaica.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	9.45	May 26	9.40	July 11	9.13	Oct. 8	8.23
Mar. 4	9.52	June 25	9.18	30	8.98	Nov. 3	8.05
Apr. 3	9.47	30	9.22	Sept. 2	8.54	25	8.10
May 6	9.41						

Q1287 (\*936, p. 188; 944, p. 164; 986, p. 200; 1016, p. 227; 1023, p. 238; 1071, p. 267). New York City Department of Water Supply, Gas and Electricity. At north corner of Merrick Boulevard and 116th Avenue, St. Albans.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	11.85	May 26	12.75	July 11	11.95	Oct. 7	11.26
Mar. 4	12.13	June 25	12.40	30	11.65	Nov. 3	11.21
Apr. 3	12.28	30	12.27	Sept. 2	11.57	25	12.87
May 6	12.91						

Q1288 (\*936, p. 189; 944, p. 165; 986, p. 201; 1016, p. 227; 1023, p. 238; 1071, p. 267). New York City Department of Water Supply, Gas and Electricity. At northwest corner of Murdock Avenue and 180th Street, St. Albans.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	16.70	May 26	17.86	July 11	17.37	Oct. 7	16.44
Mar. 4	17.00	June 25	17.61	30	17.13	Nov. 3	16.12
Apr. 3	17.04	30	17.57	Sept. 2	16.84	25	16.94
May 6	17.84						

Q1289 (\*936, p. 189; 944, p. 165; 986, p. 201; 1016, p. 227; 1023, p. 238; 1071, p. 267). New York City Department of Water Supply, Gas and Electricity. At northwest corner of Springfield Boulevard and 110th Avenue, Queens Village.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	31.49	May 26	32.16	July 11	31.86	Oct. 7	30.55
Mar. 4	31.39	June 25	32.04	30	31.61	Nov. 3	30.24
Apr. 3	31.42	30	32.01	Sept. 3	31.04	25	30.22
May 6	31.90						



Q1290 (#936, p. 190; 944, p. 165; 986, p. 201; 1016, p. 227; 1023, p. 238; 1071, p. 267). New York City Department of Water Supply, Gas and Electricity. At southwest corner of Merrick Road and Springfield Boulevard, Springfield.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	14.85	May 26	17.05	July 11	16.53	Oct. 7	15.58
Mar. 4	13.61	June 25	16.83	30	16.36	Nov. 3	15.29
Apr. 3	15.93	30	16.74	Sept. 2	16.10	25	15.84
May 6	16.93						

Q1292 (#936, p. 190; 944, p. 166; 986, p. 201; 1016, p. 228; 1023, p. 238; 1071, p. 268). New York City Department of Water Supply, Gas and Electricity. About 96 feet south of Union Turnpike and 81 feet east of 185th Street, Jamaica.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	27.96	May 6	27.81	July 11	27.69	Oct. 8	27.20
Mar. 4	27.71	29	27.86	31	27.61	Nov. 12	26.77
Apr. 3	27.52	June 26	27.81	Sept. 3	27.38	26	26.69

Q1459. New York City Department of Water Supply, Gas and Electricity. Spring Creek pumping station well 17, East Leg. Sunrise Highway and 79th Street. Unused drilled public-supply well, diameter 6 inches, depth feet. Measuring point, top of nipple, 8.50 feet above mean sea level, and 2 feet above land-surface datum. First measured by Geological Survey June 27, 1947.

## Water level, in feet below mean sea level, 1947

(From recorder charts)

Day	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	...	0.64	0.94	1.06	1.24	1.25	0.79
2	...	.67	.95	1.06	1.25	1.22	.79
3	...	.69	.96	1.07	1.26	1.21	.80
4	...	.69	.97	1.09	1.27	1.15	.81
5	...	.70	.98	1.11	1.28	1.09	.81
6	...	.72	1.00	1.12	1.29	1.08	.81
7	...	.73	1.00	1.12	1.29	1.08	.84
8	...	.73	1.01	1.14	1.29	.98	.80
9	...	.75	1.01	1.16	1.31	.99	.81
10	...	.77	1.03	1.17	1.31	1.03	a .85
11	...	.79	1.04	1.16	1.31	.98	a .87
12	...	.80	1.06	1.14	1.31	.85	a .89
13	...	.81	1.06	1.13	1.30	.84	.89
14	...	.82	1.07	1.13	1.28	.82	.91
15	...	.82	1.07	1.11	1.27	.78	.91
16	...	.82	1.07	1.10	1.29	...	.86
17	...	.80	1.05	1.13	1.29	...	.94
18	...	.79	1.03	1.13	1.29	...	.95
19	...	.78	1.02	1.12	1.29	...	.97
20	...	.80	1.03	1.15	1.30	...	1.00
21	...	.80	1.04	1.15	1.33	...	...
22	...	.79	1.05	1.14	1.35	.79	...
23	...	.81	1.05	1.19	1.36	.76	...
24	...	.83	1.06	1.20	1.38	.73	...
25	...	.87	1.08	1.20	1.39	.70	...
26	...	.88	1.09	1.22	1.39	.73	...
27	.60	.88	1.07	1.25	1.39	.76	...
28	.62	.88	1.05	1.25	1.39	.77	...
29	.64	.90	1.04	1.24	1.35	.77	...
30	.64	.91	1.06	1.22	1.33	.78	...
31	...	.92	1.05	...	1.29	...	...

a Estimated.

Suffolk County

S58 (\*1016, p. 228; 1023, p. 239; 1071, p. 268). New York City Board of Water Supply, California Stovepipe well 6. Southwest corner of Grand Boulevard and 44th Street, Islip.

Water level at noon, in feet above mean sea level, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	22.73	23.13	22.84	23.13	23.71	23.67	23.22	23.50	22.93	22.56	22.60	23.86
2	22.73	23.13	22.85	23.14	23.71	23.67	23.20	23.47	22.92	22.55	22.64	23.85
3	22.74	23.13	22.97	23.21	23.69	23.67	23.18	23.43	22.90	22.54	22.65	23.84
4	22.74	23.14	23.03	23.26	23.68	23.64	23.17	23.40	22.88	22.53	22.65	23.82
5	22.75	23.14	23.07	23.31	23.67	23.63	23.14	23.37	22.87	22.53	22.67	23.79
6	22.76	23.13	23.10	23.41	23.69	23.62	23.13	23.34	22.86	22.52	22.69	23.74
7	22.76	23.12	23.13	23.78	23.71	23.61	23.11	23.32	22.85	22.51	22.69	23.70
8	22.77	23.11	23.17	24.14	23.71	23.60	23.09	23.29	22.84	22.51	22.70	23.70
9	22.76	23.10	23.19	24.31	23.72	23.59	23.08	23.27	22.83	22.49	22.75	23.66
10	22.76	23.08	23.22	24.35	23.72	23.57	23.07	23.24	22.81	22.49	22.81	23.63
11	22.76	23.06	23.24	24.36	23.73	23.56	23.07	23.22	22.80	22.48	22.90	23.61
12	22.76	23.03	23.26	24.31	23.75	23.54	23.06	23.20	22.79	22.46	23.00	23.57
13	22.75	23.01	23.28	24.21	23.77	23.52	23.04	23.17	22.77	22.45	23.15	23.54
14	22.76	23.00	23.31	24.16	23.78	23.51	23.02	23.15	22.76	22.45	23.30	23.52
15	22.77	23.00	23.32	24.10	23.77	23.49	23.08	23.13	22.75	22.44	23.45	23.50
16	22.79	22.99	23.33	24.07	23.77	23.47	23.20	23.11	22.73	22.44	23.60	23.49
17	22.80	22.98	23.35	24.03	23.76	23.44	23.28	23.09	22.72	22.43	23.77	23.41
18	22.81	22.96	23.34	23.99	23.75	23.43	23.33	23.07	22.70	22.43	23.80	23.45
19	22.82	22.94	23.30	23.96	23.74	23.42	23.37	23.06	22.69	22.43	23.80	23.42
20	22.83	22.93	23.32	23.92	23.73	23.39	23.40	23.05	22.67	22.42	23.77	23.40
21	22.86	22.94	23.32	23.89	23.71	23.37	23.41	23.04	22.66	22.42	22.74	23.39
22	22.88	22.94	23.30	23.85	23.72	23.36	23.42	23.03	22.66	22.41	22.71	23.37
23	22.90	22.91	23.29	23.83	23.73	23.34	23.45	22.99	22.65	22.41	23.67	23.36
24	22.94	22.90	23.28	23.82	23.73	23.33	23.48	22.98	22.64	22.40	23.65	23.34
25	22.97	22.89	23.28	23.79	23.73	23.32	23.50	22.97	22.64	22.40	23.73	23.33
26	23.00	22.88	23.25	23.77	23.72	23.30	23.51	22.96	22.63	22.40	23.76	23.33
27	23.03	22.87	23.22	23.77	23.70	23.29	23.52	23.00	22.62	22.39	23.81	23.31
28	23.06	22.86	23.20	23.74	23.69	23.27	23.53	23.00	22.60	22.39	23.82	23.30
29	23.09		23.19	23.73	23.69	23.25	23.54	22.98	22.58	22.45	23.84	23.29
30	23.12		23.17	23.71	23.68	23.24	23.54	22.95	22.57	22.52	23.86	23.27
31	23.13		23.15		23.67		23.53	22.94		22.56		23.26

a Estimated.

S202 (\*840, p. 273; \*845, p. 317; 886, p. 509; \*906, p. 164; 936, p. 191; 944, p. 166; 986, p. 202; 1016, p. 228; 1023, p. 239; 1071, p. 269). New York Water Service Corporation. Abandoned well at Spring Street pumping station, 450 feet south of Gains Avenue, Huntington. Measuring point lowered 1.31 feet to 69.33 feet above mean sea level Sept. 15, 1947.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	39.66	May 2	39.90	Aug. 1	39.37	Oct. 30	39.25
Feb. 12	39.37	June 6	39.72	Sept. 5	39.26	Nov. 26	39.39
Mar. 4	39.45	July 10	39.56	Oct. 6	39.08	Dec. 22	39.25
Apr. 4	39.45						

S203 (\*840, p. 273; 845, p. 318; 886, p. 510; \*906, p. 164; 936, p. 192; 944, p. 167; 986, p. 202; 1016, p. 229; 1023, p. 240; 1071, p. 269). C. A. Gould. About 125 feet north of Wolf Hill Road and about 1.4 miles west of Deer Park Avenue, Dix Hills.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	73.10	May 2	72.35	Aug. 1	71.94	Oct. 30	71.75
Feb. 12	72.77	June 6	72.21	Sept. 5	71.89	Nov. 26	71.65
Mar. 4	72.65	July 10	71.99	Oct. 6	71.77	Dec. 22	71.50
Apr. 4	72.38						

S1803 (\*840, p. 285; 845, p. 324; 886, p. 510; 906, p. 165; 936, p. 192; 944, p. 167; 986, p. 202; 1016, p. 229; 1023, p. 240; 1071, p. 269). New York City Department of Water Supply, Gas and Electricity. At north corner of Belmont Avenue and Farmingdale Road, about 1.5 miles west of Babylon.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	16.15	May 1	16.57	July 28	16.84	Oct. 27	15.15
Mar. 3	16.06	June 3	16.38	Sept. 8	15.70	Nov. 26	16.94
Apr. 1	15.97	July 3	15.88	Oct. 1	15.38	Dec. 22	16.34

S1805 (\*840, p. 287; 845, p. 324; 886, p. 511; 906, p. 166; \*936, p. 193; 944, p. 168; 986, p. 202; 1016, p. 229; 1023, p. 240; 1071, p. 269). New York City Department of Water Supply, Gas and Electricity. At southwest corner of Albany Avenue and Farmingdale Road, about 3 miles north of Amityville.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	40.70	May 1	42.30	July 28	42.85	Oct. 27	40.54
Mar. 3	40.58	June 3	42.59	Sept. 8	41.81	Nov. 26	41.59
Apr. 1	40.85	July 3	42.13	Oct. 1	41.19	Dec. 22	41.52

S1806 (\*840, p. 288; 845, p. 325; 886, p. 511; 906, p. 166; 936, p. 193; 944, p. 168; 986, p. 203; 1016, p. 230; 1023, p. 240; 1071, p. 269). New York City Department of Water Supply, Gas and Electricity. On northeast corner of Wellwood and Long Island Avenues, Pinelawn.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	53.76	May 1	55.61	July 28	55.63	Oct. 27	54.25
Mar. 3	53.97	June 3	55.65	Sept. 8	55.26	Nov. 26	54.44
Apr. 1	54.18	July 3	55.48	Oct. 1	54.78	Dec. 22	54.70

S1807 (\*840, p. 289; 845, p. 325; 886, p. 511; 906, p. 166; 936, p. 193; 944, p. 168; 986, p. 203; 1016, p. 230; 1023, p. 240; 1071, p. 269). New York City Department of Water Supply, Gas and Electricity. On east side of Higbie Lane, 0.4 mile south of Hunter Avenue and about 1.5 miles north-east of Babylon.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	21.37	May 1	21.96	July 28	21.84	Oct. 27	20.89
Mar. 3	21.52	June 3	21.81	Sept. 8	21.28	Nov. 26	21.91
Apr. 1	21.38	July 3	21.49	Oct. 1	21.01	Dec. 22	21.63

S1808 (\*777, p. 124; \*817, p. 202; \*840, p. 290; 845, p. 325; 886, p. 511; 906, p. 166; 936, p. 194; 944, p. 168; 986, p. 203; 1016, p. 230; 1023, p. 240; 1071, p. 270). New York City Department of Water Supply, Gas and Electricity. On east side of Sagtikos Manor Lane, about 4,250 feet south of Montauk Branch of Long Island Railroad, and 2.5 miles east of Babylon.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	10.82	May 1	11.19	July 28	10.98	Oct. 27	9.71
Mar. 3	11.25	June 3	10.88	Sept. 8	10.11	Nov. 26	11.88
Apr. 1	10.63	July 3	10.36	Oct. 1	9.81	Dec. 22	10.99

S1809 (\*777, p. 124; \*817, p. 202; \*840, p. 291; 845, p. 326; 886, p. 512; 906, p. 167; 936, p. 194; 944, p. 169; 986, p. 203; 1016, p. 231; 1023, p. 240; 1071, p. 270). New York City Department of Water Supply, Gas and Electricity. At northwest corner of Sagtikos Manor Lane Road and 0.1 mile south of Bay Shore Road, about 1.5 miles northwest of Bay Shore.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	26.22	May 1	28.10	July 28	28.17	Oct. 27	26.39
Mar. 3	26.38	June 3	28.30	Sept. 8	27.40	Nov. 26	27.35
Apr. 1	26.84	July 3	27.81	Oct. 1	26.90	Dec. 22	27.55

S1810 (777, p. 124; \*817, p. 202; \*840, p. 291; 845, p. 326; 886, p. 512; 906, p. 167; 936, p. 194; 944, p. 169; 986, p. 204; 1016, p. 231; 1023, p. 241; 1071, p. 270). Geological Survey, U. S. Dept. of Interior. On east side of Sagtikos Manor Lane Road, about 1,000 feet south of main line of Long Island Railroad and 1.5 miles southwest of Brentwood.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	49.00	May 1	49.40	July 28	49.93	Oct. 27	49.20
30	48.61	June 3	49.88	Sept. 8	49.71	Nov. 28	48.93
Mar. 3	48.32	July 3	49.96	Oct. 1	48.51	Dec. 22	48.82
Apr. 1	48.19						

S1811 (\*840, p. 292; 845, p. 326; \*886, p. 512; \*906, p. 167; \*936, p. 194; 944, p. 169; 986, p. 204; 1016, p. 231; 1023, p. 241; 1071, p. 270). Geological Survey, U. S. Dept. of Interior. At north shore of Lake Ronkonkoma. Measurements show the level of Lake Ronkonkoma, a water-table Lake.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	52.12	May 2	52.12	Aug. 4	52.03	Oct. 29	52.09
Feb. 11	52.07	June 6	52.03	Sept. 4	52.00	Nov. 25	52.02
Mar. 4	52.17	July 10	52.06	Oct. 3	52.03	Dec. 23	51.97
Apr. 2	52.20						

S1812 (\*840, p. 292; 845, p. 327; 886, p. 512; \*906, p. 168; 936, p. 195; 944, p. 170; 986, p. 204; 1016, p. 231; 1023, p. 241; 1071, p. 270). Geological Survey, U. S. Dept. of Interior. On northeast side of Smithtown Boulevard, about 100 feet northwest of Nichols Road and 1 mile west of Lake Ronkonkoma, Nesconset.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	45.44	May 2	45.53	Aug. 4	45.75	Oct. 29	44.94
Feb. 11	45.05	June 6	45.84	Sept. 4	45.49	Nov. 25	44.92
Mar. 4	44.90	July 10	45.79	Oct. 3	45.19	Dec. 23	44.66
Apr. 2	44.78						

S1813 (\*906, p. 168; 936, p. 195; 944, p. 170; 986, p. 204; 1016, p. 232; 1023, p. 241; 1071, p. 270). Geological Survey, U. S. Dept. of Interior. On south side of Johnson Avenue about 1.5 miles west of Ocean Avenue, Ronkonkoma.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	37.26	May 1	37.35	Aug. 1	37.66	Oct. 30	36.82
Feb. 10	37.09	June 3	37.57	Sept. 8	37.21	Nov. 26	37.11
Mar. 3	36.96	July 3	37.50	Oct. 1	36.99	Dec. 22	36.92
Apr. 1	36.89						

S1814 (\*906, p. 169; 936, p. 196; 944, p. 170; 986, p. 204; 1016, p. 232; 1023, p. 241; 1071, p. 271). Geological Survey, U. S. Dept. of Interior. On northwest corner of Suffolk and Lowells Avenues, Central Islip.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	35.64	May 1	35.92	Aug. 1	36.04	Oct. 27	35.40
Feb. 10	35.27	June 3	36.13	Sept. 8	35.77	Nov. 26	35.43
Mar. 3	35.14	July 3	36.10	Oct. 1	35.55	Dec. 22	35.52
Apr. 1	35.11						

S1815 (\*906, p. 169; 936, p. 196; 944, p. 171; 986, p. 205; 1016, p. 232; 1023, p. 241; 1071, p. 271). Geological Survey, U. S. Dept. of Interior. On northwest corner of Suffolk and Eastern Avenues, Brentwood.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	44.46	May 1	44.03	July 28	44.63	Oct. 27	43.91
Feb. 10	43.89	June 3	44.38	Sept. 8	44.33	Nov. 26	43.87
Mar. 3	43.66	July 3	44.51	Oct. 1	44.14	Dec. 22	43.68
Apr. 1	43.39						

S1816 (\*906, p. 170; 936, p. 196; 944, p. 171; 986, p. 205; 1016, p. 232; 1023, p. 241; 1071, p. 271). Geological Survey, U. S. Dept. of Interior. On northeast corner of Brentwood and Commack Roads, Deer Park.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	55.21	May 1	56.10	Aug. 1	56.79	Oct. 27	55.87
Feb. 10	54.75	June 3	56.43	Sept. 8	56.68	Nov. 28	55.83
Mar. 3	54.72	July 3	56.51	Oct. 1	56.32	Dec. 22	55.87
Apr. 1	54.84						

S1817 (\*906, p. 170; 936, p. 196; 944, p. 171; 986, p. 205; 1016, p. 233; 1023, p. 242; 1071, p. 271). Geological Survey, U. S. Dept. of Interior. Southeast corner of Long Island Avenue and 18th Street, Wyandanch.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 10	50.65	May 1	51.77	Aug. 1	51.69	Oct. 27	50.10
Mar. 3	50.93	June 3	51.83	Sept. 8	50.85	Nov. 26	51.70
Apr. 1	50.72	July 3	51.29	Oct. 1	50.44	Dec. 22	51.05

S2314 (\*986, p. 205; 1016, p. 233; 1023, p. 242; 1071, p. 271). Foundation Sand & Gravel Co. On west side of Burr's Lane about 1,500 feet north of Straight Path, Wyandanch.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 10	58.86	May 1	59.35	Aug. 1	59.33	Oct. 27	58.64
Mar. 3	58.88	June 3	59.45	Sept. 8	59.03	Nov. 26	58.84
Apr. 1	58.68	July 3	59.20	Oct. 1	58.84	Dec. 22	58.72

S2454 (\*906, p. 171; 936, p. 197; 944, p. 171; 986, p. 206; 1016, p. 233; 1023, p. 242; 1071, p. 271). Long Island Railroad. On south side of railroad tracks, about 80 feet east of Deer Park Avenue, Babylon.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 10	7.29	May 1	7.65	July 28	7.79	Oct. 27	6.81
Mar. 3	7.71	June 3	7.42	Sept. 8	7.06	Nov. 26	8.18
Apr. 1	7.21	July 3	7.17	Oct. 1	6.92	Dec. 22	7.35

S2455 (\*777, p. 121; \*817, p. 201; \*840, p. 272; 845, p. 317; \*886, p. 508; 906, p. 172; 936, p. 198; 944, p. 172; 986, p. 206; 1016, p. 233; 1023, p. 242; 1071, p. 271). Geological Survey, U. S. Dept. of Interior. About 4,000 feet southeast of intersection of Udalls Road and Hunter Avenue, about 2 miles west of Bay Shore.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	20.94	May 1	22.31	July 28	22.10	Oct. 27	20.22
Mar. 3	20.82	June 3	22.38	Aug. 28	21.40	Nov. 24	21.65
Apr. 1	21.24	July 3	21.71	Oct. 1	20.68	Dec. 22	21.77

S3112 (\*936, p. 199; 944, p. 172; 986, p. 207; 1016, p. 234; 1023, p. 242; 1071, p. 272). New York City Department of Water Supply, Gas and Electricity. On northeast corner of Long Island Avenue and Little East Neck Road, Wyandanch.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 10	52.29	May 1	54.02	July 28	53.95	Oct. 27	52.50
Mar. 3	52.38	June 3	54.13	Sept. 8	53.55	Nov. 26	52.59
Apr. 1	52.59	July 3	53.90	Oct. 1	53.07	Dec. 22	52.87

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S3496 (\*944, p. 173; 986, p. 207; \*1016, p. 234; 1023, p. 242; 1071, p. 272). Geological Survey, U. S. Dept. of Interior. On east side of Coates Avenue about 100 feet north of Long Island Railroad, Holbrook.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	47.89	May 5	46.45	Aug. 4	46.96	Oct. 30	46.78
Feb. 10	47.43	June 6	46.48	Sept. 4	47.12	Nov. 25	46.61
Mar. 4	47.15	July 10	46.75	Oct. 3	46.94	Dec. 23	46.33
Apr. 4	46.68						

S3497 (\*944, p. 173; 986, p. 208; 1016, p. 234; 1023, p. 242; 1071, p. 272). Geological Survey, U. S. Dept. of Interior. On northeast corner of Waverly and Long Island Avenues, Holtsville.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	47.32	May 5	46.03	July 29	46.71	Oct. 29	46.26
Feb. 10	46.89	June 4	46.28	Sept. 4	46.69	Nov. 25	46.08
Mar. 4	46.65	July 8	46.61	Oct. 2	46.45	Dec. 22	45.80
Apr. 2	46.28						

S3498 (\*944, p. 173; 986, p. 208; 1016, p. 235; 1023, p. 242; 1071, p. 272). Geological Survey, U. S. Dept. of Interior. On south side of Long Island Avenue about 1,000 feet west of State Highway 112, Medford.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	44.42	May 5	44.15	July 29	44.57	Oct. 29	43.69
Feb. 10	44.07	June 4	44.59	Sept. 2	44.25	Nov. 24	43.55
Mar. 4	43.86	July 10	44.67	Oct. 2	43.95	Dec. 22	43.38
Apr. 2	43.61						

S3512 (\*944, p. 173; 986, p. 208; 1016, p. 235; 1023, p. 243; 1071, p. 272). New York State Division of Highways. On south side of Middle Country Road (State Highway 25), about 0.6 mile east of Lake Avenue, Lake Grove.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	66.85	May 2	66.21	Aug. 4	67.14	Oct. 29	66.28
Feb. 10	66.43	June 6	66.82	Sept. 4	66.78	Nov. 25	66.12
Mar. 7	66.15	July 8	67.01	Oct. 3	66.55	Dec. 23	65.89
Apr. 4	65.91						

S3513 (\*944, p. 173; 986, p. 208; 1016, p. 235; 1023, p. 243; 1071, p. 272). New York State Department of Public Works. Middle Country Road, about 0.9 mile west of Selden.

Water level at noon, in feet above mean sea level, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	61.27	61.00	60.74	60.51	60.73	61.05	61.32	61.36	61.11	.....	60.53	60.26
2	61.30	60.99	60.77	60.54	60.74	61.06	61.31	61.35	61.12	.....	60.52	60.26
3	61.29	60.97	60.74	60.50	60.75	61.08	61.31	61.35	61.08	60.80	60.52	60.26
4	61.26	61.02	60.72	60.49	60.77	61.06	61.32	61.34	61.08	60.80	60.52	60.24
5	61.27	60.98	60.71	60.51	60.78	61.08	61.32	61.35	61.08	60.79	60.50	60.26
6	61.24	60.95	60.70	60.51	60.79	61.11	61.33	61.34	61.06	60.78	60.48	60.24
7	61.26	60.94	60.69	60.48	60.80	61.11	61.32	61.35	61.05	60.78	60.47	60.24
8	61.24	60.96	60.69	60.47	60.79	61.12	61.32	61.34	61.04	60.78	60.49	60.27
9	61.22	60.93	60.68	60.48	60.80	61.13	61.32	61.33	61.03	60.75	60.45	60.23
10	61.21	60.91	60.67	60.46	60.81	61.13	61.33	61.31	61.03	60.75	60.43	60.22
11	61.22	60.89	60.65	60.48	60.82	61.15	61.33	61.29	61.02	60.74	60.43	60.22
12	61.20	60.88	60.64	60.50	60.83	61.16	61.34	61.30	61.02	60.73	60.42	60.21
13	61.17	60.88	60.64	60.47	60.86	61.16	61.34	61.30	61.01	60.73	60.40	60.21
14	61.18	60.88	60.69	60.50	60.86	61.18	61.34	61.30	61.00	60.72	60.39	60.20
15	61.18	60.88	60.63	60.51	60.86	61.19	61.35	61.29	61.00	60.71	60.39	60.20
16	61.17	60.87	60.63	60.56	60.88	61.19	61.35	61.27	60.98	60.70	60.39	60.23
17	61.14	60.86	60.63	60.54	60.90	61.20	61.36	61.25	60.95	60.69	60.37	60.19
18	61.14	60.85	60.62	60.55	60.92	61.21	61.37	61.24	60.95	60.68	60.36	60.19
19	61.12	60.83	60.60	60.57	60.91	61.22	61.37	61.25	60.95	60.67	60.35	60.17
20	61.18	60.83	60.60	60.58	60.93	61.22	61.36	61.23	60.94	60.66	60.35	60.17

a Estimated.

## S3513--Continued.

Water level at noon, in feet above mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
21	61.12	60.87	60.60	60.58	60.93	61.23	61.36	61.21	60.94	60.65	60.33	60.18
22	61.09	60.84	60.59	60.58	60.94	61.24	61.38	61.21	60.95	60.65	60.32	60.16
23	61.08	60.81	.....	60.60	60.94	61.25	61.36	61.20	60.91	60.64	60.34	60.18
24	61.08	60.81	60.58	60.64	60.96	61.26	61.35	61.20	60.91	60.61	60.34	60.15
25	61.07	60.80	60.62	60.64	60.97	61.27	61.35	61.19	60.91	60.61	60.32	60.14
26	61.06	60.79	60.56	60.66	60.97	61.27	61.36	61.17	60.88	60.60	60.31	60.18
27	61.05	60.77	60.55	60.68	60.98	61.28	61.37	61.15	60.86	60.59	60.29	60.14
28	61.04	60.75	60.55	60.66	61.00	61.29	61.39	61.15	.....	60.59	60.29	60.14
29	61.03		60.54	60.69	61.02	61.30	61.37	61.13	.....	60.58	60.28	60.12
30	61.03		60.53	60.71	61.03	61.30	61.37	61.12	.....	60.57	60.27	60.12
31	61.01		60.52		61.03		61.38	61.14		60.56		60.11

S3514 (\*944, p. 174; 986, p. 208; 1016, p. 236; 1023, p. 244; 1071, p. 273). Herman Jurgens. On south side of Jericho Turnpike (State Highway 25) about 0.5 mile east of Lakefield Avenue, Commack. Measuring point raised 4.06 feet to 158.28 feet above mean sea level Aug. 28, 1947.

Water level, in feet above mean sea level, 1947 (Mean daily levels from recorder charts beginning Aug. 1)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	.....	.....	.....	.....	.....	65.74	65.50	65.47	65.52	65.42
2	.....	.....	.....	.....	66.07	.....	.....	.....	65.58	65.51	65.55	65.42
3	.....	.....	.....	.....	.....	.....	.....	.....	65.49	65.47	65.50	65.46
4	.....	.....	66.45	.....	.....	.....	.....	.....	65.52	65.49	65.51	65.38
5	.....	.....	.....	.....	.....	.....	.....	.....	65.54	65.49	65.50	65.52
6	.....	.....	.....	.....	.....	65.93	.....	.....	65.51	65.47	.....	65.41
7	.....	.....	.....	66.18	.....	.....	.....	.....	65.52	65.49	.....	65.41
8	66.82	.....	.....	.....	.....	.....	.....	.....	65.51	65.53	65.57	65.53
9	.....	.....	.....	.....	.....	.....	.....	.....	65.51	65.43	65.38	65.35
10	.....	.....	.....	.....	.....	.....	65.53	.....	65.54	65.45	65.36	65.37
11	.....	66.59	.....	.....	.....	.....	.....	.....	65.56	65.46	65.50	65.41
12	.....	.....	.....	.....	.....	.....	.....	.....	65.58	65.45	65.49	65.38
13	.....	.....	.....	.....	.....	.....	.....	.....	65.56	65.52	65.37	65.39
14	.....	.....	.....	.....	.....	.....	.....	.....	65.57	65.49	65.38	65.38
15	.....	.....	.....	.....	.....	.....	.....	.....	65.57	65.47	65.44	65.41
16	.....	.....	.....	.....	.....	.....	.....	.....	65.49	65.48	65.47	65.51
17	.....	.....	.....	.....	.....	.....	.....	.....	65.45	65.51	65.37	65.31
18	.....	.....	.....	.....	.....	.....	.....	.....	.....	65.52	65.37	65.41
19	.....	.....	.....	.....	.....	.....	.....	.....	.....	65.52	65.37	65.34
20	.....	.....	.....	.....	.....	.....	.....	.....	65.37	65.47	65.38	65.38
21	.....	.....	.....	.....	.....	.....	.....	.....	65.46	65.45	65.37	65.43
22	.....	.....	.....	.....	.....	.....	.....	.....	65.46	65.43	65.46	65.36
23	.....	.....	.....	.....	.....	.....	.....	.....	65.47	65.47	65.50	65.44
24	.....	.....	.....	.....	.....	.....	.....	.....	65.53	65.36	65.61	65.32
25	.....	.....	.....	.....	.....	.....	.....	.....	65.50	65.47	65.45	65.40
26	.....	.....	.....	.....	.....	.....	.....	.....	65.44	65.48	65.42	65.57
27	.....	.....	.....	.....	.....	.....	.....	.....	65.42	65.47	65.38	65.49
28	.....	.....	.....	.....	.....	.....	.....	65.50	65.44	65.47	65.44	65.41
29	.....	.....	.....	.....	.....	.....	.....	65.48	65.51	65.51	65.41	65.34
30	.....	.....	.....	.....	.....	.....	.....	61.51	65.52	.....	65.40	65.35
31	.....	.....	.....	.....	.....	.....	.....	65.56	.....	.....	.....	65.39

S3515 (\*944, p. 174; 986, p. 209; 1016, p. 237; 1023, p. 244; 1071, p. 273). New York City Board of Water Supply test well 57. West side of East Third Avenue, about 0.35 mile north of Brook Street, Bay Shore.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	31.03	May 1	32.58	July 28	32.42	Oct. 27	31.20
Feb. 10	31.16	June 3	32.69	Sept. 8	31.95	Nov. 28	31.96
Mar. 3	31.06	July 3	32.31	Oct. 1	31.59	Dec. 22	32.10
Apr. 1	31.45						

S3516 (\*944, p. 174; 986, p. 209; 1016, p. 237; 1023, p. 244; 1071, p. 273). New York City Board of Water Supply test well 58. On east side of East Third Avenue, about 105 feet south of Walbridge Avenue, Bay Shore.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	36.04	May 1	37.40	July 28	37.36	Oct. 27	36.24
Feb. 10	35.87	June 3	37.54	Sept. 8	37.00	Nov. 28	36.56
Mar. 3	35.85	July 3	37.34	Oct. 1	36.66	Dec. 22	36.81
Apr. 1	36.16						

S3517 (\*944, p. 175; 986, p. 209; 1016, p. 237; 1023, p. 244; 1071, p. 273). New York City Board of Water Supply test well 60. On southwest corner of Lakeland Avenue and Tariff Street, Sayville.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	12.04	May 7	13.03	Aug. 4	12.54	Oct. 30	11.95
Feb. 10	12.23	June 6	12.91	Sept. 4	12.31	Nov. 25	12.70
Mar. 4	12.25	July 10	12.58	Oct. 3	12.04	Dec. 23	12.61
Apr. 4	12.38						

S3518 (\*944, p. 175; 986, p. 209; 1016, p. 237; 1023, p. 244; 1071, p. 274). New York City Board of Water Supply test well 79. East side of Islip Avenue, about 190 feet north of Locust Street, Central Islip.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	30.28	May 1	31.70	July 28	31.26	Oct. 27	30.15
Feb. 10	30.47	June 3	31.76	Sept. 8	30.83	Nov. 28	30.93
Mar. 3	30.32	July 3	31.38	Oct. 1	30.50	Dec. 22	31.13
Apr. 1	30.69						

S3519 (\*944, p. 176; 986, p. 210; 1016, p. 238; 1023, p. 244; 1071, p. 274). New York City Board of Water Supply test well 93. On east side of Carleton Avenue, about 2.25 miles south of main line of Long Island Railroad, Central Islip.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	24.46	May 1	25.57	July 28	25.45	Oct. 27	24.25
Feb. 10	24.60	June 3	25.64	Sept. 8	24.84	Nov. 26	25.51
Mar. 3	24.53	July 3	25.21	Oct. 1	24.55	Dec. 22	25.24
Apr. 1	24.82						

S3521 (\*944, p. 176; 986, p. 210; 1016, p. 238; 1023, p. 244; 1071, p. 274). New York City Board of Water Supply test well 162. On east side of Medford Avenue, 0.9 mile south of Long Island Avenue, Medford.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	36.49	May 5	37.14	July 29	36.93	Oct. 30	36.11
Feb. 10	36.23	June 4	37.17	Sept. 2	36.63	Nov. 24	36.24
Mar. 4	36.12	July 10	37.07	Oct. 2	36.36	Dec. 22	36.34
Apr. 2	36.07						

S3522 (\*944, p. 177; 986, p. 210; 1016, p. 238; 1023, p. 245; 1071, p. 274). New York City Board of Water Supply test well 166. On east side of Waverly Avenue, 1.0 mile north of Main Street, Patchogue.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	19.23	May 5	19.85	July 29	19.48	Oct. 30	19.15
Feb. 10	19.22	June 4	19.69	Sept. 2	19.34	Nov. 25	19.51
Mar. 4	19.20	July 8	19.54	Oct. 2	19.19	Dec. 22	19.42
Apr. 2	19.26						

S3524 (\*944, p. 177; 986, p. 211; 1016, p. 239; 1023, p. 245; 1071, p. 274). New York City Board of Water Supply test well 215. On south side of Park Road, about 0.3 mile east of Yaphank Avenue and about 0.1 mile south of main line of Long Island Railroad, Yaphank.



## S3524--Continued.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	21.91	May 6	22.50	July 29	23.11	Oct. 28	21.60
Feb. 11	21.78	June 4	22.42	Sept. 2	21.91	Nov. 24	22.21
Mar. 5	21.86	July 9	22.26	Oct. 2	21.74	Dec. 23	22.22
Apr. 4	21.86						

S3526 (\*1016, p. 239; 1023, p. 245; 1071, p. 274). New York City Board of Water Supply test well 218. South side of Long Island Avenue about 100 feet east of South Haven Road, and 1.6 miles east of Yaphank.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	28.42	May 7	27.92	July 31	27.78	Oct. 28	26.92
Feb. 11	27.61	June 4	27.07	Sept. 2	27.48	Nov. 24	26.80
Mar. 5	27.85	July 9	27.24	Oct. 2	27.19	Dec. 22	26.72
Apr. 4	27.38						

S3527 (\*944, p. 178; 986, p. 211; 1016, p. 239; 1023, p. 245; 1071, p. 274). New York City Board of Water Supply test well 222. On south side of Horseblock Road, 1.6 miles west of Yaphank Avenue and about 1.7 miles southeast of Plainfield.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	32.42	May 6	31.50	July 29	32.40	Oct. 28	31.71
Feb. 11	31.99	June 4	31.89	Sept. 2	32.23	Nov. 24	31.51
Mar. 5	31.76	July 9	32.29	Oct. 2	31.97	Dec. 23	31.38
Apr. 4	31.41						

S3529 (\*944, p. 179; 986, p. 211; 1016, p. 240; 1023, p. 245; 1071, p. 275). New York City Board of Water Supply test well 238. On north side of Horseblock Road, about 0.7 mile west of Yaphank Avenue, and about 1.3 miles northwest of Brookhaven railroad station, Brookhaven.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	25.10	May 6	25.66	July 29	25.46	Oct. 28	24.52
Feb. 11	25.23	June 4	25.90	Sept. 2	25.11	Nov. 24	25.64
Mar. 5	25.00	July 9	25.63	Oct. 2	24.78	Dec. 23	25.31
Apr. 4	24.97						

S3530 (\*944, p. 179; 986, p. 212; 1016, p. 240; 1023, p. 246; 1071, p. 275). New York City Board of Water Supply test well 240. At northeast corner of trail intersection about 0.9 mile west of Yaphank Avenue, and about 300 feet south of main line of Long Island Railroad, Yaphank.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	32.60	May 7	32.77	July 29	32.55	Oct. 28	31.83
Feb. 11	32.34	June 4	32.72	Sept. 2	32.31	Nov. 24	32.04
Mar. 5	32.25	July 9	32.69	Oct. 2	32.05		

S3531 (\*944, p. 180; 986, p. 212; 1016, p. 240; 1023, p. 246; 1071, p. 275). New York City Board of Water Supply test well 254. On east side of River Road, about 0.5 mile north of Montauk Highway (State Highway 27), and about 0.3 mile east of Carmans River, South Haven.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	9.60	May 7	9.56	July 30	9.78	Oct. 28	9.54
Feb. 11	9.50	June 4	9.73	Sept. 2	9.73	Nov. 24	10.03
Mar. 5	9.45	July 9	9.78	Oct. 2	9.59	Dec. 22	9.65
Apr. 3	9.31						

S3532 (\*944, p. 180; 986, p. 212; 1016, p. 241; 1023, p. 246; 1071, p. 275). New York City Board of Water Supply test well 265. At southeast corner of Whiskey and Randall Roads, about 1.4 miles north of intersection of Randall and Middle Country Roads (State Highway 25), Ridge.

S3532--Continued.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	47.11	May 6	46.23	July 30	46.76	Oct. 29	45.88
Feb. 11	46.51	June 5	46.53	Sept. 3	46.46	Nov. 25	45.61
Mar. 6	46.21	July 8	46.77	Oct. 2	46.16	Dec. 23	45.59
Apr. 2	45.95						

S3533 (\*944, p. 181; 986, p. 212; 1016, p. 241; 1023, p. 246; 1071, p. 275). New York City Board of Water Supply test well 272. On east side of dirt road, about 0.8 mile east of Yaphank-Middle Island road and about 1.1 miles south of Middle Country Road (State Highway 25), Middle Island.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	45.85	Apr. 2	45.21	July 8	45.90	Oct. 3	45.10
Feb. 11	45.50	May 6	45.74	30	45.72	29	44.82
Mar. 7	45.33	June 5	45.92	Sept. 3	45.43	Dec. 23	44.86

S3534 (\*944, p. 181; 986, p. 212; 1016, p. 241; 1023, p. 246; 1071, p. 275). New York City Board of Water Supply test well 276. On northeast side of trail, about 1.8 miles east of intersection of Long Island Avenue and South Haven road, and about 3.4 miles east of Yaphank.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level
Jan. 7	27.59	Mar. 5	27.03	May 7	26.88
Feb. 11	27.38	Apr. 4	27.38	June 4	27.50

S3535 (\*944, p. 181; 986, p. 213; \*1016, p. 241; 1023, p. 246; 1071, p. 275). New York City Board of Water Supply test well 284. On south side of Chichester Avenue, about 1,000 feet southeast of Brookfield Avenue, Center Moriches.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	18.89	May 7	18.56	July 31	19.12	Oct. 28	18.33
Feb. 11	18.50	June 4	18.95	Sept. 2	18.87	Nov. 24	18.20
Mar. 5	18.27	July 9	19.20	Oct. 2	18.60	Dec. 22	18.07
Apr. 3	18.06						

S3536 (\*944, p. 182; 986, p. 213; 1016, p. 242; 1023, p. 247; 1071, p. 276). New York City Board of Water Supply test well 289. On southwest side of Manor Branch of Long Island Railroad, about 2.7 miles northwest of Eastport railroad station, and about 2.3 miles northeast of Center Moriches.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	24.52	May 7	23.52	July 31	24.32	Oct. 28	23.95
Feb. 11	24.18	June 4	23.78	Sept. 2	24.34	Nov. 24	23.76
Mar. 5	23.96	July 9	24.14	Oct. 2	24.11	Dec. 22	23.58
Apr. 3	23.68						

S3537 (#944, p. 182; 986, p. 213). New York City Board of Water Supply test well 331. On west side of trail, about 1,000 feet north of Old Country Road, about 1 mile west of Speonk-Riverhead road, and about 1.1 miles northwest of Speonk. Measurements resumed Jan. 24, 1947.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 24	14.58	May 7	15.38	July 31	15.14	Oct. 28	14.46
Mar. 5	14.50	June 4	15.49	Sept. 2	14.87	Nov. 24	14.83
Apr. 3	14.50	July 9	15.31	Oct. 2	14.63	Dec. 22	14.84

S3538 (#944, p. 183; 986, p. 213; 1016, p. 242; 1023, p. 247; 1071, p. 276). New York City Board of Water Supply test well 339. On northwest side of Fox Trail about 1.7 miles south of intersection of Old Riverhead road and Riverhead-Quoque road (State Highway 113), and about 0.6 mile west of Oakville.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	15.63	May 6	15.70	July 31	15.83	Oct. 28	15.30
23	15.54	June 5	15.83	Sept. 3	15.65	Nov. 24	15.65
Mar. 6	15.38	July 9	15.90	Oct. 2	15.47	Dec. 23	15.41
Apr. 3	15.30						

S3539 (#944, p. 183; 986, p. 213). New York City Board of Water Supply test well 403. On west side of trail, about 0.4 mile west of Speonk-Riverhead Road, about 1.8 miles north of Old Country Road, and about 2.3 miles north of Speonk. Measurements resumed Jan. 24, 1947.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 24	22.77	May 7	22.28	July 31	23.11	Oct. 28	22.63
Mar. 5	22.46	June 4	22.67	Sept. 3	22.97	Nov. 24	22.48
Apr. 3	22.24	July 9	23.04	Oct. 2	22.80	Dec. 22	22.44

S3540 (#944, p. 183; 986, p. 214). New York City Board of Water Supply test well 404. On west side of trail, about 0.4 mile west of Speonk-Riverhead road, 1.0 mile north of Old Country Road, and 1.6 miles north of Speonk.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 24	19.35	May 7	19.10	July 31	19.89	Oct. 28	19.36
Mar. 5	19.08	June 4	19.54	Sept. 3	19.76	Nov. 24	19.30
Apr. 3	18.91	July 9	19.89	Oct. 2	19.56	Dec. 22	19.28

S3541 (#944, p. 184; 986, p. 214). New York City Board of Water Supply test well 410. About 200 feet west of trail, about 0.2 mile north of Old Country Road, and about 1.3 miles northeast of Speonk. Measurements resumed Jan. 25, 1947.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	11.51	May 7	12.39	July 31	12.31	Oct. 28	11.47
Mar. 6	11.44	June 5	12.65	Sept. 3	12.00	Nov. 24	11.77
Apr. 3	11.51	July 9	12.50	Oct. 2	11.71	Dec. 22	11.85

S3542 (#944, p. 184; 986, p. 214). New York City Board of Water Supply test well 413. On west side of trail, about 1.5 miles north of Old Country Road, and about 2.1 miles northeast of Speonk. Measurements resumed Jan. 25, 1947.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	19.31	May 7	18.86	July 31	19.86	Nov. 24	19.01
Mar. 7	18.80	June 5	19.46	Oct. 2	19.44	Dec. 22	18.89
Apr. 3	18.55	July 9	19.84	28	19.21		

S3543 (#944, p. 185; 986, p. 214). New York City Board of Water Supply test well 418. On west side of Bishop's Lane, about 0.9 mile north of Montauk Division of Long Island Railroad at station, Westhampton. Measurements resumed Jan. 23, 1947.

S3543--Continued.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 23	16.75	May 6	16.61	July 31	17.10	Oct. 28	16.48
Mar. 6	16.38	June 5	17.01	Sept. 3	16.88	Nov. 24	16.50
Apr. 3	16.22	July 9	17.18	Oct. 2	16.68	Dec. 22	16.54

S3544 (#944, p. 185; 986, p. 214). New York City Board of Water Supply test well 421. About 200 feet north of Montauk Division of Long Island Railroad and 0.7 mile east of Old Riverhead Road, Westhampton. Measurements resumed Jan. 25, 1947.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	11.02	May 6	11.80	July 31	11.58	Oct. 28	10.76
Mar. 6	10.99	June 5	11.94	Sept. 3	11.29	Nov. 24	11.36
Apr. 3	11.10	July 9	11.78	Oct. 2	11.02	Dec. 22	11.28

S3545 (#944, p. 185; 986, p. 214; #1016, p. 242; 1023, p. 247; 1071, p. 276). New York City Board of Water Supply test well 130. On east side of Lincoln Avenue, about 0.6 mile north of Church Street and 2.2 miles south of Holbrook.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	35.06	May 7	35.16	Aug. 4	35.22	Oct. 30	34.38
Feb. 10	34.53	June 6	35.34	Sept. 4	34.95	Nov. 25	34.29
Mar. 4	34.33	July 10	35.43	Oct. 3	34.63	Dec. 23	34.43
Apr. 4	34.16						

S3727 (#1016, p. 242; 1023, p. 247; 1071, p. 276). New York City Board of Water Supply test well 129. North side Church Street, 0.1 mile east of Lincoln Avenue, North Sayville.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	30.40	May 7	30.88	Aug. 4	30.76	Oct. 30	29.80
Feb. 10	30.02	June 6	31.09	Sept. 4	30.43	Nov. 25	30.04
Mar. 4	29.84	July 10	30.93	Oct. 3	30.08	Dec. 23	30.17
Apr. 4	29.85						

S3728 (#1016, p. 243; 1023, p. 247; 1071, p. 276). New York City Board of Water Supply test well 186. 0.2 mil east of Taylor Avenue and 0.2 mile north of Montauk Highway, Hagerman.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	19.97	May 7	20.74	July 29	20.98	Oct. 28	19.89
Feb. 11	19.62	June 4	21.08	Sept. 2	20.60	Nov. 24	19.86
Mar. 5	19.50	July 9	21.21	Oct. 2	20.22	Dec. 22	20.14
Apr. 3	19.47						

S3729 (#1016, p. 243; 1023, p. 247; 1071, p. 276). New York City Board of Water Supply test well 204. Barton and Dunston Avenues, North Hagerman.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	28.09	May 5	28.37	July 29	28.70	Oct. 28	27.70
Feb. 11	27.68	June 4	28.67	Sept. 2	28.35	Nov. 24	27.53
Mar. 5	27.49	July 9	28.83	Oct. 2	28.00	Dec. 22	27.52
Apr. 4	27.34						

S3730 (#1016, p. 243; 1023, p. 247; 1071, p. 277). New York City Board of Water Supply test well 207. Dunton Avenue and South Haven Road, South Plainfield.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	34.71	May 5	34.01	July 29	34.88	Oct. 28	34.05
Feb. 11	34.24	June 4	34.58	Sept. 2	34.60	Nov. 24	33.77
Mar. 7	33.95	July 9	34.83	Oct. 2	34.31	Dec. 22	33.55
Apr. 4	33.66						

S3731 (\*1016, p. 244; 1023, p. 248; 1071, p. 277). New York City Board of Water Supply test well 244. 30 feet east of Taylor Avenue, 0.5 mile north of Montauk Highway, Hagerman.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	22.89	May 7	23.73	July 29	23.94	Oct. 28	22.84
Feb. 11	22.66	June 4	24.00	Sept. 2	23.57	Nov. 24	22.80
Mar. 5	22.50	July 9	24.17	Oct. 2	23.20	Dec. 22	23.04
Apr. 3	22.43						

S3732 (\*1016, p. 244; 1023, p. 248; 1071, p. 277). New York City Board of Water Supply test well 259. Mt. Sinai Road, 2.6 miles north of Route 25, Coram.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	53.89	Apr. 2	52.83	July 8	52.13	Oct. 3	51.73
Feb. 12	53.51	May 5	52.47	Aug. 4	52.04	29	51.57
Mar. 7	53.59	June 6	52.27	Sept. 4	51.86	Nov. 25	51.75

S3735 (\*1016, p. 245; 1023, p. 248; 1071, p. 277). New York City Board of Water Supply test well 1214. Old Town Road, 0.6 mile east of Dare Road, Selden.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	65.29	Apr. 4	64.22	July 10	64.50	Oct. 3	64.15
Feb. 12	64.95	May 5	63.91	Aug. 4	64.47	29	63.95
Mar. 7	64.62	June 6	64.41	Sept. 4	64.41	Nov. 25	63.25

S3736 (\*1016, p. 245; 1023, p. 248; 1071, p. 277). Geological Survey, U. S. Dept. of Interior. At northwest corner of Schmidt Street and Lincoln Avenue, about 0.7 mile south of Holbrook.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	43.24	May 7	42.10	Aug. 4	42.82	Oct. 30	42.25
Feb. 10	42.74	June 6	42.45	Sept. 4	42.72	Nov. 25	42.09
Mar. 4	42.42	July 10	42.72	Oct. 3	42.47	Dec. 23	41.90
Apr. 4	41.96						

S3737 (\*1016, p. 245; 1023, p. 248; 1071, p. 277). Geological Survey, U. S. Dept. of Interior. On east side of Holbrook Road, about 0.6 mile south of Middle Country Road (State Highway 25), and 0.8 mile southwest of New Village.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	56.10	Apr. 4	55.23	July 9	55.47	Oct. 3	55.19
Feb. 11	55.80	May 5	55.19	Aug. 4	55.47	29	55.07
Mar. 7	55.55	June 6	55.37	Sept. 4	55.39	Nov. 25	54.94

S3738 (\*1016, p. 246; 1023, p. 248; 1071, p. 277). Geological Survey, U. S. Dept. of Interior. On west side of Oxhead Road, about 0.9 mile north of Middle Country Road (State Highway 25), and 1.3 miles northwest of New Village.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	55.80	Apr. 4	54.81	July 9	55.49	Sept. 4	55.44
Feb. 11	55.43	May 5	54.86	Aug. 4	55.55	Oct. 3	55.18
Mar. 7	55.14	June 6	55.28				

S3739 (\*1016, p. 246; 1023, p. 249; 1071, p. 277). Geological Survey, U. S. Dept. of Interior. On west side of Lincoln Avenue, about 0.4 mile south of Church Street and 1.5 miles north of Sayville.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	26.88	May 7	27.66	Aug. 4	27.35	Oct. 30	26.41
Feb. 10	26.56	June 6	27.75	Sept. 4	27.03	Nov. 25	26.70
Mar. 4	26.52	July 10	27.55	Oct. 3	26.69	Dec. 23	26.97
Apr. 4	26.59						

S3760 (#1016, p. 247; 1023, p. 249; 1071, p. 278). W. L. Miller.  
About 200 feet north of State Highway 25A and 600 feet west of Manorville-  
Wading River road (North Country Road), Wading River Station.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	25.85	May 6	25.16	July 30	25.04	Oct. 29	24.83
Feb. 11	25.61	June 5	25.09	Sept. 3	24.99	Nov. 25	24.65
Mar. 6	25.37	July 8	25.06	Oct. 2	24.91	Dec. 23	24.88
Apr. 2	25.33						

S3868 (#1016, p. 248; 1023, p. 249; 1071, p. 278). Geological Survey,  
U. S. Dept. of Interior. South Side of Upper Sheep Pasture Road, about 0.4  
mile east of Pond Road, Setauket Station.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	38.08	May 2	37.61	Aug. 4	37.46	Oct. 29	37.67
Feb. 12	37.67	June 6	37.62	Sept. 4	37.50	Nov. 25	37.58
Mar. 6	37.69	July 10	37.40	Oct. 3	37.48	Dec. 23	37.58
Apr. 4	37.51						

S3869 (#1016, p. 248; 1023, p. 249; 1071, p. 278). Geological Survey,  
U. S. Dept. of Interior. East side of Mt. Sinai Road, about 1.3 miles north  
of Middle County Road (State Highway 25), North Coram.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	54.66	Apr. 2	53.91	July 8	54.55	Oct. 3	53.89
Feb. 12	54.22	May 5	54.32	Aug. 4	54.42	Nov. 29	53.64
Mar. 7	53.99	June 6	54.48	Sept. 4	54.17	Dec. 25	53.43

S3870 (#1016, p. 248; 1023, p. 249; 1071, p. 278). Geological Survey,  
U. S. Dept. of Interior. West side of Mill Pond, about 0.7 mile south of  
Middle County Road (State Highway 25), South Coram.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	54.52	Apr. 2	53.96	July 8	54.36	Oct. 3	53.76
Feb. 11	54.19	May 5	54.28	29	54.26	29	53.57
Mar. 7	54.04	June 6	54.37	Sept. 4	54.01	Nov. 25	53.38

S3871 (#1016, p. 249; 1023, p. 249; 1071, p. 278). Geological Survey,  
U. S. Dept. of Interior. South side of Fire Road, about 0.6 mile west of  
Bellport Road, North Plainfield.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	48.28	Apr. 2	47.31	July 9	46.99	Oct. 3	46.91
Feb. 11	47.89	May 7	46.98	29	47.06	28	46.83
Mar. 7	47.62	June 6	46.90	Sept. 4	47.09	Nov. 24	46.70

S3955 (#1016, p. 249; 1023, p. 249; 1071, p. 278). Geological Survey,  
U. S. Dept. of Interior. East side of Pond Road, about 200 feet north of  
intersection with Horseblock Road, South Setauket Station.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	54.09	May 2	52.90	Aug. 4	52.87	Oct. 29	53.05
Feb. 12	53.76	June 6	52.66	Sept. 4	53.00	Nov. 25	52.97
Apr. 4	53.22	July 10	52.75	Oct. 3	53.00	Dec. 23	52.80
Mar. 7	53.53						

S3956 (#1016, p. 249; 1023, p. 250; 1071, p. 279). Geological Survey,  
U. S. Dept. of Interior. Southeast corner of Millers Place and Yaphank  
Road, South Millers Place.

## Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	31.96	Apr. 2	31.40	July 8	30.99	Oct. 3	31.53
Feb. 12	31.72	May 5	31.22	Aug. 4	31.02	29	31.14
Mar. 7	31.54	June 6	31.05	Sept. 4	31.14	Nov. 25	31.10

S4134 (\*1071, p. 279). Riverhead Water District. Northeast corner of old fairgrounds, Riverhead. Measuring point raised 0.58 foot to 24.48 feet above mean sea level May 6, 1947. Measuring point lowered 0.58 foot to 23.90 feet above mean sea level Nov. 13, 1947.

Mean daily water level in feet above mean sea level, 1947  
(From recorder charts)

(From 12:00:00 to 23:59)												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	12.15	12.21	12.06	12.09	12.58	12.43	12.26	11.91	11.76	11.55	11.61	12.24
2	12.25	12.22	12.19	12.20	12.57	12.44	12.25	11.85	11.76	11.52	11.60	12.24
3	12.30	12.22	12.32	12.28	12.56	12.45	12.19	11.82	11.74	11.49	11.63	12.24
4	12.27	12.29	12.20	12.23	12.58	12.37	12.15	11.83	11.72	11.46	11.68	12.25
5	12.25	12.32	12.17	12.29	12.61	12.34	12.13	11.80	11.70	11.48	11.73	12.25
6	12.28	12.26	12.15	12.41	12.62	12.39	12.09	11.77	11.69	11.51	11.71	12.29
7	12.24	12.26	12.18	12.41	12.59	12.40	12.08	11.75	11.68	11.50	11.66	12.26
8	12.28	12.29	12.21	12.35	12.58	12.42	12.09	11.78	11.66	11.51	11.74	12.33
9	12.20	12.27	12.26	12.38	12.54	12.45	12.10	11.82	11.65	11.48	11.81	12.28
10	12.15	12.24	12.25	12.38	12.51	12.43	12.10	11.82	11.64	11.46	11.76	12.17
11	12.19	12.15	12.24	12.42	12.52	12.41	12.10	11.80	11.64	11.46	11.74	12.20
12	12.21	12.11	12.22	12.47	12.55	12.40	12.12	11.80	11.63	11.45	12.00	12.20
13	12.13	12.12	12.24	12.45	12.57	12.36	12.10	11.80	11.61	11.48	12.00	12.22
14	12.16	12.17	12.37	12.45	12.56	12.36	12.07	11.79	11.61	11.49	12.08	12.23
15	12.22	12.21	12.37	12.50	12.50	12.38	12.03	11.75	11.67	11.45	12.09	12.23
16	12.25	12.22	12.35	12.52	12.51	12.35	12.01	11.70	11.66	11.45	12.18	12.34
17	12.21	12.16	12.35	12.58	12.52	12.31	12.01	11.71	11.55	11.45	12.22	12.25
18	12.19	12.13	12.28	12.54	12.52	12.28	12.02	11.75	11.54	11.45	12.17	12.24
19	12.17	12.11	12.22	12.52	12.52	12.29	12.02	11.77	11.61	11.46	12.16	12.29
20	12.28	12.11	12.23	12.51	12.52	12.27	12.01	11.80	11.62	11.48	12.16	12.18
21	12.34	12.29	12.24	12.54	12.49	12.25	11.99	11.83	11.63	11.44	12.16	12.23
22	12.20	12.28	12.24	12.52	12.49	12.23	12.01	11.85	11.69	11.40	12.19	12.22
23	12.14	.....	12.22	12.51	12.48	12.23	12.03	11.84	11.62	11.41	12.30	12.24
24	12.18	12.19	12.25	12.57	12.47	12.26	11.99	11.84	11.60	11.37	12.35	12.26
25	12.22	12.17	12.32	12.56	12.48	12.36	11.97	11.83	11.62	11.35	12.43	12.22
26	12.21	12.15	12.26	12.56	12.49	12.36	11.98	11.81	11.58	11.39	12.35	12.24
27	12.26	12.14	12.16	12.59	12.46	12.33	11.99	11.80	11.56	11.40	12.31	12.40
28	12.25	12.09	12.15	12.57	12.44	12.30	12.00	11.80	11.55	11.38	12.28	12.33
29	12.25		12.15	12.52	12.45	12.27	12.00	11.79	11.58	11.48	12.26	12.25
30	12.27		12.15	12.54	12.47	12.26	11.97	11.75	11.61	11.57	12.24	12.17
31	12.26		12.10		12.45		11.95	11.78		11.63		12.17

a Estimated.

S4268 (\*1071, p. 280). County of Suffolk, Superintendent of Highways. West side of town line, about 1,300 feet south of Kings Park-East Northport Road, West Kings Park.

Water level, in feet above mean sea level, 1947

Water level, in feet above mean sea level, 1977					
Date	Water level	Date	Water level	Date	Water level
Jan. 8	50.07	May 2	49.19	Aug. 1	49.07
Feb. 12	49.78	June 6	49.08	Sept. 5	48.94
Mar. 4	49.62	July 10	48.94	Oct. 6	48.84
Apr. 7	49.32				
				Oct. 30	48.76
				Nov. 26	48.68
				Dec. 23	48.54

S4269 (\*1071, p. 280). County of Suffolk, Superintendent of Highways. North side of Reeves Avenue, 2,000 feet west of Roanoke Avenue, North Riverhead.

Water level, in feet above mean sea level, 1947

Water level, in feet above mean sea level, 1981		Water level, in feet above mean sea level, 1982		Water level, in feet above mean sea level, 1983			
Jan. 7	14.22	May 6	13.69	July 30	13.31	Oct. 29	12.78
24	13.95	June 5	13.58	Sept. 3	13.10	Nov. 25	13.27
Mar. 6	13.92	July 8	13.46	Oct. 3	12.95	Dec. 23	13.24
Apr. 2	13.79						

S4270 (\*1071, p. 280). County of Suffolk, Superintendent of Highways. Crooked Hill Road about 0.8 mile northwest of its intersection with Wicks Road, Brentwood Park.

Water level, in feet above mean sea level, 1947

Jan. 2	52.26	May 1	51.26	Aug. 1	52.03	Oct. 27	51.74
Feb. 10	51.72	June 3	51.48	28	52.15	Nov. 26	51.83
Mar. 3	51.44	July 3	51.81	Oct. 1	52.00	Dec. 22	51.59
Apr. 1	51.19						

S4271 (\*1071, p. 281). County of Suffolk, Superintendent of Highways. About 500 feet south of Sound Avenue and 0.8 mile west of Roanoke Avenue, Baiting Hollow. Measuring point lowered 0.39 foot to 101.44 feet above mean sea level Nov. 6, 1947.

Daily noon water level, in feet above mean sea level, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	10.36	10.24	10.11	9.98	9.87	9.82	9.76	9.47	9.43	9.40	9.25	9.59
2	10.37	10.24	10.11	9.98	9.87	9.82	9.75	9.46	9.43	9.39	9.25	9.59
3	10.36	10.24	10.10	9.98	9.86	9.82	9.75	9.45	9.43	9.37	9.26	9.59
4	10.35	10.24	10.10	9.98	9.86	9.82	9.73	9.43	9.43	9.37	9.27	9.60
5	10.35	10.24	10.10	9.97	9.86	9.82	9.71	9.43	9.43	9.37	9.28	9.60
6	10.36	10.23	10.09	9.97	9.86	9.81	9.69	9.42	9.43	9.37	9.28	9.60
7	10.38	10.22	10.08	9.96	9.86	9.81	9.67	9.42	9.43	9.37	9.30	9.60
8	10.38	10.23	10.07	9.96	9.85	9.81	9.66	9.42	9.43	9.37	9.33	9.61
9	10.37	10.23	10.07	9.96	9.85	9.81	9.66	9.42	9.43	9.36	9.33	9.61
10	10.37	10.22	10.06	9.94	9.85	9.81	9.65	9.42	9.43	9.36	9.33	9.60
11	10.37	10.20	10.06	9.94	9.85	9.81	9.64	9.42	9.43	9.35	9.35	9.60
12	10.36	10.19	10.06	9.93	9.85	9.80	9.64	9.42	9.42	9.35	9.35	9.60
13	10.35	10.18	10.05	9.92	9.85	9.80	9.62	9.42	9.42	9.34	9.37	9.60
14	10.35	10.18	10.06	9.92	9.84	9.80	9.61	9.42	9.41	9.34	9.40	9.60
15	10.34	10.17	10.05	9.92	9.84	9.80	9.60	9.42	9.41	9.34	9.43	9.60
16	10.33	10.17	10.05	9.93	9.84	9.80	9.58	9.41	9.41	9.34	9.44	9.61
17	10.32	10.17	10.04	9.91	9.84	9.80	9.57	9.41	9.41	9.33	9.46	9.60
18	10.32	10.16	10.04	9.90	9.84	9.79	9.55	9.41	9.41	9.33	9.47	9.60
19	10.31	10.15	10.03	9.90	9.83	9.79	9.53	9.41	9.41	9.33	9.48	9.59
20	10.34	10.14	10.03	9.90	9.83	9.79	9.53	9.41	9.41	9.33	9.48	9.58
21	10.32	10.15	10.03	9.90	9.83	9.79	9.54	9.41	9.41	9.32	9.49	9.58
22	10.30	10.14	10.03	9.90	9.82	9.78	9.54	9.41	9.41	9.31	9.50	9.58
23	10.29	10.13	10.02	9.89	9.83	9.78	9.54	9.42	9.40	9.30	9.50	9.60
24	10.28	10.13	10.01	9.89	9.83	9.77	9.54	9.42	9.40	9.28	9.55	9.58
25	10.28	10.13	10.03	9.88	9.82	9.77	9.54	9.43	9.40	9.27	9.55	9.59
26	10.28	10.13	10.01	9.88	9.82	9.77	9.55	9.43	9.40	9.25	9.55	9.61
27	10.27	10.12	10.01	9.88	9.82	9.77	9.55	9.43	9.40	9.24	9.56	9.60
28	10.27	10.11	9.99	9.87	9.82	9.77	9.55	9.43	9.40	9.24	9.57	9.61
29	10.26		9.99	9.87	9.82	9.77	9.54	9.43	9.40	9.24	9.57	9.60
30	10.25		9.99	9.87	9.82	9.77	9.53	9.43	9.40	9.25	9.58	9.59
31	10.25		9.98		9.82		9.48	9.43		9.26		9.59

S4367 (\*1071, p. 282). M. E. Geotzinger. 200 feet north of Florida Avenue, 1.0 mile east of Babylon.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 12	55.43	May 2	54.66	Aug. 1	54.35	Oct. 27	54.29
Mar. 4	55.22	June 6	54.47	27	54.41	Nov. 26	54.42
Apr. 4	54.85	July 10	54.30	Oct. 6	54.52		

S4523 (\*1071, p. 282). Geological Survey, U. S. Dept. of Interior. Northville Turnpike and Route 58, Riverhead.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	9.03	May 6	9.16	July 30	8.78	Oct. 29	8.25
24	9.00	June 5	9.20	Sept. 3	8.68	Nov. 25	8.73
Mar. 6	8.99	July 8	8.98	Oct. 3	8.60	Dec. 23	9.00
Apr. 2	8.99						

S4524 (\*1071, p. 282). Geological Survey, U. S. Dept. of Interior. Tuthills Lane, 0.15 mile north of Route 25, Riverhead.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	6.32	May 6	6.69	July 30	6.10	Oct. 29	5.57
24	6.27	June 5	6.54	Sept. 3	5.87	Nov. 24	6.42
Mar. 6	6.35	July 8	6.26	Oct. 2	5.69	Dec. 23	6.36
Apr. 2	6.28						



S4525 (\*1071, p. 282). Geological Survey, U. S. Dept. of Interior. Twomey Avenue, and Deep Hole Road, Riverhead.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	19.30	May 6	18.54	July 30	18.22	Oct. 29	16.76
24	19.15	June 5	18.48	Sept. 3	18.02	Nov. 25	17.14
Mar. 6	18.77	July 8	18.33	Oct. 3	17.84	Dec. 23	17.24
Apr. 2	18.64						

S4526 (\*1071, p. 282). J. T. Downe. Southeast corner of West Lane and Sound Avenue, Riverhead.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	8.70	May 6	8.25	July 30	7.97	Oct. 29	7.60
24	8.59	June 5	8.21	Sept. 3	7.82	Nov. 25	7.91
Mar. 6	8.34	July 8	8.04	Oct. 2	7.74	Dec. 23	8.02
Apr. 2	8.31						

S4529. J. Gressack. Intersection of Sound and Twomey Avenues, Riverhead.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	12.35	May 6	11.67	July 30	11.36	Oct. 29	11.05
24	12.17	June 5	11.58	Sept. 3	11.24	Nov. 25	11.25
Mar. 6	11.90	July 8	11.48	Oct. 3	11.15	Dec. 23	11.38
Apr. 2	11.94						

S4530 (\*1071, p. 283). Geological Survey, U. S. Dept. of Interior. Roanoke Avenue and Middle Road, Riverhead.

Water level, in feet above mean sea level, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	15.45	May 6	15.89	July 30	15.04	Oct. 29	14.41
24	15.38	June 5	15.75	Sept. 3	14.68	Nov. 25	15.04
Mar. 6	15.37	July 8	15.37	Oct. 3	14.34	Dec. 23	15.01
Apr. 2	15.39						

S4827. Geological Survey, U. S. Dept. of Interior. East side of Broadway, 164 feet north of Cuba Hill Road, Greenlawn. Drilled observation well, diameter 4 inches, depth 199 feet. Measuring point, top of casing, 215.84 feet above mean sea level and 1 foot above land-surface datum. First measured by U. S. Geological Survey Dec. 4, 1946.

Water level, in feet above mean sea level, 1946-47

Date	Water level	Date	Water level	Date	Water level
Dec. 4, 1946	57.67	May 2, 1947	56.87	Oct. 6	55.85
Jan. 8, 1947	57.46	June 6	56.71	30	55.77
Feb. 12	57.26	July 10	56.38	Nov. 26	55.58
Mar. 4	57.17	Aug. 1	56.15	Dec. 22	55.50
Apr. 4	56.93	Sept. 5	56.01		

S4828. Geological Survey, U. S. Dept. of Interior. Southwest corner of Broadway and Park Avenue, Greenlawn. Drilled observation well, diameter 4 inches, depth 141 feet. Measuring point, top of casing, 185.75 feet above mean sea level and 1 foot above land-surface datum. First measured by U. S. Geological Survey Dec. 4, 1946.

Water level, in feet above mean sea level, 1946-47

Date	Water level	Date	Water level	Date	Water level
Dec. 4, 1946	68.50	May 2, 1947	67.72	Oct. 3, 1947	67.01
Jan. 8, 1947	68.61	June 6	67.58	30	67.01
Feb. 12	68.15	July 10	67.26	Nov. 26	66.81
Mar. 4	68.20	Aug. 1	67.24	Dec. 22	66.66
Apr. 4	67.86	Sept. 5	67.12		

S4829. Geological Survey, U. S. Dept. of Interior. West side of Randall Road, 0.95 mile south of Route 25A, Shoreham. Drilled observation well, diameter 4 inches, depth 97 feet. Measuring point, top of casing, 114.76 feet above mean sea level and 1 foot above land-surface datum. First measured by U. S. Geological Survey Sept. 30, 1946.

Water level, in feet above mean sea level, 1946-47

Date	Water level	Date	Water level	Date	Water level
Sept. 30, 1946	39.09	Apr. 2, 1947	38.07	Sept. 3, 1947	37.61
Nov. 4	39.00	May 6	37.80	Oct. 2	37.54
Dec. 3	38.85	June 5	37.66	29	37.44
Jan. 3, 1947	38.71	July 8	37.64	Nov. 25	37.46
Feb. 11	38.44	30	37.63	Dec. 23	37.35
Mar. 6	38.27				

# OHIO

By D. W. Van Tuyl

## PROGRAM OF WORK

Ground-water investigations in Ohio were continued in 1947 in cooperation with the Ohio Water Resources Board, the Ohio Engineering Experiment Station, the Commissioners of Butler and Hamilton Counties, the Federal Works Agency, and the city of Canton. Detailed investigations of ground-water conditions were completed during the year in Montgomery and Tuscarawas Counties and reports <sup>1/2/</sup> giving the results of these investigations were published by the Ohio Water Resources Board. Investigations were continued in Lucas, Mahoning, and Stark Counties. Additional investigations were started in Summit County in March and in Greene County in September. Observation wells were maintained in all heavily pumped areas of the State and at various locations in the rural areas.

At the end of 1947 automatic water-stage recorders were in operation on 113 observation wells throughout Ohio. New installations were made on 23 wells during the year as additions to the State-wide water-level program. Recording gages were operated for short periods in connection with pumping tests and special studies at Toledo, Canton, Athens, and Zanesville. Twelve observation wells were added to the Federal observation-well program, making a total of 13 now in operation.

In addition to the wells equipped with automatic gages, 118 wells were measured periodically, mostly in Butler and Hamilton Counties. During 1947, however, measurements were discontinued in 27 wells in Butler County that had previously been measured at weekly intervals, and 3 recorder wells were discontinued. In Hamilton County measurements were discontinued in one well that had previously been measured weekly, and recorders were re-

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<sup>1/</sup> Norris, S. E., Cross, W. P. and Goldthwaite, R. P., The water resources of Montgomery County, Ohio: Ohio Water Resources Board, Bull. 12, 1948.

<sup>2/</sup> Cummins, J. W. and Sanderson, E. E., The water resources of Tuscarawas County, Ohio: Ohio Water Resources Board, Bull. 6, 1947.

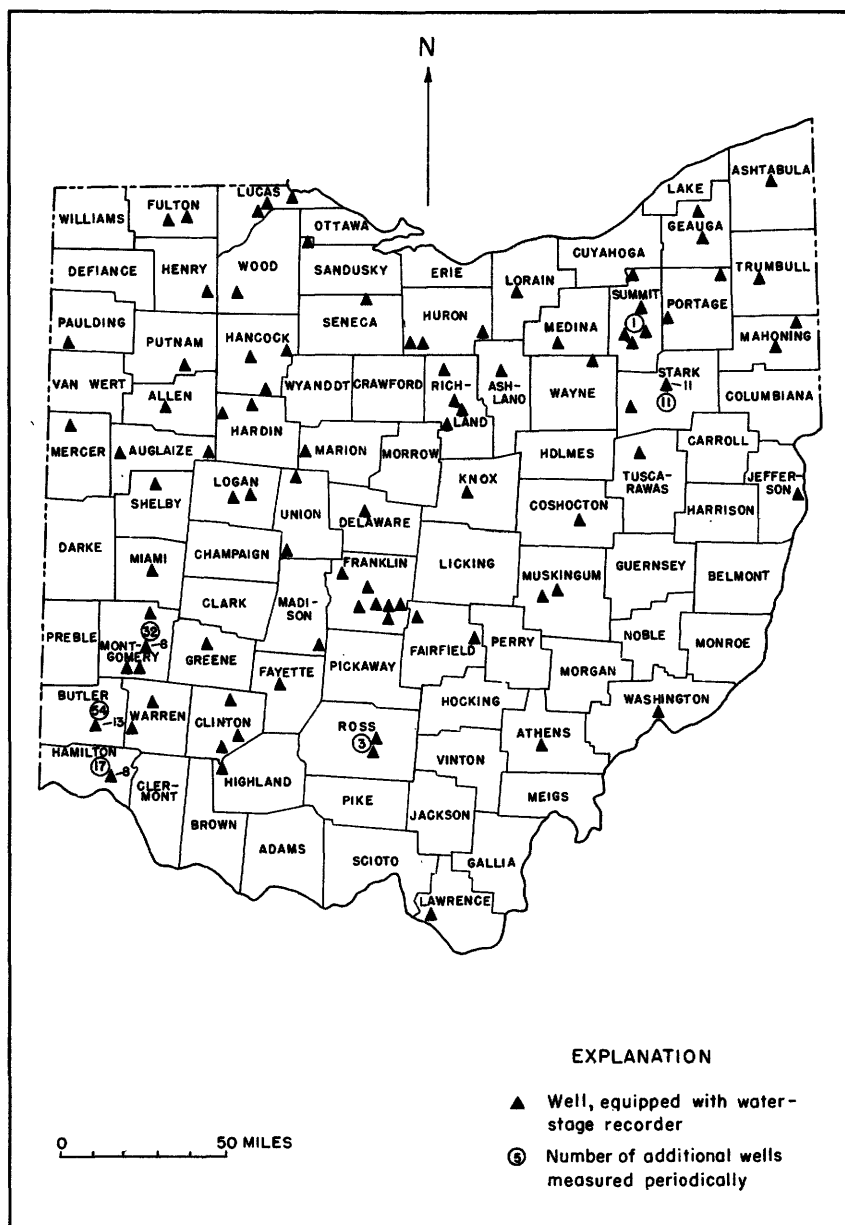


Figure 9.--Map of Ohio showing location of observation wells.

moved from five other observation wells in the State during the year. The locations of observation wells in Ohio in 1947 are shown on the map in figure 9.

The 1947 water-level records for 231 observation wells in Ohio are tabulated alphabetically by counties. The wells in Butler and Hamilton Counties are designated by numbers as given in Water-Supply Paper 999. Observation wells in all other counties are designated by letter symbols corresponding to the county names, followed by numbers for successive wells in each county.

#### FLUCTUATIONS OF WATER LEVEL

The records of water levels contained in this report show that in 1947 conditions for ground-water recharge in Ohio were especially good in April and May. Rainfall in these months was above normal, soil moisture had been largely replenished by precipitation in January, and transpiration and evaporation losses were low. Throughout the remainder of the year conditions were not favorable for large amounts of recharge--in the summer months because of high transpiration and evaporation losses and in the winter months because of frozen ground and low precipitation. However, the large amount of recharge that occurred in April and May was sufficient to maintain ground-water levels at near normal stages throughout the last half of the year in those parts of the State where pumping was not a major factor. The trends in some of the heavily pumped areas of the State may be judged by the water-level data given in the following table.

Data on water levels in heavily pumped areas in Ohio, in feet below land-surface datum, 1947

Well No.	Highest level	Date	Lowest level	Date	Net change, in feet, Jan. 1-Dec. 31
Middletown, Butler County <u>a/</u>					
25-5	14.03	June 4	36.00	Jan. 1	+1.20
29-2	b 30.03	10	48.50	Dec. 30	-1.00
33-1	b 25.13	17	42.74	Jan. 7	+2.53
T-33	b 8.78	3	20.70	14	+1.45
29-1	b 20.80	10	38.63	7	+1.44
36-13	93.31	Nov. 4	9.92	June 13	-3.30
Hamilton, Butler County <u>a/</u>					
85-7	14.44	June 4	28.70	Dec. 30	-.47
86-7	5.70	11	15.64	Mar. 11	+.75
B-30-D	b 27.18	Aug. 4	32.54	Jan. 13	+1.45
T-51	8.35	June 3	16.98	Dec. 30	-1.45
Mill Creek Valley, Hamilton County <u>a/</u> (Sharonville to Ivorydale)					
207-3	33.83	June 9	51.34	Jan. 19	+.41

\* See footnotes at end of table.

Data on water levels in heavily pumped areas in Ohio, in feet below land-surface datum, 1947--Continued

Well No.	Highest level	Date	Lowest level	Date	Net change, in feet, Jan. 1-Dec. 31
212-1	38.36	June 15	50.99	Jan. 4	+0.93
T-8	7.68	May 26	19.23	6	+5.50
214-3	10.96	27	29.15	6	+3.37
215-2	26.09	July 21	30.78	27	-.02
216-D	84.87	Aug. 7	88.25	Apr. 7	-.42
216-E	57.46	July 10	63.14	7	+1.18
236-4	123.13	June 2	125.08	7	-.79
237-3	142.58	Apr. 14	cl46.73	Oct. 25	-1.83
241-3	131.76	Jan. 20	cl36.80	Nov. 9	-2.89
246-1	103.90	Apr. 20	114.27	Dec. 6	-2.56
252	107.90	July 7	110.33	8	-.93
265-5	130.62	Mar. 24	cl37.26	Sept. 29	-.74
270-A4	88.78	May 5	93.97	Nov. 9	-.23
270-T7	122.13	5	cl29.65	Oct. 6	-2.03

Canton, Stark County d/

St-2	42.43	Oct. 2	50.08	Jan. 9	+7.12
St-3	47.26	Aug. 1	53.12	17	+4.72
St-4	b 7.60	June 9	18.60	2	+1.46
St-5	35.68	July 5	43.38	19	+2.52
St-6	b 18.37	21	24.90	1	+3.89
St-7	b 83.30	Nov. 24	89.44	6	+6.00
St-8	b 82.00	24	87.99	13	+5.15
St-9	b 86.40	May 19	107.95	June 16	+5.55
St-10	(e)	June 5-25	3.99	Jan. 1	+1.25

a Locations of these wells shown on maps in Water-Supply Paper 1023.

b Highest of record.

c Lowest of record.

d Locations of these wells shown on map in Water-Supply Paper 1071.

e Flowing.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Allen County

A1-1 (\*1071, p. 315). Standard Oil Co. At Lima, in refinery.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Mar.	Apr.	May	June
1	145.72	.....	143.38	134.68	.....
2	146.72	.....	136.70	136.92	.....
3	.....	.....	140.94	131.71	.....
4	143.55	.....	143.32	130.35	.....
5	145.10	.....	138.50	136.37	140.18
6	149.92	.....	136.41	135.76	143.21
7	148.80	.....	140.90	135.80	137.62
8	150.23	.....	143.78	137.00	135.61
9	150.14	.....	140.55	.....	140.17
10	149.81	.....	139.69	.....	140.20
11	149.19	.....	143.54	.....	144.07
12	145.89	.....	141.77	.....	143.50
13	148.07	.....	139.48	.....	141.46
14	149.50	.....	139.76	.....	140.76
15	150.10	.....	140.11	110.33	141.15
16	.....	.....	140.30	.....	140.19
17	.....	.....	142.83	.....	144.22
18	.....	.....	142.75	.....	143.40
19	.....	.....	140.00	.....	144.47
20	.....	.....	138.22	.....	143.59
21	.....	.....	138.78	.....	144.12
22	.....	.....	137.71	111.23	144.53
23	.....	.....	141.47	.....	143.70
24	.....	.....	138.60	.....	142.35

Al-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Mar.	Apr.	May	June
25	.....	.....	140.02	.....	145.12
26	.....	.....	136.03	.....	144.73
27	.....	143.62	130.12	.....	143.23
28	.....	143.41	133.90	.....	142.22
29	.....	143.13	137.64	140.18	138.22
30	.....	140.88	131.53	.....	141.04
31	.....	141.00	.....	.....	.....

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	145.13	143.78	140.29	144.52	.....	137.30
2	142.63	142.70	145.32	144.91	.....	138.24
3	145.32	141.66	.....	145.09	.....	138.88
4	143.20	.....	145.60	143.20	122.04	138.89
5	141.40	145.40	145.55	139.72	122.33	137.76
6	141.91	146.10	145.10	142.15	122.55	137.42
7	143.97	146.10	141.35	144.75	118.67	137.60
8	145.09	144.50	143.06	142.93	129.05	135.20
9	142.30	143.60	145.52	143.07	133.15	135.90
10	142.62	143.54	145.60	143.01	139.71	140.71
11	144.23	146.00	144.79	141.37	138.26	139.35
12	143.54	.....	145.79	140.39	139.65	142.35
13	.....	.....	143.85	141.40	140.58	141.85
14	.....	.....	143.70	143.62	140.73	136.80
15	.....	.....	145.60	137.92	139.06	141.20
16	.....	.....	145.62	142.62	135.95	136.00
17	145.12	.....	145.70	141.45	137.70	141.57
18	144.98	.....	145.75	138.95	139.14	139.12
19	142.08	140.50	145.72	137.70	139.20	138.80
20	136.50	142.90	145.20	138.82	139.70	139.30
21	144.45	140.45	140.82	139.83	137.30	137.69
22	141.98	144.42	143.83	144.96	139.51	135.00
23	144.13	142.90	145.23	141.20	138.29	135.25
24	.....	142.40	143.70	141.30	136.14	135.40
25	.....	143.10	145.20	140.05	138.60	137.06
26	.....	145.00	145.26	139.32	140.93	134.68
27	.....	144.90	144.88	139.73	138.75	134.80
28	.....	144.90	140.00	140.73	136.81	134.70
29	143.40	144.80	143.38	143.98	135.75	134.60
30	145.40	142.80	143.02	143.84	135.40	137.90
31	145.54	141.10	.....	142.90	.....	135.70

Ashtabula County

Ab-1 (#1071, p. 316). K. K. Tisch. 3 miles south of Jefferson, on State Highway 46.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	7.46	7.84	7.26	....	5.17	6.55	6.33	....	8.41	9.53	9.88
2	....	7.45	7.67	....	....	5.06	6.72	6.38	....	8.40	9.57	9.82
3	....	7.38	7.60	....	....	5.11	6.81	6.44	....	8.39	9.57	9.80
4	....	7.25	7.78	....	....	5.15	6.87	6.54	....	8.38	9.49	9.78
5	....	7.22	7.96	....	....	5.13	6.93	6.63	....	8.42	9.46	9.41
6	....	7.11	8.05	....	5.48	5.04	6.94	6.69	....	8.49	9.60	9.41
7	....	7.30	8.05	....	5.46	5.04	7.04	6.73	....	8.51	9.60	9.24
8	....	....	8.05	6.93	5.50	4.93	7.15	6.82	....	8.55	9.46	9.21
9	....	....	8.04	6.93	5.59	4.97	7.18	6.40	....	7.51	8.63	9.23
10	....	....	8.05	6.94	5.62	4.98	7.21	7.06	7.53	8.65	9.73	9.23
11	....	7.76	8.05	6.80	5.62	5.08	7.21	7.16	7.53	8.71	9.66	9.05
12	....	....	....	6.93	5.62	5.23	7.23	7.22	7.53	8.76	9.70	9.06

Ab-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
13	....	....	7.79	7.00	5.50	5.23	7.32	7.22	7.52	8.77	9.82	9.05
14	....	....	7.56	6.99	5.45	5.16	7.32	7.22	7.60	8.82	9.85	8.96
15	....	....	7.52	6.87	5.50	5.26	7.32	7.25	7.70	8.86	9.85	8.84
16	....	....	....	6.87	5.52	5.34	....	7.32	7.90	8.89	9.76	8.72
17	....	....	....	6.71	5.55	5.36	....	7.39	8.05	8.89	9.86	8.74
18	....	7.61	7.54	6.71	5.50	5.46	....	7.43	8.10	8.87	9.89	8.67
19	....	7.69	7.43	6.80	5.43	5.60	....	7.43	8.07	9.00	9.91	8.75
20	....	7.69	7.42	6.30	5.40	5.74	....	....	8.03	9.07	9.97	8.75
21	....	7.57	7.32	6.70	5.40	5.89	....	....	7.99	9.12	10.00	8.63
22	....	7.53	7.32	6.73	5.42	5.99	6.71	....	8.07	9.17	9.90	8.63
23	....	7.43	7.21	6.09	5.42	6.03	6.71	....	8.09	9.27	9.87	8.62
24	7.71	7.38	7.00	5.94	5.42	6.03	6.67	....	8.04	9.34	9.86	8.71
25	7.63	7.54	6.75	5.94	5.36	6.03	6.63	....	8.16	9.34	9.68	8.71
26	7.53	7.64	7.09	5.92	5.24	6.07	6.55	....	8.29	9.34	9.76	8.51
27	7.63	7.74	7.08	5.80	5.28	6.17	6.42	....	8.35	9.34	9.79	8.48
28	7.63	7.84	6.97	5.84	5.20	6.29	6.24	....	8.35	9.29	9.80	8.63
29	7.61	....	6.95	5.84	5.07	6.40	6.24	....	8.25	9.29	9.85	8.70
30	7.38	....	7.10	5.66	5.12	6.51	6.18	....	8.38	9.36	9.88	8.71
31	7.42	....	7.26	....	5.19	....	6.22	....	....	9.44	....	8.64

Athens County

At-1. Athens State Hospital. At Athens, in hospital grounds. Abandoned drilled well, diameter 4 inches, depth 120 feet. Measuring point, floor of recorder shelter 5.1 feet above land-surface datum. Automatic water-stage recorder installed May 26, 1947.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)								
Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	14.00	19.13	18.58	19.18	19.88	21.59	20.13
2	.....	14.75	19.20	18.51	19.17	19.93	20.99	20.10
3	.....	14.87	19.26	18.49	19.19	19.98	.....	20.09
4	.....	.....	19.34	18.51	19.24	20.05	.....	.....
5	.....	.....	19.37	18.56	19.28	20.14	.....	.....
6	.....	.....	19.37	18.62	19.40	.....	.....	.....
7	.....	.....	19.40	18.71	.....	.....	.....	.....
8	.....	17.28	19.53	18.73	19.40	20.55	21.45	.....
9	.....	17.42	19.60	18.70	19.44	20.72	21.47	.....
10	.....	17.57	19.60	18.55	19.48	20.84	21.48	20.86
11	.....	17.73	19.62	18.55	19.53	20.94	21.50	20.87
12	.....	17.80	19.62	18.59	19.55	21.04	21.50	20.88
13	.....	17.80	19.62	18.66	19.55	21.13	21.49	20.88
14	.....	17.80	19.65	19.28	19.50	21.19	21.44	20.86
15	.....	17.87	19.65	18.54	19.44	21.27	21.42	20.86
16	.....	18.00	19.65	18.95	19.44	21.33	21.41	20.87
17	.....	18.12	19.63	18.92	19.44	21.38	21.39	20.81
18	.....	18.27	19.59	19.40	19.41	21.43	21.35	20.71
19	.....	18.39	19.57	18.97	19.41	21.46	21.31	20.66
20	.....	18.52	19.52	19.02	19.43	21.48	21.30	20.62
21	.....	18.64	19.46	19.08	19.49	21.50	21.27	20.56
22	.....	18.74	19.47	19.06	19.53	21.51	21.26	20.54
23	.....	18.84	19.52	18.99	19.53	21.52	21.25	20.52
24	.....	18.94	19.58	18.99	19.55	21.53	21.23	20.52
25	.....	19.04	19.59	19.06	19.60	21.53	21.19	20.51
26	13.50	19.14	19.61	19.08	19.64	21.56	20.52	20.51
27	13.34	19.24	19.69	19.08	19.68	21.57	20.36	20.51
28	13.34	19.32	19.69	18.99	19.72	21.57	20.27	20.52
29	13.78	19.36	19.31	19.05	19.77	21.57	20.20	20.52
30	14.02	19.08	18.93	19.08	19.83	21.56	20.16	20.55
31	14.22		18.70	19.13		21.57		20.60



Auglaize County

Au-1 (\*1071, p. 317). C. W. Manchester. At New Hampshire, on State Highway 385.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	18.32	.....	16.82	15.52	15.22	.....	.....	16.12	16.32	15.90	.....
2	19.75	18.27	.....	16.68	15.52	15.11	.....	15.79	16.02	.....	15.89	.....
3	19.76	18.18	.....	16.67	15.54	15.09	.....	16.02	16.03	.....	15.85	.....
4	19.74	18.17	.....	16.61	15.51	15.14	.....	16.15	16.24	16.31	15.77	.....
5	19.73	18.07	17.28	16.53	15.54	15.13	15.16	16.07	16.02	16.33	15.71	.....
6	19.65	17.90	17.28	16.52	15.50	15.08	15.14	16.13	16.07	16.56	15.67	15.39
7	19.64	17.82	17.27	16.52	15.54	14.99	15.20	16.04	16.06	16.40	15.61	15.40
8	19.59	17.77	17.25	16.47	15.52	14.98	15.27	16.13	16.07	16.45	15.59	15.46
9	19.59	.....	17.28	16.44	15.54	14.96	15.23	16.10	16.12	16.50	.....	15.45
10	19.55	.....	17.34	16.47	15.63	15.03	15.17	16.12	16.33	16.45	.....	15.44
11	19.46	.....	17.30	16.31	15.54	15.03	15.19	16.26	16.15	16.44	.....	15.43
12	19.46	.....	17.28	16.39	15.57	15.05	15.47	16.37	16.11	16.47	.....	15.42
13	19.43	17.60	17.31	16.36	15.52	15.00	15.26	16.39	16.07	16.48	.....	15.48
14	19.35	17.56	17.25	16.29	15.46	14.86	15.27	16.34	16.20	16.48	.....	15.37
15	19.32	17.52	17.23	16.29	15.44	14.88	15.25	16.17	16.13	16.59	.....	15.34
16	19.33	17.50	17.20	16.23	15.42	14.91	15.30	16.00	16.19	16.60	.....	15.32
17	19.33	17.50	17.19	16.08	15.42	14.95	15.34	15.93	16.38	16.62	.....	15.32
18	19.28	17.49	17.19	16.04	15.32	14.93	15.34	16.03	16.17	16.45	.....	15.33
19	19.22	17.49	17.13	16.05	15.31	14.90	15.32	16.12	16.14	16.25	.....	15.36
20	19.11	17.45	17.18	16.02	15.32	14.90	15.39	16.35	16.27	16.27	.....	15.39
21	18.98	17.48	17.17	15.97	15.28	14.90	15.45	16.12	16.39	16.28	.....	15.55
22	18.08	17.41	17.14	15.95	15.31	14.90	15.74	16.08	16.16	16.31	.....	15.34
23	19.05	17.55	17.12	16.01	15.31	14.93	15.81	16.16	16.15	16.29	.....	15.41
24	18.92	17.53	17.04	15.98	15.30	14.91	15.65	16.11	16.20	16.24	.....	15.36
25	18.85	17.52	16.85	15.91	15.20	15.00	.....	16.12	16.21	16.24	.....	15.34
26	18.76	17.30	16.92	15.79	15.21	15.01	15.65	16.08	16.22	16.42	.....	15.35
27	18.69	17.25	16.90	16.02	15.20	15.21	15.65	16.26	16.35	16.17	.....	15.35
28	18.64	17.21	16.87	15.79	15.17	14.98	15.70	16.22	16.29	16.07	.....	15.38
29	18.58	.....	16.87	15.76	15.19	15.03	15.94	16.22	16.26	16.00	.....	15.42
30	18.44	.....	16.93	15.63	15.21	15.14	15.72	16.23	16.32	15.95	.....	15.53
31	18.35	.....	16.89	.....	15.29	.....	15.76	16.21	.....	15.92	.....	15.55

Au-2 (\*1071, p. 317). City of St. Marys. At St. Marys, in abandoned well field.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	5.14	4.52	5.02	5.02	3.82	4.18	4.52	4.66	4.31	5.14	5.00	4.73
2	4.83	4.40	4.66	4.42	3.73	3.92	4.60	.....	4.52	5.06	4.96	4.90
3	5.19	4.19	5.21	4.88	4.01	3.53	4.66	.....	4.69	5.01	4.72	5.02
4	5.26	4.55	5.49	4.88	3.75	3.89	1.60	.....	4.77	4.95	4.73	5.12
5	5.06	4.06	5.21	4.34	3.82	3.88	2.62	.....	4.66	4.85	4.84	4.84
6	4.98	4.19	5.22	4.06	3.97	3.93	3.26	4.87	4.77	4.79	5.04	5.00
7	4.95	4.61	5.19	4.53	3.99	3.71	3.99	4.92	4.72	4.90	4.92	4.86
8	5.17	5.09	5.46	4.56	4.56	3.44	4.30	5.01	4.69	4.98	4.84	4.82
9	5.34	4.86	5.49	5.04	4.72	3.63	4.37	5.00	4.76	5.05	4.53	4.92
10	5.23	5.12	5.14	5.06	4.38	3.70	4.38	4.68	4.79	5.06	4.58	4.90
11	5.09	4.71	5.31	4.82	4.20	3.88	4.43	5.08	4.84	5.02	4.82	4.96
12	4.98	4.72	5.63	4.50	3.97	4.02	4.51	5.11	4.84	4.78	5.01	5.06
13	5.00	4.98	5.57	4.42	4.25	3.90	4.57	5.05	4.74	5.00	5.22	5.05
14	5.05	4.93	4.75	4.78	4.62	3.87	4.42	5.00	4.75	5.00	5.22	4.97
15	4.97	4.41	4.81	4.89	4.75	4.00	4.29	4.54	4.81	4.98	5.00	4.78
16	5.10	4.55	4.58	4.31	4.23	4.15	4.32	4.41	4.68	4.86	4.83	4.60
17	5.24	4.77	4.66	4.09	4.12	4.15	.....	4.41	5.09	4.82	5.10	4.61
18	5.20	5.03	5.33	4.56	3.85	4.21	4.57	4.47	5.13	4.76	5.17	4.59
19	5.05	4.68	5.50	4.74	3.87	4.32	4.59	4.44	5.04	4.70	5.22	4.72
20	4.24	4.54	5.38	4.66	3.98	4.36	4.31	4.44	4.96	4.79	5.29	4.66
21	4.62	4.53	4.81	3.96	4.14	4.39	4.54	4.47	4.85	4.86	5.29	4.52
22	4.89	4.72	5.41	4.10	4.50	4.17	4.61	4.44	4.89	4.92	5.14	4.50
23	4.79	4.68	5.28	4.05	4.08	4.25	4.75	4.38	4.94	.....	5.05	4.91

Au-2--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
24	4.70	4.60	4.42	4.57	4.10	4.25	....	4.36	4.89	5.10	4.72	5.01
25	4.77	4.84	4.30	4.62	3.90	4.26	....	4.36	5.04	5.02	4.92	1.54
26	4.43	4.94	4.52	4.35	4.54	4.26	4.77	4.38	5.14	4.97	5.04	....
27	5.02	5.45	5.13	4.06	4.22	4.26	4.62	4.72	5.22	4.64	5.00	....
28	5.32	5.58	5.19	4.11	4.07	4.34	4.63	4.86	5.06	4.70	4.46	....
29	4.75		4.53	3.99	4.07	4.42	4.74	4.92	4.89	4.77	4.60	4.54
30	4.44		4.50	3.54	4.23	4.51	4.73	4.87	5.11	5.04	4.52	4.68
31	4.28		4.99		4.32		4.73	4.73		5.04		4.77

Butler County

12-1 (#886, p. 565; 906, p. 177; 936, p. 207; 944, p. 203; 986, p. 226; 1016, p. 270; 1023, p. 279; 1071, p. 318). Village of Trenton. Municipal water-supply well.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	36.02	Apr. 22	34.09	Sept. 16	31.65	Nov. 25	33.58
Feb. 25	34.84	June 3	28.72	Oct. 14	32.67	Dec. 16	33.98
Mar. 25	35.18						

25-5 (#936, p. 207; 944, p. 203; 986, p. 226; 1016, p. 270; 1023, p. 279; 1071, p. 318). City of Middletown. In municipal water plant.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	36.00	29.75	30.98	31.35	25.60	23.05	23.35	25.45	26.92	30.26	33.14	34.75
2	35.90	27.50	30.99	31.28	25.50	23.02	23.42	25.70	26.77	30.38	33.14	34.85
3	35.90	27.25	31.16	31.28	24.92	19.20	23.57	25.70	26.85	30.50	33.20	34.88
4	35.89	27.43	31.18	31.22	24.47	14.03	23.64	25.75	27.06	30.60	33.22	34.96
5	35.79	27.61	31.30	31.14	24.40	15.04	23.72	25.99	27.20	30.65	33.25	35.08
6	35.44	27.72	31.42	31.06	24.53	15.97	23.77	25.98	27.43	30.75	33.30	35.20
7	35.20	27.98	31.54	30.97	24.72	16.60	23.86	26.22	27.62	30.81	33.36	35.23
8	35.07	28.18	31.65	30.80	24.85	16.90	24.00	26.28	27.71	30.92	33.42	35.15
9	35.00	28.36	31.67	30.66	25.06	17.45	24.15	26.54	27.93	31.03	33.46	35.06
10	34.98	28.58	31.79	30.62	25.24	17.92	24.21	26.63	27.99	31.13	33.50	34.98
11	35.00	28.80	31.85	30.63	25.30	19.50	24.34	26.65	28.11	31.25	33.53	34.92
12	34.98	28.95	31.90	30.64	25.52	18.94	24.46	26.71	28.23	31.30	33.56	34.88
13	34.82	29.10	32.00	30.64	25.68	19.50	24.49	26.84	28.39	31.39	33.65	34.86
14	34.88	29.22	32.10	30.45	25.80	19.77	24.64	26.95	28.42	31.48	33.73	34.86
15	34.88	29.37	32.10	30.48	25.92	19.90	24.65	27.05	28.46	31.62	33.84	34.85
16	34.87	29.46	32.07	30.53	26.05	20.15	24.48	27.04	28.60	31.77	33.95	34.81
17	34.86	29.61	31.82	30.53	26.11	20.38	24.07	26.99	28.70	31.92	34.03	34.77
18	34.77	29.71	31.86	30.41	26.02	20.67	24.00	26.52	28.90	32.07	34.10	34.96
19	34.62	29.83	31.90	30.27	25.31	20.94	24.10	26.25	28.95	32.17	34.20	35.00
20	34.38	29.97	31.95	30.10	24.80	21.22	24.10	26.15	29.15	32.28	34.30	34.86
21	34.28	30.14	32.02	29.94	24.69	21.42	24.13	26.17	29.30	32.33	34.37	34.93
22	34.02	30.22	32.07	29.27	24.52	21.68	24.22	26.22	29.40	32.45	34.45	34.90
23	33.46	30.30	32.07	28.30	23.82	21.95	24.35	26.21	29.50	32.56	34.48	34.95
24	33.03	30.42	32.12	27.88	23.54	22.26	24.57	26.32	29.58	32.65	34.58	34.95
25	32.90	30.52	32.14	27.79	23.46	22.49	24.15	26.42	29.73	32.75	34.65	34.90
26	32.75	30.65	32.14	27.71	23.20	22.68	24.90	26.46	29.80	32.78	34.69	34.80
27	32.57	30.77	32.00	26.65	22.82	22.87	24.95	26.43	29.93	32.84	34.78	34.77
28	32.50	30.95	31.77	25.65	22.68	23.10	25.00	26.57	30.00	32.90	34.82	34.80
29	32.44		31.60	25.53	22.33	23.25	25.10	26.72	30.08	32.95	34.87	34.80
30	32.30		31.52	25.60	22.88	23.34	25.25	26.80	30.17	33.02	34.83	34.77
31	32.12		31.37		22.95		25.40	26.95		33.08		34.80

Pit J (#345, p. 373; 886, p. 560; 906, p. 180; 936, p. 207; 944, p. 204; 986, p. 227; 1016, n. 270; 1023, p. 279; 1071, p. 319). Moorman Sand & Gravel Co. gravel pit. In Middletown.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	23.60	Mar. 4	21.30	Apr. 15	20.40	July 22	16.03
14	23.15	11	21.90	22	18.87	29	16.75
21	22.75	18	21.90	May 13	16.20	Aug. 5	17.60
28	21.28	25	21.90	20	16.19	12	18.28
Feb. 18	19.79	Apr. 1	21.21	July 8	16.05	19	18.05
25	21.10	8	20.75	15	16.32	26	17.95

29-1 (#886, p. 565; 906, p. 178; 936, p. 208; 944, p. 204; 986, p. 227; 1016, p. 271; 1023, p. 280; 1071, p. 319). Young Men's Christian Association. In Middletown.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	38.71	Apr. 8	33.45	July 8	25.19	Oct. 7	32.33
14	38.19	15	33.20	15	25.97	14	32.92
21	37.65	22	32.21	22	25.81	21	33.64
28	35.65	29	29.43	29	26.46	28	34.18
Feb. 4	31.81	May 6	28.10	Aug. 5	27.22	Nov. 4	34.75
11	32.17	13	28.56	12	27.99	11	35.14
18	32.65	20	27.81	19	27.90	18	35.76
25	33.06	27	26.08	26	28.23	25	36.21
Mar. 4	33.57	June 3	23.08	Sept. 2	28.57	Dec. 2	36.67
11	34.06	10	20.88	9	29.63	9	37.14
18	34.26	17	22.32	16	30.48	16	37.51
25	34.56	24	23.67	23	31.21	23	37.55
Apr. 1	33.98	July 1	24.66	30	31.73	30	37.27

29-2 (#944, p. 205; 986, p. 228; 1016, p. 271; 1023, p. 280; 1071, p. 319). Young Men's Christian Association. In Middletown.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	47.42	Apr. 8	42.14	July 1	32.14	Sept. 30	40.46
14	47.10	15	42.76	8	33.09	Oct. 7	41.25
21	46.97	22	41.42	22	32.97	21	40.92
28	46.70	29	39.13	29	33.72	28	43.90
Feb. 4	44.25	May 6	37.41	Aug. 5	36.03	Nov. 4	44.64
11	43.30	13	38.03	12	36.62	11	43.81
25	42.90	20	36.34	19	36.30	18	44.92
Mar. 4	42.00	27	34.77	26	38.40	Dec. 2	46.46
11	42.95	June 3	32.75	Sept. 2	37.86	9	47.49
18	43.68	10	29.95	9	39.45	16	47.59
25	42.86	17	30.55	16	38.65	30	48.42
Apr. 1	43.05	24	31.25	23	39.27		

33-1 (#886, p. 569; 906, p. 178; 936, p. 208; 944, p. 205; 986, p. 228; 1016, p. 272; 1023, p. 280; 1071, p. 320). Prairie State Paper Mills. Formerly owned by Wardlow-Thomas Paper Co. In Middletown.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	42.74	Apr. 22	37.32	July 15	27.12	Oct. 14	34.55
14	42.36	29	35.57	22	27.20	21	34.97
21	41.88	May 6	33.60	29	27.73	28	35.75
28	41.42	13	32.42	Aug. 5	28.44	Nov. 4	36.43
Feb. 4	40.35	20	31.86	12	29.22	11	36.36
11	38.30	27	30.36	19	30.02	18	37.26
18	37.99	June 3	28.50	26	30.52	25	38.03
25	37.35	10	25.59	Sept. 9	31.77	Dec. 2	33.66
Mar. 4	37.36	17	25.13	16	32.67	9	39.16
11	37.04	24	25.54	23	33.22	16	39.42
18	37.85	July 1	26.25	30	33.50	23	39.57
Apr. 8	38.02	8	26.43	Oct. 7	33.95	30	40.21
15	37.61						

36-13 (\*845, p. 375; 886, p. 568; 906, p. 209; 944, p. 205; 986, p. 228; 1016, p. 272; 1023, p. 281; 1071, p. 320). American Rolling Mill Co. In Middletown.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	93.58	95.22	96.14	93.97	94.94	98.91	98.00	95.23	.....	94.72	95.63	96.61
2	93.60	95.07	95.71	94.18	95.33	99.05	97.78	95.18	.....	94.92	94.55	96.87
3	94.14	94.95	95.24	94.22	95.49	99.34	97.62	94.44	.....	95.10	93.44	97.13
4	94.35	95.19	95.13	94.24	95.41	99.44	97.52	93.66	93.94	95.13	93.31	97.18
5	94.30	95.02	95.13	94.26	95.44	99.69	96.75	94.02	.....	94.80	93.58	96.87
6	94.24	94.90	95.10	94.23	95.67	99.87	96.23	94.34	.....	94.18	93.70	96.78
7	94.54	95.60	95.05	94.63	96.02	99.90	96.37	94.22	.....	94.27	93.94	96.36
8	94.70	95.69	94.97	94.14	96.23	99.13	96.14	94.18	.....	94.26	94.11	96.38
9	94.78	95.17	94.90	94.29	96.38	99.07	96.20	94.42	93.34	94.46	94.17	96.41
10	94.79	95.08	95.60	94.29	96.48	99.38	96.67	94.29	93.41	94.55	94.58	96.53
11	94.47	95.26	95.98	94.27	96.30	99.65	96.73	94.16	93.55	94.54	94.06	96.60
12	94.56	95.42	95.85	94.33	96.33	99.79	96.75	94.33	93.64	94.27	94.90	96.65
13	94.71	95.62	95.66	94.20	96.20	99.92	96.14	94.47	93.64	94.35	94.94	96.64
14	94.25	95.45	95.93	93.69	96.36	99.84	95.84	94.62	93.41	94.75	94.93	96.07
15	94.30	95.57	95.32	93.65	96.52	98.83	96.08	94.66	93.69	95.05	94.79	96.63
16	94.53	95.27	94.67	93.77	96.59	98.95	96.17	94.63	94.07	95.30	94.70	97.05
17	94.55	94.71	94.84	93.77	97.00	99.02	96.14	94.17	94.39	95.47	95.03	97.18
18	94.52	94.67	94.37	93.83	96.70	.....	96.16	93.64	94.55	95.51	95.15	97.17
19	94.36	94.67	94.21	93.84	97.20	.....	96.24	93.83	94.67	95.25	95.20	97.17
20	94.18	95.07	94.25	93.84	97.61	.....	95.89	94.07	94.70	94.57	95.47	97.21
21	94.45	94.32	94.44	94.04	98.16	.....	95.45	94.25	94.33	94.57	95.63	97.62
22	94.33	94.78	94.52	94.10	98.60	.....	95.60	94.41	93.75	94.66	95.81	97.95
23	94.25	94.62	94.23	94.59	98.85	.....	95.80	94.44	93.76	94.83	95.95	98.28
24	94.24	94.95	94.32	94.95	98.96	99.10	95.87	94.34	93.85	94.86	96.25	98.35
25	94.25	95.26	94.57	95.55	98.70	99.27	95.85	93.96	94.15	94.83	96.46	97.65
26	94.17	95.55	94.25	95.35	98.74	99.39	95.59	94.02	94.53	94.56	96.63	96.67
27	94.18	96.26	94.25	95.05	98.86	99.52	95.05	.....	94.59	94.47	96.83	96.06
28	94.43	96.46	94.21	94.63	99.08	99.53	95.02	.....	93.95	94.83	96.98	96.07
29	94.75	.....	94.29	94.55	99.43	99.10	95.15	.....	94.15	95.17	97.09	96.55
30	95.16	.....	94.29	94.72	99.60	98.35	95.19	.....	94.50	95.45	96.45	96.82
31	95.30	.....	94.31	.....	99.67	.....	95.21	.....	.....	95.68	.....	96.80

85-7 (\*886, p. 567; 906, p. 210; 944, p. 206; 986, p. 230; 1016, p. 273; 1023, p. 282; 1071, p. 321). City of Hamilton. On U. S. Highway 127, in Fairfield Township.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	28.10	24.83	27.24	28.33	23.94	19.62	21.50	.....	25.24	26.97	27.25	27.82
2	28.04	24.83	27.30	28.30	23.37	19.09	22.20	.....	25.22	27.08	27.19	27.94
3	27.41	25.10	27.52	28.05	22.94	15.62	22.40	.....	25.36	26.77	27.93	27.99
4	27.10	26.06	27.56	28.12	22.83	14.44	22.55	.....	25.78	26.59	27.22	28.01
5	26.98	.....	27.43	28.15	23.15	15.06	22.61	24.95	25.80	26.61	27.35	28.11
6	27.12	.....	27.65	24.54	23.46	15.52	22.70	25.14	25.80	26.65	27.40	28.08
7	27.23	.....	27.99	27.54	23.86	15.87	22.74	25.24	25.92	27.08	27.46	27.92
8	27.80	.....	27.80	27.70	23.64	16.15	22.95	25.29	26.00	27.47	27.49	27.95
9	27.95	.....	28.02	27.85	23.72	16.92	23.14	24.88	26.19	27.89	27.47	28.00
10	28.20	.....	27.92	27.95	23.82	17.80	23.01	24.82	26.26	26.86	27.40	28.61
11	28.25	26.15	28.07	27.90	23.69	18.03	22.85	24.94	26.34	26.66	27.57	28.14
12	27.90	26.90	28.10	26.48	23.99	18.29	23.32	25.73	26.54	26.65	27.53	28.06
13	27.95	27.15	28.08	26.76	23.99	19.15	23.33	26.07	25.84	26.67	25.00	27.80
14	27.87	27.19	28.25	26.95	24.05	19.16	23.37	26.34	25.76	26.70	25.00	27.72
15	27.77	27.20	28.14	27.52	24.11	19.12	23.35	26.47	25.74	26.75	25.00	27.62
16	27.60	24.54	27.92	27.63	23.98	19.35	.....	26.42	26.46	26.84	25.00	27.75
17	27.36	24.54	27.95	27.30	23.78	19.42	.....	25.37	26.60	26.95	25.00	27.78
18	27.38	27.17	28.08	26.44	22.43	.....	.....	23.98	26.85	26.93	27.76	27.82
19	27.38	27.23	28.16	26.80	22.00	.....	.....	25.78	26.20	26.90	27.90	27.89
20	27.22	27.44	28.11	26.90	22.06	.....	.....	25.91	26.25	26.92	27.90	27.92
21	26.18	27.55	27.75	26.47	22.01	.....	.....	26.01	26.20	27.12	28.00	27.86
22	25.80	27.53	27.94	24.96	20.87	.....	.....	22.32	25.96	26.10	27.16	28.07
23	26.00	27.70	27.85	24.72	20.69	.....	.....	22.60	25.04	25.95	27.10	27.92
24	26.15	27.85	27.75	25.12	20.20	.....	.....	22.73	25.16	26.40	27.46	27.79

85-7--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
25	26.27	27.58	27.62	25.44	20.66	21.65	23.02	25.81	26.00	27.56	27.35	28.55
26	26.30	27.61	27.22	25.00	19.45	21.74	23.20	25.07	26.80	27.24	27.91	28.36
27	26.70	27.92	27.05	24.16	19.48	21.71	23.23	25.14	26.35	27.13	27.90	28.48
28	26.76	27.72	27.88	24.36	19.50	21.27	23.34	25.24	26.70	27.27	27.84	28.45
29	23.37		27.82	24.55	19.86	21.37	23.40	25.30	26.77	27.33	27.87	28.55
30	27.90		28.00	24.52	19.30	21.05	.....	.....	27.01	27.38	27.81	28.70
31	25.94		28.18		19.74	.....	.....	24.75		27.01		28.57

86-7 (\*886, p. 567; 906, p. 181; 936, p. 211; 944, p. 207; 986, p. 230; 1016, p. 274; 1023, p. 282; 1071, p. 321). City of Hamilton. On U. S. Highway 127, in Fairfield Township.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	15.06	Apr. 8	14.42	July 8	7.15	Oct. 7	11.64
14	15.24	15	14.19	15	7.46	14	11.82
21	14.95	22	13.33	22	7.90	21	12.21
28	14.38	29	12.22	29	8.35	28	12.70
Feb. 7	15.70	May 6	11.14	Aug. 5	8.91	Nov. 4	12.70
11	14.09	13	10.73	12	9.36	11	12.91
18	14.45	20	10.17	19	9.64	18	13.19
25	14.84	27	8.48	26	9.58	25	12.90
Mar. 4	15.21	June 3	6.23	Sept. 2	9.98	Dec. 2	13.56
11	15.64	11	5.70	9	10.14	9	14.07
18	15.20	17	5.90	16	10.85	16	14.05
25	15.15	25	6.78	23	10.88	23	14.15
Apr. 1	14.81	July 1	6.95	30	11.13	30	14.31

104-1 (\*845, p. 574; 886, p. 566; 906, p. 183; 936, p. 211; 944, p. 207; 986, p. 231; 1016, p. 274; 1023, p. 283; 1071, p. 322). McGreevy Dairy Co. In Hamilton. Dry throughout the year; measurements discontinued.

104-2 (\*944, p. 208; 986, p. 231; 1016, p. 275; 1023, p. 283; 1071, p. 322). McGreevy Dairy Co. In Hamilton.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	38.20	Apr. 1	38.22	June 17	32.25	Sept. 2	31.23
14	38.30	8	38.10	25	31.75	9	31.35
21	38.22	15	38.05	July 1	31.32	16	31.32
28	38.35	22	37.84	8	31.20	23	31.39
Feb. 11	38.25	29	37.65	15	31.00	30	31.66
18	38.28	May 6	37.53	22	31.00	Oct. 7	31.78
25	38.26	13	37.22	29	30.92	15	32.02
Mar. 4	38.24	20	36.70	Aug. 5	30.93	21	32.22
11	38.25	27	36.05	12	31.02	Nov. 11	32.80
18	38.23	June 3	34.89	19	31.08	Dec. 16	34.15
25	38.17	11	33.45	26	31.11		

B-1 (\*944, p. 215; 986, p. 241; 1016, p. 283; 1023, p. 283; 1071, p. 322). Ohio State Highway Department. Along State Highway 4, in Fairfield Township.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	36.22	Apr. 7	36.61	July 7	27.42	Oct. 8	28.62
13	35.42	14	36.95	14	27.95	15	28.83
20	35.37	21	36.42	21	27.33	21	29.02
27	35.24	28	36.34	28	26.45	28	29.26
Feb. 3	34.42	May 5	35.62	Aug. 4	29.56	Nov. 4	29.52
10	34.39	12	34.38	11	29.53	11	29.75
17	34.31	19	34.25	18	30.16	18	30.04
24	34.34	26	33.06	25	30.44	25	30.30
Mar. 3	34.38	June 2	30.66	Sept. 1	31.42	Dec. 2	30.57
10	34.53	9	30.28	8	27.90	9	30.86
17	34.63	16	27.42	15	28.33	16	31.12
24	36.66	23	27.66	22	29.17	23	31.32
31	36.64	30	27.25	29	30.35	30	31.60

B-2 (\*944, p. 215; 986, p. 241; 1016, p. 283; 1023, p. 284; 1071, p. 322). Ohio State Highway Department. Along U. S. Highway 127, in Fairfield Township.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	34.25	Apr. 7	32.05	July 7	23.72	Oct. 8	29.55
13	33.93	14	31.79	14	25.25	15	29.90
20	33.86	21	31.40	21	25.57	21	30.24
27	33.02	28	30.50	28	26.25	28	30.61
Feb. 3	32.59	May 5	29.63	Aug. 4	26.15	Nov. 4	30.88
10	32.43	12	29.22	11	26.55	11	31.18
17	32.03	19	28.74	18	26.79	18	31.54
24	32.20	26	26.18	25	27.19	25	31.65
Mar. 3	32.16	June 2	25.32	Sept. 1	27.62	Dec. 2	32.02
10	32.22	9	23.63	8	27.96	9	32.24
17	32.49	16	23.42	15	28.30	16	32.42
24	32.11	23	23.75	22	28.71	23	32.60
31	32.13	30	24.20	29	27.13	30	32.78

B-3 (\*944, p. 215; 986, p. 241; 1016, p. 283; 1023, p. 284; 1071, p. 323). E. H. Zinsmeister. In Fairfield Township. Measurements discontinued after Sept. 30.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	19.83	Mar. 18	17.95	May 27	9.98	Aug. 5	13.25
14	19.72	25	17.83	June 3	9.80	12	13.72
21	19.65	Apr. 1	17.83	10	9.03	19	21.26
28	18.24	8	17.52	17	9.43	26	14.14
Feb. 4	17.60	15	17.08	24	10.27	Sept. 2	14.90
11	17.42	22	16.45	July 1	11.20	9	15.28
18	17.24	29	15.42	8	12.00	16	15.57
25	17.28	May 6	14.57	15	12.55	23	15.52
Mar. 4	17.23	13	14.39	22	12.80	30	14.52
11	17.89	20	14.19	29	12.92		

B-4 (\*944, p. 215; 986, p. 241; 1016, p. 283; 1023, p. 284; 1071, p. 323). A. H. Kollstadt. In Fairfield Township.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	26.67	Apr. 8	25.11	July 8	22.85	Oct. 8	26.69
14	26.61	15	25.12	15	23.30	14	26.68
21	26.65	22	24.62	22	23.01	21	26.93
28	25.39	29	22.65	29	23.33	28	27.03
Feb. 4	24.20	May 6	21.99	Aug. 5	23.95	Nov. 4	26.85
11	23.08	13	23.22	12	24.40	11	27.13
18	25.85	20	23.53	19	24.44	18	27.25
25	26.02	27	20.25	26	24.65	25	27.36
Mar. 4	26.09	June 3	19.15	Sept. 2	24.73	Dec. 2	27.43
11	26.97	10	17.57	9	25.00	9	27.54
18	25.69	17	19.67	16	25.35	16	27.55
25	26.69	24	21.19	23	25.14	23	27.60
Apr. 1	25.97	July 1	21.22	30	25.03	30	27.76

B-6 (\*944, p. 216; 986, p. 242; 1016, p. 284; 1023, p. 284; 1071, p. 323). Andrew Groh. In Fairfield Township. Measurements discontinued after Sept. 30.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	18.78	Mar. 18	18.34	May 27	14.15	Aug. 5	15.73
14	18.72	25	17.29	June 3	11.22	12	16.30
21	18.18	Apr. 1	17.80	10	10.30	19	16.36
28	18.36	8	17.33	17	12.09	26	16.63
Feb. 4	16.21	15	16.80	24	13.41	Sept. 2	16.79
11	17.12	22	15.90	July 1	15.26	9	17.08
18	17.45	29	14.39	8	14.80	16	17.23
25	18.24	May 6	13.87	15	15.27	23	17.75
Mar. 4	18.22	13	14.94	22	14.97	30	17.91
11	18.45	20	14.48	29	14.76		

B-9 (\*944, p. 216; 986, p. 243; 1016, p. 284; 1023, p. 285; 1071, p. 323). Henrietta Joyce. In Fairfield Township. Measurements discontinued after Sept. 30.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	14.45	Mar. 18	13.18	May 27	7.32	Aug. 5	8.42
14	14.41	25	13.57	June 3	5.83	12	8.76
21	14.22	Apr. 1	13.25	10	6.83	19	8.58
28	13.37	8	13.22	17	6.52	26	8.68
Feb. 4	13.32	15	12.72	24	6.97	Sept. 2	9.65
11	13.39	22	11.37	July 1	6.85	9	8.79
18	13.53	29	10.89	8	7.29	16	10.63
25	13.54	May 6	10.21	15	7.79	23	10.32
Mar. 4	13.63	13	10.03	22	7.75	30	10.28
11	13.03	20	8.26	29	7.54		

B-10 (\*944, p. 217; 986, p. 243; 1016, p. 284; 1023, p. 285; 1071, p. 324). Elizabeth Groh. In Fairfield Township. Measurements discontinued after Sept. 28.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11.19	6.80	11.09	10.12	6.35	7.28	9.28	10.16	10.98
2	11.20	7.00	11.13	10.13	5.70	7.28	9.00	10.25	10.40
3	10.67	7.45	11.14	10.07	5.47	0.76	9.20	10.32	10.40
4	10.23	7.94	11.12	9.86	5.80	.60	9.40	10.38	10.37
5	10.14	8.57	11.15	9.70	6.38	2.22	9.57	10.43	10.45
6	10.17	8.77	11.17	9.64	7.00	3.50	9.70	10.44	10.55
7	10.25	9.07	11.18	9.25	7.47	4.14	9.81	10.38	10.60
8	10.35	9.32	11.20	9.10	7.84	4.35	9.89	10.38	10.66
9	10.45	9.54	11.23	9.30	8.15	4.91	9.95	10.43	10.72
10	10.55	9.74	11.26	9.47	8.40	5.60	9.97	10.52	10.77
11	10.63	9.89	11.27	9.54	8.65	6.27	9.65	10.63	10.84
12	10.72	10.00	11.29	9.20	8.87	6.80	9.65	10.69	10.86
13	10.82	10.12	11.30	9.05	8.98	7.29	9.72	10.75	10.84
14	10.86	10.19	11.30	9.10	8.93	7.40	9.76	10.80	10.82
15	10.86	10.26	11.22	9.33	8.82	7.40	9.77	10.83	10.85
16	10.37	10.32	10.60	9.36	8.85	7.42	8.72	10.69	10.92
17	10.08	10.39	10.55	8.57	8.84	7.65	8.47	10.30	10.97
18	9.97	10.45	10.66	8.40	6.95	7.88	8.75	9.57	11.03
19	10.04	10.52	10.77	8.60	6.66	8.12	8.95	9.52	11.08
20	10.05	10.59	10.85	8.71	7.04	8.33	9.16	9.71	11.12
21	9.05	10.66	10.92	6.92	7.20	8.53	9.43	9.87	11.15
22	8.62	10.73	10.97	6.75	5.90	8.72	9.61	9.82	11.17
23	8.70	10.78	10.99	7.10	5.99	8.89	9.77	9.90	11.08
24	8.89	10.87	11.04	7.50	6.62	9.04	9.92	10.10	10.99
25	9.02	10.93	10.97	7.50	6.76	9.17	10.04	10.25	11.00
26	9.18	10.97	10.27	5.90	4.34	9.20	10.15	10.26	11.05
27	9.18	11.02	9.73	5.90	5.05	....	10.22	10.00	11.12
28	9.21	11.06	9.77	6.22	5.70	....	10.20	10.08	11.17
29	9.52		9.89	6.78	6.12	....	9.91	10.24	.....
30	9.35		9.97	6.78	6.50	9.38	9.97	10.39	.....
31	7.23		10.03		6.88		10.07	10.48	

B-11 (\*944, p. 217; 986, p. 244; 1016, p. 285; 1023, p. 286; 1071, p. 324). Fred Bandtel. In Fairfield Township.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	32.87	Feb. 18	29.84	Apr. 1	30.73	May 13	24.60
14	32.59	25	29.97	8	30.27	20	23.33
21	31.82	Mar. 4	30.30	15	29.04	27	20.49
28	30.98	11	30.63	22	27.13	June 3	19.34
Feb. 7	29.49	18	30.81	29	25.35	11	18.99
11	29.91	25	30.85	May 6	24.32	17	19.11

B-11--Continued.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 25	19.60	Aug. 19	21.72	Oct. 7	25.43	Nov. 18	29.67
July 1	19.98	26	22.12	15	26.49	25	29.87
8	20.53	Sept. 2	22.72	21	27.29	Dec. 2	30.37
15	20.18	9	23.25	28	27.90	9	30.87
22	20.65	16	23.72	Nov. 4	28.53	16	31.15
Aug. 5	20.82	23	24.17	11	29.10	23	31.43
12	21.31	30	24.84				

B-22 (\*986, p. 244; 1016, p. 285; 1023, p. 286; 1071, p. 325).

Joseph N. Conrad. In Fairfield Township. Measurements discontinued after Sept. 28.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17.73	14.67	15.44	15.52	11.53	9.25	10.90	13.26	14.28
2	17.66	14.37	15.50	15.48	11.42	9.24	10.97	13.35	14.32
3	17.58	14.03	15.55	15.46	11.28	....	11.05	13.34	14.36
4	17.46	13.76	15.60	15.44	11.15	....	11.14	13.51	14.38
5	17.26	13.64	15.65	15.38	....	....	11.24	13.58	14.41
6	17.02	13.58	15.70	15.32	....	....	11.35	13.66	14.45
7	16.69	13.67	15.75	15.28	....	....	12.48	13.70	14.50
8	16.57	13.77	15.79	15.22	....	....	12.59	13.75	14.55
9	16.47	13.88	15.84	15.09	....	7.84	12.69	13.80	14.59
10	16.40	13.94	15.95	15.00	....	8.02	12.71	13.87	14.63
11	16.35	14.10	15.98	14.90	....	8.27	12.78	13.90	14.67
12	16.34	14.20	16.01	14.86	....	8.51	12.85	13.93	14.72
13	16.36	14.30	16.03	14.80	....	8.70	12.90	13.99	14.75
14	16.36	14.42	16.07	14.69	....	8.82	12.94	14.06	14.79
15	16.37	14.46	16.08	14.59	....	9.06	12.97	14.13	14.85
16	16.37	14.55	16.08	14.50	....	9.25	12.94	14.17	14.89
17	16.37	14.60	16.05	14.42	....	9.40	12.90	14.18	14.93
18	16.18	14.69	16.02	14.27	....	9.59	12.83	14.18	14.97
19	16.10	14.76	15.99	14.09	....	9.77	12.79	14.12	15.01
20	16.03	14.83	15.97	13.90	11.50	10.08	12.80	14.05	15.06
21	16.00	14.90	16.00	13.90	11.30	10.23	12.88	14.02	15.10
22	15.91	14.97	16.02	13.75	11.09	10.43	12.94	14.02	15.20
23	15.67	15.04	16.04	13.36	10.27	10.47	13.00	14.00	15.22
24	15.40	15.15	16.04	12.97	10.65	9.89	13.09	14.04	15.28
25	15.19	15.22	16.05	12.75	10.50	10.05	13.17	14.08	15.25
26	15.04	15.28	16.05	12.56	9.28	10.20	13.25	14.13	15.28
27	14.96	15.35	15.99	12.31	8.86	10.34	13.32	14.14	15.30
28	14.93	15.40	15.87	12.03	8.72	10.49	12.98	14.15	15.34
29	14.90		15.75	11.81	8.85	10.62	13.01	14.17	.....
30	14.85		15.66	11.64	9.00	10.82	13.07	14.22	.....
31	14.80		15.59		9.12		13.17	14.27	.....

B-23 (\*986, p. 245; 1016, p. 286; 1023, p. 286; 1071, p. 325). Carl E.

Schiering. In Fairfield Township.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	22.56	20.09	19.84	20.23	17.13	13.12	14.63	16.19	17.95	.....	20.60	21.20
2	22.50	19.90	19.93	20.21	16.98	13.10	14.72	16.27	18.00	.....	20.62	21.22
3	22.44	19.73	20.02	20.20	16.83	12.10	14.83	16.34	18.05	.....	20.64	21.23
4	22.37	19.53	20.05	20.17	16.71	11.70	14.94	16.39	18.10	.....	20.67	21.25
5	22.24	19.46	20.09	20.10	16.63	11.47	15.05	11.45	18.14	.....	20.70	21.25
6	22.10	19.40	20.13	20.07	16.62	11.45	15.15	16.51	18.22	.....	20.73	21.27
7	22.00	19.37	20.15	20.04	16.62	11.52	15.26	16.58	18.26	.....	20.75	21.27
8	21.65	19.37	20.18	19.98	16.63	11.60	15.37	16.59	18.32	19.75	20.77	21.30
9	21.83	19.38	20.23	19.91	16.65	11.65	15.45	16.70	18.37	19.78	20.81	21.32
10	21.77	19.44	20.25	19.87	16.68	11.80	15.57	16.76	18.43	19.83	20.82	21.32
11	21.71	19.45	20.27	19.80	16.70	11.90	15.59	16.83	18.48	19.88	20.83	21.33
12	21.67	19.46	20.29	19.76	16.72	12.14	15.65	16.88	18.53	19.93	20.85	21.33



## B-23--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
13	21.64	19.46	20.30	19.70	16.73	12.27	15.72	16.95	18.54	19.97	20.87	21.34
14	21.62	19.45	20.32	19.60	16.77	12.32	15.75	17.02	18.58	20.01	20.88	21.34
15	21.60	19.47	20.32	19.55	16.80	12.45	15.77	17.10	18.65	20.05	20.91	21.40
16	21.55	19.48	20.32	19.46	16.82	12.50	15.87	17.13	18.71	20.09	20.94	21.41
17	21.52	19.54	20.33	19.37	16.82	12.65	15.75	17.15	18.76	20.13	20.96	21.41
18	21.49	19.58	20.35	19.24	16.71	12.84	15.78	17.37	18.81	20.17	20.98	21.41
19	21.37	19.59	20.35	19.10	16.48	12.99	15.85	17.40	18.85	20.22	21.01	21.43
20	21.28	19.60	20.35	18.97	16.34	13.12	15.84	17.45	18.88	20.25	21.04	21.43
21	21.23	19.64	20.38	18.88	16.22	13.27	15.95	17.51	18.94	20.30	21.05	21.44
22	21.12	19.64	20.40	18.75	16.13	13.42	16.02	17.50	18.97	20.33	21.07	21.44
23	20.97	19.67	20.39	18.47	15.95	13.63	16.11	17.52	18.97	20.36	21.08	21.46
24	20.82	19.73	20.44	18.25	15.78	13.75	16.20	17.57	19.01	20.39	21.08	21.47
25	20.72	19.78	20.45	18.10	15.67	13.90	16.27	17.62	19.07	20.43	21.10	21.47
26	20.60	19.82	20.45	17.95	12.68	14.03	16.34	17.66	19.12	20.45	21.12	21.50
27	20.50	19.86	20.43	17.70	12.54	14.15	16.38	17.70	19.16	20.48	21.13	21.52
28	20.45	19.84	20.36	17.52	12.62	14.30	16.31	17.75	19.18	20.50	21.15	21.54
29	20.39		20.32	17.42	12.80	14.44	15.95	17.81	19.20	20.53	21.18	21.55
30	20.31		20.33	17.27	12.93	14.53	16.01	17.86	.....	20.55	21.19	21.57
31	20.23		20.30		13.02		16.08	17.92		20.57		21.58

B-24 (\*986, p. 245; 1016, p. 286; 1023, p. 287; 1071, p. 326).  
City of Hamilton. At Minor Park, in Hamilton. Measurements discontinued after Sept. 29.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	38.63	Mar. 17	36.82	May 26	32.96	Aug. 4	31.33
13	38.40	24	36.88	June 2	31.22	11	31.69
20	38.23	31	36.86	9	29.59	18	31.82
27	36.86	Apr. 7	36.82	16	29.20	25	31.78
Feb. 3	37.69	14	36.75	23	29.45	Sept. 2	34.96
10	37.38	21	36.75	30	29.77	8	32.67
17	36.80	28	35.65	July 7	30.16	15	35.83
24	36.72	May 5	34.62	14	30.47	22	29.91
Mar. 3	36.71	12	34.12	21	30.78	29	31.92
10	36.88	19	33.86	28	31.08		

B-25 (\*986, p. 246; 1016, p. 287; 1023, p. 287; 1071, p. 326).  
Elizabeth J. Sipp. In St. Clair Township. Measurements discontinued after Sept. 29.

Water level, in feet below land-surface datum, 1947							
Jan. 6	18.41	Mar. 17	16.01	May 26	13.79	Aug. 4	16.38
13	18.46	24	17.77	June 2	9.96	11	16.64
20	17.82	31	17.72	9	8.74	18	16.86
27	16.35	Apr. 7	15.67	16	13.50	25	16.99
Feb. 3	15.31	14	15.22	23	14.02	Sept. 2	15.41
10	15.46	21	14.68	30	14.08	8	15.52
17	15.64	28	13.45	July 7	14.26	15	15.63
25	15.69	May 5	13.10	14	14.45	23	15.84
Mar. 3	15.79	12	14.94	21	14.88	29	17.10
10	16.08	19	14.21	28	14.68		

B-26 (\*986, p. 246; 1016, p. 287; 1023, p. 288; 1071, p. 327).  
Miami Conservancy District. In St. Clair Township. Measurements discontinued after Sept. 29.

Water level, in feet below land-surface datum, 1947							
Jan. 6	16.94	Feb. 17	14.16	Mar. 31	16.01	May 12	13.98
13	17.02	25	14.19	Apr. 7	13.93	19	11.59
20	15.99	Mar. 3	14.38	14	13.62	26	10.02
27	15.07	10	14.63	21	13.56	June 2	7.33
Feb. 3	13.82	17	14.45	28	11.93	9	7.22
10	13.92	24	16.07	May 5	11.55	16	12.26

## B-26--Continued.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 23	12.55	July 21	13.06	Aug. 18	15.16	Sept. 15	15.19
30	12.51	28	12.88	25	15.06	23	15.32
July 7	12.99	Aug. 4	15.94	Sept. 2	14.93	29	15.55
14	13.26	11	15.35	8	15.08		

B-27 (\*986, p. 247; 1016, p. 287; 1023, p. 288; 1071, p. 327).  
Andrews Asphalt Paving Co. In Hamilton. Measurements discontinued after Sept. 29.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	33.36	Mar. 17	31.71	May 26	29.35	Aug. 4	29.10
13	34.59	24	31.76	June 2	29.59	11	28.52
20	34.35	31	31.71	9	24.57	18	28.73
27	32.79	Apr. 7	31.65	16	24.94	25	28.56
Feb. 3	31.73	14	31.79	23	25.13	Sept. 2	29.55
10	30.87	21	31.67	30	25.25	8	29.72
17	30.81	28	30.47	July 7	26.79	15	29.96
24	30.91	May 5	30.23	14	27.13	22	30.23
Mar. 3	30.76	12	28.96	21	26.75	29	28.81
10	31.55	19	28.88	28	26.62		

B-28 (\*986, p. 247; 1016, p. 288; 1023, p. 288; 1071, p. 327).  
Baltimore & Ohio Railroad. In Hamilton. Measurements discontinued after Sept. 29.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	40.24	Mar. 17	39.09	May 26	35.95	Aug. 4	33.72
13	40.32	24	39.06	June 2	33.74	11	34.10
20	40.31	31	39.09	9	32.33	18	34.24
27	38.94	Apr. 7	39.03	16	31.03	25	34.56
Feb. 3	38.72	14	38.92	23	31.25	Sept. 2	34.80
10	37.92	21	38.32	30	32.25	8	34.88
17	37.83	28	37.87	July 7	32.57	15	35.08
24	37.75	May 5	36.92	14	32.22	22	35.43
Mar. 3	37.67	12	36.33	21	33.16	29	34.76
10	39.02	19	36.26	28	32.21		

B-30-D (\*986, p. 247; 1016, p. 288; 1023, p. 288; 1071, p. 327).  
City of Hamilton. On Pleasant Ave., in Hamilton.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	32.44	Apr. 7	32.23	July 7	27.79	Oct. 8	28.44
13	32.54	14	32.29	14	28.45	14	28.60
20	32.49	21	31.76	21	28.87	21	28.81
27	31.62	28	31.95	28	28.48	28	29.03
Feb. 3	31.44	May 5	31.43	Aug. 4	27.18	Nov. 4	29.23
10	31.35	12	31.05	11	27.29	11	29.46
17	30.31	19	30.87	18	27.39	18	29.67
24	30.34	26	29.68	25	27.65	25	29.90
Mar. 3	30.32	June 2	29.84	Sept. 2	27.66	Dec. 2	30.14
10	32.29	9	28.98	8	27.76	9	30.36
17	32.36	16	27.74	15	27.92	16	30.57
24	32.36	23	28.48	22	27.96	23	30.77
31	32.32	30	27.45	29	28.45	30	30.99

B-30-M (\*986, p. 248; 1016, p. 288; 1023, p. 289; 1071, p. 328).  
City of Hamilton. On Pleasant Ave., in Hamilton.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	33.85	Feb. 17	32.03	Mar. 31	32.81	May 12	30.22
13	34.78	24	32.09	Apr. 7	32.72	19	30.19
20	34.65	Mar. 3	32.03	14	32.66	26	29.54
27	33.11	10	32.73	21	32.18	June 2	28.58
Feb. 3	32.96	17	32.80	28	31.62	9	27.58
10	32.12	24	32.92	May 5	31.04	16	26.64

## B-30-M--Continued.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 23	26.83	Aug. 11	27.80	Sept. 29	28.12	Nov. 18	31.91
30	26.75	18	28.01	Oct. 8	30.45	25	32.12
July 7	27.09	25	28.06	14	30.71	Dec. 2	32.30
14	27.42	Sept. 2	29.05	21	30.31	9	32.49
21	27.48	8	29.24	28	31.27	11	32.66
28	27.12	15	29.45	Nov. 4	31.50	23	32.81
Aug. 4	28.04	22	29.68	11	31.72	30	32.97

B-30-S (\*986, p. 248; 1016, p. 288; 1023, p. 289; 1071, p. 328).  
City of Hamilton. On Pleasant Ave., in Hamilton.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	34.13	Apr. 7	32.94	July 7	27.88	Oct. 8	30.69
13	34.08	14	32.85	14	28.16	14	30.94
20	33.91	21	32.58	21	26.20	21	31.24
27	32.59	28	31.97	28	25.75	28	31.47
Feb. 3	32.42	May 5	30.79	Aug. 4	28.41	Nov. 4	31.73
10	31.56	12	30.71	11	28.27	11	31.95
17	31.44	19	30.56	18	28.43	18	32.15
24	31.61	26	30.23	25	28.71	25	32.35
Mar. 3	31.52	June 2	29.39	Sept. 2	29.45	Dec. 2	32.54
10	32.91	9	28.27	8	29.53	9	32.72
17	32.97	16	27.70	15	29.69	16	32.56
24	33.06	23	27.87	22	30.03	23	33.05
31	33.02	30	27.45	29	28.51	30	33.21

B-32 (\*986, p. 248; 1016, p. 289; 1023, p. 289; 1071, p. 328).  
City of Hamilton. On Hamilton-Cleves Road, in Hamilton. Measurements discontinued after Sept. 29.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	31.52	Mar. 17	29.22	May 26	28.16	Aug. 4	30.28
13	30.56	24	29.95	June 2	25.66	11	30.52
20	30.51	31	29.91	9	22.88	18	31.08
27	29.62	Apr. 7	29.83	16	26.58	25	30.83
Feb. 3	28.52	14	29.46	23	26.76	Sept. 2	29.97
10	28.42	21	29.39	30	26.83	8	30.02
17	28.56	28	27.93	July 7	27.09	15	30.22
25	28.58	May 5	26.30	14	27.62	23	30.22
Mar. 3	28.65	12	28.66	21	27.93	29	30.97
10	29.16	19	30.55	28	27.74		

B-33-D (\*986, p. 249; 1016, p. 289; 1023, p. 290; 1071, p. 329).  
City of Hamilton. On South Ave. and Front St., in Hamilton.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	23.82	Mar. 17	22.24	May 26	19.43	Aug. 4	24.15
13	24.49	24	24.68	June 2	18.33	11	24.34
21	23.76	31	24.61	9	16.85	18	24.13
27	22.82	Apr. 7	23.66	16	20.09	25	24.50
Feb. 3	20.96	14	21.89	23	20.45	Sept. 2	23.79
10	21.96	21	21.61	30	23.40	8	23.88
17	21.86	28	18.16	July 7	23.08	15	23.99
25	21.78	May 5	18.09	16	23.46	23	24.06
Mar. 3	21.80	12	22.28	21	22.44	29	24.62
10	22.20	19	21.18	28	24.19		

B-33-S (\*986, p. 249; 1016, p. 289; 1023, p. 290; 1071, p. 329).  
City of Hamilton. On South Ave. and Front St., Hamilton. Measurements discontinued after Sept. 29.

## B-33-S--Continued.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	22.75	Mar. 17	22.41	May 26	20.35	Aug. 4	24.88
13	25.24	24	25.22	June 2	16.68	11	23.14
21	24.98	31	25.18	9	17.94	18	24.98
27	23.15	Apr. 7	24.82	16	20.48	25	25.41
Feb. 3	20.71	14	22.99	23	20.73	Sept. 2	24.58
10	21.71	21	22.68	30	23.18	9	24.73
17	21.75	28	19.23	July 7	23.46	15	23.88
25	21.93	May 5	18.71	16	23.72	23	23.98
Mar. 3	21.99	12	23.19	21	23.35	29	25.76
10	22.35	19	22.39	28	23.23		

B-34-D (\*986, p. 249; 1016, p. 290; 1023, p. 290; 1071, p. 329).

City of Hamilton. On South Ave. and Second St., in Hamilton. Measurements discontinued after Sept. 29.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	31.22	Mar. 17	27.84	May 26	26.29	Aug. 4	28.79
13	30.45	24	31.65	June 2	24.59	11	29.11
21	30.36	31	31.61	9	22.65	18	29.53
27	29.41	Apr. 7	31.42	16	25.10	25	29.33
Feb. 3	28.26	14	28.38	23	25.31	Sept. 2	28.77
10	27.33	21	27.41	30	27.43	8	28.83
17	27.27	28	25.18	July 7	28.75	15	29.08
24	27.11	May 5	23.69	14	28.96	23	29.03
Mar. 3	27.33	12	27.54	21	28.23	29	29.48
10	27.72	19	27.47	28	28.09		

B-34-S (\*986, p. 250; 1016, p. 290; 1023, p. 290; 1071, p. 330).

City of Hamilton. On South Ave. and Second St., in Hamilton. Measurements discontinued after Sept. 29.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	29.93	Mar. 17	26.37	May 26	23.98	Aug. 4	25.25
13	29.20	24	30.22	June 2	22.39	11	25.81
21	29.09	31	30.18	9	21.33	18	25.96
27	27.92	Apr. 7	30.15	16	22.85	25	26.06
Feb. 3	26.93	14	27.80	23	23.06	Sept. 2	25.35
10	25.91	21	27.23	30	27.35	8	25.46
17	25.84	28	23.78	July 7	27.49	15	25.65
24	25.82	May 5	22.52	16	27.64	23	25.83
Mar. 3	25.84	12	24.99	21	24.55	29	26.19
10	26.28	19	24.59	28	24.32		

B-35 (\*986, p. 250; 1016, p. 290; 1023, p. 291; 1071, p. 330).

Baltimore &amp; Ohio Railroad. In Hamilton. Measurements discontinued after Sept. 29.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	36.33	Mar. 17	34.02	May 26	32.64	Aug. 4	30.32
13	36.52	24	35.86	June 2	31.10	11	30.75
20	36.48	31	35.61	9	30.46	18	30.93
27	35.38	Apr. 7	35.56	16	31.58	25	31.04
Feb. 3	34.31	14	34.23	23	31.72	Sept. 2	31.35
10	33.26	21	34.92	30	29.14	8	31.48
17	33.22	28	34.24	July 7	29.36	15	31.63
24	33.38	May 5	34.02	14	29.78	22	31.42
Mar. 3	33.34	12	32.95	21	30.75	29	31.33
10	33.86	19	32.82	28	30.48		

B-36 (\*986, p. 250; 1016, p. 290; 1023, p. 291; 1071, p. 330).

Baltimore &amp; Ohio Railroad. In Hamilton. Measurements discontinued after Sept. 29.

B-36--Continued.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	37.15	Mar. 17	34.05	May 26	32.33	Aug. 4	31.33
13	36.43	24	36.01	June 2	30.96	11	31.68
20	36.35	31	36.22	9	30.55	18	31.82
27	35.44	Apr. 7	36.13	16	31.33	25	31.93
Feb. 3	34.25	14	35.48	23	31.52	Sept. 2	32.28
10	33.33	21	35.39	30	30.24	8	32.43
17	33.23	28	34.10	July 7	30.64	15	32.52
24	33.56	May 5	33.39	14	31.03	22	32.96
Mar. 3	33.51	12	32.84	21	29.66	29	32.26
10	33.97	19	32.77	28	29.59		

B-37 (#986, p. 251; 1016, p. 291; 1023, p. 291; 1071, p. 330). Esther Spinelli and Mary Jelle. On northeast corner Mosler Ave. and Crawford Run, in Hamilton. Measurements discontinued after Sept. 29.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	48.02	Mar. 17	47.35	May 26	43.86	Aug. 4	41.00
13	48.04	24	48.31	June 2	41.78	11	41.29
20	47.97	31	48.38	9	41.28	18	41.46
27	47.12	Apr. 7	48.35	16	44.26	25	41.62
Feb. 3	46.95	14	46.77	23	44.39	Sept. 2	42.12
10	46.88	21	45.92	30	39.69	8	42.55
17	46.81	28	45.95	July 7	39.99	15	40.52
24	46.86	May 5	45.67	14	40.16	22	40.65
Mar. 3	46.82	12	44.33	21	40.36	29	39.92
10	47.17	19	44.18	28	40.14		

B-38 (#986, p. 251; 1016, p. 291; 1023, p. 292; 1071, p. 331). City of Hamilton. In rear of electric substation, on Fifth St. and Maple Ave., in Hamilton. Measurements discontinued after Sept. 29.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	40.23	Mar. 17	37.02	May 26	35.29	Aug. 4	34.59
13	39.87	24	40.06	June 2	33.99	11	34.78
20	39.73	31	40.02	9	32.32	18	34.93
27	38.38	Apr. 7	39.92	16	32.35	25	35.58
Feb. 3	37.23	14	39.71	23	32.86	Sept. 2	35.52
10	37.21	21	38.33	30	33.22	8	35.56
17	36.31	28	36.93	July 7	33.58	15	35.83
25	36.34	May 5	36.22	16	33.86	23	36.22
Mar. 3	36.45	12	35.75	21	34.03	29	36.51
10	36.94	19	35.64	28	33.76		

B-39 (#986, p. 251; 1016, p. 291; 1023, p. 292; 1071, p. 331). City of Hamilton. On west side of North Third St., in Hamilton. Measurements discontinued after Oct. 7.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
1	33.53	.....	32.97	32.67	29.55	25.83	25.02	26.99	27.73	29.18
2	33.61	.....	32.97	32.22	29.17	25.98	24.84	26.59	28.06	29.33
3	33.18	.....	33.10	32.47	29.20	25.06	24.77	26.51	27.91	29.27
4	32.97	31.47	.....	32.38	28.78	24.25	.....	27.08	27.77	29.06
5	32.57	31.59	.....	31.77	28.92	23.80	.....	27.17	27.74	29.01
6	32.82	31.74	.....	32.21	28.87	23.96	.....	27.31	27.99	29.29
7	32.84	31.74	.....	31.72	28.73	24.02	24.88	27.30	27.90	29.65
8	32.83	31.77	.....	31.77	28.96	23.96	24.96	27.39	28.06	.....
9	32.97	31.82	.....	32.26	28.67	24.04	25.28	27.15	27.97	.....
10	32.99	31.90	.....	31.82	28.65	24.20	25.45	26.96	28.50	.....
11	32.83	32.10	.....	32.32	28.84	24.25	25.53	27.25	28.55	.....
12	33.12	32.23	34.90	31.55	28.53	24.42	25.16	27.53	28.58	.....
13	33.24	32.38	35.08	31.82	28.81	24.47	25.78	27.72	28.61	.....
14	33.21	32.18	34.04	31.29	28.75	24.40	.....	27.75	28.27	.....
15	33.23	.....	33.42	31.66	28.44	23.94	25.37	27.91	28.77	.....

B-39--Continued.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
16	33.11	.....	33.52	31.38	28.61	24.30	25.45	27.78	28.92	.....
17	33.07	.....	32.85	31.61	28.45	23.98	25.32	27.59	.....	.....
18	33.04	32.39	33.20	31.30	28.39	24.21	25.77	27.74	.....	.....
19	33.03	32.64	32.52	31.53	27.95	24.62	25.90	27.80	.....	.....
20	33.06	32.55	33.08	31.18	28.06	24.77	25.90	27.89	.....	.....
21	32.75	32.63	32.42	31.29	27.93	24.80	26.05	27.78	.....	.....
22	32.67	32.65	32.99	31.03	27.81	24.94	26.17	27.60	.....	.....
23	32.65	32.61	33.24	30.65	27.68	25.12	26.29	27.47	.....	.....
24	32.60	32.76	33.70	30.77	27.42	25.22	26.40	27.39	29.68	.....
25	32.25	32.90	33.60	30.56	27.18	25.29	26.46	27.62	29.88	.....
26	31.89	32.95	33.87	30.50	27.04	25.21	26.43	27.65	29.78	.....
27	32.08	32.99	32.33	29.96	26.47	25.41	26.09	27.98	.....	.....
28	32.03	33.02	32.70	30.03	26.48	25.59	26.03	27.87	.....	.....
29	.....	.....	32.59	30.68	26.12	25.16	26.61	27.82	.....	.....
30	.....	.....	31.72	29.52	26.20	25.02	26.24	27.64	28.87	.....
31	.....	.....	32.11	.....	26.20	.....	26.76	27.53	.....	.....

B-40 (\*1071, p. 332). Federal Works Agency. At Symmes and Gilmore Rds., in Fairfield Township.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	54.01	50.18	49.53	50.77	44.73	39.53	39.25	39.80	41.49	43.97	47.48	49.60
2	53.70	49.97	49.50	50.36	44.50	39.28	39.34	39.85	41.69	43.96	47.58	.....
3	53.57	49.58	49.72	50.46	44.43	39.05	39.38	39.87	41.77	44.01	47.55	.....
4	53.56	49.18	49.84	50.32	44.42	38.83	39.42	39.92	41.84	44.11	47.65	.....
5	53.15	49.11	49.95	50.05	44.43	38.78	39.43	39.90	41.76	44.24	47.90	.....
6	52.83	48.97	49.98	50.24	44.42	38.41	39.42	39.95	42.00	44.56	48.05	.....
7	52.60	49.15	49.98	50.31	44.43	38.25	39.63	40.05	42.11	44.45	.....	.....
8	.....	49.29	49.99	50.20	44.46	38.24	39.70	40.10	42.15	44.56	48.10	.....
9	.....	49.39	50.15	49.92	44.52	38.26	39.67	40.13	42.17	44.72	48.39	.....
10	.....	49.51	50.18	49.90	44.54	38.25	39.64	40.25	42.27	44.81	48.39	50.03
11	.....	49.60	50.17	49.57	44.47	38.42	39.56	40.37	42.33	45.03	48.57	50.12
12	.....	49.58	50.17	49.60	44.27	38.47	39.54	40.42	42.34	45.23	48.58	50.19
13	.....	49.51	50.00	49.58	44.10	38.35	39.49	40.40	42.36	45.51	48.72	50.17
14	52.21	49.27	50.06	49.07	44.23	38.36	39.39	40.50	42.44	45.44	48.70	50.12
15	52.22	49.18	50.12	48.84	44.25	38.44	39.36	40.54	42.65	45.52	48.47	50.03
16	52.27	49.27	50.10	48.56	44.18	38.52	39.35	40.64	42.76	45.61	48.83	50.50
17	52.25	49.35	50.19	48.54	44.08	38.47	39.40	40.71	42.88	45.70	48.95	50.50
18	51.96	49.47	50.31	48.12	43.64	38.60	39.39	40.75	42.93	45.93	48.93	50.42
19	51.74	49.50	50.24	47.86	43.25	38.70	39.60	40.75	42.85	46.21	48.94	50.62
20	51.32	49.33	50.13	47.58	42.87	38.68	39.60	40.86	42.83	46.55	49.10	50.61
21	51.64	49.37	50.29	47.36	42.67	38.75	39.68	40.95	42.83	46.45	49.12	50.58
22	51.63	49.37	50.46	47.25	42.65	38.84	39.80	40.95	43.24	46.55	49.07	50.52
23	51.12	49.27	50.22	46.74	42.35	38.87	39.95	40.95	43.23	46.77	49.10	50.75
24	50.73	49.40	50.03	46.35	42.13	38.78	40.05	40.98	43.23	46.83	49.00	50.80
25	50.72	49.52	50.39	46.22	41.78	38.86	40.07	41.07	43.50	46.95	49.17	50.75
26	50.57	49.56	50.56	46.07	41.20	38.88	40.03	41.17	43.65	47.00	49.30	50.75
27	50.57	49.13	50.56	45.50	40.43	38.89	39.95	41.25	43.70	46.97	49.32	50.75
28	50.74	49.66	50.42	45.43	39.96	39.03	39.84	41.35	43.60	47.05	49.45	50.90
29	50.39	.....	50.47	45.15	39.88	39.14	39.76	41.42	43.70	47.18	49.64	50.90
30	50.17	.....	50.63	44.77	39.88	39.18	39.70	41.44	43.90	47.55	49.73	50.90
31	50.25	.....	50.46	.....	39.30	.....	39.67	41.47	.....	47.40	.....	50.98

11-D-2 (\*986, p. 252; 1016, p. 292; 1023, p. 292; 1071, p. 333). Federal Works Agency. In Fairfield Township. Measurements discontinued after Sept. 29.

## 11-D-2--Continued.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	30.43	Mar. 17	27.76	May 26	21.55	Aug. 4	22.25
13	30.96	24	27.82	June 2	19.45	11	22.30
20	30.83	31	27.93	9	18.20	18	23.17
27	29.01	Apr. 7	27.90	16	18.29	25	24.66
Feb. 3	28.42	14	27.51	23	18.89	Sept. 1	24.01
10	27.97	21	27.22	30	18.67	8	24.06
17	27.42	28	25.96	July 7	20.53	15	24.46
24	27.53	May 5	24.95	14	21.29	22	25.43
Mar. 3	27.42	12	24.43	21	21.79	29	24.23
10	27.67	19	24.26	28	22.24		

11-D-3 (\*986, p. 252; 1016, p. 292; 1023, p. 293; 1071, p. 333). Federal Works Agency. In Fairfield Township. Measurements discontinued after Sept. 29.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	30.89	Mar. 17	27.15	May 26	21.72	Aug. 4	21.67
13	29.43	24	27.27	June 2	19.24	11	22.05
20	29.27	31	27.37	9	17.69	18	22.59
27	28.51	Apr. 7	27.22	16	17.66	25	23.08
Feb. 3	27.90	14	26.85	23	18.29	Sept. 1	23.46
10	26.33	21	26.56	30	19.05	8	24.02
17	26.84	28	25.48	July 7	19.95	15	24.00
24	26.82	May 5	24.22	14	20.73	22	24.85
Mar. 3	26.74	12	23.86	21	22.26	29	24.59
10	27.07	19	23.59	28	21.69		

11-D-4 (\*1016, p. 292; 1023, p. 293; 1071, p. 334). Federal Works Agency. In Fairfield Township. Measurements discontinued after Sept. 28.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	29.02	29.16	28.91	28.70	28.45	.....	.....	.....	a20.13
2	29.04	29.16	28.90	28.70	28.42	20.89	.....	.....	.....
3	29.05	29.15	28.88	28.69	28.12	20.74	.....	.....	.....
4	29.06	29.15	28.88	28.69	27.76	20.47	.....	a19.55	.....
5	29.06	29.14	28.87	28.68	27.44	.....	.....	.....	.....
6	29.07	29.14	28.86	28.68	27.15	.....	.....	.....	.....
7	29.08	29.13	28.85	28.67	26.92	.....	.....	.....	.....
8	29.08	29.12	28.84	28.67	26.71	.....	.....	.....	a20.32
9	29.09	29.11	28.84	28.66	26.52	a20.25	.....	.....	.....
10	29.10	29.11	28.84	28.66	26.35	.....	.....	.....	.....
11	29.10	29.10	28.83	28.65	26.18	.....	.....	a19.65	.....
12	29.11	.....	28.83	28.65	26.04	.....	.....	.....	.....
13	29.11	.....	28.82	28.64	25.87	.....	.....	.....	.....
14	29.12	.....	28.81	28.63	25.75	.....	.....	.....	.....
15	29.12	.....	28.80	28.61	25.66	.....	.....	.....	a20.51
16	29.13	.....	28.80	28.60	25.58	a18.85	.....	.....	.....
17	29.13	29.03	28.79	28.60	25.50	.....	.....	.....	.....
18	29.14	29.03	28.79	28.59	25.41	.....	.....	a19.83	.....
19	29.14	29.02	28.78	28.58	25.33	.....	.....	.....	.....
20	29.14	29.01	28.78	28.57	26.25	.....	.....	.....	.....
21	29.14	28.99	28.77	28.56	.....	.....	.....	.....	.....
22	.....	28.98	28.77	28.56	.....	.....	.....	.....	20.70
23	.....	28.97	28.76	28.55	.....	.....	.....	.....	20.73
24	.....	28.96	28.75	28.53	.....	.....	.....	.....	20.75
25	.....	28.95	.....	28.52	.....	.....	.....	a19.96	20.78
26	.....	28.94	.....	28.51	.....	.....	.....	.....	20.80
27	29.17	28.93	.....	28.50	.....	.....	.....	.....	20.83
28	29.17	28.92	.....	28.49	.....	.....	a19.39	.....	20.85
29	29.17	.....	.....	28.49	.....	.....	.....	.....	.....
30	29.17	.....	.....	28.46	.....	.....	.....	.....	.....
31	29.16	.....	28.70	.....	.....	.....	.....	.....	.....

a Tape measurement.

Pit D (\*845, p. 372; 886, p. 560; 906, p. 183; 936, p. 212; 944, p. 208; 986, p. 231; 1016, p. 276; 1023, p. 294; 1071, p. 334). Paul Benninghofen gravel pit. At Symmes, (Symmes Lake), in Fairfield Township.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	15.20	Apr. 7	13.70	July 14	11.60	Oct. 8	15.53
13	15.10	14	13.20	21	11.40	14	14.80
20	14.60	21	12.40	28	11.20	21	14.90
27	13.20	28	9.80	Aug. 4	11.80	Nov. 4	14.30
Feb. 3	12.80	May 5	9.30	11	12.00	11	14.92
10	13.00	12	11.00	18	12.10	18	15.10
17	13.30	19	9.90	25	12.30	25	15.18
24	13.90	26	9.10	Sept. 1	12.40	Dec. 2	15.25
Mar. 3	14.00	June 9	9.10	8	12.60	9	15.35
10	14.20	23	8.20	15	12.80	16	15.25
17	14.10	30	10.80	22	12.80	23	15.35
24	14.20	July 7	11.10	29	13.20	30	15.50
31	14.10						

110 (\*845, p. 373; 886, p. 563; 906, p. 183; 944, p. 208; 986, p. 232; 1016, p. 276; 1023, p. 294; 1071, p. 335). Joe Conrad. At Symmes, in Fairfield Township. Measurements discontinued after Sept. 29.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	17.96	Mar. 17	17.49	May 26	9.61	Aug. 4	14.98
13	17.45	24	17.16	June 2	10.08	11	16.15
20	17.38	31	16.59	9	9.55	18	16.37
27	15.75	Apr. 7	15.06	16	12.43	25	15.43
Feb. 3	14.24	14	15.54	23	12.24	Sept. 1	16.35
10	14.52	21	15.16	30	13.25	8	15.92
17	15.95	28	12.28	July 7	13.59	15	16.28
24	16.16	May 5	11.59	14	13.93	22	16.63
Mar. 3	16.32	12	12.93	21	14.29	29	16.06
10	17.35	19	12.75	28	14.05		

112A (\*986, p. 232; 1016, p. 273; 1023, p. 294; 1071, p. 335). Louis Mergy. At Symmes, in Fairfield Township. Measurements discontinued after Sept. 29.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	21.83	Mar. 17	22.02	May 26	16.43	Aug. 4	20.28
13	22.19	24	22.05	June 2	16.05	11	20.77
20	21.67	31	24.39	9	15.42	18	19.57
27	20.53	Apr. 7	20.55	16	17.66	25	20.87
Feb. 3	19.09	14	20.27	23	18.73	Sept. 1	21.04
10	20.47	21	18.99	30	17.08	8	21.05
17	21.07	28	17.29	July 7	19.55	15	21.12
24	21.53	May 5	17.15	14	22.08	22	21.05
Mar. 3	20.83	12	19.04	21	20.05	29	20.98
10	22.09	19	17.55	28	19.82		

117 (\*845, p. 376; 886, p. 563; 906, p. 183; 936, p. 212; 944, p. 208; 986, p. 233; 1016, p. 275; 1023, p. 295; 1071, p. 335). Anna Magie. At Symmes, in Fairfield Township.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	25.82	Apr. 8	22.88	July 8	17.84	Oct. 14	22.97
14	24.86	15	23.07	15	18.44	21	23.30
21	25.37	22	22.94	22	18.68	28	23.59
28	24.60	29	21.43	29	18.78	Nov. 4	23.82
Feb. 4	23.53	May 6	20.58	Aug. 5	19.07	11	24.08
11	23.30	13	20.37	12	19.54	18	24.23
18	23.30	20	21.15	19	18.14	25	24.36
25	23.27	27	14.97	26	19.88	Dec. 2	24.53
Mar. 4	23.33	June 3	15.80	Sept. 2	20.55	9	24.66
11	24.77	10	14.99	9	21.12	16	24.73
18	23.36	17	15.31	16	20.62	23	24.87
25	24.33	24	16.12	23	20.50	30	24.95
Apr. 1	23.78	July 1	17.04	30	19.88		



Pit M (\*944, p. 209; 986, p. 233; 1016, p. 275; 1023, p. 295; 1071, p. 336). Edward Hieb. Abandoned gravel pit. In Fairfield Township. Measurements discontinued after Sept. 30.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	4.00	Mar. 11	2.80	May 13	0.10	Aug. 12	2.10
14	3.50	18	2.90	20	1.00	19	2.00
21	3.30	25	2.80	June 24	.10	26	2.30
28	3.10	Apr. 1	2.40	July 1	1.90	Sept. 2	2.60
Feb. 4	2.40	8	2.20	8	1.80	9	3.00
11	.80	15	1.40	15	1.60	16	2.70
18	2.30	22	.70	22	2.60	23	3.10
25	2.40	29	1.90	29	1.80	30	3.40
Mar. 4	2.60	May 6	2.20	Aug. 5	2.10		

Pit N (\*944, p. 209; 986, p. 233; 1016, p. 275; 1023, p. 295; 1071, p. 336). Edward Hieb. Abandoned gravel pit. In Fairfield Township. Measurements discontinued after Sept. 30.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	3.20	Mar. 11	2.40	May 13	1.40	Aug. 19	1.00
14	3.10	18	2.50	July 1	2.10	26	.40
21	2.60	25	2.30	8	.80	Sept. 2	.50
28	1.90	Apr. 1	1.10	15	.10	9	1.00
Feb. 11	.70	8	.90	22	.20	16	1.10
18	1.70	15	.20	Aug. 5	.10	23	1.20
25	1.90	22	.80	12	.20	30	1.50
Mar. 4	2.20						

T-50 (\*886, p. 563; 906, p. 184; 936, p. 213; 944, p. 210; 986, p. 234; 1016, p. 277; 1023, p. 295; 1071, p. 336). Mary Gerber. On River Rd. in Fairfield Township.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	13.72	Apr. 8	12.43	July 8	9.76	Oct. 8	12.98
14	13.54	15	13.12	15	10.43	14	13.35
21	13.12	22	11.68	22	10.42	21	13.67
28	12.52	29	11.46	29	10.35	28	13.71
Feb. 4	12.84	May 6	10.50	Aug. 5	11.12	Nov. 4	13.90
11	12.98	13	10.82	12	11.41	11	13.93
18	13.16	20	10.83	19	11.52	18	14.05
25	12.89	27	9.40	26	11.59	25	14.15
Mar. 4	13.14	June 3	8.05	Sept. 2	12.94	Dec. 2	14.25
11	13.78	10	6.06	9	13.02	9	14.37
18	13.72	17	7.00	16	13.15	16	14.44
25	13.86	24	8.05	23	13.41	23	14.50
Apr. 1	13.58	July 1	8.13	30	12.41	30	14.60

T-51 (\*886, p. 564; 906, p. 184; 936, p. 213; 944, p. 210; 986, p. 234; 1016, p. 277; 1023, p. 296; 1071, p. 337). Miami Conservancy District. On River Rd. in Hamilton.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	15.53	Apr. 8	13.76	July 8	14.80	Oct. 8	16.58
14	15.45	15	14.07	15	15.09	14	16.75
21	15.26	22	12.97	22	14.22	21	16.73
28	14.72	29	10.86	29	14.18	28	16.62
Feb. 4	12.34	May 6	10.95	Aug. 5	15.57	Nov. 4	16.54
11	12.57	13	13.68	12	15.82	11	16.59
18	15.44	20	11.09	19	15.57	18	16.64
25	15.59	27	9.97	25	16.13	25	16.64
Mar. 4	15.68	June 3	8.35	Sept. 2	15.29	Dec. 2	16.83
11	16.35	10	8.82	9	15.46	9	16.72
18	16.14	17	11.84	16	15.67	16	16.66
25	16.53	24	13.85	23	15.83	23	16.79
Apr. 1	14.58	July 1	13.76	30	16.58	30	16.98

122 (\*886, p. 563; 944, p. 210; 986, p. 234; 1016, p. 277; 1023, p. 296; 1071, p. 337). Carl Federle. In Hamilton. Measurements discontinued after Sept. 29.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	41.71	Mar. 17	39.99	May 26	36.07	Aug. 4	36.20
13	40.36	24	40.02	June 2	34.72	11	37.75
20	41.33	31	39.98	9	32.68	18	37.97
27	40.67	Apr. 7	38.97	16	32.67	25	38.11
Feb. 3	40.21	14	39.75	23	33.94	Sept. 2	37.47
10	40.07	21	39.53	30	33.99	8	37.58
17	39.48	28	38.68	July 7	34.87	15	37.84
24	39.38	May 6	37.68	21	36.68	22	37.77
Mar. 3	39.44	12	36.98	28	36.44	29	38.07
10	39.84	19	37.03				

133 (\*886, p. 562; 906, p. 185; 936, p. 214; 944, p. 211; 986, p. 235; 1016, p. 278; 1023, p. 297; 1071, p. 338). J. E. Ryan. At Schenck, in Fairfield Township.

Water level, in feet below land-surface datum, 1947

Jan. 7	35.63	Apr. 8	32.89	July 8	23.33	Oct. 7	28.25
14	35.30	15	32.07	15	23.45	15	28.92
21	35.14	22	31.54	22	23.90	21	29.52
28	34.30	29	29.70	29	24.04	28	30.02
Feb. 7	33.40	May 6	28.31	Aug. 5	24.22	Nov. 4	30.66
11	33.29	13	28.49	12	24.67	11	31.27
18	33.19	20	27.75	19	25.13	18	31.77
25	32.83	27	25.53	26	25.49	25	31.99
Mar. 4	32.93	June 3	23.74	Sept. 2	26.00	Dec. 2	32.42
11	32.98	11	22.37	9	25.43	9	32.83
18	33.08	17	21.98	16	26.94	16	33.25
25	33.12	25	22.48	23	27.35	23	33.52
Apr. 1	33.00	July 1	22.85	30	27.88	30	33.54

150-2 (\*845, p. 376; 886, p. 562; 906, p. 186; 936, p. 214; 944, p. 211; 936, p. 235; 1016, p. 278; 1023, p. 297; 1071, p. 338). Harry A. Morris. At Flockton, in Fairfield Township.

Water level, in feet below land-surface datum, 1947

Jan. 7	2.35	Apr. 8	2.83	July 8	6.80	Oct. 7	10.96
14	2.56	15	2.72	15	4.43	15	11.75
21	1.85	22	1.89	22	4.98	21	12.05
28	2.60	29	2.00	29	5.18	28	12.30
Feb. 7	2.63	May 6	2.93	Aug. 5	5.82	Nov. 4	12.58
11	3.75	13	3.12	12	6.60	11	12.50
18	4.16	20	2.72	19	7.16	18	11.79
25	4.47	27	2.48	26	7.80	25	12.90
Mar. 4	4.83	June 3	1.92	Sept. 2	8.60	Dec. 2	12.80
11	5.00	11	4.35	9	8.33	9	12.45
18	4.25	17	4.53	16	9.55	16	12.37
25	3.00	25	5.43	23	10.33	23	12.19
Apr. 1	3.62	July 1	6.00	30	10.51	30	12.28

151-1 (\*906, p. 186; 936, p. 214; 944, p. 212; 986, p. 236; 1016, p. 278; 1023, p. 297; 1071, p. 338). Harry A. Morris. At Flockton, in Fairfield Township.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	18.39	13.97	14.02	14.83	7.88	2.48	3.35	4.04	5.81	3.22	12.40	14.21
2	18.23	13.75	14.02	14.83	7.69	2.40	3.45	4.13	6.01	8.26	12.47	14.27
3	18.00	13.49	14.19	14.88	7.56	1.52	3.51	4.15	6.10	8.34	12.50	14.35
4	17.90	13.15	14.27	14.78	7.55	1.45	3.59	4.18	6.15	8.45	12.55	14.39
5	17.60	13.08	14.36	14.59	7.63	1.50	3.65	4.20	6.14	8.60	12.70	14.36
6	17.31	12.97	14.44	14.57	7.65	1.55	3.67	4.26	6.32	8.73	12.82	14.45

151-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
7	17.10	13.10	14.43	14.58	7.82	1.60	3.85	4.33	6.41	8.85	12.85	14.42
8	17.01	13.20	14.47	14.72	7.90	1.71	3.90	4.36	6.45	9.02	12.95	14.60
9	16.95	13.32	14.59	14.28	7.98	1.76	3.91	4.42	6.52	9.20	13.17	14.63
10	16.91	13.44	14.62	14.23	8.07	1.85	3.90	4.54	6.61	9.34	13.20	14.63
11	16.70	13.64	14.67	13.99	8.07	....	3.43	4.64	6.68	9.55	13.18	14.70
12	16.69	....	14.72	13.85	7.98	2.11	3.48	4.69	6.69	9.78	13.33	14.75
13	16.62	....	14.62	13.65	7.87	2.15	3.51	4.70	6.66	9.93	13.42	14.77
14	16.56	....	14.63	13.21	7.98	2.12	3.47	4.82	6.72	10.08	13.43	14.75
15	16.56	....	14.70	13.02	8.03	2.13	3.42	4.85	6.88	10.24	13.26	14.73
16	16.49	....	14.69	12.85	7.97	2.24	3.41	4.91	7.00	10.40	13.50	14.98
17	16.47	....	14.75	12.55	7.67	2.34	3.48	4.98	7.11	10.52	13.60	15.00
18	16.29	13.63	14.82	11.96	6.84	2.52	3.54	5.01	7.15	10.74	13.60	15.02
19	16.12	13.65	14.81	11.64	6.18	2.60	3.73	5.06	7.13	10.99	13.63	15.14
20	15.76	13.57	14.76	11.38	5.85	2.64	3.72	5.16	7.13	11.15	13.74	15.14
21	15.72	13.65	14.85	11.10	5.83	2.79	3.87	5.23	7.16	11.22	13.77	15.16
22	15.63	13.65	14.95	10.47	5.40	2.87	4.00	5.22	7.45	11.37	13.77	15.14
23	15.29	13.64	14.84	9.97	5.12	2.92	4.10	5.23	7.45	11.58	13.80	15.28
24	15.01	13.75	14.73	9.60	5.14	2.90	4.25	5.30	7.47	11.69	13.69	15.32
25	14.89	13.83	14.91	9.52	5.00	....	4.28	5.39	7.70	11.84	13.77	15.30
26	14.72	13.95	15.00	9.20	2.84	....	4.27	5.48	7.85	11.90	13.87	15.35
27	14.70	14.02	15.01	8.57	2.20	....	4.23	5.54	7.90	11.91	13.90	15.35
28	14.77	14.07	14.93	8.42	2.16	....	3.90	5.64	7.85	12.00	13.98	15.47
29	14.57	....	14.91	8.27	2.44	....	3.81	5.70	7.97	12.10	14.15	15.48
30	14.36	....	15.02	8.00	2.49	....	3.84	5.73	8.15	12.22	14.23	15.55
31	14.21	....	14.94	8.54	....	....	3.92	5.79	....	12.30	....	15.61

151-2 (\*906, p. 187; 936, p. 215; 944, p. 211; 986, p. 236; 1016, p. 279; 1023, p. 298; 1071, p. 339). Harry A. Morris. At Flockton, in Fairfield Township.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	18.19	12.95	14.04	14.95	7.93	3.55	a4.57	....	6.85	8.83	12.29	....
2	18.06	13.76	14.06	14.95	7.71	3.38	....	....	6.97	8.86	12.35	a14.02
3	17.83	13.44	14.20	15.00	7.57	2.62	....	....	6.03	8.92	12.39	....
4	17.67	13.24	14.26	14.92	7.54	2.73	....	....	7.11	9.01	....	....
5	17.35	13.10	14.35	14.79	7.63	2.95	....	a5.36	7.05	9.11	....	....
6	17.12	13.02	14.43	14.73	7.77	3.02	....	....	7.22	9.22	....	....
7	16.89	13.11	14.43	14.77	8.07	3.12	....	....	7.34	9.32	....	....
8	16.79	13.19	14.45	14.68	7.98	3.23	a5.12	....	7.40	9.45	....	....
9	16.71	13.30	14.58	14.51	8.19	3.26	....	....	7.49	9.60	....	a14.43
10	16.66	13.42	14.64	14.46	8.29	3.51	....	....	7.56	9.69	....	....
11	16.50	13.51	14.67	14.26	8.33	3.59	....	....	7.61	9.85	....	....
12	16.51	13.55	14.71	14.34	8.29	3.62	....	5.81	7.65	10.03	....	....
13	16.45	13.52	14.63	13.96	8.21	3.59	....	5.86	7.59	10.12	....	....
14	16.40	13.41	14.66	13.57	8.30	3.52	....	5.91	7.65	10.24	....	....
15	16.42	13.39	14.71	13.34	8.36	3.65	a4.43	6.00	7.72	10.39	....	....
16	16.33	13.46	14.72	13.05	8.33	3.59	....	5.99	7.91	10.50	....	a14.75
17	16.29	13.52	14.77	12.77	7.88	3.78	....	6.06	8.02	10.61	....	....
18	16.13	13.65	14.88	12.30	6.76	....	....	6.11	8.06	10.77	a13.01	....
19	15.98	13.66	14.90	11.97	6.27	....	....	6.17	8.05	10.99	....	....
20	15.68	13.61	14.86	11.72	6.19	....	....	6.25	8.04	11.12	....	....
21	15.66	13.68	14.93	11.48	6.10	....	....	6.34	8.00	11.26	....	....
22	15.56	13.86	15.03	10.68	5.27	....	a5.14	6.39	8.30	11.36	....	....
23	15.22	13.86	14.93	10.18	5.34	....	....	6.31	8.30	11.55	....	a15.09
24	14.97	13.87	14.87	9.89	5.43	....	....	6.32	8.27	11.63	....	....
25	14.83	13.91	14.99	9.85	5.28	a4.33	....	6.39	8.45	11.76	a14.25	....
26	14.68	13.97	15.07	9.43	2.83	....	....	6.51	8.57	11.83	....	....
27	14.64	14.03	15.07	8.78	2.84	....	....	6.57	8.64	11.86	....	....
28	14.70	14.08	15.03	8.62	2.97	....	....	6.63	8.60	11.92	....	....
29	14.51	....	15.00	8.49	3.32	....	a4.95	6.73	8.68	12.01	....	....
30	14.33	....	15.12	8.04	3.45	....	....	6.77	8.81	12.11	....	a15.26
31	13.18	....	15.05	....	3.54	....	....	6.82	....	12.22	....	....

a Tape measurement.

## 350 WATER LEVELS AND ARTESIAN PRESSURE, 1947, NORTHEASTERN STATES

156 (\*944, p. 212; 986, p. 237; 1016, p. 280; 1023, p. 299; 1071, p. 340). Ray Milder's Inn. At Symmes, in Fairfield Township. Measurements discontinued after Sept. 29.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	30.18	Mar. 17	27.53	May 26	21.07	Aug. 4	21.45
13	30.31	24	27.51	June 2	19.40	11	21.75
20	30.25	31	27.36	9	18.08	18	21.89
27	28.73	Apr. 7	27.22	16	18.15	25	22.82
Feb. 3	28.15	14	27.55	23	19.68	Sept. 1	23.43
10	28.32	21	27.06	30	19.25	8	24.12
17	27.34	28	26.05	July 7	20.05	15	24.60
24	27.81	May 5	25.14	14	20.47	22	25.07
Mar. 3	27.75	12	24.78	21	21.10	29	22.13
10	27.58	19	24.25	28	21.39		

158-1 (\*944, p. 212; 986, p. 238; 1016, p. 280; 1023, p. 299; 1071, p. 340). Ralph Miller. On Seward Rd., in Fairfield Township.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	34.80	Apr. 22	27.20	July 15	21.95	Oct. 7	26.60
14	33.88	29	25.30	22	22.50	15	27.50
21	33.07	May 6	24.79	29	22.51	21	28.00
28	31.89	13	25.30	Aug. 5	22.78	28	29.10
Feb. 7	30.44	20	22.88	12	23.20	Nov. 11	30.15
11	30.75	27	19.40	19	23.60	18	30.65
18	30.87	June 3	18.97	26	23.95	25	30.85
Mar. 11	31.90	11	20.86	Sept. 2	24.45	Dec. 9	31.75
18	32.09	17	21.22	9	24.89	16	32.03
Apr. 1	32.13	25	21.82	16	25.29	23	32.28
8	31.60	July 1	22.07	23	25.57	30	32.54
15	30.31	8	22.55	30	26.18		

158-2 (\*944, p. 213; 986, p. 238; 1016, p. 280; 1023, p. 299; 1071, p. 340). Ralph Miller. On Seward Rd., in Fairfield Township.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	1.82	Apr. 8	1.83	July 1	3.60	Sept. 23	4.04
14	1.65	15	1.87	8	4.18	30	4.72
21	1.44	22	1.19	15	2.75	Oct. 7	5.15
28	1.65	29	1.44	22	3.18	15	5.48
Feb. 7	2.10	May 6	1.84	29	3.08	21	5.62
11	3.48	13	1.85	Aug. 5	3.70	28	4.68
18	3.70	20	1.52	12	4.02	Nov. 4	4.97
25	4.10	27	1.50	19	3.89	11	4.58
Mar. 4	4.30	June 3	1.20	26	4.17	18	4.29
11	4.52	11	2.67	Sept. 2	4.59	Dec. 16	4.20
18	3.85	17	2.70	9	4.83	23	4.29
25	2.08	25	3.72	16	4.32	30	4.34
Apr. 1	2.57						

160-1 (\*906, p. 188; 936, p. 215; 944, p. 213; 986, p. 238; 1016, p. 281; 1023, p. 299; 1071, p. 341). Orin James. On Seward Rd., in Union Township.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	23.89	Apr. 8	21.30	July 8	13.34	Oct. 7	17.93
14	22.75	15	20.25	15	12.70	15	19.10
21	22.52	22	18.63	22	13.29	21	18.38
28	21.54	29	16.29	29	13.29	28	18.96
Feb. 7	20.63	May 6	17.42	Aug. 5	13.71	Nov. 4	19.54
11	20.64	13	15.59	12	13.97	18	20.42
18	20.46	20	14.47	19	14.22	25	21.65
25	20.60	27	12.50	26	14.51	Dec. 2	22.59
Mar. 4	21.00	June 3	11.63	Sept. 9	15.42	9	23.04
11	21.68	17	12.10	16	16.35	16	21.35
18	22.48	25	12.60	23	16.04	23	21.98
25	21.59	July 1	12.97	30	16.55	30	21.87
Apr. 1	21.63						

160-2 (\*845, p. 376; 886, p. 562; 906, p. 188; 936, p. 216; 944, p. 213; 986, p. 239; 1016, p. 281; 1023, p. 300; 1071, p. 341). Orin James. 0.9 mile east of Flockton, in Union Township.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	.....	a2.33	.....	.....	a4.65	4.76	6.01	8.63	11.05	12.82
2	.....	.....	.....	.....	.....	.....	.....	4.80	6.14	8.70	11.14	12.84
3	.....	.....	.....	.....	.....	a2.05	.....	4.86	6.24	8.77	11.20	12.86
4	.....	.....	a5.54	.....	.....	.....	.....	4.91	6.33	8.85	11.27	12.90
5	.....	.....	.....	.....	.....	.....	.....	4.94	6.42	8.92	11.34	12.93
6	.....	.....	.....	.....	al.90	.....	.....	4.98	6.52	9.00	11.41	12.95
7	a2.44	a2.13	.....	.....	.....	.....	.....	4.98	6.63	9.10	11.49	12.98
8	.....	.....	.....	al.75	.....	.....	a5.21	4.96	6.74	9.17	11.55	13.01
9	.....	.....	.....	.....	.....	.....	.....	4.86	6.80	9.25	11.64	13.05
10	.....	.....	.....	.....	.....	.....	.....	4.80	6.89	9.33	11.70	13.08
11	.....	a5.67	a6.08	.....	.....	a5.40	.....	4.87	6.99	9.40	11.78	13.11
12	.....	.....	.....	.....	.....	.....	.....	4.96	7.07	9.48	11.85	13.14
13	.....	.....	.....	.....	a2.31	.....	.....	5.08	7.16	9.57	11.92	13.16
14	a2.25	.....	.....	.....	.....	.....	.....	5.19	7.25	9.65	11.98	13.18
15	.....	.....	.....	al.85	.....	.....	a4.17	5.29	7.33	9.73	12.03	13.22
16	.....	.....	.....	.....	.....	.....	.....	5.34	7.44	9.81	12.09	13.22
17	.....	.....	.....	.....	.....	a5.42	.....	5.35	7.53	9.88	12.15	13.25
18	.....	a4.44	a4.04	.....	.....	.....	.....	5.35	7.62	9.95	12.23	13.26
19	.....	.....	.....	.....	.....	.....	.....	5.38	7.70	10.04	12.28	13.29
20	.....	.....	.....	.....	al.85	.....	.....	5.43	7.73	10.12	12.34	13.31
21	al.24	.....	.....	.....	.....	.....	.....	5.51	7.85	10.20	12.40	13.33
22	.....	.....	.....	al.13	.....	.....	a4.00	5.55	7.94	10.29	12.45	13.34
23	.....	.....	.....	.....	.....	.....	.....	5.56	8.00	10.37	12.50	13.39
24	.....	.....	.....	.....	.....	.....	.....	5.58	8.10	10.45	12.53	13.40
25	.....	a4.83	al.42	.....	.....	a4.15	.....	5.59	8.16	10.55	12.57	13.40
26	.....	.....	.....	.....	.....	.....	4.58	5.62	8.25	10.63	12.61	13.40
27	.....	.....	.....	.....	al.70	.....	4.68	5.63	8.33	10.70	12.65	13.40
28	al.82	.....	.....	.....	.....	.....	4.69	5.68	8.40	10.77	12.70	13.40
29	.....	.....	.....	al.50	.....	.....	4.65	5.75	8.47	10.84	12.75	13.41
30	.....	.....	.....	.....	.....	.....	4.65	5.84	8.56	10.90	12.78	13.41
31	.....	.....	.....	.....	.....	.....	4.68	5.93	.....	10.98	.....	13.41

a Tape measurement.

165-1 (\*944, p. 213; 986, p. 239; 1016, p. 281; 1023, p. 300; 1071, p. 341). E. C. Sheperd. 0.7 mile north of Port Union, in Union Township.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	36.38	Apr. 8	36.37	July 8	33.93	Oct. 7	36.54
14	36.55	15	35.54	15	33.29	14	36.86
21	35.97	22	34.72	22	33.72	21	37.32
28	36.13	29	32.26	29	34.05	28	37.62
Feb. 4	35.53	May 6	34.30	Aug. 5	34.27	Nov. 4	37.67
11	36.25	13	34.82	12	34.46	11	37.85
18	36.57	20	34.39	19	34.79	18	38.05
25	36.90	27	32.85	26	35.00	25	38.11
Mar. 4	37.29	June 3	32.19	Sept. 2	35.26	Dec. 2	38.29
11	37.61	10	32.29	9	35.37	9	38.39
18	37.93	17	32.90	16	35.72	16	38.48
25	37.34	25	33.57	23	35.92	24	38.68
Apr. 1	37.10	July 1	33.70	30	36.25	30	38.63

165-2 (\*845, p. 88; 936, p. 216; 944, p. 214; 986, p. 240; 1016, p. 282; 1023, p. 300; 1071, p. 342). E. C. Sheperd. 0.7 mile north of Port Union, in Union Township.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	11.20	Feb. 11	6.86	Mar. 18	8.44	Apr. 22	4.64
14	10.13	18	7.27	25	8.20	29	4.79
21	8.10	25	7.63	Apr. 1	7.38	May 6	4.99
28	7.58	Mar. 4	8.00	8	5.27	13	5.70
Feb. 4	5.47	11	8.33	15	4.99	20	4.90

165-2--Continued.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 27	4.79	July 22	8.90	Sept. 16	11.43	Nov. 11	13.00
June 3	4.60	29	9.28	23	11.70	18	13.09
10	5.87	Aug. 5	9.61	30	11.96	25	13.09
17	6.97	12	9.93	Oct. 7	12.21	Dec. 2	13.06
25	7.85	19	10.29	14	12.44	9	12.98
July 1	8.34	26	10.50	21	12.71	16	12.82
8	8.76	Sept. 2	10.78	28	12.91	24	12.75
15	8.67	9	11.15	Nov. 4	12.95	30	12.80

162 (\*906, p. 188; 936, p. 216; 944, p. 214; 986, p. 240; 1016, p. 282; 1023, p. 301; 1071, p. 342). M. Haughebers. In Port Union, in Union Township.

Water level, in feet below land-surface datum, 1947

Jan. 7	21.71	Apr. 8	21.96	July 8	22.13	Sept. 30	23.85
14	22.33	15	21.55	15	21.00	Oct. 7	24.17
21	21.67	22	21.05	22	21.50	14	24.48
28	22.20	29	20.87	29	21.67	21	24.82
Feb. 4	22.70	May 6	21.15	Aug. 5	23.45	28	24.69
11	22.68	13	21.70	12	22.06	Nov. 4	24.23
18	22.90	20	22.15	19	22.84	18	24.75
25	23.34	27	19.57	26	22.92	25	24.00
Mar. 4	23.72	June 3	19.05	Sept. 2	22.68	Dec. 2	24.10
11	23.69	10	22.13	9	22.87	9	24.19
18	23.62	17	21.26	16	23.49	16	24.27
25	23.20	25	21.85	23	23.52	30	24.35
Apr. 1	22.94	July 1	22.34				

175 (\*845, p. 375; 886, p. 561; 906, p. 189; 936, p. 216; 944, p. 214; 986, p. 240; 1016, p. 282; 1023, p. 301; 1071, p. 342). J. W. Margonett. At Rialto, in Union Township.

Water level, in feet below land-surface datum, 1947

Jan. 7	5.65	Apr. 8	5.85	July 8	9.60	Oct. 7	11.66
14	5.98	15	5.83	15	8.55	14	11.86
21	4.99	22	5.05	22	8.65	21	11.50
28	6.23	29	5.56	29	9.12	28	11.68
Feb. 4	5.85	May 6	5.85	Aug. 5	9.70	Nov. 4	11.00
11	6.72	13	6.43	12	10.02	11	11.02
18	7.90	20	5.93	19	10.57	18	9.63
25	9.32	27	5.43	26	10.56	23	10.07
Mar. 4	9.09	June 3	5.03	Sept. 2	10.95	Dec. 2	10.03
11	9.48	10	6.38	9	11.40	9	9.96
18	8.78	17	7.52	16	10.84	16	9.74
25	6.80	25	8.92	23	11.12	24	9.89
Apr. 1	6.66	July 1	8.80	30	11.32	30	10.21

180 (\*845, p. 373; 886, p. 561; 906, p. 189; 936, p. 217; 944, p. 214; 986, p. 240; 1016, p. 282; 1023, p. 301; 1071, p. 343). Fox Paper Co. At Crescentville, in Union Township.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	7.84	5.14	5.05	9.13	7.25	11.63	12.94	14.19	10.14
2	....	....	....	7.82	5.21	4.97	9.24	....	11.86	12.86	14.21	10.14
3	....	....	....	7.92	5.40	4.68	9.33	....	11.94	12.90	14.08	10.16
4	....	a5.27	a5.57	7.80	5.50	4.62	9.44	....	12.00	12.94	14.08	10.23
5	....	....	....	7.53	5.76	4.67	9.56	7.83	11.90	13.05	14.28	10.10
6	....	....	....	7.45	5.83	4.75	9.65	7.94	12.15	13.12	14.28	10.25
7	a5.77	....	....	7.48	6.02	4.94	9.92	8.08	12.24	13.16	14.21	10.15
8	....	....	....	7.38	6.18	5.12	10.02	8.23	12.34	13.15	14.18	10.11
9	....	....	....	7.16	6.31	5.29	10.02	8.46	12.35	13.27	14.51	10.21
10	....	....	....	7.16	6.42	5.60	10.05	8.85	12.39	13.32	14.51	10.04

a Tape measurement.

180--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
11	....	a7.50	8.64	6.94	6.47	5.77	9.45	9.25	12.46	13.38	14.35	10.08
12	....	....	8.62	6.50	6.38	5.90	8.74	9.37	12.47	13.52	14.43	10.15
13	....	....	8.40	6.35	6.30	5.93	7.49	9.52	12.42	13.53	14.40	10.12
14	a7.19	....	8.18	6.04	6.51	6.16	7.32	9.85	12.43	13.64	14.20	10.07
15	....	....	8.25	6.08	6.57	6.45	7.33	10.67	12.20	13.60	13.30	9.98
16	....	....	8.24	5.88	6.57	6.65	7.10	10.50	12.00	13.60	12.68	10.08
17	....	....	8.25	5.85	6.48	6.77	7.11	10.70	11.99	13.59	12.30	10.07
18	....	a7.52	8.36	5.72	6.45	7.02	7.11	10.82	12.05	13.70	11.92	9.91
19	....	....	8.26	5.72	6.44	7.15	7.15	10.96	11.98	13.93	11.64	10.05
20	....	....	8.17	5.65	6.50	7.28	7.15	11.10	11.94	14.01	11.75	10.04
21	a6.67	....	8.16	5.57	6.36	7.45	7.24	11.12	11.92	14.06	11.76	10.02
22	....	....	8.38	5.42	6.03	7.62	7.39	....	12.42	14.00	11.63	9.93
23	....	....	8.20	5.30	5.63	7.75	7.63	....	12.42	14.15	11.17	10.16
24	....	....	7.86	5.43	5.48	7.95	7.80	....	12.25	14.17	10.33	10.21
25	....	a8.09	8.03	5.40	5.28	8.18	7.85	....	12.52	14.23	10.00	10.16
26	....	....	8.15	5.28	....	8.50	7.90	11.52	12.68	14.20	9.97	10.26
27	....	....	8.13	5.10	4.48	8.72	7.91	....	12.75	14.08	9.95	10.30
28	a7.00	....	8.00	5.18	4.45	8.90	7.43	11.52	12.65	14.00	10.00	10.61
29	....	....	8.02	5.15	4.70	....	7.25	11.57	12.65	14.07	10.15	10.68
30	....	....	8.12	5.12	4.90	....	....	11.55	12.90	14.15	10.25	10.83
31	....	....	7.98	....	5.02	....	7.20	11.60	....	14.18	....	10.97

a Tape measurement.

Clinton County

Cn-1 (#1071, p. 343 ). 4 miles north of Melvin, at abandoned brick schoolhouse.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
1	....	....	8.41	7.62	6.01	7.31	8.60	8.46	8.84	8.94	....
2	....	....	8.44	7.57	5.94	7.33	8.64	8.48	8.95	8.95	....
3	....	....	8.53	7.16	6.24	6.43	8.66	8.54	9.01	9.93	....
4	....	7.22	8.56	7.19	6.65	6.75	8.67	8.56	9.02	8.96	....
5	....	7.32	8.60	7.14	7.02	7.06	8.69	8.58	9.01	8.98	....
6	....	7.50	8.59	7.00	7.14	7.14	8.68	8.62	9.10	9.00	....
7	....	7.72	8.59	7.17	....	7.25	8.74	8.64	9.12	9.02	....
8	....	7.93	8.60	7.20	7.18	7.36	8.76	8.68	9.14	....	....
9	....	8.00	8.64	7.29	7.33	7.49	8.78	8.71	9.14	....	....
10	....	8.10	8.64	7.29	7.48	7.65	8.72	8.76	9.18	....	....
11	....	8.10	8.66	7.30	7.58	7.81	8.67	8.82	9.21	....	....
12	....	8.13	8.67	7.13	7.65	7.87	8.64	8.84	9.20	....	....
13	7.46	8.11	8.60	7.18	7.70	7.89	8.64	....	8.38	....	....
14	7.42	8.00	8.48	7.24	7.73	7.95	8.64	....	8.51	....	....
15	7.27	7.93	8.45	7.45	7.88	8.06	7.53	....	8.66	....	....
16	....	8.00	8.43	7.41	7.92	8.10	7.65	....	8.74	....	....
17	....	8.02	8.50	....	7.93	8.22	7.75	....	8.82	....	8.84
18	....	8.10	8.55	....	7.78	8.28	7.83	....	8.84	....	8.84
19	....	8.10	8.52	....	6.60	8.33	7.89	8.89	8.84	....	8.86
20	7.21	8.10	8.50	....	6.31	8.37	7.95	8.92	8.84	....	8.92
21	....	8.17	8.56	....	6.68	8.39	8.18	8.94	8.84	9.24	8.93
22	....	8.17	8.64	5.76	6.76	....	8.23	8.88	8.53	9.26	8.90
23	....	8.21	8.53	6.16	5.99	....	8.33	8.88	8.48	9.29	8.89
24	....	8.28	8.42	6.57	6.50	8.43	8.40	8.94	8.61	9.30	8.78
25	....	8.39	8.26	6.57	6.78	8.47	8.42	8.99	8.74	9.32	....
26	....	8.40	....	5.56	6.77	8.46	8.44	9.00	8.82	9.31	....
27	....	8.42	....	6.18	5.80	8.48	8.43	9.05	8.86	9.26	....
28	7.21	8.44	....	6.55	6.64	8.53	8.23	9.08	8.83	9.16	....
29	7.16	....	....	6.70	6.84	8.56	8.24	9.10	8.89	....	....
30	7.13	....	7.50	5.97	7.01	8.57	8.30	9.13	8.94	....	....
31	....	....	7.58	....	7.17	....	8.38	9.13	....	....	....

Cn-2. A. F. Roush. 2.1 miles west of New Vienna, north of State Highway 28, in farmyard. Dry well, diameter 5 feet, depth 22 feet. Measuring point, floor of pump house, 0.8 foot above land-surface datum. Automatic water-stage recorder installed Apr. 8, 1947, and removed Oct. 1, 1947. Measurements discontinued after Oct. 1.

Lowest daily water level, in feet below land-surface datum, 1947

Day	Apr.	May	June	July	Aug.	Sept.	Oct.
1	.....	10.51	10.76	11.35	10.62	.....	10.68
2	.....	10.28	10.75	11.20	10.70	.....	.....
3	.....	10.78	11.40	13.05	10.69	11.26	.....
4	.....	10.78	11.38	12.85	10.64	11.30	.....
5	.....	13.96	11.53	11.46	10.66	11.36	.....
6	.....	10.46	12.38	11.20	10.65	11.48	.....
7	.....	10.43	11.84	10.95	10.76	11.73	.....
8	.....	10.55	11.63	11.05	10.89	11.82	.....
9	.....	10.68	11.73	10.99	11.25	11.50	.....
10	.....	10.67	11.57	10.94	11.75	11.45	.....
11	.....	11.12	10.92	10.72	11.64	11.39	.....
12	.....	11.39	10.63	12.20	11.56	11.26	.....
13	.....	11.53	10.88	12.05	11.57	10.96	.....
14	.....	10.82	10.39	11.40	11.53	11.34	.....
15	.....	10.10	10.69	16.58	11.75	11.45	.....
16	.....	10.47	10.84	15.80	11.75	11.40	.....
17	.....	10.59	10.68	12.47	11.60	11.53	.....
18	.....	10.84	10.69	10.83	11.55	11.60	.....
19	.....	10.72	11.02	10.47	11.48	11.59	.....
20	.....	10.52	10.87	10.47	11.35	11.51	.....
21	.....	10.73	13.23	10.45	11.76	11.86	.....
22	.....	10.27	12.64	10.47	10.44	10.70	.....
23	10.83	10.41	11.73	10.49	10.94	10.93	.....
24	10.47	10.93	11.13	11.02	11.40	11.19	.....
25	10.20	10.37	10.92	11.53	11.54	11.22	.....
26	10.39	10.37	11.08	11.11	11.37	11.47	.....
27	10.69	10.51	10.94	10.64	11.46	11.43	.....
28	11.47	10.83	11.26	10.54	12.61	11.34	.....
29	11.83	10.60	10.85	10.52	12.57	10.84	.....
30	10.72	11.04	11.00	10.65	13.65	10.73	.....
31		10.83		10.64	13.40		.....

Cn-3. H. J. West. At Martinsville, south of junction of State Highways 124 and 134, in abandoned school yard. Abandoned dug well, diameter 36 inches, depth 18 feet. Measuring point, floor of recorder shelter, 0.4 foot above land-surface datum. Automatic water-stage recorder installed Apr. 9, 1947, and removed Oct. 1, 1947. Measurements discontinued after Sept. 30.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Apr.	May	June	July	Aug.	Sept.
1	.....	7.10	8.93	10.36	.....	.....
2	.....	7.01	8.96	.....	.....	11.57
3	.....	.....	8.56	.....	.....	11.55
4	.....	.....	8.55	.....	.....	11.55
5	.....	.....	8.66	.....	11.52	11.55
6	.....	7.70	8.83	.....	11.55	11.57
7	.....	7.94	8.96	.....	11.56	11.60
8	.....	8.19	9.01	.....	11.53	11.63
9	.....	8.44	8.17	.....	11.52	11.66
10	.....	8.67	9.28	.....	11.55	11.68
11	.....	8.88	9.41	.....	11.59	11.71
12	.....	8.97	9.50	.....	11.64	11.72
13	.....	9.02	9.58	.....	11.66	11.62
14	.....	9.11	9.49	.....	11.69	11.54
15	8.77	9.21	9.44	10.80	11.72	11.51
16	8.77	9.22	9.52	10.76	11.74	11.52
17	6.96	8.77	9.57	10.76	11.75	11.55
18	7.20	8.59	9.66	10.76	11.76	11.60
19	7.41	8.69	9.76	10.79	11.78	11.62



Cn-3--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Apr.	May	June	July	Aug.	Sept.
20	7.58	8.81	9.84	10.82	11.79	11.65
21	7.57	8.85	9.93	10.86	11.80	11.66
22	7.12	7.67	10.00	10.91	11.80	11.42
23	7.24	7.41	10.08	.....	11.80	11.41
24	7.43	7.62	10.13	.....	11.81	11.39
25	7.45	7.73	10.20	.....	11.83	11.38
26	6.71	7.54	10.25	.....	11.85	11.41
27	6.98	7.68	10.30	.....	11.84	11.44
28	7.18	7.99	10.30	.....	11.81	11.45
29	7.34	7.99	10.32	.....	11.79	11.47
30	7.17	8.54	10.35	.....	11.81	11.52
31		8.77		.....	11.81	

Coshocton County

Cs-1. Coshocton Water Department. At Coshocton, east of U. S. Highway 36, south of Tuscarawas River, in old well house at waterworks. Abandoned drilled well, diameter 12 inches, depth 90 feet. Measuring point, edge of recorder shelf, 1.0 foot below land-surface datum. Automatic water-stage recorder installed Aug. 25, 1947.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 4	20.64	Sept. 12	21.37	Oct. 30	22.01	Nov. 7	21.25
5	20.84	13	21.44	31	22.00	8	21.26
6	20.82	Oct. 24	22.07	Nov. 1	21.99	9	21.41
7	20.82	25	22.08	2	21.91	10	21.52
8	21.04	26	22.09	3	21.93	11	21.60
9	21.21	27	22.08	4	21.87	12	21.62
10	21.25	28	22.06	5	21.80	13	21.62
11	21.30	29	22.04	6	21.55		

Delaware County

D1-1 (\*1071, p. 344). Oscar Case. Along Pennsylvania Railroad tracks, 2½ miles north of Delaware.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	12.79	10.01	14.18	10.41	7.91	8.38	10.87	11.61	12.26	14.44	16.42	16.03
2	11.95	9.90	13.97	10.01	7.55	8.33	10.64	11.80	12.47	14.41	16.47	15.98
3	11.35	9.89	14.35	9.94	7.42	7.49	10.72	12.06	12.82	14.45	16.45	15.92
4	11.27	9.32	14.66	9.69	7.43	7.41	10.84	12.27	12.94	14.46	16.41	15.94
5	10.88	9.39	14.94	9.22	7.90	7.41	10.84	12.62	12.93	14.49	16.38	15.73
6	10.49	9.48	15.09	9.26	8.00	7.58	10.84	12.87	13.01	14.70	16.42	15.77
7	10.29	10.12	15.13	9.37	8.38	7.86	.....	13.12	12.91	14.79	16.41	15.71
8	10.63	10.12	15.20	9.36	8.63	7.97	11.06	13.29	12.64	14.82	16.34	15.87
9	10.99	10.52	15.46	9.25	8.96	7.95	11.30	13.54	12.45	14.97	16.35	.....
10	11.02	11.51	15.60	9.26	8.27	8.06	11.38	13.79	.....	15.03	16.36	15.69
11	10.93	11.93	15.71	9.51	9.42	8.61	11.56	13.86	12.32	15.18	16.29	15.74
12	11.39	12.15	15.80	9.85	9.45	8.96	11.70	13.92	12.37	15.28	16.28	15.78
13	11.41	12.19	15.65	9.87	9.49	9.02	11.85	.....	12.39	15.31	16.35	15.71
14	11.60	12.08	15.44	9.64	9.63	9.02	11.89	.....	12.42	15.41	16.37	15.59
15	11.66	12.12	15.52	9.76	9.55	7.94	11.88	.....	12.53	15.41	16.34	15.41
16	11.40	12.38	15.52	9.62	9.30	7.71	.....	.....	12.78	15.47	16.22	15.49
17	11.26	12.57	15.32	9.54	9.30	7.83	.....	.....	13.09	15.46	16.29	15.50
18	10.90	12.97	15.35	9.01	9.08	8.16	.....	.....	13.36	15.47	16.32	15.07
19	10.41	13.09	15.34	8.96	8.67	8.51	.....	10.58	13.42	15.72	16.31	14.98
20	9.90	13.03	15.27	8.88	8.44	8.93	.....	10.39	13.40	15.84	16.32	14.97

## DL-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
21	10.45	13.13	15.14	8.86	8.47	9.35	9.00	10.52	13.30	15.78	16.34	14.64
22	10.47	13.13	15.32	8.72	8.35	9.75	9.12	10.59	13.64	15.83	16.31	.....
23	10.22	13.13	15.19	....	8.03	9.89	9.47	10.63	13.80	15.91	16.23	.....
24	10.07	13.34	14.95	....	8.00	10.03	9.86	10.74	13.62	16.03	16.14	.....
25	10.29	13.65	14.34	....	8.04	10.24	10.00	10.91	13.86	16.14	16.94	.....
26	10.23	13.85	14.32	....	7.98	10.50	10.14	11.10	14.10	16.21	15.96	.....
27	10.26	14.08	13.82	....	7.60	10.60	10.22	....	14.20	16.22	15.96	.....
28	10.47	14.21	12.83	8.05	7.44	10.76	10.60	11.70	14.13	16.23	15.96	.....
29	10.48	....	11.87	7.94	8.07	10.99	10.90	11.88	14.05	16.24	16.03	.....
30	10.05	....	11.27	7.89	8.25	10.99	11.03	11.98	14.36	16.31	16.07	14.40
31	9.94	....	10.93	....	8.37	....	11.36	12.22	....	16.37	....	14.52

## Fairfield County

F-1 (#1071, p. 344). Charles E. Howdyshell. At West Rushville.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	15.45	.....	12.67	13.23	11.47	10.36	11.85	13.05	13.12	13.87	14.77	15.28
2	15.35	.....	12.66	13.17	11.38	10.31	11.93	13.07	13.15	13.87	14.78	15.28
3	15.27	.....	12.76	13.15	11.30	10.31	12.01	13.06	13.19	13.87	14.78	15.28
4	15.27	.....	12.82	13.14	11.21	10.34	12.09	13.05	13.21	13.89	14.77	15.30
5	15.22	.....	12.89	13.07	11.20	10.34	12.10	13.06	13.21	13.92	14.77	15.28
6	15.09	.....	12.93	13.02	11.13	10.33	12.12	13.07	13.20	13.94	14.82	15.27
7	15.01	12.30	12.96	13.06	11.13	10.32	12.18	13.10	13.26	13.97	14.82	15.27
8	14.87	.....	13.00	13.06	11.13	10.32	12.25	13.10	13.30	13.98	14.88	15.26
9	14.81	.....	13.07	12.95	11.13	10.36	12.27	13.06	13.33	14.01	14.97	15.31
10	14.76	.....	13.12	12.94	11.13	10.40	12.31	13.11	13.37	14.07	14.97	15.31
11	14.62	.....	13.16	12.86	11.11	10.46	12.40	13.13	13.40	14.11	14.97	15.30
12	14.55	.....	13.18	12.88	11.08	10.51	12.47	13.13	13.41	14.14	14.98	15.34
13	14.51	.....	13.18	12.88	11.02	10.52	12.51	13.14	13.41	14.15	15.06	15.34
14	14.45	12.30	13.16	12.85	11.02	10.58	12.56	13.14	13.40	14.15	15.06	15.32
15	14.38	12.34	13.23	12.79	11.00	10.66	12.58	13.18	13.41	14.16	15.06	15.30
16	14.30	12.35	13.23	12.75	10.90	10.73	12.60	13.20	13.47	14.20	15.06	15.29
17	14.30	12.38	13.24	12.66	10.90	10.78	12.66	13.20	13.53	14.23	15.11	15.30
18	14.23	12.42	13.29	12.64	10.83	10.87	12.71	13.16	13.57	14.25	15.11	15.27
19	14.11	12.43	13.29	12.60	10.83	10.96	12.75	13.09	13.57	14.29	15.11	15.30
20	13.92	12.43	13.29	12.55	10.81	11.05	12.80	13.02	13.57	14.35	15.16	15.29
21	13.77	12.44	13.27	12.43	10.76	11.13	12.83	12.98	13.56	14.59	15.17	15.27
22	13.77	12.45	13.29	12.40	10.75	11.21	12.88	12.94	13.59	14.42	15.16	15.26
23	.....	12.45	13.28	12.30	10.76	11.27	12.96	12.93	13.62	14.53	15.15	15.25
24	13.32	12.49	13.24	12.22	10.71	11.32	13.05	12.94	13.62	14.64	15.15	15.26
25	13.30	12.54	13.18	12.05	10.61	11.40	13.09	12.96	13.67	14.67	15.12	15.26
26	13.19	12.58	13.26	12.02	10.52	11.46	13.11	12.97	13.75	14.70	15.16	15.20
27	13.11	12.62	13.26	11.86	10.49	11.59	13.12	13.02	13.79	14.71	15.17	15.21
28	13.04	12.67	13.26	11.81	10.41	11.66	13.09	13.05	13.79	14.71	15.20	15.23
29	12.98	....	13.23	11.68	10.34	11.74	13.13	13.10	13.79	14.74	15.24	15.25
30	12.86	....	13.25	11.54	10.38	11.76	13.11	13.14	13.84	14.74	15.27	15.24
31	12.89	....	13.25	....	10.38	....	13.05	13.13	....	14.78	....	15.25

F-2 (#1071, p. 345). Pickerington Creamery. At Pickerington.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	20.74	20.32	20.30	20.42	20.64	20.61	20.60	21.94
2	.....	20.76	20.28	20.37	20.43	20.73	20.61	20.62	21.99
3	.....	20.40	20.25	20.37	20.43	20.74	20.62	20.59	22.03
4	.....	20.41	20.27	20.38	20.40	20.74	20.61	20.61	22.01
5	.....	20.42	20.27	20.28	20.45	20.74	20.61	20.65	21.90
6	.....	20.43	20.26	20.38	20.46	20.66	20.58	20.67	21.85
7	.....	20.46	20.24	20.34	20.48	20.65	20.56	20.70	21.83
8	.....	20.47	20.17	20.34	20.42	20.64	20.55	20.76	21.67

F-2--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
9	.....	20.48	20.15	20.34	20.36	20.69	20.56	.....	.....
10	.....	.....	20.18	20.25	20.34	20.71	20.57	20.77	21.65
11	.....	.....	20.23	20.26	20.33	20.74	20.57	20.78	21.66
12	.....	.....	20.25	20.26	20.40	20.71	20.58	20.78	.....
13	.....	.....	20.24	20.27	20.42	20.62	20.57	.....	.....
14	.....	.....	20.18	20.25	20.44	20.61	20.54	.....	.....
15	.....	.....	20.15	20.15	20.50	20.59	20.58	.....	21.65
16	.....	.....	20.17	20.18	20.50	20.64	20.61	.....	21.63
17	.....	.....	20.20	20.20	20.46	20.67	20.62	.....	21.64
18	.....	.....	20.23	20.18	20.53	20.67	20.52	.....	21.62
19	.....	20.32	20.25	20.20	20.58	20.63	20.52	.....	21.61
20	.....	20.33	20.28	20.20	20.59	20.61	20.56	.....	21.60
21	.....	20.32	20.29	20.19	20.62	20.61	20.57	.....	21.50
22	.....	20.28	20.33	20.25	20.55	20.58	20.59	.....	21.43
23	.....	20.30	20.33	20.30	20.58	20.57	20.60	.....	21.32
24	.....	20.31	20.36	20.32	20.60	20.60	20.61	.....	21.31
25	20.77	20.27	20.37	20.36	20.58	20.64	20.59	.....	21.26
26	20.78	20.28	20.38	20.38	20.61	20.66	20.56	.....	21.18
27	20.78	20.29	20.40	20.36	20.61	20.67	20.52	.....	21.18
28	20.76	20.27	20.41	20.27	20.64	20.66	20.52	.....	21.74
29	20.74	20.31	20.45	20.35	20.66	20.61	20.53	.....	21.77
30	20.75	20.34	20.27	20.38	20.67	20.61	20.53	.....	21.72
31	.....	20.34	.....	20.39	20.67	.....	20.55	.....	21.69

Fayette County

Fa-1 (\*1071, p. 346). Martha L. Slagle. At Jasper Mills.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	7.13	5.84	6.53	6.60	5.57	5.93	6.27	6.95	6.92	7.19	7.50	7.88
2	7.06	6.02	6.51	6.54	5.52	5.89	6.32	6.99	7.03	7.19	7.48	7.84
3	6.90	5.98	6.58	6.45	5.64	5.69	6.35	6.89	7.02	7.08	7.39	7.71
4	6.32	5.93	6.64	6.41	5.64	5.80	6.36	8.13	7.06	7.08	7.32	7.68
5	6.37	5.94	6.65	6.43	5.69	5.86	6.53	8.07	6.95	7.08	7.33	7.54
6	6.36	5.94	6.68	6.37	5.80	5.83	6.54	7.26	6.94	7.26	7.60	7.54
7	6.33	5.93	6.68	6.35	5.85	5.70	6.90	6.78	6.98	7.27	7.48	7.43
8	6.44	6.07	6.61	6.37	5.86	5.66	6.97	6.93	7.08	7.19	7.38	7.45
9	6.40	6.04	6.74	6.37	5.93	5.80	6.68	6.89	7.06	7.28	7.45	7.46
10	6.31	6.17	6.73	.....	5.94	5.87	6.43	6.81	7.17	7.30	.....	7.40
11	6.34	6.31	6.72	6.26	5.95	6.04	6.42	6.79	7.20	.....	.....	7.49
12	6.30	6.43	6.85	6.42	6.10	6.06	6.46	6.84	7.19	.....	.....	7.52
13	6.20	6.45	6.80	6.49	6.04	5.99	6.48	6.84	7.00	.....	.....	7.50
14	6.16	6.42	6.67	6.49	6.03	5.91	6.47	7.14	7.05	.....	7.29	7.40
15	6.10	6.26	6.71	6.42	6.09	5.94	6.24	7.30	7.08	.....	.....	7.34
16	5.97	6.28	6.71	6.40	6.09	6.04	6.27	7.52	7.03	.....	.....	7.44
17	6.15	6.32	6.76	6.13	6.11	6.07	6.15	7.45	7.01	7.38	.....	7.44
18	6.10	6.33	6.82	6.04	6.12	6.19	6.26	6.96	7.14	7.37	.....	7.32
19	6.01	6.34	6.85	6.10	5.92	6.21	6.33	7.09	7.14	7.40	7.29	7.42
20	5.92	6.35	6.75	6.25	5.91	6.20	6.24	8.02	7.07	7.41	7.40	7.42
21	6.04	6.40	6.74	6.02	5.93	6.33	6.17	7.53	7.17	7.35	7.66	7.29
22	6.04	6.40	6.98	5.93	5.89	6.41	6.21	7.28	7.06	7.34	7.56	7.35
23	6.11	6.35	6.90	5.86	5.88	6.36	6.33	7.11	7.03	7.57	7.40	7.23
24	6.14	6.45	6.75	5.91	5.84	6.36	6.34	7.03	6.96	7.58	7.30	7.29
25	6.09	6.48	6.59	5.84	5.75	7.15	6.36	6.95	6.99	7.56	7.31	7.35
26	6.10	6.48	6.63	5.79	5.65	6.56	6.38	7.04	7.19	7.52	7.32	7.60
27	6.14	6.55	6.66	5.70	5.67	6.42	6.34	6.96	7.14	7.47	7.39	.....
28	6.11	6.58	6.70	5.71	5.69	6.44	6.28	7.02	7.04	7.43	7.39	.....
29	6.01	.....	6.74	5.70	5.85	6.38	6.38	6.98	7.01	7.39	7.32	7.33
30	5.94	.....	6.74	5.58	5.89	6.27	6.43	7.10	7.04	7.40	7.58	7.40
31	5.78	.....	6.69	.....	5.92	.....	6.60	6.98	.....	7.39	.....	7.39

Franklin County

Fr-1 (#1071, p. 346). L. E. Keller. On Hoover Rd. 1 mile east of Grove City.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	78.76	77.80	77.53	77.67	76.87	76.59	76.43	76.89	76.91	77.13	77.12	77.20
2	78.43	77.93	77.32	77.52	76.76	76.38	76.44	76.91	76.91	77.08	77.20	77.16
3	78.51	77.93	77.49	77.68	76.94	76.52	76.52	76.84	76.95	77.01	77.12	77.14
4	78.51	77.47	77.61	77.65	76.81	76.61	76.52	76.89	76.95	76.98	76.94	77.17
5	78.49	77.34	77.71	77.47	76.79	76.52	76.49	76.86	76.91	76.98	76.94	77.01
6	78.29	77.22	77.73	77.51	76.83	76.43	76.55	76.88	76.88	77.03	77.11	76.98
7	78.28	77.16	77.73	77.75	76.83	76.36	76.60	76.83	76.97	77.05	77.08	76.98
8	78.19	77.25	77.65	77.75	76.95	76.35	76.70	76.92	76.99	77.08	76.88	76.93
9	78.32	.....	77.73	77.60	77.09	76.32	76.71	76.93	76.98	77.03	77.13	77.10
10	78.35	77.60	77.79	77.60	77.10	76.29	76.87	76.93	76.96	77.14	77.14	77.10
11	78.12	77.75	77.84	77.41	77.09	76.37	76.72	77.03	76.93	77.09	77.05	77.01
12	78.25	77.83	77.81	77.67	76.99	76.44	76.86	77.11	76.91	77.15	77.12	77.04
13	78.23	77.82	77.73	77.74	76.80	76.41	76.85	77.07	76.80	77.15	77.24	77.02
14	78.12	77.70	77.45	77.65	76.75	76.22	76.81	77.03	76.83	77.15	77.25	76.98
15	78.15	77.36	77.54	77.50	76.80	76.33	76.74	77.04	76.83	77.09	77.13	.....
16	78.27	77.39	77.54	77.61	76.79	76.47	76.76	77.08	76.98	77.11	77.04	.....
17	78.35	77.46	77.50	77.38	76.80	76.35	76.85	77.10	77.06	77.06	77.19	.....
18	78.33	77.57	77.68	77.42	76.71	76.32	76.83	77.35	77.07	76.97	77.19	.....
19	78.25	77.61	77.68	77.41	76.71	76.42	77.03	77.11	77.02	77.08	77.13	.....
20	77.85	77.57	77.59	77.38	76.73	76.42	77.01	77.14	76.90	77.15	77.25	.....
21	78.12	77.49	77.51	77.48	76.59	76.45	76.94	77.11	76.73	77.19	77.25	77.05
22	78.20	77.37	77.67	77.59	76.78	76.67	77.01	77.06	76.94	77.19	77.21	77.02
23	78.15	77.33	77.57	77.53	76.78	76.54	77.10	77.02	76.97	77.21	77.07	76.97
24	77.84	77.26	77.39	77.40	76.74	76.42	77.18	77.00	76.90	77.26	77.00	77.03
25	77.89	77.47	77.24	77.40	76.48	76.32	77.20	76.98	77.00	77.25	76.84	77.03
26	77.72	77.49	77.59	77.43	76.65	76.33	77.17	76.93	77.13	77.27	77.07	76.74
27	77.72	77.55	77.63	77.30	76.62	76.29	77.04	76.98	77.28	77.33	77.07	76.76
28	77.89	77.56	77.61	77.33	76.53	76.30	76.83	77.02	77.17	76.97	77.10	76.89
29	77.80	.....	77.55	77.28	76.53	76.36	76.92	77.04	77.00	76.96	77.23	76.90
30	77.53	.....	77.84	76.97	76.62	76.45	76.91	77.02	77.10	77.06	77.30	76.88
31	77.77	.....	77.81	.....	76.76	.....	76.84	76.94	.....	77.08	.....	76.82

Fr-2 (#1071, p. 347). Hilliard High School. At Hilliard, in school building.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	22.87	.....	21.38	21.85	20.71	.....	.....	20.98	21.45	21.76	.....	21.91
2	22.70	.....	21.26	21.81	20.64	20.09	.....	20.99	21.42	21.74	.....	21.95
3	22.55	.....	21.38	21.83	20.64	20.18	.....	21.07	21.44	21.73	.....	21.98
4	.....	.....	21.45	21.82	20.63	20.17	.....	21.15	21.45	21.75	.....	21.93
5	.....	.....	21.51	21.72	20.62	.....	.....	.....	21.43	21.76	.....	.....
6	.....	.....	21.54	21.75	20.68	.....	.....	.....	21.40	21.80	.....	.....
7	.....	.....	21.55	21.81	20.69	.....	.....	.....	21.43	21.83	.....	.....
8	.....	.....	21.52	.....	20.67	.....	.....	.....	21.34	21.83	.....	.....
9	22.28	.....	21.57	.....	20.69	20.04	20.91	21.41	21.49	21.85	.....	.....
10	22.22	21.06	21.60	21.60	.....	.....	20.80	21.53	.....	21.86	.....	21.88
11	22.20	21.16	21.60	21.54	.....	.....	20.80	21.69	.....	21.89	.....	21.90
12	22.18	21.22	21.61	21.64	20.60	.....	20.80	21.82	.....	21.93	.....	21.91
13	22.11	21.21	21.57	21.64	20.57	.....	20.82	21.97	.....	21.93	.....	21.89
14	22.05	21.14	21.48	21.54	20.53	.....	20.79	22.04	.....	.....	.....	21.84
15	22.06	21.05	21.50	21.52	20.54	.....	20.63	.....	.....	.....	.....	21.77
16	22.06	.....	21.50	.....	20.53	20.20	20.67	.....	21.57	21.92	.....	21.78
17	.....	21.28	21.54	.....	20.52	20.20	20.70	.....	21.63	21.92	21.93	21.78
18	.....	21.35	21.60	.....	20.55	.....	20.68	.....	21.64	21.87	21.93	21.78
19	.....	21.35	21.60	.....	20.55	.....	20.70	.....	21.62	21.90	21.93	21.86
20	.....	21.33	21.57	.....	.....	.....	20.67	21.70	21.68	21.92	21.98	21.86
21	.....	21.29	21.56	21.22	20.47	.....	20.67	21.71	21.53	21.93	21.99	21.84
22	.....	21.30	21.64	21.27	20.55	.....	20.70	21.66	21.54	21.97	21.96	.....
23	.....	21.25	21.61	21.21	20.52	20.47	20.74	21.61	21.55	22.05	21.98	.....

## Fr-2--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
24	21.40	21.22	21.56	21.21	.....	20.50	20.80	21.59	21.80	22.04	21.92	.....
25	21.42	21.29	21.51	21.18	.....	20.54	20.83	21.60	21.67	22.02	.....	.....
26	21.34	21.34	21.66	21.09	.....	20.57	20.82	21.58	21.74	22.01	.....	.....
27	21.34	21.37	21.67	21.05	.....	20.61	20.80	21.57	21.75	21.99	.....	.....
28	21.39	21.39	21.69	21.05	.....	20.79	20.81	21.54	21.73	21.89	.....	.....
29	21.32	.....	21.78	20.93	.....	20.79	20.85	21.55	21.66	21.88	.....	.....
30	21.20	.....	21.88	20.76	.....	20.80	20.88	21.51	21.75	21.91	.....	21.71
31	21.28	.....	21.87	.....	.....	.....	20.93	21.48	.....	21.92	.....	21.74

Fr-3 (\*1071, p. 348). R. C. Hann farm. Along Big Walnut Creek, south of Reese.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	14.17	.....	14.77	14.02	12.90	13.00	11.24	.....	14.55	14.67	14.80	14.88
2	14.22	.....	14.79	14.04	12.20	13.05	12.81	.....	14.60	14.71	14.82	14.92
3	11.36	12.31	14.92	13.58	.....	10.10	13.24	.....	14.64	14.74	14.84	14.95
4	11.36	12.72	14.94	13.72	.....	7.46	13.53	14.43	14.50	14.78	14.80	14.96
5	11.94	13.16	14.96	13.90	12.42	11.05	13.75	14.48	14.37	14.81	14.79	14.98
6	12.40	13.40	14.97	13.91	12.78	11.90	13.90	14.51	14.34	14.84	14.74	14.98
7	12.71	13.60	14.97	14.30	13.04	12.13	14.09	14.55	14.14	14.86	14.55	14.98
8	12.93	13.79	14.97	13.98	13.22	11.60	14.18	14.56	13.92	14.88	14.49	14.91
9	13.14	13.95	14.96	14.12	13.40	11.33	14.24	14.57	14.08	14.91	14.53	14.79
10	13.46	14.07	14.96	14.21	13.58	12.17	14.15	14.54	14.24	14.93	14.56	14.70
11	.....	14.18	14.98	14.30	13.72	12.67	13.98	14.60	14.36	14.95	14.59	14.79
12	.....	14.26	14.98	14.36	13.83	13.00	13.80	14.64	14.38	14.96	14.59	14.84
13	14.47	14.32	14.97	14.38	13.87	13.22	13.74	14.68	13.93	14.96	14.50	14.90
14	14.49	14.34	14.91	14.44	13.53	12.97	13.84	14.69	13.27	14.94	14.53	14.94
15	14.44	14.36	14.82	14.50	12.52	11.41	13.82	14.72	13.45	14.99	14.57	14.92
16	12.58	14.36	14.59	14.50	12.92	12.20	11.62	14.72	13.79	15.00	14.57	14.89
17	12.75	14.37	14.72	13.46	13.10	12.68	12.34	14.57	13.99	15.01	14.57	14.68
18	13.20	14.34	14.80	13.36	12.90	12.99	12.48	14.11	14.14	15.01	14.60	14.57
19	13.48	14.38	14.83	13.60	12.27	13.20	12.55	14.14	14.26	15.01	14.67	14.67
20	13.50	14.43	14.86	13.74	12.40	13.37	11.68	14.30	14.36	15.04	14.73	14.77
21	12.00	14.46	14.89	13.54	12.59	13.54	12.34	14.38	14.44	15.05	14.78	14.82
22	12.50	14.51	14.89	.....	11.75	13.68	12.79	14.00	14.43	15.04	14.81	14.90
23	13.00	14.57	14.85	.....	11.90	13.79	13.10	13.82	14.20	15.05	14.83	14.93
24	13.30	14.62	14.78	.....	12.46	13.89	13.37	14.00	14.02	15.07	14.83	14.95
25	13.50	14.67	14.46	.....	12.55	13.98	13.57	14.12	14.18	15.08	14.68	15.00
26	13.55	14.71	13.18	.....	10.40	14.05	13.73	14.22	14.32	15.05	14.58	15.02
27	13.29	14.74	13.47	.....	.....	14.12	13.83	14.35	14.42	15.06	14.60	15.04
28	13.25	14.77	13.71	12.58	11.62	14.17	13.81	14.46	14.50	15.07	14.69	15.06
29	13.47	.....	13.77	12.92	12.25	14.19	.....	14.53	14.56	15.01	14.76	15.10
30	13.53	.....	13.74	12.93	12.40	14.14	.....	14.60	14.62	14.97	14.82	15.11
31	.....	.....	13.38	.....	12.72	.....	.....	14.61	.....	14.87	.....	15.11

Fr-4. R. C. Hann farm. At Reese, 60 feet west of Big Walnut Creek, downstream from highway bridge. Ohio Water Resources Board test well, diameter 6 inches, depth 38 feet. Measuring point, floor or recorder shelter, 3.6 feet above land-surface datum, and 727.74 feet above sea-level datum. Automatic water-stage recorder installed Dec. 24, 1946.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	18.80	.....	20.29	18.89	18.28	15.34	16.01	19.59	19.82	19.56	20.36	20.19
2	18.86	.....	20.31	18.98	17.76	15.53	16.74	19.67	19.88	19.62	20.32	20.24
3	17.42	18.11	20.32	18.88	16.04	15.53	17.45	19.75	19.92	19.69	20.30	20.28
4	17.60	18.56	20.32	18.56	16.42	13.33	18.03	19.82	19.92	19.74	20.27	20.32
5	18.50	18.63	20.34	18.73	16.80	15.04	18.50	19.87	19.83	19.80	20.26	20.35
6	19.07	18.82	20.36	18.82	17.09	15.73	18.87	19.92	19.81	19.95	20.24	20.37
7	19.41	18.96	20.37	18.86	17.35	16.21	19.14	19.96	19.52	19.91	20.15	20.38
8	19.61	19.10	20.38	19.01	17.59	16.23	19.34	19.97	19.05	19.96	.....	20.38
9	19.81	19.22	20.39	19.16	17.81	15.93	19.49	19.99	19.13	20.00	.....	20.37

Fr-4--Continued.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
10	19.96	19.37	20.39	19.31	18.03	16.23	19.49	19.99	19.25	20.04	19.95	20.20
11	.....	19.47	20.40	19.43	18.23	16.58	19.44	20.01	19.38	20.08	19.97	20.20
12	.....	19.57	20.41	19.53	18.38	16.97	19.28	20.04	19.43	20.12	19.97	20.20
13	20.15	19.65	20.41	19.62	18.54	17.35	19.10	20.07	19.39	20.15	19.96	20.25
14	20.15	19.72	20.41	19.70	18.54	17.47	19.10	20.09	18.00	20.18	19.94	20.29
15	20.12	19.77	20.35	19.78	17.29	17.06	19.12	20.12	18.14	20.21	19.96	20.34
16	.....	19.81	19.90	19.80	17.46	17.44	16.60	20.12	18.25	20.24	19.97	20.35
17	.....	19.84	19.96	18.80	17.63	18.14	16.84	20.11	18.41	20.27	19.98	20.31
18	.....	19.87	20.03	18.22	17.63	18.55	17.26	19.35	18.56	20.29	19.99	20.21
19	.....	19.91	20.10	18.39	16.88	18.81	17.37	19.29	18.70	20.30	20.01	20.15
20	19.10	19.95	20.16	18.57	17.03	18.97	15.82	19.40	18.84	20.33	20.05	20.17
21	.....	19.98	20.21	18.57	17.16	19.11	16.40	19.49	18.97	20.39	20.09	20.20
22	.....	20.02	20.23	17.98	17.15	19.24	17.00	19.31	19.04	20.36	20.14	20.27
23	.....	20.06	20.23	18.87	16.21	19.35	17.53	.....	19.06	20.37	20.18	20.28
24	.....	20.10	20.21	19.42	16.52	19.45	17.99	.....	19.08	20.38	20.19	20.32
25	.....	20.14	19.88	19.63	16.75	19.52	18.37	19.07	19.13	20.40	20.19	20.37
26	.....	20.18	17.80	.....	16.50	19.58	18.69	19.21	19.20	20.41	20.16	20.40
27	18.41	20.22	18.05	.....	.....	19.63	18.95	19.36	19.27	20.42	20.07	20.44
28	18.49	20.26	18.51	17.44	14.06	19.67	19.08	19.39	19.35	20.42	20.07	20.47
29	18.67	.....	18.50	18.04	14.39	19.69	19.23	19.61	19.43	20.42	20.10	20.50
30	18.75	.....	18.59	18.26	14.72	19.69	19.36	19.72	19.50	20.42	20.14	20.52
31	.....	.....	18.83	.....	15.03	.....	19.48	19.71	.....	20.40	.....	20.54

Fr-5. R. C. Hann farm. At Reese, 278 feet west of Big Walnut Creek, downstream from highway bridge. Ohio Water Resources Board test well, diameter 6 inches, depth 43 feet. Measuring point, floor of recorder shelter, 2.1 feet above land-surface datum, and 727.64 feet above sea-level datum. Automatic water-stage recorder installed Dec. 24, 1946.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	20.68	.....	21.15	20.21	19.29	18.61	18.30	20.15	20.59	20.68	21.05	21.02
2	20.76	.....	21.16	20.28	19.05	18.76	17.96	20.23	20.63	20.74	21.00	21.09
3	19.27	18.67	21.20	20.22	17.57	17.90	18.45	20.31	20.67	20.78	21.01	21.13
4	18.89	19.12	21.22	19.82	17.88	13.49	18.88	20.36	20.66	20.83	21.01	21.17
5	19.48	19.54	21.24	20.04	18.36	14.84	19.23	20.42	20.51	20.86	21.00	21.19
6	20.00	19.81	21.25	20.11	18.75	16.04	19.51	20.47	20.48	20.90	20.98	21.21
7	20.33	19.99	21.26	20.04	19.08	16.91	19.72	20.51	20.41	20.94	20.92	21.22
8	20.54	20.15	21.25	20.20	19.32	17.07	19.89	20.53	19.86	20.97	20.75	21.22
9	20.74	20.29	21.25	20.38	19.51	17.04	20.01	20.56	19.96	21.00	20.73	21.17
10	20.87	20.42	21.25	20.51	19.69	17.43	20.02	20.56	20.09	21.02	20.75	21.00
11	.....	20.52	21.26	20.61	19.85	17.91	20.00	20.56	20.22	21.04	20.78	21.00
12	.....	20.61	21.27	20.68	19.96	18.35	19.92	20.59	20.30	21.07	20.78	21.03
13	20.96	20.67	21.27	20.72	20.03	18.71	19.79	20.63	20.30	21.09	20.77	21.07
14	20.97	20.71	21.24	20.78	20.02	18.80	19.45	20.66	19.09	21.10	20.75	21.12
15	20.94	20.72	21.17	20.83	18.56	18.15	19.76	20.69	19.28	21.12	20.78	21.14
16	.....	20.72	20.90	20.85	18.86	17.64	18.22	20.70	19.50	21.13	20.80	21.16
17	.....	20.72	20.94	20.30	19.13	18.05	17.90	20.69	19.73	21.16	20.80	21.13
18	.....	20.74	21.02	19.63	19.13	18.44	18.19	19.19	19.93	21.17	20.81	21.02
19	.....	20.77	21.09	19.91	18.18	18.76	18.29	20.05	20.10	21.17	20.84	20.95
20	20.06	20.81	21.13	20.15	18.43	19.01	17.30	20.14	20.25	21.19	20.87	20.98
21	19.11	20.85	21.17	20.15	18.61	19.22	17.61	20.23	20.37	21.19	20.93	21.02
22	19.23	20.90	21.18	18.26	18.59	19.40	18.06	20.23	20.44	21.19	20.97	21.10
23	19.72	20.94	21.17	18.54	17.73	19.56	18.47	19.61	20.43	21.20	21.01	21.12
24	19.96	21.00	21.13	19.01	18.16	19.69	18.82	19.77	20.14	21.20	21.01	21.15
25	20.13	21.04	20.95	19.30	18.43	19.80	19.12	19.95	20.17	21.21	21.01	21.20
26	20.16	21.08	19.52	.....	18.13	19.90	19.37	20.09	20.27	21.21	20.98	21.24
27	19.85	21.11	19.50	.....	.....	19.98	19.58	20.22	20.37	21.20	20.87	21.27
28	.....	21.14	19.79	18.59	16.75	20.05	19.73	20.35	20.47	21.20	20.87	21.29
29	.....	.....	19.98	19.06	17.44	20.09	19.84	20.46	20.54	21.18	20.92	21.33
30	.....	.....	19.99	19.27	17.95	20.10	19.95	20.55	20.61	21.16	20.97	21.35
31	.....	.....	20.04	.....	18.30	.....	20.05	20.59	.....	21.12	.....	21.37

Fr-6. R. C. Hann farm. At Reese, 488 feet west of Big Walnut Creek, downstream from highway bridge. Ohio Water Resources Board test well, diameter 6 inches, depth 45 feet. Measuring point floor of recorder shelter, 2.9 feet above land-surface datum, and 733.00 feet above sea-level datum. Automatic water-stage recorder installed Dec. 24, 1946.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	24.74	21.67	24.89	24.22	23.25	22.37	22.14	23.67	24.23	24.39	24.74	24.80
2	24.74	22.44	24.91	24.26	22.91	22.44	22.06	23.75	24.24	24.43	24.71	24.85
3	23.63	22.94	24.94	24.10	21.82	21.58	22.46	23.82	24.27	24.47	24.71	24.89
4	23.22	23.21	24.97	23.89	22.12	18.73	22.78	23.90	24.27	24.51	24.71	24.92
5	23.69	23.53	24.99	24.08	22.43	20.18	23.02	23.95	24.14	24.54	24.71	24.94
6	24.07	23.70	25.00	24.13	22.70	20.98	23.22	23.99	24.11	24.57	24.71	24.95
7	24.30	23.83	25.00	24.02	22.93	21.40	23.36	24.03	24.07	24.60	24.65	24.95
8	24.54	23.95	25.01	24.19	23.10	21.41	23.48	24.05	23.57	24.63	24.51	24.95
9	24.64	24.07	25.01	24.33	23.26	20.84	23.57	24.09	23.76	24.65	24.48	24.91
10	24.74	24.19	25.02	24.42	23.40	21.23	23.57	24.09	23.89	24.68	24.52	24.76
11	....	24.28	25.04	24.50	23.53	21.66	23.54	24.10	24.01	24.70	24.54	24.77
12	....	24.35	25.04	24.56	23.64	22.04	23.44	24.14	24.06	24.72	24.55	24.82
13	24.86	24.41	25.04	24.59	23.70	22.32	23.32	24.18	24.03	24.74	24.55	24.86
14	24.88	24.43	25.00	24.63	23.69	22.38	23.34	24.21	23.09	24.75	24.53	24.90
15	24.86	24.45	24.95	24.68	22.58	21.84	23.36	24.24	23.28	24.77	24.54	24.94
16	23.68	24.45	24.76	24.68	22.85	21.49	22.29	24.25	23.45	24.79	24.56	24.95
17	....	24.45	24.82	24.19	23.04	21.49	20.99	24.25	23.65	24.81	24.58	24.91
18	....	24.48	24.89	23.89	23.04	22.17	21.20	23.89	23.82	24.82	24.59	24.81
19	....	24.53	24.94	24.03	22.20	22.43	21.27	23.79	23.94	24.83	24.61	24.75
20	24.03	24.56	24.97	24.15	22.42	22.63	20.40	23.88	24.04	24.84	24.66	24.79
21	23.35	24.60	24.99	24.15	22.56	22.79	21.74	23.97	24.13	24.84	24.71	24.85
22	23.32	24.64	25.00	....	22.51	22.92	22.13	23.97	24.14	24.85	24.75	24.93
23	23.74	24.68	24.99	....	21.80	23.06	22.48	23.46	....	24.85	24.77	24.95
24	23.93	24.74	24.93	....	22.19	23.17	22.73	23.61	....	24.87	24.76	24.98
25	24.05	24.78	24.70	....	22.37	23.26	22.96	23.75	....	24.88	24.76	25.02
26	24.08	24.82	....	....	21.98	23.35	23.12	23.86	....	24.88	24.72	25.05
27	23.88	24.85	....	....	....	23.42	23.28	23.97	....	24.88	24.62	25.07
28	23.68	24.89	....	22.87	21.55	23.50	23.34	24.06	....	24.88	24.64	25.09
29	23.88	....	....	23.14	21.88	23.54	23.42	24.14	24.29	24.87	24.70	25.12
30	23.94	....	....	23.25	22.10	23.54	23.50	24.21	24.34	24.85	24.75	25.13
31	23.13	24.07	....	22.22	....	....	23.59	24.23	....	24.81	....	25.15

Fr-7 (\*944, p. 189; 986, p. 253; 1016, p. 294; 1023, p. 302; 1071, p. 348). Moores & Ross Dairy. In Columbus, at Spring and Ninth Sts.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Feb.	Mar.	Apr.	May	June	July
1	....	102.23	103.26	106.29	....	....
2	....	101.53	103.22	106.23	....	....
3	....	102.39	103.48	106.00	....	....
4	102.83	102.28	103.38	104.93	....	....
5	103.62	103.18	103.18	105.86	....	....
6	102.98	103.67	101.68	106.63	....	....
7	103.22	103.59	102.09	107.25	....	....
8	102.63	102.88	103.36	107.58	....	109.88
9	101.93	102.13	103.95	107.81	....	109.78
10	102.98	102.13	104.50	107.52	....	109.90
11	102.18	103.98	104.60	106.32	....	109.85
12	103.26	104.58	104.51	106.65	....	109.56
13	103.56	104.32	103.85	107.60	....	109.19
14	103.45	104.75	104.39	107.91	....	110.33
15	102.85	104.38	104.84	....	....	110.55
16	101.55	103.18	104.85	....	110.53	111.45
17	101.71	103.41	104.99	....	110.74	111.60
18	102.05	103.93	105.15	....	110.80	112.00
19	102.17	103.83	104.94	....	110.48	111.88
20	102.32	103.85	103.98	....	110.09	110.29
21	102.28	103.86	104.70	....	110.14	110.29
22	102.18	103.63	105.33	....	110.01	110.60
23	100.83	102.19	106.03	....	110.39	....

Fr-7--Continued.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Feb.	Mar.	Apr.	May	June	July
24	101.31	102.84	106.65	.....	101.69	110.65
25	101.73	103.36	106.70	.....	111.13	110.94
26	102.10	103.98	106.60	.....	111.51	111.12
27	102.13	103.73	105.49	.....	111.46	110.78
28	102.31	103.90	106.18	.....	111.35	109.66
29		103.68	106.15	.....	111.03	110.08
30		102.30	106.41	.....	111.13	110.80
31		103.38		.....		111.99

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Aug.	Sept.	Oct.	Nov.	Dec.
1	112.85	110.80	.....	.....	103.33
2	112.87	.....	.....	.....	103.38
3	112.76	112.81	.....	.....	103.63
4	111.43	112.82	.....	.....	103.98
5	111.95	112.82	.....	.....	103.43
6	112.16	112.82	.....	.....	103.08
7	112.85	112.68	.....	.....	101.73
8	112.79	112.83	.....	.....	102.63
9	112.79	112.83	.....	.....	.....
10	112.13	.....	.....	106.03	102.62
11	112.66	.....	.....	106.40	102.85
12	112.79	.....	.....	106.83	103.65
13	112.79	.....	.....	106.38	103.50
14	112.79	.....	.....	107.55	102.67
15	.....	.....	.....	106.83	103.37
16	.....	.....	110.19	105.53	104.20
17	.....	.....	110.23	106.79	104.38
18	.....	.....	110.13	107.10	104.43
19	.....	.....	109.97	107.12	105.03
20	.....	.....	109.88	107.46	104.63
21	.....	.....	109.88	107.13	103.11
22	.....	.....	109.53	106.73	104.20
23	.....	.....	109.03	106.08	104.54
24	.....	.....	108.79	106.07	104.43
25	112.47	.....	108.59	106.18	.....
26	112.84	.....	107.60	105.98	.....
27	112.79	.....	107.27	105.88	102.53
28	112.83	.....	107.43	104.63	102.53
29	112.83	.....	107.43	104.43	103.93
30	112.79	.....	.....	103.33	104.13
31	111.63	.....	.....		104.98

Fulton County

Fn-1 (\*1071, p. 349). City of Delta. In Delta, at water tower.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	65.52	.....	62.88	62.86	63.30	62.98	63.01
2	65.55	.....	62.81	62.74	63.14	63.01	62.87
3	65.57	.....	62.78	.....	63.05	62.91	62.94
4	65.38	.....	62.84	.....	62.93	62.67	63.11
5	65.38	.....	62.80	.....	63.01	62.57	62.79
6	65.80	.....	62.72	.....	62.98	62.77	.....
7	65.96	.....	62.77	.....	62.98	62.71	.....
8	66.09	.....	62.87	.....	62.98	62.43	.....
9	65.75	.....	62.88	.....	63.02	62.87	.....
10	65.74	.....	62.92	.....	62.99	62.93	.....
11	65.83	.....	62.99	62.82	62.94	62.61	62.84
12	65.68	.....	.....	62.80	62.98	63.05	62.92



Fn-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	July	Aug.	Sept.	Oct.	Nov.	Dec.
13	65.57	.....	.....	62.70	62.94	63.11	62.86
14	65.46	.....	62.77	62.72	62.97	63.15	62.75
15	65.38	.....	62.86	62.84	62.87	62.85	62.49
16	65.60	.....	62.90	63.04	62.83	62.91	62.61
17	65.60	.....	62.95	63.25	62.72	63.14	62.75
18	65.18	.....	62.97	63.27	62.61	63.13	62.80
19	65.51	.....	62.94	63.15	62.78	63.12	62.99
20	65.53	.....	62.97	63.03	62.90	63.22	63.06
21	65.30	.....	62.96	62.83	62.92	63.26	62.95
22	65.45	.....	62.98	63.08	62.93	63.03	62.91
23	65.50	.....	62.94	63.06	63.13	62.96	62.73
24	65.74	63.10	62.86	62.98	63.15	62.76	62.95
25	65.69	63.15	62.82	63.19	63.05	62.54	63.03
26	65.62	62.97	62.86	63.33	63.01	62.71	62.56
27	65.30	62.80	62.92	63.38	62.91	62.76	62.56
28	65.27	.....	62.91	63.30	62.69	62.63	62.67
29	64.62	.....	62.98	63.13	62.62	62.99	62.76
30	64.68	.....	62.86	63.31	62.83	63.14	62.67
31	.....	62.80	62.88	.....	62.89	.....	62.66

Fn-2 (\*1071, p. 349). Village of Wauseon. 2 miles south of Wauseon, in well field.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	59.14	58.91	.....	59.86	59.64	.....	57.34	57.49	.....	57.20	.....
2	58.83	59.11	59.01	.....	59.88	59.77	.....	57.58	57.66	.....	57.32	.....
3	58.00	59.75	59.38	58.60	.....	59.42	.....	57.58	57.19	.....	57.57	.....
4	58.69	.....	59.40	58.95	.....	58.95	.....	57.46	57.14	.....	57.69	.....
5	58.95	.....	59.39	59.24	59.81	.....	.....	57.56	57.26	57.18	57.95	.....
6	59.46	59.49	59.17	59.37	59.65	59.00	.....	57.37	57.30	57.25	57.52	.....
7	59.30	59.35	58.67	58.80	59.65	59.45	.....	57.47	57.25	57.13	57.76	.....
8	.....	59.09	58.69	.....	58.94	59.12	.....	57.40	57.25	57.23	.....	.....
9	58.69	58.93	58.56	58.58	58.86	59.17	.....	57.38	57.18	57.18	.....	.....
10	59.22	59.11	59.04	59.33	58.67	59.06	.....	57.44	57.24	57.18	.....	.....
11	59.07	58.84	.....	59.66	59.01	59.16	.....	57.42	57.04	57.38	.....	56.25
12	59.28	58.41	.....	59.33	59.15	58.93	.....	57.32	.....	57.27	.....	56.13
13	59.35	58.45	59.08	59.21	59.19	59.08	.....	57.35	.....	57.02	.....	56.09
14	59.00	59.20	59.39	59.58	.....	59.08	.....	57.39	.....	57.24	.....	.....
15	58.80	59.43	58.79	.....	59.26	59.21	.....	57.23	.....	57.37	.....	56.51
16	58.71	59.23	59.52	.....	58.99	59.20	.....	57.37	.....	57.44	.....	56.57
17	58.73	59.12	.....	59.13	59.06	59.28	.....	57.31	.....	57.35	.....	56.43
18	58.48	.....	.....	59.14	59.06	59.31	.....	57.09	56.63	57.57	.....	56.00
19	59.61	.....	.....	59.25	59.28	.....	.....	57.08	56.74	57.42	.....	55.93
20	59.12	58.78	59.37	59.30	59.21	59.50	.....	57.21	56.89	57.04	.....	55.97
21	.....	58.73	59.72	59.02	59.64	58.82	.....	56.91	57.31	57.33	.....	56.33
22	.....	58.82	59.38	59.35	59.13	59.08	.....	57.14	57.19	.....	.....	56.23
23	58.83	59.46	59.91	59.20	59.27	58.78	.....	57.20	56.81	.....	.....	56.45
24	58.85	58.91	59.91	59.18	58.94	59.28	57.23	57.32	56.84	57.20	.....	.....
25	58.79	58.74	.....	59.24	59.50	59.42	57.27	57.31	56.85	56.81	.....	56.63
26	59.27	.....	.....	59.47	58.95	59.48	57.39	57.14	.....	57.21	.....	56.73
27	59.18	58.60	58.84	59.61	59.62	.....	57.67	57.22	.....	57.18	.....	56.66
28	59.41	58.59	58.89	59.20	59.62	.....	57.64	57.20	.....	57.17	.....	56.51
29	.....	.....	59.43	59.14	59.43	.....	57.54	57.22	.....	57.52	.....	56.39
30	.....	.....	59.39	59.74	59.20	.....	57.57	57.37	.....	57.10	.....	56.56
31	59.16	.....	59.15	.....	59.23	.....	57.33	57.37	.....	57.24	.....	.....

Geauga County

Ge-1 (\*1071, p. 350). Village of Chardon. In Chardon, at water standpipe.

Ge-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	53.27	52.56	52.56	52.32	51.42	51.11	51.14	51.49	52.25	52.81	52.95	53.20
2	52.83	52.57	52.12	52.05	51.40	50.99	51.23	51.47	52.19	52.64	52.98	53.13
3	52.83	52.57	52.30	52.22	51.45	51.21	51.27	51.44	52.26	52.64	52.82	53.15
4	52.96	51.92	52.60	52.11	51.41	51.24	51.25	51.55	52.28	52.57	52.53	53.27
5	52.70	51.77	52.84	51.71	51.57	51.01	51.17	51.54	52.21	52.58	52.59	52.73
6	52.73	51.75	52.82	51.86	51.59	50.85	51.09	51.55	52.35	52.62	52.88	52.90
7	52.51	52.04	52.83	52.14	51.60	50.79	51.23	51.68	52.52	52.62	52.84	52.85
8	52.51	52.02	52.75	52.10	51.68	50.80	51.25	51.69	52.58	52.56	52.56	52.87
9	52.73	52.19	52.87	51.89	51.75	50.85	51.20	51.71	52.58	52.63	53.04	53.11
10	52.77	52.61	52.93	51.89	51.84	50.79	51.16	51.84	52.49	52.62	53.07	53.07
11	52.62	52.80	52.98	51.45	51.77	51.01	51.16	51.92	52.45	52.66	52.70	52.90
12	52.85	52.86	52.99	52.03	51.48	51.11	51.17	51.97	52.46	52.71	52.92	53.01
13	52.85	52.77	52.78	52.08	51.26	51.00	51.16	51.88	52.55	52.65	53.13	52.89
14	52.83	52.44	52.39	51.71	51.47	50.82	51.06	51.85	52.70	52.69	53.17	52.78
15	52.77	52.16	52.39	51.75	51.50	50.97	51.03	51.94	52.86	52.64	52.92	52.71
16	52.93	52.29	52.35	51.56	51.50	51.02	51.04	52.05	52.92	52.67	52.95	52.99
17	52.98	52.38	52.32	51.61	51.50	50.93	51.06	52.12	53.06	52.58	53.16	53.01
18	52.81	52.45	52.56	51.71	51.34	51.01	51.02	52.16	53.02	52.42	53.14	53.04
19	52.69	52.56	52.57	51.88	51.32	51.11	51.24	52.13	52.80	52.68	53.11	53.23
20	52.13	52.47	52.36	51.68	51.39	51.11	51.23	52.19	52.64	52.80	53.21	53.19
21	52.78	52.18	52.23	51.84	51.39	51.17	51.23	52.19	52.44	52.81	53.23	52.99
22	52.82	52.15	52.48	51.90	51.53	51.22	51.32	52.21	52.83	52.83	52.97	52.93
23	52.61	51.96	52.32	51.85	51.48	51.16	51.51	52.21	52.81	53.02	52.85	53.06
24	52.38	52.04	52.03	51.87	51.41	51.00	51.63	52.17	52.69	53.04	52.62	53.18
25	52.46	52.30	51.95	51.85	51.23	50.91	51.62	52.17	52.86	52.93	52.83	53.01
26	52.60	52.37	52.46	51.80	51.33	50.93	51.43	52.28	52.98	52.87	52.88	52.72
27	.....	52.48	52.48	51.84	51.40	50.97	51.27	52.35	53.03	52.73	52.92	52.75
28	.....	52.59	52.37	51.88	51.11	51.07	51.32	52.36	52.89	52.63	53.03	53.00
29	52.58		52.30	51.68	51.21	51.16	51.38	52.45	52.65	52.58	53.21	53.10
30	52.43		52.53	51.31	51.28	51.24	51.35	52.33	52.81	52.74	53.31	53.02
31	52.03		52.50		51.35		51.38	52.28		52.86		53.01

Ge-2 (\*1071, p. 351). D. L. Cameron. 5 miles southwest of Burton.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	14.70	13.25	13.30	11.96	10.77	10.43	12.74	13.60	14.11	14.74	15.02	15.08
2	14.60	13.21	13.18	11.64	10.87	10.40	12.83	13.63	14.21	14.76	15.02	15.09
3	14.50	13.19	13.34	11.54	10.98	10.15	12.87	13.68	14.24	14.78	15.01	15.05
4	14.48	12.98	13.39	11.46	11.00	10.20	12.92	13.70	14.24	.....	14.97	15.05
5	14.40	12.98	13.44	11.29	10.91	10.34	12.97	13.73	14.29	.....	14.98	14.95
6	14.48	13.02	13.43	11.22	10.82	10.51	13.00	13.77	14.32	.....	15.01	14.96
7	.....	13.19	13.41	11.41	10.72	10.57	13.06	13.81	14.35	14.78	14.99	14.91
8	.....	13.17	13.35	11.40	10.79	10.58	13.09	13.84	14.35	14.80	15.00	14.89
9	.....	13.25	13.37	11.37	10.92	10.69	13.09	13.86	14.37	14.82	15.05	14.91
10	.....	13.36	13.39	11.37	11.03	10.85	13.14	13.91	14.40	14.83	15.00	14.86
11	.....	13.39	13.37	11.42	11.09	11.13	13.15	13.94	14.42	14.85	15.02	14.86
12	.....	.....	13.29	11.68	11.07	11.34	13.17	13.95	14.44	14.86	15.05	14.88
13	.....	.....	13.09	11.69	11.08	11.34	13.20	.....	14.46	14.87	15.06	14.86
14	.....	.....	12.73	11.59	11.01	11.39	13.23	.....	14.49	14.89	15.06	14.87
15	14.30	13.38	12.73	11.68	11.01	11.50	13.20	.....	14.53	14.92	15.04	14.86
16	14.20	13.04	12.68	11.66	11.08	11.55	13.21	.....	14.57	14.91	15.05	14.85
17	14.18	13.04	12.75	11.38	11.08	11.64	13.18	.....	14.59	14.91	15.06	14.81
18	14.10	13.10	12.90	11.33	10.97	11.73	13.18	.....	14.60	14.90	15.06	14.82
19	14.05	13.08	12.85	11.46	10.97	11.89	13.12	14.11	14.60	14.93	15.07	14.83
20	13.91	13.06	12.74	11.40	10.99	11.94	13.10	14.12	14.60	14.93	15.10	14.81
21	13.93	13.04	12.71	11.04	10.90	12.06	13.14	14.08	14.60	14.95	15.10	14.82
22	13.79	13.04	12.86	10.91	10.73	12.15	13.18	14.10	14.62	14.96	15.08	14.81
23	13.79	13.08	12.67	10.83	10.58	12.26	13.20	14.12	14.62	15.00	15.08	14.89
24	13.72	13.23	12.45	10.92	10.65	12.36	13.26	14.14	14.61	15.00	15.05	14.89
25	13.68	.....	12.25	10.87	10.60	12.38	13.27	14.18	14.65	15.00	15.04	14.84
26	13.52	13.23	12.26	10.61	10.31	12.45	13.28	14.21	14.68	15.00	15.06	14.91
27	13.52	13.28	12.26	10.64	10.29	12.57	13.33	14.24	14.68	14.99	15.05	14.91

## Ge-2--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
28	13.61	13.32	12.15	10.66	10.19	12.64	13.39	14.27	14.66	15.01	15.04	14.95
29	13.47		12.12	10.60	10.14	12.68	13.45	14.29	14.69	14.98	15.04	14.96
30	13.37		12.19	10.65	10.27	12.70	13.48	14.23	14.70	15.00	15.04	14.96
31	13.36		12.04		10.36		13.56	14.12		15.00		14.96

Greene County

Gr-1 (\*1016, p. 295; 1023, p. 303; 1071, p. 351). Xenia Water Works.  
About 2.8 miles north of the corporate limits of Xenia.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	7.90	5.87	....	7.77	5.22	5.62	7.00	7.13	7.80	7.69	7.55	8.52
2	8.17	6.17	....	8.40	4.76	4.17	6.36	6.58	7.75	7.98	7.55	8.07
3	7.32	6.44	8.45	7.79	5.15	3.47	6.48	6.68	7.80	7.78	7.59	7.97
4	6.93	6.64	8.32	7.66	5.51	5.24	6.57	7.75	7.88	8.30	8.42	7.91
5	7.10	6.84	8.26	7.62	5.54	5.61	6.52	7.54	7.80	7.68	7.73	8.20
6	7.34	6.98	8.30	7.45	5.69	5.49	6.50	7.06	7.40	8.01	8.48	7.97
7	7.48	7.14	8.84	7.50	5.70	5.84	6.57	7.48	7.62	7.91	7.84	7.95
8	7.67	7.26	8.47	7.58	5.88	5.37	6.88	7.62	7.90	7.55	8.35	7.95
9	7.71	7.50	8.28	7.53	6.01	6.32	6.54	7.75	7.80	7.55	7.82	8.22
10	8.00	7.95	8.27	7.52	6.10	6.53	6.30	7.70	7.40	8.18	7.95	7.93
11	7.92	7.71	8.48	7.51	6.08	6.40	6.79	7.93	7.90	8.31	8.21	8.08
12	7.90	7.53	8.33	7.68	6.22	5.99	6.46	8.00	7.40	7.74	7.70	7.98
13	8.00	7.55	8.35	7.45	6.20	6.10	6.42	8.08	7.00	7.60	7.61	8.01
14	7.88	7.56	8.26	7.45	6.12	5.12	6.59	8.38	6.78	8.70	7.64	7.99
15	7.80	7.58	8.15	7.48	6.18	5.55	6.50	8.16	6.80	8.53	7.61	8.01
16	7.10	7.56	8.16	7.42	6.25	5.88	6.33	7.82	7.48	8.08	7.57	8.02
17	7.10	7.73	8.33	6.30	6.24	5.96	6.72	7.99	7.00	7.91	7.74	7.98
18	7.24	7.82	8.33	6.59	5.63	6.04	6.43	7.70	7.62	7.65	7.68	7.96
19	7.31	7.82	8.38	6.77	5.78	6.16	6.46	8.03	7.64	7.48	7.98	8.02
20	7.20	7.98	9.23	6.77	5.94	6.70	6.49	8.12	7.81	7.88	8.33	8.09
21	6.38	7.87	9.00	5.00	5.89	7.16	7.10	8.19	7.37	8.18	8.45	8.08
22	6.73	7.93	8.02	4.05	5.65	6.39	6.69	8.23	7.63	7.72	8.08	8.91
23	6.90	7.98	7.77	4.97	7.00	6.28	7.22	8.26	7.58	8.22	7.81	8.65
24	7.04	8.10	7.72	5.25	5.74	6.54	6.81	7.80	7.71	7.75	8.18	8.62
25	7.11	8.20	....	5.25	5.60	7.30	7.34	8.20	7.16	8.22	7.77	8.10
26	6.99	8.12	....	4.23	3.40	7.15	6.94	8.20	7.21	7.68	7.75	8.68
27	7.03	8.13	7.59	4.96	4.40	6.52	6.82	8.30	7.83	8.08	7.76	8.30
28	7.13	8.23	7.65	5.42	4.78	6.42	6.80	8.40	7.41	7.48	7.79	8.22
29	7.13		7.63	5.50	5.86	6.50	6.47	8.37	7.90	8.00	7.79	8.70
30	7.03		7.62	5.30	5.19	6.67	6.95	8.50	7.99	7.58	7.80	8.30
31	5.04		7.59		6.00		7.85	7.22		8.20		8.20

Hamilton County

T-74 (\*906, p. 190; 936, p. 217; 944, p. 217; 986, p. 255; 1016, p. 295; 1023, p. 303; 1071, p. 352). Frederick Hauck. On Crescentville Rd., in Sycamore township.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	5.95	Mar. 4	7.64	Apr. 29	4.90	June 24	6.72
13	6.83	11	7.76	May 6	5.78	July 1	6.91
20	5.20	18	7.73	13	6.47	8	7.05
27	6.52	25	7.03	20	6.40	15	6.68
Feb. 4	5.72	Apr. 1	7.15	27	3.34	22	6.90
11	6.76	8	6.02	June 3	2.93	29	6.94
18	7.16	15	5.41	10	5.49	Aug. 6	7.09
24	7.44	21	4.05	17	6.32	12	7.39

## T-74--Continued.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 19	8.24	Sept. 23	9.05	Oct. 29	10.24	Dec. 9	8.97
26	7.79	29	9.72	Nov. 11	10.28	17	8.82
Sept. 2	8.52	Oct. 7	9.94	18	9.52	24	8.82
9	9.12	14	10.35	25	9.07	30	8.81
16	8.70	21	10.62	Dec. 2	9.10		

T-75 (\*906, p. 190; 936, p. 217; 944, p. 218; 986, p. 255; 1016, p. 296; 1023, p. 304; 1071, p. 352). Frederick Hauck. On Crescentville Rd., in Sycamore township.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	6.13	Apr. 8	6.24	July 8	7.66	Oct. 7	8.94
13	6.98	15	5.97	15	6.90	14	9.13
21	5.15	22	4.45	22	7.24	21	9.23
27	6.77	28	5.57	29	7.20	29	9.20
Feb. 4	6.32	May 6	6.38	Aug. 6	7.44	Nov. 11	8.95
11	7.22	13	6.97	12	7.62	17	8.79
18	7.38	20	6.44	19	7.91	25	8.35
25	7.63	27	3.78	26	8.00	Dec. 2	8.26
Mar. 4	7.79	June 3	3.19	Sept. 2	8.21	9	8.22
11	7.88	10	6.42	9	8.49	17	8.05
18	7.71	17	7.00	16	8.49	24	8.15
25	6.95	24	7.35	23	8.36	30	8.25
Apr. 1	7.27	July 1	7.45	29	8.85		

204-4 (\*886, p. 587; 906, p. 190; 936, p. 217; 944, p. 218; 986, p. 255; 1016, p. 296; 1023, p. 304; 1071, p. 353). Albert Sorter Estate. In Sycamore Township.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	6.45	6.31	8.42	8.97	9.75	10.35	11.08	11.22
2	6.49	6.33	8.44	9.02	9.76	10.38	11.09	11.21
3	6.59	3.77	8.47	8.98	9.78	10.41	11.10	11.20
4	6.68	4.20	8.52	9.05	9.79	10.42	11.12	11.20
5	6.94	5.00	8.55	9.07	9.80	10.43	11.13	11.20
6	7.08	5.59	8.58	9.11	9.82	10.44	11.20	.....
7	7.18	6.00	8.60	9.14	9.82	10.45	11.20	.....
8	7.30	6.31	8.65	9.15	9.83	10.45	11.20	.....
9	7.42	6.56	8.70	9.15	9.89	10.45	11.20	.....
10	7.52	6.77	8.72	9.16	9.90	10.45	11.21	.....
11	7.61	6.96	8.68	9.17	9.94	10.48	11.21	11.16
12	7.63	7.13	8.62	9.20	9.98	10.52	11.22	11.16
13	7.68	7.25	8.60	9.22	9.99	10.53	11.22	11.17
14	7.76	7.33	8.60	9.25	10.00	10.53	11.22	11.16
15	7.83	7.43	8.58	9.28	10.00	10.54	11.22	11.15
16	7.86	7.53	8.57	9.32	10.02	10.55	11.23	11.16
17	7.87	7.63	8.53	9.35	10.02	.....	11.24	11.14
18	7.87	7.70	8.54	9.36	10.03	10.56	11.25	11.12
19	7.82	7.78	8.57	9.40	10.05	10.57	11.26	11.11
20	7.87	7.85	8.59	9.45	10.07	10.66	11.28	11.11
21	7.88	7.93	8.65	9.53	10.07	10.74	11.29	11.11
22	6.13	8.00	8.70	9.54	10.07	10.80	11.31	11.10
23	5.30	8.07	8.77	9.55	10.07	10.86	11.32	11.09
24	5.98	8.17	8.85	9.55	10.10	10.92	11.29	.....
25	6.14	8.21	8.92	9.57	.....	10.95	11.27	.....
26	3.85	8.25	8.96	9.60	.....	10.99	11.25	.....
27	3.85	8.28	8.96	9.60	.....	11.02	11.25	.....
28	4.67	8.31	8.95	9.68	.....	11.04	11.23	.....
29	5.32	8.35	8.95	9.70	.....	11.05	11.23	.....
30	5.77	8.36	8.95	9.72	10.35	11.05	11.22	.....
31	6.08		8.95	9.74		11.07		.....

T-67 (\*906, p. 191; 936, p. 218; 944, p. 219; 986, p. 256; 1016, p. 297; 1023, p. 304; 1071, p. 353). Emmitt Ferris. In Sycamore Township.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	3.54	Apr. 7	3.51	July 7	4.10	Oct. 13	6.55
13	3.94	15	3.02	14	3.90	20	6.70
20	2.08	21	2.10	21	4.03	27	6.82
27	3.39	28	2.60	28	3.49	Nov. 3	6.65
Feb. 3	3.07	May 5	3.20	Aug. 6	4.16	10	6.30
10	3.84	12	3.62	11	4.55	17	6.41
17	3.98	19	3.44	18	4.95	24	6.33
24	4.25	26	1.36	25	4.75	Dec. 1	6.45
Mar. 3	4.50	June 3	1.40	Sept. 2	5.28	8	6.50
10	4.60	10	2.78	8	5.73	15	6.55
17	4.53	16	3.48	15	5.17	22	6.61
25	4.11	24	3.85	22	5.60	29	6.72
Apr. 1	4.25	July 1	3.90	Oct. 6	6.34		

T-8 (\*886, p. 583; 906, p. 194; 936, p. 220; 944, p. 220; 986, p. 258; 1016, p. 299; 1023, p. 306; 1071, p. 353). St. Rita School for Deaf Children. Near crossing of Glendale-Milford Road and Pennsylvania Railroad.

Water level, in feet below land-surface datum, 1947

Jan. 6	19.23	Apr. 7	17.65	July 7	12.40	Oct. 6	17.56
13	19.15	14	17.68	14	13.04	13	17.63
20	18.90	21	17.59	21	13.65	20	17.77
27	18.32	28	17.35	28	14.23	27	17.94
Feb. 3	18.26	May 5	16.93	Aug. 4	14.74	Nov. 3	18.01
10	17.87	12	16.63	11	15.24	17	18.12
17	17.57	19	16.51	18	15.67	24	18.28
24	17.39	26	7.38	25	16.05	Dec. 1	18.37
Mar. 3	17.32	June 2	9.40	Sept. 1	16.35	8	18.46
10	17.30	9	9.84	8	16.66	15	18.57
17	17.42	16	10.42	15	16.91	22	18.68
24	17.50	24	11.13	22	17.13	29	18.73
31	17.59	30	11.75	29	17.52		

207-3 (\*845, p. 381; 886, p. 586; 906, p. 192; 936, p. 218; 944, p. 219; 986, p. 256; 1016, p. 297; 1023, p. 305; 1071, p. 353). Village of Glendale. At municipal water plant, in Sycamore Township.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	49.01	50.12	47.55	46.05	45.78	39.91	38.73	40.34	40.12	43.65	.....	.....
2	48.75	48.26	49.87	45.97	45.75	40.13	38.97	40.65	.....	42.95	.....	.....
3	48.65	48.05	47.76	46.63	45.85	39.23	39.15	39.57	.....	43.10	40.20	.....
4	51.17	48.83	47.45	45.22	45.57	.....	39.07	39.92	.....	43.09	45.63	43.53
5	49.27	47.85	47.65	46.03	45.64	.....	38.16	39.60	.....	43.02	46.13	48.36
6	48.65	49.86	48.25	45.59	45.92	.....	40.36	39.35	.....	43.39	45.35	50.63
7	48.40	48.21	47.95	45.92	45.81	.....	38.47	39.53	.....	43.55	45.66	42.80
8	48.28	48.50	47.77	45.94	45.64	.....	39.28	39.44	.....	43.71	47.35	49.94
9	48.45	47.92	47.42	46.00	45.18	33.83	38.13	39.84	41.76	43.54	45.72	48.39
10	48.28	47.31	48.36	45.55	45.80	39.33	38.05	39.51	42.27	43.38	45.76	48.50
11	48.38	48.15	47.85	44.98	49.55	39.55	38.75	39.83	42.40	43.85	45.60	52.16
12	48.89	48.05	47.78	44.97	47.73	38.93	38.53	41.53	42.37	43.77	47.97	48.48
13	48.74	48.01	48.05	46.09	45.85	38.33	38.23	41.07	44.54	43.48	46.48	48.35
14	47.50	47.75	47.55	46.14	45.97	38.27	38.87	41.07	41.67	42.77	46.68	47.63
15	48.04	48.58	47.68	.....	45.95	37.69	39.58	41.07	42.35	42.82	46.55	48.49
16	48.43	47.55	50.27	45.25	46.35	38.66	39.59	.....	42.17	42.85	48.73	49.16
17	48.67	47.44	48.17	46.28	46.11	38.54	40.17	.....	42.54	42.85	47.23	49.53
18	48.54	47.24	48.71	45.62	45.24	37.98	39.54	40.39	42.49	42.76	47.65	48.71
19	51.34	47.42	47.77	46.37	45.77	38.20	41.85	40.47	42.22	42.65	47.67	49.34
20	48.27	47.35	47.96	46.48	45.69	38.95	38.85	41.51	42.43	43.48	49.50	51.25
21	48.65	47.15	48.21	46.11	45.23	40.25	39.77	41.42	42.05	43.45	49.65	48.93
22	48.16	48.08	48.17	46.52	45.25	38.28	39.87	41.12	42.18	43.26	50.00	48.97

207-3--Continued.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
23	47.96	46.91	47.84	46.11	45.25	39.28	40.73	40.77	43.00	43.45	49.85	49.50
24	48.12	47.74	47.67	45.88	46.33	39.05	41.13	40.58	42.44	43.64	47.47	49.75
25	47.93	48.04	47.66	45.77	44.05	39.02	41.20	41.17	42.53	45.70	50.40	48.57
26	49.17	47.95	48.05	40.23	43.57	39.45	40.35	41.49	42.50	42.92	47.68	48.75
27	49.96	48.14	47.48	45.71	42.41	39.45	40.45	41.06	43.81	42.36	.....	48.70
28	48.38	48.44	46.91	46.05	41.88	38.42	39.95	41.45	42.75	.....	.....	49.20
29	48.15		46.82	46.59	41.82	38.30	41.08	43.55	43.08	.....	.....	49.37
30	47.60		47.15	46.25	40.64	39.05	40.05	40.68	42.75	.....	.....	49.15
31	48.54		46.71		40.70		39.84	40.32	.....	.....	.....	48.60

212-1 (\*845, p. 382; 886, p. 193; 936, p. 219; 944, p. 220; 986, p. 257; 1016, p. 298; 1023, p. 305; 1071, p. 354). Johns-Manville Corporation. In Sycamore Township.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	50.95	50.39	49.55	49.45	48.05	40.42	39.00	40.55	42.35	44.43	45.99	48.40
2	50.84	50.44	49.46	49.42	47.97	40.17	39.20	40.45	42.63	44.45	46.15	48.92
3	50.91	50.13	49.77	49.53	48.10	40.17	39.21	40.50	42.50	44.44	46.25	48.65
4	50.99	50.03	49.73	49.35	48.05	39.80	39.20	40.55	42.65	44.47	46.39	48.74
5	50.74	49.81	49.71	49.15	48.10	39.40	39.02	.....	42.55	44.39	46.45	48.60
6	50.73	49.51	50.03	49.35	48.07	39.28	38.95	.....	42.72	44.58	46.55	48.80
7	50.50	49.80	49.83	49.54	48.11	38.95	39.15	.....	42.79	44.70	46.53	48.68
8	50.70	49.90	49.65	49.40	48.11	38.81	39.44	.....	42.93	44.74	46.62	49.03
9	50.75	49.97	49.72	49.28	48.12	38.63	39.30	.....	42.98	44.88	46.86	49.02
10	50.82	50.00	49.87	49.21	48.07	38.85	39.27	.....	43.15	44.81	46.80	48.95
11	50.38	50.08	49.83	48.96	47.99	38.71	39.43	41.02	43.24	45.07	46.81	49.25
12	50.70	50.01	49.78	49.21	47.87	38.67	39.35	41.02	43.23	45.12	47.15	49.19
13	50.52	49.97	49.54	49.13	47.62	38.46	39.30	41.16	43.32	45.17	47.33	49.17
14	50.41	49.79	49.59	48.84	47.77	38.40	39.39	41.11	43.28	45.19	47.28	49.11
15	50.51	49.75	49.65	48.77	47.76	38.36	39.37	41.25	43.49	45.25	47.13	48.99
16	50.68	49.72	49.56	48.69	47.77	38.59	39.65	41.35	43.55	45.29	47.40	49.50
17	50.75	49.80	49.65	48.77	47.67	38.45	39.80	41.35	43.85	45.28	47.70	49.49
18	50.52	49.71	49.81	48.74	47.53	38.59	39.72	41.32	43.85	45.36	47.67	49.46
19	50.40	49.73	49.75	48.80	47.60	38.65	39.89	41.52	43.70	45.47	47.78	49.49
20	50.07	49.46	49.67	48.62	47.51	38.70	39.82	41.70	43.65	45.64	47.92	49.66
21	50.65	49.62	49.65	48.84	47.43	38.65	39.96	41.86	43.50	45.79	48.05	49.66
22	50.61	49.53	49.85	48.93	47.51	38.69	40.15	41.92	43.95	45.81	48.02	49.48
23	50.35	49.43	49.79	48.75	47.36	38.82	40.15	41.87	43.83	45.88	47.99	49.88
24	50.15	49.59	49.55	48.79	47.17	38.82	40.43	41.75	43.94	46.08	47.88	49.77
25	50.17	49.63	49.80	48.69	46.88	38.87	40.42	42.15	44.05	46.22	48.15	49.68
26	50.17	49.79	50.02	48.70	45.45	38.91	40.42	42.34	44.29	46.15	48.07	49.75
27	50.08	49.85	49.99	48.55	43.25	38.95	40.23	42.32	44.30	45.83	48.15	49.80
28	50.22	49.77	49.74	48.53	42.05	38.90	40.30	42.38	44.18	45.68	48.55	49.87
29	49.96		49.59	48.33	41.36	38.87	40.45	42.54	44.11	45.68	49.10	49.95
30	50.02		49.72	48.11	41.22	38.95	40.35	42.36	44.35	45.80	48.57	49.99
31	50.40		49.58		40.82		40.35	42.39		45.88		50.02

214-3 (\*886, p. 583; 906, p. 195; 936, p. 220; 944, p. 220; 986, p. 258; 1016, p. 299; 1023, p. 306; 1071, p. 355). Tennessee Corporation. In Sycamore Township, on Glendale-Milford Rd.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	28.38	.....	27.53	26.36	12.23	17.37	20.68	23.07	25.15	26.70	27.86
2	.....	28.26	.....	27.54	26.30	12.29	17.51	20.76	23.15	25.19	26.75	27.90
3	.....	28.13	27.15	27.57	26.24	11.80	17.67	20.83	23.22	25.24	26.81	27.93
4	.....	28.13	27.14	27.58	26.18	11.54	17.81	20.90	23.28	25.29	26.83	27.95
5	.....	28.08	27.14	27.59	26.12	11.79	17.93	21.03	23.33	25.33	26.86	27.99
6	29.15	28.01	27.13	27.62	26.06	12.02	18.07	21.10	23.40	25.45	26.92	28.02
7	.....	27.95	27.13	27.64	26.00	12.29	18.23	21.18	23.47	25.49	26.98	28.05
8	.....	27.90	27.13	27.62	25.96	12.56	18.36	21.26	23.55	25.56	27.01	28.13

a Tape measurement.

214-3--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
9	.....	27.86	27.14	27.62	25.92	12.84	18.48	21.35	23.60	25.62	27.06	28.14
10	.....	27.82	27.18	27.62	25.88	13.09	18.60	21.41	23.67	25.68	27.11	28.16
11	.....	27.79	27.18	27.59	25.84	13.39	18.72	21.52	23.74	25.72	27.14	28.19
12	.....	27.76	27.19	27.59	25.79	13.64	18.83	21.60	23.80	25.78	27.18	28.23
13a	28.82	27.72	27.19	27.59	25.72	13.86	18.94	21.68	23.87	25.81	27.22	28.26
14	.....	27.68	27.20	27.48	27.69	14.10	19.07	21.77	23.93	25.85	27.25	28.28
15	.....	27.64	27.22	27.37	25.68	14.35	19.18	21.84	24.24	25.89	27.27	28.32
16	.....	27.61	27.23	27.30	25.65	14.62	19.28	21.93	24.30	25.93	27.29	28.34
17	.....	27.66	27.26	27.27	25.65	14.82	19.38	22.01	24.37	25.98	27.36	28.37
18	.....	27.66	27.27	27.23	25.61	15.06	19.47	22.07	24.42	26.03	27.39	28.40
19	.....	27.66	27.27	27.19	25.61	15.27	19.57	22.14	24.47	26.08	27.42	28.43
20a	28.65	27.64	27.28	27.14	25.54	15.47	19.65	22.22	24.52	26.17	27.46	28.46
21	.....	27.62	27.30	27.12	25.53	15.69	19.72	22.29	24.58	26.20	27.49	28.54
22	.....	27.61	27.32	27.11	25.52	14.87	19.83	22.35	24.67	26.24	27.54	28.55
23	.....	27.60	27.33	27.03	25.46	15.09	19.94	22.42	24.70	26.29	27.58	28.55
24	.....	27.58	27.38	26.89	25.30	16.26	20.04	22.51	24.75	26.34	27.63	28.59
25	.....	.....	27.41	26.82	.....	16.43	20.42	22.58	24.81	26.38	.....	28.60
26	.....	.....	27.43	26.78	11.04	16.58	20.20	22.66	24.87	26.42	.....	28.65
27a	28.33	.....	27.44	26.70	10.96	16.73	20.27	22.73	24.93	26.49	.....	28.66
28	.....	.....	27.45	26.61	11.09	16.92	20.37	22.81	24.97	26.53	.....	28.70
29	28.41	.....	27.48	26.51	11.41	17.09	20.45	22.88	25.04	26.57	.....	28.74
30	28.41	.....	27.49	26.43	11.70	17.21	20.51	22.95	25.10	26.61	.....	28.75
31	28.41	.....	27.50	.....	11.95	.....	20.60	23.01	.....	26.68	.....	28.78

a Tape measurement.

215-2 (\*845, p. 383; 886, p. 582; 906, p. 196; 936, p. 221; 944, p. 221; 986, p. 258; 1016, p. 299; 1023, p. 306; 1071, p. 355). Pennsylvania Railroad Co. On Harry F. Pittman farm, in Sycamore Township.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	30.33	June 16	26.48	July 28	27.46	Sept. 15	28.80
27	30.78	24	26.57	Aug. 4	27.67	22	28.97
Mar. 10	29.75	30	26.74	11	27.85	Oct. 20	29.54
Apr. 28	29.37	July 7	26.92	18	28.09	Nov. 3	29.68
May 20	27.55	14	27.14	25	28.21	Dec. 1	29.81
June 2	27.00	21	26.09	Sept. 1	28.44	29	30.35
9	26.52						

216-C (\*936, p. 224; 944, p. 222; 986, p. 259; 1016, p. 300; 1023, p. 307; 1071, p. 355). Wright Aeronautical Corporation. In Lockland.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	81.66	Apr. 7	81.18	July 7	76.62	Oct. 6	77.86
13	80.22	14	80.60	14	76.40	13	78.00
20	80.84	21	81.64	21	76.39	20	79.35
27	80.28	28	80.85	28	76.28	27	78.67
Feb. 3	83.09	May 5	80.64	Aug. 4	76.40	Nov. 10	79.00
10	80.98	12	80.34	11	76.83	17	77.80
17	82.16	19	80.45	18	76.62	24	79.01
24	81.39	26	80.06	25	76.72	Dec. 1	80.29
Mar. 3	80.85	June 2	78.29	Sept. 1	77.80	8	79.85
10	80.95	9	77.68	15	77.45	15	79.45
17	80.71	16	77.23	22	77.66	22	80.24
24	80.82	23	77.14	29	77.60	29	80.65
31	85.51	30	77.40				

216-D (\*936, p. 223; 944, p. 222; 986, p. 259; 1016, p. 300; 1023, p. 307; 1071, p. 355). Wright Aeronautical Corporation. In Lockland.

216-D--Continued.

Water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	.....	.....	.....	.....	84.90	85.27	86.12	.....	a87.63	
2	.....	.....	.....	.....	.....	a86.68	84.91	85.27	86.08	.....	.....	
3	.....	a87.65	a87.59	.....	.....	.....	84.91	85.32	85.99	.....	.....	
4	.....	.....	.....	.....	.....	.....	84.95	85.40	85.95	.....	.....	
5	.....	.....	.....	.....	a87.77	.....	.....	84.94	85.39	85.91	.....	
6	a87.54	.....	.....	.....	.....	.....	84.92	85.35	85.97	.....	.....	
7	.....	.....	.....	a88.25	.....	.....	85.20	84.87	85.50	85.97	.....	
8	.....	.....	.....	.....	.....	.....	85.31	84.93	85.56	85.95	.....	a87.17
9	.....	.....	.....	.....	.....	a86.19	85.31	84.96	85.54	85.93	.....	
10	.....	a87.92	a88.12	.....	.....	.....	85.24	84.98	85.52	85.98	a87.01	
11	.....	.....	.....	.....	.....	.....	85.17	85.09	85.55	85.99	.....	
12	.....	.....	.....	.....	a87.90	.....	85.22	85.14	85.57	86.12	.....	
13	a87.29	.....	.....	.....	.....	.....	85.22	85.12	85.57	86.15	.....	
14	.....	.....	.....	a88.00	.....	.....	85.15	85.05	.....	86.13	.....	
15	.....	.....	.....	.....	.....	.....	85.00	85.03	85.65	86.10	.....	a87.40
16	.....	.....	.....	.....	.....	a85.98	84.91	85.09	85.84	86.07	.....	
17	.....	a87.63	a87.72	.....	.....	.....	84.92	85.17	85.97	86.04	a87.20	
18	.....	.....	.....	.....	.....	.....	84.92	85.23	86.03	86.02	.....	
19	.....	.....	.....	.....	a87.57	.....	85.05	85.22	86.00	86.17	.....	
20	a86.67	.....	.....	.....	.....	.....	85.06	85.21	85.83	.....	.....	
21	.....	.....	.....	a87.80	.....	.....	85.03	85.25	85.67	.....	.....	
22	.....	.....	.....	.....	.....	.....	85.08	85.27	85.77	.....	.....	a87.75
23	.....	.....	.....	.....	.....	.....	85.19	85.24	85.88	.....	.....	
24	.....	a87.49	a87.43	.....	.....	a85.77	85.30	85.21	85.95	.....	a86.66	
25	.....	.....	.....	.....	.....	.....	85.30	85.18	86.94	.....	.....	
26	.....	.....	.....	.....	a87.66	.....	85.26	85.15	86.12	.....	.....	
27	a87.35	.....	.....	.....	.....	.....	85.12	85.22	86.17	a86.35	.....	
28	.....	.....	.....	a88.12	.....	.....	84.89	85.27	86.17	.....	.....	
29	.....	.....	.....	.....	.....	.....	84.94	85.32	85.98	.....	.....	a87.96
30	.....	.....	.....	.....	.....	a85.42	84.96	85.32	86.05	.....	.....	
31	.....	a88.18	.....	.....	.....	.....	84.93	85.30	.....	.....	.....	

a Tape measurement.

216-E (#936, p. 224; 944, p. 222; 986, p. 259; 1016, p. 300; 1023, p. 307; 1071, p. 356). Wright Aeronautical Corporation. In Lockland.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	62.68	62.74	62.32	.....	62.08	60.14	58.04	57.90	58.44	59.72	60.37	61.60
2	62.18	62.74	62.18	.....	62.04	59.50	57.99	57.55	58.66	59.60	60.60	61.75
3	62.23	62.55	62.45	.....	62.19	59.96	57.95	57.80	58.50	59.52	60.37	61.88
4	62.51	62.10	62.65	.....	62.17	59.95	57.90	57.85	58.47	59.45	60.39	61.85
5	62.34	62.08	62.72	.....	62.22	59.56	57.86	57.81	58.53	59.20	60.50	61.28
6	62.20	61.97	62.76	.....	62.40	59.30	57.63	57.86	58.83	59.66	60.73	61.75
7	62.13	62.00	62.72	63.14	62.45	59.05	57.60	57.86	58.60	59.63	61.32	61.56
8	62.20	62.40	62.44	62.96	62.46	58.84	58.05	57.97	58.90	59.50	60.92	61.50
9	62.19	62.44	62.78	62.80	62.55	58.84	57.80	57.95	58.81	59.70	61.24	62.04
10	62.36	62.70	62.86	62.73	62.63	58.67	57.46	57.90	59.04	59.49	61.10	61.64
11	61.92	62.77	62.85	62.50	62.44	58.82	57.89	58.15	60.53	59.78	60.95	61.93
12	61.97	62.79	63.19	62.97	62.20	58.82	57.86	58.15	59.35	59.81	61.15	62.12
13	62.06	62.55	62.64	62.91	61.76	58.45	57.76	58.07	59.05	60.00	61.05	62.05
14	62.07	62.29	62.45	62.51	61.98	58.40	57.60	58.01	59.00	59.73	61.35	61.79
15	62.08	62.13	62.60	62.47	62.03	58.41	57.60	58.02	58.95	59.94	60.60	61.76
16	62.44	62.13	62.56	62.37	62.03	58.44	57.55	58.15	59.30	59.91	60.82	62.13
17	62.46	62.34	62.48	62.47	62.03	58.30	57.71	58.79	59.34	59.92	61.36	62.26
18	62.25	62.37	62.70	62.42	62.00	58.36	57.62	58.16	59.45	59.17	61.37	62.13
19	62.06	62.58	62.73	62.35	61.95	58.43	57.95	58.40	59.23	60.06	61.23	62.41
20	61.55	62.41	62.53	62.17	61.89	58.45	57.78	58.42	59.14	60.27	61.39	62.26
21	62.37	62.32	62.61	62.53	61.77	58.82	57.78	58.26	58.73	60.27	61.39	62.25
22	62.65	62.22	62.65	62.72	62.07	58.90	57.65	58.44	59.55	60.27	61.30	62.05
23	62.35	62.11	62.48	62.54	62.16	58.24	57.90	58.36	59.45	60.39	61.04	62.27
24	62.08	62.20	62.20	62.66	61.87	57.83	58.00	58.30	59.28	60.47	60.82	62.52
25	62.02	62.52	62.50	62.60	61.82	57.98	58.03	58.36	59.18	60.47	61.06	62.43
26	61.84	62.62	62.87	62.74	61.68	57.86	57.87	58.18	59.65	60.41	61.30	62.36



## 216-E--Continued.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
27	62.13	62.54	62.89	62.43	61.95	57.84	57.65	58.51	59.80	60.03	61.37	62.30
28	62.58	62.56	.....	62.58	61.02	57.79	57.60	58.58	59.42	60.09	61.55	62.44
29	62.07	.....	62.42	60.72	57.85	57.70	58.67	59.30	60.32	61.84	62.53	
30	61.89	.....	62.20	60.87	57.87	57.85	58.29	59.67	60.37	61.95	62.38	
31	62.47	63.06	.....	60.63	.....	57.80	58.51	.....	60.54	.....	63.50	

236-4 (\*936, p. 226; 944, p. 223; 986, p. 260; 1016, p. 301; 1023, p. 308; 1071, p. 356). E. I. du Pont de Nemours Co., Grasselli Chemicals Division. In Lockland.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	124.21	Mar. 31	125.01	June 16	123.85	Oct. 6	124.54
13	123.88	Apr. 7	125.08	30	123.85	13	124.93
27	123.78	14	124.55	July 7	124.06	27	124.44
Feb. 3	123.68	21	124.43	14	123.80	Nov. 3	124.50
10	124.23	28	124.61	21	123.91	10	124.77
17	124.16	May 5	124.39	28	123.83	24	124.37
24	124.06	12	124.37	Aug. 11	124.60	Dec. 1	125.05
Mar. 3	124.02	19	123.99	18	124.60	8	124.78
10	124.65	26	124.18	25	124.33	15	124.70
17	124.08	June 2	123.13	Sept. 15	124.21	22	124.82
24	124.17	9	123.48	22	124.41	29	125.00

237-3 (\*845, p. 377; 886, p. 578; 906, p. 200; 936, p. 226; 944, p. 224; 986, p. 260; 1016, p. 201; 1023, p. 308; 1071, p. 357). Village of Wyoming. At municipal water plant, in Wyoming.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	144.90	144.87	143.65	144.23	144.04	143.90
2	145.03	145.23	143.64	144.70	144.08	143.90
3	145.16	145.17	143.96	144.82	144.32	144.27
4	145.27	143.70	143.91	144.72	144.33	143.98
5	144.88	145.51	144.13	144.17	144.60	143.73
6	144.90	143.20	144.24	144.44	144.73	143.28
7	145.02	143.92	144.18	144.72	144.77	144.02
8	144.70	144.55	144.29	144.76	144.77	.....
9	145.10	144.57	144.53	144.76	144.63	144.02
10	145.26	145.13	144.53	144.81	144.49	144.23
11	144.52	145.27	144.08	144.72	144.26	144.35
12	144.33	145.28	144.15	144.56	144.40	144.56
13	144.53	145.47	143.96	142.88	144.23	144.52
14	144.53	144.89	143.91	142.88	144.46	144.53
15	144.64	144.55	144.00	143.55	144.61	144.54
16	144.25	144.58	143.85	143.59	144.07	144.66
17	144.94	144.53	144.03	144.11	143.89	144.75
18	144.93	144.52	144.15	144.22	143.75	144.82
19	144.55	144.41	144.38	144.43	143.57	144.94
20	144.24	144.30	144.41	.....	143.45	144.93
21	144.64	144.19	144.25	144.70	143.41	144.95
22	145.22	144.32	145.31	144.86	143.73	144.98
23	145.00	145.32	145.82	144.86	144.08	145.13
24	145.05	143.98	143.40	144.53	144.12	143.95
25	145.01	144.00	144.12	144.49	144.02	144.30
26	144.51	144.14	144.56	144.66	144.10	144.47
27	143.44	143.89	144.38	144.68	144.23	144.54
28	144.20	144.07	144.27	144.76	144.17	144.68
29	143.93	.....	144.44	144.02	144.51	144.87
30	142.99	.....	144.84	143.65	144.66	145.07
31	144.40	.....	144.52	.....	144.78	.....

237-3--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	145.09	145.30	144.55	145.64	146.46	146.24
2	145.11	144.50	145.17	145.85	145.88	146.25
3	145.00	144.40	145.45	145.75	145.76	146.22
4	145.08	144.76	145.59	145.67	146.07	145.43
5	145.15	144.97	145.15	145.31	145.54	145.10
6	144.98	145.03	145.52	145.74	145.87	145.65
7	145.13	145.21	145.26	145.92	145.70	144.72
8	145.04	145.29	145.51	145.85	145.80	145.00
9	144.87	144.88	145.45	145.75	145.70	145.71
10	144.70	144.75	145.45	145.82	145.78	144.78
11	144.65	145.14	145.50	145.50	145.60	144.72
12	144.80	145.40	145.60	145.75	144.95	145.57
13	144.59	145.39	145.48	144.78	145.77	145.57
14	144.05	145.37	145.10	145.58	146.05	145.35
15	144.27	145.37	145.60	145.87	145.65	145.35
16	144.50	145.48	145.85	145.00	145.70	145.90
17	144.74	145.57	146.25	144.60	146.13	145.77
18	144.82	145.06	146.05	145.03	145.15	145.77
19	144.61	144.69	145.90	145.39	145.50	146.15
20	144.73	145.08	146.00	146.00	145.89	146.13
21	144.51	145.38	145.50	146.25	146.17	146.17
22	144.87	145.50	146.09	146.30	146.00	146.03
23	145.15	145.47	145.92	146.34	144.99	145.20
24	145.41	145.45	145.80	146.51	144.80	145.63
25	145.55	145.45	145.05	146.73	144.58	145.70
26	144.80	144.92	146.24	146.67	144.87	145.15
27	144.75	144.67	146.26	146.23	145.35	145.30
28	145.00	145.10	145.25	146.31	145.83	144.94
29	145.20	145.38	144.62	146.36	146.19	145.28
30	145.30	145.47	145.47	146.33	146.09	145.50
31	145.05	145.38		146.46		145.73

241-3 (\*845, p. 378; 886, p. 579; 906, p. 201; 936, p. 228; 944, p. 225; 986, p. 262; 1016, p. 302; 1023, p. 309; 1071, p. 358). Gardner-Richardson Co. In Lockland, on South Cooper Ave.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	132.14	133.70	133.16	133.43	132.72	132.89
2	131.92	133.40	133.00	133.60	132.89	132.67
3	132.85	132.94	133.20	133.95	132.98	132.81
4	133.01	132.61	133.27	133.84	133.13	132.81
5	132.34	132.55	133.40	133.69	133.45	132.63
6	132.05	132.45	133.45	133.78	133.58	132.62
7	131.87	132.69	133.44	133.84	133.16	132.44
8	132.01	132.80	133.37	134.01	133.19	132.43
9	132.23	132.80	133.49	133.76	133.41	132.75
10	132.20	132.83	133.48	133.81	133.31	132.95
11	131.87	132.88	133.44	133.32	133.19	133.25
12	132.10	132.79	133.41	133.50	133.01	133.34
13	131.96	132.65	133.22	133.50	132.84	133.41
14	131.93	132.33	133.29	133.20	132.81	133.50
15	132.00	132.25	133.36	133.03	132.85	133.64
16	132.34	132.34	133.34	133.37	132.77	133.65
17	132.41	132.42	133.20	133.46	132.77	133.60
18	132.19	132.40	133.65	133.10	132.67	133.71
19	132.00	133.10	134.17	133.00	132.84	133.80
20	131.76	133.57	133.82	133.20	132.85	133.75
21	132.45	133.93	133.66	133.23	132.76	133.75
22	132.50	133.97	133.85	133.27	133.30	133.80
23	132.37	133.52	133.57	133.36	133.02	133.83
24	132.02	134.00	133.25	133.02	132.84	134.25
25	132.13	134.13	133.59	133.11	132.77	134.42

241-3--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
26	132.05	133.62	133.81	133.13	133.01	133.92
27	132.08	133.40	133.81	132.98	132.87	134.35
28	132.63	133.34	133.67	133.37	132.95	134.45
29	132.32		133.76	133.22	133.04	134.18
30	132.95		133.92	132.70	133.50	134.03
31	133.65		133.66		133.41	

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	134.09	133.43	134.67	134.92	136.07	134.90
2	134.15	133.34	134.90	135.16	136.15	134.84
3	134.19	133.20	135.09	135.28	135.55	134.80
4	134.11	133.15	135.25	135.45	135.80	134.85
5	134.01	133.02	135.21	135.60	136.25	134.67
6	134.20	132.92	134.75	135.65	136.43	134.83
7	133.95	132.93	134.99	135.58	136.37	134.70
8	134.43	132.92	134.95	135.67	136.53	134.93
9	134.55	132.85	135.20	135.81	136.80	135.06
10	134.12	132.99	135.34	135.86	136.77	134.80
11	134.10	133.76	135.41	135.99	136.68	134.79
12	134.64	133.95	135.48	136.09	136.45	134.69
13	134.73	133.95	135.45	135.70	136.14	134.55
14	134.22	134.32	134.97	135.90	135.95	134.40
15	134.01	134.57	134.72	135.95	135.32	134.17
16	134.05	134.71	135.14	136.02	135.61	134.57
17	134.08	135.30	135.48	136.05	135.60	134.57
18	134.07	134.16	135.57	136.02	135.61	134.33
19	134.22	134.03	135.50	135.30	135.25	134.41
20	134.20	134.00	135.46	135.66	135.28	134.40
21	134.08	134.03	135.37	135.90	135.29	134.23
22	134.60	133.95	135.72	136.02	135.09	134.08
23	.....	133.86	135.30	136.25	135.08	134.80
24	134.67	133.85	135.30	136.30	134.74	135.03
25	134.93	134.14	135.87	136.38	134.89	134.77
26	134.95	134.77	136.05	136.33	134.97	134.68
27	134.90	135.05	135.45	136.20	134.97	134.70
28	134.07	135.24	134.95	136.20	135.06	134.93
29	133.84	135.34	134.45	135.75	135.18	134.93
30	133.67	135.40	134.55	135.55	135.23	134.90
31	133.41	135.54		135.52		135.03

242-T-1 (#944, p. 226; 986, p. 263; 1016, p. 304; 1023, p. 310; 1071, p. 359). Philip Carey Mfg. Co. On South Wayne Ave., in Lockland. Measurements discontinued after Sept. 29, 1947.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	140.90	Mar. 17	141.54	May 19	141.22	July 28	141.82
13	140.82	24	141.27	26	141.62	Aug. 4	141.82
20	140.39	31	141.77	June 2	141.37	11	142.00
27	140.85	Apr. 7	142.07	9	141.62	18	141.85
Feb. 3	140.71	14	141.55	16	141.82	Sept. 8	141.57
17	141.11	21	141.56	23	141.27	15	141.74
24	141.12	28	141.47	July 7	141.76	22	141.90
Mar. 10	141.94	May 5	141.55	14	141.85	29	141.66

246-1 (#1016, p. 304; 1023, p. 311; 1071, p. 359). National Distillers Corporation. In Carthage, at Wayne Ave. and 78th St.

246-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	105.42	106.81	105.58	106.11	105.18	105.70
2	106.57	106.10	105.56	106.12	105.25	106.32
3	106.90	106.28	105.71	106.00	105.13	106.48
4	106.90	106.45	106.09	105.77	105.03	106.58
5	106.30	106.41	106.22	105.45	105.57	106.18
6	106.69	106.31	106.23	104.24	105.68	106.11
7	106.71	106.59	106.14	105.90	105.52	105.82
8	106.83	106.70	106.21	105.78	105.53	105.62
9	107.00	106.12	104.61	106.09	105.60	105.69
10	106.61	106.28	106.29	105.85	105.32	105.61
11	106.23	106.86	106.31	105.56	105.10	105.60
12	104.90	106.80	106.32	105.62	105.21	105.96
13	106.20	106.60	106.02	105.42	104.97	105.67
14	106.08	106.32	106.06	105.50	105.63	105.37
15	106.60	106.52	105.27	105.51	106.13	105.30
16	106.48	105.96	104.30	105.90	106.12	105.45
17	106.77	106.04	105.79	105.65	106.18	105.56
18	106.73	106.44	106.19	105.60	104.80	105.77
19	105.72	106.40	105.87	105.20	106.13	105.50
20	106.53	106.13	106.00	103.90	106.16	105.71
21	106.94	106.42	106.07	105.84	106.15	105.38
22	107.02	105.80	106.15	105.54	106.72	103.88
23	106.57	105.68	104.38	106.65	106.79	105.24
24	106.30	106.18	105.31	105.54	106.80	105.50
25	106.47	106.32	106.02	105.53	106.20	105.21
26	104.70	106.02	106.26	105.44	106.83	105.41
27	106.05	106.32	106.21	103.95	106.77	105.13
28	106.56	106.27	106.22	105.37	106.88	104.94
29	106.28		104.57	105.12	107.52	103.53
30	107.68		107.21	105.27	107.00	104.99
31	106.71		106.10		108.51	

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	105.33	110.59	109.37	110.78	113.00	113.30
2	105.12	109.40	110.23	111.43	109.90	113.58
3	106.13	109.05	109.97	111.63	111.88	113.80
4	105.02	110.00	110.70	110.14	112.10	113.90
5	106.50	110.08	109.64	110.69	112.48	114.04
6	105.21	109.96	107.89	111.04	112.59	114.27
7	106.64	110.70	106.71	111.45	113.80	109.95
8	108.10	110.54	109.60	111.60	111.40	113.06
9	108.48	109.23	109.11	112.01	109.80	113.55
10	108.25	109.69	109.91	111.98	112.95	113.62
11	108.48	110.95	109.92	110.84	113.48	113.78
12	107.85	111.18	108.40	111.00	113.70	113.89
13	107.50	111.22	108.06	111.95	113.79	113.31
14	108.72	111.10	105.99	112.32	113.87	109.70
15	110.72	111.77	106.63	112.56	113.46	108.70
16	110.68	110.79	108.21	112.32	109.80	108.48
17	110.89	110.12	108.00	113.00	113.40	108.37
18	111.88	111.13	109.35	113.00	113.48	110.45
19	110.35	111.48	109.49	111.76	113.64	110.78
20	107.91	111.33	107.03	112.75	113.75	108.62
21	109.93	111.68	108.14	112.78	113.86	107.69
22	109.50	111.93	110.19	113.20	113.89	109.85
23	109.95	111.01	110.00	113.59	109.80	110.00
24	110.20	110.28	110.34	113.64	112.52	107.20
25	109.63	111.50	110.64	113.73	113.30	107.14
26	108.70	111.50	111.00	112.18	113.69	107.03
27	108.45	113.80	110.53	112.58	113.70	107.01
28	109.43	112.44	109.90	112.85	113.65	106.99
29	110.10	112.28	110.60	113.00	114.03	109.30
30	110.28	110.98	109.60	112.95	114.01	109.24
31	110.68	107.98		113.03		109.22

252 (\*845, p. 383; 886, p. 575; 906, p. 204; 936, p. 229; 944, p. 227; 986, p. 263; 1016, p. 305; 1023, p. 312; 1071, p. 361). National Distillers Corporation. Formerly owned by Flintkote Co. At 75th St. and Longview Ave., in Carthage.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	109.20	Apr. 7	108.74	July 7	107.90	Oct. 13	109.57
13	108.90	14	108.48	14	108.05	20	109.78
20	108.52	21	108.45	21	108.28	27	109.82
27	108.53	28	108.47	28	108.38	Nov. 3	109.93
Feb. 3	108.74	May 5	108.31	Aug. 4	108.61	10	110.10
10	108.96	12	108.27	11	108.80	17	110.29
17	108.78	19	108.14	18	108.95	24	109.95
24	108.61	26	108.39	25	109.09	Dec. 1	110.26
Mar. 3	108.65	June 2	108.16	Sept. 8	109.18	8	110.33
10	108.81	9	108.13	15	109.01	15	110.23
17	108.54	16	108.14	22	109.17	22	110.12
24	108.35	23	108.03	29	109.23	29	110.13
31	108.72	30	107.94	Oct. 6	109.07		

265 (\*886, p. 575; 906, p. 205; 936, p. 229; 944, p. 227; 986, p. 263; 1016, p. 305; 1023, p. 312; 1071, p. 361). Cities Service Co. In Cincinnati.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	132.83	Apr. 7	131.58	July 7	132.86	Oct. 13	136.10
13	132.00	14	130.77	14	132.37	20	136.45
20	131.22	21	130.82	21	132.24	27	135.42
27	132.14	28	130.92	28	133.03	Nov. 3	135.89
Feb. 3	131.43	May 5	130.72	Aug. 4	133.52	10	135.95
10	131.83	12	130.87	11	134.10	17	136.05
17	131.55	19	130.91	18	134.27	24	134.57
24	131.23	26	131.37	25	134.37	Dec. 1	134.75
Mar. 3	131.29	June 2	131.22	Sept. 1	134.46	8	134.28
10	131.43	9	131.85	15	134.80	15	133.72
17	131.02	16	132.60	22	136.46	22	133.50
24	130.62	23	132.94	29	137.36	29	133.57
31	131.17	30	133.24	Oct. 6	135.37		

270-A-4 (\*886, p. 574; 906, p. 206; 936, p. 230; 944, p. 227; 986, p. 264; 1016, p. 306; 1023, p. 313; 1071, p. 361). Frocter & Gamble Co. In Cincinnati.

## Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	90.40	89.97	89.26	88.95	.....	90.77	90.62	92.72	92.94	93.53	93.57	91.37
2	90.18	89.97	89.24	89.05	.....	91.24	90.50	92.46	93.08	90.45	93.57	91.30
3	90.34	89.73	89.34	89.10	.....	91.46	90.36	92.32	93.12	93.45	93.69	91.23
4	90.36	89.62	89.35	88.97	.....	91.52	90.20	92.47	93.18	93.46	93.74	91.24
5	90.20	89.55	89.40	88.83	88.78	91.55	90.06	92.59	93.15	93.51	93.82	91.13
6	90.16	89.47	89.32	.....	.....	91.64	89.95	92.72	93.25	93.49	93.88	91.18
7	90.05	89.65	89.32	89.120	.....	91.58	89.92	92.78	93.32	93.47	93.80	91.06
8	90.08	89.68	89.27	.....	.....	.....	89.89	92.84	93.30	93.44	93.82	91.21
9	90.17	89.69	89.31	.....	.....	91.54	89.79	92.85	93.27	93.47	93.97	91.24
10	90.15	89.77	89.33	.....	.....	91.65	89.68	92.91	93.27	93.48	93.97	91.04
11	89.90	89.76	89.29	.....	.....	91.41	89.66	92.99	93.28	93.46	93.68	91.05
12	90.03	89.71	89.25	.....	89.36	91.30	90.24	92.97	93.27	92.78	93.60	91.03
13	89.99	89.65	89.11	.....	89.26	91.15	90.86	92.94	93.29	93.06	93.60	90.94
14	90.03	89.47	89.17	88.79	89.50	91.07	91.16	92.96	93.29	93.19	93.60	90.92
15	90.05	89.43	89.20	.....	89.56	90.74	91.34	92.97	93.41	93.23	92.05	90.78
16	90.24	89.47	89.15	.....	90.10	90.92	91.60	93.02	93.45	93.28	92.75	91.06
17	90.21	89.54	89.17	.....	89.29	91.14	91.84	93.05	93.45	93.30	92.71	91.06
18	90.03	89.57	89.24	.....	90.73	91.40	91.94	93.07	93.45	93.38	92.51	90.34
19	89.88	89.57	89.15	.....	90.81	91.69	91.70	93.02	93.34	93.45	92.21	90.92
20	89.94	89.38	89.05	.....	90.99	91.89	91.60	93.04	93.33	93.55	92.10	90.90
21	89.20	89.43	89.14	88.88	91.16	91.98	91.95	93.12	93.35	93.58	92.05	90.79

a Tape measurement.

270-A-4--Continued.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
22	89.20	89.42	89.24	.....	91.25	91.32	92.08	93.08	93.56	93.58	91.81	90.72
23	90.06	89.35	89.03	.....	91.23	91.64	92.25	93.05	93.51	93.58	91.76	90.81
24	89.74	89.36	88.90	.....	91.26	91.80	92.34	93.05	93.37	93.58	91.57	90.82
25	89.80	89.39	89.16	.....	91.42	91.92	92.35	93.05	93.50	93.58	91.60	90.72
26	89.77	89.41	89.25	.....	91.45	92.00	92.34	93.06	93.48	93.58	91.60	90.66
27	89.80	89.41	89.21	.....	91.50	92.06	92.34	93.10	93.53	93.57	91.57	90.66
28	89.97	89.57	89.07	88.80	91.47	91.85	92.45	93.10	93.43	93.57	91.55	90.70
29	89.70		89.13	.....	91.76	91.20	92.52	93.13	93.47	93.57	91.60	90.65
30	89.83		89.22	.....	91.76	90.88	92.55	93.08	93.55	93.57	91.54	90.63
31	89.97		89.06		90.90		92.62	93.11		93.57	.....	

a Tape measurement.

270-T-7 (\*886, p. 574; 906, p. 205; 936, p. 230; 944, p. 228; 986, p. 264; 1016, p. 306; 1023, p. 313; 1071, p. 362). Procter & Gamble Co. In Cincinnati.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	123.54	Apr. 7	122.24	July 7	125.37	Oct. 13	129.03
13	123.43	14	122.31	21	125.36	20	129.08
20	122.58	21	122.15	28	125.53	27	129.15
27	123.14	28	122.22	Aug. 4	126.36	Nov. 3	129.35
Feb. 3	122.93	May 5	122.13	11	127.02	10	129.53
10	123.13	12	122.49	18	127.39	17	129.08
17	122.81	19	122.85	25	127.72	24	127.35
24	122.68	26	124.07	Sept. 8	127.69	Dec. 1	127.32
Mar. 3	122.57	June 2	124.23	15	127.88	8	126.27
10	122.89	9	124.72	22	128.19	15	126.08
17	122.63	16	125.58	29	128.76	22	125.89
24	122.27	23	126.30	Oct. 6	129.65	29	125.57
31	122.70	30	126.47				

294-A (\*1016, p. 306; 1023, p. 314; 1071, p. 362). Rollman Co. In Cincinnati, between Race and Vine Sts.

Water level, in feet below land-surface datum, 1947

Jan. 23	106.74	Mar. 14	107.03	May 16	106.50	July 25	134.07
Feb. 26	105.88	Apr. 11	109.80	June 13	128.97	Aug. 30	136.87

298-2 (\*1016, p. 307; 1023, p. 314; 1071, p. 362). Hudepohl Brewing Co. In Cincinnati, at Stone and 6th Sts.

Water level, in feet below land-surface datum, 1947

Jan. 23	71.25	Apr. 11	68.36	July 25	69.41	Sept. 19	71.98
Feb. 26	69.00	May 16	67.05	Aug. 30	71.62	Dec. 28	73.95
Mar. 14	69.04	June 16	66.99				

301-A (\*1016, p. 307; 1023, p. 314; 1071, p. 363). Palace Theater. In Cincinnati, at Vine and 6th Sts.

Water level, in feet below land-surface datum, 1947

Jan. 23	106.42	Mar. 14	106.52	May 16	113.19	July 25	132.93
Feb. 26	105.72	Apr. 11	110.85	June 13	126.59	Dec. 28	105.47

315-3 (\*845, p. 379; 886, p. 573; 906, p. 207; 936, p. 231; 944, p. 228; 986, p. 264; 1016, p. 307; 1023, p. 314; 1071, p. 363). Globe-Wernicke Co. At Norwood and Carthage Aves., in Norwood.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level
Jan. 27	188.33	Apr. 21	188.84	Dec. 15	189.03
Feb. 24	188.47	Sept. 8	189.25		

300-3 (\*1071, p. 363 ). Union Central Life Insurance Co. In Cincinnati, at Fourth and Vine Sts.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 26	78.80	May 16	79.25	July 25	82.00	Sept. 19	83.01
Mar. 14	79.10	June 16	79.69	Aug. 30	83.50	Dec. 28	79.86
Apr. 11	78.88						

### Hancock County

Ha-1 (\*1071, p. 363). W. T. Miller. 3 miles east of Williamstown. Measurements discontinued after Aug. 5.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
1	15.25	.....	13.39	12.80	.....	12.06	12.14	12.76
2	15.24	.....	13.34	12.78	.....	11.86	12.27	12.78
3	15.09	13.73	13.54	12.76	.....	12.10	12.26	12.95
4	15.10	13.73	13.80	12.60	.....	12.07	12.34	12.89
5	14.94	13.90	13.63	12.42	12.08	11.97	12.40	12.92
6	14.87	13.59	13.69	12.87	12.00	11.86	12.41	.....
7	14.75	13.59	13.65	12.88	12.14	11.92	.....	.....
8	14.75	.....	13.61	12.66	12.31	11.93	12.29	.....
9	14.89	.....	13.92	12.69	12.38	11.91	12.42	.....
10	14.85	.....	13.80	12.81	12.22	11.96	12.50	.....
11	14.70	.....	13.80	12.57	12.25	12.09	12.28	.....
12	14.79	.....	13.82	12.67	12.22	12.20	12.40	.....
13	14.71	.....	13.60	12.69	12.12	12.09	12.40	.....
14	14.66	.....	13.61	12.70	12.20	11.99	12.44	.....
15	14.64	.....	13.60	12.58	12.20	11.92	12.39	.....
16	14.68	.....	13.53	12.44	12.20	11.97	.....	.....
17	14.59	.....	13.51	12.30	12.26	12.04	.....	.....
18	14.51	.....	13.62	12.36	12.17	11.94	.....	.....
19	14.35	.....	13.56	12.44	12.01	12.21	.....	.....
20	14.09	.....	13.47	12.22	12.08	11.95	.....	.....
21	14.41	.....	13.54	12.27	11.98	12.02	12.52	.....
22	14.21	.....	13.61	12.28	12.15	12.08	12.64	.....
23	14.05	.....	13.49	12.42	12.13	12.04	12.85	.....
24	13.86	.....	13.14	12.29	12.12	12.05	12.81	.....
25	13.97	.....	13.24	12.24	.....	12.29	12.94	.....
26	13.87	13.49	13.26	12.18	12.11	12.05	12.81	.....
27	13.86	13.48	13.17	12.24	12.01	12.13	12.76	.....
28	13.84	13.54	13.07	12.21	12.04	12.31	12.64	.....
29	13.79	.....	13.04	12.11	11.91	12.24	12.86	.....
30	13.79	.....	13.02	12.21	12.12	12.38	12.79	.....
31	13.66	.....	13.00	.....	12.07	.....	12.87	.....

Ha-2. R. E. Ascham. 3.5 miles west of Findlay, north of county highway, in barnyard. Abandoned drilled well, diameter 6 inches, depth 27 feet. Measuring point, floor of recorder shelter, 0.9 foot above land-surface datum. Automatic water-stage recorder installed May 6, 1947.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	1.70	3.04	3.78	2.59	3.55	3.06	3.00
2	....	.64	3.12	3.89	2.71	3.54	3.08	3.04
3	....	.97	3.14	3.91	2.80	3.57	3.04	3.08
4	....	1.21	3.17	4.06	2.81	3.58	3.01	3.06
5	....	1.46	3.18	4.16	2.93	3.62	....	2.24
6	1.23	1.12	3.18	4.23	2.22	3.64	....	2.33
7	1.22	.10	3.28	3.77	2.44	3.66	....	2.28
8	1.30	.74	3.31	3.68	2.58	3.68	....	2.14
9	1.72	1.15	3.31	3.82	2.70	3.72	....	2.31
10	1.88	1.33	3.26	3.97	2.80	3.72	....	2.36
11	1.94	1.70	3.28	4.18	2.91	3.75	....	2.50

## Ha-2--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
12	2.01	1.84	3.32	4.27	2.52	3.78	....	2.57
13	2.03	1.87	3.33	4.32	2.70	3.79	2.88	2.59
14	2.08	1.14	3.31	4.40	2.81	3.83	2.97	2.58
15	2.11	1.44	3.34	3.29	2.97	3.85	2.98	2.62
16	2.24	1.65	3.38	3.32	3.08	3.86	2.96	2.34
17	2.24	1.75	3.42	3.36	3.18	3.85	3.00	....
18	1.98	1.51	3.42	3.38	3.21	3.82	3.05	2.44
19	1.99	1.77	3.49	3.39	3.21	3.66	3.04	2.56
20	2.18	1.99	3.49	3.46	3.25	3.67	3.06	2.55
21	1.57	2.18	3.53	3.45	3.25	3.68	3.14	2.58
22	....	2.36	3.57	3.47	3.04	3.70	3.16	2.54
23	....	2.47	3.63	3.50	3.05	3.80	3.09	2.70
24	....	2.55	3.66	3.50	3.13	3.81	3.08	2.74
25	....	2.66	3.66	3.59	3.27	3.80	3.00	2.71
26	....	2.75	3.64	3.57	3.38	3.79	2.62	2.74
27	1.06	2.82	3.57	3.60	3.43	3.75	2.76	2.74
28	1.17	2.93	3.57	3.69	3.40	3.53	2.88	2.89
29	1.21	2.97	3.62	3.75	3.43	3.24	3.00	2.92
30	1.47	2.95	3.62	3.12	3.55	3.01	3.06	2.98
31	1.63	....	3.68	3.14	....	3.01	....	....

Ha-3. Findlay Water Department. 11 miles east of Findlay, south of State Highway 15, in yard behind pumping station. Abandoned drilled well, diameter 10 inches, depth 240 feet. Measuring point, floor of recorder shelter, 1.0 foot above land-surface datum. Automatic water-stage recorder installed May 19, 1947.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	May	June	July	Aug.	Sept.	Oct.	Nov.
1	....	4.23	....	6.48	9.81	18.20	....
2	....	4.23	6.28	6.43	13.27	18.15	17.74
3	....	....	6.23	6.46	15.01	18.14	17.72
4	....	4.08	6.22	6.59	15.95	18.17	17.72
5	....	4.08	6.19	7.68	16.56	17.70	17.74
6	....	4.58	6.18	8.13	17.08	17.71	17.99
7	....	4.10	6.26	9.51	17.50	17.70	....
8	....	4.06	6.27	9.03	17.64	17.72	....
9	....	....	6.22	9.35	17.76	17.75	17.85
10	....	....	6.26	9.60	17.82	17.75	17.95
11	....	....	6.26	9.81	17.92	17.71	17.92
12	....	....	....	9.87	17.94	17.71	17.92
13	....	....	....	9.97	18.03	17.70	17.94
14	....	....	....	10.02	18.08	17.69	17.97
15	....	....	....	10.10	18.19	17.68	17.98
16	....	....	6.27	10.21	18.23	17.73	17.84
17	....	....	6.29	10.25	18.21	17.79	17.75
18	....	....	6.27	10.28	18.23	....	17.74
19	4.42	....	6.36	10.33	18.20	....	17.78
20	4.50	....	6.34	10.26	18.14	....	17.75
21	4.51	....	6.36	10.19	18.10	....	17.71
22	4.53	....	6.38	10.24	18.03	....	17.70
23	4.50	....	6.40	10.28	18.03	....	....
24	4.48	....	6.47	10.28	18.07	....	....
25	4.39	....	6.44	10.34	18.17	....	....
26	4.37	....	6.39	10.41	18.21	....	....
27	4.37	....	6.31	10.44	18.21	....	....
28	4.28	....	6.37	10.51	18.14	....	....
29	4.35	....	6.41	10.60	18.19	....	....
30	....	....	6.41	9.67	18.20	....	....
31	4.29	....	6.44	9.69	....	....	....



Hardin County

Hn-1 (\*1071, p. 364). Village of Alger. In Alger, at grain elevator on State Highway 69.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	9.85	7.40	....	7.54	....	7.10	8.40	6.76	9.58	7.22	7.90	
2	9.60	7.74	....	7.60	6.70	7.30	8.43	6.76	9.55	7.28	7.77	
3	9.24	7.20	8.32	7.26	6.74	7.30	8.43	6.75	9.37	6.45	7.64	
4	9.43	....	8.27	7.49	6.60	7.60	8.46	6.75	8.53	7.08	7.90	
5	9.43	....	8.55	7.26	6.63	7.61	8.60	7.26	8.21	7.10	7.66	
6	9.14	....	8.81	7.26	6.50	7.30	8.57	7.27	7.88	6.80	7.67	
7	9.08	....	8.80	7.27	....	....	8.93	7.20	7.80	7.01	7.44	
8	9.32	....	8.57	7.27	....	7.15	9.02	7.43	7.95	7.23	6.94	
9	9.25	....	8.54	7.27	6.25	....	8.86	7.30	8.28	6.60	7.50	
10	9.32	7.73	8.75	7.40	6.83	7.28	8.83	7.30	7.40	7.08	7.59	
11	9.08	....	8.75	7.55	6.87	7.43	8.95	7.33	7.33	7.17	7.55	
12	9.19	....	8.77	7.47	7.02	7.32	9.20	7.32	8.18	7.32	7.47	
13	8.65	....	8.80	7.49	6.60	7.47	9.19	7.27	8.33	7.50	7.76	
14	9.17	....	8.55	7.25	6.87	6.75	9.33	7.06	8.33	7.47	6.78	
15	8.25	....	8.62	....	....	7.35	9.23	6.99	8.21	7.15	7.51	
16	9.00	....	8.32	....	....	....	9.22	7.18	7.99	7.43	7.53	
17	8.94	7.56	8.34	....	6.57	....	7.75	7.33	7.76	7.25	7.75	
18	8.94	8.11	....	....	6.79	....	8.85	8.05	6.64	7.44	7.75	
19	8.30	....	....	....	6.80	....	8.87	6.55	7.86	7.54	7.80	
20	8.37	....	....	....	6.75	....	8.83	6.68	7.32	7.47	7.00	
21	....	....	....	....	6.90	....	8.50	6.68	7.80	7.50	7.87	
22	8.55	....	....	....	7.05	7.20	8.50	6.97	7.63	7.51	7.92	
23	8.66	....	....	....	6.93	6.80	8.30	8.24	7.78	7.57	7.77	
24	8.67	8.59	7.85	....	6.82	8.07	8.23	9.34	7.79	7.28	7.93	
25	8.69	8.54	7.92	....	7.04	7.83	8.35	9.33	6.15	7.64	7.58	
26	8.50	8.77	7.85	....	6.91	7.85	7.55	9.35	7.67	7.38	7.75	
27	8.52	8.63	7.87	....	7.13	7.83	6.77	9.32	6.93	7.70	6.80	
28	7.70	....	7.87	....	7.25	7.76	6.75	9.46	7.34	6.27	7.68	
29	6.82	....	7.53	....	7.13	7.75	6.76	9.50	7.23	7.43	7.80	
30	7.43	....	7.31	....	7.15	7.92	6.76	9.27	7.43	7.73	7.85	
31	6.81	....	7.31	....	....	7.93	6.76	....	6.50	....	7.70	

Hn-2 (\*1071, p. 365). Edward Abaier. At Dola.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	24.82	....	21.35	20.34	18.80	....	14.19	14.93	15.48	15.98	16.23	....
2	24.71	....	21.50	20.34	18.65	15.67	14.23	14.85	15.50	15.92	16.21	15.69
3	24.57	21.81	21.43	20.35	18.64	15.57	....	14.89	15.45	15.93	16.00	15.84
4	24.51	21.97	21.56	20.06	18.58	15.49	....	14.91	15.46	15.90	15.98	15.88
5	24.41	21.54	21.43	20.05	18.55	15.33	....	14.88	15.40	15.93	15.91	15.62
6	23.91	21.66	21.40	20.05	....	14.90	....	14.87	15.31	15.98	16.09	15.70
7	24.02	....	21.39	20.02	....	14.81	....	14.97	15.34	16.00	15.97	15.54
8	24.29	....	21.44	20.00	....	....	14.34	15.04	15.28	16.04	15.95	15.76
9	24.30	....	21.34	20.00	....	14.75	14.37	15.06	15.24	16.08	16.03	15.85
10	24.12	21.66	21.60	19.98	....	14.61	14.35	15.11	15.32	16.10	15.97	15.71
11	23.98	21.58	21.48	20.02	....	14.71	14.20	15.19	15.50	16.22	15.81	15.66
12	23.94	21.64	21.30	20.03	18.21	14.71	14.14	15.22	15.46	16.27	15.88	15.70
13	23.86	21.55	21.53	20.00	18.10	14.61	14.12	15.21	15.44	16.30	15.95	15.68
14	23.98	21.34	21.07	19.99	18.14	14.30	14.06	15.26	15.47	16.33	15.92	15.58
15	24.00	....	21.44	19.99	18.10	14.19	....	15.24	15.56	16.33	15.67	15.54
16	23.91	....	21.10	20.00	17.93	14.21	....	15.31	15.61	16.41	16.10	15.85
17	24.03	21.39	21.21	20.00	17.89	14.14	....	15.35	15.69	16.43	16.11	15.85
18	23.85	21.50	21.20	18.93	17.59	13.96	....	15.37	15.71	16.43	15.97	15.74
19	24.01	21.34	21.15	18.93	17.56	13.95	....	15.36	15.63	16.38	15.84	15.82
20	23.67	21.36	20.86	19.68	17.43	13.92	....	15.41	15.59	16.38	15.87	15.75
21	24.13	21.33	20.90	19.63	17.32	13.92	14.44	15.40	15.62	16.37	15.87	15.73
22	23.48	....	21.13	19.62	17.33	13.96	14.55	15.40	15.76	16.31	15.71	15.60
23	23.58	....	20.83	19.47	17.17	13.94	14.61	15.41	15.74	16.43	15.71	15.84
24	23.61	....	20.76	19.47	17.04	13.87	14.63	15.41	15.71	16.42	15.53	15.84
25	....	....	21.18	19.41	16.86	13.88	14.61	15.40	15.82	16.41	15.53	15.75

## Hn-2--Continued.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)											
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. Dec.
26	.....	21.46	20.91	19.31	16.84	13.97	14.48	15.40	15.91	16.49	15.67 15.63
27	23.69	21.55	20.94	19.22	.....	13.99	14.37	15.49	15.96	16.44	15.66 15.64
28	23.60	21.47	20.83	19.21	.....	14.17	14.59	15.52	15.90	16.38	15.65 15.61
29	23.49		20.66	18.99	.....	14.27	14.65	15.56	15.92	16.33	15.79 15.70
30	23.19		20.78	18.80	.....	14.31	14.71	15.53	15.97	16.30	..... 15.65
31	23.29		20.45	.....			14.86	15.49		16.30	..... 15.73

Highland County

Hd-1. Harold Wilkin. 1 mile north of Dodsonville, east of State Highway 134, in right-of-way. Abandoned dug well, diameter 4 feet, depth 38 feet. Measuring point, top of well cap, 0.4 foot above land-surface datum. Automatic water-stage recorder installed Apr. 23, 1947.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)									
Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	2.23	.....	7.66	.....	12.45	13.31	14.88	15.77
2	.....	2.05	.....	8.01	.....	12.48	13.36	14.91	15.80
3	.....	2.28	2.68	.....	.....	12.53	13.42	14.94	15.83
4	.....	2.45	2.80	.....	.....	12.58	13.47	14.97	15.86
5	.....	2.62	2.92	.....	.....	12.63	13.52	15.01	15.89
6	.....	2.69	3.05	.....	11.20	12.67	13.58	15.05	15.92
7	.....	2.70	3.13	.....	11.24	12.73	13.69	15.08	15.94
8	.....	2.76	3.13	.....	11.31	12.78	13.76	15.11	15.94
9	.....	2.87	3.15	.....	11.35	12.83	13.80	15.15	15.97
10	.....	2.99	3.27	.....	11.40	12.83	13.83	15.19	15.77
11	.....	3.10	3.45	.....	11.45	12.83	13.87	15.21	15.67
12	.....	3.20	3.59	.....	11.51	12.84	13.91	15.27	15.69
13	.....	3.27	3.70	.....	11.56	12.84	13.95	15.21	15.53
14	.....	3.13	3.83	.....	11.60	12.84	13.99	15.34	15.49
15	.....	2.91	3.98	.....	11.65	12.85	14.04	15.36	15.47
16	.....	2.91	4.13	.....	11.70	12.93	14.08	15.39	15.43
17	.....	2.65	4.27	.....	11.75	12.97	14.13	15.42	15.37
18	.....	2.73	4.50	.....	11.80	13.02	.....	15.44	15.29
19	.....	2.85	4.70	.....	11.85	13.07	14.21	15.47	15.22
20	.....	2.99	4.91	.....	11.91	13.15	14.26	15.50	15.18
21	.....	3.00	5.18	.....	11.95	13.18	14.34	15.53	15.15
22	.....	2.44	5.47	.....	12.01	13.16	14.44	15.56	15.13
23	2.58	2.62	5.73	.....	12.06	13.03	14.57	15.59	15.12
24	2.66	2.72	6.03	10.52	12.11	12.99	14.61	15.61	15.13
25	2.65	2.71	6.26	10.60	12.16	12.97	14.63	15.63	15.14
26	2.24	2.58	6.49	10.65	12.21	13.01	14.68	15.65	15.16
27	2.53	2.65	6.72	10.69	12.24	13.09	14.72	15.67	15.19
28	2.70	.....	7.00	10.74	12.32	13.14	14.73	15.69	15.21
29	2.74	.....	7.27	10.76	12.38	13.22	14.76	15.72	15.25
30	2.41	.....	7.60	.....	12.41	13.26	14.80	15.74	15.28
31	.....	.....	.....	.....	12.43	.....	14.84	.....	15.33

Huron County

Hu-2. City of New London. At New London, in woods grove, south side State Highway 162, 0.6 mile west of State Highway 60. Drilled test well, diameter 4 inches, depth 105 feet. Measuring point, floor of recorder shelter, 2.5 feet above land-surface datum. Automatic water-stage recorder installed Oct. 3, 1946.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)									
Day	Jan.	Feb.	Mar.	Apr.	June	Aug.	Sept.	Oct.	Nov.
1	.....	16.56	16.52	16.32	.....	.....	14.87	.....	.....
2	.....	16.60	16.43	16.21	.....	14.87	14.88	.....	.....
3	.....	16.60	16.48	16.17	.....	14.90	14.90	.....	.....

## Hu-2--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	June	Aug.	Sept.	Oct.	Nov.
4	.....	16.50	16.54	16.17	.....	14.90	14.91	.....	.....
5	.....	16.49	16.56	.....	.....	14.91	14.91	.....	.....
6	.....	16.46	16.57	.....	.....	14.93	.....	.....	.....
7	.....	16.45	16.56	.....	.....	14.94	.....	.....	.....
8	.....	16.47	16.56	.....	.....	14.86	.....	.....	.....
9	.....	16.47	.....	.....	.....	14.88	14.97	.....	.....
10	.....	16.52	16.44	.....	.....	.....	14.98	.....	.....
11	.....	16.59	16.44	.....	.....	.....	14.99	15.17	.....
12	.....	16.63	16.42	.....	.....	.....	14.99	15.18	.....
13	.....	16.64	16.39	.....	.....	14.95	14.97	15.17	.....
14	.....	16.63	16.42	.....	.....	14.95	14.99	15.17	.....
15	.....	16.48	16.40	.....	.....	14.90	15.03	15.16	.....
16	.....	16.48	16.33	.....	.....	14.92	15.08	15.14	.....
17	.....	16.49	16.16	.....	.....	14.97	15.12	15.14	.....
18	.....	16.52	.....	.....	14.41	.....	15.12	15.16	.....
19	.....	.....	.....	.....	14.44	.....	15.11	.....	.....
20	.....	.....	.....	.....	14.44	.....	15.10	.....	a15.30
21	.....	16.55	.....	.....	14.46	.....	15.07	.....	.....
22	.....	16.51	.....	.....	14.49	.....	15.07	.....	.....
23	.....	16.48	.....	.....	14.50	.....	15.08	.....	.....
24	.....	16.51	.....	.....	14.47	.....	15.07	.....	.....
25	.....	16.52	.....	.....	14.45	.....	15.12	.....	.....
26	.....	16.54	.....	.....	.....	.....	15.17	.....	.....
27	.....	16.55	16.30	.....	.....	.....	15.19	.....	.....
28	.....	.....	16.29	.....	.....	.....	15.18	.....	.....
29	.....	.....	16.27	.....	.....	14.97	15.14	.....	.....
30	16.38	.....	16.33	.....	.....	14.95	.....	.....	.....
31	16.52	.....	16.33	.....	.....	14.88	.....	.....	.....

a Tape measurement.

Hu-3. Willard Water Department. At Willard, in municipal well field. Abandoned drilled well, diameter 10 inches, depth 200 feet. Measuring point, top of instrument support, 1.75 feet above land-surface datum. Automatic water-stage recorder installed Apr. 15, 1947.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	39.70	38.25	39.47	40.54	.....	43.28	.....	46.86
2	.....	40.13	38.33	39.53	40.48	42.76	43.36	.....	46.90
3	.....	40.21	40.25	39.59	.....	42.86	43.31	a43.40	47.10
4	.....	39.94	40.60	39.50	.....	42.91	43.23	.....	47.10
5	.....	40.02	39.77	39.61	41.00	42.78	.....	.....	47.18
6	.....	40.00	39.66	.....	41.10	42.90	43.26	.....	47.38
7	.....	40.02	39.25	.....	41.42	42.90	43.26	.....	47.47
8	.....	40.02	39.20	39.90	41.58	43.15	43.23	.....	47.92
9	.....	40.00	39.22	39.80	.....	42.95	43.24	.....	48.17
10	.....	39.98	39.30	39.83	41.31	43.00	43.26	a43.50	48.36
11	.....	39.83	39.50	39.78	41.75	43.08	43.20	.....	48.58
12	.....	39.82	39.30	39.91	41.96	43.10	.....	.....	48.73
13	.....	39.90	39.56	39.63	42.24	42.96	43.27	.....	48.90
14	.....	39.63	39.54	.....	42.55	.....	43.23	.....	48.39
15	41.10	39.58	39.43	39.92	42.20	43.17	43.28	.....	48.89
16	41.15	39.63	39.59	39.87	42.17	43.64	43.31	.....	49.15
17	40.98	39.57	39.55	39.87	42.20	43.44	43.28	a45.00	49.48
18	40.94	39.39	39.28	39.84	42.45	43.74	43.28	.....	.....
19	40.95	39.46	39.36	39.90	42.60	43.46	.....	.....	.....
20	40.57	39.30	39.41	.....	42.45	43.25	43.32	.....	.....
21	40.69	.....	39.47	39.90	42.45	.....	43.27	.....	.....
22	40.92	39.25	39.32	39.89	42.51	43.34	43.37	.....	50.14
23	40.65	39.33	39.43	40.07	42.39	43.21	43.44	.....	50.30
24	40.67	39.20	39.32	40.07	42.41	43.35	43.40	a45.40	50.40
25	40.63	38.65	39.32	40.14	42.57	43.31	43.56	.....	50.40
26	40.52	39.05	39.33	40.12	42.45	43.27	.....	46.06	50.40
27	40.32	39.29	39.47	39.74	42.75	43.26	a43.40	46.06	50.40
28	40.65	38.60	39.30	40.09	42.70	.....	.....	46.35	50.40

a Tape measurement.

Hu-3--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
29	40.40	39.09	39.31	40.30	42.80	43.30	.....	46.53	50.53
30	39.78	38.67	39.25	40.36	42.65	43.30	.....	46.59	50.51
31		38.57		40.35	.....	.....	.....		50.57

a Tape measurement.

Henry County

Hy-1 (\*1071, p. 365). A. F. Beam. 2 miles north of Deshler.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	21.30	21.25	21.22	21.20	20.87	20.65	20.67	20.91	.....	21.21	20.80	.....
2	21.20	21.27	21.11	21.20	20.82	20.50	20.72	20.91	.....	21.17	20.80	.....
3	.....	21.27	21.17	21.21	20.85	20.57	20.74	20.95	.....	21.15	20.74	.....
4	.....	21.10	21.22	21.20	20.84	20.60	20.74	20.97	21.14	21.15	20.67	.....
5	.....	21.11	21.25	21.08	20.86	20.61	20.73	20.98	21.13	21.14	20.61	.....
6	.....	21.02	21.27	21.12	20.88	20.63	20.71	21.00	21.11	21.13	20.66	.....
7	.....	21.08	21.27	21.20	20.88	20.57	20.73	21.07	21.14	21.13	20.64	.....
8	.....	21.10	21.24	21.20	20.89	20.55	20.77	21.10	21.15	21.11	20.59	.....
9	21.26	21.14	21.28	21.19	20.93	20.53	20.77	21.15	.....	21.13	20.70	.....
10	21.27	21.23	21.30	21.17	20.96	20.53	20.68	21.19	.....	21.13	20.70	.....
11	21.18	21.29	21.31	21.03	20.96	20.61	20.68	21.23	21.12	21.11	20.60	.....
12	21.23	21.31	21.32	21.21	20.94	20.64	20.71	21.23	21.13	21.11	20.64	.....
13	21.22	21.30	21.27	21.20	20.87	20.60	20.73	21.23	21.11	21.10	20.68	.....
14	21.22	21.16	21.18	21.14	20.79	20.52	20.72	21.25	21.13	21.10	20.65	.....
15	21.23	21.19	21.19	21.14	20.84	20.55	20.70	21.20	21.12	21.09	20.61	.....
16	21.31	21.20	21.18	21.11	20.85	20.59	20.73	21.19	.....	21.09	20.61	.....
17	21.31	21.20	21.21	21.03	20.84	20.56	20.70	21.22	.....	21.08	20.64	.....
18	21.29	21.28	21.25	21.07	20.79	20.57	20.69	.....	21.26	21.03	20.65	20.26
19	21.28	21.28	21.25	21.11	20.77	20.60	20.76	.....	21.27	20.96	20.62	20.31
20	21.13	21.26	21.22	21.05	20.80	20.61	20.74	.....	21.25	20.96	20.63	20.32
21	21.29	21.22	21.20	21.04	20.71	20.62	20.74	21.25	21.20	20.97	20.64	20.28
22	21.29	21.21	21.25	21.08	20.79	20.65	20.76	21.22	21.21	20.96	20.57	20.27
23	21.18	21.16	21.19	21.01	20.78	20.63	20.79	21.24	21.21	21.96	20.54	20.31
24	21.21	21.16	21.13	21.06	20.78	20.60	20.85	21.25	21.16	20.98	20.54	20.31
25	21.21	21.18	21.06	21.03	20.67	20.59	20.86	21.25	21.22	20.95	20.42	20.30
26	21.19	21.21	21.16	20.99	20.70	20.60	20.84	21.26	21.26	20.95	20.48	20.22
27	21.22	21.22	21.16	21.02	20.71	20.60	20.79	21.30	21.27	20.89	20.47	20.22
28	21.26	21.24	21.15	21.02	20.65	20.60	20.81	21.32	21.24	20.82	.....	20.24
29	21.21		21.18	21.00	20.65	20.64	20.85	21.34	21.20	20.78	.....	20.24
30	21.04		21.25	20.88	20.68	20.66	20.85	21.36	21.21	20.80	.....	20.20
31	21.22		21.23		20.70		20.87	.....		20.80		20.18

Jefferson County

Je-1. Steubenville Pottery Co. 3 miles north of Steubenville, east of State Highway 7, in rear of factory. Abandoned drilled well, diameter 8 inches, depth 104 feet. Measuring point, floor of recorder shelter, 3.5 feet above land-surface datum. Automatic water-stage recorder installed May 16, 1947.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	44.71	43.38	44.22	.....	44.59	44.06	44.15
2	.....	45.23	43.40	44.28	.....	44.48	43.93	44.15
3	.....	45.50	43.44	44.23	44.08	44.55	44.00	43.82
4	.....	44.34	43.44	44.24	44.17	44.60	44.10	43.90
5	.....	43.90	43.33	44.25	44.20	44.42	44.12	43.93
6	.....	43.38	43.43	44.26	44.24	44.35	44.20	44.04
7	.....	43.43	43.52	.....	44.43	44.44	44.05	44.55

Je-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
8	.....	41.35	43.60	.....	44.40	44.39	44.05	44.75
9	.....	38.27	43.67	.....	44.50	46.19	43.90	45.06
10	.....	38.39	43.70	.....	44.54	46.15	43.90	45.80
11	.....	39.51	43.75	.....	44.55	44.67	43.83	47.75
12	.....	41.18	.....	.....	44.58	44.42	43.95	47.85
13	.....	42.48	.....	.....	44.57	46.10	44.06	46.35
14	.....	42.98	43.74	.....	44.54	46.14	44.27	45.15
15	45.50	43.58	43.83	.....	.....	46.22	43.95	44.89
16	45.42	44.31	43.95	.....	.....	46.07	44.08	44.95
17	45.65	44.21	43.88	.....	.....	46.17	44.10	44.05
18	45.52	44.80	44.10	.....	.....	46.10	44.17	46.22
19	44.00	44.68	44.15	.....	44.54	44.63	44.12	44.98
20	42.78	44.55	44.27	44.05	44.45	46.07	43.98	44.95
21	42.43	44.50	44.38	44.20	44.50	44.60	45.54	44.73
22	42.56	44.28	44.25	44.27	44.70	45.84	44.00	44.66
23	41.82	44.30	44.33	44.32	44.81	44.74	43.72	44.42
24	41.96	43.35	44.20	44.35	44.73	44.37	43.79	44.73
25	42.67	43.32	44.30	44.45	44.65	44.40	45.74	44.75
26	42.57	43.42	44.37	44.70	44.60	44.20	45.89	45.47
27	42.94	43.37	44.24	44.74	44.59	43.95	44.70	45.46
28	43.00	43.37	44.24	44.56	44.55	44.02	45.83	44.38
29	43.42	43.42	44.28	44.45	44.37	43.96	.....	45.33
30	43.46	43.34	44.20	44.41	44.45	43.95	.....	45.40
31	43.90	.....	44.10	44.50	.....	44.05	.....	46.35

Knox County

K-1 (\*1071, p. 366). City of Mt. Vernon. At Mt. Vernon, in municipal well field.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	6.42	6.28	6.76	3.43	6.20	6.57	7.01	5.80	....	....
2	....	....	6.53	4.87	3.99	3.47	7.50	6.20	8.72	4.80	....	a5.06
3	....	....	8.15	5.86	3.84	3.63	6.30	5.89	8.63	5.16	....	....
4	....	....	7.93	6.43	3.53	3.77	5.99	7.32	8.27	5.66	....	....
5	....	....	7.87	5.07	3.72	3.20	5.50	7.88	9.60	....	....	6.60
6	....	5.39	7.60	3.78	5.27	3.12	5.57	7.90	6.79	....	....	....
7	....	5.50	8.15	6.26	5.19	....	6.00	7.89	5.90	....	....	....
8	....	6.50	7.14	4.60	5.41	....	6.06	7.62	8.50	....	....	....
9	....	6.25	6.63	5.70	5.32	....	6.30	6.92	7.67	6.20	....	....
10	....	7.54	8.14	4.47	3.09	....	6.13	6.38	8.09	....	....	....
11	....	6.19	8.12	4.31	3.51	....	7.40	8.70	8.70	....	....	....
12	....	7.30	6.99	4.23	4.56	....	....	9.22	9.20	....	....	....
13	....	7.15	6.90	3.61	4.31	....	....	9.18	7.62	....	....	....
14	....	....	6.56	4.01	4.39	....	....	8.51	6.00	....	....	....
15	7.31	....	6.00	5.66	4.40	....	....	8.27	7.55	....	....	....
16	7.47	....	5.71	3.92	4.64	....	7.40	8.00	7.24	....	....	....
17	7.16	....	5.93	4.97	4.50	....	8.81	6.50	6.94	....	....	....
18	6.64	....	6.44	5.60	3.80	....	7.05	7.18	8.10	....	....	5.40
19	4.50	....	7.11	6.11	5.16	....	6.33	8.10	8.42	....	....	6.53
20	....	8.19	6.10	3.97	5.21	....	5.91	8.86	7.69	....	....	5.56
21	....	8.18	7.80	5.19	5.96	....	7.69	9.14	6.52	....	....	4.20
22	....	7.83	6.82	5.20	5.46	....	7.48	8.87	6.80	....	....	....
23	....	8.45	5.70	6.22	5.28	....	10.25	9.17	7.91	....	3.28	....
24	....	8.17	7.15	5.70	4.52	....	7.98	7.14	7.07	a5.20	5.50	....
25	....	6.82	5.79	5.72	3.38	....	7.78	8.80	7.23	....	4.80	....
26	....	7.82	5.90	4.34	4.93	7.89	8.03	10.25	7.40	....	....	....
27	....	6.21	5.70	3.10	4.12	7.60	7.28	8.69	7.18	....	....	....
28	....	6.30	5.78	4.67	5.14	6.48	6.78	9.50	5.91	....	....	....
29	....	....	5.52	3.62	4.33	6.65	6.84	9.25	7.00	....	....	6.42
30	....	....	5.12	4.38	3.76	6.00	7.70	8.04	6.89	....	....	4.25
31	....	....	5.84	....	3.65	....	7.00	6.61	....	....	....	....

a Tape measurement.

Lawrence County

La-1. Crystal Ice Co. In Ironton, at Ninth and Railroad Sts., in ice plant. Abandoned drilled well, diameter 16 inches, depth 77 feet. Measuring point, floor of recorder shelter, 0.5 foot above land-surface datum. Automatic water-stage recorder installed May 21, 1947.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)								
Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	51.35	52.27	52.54	53.14	53.18	53.58	52.80
2	.....	51.36	52.42	52.57	53.16	53.20	53.63	52.82
3	.....	51.38	52.50	52.62	53.14	51.99	52.74	52.85
4	.....	51.38	52.48	52.62	53.16	52.93	52.38	52.85
5	.....	51.39	52.50	52.63	53.21	51.77	52.28	52.88
6	.....	51.40	52.55	52.65	53.18	52.77	52.48	52.88
7	.....	51.47	52.61	52.68	53.16	52.69	52.83	.....
8	.....	51.42	52.64	52.71	53.21	51.73	52.82	.....
9	.....	51.37	52.65	52.67	53.22	52.45	52.85	.....
10	.....	51.37	52.65	52.67	53.21	52.74	52.87	.....
11	.....	51.42	52.17	52.68	53.22	.....	.....	.....
12	.....	51.30	52.22	52.68	53.21	.....	52.83	.....
13	.....	50.47	52.24	52.89	53.20	.....	52.84	.....
14	.....	50.42	52.30	53.04	53.20	.....	52.89	.....
15	.....	51.27	52.27	53.08	53.22	.....	52.84	.....
16	.....	51.27	52.28	53.12	53.22	53.40	52.85	.....
17	.....	50.41	52.29	53.16	53.30	53.61	52.06	.....
18	.....	51.24	52.30	53.16	53.32	53.73	51.60	52.51
19	.....	51.24	52.32	53.17	53.36	53.77	51.65	52.55
20	.....	51.33	52.33	53.16	53.36	53.66	51.57	52.59
21	.....	51.24	52.35	53.15	53.38	53.66	.....	52.66
22	50.99	51.25	52.36	53.14	53.37	53.64	.....	.....
23	51.06	51.25	52.38	53.14	53.40	53.54	.....	.....
24	51.12	51.23	52.40	53.14	53.53	53.58	.....	.....
25	51.16	51.23	52.41	53.14	.....	53.58	.....	.....
26	51.18	51.23	52.42	53.14	53.17	53.56	52.64	51.23
27	51.20	51.23	52.43	53.14	53.18	53.34	52.68	51.14
28	51.25	51.25	52.42	53.16	53.18	52.38	52.72	51.00
29	51.32	51.29	52.31	53.15	53.17	52.32	52.74	50.89
30	51.32	51.34	52.41	53.15	52.95	52.29	52.78	.....
31	51.33	.....	52.46	53.17	.....	53.44	.....	.....

Logan County

Lo-1 (#1071, p. 366). Ohio State Grange. 2 miles west of Bellefontaine, at abandoned school.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	21.96	19.62	19.32	18.78	15.98	14.55	14.13	15.40	15.00	16.08	16.75	17.51
2	21.79	19.32	19.32	18.71	.....	14.29	14.28	15.46	15.05	16.06	16.73	17.56
3	21.76	19.13	19.40	18.67	.....	12.96	14.29	15.50	15.08	16.11	16.70	17.65
4	21.75	18.96	19.47	18.54	.....	13.08	14.33	15.61	15.14	16.16	16.74	17.68
5	21.61	18.88	19.51	18.41	.....	.....	14.35	15.61	15.11	16.22	16.81	17.72
6	21.55	18.86	19.51	18.12	.....	.....	14.34	15.61	15.21	16.25	16.90	17.74
7	21.50	18.85	19.48	18.05	15.83	.....	14.46	15.71	15.31	16.27	16.83	17.68
8	21.46	18.92	19.52	17.96	15.89	13.18	14.49	15.79	15.32	16.29	16.86	17.81
9	21.44	18.94	19.55	17.78	15.96	13.26	14.48	15.80	15.34	16.35	17.05	17.84
10	21.44	18.98	19.57	17.78	16.05	13.41	14.47	15.92	15.41	16.37	17.05	17.77
11	21.45	19.04	19.58	17.62	16.05	13.64	14.52	15.95	15.45	16.42	17.17	17.80
12	21.47	19.09	19.58	17.84	15.97	13.75	14.51	15.96	15.44	16.46	.....	17.84
13	21.44	19.10	19.50	17.83	15.90	13.75	14.43	16.02	15.48	16.51	.....	.....
14	21.43	19.01	19.47	17.71	15.94	13.65	14.43	16.05	15.48	16.54	.....	17.82
15	21.44	19.07	19.42	17.72	15.94	13.71	14.54	15.98	15.62	16.61	.....	17.81
16	21.33	19.11	19.38	17.67	15.93	13.74	14.65	15.57	15.70	16.61	17.29	17.98
17	21.30	19.12	19.45	17.51	15.92	13.74	14.67	14.76	15.73	16.63	17.36	17.98
18	21.18	19.17	19.50	17.42	15.70	13.86	14.67	14.58	15.74	16.63	17.32	17.92
19	21.15	19.17	19.50	17.41	15.63	13.95	14.79	14.67	15.70	16.79	17.31	17.99

## Lo-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
20	21.00	19.11	19.49	17.36	15.61	14.00	14.72	14.82	15.70	16.83	17.39	17.96
21	20.93	19.17	19.56	17.29	15.50	14.11	14.83	14.93	15.68	16.84	17.40	17.88
22	20.81	19.17	19.61	17.26	15.33	14.14	14.90	15.00	15.76	16.85	17.41	17.83
23	20.56	19.15	19.50	17.08	15.10	14.17	15.03	15.14	15.76	16.95	17.42	17.97
24	20.43	19.23	19.48	17.08	15.06	14.13	15.16	15.19	15.62	16.96	17.32	17.98
25	20.41	19.25	19.33	17.06	14.97	14.19	15.20	15.19	15.76	17.00	17.32	17.94
26	20.27	19.25	19.33	16.81	14.56	14.21	15.18	14.80	15.87	17.03	17.38	17.97
27	20.20	19.30	19.15	16.53	14.38	14.21	15.16	14.85	15.90	17.01	17.37	17.97
28	20.20	19.32	19.01	16.53	14.33	14.24	15.23	14.97	15.88	16.97	17.46	18.02
29	20.08		18.92	16.41	14.56	14.37	15.27	14.98	15.97	16.91	17.59	18.02
30	19.98		18.92	16.18	14.58	14.13	15.28	15.03	16.05	16.86	17.59	18.01
31	19.71		18.84		14.61		15.38	15.04		16.79		18.01

Lo-2. Ohio Water Resources Board. 3 miles north of Zanesfield, north side of State Highway 540, in right-of-way. Drilled test well, diameter 6 inches, depth 18 feet. Measuring point, floor of recorder shelter, 3.0 feet above land-surface datum. Automatic water-stage recorder installed Sept. 24, 1947.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 24	9.50	Oct. 16	9.86	Nov. 10	9.51	Dec. 5	9.73
25	9.55	17	9.87	11	9.52	6	9.75
26	9.59	18	9.84	12	9.56	7	9.74
27	9.67	19	9.87	13	9.60	8	9.70
28	9.61	20	9.88	15	9.50	9	9.73
29	9.65	21	9.89	16	9.56	12	9.71
30	9.68	22	9.90	17	9.58	13	9.72
Oct. 1	9.68	23	9.92	18	9.59	14	9.72
2	9.68	24	9.92	19	9.62	15	9.73
3	9.70	25	9.93	20	9.65	16	9.72
4	9.73	26	9.93	21	9.66	17	9.72
5	9.67	27	9.93	22	9.65	18	9.75
6	9.71	28	9.93	25	9.53	19	9.78
7	9.73	29	9.66	26	9.57	24	9.90
8	9.75	30	9.36	27	9.58	25	9.90
9	9.76	31	9.47	28	9.61	26	9.93
10	9.78	Nov. 1	9.53	29	9.67	27	9.94
11	9.80	2	9.54	30	9.69	28	9.97
12	9.82	6	9.33	Dec. 1	9.70	29	9.98
13	9.83	7	9.37	2	9.72	30	9.97
14	9.84	8	9.42	3	9.74	31	9.84
15	9.85	9	9.51	4	9.74		

Lucas County

Lu-1 (\*1071, p. 367). State Hospital. In Toledo, in orchard at hospital.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Dec.
1	85.80	.....	85.10	85.68	.....	.....	.....	84.35	.....	.....
2	85.44	.....	84.95	85.90	85.30	.....	84.60	84.50	.....	.....
3	85.54	.....	.....	86.02	85.35	.....	84.68	84.40	84.75	.....
4	.....	.....	85.09	86.00	85.33	.....	84.64	84.40	85.20	.....
5	.....	.....	85.29	85.58	85.37	85.21	84.57	84.42	87.45	.....
6	.....	.....	85.45	.....	85.51	85.21	84.45	84.50	89.00	.....
7	85.01	.....	87.01	.....	85.40	85.05	84.58	84.63	90.04	.....
8	85.18	.....	86.40	.....	85.53	84.94	84.65	84.64	90.76	.....
9	85.29	.....	85.83	.....	.....	84.92	84.57	84.70	91.34	.....
10	85.33	.....	.....	.....	.....	84.77	84.55	84.80	91.90	.....

Lu-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)											
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Dec.	
11	84.90	85.87	85.50	.....	.....	84.99	84.48	84.84	92.36	.....	
12	85.23	86.05	85.45	.....	.....	85.10	84.46	84.67	92.57	.....	
13	85.16	85.90	85.25	.....	.....	84.92	84.54	84.75	92.70	.....	
14	85.04	85.50	85.01	.....	.....	84.66	84.49	84.65	93.10	.....	
15	85.11	85.15	.....	.....	.....	84.22	84.36	84.70	93.50	86.33	
16	85.40	85.10	.....	.....	.....	84.93	84.30	84.80	93.87	86.70	
17	85.41	.....	.....	.....	.....	84.82	84.38	84.84	94.15	86.75	
18	85.12	85.40	85.15	85.55	.....	.....	84.27	84.83	.....	86.75	
19	85.29	85.40	85.15	85.75	.....	.....	84.51	.....	.....	86.98	
20	84.73	85.20	85.04	85.75	.....	.....	84.46	84.79	.....	86.95	
21	85.57	85.13	85.40	85.76	.....	.....	84.48	84.82	.....	86.76	
22	85.38	84.88	85.51	85.76	.....	.....	84.57	84.83	95.13	86.68	
23	.....	84.90	85.38	85.70	.....	.....	84.65	84.80	95.20	86.76	
24	.....	.....	.....	85.54	.....	.....	84.82	84.77	95.26	86.81	
25	.....	84.90	.....	85.37	.....	.....	84.88	.....	.....	86.75	
26	.....	85.00	85.40	.....	.....	.....	84.70	.....	.....	86.37	
27	.....	85.10	85.74	.....	.....	.....	84.52	84.78	.....	86.37	
28	.....	85.16	85.81	.....	.....	.....	84.50	84.84	.....	86.50	
29	.....	.....	85.75	.....	.....	.....	84.55	84.88	.....	86.52	
30	.....	.....	85.80	.....	.....	.....	.....	.....	.....	86.40	
31	.....	.....	86.02	.....	.....	.....	84.35	.....	.....	86.34	

Lu-2 (\*1071, p. 368). Henry Miller. In Toledo, at Suceor and Dorr Sts.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)											
Day	Jan.	Feb.	Mar.	Apr.	May	June	Sept.	Oct.	Nov.	Dec.	
1	66.35	66.00	64.88	.....	.....	.....	.....	.....	.....	65.48	
2	66.20	66.00	64.59	.....	62.75	61.52	.....	.....	.....	.....	
3	66.18	65.86	64.61	.....	62.80	.....	.....	65.12	.....	.....	
4	66.23	65.42	64.76	.....	62.78	.....	.....	65.14	.....	65.49	
5	66.15	65.28	64.88	.....	62.61	61.63	64.96	65.08	.....	65.35	
6	66.04	65.06	64.94	.....	62.66	61.71	64.97	65.07	65.52	65.33	
7	65.98	65.00	64.94	.....	62.79	61.68	64.91	65.19	65.51	65.29	
8	66.07	65.01	64.94	.....	62.95	.....	64.99	65.24	65.42	65.06	
9	66.17	65.01	64.88	.....	63.15	.....	65.08	65.27	65.54	65.22	
10	66.18	65.16	64.89	.....	.....	.....	65.17	65.28	65.55	65.22	
11	66.01	65.33	64.96	.....	63.19	.....	65.20	.....	65.40	65.11	
12	66.10	65.38	64.80	.....	63.07	.....	.....	.....	65.54	.....	
13	66.06	65.34	64.91	.....	63.01	.....	.....	.....	65.74	.....	
14	66.04	65.27	64.76	.....	63.12	.....	.....	.....	65.76	.....	
15	66.10	65.03	64.78	.....	63.13	.....	.....	.....	65.68	64.59	
16	66.30	64.98	64.72	.....	63.37	.....	65.15	.....	65.41	64.70	
17	66.32	64.92	64.75	.....	63.33	.....	65.27	.....	65.53	64.74	
18	66.32	65.05	64.85	63.99	63.02	.....	65.33	.....	65.57	64.86	
19	66.20	65.07	64.87	64.06	.....	.....	65.39	.....	65.62	65.00	
20	65.78	64.99	65.95	63.90	.....	.....	65.40	.....	65.66	65.01	
21	66.10	64.98	.....	63.39	.....	.....	65.23	.....	.....	64.90	
22	66.17	64.97	.....	63.54	.....	.....	65.04	.....	.....	64.84	
23	66.17	64.80	.....	63.41	.....	.....	.....	.....	.....	64.84	
24	66.00	64.63	.....	63.24	.....	.....	.....	.....	65.09	64.92	
25	66.01	64.73	.....	63.18	.....	.....	.....	.....	65.16	64.91	
26	65.89	64.82	.....	63.15	.....	.....	.....	.....	65.30	64.63	
27	65.98	64.87	65.34	63.09	.....	.....	.....	.....	65.30	64.62	
28	.....	64.91	64.25	63.09	.....	.....	.....	65.14	65.37	64.59	
29	.....	.....	.....	.....	.....	.....	.....	65.17	65.51	64.60	
30	.....	.....	.....	.....	.....	.....	.....	65.29	65.54	64.58	
31	65.98	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Lu-3. DeVilbiss Corporation. In Toledo, in sheet metal shop of De-Vilbiss plant, at Sylvania and Concord Sts. Abandoned drilled well, diameter 12 inches, depth 550 feet. Measuring point, floor of recorder shelter, 5.4 feet above land-surface datum. Automatic water-stage recorder installed Mar. 29, 1946.



Lu-3--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	94.73	Jan. 12	92.20	Jan. 31	94.39	Feb. 14	92.90
2	93.96	13	91.48	Feb. 1	94.31	15	92.82
3	94.68	14	91.30	2	93.03	16	92.63
4	94.68	20	91.00	3	92.10	17	92.77
5	93.60	21	93.00	7	92.97	18	93.33
6	92.60	22	93.24	8	92.97	19	93.53
7	93.08	23	93.24	9	91.84	20	93.40
8	93.69	24	93.42	10	92.20	21	93.50
9	93.73	25	93.42	11	92.75	22	92.15
10	93.81	26	91.72	12	93.25	23	92.70
11	93.38	27	91.22	13	93.15	24	92.42

Madison County

M-1 (\*1071, p. 369). Max A. Chenoweth. At east edge of Mt. Sterling.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	25.47	25.69	25.68	24.10	23.85	24.71	25.18	25.45	26.89	25.74	25.79	25.79
2	25.47	25.58	25.61	24.00	23.69	24.78	25.21	25.65	26.88	25.74	25.80	25.80
3	25.34	25.72	25.69	24.13	23.88	25.05	25.21	25.94	26.66	25.66	25.81	25.81
4	26.58	25.26	25.68	24.12	23.96	25.03	25.30	26.11	26.64	25.67	25.81	25.81
5	26.57	25.26	25.93	25.54	24.15	23.90	24.94	25.39	26.10	26.35	25.69	25.69
6	26.55	25.21	25.93	25.49	24.13	23.89	24.89	25.34	25.95	26.16	25.86	25.88
7	26.50	25.33	25.86	25.64	24.18	23.85	24.90	25.43	25.81	26.26	25.85	25.87
8	26.60	25.38	25.90	25.64	24.18	23.84	24.92	25.44	26.08	26.23	25.71	25.76
9	26.65	25.49	25.90	25.61	24.30	23.96	24.90	25.47	26.33	26.05	25.76	25.83
10	26.63	25.60	26.00	25.59	24.31	24.01	24.84	25.46	26.38	26.02	25.81	25.78
11	26.41	25.76	26.00	25.49	24.31	24.13	24.93	25.55	26.65	25.94	25.79	25.78
12	26.40	25.79	25.99	25.67	24.32	24.24	24.91	25.55	26.60	25.94	25.65	25.80
13	26.41	25.78	25.91	25.67	24.28	24.24	24.91	25.58	26.08	25.83	.....	25.80
14	26.39	25.72	25.79	25.57	24.25	24.06	24.84	25.61	25.69	25.87	.....	25.80
15	26.35	25.55	25.81	25.57	24.34	24.03	24.68	25.37	25.90	25.87	.....	25.64
16	26.30	25.55	25.81	25.43	24.48	24.09	24.55	25.27	26.23	25.83	.....	25.69
17	26.28	25.52	25.89	25.27	24.41	24.12	24.58	25.11	26.43	25.76	.....	25.72
18	26.24	25.65	26.01	25.27	24.17	24.14	24.58	25.21	26.41	25.76	.....	25.73
19	26.17	25.63	25.94	25.34	24.07	24.23	24.71	25.45	26.50	25.76	.....	25.76
20	25.85	25.63	25.92	25.33	24.11	24.34	24.82	25.75	26.59	25.79	.....	25.75
21	26.00	25.57	25.78	25.00	24.02	24.40	24.85	25.74	26.55	25.84	25.79	25.70
22	26.10	25.53	25.92	24.96	24.07	24.42	24.95	25.50	26.31	25.85	25.73	25.66
23	26.03	25.52	25.91	24.84	24.05	24.50	24.99	25.31	26.46	25.87	25.69	25.74
24	25.96	25.53	25.67	24.88	24.04	24.45	25.02	25.26	26.56	25.89	25.56	25.74
25	25.93	25.65	25.57	24.74	23.99	24.48	25.06	25.32	26.70	25.89	25.61	25.72
26	25.91	25.70	25.77	24.44	23.87	24.51	25.05	25.32	26.85	25.83	25.76	25.66
27	25.85	25.75	25.77	24.38	23.87	24.52	25.04	25.59	26.95	25.73	25.71	25.66
28	25.76	25.74	25.71	24.52	23.75	24.65	25.01	25.70	26.91	25.67	25.73	25.66
29	25.65		25.67	24.41	23.79	24.66	25.09	25.70	26.52	25.66	25.80	25.71
30	25.53		25.69	24.34	23.78	24.65	25.10	25.65	26.70	25.65	25.80	25.68
31	25.46	25.65		23.85			25.16	25.52		25.74		25.67

Mahoning County

Ma-1 (\*1071, p. 369). Village of Canfield. 1 mile south of Canfield, in municipal well field.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	.....	107.87	108.10	107.70	106.90	106.35
2	.....	107.70	107.85	107.75	106.74	106.18
3	.....	107.71	107.84	107.80	107.00	106.45

Ma-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
4	.....	107.82	108.05	107.63	107.02	106.50
5	.....	98.90	108.11	107.43	106.91	106.20
6	.....	87.93	107.98	107.66	106.79	106.11
7	.....	84.20	107.90	107.83	106.89	106.18
8	.....	79.20	108.06	107.68	106.73	100.10
9	.....	75.50	108.09	107.48	106.59	105.30
10	.....	90.10	107.98	107.52	106.63	105.80
11	.....	100.92	107.86	107.60	106.80	106.07
12	.....	105.50	108.01	107.53	106.84	106.43
13	.....	106.62	108.01	107.39	106.73	106.51
14	.....	107.00	107.77	107.52	106.58	106.49
15	.....	107.50	107.88	107.54	106.78	106.99
16	.....	107.70	108.02	107.40	106.78	107.18
17	108.23	107.63	108.02	107.27	106.61	107.09
18	108.14	107.78	107.93	107.45	106.40	106.79
19	108.11	108.09	107.82	107.53	106.40	106.80
20	108.11	108.08	108.00	107.50	106.61	107.12
21	108.39	107.95	108.01	107.21	106.60	107.05
22	106.40	107.81	108.12	107.11	106.45	106.82
23	108.21	107.91	107.85	107.25	106.29	106.85
24	107.96	108.12	107.62	107.40	106.44	106.97
25	108.10	108.19	107.63	107.40	106.59	106.82
26	108.20	108.17	107.88	107.16	106.42	106.56
27	108.21	107.94	107.92	107.11	106.40	106.39
28	108.01	108.11	107.84	107.23	106.47	106.79
29	107.90		107.58	107.23	106.30	106.89
30	108.00		107.50	107.22	106.38	106.91
31	108.10		107.68		106.49	

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	106.58	105.88	68.90	44.70	43.20	41.90
2	106.43	105.61	65.70	44.44	43.10	41.90
3	106.82	105.60	63.50	44.24	42.61	41.73
4	106.90	105.80	61.17	44.10	42.40	41.80
5	106.58	107.01	59.52	43.89	42.30	41.50
6	106.84	107.03	57.95	43.90	42.19	41.33
7	106.60	106.84	56.65	43.90	42.15	41.32
8	106.60	106.89	55.40	43.81	41.97	41.20
9	106.70	107.10	54.30	43.90	41.95	41.27
10	106.47	107.35	53.32	44.10	41.95	41.27
11	106.61	107.41	52.50	44.20	41.90	41.22
12	106.80	107.06	51.88	44.14	41.81	41.23
13	106.66	107.17	51.19	43.99	41.82	41.20
14	106.36	107.40	50.41	43.99	41.80	40.90
15	106.70	107.34	49.90	43.99	41.70	40.60
16	106.73	107.34	49.37	43.99	41.50	40.37
17	106.40	106.95	48.90	44.00	41.40	40.36
18	106.40	106.71	48.50	43.88	41.36	40.10
19	106.71	107.08	48.00	43.80	41.30	39.98
20	106.60	107.16	47.59	43.78	41.30	39.90
21	106.56	106.97	47.20	43.72	41.30	39.70
22	106.89	106.80	46.71	43.70	41.40	39.62
23	106.79	106.91	46.55	43.60	41.49	39.51
24	106.58	106.60	46.20	43.58	41.48	39.50
25	106.76	106.84	45.94	43.50	41.51	39.50
26	106.66	107.00	45.65	43.58	41.59	39.30
27	106.57	107.08	45.70	43.46	41.60	39.25
28	106.67	98.10	45.46	43.38	41.69	39.19
29	106.49	85.70	45.46	43.32	41.74	39.19
30	106.88	77.85	44.88	43.27	41.75	39.14
31	107.01	72.70		43.22		39.10

Ma-3. Tod Hotel. At Youngstown, on southeast corner of public square, in boiler room at hotel. Abandoned drilled well, diameter 8 inches, depth 400 feet. Measuring point, top of instrument shelf, 8.7 feet below land-surface datum. Automatic water-stage recorder installed Jan. 27, 1947.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	27.56	27.46	27.68	27.50	27.66	27.28	27.39	.....	26.81	27.03	27.16
2	.....	27.53	27.42	27.65	27.57	27.62	27.30	27.41	27.23	26.77	27.03	27.14
3	.....	27.53	27.43	27.65	27.57	27.62	27.32	27.41	27.24	26.76	27.02	27.14
4	.....	27.45	27.46	27.64	27.53	27.61	27.31	27.42	27.23	26.75	26.98	27.15
5	.....	27.45	27.50	27.60	27.48	27.54	27.31	27.43	27.20	26.76	26.96	27.12
6	.....	27.42	27.51	27.57	27.49	27.53	27.31	27.44	27.18	26.81	26.98	27.11
7	.....	27.41	27.52	27.64	27.48	27.53	27.31	27.45	27.19	26.85	26.98	27.11
8	.....	27.41	27.51	27.65	27.48	27.54	27.34	27.47	27.18	26.88	26.93	27.04
9	.....	27.40	27.54	27.61	27.47	27.52	27.36	27.47	27.16	26.90	26.97	27.07
10	.....	27.41	27.56	27.61	27.48	27.52	27.37	27.49	27.14	26.90	26.99	27.07
11	.....	27.45	27.53	27.57	27.50	27.51	27.39	27.50	27.13	26.88	26.96	27.00
12	.....	27.46	27.59	27.66	27.48	27.52	27.38	27.51	27.11	26.93	26.98	27.04
13	.....	27.45	27.58	27.66	27.50	27.45	27.38	27.49	27.10	26.92	27.03	27.06
14	.....	27.43	27.56	27.66	.....	27.35	27.36	27.49	27.10	26.94	27.04	27.06
15	.....	27.39	27.56	27.62	27.50	27.34	27.37	27.49	27.07	26.96	27.04	27.03
16	.....	27.41	27.56	27.58	27.48	27.31	27.38	27.50	27.09	26.99	27.01	27.03
17	.....	27.41	27.55	27.56	27.49	27.27	27.40	27.50	27.09	27.01	27.03	27.03
18	.....	27.43	27.60	27.55	27.48	27.25	27.41	27.49	27.09	27.01	27.03	27.01
19	.....	27.44	27.60	27.55	27.49	27.25	27.40	27.47	27.06	27.02	27.01	27.02
20	.....	27.44	27.59	27.55	27.62	27.20	27.43	27.47	27.04	27.05	27.01	27.02
21	27.66	27.41	27.59	27.53	27.62	27.17	27.41	27.47	27.00	27.05	27.02	26.99
22	27.66	27.41	27.60	27.53	27.68	27.21	27.43	27.46	27.00	27.07	27.00	26.99
23	27.65	27.40	27.61	27.61	27.66	27.23	27.44	27.46	27.00	27.08	26.97	27.01
24	.....	27.39	27.58	27.50	27.67	27.23	27.46	27.45	26.91	27.10	26.96	27.04
25	.....	27.41	27.56	27.51	27.72	27.24	27.46	27.43	26.89	27.08	26.94	27.04
26	.....	27.43	27.63	27.49	27.75	27.26	27.45	27.41	26.89	27.05	27.01	26.99
27	.....	27.45	27.64	27.45	27.77	27.24	27.43	27.42	26.89	27.04	27.10	26.98
28	27.58	27.46	27.66	27.44	27.74	27.25	27.39	27.42	26.88	27.05	27.15	26.98
29	27.58	.....	27.66	27.42	27.69	27.27	27.35	27.42	26.82	27.06	27.17	26.99
30	27.54	.....	27.69	27.42	27.71	27.28	27.37	27.41	26.81	27.05	27.17	27.00
31	27.55	.....	27.69	.....	27.67	.....	27.36	.....	.....	27.03	.....	27.02

### Marion County

Mn-1 (\*1071, p. 370). Village of Larue. In Larue, at Baptist Church.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	10.32	7.73	9.45	8.14	7.15	7.54	8.07	9.49	9.18	9.40	8.65	9.05
2	10.19	7.98	9.43	7.84	6.73	7.27	8.33	9.51	9.02	9.39	8.65	9.06
3	10.07	8.44	9.50	7.50	6.81	5.69	8.51	9.57	8.93	9.40	8.74	9.06
4	9.94	8.34	9.55	7.60	6.92	6.01	8.57	9.74	8.58	9.40	8.69	8.90
5	9.79	.....	9.65	7.58	7.26	6.35	8.74	9.79	8.68	9.33	8.62	8.86
6	9.89	.....	9.68	7.47	7.60	6.53	8.75	9.76	8.69	9.43	8.48	8.75
7	9.88	.....	9.66	7.72	7.66	6.48	.....	9.74	8.50	9.44	8.36	8.69
8	9.99	.....	9.68	7.90	7.66	6.46	8.82	9.70	8.65	9.43	8.36	8.71
9	10.01	.....	9.67	8.13	7.91	6.56	8.88	9.68	8.58	9.49	8.50	8.78
10	10.04	9.00	9.73	8.25	8.09	.....	8.90	9.68	8.72	9.54	8.59	8.78
11	9.96	9.07	9.70	8.36	8.19	.....	8.89	9.86	8.89	9.45	8.67	8.84
12	10.03	9.15	9.68	8.46	8.33	.....	8.86	9.87	8.84	9.55	8.74	8.95
13	10.01	9.15	9.60	8.43	8.29	.....	8.82	9.97	8.82	9.57	8.79	8.93
14	10.12	9.13	9.46	8.49	8.34	.....	8.82	9.88	8.89	9.57	8.84	8.88
15	9.98	9.11	9.21	8.61	8.41	.....	8.88	9.76	9.03	9.58	8.73	8.83
16	9.65	9.06	9.18	8.54	8.52	6.97	.....	9.56	9.20	9.63	8.70	8.79
17	9.48	9.20	9.32	8.09	8.47	7.24	.....	9.12	9.29	9.60	8.86	8.71
18	9.46	9.28	9.42	7.86	8.19	7.38	.....	9.13	9.33	9.55	8.78	8.75
19	9.42	9.38	9.44	8.00	7.92	7.42	.....	9.25	9.37	9.29	8.81	8.78
20	9.28	9.31	9.43	8.03	8.00	7.59	.....	9.28	9.32	8.86	8.92	8.79
21	8.91	9.38	9.40	8.10	7.91	7.87	8.96	9.30	9.23	8.87	8.93	8.84

## Mn-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
22	8.43	9.31	9.47	7.77	7.40	8.06	9.03	8.88	9.22	8.95	8.89	8.86
23	8.44	9.30	9.33	7.84	7.26	8.23	9.12	9.06	9.07	9.09	8.85	8.93
24	8.54	9.40	9.25	7.97	7.44	8.28	9.20	....	9.10	9.14	8.75	9.01
25	8.61	9.47	8.82	7.96	7.36	8.37	9.29	9.07	9.18	9.19	8.64	8.93
26	8.56	9.50	8.31	7.55	6.68	8.53	10.15	9.01	9.24	9.22	8.65	9.00
27	8.68	9.51	8.20	7.18	6.68	8.58	9.22	8.94	9.28	9.30	8.61	9.04
28	8.83	9.58	8.25	7.49	6.85	8.66	9.30	9.08	9.27	9.25	8.69	9.05
29	8.82	....	8.10	7.66	7.00	8.65	9.37	9.14	9.29	9.04	8.83	9.11
30	8.63	....	7.95	7.58	7.14	8.43	9.37	9.12	9.38	8.76	8.87	9.09
31	7.57	....	8.07	....	7.41	....	9.52	9.25	....	8.58	....	9.10

Medina County

● Md-1 (\*1071, p. 371). Village of Lodi. At Lodi, in municipal well field.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	16.81	17.39	17.60	....	....	18.52	17.90	18.31	....	18.97	18.95
2	....	16.79	16.91	17.57	....	....	....	18.30	18.36	....	18.60	18.90
3	....	....	17.60	17.52	19.00	....	....	18.52	18.13	....	18.50	18.49
4	....	....	17.50	17.58	18.30	....	....	18.38	18.30	18.33	18.36	18.99
5	....	....	17.57	16.50	18.80	....	....	18.49	18.02	18.00	18.25	18.56
6	....	16.50	17.44	17.03	18.88	....	....	18.26	17.50	18.30	18.42	19.62
7	....	16.67	17.50	16.70	18.52	....	....	18.67	17.91	18.31	18.52	19.02
8	....	17.18	17.90	....	18.80	....	....	18.87	17.72	....	18.18	19.67
9	....	17.23	17.57	....	19.08	....	....	18.89	17.50	....	18.29	19.78
10	17.14	17.27	18.10	18.29	....	....	....	18.28	17.76	....	18.10	19.17
11	17.14	17.35	18.14	18.95	....	....	19.12	17.91	18.10	18.10	17.68	19.61
12	17.02	17.30	18.11	19.65	....	....	19.26	18.01	18.23	17.70	17.72	19.52
13	16.97	17.50	18.00	19.65	....	....	19.31	18.09	18.51	17.92	17.56	19.77
14	16.96	17.10	18.10	19.40	....	....	18.80	18.01	18.36	....	17.70	19.10
15	17.50	15.60	17.93	23.68	....	....	18.80	18.10	18.40	....	17.70	19.35
16	17.22	16.12	17.95	24.55	....	....	26.38	18.08	18.30	....	17.68	19.30
17	17.70	16.52	18.27	19.05	....	....	19.53	18.02	18.48	....	17.92	19.47
18	17.12	16.62	18.28	....	....	....	19.38	18.10	18.58	18.39	17.92	19.47
19	16.98	16.32	17.48	....	....	....	19.17	18.03	....	18.30	17.75	19.40
20	17.30	16.77	17.40	....	....	17.21	18.51	18.04	18.88	18.00	17.55	19.53
21	16.92	16.63	18.07	18.90	....	17.60	17.80	18.06	18.61	18.00	17.49	18.79
22	17.30	17.20	18.05	18.60	....	18.00	18.30	18.10	18.59	18.07	18.60	19.20
23	17.38	16.68	17.77	19.08	....	18.29	18.07	18.12	....	17.99	18.52	18.85
24	16.65	17.19	17.80	19.43	....	18.52	18.11	....	....	17.91	18.20	19.00
25	16.37	17.10	....	19.69	....	18.71	18.13	....	....	17.67	25.20	18.81
26	16.17	16.80	17.80	19.50	....	18.78	18.01	....	....	18.50	19.02	18.91
27	16.32	17.30	18.14	19.61	....	18.87	17.77	....	....	18.86	18.32	19.30
28	16.27	17.30	18.00	19.41	....	....	17.80	....	....	18.86	18.62	19.30
29	16.54	....	....	....	....	19.13	17.78	....	....	19.00	19.29	19.39
30	16.29	....	....	....	....	18.47	17.70	18.38	....	19.05	18.91	19.17
31	17.03	....	17.80	....	....	....	17.90	18.26	....	18.89	....	19.50

Mercer County

Mr-1 (\*1071, p. 371). S. O. Self. Along State Highway 707, about 4 miles southwest of Rockford.

Lowest daily water level, in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	10.88	10.78	10.50	10.52	10.03	9.74	9.75	9.80	9.85	9.87	9.65	9.62
2	10.66	10.81	10.44	10.53	9.95	9.66	....	9.75	9.77	9.80	9.67	9.59
3	10.80	10.76	10.50	10.55	10.01	9.76	9.82	9.79	9.78	9.80	9.61	9.57
4	10.82	10.61	10.54	10.52	10.00	9.74	9.85	9.81	9.80	9.80	9.56	9.61
5	10.77	10.59	10.57	10.38	10.05	9.66	9.82	9.81	9.75	9.80	9.52	9.47

Mr-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1947												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
6	10.73	10.56	10.57	10.50	10.05	9.68	9.77	9.81	9.72	9.81	9.60	9.53
7	10.72	10.56	10.57	10.59	10.07	9.57	9.82	9.82	9.78	9.82	9.55	9.46
8	10.75	10.60	10.53	10.54	10.05	9.56	9.85	9.90	9.80	9.80	9.52	9.55
9	10.78	10.61	10.59	10.52	10.05	9.56	9.84	9.87	9.80	9.84	9.66	9.61
10	10.80	10.71	10.60	10.47	10.05	9.56	9.77	9.91	9.80	9.83	9.66	9.57
11	10.66	10.76	10.60	10.36	10.05	9.68	....	9.93	9.82	9.81	9.59	9.54
12	10.77	10.76	10.59	10.53	10.00	9.70	....	9.94	9.81	9.83	9.63	9.55
13	10.77	10.66	10.51	10.51	9.93	9.63	....	9.92	9.75	9.82	9.67	9.53
14	10.75	10.62	10.50	10.40	9.94	9.62	....	9.90	9.78	9.81	9.69	9.47
15	10.77	10.58	10.50	10.42	9.94	9.67	....	9.83	9.79	9.78	9.54	9.42
16	10.89	10.59	10.46	10.30	9.90	9.72	9.65	9.75	9.84	9.77	9.59	9.44
17	10.89	10.59	10.53	10.29	9.88	9.68	9.66	9.75	9.88	9.76	9.64	9.45
18	10.85	10.61	10.58	10.30	9.84	9.70	9.63	9.75	9.91	9.73	9.64	9.46
19	10.81	10.61	10.58	10.33	9.82	9.71	9.68	9.74	9.87	9.67	9.60	9.51
20	10.62	10.60	10.53	10.23	9.87	9.75	9.63	9.75	9.84	9.72	9.63	9.51
21	10.81	10.55	10.54	10.28	9.76	9.75	9.66	9.77	9.80	9.72	9.64	9.46
22	10.86	10.54	10.61	10.31	9.86	9.73	9.68	9.79	9.82	9.73	9.57	9.44
23	10.79	10.46	10.48	10.22	9.82	9.73	9.74	9.79	9.82	9.76	9.57	9.51
24	10.66	10.45	10.42	10.28	9.81	9.69	9.79	9.80	9.78	9.77	9.44	9.52
25	10.71	10.51	10.43	10.23	9.79	9.65	9.82	9.80	9.87	9.75	9.50	9.47
26	10.68	10.55	10.53	10.20	9.79	9.65	9.77	9.81	9.91	9.76	9.55	9.43
27	10.68	10.55	10.53	10.25	9.80	9.64	9.66	9.84	9.91	9.70	9.55	9.43
28	10.78	10.54	10.50	10.23	9.71	9.67	9.71	9.84	9.85	9.62	9.54	9.46
29	10.71		10.54	10.16	9.76	9.72	9.74	9.89	9.85	9.59	9.64	9.46
30	10.56		10.59	10.03	9.79	9.75	9.72	9.85	9.87	9.63	9.68	9.39
31	10.78		10.56		9.80		9.73	9.87		9.64		9.41

Miami County

Mi-1 (\*1071, p. 372). Troy Sunshade Co. At Troy, in factory.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	13.86	11.10	11.74	12.62	10.31	8.00	10.40	10.23	.....	12.58	13.40	13.54
2	13.74	10.45	11.10	12.52	10.20	8.67	10.56	10.00	.....	12.43	12.07	13.55
3	13.78	10.67	11.58	12.44	9.83	9.08	10.63	9.50	.....	12.41	12.91	13.63
4	13.68	10.83	11.80	12.45	9.10	9.30	10.15	9.95	.....	12.15	13.21	13.77
5	12.92	10.87	11.91	12.25	9.75	9.54	9.39	10.10	.....	11.36	13.35	13.84
6	13.12	10.87	12.08	11.26	9.74	9.56	9.19	10.17	.....	11.98	13.45	13.66
7	13.30	11.02	12.17	12.10	10.07	9.00	10.30	10.22	.....	12.25	13.53	12.98
8	13.37	10.68	12.04	12.51	10.20	7.62	10.60	10.20	11.51	12.36	13.27	13.53
9	13.40	10.88	11.37	12.48	10.32	8.73	10.72	10.20	11.27	12.71	12.36	13.91
10	13.41	.....	11.90	12.53	9.97	9.27	10.68	9.91	11.95	12.87	13.07	13.83
11	13.30	11.06	12.10	12.07	9.36	9.54	10.82	10.88	12.18	12.60	13.31	13.89
12	12.58	11.07	12.20	12.26	10.03	9.74	10.05	11.23	12.18	11.57	13.46	13.97
13	12.95	11.22	12.27	11.26	.....	9.91	9.51	11.92	11.85	12.62	13.54	13.76
14	13.12	11.30	12.40	12.00	10.32	9.90	10.43	11.58	10.57	12.85	13.62	13.10
15	13.43	11.16	12.37	12.25	10.43	8.80	10.53	11.60	11.75	13.00	13.34	13.67
16	13.54	10.52	11.73	12.22	10.50	9.87	10.63	11.26	12.05	13.12	12.44	13.90
17	13.62	11.01	12.08	12.23	10.12	9.20	10.24	10.27	12.25	13.22	13.23	14.00
18	13.47	11.27	12.30	12.21	8.76	9.42	11.00	11.25	12.38	12.95	13.46	14.06
19	12.60	11.40	12.43	11.87	9.21	9.56	10.30	.....	12.47	11.86	13.61	14.13
20	12.72	11.46	12.50	10.75	9.46	9.70	9.45	.....	12.12	12.78	13.69	13.96
21	12.86	11.52	12.57	11.45	9.34	9.16	10.39	11.77	11.05	13.10	13.74	12.93
22	12.85	11.46	12.62	.....	9.00	8.42	10.60	.....	12.05	13.24	13.53	13.70
23	12.76	10.82	11.82	.....	9.17	9.62	10.93	.....	.....	13.33	12.70	13.97
24	12.77	11.22	12.14	.....	8.80	9.94	11.06	11.57	12.33	13.42	13.28	13.80
25	12.66	11.51	.....	.....	7.80	10.10	11.15	11.94	12.47	13.16	13.48	13.00
26	11.62	11.64	12.73	.....	8.80	10.22	10.92	11.51	12.59	12.10	13.60	13.02
27	12.17	11.73	12.76	.....	9.06	10.39	9.83	11.52	12.35	12.83	13.42	12.93
28	12.17	11.80	12.68	.....	9.30	9.80	10.08	11.45	11.21	13.07	13.45	12.50
29	12.17		12.66	10.51	9.40	9.02	10.88	11.10	12.17	13.26	13.25	13.07
30	12.04		11.92	10.52	8.92	10.06	10.45	10.45	12.46	13.36	12.65	13.50
31	11.45		12.42		8.37		10.25	10.33		13.45		13.43

Montgomery County

Mt-1 (\*944, p. 190; 986, p. 265; 1016, p. 307; 1023, p. 314; 1071, p. 372). City of Dayton water department. In Rohrer's Island well field.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
1	6.60	8.75	8.35	11.31	6.96	5.38	6.37	10.15	8.70	7.98
2	6.70	9.82	9.64	11.66	7.20	5.24	....	10.40	8.80	8.46
3	6.42	9.85	10.13	10.92	7.53	1.10	....	10.40	9.19	8.50
4	7.80	6.10	10.86	10.18	7.73	2.62	....	10.62	9.70	8.43
5	9.27	4.71	11.34	9.81	4.54	3.50	....	7.50	9.88	8.45
6	....	4.72	12.23	9.63	4.12	3.06	....	5.45	9.28	8.60
7	....	4.74	12.07	8.34	6.05	3.01	....	3.96	9.27	9.66
8	9.02	4.90	10.43	....	6.77	2.21	....	3.66	10.46	....
9	9.40	5.23	10.39	11.18	6.38	4.78	5.35	2.17	10.61	....
10	9.70	5.00	10.45	11.45	5.81	5.55	5.41	1.85	8.74	....
11	....	4.60	9.87	10.67	5.94	5.48	4.15	3.10	7.54	....
12	....	5.18	7.52	10.67	5.27	5.98	4.32	3.80	8.13	....
13	....	5.20	7.73	10.35	5.32	5.87	5.63	5.00	9.41	....
14	4.94	5.15	7.02	10.90	6.24	5.52	5.62	4.77	9.50	....
15	....	5.59	5.60	....	6.67	4.03	4.86	4.40	8.42	....
16	8.72	5.84	4.96	....	7.38	4.61	....	3.20	8.43	....
17	9.44	6.00	5.60	12.30	7.15	5.58	....	2.93	8.95	....
18	6.75	5.60	6.37	13.22	6.36	5.63	....	4.53	9.46	....
19	4.35	....	6.87	13.14	8.12	6.46	....	3.67	9.35	....
20	6.35	6.26	7.56	10.80	8.24	6.84	....	4.60	9.64	....
21	8.65	6.70	6.85	9.59	7.23	6.05	....	6.99	9.50	....
22	9.63	6.67	4.86	6.20	7.65	5.71	....	7.97	7.54	....
23	9.60	6.70	5.05	7.66	7.36	4.70	6.12	8.68	6.10	....
24	9.05	6.68	5.07	7.89	6.42	5.54	7.15	8.75	6.74	....
25	9.02	6.37	6.32	6.92	6.01	6.10	8.15	8.97	7.60	....
26	7.45	6.34	9.15	6.87	5.49	6.69	8.15	8.30	7.52	....
27	5.55	6.58	9.85	7.75	5.21	6.74	7.70	8.66	6.68	....
28	6.82	7.13	11.45	7.35	5.51	6.52	6.92	9.09	5.74	....
29	7.35	....	11.78	6.80	5.58	5.77	8.45	9.01	6.32	....
30	9.42	....	11.28	7.05	5.58	5.79	9.42	9.00	7.04	....
31	8.82	....	10.59	....	5.47	....	9.87	8.64	....	....

Mt-2 (\*944, p. 191; 986, p. 265; 1016, p. 308; 1023, p. 315; 1071, p. 373). Dayton Power & Light Co. In Dayton, at steam distribution plant, 118 Fourth St.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	26.74	25.29	25.46	25.52	24.60	23.92	25.28	26.57	27.21	27.60	28.55	27.70
2	26.64	25.05	25.40	25.60	24.55	23.78	25.44	26.75	27.15	27.56	28.45	27.82
3	26.70	24.72	25.35	25.62	24.44	23.72	25.55	26.68	27.32	27.52	28.20	27.94
4	26.66	24.61	25.46	25.64	24.14	23.48	25.54	26.71	27.45	27.96	28.25	28.04
5	26.48	24.56	25.57	....	23.94	23.15	25.35	26.91	27.55	....	28.32	28.12
6	26.29	24.55	25.65	....	24.01	23.15	25.26	27.07	27.63	....	28.37	28.16
7	26.31	24.62	25.68	....	24.09	23.13	25.21	27.24	27.58	....	28.36	28.13
8	26.34	24.61	25.69	....	24.15	23.02	25.35	27.32	27.55	....	28.34	28.06
9	26.35	25.52	25.63	....	24.17	22.85	25.47	27.47	27.73	....	28.23	28.10
10	26.37	24.55	25.62	....	24.16	23.05	25.46	27.39	27.90	27.96	28.05	28.15
11	26.35	24.63	25.71	25.64	24.12	23.27	25.77	27.58	28.08	....	28.10	28.20
12	26.26	24.69	25.75	25.68	24.07	23.45	25.80	27.53	28.24	....	28.10	28.28
13	26.20	24.77	25.71	25.62	24.22	23.65	25.77	27.68	28.32	....	28.10	28.25
14	26.32	24.82	25.77	25.48	24.38	23.77	25.82	27.85	28.22	....	28.12	28.20
15	26.37	24.85	25.73	25.59	24.53	23.69	26.00	27.95	28.18	....	28.10	28.25
16	26.43	24.80	25.64	25.64	24.72	23.52	26.06	27.99	28.27	....	28.02	28.20
17	26.40	24.77	25.55	25.65	24.85	23.62	26.11	27.87	28.32	28.40	27.83	28.28
18	26.32	24.90	25.62	25.60	24.80	23.78	26.13	27.59	28.42	....	27.90	28.37
19	26.15	24.97	25.67	25.58	24.64	23.90	26.13	27.56	28.52	....	27.97	28.40
20	26.00	25.04	25.72	25.48	24.75	23.98	26.03	27.56	28.57	....	27.05	28.40
21	25.98	25.11	25.77	25.31	24.81	24.07	25.78	27.61	28.50	....	28.10	28.30
22	25.85	25.13	25.78	25.24	24.78	24.00	25.75	27.62	28.27	....	28.10	28.17
23	25.71	25.09	25.75	25.20	24.76	24.02	25.80	27.63	28.22	....	28.00	28.25

a Tape measurement.

## Mt-2--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
24	25.60	25.06	25.66	25.25	24.75	24.27	25.87	27.54	28.20	28.70	27.88	28.27
25	25.52	25.18	25.78	25.26	24.65	24.47	25.92	27.47	28.18	28.70	27.93	28.23
26	25.40	25.29	25.74	25.22	24.37	24.68	25.99	27.52	28.12	28.60	27.98	27.99
27	25.25	25.38	25.71	24.98	24.36	24.90	25.93	27.58	28.07	28.50	27.98	27.95
28	25.28	25.46	25.64	24.66	24.37	25.03	25.99	27.61	27.88	28.55	27.82	27.85
29	25.33		25.62	24.63	24.43	25.02	26.17	27.58	27.65	28.55	27.83	27.86
30	25.35		25.60	24.62	24.40	25.08	26.36	27.56	27.58	28.55	27.75	28.00
31	25.37		25.42		24.07		26.54	27.45		28.59		28.14

Mt-3 (\*1023, p. 315; 1071, p. 374). State Highway Department. In Dayton, 100 feet north of Stewart St., along Miami River.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	42.84	41.85	43.55	43.27	41.68	38.32	41.27	41.64	.....	42.48	43.49	43.67
2	43.06	40.82	43.30	43.43	41.52	38.92	41.46	41.65	40.43	42.52	42.80	44.00
3	43.42	40.72	42.90	43.51	41.04	38.10	41.54	40.15	39.96	42.63	42.67	44.20
4	43.42	41.35	43.07	43.55	40.32	36.26	41.54	39.26	41.27	42.64	43.14	44.40
5	41.80	41.75	43.34	43.55	40.81	37.34	39.86	38.55	41.51	42.47	43.43	44.55
6	42.52	41.98	43.44	43.16	41.37	37.96	38.90	38.06	41.57	42.10	43.60	44.60
7	43.07	42.22	43.48	42.53	41.74	37.97	39.78	37.57	41.35	42.52	43.70	44.60
8	43.36	42.22	43.47	42.83	41.80	37.32	40.51	37.38	41.03	42.81	43.75	44.12
9	43.50	41.81	43.23	43.30	41.85	38.02	40.96	37.44	41.75	43.01	43.40	44.28
10	43.64	41.95	43.12	43.55	41.85	38.81	41.27	36.92	41.85	43.06	43.08	44.44
11	43.64	42.26	43.45	43.75	41.58	39.42	41.45	36.25	42.08	43.06	43.60	44.55
12	43.05	42.52	43.76	43.75	41.78	39.78	41.50	.....	42.23	42.56	43.84	44.64
13	43.22	42.78	43.94	43.42	42.30	40.14	41.38	36.45	42.28	42.40	43.93	44.63
14	43.82	43.01	44.01	42.97	42.58	40.16	41.15	36.90	42.11	42.80	43.94	44.20
15	44.08	43.08	44.01	43.27	42.73	39.80	41.50	36.82	41.47	42.90	.....	43.93
16	44.09	42.79	43.12	43.41	42.87	39.70	41.25	36.19	41.90	43.08	.....	44.13
17	44.00	42.67	43.02	43.41	42.91	40.15	41.09	35.30	42.22	43.19	.....	44.30
18	43.89	42.88	43.30	43.38	42.52	40.48	41.30	37.44	42.43	43.22	.....	44.50
19	43.28	43.07	43.60	43.42	41.27	40.72	41.40	38.58	42.58	42.78	43.78	44.70
20	43.15	43.23	43.79	43.18	41.69	40.88	41.20	40.53	42.62	42.34	43.95	44.73
21	43.16	43.41	43.95	42.76	42.02	40.91	41.46	40.17	42.45	42.80	44.10	44.50
22	42.40	43.26	43.95	42.65	42.03	40.60	41.43	40.50	41.96	43.06	44.15	44.05
23	42.28	42.94	43.60	42.54	41.64	40.37	41.68	40.68	41.28	43.23	44.13	44.30
24	42.63	42.90	43.38	42.84	41.69	40.85	41.70	40.63	43.37	43.35	43.68	44.38
25	42.64	43.12	43.65	42.85	41.34	41.14	41.64	40.57	42.52	43.37	43.95	44.05
26	42.00	43.29	43.44	42.84	40.86	41.37	41.63	40.94	42.55	42.75	44.05	43.17
27	42.39	43.40	43.30	41.67	41.14	41.55	41.34	41.22	42.60	42.68	44.08	42.80
28	42.72	43.54	43.31	41.08	41.42	41.65	40.71	.....	42.39	43.12	43.78	42.25
29	42.94		43.25	41.42	41.66	41.48	41.18	.....	41.95	43.30	43.85	43.36
30	43.24		42.98	41.68	41.67	41.19	41.37	.....	42.30	43.39	43.70	43.95
31	43.22		42.95		39.42		41.55	.....		43.48		44.15

Mt-4 (\*1071, p. 374). U. S. Government powder plant. 5 miles south of Dayton, on Springboro Pike. Measurements discontinued after Aug. 27.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Mar.	Apr.	May	June	July	Aug.
1	2.10	....	1.87	1.22	1.28	1.55	1.82
2	2.08	....	1.87	1.18	1.08	....	1.82
3	1.97	....	1.74	1.25	1.22	....	1.77
4	2.13	....	1.72	1.31	1.24	....	1.77
5	2.15	....	1.63	1.37	1.28	....	1.78
6	2.21	....	1.61	....	1.28	....	1.75
7	2.23	2.04	1.66	1.42	1.21	....	....
8	2.28	2.06	1.65	1.44	1.24	....	....
9	....	2.08	1.66	1.47	1.27	....	....
10	....	2.09	1.67	1.48	1.32	....	....
11	....	2.09	1.64	1.47	1.38	....	....

## Mt-4--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Mar.	Apr.	May	June	July	Aug.
12	....	2.08	1.44	1.45	1.38	....	....
13	....	2.05	1.48	1.43	1.36	....	....
14	....	1.89	1.52	1.39	1.20	....	....
15	....	1.95	1.57	1.40	1.29	....	....
16	....	1.97	1.53	1.38	1.31	....	....
17	....	2.05	1.42	1.38	1.34	....	....
18	....	2.07	1.49	1.24	1.36	....	....
19	....	2.04	1.51	1.25	1.38	....	....
20	....	2.01	1.49	1.27	1.41	....	1.86
21	....	1.98	1.27	1.22	1.44	....	1.86
22	....	2.01	1.36	1.21	1.47	....	1.73
23	....	1.95	1.38	1.27	1.48	1.69	1.80
24	....	....	1.44	1.29	1.48	1.73	1.85
25	....	1.66	1.43	1.22	1.48	1.72	1.87
26	....	1.72	1.24	1.23	1.48	1.71	1.87
27	....	1.75	1.38	1.24	1.46	1.71	2.01
28	....	1.80	1.40	1.21	1.50	1.71	....
29	....	1.81	1.37	1.21	1.53	1.76	....
30	....	1.92	1.26	1.26	1.46	1.75	....
31	....	1.89	....	1.30	....	1.79	....

Mt-5 (#1071, p. 375). Kuhns Bros. Co. In Dayton, in foundry at 1800 McCall St.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	41.43	40.47	39.63	39.92	38.94	36.91	35.39	....	37.13	38.03	39.18	40.16
2	41.41	40.41	39.64	39.93	38.96	36.81	35.43	....	37.17	38.07	39.21	40.20
3	41.37	40.32	39.66	39.99	38.76	36.53	35.46	....	37.18	38.08	39.25	40.23
4	41.32	40.25	39.68	39.97	38.66	36.32	35.50	....	37.21	38.12	39.30	40.25
5	41.28	40.17	39.69	39.97	38.66	36.12	35.53	....	37.22	38.13	39.32	40.30
6	41.25	40.11	39.69	39.97	38.48	35.94	35.55	....	37.25	38.17	39.34	40.32
7	41.22	40.05	39.65	39.97	38.39	35.79	35.61	36.42	....	38.19	39.38	40.34
8	41.19	39.99	39.66	39.94	38.32	35.66	35.65	36.47	37.29	38.24	39.41	40.43
9	41.21	39.94	39.67	39.93	38.22	35.55	35.67	36.51	37.51	38.28	39.44	40.46
10	41.19	39.89	39.69	39.92	38.14	35.45	35.68	36.56	37.35	38.31	39.47	40.49
11	41.16	39.84	39.70	39.89	38.07	35.36	35.67	36.60	37.37	38.34	39.51	40.52
12	41.15	39.80	39.71	39.87	37.99	35.30	35.70	36.64	37.40	38.38	39.55	40.55
13	41.12	39.75	39.78	39.86	37.90	35.20	35.72	36.67	37.44	38.43	....	40.57
14	41.11	39.74	39.81	39.82	....	35.13	35.75	36.71	37.46	38.48	....	40.59
15	41.11	39.71	39.82	39.82	37.85	35.08	35.71	36.75	37.51	38.52	....	40.62
16	41.12	39.67	39.82	39.79	37.82	35.05	35.61	36.77	37.55	38.56	....	40.65
17	41.10	39.64	39.84	39.77	37.68	35.02	35.63	36.78	37.59	38.60	39.73	40.67
18	41.08	39.62	39.85	39.74	37.65	35.01	35.65	36.82	37.62	38.65	39.76	40.70
19	41.05	39.62	39.86	39.72	....	35.06	....	36.84	37.65	38.70	39.79	40.73
20	41.04	39.59	39.86	39.72	....	35.07	....	36.85	37.68	38.74	39.83	40.75
21	41.02	39.60	39.85	39.66	....	35.08	....	36.88	37.73	38.82	39.86	40.77
22	40.97	39.60	39.86	39.61	37.59	35.09	....	36.90	37.76	38.81	39.89	40.77
23	40.92	39.58	39.86	39.56	37.51	35.10	....	36.93	37.79	38.86	39.91	40.80
24	40.88	39.59	39.87	39.53	37.48	35.12	....	36.95	37.81	38.90	39.95	40.81
25	40.85	39.61	39.88	39.49	37.42	35.13	....	36.97	37.85	38.94	39.99	40.80
26	40.80	39.61	39.89	39.44	37.35	35.17	....	36.99	37.90	38.96	40.01	40.84
27	40.76	39.62	39.96	39.32	37.28	35.21	....	37.02	37.92	38.00	40.04	40.84
28	40.73	39.63	39.96	39.24	37.19	35.26	....	37.05	37.93	39.02	40.08	40.86
29	40.66	....	39.95	39.15	37.11	35.32	....	37.08	37.98	39.07	40.11	40.88
30	40.64	....	39.95	39.05	37.07	35.34	....	37.11	38.02	39.12	40.13	40.90
31	40.55	....	39.93	36.99	....	....	....	37.12	....	39.15	....	40.92

Mt-6 (#1071, p. 376). City of Dayton. In Dayton, at Third and Ludlow Sts., in municipal building.



## Mt-6--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	.....	.....	.....	27.06	29.63	30.90	29.40	29.70	29.95	30.05
2	.....	.....	.....	a26.89	.....	26.94	29.70	30.80	31.21	29.67	29.80	30.20
3	.....	.....	.....	.....	.....	26.88	29.75	29.16	31.58	29.71	29.70	30.32
4	a28.26	.....	.....	.....	.....	.....	28.28	30.92	31.68	30.04	.....	30.41
5	.....	.....	a27.75	.....	.....	.....	29.54	31.30	31.82	29.70	.....	30.50
6	.....	.....	.....	.....	.....	.....	28.62	31.60	31.90	30.05	.....	30.60
7	.....	.....	.....	.....	a26.00	.....	28.93	31.75	30.22	30.27	.....	30.40
8	a27.81	.....	.....	.....	.....	.....	29.47	31.90	31.78	30.39	.....	30.30
9	.....	.....	.....	a27.23	.....	.....	29.40	31.90	32.09	30.17	.....	30.22
10	.....	.....	.....	.....	.....	.....	28.22	30.20	31.95	30.21	.....	30.23
11	.....	a25.89	.....	.....	.....	.....	29.95	31.70	.....	30.30	.....	30.29
12	.....	.....	a27.41	.....	.....	27.67	30.08	31.98	.....	30.21	.....	30.30
13	.....	.....	.....	.....	.....	27.97	28.25	32.18	.....	30.59	.....	30.33
14	.....	.....	.....	.....	.....	27.74	29.98	32.30	.....	31.15	.....	30.20
15	a27.52	.....	.....	.....	.....	26.15	30.09	32.28	.....	30.60	.....	30.30
16	.....	.....	.....	a26.28	.....	27.07	29.95	32.30	.....	30.90	.....	30.22
17	.....	.....	.....	.....	.....	27.71	29.97	31.15	30.83	30.90	.....	30.33
18	.....	.....	a27.35	.....	.....	27.65	30.03	31.40	32.39	31.03	.....	30.45
19	.....	.....	.....	.....	.....	27.95	29.37	31.43	32.73	30.68	30.11	30.50
20	.....	.....	.....	.....	.....	26.98	28.02	31.53	32.83	30.38	30.22	30.51
21	.....	.....	.....	.....	.....	26.77	29.34	.....	31.22	30.70	30.30	30.38
22	.....	.....	.....	.....	.....	26.55	29.17	.....	30.59	30.50	30.17	30.21
23	.....	.....	.....	a25.75	.....	28.75	29.37	.....	30.35	30.53	30.09	30.30
24	a26.91	.....	.....	.....	a25.79	29.00	29.92	.....	30.26	30.50	30.10	30.30
25	.....	.....	a27.15	.....	.....	28.93	30.10	.....	30.25	30.53	30.00	30.20
26	.....	.....	.....	.....	.....	29.23	30.13	.....	30.19	30.48	30.07	30.17
27	.....	a27.48	.....	.....	.....	29.50	28.50	31.68	30.04	30.32	.....	30.20
28	.....	.....	.....	.....	.....	29.62	30.20	31.83	29.90	30.29	.....	30.02
29	.....	.....	.....	.....	.....	29.04	30.43	31.76	29.82	30.25	.....	.....
30	.....	.....	.....	a25.39	27.42	29.58	30.65	31.80	29.63	29.80	.....	30.18
31	a25.92	.....	.....	.....	27.08	.....	30.80	30.00	.....	29.80	.....	30.30

a Tape measurement.

Mt-7 (\*1071, n. 376). Mrs. Augusta Rich. In Dayton. Measurements discontinued after Aug. 6.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	36.85	Mar. 5	34.93	Apr. 30	34.42	June 18	29.49
15	36.87	12	35.01	May 7	33.70	25	29.77
24	36.79	18	35.09	24	32.45	July 9	30.24
31	36.55	Apr. 1	35.22	28	33.53	21	30.39
Feb. 11	36.28	9	35.28	June 4	30.61	30	30.59
27	35.24	17	35.37	11	29.48	Aug. 6	28.90
	34.90	23	35.25				

Mt-8 (\*1071, p. 376). Advance Laundry. In Dayton.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	23.75	Apr. 9	23.59	July 9	22.20	Oct. 22	21.19
9	23.72	22	23.59	21	23.09	28	21.23
15	23.60	28	23.26	30	22.70	Nov. 5	21.28
24	23.54	May 1	23.06	Aug. 13	22.74	12	21.32
31	23.50	8	22.69	26	20.65	19	21.35
Feb. 12	23.18	16	22.48	Sept. 2	20.69	26	21.40
27	23.30	26	22.31	9	20.77	Dec. 3	21.44
Mar. 6	23.39	29	22.12	16	20.89	10	21.45
13	23.53	June 4	21.68	23	20.89	18	21.50
18	23.57	11	21.33	Oct. 1	20.95	24	21.53
28	23.67	18	21.68	8	21.00	31	21.55
Apr. 1	23.67	26	22.55	15	21.12		

Mt-9 (\*1071, p. 376). City of Oakwood. In Oakwood, at Brown and Irving Sts. Measurements discontinued after July 30.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	39.33	Mar. 3	41.61	Apr. 28	39.87	June 11	38.68
9	39.84	13	42.09	May 1	39.56	18	37.47
15	39.90	19	39.76	8	39.47	26	36.33
24	41.16	28	39.90	16	39.20	July 9	39.86
31	42.61	Apr. 1	39.80	20	39.21	21	35.53
Feb. 12	39.94	10	39.82	29	38.74	30	34.79
27	39.82	22	39.95	June 4	37.87		

Mt-11 (\*1071, p. 377). H. C. Huber. In Dayton, at Avonway and Canterbury Sts. Measurements discontinued after July 30.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	53.93	Mar. 19	54.02	Apr. 20	53.84	June 11	53.24
9	54.16	28	54.19	May 7	54.07	18	52.98
15	54.17	Apr. 2	54.14	14	53.89	26	52.54
Feb. 27	54.28	10	54.10	24	53.73	July 10	53.90
Mar. 10	54.25	22	54.21	28	53.57	21	53.81
13	54.15	28	54.17	June 4	53.59	30	53.96

Mt-12 (\*1071, p. 377). Hewitt Soap Co. In Dayton, at 333 Linden St. Measurements discontinued after July 30.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	22.47	Mar. 6	21.24	Apr. 22	21.43	May 29	19.38
9	21.96	13	21.04	28	20.79	June 4	18.58
15	21.13	18	21.43	May 1	20.96	11	17.23
24	21.87	28	21.65	8	20.51	July 9	15.98
31	21.07	Apr. 1	21.44	16	20.15	21	17.66
Feb. 12	21.18	9	21.38	26	19.01	30	16.49
21	21.33						

Mt-13 (\*1071, p. 377). Northridge Ice Station. In Dayton. Measurements discontinued after Aug. 6.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	11.24	Mar. 5	10.78	Apr. 23	8.52	June 11	7.00
9	10.88	12	10.96	30	8.00	18	7.83
15	11.00	18	10.96	May 7	7.85	25	8.75
24	10.01	25	10.89	14	8.47	July 9	9.03
31	9.53	Apr. 1	10.48	24	7.95	21	8.96
Feb. 11	9.67	9	9.93	28	7.56	30	9.94
27	10.54	17	9.55	June 3	6.14	Aug. 6	9.72

Mt-14 (\*1071, p. 378). Turner Quality Cleaners. In Dayton. Measurements discontinued after July 30.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	8.81	Mar. 6	11.10	Apr. 24	8.17	June 10	8.69
9	9.63	12	11.24	30	7.56	17	8.45
16	8.91	19	10.71	May 7	8.79	26	10.56
25	8.54	28	9.68	16	9.07	July 10	8.67
Feb. 1	8.47	Apr. 2	9.90	24	8.58	21	8.99
12	10.04	10	9.57	28	8.57	30	10.44
27	10.74	19	8.85	June 4	8.12		

Mt-15 (\*1071, p. 378). George Boedeker. In Dayton. Measurements discontinued after Aug. 6.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	26.40	Mar. 5	24.05	Apr. 23	23.79	June 11	17.59
9	25.93	12	24.57	30	22.39	18	18.04
15	25.76	18	25.06	May 7	21.41	25	18.88
24	25.35	25	25.15	14	21.36	July 9	20.32
31	24.56	Apr. 1	25.03	24	20.83	21	20.67
Feb. 12	23.50	9	24.89	28	20.18	30	21.23
27	23.69	17	24.60	June 4	18.32	Aug. 6	21.85

Mt-16 (\*1C71, p. 378). Geo. Handwerker. In Harrison Township.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	21.58	Apr. 9	19.56	June 25	16.78	Sept. 4	18.90
9	21.15	17	19.39	July 9	17.57	7	18.90
15	21.10	23	18.57	21	17.86	11	18.92
24	20.22	30	17.58	30	18.32	14	18.93
31	19.66	May 7	17.10	Aug. 6	18.74	19	18.45
Feb. 11	18.73	14	17.39	13	19.09	24	19.25
27	18.25	24	17.05	20	18.83	28	19.40
Mar. 5	19.69	28	16.52	21	19.75	Oct. 1	20.70
12	19.78	June 3	15.08	24	18.80	Nov. 1	20.30
18	19.91	11	15.54	28	18.90	7	20.50
25	19.94	18	16.15	31	18.82	14	20.50
Apr. 1	19.72						

Mt-17 (\*1071, p. 378). R. Kelley. In Mad River Township, at 3820 Xenia Pike. Measurements discontinued after July 30.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	19.36	Mar. 5	19.67	Apr. 28	16.03	June 11	14.16
9	19.47	12	20.10	30	15.60	18	14.84
15	19.18	18	20.38	May 7	15.44	26	15.40
24	19.18	28	20.59	14	16.05	July 9	17.48
31	18.03	Apr. 1	20.48	24	15.04	21	17.95
Feb. 12	17.79	9	20.46	28	13.79	30	16.72
27	19.31	22	19.04	June 4	12.92		

Mt-20 (\*1071, p. 379). Ford Service Station. In Harrison Township. Measurements discontinued after Aug. 6.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	25.08	Mar. 5	23.60	Apr. 23	21.87	June 11	21.95
9	25.20	12	24.62	30	21.30	18	22.68
15	23.19	18	24.76	May 7	21.97	25	25.45
24	25.30	25	23.81	14	22.42	July 9	24.02
31	23.28	Apr. 1	23.80	24	25.07	21	23.62
Feb. 11	23.34	9	25.78	28	22.48	30	24.29
27	23.41	17	23.11	June 3	22.30	Aug. 6	22.47

Mt-22 (\*1071, p. 379). C. F. Weckesser. In Dayton, at 635 Shantz Ave. Measurements discontinued after Apr. 1.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	3.31	Jan. 14	3.32	Feb. 27	3.50	Mar. 19	3.47
9	3.39	31	3.31	Mar. 6	3.48	28	3.40
15	3.36	Feb. 12	3.48	13	3.43	Apr. 1	3.44

Mt-23 (\*1071, p. 379). R. H. Hamiel. In Mad River Township. Measurements discontinued after Aug. 6.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	15.10	Mar. 5	17.92	Apr. 23	13.31	June 11	15.06
9	15.94	12	18.08	30	13.83	18	17.03
15	15.27	18	17.55	May 7	14.10	25	18.39
24	14.99	25	17.09	14	16.15	July 9	18.77
31	13.81	Apr. 1	15.77	24	14.21	21	17.02
Feb. 11	16.33	9	15.37	28	14.53	30	17.91
27	17.80	17	14.54	June 3	10.13	Aug. 6	19.74

Mt-24 (\*1071, p. 379). M. E. Lehman. In Wayne Township. Measurements discontinued after Aug. 13.

## Mt-24--Continued.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	24.08	Mar. 12	22.67	Apr. 30	18.73	June 18	14.99
9	24.19	18	22.98	May 7	15.77	25	16.65
15	23.99	25	23.08	14	16.06	July 9	12.85
24	23.75	Apr. 1	23.32	24	13.83	21	14.78
31	23.33	9	22.81	28	11.78	30	20.66
Feb. 11	22.60	17	22.35	June 4	10.19	Aug. 6	20.49
27	22.49	23	21.52	11	10.93	13	20.69
Mar. 5	22.58						

Mt-26 (\*1071, p. 380). John Colvard. In Van Buren Township. Measurements discontinued after Apr. 2.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	32.07	Jan. 24	32.92	Feb. 27	32.82	Mar. 19	32.77
9	32.95	31	32.91	Mar. 3	32.78	28	32.79
15	32.90	Feb. 12	32.91	13	32.78	Apr. 2	32.80

Mt-27 (\*1071, p. 380). City of Dayton. In Van Buren Township, at Staley farm. Measurements discontinued after July 30.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	16.37	Mar. 6	16.36	Apr. 17	15.68	May 28	12.66
9	16.45	12	16.53	23	14.97	June 4	9.16
15	16.27	19	16.47	30	13.91	10	10.22
25	15.57	28	16.08	May 7	13.35	18	11.31
31	15.35	Apr. 2	16.12	14	13.96	26	12.29
Feb. 12	15.26	10	15.86	21	13.53	July 30	13.20
27	16.13						

Mt-28 (\*1071, p. 380). Weston Afflerbach. In Butler Township. Measurements discontinued after Aug. 6.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	5.58	Mar. 5	8.08	Apr. 23	5.80	June 11	6.68
9	6.97	12	7.77	30	5.66	18	7.44
15	7.03	18	7.52	May 7	6.84	25	7.40
24	7.34	25	6.67	16	7.27	July 9	6.65
31	5.38	Apr. 1	6.73	24	6.96	21	7.70
Feb. 11	7.38	9	6.31	28	6.69	30	7.68
27	7.69	17	5.73	June 3	7.05	Aug. 6	7.98

Mt-30 (\*1071, p. 380). Henry Saunders. In Van Buren Township. Measurements discontinued after July 30.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	23.25	Mar. 6	22.41	Apr. 28	18.33	June 11	16.95
9	23.33	12	22.65	30	18.11	18	17.94
15	22.40	18	22.72	May 7	18.92	26	18.43
24	21.40	28	22.44	14	19.60	July 10	18.97
31	21.37	Apr. 1	22.38	24	18.03	21	18.56
Feb. 12	21.37	9	22.38	28	16.44	30	18.77
27	21.11	22	18.81	June 4	15.11		

Mt-31 (\*1071, p. 381). H. R. Von Niede. In Washington Township. Measurements discontinued after July 30.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	10.75	Mar. 6	8.85	Apr. 22	2.75	June 11	5.54
9	10.75	13	8.85	30	2.78	18	5.68
15	10.30	19	8.94	May 7	4.34	26	6.76
24	9.14	28	7.25	24	4.00	July 10	7.08
31	9.08	Apr. 2	7.52	28	3.91	21	7.05
Feb. 12	8.12	10	7.18	June 4	3.50	30	7.55
27	8.60						

Mt-32 (\*1071, p. 381). A. D. Fergusson. In Jackson Township. Measurements discontinued after Oct. 8.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	17.87	Mar. 28	15.60	June 4	7.13	Sept. 3	16.96
9	18.06	Apr. 2	15.25	10	9.65	9	17.07
16	16.06	10	15.73	17	11.78	13	17.37
25	15.97	19	10.37	26	13.78	16	17.60
Feb. 1	15.75	24	9.21	July 10	9.43	20	17.70
12	15.46	30	7.87	21	11.49	23	17.87
27	16.70	May 7	10.23	30	15.42	26	17.90
Mar. 6	17.25	16	10.83	Aug. 16	16.88	29	18.08
12	17.71	24	9.54	28	16.63	Oct. 2	18.18
19	17.19	28	8.68	30	16.76	8	18.49

Mt-33 (\*1071, p. 381). Hochwalt. In Miami Township. Measurements discontinued after July 30.

Water level, in feet below land-surface datum, 1947								
Jan. 4	18.90	Mar.	6	17.64	Apr. 23	16.74	June 11	11.16
9	18.85		12	17.75	30	15.63	18	11.57
15	18.73		19	17.85	May 7	14.96	26	12.04
25	18.30		28	17.81		14	14.86	July 10
31	18.17		Apr.	2	17.85	21	14.47	21
Feb. 12	17.24	10		17.89	28	13.36	30	12.73
27	17.46	17		17.50	June 4	11.01		

Mt-34 (\*1071, p. 381). J. R. Baker. In Jefferson Township.

Water level, in feet below land-surface datum, 1947							
Jan. 4	0.67	Jan. 25	0.62	Feb. 27	1.63	Mar. 19	0.70
9	1.03	31	.24	Mar. 6	1.39	28	.63
15	.65	Feb. 12	1.09	12	1.11	Apr. 2	.70

Mt-35 (\*1071, p. 381). Montgomery County Infirmary. In Jefferson Township in sec. 2.

Water level, in feet below land-surface datum, 1947 (From recorder charts)												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	.....	.....	.....	.....	.....	.....	10.13	10.91	11.14	10.94
2	.....	.....	.....	a10.17	.....	.....	.....	.....	10.34	10.96	11.23	10.94
3	.....	.....	.....	.....	.....	.....	.....	.....	10.48	10.94	11.12	11.06
4	a10.30	.....	.....	.....	.....	a8.40	.....	.....	10.55	10.97	11.15	11.07
5	.....	.....	.....	.....	.....	.....	.....	.....	10.58	11.06	11.13	10.88
6	.....	.....	a11.49	.....	.....	.....	.....	.....	10.38	11.08	11.08	11.05
7	.....	.....	.....	.....	a9.25	.....	.....	.....	10.48	11.11	10.90	10.89
8	.....	.....	.....	.....	.....	.....	.....	.....	10.43	11.08	11.15	10.74
9	a10.73	.....	.....	.....	.....	.....	.....	.....	10.49	11.17	11.28	11.09
10	.....	.....	.....	a10.11	.....	a8.89	a7.91	.....	10.57	11.12	11.32	10.81
11	.....	.....	.....	.....	.....	.....	.....	.....	10.61	11.14	11.28	10.93
12	.....	a10.71	a11.62	.....	.....	.....	.....	.....	10.64	11.17	11.23	10.98
13	.....	.....	.....	.....	.....	.....	.....	11.70	10.57	.....	11.22	10.95
14	.....	.....	.....	.....	.....	.....	.....	.....	10.59	11.23	11.24	10.89
15	.....	.....	.....	.....	.....	.....	.....	.....	10.58	11.29	11.27	10.74
16	a10.00	.....	.....	.....	a9.41	.....	.....	.....	10.72	11.31	11.26	10.72
17	.....	.....	.....	.....	.....	.....	.....	.....	10.89	11.33	11.11	10.86
18	.....	.....	.....	.....	.....	a10.06	.....	.....	10.93	11.29	11.13	10.87
19	.....	.....	a11.20	.....	.....	.....	.....	.....	10.89	11.34	11.15	10.89
20	.....	.....	.....	.....	.....	.....	.....	.....	10.88	11.42	11.19	10.92
21	.....	.....	.....	.....	a8.28	.....	a9.77	9.79	10.84	11.12	11.25	10.87
22	.....	.....	.....	a8.33	.....	.....	.....	9.83	10.60	11.39	11.14	10.84
23	.....	.....	.....	.....	.....	.....	.....	9.89	10.57	11.37	10.96	10.81
24	.....	.....	.....	a8.66	.....	.....	.....	9.94	10.54	11.42	10.69	11.03
25	a9.37	.....	.....	.....	.....	.....	.....	10.01	10.69	11.54	10.64	10.89
26	.....	.....	.....	.....	.....	a10.75	.....	10.15	10.78	11.52	10.84	10.86
27	.....	a11.28	.....	.....	.....	.....	.....	10.24	10.86	11.31	10.89	10.92
28	.....	.....	a10.07	.....	a8.58	.....	.....	10.31	10.82	11.25	10.97	11.05
a Tape measurement.												

a Tape measurement.

Mt-35--Continued.

Water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
29	.....	.....	.....	.....	.....	.....	.....	10.39	10.86	10.50	11.08	10.98
30	.....	.....	.....	8.08	.....	.....	all.00	10.42	10.87	10.90	11.13	10.92
31	89.21	.....	.....	.....	.....	.....	.....	10.38	.....	11.10	.....	10.97

a Tape measurement.

Mt-36 (\*1071, p. 382). Wright Field. About 4 miles northeast of Dayton, south of State Highway 4.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	17.83	16.28	18.96	20.34	17.35	15.77	16.90	19.46	18.62	19.42	.....	17.44
2	18.54	16.94	18.70	20.50	17.03	15.62	17.74	19.07	18.62	19.66	.....	18.16
3	18.34	18.12	19.42	20.63	16.37	12.52	.....	18.93	19.15	19.35	.....	.....
4	17.52	18.06	20.02	19.88	16.29	12.06	.....	19.56	19.03	19.18	.....	.....
5	17.68	18.01	19.76	19.65	16.35	12.94	.....	19.45	19.08	19.14	19.50	.....
6	18.60	17.82	19.89	19.65	16.13	13.52	.....	19.22	19.17	19.76	19.98	.....
7	18.91	17.86	20.51	20.29	16.33	13.41	.....	18.64	19.34	10.92	19.71	.....
8	18.65	17.68	19.85	20.26	16.70	13.10	.....	18.18	19.19	19.78	19.27	.....
9	18.31	17.66	19.60	19.98	17.01	13.96	17.20	17.97	19.69	20.03	19.83	.....
10	19.67	18.46	20.27	20.25	16.79	14.83	17.28	17.62	20.08	19.89	19.81	.....
11	19.16	18.60	20.65	19.95	16.71	15.01	17.35	18.11	20.09	19.74	18.93	.....
12	18.60	18.22	20.11	19.80	16.84	15.50	17.09	18.46	20.02	19.39	.....	.....
13	18.81	18.47	19.94	19.64	16.63	16.23	17.09	18.75	19.38	20.32	19.52	.....
14	18.85	18.92	20.15	19.64	16.41	15.56	17.66	18.10	19.15	20.44	19.62	.....
15	18.34	18.45	19.52	19.73	16.25	14.74	17.27	.....	19.31	20.32	19.36	.....
16	18.55	18.34	18.94	20.36	16.52	15.42	17.63	.....	19.89	20.44	19.19	.....
17	17.79	18.86	19.32	19.87	16.63	15.61	.....	.....	19.66	20.54	19.40	.....
18	18.34	18.57	19.48	20.06	16.46	15.77	.....	.....	19.95	20.32	19.56	16.25
19	17.89	18.90	19.24	19.95	16.02	16.08	.....	.....	20.06	.....	19.57	16.82
20	18.20	19.18	19.37	19.84	16.58	16.59	.....	17.12	19.80	.....	19.67	16.48
21	17.41	18.80	19.43	19.69	16.79	16.17	.....	16.94	19.76	.....	19.34	16.33
22	17.70	18.61	19.09	18.90	16.35	16.28	.....	.....	19.50	.....	.....	16.41
23	18.46	18.20	18.70	18.28	15.65	16.72	17.94	.....	19.58	20.79	.....	16.96
24	19.04	18.76	18.60	18.10	15.75	16.49	18.02	.....	19.31	20.81	.....	17.01
25	18.60	19.15	18.53	18.05	15.79	16.69	17.93	18.84	19.61	20.39	.....	.....
26	18.25	18.85	18.47	17.57	15.30	17.30	17.96	18.86	19.30	20.36	.....	16.56
27	18.39	19.02	18.76	16.20	14.98	17.52	17.83	18.43	19.13	20.64	.....	16.58
28	18.61	19.12	19.60	17.12	15.57	17.22	18.22	18.72	18.82	.....	18.43	16.60
29	18.88	.....	19.08	17.17	15.58	16.80	18.19	18.98	19.03	.....	17.92	16.84
30	18.99	.....	19.12	17.22	15.58	17.32	18.85	18.93	19.20	.....	17.76	17.02
31	17.72	.....	20.02	.....	15.75	.....	18.76	18.69	.....	.....	.....	17.18

Mt-37 (\*1071, p. 382). E. Hartzell. In Miami Township. Measurements discontinued after June 26.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	23.25	Feb. 27	21.48	Apr. 10	21.17	May 24	18.83
9	23.54	Mar. 6	21.13	22	21.13	28	18.33
16	23.01	12	21.13	24	21.05	June 4	16.55
24	22.71	19	21.14	30	20.55	10	15.91
Feb. 1	22.65	28	21.22	May 7	19.77	18	15.73
12	21.83	Apr. 2	21.25	16	19.13	26	15.96

Mt-38 (\*1071, p. 383). R. D. Gebhart. In Jefferson Township. Measurements discontinued after May 28.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	7.15	Feb. 12	7.25	Mar. 28	7.37	Apr. 30	4.57
9	7.58	27	7.61	Apr. 2	7.44	May 7	5.61
16	7.24	Mar. 6	7.83	10	7.18	16	5.88
25	7.71	12	7.90	19	6.11	24	5.04
Feb. 1	6.37	19	7.93	24	5.55	28	4.30

Mt-41 (\*1023, p. 316; 1071, p. 383). State Highway Department. At Dayton, along Miami River, about 3,000 ft. north of Stewart St.

Water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	.....	28.94	24.75	.....	25.85	.....	.....	.....	.....	.....
2	31.20	.....	.....	29.09	23.78	22.01	26.14	.....	a27.51	.....	.....	.....
3	30.78	26.65	30.10	28.93	.....	19.10	26.32	.....	a30.00	a31.24	a32.32	.....
4	.....	27.44	30.13	28.47	.....	19.80	.....	.....	.....	.....	.....	.....
5	.....	27.88	30.18	.....	25.27	21.43	.....	.....	.....	.....	.....	.....
6	29.88	28.00	30.23	.....	25.83	22.41	.....	a28.18	.....	.....	.....	.....
7	30.20	28.26	30.27	27.75	26.12	.....	27.07	.....	.....	.....	.....	.....
8	30.40	.....	.....	27.91	26.39	.....	27.11	.....	.....	.....	.....	.....
9	30.67	.....	.....	28.04	26.60	23.24	27.40	.....	.....	.....	.....	.....
10	30.86	28.88	30.31	28.12	.....	23.52	27.20	.....	.....	a31.42	a32.44	.....
11	.....	28.96	30.38	28.57	.....	23.94	27.26	a28.29	.....	.....	.....	.....
12	.....	29.13	30.41	.....	27.12	24.84	.....	a28.72	.....	.....	.....	.....
13	31.28	29.20	30.44	.....	27.28	25.14	.....	.....	a30.68	.....	.....	.....
14	31.41	29.27	30.46	28.42	27.01	.....	27.35	.....	.....	.....	.....	.....
15	31.31	.....	.....	28.62	26.90	.....	27.01	.....	.....	.....	.....	.....
16	30.57	.....	.....	28.68	27.08	25.00	25.30	.....	.....	.....	.....	a33.62
17	29.11	29.43	29.34	28.67	.....	25.14	25.81	.....	.....	.....	.....	.....
18	.....	29.46	29.58	27.10	.....	25.48	26.16	a25.63	.....	.....	.....	.....
19	.....	29.57	29.78	.....	24.92	25.68	.....	.....	.....	a31.69	.....	.....
20	30.01	29.61	29.91	.....	25.52	25.89	.....	.....	a30.92	.....	.....	.....
21	26.76	29.65	30.00	26.28	25.65	.....	26.99	.....	.....	.....	.....	.....
22	26.60	.....	.....	25.31	23.64	.....	27.18	.....	a29.05	.....	.....	.....
23	27.65	.....	.....	25.87	24.06	26.36	27.35	.....	.....	.....	.....	.....
24	28.36	29.82	30.23	26.45	.....	26.47	27.45	.....	.....	.....	a32.73	.....
25	.....	29.88	30.14	26.61	.....	26.52	27.53	.....	.....	.....	.....	.....
26	.....	29.94	28.22	.....	23.89	26.70	.....	.....	.....	a32.13	.....	.....
27	29.13	29.99	28.13	.....	24.21	26.86	.....	.....	a31.15	.....	.....	.....
28	29.04	30.06	28.21	25.25	25.08	.....	.....	.....	.....	.....	.....	.....
29	29.16	.....	.....	.....	25.39	.....	.....	.....	.....	.....	.....	.....
30	29.07	.....	.....	26.12	.....	26.84	.....	.....	.....	.....	.....	.....
31	29.04	.....	28.81	.....	.....	.....	.....	.....	.....	.....	a32.61	.....

a Tape measurement.

Mt-42 (\*1023, p. 317; 1071, p. 384). State Highway Department. At Dayton, on corner of Washington St. and Miami Blvd., along Miami River.

Water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	.....	28.32	25.14	.....	26.64	.....	.....	.....	.....	.....
2	29.30	.....	.....	28.48	22.33	23.38	26.85	.....	29.17	.....	.....	.....
3	28.79	26.86	30.17	28.30	.....	20.26	27.02	.....	.....	30.99	32.02	33.10
4	.....	27.13	30.26	27.85	.....	20.61	.....	28.90	.....	.....	.....	.....
5	.....	27.41	30.33	.....	25.78	21.31	.....	.....	.....	.....	.....	.....
6	28.37	27.50	30.38	.....	26.21	23.03	.....	.....	.....	.....	.....	.....
7	28.89	27.87	30.44	27.22	26.64	.....	27.48	.....	.....	.....	.....	.....
8	29.13	.....	.....	27.41	26.93	.....	27.55	.....	.....	.....	.....	.....
9	29.54	.....	.....	27.55	27.20	23.84	27.68	.....	.....	.....	.....	.....
10	29.69	28.25	30.58	27.61	.....	24.43	27.50	.....	.....	.....	32.36	33.55
11	.....	28.41	30.64	27.94	.....	24.87	27.59	29.31	.....	.....	.....	.....
12	.....	28.53	30.66	.....	27.12	25.33	.....	.....	29.84	.....	.....	.....
13	30.53	28.66	30.73	.....	27.31	25.65	.....	.....	.....	31.46	.....	.....
14	30.70	28.79	30.75	28.26	27.23	.....	27.84	.....	.....	.....	.....	.....
15	30.86	.....	.....	28.43	27.12	.....	27.53	.....	.....	.....	.....	.....
16	28.09	.....	.....	28.47	27.34	25.65	26.44	.....	.....	.....	.....	33.65
17	27.90	29.13	28.60	27.51	.....	25.82	26.85	.....	.....	.....	.....	.....
18	.....	29.19	28.89	27.39	.....	26.11	27.24	26.90	.....	.....	.....	.....
19	.....	29.32	29.16	.....	25.56	26.31	.....	.....	.....	.....	32.66	.....
20	28.58	29.41	29.30	.....	26.08	26.50	.....	.....	.....	31.78	.....	.....
21	27.59	29.51	29.49	26.35	26.13	.....	27.31	.....	.....	.....	.....	.....
22	25.43	.....	.....	25.70	24.52	.....	27.54	.....	30.45	.....	.....	.....
23	27.24	.....	.....	26.40	24.89	26.88	27.69	.....	.....	.....	.....	.....
24	27.99	29.74	29.88	27.01	.....	27.01	27.70	.....	.....	.....	.....	33.72
25	.....	29.79	29.94	27.10	.....	27.19	27.80	.....	.....	.....	.....	.....

## Mt-42--Continued.

Water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	.....	29.88	27.14	.....	24.84	27.03	.....	.....	.....	.....	32.87	.....
27	28.31	29.96	27.02	.....	25.27	27.12	.....	.....	.....	32.00	.....	.....
28	28.36	30.00	27.65	25.83	25.80	.....	.....	.....	.....	.....	.....	.....
29	28.38	.....	.....	26.16	.....	.....	.....	.....	.....	.....	.....	.....
30	27.84	.....	26.60	.....	27.34	.....	.....	.....	.....	.....	.....	.....
31	24.88	.....	28.18	.....	.....	.....	.....	.....	.....	.....	.....	33.83

Mt-43 (\*1023, p. 317; 1071, p. 384). State Highway Department. At Dayton, along Miami River, just south of Baltimore &amp; Ohio Railroad bridge.

Water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	.....	32.87	28.72	.....	29.61	.....	.....	.....	.....	.....
2	35.29	.....	.....	33.01	27.23	26.27	29.75	.....	32.02	.....	.....	.....
3	34.72	30.64	34.03	32.27	.....	22.82	29.96	.....	.....	33.99	34.85	37.06
4	.....	31.35	34.10	32.05	.....	22.82	.....	.....	.....	.....	.....	.....
5	.....	31.79	34.14	.....	28.92	24.30	.....	.....	.....	.....	.....	.....
6	34.00	32.02	34.20	.....	29.48	25.47	.....	31.72	.....	.....	.....	.....
7	34.30	32.43	34.23	30.99	29.93	.....	30.50	.....	.....	.....	.....	.....
8	34.54	.....	.....	31.56	30.18	.....	30.57	.....	.....	.....	.....	.....
9	34.69	.....	.....	32.02	30.43	26.42	30.88	.....	.....	.....	.....	.....
10	34.87	32.72	34.30	32.20	.....	27.21	30.83	.....	.....	34.41	35.02	36.03
11	.....	32.85	34.34	32.43	.....	27.73	30.85	32.09	.....	.....	.....	.....
12	.....	32.99	34.37	.....	30.81	28.18	.....	.....	32.90	.....	.....	.....
13	34.94	33.10	34.30	.....	30.93	28.54	.....	.....	.....	.....	.....	.....
14	35.08	33.21	34.27	32.20	30.82	.....	30.87	.....	.....	.....	.....	.....
15	35.01	.....	.....	32.30	30.73	.....	30.51	.....	.....	.....	.....	.....
16	33.95	.....	.....	32.38	31.00	28.66	29.46	.....	.....	.....	.....	36.24
17	33.37	33.26	33.25	31.46	.....	28.82	29.68	.....	.....	.....	.....	.....
18	.....	33.38	33.46	31.32	.....	29.09	30.06	30.00	.....	.....	.....	.....
19	.....	33.47	33.67	.....	28.72	.....	.....	.....	.....	.....	35.27	.....
20	33.80	33.52	33.79	.....	29.29	29.58	.....	.....	.....	34.63	.....	.....
21	30.60	33.63	33.87	30.10	29.51	.....	30.58	.....	.....	.....	.....	.....
22	30.42	.....	.....	29.22	28.01	.....	30.75	.....	33.29	.....	.....	.....
23	31.77	.....	.....	29.99	27.42	29.86	30.92	.....	.....	.....	.....	.....
24	32.44	33.70	33.75	30.56	.....	29.99	31.06	.....	.....	.....	.....	36.37
25	.....	33.81	33.14	30.72	.....	30.10	31.25	.....	.....	.....	.....	.....
26	.....	33.88	31.73	.....	27.88	30.28	.....	.....	.....	.....	36.74	.....
27	32.68	33.92	31.61	.....	27.41	30.41	.....	.....	.....	34.74	.....	.....
28	32.90	34.00	32.38	29.11	29.10	.....	.....	.....	.....	.....	.....	.....
29	33.06	.....	.....	.....	29.41	.....	.....	.....	.....	.....	.....	.....
30	32.27	.....	.....	30.03	.....	30.19	.....	.....	.....	.....	.....	.....
31	28.64	.....	32.70	.....	.....	.....	.....	.....	.....	.....	.....	36.57

Mt-44 (\*1023, p. 318; 1071, p. 385). State Highway Department. At Dayton, corner of West Fourth St. and S. Roberts Blvd.

Water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	.....	21.26	16.97	.....	18.22	.....	.....	.....	.....	.....
2	23.58	.....	.....	21.31	15.96	15.29	18.47	.....	20.63	.....	.....	.....
3	23.06	18.64	22.66	20.87	.....	12.20	18.70	.....	.....	22.45	23.33	24.73
4	.....	19.38	22.69	20.57	.....	11.78	.....	.....	.....	.....	.....	.....
5	.....	19.90	22.72	.....	17.07	12.72	.....	.....	.....	.....	.....	.....
6	22.29	20.18	22.74	.....	17.74	13.65	.....	20.39	.....	.....	.....	.....
7	22.68	20.50	22.78	19.67	18.17	.....	19.14	.....	.....	.....	.....	.....
8	22.86	.....	.....	20.08	18.11	.....	19.32	.....	.....	.....	.....	.....
9	22.92	.....	.....	20.36	18.89	14.69	19.43	.....	.....	.....	.....	.....
10	23.05	21.11	22.84	20.59	.....	15.40	19.42	.....	.....	22.75	23.69	24.73
11	.....	21.36	22.88	20.79	.....	16.03	19.41	20.83	.....	.....	.....	.....
12	.....	21.48	22.91	.....	19.34	16.60	.....	.....	21.40	.....	.....	.....
13	23.36	21.57	22.94	.....	19.49	17.00	.....	.....	.....	.....	.....	.....
14	23.40	21.62	22.90	20.65	19.40	.....	19.46	.....	.....	.....	.....	.....



## Mt-44--Continued.

Water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
15	23.38	.....	.....	20.81	19.28	.....	18.95	.....	.....	.....	.....	.....
16	22.53	.....	.....	20.87	19.54	17.07	17.85	.....	.....	.....	.....	24.86
17	22.03	21.80	21.81	19.99	.....	17.23	18.20	.....	.....	.....	.....	.....
18	.....	21.89	22.07	19.88	.....	17.63	18.60	18.71	.....	.....	.....	.....
19	.....	21.99	22.11	.....	17.34	29.32	.....	.....	.....	.....	24.13	.....
20	22.08	22.04	22.22	.....	17.72	18.05	.....	.....	.....	23.18	.....	.....
21	19.86	22.15	22.35	19.11	17.84	.....	19.11	.....	.....	.....	.....	.....
22	19.68	.....	.....	18.08	16.30	.....	19.31	.....	21.90	.....	.....	.....
23	19.98	.....	.....	18.62	16.72	18.42	19.50	.....	.....	.....	.....	.....
24	20.60	22.30	22.34	19.17	.....	18.51	19.67	.....	.....	.....	.....	24.94
25	.....	22.39	21.75	19.29	.....	18.70	19.81	.....	.....	.....	.....	.....
26	.....	22.44	20.78	.....	16.32	18.85	.....	.....	.....	.....	24.45	.....
27	20.92	22.49	20.70	.....	16.71	18.97	.....	.....	.....	23.58	.....	.....
28	21.10	22.56	20.77	17.35	17.24	.....	.....	.....	.....	.....	.....	.....
29	21.22	.....	.....	.....	17.63	.....	.....	.....	.....	.....	.....	.....
30	20.74	.....	.....	18.21	.....	18.92	.....	.....	.....	.....	.....	.....
31	18.21	.....	21.08	.....	.....	.....	.....	.....	.....	.....	.....	25.24

Mt-45 (\*1023, p. 319; 1071, p. 385). State Highway Dept. At Dayton, corner of West Second St., and North Roberts Blvd.

Water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
1	.....	.....	.....	21.44	18.19	.....	19.48	.....	.....	.....	.....
2	23.48	.....	.....	21.52	17.45	17.55	19.27	.....	21.20	.....	.....
3	22.81	18.65	22.70	21.44	.....	15.06	19.39	.....	.....	22.90	24.01
4	.....	19.17	22.73	21.25	.....	13.81	.....	.....	.....	.....	.....
5	.....	19.69	22.76	.....	17.34	13.75	.....	.....	.....	.....	.....
6	22.12	20.07	22.78	.....	17.87	14.39	.....	21.35	.....	.....	.....
7	22.35	20.33	22.85	20.64	18.35	.....	19.78	.....	.....	.....	.....
8	22.62	.....	.....	20.71	18.63	.....	19.98	.....	.....	.....	.....
9	22.65	.....	.....	20.74	18.86	15.17	20.17	.....	.....	.....	.....
10	22.71	21.10	22.90	20.81	.....	15.89	20.18	.....	.....	23.60	24.24
11	.....	21.31	22.95	20.96	.....	16.45	20.15	21.47	.....	.....	.....
12	.....	21.44	22.98	.....	19.61	17.05	.....	.....	22.15	.....	.....
13	23.11	21.56	22.95	.....	19.70	17.52	.....	.....	.....	.....	.....
14	23.17	21.59	22.94	20.93	19.87	.....	20.13	.....	.....	.....	.....
15	23.30	.....	.....	21.10	19.78	.....	20.01	.....	.....	.....	.....
16	23.04	.....	.....	21.15	20.00	.....	19.27	.....	.....	.....	.....
17	22.77	21.88	22.15	20.71	.....	17.86	19.09	.....	.....	.....	.....
18	.....	21.96	22.36	20.63	.....	18.12	19.20	20.21	.....	.....	.....
19	.....	22.09	22.40	.....	18.45	18.33	.....	.....	.....	.....	24.66
20	22.17	22.17	22.44	.....	18.56	18.52	.....	.....	.....	23.93	.....
21	20.97	22.24	22.47	20.34	18.65	.....	19.56	.....	.....	.....	.....
22	20.75	.....	.....	19.46	17.98	.....	19.69	.....	22.67	.....	.....
23	20.23	.....	.....	19.89	18.41	19.07	19.81	.....	.....	.....	.....
24	20.40	22.35	22.50	20.45	.....	19.16	19.93	.....	.....	.....	.....
25	.....	22.41	22.09	20.65	.....	19.35	20.37	.....	.....	.....	.....
26	.....	22.52	21.54	.....	17.47	19.54	.....	.....	.....	.....	25.10
27	20.95	22.60	21.05	.....	17.87	19.69	.....	.....	.....	23.92	.....
28	21.13	22.67	21.20	17.77	18.31	.....	.....	.....	.....	.....	.....
29	21.25	.....	.....	.....	18.70	.....	.....	.....	.....	.....	.....
30	21.26	.....	.....	18.39	.....	19.92	.....	.....	.....	.....	.....
31	20.74	.....	21.27	.....	.....	.....	.....	.....	.....	.....	.....

Mt-46 (\*1023, p. 319; 1071, p. 386). State Highway Department. At Dayton, corner of Monument Ave. and Roberts Blvd.

Water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	.....	24.56	20.89	.....	23.30	.....	.....	.....	.....	.....
2	25.70	.....	.....	24.69	20.01	19.55	23.62	.....	25.29	.....	.....	.....
3	24.98	22.17	25.83	24.18	.....	16.49	24.00	.....	.....	26.80	26.67	27.27
4	.....	22.85	25.85	23.87	.....	16.68	.....	.....	.....	.....	.....	.....

## Mt-46--Continued.

Water level, in feet below land-surface datum, 1947

(From recorder charts)

[illegible]

Mt-47 (\*1023, p. 320; 1071, p. 387 ). State Highway Department. At Dayton. at Longworth St. pump station.

Water level, in feet below land-surface datum, 1947

(From recorder charts)

[illegible]

Mt-48 (\*1016, p. 308; 1023, p. 320; 1071, p. 387). Vandalia Water Works. In municipal well field, at Vandalia. Measurements discontinued after July 26.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)							
Day	Jan.	Feb.	Mar.	Apr.	May	June	July
1	18.20	10.75	16.59	15.38	9.35	10.30	.....
2	17.90	10.00	16.50	15.41	8.80	.....	.....
3	17.80	9.90	16.68	15.40	8.21	2.25	.....
4	17.60	10.40	16.80	15.18	8.28	14.50	.....
5	17.20	10.81	16.97	15.08	8.85	15.78	.....
6	16.87	11.25	17.12	14.98	9.32	6.95	.....
7	16.72	11.83	17.27	14.62	18.10	6.79	25.22
8	16.76	12.15	17.23	14.48	10.65	7.00	25.70
9	16.80	12.38	17.18	14.40	11.22	7.88	26.31
10	16.80	12.95	17.20	14.44	11.45	8.70	26.10
11	16.80	13.25	17.28	14.52	11.70	9.25	26.10
12	16.88	13.41	17.37	14.53	12.05	.....	25.70
13	17.00	14.00	17.38	14.30	12.44	.....	25.91
14	17.08	14.21	17.40	14.23	12.63	.....	.....
15	17.07	14.38	17.30	14.40	12.79	.....	25.62
16	17.00	14.42	17.08	14.42	12.85	11.32	25.70
17	16.85	14.75	17.08	14.31	12.39	19.33	24.82
18	16.60	15.02	17.18	14.08	12.20	11.85	24.41
19	16.35	15.23	17.18	13.83	11.22	12.23	23.61
20	16.12	15.43	17.20	13.60	10.79	12.60	.....
21	15.98	15.62	17.20	13.44	10.69	20.83	.....
22	15.12	15.72	17.20	12.62	10.38	21.12	25.10
23	14.23	15.80	17.08	11.75	9.38	21.45	25.21
24	13.80	16.00	17.00	11.15	9.68	.....	25.31
25	13.60	16.12	17.00	11.02	9.65	.....	25.55
26	13.43	16.30	16.80	10.56	9.18	.....	25.10
27	13.44	16.42	16.50	9.41	9.01	.....	.....
28	13.81	16.56	16.13	17.00	9.38	.....	.....
29	14.01	.....	15.90	9.45	9.69	.....	.....
30	14.01	.....	15.60	9.51	9.80	.....	.....
31	13.40	.....	15.40	.....	10.02	.....	.....

Mt-49. E. F. Stenger. At Whitfield, east of railroad, and north of county road, in barnyard. Drilled test well, diameter 6 inches, depth 212 feet. Measuring point, floor of recorder shelter, 2.5 feet above land-surface datum. Automatic water-stage recorder installed Nov. 28, 1947.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Nov. 28	17.40	Dec. 7	16.93	Dec. 16	17.05	Dec. 24	17.13
29	16.93	8	16.96	17	17.07	25	17.08
30	16.84	9	16.97	18	17.08	26	17.09
Dec. 1	16.87	10	16.98	19	17.09	27	17.11
2	16.89	11	17.00	20	17.09	28	17.12
3	16.91	12	17.02	21	17.08	29	17.16
4	16.92	13	17.02	22	17.09	30	17.19
5	16.95	14	17.01	23	17.13	31	17.20
6	16.96	15	17.03				

Mt-50. Hugo Thompson. 3 miles northeast of Dayton, west of Brandt Pike (State Highway 201), in vacant lot. Abandoned drilled well, diameter 6 inches, depth 35 feet. Measuring point, floor of recorder shelter, at land-surface datum. Automatic water-stage recorder installed May 27, 1947.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)								
Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	27.40	25.90	26.68	27.96	29.28	30.65	31.78
2	.....	27.28	25.94	26.72	27.98	29.24	30.68	31.81
3	.....	23.02	25.97	26.77	28.03	29.29	30.71	31.85

## Mt-50--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
4	.....	27.46	26.00	26.80	28.05	29.34	30.76	31.86
5	.....	26.04	26.04	26.85	28.08	29.39	30.80	31.89
6	.....	25.75	26.08	26.92	28.13	29.44	30.84	31.92
7	.....	25.56	26.22	26.96	28.17	29.50	30.88	31.93
8	.....	25.48	.....	26.99	28.20	29.51	30.91	31.99
9	.....	25.47	26.28	27.05	28.22	29.57	30.97	32.02
10	.....	25.46	26.32	27.10	28.27	29.62	30.99	32.04
11	.....	25.46	26.30	27.14	28.33	29.67	31.04	32.07
12	.....	.....	26.29	27.18	28.34	29.73	31.07	32.10
13	.....	.....	26.31	27.21	28.38	29.77	31.11	32.12
14	.....	.....	26.34	27.27	28.42	29.82	31.14	32.14
15	.....	.....	26.34	27.31	28.49	29.85	31.16	32.19
16	.....	.....	26.37	27.36	28.53	29.86	31.23	32.20
17	.....	.....	.....	27.40	28.57	29.91	31.27	32.21
18	.....	.....	.....	27.42	28.61	29.95	31.29	32.23
19	.....	.....	.....	27.46	28.64	30.01	31.33	32.26
20	.....	.....	.....	27.51	28.68	30.07	31.35	32.27
21	.....	.....	.....	27.55	28.75	30.11	31.38	32.29
22	.....	.....	.....	27.58	28.80	30.16	31.42	32.30
23	.....	25.56	26.39	27.62	28.83	30.50	31.45	32.32
24	.....	25.59	26.41	27.65	28.97	.....	31.48	32.34
25	.....	25.63	26.43	27.70	29.04	.....	31.52	32.34
26	.....	25.68	26.46	27.74	29.09	.....	31.72	32.37
27	27.90	25.71	26.49	27.79	29.12	.....	.....	32.38
28	27.86	25.77	26.52	27.83	29.16	.....	.....	32.42
29	27.71	25.82	26.55	27.87	29.21	30.52	.....	32.43
30	27.63	25.86	26.60	27.91	29.26	30.56	.....	32.44
31	27.53	.....	26.65	27.94	.....	30.61	.....	32.46

Muskingum County

Mu-1 (\*944, p. 192; 986, p. 266; 1016, p. 309; 1023, p. 321; 1071, p. 388). City of Zanesville water department. In municipal well field, 0.5 mile north of corporation line.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
1	.....	21.10	24.63	25.50	21.51	16.49	16.62	19.26	21.27	.....
2	22.08	20.40	24.60	.....	21.41	16.29	16.44	19.27	21.27	21.20
3	22.25	19.38	24.60	25.26	21.17	16.63	16.45	19.42	21.22	21.64
4	22.15	19.52	24.42	25.35	20.93	16.80	16.60	19.35	21.24	21.64
5	21.85	19.57	24.33	25.35	20.54	16.80	16.80	20.24	21.30	21.44
6	21.35	20.00	24.30	24.82	20.44	16.65	16.85	20.46	21.40	21.57
7	21.55	20.53	24.47	24.80	20.55	16.45	17.20	21.05	21.20	21.37
8	21.52	20.75	24.40	24.58	20.74	16.25	17.40	21.14	21.30	21.60
9	21.79	20.96	24.43	.....	20.89	15.65	17.75	21.32	21.42	21.71
10	21.88	21.40	24.51	24.40	20.82	15.90	17.65	21.40	21.52	21.50
11	22.10	21.70	24.52	24.42	20.83	15.85	18.00	21.35	21.57	21.86
12	22.03	21.92	24.70	24.37	20.62	16.35	18.43	21.72	21.62	.....
13	22.17	22.05	24.70	24.49	20.68	16.15	18.25	22.15	21.65	.....
14	22.31	22.28	24.85	24.15	20.74	16.00	18.06	22.09	21.70	.....
15	22.40	22.27	24.80	24.35	20.84	15.60	18.72	22.05	21.50	.....
16	22.54	20.22	24.96	24.30	20.80	14.95	18.62	21.57	21.55	.....
17	22.37	.....	24.77	24.45	20.59	14.95	18.70	21.59	21.53	.....
18	22.15	.....	24.73	24.35	20.25	14.80	18.60	20.95	21.50	.....
19	21.95	.....	24.93	24.37	19.96	14.60	18.80	20.95	21.37	.....
20	21.70	24.18	.....	24.04	19.95	14.75	18.57	21.02	21.44	.....
21	21.88	24.33	.....	24.03	19.70	15.00	18.00	21.10	21.25	.....
22	21.39	24.52	.....	23.80	19.37	15.00	18.12	21.05	21.28	.....
23	21.57	24.53	.....	23.66	18.97	15.75	18.10	21.13	21.25	.....
24	21.36	.....	.....	23.30	18.55	15.60	18.25	20.87	21.25	.....
25	21.31	.....	.....	23.31	18.00	16.50	18.55	21.00	21.29	.....

Mu-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
26	21.27	.....	.....	22.75	17.45	16.70	18.85	21.02	21.17	.....
27	21.15	24.50	.....	22.46	17.05	17.15	18.94	21.17	21.28	.....
28	21.10	24.71	25.33	21.50	16.90	17.03	18.67	21.35	21.25	.....
29	.....	.....	25.52	21.36	16.96	16.95	19.23	21.40	21.14	.....
30	.....	.....	25.60	21.06	16.97	16.78	19.10	21.59	21.24	.....
31	21.33	.....	25.50	.....	16.65	.....	19.30	21.67	.....	.....

Mu-2. Ohio Water Resources Board. At Zanesville, west of Licking River, about 1 mile above confluence of Licking and Muskingum Rivers, in field. Drilled test well, diameter 6 inches, depth 54 feet. Measuring point, floor of recorder shelter, 4.1 feet above land-surface datum. Automatic water-stage recorder installed Sept. 9, 1947.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 9	8.30	Oct. 11	8.17	Nov. 7	7.96	Dec. 4	8.17
10	8.09	12	8.18	8	7.95	5	8.15
11	8.02	13	8.19	9	8.00	6	8.15
12	8.01	14	8.19	10	8.00	7	8.15
13	7.96	15	8.20	11	8.00	8	8.08
14	7.72	16	8.20	12	7.97	9	8.03
15	7.76	17	8.20	13	7.97	10	8.02
16	7.83	18	8.16	14	7.97	11	8.02
22	7.94	19	8.18	15	7.97	12	8.02
23	7.94	20	8.19	16	7.93	13	8.03
24	7.94	21	8.19	17	7.94	14	8.03
25	7.98	22	8.20	18	7.97	15	8.03
26	8.04	23	8.23	19	7.99	16	7.94
27	8.06	24	8.24	20	8.02	17	7.86
28	8.06	25	8.24	21	8.04	18	7.87
29	8.06	26	8.24	22	8.04	19	7.94
30	8.06	27	8.23	23	8.06	20	7.96
Oct. 1	8.03	28	8.22	24	8.05	21	8.00
2	8.04	29	8.20	25	8.03	22	8.00
3	8.07	30	8.18	26	8.03	23	8.04
4	8.08	31	8.18	27	8.05	24	8.07
5	8.10	Nov. 1	8.18	28	8.08	25	8.07
6	8.11	2	8.18	29	8.11	26	8.08
7	8.12	3	8.18	30	8.13	27	8.08
8	8.13	4	8.06	Dec. 1	8.14	28	8.12
9	8.14	5	8.04	2	8.15	29	8.16
10	8.16	6	8.01	3	8.15	30	8.16

Paulding County

P-1 (#1071, p. 588). E. A. Green. At Tipton, north of State Highway 114.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	6.13	5.78	5.28	3.30	2.74	.....	2.88	.....	4.21	.....	3.72
2	.....	6.10	5.49	4.72	3.15	2.48	2.69	3.38	.....	3.78	.....	3.84
3	.....	6.10	5.20	5.20	3.68	2.99	.....	3.16	.....	3.77	.....	3.86
4	6.54	5.37	5.67	4.73	3.17	2.68	.....	3.39	.....	4.17	.....	4.14
5	6.50	5.66	5.30	4.99	3.20	2.94	.....	2.92	.....	3.79	.....	3.76
6	6.46	5.72	5.83	4.58	3.66	2.56	.....	3.38	.....	3.80	3.87	3.83
7	6.46	5.62	5.77	5.09	3.20	2.72	.....	2.98	.....	3.82	.....	3.76
8	6.34	5.62	5.80	4.66	3.25	2.34	.....	3.42	3.38	3.82	.....	3.74
9	6.34	5.72	5.46	4.94	3.74	2.82	.....	2.99	3.42	3.80	.....	3.85
10	6.84	5.81	5.82	4.56	3.34	2.37	.....	3.53	3.83	4.15	.....	3.81

a Tape measurement.

P-1--Continued,

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
11	....	5.89	5.88	4.78	3.54	2.66	....	3.08	3.56	3.85	3.53	4.12
12	....	5.92	5.92	4.51	3.32	2.40	....	3.12	3.49	3.86	3.60	3.88
13	....	....	5.79	4.98	3.62	2.82	....	3.60	3.43	3.86	3.60	4.08
14	....	5.77	5.54	4.68	3.12	2.32	....	3.15	3.48	4.32	3.51	4.21
15	6.48	5.67	5.64	4.62	3.12	2.78	....	3.56	3.98	3.85	3.70	3.92
16	6.54	5.64	5.64	4.38	3.10	2.40	3.13	3.04	3.58	3.88	3.56	3.69
17	6.54	5.42	5.58	4.24	3.08	2.78	2.84	3.09	3.64	3.88	3.57	4.05
18	6.60	5.38	5.63	3.82	3.01	2.46	2.96	3.57	3.68	4.14	3.57	3.79
19	6.48	5.61	5.57	3.82	2.98	2.92	2.68	3.56	3.68	3.83	3.88	4.14
20	6.26	5.56	5.26	3.76	3.34	2.52	2.70	3.56	3.68	4.14	3.62	3.90
21	6.24	5.52	5.56	4.13	2.86	3.05	3.15	3.13	3.58	3.90	3.96	4.18
22	6.24	....	5.70	3.76	2.95	2.64	2.76	3.55	3.62	3.94	3.59	4.21
23	6.52	....	5.14	4.16	2.95	2.63	3.22	3.14	4.14	3.94	3.65	3.92
24	6.44	....	5.38	3.70	2.95	3.06	2.82	3.55	3.68	3.97	3.49	4.20
25	6.20	....	5.24	3.65	2.84	....	3.28	3.13	3.62	3.98	3.73	3.99
26	6.32	5.24	4.95	4.85	3.34	....	3.22	3.47	3.73	4.07	3.56	4.16
27	5.84	5.67	5.40	3.58	2.88	....	2.94	....	3.77	4.29	3.52	4.05
28	4.88	5.71	4.97	3.79	2.80	....	3.32	....	3.75	3.88	3.56	3.93
29	6.20	....	5.18	3.53	3.09	....	3.26	....	3.71	3.82	4.00	4.16
30	5.62	....	5.28	3.68	2.82	....	3.28	....	3.78	....	3.74	3.92
31	5.82	....	4.93	....	3.72	....	3.26	....	....	....	....	4.20

Portage County

Po-1 (#1071, p. 389). Edward Tiddle. In Windham, on north side of High St.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	20.15	19.65	19.42	19.27	17.03	15.49	14.81	15.81	17.36	18.91	....	20.02
2	20.07	19.63	19.42	19.18	16.95	15.41	14.88	15.83	17.46	18.99	....	20.03
3	20.07	19.61	19.44	19.18	16.92	15.18	14.89	15.87	17.50	....	19.63	20.05
4	20.07	19.54	19.46	19.11	16.87	15.13	14.91	15.91	17.54	19.06	19.62	20.07
5	20.02	19.52	19.43	19.04	16.81	14.99	14.91	15.95	17.58	19.11	19.65	20.03
6	20.04	19.50	19.48	18.96	16.77	14.94	14.92	16.00	17.66	19.17	19.69	20.08
7	20.00	19.51	19.46	18.89	16.68	14.90	15.00	16.06	17.72	19.19	19.66	20.06
8	....	19.52	19.46	18.81	16.64	14.75	15.04	16.12	17.78	19.22	19.70	20.10
9	20.04	19.53	19.46	18.69	16.62	14.74	15.05	16.15	17.83	19.24	19.76	20.12
10	20.04	19.56	19.48	18.62	16.60	14.69	15.08	16.21	17.88	19.25	19.76	20.11
11	20.00	19.57	19.49	18.50	16.55	14.71	15.11	16.28	17.93	19.26	19.74	20.12
12	20.05	19.56	19.48	18.43	16.46	14.72	15.15	16.33	17.97	19.29	19.77	20.13
13	20.03	....	19.44	18.41	16.39	14.61	15.15	16.35	18.06	19.31	19.80	20.13
14	20.02	....	19.44	18.29	16.41	14.60	15.17	16.41	....	19.32	19.80	20.13
15	20.03	19.48	19.47	18.28	16.39	14.62	15.22	16.47	18.11	19.33	19.76	20.13
16	20.02	19.50	19.46	18.13	16.35	14.62	15.25	16.53	18.19	19.35	19.83	20.19
17	20.01	19.50	19.46	18.09	16.31	14.60	15.28	16.57	18.24	19.36	19.85	20.18
18	19.95	19.51	19.48	18.04	16.23	14.62	15.27	16.61	18.27	....	19.84	20.18
19	19.94	19.50	19.47	18.01	16.21	14.65	15.39	16.67	18.29	....	19.85	20.22
20	19.86	19.45	19.46	17.93	16.21	14.63	15.39	16.77	18.34	....	19.88	20.21
21	19.92	19.45	19.45	17.84	16.13	14.66	15.40	16.81	18.38	....	19.89	20.23
22	....	19.44	19.47	17.82	16.13	14.68	15.44	16.87	....	....	19.87	20.22
23	19.80	19.42	19.45	17.71	16.04	14.64	15.52	16.92	....	....	19.89	20.27
24	19.80	19.44	19.42	17.65	15.98	14.59	15.58	16.97	....	....	19.88	20.27
25	19.81	19.44	19.39	17.55	15.91	14.63	15.60	17.02	....	....	19.91	20.25
26	19.77	19.46	19.42	17.43	15.90	14.60	15.57	17.11	....	....	19.96	20.27
27	19.77	19.45	19.40	17.35	15.86	14.64	15.57	17.17	18.72	....	19.96	20.27
28	19.77	19.44	19.38	17.33	15.76	14.69	15.65	17.23	18.76	....	19.99	....
29	19.77	....	19.32	17.21	15.69	14.73	15.68	17.28	18.80	....	20.01	20.32
30	19.66	....	19.35	17.06	15.68	14.77	15.70	17.31	18.87	....	20.03	20.31
31	19.65	....	19.30	....	15.61	....	15.77	17.35	....	....	....	20.32

Po-2 (#1071, p. 390). City of Kent water department. At Kent, in municipal well field.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	15.17	15.26	14.66	.....	11.40	11.98	13.43	14.65	16.98	16.06	17.64
2	.....	15.10	15.13	14.48	.....	11.19	12.10	13.50	16.20	17.20	17.03	17.80
3	.....	.....	15.13	14.48	12.20	11.16	12.16	16.85	15.00	17.28	17.58	17.83
4	.....	15.12	15.23	14.44	12.16	11.20	12.80	13.58	15.01	16.00	17.60	17.94
5	.....	15.14	15.28	14.24	11.96	11.01	12.12	13.70	15.02	16.80	17.64	18.10
6	.....	14.98	15.31	14.14	11.89	10.99	12.09	13.83	15.02	17.24	17.70	18.15
7	15.51	15.14	13.33	14.05	11.96	10.96	12.15	13.95	14.45	17.39	17.82	16.32
8	15.57	15.38	15.33	13.98	.....	10.80	12.23	14.05	16.15	17.42	16.82	17.90
9	15.67	15.27	15.32	13.86	.....	10.78	12.32	14.11	15.98	17.34	15.99	18.19
10	15.68	15.03	15.26	13.85	.....	10.79	12.37	17.07	16.30	17.34	17.55	18.20
11	15.74	15.26	15.63	13.73	.....	10.97	12.39	14.41	15.11	.....	17.70	18.37
12	15.76	15.09	15.38	13.71	.....	10.97	12.38	14.32	15.14	.....	17.77	18.50
13	15.67	15.10	15.29	13.62	.....	10.94	12.38	14.45	15.15	.....	17.92	17.50
14	15.76	15.70	15.25	13.42	.....	10.98	12.43	14.55	14.65	.....	18.06	16.42
15	15.82	15.06	15.09	13.37	12.16	10.93	12.53	14.58	16.49	.....	17.20	18.02
16	15.93	15.03	14.99	13.33	12.20	10.98	12.62	14.58	16.50	.....	16.19	18.33
17	15.94	14.96	15.01	13.21	12.19	11.10	12.69	15.58	16.50	.....	17.68	18.33
18	15.97	15.03	15.05	13.23	12.15	11.21	12.75	14.30	16.68	.....	17.85	18.42
19	15.95	15.06	.....	13.25	12.00	11.31	12.81	16.50	16.76	.....	18.00	18.50
20	15.78	15.06	15.00	13.13	11.97	11.41	12.84	16.60	15.69	.....	18.07	17.45
21	15.96	15.12	15.12	.....	12.01	11.47	12.78	16.50	14.77	.....	18.09	16.65
22	.....	15.12	15.06	.....	12.06	11.48	12.92	16.50	15.30	.....	18.12	18.03
23	.....	15.08	14.91	.....	12.00	11.45	13.80	15.97	16.61	.....	16.30	17.10
24	.....	15.03	14.74	.....	12.02	11.57	12.96	14.75	16.78	.....	17.70	16.98
25	.....	15.11	14.81	.....	11.93	11.68	13.02	16.50	15.62	.....	17.90	16.49
26	.....	15.16	14.94	.....	11.70	11.76	13.06	15.50	.....	.....	17.88	16.15
27	.....	15.22	14.94	.....	11.73	11.85	13.00	16.50	.....	.....	12.62	16.09
28	15.25	15.26	.....	.....	12.19	11.90	13.02	16.50	14.70	.....	16.50	16.14
29	15.23	.....	15.01	.....	11.72	11.91	13.11	16.50	16.32	16.14	16.10	17.50
30	15.18	.....	15.01	.....	11.71	11.85	13.19	16.87	15.60	.....	15.89	16.62
31	15.19	.....	14.85	.....	11.54	.....	13.32	15.20	.....	.....	.....	16.62

a Tape measurement.

### Putnam County

Pu-1 (#1071, p. 391). City of Columbus Grove. In Columbus Grove, on south side of Broadway.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	17.61	13.85	15.31	14.16	14.25	14.51	16.12	.....	16.60	15.00	14.12	15.80
2	.....	14.01	15.00	14.48	14.01	14.30	15.80	.....	16.59	14.69	13.92	15.48
3	.....	14.10	15.60	14.52	14.40	14.61	15.71	.....	.....	14.33	13.90	14.18
4	17.24	14.50	15.62	14.39	13.61	14.60	15.46	.....	16.91	14.62	13.70	.....
5	16.98	14.88	15.70	14.14	14.33	14.70	15.46	17.05	16.90	14.58	13.61	.....
6	17.26	14.51	15.90	13.36	14.54	14.72	14.37	17.96	16.52	14.48	13.80	.....
7	16.82	14.89	16.31	13.60	14.50	14.32	15.32	18.11	16.07	14.07	13.79	15.21
8	16.60	14.82	16.42	13.60	14.32	13.77	15.80	18.30	16.27	14.97	13.44	15.23
9	16.50	15.03	16.22	13.98	14.45	14.10	15.58	18.10	16.50	14.88	13.43	15.31
10	16.31	15.00	16.89	13.92	14.59	14.64	15.31	16.73	16.77	14.32	13.70	15.11
11	16.40	15.20	16.57	14.23	14.28	15.02	15.30	17.52	16.82	14.68	13.73	15.01
12	15.05	15.10	16.27	14.11	14.22	14.96	15.48	17.93	16.50	14.54	13.85	15.00
13	15.54	14.81	16.27	13.72	14.11	15.20	14.72	.....	16.65	14.62	13.98	15.28
14	15.22	15.12	16.30	14.10	14.46	14.80	15.66	.....	15.99	14.47	13.72	14.75
15	15.47	15.05	15.59	14.59	14.15	14.30	15.55	.....	16.70	14.66	13.28	14.33
16	15.62	14.67	15.07	14.48	14.46	14.84	15.59	.....	.....	14.60	13.12	13.90
17	15.65	15.29	15.35	14.31	14.18	15.12	.....	.....	.....	14.79	13.60	13.07
18	15.50	15.29	15.68	14.42	13.92	15.47	.....	.....	.....	14.63	13.48	12.67
19	14.82	15.70	15.60	14.34	14.00	15.42	.....	.....	.....	13.98	13.36	12.40
20	14.82	15.60	15.10	13.88	14.00	15.96	.....	.....	.....	14.22	13.30	12.45
21	15.08	15.23	15.50	14.43	14.02	16.01	.....	.....	.....	14.20	13.77	12.45
22	15.30	15.19	15.20	14.31	14.26	15.60	.....	.....	14.78	14.50	13.22	.....

Pu-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)											
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. Dec.
23	15.14	15.12	14.67	14.58	14.41	16.17	.....	.....	15.77	14.31	12.87 12.50
24	15.09	15.30	14.80	14.50	14.16	16.45	.....	.....	15.01	14.35	..... 13.42
25	15.00	15.22	14.90	14.18	13.50	16.16	.....	.....	15.08	14.20	..... 13.00
26	14.28	15.50	.....	15.47	.....	16.00	.....	16.74	.....	13.93	..... 13.48
27	14.60	15.08	.....	13.81	.....	16.13	.....	16.93	.....	14.10	..... 13.50
28	14.64	15.12	14.90	14.41	.....	15.92	.....	16.76	.....	13.79	..... 13.38
29	14.40	.....	14.86	14.48	14.98	15.42	.....	16.94	15.08	13.82	..... 13.57
30	14.10	.....	14.40	14.60	15.05	16.08	.....	16.90	14.81	13.98	15.15 13.61
31	14.02	.....	14.18	.....	14.91	.....	.....	16.22	.....	13.89	..... 13.70

Richland County

R-1 (#1071, p. 391). State of Ohio. In Mansfield, at Ohio State Reformatory.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)											
Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
1	26.80	29.43	31.00	31.60	31.20	31.24	31.15	.....	.....	.....	.....
2	26.30	28.83	31.11	31.36	31.22	31.22	31.22	.....	.....	.....	30.93
3	26.43	28.68	31.17	31.40	31.29	.....	31.28	.....	.....	.....	31.00
4	26.48	28.89	31.20	31.53	31.23	.....	31.30	.....	.....	.....	31.10
5	27.33	28.80	31.35	31.53	31.18	.....	31.20	31.33	.....	.....	30.68
6	28.53	29.11	31.69	31.39	.....	.....	31.30	31.39	.....	.....	30.85
7	28.68	29.50	.....	.....	.....	.....	31.34	31.40	31.10	.....	30.80
8	29.18	29.35	.....	.....	31.19	.....	31.38	31.39	31.13	.....	30.90
9	29.49	29.60	.....	.....	31.12	31.22	31.35	31.34	31.48	.....	31.08
10	29.82	29.48	.....	31.52	31.10	31.28	31.24	31.38	31.49	.....	.....
11	30.12	29.59	.....	31.55	31.10	31.29	.....	31.35	31.30	.....	.....
12	30.27	29.79	.....	31.48	31.14	31.28	.....	31.35	31.45	.....	.....
13	30.20	29.60	.....	31.33	31.12	.....	.....	.....	31.58	.....	.....
14	30.57	29.20	31.78	31.40	31.15	.....	.....	.....	31.72	.....	.....
15	30.52	29.38	31.82	31.43	.....	.....	.....	31.18	.....	.....	.....
16	30.53	29.85	31.82	31.39	.....	.....	.....	31.18	.....	.....	.....
17	30.80	29.98	31.83	31.48	.....	.....	.....	31.12	.....	.....	.....
18	30.99	30.36	31.73	.....	.....	.....	.....	31.05	.....	.....	.....
19	30.60	30.51	31.72	31.34	.....	.....	.....	31.28	.....	.....	.....
20	30.45	30.61	31.74	31.34	.....	.....	.....	31.31	.....	.....	.....
21	30.73	30.48	31.70	31.40	.....	.....	.....	31.33	.....	.....	.....
22	31.04	.....	31.45	31.42	.....	31.27	.....	31.24	.....	.....	.....
23	30.92	30.73	31.43	31.38	.....	31.27	.....	.....	.....	.....	.....
24	30.35	30.80	31.38	31.33	.....	31.26	.....	.....	.....	.....	.....
25	30.42	30.91	31.48	31.20	.....	31.21	.....	.....	.....	.....	.....
26	30.62	31.04	31.50	31.15	31.30	31.26	.....	.....	.....	.....	.....
27	30.46	31.04	31.30	.....	31.20	31.26	.....	.....	.....	.....	.....
28	30.22	31.18	31.50	31.19	31.20	31.25	.....	.....	.....	.....	.....
29	30.03	31.18	.....	31.21	31.28	31.30	.....	.....	.....	.....	.....
30	30.20	31.03	.....	31.25	31.24	31.21	.....	.....	.....	.....	.....
31	30.02	.....	31.58	.....	31.28	31.20	.....	.....	.....	.....	.....

R-2 (#1071, p. 392). Village of Lexington. At Lexington, in abandoned well field.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)											
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. Dec.
1	26.99	24.90	26.36	25.78	25.01	24.93	25.11	.....	26.79	27.18	27.44 27.47
2	26.98	24.82	26.41	25.68	25.03	24.80	25.19	26.26	26.76	27.20	27.44 27.48
3	26.89	24.79	26.45	25.23	25.06	24.12	25.25	26.29	26.78	27.21	27.44 27.49
4	26.70	24.81	26.49	25.15	25.10	23.80	25.33	26.34	26.81	27.23	27.44 27.49
5	26.65	24.90	26.53	25.15	25.12	23.86	25.40	26.37	26.81	27.24	27.43 27.47
6	26.61	24.98	26.55	24.80	25.15	23.89	25.46	26.40	26.80	27.26	27.40 27.47
7	26.61	25.08	26.58	24.72	25.16	23.48	25.53	26.43	26.80	27.27	27.38 27.47
8	26.60	25.17	26.60	24.71	25.21	22.30	.....	26.46	26.82	27.28	27.37 27.43



R-2--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
9	26.63	25.27	26.63	24.71	25.26	22.62	.....	26.48	26.85	27.30	27.38	27.42
10	26.63	25.37	26.65	24.74	25.31	22.94a	25.58	26.52	26.88	27.31	27.38	27.41
11	26.64	25.46	26.67	24.81	25.36	23.25	.....	26.55	26.90	27.32	27.39	27.41
12	26.66	25.54	26.67	24.90	25.40	23.48	.....	26.57	26.90	27.34	27.39	27.42
13	26.66	25.58	26.67	24.95	25.41	23.67	.....	26.60	26.92	27.35	27.41	27.43
14	26.66	25.62	26.63	25.03	25.34	23.67	.....	26.63	26.94	27.36	27.41	27.44
15	26.65	25.67	26.54	25.10	25.25	23.70	.....	26.64	26.97	27.37	27.41	27.44
16	26.48	25.73	26.53	25.10	25.30	23.92	.....	26.64	26.99	27.38	27.42	27.45
17	26.45	25.78	26.54	25.03	25.30	24.09	25.65	26.65	27.01	27.39	27.43	27.40
18	26.44	25.84	26.57	25.10	25.25	24.23	25.69	26.67	27.03	27.40	27.44	27.38
19	26.43	25.89	26.57	25.16	25.21	24.37	25.74	26.69	27.05	27.41	27.45	27.40
20	26.41	25.94	26.58	25.19	25.23	24.51	25.77	26.71	27.06	27.42	27.45	27.40
21	26.17	26.00	26.58	25.10	25.23	24.65	.....	26.73	27.08	27.43	27.46	27.41
22	26.09	26.05	26.58	25.02	25.12	24.77	.....	26.74	27.07	27.44	27.47	27.42
23	26.04	26.10	26.57	25.06	25.02	24.87	.....	26.76	27.07	27.45	27.47	27.44
24	26.00	26.15	26.54	25.11	25.03	25.09a	25.90	26.78	27.09	27.46	27.47	27.45
25	25.97	26.20	26.32	25.10	25.02	25.18	.....	26.81	27.10	27.47	27.44	27.45
26	25.92	26.25	26.10	25.01	24.94	25.26	.....	26.83	27.12	27.47	27.42	27.47
27	25.82	26.29	26.04	24.96	24.84	25.35	.....	26.85	27.13	27.48	27.42	27.48
28	25.81	26.34	26.03	25.00	24.83	25.38	.....	26.88	27.15	27.48	27.43	27.49
29	25.79	.....	25.99	25.02	24.83	25.45	.....	26.91	27.16	27.47	27.45	27.49
30	25.77	.....	25.89	25.05	24.87	25.23	26.17	26.93	27.17	27.45	27.46	27.50
31	25.22	.....	25.81	.....	24.91	.....	26.21	26.91	.....	27.44	.....	27.50

a Tape measurement.

R-3 (#1071, p. 393). Voisard Factory. At Shiloh.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	27.21	27.20	25.71	24.59	24.10	.....	26.64	27.14	.....	27.27
2	.....	.....	26.69	26.82	25.36	24.55	24.92	24.94	26.62	27.03	.....	27.67
3	.....	.....	27.60	27.66	25.10	25.44	24.64	25.43	.....	27.34	.....	27.55
4	.....	.....	27.29	27.21	25.73	24.97	24.73	25.42	.....	27.57	.....	.....
5	.....	.....	27.98	26.63	25.46	24.56	24.39	25.18	.....	26.85	.....	.....
6	.....	.....	27.58	26.93	25.45	24.32	24.81	26.00	.....	27.22	.....	.....
7	.....	.....	27.40	26.86	25.03	24.72	24.80	25.53	.....	26.80	.....	27.36
8	.....	.....	27.86	26.82	25.72	24.30	24.79	25.66	.....	27.20	.....	27.68
9	27.49	.....	27.81	26.45	26.21	24.48	24.72	.....	.....	27.16	.....	27.73
10	27.95	.....	27.55	26.01	26.13	24.16	24.48	.....	.....	27.16	.....	27.73
11	27.72	.....	27.43	26.50	26.11	24.36	24.35	.....	.....	26.94	.....	27.65
12	27.94	.....	28.07	26.62	25.59	24.21	24.93	25.66	.....	27.18	27.59	27.78
13	27.87	.....	27.67	27.13	25.25	24.17	.....	25.95	.....	26.74	27.54	27.78
14	28.31	.....	26.89	26.58	25.73	23.77	.....	26.20	.....	26.81	27.30	27.46
15	28.08	.....	27.59	26.96	25.88	23.68	.....	25.84	.....	27.25	26.82	.....
16	27.95	.....	27.27	26.44	25.32	24.45	24.58	26.21	.....	27.01	27.05	.....
17	.....	.....	27.05	26.22	25.30	23.91	25.10	25.84	.....	27.15	27.59	.....
18	.....	.....	27.83	26.59	25.59	24.04	24.78	26.14	.....	27.08	.....	27.34
19	.....	.....	27.50	26.77	25.19	23.80	.....	26.27	26.89	26.62	.....	28.08
20	.....	.....	27.56	26.26	25.40	24.12	.....	26.55	27.19	26.69	27.50	27.52
21	.....	.....	27.26	26.70	24.95	23.87	.....	26.50	27.01	27.23	27.70	27.65
22	.....	.....	27.24	26.41	25.04	23.76	.....	26.48	26.58	27.26	27.44	27.63
23	.....	.....	27.52	26.15	24.93	23.68	.....	26.57	26.62	27.00	27.18	27.50
24	.....	.....	27.08	26.72	25.53	24.35	.....	26.20	27.11	27.28	26.94	27.96
25	.....	.....	27.43	26.34	24.94	23.99	.....	26.58	27.15	26.97	26.82	27.60
26	.....	.....	27.26	26.12	24.86	23.73	.....	26.63	27.32	27.35	27.51	26.98
27	.....	.....	27.26	26.42	24.86	24.37	.....	26.21	27.33	26.82	27.16	27.58
28	.....	27.33	27.75	26.15	24.55	24.12	.....	26.64	26.70	.....	27.05	27.31
29	.....	.....	27.30	25.83	25.35	23.95	.....	26.20	26.55	.....	27.83	27.80
30	.....	.....	27.30	26.09	25.06	24.61	.....	26.52	27.27	.....	27.72	27.50
31	.....	.....	27.18	.....	24.89	.....	.....	26.05	.....	.....	.....	.....

R-4 (#944, p. 193; 986, p. 267; 1016, p. 310; 1023, p. 322; 1071, p. 393). City of Mansfield. At North Main Street pumping station.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	42.95	.....	35.05	.....	33.30	41.75	48.20	.....
2	.....	41.10	.....	35.20	.....	.....	42.15	46.40	.....
3	.....	40.25	.....	34.70	.....	.....	42.35	45.65	43.60
4	.....	41.20	.....	34.30	.....	.....	42.30	47.65	43.60
5	.....	41.03	.....	30.80	.....	.....	38.40	48.02	43.25
6	.....	41.00	.....	.....	.....	.....	.....	48.34	43.28
7	.....	41.05	.....	.....	.....	.....	.....	48.40	43.02
8	.....	40.55	.....	.....	.....	.....	41.95	48.40	42.30
9	.....	.....	.....	.....	.....	.....	42.45	45.25	.....
10	.....	.....	.....	.....	.....	.....	.....	41.70	43.93
11	42.06	.....	.....	.....	.....	.....	.....	42.75	43.93
12	40.92	.....	.....	.....	.....	.....	40.15	42.85	43.97
13	40.90	.....	.....	.....	.....	.....	.....	43.55	43.90
14	42.17	.....	.....	.....	.....	.....	.....	46.12	43.04
15	42.72	.....	.....	.....	.....	.....	42.40	45.68	42.92
16	43.28	.....	.....	.....	.....	.....	.....	45.85	43.16
17	43.72	.....	.....	.....	.....	.....	.....	46.50	43.40
18	42.95	.....	.....	.....	.....	.....	.....	45.20	43.40
19	.....	.....	.....	.....	.....	.....	42.05	43.94	43.50
20	.....	.....	.....	.....	.....	.....	41.65	46.45	43.50
21	.....	.....	.....	.....	.....	.....	42.40	43.48	43.50
22	.....	.....	.....	.....	.....	.....	.....	43.37	43.30
23	.....	.....	39.95	.....	.....	.....	.....	42.92	41.80
24	.....	.....	41.35	.....	.....	42.50	.....	41.45	.....
25	42.29	.....	41.95	.....	.....	42.95	.....	42.60	.....
26	41.46	.....	42.55	.....	.....	43.00	.....	42.90	39.32
27	41.42	.....	42.70	.....	41.45	43.00	.....	42.90	38.75
28	42.80	.....	42.65	.....	.....	40.85	.....	41.20	36.75
29	43.02	.....	39.99	.....	.....	40.70	42.90	41.90	.....
30	42.82	.....	33.85	.....	.....	41.63	43.35	41.90	37.00
31	43.84	.....	.....	.....	38.00	.....	47.20	.....	36.80

a Tape measurement.

#### Ross County

Ro-1 (#1016, p. 310; 1023, p. 322; 1071, p. 394). Chillicothe Water Department. In City Park, Chillicothe.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	17.27	12.93	.....	15.17	12.00	11.50	13.28	14.35	14.70	15.63	16.70	.....
2	17.33	10.00	.....	15.23	12.07	11.75	12.68	14.50	14.71	15.69	16.60	17.18
3	17.18	9.60	16.13	15.24	11.55	11.70	12.90	14.60	14.75	.....	16.57	17.23
4	.....	11.01	16.19	14.74	10.74	10.54	13.14	14.70	14.77	.....	16.67	17.25
5	.....	11.86	16.25	14.64	11.15	6.50	13.34	14.83	14.75	.....	16.68	17.30
6	16.43	12.68	16.29	14.70	11.65	5.80	13.52	14.88	14.73	.....	16.67	17.32
7	16.67	13.12	16.30	14.70	12.06	7.27	13.60	14.94	14.80	.....	16.65	17.33
8	16.84	13.50	16.34	14.61	12.40	7.90	13.70	14.95	14.67	.....	16.57	17.34
9	16.95	13.83	16.35	14.78	12.65	8.02	13.76	14.85	14.76	.....	16.62	17.34
10	17.05	14.15	16.35	14.91	.....	8.22	13.77	14.95	14.87	.....	16.67	17.20
11	17.14	.....	.....	15.10	.....	9.27	13.78	15.02	15.02	.....	16.70	17.20
12	17.17	.....	16.42	15.23	13.30	.....	13.76	15.10	15.09	.....	.....	17.24
13	17.23	14.74	16.42	15.30	13.46	.....	13.75	15.16	15.00	16.22	.....	17.28
14	.....	14.85	16.44	15.37	13.50	10.80	13.90	15.25	14.43	16.28	.....	17.33
15	17.26	14.97	16.43	15.44	13.17	10.50	.....	15.33	14.56	16.34	.....	17.35
16	16.96	15.05	16.35	15.44	12.90	9.70	.....	15.33	14.68	16.38	.....	17.39
17	15.93	15.13	16.17	15.17	13.10	9.10	.....	15.27	14.80	16.43	16.76	17.39
18	15.63	15.23	16.23	14.60	13.12	10.05	.....	15.05	14.93	16.47	16.77	.....
19	15.88	15.32	16.29	14.39	12.57	10.72	.....	.....	15.05	16.50	16.81	.....
20	15.98	15.40	16.34	14.52	.....	11.09	.....	.....	15.15	16.55	16.86	.....
21	15.85	15.50	16.40	14.52	12.40	11.43	.....	.....	15.24	.....	16.90	.....

## Ro-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
22	14.99	15.55	16.42	13.42	12.35	11.80	.....	.....	15.25	.....	16.95	.....
23	14.33	15.62	16.42	11.24	11.83	12.05	.....	.....	15.21	.....	16.97	17.52
24	14.40	15.70	16.42	11.79	11.28	12.33	.....	.....	15.20	.....	17.00	17.55
25	14.88	15.78	16.40	12.06	11.50	12.55	.....	.....	15.25	.....	.....	17.55
26	15.15	15.83	16.15	11.84	11.47	12.75	.....	.....	15.30	.....	.....	17.58
27	15.36	.....	14.71	11.50	10.52	12.91	.....	14.48	15.36	.....	.....	17.63
28	15.37	.....	14.80	10.92	8.95	13.06	.....	14.65	15.41	16.70	.....	17.70
29	15.27	.....	15.05	11.56	9.90	.....	13.93	14.75	15.50	16.70	.....	17.73
30	15.44	.....	15.13	11.91	10.55	13.30	14.07	14.85	15.57	16.72	.....	17.80
31	15.02	.....	15.13	.....	11.05	.....	14.20	14.87	.....	16.73	.....	.....

Ro-2 (\*1016, p. 311; 1023, p. 323; 1071, p. 395). Chilllicothe Water Department. In Chilllicothe, in municipal well field.

Water level, in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	41.91	39.81	38.97	39.95	36.65	35.80	35.25	.....	37.21	38.40	38.57	39.99
2	41.90	39.75	38.95	39.64	36.95	34.83	.....	.....	37.38	38.43	38.55	39.97
3	41.93	39.70	38.94	.....	36.38	.....	35.30	.....	37.40	38.45	40.15	40.01
4	41.88	39.74	38.95	39.90	36.45	.....	35.30	.....	37.38	38.60	40.39	39.97
5	41.90	39.78	39.35	.....	36.37	.....	35.25	.....	37.63	38.80	40.15	39.99
6	41.88	36.55	39.40	39.95	36.44	.....	.....	.....	37.05	38.50	40.31	40.02
7	41.88	36.55	39.42	39.95	36.40	.....	.....	.....	37.15	38.45	40.55	40.03
8	41.90	36.57	39.42	.....	36.41	.....	.....	.....	.....	38.46	40.36	40.00
9	41.88	36.80	39.44	39.90	37.30	32.45	35.25	.....	.....	38.45	40.38	39.97
10	41.95	36.90	39.45	39.88	37.00	32.65	35.35	.....	.....	.....	40.40	39.99
11	41.94	36.92	39.42	.....	37.20	32.63	35.40	.....	.....	38.43	40.35	40.13
12	41.95	37.10	39.45	39.88	36.60	32.50	.....	.....	.....	38.40	40.15	40.03
13	41.05	37.22	39.45	39.90	36.65	32.65	.....	.....	38.24	39.47	40.06	40.05
14	41.05	37.26	39.40	39.92	36.64	32.67	.....	.....	38.20	39.43	40.23	40.00
15	.....	37.30	39.44	39.15	36.67	32.69	.....	.....	.....	38.50	40.21	40.03
16	41.10	38.47	39.45	39.15	.....	32.70	.....	.....	.....	38.71	40.24	40.05
17	41.05	38.40	39.48	39.09	36.95	32.71	.....	38.13	38.20	39.15	40.20	40.10
18	41.08	38.35	39.70	38.98	36.85	32.50	36.05	.....	38.00	39.20	40.17	40.05
19	41.05	38.51	39.75	38.95	36.35	32.80	36.07	.....	38.05	39.70	40.21	44.02
20	40.93	.....	39.50	39.07	36.55	32.62	36.05	.....	38.15	39.10	40.23	42.95
21	40.93	.....	39.95	39.09	36.58	32.65	36.06	.....	38.10	39.87	40.17	.....
22	40.90	38.55	39.90	39.07	36.50	32.70	36.08	38.20	38.00	39.85	40.16	42.94
23	40.91	38.53	39.65	38.10	36.65	32.95	36.10	38.17	38.00	39.88	40.18	42.93
24	40.93	.....	39.85	38.60	.....	32.90	36.33	38.15	38.40	39.70	40.20	42.20
25	40.92	38.95	39.87	38.65	.....	33.05	36.35	.....	38.25	40.40	39.93	.....
26	40.92	38.94	39.80	38.15	36.42	33.20	36.36	.....	38.50	39.60	39.96	42.23
27	40.00	38.90	39.91	38.20	36.43	33.10	36.35	.....	38.40	39.55	39.94	42.24
28	40.25	.....	39.90	38.35	.....	33.20	.....	37.15	38.41	39.60	39.96	42.25
29	40.16	.....	39.85	38.40	.....	33.22	.....	37.20	38.43	38.50	40.03	.....
30	40.10	.....	39.91	38.44	.....	33.23	.....	37.15	38.40	38.55	40.00	.....
31	40.15	.....	39.90	.....	.....	.....	36.45	37.20	.....	.....	.....	.....

Ro-3 (\*1023, p. 323; 1071, p. 395). The Mead Corporation well 7.  
At Chilllicothe, in industrial well field.

Water level, in feet below land-surface datum, 1941-44

Date	Water level	Date	Water level	Date	Water level
Jan. 5, 1941	31.1	Mar. 16, 1941	32.2	May 25, 1941	33.0
12	31.1	23	32.3	June 1	32.7
19	31.2	30	32.2	8	32.6
26	31.2	Apr. 6	32.2	15	32.6
Feb. 2	31.7	13	32.1	22	32.4
9	32.1	20	32.1	29	32.3
16	32.1	27	32.1	July 6	32.1
23	32.1	May 4	32.1	13	32.5
Mar. 2	32.1	11	32.7	20	32.3
9	32.1	18	33.3	27	32.1

Ro-3--Continued.

Water level, in feet below land-surface datum, 1941-44					
Date	Water level	Date	Water level	Date	Water level
Aug. 3, 1941	32.7	Oct. 25, 1942	37.5	Jan. 16, 1944	36.7
10	33.3	Nov. 1	39.0	23	37.3
17	33.2	8	39.2	30	37.6
24	33.0	15	39.3	Feb. 6	37.8
31	32.7	22	39.4	13	37.5
Sept. 7	33.3	29	38.8	20	38.7
14	33.8	Dec. 6	38.0	27	38.6
21	34.4	13	38.7	Mar. 5	38.5
28	34.4	20	39.4	12	37.6
Oct. 5	34.4	27	37.7	19	36.8
12	34.9	Jan. 3, 1943	37.7	26	36.1
19	35.5	10	37.1	Apr. 2	35.5
26	36.0	17	36.6	9	35.0
Nov. 2	36.4	24	36.0	16	33.2
9	36.5	31	35.5	23	32.8
16	36.6	Feb. 7	36.0	30	32.7
23	36.7	14	35.9	May 7	31.0
30	36.9	21	35.8	14	32.0
Dec. 7	36.9	28	34.2	21	32.2
14	36.9	Mar. 7	35.7	28	32.3
21	36.8	14	36.0	June 4	32.9
28	36.7	21	17.2	11	33.5
Jan. 4, 1942	36.6	28	24.7	18	33.3
11	36.6	Apr. 4	26.7	25	33.0
18	36.6	11	25.0	July 2	32.8
25	36.5	18	28.0	9	32.6
Feb. 1	36.5	25	28.7	16	33.5
8	36.5	May 2	29.1	23	34.0
15	36.1	9	29.4	30	34.8
22	35.7	16	28.6	Aug. 6	35.5
Mar. 1	35.4	23	30.5	13	35.6
8	35.0	30	28.9	20	35.6
15	34.6	June 6	29.9	27	36.5
22	34.3	13	30.4	Sept. 3	36.6
29	33.9	20	31.0	10	37.3
Apr. 5	33.5	27	29.2	17	37.6
12	33.2	July 4	28.5	24	38.2
19	32.8	11	29.2	Oct. 1	38.5
26	32.4	18	30.8	8	39.0
May 3	32.3	25	31.2	14	39.0
10	32.2	Aug. 1	31.9	22	39.5
17	32.1	8	31.8	29	39.8
24	32.0	15	32.5	Nov. 5	40.2
31	31.8	22	33.2	12	40.6
June 7	31.8	29	33.4	19	40.0
14	29.7	Sept. 1	32.9	26	40.7
21	30.6	12	33.7	Dec. 3	40.9
28	30.7	19	34.4	8	41.56
July 5	30.8	26	34.5	9	41.75
12	31.1	Oct. 3	35.1	10	41.80
19	31.4	10	35.6	11	41.69
26	34.0	17	36.0	12	41.34
Aug. 2	34.2	24	36.4	13	41.51
9	34.5	31	36.4	14	41.69
16	34.0	Nov. 7	37.0	15	41.81
23	34.1	14	37.3	16	41.86
30	34.6	21	38.0	17	41.80
Sept. 6	34.7	28	38.0	18	41.31
13	34.8	Dec. 5	38.0	19	40.96
20	35.1	12	38.2	20	41.21
27	35.3	19	38.2	21	41.48
Oct. 4	35.5	26	37.8	22	41.60
11	35.8	Jan. 2, 1944	36.5	23	41.80
18	35.9	9	36.7	24	41.78

Ro-3--Continued.

Water level, in feet below land-surface datum, 1941-44					
Date	Water level	Date	Water level	Date	Water level
Dec. 25, 1944	41.33	Dec. 28, 1944	40.52	Dec. 30, 1944	40.99
26	40.66	29	40.79	31	41.07
27	40.29				

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	37.23	35.51	33.20	33.60	32.07	30.15	29.30	30.25	32.05	33.45	36.35	38.50
2	37.35	35.17	33.23	33.70	32.03	29.98	28.92	30.40	31.40	33.62	36.42	38.46
3	37.44	34.75	33.18	33.76	31.81	29.65	28.59	30.50	31.27	33.89	36.41	38.58
4	37.45	34.30	33.12	33.76	31.75	29.75	28.30	30.40	31.55	34.03	36.42	38.69
5	37.44	34.15	33.22	33.76	31.57	29.81	27.75	30.22	31.68	34.15	36.55	38.85
6	37.26	34.08	33.29	33.78	31.13	29.85	27.39	30.45	31.90	34.15	36.68	38.92
7	36.95	34.05	33.37	33.62	31.07	29.88	26.86	30.65	32.00	34.30	36.78	38.95
8	36.94	34.00	33.42	33.21	31.08	29.91	27.15	30.80	31.90	34.47	36.90	38.92
9	37.00	34.00	33.44	33.30	31.12	29.86	27.56	30.95	31.70	34.65	36.95	38.85
10	37.06	33.95	33.30	33.36	31.14	29.76	27.91	31.05	31.90	34.80	36.95	38.95
11	37.10	33.79	32.97	33.40	31.15	29.86	28.49	31.05	32.10	34.95	36.94	39.05
12	37.11	33.84	33.10	33.49	31.01	29.91	28.42	31.12	32.30	35.05	37.06	39.08
13	36.95	33.85	33.17	33.52	30.58	29.94	28.55	31.27	32.42	35.05	37.18	39.10
14	.....	33.90	33.27	33.47	30.70	29.96	28.45	31.42	32.50	35.06	37.38	39.15
15	.....	33.90	33.38	33.32	30.76	29.96	28.30	31.60	32.50	35.16	37.46	39.13
16	.....	33.91	33.44	33.39	30.80	29.73	28.55	31.75	32.56	35.25	37.54	39.10
17	36.67	33.77	33.42	33.41	30.82	29.23	28.75	31.75	32.73	35.30	37.53	39.18
18	36.65	33.34	33.38	33.39	30.82	29.37	28.80	31.50	32.87	35.35	37.50	39.26
19	36.56	33.35	33.48	33.30	30.60	29.48	28.99	31.50	33.05	35.40	37.64	39.40
20	36.45	33.35	33.56	33.26	30.18	29.54	29.07	31.72	33.16	35.40	37.75	39.47
21	36.23	33.37	33.62	33.14	30.27	29.58	28.99	31.82	33.24	35.35	37.86	39.50
22	36.23	33.37	33.70	32.70	30.33	29.62	28.80	31.66	33.10	35.47	37.93	39.55
23	36.20	33.40	33.73	32.63	30.33	29.57	29.05	31.40	32.83	35.57	38.05	39.60
24	36.15	33.28	33.62	32.59	30.32	29.48	29.26	31.57	33.00	35.77	38.05	39.65
25	36.10	32.92	33.30	32.56	30.32	29.60	29.64	31.57	33.15	35.87	38.05	39.64
26	36.06	33.03	33.45	32.52	30.25	29.67	29.80	31.60	33.30	35.93	38.16	39.18
27	35.95	33.12	33.54	32.48	30.03	29.72	29.90	31.73	33.40	35.92	38.26	39.05
28	35.52	33.18	33.60	32.36	30.02	29.75	29.85	31.85	33.48	35.90	38.36	39.25
29	35.48		33.66	32.11	30.06	29.79	29.68	32.04	33.46	36.00	38.45	39.25
30	35.52		33.72	32.07	30.14	29.70	29.90	32.14	33.30	36.14	38.50	39.27
31	35.58		33.69		30.16		30.07	32.20		36.22		39.38

Ro-4 (\*1023, p. 324; 1071, p. 396). Chillicothe Paper Co. At Chillicothe, on southeast corporation line.

Water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	35.00	33.30	30.80	30.50	29.40	26.80	26.40	22.10	24.00	29.30	34.60	32.40
2	35.20	32.10	32.80	30.90	29.50	24.10	26.30	27.30	25.10	30.10	34.20	36.30
3	35.30	29.30	27.60	31.20	29.40	26.20	26.10	27.10	27.70	30.40	29.70	37.20
4	35.30	31.60	30.00	31.20	28.30	26.60	.....	24.40	28.30	30.70	34.00	37.50
5	32.60	31.90	30.40	31.30	26.00	26.60	.....	27.20	28.60	30.40	34.60	37.70
6	31.70	31.90	30.60	31.10	28.30	26.60	.....	27.20	28.80	28.00	34.90	38.00
7	34.40	31.90	30.80	28.10	28.60	26.60	20.60	27.60	28.60	31.10	35.10	37.40
8	34.70	31.90	30.80	30.40	28.60	.....	23.40	27.70	26.00	31.80	35.20	38.20
9	34.90	31.30	31.00	30.80	28.60	23.60	24.00	27.80	28.30	32.10	34.90	36.80
10	34.90	28.60	27.60	30.90	28.70	25.90	24.40	27.80	28.30	31.30	30.20	37.40
11	35.00	31.10	30.00	31.00	28.40	26.40	24.70	25.10	29.20	32.50	34.60	37.70
12	33.10	31.50	30.40	31.00	28.40	26.50	25.00	27.50	29.30	32.20	35.30	38.00
13	31.40	31.60	30.50	30.80	27.60	26.60	25.10	27.90	29.60	29.10	35.50	38.10
14	34.00	31.70	30.80	27.70	28.00	26.60	22.40	28.30	29.20	32.20	35.70	37.40
15	34.40	31.70	30.80	30.10	28.10	26.20	24.60	28.40	26.60	32.80	35.60	32.40
16	34.50	30.80	.....	30.60	29.10	23.40	25.20	28.50	29.00	33.00	35.50	37.10
17	34.50	28.30	26.80	30.90	28.10	25.40	25.50	28.10	29.70	33.20	38.90	37.40
18	34.40	30.60	30.00	30.90	28.00	25.80	25.70	25.60	29.70	33.30	35.20	37.90
19	33.70	31.00	30.60	30.90	24.90	26.00	25.90	28.00	30.00	32.10	36.60	38.40

## Ro-4--Continued.

Water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
20	31.10	31.10	30.80	30.60	27.10	26.10	.....	28.50	30.10	29.60	39.90	38.20
21	33.60	31.00	31.00	27.40	27.40	26.40	23.20	28.80	30.10	32.70	37.20	35.10
22	34.00	31.10	31.00	29.80	27.50	26.10	25.40	28.60	28.00	33.40	36.80	34.80
23	34.10	30.60	30.80	30.00	27.60	23.20	25.80	28.40	29.50	33.60	.....	35.90
24	34.00	26.90	28.00	30.00	27.60	25.40	26.10	28.00	29.90	33.80	31.30	36.60
25	34.10	30.20	30.40	29.90	27.20	26.00	26.30	25.40	30.20	33.50	35.80	.....
26	33.30	30.60	30.80	30.00	25.20	26.10	26.50	27.70	30.40	30.10	36.20	31.00
27	30.50	30.70	31.10	29.40	26.60	26.30	.....	28.20	30.50	.....	36.60	37.00
28	33.00	30.70	31.10	26.60	27.00	26.40	23.40	28.40	.....	33.30	36.70	37.30
29	33.30		31.20	29.00	27.00	.....	26.00	28.60	25.10	33.90	36.90	32.60
30	33.30		31.20	29.40	27.00	26.60	26.60	28.80	.....	34.10	36.10	.....
31	33.40		27.60		27.00		26.90	28.70		34.40	.....	.....

Ro-5 (#1023, p. 328; 1071, p. 396). The Mead Corporation. In Chillicothe.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	46.09	Apr. 4	40.93	July 5	34.68	Oct. 3	40.93
10	45.35	11	41.85	11	36.93	10	41.35
17	45.53	18	41.59	18	36.68	17	42.68
24	45.18	25	39.93	25	37.26	24	43.18
31	43.93	May 2	39.01	Aug. 1	38.76	31	43.01
Feb. 7	41.43	9	39.59	8	38.10	Nov. 7	43.93
14	40.93	16	38.77	15	38.76	14	45.68
21	41.01	23	38.18	22	38.43	21	45.85
28	40.59	30	37.93	29	39.37	28	46.26
Mar. 7	40.68	June 6	38.68	Sept. 5	38.77	Dec. 5	46.76
14	41.43	13	37.93	12	38.85	12	47.26
21	41.85	20	37.18	19	39.77	19	47.59
28	41.01	27	37.09	26	40.09	26	46.26

Sandusky County

S-1 (#1071, p. 397). City of Woodville. In Woodville, at water tower.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	23.48	.....	17.60	19.53	21.10	22.25	23.64	24.60
2	23.32	.....	17.60	19.54	21.35	22.30	23.55	24.73
3	23.42	.....	17.50	19.58	21.40	22.35	23.61	24.80
4	23.37	.....	17.53	19.65	21.40	22.47	23.66	24.75
5	23.38	18.37	17.80	19.75	21.23	22.47	23.88	24.77
6	23.35	18.25	17.73	19.89	21.46	22.65	23.75	24.65
7	23.33	18.28	17.95	20.23	21.45	22.55	23.73	24.75
8	23.43	17.86	17.99	20.05	21.36	22.63	23.87	24.85
9	23.46	17.55	17.92	20.35	21.50	22.73	23.85	24.73
10	23.33	17.53	17.96	20.35	21.45	22.74	23.78	24.52
11	23.43	17.65	19.97	20.40	21.64	22.77	23.95	24.77
12	23.37	17.76	18.12	20.70	21.65	22.80	22.92	24.78
13	23.27	17.45	18.04	20.62	21.68	22.85	24.09	24.85
14	.....	17.48	17.98	20.86	21.70	22.85	24.05	24.82
15	.....	17.42	18.11	20.66	21.96	22.96	23.99	24.71
16	.....	17.27	18.22	20.70	21.96	23.01	24.11	24.98
17	.....	17.17	18.18	20.62	21.94	23.07	24.22	24.87
18	.....	17.22	18.18	20.65	21.90	23.00	24.23	24.90
19	.....	17.36	18.62	21.01	21.35	23.10	24.23	24.98
20	.....	17.33	18.35	20.94	21.97	23.14	24.38	24.87
21	.....	17.45	18.50	20.93	21.80	23.20	24.27	24.98
22	.....	17.47	18.60	21.00	22.27	23.24	24.37	24.98

S-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
23	.....	17.35	18.67	21.10	21.96	23.50	24.45	25.03
24	.....	17.25	18.81	21.01	22.14	23.31	24.45	25.04
25	.....	17.27	18.80	21.05	22.26	23.31	24.50	25.22
26	.....	17.26	18.92	21.27	22.30	23.34	24.42	.....
27	.....	17.26	18.72	21.29	22.24	23.31	24.47	.....
28	.....	17.42	18.93	21.36	22.05	23.48	24.58	.....
29	.....	17.48	19.07	21.28	22.20	23.50	24.67	.....
30	.....	17.46	19.25	21.32	22.34	23.57	24.65	.....
31	.....		19.37	21.33		23.56		.....

Seneca County

Se-1 (\*1071, p. 397). Myers farm. 1.5 miles south of Green Springs.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
1	.....	32.35	32.92	32.70	31.80	31.02	.....	32.30	32.72	32.40	33.30
2	.....	32.82	32.60	32.29	31.81	29.63	32.10	32.46	32.60	33.01	33.10
3	.....	32.48	32.90	32.68	31.64	29.21	31.90	32.55	32.72	33.07	33.11
4	.....	32.68	32.60	32.33	31.82	29.54	31.92	32.60	33.05	33.12	32.92
5	.....	32.82	32.98	31.94	31.38	30.10	31.99	32.71	33.15	33.02	33.12
6	.....	32.75	32.72	32.00	31.58	30.28	31.82	32.73	33.23	33.32	32.50
7	.....	32.71	32.88	32.50	31.50	29.29	32.00	32.79	33.27	33.80	33.02
8	.....	32.52	32.96	32.60	31.63	29.30	31.85	31.41	33.00	33.20	33.41
9	.....	33.00	33.11	32.62	31.82	29.50	31.80	31.20	33.13	33.38	33.51
10	33.52	32.70	33.00	32.22	31.67	30.30	32.10	31.30	33.40	33.27	.....
11	33.72	.....	33.11	32.10	31.90	30.32	31.80	31.27	32.31	33.41	.....
12	33.58	.....	33.28	32.63	31.50	30.50	31.88	31.30	31.90	33.28	.....
13	33.30	.....	32.72	32.80	31.78	30.38	31.80	32.41	32.22	.....	.....
14	33.52	32.90	32.86	.....	31.70	29.60	31.50	32.49	32.28	33.53	.....
15	33.60	32.90	32.98	.....	31.64	29.92	32.01	32.28	32.33	33.26	.....
16	33.03	32.92	33.02	.....	31.30	30.40	30.81	32.30	32.38	33.32	.....
17	33.50	32.96	32.70	32.50	31.57	30.10	32.30	32.60	32.22	33.26	.....
18	33.60	33.03	33.00	32.28	31.44	30.50	.....	32.38	32.25	33.30	.....
19	33.33	32.90	33.20	32.61	.....	30.38	.....	32.92	32.31	33.11	.....
20	33.00	32.40	32.30	32.48	.....	30.52	.....	32.88	32.20	33.32	.....
21	33.15	33.08	33.02	31.79	.....	30.70	.....	32.78	32.30	33.76	.....
22	33.42	32.75	33.00	32.01	30.98	30.90	.....	32.81	32.26	33.44	.....
23	33.50	32.87	32.96	32.16	31.40	30.79	32.03	32.83	32.20	33.62	.....
24	.....	32.80	32.42	31.87	31.70	30.78	32.03	32.85	32.30	33.38	.....
25	.....	33.14	32.41	31.78	31.42	30.82	32.20	32.70	32.10	33.60	.....
26	.....	32.94	32.99	32.00	.....	31.00	32.22	32.66	32.22	33.67	.....
27	.....	29.68	32.90	31.69	.....	.....	31.82	32.68	32.20	33.22	.....
28	.....	33.28	33.02	32.01	.....	.....	31.68	33.21	32.28	33.28	.....
29	.....		32.87	31.60	31.21	.....	32.49	32.30	31.95	33.18	.....
30	31.92		32.83	31.90	30.71	.....	32.48	32.42	32.21	33.11	.....
31	32.20		32.47		30.80		32.27	32.82		33.20	.....

Shelby County

Sh-1 (\*1071, p. 398). John Wanger. On south side of State Highway 274, 3 miles east of Kettlersville.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	12.37	13.38	12.63	11.25	11.77	12.41	12.89	13.39	13.65	13.77	13.99
2	13.76	12.54	13.30	12.51	11.03	11.67	12.51	12.91	13.32	13.63	13.78	13.98
3	13.72	12.54	13.35	12.26	11.07	11.09	12.44	12.93	13.37	13.62	13.78	14.02
4	13.74	12.49	13.42	12.25	11.21	11.08	12.48	12.97	13.40	13.61	13.73	14.01
5	13.61	12.51	13.48	12.16	11.42	11.15	12.51	12.99	13.39	13.60	13.71	13.89
6	.....	12.56	13.50	12.11	11.55	11.18	12.56	12.98	13.34	13.63	13.76	13.92

Sh-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
7	.....	12.65	13.50	12.29	11.68	11.12	.....	13.01	13.36	13.63	13.76	13.92
8	13.70	12.78	13.49	12.34	11.81	10.85	.....	13.06	13.41	13.62	13.84	13.90
9	13.73	12.87	13.52	12.36	11.94	10.90	.....	13.02	13.42	13.65	.....	13.96
10	13.72	13.02	13.53	12.40	12.02	11.03	12.49	13.11	13.46	13.66	.....	13.96
11	13.72	13.11	13.53	12.34	12.12	11.25	12.53	13.14	13.45	13.66	.....	13.92
12	13.67	13.16	13.53	12.44	12.12	11.44	12.58	13.18	13.43	13.67	.....	13.95
13	.....	13.18	13.49	12.48	12.12	11.49	12.58	13.19	13.42	13.67	.....	13.96
14	.....	13.17	.....	12.47	12.11	11.41	12.56	13.19	13.42	13.67	.....	13.94
15	13.58	13.16	.....	12.44	12.19	11.09	12.50	13.15	13.42	13.70	.....	13.89
16	13.49	13.08	.....	12.44	12.21	11.18	12.50	13.16	13.50	13.72	.....	13.81
17	13.43	13.13	.....	12.35	12.23	11.27	12.54	13.18	13.56	13.71	.....	13.83
18	13.43	13.19	.....	12.30	12.09	11.40	12.54	13.19	13.60	13.69	.....	13.83
19	13.40	13.24	13.18	12.35	11.96	11.55	12.60	13.23	13.59	13.70	.....	13.88
20	13.26	13.24	13.17	12.35	11.90	11.69	12.62	13.25	13.56	13.74	.....	13.90
21	12.90	13.22	13.14	12.19	11.90	11.77	12.63	13.28	13.53	13.75	.....	13.88
22	12.98	13.22	13.15	12.01	11.86	11.91	12.70	13.25	13.53	13.77	.....	13.87
23	12.91	13.22	13.15	11.94	11.86	11.96	12.75	13.26	13.55	13.79	.....	13.80
24	12.90	13.21	13.06	12.01	11.90	11.98	12.83	13.26	13.52	13.84	.....	13.85
25	12.94	13.29	12.65	12.01	11.86	12.01	12.85	13.28	13.57	13.84	13.82	13.85
26	12.90	13.34	12.60	11.81	11.74	12.05	12.85	13.29	13.61	13.84	13.85	13.75
27	12.90	13.38	12.62	11.64	11.51	12.19	12.81	13.32	13.69	13.82	13.88	13.77
28	13.02	13.38	12.63	11.75	11.66	12.17	12.75	13.37	13.65	13.71	13.89	13.81
29	13.02	.....	12.58	11.77	11.65	12.24	12.83	13.39	13.59	13.71	13.90	13.84
30	12.93	.....	12.60	11.61	11.71	12.35	12.83	13.39	13.64	13.72	13.99	13.83
31	12.34	.....	12.63	.....	11.77	.....	12.85	13.39	.....	13.76	.....	13.81

Stark County

St-1 (\*944, p. 197; 986, p. 274; 1016, p. 317; 1023, p. 333; 1071, p. 399). Republic Steel Corporation. In Massillon, in office building on Oberlin Ave.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	45.44	45.53	46.02	45.13	43.69	42.13	43.14	42.98	43.92	44.75	45.31
2	46.23	45.30	45.52	45.98	45.15	43.56	42.15	43.15	43.04	43.98	44.75	45.35
3	46.20	45.17	45.58	45.97	45.15	43.34	42.10	43.15	43.08	44.04	44.72	45.40
4	46.19	45.12	45.66	45.87	45.16	42.97	42.00	43.23	43.13	44.06	44.74	45.43
5	46.10	45.08	45.74	45.77	45.16	42.64	41.94	43.25	43.16	44.04	44.74	45.48
6	46.08	45.07	45.79	45.66	45.18	.....	42.01	43.27	43.22	44.03	44.83	45.50
7	46.05	45.07	45.81	45.54	45.17	.....	42.13	43.27	43.23	.....	44.83	45.48
8	46.10	45.07	45.82	.....	.....	.....	42.20	.....	43.28	.....	44.84	45.46
9	46.14	45.08	45.84	.....	.....	.....	.....	.....	43.38	44.23	44.83	45.53
10	.....	45.13	45.83	.....	.....	.....	.....	.....	43.45	44.27	44.83	45.57
11	.....	45.16	45.86	.....	.....	.....	.....	.....	43.49	44.29	44.85	45.62
12	46.15	45.18	45.92	.....	45.09	.....	.....	.....	43.50	44.27	44.87	45.68
13	46.17	.....	45.96	.....	45.09	.....	.....	.....	43.50	44.27	44.88	45.70
14	46.20	45.15	45.97	.....	45.04	.....	.....	.....	43.49	44.34	44.88	45.73
15	46.17	45.19	45.98	45.56	44.99	.....	42.52	.....	43.49	44.38	.....	45.70
16	46.21	45.20	.....	45.54	44.98	41.70	42.56	.....	43.51	44.42	.....	45.78
17	46.22	45.22	45.98	45.53	44.92	41.73	42.62	.....	43.69	44.45	45.02	45.82
18	46.14	45.27	46.05	45.54	44.87	41.76	42.65	.....	43.73	44.48	45.05	45.88
19	46.12	45.28	46.06	45.45	44.83	41.73	42.65	.....	43.76	44.48	45.10	45.93
20	45.98	45.30	46.10	45.37	44.80	41.82	42.73	.....	.....	44.46	45.15	45.95
21	45.98	45.32	46.14	45.32	44.76	41.87	42.77	42.80	.....	44.53	45.18	45.96
22	45.94	45.33	46.17	45.24	44.64	41.88	42.80	42.83	43.70	44.57	45.18	45.95
23	45.85	45.33	46.15	45.20	44.55	41.93	.....	42.85	43.73	44.64	45.17	46.03
24	45.82	45.35	46.07	45.22	44.45	41.98	42.81	42.87	43.81	44.67	45.05	46.05
25	45.82	45.40	46.10	45.21	44.32	42.03	42.85	42.92	43.86	44.65	.....	46.03
26	45.78	45.42	46.15	44.15	44.15	42.08	42.87	42.46	43.88	44.62	.....	45.95
27	45.75	45.46	46.15	45.08	43.98	42.12	42.88	43.01	43.88	44.58	.....	45.97
28	45.70	45.52	46.16	45.01	.....	42.13	42.93	43.04	43.86	44.65	.....	.....
29	45.66	.....	46.20	45.00	43.87	42.09	42.98	43.06	43.87	44.68	45.30	46.02
30	45.63	.....	46.20	45.06	43.84	42.11	43.01	43.13	43.89	44.74	45.30	46.02
31	45.56	.....	46.07	.....	43.79	.....	43.08	43.10	.....	44.75	.....	46.10



St-2 (\*886, p. 590; 906, p. 210; 936, p. 237; 944, p. 196; 986, p. 271; 1016, p. 315; 1023, p. 332; 1071, p. 399). Republic Steel Corporation. In Canton.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	50.06	Apr. 1	49.27	July 19	44.18	Oct. 10	43.89
9	50.08	10	49.27	25	44.02	13	43.91
16	50.08	15	49.10	Aug. 1	43.52	25	43.89
25	49.97	22	48.35	6	43.47	28	43.86
31	49.85	29	48.45	16	43.02	Nov. 7	43.93
Feb. 7	49.72	May 7	48.68	18	42.85	10	43.85
12	49.52	16	48.72	30	43.10	17	44.00
18	49.54	24	48.47	Sept. 2	43.27	25	44.00
28	49.43	June 6	47.22	12	43.10	Dec. 5	42.89
Mar. 5	49.23	14	45.10	15	43.18	8	42.93
12	49.27	27	44.85	27	42.68	20	42.89
21	49.10	July 4	44.35	Oct. 2	42.43	22	42.94
28	49.10						

St-3 (\*986, p. 273; 1016, p. 316; 1023, p. 332; 1071, p. 400). Ohio Power Co. in Canton, on Second St. at Savannah St., S. E.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	52.24	51.95	51.43	51.14	48.44	47.26	47.42	47.59	47.92	48.15	
2	.....	52.21	51.93	51.42	51.12	48.41	47.28	.....	47.59	47.93	48.17	
3	.....	52.18	51.90	51.42	51.07	48.37	47.29	.....	47.60	47.93	48.18	
4	.....	52.16	51.90	51.42	51.04	48.34	47.30	.....	47.61	47.92	48.19	
5	.....	52.17	51.88	51.41	51.00	48.31	47.31	.....	47.62	47.92	48.19	
6	.....	52.17	51.85	51.41	50.92	48.27	47.32	.....	47.64	47.93	48.21	
7	.....	.....	51.83	51.41	50.84	48.24	47.33	.....	47.65	47.93	48.22	
8	.....	.....	51.82	51.41	50.75	48.20	47.34	.....	47.66	47.93	48.21	
9	.....	.....	51.78	51.42	50.65	48.16	47.36	.....	47.68	47.94	48.23	
10	.....	.....	51.77	51.42	50.52	48.12	47.37	.....	47.70	47.94	48.24	
11	.....	.....	51.74	51.42	50.36	48.08	47.38	.....	47.71	47.94	48.26	
12	.....	.....	51.73	51.40	50.20	48.06	47.39	.....	47.72	47.95	48.27	
13	.....	.....	51.73	51.37	50.04	48.02	47.41	.....	47.72	47.96	48.28	
14	.....	52.10	51.72	51.37	49.89	47.99	47.42	.....	47.72	47.97	48.29	
15	53.11	.....	52.11	51.68	51.38	49.74	47.95	47.43	.....	47.73	47.97	48.29
16	53.11	.....	52.11	51.66	51.39	49.59	47.91	47.44	.....	47.74	47.97	48.29
17	53.12	.....	52.10	51.64	51.39	49.48	47.88	47.45	47.48	47.75	47.99	48.30
18	53.12	.....	52.07	51.63	51.39	49.35	47.84	47.46	47.50	47.76	48.00	48.31
19	53.10	.....	52.07	51.62	51.38	49.24	47.80	47.46	47.51	47.78	48.02	48.32
20	53.06	.....	52.07	51.62	51.36	49.14	.....	47.45	47.52	47.79	48.04	48.32
21	53.07	.....	52.06	51.59	51.36	49.06	.....	47.45	47.52	47.80	48.06	48.32
22	53.07	.....	52.06	51.58	51.37	48.97	.....	47.46	47.52	47.81	48.06	48.31
23	.....	.....	52.06	51.57	51.37	48.90	.....	47.46	47.53	47.82	48.07	48.29
24	.....	.....	52.03	51.55	51.37	48.84	.....	47.46	47.54	47.84	48.07	48.29
25	.....	.....	51.99	51.55	51.36	48.76	.....	47.46	.....	47.85	48.06	48.29
26	.....	.....	52.01	51.54	51.35	48.70	.....	47.44	.....	47.86	48.07	48.29
27	.....	.....	52.02	51.52	51.35	48.62	.....	47.43	.....	47.86	48.09	48.29
28	.....	52.25	52.02	51.51	51.32	48.58	47.38	47.42	.....	47.86	48.11	48.30
29	.....	.....	52.00	51.49	51.28	48.53	47.35	47.42	47.58	47.87	48.13	48.36
30	.....	.....	51.98	51.46	51.26	48.49	47.31	47.42	47.58	47.89	48.14	48.37
31	.....	.....	51.98	.....	51.24	.....	47.28	47.42	.....	47.91	.....	48.39

St-4 (\*936, p. 236; 944, p. 195; 986, p. 268; 1016, p. 312; 1023, p. 329; 1071, p. 400). Goughmour well. Adeasi Bros, Harcourt Ave. Extension, 2 miles northeast of Canton.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	18.58	15.15	15.69	16.02	13.86	11.32	10.40	12.27	12.88	14.16	15.21	16.19
2	18.60	14.86	15.72	15.92	13.88	11.31	10.49	12.32	12.88	14.18	15.24	16.22
3	18.56	14.77	15.77	15.80	13.92	10.49	10.55	12.39	12.96	14.21	15.25	16.26
4	18.24	14.70	15.83	15.65	13.95	9.55	10.62	12.42	13.03	14.24	15.29	16.29

St-4--Continued.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	18.09	14.70	15.88	15.59	13.96	9.47	10.67	12.45	13.07	14.28	15.32	16.32
6	18.05	14.75	15.92	15.26	13.91	9.61	10.74	12.50	13.14	14.30	15.36	16.36
7	18.05	14.78	15.96	14.74	13.91	9.59	10.81	12.57	13.19	14.32	15.39	16.38
8	18.05	14.84	16.00	14.63	13.96	....	10.88	12.63	13.24	14.36	15.41	16.42
9	18.07	14.92	16.04	14.59	14.01	7.60	10.94	12.69	13.29	14.40	15.47	16.46
10	18.08	14.95	16.07	14.59	14.05	7.99	11.01	12.76	13.33	14.43	15.48	16.48
11	18.11	15.02	16.10	14.61	14.07	8.25	11.07	12.75	13.38	14.46	15.52	16.50
12	18.15	15.07	16.14	14.69	14.09	8.44	11.12	12.80	13.42	14.50	15.57	16.53
13	18.21	15.09	16.15	14.70	14.12	8.60	11.17	12.85	13.47	14.56	15.61	16.55
14	18.25	15.10	16.20	14.71	14.12	8.73	11.24	12.91	13.51	14.58	15.63	16.58
15	18.27	15.15	16.21	14.75	13.76	8.73	11.29	12.97	13.53	14.61	15.66	16.59
16	18.18	15.19	16.24	14.77	13.69	8.87	11.35	12.99	13.59	14.65	15.72	16.63
17	17.88	15.22	16.27	14.74	13.71	9.04	11.40	12.73	13.64	14.68	15.74	16.65
18	17.75	15.27	16.32	14.61	13.70	9.18	11.44	12.81	13.67	14.72	15.77	16.69
19	17.72	15.32	16.34	14.67	13.53	9.30	11.53	12.34	13.72	14.77	15.80	16.73
20	17.71	15.34	16.38	14.70	13.51	9.43	11.56	12.45	13.74	14.79	15.85	16.75
21	17.55	15.38	16.41	14.69	13.55	9.55	11.62	12.52	13.80	14.81	15.88	16.78
22	16.89	15.41	16.47	14.23	13.51	9.65	11.68	12.54	13.83	14.85	15.90	16.80
23	16.50	15.45	16.48	14.08	12.82	....	11.76	12.60	13.85	14.90	15.93	16.85
24	16.27	15.48	16.49	14.07	12.85	....	11.84	12.67	13.89	14.93	15.94	16.88
25	16.15	15.53	16.45	14.08	12.63	....	11.88	12.74	13.95	14.97	15.98	16.90
26	16.06	15.58	16.37	14.07	12.36	....	11.93	12.78	13.99	15.00	16.02	16.94
27	16.03	15.63	16.36	13.81	11.64	10.07	11.97	12.84	14.03	15.02	16.04	16.97
28	15.93	15.67	16.35	13.81	11.31	10.15	12.03	12.91	14.05	15.04	16.09	17.02
29	15.93		16.35	13.78	11.22	10.24	12.07	12.98	14.09	15.08	16.14	17.05
30	15.94		16.35	13.81	11.17	10.33	12.12	13.05	14.13	15.12	16.18	17.08
31	15.86		16.20		11.20		12.20	13.07		15.16		17.12

St-5 (\*936, p. 237; 944, p. 196; 986, p. 269; 1016, p. 313; 1023, p. 330; 1071, p. 401). Canton Water Department. In Northeast well field.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	42.27	43.20	41.85	....	42.22	41.14	35.71	38.40	37.12	36.51	38.17	38.72
2	42.27	43.20	41.85	....	42.21	40.50	35.71	38.05	36.92	36.86	37.80	39.00
3	42.23	43.15	41.74	....	42.21	40.39	35.71	37.91	37.33	36.90	37.60	39.20
4	42.20	43.05	41.70	42.33	42.23	40.31	35.70	38.38	37.53	37.13	37.92	39.22
5	42.22	43.02	41.69	42.42	41.89	40.18	35.68	38.83	37.63	37.19	37.95	38.64
6	42.25	43.00	41.69	42.39	41.98	40.06	35.69	39.11	37.64	37.02	38.00	39.00
7	42.26	42.97	41.69	41.85	42.05	39.84	35.76	39.02	37.01	37.30	38.21	39.10
8	42.35	42.92	41.68	41.86	42.07	39.63	35.85	39.02	37.17	37.51	38.20	38.77
9	42.48	42.85	41.68	41.87	42.08	39.40	35.84	39.08	37.35	37.53	37.51	39.12
10	42.61	42.68	41.68	41.70	42.10	39.08	35.88	38.96	37.53	37.25	37.99	39.17
11	42.73	42.58	41.64	41.84	42.10	38.68	35.92	38.26	37.67	37.36	37.98	39.02
12	42.82	42.52	41.65	41.78	41.78	38.42	....	38.50	37.88	37.10	38.09	39.31
13	42.87	42.52	41.65	41.34	41.88	38.45	....	38.58	37.90	37.33	38.16	39.43
14	42.95	42.49	41.65	41.48	41.92	37.96	36.05	38.64	37.91	37.65	....	38.90
15	43.05	42.44	41.65	41.60	41.95	37.57	....	38.79	37.52	37.81	....	39.20
16	43.15	42.33	41.65	41.74	41.91	36.47	....	38.80	37.57	37.93	....	39.55
17	43.27	42.07	41.64	41.83	41.89	36.47	37.35	38.02	37.21	38.08	37.76	39.85
18	43.36	42.07	41.56	41.90	41.87	36.33	37.65	38.18	37.50	38.15	38.16	40.00
19	43.38	42.06	41.56	41.95	41.55	36.20	37.78	38.40	37.54	37.61	38.34	40.22
20	43.37	42.04	41.60	41.93	41.65	36.05	37.27	38.53	37.59	37.78	38.39	40.27
21	43.30	42.06	41.69	41.79	41.71	35.92	36.67	38.60	37.62	37.83	38.45	40.27
22	43.28	42.08	41.69	42.08	41.71	35.79	36.71	38.66	37.04	37.91	38.61	39.97
23	43.35	42.08	41.69	42.16	41.72	35.59	36.77	38.55	37.36	37.95	38.45	40.20
24	43.35	41.94	41.66	42.21	41.72	35.46	37.38	37.68	37.25	38.17	38.31	40.22
25	43.35	41.90	41.66	42.25	41.70	35.93	....	37.99	36.75	38.20	38.60	40.15
26	43.35	41.88	41.66	42.25	41.64	36.31	....	38.22	36.58	37.50	38.63	39.55
27	43.27	41.87	41.67	42.28	41.52	36.57	....	38.28	36.38	37.93	....	39.38
28	43.16	41.87	41.69	42.25	41.47	36.58	37.40	38.06	36.32	38.15	38.45	39.70
29	43.15		41.74	42.14	41.42	36.12	37.45	38.11	36.42	38.14	38.70	39.45
30	43.19		41.74	42.18	41.35	35.70	....	37.94	36.47	38.20	38.35	39.82
31	43.20		41.73		41.27		38.30	37.48		38.25		39.75

St-6 (\*1016, p. 314; 1023, p. 330; 1071, p. 401). Canton Water Department. In Ninth St. well field.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	24.90	23.73	23.65	23.21	22.96	22.59	19.37	19.05	19.78	20.48	20.91	21.19
2	24.87	23.75	23.65	23.15	22.93	22.58	19.31	19.10	19.76	20.50	20.92	21.30
3	24.82	23.77	23.59	23.09	22.93	22.29	19.23	19.15	19.80	20.52	20.92	21.20
4	24.78	23.72	23.82	23.10	22.93	.....	19.15	19.21	19.85	20.53	20.91	21.21
5	24.73	23.71	24.04	.....	22.94	.....	19.06	19.25	19.88	20.54	20.83	21.16
6	24.69	23.69	23.92	.....	22.94	21.54	18.96	19.30	19.92	20.56	20.82	21.11
7	24.69	23.68	23.74	.....	22.92	21.14	18.86	19.35	19.95	20.57	20.82	21.11
8	24.65	23.68	23.71	.....	22.96	8.10	18.82	19.41	20.01	20.58	20.82	21.05
9	24.65	23.68	23.67	.....	23.07	10.50	18.76	19.47	20.04	20.61	20.90	21.09
10	24.65	23.70	23.67	.....	23.13	13.85	18.68	19.52	20.07	20.62	20.94	21.09
11	24.65	23.69	23.65	23.33	23.15	15.85	18.62	19.56	20.09	20.64	20.93	21.07
12	24.66	23.69	23.65	23.40	23.14	17.18	18.57	19.61	20.11	20.66	20.96	21.09
13	24.67	23.69	23.65	23.41	23.12	18.06	18.52	19.66	20.13	20.66	20.99	21.09
14	24.67	23.69	23.54	23.38	23.08	18.71	18.46	19.70	20.15	20.67	21.01	21.07
15	24.63	23.67	23.54	23.39	22.97	19.08	18.44	19.74	20.15	20.68	21.00	21.05
16	24.59	23.67	23.52	23.37	23.02	19.31	18.43	19.74	20.20	20.70	21.01	20.91
17	24.55	23.67	23.52	23.30	23.03	19.46	18.38	19.64	20.24	20.70	21.05	20.71
18	24.55	23.66	23.48	23.24	23.02	19.56	18.37	19.59	20.27	20.70	21.07	20.52
19	24.47	23.66	23.48	23.26	22.96	19.63	18.40	19.62	20.28	20.72	21.09	20.46
20	24.45	23.66	23.48	23.26	22.99	19.67	18.40	19.67	20.29	20.74	21.12	20.60
21	24.25	23.63	23.48	23.22	23.00	19.69	18.37	19.72	20.29	20.76	21.14	20.70
22	24.15	23.63	23.43	23.07	22.97	19.71	18.37	19.73	20.26	20.78	21.13	20.72
23	24.15	23.63	23.43	23.06	22.75	19.71	18.39	19.62	20.27	20.81	21.11	20.79
24	24.14	23.63	23.38	23.09	22.79	19.69	18.42	19.64	20.29	20.84	21.09	20.85
25	24.14	23.62	23.30	23.09	22.79	19.63	18.42	19.68	20.34	20.85	21.05	20.85
26	24.14	23.62	23.33	23.05	22.71	19.59	18.46	19.73	20.38	20.86	21.08	20.86
27	24.07	23.62	23.34	22.97	22.53	19.54	18.63	19.78	20.41	20.85	21.09	20.89
28	24.07	23.65	23.34	22.99	22.52	19.51	18.76	19.82	20.42	20.85	21.13	20.94
29	24.04		23.29	22.97	22.53	19.47	18.86	19.86	20.42	20.86	21.16	20.97
30	24.12		23.26	22.95	22.58	19.43	18.93	19.87	20.46	20.87	21.18	20.99
31	23.98		23.26		22.60		18.99	19.86		20.88		21.01

St-7 (\*1016, p. 314; 1023, p. 331; 1071, p. 402). Canton Water Department. In Grovemiller well field.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	89.44	Apr. 7	87.67	July 7	86.33	Oct. 6	84.16
13	89.30	14	88.02	14	86.19	13	83.94
20	88.82	21	87.90	21	86.05	20	83.95
27	89.20	28	87.77	28	85.19	27	83.70
Feb. 3	89.00	May 5	87.52	Aug. 4	84.62	Nov. 3	83.60
10	89.02	12	87.20	11	85.25	10	83.81
17	88.98	19	86.98	18	84.74	17	83.89
24	87.37	26	86.83	25	85.02	24	83.30
Mar. 3	87.40	June 2	86.60	Sept. 1	85.10	Dec. 2	83.77
10	88.59	9	86.03	8	86.22	8	83.67
17	88.65	16	86.78	15	85.11	15	83.68
24	88.12	23	85.87	22	85.35	22	83.76
31	88.35	30	86.55	29	85.40	29	83.44

St-8 (\*1016, p. 315; 1023, p. 331; 1071, p. 402). Canton Water Department. In Grovemiller well field.

Water level, in feet below land-surface datum, 1947

Jan. 6	87.65	Feb. 24	86.15	Apr. 14	86.60	June 9	85.47
13	87.99	Mar. 3	86.20	21	87.31	16	85.99
20	87.47	10	87.16	28	87.18	23	86.67
27	87.86	17	87.20	May 5	86.12	30	85.80
Feb. 3	87.58	24	86.73	19	86.40	July 7	85.50
10	87.54	31	86.92	26	86.24	14	85.42
17	86.65	Apr. 7	86.92	June 2	85.97	21	85.26

## St-8--Continued.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 28	83.73	Sept. 8	84.41	Oct. 20	82.53	Dec. 2	82.37
Aug. 4	83.20	15	84.31	27	82.29	8	82.20
11	84.45	22	84.56	Nov. 3	82.25	15	82.24
18	84.00	29	84.57	10	82.38	22	82.43
25	84.32	Oct. 6	82.73	17	82.42	29	82.50
Sept. 1	84.28	13	82.59	24	82.00		

St-9 (\*1016, p. 315; 1023, p. 331; 1071, p. 403). Canton Water Department. In Grovemiller well field.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	104.75	Apr. 7	103.79	July 7	101.44	Oct. 6	99.63
13	104.72	14	103.40	14	101.28	13	99.41
20	104.21	21	100.72	21	101.15	20	99.45
27	104.69	28	100.84	28	100.64	27	99.16
Feb. 3	104.40	May 5	99.59	Aug. 4	100.05	Nov. 3	99.13
10	104.60	12	86.65	11	100.18	10	99.27
17	104.35	19	86.40	18	97.95	17	99.41
24	104.14	26	99.92	25	100.10	24	98.70
Mar. 3	104.20	June 2	99.73	Sept. 1	100.12	Dec. 2	99.12
10	104.03	9	99.20	8	100.30	8	99.10
17	103.85	16	107.95	15	100.14	15	99.06
24	103.55	23	101.84	22	100.42	22	99.13
31	103.82	30	101.69	29	100.55	29	99.20

St-10 (\*1071, p. 403). Canton Water Department. In Sippo field, 500 feet north of Twelfth St., 3 miles west of Canton.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	3.99	2.84	2.81	2.83	2.16	0.73	0.36	1.28	1.20	1.78	2.24	2.49
2	3.94	2.71	2.82	2.81	2.15	.65	.42	1.31	1.18	1.80	2.24	2.49
3	3.88	2.64	2.85	2.82	2.15	.32	.49	1.34	1.18	1.81	2.24	2.51
4	3.85	2.53	2.87	2.81	2.15	.01	.55	1.37	1.20	1.82	2.22	2.52
5	3.79	2.50	2.89	2.77	2.17	(a)	.54	1.39	1.20	1.84	2.23	2.50
6	3.78	2.47	2.91	2.74	2.17	(a)	.59	1.40	1.25	1.86	2.26	2.53
7	3.76	2.47	2.92	2.74	2.16	(a)	.66	1.42	1.28	1.87	2.24	2.52
8	3.75	2.47	2.93	2.73	2.16	(a)	.70	1.46	1.31	1.89	2.26	2.56
9	3.76	2.49	2.95	2.69	2.17	(a)	.72	1.48	1.32	1.91	2.30	2.57
10	3.77	2.52	2.96	2.69	2.19	(a)	.77	1.50	1.34	1.92	2.30	2.56
11	3.74	2.54	2.98	2.66	2.19	(a)	.80	1.56	1.36	1.94	2.29	2.58
12	3.78	2.54	2.99	2.73	2.16	(a)	.82	1.56	1.38	1.96	2.32	2.59
13	3.78	2.53	2.98	2.73	2.13	(a)	.87	1.58	1.41	1.98	2.34	2.60
14	3.74	2.51	2.99	2.69	2.09	(a)	.91	1.50	1.43	1.99	2.34	2.60
15	3.74	2.54	2.99	2.71	2.08	(a)	.93	1.41	1.48	2.00	2.32	2.60
16	3.69	2.58	2.99	2.69	2.06	(a)	.94	1.37	1.51	2.01	2.35	2.60
17	3.68	2.62	3.01	2.68	2.05	(a)	.95	1.32	1.54	2.01	2.37	2.60
18	3.63	2.65	3.04	2.66	2.02	(a)	.96	1.27	1.54	2.02	2.37	2.60
19	3.61	2.66	3.04	2.66	2.02	(a)	1.00	1.25	1.55	2.06	2.38	2.63
20	3.56	2.66	3.04	2.64	2.03	(a)	1.01	1.28	1.56	2.08	2.40	2.62
21	3.48	2.68	3.05	2.60	2.00	(a)	1.05	1.28	1.56	2.09	2.40	2.63
22	3.42	2.68	3.08	2.54	1.95	(a)	1.07	1.27	1.63	2.10	2.39	2.64
23	3.33	2.70	3.06	2.47	1.80	(a)	1.10	1.21	1.64	2.14	2.41	2.68
24	3.24	2.72	3.05	2.41	1.70	(a)	1.13	1.20	1.65	2.14	2.39	2.69
25	3.21	2.75	3.04	2.39	1.62	.02	1.14	1.21	1.68	2.16	2.42	2.68
26	3.17	2.77	3.01	2.35	1.48	.08	1.15	1.24	1.72	2.16	2.44	2.70
27	3.14	2.79	2.90	2.29	1.29	.14	1.16	1.26	1.73	2.16	2.44	2.70
28	3.15	2.81	2.80	2.28	1.12	.21	1.19	1.30	1.73	2.17	2.46	2.73
29	3.10		2.85	2.20	.98	.28	1.23	1.32	1.76	2.18	2.48	2.74
30	3.05		2.87	2.16	.88	.30	1.24	1.34	1.78	2.21	2.49	2.73
31	2.98		2.86		.80		1.26	1.34		2.22		2.74

a Flowing.

T-50 (\*1016, p. 315; 1023, p. 332; 1071, p. 403). Canton Water Department. In Sippo field, 970 feet north of Twelfth St., 3 miles west of Canton. Measurements discontinued after Apr. 10.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	5.80	Jan. 26	4.99	Feb. 20	4.41	Mar. 17	4.76
2	5.75	27	4.96	21	4.41	18	4.77
3	5.70	28	4.93	22	4.41	19	4.78
4	5.66	29	4.90	23	4.44	20	4.78
5	5.60	30	4.95	24	4.45	21	4.80
6	5.57	31	4.77	25	4.47	22	4.84
7	5.54	Feb. 1	4.64	26	4.49	23	4.83
8	5.53	2	4.52	27	4.52	24	4.81
9	5.53	3	4.38	28	4.54	25	4.79
10	5.53	4	4.34	Mar. 1	4.54	26	4.77
11	5.51	5	4.31	2	4.55	27	4.65
12	5.54	6	4.27	3	4.59	28	4.59
13	5.54	7	4.25	4	4.62	29	4.60
14	5.53	8	4.25	5	4.63	30	4.63
15	5.53	9	4.26	6	4.65	31	4.63
16	5.49	10	4.30	7	4.65	Apr. 1	4.61
17	5.48	11	4.32	8	4.67	2	4.59
18	5.44	12	4.32	9	4.69	3	4.60
19	5.42	13	4.32	10	4.71	4	4.59
20	5.36	14	4.29	11	4.72	5	4.55
21	5.29	15	4.32	12	4.72	6	4.50
22	5.24	16	4.36	13	4.72	7	4.51
23	5.14	17	4.37	14	4.73	8	4.50
24	5.07	18	4.40	15	4.73	9	4.46
25	5.03	19	4.41	16	4.73	10	4.46

St-11. Canton water department. 3 miles northwest of Canton, in municipal well field. Drilled test well, diameter 6 inches, depth 87 feet. Measuring point, floor of recorder shelter, 3.5 feet above land-surface datum, and 1,062.00 feet above sea level datum. Automatic water-stage recorder installed Dec. 18, 1946.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	2.63	....	....	2.54	1.54	1.58	2.48	....	....	3.83	4.41
2	....	2.68	....	3.03	2.55	1.46	1.63	2.56	....	....	3.80	4.10
3	3.66	2.68	....	3.05	2.58	.75	1.66	2.53	....	....	3.80	4.80
4	3.65	2.69	....	3.05	2.59	.89	1.69	2.55	....	....	3.77	6.28
5	3.63	2.71	....	3.04	2.56	.98	1.71	2.59	....	....	4.01	4.35
6	3.67	2.74	....	2.62	2.52	1.03	1.75	2.62	....	....	4.35	4.39
7	3.66	2.80	....	2.69	2.50	.76	1.77	2.61	....	....	....	4.35
8	3.70	2.84	....	2.71	2.52	.37	1.82	2.55	....	....	....	4.50
9	3.72	2.88	....	2.77	2.55	.50	1.82	2.52	....	....	....	6.62
10	3.73	2.93	....	2.77	2.60	.60	1.87	2.55	....	....	....	4.70
11	3.74	2.97	....	2.81	....	.70	....	2.58	....	....	....	4.81
12	3.77	....	....	2.88	....	.76	....	2.61	....	....	....	4.42
13	3.77	....	....	....	....	.78	....	2.62	....	....	4.60	4.40
14	3.79	....	....	....	2.31	.81	....	2.61	....	....	4.88	4.40
15	....	....	....	....	2.33	.85	....	2.63	3.14	....	4.50	4.30
16	....	....	....	....	2.39	.87	....	2.63	3.59	....	3.87	4.39
17	....	....	....	2.71	2.42	.85	2.00	2.58	4.09	....	4.40	4.40
18	....	....	....	2.75	2.36	.88	2.01	2.76	4.05	....	4.88	4.45
19	....	....	....	2.81	2.25	....	2.07	2.76	4.12	....	4.93	4.45
20	....	....	....	2.82	2.28	....	2.10	2.77	3.44	....	5.16	4.45
21	....	....	....	2.59	2.28	1.14	2.12	2.77	3.49	....	6.58	4.37
22	....	3.42	2.55	1.92	1.20	2.15	2.76	....	....	....	6.63	4.50
23	....	3.39	2.56	1.85	1.22	2.20	2.67	4.30	8.32	6.45	4.52	
24	3.18	....	3.37	....	1.91	1.28	2.32	2.77	4.11	5.90	4.11	4.57
25	3.41	....	3.25	2.52	1.91	1.31	2.31	2.79	3.98	6.02	4.10	4.52
26	3.53	....	3.28	2.50	1.43	1.37	2.32	....	4.34	3.85	4.20	....

St-11--Continued.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)											
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. Dec.
27	3.60	....	3.29	2.47	1.43	1.41	2.34	....	4.88	3.70	3.99
28	3.63	....	3.29	2.48	1.39	1.49	....	2.89	4.17	3.70	4.57
29	3.37	....	3.27	....	1.41	1.53	....	2.91	4.24	3.68	4.51
30	3.23	....	....	....	1.46	1.53	....	2.90	....	3.80	4.10
31	2.70	....	....	....	1.51	....	2.41	2.86	....	3.80	....

St-12. Canton Water Department. 3 miles northwest of Canton, in municipal well field. Drilled test well, diameter 6 inches, depth 55 feet. Measuring point, floor of recorder shelter, 5.8 feet above land-surface datum, and 1,052.08 feet above sea-level datum. Automatic water-stage recorder installed Jan. 25, 1947.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)											
Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
1	....	....	....	....	4.11	3.33	3.06	2.47	2.37	2.31	
2	....	3.33	....	....	4.05	3.31	2.99	2.39	2.37	2.31	
3	....	3.32	....	....	4.00	3.29	2.92	2.39	2.37	2.26	
4	....	3.32	....	....	5.19	3.96	3.28	2.91	....	2.40	2.26
5	....	....	....	....	5.08	3.93	3.26	2.90	....	2.55	2.30
6	....	....	....	....	5.02	3.91	3.25	2.90	....	2.43	2.27
7	....	....	....	....	5.38	3.87	3.21	2.89	....	....	2.27
8	....	....	....	....	5.62	3.84	3.20	2.82	....	....	2.18
9	....	....	....	....	5.52	3.83	3.20	2.84	2.13	....	1.73
10	....	3.58	....	....	5.44	3.80	3.22	2.82	2.13	....	1.81
11	....	3.53	....	....	5.29	....	3.15	2.79	2.12	....	1.73
12	....	....	....	....	5.19	....	3.14	2.75	2.18	....	1.74
13	....	....	....	....	5.13	....	3.13	2.75	2.16	2.28	1.75
14	....	....	....	....	5.08	....	3.14	2.74	2.30	2.28	1.75
15	....	....	....	....	5.07	....	3.10	2.72	2.19	2.32	1.91
16	....	....	....	....	4.96	....	3.10	2.68	2.19	2.33	1.85
17	....	....	....	....	4.92	....	3.16	2.63	2.19	2.31	1.79
18	....	....	....	....	4.89	....	3.11	2.58	2.16	2.28	1.78
19	....	....	....	....	4.89	....	3.09	2.54	2.20	2.27	1.81
20	....	....	....	....	4.89	....	3.14	2.54	2.16	2.25	1.80
21	....	....	....	....	4.60	....	3.04	2.56	2.16	2.20	1.82
22	....	....	....	....	4.52	....	3.04	2.50	2.16	2.26	1.73
23	....	....	....	....	4.49	....	3.15	....	2.18	2.20	1.70
24	....	....	....	....	4.44	....	3.09	....	....	2.26	1.68
25	....	....	....	....	4.39	....	3.07	....	....	2.20	1.74
26	....	....	....	....	4.36	....	3.04	2.50	....	2.28	....
27	....	....	....	....	4.29	....	3.02	2.47	....	2.30	....
28	....	....	....	....	4.21	....	2.98	2.47	....	2.26	....
29	....	....	....	....	4.12	....	2.96	2.47	....	2.26	....
30	....	....	....	....	4.14	....	2.94	2.48	2.37	2.27	....
31	....	....	....	....	....	....	2.98	....	2.37	....	....

St-13. Canton water department. 3 miles northwest of Canton, in municipal well field. Drilled observation well, diameter 6 inches, depth 20 feet. Measuring point, top of casing, 1.7 feet above land-surface datum, and 1,044.70 feet above sea-level datum. Automatic water-stage recorder installed Dec. 13, 1946.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)											
Day	Jan.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	1.14	0.48	0.45	0.58	1.32	1.82	1.83	....
2	....	....	1.05	1.08	.30	.51	.60	1.40	1.82	1.84	....
3	1.80	....	1.27	1.13	.72	.53	.60	1.47	1.86	1.84	1.80
4	2.07	....	1.33	1.14	....	.52	.60	1.52	....	1.60	1.79
5	2.21	....	....	.88	.16	.58	.58	1.50	....	....	1.77
6	2.25	....	....	.96	.19	.58	.61	1.55	....	....	1.76
7	1.64	....	....	.95	.80	.54	.64	1.59	....	....	1.79
8	....	....	....	1.01	.80	.55	.67	1.60	....	....	1.69
9	....	....	....	1.06	.12	.55	.69	1.62	....	....	1.73

St-13--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
10	....	....	1.33	1.11	0.08	0.52	0.71	1.64	....	....	1.73
11	....	....	1.36	1.13	.15	....	.74	1.66	....	....	1.73
12	....	....	1.41	1.14	.24	....	.77	1.67	....	....	1.70
13	1.71	....	1.43	1.13	.31	....	.81	1.70	....	al.74	1.72
14	1.70	....	1.44	.66	.31	....	.80	1.73	....	....	1.77
15	1.30	....	1.47	.82	.18	....	.79	1.73	....	....	1.80
16	1.25	....	1.47	.86	.29	....	.79	1.73	....	....	1.52
17	1.41	....	1.20	.86	.35	.28	.78	1.75	....	....	1.68
18	1.48	....	1.29	.56	.19	.31	.89	1.76	....	....	1.69
19	1.53	....	1.35	.68	....	.34	1.01	1.77	....	....	1.72
20	....	....	1.34	.73	....	.39	1.11	1.79	....	al.81	1.75
21	....	....	.86	.74	.52	.40	1.16	1.82	....	....	1.79
22	....	1.66	1.02	....	.57	.39	1.16	1.70	....	....	1.81
23	....	1.60	1.12	.41	.57	.41	1.01	1.74	....	....	1.79
24	....	1.56	1.14	.52	.59	.46	1.18	1.77	....	....	1.80
25	1.26	1.42	1.10	.52	.60	.48	1.22	1.81	....	....	....
26	1.26	1.47	.92	.03	.60	.49	1.26	1.83	....	al.73	....
27	1.24	1.48	.98	.10	.59	.49	1.31	1.83	....	....	....
28	1.31	1.51	1.05	.18	.58	.50	1.35	1.85	....	1.80	....
29	1.32	1.42	1.11	.22	.59	.52	1.37	1.85	....	1.80	....
30	1.52	....	1.10	.32	.36	.54	1.37	1.81	1.80	....	....
31	....	....	....	.43	....	.58	1.15	....	1.82	....	....

St-21. Canton Water Department. 3 miles northwest of Canton, in municipal wellfield. Drilled observation well, diameter 6 inches, depth 30 feet. Measuring point, floor of recorder shelter, 2.0 feet above land-surface datum, and 1,055.30 feet above sea-level datum. Automatic water-stage recorder installed Aug. 15, 1947.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 13	0.07	Sept. 16	0.46	Oct. 20	1.05	Nov. 28	1.36
14	.08	17	.50	21	1.06	29	1.36
15	.07	18	.53	22	1.12	30	1.34
16	.07	19	.55	23	1.25	Dec. 1	1.32
17	.03	20	.56	24	1.38	2	1.32
18	.08	21	.59	30	1.24	3	1.36
19	.10	22	.58	31	1.25	4	1.36
20	.12	23	.60	Nov. 1	1.26	5	1.34
21	.14	24	.62	2	1.26	6	1.37
22	.14	25	.64	3	1.23	7	1.37
23	.21	26	.65	4	1.20	8	1.33
29	.22	27	.66	5	1.19	9	1.44
30	.24	28	.66	6	1.24	10	1.44
31	.25	29	.67	13	1.35	11	1.46
Sept. 1	.16	30	.68	14	1.35	12	1.47
2	.22	Oct. 1	.70	15	1.31	13	1.48
3	.24	2	.72	16	1.30	14	1.48
4	.26	3	.73	17	1.30	15	1.44
5	.26	9	.88	18	1.34	16	1.51
6	.28	10	.91	19	1.35	17	1.54
7	.30	11	.92	20	1.35	18	1.55
8	.33	12	.92	21	1.37	19	1.57
9	.35	13	.94	22	1.39	20	1.60
10	.37	14	.95	23	1.40	21	1.56
11	.38	15	.99	24	1.38	22	1.58
12	.40	16	1.01	25	1.34	23	1.62
13	.40	17	1.02	26	1.34	24	1.63
14	.42	18	1.03	27	1.34	25	1.62
15	.44	19	1.03				

St-22. Canton water department. 3 miles northwest of Canton, 40 feet west of Baltimore & Ohio Railroad, in municipal well field. Drilled observation well, diameter 6 inches, depth 37 feet. Measuring point, floor of recorder shelter, 3.5 feet above land-surface datum, and 1,065.67 feet above sea-level datum. Automatic water-stage recorder installed Aug. 13, 1947.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 14	16.42	Sept. 13	16.67	Oct. 17	17.24	Nov. 27	17.08
15	16.43	14	16.67	18	17.24	28	17.12
16	16.41	15	16.90	19	17.22	29	17.12
17	16.34	16	16.93	20	17.24	30	17.12
18	16.41	17	16.95	21	17.24	Dec. 1	17.11
19	16.42	18	16.99	21	17.25	2	17.15
20	16.47	19	17.05	23	17.25	3	17.13
21	16.53	20	17.06	30	17.14	4	17.14
22	16.51	21	17.06	31	17.14	5	17.14
23	16.40	22	17.06	Nov. 1	17.13	6	17.14
24	16.45	23	17.07	2	17.12	7	17.13
25	16.50	24	17.07	3	17.13	8	17.12
26	16.53	25	17.11	4	17.11	9	17.15
27	16.54	26	17.12	5	17.03	10	17.22
28	16.57	27	17.12	6	17.00	11	17.26
29	16.63	28	17.12	13	17.08	12	17.26
30	16.64	29	17.14	14	17.06	13	17.28
31	16.62	30	17.13	15	17.06	14	17.26
Sept. 1	16.50	Oct. 1	17.12	16	17.06	15	17.23
2	16.58	2	17.13	17	17.10	16	17.25
3	16.62	3	17.13	18	17.10	17	17.21
4	16.67	9	17.22	19	17.13	18	17.20
5	16.70	10	17.22	20	17.16	19	17.25
6	16.73	11	17.21	21	17.10	20	17.24
7	16.72	12	17.20	22	17.13	21	17.24
8	16.77	13	17.22	23	17.12	22	17.24
9	16.77	14	17.22	24	17.08	23	17.32
10	16.80	15	17.23	25	17.06	24	17.28
11	16.84	16	17.29	26	17.09	25	17.31
12	16.86						

St-23. Canton Water Department. 3 miles northwest of Canton, east of Wise Rd. about 450 feet south of 38 St., N. W. Drilled observation well, diameter 6 inches, depth 57 feet. Measuring point, floor of recorder shelter, 3.5 feet above land-surface datum, and 1,080.18 feet above sea-level datum. Automatic water-stage recorder installed Aug. 13, 1947.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 13	5.87	Sept. 1	5.96	Sept. 20	6.19	Oct. 14	6.41
14	5.90	2	5.98	21	6.18	15	6.41
15	5.91	3	6.04	22	6.20	16	6.40
16	5.90	4	6.01	23	6.27	17	6.40
17	5.90	5	6.01	24	6.22	18	6.43
18	5.98	6	6.05	25	6.24	19	6.43
19	5.96	7	6.06	26	6.25	20	6.48
20	5.97	8	6.10	27	6.26	21	6.46
21	5.97	9	6.06	28	6.27	22	6.47
22	5.96	10	6.10	29	6.27	23	6.47
23	5.96	11	6.11	30	6.33	30	6.51
24	5.97	12	6.10	Oct. 1	6.29	31	6.53
25	6.05	13	6.12	2	6.30	Nov. 1	6.53
26	6.00	14	6.14	3	6.30	2	6.53
27	6.04	15	6.18	9	6.36	3	6.58
28	6.02	16	6.16	10	6.37	4	6.49
29	6.02	17	6.17	11	6.39	5	6.49
30	6.02	18	6.20	12	6.40	6	6.52
31	6.00	19	6.19	13	6.45	13	6.55



St-23--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Nov. 14	6.55	Nov. 25	6.64	Dec. 6	6.78	Dec. 16	6.78
15	6.54	26	6.66	7	6.76	17	6.83
16	6.57	27	6.63	8	6.77	18	6.76
17	6.63	28	6.65	9	6.79	19	6.80
18	6.58	29	6.68	10	6.82	20	6.81
19	6.59	30	6.69	11	6.79	21	6.81
20	6.65	Dec. 1	6.75	12	6.79	22	6.82
21	6.64	2	6.72	13	6.80	23	6.88
22	6.63	3	6.74	14	6.79	24	6.86
23	6.65	4	6.76	15	6.80	25	6.86
24	6.66	5	6.75				

Summit County

Su-1 (\*1071, p. 404). Village of Hudson. At Hudson, in municipal well field.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	18.86	18.21	18.12	17.72	17.00	18.03	24.76	24.95	24.54	25.08	.....	24.23
2	18.59	18.25	18.09	17.85	17.38	17.53	24.84	24.62	24.35	24.78	.....	.....
3	18.59	17.96	18.10	17.86	18.22	18.28	24.71	24.49	24.50	24.75	24.50	.....
4	18.68	17.91	18.10	17.81	18.10	18.21	24.69	24.94	24.48	24.56	24.48	.....
5	18.58	17.97	18.20	17.62	18.29	18.00	24.71	25.05	24.51	24.18	23.79	.....
6	18.80	17.77	18.11	17.84	18.37	24.32	25.23	25.14	24.49	23.48	.....	.....
7	18.10	18.07	18.18	18.15	18.27	17.73	24.99	24.73	24.55	24.02	.....	.....
8	18.29	18.04	18.11	18.01	18.20	17.95	24.95	25.20	24.83	24.20	24.30	24.10
9	18.10	18.09	18.14	18.18	18.38	24.60	24.62	25.11	24.74	24.34	24.22	24.23
10	18.33	18.32	18.48	17.92	18.35	24.75	24.63	25.02	24.76	24.34	24.31	24.14
11	18.03	18.36	18.34	17.83	18.38	23.74	24.73	25.78	24.76	24.38	24.25	24.20
12	18.12	18.31	18.24	18.06	18.48	.....	24.65	25.84	24.80	24.62	24.29	24.24
13	18.20	18.33	18.24	18.08	18.22	.....	24.63	26.03	24.67	24.58	24.34	24.20
14	18.30	18.16	18.06	17.84	18.32	.....	24.60	26.10	24.63	24.56	24.36	24.08
15	18.10	18.18	18.10	17.92	18.27	.....	24.60	25.86	24.62	.....	24.18	23.90
16	18.18	18.17	17.95	17.90	18.41	24.78	24.38	25.43	24.85	.....	24.03	24.08
17	18.18	18.28	18.04	17.77	18.24	24.70	24.50	25.32	24.91	.....	24.60	24.05
18	18.36	18.23	17.98	17.85	18.23	24.60	24.51	25.69	24.90	.....	24.47	24.14
19	18.30	18.35	17.88	17.89	25.48	24.63	24.22	25.61	24.88	.....	24.33	24.20
20	17.97	18.10	17.79	17.79	25.97	24.30	24.30	25.59	24.82	.....	24.30	24.13
21	18.22	18.15	17.80	18.19	18.10	.....	24.53	25.42	24.70	.....	24.30	24.10
22	18.24	18.07	17.99	18.11	24.32	.....	24.57	25.40	24.98	.....	.....	23.83
23	18.13	18.08	17.81	17.98	24.73	24.80	24.09	25.32	25.05	.....	.....	23.68
24	18.17	18.24	17.65	18.05	18.13	24.88	24.18	24.80	24.68	.....	24.40	23.70
25	18.10	18.35	17.63	18.11	17.88	24.80	24.33	24.58	24.45	.....	24.62	23.50
26	18.10	18.35	17.69	18.13	21.32	24.10	24.24	24.88	24.43	.....	24.52	23.69
27	18.10	18.23	17.73	18.02	18.18	24.65	24.18	25.25	24.40	24.50	24.44	23.62
28	18.30	18.18	17.71	18.05	18.14	24.62	24.30	25.18	24.28	24.59	24.50	23.69
29	18.00	.....	17.67	17.82	17.92	24.83	24.48	25.21	24.75	24.55	24.50	23.71
30	17.75	.....	17.80	17.14	18.12	24.84	24.59	24.72	24.62	24.59	24.45	23.80
31	18.10	.....	17.72	.....	18.08	.....	24.66	24.79	.....	24.55	.....	23.80

Su-2. Firestone Tire &amp; Rubber Co. At Akron, north of U. S. Highway 224, in industrial well field. Abandoned drilled well, diameter 30 inches, depth 265 feet. Measuring point, edge of casing flange at floor level, 2.5 feet above land-surface datum. Automatic water-stage recorder installed Jan. 14, 1947.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	7.46	.....	6.20	31.12	.....	.....	47.10	22.52	48.50	.....	26.10
2	.....	7.59	.....	6.12	31.89	.....	.....	46.50	44.10	47.88	.....	25.50

## Su-2--Continued.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
3	.....	7.57	.....	5.91	32.96	26.53	.....	40.30	46.70	48.10	.....	25.90
4	.....	7.50	.....	5.77	.....	.....	.....	46.73	47.38	48.30	.....	24.40
5	.....	7.50	.....	5.52	.....	.....	.....	47.27	47.37	47.88	.....	23.90
6	.....	.....	.....	5.31	35.01	.....	.....	47.27	47.50	50.26	.....	22.50
7	.....	.....	.....	5.33	36.64	.....	.....	47.28	46.70	49.33	.....	22.54
8	.....	.....	.....	5.26	38.15	.....	.....	47.28	.....	49.32	.....	22.60
9	.....	.....	.....	4.16	38.70	.....	46.76	47.66	.....	49.30	.....	22.40
10	.....	.....	.....	4.82	38.80	39.20	47.11	37.30	.....	49.88	.....	21.90
11	.....	.....	.....	4.16	.....	.....	47.43	46.90	.....	49.90	.....	21.40
12	.....	7.72	.....	.....	.....	.....	47.30	47.15	.....	49.90	.....	21.10
13	.....	7.71	6.36	.....	30.91	.....	37.60	47.14	.....	51.68	.....	20.78
14	.....	7.53	6.35	.....	31.20	.....	57.20	47.28	.....	51.52	.....	20.43
15	15.72	7.41	6.33	38.17	31.28	.....	56.50	47.48	47.51	.....	.....	20.10
16	15.42	7.41	6.17	.....	31.70	.....	.....	47.46	47.90	.....	.....	19.70
17	14.92	7.37	6.09	.....	31.70	41.59	.....	39.50	47.70	.....	.....	19.57
18	14.10	7.32	6.17	.....	.....	42.92	47.10	42.72	47.70	.....	.....	19.16
19	13.62	7.33	6.13	.....	.....	43.17	47.30	43.10	47.93	.....	.....	18.94
20	13.15	.....	6.08	.....	31.12	44.39	44.30	43.00	48.18	.....	.....	18.70
21	12.81	.....	6.03	.....	31.70	44.60	44.50	43.00	48.18	.....	54.00	18.40
22	11.76	.....	6.07	25.53	31.44	24.20	47.20	43.10	48.18	.....	34.80	18.20
23	10.70	.....	5.90	25.84	31.20	.....	47.74	43.73	48.34	.....	32.10	17.90
24	10.27	.....	5.71	26.40	.....	40.72	47.28	36.30	48.70	.....	31.00	17.70
25	10.11	.....	5.47	26.52	.....	.....	47.50	44.20	48.50	.....	30.10	17.50
26	9.84	.....	5.46	.....	.....	.....	47.20	46.60	48.10	.....	29.30	17.23
27	9.76	.....	5.33	.....	28.91	.....	32.30	47.13	.....	.....	28.50	17.10
28	9.49	.....	.....	.....	29.47	.....	46.70	47.22	.....	.....	27.76	16.90
29	9.29	.....	.....	29.65	.....	.....	47.28	46.94	.....	.....	27.25	16.78
30	9.11	.....	.....	30.24	.....	.....	47.30	47.50	48.59	.....	26.60	16.60
31	8.79	.....	.....	.....	.....	.....	47.25	40.70	.....	.....	.....	16.50

a Tape measurement.

Su-3 (\*1016, p. 317; 1023, p. 354; 1071, p. 405). Goodyear Rubber Co. In Akron, north of Springfield Rd. in industrial well field.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	36.91	30.46	26.58	23.23	19.77	18.92	24.23	28.01	41.25	42.65	51.24	.....
2	36.62	30.32	26.37	23.07	19.64	18.66	24.40	28.42	41.20	42.50	51.37	.....
3	36.30	30.17	26.25	22.88	19.60	18.75	24.50	28.47	41.49	42.50	51.37	.....
4	36.10	29.90	26.20	22.80	19.55	19.02	24.50	28.58	41.76	42.18	51.39	.....
5	35.83	29.76	26.10	22.59	19.37	19.23	23.97	29.17	42.20	41.67	51.51	45.46
6	35.55	29.61	26.00	22.42	19.25	19.52	23.66	29.86	42.42	41.18	51.57	45.05
7	35.27	29.45	25.87	22.35	19.12	19.68	23.17	30.60	42.75	40.92	51.77	44.33
8	35.03	29.32	25.75	22.27	19.04	.....	23.04	31.20	43.07	41.25	.....	43.60
9	34.84	29.17	25.65	22.07	18.95	.....	23.32	31.87	43.45	41.69	.....	43.00
10	34.65	29.05	25.55	22.00	18.90	.....	23.62	32.00	43.82	42.18	.....	42.36
11	34.34	28.95	25.45	21.81	18.70	.....	23.75	31.99	44.23	42.85	.....	41.75
12	34.14	28.84	25.34	21.68	18.63	.....	.....	31.67	44.62	43.17	.....	41.18
13	33.96	28.70	25.20	21.64	18.47	21.20	.....	32.07	44.63	43.75	51.23	40.65
14	33.74	28.52	24.97	21.48	18.28	21.50	23.62	32.69	44.54	44.44	51.38	40.10
15	33.55	28.33	24.88	21.35	18.21	21.67	24.05	33.31	44.23	45.12	51.53	39.57
16	33.37	28.20	24.77	21.32	18.02	21.75	24.47	33.78	44.51	45.78	51.54	39.00
17	33.24	28.08	24.63	21.09	17.97	21.96	24.83	34.11	44.77	46.35	.....	38.60
18	33.02	27.93	24.56	.....	17.80	22.13	25.27	34.66	44.97	46.95	.....	38.12
19	32.82	27.84	24.50	20.95	17.73	22.30	25.65	35.27	45.18	47.40	.....	37.70
20	32.55	27.70	24.37	20.83	18.18	22.45	25.65	35.93	45.40	47.77	51.64	37.25
21	32.37	27.54	24.27	20.73	18.65	22.60	25.18	36.55	45.52	48.26	51.84	36.82
22	32.28	27.38	24.22	20.65	19.10	22.75	25.24	37.21	45.54	48.72	52.02	36.45
23	32.09	27.23	24.12	20.55	19.60	22.95	25.49	37.92	45.58	49.15	52.08	36.00
24	31.87	27.09	23.97	20.44	20.10	23.24	25.70	38.58	45.00	49.57	52.06	35.70
25	31.68	26.96	23.76	20.37	20.11	23.55	25.90	39.05	44.75	49.90	52.03	35.35
26	31.48	26.86	23.75	20.32	19.50	23.76	26.17	39.27	44.64	.....	51.97	34.93
27	31.34	26.75	23.70	20.17	19.37	23.72	26.40	39.67	44.52	.....	51.60	34.62
28	31.17	26.66	23.62	20.12	19.15	24.02	26.63	40.14	44.22	50.48	51.08	34.30

## Su-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
29	31.00		23.51	20.02	18.92	24.10	26.93	40.67	43.70	50.78	.....	34.05
30	30.80		23.44	19.85	18.90	24.08	27.27	41.13	43.20	50.83	.....	33.75
31	30.60		23.36		18.92		27.75	41.25		51.02	.....	33.47

Su-4. Firestone Tire & Rubber Co. At Akron, north of Dartmore Ave., in industrial well field. Abandoned drilled well, diameter 30 inches, depth 177 feet. Measuring point, top of motor stand about 2.5 feet above floor level, 5.1 feet above land-surface datum. Automatic water-stage recorder installed Mar. 14, 1947.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	11.04	12.30	6.23	13.70	14.87	19.91	22.83	18.72
2	....	....	11.39	....	6.15	14.28	15.70	20.08	22.60	18.50
3	....	....	11.56	11.43	....	14.29	16.15	20.27	22.54	18.20
4	....	....	11.51	11.34	....	14.24	16.34	20.38	22.82	18.02
5	....	....	....	9.14	....	14.10	16.66	20.39	23.60	17.78
6	....	....	11.63	....	....	14.15	16.67	20.28	23.57	17.61
7	....	....	12.16	....	....	14.89	16.47	20.41	23.71	17.41
8	....	2.27	12.54	....	6.98	15.21	16.18	20.97	23.85	17.33
9	....	2.30	12.66	....	7.53	15.22	16.79	21.20	23.84	17.13
10	....	2.28	12.80	5.78	7.73	14.94	16.97	21.37	22.79	16.40
11	....	2.04	....	5.94	7.68	15.33	17.14	21.46	23.31	16.20
12	....	2.59	....	....	8.12	15.92	17.33	21.47	23.47	16.04
13	....	3.32	11.87	....	8.12	16.22	17.22	21.22	23.62	15.85
14	5.64	4.30	11.29	....	9.04	16.33	16.93	21.61	23.45	15.65
15	5.59	5.56	12.25	....	9.44	16.48	17.60	21.83	23.14	15.45
16	5.45	7.36	12.61	....	9.98	16.55	18.13	22.02	22.88	15.20
17	5.30	8.29	12.47	5.58	10.92	16.08	18.46	22.14	22.54	15.10
18	5.29	8.51	11.70	5.87	10.99	16.38	18.62	22.33	22.70	14.90
19	5.35	8.71	12.07	6.64	10.91	16.50	18.78	22.33	22.44	14.70
20	5.34	....	12.83	6.68	10.81	16.52	18.92	22.16	22.49	14.60
21	5.04	....	13.12	6.51	11.36	16.47	18.57	22.50	22.52	14.48
22	4.96	9.34	13.11	6.48	11.40	16.43	18.27	22.71	22.24	14.20
23	4.78	9.75	13.32	....	11.82	16.30	18.48	22.90	20.70	14.40
24	4.62	10.23	13.33	6.78	12.17	16.73	18.72	23.01	20.34	14.30
25	4.43	10.47	....	6.82	12.42	16.08	19.22	23.13	20.06	14.10
26	4.43	10.61	....	....	12.72	16.40	19.42	23.00	19.81	13.90
27	4.42	10.62	12.89	....	12.75	16.50	19.48	22.33	19.60	13.80
28	....	....	13.19	....	12.75	16.63	19.23	22.90	19.33	13.60
29	....	10.42	13.33	....	13.22	16.80	19.22	23.23	19.15	13.50
30	....	10.75	12.13	....	13.40	16.88	19.75	23.36	18.94	13.35
31	....	....	11.62	....	13.60	16.60	....	23.43	....	13.30

Su-5. Hawthornden State Hospital. 3 miles northwest of Macedonia, south of Valley View Rd. (State Highway 631), in field. Abandoned drilled well, diameter 10 inches, depth 89 feet. Measuring point, floor of recorder shelter, 1.5 feet above land-surface datum. Automatic water-stage recorder installed Oct. 30, 1947.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 30	35.83	Nov. 9	35.79	Nov. 19	35.81	Nov. 29	35.46
31	35.91	10	35.86	20	35.86	30	35.45
Nov. 1	36.01	11	35.59	21	35.84	Dec. 1	35.56
2	35.98	12	35.72	22	35.70	2	35.27
3	35.92	13	35.83	23	35.66	3	35.25
4	35.72	14	35.81	24	35.50	4	35.30
5	35.66	15	35.70	25	35.36	5	35.00
6	35.82	16	35.75	26	35.41	6	34.88
7	35.70	17	35.92	27	35.57	7	34.79
8	35.53	18	35.86	28	35.57	8	34.42

## Su-5--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Dec. 9	34.46	Dec. 15	33.85	Dec. 21	33.76	Dec. 27	33.81
10	34.35	16	34.04	22	33.77	28	34.07
11	34.04	17	34.03	23	33.82	29	34.17
12	34.02	18	33.93	24	33.89	30	34.16
13	33.98	19	33.92	25	33.83	31	34.16
14	33.95	20	33.89	26	33.80		

Su-6 (\*1016, p. 318; 1023, p. 334; 1071, p. 405). Goodyear Rubber Co. In Akron.

Water level, in feet below land-surface datum, 1947

Jan. 3	48.84	Apr. 4	36.60	July 5	34.25	Oct. 3	42.90
10	47.78	11	35.72	14	33.32	10	50.00
17	46.79	18	35.04	18	39.50	17	53.41
24	45.63	25	33.97	25	37.00	24	50.41
31	44.69	May 2	32.90	Aug. 1	38.75	31	48.33
Feb. 7	43.56	9	31.95	8	39.92	Nov. 7	52.84
14	42.44	16	43.25	15	47.16	14	52.78
21	41.38	23	35.40	22	47.14	21	48.33
28	40.51	31	35.50	29	40.84	28	48.00
Mar. 7	39.85	June 6	36.40	Sept. 5	39.75	Dec. 5	41.41
14	38.95	13	30.84	12	40.16	12	39.50
21	38.44	20	34.41	19	42.00	19	38.58
28	37.62	27	34.45	26	42.41	26	37.58

Trumbull County

T-2 (\*1071, p. 406). Copperweld Steel Co. About 3 miles northeast of Warren, in factory yard.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	34.87	37.34	34.45	34.28	33.57	35.49	39.30	35.90	34.53	35.32	36.90
2	....	34.85	36.70	34.42	34.68	33.67	35.74	39.10	35.58	34.61	35.04	36.77
3	....	35.10	36.75	34.33	34.60	33.52	35.68	38.08	35.92	34.60	34.96	36.58
4	....	37.04	37.09	33.82	33.64	33.24	35.17	38.15	36.16	34.58	34.96	36.55
5	....	37.87	37.31	33.42	33.28	33.54	33.60	39.11	36.50	34.34	35.03	36.20
6	....	38.12	37.83	32.94	34.08	33.56	33.64	39.51	36.23	34.78	35.06	36.06
7	....	38.44	37.67	33.29	34.50	33.18	34.66	39.66	35.84	35.30	35.17	35.82
8	....	39.20	37.12	33.62	34.97	33.01	35.84	39.67	36.24	35.63	34.80	35.44
9	36.90	39.48	36.51	33.70	35.36	33.19	36.40	39.37	36.64	36.60	34.75	35.68
10	36.83	39.42	37.00	33.96	34.74	33.74	36.64	37.60	36.71	35.92	34.50	35.72
11	36.91	38.06	37.12	34.59	32.96	34.15	37.00	37.16	36.93	35.78	34.61	36.47
12	36.93	38.06	37.16	34.44	32.98	34.38	36.97	37.82	38.32	35.42	34.76	36.62
13	36.61	37.50	37.17	32.77	34.61	34.84	36.92	38.28	38.82	35.71	34.99	35.99
14	36.72	37.32	37.04	33.05	34.66	34.66	37.43	38.67	38.92	35.78	34.91	....
15	37.46	37.00	37.07	33.54	34.19	33.88	38.94	38.21	37.68	35.85	34.76	....
16	37.16	36.30	36.60	33.50	35.47	34.22	38.94	37.30	36.25	36.00	34.38	....
17	36.92	36.10	36.24	33.80	36.40	34.72	38.65	36.51	36.14	36.20	35.72	36.48
18	36.14	36.40	36.52	33.74	35.84	35.18	39.34	37.10	35.86	36.08	35.98	36.66
19	35.68	36.29	36.33	33.42	36.78	35.00	39.05	38.03	36.55	35.98	35.56	37.07
20	36.45	36.38	36.26	32.70	37.46	34.61	38.33	38.36	36.30	35.95	35.48	37.11
21	38.55	36.88	36.30	32.30	38.00	34.07	37.99	38.18	35.92	36.04	35.42	36.70
22	....	36.62	35.80	32.62	38.00	33.34	38.08	38.02	35.62	36.24	35.29	36.12
23	38.53	36.12	35.30	32.72	37.98	33.02	38.46	37.64	35.59	37.18	35.22	36.63
24	38.25	36.49	34.73	33.90	37.74	33.95	38.70	36.92	35.14	36.85	35.05	37.42
25	37.45	36.82	34.50	33.62	37.23	34.36	38.93	37.54	35.50	36.40	35.52	37.47
26	35.75	37.22	35.50	33.05	37.52	34.57	38.84	37.56	35.56	35.69	35.58	37.69
27	34.98	37.55	35.41	32.66	37.51	34.74	38.30	37.69	35.20	35.52	36.18	37.30
28	35.36	37.64	35.14	33.11	37.79	34.84	38.02	37.46	34.78	35.77	36.89	36.40
29	35.18		35.08	33.97	37.90	34.85	38.36	37.81	34.40	35.67	37.52	36.03
30	34.50		34.37	33.69	37.46	35.29	38.80	37.62	34.54	35.42	36.92	36.02
31	34.88		34.36		35.52		39.10	36.71		35.34		36.08

Tuscarawas County

Tu-1 (\*1071, p. 406). Everet Waltz. About 3 miles north of Strasburg, on west side of U. S. Highway 21.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	10.40	11.39	11.74	.....	9.47	8.88	10.76	11.76	12.38	12.86	13.02
2	.....	.....	11.43	11.73	10.51	9.47	8.96	10.76	11.74	12.39	12.87	13.02
3	.....	10.04	11.48	11.71	10.52	9.43	9.04	10.81	11.75	12.42	12.90	13.02
4	.....	10.04	11.53	11.68	10.54	9.25	9.16	10.82	11.77	12.43	12.89	13.02
5	.....	.....	11.57	11.68	10.54	9.12	9.20	10.90	11.78	12.44	12.89	13.02
6	12.08	.....	11.60	11.63	10.49	9.07	9.30	10.97	11.80	12.46	12.85	13.03
7	12.07	.....	11.63	11.61	10.45	9.04	9.39	11.02	11.82	12.52	12.84	13.03
8	12.05	.....	11.63	11.61	10.47	8.44	9.45	11.08	11.84	12.53	12.83	13.04
9	12.06	.....	.....	11.57	10.52	8.21	9.55	11.12	11.86	12.54	12.85	13.03
10	12.07	.....	.....	11.57	10.57	8.12	9.67	11.16	11.89	12.55	12.85	13.03
11	12.08	10.58	.....	11.57	10.63	8.11	9.71	.....	11.91	12.56	12.85	13.04
12	12.11	.....	11.80	11.60	10.65	8.18	9.77	.....	11.95	12.59	12.87	13.04
13	12.13	.....	11.82	11.60	10.68	8.23	9.83	.....	12.09	12.64	12.87	13.04
14	12.13	.....	11.82	11.60	10.68	8.28	9.90	.....	12.13	12.65	12.88	13.06
15	12.13	.....	11.82	11.60	10.63	8.35	9.97	.....	12.15	12.66	12.88	13.06
16	11.99	.....	11.81	11.60	10.65	8.40	10.02	11.41	12.15	12.67	12.89	13.06
17	11.85	.....	11.83	.....	10.68	8.45	10.06	11.41	12.20	12.68	13.01	13.05
18	11.73	10.92	11.87	11.36	10.66	8.55	10.12	11.42	12.23	12.69	13.01	13.03
19	11.69	10.96	11.88	11.34	10.61	8.63	10.10	11.43	12.25	12.71	13.02	13.03
20	11.57	10.99	11.89	11.33	10.36	8.69	10.09	11.47	12.27	12.74	13.03	13.03
21	11.47	11.04	11.91	11.31	.....	8.73	10.19	11.49	12.20	12.74	13.03	13.03
22	.....	11.05	11.94	11.07	.....	8.76	10.25	11.55	12.23	12.75	13.04	13.04
23	.....	11.13	11.94	10.94	10.22	8.76	10.30	11.56	12.23	12.76	13.04	.....
24	.....	11.18	11.94	10.87	10.14	8.76	10.34	11.60	12.23	12.76	13.04	.....
25	.....	11.23	11.92	10.90	10.06	8.78	10.38	11.63	12.24	12.77	13.04	.....
26	.....	11.28	11.90	10.86	9.86	8.80	10.44	11.67	12.27	12.78	13.04	.....
27	10.30	11.32	11.87	10.67	9.63	8.88	10.46	11.72	12.29	12.83	13.04	13.09
28	10.78	11.37	11.85	10.63	9.49	8.88	.....	11.73	12.31	12.82	13.04	13.09
29	10.75	.....	11.84	.....	9.40	8.86	.....	11.77	12.35	12.82	13.05	13.10
30	10.75	.....	11.83	.....	9.38	8.86	.....	11.79	12.37	12.84	13.06	13.11
31	10.67	.....	11.79	.....	9.41	.....	.....	11.81	.....	12.85	.....	13.12

Union County

U-1 (\*1071, p. 407). Irwin Public School. At Irwin, in school yard.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	7.36	9.38	.....	7.78	7.51	9.22	9.38	9.86	10.04	10.02	9.62
2	....	7.75	9.40	.....	7.74	.....	9.27	9.41	9.92	10.05	10.02	9.64
3	....	7.91	9.43	.....	7.73	.....	9.30	9.45	9.94	10.08	10.02	9.66
4	....	8.13	9.44	8.52	7.91	.....	9.34	.....	9.96	10.09	9.95	9.68
5	7.98	8.31	9.44	8.52	8.14	7.66	9.38	.....	9.94	10.10	9.91	9.65
6	8.29	8.43	.....	8.49	8.24	7.86	9.38	.....	9.93	10.12	9.83	9.68
7	8.50	8.61	.....	8.56	8.33	7.86	9.41	9.52	9.96	10.13	9.82	9.68
8	8.68	8.71	.....	8.59	.....	8.00	9.45	9.56	10.00	10.13	9.79	.....
9	8.85	8.84	.....	8.70	.....	8.18	9.45	9.58	10.01	10.14	9.84	9.48
10	8.85	8.93	.....	8.72	.....	8.38	9.40	9.62	10.00	10.13	9.84	9.47
11	8.93	8.99	9.48	.....	.....	8.54	9.42	.....	10.02	10.14	9.79	9.50
12	8.04	9.03	9.47	.....	.....	8.65	9.45	9.66	10.02	10.16	9.80	9.53
13	8.07	9.04	9.43	8.00	.....	8.67	.....	9.70	9.97	10.15	9.80	9.54
14	8.08	9.03	9.30	8.04	.....	8.58	9.45	9.72	10.01	10.16	.....	9.55
15	7.65	9.02	9.02	8.07	.....	7.44	8.96	9.72	10.01	10.17	.....	9.56
16	....	9.05	9.07	8.07	.....	7.83	8.16	9.68	10.09	10.19	9.60	9.52
17	....	9.15	9.26	7.52	.....	8.02	8.37	9.62	.....	10.18	9.61	9.52
18	8.18	9.19	9.26	7.75	6.74	8.19	8.47	9.66	10.09	10.18	9.61	9.47
19	8.29	9.21	9.26	7.89	7.03	8.34	8.24	9.68	10.08	10.16	9.64	9.50
20	8.29	9.20	9.30	7.94	7.29	8.54	8.48	9.72	10.10	10.18	9.67	9.51
21	7.17	9.00	9.30	.....	.....	8.64	8.66	9.74	10.09	10.19	9.68	9.54

U-1-- Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
22	7.70	9.23	9.23	6.58	....	8.74	8.80	9.76	9.93	10.20	9.67	9.54
23	8.00	9.26	8.88	6.78	....	8.80	8.92	9.76	9.91	10.22	9.65	9.62
24	8.10	9.27	7.79	6.95	....	8.87	9.02	9.80	9.94	10.22	9.59	....
25	8.12	....	....	6.95	6.93	8.94	9.08	9.82	9.98	10.22	9.49	....
26	7.35	9.37	....	....	7.46	8.98	9.12	9.81	10.01	10.22	9.47	9.64
27	7.77	9.38	....	7.74	7.87	9.04	9.16	9.80	10.01	10.20	9.48	9.64
28	7.98	....	....	8.01	8.14	9.08	9.20	9.86	10.00	10.12	9.52	9.68
29	8.13	....	....	8.08	8.19	9.13	9.26	9.88	10.02	10.04	9.58	9.68
30	8.06	....	....	8.01	8.30	9.14	9.30	9.92	10.05	10.04	9.62	9.68
31	4.51	....	....	....	8.41	....	9.35	9.91	....	10.02	....	9.69

U-2 (#1071, p. 408). J. B. Gray. About 1 mile north of Byhalia,  
on east side of U. S. Highway 31.Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	11.20	9.81	9.75	....	....	....	11.61	....	....
2	....	....	....	11.00	9.59	9.50	....	....	....	11.60	....	....
3	....	11.75	12.88	10.83	9.55	9.10	....	....	....	11.72	....	....
4	....	11.74	12.92	10.65	9.60	9.17	....	....	11.02	11.81	11.93	....
5	....	11.85	12.95	10.52	9.79	9.30	....	....	11.02	11.95	11.89	....
6	....	11.83	12.95	10.20	9.97	9.44	....	....	10.83	11.81	11.67	11.76
7	....	11.97	12.96	10.40	10.00	9.42	....	12.16	10.81	....	11.87	11.77
8	....	12.20	12.96	10.44	10.07	9.44	11.62	12.08	10.84	11.85	11.85	11.62
9	....	12.24	13.11	10.52	10.25	9.62	11.67	12.11	10.95	11.91	11.90	11.73
10	....	12.42	13.11	10.60	10.35	9.79	11.64	12.13	10.92	11.94	12.51	11.68
11	....	12.58	13.07	10.63	10.54	10.08	11.71	12.31	10.97	12.04	12.61	11.71
12	....	12.65	13.10	10.87	10.53	10.29	11.78	....	....	12.13	12.20	11.85
13	....	12.65	....	10.99	10.50	10.42	11.92	....	....	12.13	12.42	11.82
14	....	12.60	....	10.96	10.55	10.24	11.74	11.27	....	12.16	12.15	....
15	....	....	....	11.06	10.62	9.72	11.74	11.31	....	12.11	11.99	....
16	....	....	....	11.00	10.65	9.76	11.77	11.20	....	....	11.81	....
17	....	12.51	....	10.55	10.70	9.88	11.63	10.81	....	....	11.75	....
18	....	12.66	....	10.44	10.59	9.83	11.57	10.81	....	....	11.73	....
19	....	12.66	....	10.50	10.54	9.72	11.41	10.81	....	....	11.77	....
20	....	12.59	....	10.50	10.45	9.84	11.36	10.68	....	....	....	....
21	....	12.63	....	10.37	10.43	10.06	11.38	10.57	....	....	....	....
22	12.27	12.68	....	10.26	10.05	10.28	11.52	....	....	....	....	....
23	12.23	12.59	....	10.16	9.81	10.45	11.59	....	....	....	....	....
24	12.21	12.70	....	10.22	9.87	10.59	11.85	....	....	12.53	....	....
25	....	12.70	....	10.25	9.78	10.70	11.80	....	....	12.53	....	....
26	....	12.70	....	9.95	9.50	10.79	11.87	....	....	12.52	....	....
27	12.22	....	....	9.79	9.51	10.95	11.84	....	....	12.47	....	....
28	12.22	....	....	9.98	9.39	10.09	11.86	....	....	12.41	....	....
29	....	....	....	10.01	9.41	....	12.01	....	11.39	12.18	....	....
30	....	....	....	9.94	9.58	....	12.02	....	11.61	11.98	....	....
31	....	....	11.21	....	9.72	....	12.11	....	....	11.85	....	....

Warren CountyW-1 (#1071, p. 409). Everybody's Farm. 1 mile southeast of Mason,  
on northwest side of U. S. Highway 42.Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	1.80	1.32	3.57	1.98	0.70	2.52	3.83	4.51	....	4.64	4.63	2.98
2	1.19	1.63	3.61	1.30	....	2.39	3.98	4.52	....	....	4.62	3.05
3	.70	1.84	3.65	1.15	....	1.00	4.06	4.52	....	....	4.62	3.14
4	.88	1.92	3.68	1.22	....	2.12	4.15	4.45	4.21	4.66	4.57	3.15
5	1.13	2.30	3.70	.77	....	....	4.20	4.43	4.24	4.70	4.47	3.00
6	1.26	2.51	3.63	1.05	....	....	4.20	4.20	4.25	4.74	4.47	2.90
7	1.29	2.60	3.45	1.40	....	....	4.22	3.92	4.31	4.78	4.47	2.90

## W-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
8	1.37	2.77	3.23	1.49	1.54	....	4.29	3.35	4.37	4.81	4.47	2.35
9	1.47	2.94	3.17	1.16	1.86	....	4.30	3.43	4.42	4.83	4.52	2.37
10	1.67	3.08	3.17	1.48	2.13	....	4.30	3.63	4.47	4.86	4.53	2.46
11	1.59	3.16	3.19	1.54	2.35	....	4.12	3.82	4.42	4.90	4.52	2.55
12	1.28	3.16	3.21	.90	2.60	....	3.96	3.94	....	5.00	3.95	2.62
13	1.12	3.13	3.05	1.25	2.68	....	4.00	4.01	....	5.02	3.60	2.71
14	1.22	3.01	2.88	1.53	2.27	2.05	4.05	4.07	....	5.03	3.61	2.77
15	.65	2.81	1.61	1.79	2.46	2.47	4.05	4.09	....	5.04	3.61	2.80
16	.82	2.70	1.73	1.79	2.42	2.81	3.67	4.12	....	5.05	3.15	2.46
17	.98	2.60	1.86	1.87	.92	3.09	3.24	4.18	....	5.06	3.16	2.23
18	1.17	2.51	1.99	1.46	1.04	3.15	3.40	....	4.08	5.13	3.24	2.33
19	1.21	2.46	1.94	1.78	1.40	3.20	3.58	....	4.16	....	3.34	2.45
20	.97	2.50	1.86	1.82	1.66	3.26	3.71	....	4.22	....	3.44	2.55
21	1.54	2.76	1.70	.51	1.64	3.43	3.87	....	4.27	....	3.50	2.57
22	2.17	2.92	1.58	.80	1.09	3.58	3.98	....	4.18	4.99	3.51	2.65
23	2.35	3.08	1.51	1.28	1.65	3.70	....	....	4.12	5.00	3.01	2.75
24	2.30	3.25	1.37	1.38	1.91	3.76	....	4.25	4.05	5.02	2.72	2.77
25	1.75	3.38	.70	1.01	1.85	3.81	....	4.33	4.15	5.03	2.30	....
26	1.00	3.47	1.04	.79	1.07	3.87	4.33	....	4.23	5.04	2.43	2.90
27	1.25	3.53	1.22	1.25	1.55	....	4.36	....	4.30	5.04	2.50	3.00
28	1.47	3.57	1.46	1.56	2.06	4.01	4.31	....	4.35	4.93	2.59	3.05
29	1.37		1.44	1.73	2.13	4.06	4.37	....	4.40	4.80	2.74	3.10
30	1.37		1.67	.64	....	3.94	4.42	....	4.46	4.78	2.88	3.16
31	1.03		1.87	....	....	....	4.47	....	....	4.68	....	3.16

W-2. Lebanon water department. At Lebanon, in municipal well field. Abandoned drilled well, diameter 6 inches, depth 100 feet. Measuring point, floor of recorder shelter, 1.5 feet above land-surface datum. Automatic water-stage recorder installed June 26, 1947.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	14.46	14.54	....	15.56	15.72	16.46
2	....	14.52	14.18	....	16.15	15.30	16.42
3	....	....	14.61	....	15.60	16.16	16.85
4	....	....	14.32	16.12	15.44	16.18	16.10
5	....	....	14.29	16.43	15.46	15.93	16.84
6	....	....	14.64	....	15.42	15.53	16.94
7	....	....	14.58	16.55	15.44	15.89	16.77
8	....	....	15.17	16.34	16.52	15.74	16.93
9	....	....	15.54	16.53	15.44	15.78	16.96
10	....	....	14.45	17.05	16.24	16.45	16.87
11	....	....	14.36	16.33	16.41	15.89	16.98
12	....	....	15.27	17.24	15.70	15.66	16.86
13	....	....	15.49	16.33	15.50	16.63	16.79
14	....	....	15.35	17.34	16.52	16.24	16.99
15	....	....	15.46	17.45	15.89	16.28	16.36
16	....	....	15.06	16.64	16.38	15.90	16.68
17	....	....	15.16	17.39	15.69	16.07	17.58
18	....	....	16.90	16.62	15.75	16.13	16.90
19	....	....	16.75	16.57	15.69	16.07	16.68
20	....	....	15.21	16.57	15.48	16.14	17.64
21	....	....	16.42	15.61	16.35	16.28	....
22	....	....	15.77	15.57	16.49	16.16	....
23	....	....	15.94	16.46	15.63	15.83	....
24	....	....	16.42	16.61	15.56	16.07	....
25	....	....	15.32	16.62	15.60	16.18	....
26	14.67	....	15.34	15.50	15.50	16.39	....
27	14.32	....	16.16	16.58	15.56	16.22	....
28	14.36	....	....	15.54	15.55	16.02	17.32
29	14.41	....	16.60	15.47	15.88	16.22	17.32
30	14.34	....	16.65	15.47	16.59	16.14	17.50
31		14.76	16.16	....	15.70	....	17.48

Washington County

Wa-1 (\*944, p. 198; 986, p. 275; 1016, p. 318; 1023, p. 335; 1071, p. 409). Marietta Osteopathic Clinic. In Marietta, at Fourth and Putnam Sts.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	28.68	26.24	27.45	26.97	25.91	25.37	26.03	27.44	28.18	28.43	28.83	28.83
2	28.57	26.24	27.48	26.99	25.93	25.17	26.07	27.56	28.13	28.44	28.81	28.84
3	28.50	26.02	27.54	26.98	25.89	25.24	26.44	27.65	28.19	28.45	28.79	28.84
4	28.42	25.95	27.59	26.92	26.08	25.22	26.22	27.68	28.21	28.48	28.80	28.85
5	28.25	26.07	27.64	26.82	26.08	25.25	26.39	27.75	28.20	28.64	28.82	28.86
6	28.09	26.22	27.65	26.77	25.87	25.22	26.47	27.83	28.25	28.51	28.82	28.87
7	27.96	26.30	27.67	26.65	25.84	25.36	26.40	27.87	28.27	28.52	28.81	28.87
8	27.90	25.82	27.73	26.42	26.07	25.15	26.22	27.81	28.28	28.53	28.80	28.90
9	28.02	26.43	27.75	26.05	25.90	24.80	26.48	27.98	28.29	28.54	28.80	28.86
10	.....	26.52	27.76	25.91	26.15	24.21	26.55	28.02	28.31	28.55	28.78	28.83
11	27.97	26.62	27.79	26.22	26.34	24.29	26.29	27.96	28.32	28.59	28.79	28.82
12	28.00	26.68	27.80	26.12	26.16	24.39	26.71	27.90	28.33	28.60	28.80	28.80
13	28.02	26.72	27.80	26.15	26.24	24.47	26.78	27.93	28.40	28.60	28.78	28.82
14	28.04	26.75	27.84	26.23	26.24	24.66	26.83	27.96	28.41	28.62	28.77	28.82
15	28.07	26.93	27.80	26.33	26.19	24.81	26.89	27.94	28.31	28.64	28.77	28.85
16	28.01	26.98	27.75	26.50	26.12	24.53	26.91	28.00	28.24	28.65	28.79	28.87
17	27.86	27.04	27.62	26.45	26.44	24.77	23.95	28.01	28.25	28.66	28.80	28.83
18	27.67	27.05	27.51	26.58	26.40	24.62	27.00	27.97	28.25	28.68	28.79	28.78
19	.....	27.07	27.55	26.40	26.18	24.78	27.05	27.97	28.38	28.85	28.78	28.73
20	.....	27.06	27.46	26.62	25.85	24.88	27.10	28.00	28.43	28.73	28.80	28.75
21	.....	27.10	27.53	26.30	25.96	25.33	27.02	27.94	28.56	28.73	28.80	28.75
22	.....	27.12	27.61	26.27	25.60	25.44	26.88	27.99	28.38	28.74	28.82	28.74
23	.....	.....	27.67	26.35	25.47	25.47	26.91	27.95	28.33	28.77	28.83	28.77
24	.....	.....	27.70	26.22	25.45	25.54	26.94	28.03	28.30	28.76	28.85	28.78
25	26.86	.....	27.70	26.23	25.50	25.58	26.95	27.88	28.33	28.77	28.82	28.77
26	26.90	.....	27.65	26.27	25.28	25.66	27.14	27.88	28.34	28.73	28.82	28.80
27	26.87	.....	27.54	26.12	25.10	25.72	27.30	28.29	28.36	28.83	28.80	28.33
28	26.90	.....	27.25	26.02	25.16	25.86	27.15	28.17	28.37	28.81	29.79	28.85
29	26.67	.....	27.06	25.89	25.20	25.97	27.30	28.11	28.38	28.80	28.83	28.85
30	26.51	.....	27.06	25.90	25.25	25.98	27.36	28.10	28.43	28.81	28.83	28.85
31	26.60	.....	27.01	.....	25.28	.....	27.41	28.18	.....	28.82	.....	28.97

Wayne County

Wn-1 (\*1071, p. 410). Ohio Boxboard Co. At Rittman, in factory.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	95.38	88.30	.....	88.90	90.63	.....	93.80	94.00	.....	93.24	94.48
2	88.33	92.22	86.89	.....	88.72	90.13	.....	93.40	95.77	.....	93.05	94.70
3	87.18	90.70	87.23	.....	89.85	91.60	.....	93.14	95.00	.....	92.75	94.73
4	87.38	90.25	87.16	.....	91.75	91.13	.....	93.25	95.20	.....	92.27	94.31
5	87.83	91.32	87.38	89.75	91.95	91.58	.....	94.67	96.52	.....	92.42	93.30
6	88.55	89.53	87.53	90.40	92.03	92.40	.....	96.52	97.02	.....	92.93	93.82
7	87.67	89.60	87.30	91.98	92.70	92.37	.....	96.37	95.25	.....	92.89	92.89
8	88.36	90.03	87.42	91.67	93.37	92.40	.....	96.10	93.78	.....	92.86	93.55
9	89.03	89.83	86.80	91.80	93.45	93.26	.....	96.11	93.84	.....	92.74	94.00
10	90.10	90.60	86.63	92.41	94.01	93.20	.....	94.46	94.02	.....	93.08	95.94
11	88.15	90.45	86.90	89.23	94.01	93.70	.....	96.20	94.55	.....	92.85	93.84
12	88.55	90.32	86.85	88.00	93.85	93.35	.....	95.52	95.55	.....	93.04	95.55
13	87.71	89.92	86.47	88.55	92.90	93.07	.....	96.15	95.17	95.41	94.44	96.25
14	87.93	89.27	86.89	87.72	92.81	93.26	91.47	96.14	93.42	94.65	94.15	96.25
15	90.06	88.86	87.76	87.07	92.89	91.65	92.38	95.73	93.98	94.06	93.45	93.80
16	89.90	89.03	87.18	87.67	92.85	91.97	92.79	95.25	94.62	93.47	94.00	96.55
17	88.17	88.86	87.66	88.85	92.89	91.82	92.75	95.10	95.14	93.35	94.15	97.66
18	87.88	88.92	87.14	89.63	92.63	91.24	93.44	95.75	96.48	93.00	.....	97.09
19	88.29	89.68	87.39	87.04	92.31	92.90	93.90	95.72	97.61	92.90	.....	97.00
20	89.50	88.67	86.67	.....	92.00	94.20	94.43	.....	98.60	93.53	.....	96.34
21	91.45	88.25	86.83	.....	91.82	94.95	94.52	.....	98.91	93.15	.....	96.59



Wn-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
22	90.38	88.65	87.15	.....	93.04	93.18	92.63	.....	97.56	92.87	.....	96.62
23	90.43	88.42	87.87	.....	93.04	92.74	94.23	.....	96.69	93.45	.....	96.70
24	91.58	88.00	88.48	.....	91.65	.....	93.45	.....	96.97	94.23	.....	98.58
25	89.42	88.17	89.93	.....	92.40	.....	93.20	96.73	97.06	93.04	.....	92.93
26	87.98	88.00	89.85	.....	93.07	.....	92.87	96.85	97.06	92.57	.....	91.07
27	87.91	88.15	89.12	.....	93.74	.....	93.59	97.23	95.90	94.39	.....	90.42
28	88.20	89.94	90.60	90.47	93.84	.....	92.08	97.40	95.45	92.89	.....	87.15
29	88.85	.....	.....	89.07	93.93	.....	93.37	97.37	95.21	93.00	.....	.....
30	92.70	.....	.....	89.53	93.97	.....	93.92	97.50	95.15	93.45	.....	.....
31	95.05	.....	.....	.....	91.40	.....	93.20	94.82	.....	92.85	.....	.....

Wood County

Wo-1 (\*1071, p. 411). Paul W. Kale. 1 mile west of Wingston, at Liberty schoolhouse.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	5.48	5.45	4.85	4.03	3.50	3.14	3.32	3.44	3.55	3.71	....
2	....	5.43	5.43	4.86	3.90	3.48	3.17	3.32	3.41	3.56	3.72	....
3	....	....	5.46	....	3.90	3.36	3.20	3.35	3.40	3.57	3.73	3.87
4	....	....	....	....	3.86	3.32	3.22	3.34	3.40	3.55	3.68	3.87
5	....	....	....	....	3.80	3.29	3.25	3.33	3.39	3.55	3.66	3.82
6	....	5.17	5.46	....	3.79	3.25	3.24	3.33	3.37	3.58	3.66	3.83
7	....	5.16	5.52	....	3.75	3.20	3.24	3.34	3.38	3.59	3.66	3.81
8	....	5.15	5.63	....	3.76	3.15	3.26	3.35	3.39	3.59	....	3.75
9	6.58	5.16	5.67	....	3.91	3.10	3.25	3.37	3.40	3.60	....	3.79
10	6.58	5.23	5.68	....	3.84	3.08	3.16	3.39	3.43	3.60	3.62	3.81
11	....	5.30	....	....	3.87	3.07	3.15	3.43	3.43	3.62	3.59	3.85
12	....	5.30	....	....	3.84	3.08	3.14	3.45	3.42	3.64	3.60	3.87
13	....	....	5.63	....	3.79	3.07	3.13	3.47	3.38	3.67	3.65	3.97
14	....	5.28	5.52	....	3.72	2.99	3.13	3.49	3.38	3.68	....	3.86
15	....	5.28	5.52	....	3.72	2.99	3.11	3.50	3.39	3.71	....	3.85
16	6.42	5.28	5.52	....	3.70	3.01	3.08	3.42	3.43	3.72	....	....
17	5.91	5.29	5.43	4.44	3.69	3.01	3.07	2.44	3.45	3.72	....	....
18	6.37	5.35	....	4.41	3.64	3.02	3.02	3.46	3.47	3.69	3.66	3.97
19	....	....	....	4.44	3.63	3.05	3.02	3.48	3.49	3.66	3.68	3.98
20	....	5.37	5.39	4.37	3.64	3.08	3.04	3.50	3.50	3.63	3.70	4.02
21	....	5.37	5.38	4.27	3.62	3.12	3.04	3.52	3.50	3.68	3.73	4.05
22	....	5.37	5.35	4.25	3.60	3.14	3.06	3.54	3.42	3.69	3.73	4.06
23	5.90	5.43	5.34	4.21	3.60	3.15	3.06	3.55	3.44	3.74	3.73	4.06
24	5.89	5.44	5.30	4.20	3.60	3.15	3.22	3.57	3.44	3.77	3.73	4.06
25	5.84	....	5.18	4.16	3.54	3.15	3.23	3.58	3.47	3.77	3.68	3.91
26	5.78	....	....	4.14	3.56	3.15	3.24	3.58	3.50	3.77	3.70	....
27	5.74	5.45	5.14	4.15	3.56	3.17	3.24	3.59	3.52	3.77	....	....
28	5.71	5.47	5.10	4.12	3.52	3.12	3.24	3.60	3.52	3.75	....	....
29	5.68	....	5.03	4.10	3.50	3.13	3.27	3.62	3.52	3.73	....	....
30	5.53	....	5.02	4.04	3.50	3.16	3.27	3.59	3.55	3.71	....	....
31	5.49	....	4.92	....	....	....	3.31	3.45	....	3.71	....	....

## PENNSYLVANIA

By R. R. Huber

### PROGRAM OF WORK

The program of water-level measurements in observation wells in Pennsylvania, begun in 1931, was continued in 1947 in cooperation with the Topographic and Geologic Survey of the Pennsylvania Department of Internal Affairs. Three new observation wells were established during the year, one in Philadelphia, one in Pittsburgh, and one in Cumberland County in the Susquehanna River Basin.

More than 8,000 measurements of water level, distributed among 65 wells, are recorded for the year. In 46 of the wells measurements were made weekly. A total of 19 automatic water-stage recorders were in use in 1947, 15 of them at the Philadelphia Naval Base. Daily measurements are given for all wells equipped with recorders.

Weekly measurements of 22 observation wells situated in the Susquehanna River Basin in Pennsylvania were made available to the Pennsylvania Water and Power Company at Baltimore, Maryland. These measurements, continuing a record begun in 1930, are used by this company as a means of predicting minimum stream flow of the Susquehanna River at their hydroelectric plants.

### FLUCTUATIONS OF WATER LEVEL

Weekly measurements of 29 observation wells distributed over the State have been converted to feet above assumed datum planes and arithmetically averaged. This weekly average for 1947 is shown in figure 10, together with the highest and lowest weekly averages occurring during the period 1932-46. Only those wells that were thought free of any pumpage effects were used in computing these average figures. The figure also shows the monthly mean precipitation for Pennsylvania in 1947, together with the normal precipitation based on records over a period of 60 years.

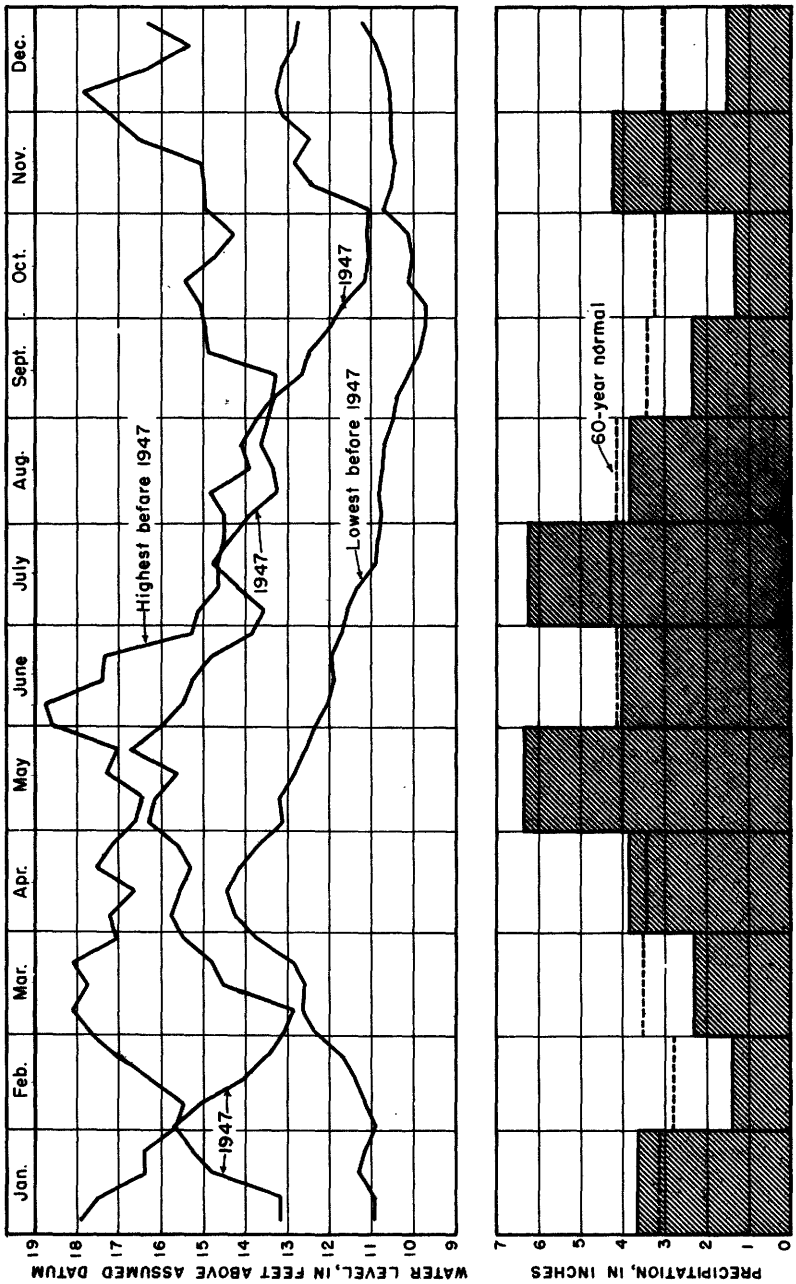


Figure 10.--Graph showing average ground-water levels and precipitation in Pennsylvania in 1947 in comparison with previous years of record.

In the following table, the 15-year weekly average (1932-46) of water levels in observation wells in Pennsylvania is shown with the average of the water levels in observation wells for each week in 1947. The number of wells reported each week is also tabulated.

Average of water levels in observation wells in Pennsylvania, by weeks, in feet above assumed datum planes, 1947

Date	Number of wells	1947 average	15-year average	Date	Number of wells	1947 average	15-year average
Jan. 4	27	13.18	13.88	July 5	25	13.55	13.05
11	26	13.19	13.92	12	27	14.17	12.80
18	27	14.78	13.68	19	27	14.76	12.55
25	26	15.24	13.66	26	25	14.37	12.49
Feb. 1	26	15.67	13.62	Aug. 2	26	13.91	12.33
8	26	15.06	13.56	9	27	13.25	12.21
15	27	14.03	13.81	16	26	13.34	12.13
22	25	13.48	13.91	23	27	13.65	12.03
Mar. 1	26	13.09	14.33	30	27	13.43	11.92
8	27	12.89	14.59	Sept. 6	27	13.31	11.79
15	27	14.53	15.03	13	27	12.62	11.62
22	27	14.79	15.55	20	27	12.46	11.68
29	26	15.43	15.57	27	28	11.99	11.60
Apr. 5	27	15.78	15.57	Oct. 4	28	11.66	11.53
12	28	15.54	15.53	11	26	11.18	11.54
19	27	15.32	15.31	18	23	11.08	11.51
26	28	15.63	15.07	25	24	11.10	11.78
May 3	26	16.31	14.77	Nov. 1	26	11.07	12.15
10	27	16.17	14.48	8	26	12.40	12.29
17	27	15.64	14.42	15	26	12.88	12.55
24	27	16.76	14.40	22	26	12.48	12.75
31	27	16.03	14.34	29	25	13.11	12.84
June 7	27	15.52	14.06	Dec. 6	25	13.27	12.90
14	26	15.50	13.65	13	25	13.10	13.02
21	28	14.79	13.62	20	24	12.90	13.12
28	27	13.83	13.22	27	23	12.76	13.44

Fluctuations of the weekly average water level correspond closely to changes in the State-wide average of precipitation. Average monthly precipitation in 1947 varied widely from normal throughout most of the year. While total precipitation for the year was only 1.00 inch below average for the 60-year period of record, monthly deviations were pronounced, as shown by the following summary:

February: fifth driest of record  
 March : seventh driest of record  
 May : fourth wettest of record  
 July : wettest in 51 years  
 October: sixth driest of record  
 November: tenth wettest of record

Average water level rose sharply in late January in response to heavy precipitation and high temperature, resulting in the highest level recorded for the first week of February. The deficiency of precipitation in February and March caused the level to approach the lowest of record for the middle of March. July rains produced the highest average water level recorded for the third week of the month, but by early November, the level

again approached a record low due to the marked dryness of October. At the year's end, water levels were only slightly below average.

Throughout the year sharp contrasts in monthly precipitation were reflected in pronounced variations in average water levels. The large range of water-level fluctuation, together with the speed of response to precipitation conditions, emphasizes the relatively low storage capacity of the surface rocks of Pennsylvania. High ground-water levels reflecting water-table conditions do not indicate sufficient storage to carry through more than a few weeks of deficient rainfall. Conversely, depleted storage of the shallow ground-water reservoir may be filled quickly by favorable precipitation.

#### Philadelphia area

During 1947, 22 observation wells in south Philadelphia were measured weekly or daily. Seventeen of these wells were equipped with automatic water-stage recorders. Hydrographs of these wells indicate that during the year water levels, in general, remained fairly constant except for the effects of tides and periodic operation of large wells. The sands and gravels that underlie portions of south Philadelphia constitute the main source of water supply for the Philadelphia Naval Base and many industries in that area. Levels in the observation wells readily reflect any change in production by operating wells in the area, as is shown by the sharp rise in the levels of some of the wells during periods in the latter part of the year when several large industries curtailed production. When normal production was again begun the levels readily assumed their former lower positions. In general, water levels in south Philadelphia do not indicate depletion of the ground-water supply at the present rate of withdrawal and, in some areas, indicate that increased production is possible.

#### Pittsburgh area

Ground-water studies in Pittsburgh, begun in 1946 as a part of the cooperative ground-water program in Pennsylvania, were continued in 1947. A comprehensive study of ground-water use and ground-water conditions in general was begun in the sand and gravel deposits of Allegheny County. During the year weekly measurements were made in 13 wells in the downtown area of Pittsburgh. Although the period of record is still comparatively short, observations to date do not show any definite lowering of water levels in the areas of heavy ground-water use in Pittsburgh.

## WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Allegheny County

A1 (\*1071, p. 415). City of Pittsburgh. At Liberty Avenue and Short Street. Extremes of observed water level, in feet below land-surface datum: Highest, Dec. 20, 1945, 23.64; lowest, July 3, 1947, 29.50.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	27.16	Apr. 10	27.03	July 3	29.50	Oct. 2	27.30
9	27.40	21	27.78	10	29.22	9	27.24
16	27.43	24	28.08	18	29.38	16	27.36
23	27.47	May 1	28.02	24	28.96	23	27.45
30	27.50	8	27.80	31	29.10	30	27.28
Feb. 7	27.32	15	27.98	Aug. 7	29.00	Nov. 6	27.02
13	27.44	22	28.60	14	29.10	13	26.83
20	27.58	29	28.94	20	29.18	20	26.72
27	27.70	June 5	28.63	28	29.21	26	26.65
Mar. 6	27.75	9	28.20	Sept. 4	28.90	Dec. 4	26.66
13	27.78	12	29.04	11	29.00	11	26.77
20	27.88	17	29.20	18	28.66	18	26.86
27	27.30	19	29.14	25	28.03	26	26.38
Apr. 3	27.80	26	29.30				

A2 (\*1071, p. 416). City of Pittsburgh. At First Avenue and Short Street. Extremes of observed water level, in feet below land-surface datum: Highest, Dec. 20, 1945, 20.98; lowest, July 3, 1947, 30.12.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	28.20	Apr. 10	27.80	July 3	30.12	Oct. 2	28.40
9	28.34	21	28.70	10	29.94	9	28.16
16	28.44	24	28.79	18	30.03	16	28.23
23	28.44	May 1	28.87	24	29.92	23	28.36
30	28.53	8	28.85	31	29.82	30	28.28
Feb. 7	28.34	15	28.97	Aug. 7	29.70	Nov. 6	28.05
13	28.38	22	29.24	14	29.77	13	27.86
20	28.46	29	29.59	20	29.82	20	27.70
27	28.60	June 5	29.52	28	29.84	26	27.58
Mar. 6	28.72	9	29.46	Sept. 4	29.65	Dec. 4	27.58
13	28.73	12	29.50	11	29.62	11	27.67
20	28.78	19	29.92	18	29.57	18	27.67
27	28.58	26	29.97	25	29.10	26	27.74
Apr. 3	28.68						

A3 (\*1071, p. 417). City of Pittsburgh. At Water and Short Streets. Extremes of observed water level, in feet below land-surface datum: Highest, Feb. 28, 1946, 23.66; lowest, Mar. 16, 1946, 28.39.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	26.50	Apr. 10	25.96	July 3	28.06	Oct. 2	26.37
9	26.62	21	26.92	10	27.84	9	26.15
16	26.70	24	27.00	18	27.94	16	26.32
23	26.71	May 1	26.90	24	27.78	23	26.46
30	26.78	8	26.94	31	27.74	30	26.37
Feb. 4	26.77	15	27.00	Aug. 7	27.55	Nov. 6	26.04
13	26.60	22	27.43	14	27.62	13	25.90
20	26.70	29	27.67	20	27.86	20	25.83
27	26.84	June 5	27.50	28	27.66	26	25.80
Mar. 6	26.90	9	27.10	Sept. 4	27.46	Dec. 4	25.80
13	26.92	12	27.52	11	27.50	11	25.94
20	27.00	17	27.85	18	27.38	18	25.94
27	26.40	19	27.87	25	26.93	26	25.97
Apr. 3	26.88	26	27.92				

A4 (\*1071, p. 417). Commonwealth Building. 316 Fourth Avenue, Pittsburgh. Extremes of observed water level, in feet below land-surface datum: Highest, Jan. 23, 1947, 37.72; lowest, Apr. 3, 1946, 58.91.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	43.60	Apr. 3	47.90	July 3	49.46	Oct. 2	48.52
9	47.84	10	47.25	10	48.90	9	44.66
16	46.62	21	44.56	18	47.22	16	46.50
23	37.72	24	45.64	24	49.17	23	45.94
30	51.22	May 1	49.07	31	48.83	30	49.92
Feb. 4	48.32	8	53.21	Aug. 7	44.80	Nov. 6	44.66
13	45.94	15	49.46	14	41.24	13	48.18
20	50.02	22	50.04	20	40.42	20	53.23
27	47.16	29	52.48	28	41.67	26	47.26
Mar. 6	51.50	June 5	50.96	Sept. 4	44.96	Dec. 4	50.36
13	48.90	12	48.96	11	42.36	11	49.70
20	50.20	19	55.12	18	45.80	18	52.30
27	48.50	26	50.02	25	45.80	26	45.19

A5 (\*1071, p. 418). Keystone Building. 324 Fourth Avenue, Pittsburgh. Extremes of observed water level, in feet below land-surface datum: Highest, Jan. 23, 1947, 35.66; lowest, Apr. 3, 1946, 53.93.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	37.90	Apr. 3	44.08	July 3	45.40	Oct. 9	42.43
9	41.56	10	43.85	10	44.92	16	44.30
16	41.88	21	40.88	17	43.98	23	43.56
23	35.66	24	44.18	24	46.24	30	46.90
30	44.22	May 1	45.50	Aug. 7	43.04	Nov. 6	41.64
Feb. 4	41.00	8	50.28	14	40.19	13	42.90
13	41.14	15	45.78	20	39.39	20	48.72
20	46.42	22	46.86	28	40.06	26	43.44
27	41.95	29	49.28	Sept. 4	43.25	Dec. 4	46.85
Mar. 6	43.92	June 5	47.50	11	41.68	11	45.12
13	44.40	12	44.57	18	44.02	18	49.62
20	46.12	19	52.38	25	44.40	26	40.09
27	45.40	26	45.70	Oct. 2	45.98		

A6 (\*1071, p. 418). Fulton Building. Sixth Street and Duquesne Way, Pittsburgh. Extremes of observed water level, in feet below land-surface datum: Highest, Dec. 28, 1945, 30.86; lowest, Aug. 14, 1947, 38.95.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	32.73	Apr. 3	34.55	July 3	38.22	Oct. 2	33.45
9	33.15	10	33.55	10	37.75	9	33.97
16	33.39	21	34.03	17	37.89	16	34.75
23	33.27	24	36.54	24	36.90	23	34.90
30	33.47	May 1	36.73	31	37.49	30	33.75
Feb. 4	33.43	8	35.25	Aug. 7	38.23	Nov. 6	33.01
13	33.55	15	34.49	14	38.95	13	32.53
20	33.77	22	35.49	20	38.52	20	32.25
27	33.97	29	37.39	28	38.79	26	32.22
Mar. 6	34.15	June 5	37.79	Sept. 4	37.99	Dec. 4	32.33
13	34.25	13	38.05	11	38.09	11	32.51
20	34.55	19	36.97	18	36.73	18	32.75
27	34.25	26	37.87	25	34.65	26	32.87

A7 (\*1071, p. 419). Stanley Theater. Penn Avenue and Seventh Street, Pittsburgh. Extremes of observed water level, in feet below land-surface datum: Highest, May 8, 1945, 31.93; lowest, Aug. 28, 1947, 39.67.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	33.40	Feb. 20	34.50	Apr. 10	34.50	May 29	37.05
9	33.79	27	34.72	21	34.82	June 5	36.80
16	34.02	Mar. 6	34.84	24	35.36	12	38.46
23	34.06	13	34.90	May 1	35.54	19	38.10
30	34.00	20	35.14	8	35.22	26	38.28
Feb. 4	34.18	27	35.18	15	35.25	July 3	39.04
13	34.36	Apr. 3	34.97	22	36.27	10	38.60

A7--Continued.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 17	39.18	Aug. 28	39.67	Oct. 9	34.90	Nov. 20	33.06
24	38.22	Sept. 4	39.23	16	35.06	26	32.70
31	38.64	11	39.56	23	35.12	Dec. 4	32.63
Aug. 7	39.00	18	38.52	30	34.72	11	32.67
14	39.14	25	36.92	Nov. 6	34.00	18	32.76
20	39.05	Oct. 2	35.06	13	33.42	26	32.58

A8 (\*1071, p. 420). Pittsburgh Plate Glass Co. 632 Duquesne Way, Pittsburgh. Extremes of observed water level, in feet below land-surface datum: Highest, Oct. 17, 1946, 30.76; lowest, Aug. 28, 1947, 36.72.

Water level, in feet below land-surface datum, 1947

Jan. 2	32.03	Apr. 10	32.80	July 3	36.45	Oct. 2	32.63
9	32.38	21	33.40	10	35.90	9	31.98
16	32.54	24	33.66	17	35.98	16	32.20
23	32.74	May 1	33.79	24	35.40	23	32.90
30	32.74	8	33.58	31	35.50	30	32.64
Feb. 4	32.66	15	33.50	Aug. 7	35.85	Nov. 6	32.08
13	32.85	22	34.00	14	36.19	13	31.78
20	33.02	29	34.60	20	36.48	20	31.60
27	33.26	June 5	34.88	28	36.72	26	31.24
Mar. 6	33.33	9	34.87	Sept. 4	35.96	Dec. 4	31.28
13	33.42	11	35.13	11	35.74	11	31.35
20	33.54	17	35.34	18	35.29	18	31.60
27	33.46	19	35.62	25	34.00	26	31.49
Apr. 3	33.56	26	36.04				

A9 (\*1071, p. 420). Century Building. 130 Seventh Street, Pittsburgh. Extremes of observed water level, in feet below land-surface datum: Highest, Oct. 17, 1946, 28.53; lowest, Aug. 28, 1947, 34.93.

Water level, in feet below land-surface datum, 1947

Jan. 2	29.76	Apr. 10	30.68	July 10	34.06	Oct. 2	30.86
9	30.10	21	31.20	17	34.50	9	30.93
16	30.34	24	31.84	24	33.40	16	30.70
23	30.42	May 1	31.84	31	33.90	23	30.86
30	30.45	8	31.34	Aug. 7	34.28	30	30.40
Feb. 13	30.66	15	31.88	14	34.62	Nov. 6	29.82
20	30.84	22	32.82	20	34.80	13	29.45
27	31.00	29	33.50	28	34.93	20	29.15
Mar. 6	31.14	June 5	32.98	Sept. 4	34.40	Dec. 4	28.96
13	31.21	12	33.92	11	34.62	11	29.10
20	31.36	19	33.56	18	33.46	18	29.20
27	31.26	26	34.18	25	32.15	26	29.07
Apr. 3	31.30	July 3	34.64				

A10 (\*1071, p. 420). Duff & Sons, Inc. Garrison Place and Duquesne Way, Pittsburgh. Extremes of observed water level, in feet below land-surface datum: Highest, Nov. 26, 1947, 32.16; lowest, Aug. 1, 1946, 41.88.

Water level, in feet below land-surface datum, 1947

Jan. 2	38.05	Apr. 10	37.58	July 3	37.22	Oct. 2	34.10
9	37.65	21	38.04	10	36.94	9	33.68
16	37.54	24	38.24	17	37.10	16	33.64
23	37.75	May 1	38.62	24	36.60	23	33.58
30	37.45	8	34.80	31	36.65	30	33.74
Feb. 4	36.92	15	34.53	Aug. 7	36.85	Nov. 6	33.55
13	37.80	22	35.14	14	37.13	13	32.88
20	37.93	29	35.57	20	37.19	20	32.55
27	38.15	June 5	35.54	28	37.38	26	32.16
Mar. 6	38.28	9	35.83	Sept. 4	36.94	Dec. 4	32.20
13	38.30	12	36.38	11	36.92	11	32.28
20	38.50	19	36.58	18	36.48	18	32.40
27	38.46	26	36.72	25	35.47	26	32.29
Apr. 3	a 34.74						

a Nearby well shutdown.

b Nearby well shutdown permanently.



A11 (#1071, p. 420). Victory Building. Liberty Avenue and Ninth Street, Pittsburgh. Extremes of observed water level, in feet below land-surface datum: Highest, Nov. 26 and Dec. 4, 1947, 37.65; lowest, Aug. 28, 1947, 44.58.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	38.56	Apr. 5	40.05	July 3	43.72	Oct. 2	40.24
9	38.83	10	39.77	10	43.40	9	39.90
16	39.13	21	40.02	17	43.80	16	39.86
23	39.22	24	40.24	24	43.12	23	39.92
30	39.16	May 1	40.51	31	43.36	30	39.80
Feb. 4	39.27	8	40.19	Aug. 7	43.57	Nov. 6	39.02
13	39.54	15	40.12	14	43.99	13	38.55
20	39.68	22	41.00	20	44.10	20	38.14
27	39.88	29	41.58	28	44.38	26	37.65
Mar. 6	40.05	June 5	41.45	Sept. 4	43.88	Dec. 4	37.65
13	40.07	12	42.73	11	43.92	11	37.66
20	40.28	19	42.94	18	43.40	18	37.76
27	40.42	26	43.00	25	41.96	26	37.67

A12 (#1071, p. 421). Wabash Building. Ferry and Water Streets, Pittsburgh. Extremes of observed water level, in feet below land-surface datum: Highest, Nov. 13, 1947, 30.36; lowest, July 3, 1947, 32.40; Measurements discontinued after Nov. 13, 1947.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	31.10	Mar. 27	30.97	June 12	32.15	Aug. 20	31.68
9	31.28	Apr. 3	31.60	17	32.22	28	31.78
16	31.28	10	30.86	19	32.00	Sept. 4	31.62
23	31.33	21	31.60	26	32.30	11	31.66
30	31.35	24	31.42	July 3	32.40	Oct. 2	30.60
Feb. 4	31.35	May 1	31.40	10	32.15	9	30.57
13	31.25	8	31.52	17	32.20	16	30.68
20	31.30	15	31.50	24	32.04	23	30.75
27	31.40	22	31.92	31	31.90	30	30.67
Mar. 6	31.60	29	32.02	Aug. 7	31.56	Nov. 13	30.36
13	31.66	June 5	32.03	14	31.73		

A13. Columbia Building. Fourth Avenue and Wood Street, Pittsburgh. Altitude 723.00 feet above mean sea level. Unused drilled well, diameter 8 inches, depth 58 feet. Measuring point, top of casing, 12.0 feet below land-surface datum.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 7	40.25	Sept. 18	40.25	Oct. 23	37.60	Nov. 26	35.77
14	40.79	25	39.13	30	37.34	Dec. 4	35.64
20	40.83	Oct. 2	37.52	Nov. 6	36.75	11	35.68
28	40.94	9	37.30	13	36.30	18	35.78
Sept. 4	40.47	16	37.45	20	36.00	26	35.90
11	40.50						

#### Bedford County

116 (#936, p. 241; 944, p. 233; 986, p. 279; 1016, p. 323; 1023, p. 339; 1071, p. 421). At West Saxton. Extremes of observed water level, in feet below land-surface datum: Highest, Jan. 1, 1945, 45.49; lowest, Feb. 2, 1945, 53.91.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	52.12	Mar. 7	51.81	May 9	51.56	July 13	52.45
10	51.53	14	51.74	16	51.68	18	52.17
17	51.43	21	51.04	23	51.64	25	51.37
24	50.38	28	50.76	30	51.70	Aug. 1	51.58
31	50.92	Apr. 4	51.04	June 6	51.84	8	51.85
Feb. 7	50.95	11	51.27	13	51.85	15	52.09
14	51.19	18	51.38	20	52.26	22	52.23
21	51.39	25	51.56	27	52.22	29	52.36
28	51.59	May 2	51.76	July 4	52.34	Sept. 5	52.51

116--Continued.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 12	52.66	Oct. 10	53.10	Nov. 7	53.33	Dec. 5	53.35
19	52.76	17	53.15	14	53.32	12	53.38
26	52.94	25	53.20	21	53.35	19	53.49
Oct. 3	53.00	31	53.26	28	53.30	26	53.40

Berks County

114 (\*817, p. 268; 845, p. 417; 886, p. 628; 906, p. 217; 936, p. 241; 944, p. 233; 986, p. 279; 1016, p. 323; 1023, p. 339; 1071, p. 421). At Bally. Extremes of observed water level, in feet below land-surface datum: Highest, Aug. 14, 1942, 4.37; lowest, Feb. 9, 1940, 19.92.

## Water level, in feet below land-surface datum, 1947

Jan. 4	18.22	Apr. 5	16.53	July 5	16.67	Oct. 4	18.43
11	18.21	12	16.22	12	16.88	11	18.59
18	17.76	19	16.37	19	17.06	18	18.70
25	15.73	26	16.50	26	17.20	25	18.85
Feb. 1	16.48	May 3	15.93	Aug. 2	17.41	Nov. 1	18.92
8	16.32	10	15.02	9	17.65	8	18.72
15	17.47	17	15.76	16	17.59	15	18.13
22	17.76	24	15.55	23	17.81	22	18.19
Mar. 1	17.99	31	15.32	30	17.97	29	17.91
8	17.54	June 7	15.98	Sept. 6	17.99	Dec. 6	18.08
15	16.77	14	15.84	13	18.08	13	18.25
22	16.58	21	15.55	20	18.18	20	18.11
29	16.66	28	16.17	27	18.28	27	18.17

Bradford County

81 (\*817, p. 286; 845, p. 417; 886, p. 628; 906, p. 217; 944, p. 233; 986, p. 280; 1016, p. 324; 1071, p. 421). At Monroeton. Extremes of observed water level, in feet below land-surface datum: Highest, Apr. 6, 1941, 1.45; lowest, Sept. 24-Oct. 8, 1932, Oct. 3-17, 1936, Aug. 20-Oct. 29, 1939, Oct. 5-19 and Oct. 26-Nov. 29, 1941, Sept. 21, 1942, Sept. 6-Oct. 24, 1943, when well was dry.

## Water level, in feet below land-surface datum, 1947

Jan. 3	2.65	Apr. 4	2.61	July 4	3.55	Oct. 3	4.18
10	2.79	11	2.56	11	3.00	10	4.25
17	2.46	18	2.63	18	3.21	17	4.50
24	2.59	25	2.58	25	2.74	24	4.60
31	2.41	May 2	2.38	Aug. 1	2.40	31	4.41
Feb. 7	2.40	9	2.48	8	2.73	Nov. 7	3.29
14	2.77	16	2.57	15	3.08	14	2.78
21	2.95	23	2.40	22	3.07	21	2.96
28	2.80	30	2.65	29	3.67	28	2.85
Mar. 7	3.10	June 6	2.85	Sept. 5	2.64	Dec. 6	2.90
14	1.65	13	2.80	12	3.05	15	2.95
21	2.59	20	3.31	19	3.33	20	2.90
28	2.69	29	3.10	26	3.42	27	2.91

82 (\*817, p. 269; 845, p. 418; 886, p. 629; 906, p. 219; 936, p. 242; 944, p. 234; 986, p. 280; 1016, p. 324; 1023, p. 339; 1071, p. 422). At East Towanda. Extremes of observed water level, in feet below land-surface datum: Highest, May 25, 1947, 17.00; lowest, Feb. 15, 1942, 61.70.

## Water level, in feet below land-surface datum, 1947

Jan. 5	44.42	Feb. 15	38.37	Mar. 22	39.31	May 4	26.28
12	44.31	18	39.20	29	35.60	11	27.65
19	41.21	23	40.59	Apr. 5	24.29	14	28.92
22	38.31	Mar. 1	42.03	13	30.84	18	28.14
25	37.61	8	43.36	17	32.26	25	17.00
Feb. 1	34.26	15	42.75	20	32.56	31	29.72
8	35.32	19	39.69	27	27.97	June 8	33.11

82--Continued.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 15	35.74	Aug. 3	40.75	Sept. 28	47.51	Nov. 9	50.01
18	35.69	10	42.38	Oct. 5	47.48	15	50.32
21	37.73	15	42.47	7	47.80	22	50.64
29	39.75	17	42.86	12	48.13	30	50.94
July 6	41.30	24	43.87	19	48.67	Dec. 3	50.01
13	42.00	31	44.65	22	48.77	8	51.24
16	42.22	Sept. 7	45.08	26	49.04	14	51.55
20	42.61	14	45.62	Nov. 2	49.55	21	51.84
26	40.56	21	46.41	5	49.75	27	52.06

Butler County

120 (\*936, p. 242; 944, p. 234; 986, p. 280; 1016, p. 324; 1023, p. 340; 1071, p. 422). At West Sunbury. Extremes of observed water level, in feet below land-surface datum: Highest, Mar. 14, 1942, 6.84; lowest, Oct. 5, 1946, 11.22.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	7.83	Apr. 5	7.41	July 5	9.35	Oct. 4	10.51
11	8.75	12	8.61	12	9.55	11	10.63
18	7.89	19	8.74	19	9.59	18	10.69
25	8.11	26	7.63	26	9.66	25	10.76
Feb. 1	7.70	May 3	8.45	Aug. 2	9.61	Nov. 1	10.75
8	8.72	10	8.44	9	9.72	8	10.68
15	9.06	17	8.26	16	9.86	15	10.55
22	9.14	24	8.25	23	9.80	22	10.45
Mar. 1	9.29	31	8.79	30	10.05	29	10.29
8	9.42	June 7	7.69	Sept. 6	10.10	Dec. 6	10.17
15	8.08	14	8.72	13	10.21	13	9.84
22	8.75	21	9.06	20	10.30	20	9.49
29	8.26	28	9.23	27	10.44	27	9.52

Centre County

124 (\*1071, p. 423). At Milesburg. Extremes of observed water level, in feet below land-surface datum: Highest, June 1, 1946, 3.80; lowest, Oct. 25, 1947, 18.10.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	14.19	Apr. 5	10.39	July 12	14.04	Oct. 11	17.29
11	14.57	12	9.56	19	12.56	25	18.10
18	9.12	19	10.22	Aug. 2	15.44	Nov. 1	17.87
25	11.22	26	9.27	9	15.34	8	12.36
Feb. 1	7.84	May 3	8.00	23	13.26	15	14.08
8	9.62	10	8.27	30	12.87	22	15.21
15	12.40	17	9.82	Sept. 6	13.50	29	14.65
Mar. 1	14.75	24	5.97	13	15.00	Dec. 6	15.09
8	13.98	31	7.19	20	15.77	13	14.34
15	12.12	June 21	10.57	27	16.40	20	14.17
22	11.39	28	12.86	Oct. 4	16.95	27	14.40
29	11.60	July 5	14.29				

Clarion County

103 (\*817, p. 272; 845, p. 419; 886, p. 629; 906, p. 219; 936, p. 243; 944, p. 235; 986, p. 281; 1016, p. 325; 1023, p. 340; 1071, p. 423). At Clarion. Extremes of observed water level, in feet below land-surface datum: Highest, Apr. 9, 1938, 11.36; lowest, Sept. 23, 1944, 20.76.

103--Continued.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	14.32	Apr. 1	13.28	June 24	17.14	Oct. 11	20.12
7	13.75	5	12.60	28	17.29	18	20.39
11	14.77	12	13.40	July 12	18.15	25	20.50
18	13.87	19	15.42	19	18.31	27	20.58
25	13.13	26	14.12	26	18.72	Nov. 1	20.37
Feb. 8	14.40	May 3	12.55	Aug. 2	18.93	8	19.56
15	16.96	10	13.01	4	19.08	15	17.71
17	16.61	12	13.90	9	19.42	22	17.72
22	16.97	17	14.79	16	19.82	29	17.25
Mar. 1	17.80	24	12.81	23	18.33	Dec. 6	17.87
8	18.59	31	12.49	30	16.65	13	16.23
15	14.74	June 7	13.15	Sept. 13	17.90	19	16.68
22	14.32	14	13.69	27	18.90	20	16.79
29	13.22	21	16.01	Oct. 4	19.73	27	18.24

Clearfield County

111 (\*817, p. 274; 845, p. 419; 886, p. 630; 906, p. 220; 936, p. 243; 944, p. 235; 986, p. 281; 1071, p. 423). Near Mahaffsy. Extremes of observed water level, in feet below land-surface datum: Highest, Jan. 4, 1947, 14.40; lowest, Dec. 15, 1939, 21.12. Measurements discontinued after Nov. 30, 1947.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	14.40	Mar. 27	15.30	June 3	16.04	Aug. 27	17.15
11	15.78	Apr. 4	15.48	9	15.02	Sept. 5	16.50
18	14.52	11	14.88	17	15.82	20	17.25
26	15.36	16	15.15	20	16.48	29	18.36
30	14.62	23	15.74	24	16.92	Oct. 4	18.35
Feb. 12	16.80	29	14.90	July 4	17.32	12	18.88
22	16.22	May 8	14.80	20	17.70	29	18.60
Mar. 1	17.48	18	15.80	25	18.28	Nov. 9	19.27
8	17.68	21	14.68	Aug. 9	18.65	22	17.50
14	15.62	27	14.44	17	18.10	30	17.90
20	15.76						

123 (\*1071, p. 423). At Curwensville. Extremes of observed water level, in feet below land-surface datum: Highest, May 26 and June 2, 1947, 19.00; lowest, Aug. 31, 1946, 21.40.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	20.30	Apr. 14	19.80	July 7	20.35	Sept. 28	20.80
20	19.10	21	19.00	14	20.30	Oct. 6	20.75
Feb. 4	19.60	28	19.50	21	20.50	13	20.00
10	19.35	May 5	19.60	28	20.55	20	21.15
17	19.45	12	19.80	Aug. 4	20.35	27	21.10
24	19.60	19	19.80	11	20.30	Nov. 3	21.05
Mar. 3	19.80	26	19.00	18	20.70	10	21.25
10	20.70	June 2	19.00	25	20.60	17	21.35
17	20.50	9	19.70	Sept. 1	20.50	25	20.70
24	20.40	16	19.90	8	20.30	Dec. 1	20.20
31	20.20	23	20.10	15	20.50	8	20.30
Apr. 7	19.70	30	20.30	22	20.65	15	20.00

Columbia County

75 (\*817, p. 274; 845, p. 420; 886, p. 630; 906, p. 220; 936, p. 244; 944, p. 235; 986, p. 281; 1016, p. 325; 1023, p. 341; 1071, p. 424). At Fernville. Extremes of observed water level, in feet below land-surface datum: Highest, Sept. 2, 1933, 7.28; lowest, Dec. 15, 1931, 16.91.

75--Continued.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	14.70	Apr. 5	12.79	July 5	13.72	Oct. 4	15.22
11	15.06	12	12.91	12	13.49	11	15.20
18	12.52	19	12.04	19	13.18	18	15.51
25	12.68	26	12.95	26	13.49	25	15.72
Feb. 1	12.54	May 3	12.58	Aug. 2	13.18	Nov. 1	15.58
8	13.09	10	13.40	9	13.46	8	15.05
15	13.55	17	12.72	16	13.79	15	14.20
22	14.81	24	11.91	23	14.09	22	13.52
Mar. 1	14.34	31	12.31	30	14.04	29	13.54
8	14.52	June 7	12.19	Sept. 6	14.42	Dec. 6	13.82
15	14.32	14	12.81	13	14.60	13	14.28
22	12.55	21	13.58	20	14.10	20	14.59
29	13.32	29	13.51	27	15.13	27	14.90

Cumberland County

125. Near Mt. Holly Springs, in front yard of D. G. Yengst residence on east side of State Route 94, 1.52 miles south of intersection with State Route 34. Altitude about 770 feet above mean sea level. Unused dug well, diameter 4 feet, depth 31.0 feet. Measuring point, top of wooden well cover, 0.50 foot above land-surface datum.

Water level, in feet below land-surface datum, 1947							
Aug. 2	22.44	Sept. 20	25.00	Oct. 27	27.00	Nov. 29	22.32
23	23.32	27	25.32	Nov. 1	27.00	Dec. 6	22.42
30	23.64	Oct. 4	25.63	8	25.53	13	22.00
Sept. 6	23.63	11	26.53	15	23.63	20	22.00
13	24.23	18	26.63	22	23.63	27	22.00

Elk County

118 (\*936, p. 244; 944, p. 236; 986, p. 282; 1016, p. 326; 1023, p. 341; 1071, p. 424). At Kersey. Extremes of observed water level, in feet below land-surface datum: Highest, June 11, 1943, 8.12; lowest, Sept. 22, 1944, 12.49.

Water level, in feet below land-surface datum, 1947							
Jan. 3	10.20	Apr. 4	10.12	July 4	9.80	Oct. 3	10.25
10	10.21	11	9.90	11	9.89	10	10.45
17	10.17	18	9.20	18	9.90	17	10.60
24	9.60	25	9.10	25	9.99	24	10.95
31	9.85	May 2	9.45	Aug. 1	9.98	30	10.95
Feb. 7	9.86	9	9.55	8	10.10	Nov. 7	11.02
14	10.02	16	9.50	15	10.05	14	10.96
21	10.01	23	9.30	22	9.95	21	11.02
28	10.40	30	9.20	29	9.96	28	10.85
Mar. 7	10.58	June 6	9.25	Sept. 5	10.09	Dec. 5	10.55
14	10.25	13	9.27	12	10.04	12	10.65
21	10.28	20	9.35	19	10.02	19	10.65
28	10.27	27	9.40	26	10.12	26	10.60

Erie County

1 (\*817, p. 276; 845, p. 420; 886, p. 630; 906, p. 220; 936, p. 244; 986, p. 282; 1016, p. 326; 1023, p. 342; 1071, p. 424). Near Carters Corner. Extremes of observed water level, in feet below land-surface datum: Highest, June 8, 1947, 8.63; lowest, Sept. 8-Dec. 1, 1934, when well was dry.

1--Continued.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	11.73	Mar. 30	12.53	July 8	17.22	Sept. 21	18.41
12	12.83	Apr. 13	11.48	13	17.91	28	18.44
19	12.01	20	10.90	20	17.86	Oct. 5	18.48
24	11.26	27	9.53	Aug. 3	17.93	10	18.34
26	10.75	May 11	11.45	10	18.06	19	18.63
Feb. 2	10.45	18	12.21	18	18.05	Nov. 2	18.75
16	13.01	June 5	9.11	19	17.90	7	15.21
Mar. 2	15.51	8	8.63	24	18.20	9	18.74
9	16.59	15	11.33	31	18.28	23	18.74
16	14.96	22	13.02	Sept. 7	18.34	Dec. 21	14.44
23	14.17	29	15.31	14	18.38	30	14.76

Huntingdon County

47 (\*817, p. 279; 845, p. 421; 886, p. 631; 906, p. 221; 936, p. 245; 986, p. 282; 1016, p. 326; 1023, p. 342; 1071, p. 425). Near Trexler Bridge. Extremes of observed water level, in feet below land-surface datum: Highest, Mar. 15, 1941, when well was full; lowest, Oct. 1, 1932, 26.25.

Water level, in feet below land-surface datum, 1947							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	21.78	Apr. 5	21.81	July 12	18.06	Oct. 11	21.57
11	21.50	12	21.93	19	8.36	18	21.81
18	21.10	19	22.05	26	17.62	25	21.72
25	20.51	27	22.11	Aug. 2	18.14	Nov. 1	19.92
Feb. 1	20.32	May 3	22.20	9	19.88	8	19.00
9	20.73	11	22.29	16	8.82	15	19.68
15	20.95	18	21.88	23	7.40	22	20.32
23	21.42	24	21.05	30	11.02	29	19.59
Mar. 1	21.70	31	20.23	Sept. 6	16.75	Dec. 6	20.87
8	21.93	June 7	20.78	13	18.75	13	21.35
15	21.87	21	19.38	20	19.73	20	23.53
22	21.76	28	16.92	27	20.61	27	22.93
30	21.74	July 5	18.83	Oct. 4	21.10		

Indiana County

200 (\*1016, p. 327; 1023, p. 342; 1071, p. 425). At Indiana. Extremes of observed water level, in feet below land-surface datum: Highest, Mar. 21, 1945, 77.70; lowest, Oct. 19, 1946, 87.03.

Daily noon water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	85.78	83.75	83.91	82.90	81.10	80.32
2	85.42	83.90	83.82	82.60	80.94	80.30
3	85.32	83.73	83.99	82.81	80.98	80.57
4	85.41	83.20	84.30	82.78	80.87	80.89
5	85.00	83.35	84.40	82.44	80.63	81.00
6	85.24	83.45	84.45	82.30	80.71	81.03
7	84.90	83.49	84.42	82.10	80.69	81.19
8	85.00	83.89	84.10	82.27	80.61	.....
9	85.05	83.94	84.22	82.04	80.61	.....
10	85.06	84.30	84.23	82.10	80.40	.....
11	84.96	84.45	84.20	82.18	80.36	.....
12	85.18	84.42	84.15	82.30	80.10	.....
13	85.16	84.29	83.90	82.32	79.91	.....
14	85.03	84.10	83.41	82.03	79.78	80.78
15	85.00	83.90	83.87	82.00	79.98	.....
16	84.81	84.03	83.70	81.90	79.96	.....
17	85.01	84.28	83.64	82.19	80.00	.....
18	84.47	84.13	83.90	82.30	79.81	.....
19	84.33	84.38	83.79	82.21	79.71	.....

200--Continued.

Daily noon water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
20	83.70	84.31	83.58	82.00	79.72	.....
21	84.25	84.07	83.47	82.16	79.70	.....
22	84.41	84.09	83.60	82.30	80.08	.....
23	84.06	84.14	83.28	82.15	80.02	.....
24	83.91	84.29	82.90	82.05	80.07	.....
25	84.05	84.31	82.90	82.21	.....	.....
26	83.73	84.31	83.13	81.93	.....	.....
27	83.90	84.27	83.11	81.49	.....	.....
28	83.78	84.38	82.92	81.66	.....	.....
29	83.64		82.76	81.40	.....	.....
30	83.41		83.18	81.08	.....	.....
31	83.63		83.11		80.42	.....

Lackawanna County

102 (\*817, p. 284; 845, p. 423; 886, p. 632; 906, p. 222; 936, p. 246; 944, p. 237; 986, p. 284; 1016, p. 327; 1023, p. 343; 1071, p. 426). Near Carbondale. Extremes of observed water level, in feet below land-surface datum: Highest, Mar. 21, 1936, 1.17; lowest, Oct. 15, 1943, 13.10.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	9.84	Apr. 4	3.60	July 5	8.00	Oct. 3	10.12
10	9.80	11	3.74	11	3.94	10	10.40
17	8.05	19	4.88	18	3.86	18	10.61
24	8.48	25	3.71	25	4.34	24	11.00
31	4.37	May 3	2.60	Aug. 1	3.50	31	11.05
Feb. 8	5.75	9	2.55	9	5.91	Nov. 7	10.75
14	6.90	17	3.67	16	5.75	15	6.00
21	7.90	23	2.46	22	6.74	21	6.58
28	7.95	30	4.10	29	7.64	28	4.76
Mar. 8	8.00	June 6	5.87	Sept. 5	8.40	Dec. 6	6.03
15	4.60	13	6.48	12	9.10	13	6.19
21	5.20	20	7.20	20	9.70	19	6.52
28	4.22	27	7.92	26	9.86	27	7.30

Lancaster County

119 (\*936, p. 246; 944, p. 238; 986, p. 284; 1016, p. 328; 1023, p. 344; 1071, p. 426). At West Quarryville. Extremes of observed water level, in feet below land-surface datum: Highest, June 2, 1946, 0.99; lowest, Jan. 31, 1942, 25.10.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	19.54	Apr. 6	14.82	July 13	14.43	Oct. 5	19.88
11	19.33	13	15.22	20	15.07	13	20.18
19	19.18	20	15.20	27	15.80	19	20.40
26	18.41	27	15.44	Aug. 3	16.38	26	20.70
Feb. 2	18.04	May 4	15.38	11	17.00	Nov. 2	20.95
9	17.59	11	15.37	18	17.49	9	21.05
16	17.37	18	15.26	24	17.86	16	21.09
23	17.38	25	12.27	Sept. 3	18.26	23	21.13
Mar. 2	17.47	June 1	10.70	7	18.63	30	20.99
10	16.57	8	12.71	14	18.94	Dec. 7	20.86
16	12.78	15	5.07	21	19.29	14	20.86
23	12.76	22	9.02	28	19.60	21	20.76
29	14.29						

Luzerne County

76 (\*817, p. 287; 845, p. 424; 886, p. 632; 906, p. 222; 936, p. 247; 944, p. 238; 986, p. 284; 1016, p. 328; 1023, p. 344; 1071, p. 426). Near Wapwallopen. Extremes of observed water level, in feet below land-surface datum: Highest, Aug. 5, 1933, 18.17; lowest, Sept. 3, 1941, 29.89.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	24.80	Apr. 13	23.30	July 6	24.05	Oct. 5	25.25
13	25.05	15	23.42	13	23.30	7	25.45
20	23.00	27	23.30	15	23.10	12	25.70
26	23.30	May 4	22.80	20	23.05	27	26.50
Feb. 4	23.00	11	22.90	27	23.30	Nov. 4	26.20
10	24.10	13	22.59	Aug. 12	23.37	12	23.00
18	24.65	18	23.85	13	23.55	16	23.20
19	24.55	25	22.60	17	24.20	23	24.00
25	24.95	June 1	23.35	24	24.50	Dec. 1	23.95
Mar. 9	25.25	8	24.00	31	24.70	2	23.91
17	23.37	15	24.25	Sept. 7	24.80	9	24.50
23	24.25	16	24.42	14	24.95	14	24.65
30	23.20	24	24.70	22	25.00	21	24.70
Apr. 6	21.00	29	24.75	28	25.00	28	25.10

Mifflin County

117 (\*936, p. 247; 944, p. 238; 1071, p. 427). At Naginney. Extremes of observed water level, in feet below land-surface datum: Highest, May 23, 1942, 8.38; lowest, Oct. 4, 25, 1947, 23.11.

Water level, in feet below land-surface datum, 1947

Jan. 3	18.30	Apr. 5	17.30	June 28	19.53	Oct. 4	23.11
10	18.25	11	17.40	July 13	19.33	13	23.09
17	15.87	19	17.14	19	18.44	18	23.09
24	15.53	25	16.92	26	19.37	25	23.11
31	15.97	May 3	15.72	Aug. 1	18.70	Nov. 1	23.05
Feb. 7	16.38	10	16.30	9	21.70	15	18.01
14	17.62	16	16.84	18	22.09	22	19.58
21	19.98	24	16.50	26	22.46	30	18.90
28	19.36	31	16.85	Sept. 6	22.30	Dec. 6	19.33
Mar. 6	20.60	June 7	17.85	13	22.70	20	20.70
14	17.50	13	17.45	20	23.00	27	22.17
21	17.23	21	18.33	27	23.09		

Northumberland County

57 (\*817, p. 291; 845, p. 425; 886, p. 663; 906, p. 223; 936, p. 247; 944, p. 239; 986, p. 285; 1016, p. 328; 1023, p. 345; 1071, p. 427). At Sunbury. Extremes of observed water level, in feet below land-surface datum: Highest, Mar. 28, 1936, 6.31; lowest, Dec. 21, 1941, 20.71.

Water level, in feet below land-surface datum, 1947

Jan. 3	19.32	Mar. 14	18.71	May 23	16.42	Aug. 1	17.45
10	19.21	21	18.10	30	16.11	8	17.43
17	19.18	28	17.66	June 6	16.21	15	18.08
24	18.11	Apr. 4	17.56	9	16.39	22	18.26
31	18.28	7	16.98	13	16.43	29	18.41
Feb. 7	18.14	11	16.51	20	16.06	Sept. 5	18.52
10	18.07	18	17.21	29	16.94	12	18.71
15	18.35	25	17.26	July 4	17.22	19	18.87
21	18.55	May 2	17.10	11	17.23	26	19.00
28	18.63	6	16.97	18	17.33	Oct. 2	19.13
Mar. 7	18.76	9	16.52	25	17.50	Dec. 11	18.53
10	18.90	16	16.68				



Perry County

61 (\*817, p. 292; 845, p. 425; 886, p. 633; 906, p. 223; 936, p. 248; 944, p. 238; 986, p. 285; 1016, p. 329; 1023, p. 345; 1071, p. 427). At Newport. Extremes of observed water level, in feet below land-surface datum: Highest, June 7, 1940, 7.92; lowest, Dec. 12, 1941, 17.34.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	15.90	Mar. 28	14.94	July 7	14.01	Oct. 11	16.03
11	15.88	Apr. 4	15.00	13	14.30	19	16.18
18	15.66	12	15.01	19	14.39	20	16.19
24	15.44	19	15.07	27	14.76	25	16.28
25	15.41	26	14.76	Aug. 2	14.88	Nov. 1	16.38
Feb. 1	14.88	May 3	14.12	11	14.83	9	15.67
8	14.59	10	14.10	16	15.15	16	15.99
15	14.55	17	14.00	24	15.31	17	15.99
22	14.70	24	14.02	31	15.22	22	15.98
28	14.84	31	13.79	Sept. 6	15.36	30	15.76
Mar. 4	15.03	June 7	13.73	13	15.51	Dec. 7	15.73
8	15.13	15	12.84	19	15.61	13	15.79
15	13.96	19	13.00	27	15.78	20	15.88
22	14.98	29	13.55	Oct. 4	15.91	28	16.04

110 (\*840, p. 359; 845, p. 426; 886, p. 634; 906, p. 223; 936, p. 248; 944, p. 239; 986, p. 285; 1016, p. 329; 1023, p. 345; 1071, p. 428). Near Millerstown. Extremes of observed water level, in feet below land-surface datum: Highest, May 7, 1943, 1.63; lowest, Dec. 11, 1939, 9.33. Measurements discontinued after July 12, 1947.

Water level, in feet below land-surface datum, 1947

Jan. 4	2.97	Feb. 15	2.84	Apr. 5	2.86	June 14	2.64
11	2.94	22	2.86	12	2.84	20	2.70
18	2.89	Mar. 1	2.85	19	2.80	21	2.62
22	2.67	8	2.83	25	2.64	28	2.66
25	2.85	15	2.74	May 24	2.68	July 5	2.68
Feb. 1	2.82	22	2.79	31	2.65	12	2.70
8	2.86	29	2.84	June 7	2.61		

Philadelphia County

P1 (\*986, p. 285; 1016, p. 329; 1023, p. 345; 1071, p. 428). Girard Estate. In south Philadelphia, at Passyunk power station. Extremes of observed water level, in feet below land-surface datum: Highest, Nov. 18, 1943, 30.42; lowest, June 3, Sept. 6, 13, Oct. 25, 1946, greater than 34.

Water level, in feet below land-surface datum, 1947

Jan. 3	31.37	Apr. 22	31.55	July 16	31.22	Oct. 8	(a)
10	31.38	30	31.52	23	31.24	15	(a)
17	31.44	May 7	31.47	30	31.17	22	(a)
24	31.46	14	30.81	Aug. 6	30.89	30	(a)
31	31.56	21	31.28	13	31.43	Nov. 6	(a)
Feb. 5	31.45	28	31.24	20	(a)	13	(a)
12	31.78	June 4	31.33	27	(a)	20	(a)
19	31.67	11	31.16	Sept. 3	(a)	26	(a)
26	31.71	18	31.32	10	(a)	Dec. 3	(a)
Mar. 5	31.68	25	31.18	17	(a)	10	31.66
13	31.79	July 2	31.23	24	(a)	17	31.75
26	32.12	9	31.20	Oct. 1	(a)	29	31.72

a More than 32.17 feet below land-surface datum.

P3 (\*986, p. 286; 1016, p. 329; 1023, p. 346; 1071, p. 428). City of Philadelphia. In south Philadelphia, in League Island Park. Extremes of observed water level, in feet below land-surface datum: Highest, May 12, 1946, 24.38; lowest, June 13, 1946, 36.58.

Daily noon water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	31.71	32.60	31.75	30.61	.....	33.20	34.40	.....	32.63	31.37	.....
2	.....	31.15	32.12	30.44	30.56	.....	32.50	35.46	.....	32.56	.....	.....
3	.....	32.11	31.92	32.12	29.50	.....	33.50	35.00	32.86	32.61	.....	31.67
4	30.65	31.52	.....	31.90	29.02	.....	31.55	34.80	33.22	32.13	.....	31.73
5	.....	31.82	32.58	30.32	29.90	33.70	32.00	35.55	34.15	30.19	.....	31.80
6	.....	32.10	32.67	29.26	30.30	33.85	32.20	34.80	32.25	31.70	30.96	31.02
7	.....	31.75	32.60	31.60	30.36	32.80	34.03	33.90	30.81	32.42	31.11	29.56
8	.....	31.83	32.34	31.62	30.62	31.20	33.96	34.50	31.40	32.41	.....	30.31
9	.....	32.11	31.55	31.73	30.65	33.25	.....	31.39	32.50	.....	30.86	.....
10	32.23	32.40	.....	31.30	30.00	33.40	33.70	.....	31.78	31.90	.....	31.84
11	.....	32.64	.....	31.52	29.58	33.66	33.08	.....	32.28	30.75	.....	31.72
12	.....	32.69	32.68	30.67	30.20	33.87	32.20	.....	32.30	32.00	.....	31.98
13	.....	32.57	32.57	28.88	30.68	34.05	31.50	34.15	31.07	32.04	30.82	31.70
14	.....	32.35	32.03	31.65	30.63	32.25	32.86	34.00	31.11	31.45	30.82	.....
15	.....	.....	31.84	30.88	31.08	32.12	33.06	34.07	31.50	31.56	30.75	31.67
16	.....	.....	30.78	31.75	30.31	34.74	33.75	35.00	31.45	32.42	30.41	31.38
17	32.01	.....	31.50	31.92	29.25	34.50	32.90	33.21	31.41	32.60	30.65	30.17
18	31.95	.....	32.12	31.45	28.82	34.40	33.65	34.30	31.36	31.90	30.82	32.14
19	.....	32.30	32.38	30.15	.....	35.17	33.30	34.32	31.20	31.41	30.76	32.25
20	.....	32.43	32.28	28.91	.....	34.56	33.52	34.55	31.20	31.80	30.80	32.21
21	.....	32.09	32.32	31.80	30.20	34.22	32.71	34.46	30.39	32.37	.....	31.97
22	.....	32.11	31.83	30.76	30.70	32.90	33.23	34.68	30.40	32.63	.....	31.60
23	.....	30.63	30.83	32.01	.....	33.59	33.95	33.51	31.15	32.75	.....	30.46
24	32.08	31.63	31.94	.....	.....	33.83	34.02	32.60	31.13	32.94	.....	31.11
25	32.07	32.33	31.69	.....	.....	33.30	34.45	35.24	31.15	31.80	.....	30.90
26	.....	32.45	32.34	.....	.....	34.60	33.58	33.95	.....	30.77	.....	31.22
27	31.78	32.42	32.60	.....	.....	34.15	32.28	33.56	.....	31.36	.....	.....
28	32.02	32.70	32.42	.....	34.86	33.21	32.60	33.21	.....	31.15	.....	.....
29	32.01	.....	32.23	.....	32.80	32.10	33.30	.....	.....	31.15	.....	31.83
30	31.86	.....	30.29	31.62	.....	33.42	34.35	.....	.....	31.25	.....	32.02
31	31.95	.....	30.72	.....	.....	.....	35.10	.....	.....	31.20	.....	29.93

P4 (\*986, p. 286; 1016, p. 330; 1023, p. 346; 1071, p. 429). City of Philadelphia. In south Philadelphia, at Southwest Airport. Extremes of observed water level, in feet below land-surface datum: Highest, Dec. 21, 1945, 7.34; lowest, Aug. 28, 1944, 12.87.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	11.33	Apr. 2	11.22	July 2	11.33	Oct. 1	12.34
10	11.53	7	11.03	9	11.45	8	12.27
17	11.09	9	11.10	16	11.72	15	12.45
24	10.95	14	11.12	23	11.62	22	12.39
31	10.95	22	11.08	30	11.82	30	12.06
Feb. 5	10.97	30	11.12	Aug. 6	11.78	Nov. 6	11.57
13	11.50	May 7	11.09	13	12.29	13	10.77
19	11.37	14	10.42	20	11.99	20	11.24
26	11.48	21	9.73	27	12.18	26	10.89
27	11.56	28	9.64	Sept. 3	12.16	Dec. 3	11.35
Mar. 5	11.00	June 4	10.60	10	12.20	10	11.65
13	11.20	11	10.29	16	12.10	17	11.72
19	11.13	18	10.63	17	12.38	29	11.69
26	11.17	25	10.01	24	12.18		

P5 (\*1016, p. 330; 1023, p. 347; 1071, p. 429). United States Navy. In south Philadelphia, at Philadelphia Naval Hospital. Extremes of observed water level, in feet below land-surface datum: Highest, Jan. 11, 1946, 22.82; lowest, Nov. 9, 1945, 30.70.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	28.13	Apr. 9	28.25	July 9	27.85	Oct. 8	28.48
10	28.40	14	28.17	16	27.76	15	28.18
17	28.44	22	28.10	23	28.09	22	28.69
31	28.43	30	28.16	30	28.15	30	28.09
Feb. 5	28.29	May 7	28.19	Aug. 6	28.89	Nov. 6	28.09
12	28.89	14	27.70	13	28.24	13	27.74
19	28.60	21	27.40	20	28.41	20	27.71
26	28.73	28	28.77	27	28.58	26	27.02
Mar. 5	28.80	June 4	28.10	Sept. 3	28.58	Dec. 6	27.96
13	28.80	11	27.83	10	28.11	10	28.02
19	28.69	18	28.10	17	28.09	17	28.19
26	28.56	25	27.78	24	27.83	29	27.95
Apr. 2	27.80	July 2	27.16	Oct. 1	28.83		

P6 (\*1016, p. 330; 1023, p. 347; 1071, p. 429). United States Navy. In south Philadelphia, at Philadelphia Naval Hospital. Extremes of observed water level, in feet below land-surface datum: Highest, Apr. 8, 1946, 23.73; lowest, Nov. 9, 1945, 29.19.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	26.58	Apr. 9	26.77	July 2	25.74	Oct. 8	26.97
10	26.83	14	26.75	9	26.21	15	26.80
17	26.82	22	26.73	16	26.21	22	27.20
31	26.88	30	26.75	23	26.42	30	26.81
Feb. 5	26.77	May 7	26.76	Aug. 13	26.67	Nov. 6	27.23
12	27.26	14	26.35	20	26.64	13	26.55
19	27.05	21	26.05	27	26.94	20	26.48
26	27.14	28	26.97	Sept. 3	26.96	26	26.49
Mar. 5	27.22	June 4	26.44	10	26.64	Dec. 3	26.59
13	27.19	11	26.27	17	26.69	10	26.67
19	27.13	18	26.47	24	26.49	17	26.83
26	27.07	25	27.19	Oct. 1	27.09	29	26.66
Apr. 2	26.49						

P8 (\*1016, p. 331; 1023, p. 347; 1071, p. 430). McCahan Sugar Co. In south Philadelphia. Extremes of observed water level, in feet below land-surface datum: Highest, Dec. 29, 1947, 33.24; lowest, Sept. 16, 1944, 61.57.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	49.89	Apr. 9	42.70	July 9	42.30	Oct. 1	49.48
24	51.76	14	42.00	16	46.13	8	52.22
31	53.39	22	44.46	23	46.95	15	51.67
Feb. 5	51.05	30	44.56	30	48.71	22	52.12
12	53.01	May 14	41.49	Aug. 6	49.73	Nov. 6	42.16
19	53.25	21	37.06	13	49.75	13	41.04
26	54.23	28	36.75	20	49.93	20	35.41
Mar. 5	49.46	June 4	37.36	27	52.71	26	37.24
13	48.31	11	37.19	Sept. 3	51.49	Dec. 3	35.72
19	43.97	18	37.00	10	50.29	10	35.33
26	38.69	25	37.35	17	47.67	17	36.12
Apr. 2	39.74	July 2	40.89	24	46.06	29	33.24

P9. Katham Corporation. In Philadelphia, at 1621 South Front Street, in storage shed adjoining north side of main building. Altitude about 20 feet above mean sea level. Unused drilled well, diameter 8 inches, depth 156 feet. Measuring point, top of casing, at land-surface datum.

P9--Continued.

Water level, in feet below land-surface datum, 1947								
Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	36.30	43.50	42.00	.....	39.40	32.50
2	.....	33.12	36.70	.....	43.25	44.08	36.96	32.90
3	.....	33.88	36.40	.....	44.90	45.05	.....	32.87
4	.....	34.31	35.55	.....	45.09	43.22	.....	33.59
5	.....	.....	.....	.....	44.13	39.10	.....	32.70
6	.....	.....	.....	.....	44.10	41.25	.....	32.08
7	.....	.....	.....	43.48	41.70	44.85	37.82	31.33
8	.....	.....	37.47	44.50	43.00	45.00	35.68	31.48
9	.....	.....	37.45	39.98	44.55	44.78	34.75	33.78
10	.....	.....	37.47	38.04	43.15	45.72	.....	32.53
11	.....	.....	37.18	41.90	44.10	44.28	.....	32.38
12	.....	.....	38.50	43.76	44.30	41.40	.....	32.27
13	.....	.....	37.87	42.58	43.14	42.20	.....	31.64
14	.....	.....	39.72	43.00	40.58	44.80	35.96	31.14
15	.....	.....	39.43	42.71	41.20	44.34	32.90	32.10
16	.....	.....	40.50	41.91	41.92	43.50	31.89	33.28
17	.....	.....	40.50	40.90	42.06	44.79	32.30	33.98
18	.....	.....	40.63	42.70	42.78	44.27	.....	36.37
19	.....	.....	40.61	43.63	42.10	42.00	.....	35.82
20	.....	.....	37.63	44.71	41.20	43.56	.....	35.68
21	.....	.....	41.40	44.69	39.38	44.73	33.20	34.55
22	.....	.....	41.05	44.90	40.20	44.89	32.70	34.40
23	.....	.....	41.78	43.25	40.49	44.78	32.11	34.35
24	.....	34.06	42.60	41.29	40.90	44.83	32.76	31.42
25	.....	34.22	42.40	42.75	41.60	43.58	34.36	.....
26	.....	34.83	40.70	.....	41.98	39.60	34.16	.....
27	.....	34.80	37.30	.....	41.40	.....	33.20	.....
28	.....	35.32	38.30	44.25	.....	.....	32.60	.....
29	33.89	33.67	41.12	44.36	.....	.....	33.10	.....
30	.....	34.15	41.87	43.22	.....	.....	32.41	.....
31	.....	.....	42.80	42.20	.....	41.18	.....	.....

NO-1 (#1023, p. 347; 1071, p. 430). United States Navy. In south Philadelphia, on League Island. Extremes of observed water level, in feet below land-surface datum: Highest, May 5, 1946, 30.13; lowest, July 19, 1945, 35.60.

Daily noon water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	34.69	35.40	34.95	33.76	30.89	32.92	34.54	31.65	35.04	34.10	33.79
2	.....	34.10	34.79	33.80	33.78	32.42	32.99	34.71	32.16	34.98	34.10	34.31
3	33.87	34.84	34.53	34.88	33.50	32.78	33.98	34.71	34.10	35.07	33.98	34.47
4	33.58	34.31	35.18	34.82	32.35	33.58	33.03	34.80	34.62	34.79	33.52	34.45
5	32.59	34.34	35.32	33.82	32.41	33.52	32.82	34.81	34.74	33.60	33.58	34.50
6	33.58	34.59	35.60	32.93	33.34	33.30	32.71	35.39	33.79	34.20	33.58	33.96
7	34.10	34.22	35.48	34.25	33.45	32.95	33.40	34.83	32.89	34.87	33.83	33.48
8	33.96	34.35	35.32	34.60	33.70	32.08	33.80	34.96	33.82	34.87	33.32	33.10
9	34.28	34.68	34.83	34.20	33.90	32.35	34.07	33.92	33.96	34.96	33.53	33.50
10	34.63	34.95	35.22	34.34	33.50	33.40	34.22	33.40	.....	34.60	33.90	34.68
11	34.36	35.47	35.52	34.57	33.35	33.56	34.31	34.60	.....	34.49	33.68	34.41
12	34.30	35.58	35.58	33.91	33.27	33.57	33.80	34.98	.....	34.81	33.22	34.62
13	34.69	35.50	35.48	32.60	33.85	33.89	32.90	35.12	.....	34.57	33.67	34.58
14	34.60	35.22	34.80	34.40	33.77	32.82	33.57	35.13	.....	34.25	33.74	34.02
15	34.45	34.83	34.98	33.97	33.93	32.79	34.58	35.19	.....	34.09	33.70	34.23
16	34.33	34.73	33.92	34.50	33.70	33.29	34.77	35.30	.....	34.87	33.21	33.90
17	34.61	34.90	34.18	34.57	32.91	33.75	34.72	34.10	33.93	35.00	33.58	34.74
18	34.60	34.92	34.93	34.30	32.33	33.90	34.80	35.20	33.95	34.60	33.69	34.73
19	34.01	35.10	35.21	34.39	32.70	34.38	33.98	35.15	33.69	34.13	33.70	35.02
20	33.89	35.23	35.11	33.03	33.13	34.21	33.41	35.80	33.63	34.25	33.70	35.17
21	33.88	34.68	35.01	34.37	33.33	33.87	33.70	34.51	33.17	34.83	33.87	34.72
22	34.80	34.70	34.75	34.09	33.50	32.85	34.70	34.73	32.63	35.12	33.53	34.65
23	34.93	35.83	34.21	34.62	33.59	33.50	34.72	33.85	33.50	35.23	33.40	33.80
24	34.70	34.40	35.14	34.07	33.11	33.56	.....	33.90	33.49	35.52	33.27	34.22
25	34.61	34.92	34.18	34.10	32.48	33.66	.....	34.85	33.43	34.90	33.58	33.92
26	34.57	35.09	34.77	33.40	33.10	34.05	.....	34.70	34.48	33.81	34.06	34.02
27	34.43	35.15	35.35	33.33	33.35	34.06	.....	33.05	34.60	34.15	33.77	.....

NO-1--Continued.

Daily noon water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
28	34.57	35.46	35.21	33.43	34.21	32.99	.....	34.71	34.10	34.00	33.43	.....
29	34.63		35.12	33.98	33.80	32.39	.....	34.65	34.19	33.85	33.61	34.60
30	34.48		33.95	34.15	33.02	32.94	34.00	33.77	34.69	33.84	33.69	34.80
31	34.40		34.30		31.40		34.43	31.82		33.85		33.25

NO-2 (\*1016, p. 334; 1023, p. 348; 1071, p. 431). United States Navy. In south Philadelphia, on League Island. Extremes of observed water level, in feet below land-surface datum: Highest, May 5, 1946, 30.54; lowest, July 19, 1945, 35.00.

Daily noon water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	32.89	33.92	34.65	34.31	33.15	31.14	32.38	34.35	31.98	33.98	33.49	33.30
2	33.17	33.59	33.95	33.41	33.10	32.35	32.79	34.31	32.80	33.94	33.49	33.55
3	33.05	34.23	33.88	34.32	32.84	32.42	33.32	34.32	33.50	34.10	33.20	33.57
4	32.53	33.45	34.50	34.32	32.38	33.05	32.51	34.62	33.80	33.94	.....	33.70
5	32.22	33.63	34.65	33.40	32.55	33.05	32.60	34.63	33.70	33.00	.....	33.51
6	33.06	33.87	34.81	32.73	32.88	32.85	32.53	34.90	32.90	33.69	33.00	33.07
7	33.10	33.57	34.82	33.88	32.82	32.32	32.90	34.41	32.23	33.96	33.17	32.53
8	33.11	33.67	34.66	34.05	33.13	31.83	33.23	34.52	33.02	33.83	32.57	32.40
9	33.50	33.97	34.37	33.82	33.35	32.40	33.35	33.38	33.10	34.04	32.92	33.04
10	33.79	34.22	34.70	34.00	33.15	32.79	33.52	.....	33.21	33.91	33.25	33.62
11	33.40	34.78	34.88	33.78	32.99	32.96	33.80	.....	33.38	33.71	32.86	33.57
12	33.48	34.90	34.95	33.39	33.09	32.92	33.03	.....	33.30	33.92	.....	33.73
13	33.92	34.76	34.79	32.75	33.21	33.21	32.68	34.45	32.66	33.86	33.01	33.50
14	33.71	34.42	34.08	33.78	33.05	32.20	33.19	34.29	32.56	33.31	33.15	33.29
15	33.52	34.03	34.10	33.42	33.58	32.15	34.00	34.31	32.75	33.60	32.90	33.52
16	33.41	33.97	33.68	33.62	33.22	32.82	34.09	34.46	32.71	34.00	32.52	33.12
17	33.88	34.18	33.77	33.85	32.53	33.10	34.10	33.50	33.00	34.09	32.80	33.95
18	33.71	34.20	34.28	33.78	32.18	33.20	34.18	34.41	32.97	33.67	33.02	33.80
19	33.29	34.49	34.58	33.81	32.47	33.60	33.26	34.30	32.61	33.40	33.05	34.10
20	32.90	34.51	34.35	32.75	32.66	33.39	33.01	34.13	32.67	33.54	33.12	34.17
21	33.20	.....	34.25	33.83	32.80	33.18	33.45	34.01	32.00	33.95	33.29	33.83
22	33.96	.....	34.04	33.68	33.17	32.52	34.16	34.10	31.83	34.28	33.13	33.68
23	33.95	.....	33.80	34.13	33.10	32.91	34.40	33.25	32.52	34.29	32.73	33.03
24	33.99	33.91	33.92	33.40	32.81	32.98	34.61	33.44	32.40	34.71	32.48	33.39
25	34.00	34.17	33.41	33.57	32.10	33.17	34.71	34.00	32.44	34.00	32.84	33.28
26	33.89	34.38	34.06	32.89	32.80	33.31	33.78	33.91	33.40	33.41	33.26	33.08
27	33.93	34.43	34.60	32.85	32.84	33.34	33.31	34.25	33.44	33.54	33.15	.....
28	34.01	34.65	34.50	33.32	33.47	32.52	33.29	34.10	33.29	33.32	32.89	.....
29	33.99		34.37	33.33	33.02	32.10	33.70	34.18	33.50	33.15	33.06	33.70
30	33.80		33.78	33.55	32.52	32.45	33.95	33.30	33.70	33.14	33.18	33.86
31	33.85		34.00		31.58		34.16	32.00		33.21		32.66

NO-3 (\*1023, p. 349; 1071, p. 431). United States Navy. In south Philadelphia, on League Island. Extremes of observed water level, in feet below land-surface datum: Highest, Sept. 22, 1947, 25.96; lowest, Feb. 12, 1947, 31.08.

Daily noon water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	30.45	30.28	30.69	30.68	29.90	29.57	29.44	30.30	30.11	30.30	30.39	30.25
2	29.80	30.27	30.00	30.12	29.88	29.25	29.20	30.42	29.78	30.25	30.31	30.06
3	29.48	30.40	30.10	30.49	29.88	.....	29.73	30.40	30.12	30.32	30.09	30.23
4	.....	29.48	30.72	30.50	29.61	.....	29.72	30.40	27.40	30.41	.....	30.19
5	.....	29.50	30.88	30.20	29.47	29.79	29.71	30.42	26.93	30.38	.....	30.02
6	.....	29.95	30.98	30.00	.....	29.51	29.61	30.42	26.81	30.38	29.94	30.07
7	.....	29.80	30.95	30.17	29.65	29.33	29.53	30.37	26.70	30.41	30.03	30.18
8	.....	29.81	30.64	30.18	30.05	29.32	29.54	30.44	26.68	30.20	29.43	29.53
9	.....	30.22	30.73	29.72	30.35	29.33	29.80	30.40	26.76	30.41	29.86	30.08
10	30.30	30.53	30.85	29.70	30.48	29.52	29.86	30.40	26.70	30.41	30.29	30.39
11	29.89	31.06	30.93	29.67	30.38	29.58	29.93	30.48	26.60	30.42	29.91	30.00
12	30.02	31.08	30.97	29.88	29.50	27.82	29.91	30.40	26.46	30.49	.....	30.22
13	30.39	30.48	30.82	30.32	29.75	29.79	29.87	30.00	26.41	.....	29.80	30.29

NO-3--Continued.

Daily noon water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
13	30.03	30.58	30.13	30.05	29.80	29.60	29.81	30.40	26.31	.....	30.18	30.27
15	.....	30.22	30.40	30.09	30.19	29.61	29.86	30.21	26.19	30.23	28.60	30.17
16	.....	30.21	30.30	29.80	30.04	29.60	29.31	30.43	26.39	30.34	29.56	29.41
17	30.16	30.43	30.18	30.00	30.04	29.69	29.88	30.52	26.82	30.33	29.98	30.49
18	30.10	30.42	30.50	30.18	29.70	29.74	29.97	30.29	26.78	30.20	30.23	30.31
19	30.20	30.68	30.71	30.18	29.70	29.83	29.87	30.38	26.50	30.14	30.22	30.62
20	29.35	30.57	30.31	30.17	29.52	29.99	30.00	30.43	26.63	.....	30.24	30.67
21	29.60	30.04	30.18	30.10	29.68	30.09	29.93	30.52	26.24	30.36	30.39	30.33
22	.....	30.12	30.31	30.29	29.79	29.91	29.90	30.40	25.96	.....	30.25	30.42
23	.....	30.40	30.20	30.20	29.68	29.78	30.28	30.40	26.71	.....	29.81	29.67
24	30.08	30.38	29.80	29.55	29.63	29.65	30.50	30.24	26.44	.....	29.50	30.44
25	30.10	30.08	.....	30.11	29.50	29.67	30.40	30.25	26.40	.....	29.51	30.30
26	29.98	30.45	.....	30.13	29.58	29.71	30.40	30.20	29.23	.....	29.87	29.76
27	30.02	30.68	30.75	29.86	29.52	29.71	30.20	30.48	29.90	.....	30.19	.....
28	30.02	29.22	30.60	29.62	29.61	29.72	30.00	30.30	30.03	.....	30.00	.....
29	30.07	.....	30.47	30.20	29.57	29.61	30.04	30.43	29.87	.....	30.10	.....
30	29.88	.....	30.65	29.95	29.81	29.55	29.78	30.51	29.81	.....	30.24	.....
31	29.91	.....	30.50	.....	29.83	.....	30.03	30.17	.....	30.15	.....	.....

NO-4 (\*1023, p. 349; 1071, p. 432). United States Navy. In south Philadelphia, on League Island. Extremes of observed water level, in feet below land-surface datum: Highest, Sept. 22, 1947, 29.19; lowest, Feb. 12, 1947, 32.73.

Daily noon water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	32.18	31.99	32.35	32.40	.....	31.02	30.95	31.81	31.48	31.66	31.83	31.64
2	31.67	31.90	31.72	31.78	.....	30.61	30.80	.....	31.11	31.61	31.83	31.61
3	31.24	32.07	31.60	32.03	.....	30.59	31.01	.....	31.47	31.67	31.58	31.55
4	31.60	31.25	32.20	32.23	.....	31.18	31.05	.....	30.80	31.68	31.13	31.61
5	31.28	31.30	32.40	31.93	.....	31.32	31.01	.....	30.57	31.68	31.16	31.33
6	31.27	31.52	32.58	31.78	.....	30.98	30.90	32.07	.....	31.66	31.30	31.37
7	31.36	31.50	32.59	31.69	31.15	30.90	30.80	31.99	.....	31.68	31.49	31.46
8	31.20	31.42	32.38	32.00	31.50	30.78	30.89	32.10	.....	31.59	30.82	30.79
9	31.52	31.70	32.42	31.62	31.77	30.68	31.12	31.98	.....	31.80	31.23	31.29
10	31.82	32.00	32.53	31.98	31.96	30.85	31.20	31.91	30.19	31.90	31.69	31.53
11	31.51	32.59	32.65	31.64	31.96	30.96	31.29	31.93	30.11	31.90	31.42	31.49
12	31.56	32.73	32.72	31.57	31.52	30.48	31.30	31.98	30.00	32.00	31.07	31.58
13	32.10	32.58	32.58	31.86	31.35	31.14	31.15	31.91	29.89	31.97	31.39	31.62
14	31.86	32.22	31.78	31.71	31.28	30.92	31.10	31.91	29.78	31.72	31.58	31.58
15	31.72	31.90	32.02	31.68	31.70	30.91	31.31	31.90	29.68	31.73	30.95	31.53
16	31.60	31.79	31.86	31.40	31.58	30.90	31.45	32.03	29.86	31.76	30.90	30.95
17	32.00	32.00	31.75	31.60	31.48	31.08	31.49	32.11	30.29	31.74	31.22	31.74
18	31.87	32.09	32.06	31.78	31.11	31.12	31.56	32.11	30.26	31.63	31.44	31.51
19	31.95	32.39	32.38	31.80	31.08	31.24	31.40	31.99	29.90	31.57	31.49	31.92
20	31.09	32.29	32.14	31.76	30.99	31.42	31.45	31.95	29.93	31.62	31.54	32.02
21	31.30	31.61	31.92	31.71	31.18	31.55	31.38	32.08	29.60	31.74	31.67	31.70
22	32.01	31.68	31.99	32.00	31.24	31.35	31.52	31.98	29.19	31.98	31.59	31.79
23	32.10	31.81	32.00	31.97	31.39	31.19	31.76	31.92	29.90	31.92	31.12	31.38
24	.....	31.81	31.70	31.58	31.28	31.05	31.91	31.77	29.75	32.08	30.80	31.75
25	.....	31.82	31.20	31.70	31.02	31.03	31.92	31.71	29.60	32.09	30.76	31.70
26	.....	32.01	31.65	31.64	31.09	31.12	31.93	31.70	30.85	31.93	31.13	31.13
27	.....	32.20	32.34	31.42	31.12	31.12	31.71	31.93	31.42	31.81	31.52	.....
28	.....	32.08	32.30	31.70	31.12	31.14	31.43	31.95	31.50	31.50	31.38	.....
28	.....	.....	32.18	31.73	31.03	31.01	31.51	31.92	31.36	.....	31.47	31.62
30	.....	.....	32.33	31.48	31.19	30.97	31.62	32.06	31.29	.....	31.59	31.87
31	31.62	.....	32.44	.....	31.18	.....	31.59	31.60	.....	31.51	.....	31.60

NO-5 (\*1023, p. 350; 1071, p. 432). United States Navy. In south Philadelphia, on League Island. Extremes of observed water level, in feet below land-surface datum: Highest, Sept. 22, 1947, 28.13; lowest, Feb. 12, 1947, 32.49.

Daily noon water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	31.76	31.77	32.10	32.08	31.23	30.90	30.74	31.57	31.39	31.52	31.65	31.58
2	.....	31.73	31.50	31.58	31.20	30.53	30.72	31.75	31.09	31.45	31.69	31.48
3	30.92	31.82	.....	31.82	31.24	30.46	.....	31.79	31.05	31.56	31.43	31.46
4	31.20	31.05	.....	32.02	31.08	31.05	.....	31.77	29.95	31.62	31.04	31.46
5	30.82	31.12	.....	31.68	30.92	31.13	.....	31.81	29.48	31.58	31.05	31.38
6	31.00	.....	32.30	31.40	30.88	30.83	.....	31.81	29.24	31.52	31.16	31.29
7	30.81	31.21	32.30	31.53	30.96	30.69	30.70	31.79	29.25	31.55	31.32	31.37
8	.....	31.19	32.18	31.77	31.26	30.63	30.76	31.81	.....	31.38	30.76	30.78
9	.....	31.48	32.10	31.30	30.43	30.57	30.98	31.77	.....	31.57	31.10	31.21
10	31.64	31.72	32.22	31.71	30.71	30.70	31.08	31.71	29.02	31.65	31.49	31.53
11	31.33	32.33	32.35	31.48	30.69	30.78	31.13	31.81	28.95	31.66	31.30	31.40
12	31.46	32.49	32.42	31.24	31.16	29.85	31.14	31.79	28.83	31.72	30.90	31.47
13	31.89	32.20	32.28	31.70	31.06	.....	31.07	31.63	28.77	31.59	31.27	31.58
14	31.58	32.02	31.52	31.48	31.08	.....	31.01	31.72	28.66	31.48	31.46	31.55
15	31.36	31.65	31.82	31.88	31.36	.....	31.12	31.69	28.56	31.51	30.44	31.48
16	30.82	31.60	31.68	31.42	31.47	.....	31.13	31.80	28.73	31.59	30.81	30.86
17	31.65	31.82	31.51	30.98	31.28	.....	31.16	31.91	29.10	31.59	.....	31.46
18	31.57	31.88	31.87	31.32	31.25	31.00	31.30	31.86	29.04	31.49	.....	31.48
19	31.60	32.12	32.10	31.50	30.96	31.12	31.29	31.75	28.74	31.40	.....	31.81
20	30.72	32.03	31.88	31.54	30.90	31.20	31.29	31.76	28.80	31.48	31.52	31.87
21	31.06	31.42	31.70	31.50	30.96	31.28	31.25	31.88	28.50	31.60	31.64	31.58
22	31.74	31.51	31.72	.....	30.96	31.24	31.28	31.75	28.13	31.80	31.56	31.62
23	31.73	31.70	31.80	.....	31.08	31.08	31.61	31.71	28.53	31.75	31.17	31.06
24	31.52	31.70	31.42	.....	30.85	30.97	31.82	31.56	28.64	32.03	30.71	31.60
25	31.49	.....	30.86	.....	30.81	30.90	31.89	31.53	28.57	32.01	30.83	31.45
26	31.47	.....	31.48	.....	30.82	30.96	31.79	31.51	.....	31.77	31.12	30.93
27	31.45	32.00	32.00	.....	30.88	30.99	31.55	31.76	.....	31.65	31.29	.....
28	31.50	31.35	31.94	.....	30.86	31.00	31.30	31.75	.....	31.20	31.31	.....
29	31.54	.....	32.02	.....	30.88	30.92	31.33	31.68	.....	31.17	31.45	31.51
30	31.35	.....	31.81	31.30	30.97	30.86	31.40	31.88	.....	31.30	31.52	31.70
31	31.40	.....	32.20	.....	31.00	.....	31.31	31.56	.....	31.40	.....	31.49

NO-6 (\*1023, p. 350; 1071, p. 433). United States Navy. In south Philadelphia, on League Island. Extremes of observed water level, in feet below land-surface datum: Highest, Sept. 22, 1947, 26.11; lowest, Feb. 12, 1947, 30.34.

Daily noon water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	29.58	30.00	29.87	29.17	28.80	28.65	29.41	29.02	29.25	29.40	.....
2	.....	29.53	29.40	28.32	29.11	28.44	28.30	29.61	28.71	29.21	29.40	.....
3	28.74	29.67	29.32	29.68	29.13	28.42	28.70	29.59	29.11	29.30	29.21	29.28
4	29.05	28.85	29.90	29.72	28.89	29.14	28.73	29.51	27.56	29.36	28.78	29.24
5	29.60	29.00	30.11	29.40	28.72	29.07	28.70	29.53	27.19	29.32	28.80	29.10
6	28.83	29.17	30.25	29.10	28.80	28.83	28.61	29.56	27.01	29.30	28.96	29.05
7	28.59	28.96	30.22	29.22	28.85	28.60	28.50	29.48	26.92	29.31	29.12	29.26
8	28.56	29.03	30.08	29.49	29.20	28.58	28.50	29.54	.....	29.21	28.51	28.61
9	29.17	29.38	29.95	28.97	29.48	28.48	28.78	29.50	.....	29.36	28.89	29.03
10	29.52	29.68	30.11	29.34	29.62	28.65	29.02	29.42	26.80	29.42	29.31	29.34
11	29.13	.....	30.22	29.05	29.62	28.72	29.10	29.59	.....	29.38	28.93	29.24
12	29.30	30.34	30.30	29.08	29.25	27.73	29.09	29.56	.....	29.41	28.65	29.31
13	29.64	30.03	30.21	29.48	29.00	28.90	29.00	29.35	.....	29.28	28.93	29.41
14	29.35	29.90	29.42	29.24	29.03	28.81	28.97	29.55	.....	29.16	29.27	.....
15	29.08	29.50	29.70	29.22	29.42	28.75	29.05	29.48	.....	29.26	28.25	.....
16	28.69	29.48	29.58	29.02	29.33	28.78	28.82	29.63	.....	29.32	28.53	.....
17	29.49	29.68	29.39	29.08	29.18	28.94	29.13	29.76	26.94	29.31	28.90	29.54
18	29.40	29.75	29.72	29.27	29.01	29.00	29.21	29.60	28.84	29.18	29.20	29.35
19	29.40	30.00	29.98	29.28	28.90	28.98	29.02	29.52	26.53	29.12	29.23	29.77
20	29.48	.....	29.64	29.32	28.73	29.16	29.21	29.54	26.63	29.20	29.25	.....
21	29.91	.....	29.48	29.15	28.90	29.30	29.18	29.64	26.17	29.31	29.39	.....
22	29.63	.....	29.48	29.48	28.91	29.18	29.16	29.49	26.11	29.57	29.29	.....
23	29.57	.....	29.58	29.57	29.07	28.92	29.49	29.47	26.59	29.49	28.86	.....

## NO-6--Continued.

Daily noon water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
24	29.36	.....	29.20	29.25	28.85	28.84	29.73	29.27	26.45	29.80	28.60	.....
25	29.35	.....	28.62	29.29	28.74	28.82	29.72	29.30	26.37	29.78	28.44	.....
26	29.28	29.74	29.33	29.23	28.75	28.91	29.67	29.26	28.24	29.52	28.84	.....
27	29.27	29.92	29.87	29.30	28.81	28.92	29.45	29.50	.....	29.41	29.20	.....
28	29.28	29.19	29.78	29.32	28.80	28.93	29.21	29.40	.....	29.10	29.05	.....
29	29.31		29.65	29.31	28.82	28.83	29.27	29.44	.....	28.85	29.16	29.51
30	29.12		29.79	29.20	28.96	28.80	29.11	29.50	.....	29.11	29.29	29.70
31	29.21		29.90		29.03		29.21	29.10		29.17		29.48

NO-8 (#1071, p. 434). United States Navy. In south Philadelphia, on League Island. Extremes of observed water level, in feet below land-surface datum: Highest, June 1, 1947, 41.00; lowest, June 19, 1946, 51.45.

Daily noon water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	45.50	48.17	49.80	49.19	47.61	41.00	.....	49.61	42.46	49.57	46.38	47.12
2	48.23	47.30	49.48	47.48	47.68	46.72	46.55	49.67	46.35	49.53	46.25	47.59
3	47.84	49.68	49.30	49.38	46.77	47.10	48.42	49.62	48.03	49.66	45.95	47.89
4	45.00	48.69	49.58	49.25	45.58	47.82	44.89	50.00	48.10	48.40	45.85	47.97
5	44.43	49.60	50.21	46.94	46.30	47.10	45.25	50.22	49.31	45.51	45.88	47.50
6	46.60	50.20	50.15	45.25	47.30	47.21	44.85	50.66	45.68	48.08	45.75	45.50
7	48.98	49.48	49.95	48.90	47.30	45.20	47.26	49.61	44.20	49.40	45.94	43.20
8	48.80	49.87	50.03	49.20	47.57	44.03	47.90	49.10	47.05	49.40	45.28	44.94
9	49.12	49.97	48.40	49.43	47.93	45.83	48.08	46.38	48.10	49.40	45.70	46.20
10	50.00	50.33	49.60	48.58	47.67	47.24	48.50	45.30	48.61	48.61	45.49	48.09
11	48.70	50.31	49.90	49.07	45.02	47.30	48.30	48.12	49.27	47.96	45.10	47.73
12	48.45	50.63	49.74	47.90	47.00	48.02	45.49	48.83	49.44	49.10	45.40	48.21
13	49.00	50.03	50.38	44.57	47.65	47.60	44.27	49.80	46.64	48.68	45.57	47.07
14	49.23	49.25	48.82	48.70	47.79	44.00	47.00	49.89	46.59	46.50	45.12	.....
15	49.32	49.52	49.90	47.57	47.85	44.80	48.31	50.12	47.90	48.00	44.91	48.29
16	48.47	49.22	47.51	48.65	47.42	48.60	48.92	49.96	47.12	49.32	45.05	47.36
17	49.64	49.07	48.40	48.70	44.00	49.58	48.85	47.16	46.04	49.52	45.18	48.52
18	49.24	49.32	49.51	48.40	44.03	48.40	49.00	49.79	45.98	47.62	45.18	48.50
19	48.14	49.56	50.18	48.60	45.93	49.42	46.70	49.80	46.01	46.78	44.82	48.40
20	48.33	49.80	49.83	45.70	47.43	47.48	45.70	49.20	45.68	47.70	45.75	48.49
21	48.79	49.42	50.31	48.90	47.21	46.00	47.10	48.50	42.40	48.70	45.74	47.80
22	49.97	49.50	48.50	48.46	47.90	44.48	48.40	48.90	44.03	49.25	45.30	46.61
23	49.60	46.68	48.30	49.32	47.52	46.20	49.00	45.91	45.64	49.48	44.85	45.70
24	49.72	49.05	49.40	47.83	46.28	46.75	49.25	46.60	46.90	49.62	45.05	45.76
25	49.62	50.34	48.92	48.29	44.52	46.80	49.48	49.51	47.91	46.48	46.92	44.17
26	49.42	50.10	49.78	46.31	47.27	48.07	46.25	49.33	49.28	45.20	47.68	46.84
27	49.20	50.08	49.90	46.71	47.70	47.57	45.50	49.70	47.69	46.65	46.00	.....
28	49.74	50.18	49.03	47.02	49.14	44.46	45.25	48.90	46.45	46.03	45.55	.....
29	49.51		49.20	47.58	47.73	.....	46.73	48.90	48.70	46.17	46.68	.....
30	48.75		46.75	48.50	45.15	.....	48.20	45.27	49.80	46.38	47.55	48.08
31	49.42		47.77		41.32		49.51	42.17		46.33		42.74

NO-9 (#1071, p. 435). United States Navy. In south Philadelphia, on League Island. Extremes of observed water level, in feet below land-surface datum: Highest, May 5, 1946, 41.41; lowest, Sept. 30, 1947, 55.90.

Daily noon water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	50.20	52.95	51.03	49.70	.....	.....	53.38	43.00	53.64	48.47	49.90
2	.....	49.50	52.40	49.30	49.82	.....	.....	53.42	47.28	53.35	48.30	50.90
3	52.06	52.20	52.72	52.33	45.85	.....	51.67	53.39	51.40	53.00	48.13	51.29
4	48.97	51.95	53.18	52.00	45.95	.....	46.36	53.36	51.86	52.13	48.29	51.60
5	47.39	52.32	53.32	47.27	48.78	49.99	46.52	52.51	52.86	46.69	48.53	52.00
6	.....	52.58	53.33	45.42	49.40	50.30	.....	53.72	49.60	51.40	48.28	49.89
7	.....	52.11	53.00	51.32	48.58	46.32	.....	52.42	46.38	52.55	48.19	46.90
8	.....	52.42	53.00	51.53	49.51	44.45	.....	52.30	50.66	52.90	47.61	47.73
9	.....	52.77	51.08	51.58	49.17	48.50	.....	47.45	50.65	52.81	47.76	49.31
10	.....	53.14	52.70	51.09	46.48	49.60	51.93	.....	51.88	51.63	47.63	51.77
11	52.42	53.01	53.13	52.13	45.40	50.50	52.04	.....	53.06	51.23	47.00	51.66



## NO-9--Continued.

Daily noon water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
12	52.38	53.00	53.30	48.60	47.47	50.52	49.71	.....	53.31	51.46	.....	52.39
13	52.29	53.15	53.22	43.87	50.12	50.91	47.80	53.39	49.21	51.80	47.57	51.13
14	52.54	52.95	52.58	51.31	49.81	47.40	50.10	53.50	49.05	49.85	47.28	47.79
15	52.46	52.58	51.70	50.50	49.95	47.20	51.56	53.70	51.51	50.47	47.17	51.13
16	52.48	52.56	49.80	51.62	48.68	50.26	52.59	53.75	49.68	52.47	46.80	51.08
17	52.99	52.64	51.10	52.12	45.80	50.12	52.60	48.40	49.26	53.81	47.41	52.80
18	52.49	52.43	52.58	50.70	45.07	50.91	52.58	52.93	49.17	50.39	47.36	53.88
19	50.06	52.81	52.05	51.34	46.82	52.17	49.27	53.08	49.19	49.03	47.28	53.74
20	51.16	52.94	52.92	45.90	48.05	.....	47.69	52.80	48.79	.....	47.53	.....
21	52.00	52.83	53.06	51.19	48.11	.....	48.80	50.51	47.48	.....	47.74	.....
22	53.11	52.63	51.62	49.03	50.13	.....	51.81	51.95	.....	53.69	47.55	.....
23	52.74	48.17	49.77	51.83	49.30	.....	52.49	47.21	.....	54.60	47.40	.....
24	52.71	.....	52.30	49.96	47.22	.....	52.81	.....	49.42	53.58	48.00	.....
25	52.66	.....	52.08	50.19	45.16	.....	53.15	.....	51.05	50.14	50.70	.....
26	52.41	.....	53.22	46.41	48.87	51.70	50.46	.....	54.71	48.59	50.91	.....
27	52.28	53.26	53.23	46.86	49.57	.....	49.44	53.34	52.30	48.75	49.89	.....
28	52.53	53.41	53.12	48.64	51.99	.....	49.34	52.50	51.54	48.12	49.00	.....
29	52.58	.....	52.41	48.80	.....	.....	50.03	52.40	54.70	48.71	49.24	51.48
30	52.41	.....	48.30	51.36	.....	.....	51.62	47.53	55.90	49.21	49.49	51.64
31	52.78	.....	49.12	.....	.....	.....	53.20	42.63	.....	49.16	.....	46.97

NO-10 (\*1071, p. 435). United States Navy. In south Philadelphia, on League Island. Extremes of observed water level, in feet below land-surface datum: Highest, Aug. 31, 1947, 45.01; lowest, Sept. 30, 1947, 59.53.

Daily noon water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	49.80	56.72	58.12	.....	53.97	.....	.....	58.70	46.09	58.90	55.80	55.00
2	56.31	55.62	57.60	.....	54.04	.....	.....	58.91	54.60	58.66	55.72	56.90
3	57.31	57.50	57.80	57.44	49.36	.....	57.38	58.90	56.60	58.63	55.48	57.32
4	55.21	57.20	58.33	56.85	49.30	.....	50.80	58.53	56.89	57.78	55.50	57.51
5	.....	57.60	58.43	51.15	50.87	54.91	53.60	57.00	58.38	51.35	55.60	58.61
6	.....	57.63	58.41	49.48	52.20	56.50	53.77	58.92	55.66	57.09	55.59	56.52
7	.....	.....	58.18	56.20	52.75	48.76	56.00	56.98	52.05	58.21	55.64	51.37
8	.....	.....	58.16	56.40	56.16	.....	57.33	56.24	56.76	58.37	55.11	55.09
9	.....	.....	54.73	56.34	51.98	.....	57.26	51.65	56.30	58.22	55.34	.....
10	.....	.....	57.92	54.02	51.90	55.40	57.43	50.50	56.60	56.40	55.40	.....
11	57.34	58.33	58.29	55.80	49.81	54.83	57.58	.....	58.23	56.41	54.80	.....
12	57.48	58.12	58.33	50.10	52.50	54.75	56.09	.....	58.41	56.01	55.25	58.91
13	57.56	58.33	58.24	49.08	54.13	55.91	54.00	58.91	55.91	57.53	56.18	57.48
14	57.60	58.18	57.68	56.60	52.51	50.76	55.23	58.84	56.83	56.52	54.97	.....
15	57.40	57.85	.....	54.38	54.70	.....	57.51	58.92	56.84	56.82	54.84	57.19
16	57.41	57.90	.....	57.01	51.62	.....	58.07	59.22	56.46	58.15	54.50	57.11
17	57.90	57.95	.....	57.60	49.79	.....	57.92	53.90	56.07	58.89	55.25	58.36
18	57.65	57.62	.....	56.00	50.10	.....	58.00	58.52	56.05	57.26	55.06	58.66
19	52.70	57.97	.....	55.92	49.20	.....	56.36	58.61	56.08	56.17	54.93	58.49
20	56.49	57.99	58.00	47.70	51.17	.....	54.86	57.46	55.79	57.30	55.17	58.18
21	57.33	.....	58.00	56.67	51.80	.....	55.18	54.87	55.06	58.07	55.36	57.76
22	58.15	.....	56.95	51.81	54.45	.....	57.61	56.80	55.10	58.85	55.12	56.82
23	57.71	.....	52.00	57.12	52.52	.....	58.10	52.52	55.75	59.40	54.99	.....
24	57.79	.....	57.40	53.00	52.80	54.67	58.34	55.29	56.07	59.00	55.15	.....
25	57.81	.....	57.20	55.14	49.06	.....	58.60	58.27	56.59	55.70	56.85	.....
26	.....	.....	58.25	.....	52.53	57.30	57.15	57.58	58.66	55.56	56.50	.....
27	57.48	58.37	58.48	.....	53.41	57.30	56.12	58.69	57.87	55.99	54.02	57.23
28	57.60	58.54	.....	.....	57.53	53.18	56.11	57.69	56.62	55.74	53.48	.....
29	57.67	.....	.....	.....	.....	.....	56.70	57.58	57.91	56.01	53.45	57.69
30	57.49	.....	.....	.....	.....	.....	55.91	52.40	59.53	56.17	53.62	58.02
31	57.79	.....	.....	.....	.....	.....	58.55	45.01	.....	56.02	.....	.....

N-1 (#986, p. 286; 1016, p. 331; 1023, p. 351; 1071, p. 436). United States Navy. In south Philadelphia, on League Island. Lowest observed water level, in feet below land-surface datum: Aug. 18, 25, 27, 1947, 156.5. Pumping when measured.

Daily noon water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	125	130	133.5	131	130	.....	.....	153.5	.....	145	127	132
2	128	129	133	129.5	130	135	132.5	153	132	145	128	134
3	130	132.5	134.5	132.5	125.5	136	134.5	153	141.5	145	127.5	133
4	125	132	135	131	125	135.5	128	154.5	137	143	128	133
5	124	133	135	125.5	129.5	135.5	128	155	137.5	139	127.5	134
6	130	134.5	134.5	125.5	129.5	135	127	153	.....	144	127.5	.....
7	130.5	133.5	135	132	129.5	136	134	152.5	.....	146.5	127.5	.....
8	131	132.5	133.5	131.5	131	130	134.5	153.5	141	146	127	133
9	131	133	130	128	130.5	135	135.5	146.5	141	147	126	128.5
10	131.5	134	135	128	126.5	135	135	145	144.5	147	126.5	128.5
11	130	134.5	135	129	126	138	135	154	144	140	126	128.5
12	129.5	134.5	135.5	125	130	138	.....	154.5	145	142	126	129
13	131	134	135.5	124.5	130	139	.....	155	140	145	126	...
14	132	133.5	135	129	129.5	149	136	155	140	...	126.5	...
15	131.5	133	132.5	129	131.5	133	137.5	...	142	138.5	126.5	130.5
16	131	132.5	131.5	130	129.5	129	140	156	143	141.5	126.5	130
17	131.5	133.5	135	130	.....	129.5	139	150	143	142.5	126	130.5
18	129	134	135	129.5	.....	131	140.5	156.5	143	137	126	131.5
19	127	134.5	135.5	128.5	131	132.5	136	153.5	144	135.5	126.5	131
20	131	133.5	136	125	132.5	130	135	156	140	141	127	128
21	131.5	133	136	129.5	133	126	140	155.5	126	143.5	128	130
22	132	126	129	128.5	134	126	140.5	155	144	144	125.5	138
23	132	126.5	128	131.5	133.5	130	140	147	144	144	126	126
24	132	134.5	...	129.5	131	131	142	154.5	145	144	128.5	126.5
25	131	135	...	129.5	129	131	143	156.5	148	152.5	132	130
26	130.5	135	...	125	133.5	...	...	156	150	...	133	127
27	131	135	...	125.5	134.5	129	...	156.5	...	126	124	126
28	132	135.5	...	129	137	128.5	143.5	152	...	127	129	126.5
29	131	...	...	129	136	.....	154.5	138.5	144	129	126	126.5
30	132.5	...	132	...	...	...	153.5	128	145.5	130	128	125.5
31	132	128.5	...	...	...	...	154.5	...	...	127	.....	.....

N-2 (#986, p. 286; 1016, p. 331; 1023, p. 352; 1071, p. 437). United States Navy. In south Philadelphia, on League Island. Lowest observed water level, in feet below land-surface datum: June 5, 7, 1946, 161. Pumping when measured.

Daily noon water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
1	.....	.....	150.5	155.5	153.5	140.5	146	151	...	146
2	.....	.....	149	154	153.5	152	145.5	151	147.5	146.5
3	.....	149.5	151.5	157	148.5	152	146.5	155	147.5	146
4	.....	150	152	157.5	147.5	151	.....	156	147	...
5	.....	151	153	.....	154.5	150.5	.....	158	146.5	...
6	147.5	152	153.5	.....	154.5	152.5	.....	157	148.5	149.5
7	148	148.5	152.5	152	153.5	.....	151	155.5	149.5	156.5
8	148	149.5	150.5	153	155	.....	149	156.5	147.5	156.5
9	148.5	151	147.5	153	155	.....	149.5	.....	.....	157.5
10	149	152	153	153	...	153	149	.....	154	150.5
11	...	152.5	153.5	154.5	...	153	149.5	154	152.5	150.5
12	...	152.5	153.5	149	156.5	155	144.5	155	152.5	151.5
13	148.5	152.5	154	...	154.5	151.5	144.5	154.5	.....	150
14	149	152	153.5	153	153.5	147	.....	155	.....	148
15	148	150.5	150	153	155.5	147	148.5	157	144.5	148
16	148	150	150.5	155	153	151	151	157	142.5	151
17	148.5	151.5	154.5	155	150.5	151.5	...	152	.....	151
18	145	151	156	154	151.5	153	139.5	157.5	.....	...
19	142	151.5	157	152.5	153.5	154.5	.....	154	156.5	...
20	149	151.5	156.5	147.5	155	152.5	.....	155	153.5	154
21	149	151	156.5	154	153	.....	152.5	152.5	151.5	152.5
22	149.5	141.5	154.5	152.5	152.5	.....	153	153.5	.....	152
23	149	.....	153.5	156.5	151	149.5	152.5	.....	.....	150.5

## N-2--Continued.

Daily noon water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
24	149.5	150	157	153.5	...	150	155.5	...	.....	146
25	148	151	156.5	154.5	...	149.5	156	147	.....	146
26	147	152.5	157	148	150	153	151.5	147	.....	146.5
27	149	152	158.5	148.5	151	158.5	150.5	...	.....	.....
28	149	152.5	158.5	153	153.5	144.5	158	145.5	.....	.....
29	149	...	156	153.5	153	143	149.5	148	156.5	.....
30	150	...	150.5	156.5	143.5	143	150.5	150	157.5	.....
31	149	...	153	...	139.5	...	150.5	147	.....	.....

N-3 (\*986, p. 286; 1016, p. 332; 1023, p. 352; 1071, p. 437). United States Navy. In south Philadelphia, on League Island. Lowest observed water level, in feet below land-surface datum: Jan. 24, Feb. 26, 1944, 90.

Daily noon water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	65.0	74.0	77.5	....	72.5	....	73.5	78.0	76.5	77.5	73.0	73.5
2	75.5	75.0	77.0	....	72.5	74.5	76.0	78.0	75.0	77.5	73.0	75.0
3	76.0	77.0	77.5	77.5	....	74.5	76.5	78.5	75.5	77.0	73.0	76.0
4	72.0	76.5	78.0	77.5	....	74.5	66.5	78.0	77.5	76.5	73.0	76.5
5	72.0	77.0	78.0	68.0	....	75.0	72.0	77.0	77.5	69.0	72.5	76.5
6	76.0	77.0	78.0	65.0	73.5	....	...	78.5	....	76.0	73.0	74.0
7	76.0	76.0	78.0	76.5	....	66.0	75.0	77.5	....	77.0	73.0	....
8	76.5	77.0	78.0	77.0	74.0	64.5	76.0	77.0	76.0	77.0	72.5	72.0
9	77.0	78.0	70.0	76.5	69.0	74.5	76.0	67.0	76.5	77.0	73.0	74.5
10	77.0	78.0	78.5	76.5	71.0	73.5	77.0	66.0	77.0	...	73.0	76.5
11	76.5	78.0	78.5	76.0	65.0	76.5	77.0	76.5	77.0	75.0	72.5	77.0
12	76.0	78.0	78.0	68.5	73.0	76.5	73.5	77.5	77.5	....	72.5	77.5
13	76.5	78.0	78.0	....	69.5	77.0	....	78.0	....	76.5	72.5	77.5
14	76.5	77.5	78.0	76.5	68.5	67.0	76.0	78.0	....	74.0	72.5	77.5
15	76.5	77.5	76.0	75.0	75.5	66.0	76.5	78.0	76.0	75.0	72.5	....
16	76.5	77.0	74.0	76.5	68.5	76.0	77.5	78.5	74.0	77.0	72.0	....
17	77.0	77.5	77.0	77.0	64.5	76.0	77.0	....	74.0	77.5	72.5	77.5
18	76.5	77.0	78.0	....	69.0	77.0	77.0	78.0	74.0	74.0	72.5	77.5
19	71.5	77.5	77.5	75.5	71.0	77.0	74.0	77.5	74.0	73.5	72.0	78.0
20	76.0	77.5	78.0	....	72.0	74.5	73.0	....	73.5	76.5	72.0	78.5
21	76.5	77.5	78.0	75.5	72.5	....	75.5	76.5	71.5	77.0	73.0	78.5
22	77.0	76.5	70.5	68.5	75.0	....	77.0	77.0	73.0	....	72.5	78.5
23	77.0	75.0	78.0	77.0	74.5	75.0	77.5	....	74.0	78.0	72.5	82.0
24	77.0	77.0	77.0	76.0	72.0	76.0	78.0	....	74.0	77.5	73.5	82.0
25	77.0	77.5	77.0	72.0	64.0	76.0	78.0	77.5	77.0	74.0	75.5	82.0
26	77.0	78.0	78.0	....	68.0	77.0	75.0	77.0	78.0	73.0	75.0	82.0
27	77.0	78.5	78.0	....	70.5	76.5	74.0	78.0	75.0	73.5	73.0	82.0
28	77.0	78.5	78.0	75.0	77.0	73.5	74.5	77.5	74.5	75.0	72.5	82.0
29	77.0	...	77.5	68.5	69.5	....	76.5	75.0	77.5	73.0	72.5	82.0
30	77.0	...	76.5	....	...	73.5	77.0	76.0	78.5	73.5	72.5	82.0
31	77.5	76.0	...	....	....	...	78.0	76.0	...	73.0	...	81.5

N-4 (\*986, p. 286; 1016, p. 333; 1023, p. 353; 1071, p. 438). United States Navy. In south Philadelphia, on League Island. Lowest observed water level, in feet below land-surface datum: Jan. 27, 29, 1944, 90.

Daily noon water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	70.5	....	72.0	65.5	60.0	72.0	61.0	61.0	67.0	66.0	60.5	62.5
2	69.5	....	72.0	65.0	62.0	63.5	61.0	61.0	....	66.0	60.5	65.0
3	67.5	....	72.0	66.0	62.0	58.5	61.0	61.5	....	66.0	60.5	66.5
4	68.5	....	73.0	73.0	60.5	65.5	60.5	61.0	72.0	66.0	60.5	66.5
5	....	65.5	....	73.0	66.0	59.0	61.0	67.5	72.5	57.0	60.5	66.5
6	....	65.5	73.0	73.0	67.0	59.0	60.5	67.5	72.5	63.0	60.0	66.5
7	....	65.5	73.0	73.0	70.5	59.0	56.5	59.0	72.5	63.0	60.0	61.0
8	....	66.0	73.0	64.0	71.5	61.0	56.5	59.0	72.5	63.0	58.5	56.5
9	....	66.5	78.0	70.0	72.0	61.0	57.0	59.0	72.5	63.0	58.5	67.5
10	....	67.0	72.5	75.0	72.0	70.0	58.0	59.0	72.5	73.0	58.5	62.0

N-4--Continued.

Daily noon water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
11	....	67.5	73.0	74.5	71.5	71.5	63.5	68.5	72.5	73.0	59.5	64.5
12	....	68.0	73.0	74.0	71.5	62.5	63.5	58.5	72.5	73.0	59.0	62.5
13	....	68.0	....	75.0	71.5	62.5	63.5	59.0	72.5	57.0	59.0	63.5
14	....	67.5	67.5	68.0	66.5	62.5	69.0	59.0	72.5	58.0	58.5	62.5
15	....	68.0	67.5	57.5	70.0	62.5	69.0	59.0	70.5	58.0	59.0	62.0
16	....	68.0	65.0	62.0	70.0	61.5	69.0	59.0	62.0	59.0	59.0	62.5
17	....	68.0	74.5	61.0	70.0	70.0	69.0	57.5	62.0	59.5	59.0	63.5
18	75.0	68.0	74.5	71.0	69.5	63.0	69.0	58.0	62.0	60.0	59.0	64.5
19	75.0	68.0	74.5	70.0	69.0	71.5	69.0	59.0	62.0	59.5	60.0	65.5
20	71.5	....	75.0	71.0	75.0	71.5	69.0	58.0	62.0	58.5	60.5	65.5
21	57.5	68.5	75.5	66.5	68.5	71.5	66.5	69.0	62.0	60.0	61.0	65.5
22	74.0	68.5	75.5	68.0	68.0	71.5	66.5	69.0	62.0	61.0	61.5	....
23	75.5	66.0	76.5	72.0	69.0	71.5	66.5	69.0	62.0	62.5	61.5	53.5
24	....	73.0	74.0	....	58.0	67.5	66.5	69.0	62.0	64.5	61.5	59.5
25	....	73.0	74.0	....	58.0	....	66.5	69.0	62.0	64.5	62.5	58.5
26	....	71.5	74.5	70.5	58.5	64.0	66.5	69.0	62.0	55.5	64.0	60.0
27	....	72.0	74.5	69.5	69.0	65.0	66.5	69.0	62.0	....	63.5	61.0
28	....	72.5	77.0	69.5	68.5	65.5	66.5	67.0	62.5	60.5	62.5	61.5
29	....	....	64.0	69.5	69.0	65.5	66.5	67.0	66.0	60.5	62.5	61.5
30	....	....	62.0	69.0	72.0	65.5	66.5	67.0	66.0	60.5	62.5	62.5
31	....	....	66.0	....	72.0	....	67.0	67.0	....	60.5	....	59.0

N-5 (#986, p. 287; 1016, p. 333; 1023, p. 353; 1071, p. 438). United States Navy. In south Philadelphia, on League Island. Extremes of observed water level, in feet below land-surface datum: Highest, May 5, 1946, 35.5; lowest, Jan. 3, May 1, 1944, 59. Not pumping when measured.

Daily noon water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	43.6	47.7	48.5	46.9	45.4	38.8	46.2	48.7	41.2	48.9	46.8	45.4
2	46.6	46.8	48.0	44.7	46.0	44.8	46.2	48.9	44.8	48.8	46.8	47.6
3	47.1	48.0	48.2	48.0	42.4	44.4	47.6	48.8	47.2	48.8	46.6	47.9
4	46.5	47.8	48.6	47.0	42.0	45.0	44.4	48.9	48.0	48.2	46.4	48.1
5	46.7	48.0	48.6	45.0	44.8	45.6	44.8	48.3	48.4	46.6	46.4	49.9
6	47.1	48.2	48.6	43.0	....	46.0	44.6	49.4	46.9	47.3	46.9	50.0
7	47.5	47.8	48.6	46.8	45.3	43.8	46.4	47.6	44.4	....	46.6	49.8
8	47.9	47.8	48.7	46.8	45.0	42.2	47.2	47.7	47.0	48.7	46.2	50.0
9	48.2	....	46.4	46.8	44.6	44.0	47.9	45.1	46.7	48.8	46.4	49.8
10	48.8	48.9	48.4	46.3	44.0	45.6	48.0	44.0	47.9	47.6	46.6	49.9
11	48.0	48.8	48.6	47.0	43.2	47.0	48.0	47.5	48.4	46.8	46.2	50.0
12	48.1	48.6	48.6	44.4	44.0	46.4	47.2	47.8	48.6	47.7	46.2	50.0
13	48.1	48.7	48.4	42.6	45.8	47.2	45.6	49.0	46.9	47.9	46.2	50.0
14	48.0	48.6	48.0	47.8	45.7	44.8	46.6	49.0	46.9	47.4	46.0	50.0
15	47.8	48.2	48.1	45.8	45.4	44.0	47.8	49.0	47.2	47.3	46.4	49.9
16	47.9	48.0	45.2	47.6	44.4	47.0	48.8	49.2	47.4	48.6	45.7	48.4
17	48.2	48.2	46.8	48.0	43.0	46.6	48.0	46.1	47.1	48.8	46.1	48.8
18	48.1	48.0	48.2	46.8	42.5	46.4	48.2	48.6	47.1	48.4	46.1	49.3
19	44.8	48.2	48.2	46.0	42.6	48.4	47.4	48.9	47.1	47.2	46.3	49.2
20	47.0	48.3	48.2	42.0	44.6	46.6	46.2	48.7	46.8	47.6	47.0	49.0
21	47.7	48.2	48.4	47.2	44.6	45.8	46.2	46.7	46.1	48.6	46.7	48.8
22	48.7	48.4	47.7	44.5	45.8	44.0	47.6	47.6	46.2	49.0	46.5	48.1
23	48.3	46.2	45.1	47.4	45.0	45.8	....	45.4	46.9	49.4	46.4	46.5
24	48.3	47.7	47.9	45.6	45.0	46.6	....	46.6	47.0	49.2	46.0	47.7
25	48.2	48.5	47.5	45.6	42.8	45.2	....	48.6	47.2	47.8	47.6	47.0
26	48.0	48.0	48.4	42.4	45.0	47.8	....	48.2	48.6	46.4	47.6	47.8
27	48.0	48.8	47.6	43.4	45.6	47.6	....	48.8	48.5	46.8	44.4	48.3
28	48.0	48.9	48.6	45.2	48.0	44.4	....	48.2	47.8	47.0	44.0	48.2
29	48.0	....	48.3	44.4	46.2	44.0	....	48.4	48.1	....	44.0	48.5
30	48.0	....	45.1	46.8	44.0	46.0	47.2	45.5	49.4	47.2	44.0	47.4
31	48.0	....	45.0	....	39.8	....	48.6	40.7	....	47.0	....	46.0

N-8 (\*1071, p. 440). United States Navy. In south Philadelphia, on League Island. Lowest observed water level, in feet below land-surface datum: Jan. 27, 1945, 91. Pumping when measured.

Daily noon water level, in feet below land-surface datum, 1947  
(From recorder charts)

(From Recorder Charts)												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	79.5	..	84	80.5	82	..	80.5	85	....	79	....	81.5
2	87	..	83	78	77	79	81	85	80.5	77.5	....	83
3	87.5	..	83.5	84	72	77	83	85	83	77.5	....	83.5
4	85	..	84	82.5	74	80	76.5	85	83	76.5	....	84
5	83.5	83	84	74	78	80.5	78	..	83.5	72	....	85
6	87	83	84	82.5	77.5	80	78	84.5	81	76	....	82.5
7	88	83	84	83	78	77	81.5	83.5	87.5	77	....	79
8	88.5	83.5	84	82.5	78.5	74	82.5	82.5	81.5	76.5	80.5	80.5
9	88.5	83.5	78	82.5	78	78	82.5	76.5	81.5	77.5	80.5	82.5
10	89	84.5	84	....	78	80	83.5	75	83	76.5	80.5	84
11	88	84	84	83	74.5	81	83	82	83.5	75.5	80	83.5
12	88	84.5	84	78	80.5	82.5	81	82	84	76	80.5	84
13	88	83.5	84	74	79	82	78.5	84.5	80.5	..	80.5	83.5
14	88.5	84	84	83.5	77.5	77	82	84.5	80.5	76	80.5	82.5
15	88.5	83.5	82	82	82	75.5	83	84.5	82.5	76	80	83.5
16	88.5	83.5	81	83.5	77	82	83.5	....	81	75	79.5	83.5
17	....	83.5	83	84	74	79.5	83	....	80.5	77	80.5	85
18	....	83.5	84	82.5	76	81	83.5	....	81.5	74.5	80	85.5
19	....	83.5	84	81.5	74.5	84	81	....	80.5	....	80.5	84.5
20	....	83.5	84	71	77	80.5	78.5	84	80	71.5	80.5	84.5
21	....	84	84	82	78.5	77.5	80	83	78.5	74	81	84
22	....	83	82	77	82	75.5	82.5	82.5	79	75.5	80.5	83
23	....	80	78	83.5	78	80	83.5	78	79.5	77	80.5	80.5
24	....	83	83.5	80.5	78.5	81.5	84	80.5	80	75.5	81	82
25	....	84	84	81	74.5	81.5	84	84	80	72	82.5	81
26	....	84.5	84.5	71.5	79	83	82.5	83.5	82.5	..	82.5	82.5
27	....	84	84.5	72.5	80	83	80.5	83.5	81.5	71.5	80	83
28	....	85	84.5	82	84	78.5	81.5	84	79	....	80	83
29	....	..	83	77.5	81	76	83	83.5	79	....	80	83.5
30	....	..	77	83.5	78	80	82	77	79.5	....	80	83
31	....	..	77.5	..	..	..	85	..	..	79.5	..	78.5

### Schuylkill County

72 (\*817, p. 204; 845, p. 427; 886, p. 634; 906, p. 224; 926, p. 248; 944, p. 240; 986, p. 287; 1016, p. 335; 1023, p. 356; 1071, p. 441). Near Pine Grove. Extremes of observed water level, in feet below land-surface datum: Highest, Aug. 31, 1930, 3.13; lowest, Nov. 5, 1944, 31.78.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	16.75	Apr. 4	16.50	July 4	22.71	Sept. 27	23.80
10	15.79	11	15.70	11	15.30	Oct. 3	23.78
17	4.20	19	14.80	18	13.60	10	24.20
24	7.77	25	15.50	25	16.00	17	24.80
31	12.20	May 2	14.60	Aug. 1	18.40	24	25.30
Feb. 7	12.74	9	13.00	8	19.80	31	25.00
14	16.60	16	16.20	15	20.90	Nov. 7	13.40
21	17.73	23	14.10	22	23.00	14	15.73
28	18.90	30	16.00	29	24.00	Dec. 6	13.60
Mar. 7	18.00	June 6	14.10	Sept. 5	23.80	13	18.00
14	13.10	13	15.00	12	24.90	20	17.80
21	13.90	20	16.80	19	25.80	27	16.70
28	16.00	27	20.79				

Somerset County

16 (\*817, p. 296; 845, p. 427; 886, p. 635; 906, p. 224; 936, p. 249; 944, p. 240; 986, p. 287; 1016, p. 335; 1023, p. 356; 1071, p. 441). At Markleton. Extremes of observed water level, in feet below land-surface datum: Highest, Mar. 28, 1936, 11.98; lowest, Sept. 24, 1944, 16.99.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	15.00	Mar. 31	13.70	July 2	15.33	Oct. 6	15.65
8	15.08	Apr. 7	13.90	14	15.16	13	15.85
13	14.86	14	14.33	21	15.04	20	16.05
20	14.33	20	14.58	28	15.32	27	16.20
27	13.92	28	14.60	31	15.00	29	16.23
Feb. 3	13.83	May 5	14.01	Aug. 4	14.83	Nov. 3	16.00
10	14.48	11	13.86	11	15.20	10	15.40
11	13.69	19	12.88	18	15.10	17	15.17
17	14.42	26	13.26	25	14.35	24	14.86
24	14.40	June 2	13.87	31	14.50	30	14.85
Mar. 3	14.55	9	13.60	Sept. 8	14.95	Dec. 1	15.09
10	14.30	15	14.00	9	15.04	7	14.95
17	13.90	18	14.28	15	14.87	14	14.90
24	13.60	23	14.60	22	14.95	21	15.07
26	13.57	29	14.97	29	15.35	29	15.35

115 (\*840, p. 360; 845, p. 428; 886, p. 635; 906, p. 224; 936, p. 249; 944, p. 240; 986, p. 287; 1016, p. 336; 1023, p. 357; 1071, p. 442). Near Trent. Extremes of observed water level, in feet below land-surface datum: Highest, Dec. 19, 1942, 33.47; lowest, Apr. 17, 1937, 41.70.

Water level, in feet below land-surface datum, 1947

Feb. 11	34.37	June 9	33.80	Aug. 11	34.60	Oct. 20	35.40
Apr. 4	34.55	16	34.00	18	34.30	27	35.50
14	34.45	23	34.20	25	34.50	Nov. 3	35.23
21	34.55	30	34.15	Sept. 1	34.35	10	35.40
28	34.15	July 7	34.20	8	35.13	17	35.30
May 5	34.10	14	34.30	15	35.10	24	35.40
12	34.15	21	34.50	22	35.00	Dec. 1	35.50
19	34.00	28	34.40	29	35.18	8	35.50
26	34.10	30	34.72	Oct. 6	35.20	15	35.20
June 2	34.05	Aug. 4	34.80				

Sullivan County

105 (\*817, p. 298; 845, p. 423; 886, p. 635; 906, p. 225; 936, p. 249; 944, p. 240; 986, p. 288; 1016, p. 336; 1023, p. 357; 1071, p. 442). Near Millview. Extremes of observed water level, in feet below land-surface datum: Highest, Mar. 5, 1945, 18.22; lowest, dry, several periods 1935-1939, 1941, 1943-44, 1946-47.

Water level, in feet below land-surface datum, 1947

Jan. 4	26.02	Apr. 5	21.38	July 5	24.88	Oct. 4	26.38
11	26.10	12	23.72	12	24.03	11	27.00
18	22.44	19	23.84	19	24.31	18	(a)
25	21.33	26	23.78	26	24.79	25	(a)
Feb. 1	21.69	May 3	23.27	Aug. 2	24.94	Nov. 1	(a)
8	22.41	10	23.35	9	25.17	8	24.23
15	24.55	17	23.58	16	25.58	15	24.06
22	24.92	24	23.11	23	25.82	22	24.38
Mar. 1	25.13	31	23.07	30	25.93	29	24.77
8	25.26	June 7	23.28	Sept. 6	25.14	Dec. 6	24.94
15	19.65	14	24.97	13	25.83	13	25.38
22	21.84	21	24.59	20	25.77	20	24.79
29	22.07	28	24.91	27	25.95	27	24.84

a Dry.

Susquehanna County

100 (#777, pp. 167-169; 817, p. 298; 845, p. 429; 886, p. 636; 906, p. 225; 936, p. 250; 944, p. 241; 986, p. 288; 1016, p. 337; 1023, p. 357; 1071, p. 442). At Montrose. Extremes of observed water level, in feet below land-surface datum: Highest, Mar. 18, 1936, 1.80; lowest, Oct. 6, 13, 1939, 11.06.

Daily noon water level, in feet below land-surface datum, 1947

(From recorder charts)											
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. Dec.
1	8.57	3.99	8.62	5.26	4.82	5.25	7.63	5.76	9.17	8.53	9.75 7.50
2	8.58	4.07	8.80	5.29	4.46	5.37	7.68	5.92	9.03	8.60	9.78 7.44
3	8.56	4.37	8.87	5.01	3.55	5.48	7.70	6.00	8.90	8.67	9.78 7.40
4	8.49	4.50	8.90	4.91	3.72	5.62	7.72	6.12	8.70	8.72	9.79 7.38
5	8.50	4.67	8.98	2.89	3.94	5.78	7.73	6.35	8.52	8.89	9.79 7.32
6	8.49	4.78	9.01	2.64	3.73	5.93	7.75	6.58	8.33	8.88	9.80 7.26
7	8.48	4.90	9.05	3.10	3.77	6.09	7.72	6.85	8.18	8.98	9.81 7.22
8	8.47	5.03	9.11	3.54	3.65	6.23	7.53	7.16	8.04	9.02	9.71 7.22
9	8.47	5.35	9.20	3.83	3.98	6.38	6.99	7.47	7.94	9.13	9.65 7.17
10	8.47	5.50	9.22	4.03	4.28	6.52	6.63	7.70	7.88	9.19	9.61 7.11
11	8.49	5.70	9.26	4.20	4.42	6.69	6.38	7.92	7.83	9.20	9.57 7.05
12	8.51	5.85	9.31	4.29	4.58	6.86	6.18	8.09	7.83	9.21	9.38 7.00
13	8.54	6.05	9.34	4.38	4.74	7.04	6.06	8.22	7.84	9.25	9.19 6.97
14	8.57	6.33	9.13	4.54	4.81	7.05	6.01	8.33	7.86	9.30	9.00 6.94
15	8.58	6.61	6.94	4.70	4.81	6.87	6.00	8.43	7.90	9.34	8.82 6.94
16	8.18	6.98	6.80	4.79	4.88	6.69	5.99	8.50	7.95	9.38	8.54 6.87
17	7.82	7.15	6.80	4.90	4.97	6.56	5.88	8.59	7.99	9.40	8.45 6.83
18	7.53	7.35	6.80	5.07	5.04	6.46	5.72	8.62	8.02	9.45	8.34 6.82
19	7.34	7.52	6.82	5.18	5.07	6.41	5.60	8.66	8.05	9.48	8.22 6.81
20	7.16	7.70	6.86	5.28	5.08	6.40	5.50	8.70	8.09	9.52	8.16 6.80
21	5.91	7.88	6.85	5.32	5.11	6.40	5.46	8.76	8.12	9.59	8.07 6.80
22	5.58	7.95	6.77	5.10	4.97	6.43	5.27	8.81	8.12	9.62	.... 6.88
23	5.50	8.02	6.75	4.97	4.80	6.51	4.87	8.88	8.15	9.67	8.08 6.90
24	5.49	8.18	6.18	4.91	4.79	6.60	4.79	8.94	8.18	9.69	8.01 6.94
25	5.43	8.23	5.28	4.94	4.80	6.72	4.80	8.98	8.20	9.70	7.90 7.02
26	5.55	8.32	4.85	4.96	4.78	6.87	4.92	9.00	8.24	9.66	7.81 7.10
27	4.90	8.41	4.83	4.96	4.78	7.01	5.06	9.01	8.29	9.60	7.76 7.18
28	4.75	8.50	4.86	4.95	4.84	7.17	5.16	9.06	8.34	9.70	7.68 7.30
29	4.71		4.92	4.94	4.94	7.36	5.28	9.10	8.40	9.71	7.60 7.36
30	4.72		5.06	4.94	4.99	7.50	5.41	9.12	8.46	9.72	7.51 7.40
31	4.04		5.17		5.12		5.57	9.17		9.73	7.45

Tioga County

106 (#817, p. 299; 845, p. 431; 886, p. 636; 906, p. 226; 936, p. 251; 944, p. 241; 986, p. 289; 1016, p. 337; 1023, p. 358; 1071, p. 443). At Gaines. Extremes of observed water level, in feet below land-surface datum: Highest, Mar. 21, 1936, 8.45; lowest, Sept. 16, 1939, 24.98.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	15.35	Apr. 12	9.90	July 12	12.90	Oct. 11	20.51
11	14.54	19	10.12	19	12.75	18	21.75
18	11.55	26	10.35	26	14.36	25	22.40
25	10.64	May 3	10.44	Aug. 2	15.90	Nov. 1	22.30
Feb. 1	9.86	10	9.80	9	15.73	8	21.16
8	11.85	17	10.55	16	17.55	15	17.75
22	13.77	24	9.38	30	11.60	22	17.15
Mar. 1	14.37	31	10.00	Sept. 6	9.61	29	14.14
8	15.06	June 7	9.60	13	12.27	Dec. 6	14.10
15	14.65	14	10.72	20	14.87	13	13.66
22	11.55	21	12.58	28	16.26	20	12.80
29	11.50	28	13.65	Oct. 4	18.46	27	12.10
Apr. 5	11.08	July 6	14.24				

Union County

122 (\*1071, p. 443). At Laurelton. Extremes of observed water level, in feet below land-surface datum: Highest, May 23, 1947, 6.20; lowest, Oct. 25, 1947, 10.11.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	7.00	Apr. 5	6.80	July 4	7.60	Oct. 5	9.10
10	7.10	12	6.80	12	7.00	11	9.55
15	6.90	18	6.50	18	7.00	17	9.65
24	6.60	26	6.40	25	7.50	25	10.11
31	6.00	May 2	6.50	Aug. 1	7.20	31	9.37
Feb. 7	7.00	9	5.90	8	7.90	Nov. 7	7.95
14	7.47	17	6.40	15	7.90	13	5.70
21	7.47	23	6.20	22	8.50	21	6.90
28	7.50	30	6.40	29	8.40	28	6.87
Mar. 7	7.70	June 6	7.00	Sept. 5	7.90	Dec. 6	7.60
14	6.50	13	6.90	12	8.40	14	7.60
21	6.70	20	7.00	19	8.40	19	7.55
28	6.60	27	7.50	26	8.65	27	7.90

Wayne County

83 (\*817, p. 300; 845, p. 432; 886, p. 637; 906, p. 226; 936, p. 251; 944, p. 242; 1016, p. 338; 1023, p. 359; 1071, p. 444). Near Hawley. Extremes of observed water level, in feet below land-surface datum: Highest, May 23, 1942, 2.08; lowest, Oct. 25, Nov. 15-Dec. 20, 1941, when well was dry.

Water level, in feet below land-surface datum, 1947

Jan. 4	14.66	Apr. 4	12.35	June 28	10.28	Oct. 11	14.36
11	14.37	12	6.06	July 5	10.71	18	14.55
18	13.98	19	7.76	12	8.87	24	14.84
25	13.16	26	7.81	Aug. 2	9.07	Nov. 1	14.96
Feb. 1	11.26	May 3	5.02	9	9.28	8	14.03
8	11.28	10	6.56	16	9.77	15	13.74
15	11.55	17	8.34	30	10.85	22	13.68
22	11.75	24	8.31	Sept. 6	11.29	29	12.62
Mar. 1	12.07	31	8.62	13	11.81	Dec. 6	12.32
8	12.27	June 7	9.06	20	12.47	13	12.42
15	10.78	14	9.55	27	12.87	20	12.53
22	8.82	21	10.08	Oct. 4	13.71	27	12.79
29	8.81						



## RHODE ISLAND

By W. B. Allen

### PROGRAM OF WORK

The observation-well program in Rhode Island was continued during 1947 as a part of the State-wide investigation of mineral resources in cooperation with the Rhode Island Industrial Commission. The main purpose of the ground-water phase of the investigation is to study ground-water conditions and ground-water supplies throughout the State.

The program in Rhode Island during 1947 was directed toward the investigation of ground-water conditions in critical areas where large quantities of water might be pumped for industrial and public-supply use. Detailed reports on the ground-water resources of the Pawtucket and Georgiaville quadrangles, industrial areas to the northwest of Providence, were completed in 1947. It is planned to publish these reports as a part of Geological Bulletins 3 and 4 of the Rhode Island Industrial Commission.

During September a paper on the ground-water resources in the vicinity of Mashapaug Pond, Providence, was presented at the annual meeting of the New England Water Works Association at Boston, Mass.<sup>1/</sup> This paper describes briefly the results of an investigation of ground-water conditions in the Gorham well field and includes general methods for obtaining quantitative data from a controlled pumping test. A brief detailed investigation of ground-water conditions in the vicinity of Exeter School, a State institution in Washington County, was also completed during 1947. This paper, describing the methods of investigation and general ground-water conditions, was presented at the New England meeting of the American Geophysical Union in September. The report is to be published at a later date.

The monthly collection of samples of ground water used to determine chloride content, which was begun in February 1946, was continued in 1947. During the year 36 samples were collected from 3 industrial plants in the  
<sup>1/</sup> Jeffords, R. M., Jr., and Allen, W. B., Ground-water conditions in the vicinity of Mashapaug Pond, Providence, Rhode Island: New England W. W. Jour., vol. LXII, No. 1, pp. 38-61, March 1948.

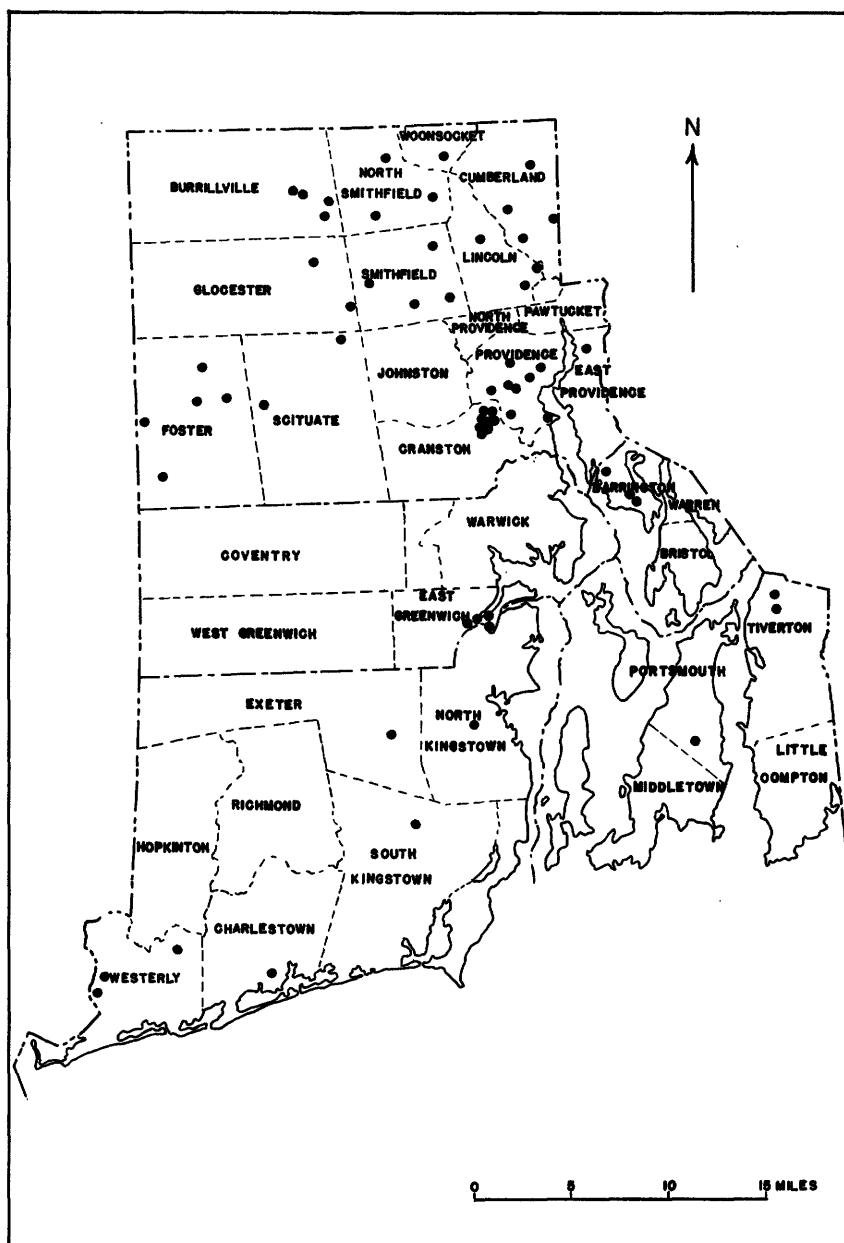


Figure 11.--Map of Rhode Island showing location of observation wells.

city of Providence where it is thought that salt-water encroachment is taking place. The chloride content of these samples was determined at the laboratory of the Division of Sanitary Engineering of the Rhode Island Department of Health, under the direction of Walter J. Shea, acting director.

The observation-well program in Rhode Island was expanded during 1947 as part of the State-wide ground-water investigation. In December 1946 the program included 35 wells, in which measurements of water levels were made at daily, weekly, and monthly intervals. Readings at one well in Washington County, Exeter 8, were discontinued in December 1946. During 1947, 27 wells were added to the program so that, at the end of the year measurements were being made daily in 5 wells, weekly in 22 wells, monthly in 32 wells, and twice a year in 3 wells. A water-stage recorder was operated throughout the year in one well, Providence 48. In all about 3,000 water-level measurements were made. The location of wells included in the program in December 1947 are shown in figure 11.

## FLUCTUATIONS OF WATER LEVEL

Summary of ground-water level data in Rhode Island,  
in feet below land-surface datum

Well	First measured	Lowest observed water level		Highest observed water level		Water level on last day of record in 1947
		Water level	Date	Water level	Date	
Barrington 1	Jan. 10, 1945	46.92	Dec. 15, 1945	43.61	Mar. 3, 1946	45.45
Barrington 7	Oct. 20, 1947	9.60	Oct. 20, 1947	7.36	Dec. 8, 1947	8.75
Barrington 10	Oct. 14, 1947	36.68	Dec. 31, 1947	35.80	Oct. 14, 1947	36.68
Burrillville 21	June 5, 1947	11.93	Oct. 31, 1947	7.23	Nov. 28, 1947	7.97
Burrillville 28	June 9, 1947	22.98	Oct. 31, 1947	18.22	June 9, 1947	19.11
Burrillville 29	June 9, 1947	13.94	Oct. 31, 1947	9.84	June 9, 1947	10.29
Burrillville 54	June 19, 1947	15.36	Aug. 29, Dec. 30, 1947	14.61	Nov. 28, 1947	15.36
Charlestown 18	Oct. 3, 1946	21.19	Oct. 31, 1947	17.55	May 14, 1947	20.70
Cranston 3	Aug. 22, 1938	33.3	Aug. 26, 1945	24.5	Aug. 26, 1938	29.1
Cranston 4	June 22, 1939	36.5	Nov. 9, 1947	22.3	June 22, 1939	35.8
Cranston 12	Oct. , 1938	32.4	May 5, 1947	24.0	Oct. , 1938	30.9
Cranston 36	May 7, 1946	46.5	July 28, 1947	12.8	May 7, 1946	22.5
Cranston 38	May 7, 1946	21.0	Sept. 3, 1947	15.1	May 7, 1946	19.7
Cranston 39	May 7, 1946	12.82	Aug. 29, 1947	9.25	Sept. 2, 1946	11.86
Cranston 40	May 7, 1946	20.60	Nov. 9, 1947	17.93	Sept. 2, 1946	19.99
Cranston 41	May 7, 1946	21.94	Oct. 31, 1947	17.54	May 7, 1946	20.60
Cumberland 64	July 5, 1946	9.73	Mar. 1, 1947	7.83	May 4, 1947	9.26
Cumberland 129	July 18, 1946	15.80	Oct. 31, 1947	6.13	May 4, 1947	9.91
Cumberland 265	Aug. 19, 1946	16.49	Oct. 31, 1947	11.55	Nov. 28, 1947	13.07
Cumberland 315	Aug. 22, 1946	20.48	Oct. 18, 1947	10.68	May 4, 1947	20.48
East Greenwich 3	July 17, 1944	23.5	Aug. 15- Sept. 11, 1944	7.3	Feb. 27, Feb. 28, 1945	10.1
East Providence 1	Dec. 14, 1944	22.5	Aug. 15, 1946	22.1	June 26, 1947	22.2
Exeter 16	July 9, 1946	14.82	Jan. 16, 1947	10.92	June 4, 1947	13.01
Foster 1	Oct. 6, 1947	11.90	Oct. 18, 1947	6.55	Nov. 28, 1947	9.57
Foster 2	Oct. 6, 1947	18.93	Oct. 18, 1947	18.16	Dec. 29, 1947	18.16
Foster 3	Oct. 6, 1947	30.41	Nov. 28, 1947	27.52	Oct. 6, 1947	27.96
Foster 4	Oct. 6, 1947	11.39	Oct. 31, 1947	8.78	Nov. 28, 1947	9.60

Summary of ground-water level data in Rhode Island,  
in feet below land-surface datum--Continued

Well	First measured	Lowest observed water level		Highest observed water level		Water level on last day of record in 1947
		Water level	Date	Water level	Date	
Foster 5	Oct. 6, 1947	10.59	Oct. 18, 1947	8.74	Nov. 28, 1947	9.72
Glocester 12	June 13, 1947	5.22	Oct. 18, 1947	1.95	Dec. 1, 1947	2.62
Glocester 62	June 23, 1947	17.32	Oct. 31, 1947	12.91	June 23, 1947	11.50
Lincoln 84	June 11, 1946	6.78	Oct. 25, 1947	4.42	Mar. 15, 1947	6.39
Lincoln 181	June 4, 1946	3.25	Sept. 29, 1947	1.63	June 10, 1946	3.25
Lincoln 199	Mar. 13, 1946	11.47	Nov. 29, 1946	2.56	May 5, 1947	9.40
North	Nov. 1, 1946	10.8	Aug. 1, 1947	10.1	May 1, 1947	10.1
Kingston 26						
North	Mar. 7, 1946	18.09	Oct. 18, 1947	9.77	May 4, 1947	12.87
Smithfield 2						
North	May 21, 1947	10.92	Oct. 31, 1947	6.83	May 21, 1947	7.84
Smithfield 21						
North	June 19, 1947	14.04	Oct. 31, 1947	10.06	Nov. 28, 1947	10.40
Smithfield 103						
Providence 5	Dec. 16, 1944	9.46	Nov. 3, 1945	7.80	Mar. 4, 1946	8.94
Providence 48	Dec. 16, 1944	10.20	Oct. 20, 1947			9.82
Providence 81	May 26, 1946	25.0	Feb. 2, 1947	18.0	July 20, 1947	22.5
Providence 82	May 25, 1946	22.8	Aug. 4, 1946	14.0	July 20, 1947	18.0
Providence 94	Dec. 23, 1944	28.34	Sept. 1, 1945	11.93	Dec. 14, 1945	12.95
Providence 113	Dec. 16, 1944	49.12	Nov. 9, 1945	47.65	May 6, 1946	47.74
Providence 1110	Nov. 5, 1945	6.78	Nov. 29, 1946	5.94	Dec. 7, 1945	6.63
Providence 1111	Nov. 14, 1946	16.33	Nov. 3, 1947	10.61	Apr. 7, 1947	14.05
Portsmouth 72	Sept. 26, 1947	23.97	Oct. 29, 1947	16.76	Nov. 26, 1947	17.60
Scituate 3	June 13, 1947	18.38	Oct. 31, 1947	7.72	June 13, 1947	12.89
Scituate 4	Oct. 6, 1947	15.71	Dec. 29, 1947	14.87	Nov. 28, 1947	15.71
Smithfield 43	Apr. 16, 1946	15.07	Aug. 29, 1947	9.36	Nov. 28, 1947	11.34
Smithfield 66	June 12, 1947	14.14	Oct. 31, 1947	10.12	Nov. 28, 1947	10.92
Smithfield 71	June 12, 1947	10.38	Oct. 18, 1947	6.47	June 12, 1947	8.06
Smithfield 116	June 24, 1947	8.82	Aug. 29, 1947	7.60	July 31, 1947	8.19
South	Nov. 4, 1947	14.19	Nov. 4, 1947	12.90	Nov. 28, 1947	12.95
Kingston 6						
Tiverton 31	Sept. 26, 1947	7.37	Nov. 1, 1947	a3.01	Dec. 30, 1947	a3.01
Tiverton 47	Oct. 8, 1947	11.53	Oct. 25, 1947	.31	Dec. 27, 1947	.31
Warwick 33	July 17, 1944	23.5	Aug. 16 - Sept. 12, 1944	5.0	Dec. 27, 1945	8.0
Warwick 39	July 1, 1943	39.8	Sept. 10, 1944	10.4	Apr. 27, 1947	13.5
Warwick 40	July 1, 1943	22.6	Sept. 6, 1944	4.6	Aug. 8, 1946	8.4
Westerly 4	Oct. 3, 1946	8.87	July 17, 1947	7.03	Nov. 13, 1947	7.59
Westerly 133	Oct. 17, 1946	17.83	Dec. 5, 1946	11.22	May 8, 1947	12.51
Westerly 178	Oct. 17, 1946	7.13	Nov. 21, 1946	2.75	May 8, 1947	4.51
Woonsocket 18	June 11, 1947	21.19	Oct. 13, 1947	17.55	May 14, 1947	20.70

a Above land-surface datum.

Net change, in feet, in water levels in observation  
wells in Rhode Island, 1947

Well	Net change	Well	Net change
Barrington 1	+0.26	North Smithfield 2	+3.39
Charlestown 18	+0.01	Providence 5	-0.01
Cranston 3a	+1.50	Providence 48a	-4.46
Cranston 4a	-1.70	Providence 81a	+5.50
Cranston 12a	+3.30	Providence 82a	-1.00
Cranston 39a	-1.42	Providence 94b	+8.36
Cranston 40a	-1.04	Providence 113	+1.11
Cranston 41a	-1.78	Providence 1110	+0.03
Cumberland 129	+3.22	Providence 1111	+1.51
Cumberland 265	+2.80	Smithfield 43	+3.31
East Greenwich 3a	+1.90	Warwick 33a	+1.10
East Providence 1a	0	Warwick 39a	+9.50
Exeter 16	+0.98	Warwick 40a	-0.90
Lincoln 84a	-0.32	Westerly 133a	+4.39
Lincoln 181a	-0.24	Westerly 178a	-0.23
Lincoln 199	+2.07		

a Affected by pumping from nearby wells.

b Affected by tide and pumping.

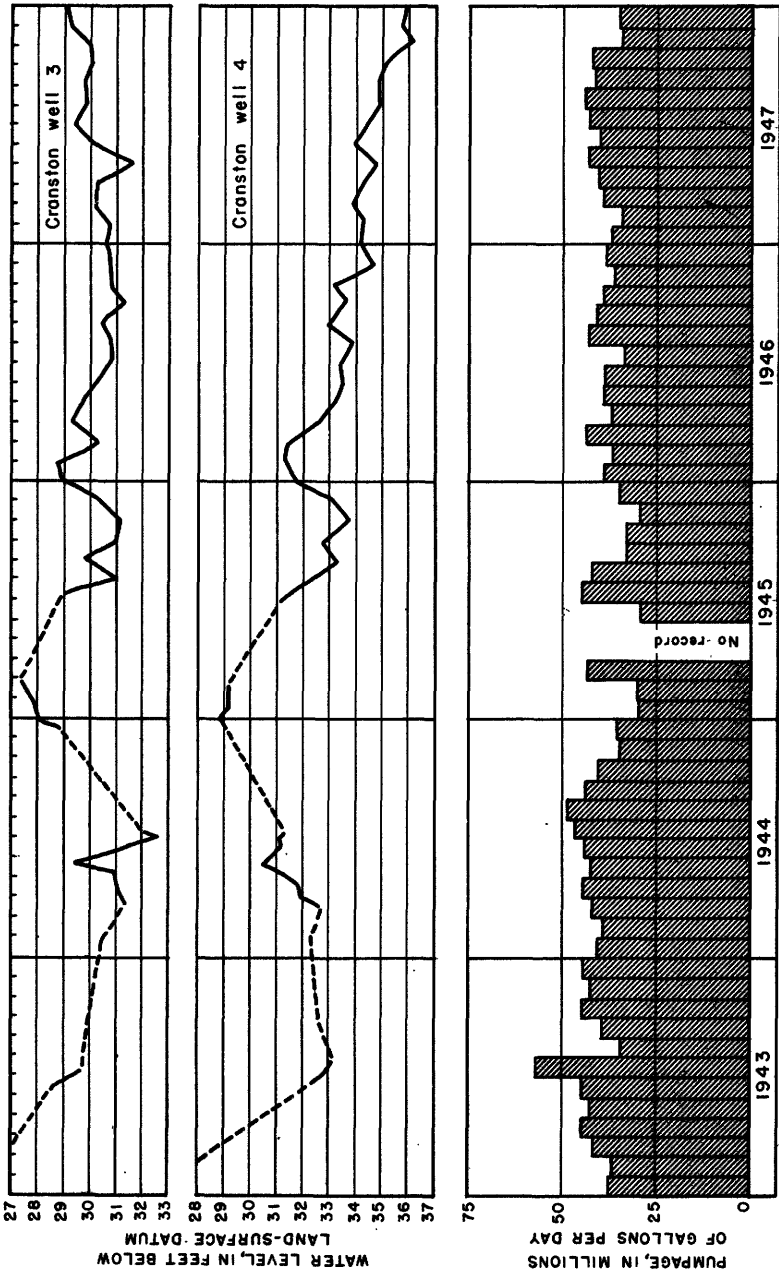


Figure 12.--Graph showing relationship of water-level fluctuations to pumpage in wells Cranston 3, 4, and 36, at the Narragansett Brewing Co. Monthly pumpage data is total for all three wells. Solid bars indicate monthly pumpage in wells Cranston 3 and 4; open bars, pumpage in well Cranston 36.

As indicated in the foregoing table, 18 of the observation wells in Rhode Island included in this report, for which there are complete records in 1947, showed a net rise during the year. The 10 wells that showed net declines for 1947 were affected by nearby pumping wells. Three wells, Charlestown 18, East Providence 1, and Providence 5, showed no change during the year.

In 1947, the precipitation for the State as a whole was 41.53 inches or about 1.2 inches below normal and about 3.8 inches more than in 1946. The precipitation at Providence was 41.71 inches or about 3.3 inches above average, and about 4.0 inches more than in 1946.

The net rise in water levels during 1947 is the result chiefly of increased precipitation. Heavy rains in the spring caused a rise in the water table. Water levels dropped seasonally, beginning in May, due to the needs of plants and to deficient precipitation in August, September, and October. Heavy rains in November recharged many of the aquifers resulting in a net rise during the year in many of the wells.

Water-level measurements have been made since 1939 in wells Cranston 3 and 4 at the Narragansett Brewing Co. in Cranston. Records show that recharge in the Cranston area has been satisfactory through 1945 and still is satisfactory in well Cranston 3 (figure 12). However, in May 1947, a new well, Cranston 36, installed about 880 feet south of Cranston 4, has caused a net decline in ground-water levels in the vicinity of the new well, as shown by the records of water-level measurements obtained in well Cranston 4. The net decline in well Cranston 4, from the beginning of record on June 22, 1939, to the end of 1947, amounted to 13.5 feet. The steady decline from the end of May 1947 to the end of the year coincides with the period of pumping of the new well, Cranston 36, which was pumped at an average rate of 1.2 million gallons a day. Pumpage from the entire well field in 1947 amounted to an average of about 2 million gallons a day.

In order to show examples of trends in ground-water levels in different types of deposits in Rhode Island, the graphs of three observation wells, Cumberland 129, ending in till, Cumberland 265, ending in outwash, and Providence 113, ending in bedrock, are shown in figure 13. It is evident from an examination of these graphs that till deposits show the greatest range in water level and bedrock shows the least.

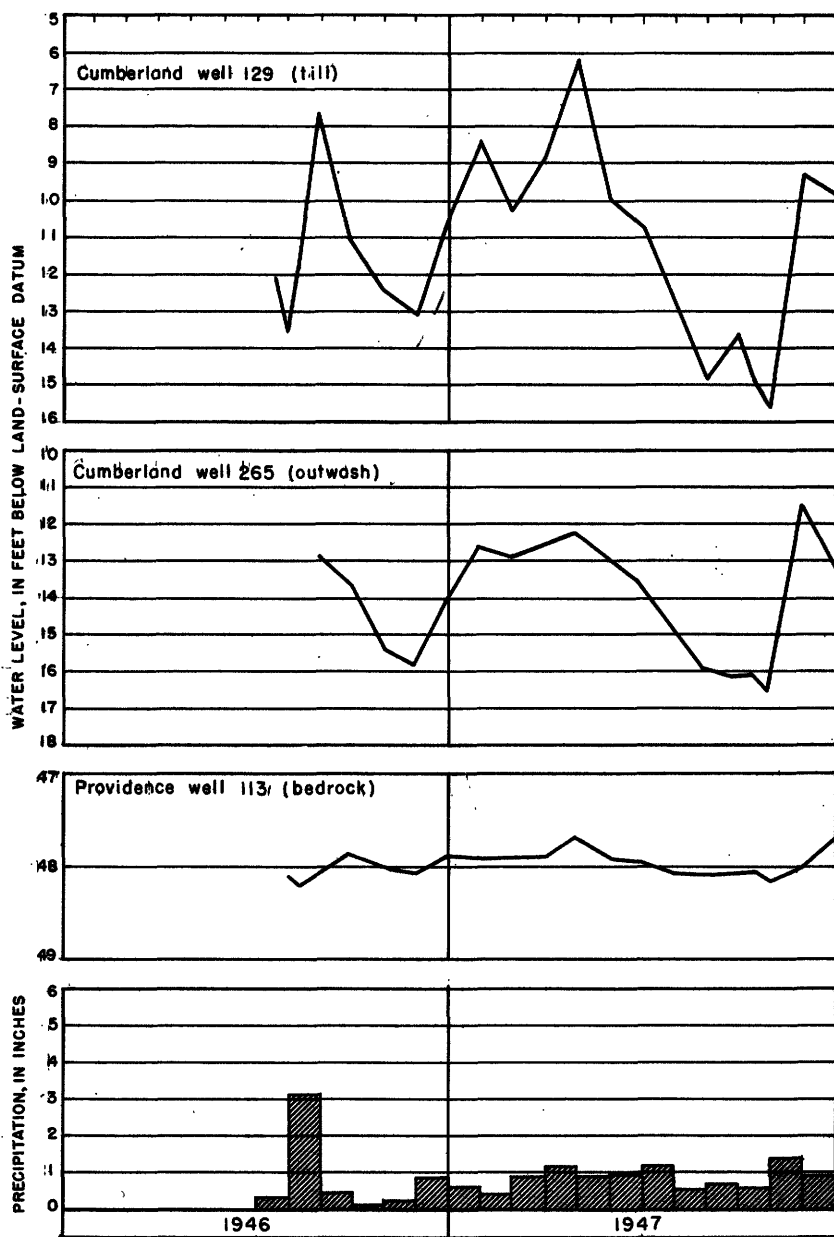


Figure 13.--Graphs showing monthly precipitation at Providence, R. I., and fluctuations of water levels in three types of deposits found in Rhode Island.

## WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Bristol County

Barrington 1 (\*1023, p. 362; 1071, p. 446). Town of Barrington. In Department of Public Works Building, about 200 feet east of Upland Way, 2,500 feet north of Foote Street and 0.9 mile west of Barrington town hall.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	45.45	Apr. 26	44.60	July 26	44.80	Oct. 31	45.90
Mar. 8	44.99	May 31	44.52	Aug. 30	45.34	Nov. 29	45.45
29	44.90	June 28	44.62	Sept. 27	45.69		

Barrington 7. Rhode Island Lace Works, Inc. About 80 feet east of Narragansett Avenue, 300 feet south of Bay Spring Avenue, and 0.5 mile northwest of West Barrington. Used dug industrial well, diameter 4.5 feet, depth 12 feet below land surface. Measuring point, south edge of top of casing, at land-surface datum and about 15 feet above mean sea level. Readings taken after well shut off for 1 hour.

## Water level, in feet below land-surface datum, 1947

Oct. 20	9.49	Nov. 18	8.50	Dec. 1	8.10	Dec. 15	7.64
27	9.60	24	8.49	8	7.36	22	8.75
Nov. 3	8.97						

Barrington 10. Charles Douglas. About 100 feet east of Clarke Road, 1,150 feet south of intersection of Clarke and Nayatt Roads, and 1.1 miles east of Nayatt Point. Unused dug domestic well, diameter 30 inches, depth 38 feet below land surface. Measuring point, at arrowhead on top of timber in well shelter, 3.0 feet above land-surface datum and about 40 feet above mean sea level. Water level, in feet below land-surface datum, 1947: Oct. 14, 35.80; Nov. 3, 35.94; Nov. 26, 35.85; Dec. 31, 36.68.

Kent County

East Greenwich 3 (\*1023, p. 362; 1071, p. 448). East Greenwich Water Co. pumping station 3. About 300 feet west of Post Road (U. S. Highway 1), 150 feet north of Hunt River, and 1.6 miles southwest of East Greenwich.

## Water level, in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	12.1	10.1	10.1	10.1	10.1	10.0	10.1	10.1	10.1	10.3	10.2	10.1
2	12.1	10.1	10.0	10.1	10.1	10.1	10.1	10.1	10.1	10.3	10.2	10.1
3	12.1	10.1	10.1	10.1	10.0	10.1	10.1	10.1	10.1	10.3	10.1	10.1
4	12.1	10.0	10.1	10.0	10.1	10.1	10.1	10.1	10.1	10.3	10.1	10.1
5	12.1	10.1	10.0	10.0	10.1	10.1	10.1	10.2	10.1	10.3	10.1	10.1
6	12.1	10.1	10.0	10.1	10.1	10.1	10.1	10.1	10.1	10.3	10.1	10.1
7	12.1	10.1	10.1	10.1	10.0	10.1	10.1	10.1	10.1	10.3	10.1	10.1
8	12.0	10.1	10.0	10.1	10.0	10.1	10.1	10.1	10.1	10.3	10.1	10.1
9	12.1	10.0	10.0	10.1	10.1	10.0	10.1	10.1	10.1	10.3	10.1	10.1
10	12.0	10.1	10.1	10.1	10.1	10.0	10.1	10.1	10.1	10.3	10.1	10.1
11	12.0	10.1	10.0	10.1	10.1	10.1	10.1	10.1	10.2	10.3	10.1	10.1
12	12.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.2	10.3	10.0	10.1
13	12.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.2	10.3	10.0	10.1
14	12.0	10.1	10.0	10.2	10.0	10.1	10.1	10.1	10.2	10.3	10.0	10.1
15	12.1	10.0	10.0	10.2	10.1	10.0	10.1	10.1	10.2	10.3	10.0	10.0
16	12.0	10.0	10.1	10.2	10.0	10.0	10.2	10.1	10.2	10.3	10.1	10.1
17	12.0	10.0	10.0	10.2	10.1	10.1	10.2	10.1	10.2	10.3	10.1	10.1
18	12.0	10.1	10.0	10.2	10.0	10.1	10.1	10.1	10.2	11.2	10.1	10.1
19	12.1	10.1	10.1	10.2	10.1	10.1	10.1	10.1	10.2	11.2	10.1	10.1
20	11.1	10.1	10.1	10.2	10.0	10.1	10.1	10.1	10.2	11.3	10.1	10.1
21	11.1	10.1	10.1	10.2	10.1	10.1	10.1	10.1	10.2	11.5	10.1	10.1
22	11.1	10.0	10.0	10.1	10.1	10.1	10.1	10.1	10.2	11.6	10.1	10.1
23	10.1	10.1	10.0	10.1	10.0	10.1	10.1	10.1	10.2	11.6	10.1	10.1
24	10.1	10.0	10.0	10.1	10.0	10.1	10.1	10.1	10.2	11.6	10.1	10.1
25	10.1	10.1	10.1	10.0	10.0	10.1	10.1	10.1	10.3	11.6	10.0	10.1
26	10.1	10.1	10.1	10.0	10.0	10.1	10.1	10.1	10.3	11.6	9.1	10.1
27	10.1	10.0	10.1	10.1	10.1	10.1	10.1	10.1	10.3	11.5	10.1	10.1
28	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.3	11.5	10.1	10.1
29	10.1		10.1	10.1	10.1	10.1	10.1	10.1	10.3	11.5	10.0	10.1
30	10.1		10.0	10.1	10.1	10.1	10.1	10.1	10.3	11.5	10.1	10.1
31	10.1		10.0		10.0		10.1	10.1		11.5		10.1



Warwick 33 (\*1023, p. 363; 1071, p. 449). East Greenwich Water Co. pumping station 2. About 100 feet east of Post Road (U. S. Highway 1), 600 feet north of Hunt River, and 1.6 miles southwest of East Greenwich.

Water level, in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	9.1	8.0	9.0	9.0	9.0	8.0	8.0	8.1	8.1	8.2	8.1	8.0
2	9.0	8.0	9.0	9.0	9.0	8.0	8.1	8.1	8.1	8.2	8.1	8.0
3	9.0	8.0	9.0	9.0	9.0	8.0	8.0	8.1	8.1	8.2	8.1	8.0
4	9.1	8.0	9.0	9.0	9.0	8.0	8.1	8.1	8.1	8.2	8.1	8.0
5	9.0	8.0	9.0	9.0	9.0	8.0	8.1	8.1	8.1	8.2	8.1	8.0
6	9.0	8.0	9.0	9.0	9.0	8.0	8.1	8.1	8.1	8.2	8.1	8.0
7	9.0	8.0	9.0	9.0	9.0	8.0	8.1	8.1	8.1	8.2	8.0	8.0
8	9.0	8.0	8.9	9.0	9.0	8.0	8.1	8.1	8.1	8.2	8.0	8.0
9	9.0	8.0	9.0	9.0	9.0	8.0	8.1	8.1	8.1	8.2	8.1	8.0
10	9.0	8.0	9.0	9.1	9.0	8.0	8.1	8.1	8.1	8.2	8.1	8.0
11	9.0	8.0	9.0	9.0	9.0	8.0	8.1	8.1	8.1	8.2	8.1	8.0
12	9.0	8.0	9.0	9.0	9.0	8.0	8.1	8.1	8.1	8.2	8.0	8.0
13	9.1	8.0	8.0	9.0	9.0	8.0	8.1	8.1	8.1	8.2	8.0	8.0
14	9.0	8.0	8.0	9.0	9.0	8.0	8.1	8.1	8.1	8.3	8.0	8.0
15	9.0	8.0	8.0	9.0	9.0	8.0	8.1	8.1	8.1	8.3	8.0	8.0
16	9.0	8.0	8.0	9.0	9.0	8.0	8.1	8.1	8.1	8.3	8.0	8.0
17	9.0	8.0	8.0	9.0	9.0	8.0	8.1	8.1	8.1	8.3	8.0	8.0
18	9.0	8.0	8.0	9.0	9.0	8.0	8.1	8.1	8.1	8.2	8.0	8.0
19	9.0	8.0	8.0	9.0	9.0	8.0	8.1	8.1	8.2	8.2	8.0	8.0
20	9.0	8.0	8.0	9.0	9.0	8.0	8.1	8.1	8.2	8.2	8.0	8.0
21	9.0	8.0	8.0	9.0	9.0	8.0	8.1	8.1	8.2	9.7	8.0	8.0
22	9.0	8.0	8.0	9.0	9.0	8.0	8.1	8.1	8.2	9.7	8.0	8.1
23	8.0	8.0	8.0	9.0	9.0	8.1	8.1	8.1	8.2	9.7	8.0	8.0
24	8.7	8.0	8.0	9.0	9.0	8.1	8.1	8.1	8.2	9.7	8.0	8.0
25	8.7	8.0	8.0	9.0	9.0	8.1	8.1	8.1	8.2	9.7	8.0	8.0
26	8.7	7.8	8.0	9.0	9.0	8.1	8.1	8.1	8.2	9.7	8.0	8.0
27	8.7	8.0	8.0	9.0	9.0	8.1	8.1	8.1	8.2	9.7	8.0	8.0
28	8.7	8.0	8.0	9.0	9.0	8.0	8.1	8.1	8.2	9.7	8.0	8.0
29	8.7	8.0	8.0	9.0	9.0	8.0	8.1	8.1	8.2	9.7	8.0	8.1
30	8.0	8.0	9.0	9.0	9.0	8.0	8.1	8.1	8.2	9.7	8.0	8.0
31	8.0	8.0	8.0	9.0	9.0	8.1	8.1	8.1	8.2	9.8	8.0	8.0

Warwick 39 (\*1023, p. 365; 1071, p. 450). U. S. Naval Advance Base Depot pumping station 9A, Davisville. About 1,250 feet east of Post Road (U. S. Highway 1), 0.1 mile north of Hunt River, and 1.6 miles southwest of East Greenwich.

Water level, in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	23.0	23.4	23.5	23.0	21.4	21.3	22.8	23.6	25.4	15.8	26.6	13.0
2	23.0	23.6	23.3	22.7	21.3	21.5	22.9	23.8	25.6	15.6	14.9	22.6
3	23.0	23.0	22.0	22.7	20.8	21.0	23.6	23.7	25.6	15.8	16.4	22.5
4	22.7	23.3	22.5	22.8	20.2	21.8	22.8	23.3	25.5	25.7	16.5	22.8
5	22.9	23.3	22.5	12.3	20.8	21.8	12.8	23.7	16.7	25.5	16.4	13.3
6	22.2	23.3	22.9	12.2	20.9	21.7	22.6	23.6	25.5	25.7	14.8	22.7
7	22.0	15.7	22.8	12.0	12.8	21.7	22.9	23.8	25.6	25.6	14.9	23.2
8	22.2	12.5	22.3	12.0	21.0	12.8	22.9	24.5	17.1	25.5	24.9	13.6
9	23.6	12.5	22.7	12.0	21.0	21.7	22.9	24.3	25.7	15.7	25.2	22.7
10	23.8	23.2	23.0	11.8	20.4	21.5	23.1	24.4	16.6	25.3	14.6	13.2
11	23.3	23.5	23.3	11.7	20.6	21.5	23.3	24.5	26.2	16.1	25.0	22.9
12	23.1	23.6	22.6	11.9	20.8	21.8	13.1	24.3	26.4	25.6	24.7	22.9
13	23.2	23.6	22.8	11.2	21.0	22.3	23.4	14.5	26.5	16.8	13.5	22.7
14	23.3	23.6	22.7	21.8	21.0	12.1	23.4	24.3	26.5	25.8	12.5	22.9
15	13.5	23.3	22.7	22.0	11.9	21.5	23.5	14.5	26.2	16.1	13.4	23.0
16	23.6	23.5	22.5	22.2	21.0	21.7	23.7	24.8	26.4	26.3	24.2	23.0
17	23.8	23.5	23.1	11.4	11.7	22.0	23.7	14.3	26.5	16.1	12.9	13.1
18	23.8	23.7	23.0	21.2	21.2	22.0	23.9	24.5	16.7	26.7	13.0	13.2
19	13.3	23.7	23.2	11.4	21.7	22.1	23.8	25.0	16.6	16.3	13.4	13.0
20	23.7	23.7	23.3	11.4	21.7	22.0	23.6	25.2	26.2	26.3	22.9	23.2
21	23.5	12.7	23.3	21.2	21.4	21.7	13.8	25.3	26.1	25.8	23.7	12.3
22	22.8	23.4	22.5	21.3	21.4	21.7	23.5	25.6	26.4	26.8	23.6	23.0
23	23.4	23.6	22.8	11.4	21.5	22.4	23.0	25.3	26.3	16.3	24.0	23.2
24	23.6	23.8	23.1	21.3	21.3	22.5	23.8	14.8	25.6	16.3	24.0	12.3
25	23.7	....	23.0	11.3	11.3	22.4	13.2	25.5	15.7	27.3	24.0	12.3

## Warwick 39--Continued.

## Water level, in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	23.3	13.4	22.8	10.8	21.4	21.9	22.7	25.6	25.4	27.1	12.7	12.3
27	23.5	23.4	23.1	10.4	21.5	21.9	22.7	25.0	25.3	16.4	12.2	12.4
28	23.5	23.7	23.2	10.5	21.5	21.9	13.3	25.6	25.4	16.3	23.7	23.7
29	23.4		22.9	21.5	21.6	22.1	13.2	25.5	25.6	16.8	23.5	23.0
30	23.4		23.1	21.7	11.2	22.5	23.8	15.5	25.6	26.8	23.9	23.2
31	23.7		22.9		11.3		23.5	25.3		26.6		13.5

Warwick 40 (\*1023, p. 366; 1071, p. 450). U. S. Naval Advance Base Depot pumping station 14A, Davisville. About 1,250 feet east of Post Road (U. S. Highway 1), 200 feet north of Hunt River and 1.6 miles southwest of East Greenwich.

## Water level, in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	7.1	7.0	9.2	7.0	5.8	6.1	8.6	7.6	10.0	9.8	12.2	7.2
2	7.0	7.0	9.0	6.6	5.3	6.0	7.1	9.7	11.2	10.0	12.3	9.0
3	7.0	7.0	7.1	6.7	5.1	6.4	7.5	9.7	11.3	12.0	12.3	8.8
4	7.2	7.0	7.3	6.7	5.2	6.3	7.1	7.8	11.6	9.7	12.3	7.0
5	7.2	7.2	7.3	9.4	7.2	6.4	9.1	9.8	12.3	10.0	12.5	8.5
6	7.2	8.8	6.8	9.7	6.8	7.8	9.3	8.3	12.4	10.2	10.8	7.8
7	7.2	7.3	6.5	9.6	8.8	6.7	9.4	8.3	12.4	10.2	10.8	8.1
8	7.2	6.6	8.3	9.7	5.5	6.2	7.1	8.5	12.4	10.2	12.2	7.3
9	7.5	6.4	8.4	9.7	5.7	6.7	7.3	8.7	12.3	12.1	10.2	8.2
10	9.3	7.2	8.5	8.2	5.5	6.6	7.3	8.7	12.2	10.3	12.1	9.4
11	9.4	8.8	7.0	6.8	8.4	7.7	7.5	8.1	10.5	9.6	12.2	7.3
12	9.6	7.1	8.5	5.9	5.4	6.5	9.3	10.0	12.5	11.4	12.1	7.4
13	7.2	7.3	6.6	5.7	8.5	6.8	9.1	10.3	12.7	11.8	9.5	7.8
14	7.3	7.4	6.5	8.2	8.6	6.6	9.0	8.3	12.5	10.0	9.3	8.0
15	9.3	8.7	8.1	6.0	7.9	6.3	9.2	8.5	12.7	12.1	9.0	8.1
16	7.3	8.5	8.0	6.1	7.8	6.4	7.8	8.5	10.7	10.3	7.2	9.0
17	7.3	8.7	8.2	5.7	7.7	7.5	7.8	10.2	10.0	12.3	8.7	9.1
18	9.1	7.3	7.0	5.7	7.8	7.1	8.0	8.3	12.6	10.7	8.8	9.0
19	9.0	7.3	7.3	8.3	6.6	6.4	7.8	9.0	12.5	12.1	9.3	9.3
20	7.0	7.2	8.8	7.8	6.0	6.3	9.3	9.0	10.2	12.3	7.5	10.0
21	7.2	7.3	7.3	5.7	6.0	8.2	9.7	8.9	12.2	12.0	7.8	6.5
22	6.9	8.8	8.7	5.9	7.7	8.3	9.6	9.3	12.3	10.3	7.8	8.5
23	7.3	8.7	8.5	7.8	7.7	8.8	9.3	9.3	12.0	12.3	7.8	8.3
24	7.3	8.8	6.7	5.8	7.6	8.7	7.3	10.8	9.5	12.3	7.7	6.5
25	8.8	...	6.8	5.8	7.6	6.1	7.4	11.2	11.8	10.1	9.0	8.3
26	9.0	7.3	8.2	5.5	7.7	6.2	9.7	9.3	9.6	10.1	7.7	6.5
27	7.0	7.3	6.7	5.3	7.7	6.3	9.8	9.6	12.1	12.4	6.7	6.3
28	...	7.3	6.8	5.5	7.7	8.8	9.2	9.5	12.0	12.5	8.6	6.5
29	7.0		9.3	5.6	6.2	8.5	9.2	10.0	12.0	10.2	8.7	8.4
30	7.0		9.5	6.1	6.1	8.5	7.7	11.2	12.1	12.3	8.8	8.3
31	7.3		6.8		7.5		7.6	11.0		10.0		8.4

## Newport County

Portsmouth 72. St. Mary's Church (parish house). About 30 feet west of East Main Road, 3,200 feet north of intersection of East Main Road and Mitchell Lane, and 3,200 feet northeast of the Portsmouth-Middletown town line. Unused dug domestic well, diameter 36 inches, depth 42 feet below land surface. Measuring point, west edge hole in cement cover, at land-surface datum, and about 235 feet above mean sea level.

## Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 26	22.68	Oct. 29	23.97	Nov. 19	16.79	Dec. 11	17.38
Oct. 14	23.47	Nov. 5	23.94	26	16.76	17	17.70
22	23.84	12	22.95	Dec. 3	16.95	26	17.60

Tiverton 31. North Tiverton Water District, test well 31. Boessoneau well field, about 0.1 mile west of Eight Rod Way, 0.7 mile north of intersection of Eight Rod Way and Mile Road, and 1.5 miles northeast of Tiverton. Unused driven well, diameter 8 inches, depth 21.4 feet below land surface. Measuring point, south edge of casing, 3.6 feet above land-surface datum, and 255 feet above mean sea level.

Water level, in feet with reference to land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 26	-0.65	Oct. 25	-6.14	Nov. 22	+0.74	Dec. 13	+2.68
Oct. 6	a-3.80	Nov. 1	a-7.37	29	+2.93	20	+2.84
14	-4.27	8	a-2.96	Dec. 6	+2.98	30	+3.01
18	-5.43	17	a-1.80				

a Well field pumping.

Tiverton 47. North Tiverton Water District well 16. McIntyre well field, about 900 feet east of Eight Rod Way, 0.6 mile south of intersection of Eight Rod Way and Mile Road, and about 1 mile east of Tiverton. Unused driven well, diameter 2½ inches, depth 26.8 feet below land surface. Measuring point, south edge of casing, 1.8 feet above land-surface datum, and about 160 feet above mean sea level.

Water level, in feet below land-surface datum, 1947

Oct. 8	a10.60	Oct. 25	a11.53	Nov. 22	a 2.53	Dec. 13	a 2.77
14	a10.59	Nov. 1	a 3.79	29	a 2.17	20	a 2.77
15	6.17	8	a .79	Dec. 6	a 2.46	27	.31
18	a 9.49	15	a 1.25				

a Well field pumping.

Providence County

Burrillville 21. Cyrille Bruynel. About 25 feet north of Tarklin Road, 1.25 miles southwest of intersection of Tarklin Road and Douglas Pike, and 1.1 miles south of Oak Valley. Unused dug domestic well, diameter 24 inches, depth 15 feet below land surface. Measuring point, north edge of top of stone casing, at land-surface datum, and about 400 feet above mean sea level.

Water level, in feet below land-surface datum, 1947

June 5	8.90	Aug. 29	10.98	Oct. 18	11.46	Nov. 28	7.23
26	7.79	Sept. 29	10.80	31	11.93	Dec. 30	7.97
Aug. 1	8.82						

Burrillville 28. Wanskuck Wool Co. well 6. In shelter about 100 feet northeast of Douglas Pike, 0.2 mile north of Wanskuck Wool Co. plant, and 0.1 mile northwest of Mohegan. Unused drilled industrial well, diameter 4 inches, depth 225 feet below land surface. Measuring point, southwest edge of top of iron casing, 1 foot above land-surface datum, and about 360 feet above mean sea level.

Water level, in feet below land-surface datum, 1947

June 9	18.22	Aug. 1	19.81	Sept. 29	21.87	Oct. 31	22.98
26	18.52	29	22.13	Oct. 18	22.75	Nov. 28	19.11

Burrillville 29. Wanskuck Wool Co. well 5. In shelter 70 feet northeast of Douglas Pike, 500 feet northeast of Wanskuck Wool Co. plant, in village of Mohegan. Unused drilled industrial well, diameter 7 inches, depth 340 feet below land surface. Measuring point, south edge of top of iron casing in cement block, at land-surface datum, and about 340 feet above mean sea level.

Water level, in feet below land-surface datum, 1947

June 9	9.84	Aug. 29	13.07	Oct. 18	13.58	Nov. 28	10.08
26	10.42	Sept. 29	12.77	31	13.94	Dec. 30	10.29
Aug. 1	11.20						

Burrillville 54. Vernon Rug Mill. About 100 feet northeast of Tarkiln Road, 675 feet southwest of Douglas Pike, in village of Oak Valley. Unused dug industrial well, diameter 36 inches, depth 15.8 feet below land surface. Measuring point, south edge of inner rim of cement casing, at land-surface datum, and about 280 feet above mean sea level.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 19	14.70	Aug. 29	15.36	Oct. 18	15.11	Nov. 28	14.61
26	14.67	Sept. 29	14.72	31	14.97	Dec. 30	15.36
Aug. 1	15.18						

Cranston 3 (\*1023, p. 368; 1071, p. 451). Narragansett Brewing Co. pumping station 1, about 100 feet east of New York, New Haven & Hartford Railroad tracks, and 1,250 feet south of Cranston Street bridge over railroad tracks, Cranston.

Water level, in feet below land-surface datum, 1947

Jan. 6	30.9	Apr. 7	30.7	July 6	29.1	Sept. 27	30.0
13	30.7	15	32.0	13	29.7	Oct. 19	30.3
20	30.3	21	31.0	20	30.4	26	30.0
27	30.8	29	31.6	27	29.8	Nov. 2	30.0
Feb. 3	30.7	May 5	31.3	Aug. 3	29.8	9	30.1
10	30.5	12	31.0	10	29.9	16	29.7
17	30.7	19	30.3	17	30.0	23	29.5
24	30.7	26	30.1	24	30.0	30	29.3
Mar. 3	30.1	June 1	30.0	31	29.8	Dec. 7	29.4
10	29.9	8	30.0	Sept. 7	30.3	14	29.2
17	30.5	15	29.7	13	30.1	21	29.2
24	30.3	22	29.7	21	30.5	28	29.1
31	30.2	29	29.4				

Cranston 4 (\*1023, p. 368; 1071, p. 451). Narragansett Brewing Co. pumping station 2, about 175 feet east of New York, New Haven & Hartford Railroad tracks and 1,720 feet south of Cranston Street bridge over railroad tracks, Cranston.

Water level, in feet below land-surface datum, 1947

Jan. 6	33.8	Apr. 7	34.2	July 6	34.1	Oct. 5	35.7
13	33.8	15	34.3	13	34.5	12	35.5
20	34.1	21	34.5	20	35.2	19	35.7
27	33.8	29	34.7	27	34.5	26	35.9
Feb. 3	34.2	May 5	34.9	Aug. 3	34.9	Nov. 2	36.2
10	34.1	12	34.4	10	34.9	9	36.5
17	34.1	19	33.7	17	35.0	16	35.7
24	34.1	26	33.9	24	35.1	23	35.5
Mar. 3	33.9	June 1	33.9	31	34.8	30	35.7
10	33.8	8	34.4	Sept. 7	35.1	Dec. 7	35.3
17	34.0	15	34.2	13	35.0	14	35.5
24	34.1	22	34.4	21	35.1	21	35.3
31	34.2	29	34.4	27	35.1	28	35.8

Cranston 12 (\*1071, p. 452). Narragansett Brewing Co., pumping station 3, about 30 feet east of railroad siding, New York, New Haven & Hartford Railroad, and 1,350 feet south of Cranston Street bridge over railroad tracks, Cranston.

Water level, in feet below land-surface datum, 1947

Jan. 6	31.7	Apr. 7	31.2	July 6	30.0	Oct. 12	31.5
13	30.9	15	32.3	13	30.2	19	31.7
20	30.9	21	31.9	20	30.8	26	30.9
27	31.4	29	32.2	27	30.7	Nov. 2	31.3
Feb. 3	31.2	May 5	32.4	Aug. 3	30.4	9	31.4
10	31.0	12	31.3	10	31.0	16	30.9
17	31.1	19	31.2	24	30.7	23	30.8
24	30.9	22	30.8	31	30.7	30	30.7
Mar. 3	30.8	June 1	30.5	Sept. 7	31.4	Dec. 7	30.8
10	30.7	6	30.5	13	31.2	14	30.8
17	30.7	15	30.3	21	31.4	21	30.8
24	30.8	22	30.2	27	31.1	28	30.9
31	30.7	29	30.3	Oct. 5	31.8		

Cranston 38. Narragansett Brewing Co. pumping station 4. Observation well 1. 4.1 feet west of Cranston 36, about 200 feet east of New York, New Haven & Hartford Railroad tracks, and about 2,600 feet south of Cranston Street bridge over railroad tracks, Cranston. Diameter  $2\frac{3}{8}$  inches, depth 30.4 feet below land surface. Measuring point, top edge of casing, 7.2 feet below land-surface datum, and 45.23 feet above mean sea level.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
May 7, 1946	12.8	July 14, 1947	a 19.6	Oct. 14, 1947	a 20.5
Aug. 8	13.2	21	a 19.6	20	a 20.7
12	12.9	28	a 19.8	27	a 20.7
20	13.0	Aug. 4	a 19.9	Nov. 2	a 21.0
26	12.9	11	a 20.1	9	a 20.9
Apr. 29, 1947	16.3	18	a 20.3	16	a 20.4
May 26	a 19.1	25	a 20.1	23	a 20.1
June 2	a 18.5	Sept. 3	a 21.0	Dec. 1	a 20.3
9	a 19.2	8	a 19.7	8	a 20.1
16	a 19.6	15	a 19.9	15	a 20.0
22	a 19.5	22	a 21.0	22	a 20.0
29	a 19.8	28	a 20.4	29	a 19.7
July 7	a 19.5	Oct. 6	a 20.5		

a Pumping.

Cranston 39 (\*1071, p. 452). Narragansett Brewing Co. observation well 2. About 200 feet east of New York, New Haven & Hartford Railroad tracks, and about 2,500 feet south of Cranston Street bridge over railroad tracks, Cranston.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	10.39	June 30	11.42	Sept. 3	12.00	Nov. 3	12.46
Mar. 1	10.58	July 7	11.20	8	11.70	9	12.60
15	10.23	14	11.40	15	11.70	16	12.10
31	10.29	21	11.50	22	12.20	23	12.00
Apr. 29	10.60	28	11.50	28	12.10	28	12.12
May 26	10.60	Aug. 1	12.53	30	12.59	Dec. 1	11.80
June 2	10.70	4	11.60	Oct. 6	12.20	8	12.10
4	11.38	11	11.70	14	12.10	15	11.70
9	11.00	18	11.90	20	12.30	22	11.80
16	11.10	25	11.90	27	12.40	29	11.90
22	11.20	29	12.82	Nov. 2	12.50	29	11.86
29	11.40						

Cranston 40 (\*1071, p. 452). Narragansett Brewing Co., observation well 3. About 500 feet east of New York, New Haven, & Hartford Railroad tracks and about 2,500 feet south of Cranston Street bridge over railroad tracks, Cranston.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	19.00	June 30	19.45	Sept. 8	19.90	Nov. 3	20.49
Mar. 1	19.24	July 7	19.30	15	20.00	9	20.60
15	18.90	14	19.50	22	20.00	16	20.00
31	18.98	21	19.70	28	20.10	23	19.90
Apr. 29	19.23	28	19.60	30	20.03	28	19.98
May 26	18.80	Aug. 1	19.79	Oct. 6	20.20	Dec. 1	19.80
June 2	19.00	4	19.70	14	20.10	8	19.90
4	18.93	11	19.80	20	20.30	15	19.80
9	19.20	18	19.90	27	20.40	22	20.10
16	19.20	25	19.90	31	20.25	29	20.00
22	19.30	29	19.93	Nov. 2	20.50	29	19.99
29	19.50	Sept. 3	19.70				

Cranston 41 (\*1071, p. 453). Narragansett Brewing Co., observation well 4. About 600 feet east of New York, New Haven, & Hartford Railroad tracks and about 3,000 feet south of Cranston Street bridge over railroad tracks, Cranston.

Water level, in feet below land-surface datum, 1947

Jan. 28	18.90	June 30	20.12	Sept. 8	20.30	Nov. 3	21.08
Mar. 1	19.19	July 7	19.90	15	20.40	9	21.20
15	18.74	14	20.20	22	20.60	16	20.60
31	18.88	21	20.20	28	20.60	23	20.50
Apr. 29	19.48	28	20.10	30	20.93	28	20.74
May 26	19.20	Aug. 1	20.85	Oct. 6	20.80	Dec. 1	20.50
June 2	19.30	4	20.20	14	20.70	8	20.60
4	19.87	11	20.30	20	20.90	15	20.40
9	19.70	18	20.50	27	21.10	22	20.60
16	19.90	25	20.40	31	21.94	29	20.60
22	20.00	29	21.16	Nov. 2	21.10	29	20.60
29	20.10	Sept. 3	20.30				

Cumberland 64 (\*1071, p. 453). Rev. W. Bath (parsonage). On north side of Sneece Pond Road, about 0.25 mile west of Arnold Mills.

Water level, in feet below land-surface datum, 1947

Jan. 3	9.64	Mar. 1	9.73	May 4	7.83	June 30	8.07
28	9.50	31	8.96	June 4	7.95	Oct. 18	9.26

Cumberland 129 (\*1071, p. 453). Thomas Cooney Estate. About 90 feet west of Mendon Road, 0.4 mile south of Cumberland Hill.

Water level, in feet below land-surface datum, 1947

Jan. 3	10.67	May 4	6.13	Aug. 29	14.95	Oct. 31	15.80
28	8.40	June 4	9.93	Sept. 29	13.72	Nov. 28	9.34
Mar. 1	10.30	30	10.64	Oct. 18	15.12	Dec. 30	9.91
31	8.79	Aug. 1	12.66				

Cumberland 265 (\*1071, p. 453). Clarence Lawton. About 55 feet south of Scott Road, 0.25 mile northeast of Ashton.

Water level, in feet below land-surface datum, 1947

Jan. 3	14.06	May 4	12.20	Aug. 29	15.89	Oct. 31	16.49
28	12.55	June 4	12.94	Sept. 29	16.08	Nov. 28	11.55
Mar. 1	12.88	30	13.56	Oct. 18	16.03	Dec. 30	13.07
31	12.51	Aug. 1	14.71				

Cumberland 315 (\*1071, p. 453). J. L. Carpenter. Northeast corner of Abbott Run Valley and Bear Hill Roads and 0.9 mile south of Abbott Run village.

Water level, in feet below land-surface datum, 1947

Jan. 3	18.13	Mar. 1	12.97	May 4	10.68	June 30	13.60
28	12.38	31	11.27	June 4	12.07	Oct. 18	20.48

East Providence 1 (\*1071, p. 454). Rumford Chemical Co. About 120 feet south of Newman Avenue, 800 feet northeast of Greenwood Avenue, and 0.6 mile south of Pawtucket Avenue bridge over railroad tracks, Rumford.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	22.2	Apr. 2	22.2	July 31	22.2	Oct. 30	22.1
Feb. 27	22.2	May 28	22.1	Aug. 28	22.1	Dec. 5	22.1
Mar. 25	22.2	June 26	22.1	Sept. 30	22.2	23	22.2

Foster 1. Old Staples Farm. About 40 feet east of Rams Tail Road, 4,000 feet north of the intersection of Rams Tail Road and Central Pike, and about 0.5 mile south of South Foster. Unused dug domestic well, diameter 20 inches, depth 15 feet below land surface. Measuring point, west edge of stone casing in well shelter, at land-surface datum, and about 380 feet above mean sea level.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level
Oct. 6	11.45	Oct. 31	10.25	Dec. 29	9.57
18	11.90	Nov. 28	6.55		

Foster 2. Winsor Road well. About 20 feet west of Winsor Road, 3,500 feet southeast of the junction of Winsor and Boss Roads, and about 1.75 miles northwest of South Foster. Unused dug domestic well, diameter 20 inches, depth 21.8 feet below land surface. Measuring point, north edge of stone casing in well shelter, at land-surface datum, and about 525 feet above mean sea level.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level
Oct. 6	18.32	Oct. 31	18.48	Dec. 29	18.16
18	18.93	Nov. 28	18.60		

Foster 3. Clarence S. Cook. About 60 feet north of Danielson Pike, 40 feet west of Cucumber Hill Road, at the Connecticut-Rhode Island State line. Unused dug domestic well, diameter 24 inches, depth 35.5 feet below land surface. Measuring point, east edge of stone casing in well shelter, at land-surface datum, and about 610 feet above mean sea level.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level
Oct. 6	27.52	Oct. 31	28.59	Dec. 29	27.96
18	28.49	Nov. 28	30.41		

Foster 4. Cucumber Hill well. About 12 feet north of Cucumber Hill Road, 1.5 miles southeast of intersection of Cucumber Hill and South Killingly Roads, and 1.7 miles southeast of North Sterling Church. Unused dug domestic well, diameter 24 inches, depth 17.4 feet below land surface. Measuring point, southwest edge of stone casing, at land-surface datum, and about 605 feet above mean sea level.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level
Oct. 6	11.02	Oct. 31	11.39	Dec. 29	9.60
18	11.28	Nov. 28	8.78		

Foster 5. S. J. Chatterson. About 20 feet east of Foster Center Road, 3,000 feet southeast of intersection of Foster Center Road and Danielson Pike, and 0.75 mile north of Foster Center. Unused dug domestic well, diameter 30 inches, depth 11.7 feet below land surface. Measuring point, west edge of stone casing, at land-surface datum, and about 465 feet above mean sea level.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level
Oct. 6	10.47	Oct. 31	10.06	Dec. 29	9.72
18	10.59	Nov. 28	8.74		

Glocester 12. Glocester Country Club. About 10 feet east of Philips Lane, 600 feet northeast of intersection of Philips Lane and Putnam Pike, and 1,800 feet east of Harmony. Unused dug well, diameter 24 inches, depth 6.9 feet below land surface. Measuring point, inside stone well casing, sharp rock west side, at land-surface datum, and about 385 feet above mean sea level.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 13	2.20	Aug. 29	4.69	Oct. 18	5.22	Dec. 1	1.95
26	2.19	Sept. 29	4.29	31	3.95	29	2.62
Aug. 1	4.04						

Glocester 62. Raymond H. Price. About 70 feet south of Douglas Hook Road, 1,300 feet east of intersection of Douglas Hook and Cooper Roads, and 1,800 feet west of Pine Tree Chapel. Unused dug domestic well, diameter 23 inches, depth 19.4 feet below land surface. Measuring point, inside stone well casing, granite block southeast side, at land-surface datum, and about 440 feet above mean sea level.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 23	12.91	Aug. 1	14.65	Sept. 29	16.04	Oct. 31	17.32
26	14.40	29	16.95	Oct. 18	17.06	Nov. 28	11.50

Lincoln 84 (\*1071, p. 454). Lincoln Bleachery & Dye Works, Lonsdale. About 5 feet north of machine shop, 0.1 mile northwest of Lonsdale.

Water level, in feet below land-surface datum, 1947

Jan. 31	5.33	Apr. 26	5.50	July 19	6.10	Oct. 11	6.23
Feb. 7	4.97	May 5	4.75	25	5.63	18	6.52
15	5.90	10	5.09	Aug. 2	5.85	25	6.78
22	5.70	17	5.71	9	6.14	Nov. 1	6.28
28	6.00	24	5.47	15	6.05	8	6.27
Mar. 8	4.74	29	5.49	25	6.07	15	5.28
15	4.42	June 7	5.65	29	5.90	22	6.28
22	5.36	13	5.26	Sept. 5	5.63	29	6.05
29	5.75	20	5.78	12	6.02	Dec. 6	6.35
31	5.95	28	5.81	20	6.00	13	6.35
Apr. 5	5.25	July 3	5.98	26	6.04	20	6.29
12	5.47	12	5.95	Oct. 4	6.10	27	6.39
21	5.71						

Lincoln 181 (\*1071, p. 454). Sayles Finishing Plants, Inc. upper bleachery well. About 0.2 mile southwest of Walker Street, and 0.2 mile southwest of Scott Pond.

Water level, in feet below land-surface datum, 1947

Jan. 27	2.91	Apr. 28	2.32	July 28	2.33	Nov. 12	3.17
Mar. 3	2.75	May 26	2.00	Aug. 29	2.92	24	2.83
31	2.79	June 7	2.00	Sept. 29	3.25	Dec. 30	3.25

Lincoln 199 (\*1071, p. 454). Mrs. Mary Greene. 50 feet east of Louisquisset Pike, 0.5 mile south of junction of Washington and Louisquisset Pikes, Lincoln.

Water level, in feet below land-surface datum, 1947

Jan. 3	4.35	Mar. 1	4.40	May 4	2.56	June 30	5.25
28	3.54	31	4.96	June 4	5.59	Oct. 18	9.40

North Smithfield 2 (\*1071, p. 454). Georges Malfait. About 400 feet west of Louisquisset Pike, about 350 feet southeast of Sayles Hill Road, and 1.5 miles southwest of Manville.

Water level, in feet below land-surface datum, 1947

Jan. 3	15.45	May 4	9.77	Aug. 29	16.67	Oct. 31	17.68
28	12.25	June 4	11.85	Sept. 29	16.81	Nov. 28	13.70
Mar. 1	12.28	30	13.09	Oct. 18	18.09	Dec. 30	12.87
31	10.65	Aug. 1	15.14				



North Smithfield 21. James W. Shaw. About 350 feet northeast of Great Road, 0.75 mile northwest of intersection of Great and Pound Hill Roads, Branch Village. Unused dug domestic well, diameter 24 inches, depth 15.8 feet below land surface. Measuring point, top inside rim of iron casing west side, 2.8 feet below land-surface datum, and about 250 feet above mean sea level.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 21	6.83	Aug. 1	9.04	Oct. 18	10.21	Nov. 28	8.19
June 4	8.30	29	9.95	31	10.92	Dec. 30	7.84
30	8.75	Sept. 29	10.47				

North Smithfield 103. Douglas Pike well. About 90 feet northeast of Douglas Pike, 0.9 mile northwest of intersection of Douglas and Farnum Pikes, and 0.8 mile west of Primrose. Unused dug domestic well, diameter 36 inches, depth 17 feet below land surface. Measuring point, north edge of stone casing in well shelter, at land-surface datum, and about 360 feet above mean sea level.

Water level, in feet below land-surface datum, 1947

June 19	10.57	Aug. 29	13.27	Oct. 18	13.94	Nov. 28	10.06
26	10.66	Sept. 29	12.96	31	14.04	Dec. 30	10.40
Aug. 1	11.65						

Providence 5 (\*1023, p. 369; 1071, p. 455). American Silk Spinning Co. 339 feet south of Admiral Street, 111 feet southeast of Whipple Street, and 1.1 miles northwest of Providence.

Water level, in feet below land-surface datum, 1947

Jan. 28	8.91	June 4	8.91	Aug. 29	9.17	Oct. 31	9.45
Mar. 1	9.18	30	8.79	Sept. 29	9.10	Nov. 28	9.05
31	8.92	Aug. 1	8.94	Oct. 18	9.38	Dec. 30	8.94
May 4	8.57						

Providence 48 (\*1023, p. 369; 1071, p. 455). Gorham Manufacturing Co. On bank of Mashapaug Pond, 700 feet northwest of Adelaide Avenue, 1,050 feet southwest of New York, New Haven & Hartford Railroad tracks, and 2.2 miles southwest of Providence.

Lowest daily water level, in feet below land-surface datum, 1947  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	7.49	7.85	7.81	9.62	7.08	7.53	8.54	10.07	7.37	9.81	8.66	9.87
2	9.36	7.54	7.37	9.28	7.08	9.41	9.65	9.66	7.45	9.96	7.92	9.96
3	9.48	9.47	9.10	9.63	7.05	9.62	9.68	8.57	7.49	9.99	10.02	9.97
4	7.80	9.44	9.12	9.68	6.95	9.65	8.63	10.05	7.42	9.42	10.03	9.97
5	7.30	9.47	9.36	8.02	7.00	9.56	8.35	10.08	7.42	7.85	9.88	10.00
6	9.61	9.46	9.16	7.70	6.98	9.76	8.86	10.06	7.50	9.90	9.96	9.56
7	9.29	9.52	9.00	9.41	6.99	9.73	8.75	10.05	7.42	10.04	9.99	7.88
8	9.42	7.48	7.03	9.54	7.01	8.09	....	10.08	7.52	9.94	9.31	9.93
9	9.44	7.22	6.95	9.48	6.96	9.63	....	....	7.47	9.96	8.01	9.98
10	9.72	9.37	9.28	9.08	6.98	9.73	....	....	7.48	9.93	10.14	10.04
11	7.88	9.31	9.35	8.93	6.95	9.73	....	....	7.50	8.42	8.24	9.96
12	7.31	9.45	9.27	8.22	6.99	9.81	....	....	7.47	8.04	9.93	10.01
13	9.54	9.68	9.23	7.68	7.06	9.83	....	....	9.63	7.96	9.63	9.89
14	9.50	9.55	9.53	9.20	7.04	9.45	10.05	....	8.31	9.96	9.68	7.95
15	9.41	9.03	7.75	9.16	6.99	7.55	10.11	....	9.96	10.00	9.41	9.97
16	9.35	7.82	7.46	9.61	7.02	9.80	10.14	7.58	10.06	9.98	8.15	10.03
17	9.28	9.44	9.35	9.56	7.00	9.74	10.15	7.46	10.02	10.13	9.80	10.03
18	7.80	9.46	9.35	9.44	6.88	9.76	10.16	7.82	10.03	8.62	9.90	9.95
19	7.22	9.61	9.41	7.89	6.93	9.79	9.91	9.14	10.01	7.90	9.91	9.95
20	9.31	9.72	9.56	7.10	6.92	9.83	8.50	7.51	9.73	10.22	9.87	9.52
21	9.31	9.53	8.70	7.15	6.88	9.66	10.11	7.82	8.14	10.13	9.81	8.07
22	9.14	7.66	8.29	7.18	6.92	8.14	10.06	7.42	8.97	10.19	9.74	9.95
23	8.93	7.38	7.74	7.11	6.97	9.86	9.95	7.45	10.02	10.16	7.88	9.90
24	9.00	9.33	9.45	7.10	6.97	9.85	9.96	7.36	10.06	10.14	9.90	9.13
25	7.58	9.42	9.53	7.18	6.88	9.84	9.97	7.48	9.94	9.74	9.88	7.85
26	7.64	9.35	9.67	7.18	6.90	9.82	9.77	7.52	10.00	8.22	9.89	9.76
27	8.35	9.37	9.59	7.05	6.93	9.82	8.26	7.43	8.68	10.08	8.69	9.65

## Providence 48--Continued.

Lowest daily water level, in feet below land-surface datum, 1947

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
28	8.30	9.52	9.65	7.13	6.92	8.34	9.96	7.38	7.88	10.18	9.77	8.12
29	8.61		8.64	7.13	7.04	8.16	10.01	7.40	9.70	10.16	9.40	9.95
30	8.43		8.25	7.15	7.02	8.85	10.06	7.37	9.85	9.99	7.85	9.89
31	8.32		9.66		7.54		10.04	7.37		10.06		9.94

Providence 81 (\*1071, p. 456). Nicholson File Co. well 2. About 120 feet west of Acorn Street, 250 feet north of Tingley Street, and 2 miles west of Providence.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	23.0	Apr. 6	23.5	June 29	22.0	Oct. 13	21.0
12	22.5	13	22.0	July 13	19.5	19	22.0
19	24.5	20	22.3	20	18.0	26	21.0
26	22.0	27	22.0	27	21.0	Nov. 2	21.3
Feb. 2	25.0	May 4	21.0	Aug. 3	22.0	9	21.0
16	23.0	11	21.8	10	22.0	16	21.0
23	24.0	18	22.0	24	23.0	30	20.5
Mar. 2	24.0	25	22.5	31	22.5	Dec. 7	22.0
9	23.3	June 1	23.0	Sept. 14	23.0	14	21.0
16	22.0	8	22.0	21	22.0	21	22.0
23	21.0	15	22.5	28	22.0	28	22.5
30	21.5	22	23.0	Oct. 5	21.8		

Providence 82 (\*1071, p. 456). Nicholson File Co. well 1. About 225 feet west of Acorn Street, 360 feet north of Tingley Street and 2 miles west of Providence.

Water level, in feet below land-surface datum, 1947

Jan. 5	16.0	Apr. 6	15.5	June 29	17.3	Oct. 5	17.0
12	15.5	13	17.0	July 6	16.0	13	16.5
19	18.0	20	17.5	13	14.8	19	17.5
26	16.0	27	17.0	20	14.0	26	17.0
Feb. 2	18.5	May 4	16.3	27	16.5	Nov. 2	17.0
16	17.0	11	16.5	Aug. 3	17.0	9	17.0
23	18.0	18	17.0	10	17.3	16	17.0
Mar. 2	17.5	25	17.5	24	17.0	30	17.0
9	16.0	June 1	21.0	31	17.8	Dec. 7	18.0
16	16.8	8	17.3	Sept. 14	18.0	14	17.0
23	15.5	15	17.5	21	17.3	21	17.5
30	17.0	22	18.0	28	17.0	28	18.0

Providence 94 (\*1023, p. 370; 1071, p. 456). Providence Gas Co., Sassafras Point plant. About 2,050 feet east of Allens Avenue, 1,100 feet north of Terminal Road, and 2.1 miles south of Providence.

Water level, in feet below land-surface datum, 1947

Jan. 28	19.05	June 4	21.47	Sept. 3	19.67	Oct. 31	19.84
Mar. 1	22.72	30	23.03	29	20.02	Nov. 28	20.94
31	22.30	Aug. 1	19.22	Oct. 18	21.43	Dec. 30	12.95
May 4	21.06						

Providence 113 (\*1023, p. 371; 1071, p. 457). Providence Young Men's Christian Association. In boiler room, 153 feet northeast of Stewart Street, and 68 feet northwest of Conduit Street and 0.8 mile southwest of Providence.

Water level, in feet below land-surface datum, 1947

Jan. 28	47.87	June 4	47.89	Aug. 29	48.09	Oct. 31	48.15
Mar. 1	47.86	30	47.94	Sept. 30	48.07	Nov. 28	48.01
31	47.88	Aug. 1	48.07	Oct. 18	48.05	Dec. 30	47.74
May 4	47.65						

Providence 1110 (#1023, p. 371; 1071, p. 457). Roger Williams Brewery, Simon Shatkin, trustee. About 6 feet south of Oak Street, 140 feet west of Troy Street, and 1.9 miles west of Providence.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	6.69	May 4	6.42	Aug. 1	6.63	Oct. 31	6.64
Mar. 1	6.69	June 4	6.68	29	6.66	Nov. 28	6.50
31	6.69	30	6.63	Sept. 30	6.72	Dec. 30	6.63

Providence 1111 (#1071, p. 457). Brown University. Opposite corner of George and Magee Streets, Providence, in basement of Rhode Island Hall.

Water level, in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	15.34	14.38	.....	12.12	12.35	.....	.....	.....	15.34	.....	.....	14.66
2	15.33	.....	14.06	12.10	12.37	12.79	.....	.....	.....	.....	.....	.....
3	15.27	14.31	13.59	11.45	12.15	.....	.....	.....	.....	.....	16.33	.....
4	15.26	14.28	13.55	11.47	11.98	12.92	.....	14.48	.....	.....	.....	.....
5	15.24	14.24	13.48	11.59	11.75	12.98	.....	.....	.....	.....	.....	.....
6	15.22	14.22	13.43	11.28	11.46	13.02	.....	.....	.....	16.20	.....	.....
7	15.20	14.21	13.36	10.61	11.32	13.06	13.85	.....	.....	.....	.....	.....
8	15.17	14.19	13.31	10.70	11.20	13.10	.....	.....	15.55	.....	.....	14.43
9	15.16	14.17	13.23	10.78	11.18	.....	.....	.....	.....	.....	.....	.....
10	15.15	14.15	13.18	10.88	.....	.....	.....	.....	.....	.....	16.22	.....
11	15.13	14.10	13.13	11.00	11.24	.....	.....	14.71	.....	.....	.....	.....
12	15.12	14.10	13.10	11.07	11.27	.....	.....	.....	.....	.....	16.21	.....
13	15.12	14.09	13.07	.....	11.29	.....	.....	.....	.....	.....	15.52	.....
14	15.12	14.07	12.93	11.32	11.36	.....	14.02	.....	.....	16.24	15.35	.....
15	.....	14.06	.....	11.38	11.47	.....	.....	.....	15.79	.....	.....	14.30
16	15.09	14.03	12.85	11.45	.....	.....	.....	.....	.....	.....	.....	.....
17	15.08	14.03	12.80	11.45	11.61	13.31	.....	.....	.....	.....	15.25	.....
18	15.06	14.02	12.80	11.54	11.71	13.35	.....	14.92	.....	.....	.....	.....
19	15.05	14.03	12.80	.....	11.80	.....	.....	.....	.....	.....	.....	.....
20	15.01	14.03	12.80	11.71	11.87	13.40	.....	.....	.....	16.26	.....	.....
21	14.92	14.02	12.79	11.80	11.97	.....	14.27	.....	.....	.....	.....	.....
22	14.86	14.00	12.79	11.88	12.04	.....	.....	.....	.....	.....	.....	.....
23	14.79	14.01	12.80	11.96	12.12	13.52	.....	.....	16.00	.....	.....	14.27
24	14.75	14.01	12.80	12.01	12.20	.....	.....	.....	.....	.....	14.94	.....
25	14.69	14.02	11.14	12.08	12.29	.....	.....	15.12	.....	.....	14.89	.....
26	14.65	14.03	11.30	12.11	12.34	.....	.....	.....	.....	.....	14.85	.....
27	14.60	.....	11.49	12.16	12.42	.....	.....	.....	.....	16.33	.....	.....
28	14.54	.....	11.62	12.20	12.48	.....	14.27	.....	.....	.....	.....	.....
29	14.50	.....	11.76	.....	12.55	.....	.....	.....	.....	.....	.....	14.05
30	14.45	.....	11.88	12.36	.....	13.67	.....	.....	16.24	.....	.....	.....
31	14.41	.....	.....	.....	12.68	.....	.....	.....	.....	.....	.....	.....

Scituate 3. Philippe Plante. About 60 feet east of Tucker Road, 0.3 mile northwest of intersection of Tucker and Elmdale Roads, and 1.1 miles south of Waldron Corners. Unused dug domestic well, diameter 24 inches, depth 19 feet below land surface. Measuring point, south edge of stone casing, at land-surface datum, and about 355 feet above mean sea level.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 13	7.72	Aug. 29	17.59	Oct. 18	18.00	Nov. 28	11.25
Aug. 1	15.20	Sept. 29	17.25	31	18.38	Dec. 29	12.89

Scituate 4. City of Providence Water Supply Board. About 6 feet east of Round Hill Road, 3,100 feet northwest of intersection of Round Hill Road and Plainfield Pike, and 1.1 miles north of Clayville. Unused dug well, diameter 24 inches, depth 28.3 feet below land surface. Measuring point, top edge of casing, west side, at land-surface datum, and about 365 feet above mean sea level.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level
Oct. 6	15.59	Oct. 31	15.42	Dec. 29	15.71
18	15.58	Nov. 28	14.87		

Smithfield 43 (\*1071, p. 457). L. M. Gardner. On north side of Washington Pike, 0.1 mile northeast of Jenks Hill Road, and 3.3 miles west of Ashton.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	13.13	June 4	11.59	Aug. 29	15.07	Oct. 31	14.55
28	11.45	30	12.43	Sept. 29	13.15	Nov. 28	9.36
Mar. 31	10.28	Aug. 1	14.22	Oct. 18	13.89	Dec. 30	11.34
May 4	10.13						

Smithfield 66. E. Sheffield. About 2 feet east of Tarkiln Road, 400 feet south of intersection of Tarkiln and Mapleville Roads, and 2 miles north of West Greenville. Unused dug well, diameter 21 inches, depth 17 feet below land surface. Measuring point, east edge of granite rock in well shelter, at land-surface datum, and about 415 feet above mean sea level.

Water level, in feet below land-surface datum, 1947

June 12	10.38	Aug. 29	12.98	Oct. 18	14.00	Nov. 28	10.12
26	10.39	Sept. 29	13.64	31	14.14	Dec. 29	10.92
Aug. 1	11.65						

Smithfield 71. City of Providence Water Supply Board. About 50 feet south of Mountindale Road, 1,650 feet northwest of intersection of Mountindale and Cary Roads, and 0.5 mile southeast of Spragueville. Unused dug well, diameter 30 inches, depth 10.8 feet below land surface. Measuring point, chiseled cut on west side of large rock covering well, at land-surface datum, and about 220 feet above mean sea level.

Water level, in feet below land-surface datum, 1947

June 12	5.47	Aug. 29	9.59	Oct. 18	10.38	Nov. 28	8.78
26	6.73	Sept. 29	9.93	31	9.96	Dec. 30	8.06
Aug. 1	8.30						

Smithfield 116. Semaco Macaroni Co. About 350 feet south of Stillwater Road, 1,300 feet northeast of intersection of Stillwater Road and Farnum Pike, in Georgiaville. Unused drilled industrial well, diameter 6 inches, depth 71.5 feet below land surface. Measuring point, south edge of wooden platform, at land-surface datum, and about 130 feet above mean sea level.

Water level, in feet below land-surface datum, 1947

June 24	7.94	Aug. 29	8.82	Oct. 18	8.50	Nov. 28	7.98
26	7.71	Sept. 29	8.14	31	7.94	Dec. 29	8.19
July 31	7.60						

Woonsocket 18. French Worsted Co. About 320 feet southeast of Hamlet Avenue, 160 feet west of Davison Avenue, and 2,910 feet east of Woonsocket court house. Unused drilled industrial well, diameter 8 inches, depth 750 feet below land surface. Measuring point, top edge of iron casing, west side, at land-surface datum, and about 130 feet above mean sea level.

Water level, in feet below land-surface datum, 1947

June 11	12.30	Sept. 4	13.39	Nov. 1	16.60	Dec. 13	14.09
26	13.42	Oct. 11	14.55	Dec. 10	13.30	22	14.20

#### Washington County

Charlestown 18 (\*1071, p. 458). U. S. Naval Air Base test well 2, Charlestown. About 0.5 mile south of U. S. Highway 1, 1,000 feet south of water towers, and 3 miles southwest of Charlestown.

Water level, in feet below land-surface datum, 1947

Jan. 29	18.97	May 14	17.55	July 31	19.24	Oct. 31	21.19
Feb. 26	19.60	28	17.86	Aug. 29	20.03	Nov. 26	20.50
Apr. 4	19.16	June 26	18.66	Sept. 30	20.67	Dec. 31	20.70

Exeter 16 (#1071, p. 458). Rhode Island State Department of Social Welfare, Exeter School. About 150 feet south of boiler house, 450 feet west of nurses home and 3.5 miles south of Exeter.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	14.27	Apr. 15	11.70	July 10	11.85	Oct. 14	14.38
16	14.82	25	11.43	15	11.99	20	14.35
24	13.84	29	11.40	24	12.03	27	14.50
28	13.83	May 5	10.99	31	12.37	Nov. 4	14.29
Feb. 7	13.71	13	10.97	Aug. 5	12.59	10	14.47
14	13.79	19	10.96	11	12.70	17	13.67
Mar. 1	13.95	26	10.95	15	12.79	24	13.74
6	12.79	June 4	10.92	Sept. 3	13.28	Dec. 1	13.06
12	12.79	9	10.99	9	13.53	8	13.22
20	12.60	17	10.98	26	13.30	15	13.02
28	12.53	23	11.93	Oct. 6	14.15	22	13.01
Apr. 9	11.75						

North Kingston 26. North Kingston Water Commission pumping station. About 140 feet south of Oak Hill Road, 1.2 miles west of Post Road, and 2 miles southwest of Wickford. Pumped gravel-packed well, diameter 12 inches, depth 50 feet below land surface. Measuring point, top edge of casing, at land-surface datum, and about 56 feet above mean sea level. Measurements made by the North Kingston Water Co. in pumping well.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Nov. 1, 1946	10.3	Apr. 1, 1947	10.4	Sept. 1, 1947	10.8
30	10.4	May 1	10.1	Oct. 1	10.8
Jan. 1, 1947	10.3	June 1	10.4	Nov. 1	10.3
Feb. 1	10.3	July 1	10.6	Dec. 1	10.1
Mar. 1	10.5	Aug. 1	10.8		

South Kingston 6. Rhode Island State College. About 40 feet south of Thirty Acre Road, 10 feet west of cinder track at athletic field, and 1 mile northwest of Kingston. Unused drilled well, diameter 8 inches, depth 34 feet below land surface. Measuring point, north edge of iron casing, at land-surface datum, and about 110 feet above mean sea level.

Water level, in feet below land-surface datum, 1947

Nov. 4	14.19	Nov. 21	13.67	Dec. 12	13.45
14	13.47	28	12.90	19	12.95

Westerly 4 (#1071, p. 458). Westerly Water Works. Varietyville pumping station well 4. On west side of White Rock Road and 2.3 miles north of Westerly.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 5	7.90	July 25	7.62	Sept. 11	8.75	Oct. 24	8.62
12	7.47	31	8.83	18	8.45	30	8.27
19	7.62	Aug. 7	8.16	26	8.45	Nov. 7	8.20
27	7.40	14	8.54	Oct. 3	8.56	13	7.03
July 3	7.72	21	8.73	9	8.62	21	7.59
10	7.85	28	8.32	17	8.58	28	7.59
17	8.87	Sept. 4	8.47				

Westerly 133 (#1071, p. 459). Westerly Water Works. White Rock pumping station well 31. On west side of White Rock Road, and 3 miles north of Westerly.

Water level, in feet below land-surface datum, 1947

Jan. 2	14.79	Feb. 20	13.05	Apr. 10	11.54	May 23	12.00
9	13.07	27	13.10	17	11.67	29	12.48
16	13.05	Mar. 6	11.75	24	12.10	Dec. 4	12.90
23	12.43	13	12.07	May 1	12.09	12	12.86
30	12.48	20	12.10	8	11.22	18	12.53
Feb. 7	12.55	27	12.45	16	12.04	28	12.51
13	12.92						

Westerly 178 (\*1071, p. 459). Westerly Water Works. Bradford pumping station well 12A. On north side of Bradford Road and 1 mile southwest of Bradford.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	4.64	Apr. 3	3.74	July 3	3.81	Oct. 3	5.14
9	4.77	10	3.32	10	3.90	9	5.08
16	4.55	17	3.25	17	4.12	17 a	7.13
23	4.32	24	3.20	25	3.19	24	5.16
30	4.20	May 1	3.20	31	3.20	30	5.17
Feb. 7	4.06	8	2.75	Aug. 7	4.45	Nov. 7	5.44
13	4.13	16	3.01	14	4.57	13	5.70
20	4.08	23	3.65	21	4.71	21	4.62
27	4.05	29	3.12	28	4.72	28	4.61
Mar. 6	3.75	June 5	3.28	Sept. 4	4.80	Dec. 4	4.51
13	3.30	12	3.39	11	4.82	12	4.52
20	3.65	19	3.57	18	4.70	18	4.58
27	3.75	26	3.64	26	4.98	26	4.51

a Pumping.

## VERMONT

By H. L. Free, Jr.

### PROGRAM OF WORK

Periodic measurements of water level in Vermont, begun in October 1942, were continued in 1947 on a monthly basis in one shallow observation well in the town of Middlesex, Washington County, near Wrightsville, which is about 3 miles north of Montpelier. Twelve measurements were made during the year.

### FLUCTUATIONS OF WATER LEVEL

In 1947 the net drop in water level was about 0.5 foot. The precipitation, as measured at nearby Northfield, totaled 38.35 inches in 1947, which was 4.51 inches above normal. However, greatly below normal precipitation during most of the latter part of the year prevented sufficient recharge to raise the water level to its position at the beginning of the year, resulting in a small net loss in ground-water storage.

The water level was above or near average from the first of January through the end of August and below average throughout the rest of the year. It was at a new high level for the month at the end of January, May, July, and August, and was close to or at its lowest monthly stage at the end of October, November, and December.

The abrupt rise in water level in January resulted largely from the greater-than-usual proportion of the above normal precipitation which fell as rain on ground that had less snow cover than usual. During February the snow cover retarded increments to ground-water storage, thereby contributing to the drop in water level. The rise in March was due partly to temperatures high enough to melt part of the snow cover. Far below normal precipitation during April contributed to the drop in water level during that month. The water level then rose to a new May high for the period 1943-48 as a result of rainfall which was well above normal. The decline in water level from the end of May to the end of October was interrupted