

# Water Levels and Artesian Pressure in Observation Wells in the United States in 1946

## Part 1. Northeastern States

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

---

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1071

*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**

**J. A. Krug, *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 1946

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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 of such parts of the country as have been covered.

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

Year	North-eastern States	South-eastern States	North-central States	South-central States	North-western States	South-western States and Hawaii
1935	777	777	777	777	777	777
1936	817	817	817	817	817	817
1937	840	840	840	840	840	840
1938	845	845	845	845	845	845
1939	886	886	886	886	886	886
1940	906	907	908	909	910	911
1941	936	937	938	939	940	941
1942	944	945	946	947	948	949
1943	986	987	988	989	990	991
1944	1016	1017	1018	1019	1020	1021
1945	1023	1024	1025	1026	1027	1028
1946	1071	1072	1073	1074	1075	1076

#### Scope of present volume

The present volume covers the northeastern States and gives records of water level and artesian pressure in about 1,210 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, 261 are equipped with automatic water-stage recorders. For some wells not previously reported complete records of water level are given in this volume, including those of the years before 1945. For wells whose previous records have been published this volume gives only the current records. If a complete description of a well has been published in a previous report, only the well number or the well number and a brief identifying description are given in this report. The numbers in parentheses immediately following a well number are those of the water-supply papers in which earlier records of that well are given and the pages on which they appear. An asterisk indicates that a description of the well is given in the paper whose number is so marked. This report includes about 39,750 individual determinations of water level and artesian pressure.

#### Land-surface datum

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

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

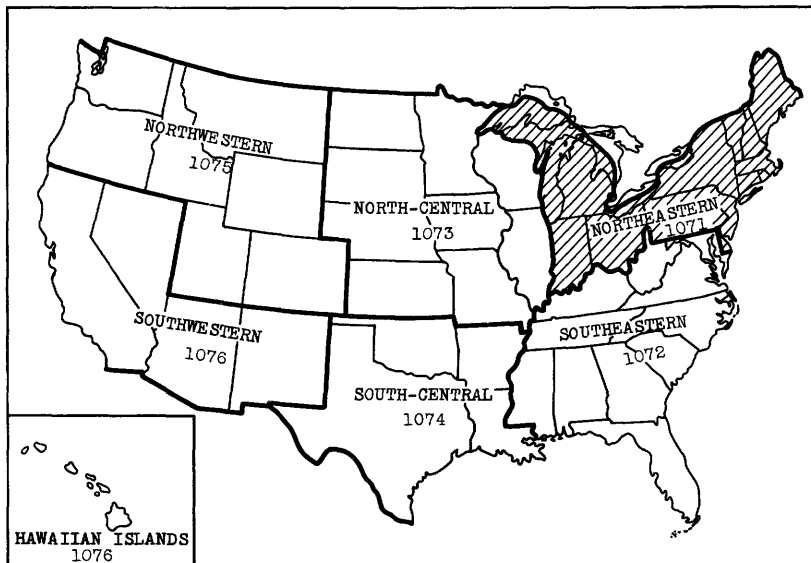


Figure 1.--Outline map of the United States showing sections of the country covered by the six water-supply papers on water levels and artesian pressure in observation wells in 1946. The shaded section represents the part of the country covered by this volume.

If the water levels or artesian heads are referred to land-surface datum for the first time, a conversion factor is given in the descriptive matter preceding them in order to facilitate comparison of the older and newer records. Wherever the conversion factor is given in earlier reports it is not repeated in this report. New data as to the positions of the measuring 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 1946 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 1946 in the northeastern part of the  
United States

In 1946 the precipitation in many of the States in the northeastern section of the country was below normal, but in the New England States and in New Jersey, New York, and Pennsylvania it was about average. 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 Misses Dorothy M. Ireland and Beulah B. Brunson, Mrs. Nauvoo Ragland and Mrs. Frances Dowell, 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 Mrs. Ragland, Mrs. Dowell, and Miss Brunson did the offset typing.

## CONNECTICUT

By R. V. Cushman

### PROGRAM OF WORK

The present program of ground-water investigation in Connecticut, begun in 1939, was continued in 1946 in cooperation with the Connecticut State Water Commission. The chief purpose of the investigation is the systematic collection of detailed information as to the occurrence and availability of the ground-water resources of Connecticut. Periodic water-level observations are made to reveal the seasonal fluctuation and the long-range trends of ground-water levels. This observation program consists of monthly and weekly water-level measurements in 15 wells in or adjacent to heavily pumped areas in New Haven, 11 wells in Waterbury, and in a network of 20 wells scattered throughout the State. In July 1946 monthly observations were begun at wells in Ashford, Bethel, East Hartford, Essex, Falls Village, Middlefield, Naugatuck, New London, Norwich, and Union, in addition to the wells already being measured in Burlington, Falls Village, Plainfield, Southbury, and Woodbury. Observations at 10 wells in Waterbury (Wb 99, 130, 167, 179, 188, 191, 210, 234, 249, and 261) were discontinued at the end of 1945. In all, approximately 700 individual measurements of water level were made during the year.

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 the determination of sulfate content.

### PRECIPITATION

The annual precipitation for Connecticut during 1946, as reported by 20 stations of the United States Weather Bureau, averaged 38.28 inches over the State, or about 7 inches below the average for the period of record.

Precipitation at the weather stations in Connecticut ranged from 1 to 12 inches below normal, with above normal precipitation being recorded only during the months of May, July, and August. Where not affected by pumping, the ground-water level, in general, followed closely the trend of the rate of precipitation.

#### FAIRFIELD COUNTY

##### Bethel

An observation well was located in Bethel in the watershed of the Still River in 1946 and monthly water-level measurements were begun on July 18, 1946.

#### HARTFORD COUNTY

##### Burlington

Measurements were discontinued at well Bu 1 on December 9, 1945. A new well, Bu 2, was added and weekly readings by a local observer were begun on April 13, 1946.

##### East Hartford

An observation well was located in East Hartford in 1946 and monthly measurements were begun on July 18, 1946.

#### LITCHFIELD COUNTY

##### Falls Village

Weekly readings on well FV 2 were made by a local observer until July 28, 1946, when it became impossible to continue measurements. Accordingly, two new wells, FV 4 and FV 5, were located and readings begun on September 11, 1946. These wells are about 30 feet from each other, FV 4 being a dug well penetrating till and FV 5, a drilled well penetrating limestone.

##### Woodbury

Monthly water-level measurements on two wells in Woodbury were continued in 1946. Well W 2, however, was dropped as an observation well after June 6, 1946. Both of these wells were among those measured in connection with hydrologic studies in the Pomperaug Basin by Meinzer.<sup>1/</sup> Descriptions of the wells, a map showing their locations, and previous water-level measurements are given in that report.

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<sup>1/</sup> Meinzer, O. E., and Stearns, N. D., A study of ground water in the Pomperaug Basin, Connecticut: U. S. Geological Survey Water-Supply Paper 597-B, 1929.

Summary of data on water levels in Litchfield County

Well No.	First measured	Lowest observed water level, in feet below land-surface datum		Highest observed water level, in feet below land-surface datum		Water level at end of year, in feet below land-surface datum
		Water level	Date	Water level	Date	
FV 2	Nov. 3, 1945	11.28	July 28, 1946	0.23	Jan. 18, 1946	a 11.28
FV 4	Sept. 11, 1946	8.30	Oct. 2, 1946	7.12	Oct. 31, 1946	8.22
FV 5	Sept. 11, 1946	21.50	Sept. 11, 1946	19.14	Oct. 31, 1946	19.45
W 1	Oct. 4, 1913	33.5	Oct. 10, 1914	21.12	May 17, 1945	28.98
W 2	Oct. 4, 1913	18.7	Sept. 26, 1914 July 3, 1915	10.41	June 6, 1946	b 10.41

a Last measured July 28, 1946.

b Last measured June 6, 1946.

MIDDLESEX COUNTY

Two observation wells were located in Middlesex County in 1946, one, E 1, near Ivoryton, in the town of Essex, and the other, M 1, near the town of Middlefield. Measurements were begun on July 16 and July 17, respectively, and continued on a monthly basis.

NEW HAVEN COUNTYNew Haven

The study of ground-water conditions in the New Haven area was continued in 1946. This year marked the seventh year of cooperative investigation in New Haven. During the year water-level measurements were made at monthly intervals in 15 observation wells scattered throughout the city. About 175 individual measurements of water level were made in 1946. For convenience of study, the New Haven area has been divided into four somewhat arbitrary areas, based on the chief use of ground water in each. These areas are: Residential, Air Conditioning, Cold Storage, and Industrial. Water-Supply Paper 986 included a more detailed description of the divisions, together with an index map showing their boundaries and the location of observation wells in the New Haven area.

Summary of data on water levels in New Haven  
(Measurements refer to mean sea level)

(measurements refer to mean sea level)						
Well No.	First measured	Lowest observed water level		Highest observed water level		Water level at end of year (feet)
		Water level (feet)	Date	Water level (feet)	Date	
<u>Residential area</u>						
NHn 170	June 23, 1939	+15.64	Jan. 14, 1942	+18.41	June 23, 1939	+16.42
NHn 175	June 23, 1939	+2.27	Dec. 17, 1941	+4.51	June 23, 1939	+2.94
NHn 183	Dec. 13, 1939	+2.67	Dec. 3, 1941	+5.88	June 12, 1940	+3.20
NHn 270	May 21, 1941	+3.78	Dec. 17, 1941	+5.94	Apr. 28, 1943	+4.73
<u>Air-conditioning area</u>						
NHn 123	Feb. 26, 1941	a-1.22	Sept. 29, 1944	+2.48	June 1, 1943	(b)
NHn 250	Oct. 9, 1940	+9.98	Aug. 30, 1944	+4.79	Oct. 9, 1940	+1.08

Summary of data on water levels in New Haven--Continued  
(Measurements refer to mean sea level)

(measurements refer to mean sea level)						
Well No.	First measured	Lowest observed water level		Highest observed water level		Water level at end of year (feet)
		Water level (feet)	Date	Water level (feet)	Date	
<u>Cold-storage area</u>						
NHn 108	May 12, 1939	-3.40	Aug. 26, 1946	+1.26	May 8, 1940	-1.72
NHn 110	May 12, 1939	-2.20	Oct. 27, 1944	+ .51	May 12, 1939	-1.86
<u>Industrial area</u>						
NHn 131	June 1, 1939	-5.65	May 26, 1944	-2.06	Feb. 19, 1941	-4.31
NHn 138	Feb. 28, 1940	-5.70	June 23, 1944	-1.83	Jan. 2, 1941	-3.77
NHn 160	June 7, 1939	-19.59	Nov. 1, 1945	+4.15	Mar. 6, 1940	+1.31
NHn 178	July 21, 1939	-6.42	Oct. 28, 1946	+ .04	June 12, 1940	-5.97
NHn 179	July 21, 1939	-6.55	Aug. 28, 1945	- .17	July 17, 1940	-5.65
NHn 235	Oct. 2, 1940	-3.59	Feb. 1, 1945	+ .15	Mar. 30, 1943	-1.39

a Inaccessible for measurements during the summer due to pumping in the air-conditioning season.

b Measurements discontinued May 27, 1946.

Measurements in one well, NHn 123, were discontinued in 1946, as the well was made inaccessible. It will be noted in the summary table that the ground-water level in two observation wells in New Haven reached its lowest observed stage in the latter part of 1946. These two wells are in the Cold Storage and Industrial areas where the annual withdrawal of ground water is heavy, a combined total of about 3,500,000 gallons being pumped daily. The water level in all wells but one in the Cold Storage and Industrial areas is shown to be below mean sea level at the end of 1946.

The following table shows the net change in ground-water levels in wells in New Haven during 1946. The net change is the difference in the water level obtained by measurements nearest to December 31, 1945, and December 31, 1946.

Net change in water level in observation wells New Haven, Conn.,  
in feet, during 1946

Area	Well	Net decline
Residential	NHn 170	0.23
	NHn 175	.31
	NHn 183	.38
	NHn 270	.46
	NHn 123	(a)
Air-conditioning	NHn 250	2.04
	NHn 108	1.43
Cold-storage	NHn 110	1.30
	NHn 131	1.30
Industrial	NHn 138	1.06
	NHn 160	1.01
	NHn 178	.34
	NHn 179	.31
	NHn 235	.75

a Measurements discontinued May 27, 1946.



The table indicates that at the end of 1946 the water level in all observation wells in New Haven showed a net decline from the level recorded at the end of the previous year, presumably due to the effect of below-normal precipitation and heavy pumpage.

The precipitation at New Haven in 1946 was 37.58 inches, or 4.30 inches below the mean for the past 74 years. Below-normal precipitation was recorded for all months but May, June, and August. Water levels rose slowly during the first 3 months of the year but had begun to decline by the start of the growing season in May. The above-normal rainfall in May and June caused a temporary rise in the water table by the end of June, but during the last half of the year precipitation was almost continuously below normal, and water levels, in response, declined steadily.

#### Naugatuck

The two wells located in Naugatuck in 1946 are in the valley of Beaver Hill Brook adjacent to the ground-water pumping station of the Naugatuck Water Company. The water level in both wells was affected by seasonal withdrawals at the station during July and August, and, as a result, the lowest water level in both wells was recorded on July 31, 1946. Pumpage was at the rate of about 400,000 gallons daily.

#### Southbury

One well in Southbury, near South Britain, has been measured monthly since April 1944. This was also one of the wells measured during the course of the hydrologic investigation made 30 years ago in the Pomperaug Basin by Meinzer.<sup>2/</sup> As the well has not been used in recent years, the water level was higher in 1946 than during the period 1913-17.

Summary of data on water levels in Southbury

Well No.	First measured	Lowest observed water level, in feet below land-surface datum		Highest observed water level, in feet below land-surface datum		Water level at end of year, in feet below land-surface datum
		Water level	Date	Water level	Date	
S 1	Oct. 4, 1913	21.7	Oct. 14, 1916	13.17	June 6, 1946	14.72

#### Waterbury

During 1946, monthly water-level measurements were maintained on 10 wells in the Waterbury area. In addition, one well, Wb 1, was measured

<sup>2/</sup> Meinzer, O. E., and Stearns, N. D., op. cit.

weekly by a local observer. Measurements on 10 other wells were discontinued at the end of 1945. Water-Supply Paper 1016 included a description of the geology and hydrology of the area and an index map showing locations of all observation wells.

Precipitation at Waterbury during 1946 totaled 38.27 inches, or 8.27 inches below normal. Below-normal precipitation was recorded for all months except May, August, and September. As a result, the water level in all observation wells but two was lower than the level recorded for these wells at the end of 1945. The two wells showing a net increase for the year, Wb 336 and Wb 340, are both affected by pumping from nearby wells. Excessive rainfall in May caused a temporary rise in water levels in Waterbury but below-normal precipitation during most of the following months of 1946 caused a gradual decline in water level in all wells.

Net change in water levels in observation wells in Waterbury, Conn., in feet during 1946

Well	Net rise (+) or net decline (-)	Well	Net rise (+) or net decline (-)
Wb 1	-1.06	Wb 176	-5.67
Wb 16	-1.24	Wb 198	-3.13
Wb 25	-.12	Wb 236	-3.21
Wb 70	-.72	Wb 336	+ .75
Wb 93	-.79	Wb 340	+2.13
Wb 119	-1.83		

Summary of data on water levels in Waterbury, Conn.

Well No.	First measured	Lowest observed water level, in feet below land- surface datum		Highest observed water level, in feet below land- surface datum		Water level, at end of year, in feet below land- surface datum
		Water level	Date	Water level	Date	
Wb 1	Apr. 29, 1943	10.99	Sept. 11, 1944	7.90	May 29, 1943	10.08
Wb 16	Feb. 2, 1944	16.24	July 3, 1946	9.58	Jan. 3, 1945	15.56
Wb 25	Feb. 3, 1944	8.62	Aug. 29, 1944	4.27	June 6, 1946	5.59
Wb 70	Feb. 2, 1944	17.01	Aug. 29, 1944	13.08	Apr. 26, 1944	16.26
Wb 93	Feb. 18, 1944	28.39	Aug. 29, 1944	25.38	Mar. 4, 1945	27.39
Wb 119	Feb. 18, 1944	12.34	Aug. 29, 1944	2.93	Nov. 30, 1944	6.00
Wb 176	Feb. 18, 1944	14.48	Aug. 29, 1944	3.14	Mar. 4, 1945	10.18
Wb 198	Feb. 18, 1944	18.25	Aug. 29, 1944	5.49	Jan. 10, 1946	16.90
Wb 236	Feb. 18, 1944	8.15	Aug. 29, 1944	2.27	Nov. 30, 1944	6.71
Wb 336	June 20, 1944	20.40	Aug. 29, 1944	12.50	Apr. 3, 1946	16.49
Wb 340	Aug. 8, 1944	24.87	Sept. 27, 1945	15.83	May 19, 1945	21.76

a Inaccessible during November and December 1946.

b Inaccessible in the spring due to flooding of the well pit.

It will be noted that of the 11 wells listed, the highest water levels for the period of record occurred during 1946 in 3 wells. Also the lowest water level for the period of record occurred during 1946 in one well.

The net decline was much greater in those wells which penetrate glacial till.

## WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Fairfield County

Be 1. Fred Andrews, 248 Greenwood Ave., Bethel. Unused dug domestic well, diameter 3 feet, depth 25.3 feet. Measuring point, top of oval pump support, 2.6 feet above land surface.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 18	21.09	Aug. 30	20.39	Oct. 31	20.74	Dec. 23	21.75
Aug. 1	21.12	Sept. 25	21.58	Dec. 4	21.48		

Hartford County

Bu 2. E. E. Edman, State Route 116. About 1,000 feet west of Burlington Center, Burlington. Domestic dug well, diameter 3 feet, depth 38 feet. Measuring point, east edge of top of concrete rim, 3 feet above land surface.

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

Apr. 13	17.20	June 23	16.50	Aug. 30	21.53	Oct. 30	26.00
20	16.80	July 22	20.39	Sept. 10	22.60	31	25.94
27	17.90	30	19.60	28	25.20	Nov. 20	26.50
May 4	17.80	Aug. 1	20.02	Oct. 2	25.36	25	26.60
15	18.30	5	19.90	12	25.50	Dec. 4	27.49
June 3	19.60	12	20.60	22	25.80	8	27.50
16	19.30	24	21.10				

EHD 21. Burnside Ice Co., 790 Tolland St., East Hartford. Unused dug domestic well, diameter 30 inches, depth 20 feet. Measuring point, east side of concrete curbing, at land surface.

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

July 18	17.02	Aug. 30	17.24	Oct. 29	18.15	Dec. 24	18.17
Aug. 1	17.47	Sept. 27	18.04	Dec. 3	18.35		

FV 2 (\*1023, p. 12). Theodore C. Mallory, Falls Village. Measurements discontinued on July 28, 1946.

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

Jan. 4	1.67	Mar. 1	7.52	Apr. 27	6.21	June 25	4.36
18	.23	8	6.92	May 4	7.27	July 1	7.00
25	2.56	23	.47	13	7.77	8	8.58
Feb. 2	5.65	30	.98	26	7.04	14	8.95
8	6.49	Apr. 6	2.68	June 10	.38	21	10.57
16	7.26	13	3.56	15	2.07	28	11.28
23	7.52	20	6.25				

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. Abandoned dug well, 5 feet long by 3 feet wide, depth 16.5 feet. Measuring point, top of wooden plank level with top of concrete casing, at land surface.

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

Date	Water level	Date	Water level	Date	Water level
Sept. 11	7.70	Oct. 31	7.12	Dec. 23	8.22
Oct. 2	8.30	Dec. 4	7.95		

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. Unused drilled well, diameter 6 inches, depth 186 feet. Measuring point, top of 6-inch coupling, at land surface.

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

Date	Water level	Date	Water level	Date	Water level
Sept. 11	21.50	Oct. 31	19.14	Dec. 23	19.45
Oct. 2	19.80	Dec. 4	19.73		

W 1 (\*1016, p. 13; 1023, p. 12). James Crowfoot, Woodbury.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	21.70	May 6	23.35	July 31	23.60	Oct. 30	25.70
Feb. 3	22.25	June 6	22.13	Aug. 29	26.49	Dec. 2	28.00
Mar. 4	22.32	July 2	21.96	Oct. 1	28.47	31	28.98
Apr. 3	22.60						

W 2 (\*1016, p. 13; 1023, p. 12). Oliver Towles. Along Hesseky Brook, Woodbury. Measurements discontinued on June 6, 1946.

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

Date	Water level	Date	Water level	Date	Water level
Jan. 9	11.14	Mar. 4	12.03	May 6	11.84
Feb. 3	11.95	Apr. 3	11.53	June 6	10.41

### Middlesex County

E 1. John Giza, 53 Warsaw St. About 100 feet west of State Route 80 and 0.5 mile north of Ivoryton. Dug stock well in field, diameter 30 inches, depth 7.6 feet. Measuring point, top of round hole in center of wooden cover, 2 feet above land surface.

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

Date	Water level	Date	Water level	Date	Water level
July 16	0.97	Aug. 28	0.65	Oct. 29	1.94
30	.77	Sept. 27	1.35	Dec. 3	2.08
				Dec. 24	0.78

M 1. Lyman Gunsight Corporation, Middlefield. Unused dug well, diameter 2 feet, depth 22 feet. Measuring point, north rim of top edge of stone casing, at land surface.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 17	8.47	Aug. 27	6.90	Oct. 31	10.37	Dec. 23	11.28
Aug. 1	9.11	Sept. 25	9.77	Dec. 3	11.03		

### New Haven County

N 10. 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. Drilled well, diameter 2 inches, depth 94 feet. Screened in sand and gravel. Measuring point, top of 2-inch coupling, at land surface.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	4.31	Apr. 26	5.37	July 31	9.35	Oct. 30	6.02
Mar. 4	5.13	June 6	4.15	Aug. 29	7.09	Dec. 2	6.14
Apr. 8	5.27	July 3	6.55	Oct. 1	5.91	31	6.08

N 11. 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. Drilled well, diameter 2 inches, depth 36 feet. Screened in sand and gravel. Measuring point, top of 2-inch casing, at land surface.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	4.38	Apr. 26	5.40	July 31	9.63	Oct. 30	6.15
Mar. 4	5.18	June 6	4.25	Aug. 29	7.28	Dec. 2	6.24
Apr. 8	5.32	July 3	6.29	Oct. 1	6.00	21	6.10

NHn 108 (\*886, p. 58; 906, p. 8; 936, p. 11; 944, p. 12; 986, p. 13; 1016, p. 14; 1023, p. 12). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	0.08	May 1	0.98	July 29	3.39	Oct. 28	1.99
Mar. 4	.41	27	2.07	Aug. 26	3.40	Nov. 29	1.94
30	.75	July 1	2.57	Sept. 26	2.59	Dec. 26	1.72

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

Water level, in feet below mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	1.45	May 1	1.36	July 29	1.59	Oct. 28	1.81
Mar. 4	1.41	27	1.40	Aug. 26	1.71	Nov. 29	1.86
29	1.39	July 1	1.46	Sept. 26	1.74	Dec. 26	1.86

NHn 123 (\*936, p. 13; 944, p. 13; 986, p. 13; 1016, p. 14; 1023, p. 13). New York Life Insurance Co. On west side of Church Street. About 135 feet south of Center Street, New Haven. Measurements discontinued May 27, 1946.

Water level, in feet above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 12	0.98	Mar. 30	1.39	May 1	1.42	May 27	1.57
Mar. 2	1.02						

NHn 131 (\*886, p. 59; 906, p. 9; 936, p. 13; 944, p. 13; 986, p. 14; 1016, p. 14; 1023, 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 12	3.27	May 3	3.64	July 29	3.41	Oct. 28	4.16
Mar. 2	3.39	27	3.57	Aug. 26	3.56	Nov. 29	4.31
29	3.54	July 1	3.38	Sept. 26	3.90	Dec. 26	4.31

NHn 138 (\*906, p. 9; 936, p. 14; 944, p. 14; 986, p. 14; 1016, p. 15; 1023, 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 12	2.99	May 1	3.37	July 29	3.30	Oct. 28	3.59
Mar. 2	3.13	27	3.37	Aug. 26	3.27	Nov. 29	3.83
29	3.24	July 1	3.13	Sept. 26	3.65	Dec. 26	3.77

NHn 160 (\*886, p. 61; 906, p. 11; 936, p. 15; 944, p. 15; 986, p. 15; 1016, p. 15; 1023, 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 12	1.39	May 3	1.17	July 29	1.75	Oct. 28	1.44
Mar. 2	1.43	27	1.46	Aug. 26	1.29	Nov. 29	1.12
29	1.47	July 1	1.37	Sept. 26	1.49	Dec. 26	1.31

NHn 170 (\*886, p. 61; 906, p. 11; 936, p. 15; 944, p. 15; 986, p. 16; 1016, p. 17; 1023, 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	17.17	May 1	17.11	July 29	17.14	Oct. 28	16.74
Mar. 2	17.37	27	16.98	Aug. 26	16.92	Nov. 29	16.59
29	17.33	July 1	17.28	Sept. 26	16.87	Dec. 26	16.42

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

Water level, in feet above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	3.50	May 1	3.41	July 29	3.45	Oct. 28	3.14
Mar. 2	3.58	27	3.32	Aug. 26	3.34	Nov. 29	3.01
29	3.64	July 1	3.56	Sept. 26	3.25	Dec. 26	2.94

NHn 178 (\*886, p. 63; 906, p. 12; 936, p. 16; 944, p. 16; 986, p. 16; 1016, p. 16; 1023, 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 12	5.98	May 3	6.09	July 29	4.45	Oct. 28	6.42
Mar. 2	5.79	27	6.27	Aug. 26	5.40	Nov. 29	6.03
29	6.28	July 1	5.90	Sept. 26	6.16	Dec. 26	5.97

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

Water level, in feet below mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 12	5.54	May 3	5.73	July 29	4.25	Oct. 28	6.02
Mar. 2	5.49	27	5.90	Aug. 26	5.07	Nov. 29	5.70
29	5.84	July 1	5.43	Sept. 26	5.69	Dec. 26	5.65

NHn 183 (\*906, p. 13; 936, p. 17; 944, p. 16; 986, p. 16; 1016, p. 16; 1023, p. 15). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	4.02	May 1	3.81	July 29	3.69	Oct. 28	3.30
Mar. 4	3.94	27	3.81	Aug. 26	3.52	Nov. 29	3.24
29	3.93	July 1	4.04	Sept. 26	3.36	Dec. 26	3.20

NHn 235 (\*906, p. 14; 936, p. 17; 944, p. 16; 986, p. 17; 1016, p. 16; 1023, p. 15). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 12	0.55	May 1	0.95	July 29	1.03	Oct. 28	1.20
Mar. 2	.68	27	.87	Aug. 26	1.20	Nov. 29	1.33
29	.87	July 1	.63	Sept. 26	1.25	Dec. 26	1.39

NHn 250 (\*906, p. 15; 936, p. 18; 944, p. 17; 986, p. 17; 1016, p. 17; 1023, p. 16). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 12	3.05	May 1	3.39	July 29	1.94	Oct. 28	1.72
Mar. 4	3.20	27	3.51	Aug. 26	1.58	Nov. 29	1.56
29	3.34	July 1	2.60	Sept. 26	1.59	Dec. 26	1.08

NHn 270 (\*936, p. 19; 944, p. 18; 986, p. 17; 1016, p. 17; 1023, p. 16 ). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	5.60	May 1	5.39	July 29	5.65	Oct. 28	5.06
Mar. 2	5.66	27	5.32	Aug. 26	5.40	Nov. 29	4.88
29	5.62	July 1	5.33	Sept. 26	5.41	Dec. 26	4.73

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

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

Jan. 9	13.67	May 6	13.86	July 31	14.57	Oct. 30	14.50
Feb. 3	13.65	June 6	13.17	Aug. 29	14.71	Dec. 2	14.90
Mar. 4	13.63	July 2	14.13	Oct. 1	14.59	31	14.72
Apr. 3	13.36						

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

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	8.38	Apr. 15	9.72	July 22	10.44	Oct. 7	9.60
21	8.96	23	9.90	30	9.98	17	9.70
Feb. 2	9.60	May 1	9.80	Aug. 7	10.33	28	10.16
11	9.49	9	9.90	14	10.14	Nov. 5	10.26
22	9.45	18	9.49	20	10.01	13	10.21
28	9.43	June 10	8.65	27	10.30	20	10.28
Mar. 9	8.44	18	9.28	Sept. 4	10.28	Dec. 5	10.33
16	8.79	24	9.61	10	10.45	12	10.38
25	9.35	July 1	10.09	24	10.47	23	10.08
Apr. 2	9.40	15	10.45	Oct. 2	9.28		

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

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

Jan. 9	13.31	July 3	16.24	Aug. 29	15.75	Oct. 30	15.56
June 6	13.91	31	15.03	Oct. 1	15.39		

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

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

Jan. 9	4.37	May 6	5.88	July 31	5.88	Oct. 30	5.85
Mar. 6	5.14	June 6	4.27	Aug. 29	5.54	Dec. 2	6.00
Apr. 3	5.20	July 3	5.71	Oct. 1	5.40	Dec. 31	5.59

Wb 70 (\*1016, p. 19; 1023, p. 17). City of Waterbury. On Thomastor Avenue, Waterbury.

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

Jan. 9	14.07	May 6	16.01	July 31	16.01	Oct. 30	16.22
Feb. 3	16.11	June 6	14.11	Aug. 29	16.35	Dec. 2	16.39
Mar. 6	15.10	July 3	16.14	Oct. 1	15.53	31	16.26
Apr. 3	15.38						

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

## Wb 93--Continued.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	26.05	May 8	27.43	July 31	27.32	Oct. 30	27.47
Mar. 6	26.88	June 6	25.73	Aug. 29	27.04	Dec. 2	27.55
Apr. 8	27.03	July 3	27.23	Oct. 1	27.69	31	27.39

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

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	4.34	May 8	5.72	July 31	6.50	Oct. 30	6.20
Mar. 6	4.93	June 6	4.30	Aug. 29	5.10	Dec. 2	6.64
Apr. 8	5.26	July 3	5.55	Oct. 1	4.45	31	6.00

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

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	3.31	May 6	8.75	July 31	9.85	Oct. 30	10.05
Mar. 6	5.65	June 6	5.02	Aug. 29	8.74	Dec. 2	10.70
Apr. 8	7.12	July 3	8.75	Oct. 1	9.59	Dec. 31	10.18

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

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	5.49	May 6	12.82	July 31	13.67	Oct. 30	15.32
Mar. 6	10.48	June 6	10.65	Aug. 29	13.47	Dec. 2	16.34
Apr. 8	11.54	July 3	12.45	Oct. 1	14.36	31	16.90

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

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	2.67	May 6	4.49	July 31	5.15	Oct. 30	6.85
Mar. 6	2.60	June 6	3.13	Aug. 29	4.68	Dec. 2	7.48
Apr. 8	2.97	July 3	3.35	Oct. 1	3.95	31	6.71

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

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 3	12.50	July 31	16.34	Oct. 1	15.96	Dec. 2	16.35
May 6	14.96	Aug. 29	15.98	30	16.48	31	16.49
July 3	14.52						

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

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	21.17	May 6	22.10	July 31	22.72	Oct. 30	22.32
Mar. 6	23.57	June 6	20.24	Aug. 29	21.10	Dec. 2	22.36
Apr. 3	21.50	July 3	23.07	Oct. 1	20.88	31	21.76

New London County

NL 2. New London Historical Society, 11 Blinman Street, New London. Unused dug domestic well, diameter 3 feet, depth 21.7 feet. Measuring point, top of east side of wooden curb at base of shelter, at land surface.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 16	15.83	Aug. 28	14.73	Oct. 29	16.57	Dec. 24	16.25
30	16.52	Sept. 27	16.22	Dec. 3	16.70		



NWH 4. A. Duch, 20 Church Street, Norwich. Unused dug domestic well, beneath porch, diameter 30 inches, depth 19.6 feet. Measuring point, top of wooden cover, 1 foot above land surface.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 16	7.80	Aug. 28	5.24	Oct. 29	7.29	Dec. 24	7.91
30	7.30	Sept. 27	7.95	Dec. 3	8.20		

#### Tolland County

U 1. Yale University Forest, Union. Northwest corner of abandoned homestead, about 300 feet north of Kinney Pond, Town of Union. Unused dug domestic well, diameter 2 feet, depth 7.6 feet. Measuring point, top of south side of stone curb, at land surface.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 18	2.66	Aug. 28	2.40	Oct. 29	2.48	Dec. 24	2.06
30	2.87	Sept. 27	2.54	Dec. 3	2.35		

U 3. Yale University Forest, Union. At northeast corner of old stone foundation about 1.5 miles east of Morey Pond and 600 feet north of Tolland-Windham County line. Unused dug domestic well, diameter 3 feet, depth 25 feet. Measuring point, top of east side of stone curb, at land surface.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 18	18.24	Aug. 28	20.34	Oct. 29	22.13	Dec. 24	23.41
30	19.54	Sept. 27	21.20	Dec. 3	23.06		

#### Windham County

A 1. Yale University Forest, Ashford. At southeast corner of old stone foundation, about 1.75 miles east of Westford. Unused dug domestic well, diameter 30 inches, depth 18 feet. Measuring point, top of east side of stone curb, 2.4 feet above land surface.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 18	10.33	Aug. 28	8.04	Oct. 29	11.70	Dec. 24	12.35
30	10.84	Sept. 27	11.32	Dec. 3	12.39		

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

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	29.88	May 1	29.96	July 30	30.44	Oct. 29	30.75
Feb. 1	29.10	June 3	30.12	Aug. 1	30.45	Nov. 29	31.10
Mar. 2	29.29	July 1	29.97	28	30.29	Dec. 24	31.27
Apr. 1	29.46	2	29.88	Sept. 27	30.50		

# DELAWARE

By G. D. DeBuchananne

## PROGRAM OF WORK

The cooperative ground-water investigations, which were started in 1943 in cooperation with the Town of Lewes, were continued through 1946. The wells included in this report are at Fort Miles, which lies just outside the limits of Lewes. Measurements were made on two observation wells in this area. One is equipped with an automatic water-stage recorder. The other is measured once a week.

## FLUCTUATIONS OF WATER LEVEL

Hydrographs of the two wells show that the water levels on the whole were higher in 1946 than they were in 1945. The precipitation in 1945 was about 11 inches above normal, while in 1946 it was about 4 inches below normal. It is believed that, because the water-bearing formation is relatively shallow and the intake area is probably in the immediate vicinity, this inverse relationship between water levels and precipitation is due primarily to pumpage in the well field rather than to a lag or delay in the precipitation penetrating to the water table.

## WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

### Sussex County

S-1 (\*1016, p. 23; 1023, p. 20). U. S. War Department. Fort Miles test well 1. Extremes of observed water-level, in feet below land-surface datum: 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, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	16.6	18.1	17.0	17.7	18.4	16.8	18.3	....	....	18.2	18.2	17.2
2	17.0	18.2	16.8	17.8	18.5	16.7	18.3	....	....	18.4	18.1	18.5
3	16.8	18.2	17.0	18.0	18.0	16.7	18.1	....	18.0	18.2	17.9	18.4
4	....	18.1	18.1	17.5	17.7	17.5	18.0	....	17.9	18.3	18.0	18.6
5	....	17.1	17.8	17.7	17.2	17.7	17.9	....	17.7	18.3	18.0	....
6	....	17.0	....	17.8	17.5	18.0	17.1	....	17.7	18.3	17.5	....
7	17.8	17.1	....	17.8	17.5	18.1	17.2	....	17.2	18.3	17.5	....
8	17.9	17.3	....	17.7	....	18.0	17.1	....	17.3	18.2	17.3	18.3
9	17.8	17.1	....	17.6	17.0	18.2	17.1	....	17.4	17.7	17.2	18.2
10	17.8	17.0	18.3	17.7	17.2	18.1	....	....	17.4	17.4	17.0	18.1
11	17.8	16.8	18.0	17.7	17.3	18.3	17.2	....	17.5	17.1	17.0	18.2
12	17.5	18.0	17.1	17.8	17.3	18.3	17.2	....	17.4	17.2	17.1	18.4
13	17.8	18.1	17.4	17.6	17.4	17.4	17.1	18.2	17.1	17.4	17.1	18.3
14	17.9	18.1	17.5	17.7	17.3	18.2	17.3	18.2	16.9	17.5	17.1	18.6
15	18.0	18.5	17.4	17.8	....	18.0	17.3	18.3	17.0	17.4	17.1	18.5
16	17.7	18.6	17.1	18.0	....	18.0	17.0	18.2	17.3	17.6	....	18.6

S-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
17	17.6	17.7	17.0	17.9	....	18.0	17.0	18.2	17.3	18.2	....	18.3
18	17.6	17.5	16.8	17.9	....	17.9	17.1	18.2	17.4	18.2	....	18.3
19	17.8	17.1	16.6	18.1	....	17.9	17.2	18.0	17.4	18.3	17.0	18.3
20	17.8	17.2	16.6	18.0	....	17.8	17.3	18.1	17.5	18.1	17.1	....
21	17.3	17.7	16.9	18.0	....	17.9	17.3	18.2	17.4	18.0	17.3	....
22	17.8	17.7	16.9	18.0	....	17.9	17.4	....	17.4	18.1	17.0	....
23	17.9	17.3	16.9	18.1	17.0	18.0	17.2	18.4	17.5	18.2	....	....
24	17.7	16.9	16.9	18.1	17.0	18.2	17.4	18.3	17.5	18.4	....	18.6
25	18.0	....	17.0	18.0	17.0	18.1	....	18.5	17.4	18.0	....	18.5
26	18.1	....	17.4	17.7	17.1	18.0	17.3	18.3	17.3	17.9	....	18.6
27	17.9	17.0	17.1	18.0	16.9	18.2	17.3	18.1	17.3	17.9	....	18.6
28	18.0	16.9	17.2	18.5	16.7	18.4	17.2	18.2	17.3	18.2	....	18.4
29	18.3		17.1	18.3	16.5	18.2	17.4	18.3	17.3	18.2	17.5	18.0
30	18.2		17.0	18.4	16.6	18.2	17.5	18.1	17.2	18.3	17.5	18.5
31	18.0		16.5		16.7		17.5	18.0		18.3		18.6

S-2 (\*1016, p. 24; 1023, p. 21). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	15.5	Apr. 16	16.1	July 10	16.4	Oct. 3	16.8
14	15.8	23	16.3	17	16.3	10	16.4
21	15.6	30	16.2	24	16.7	17	16.4
28	16.3	May 8	16.2	30	16.6	24	16.7
Feb. 4	16.3	15	16.3	Aug. 1	16.4	31	16.7
11	15.9	22	16.1	2	16.4	Nov. 7	16.8
18	16.4	29	15.9	8	16.6	14	16.4
26	16.4	June 5	15.9	22	16.8	21	16.6
Mar. 5	16.7	12	16.6	29	16.6	28	16.7
12	16.4	17	16.5	Sept. 5	16.8	Dec. 7	16.7
19	15.9	19	16.4	12	16.7	14	16.9
26	16.2	26	16.6	19	16.8	23	17.0
Apr. 2	16.0	July 3	16.3	26	16.6	30	16.8
9	15.9						

## INDIANA

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

### PROGRAM OF WORK

The State-wide observation-well program in Indiana was continued during 1946 in cooperation with the Indiana Department of Conservation, Division of Water Resources as a part of the larger investigation of the water resources of Indiana and is designed to obtain information on the seasonal range and long-time trends in ground-water levels and on the average annual recharge of water to the water-bearing formations.

During the year, detailed investigations of ground-water resources were continued in St. Joseph, Noble, Boone, Tippecanoe, and Adams Counties. The reconnaissance survey of existing ground-water supplies of the State and the inventory of water wells was also continued. Several special problems of the effects of drainage on ground-water and lake levels were studied.

At the end of 1945, the observation-well program in Indiana included 166 wells, the locations of which are shown in figure 2. During 1946, 22 new wells were added and 14 wells were dropped and measurements of water levels in these wells were discontinued. At the end of 1946, the program included 174 wells. Four of these were measured daily, 110 weekly, 5 semimonthly, 13 monthly, 14 occasionally at irregular intervals, and 28 were equipped with automatic water-stage recorders. A total of about 8,000 individual measurements of water levels was made during the year and about 7,400 additional determinations of water level were computed from recorder charts.

Seven wells in Clark and Floyd Counties were measured in connection with the Louisville, Kentucky, ground-water investigation by personnel of the Louisville office of the U. S. Geological Survey, M. I. Rorabaugh, district engineer (GW). Thirty-two wells are on State property and are measured voluntarily by personnel of the Indiana Department of Conservation.

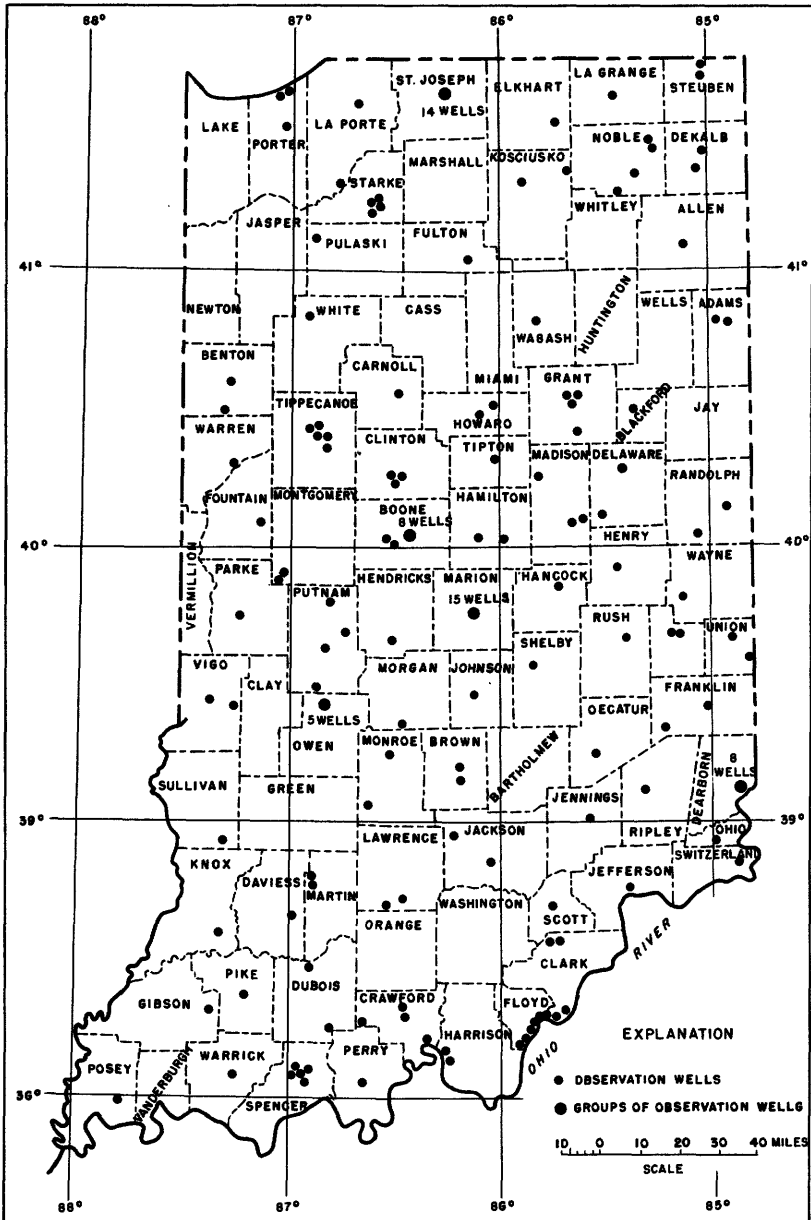


Figure 2.--Map of Indiana showing locations of observation wells, 1946

Forty-six wells are on municipal property and are measured by personnel of the various water-works departments and other municipal employees. Nineteen wells are on private or industrial property and are measured by industrial personnel or private individuals, and 19 wells are measured by personnel of the U. S. Geological Survey, Indianapolis.

## PRECIPITATION

The average precipitation for the State during 1946 was 36.25 inches, about 2.91 inches below the 60-year average for the period 1887-1946 inclusive. Precipitation was excessive in May and slightly above normal in February, June, November, and December, and below normal in January, April, and September. Droughts occurred in several of the extreme northern counties during midsummer although, in general, the amount and distribution of rainfall throughout the remainder of the State was adequate to prevent serious crop damage. Pertinent data on precipitation are given in the following table:

Precipitation, in inches, in Indiana, 1946

Division	Precipitation 1946	Departure from 60-year average	Driest month	Precipitation	Wettest month	Precipitation
Northern	32.01	-3.78	April	1.35	June	5.39
Central	35.86	-3.18	September	1.00	May	7.24
Southern	40.88	-1.91	September	1.18	May	6.60
Entire State	36.25	-2.96	September	1.35	May	6.06

## FLUCTUATIONS OF WATER LEVEL

Water levels in observation wells in Indiana, in feet  
below land-surface datum, 1946

Well	Date of first measurement	Lowest observed water level		Highest observed water level		Water level on last date of record, 1946
		Water level	Date	Water level	Date	
Adams 1 a/	May 27, 1944	55.90	Nov. 10, 1945	42.20	Mar. 23, 1946	51.87
Adams 2a/	June 23, 1945	83.71	July 13, 1946	49.78	Mar. 9, 1946	54.64
					Mar. 23, 1946	
Allen 3a/	May 25, 1944	12.72	Sept. 6, 1946	7.84	May 26, 1945	11.38
Benton 1	May 25, 1944	47.60	Nov. 2, 1944	37.38	June 1, 1944	42.94
Benton 2	May 25, 1944	17.05	Feb. 2, 1945	6.42	Mar. 1, 1946	10.48
Blackford 1	Sept. 27, 1945	7.98	Dec. 28, 1946	.72	Mar. 23, 1946	7.98
Boone 1	Oct. 15, 1935	12.95	Sept. 16, 1936	.28	Mar. 16, 1938	4.89
Boone 2	Oct. 15, 1935	11.0	Sept. 18, 1940	2.09	Mar. 16, 1938	5.79
Boone 4a/	May 24, 1945	71.30	Sept. 8, 1945	47.20	June 3, 1946	63.82
Boone 10a/	Oct. 26, 1945	51.37	Oct. 13, 1946	15.51	May 31, 1946	45.90
Boone 11a/	Oct. 26, 1945	52.40	Nov. 1, 1946	14.09	May 10, 1946	50.14
Boone 12a/	Oct. 26, 1945	32.58	Nov. 1, 1946	23.15	May 17, 1946	27.95
Boone 13	Oct. 26, 1945	13.47	Dec. 6, 1946	3.49	May 24, 1946	13.05
Boone 14a/	Oct. 26, 1945	50.14	Aug. 23, 1946	36.70	Jan. 25, 1946	40.34
Boone 15a/	Feb. 1, 1946	93.67	Aug. 16, 1946	39.45	Mar. 15, 1946	48.60

\* See footnotes at end of table.

Water levels in observation wells in Indiana, in feet below land-surface datum, 1946--Continued

Well	Date of first measurement	Lowest observed water level		Highest observed water level		Water level on last date of record 1946
		Water level	Date	Water level	Date	
Boone 16	Sept. 17, 1946	7.29	Nov. 25, 1946	4.37	Dec. 26, 1946	4.37
Brown 2	Dec. 8, 1936	17.65	Jan. 1, 1940	1.90	Feb. 28, 1945	4.85
Brown 3	Dec. 8, 1936	11.4	Feb. 1, 1940			
Carroll 1	Sept. 28, 1945	11.20	Nov. 11, 1938	+3	Feb. 2, 1945	8.47
Clark 1	Dec. 2, 1936	26.69	Oct. 5, 1946	2.72	Mar. 16, 1946	10.13
Clark 2	Dec. 2, 1936	24.46	Dec. 31, 1944	1.3	Feb. 15, 1937	20.24
Clark 3a/	Aug. 26, 1943	33.99	Nov. 29, 1944	.05	June 3, 1945	12.04
Clark 5	Feb. 21, 1944	17.86	May 12, 1944	21.32	Nov. 17, 1945	23.80
Clinton 1a/	Feb. 7, 1944	54.38	Feb. 21, 1944	6.69	May 9, 1945	14.24
Clinton 2a/	Feb. 7, 1944	71.11	Dec. 2, 1944	42.60	June 22, 1946	47.50
Clinton 3a/	Apr. 20, 1944	41.11	Dec. 3, 1944	59.78	Apr. 8, 1946	65.15
Crawford 1	Mar. 3, 1944	11.43	Sept. 15, 1946	13.87	May 15, 1946	38.65
Crawford 2	July 27, 1944	7.26	Nov. 9, 1946	1.99	Feb. 16, 1946	6.90
Crawford 3	July 27, 1944	18.50	Dec. 22, 1944	+0.1	Mar. 2, 1945	1.56
Crawford 4	Aug. 22, 1944	31.70	Oct. 27, 1946	5.90	Mar. 8, 1945	13.70
Daviess 1	Feb. 24, 1944	28.30	May 21, 1945	30.33	Mar. 13, 1945	.....
Dearborn 1-1a/	Nov. 15, 1943	91.69	Mar. 2, 1944	19.24	July 5, 1945	24.50
Dearborn 1-7a/	Sept. 30, 1944	83.55	Sept. 21, 1944	48.30	Mar. 17, 1945	69.42
Dearborn 1-8a/	Oct. 6, 1944	107.89	Sept. 30, 1944	37.10	May 19, 1945	64.34
Dearborn 1-10a/	Feb. 26, 1946	41.10	Oct. 12, 1944	65.56	Mar. 18, 1945	99.92
Dearborn 2	Sept. 21, 1944	67.95	Dec. 31, 1946	10.60	Apr. 2, 1946	41.10
			Nov. 20, 1944	32.7	Mar. 12, 1945	64
			Nov. 26, 1944			
			Dec. 4, 1944			
Dearborn 3	Sept. 21, 1944	58.00	Nov. 26, 1944	18.24	Mar. 12, 1945	55.93
Dearborn 4	Sept. 21, 1944	45.50	Nov. 13, 1944	(c)	Mar. 12, 1945	44.24
			Nov. 20, 1944			
Dearborn 5	Aug. 28, 1945	40.55	Nov. 12, 1946	18.76	Jan. 14, 1946	39.98
Decatur 1	Sept. 8, 1944	6.64	Oct. 25, 1946	1.37	Dec. 20, 1946	1.60
De Kalb 1a/	Nov. 24, 1936	14.5	Aug. 15, 1944	5.5	May 26, 1943	9.5
De Kalb 2	Sept. 7, 1945	17.10	Dec. 6, 1946	2.32	Jan. 13, 1946	10.90
Delaware 2	Mar. 30, 1945	14.80	Dec. 7, 1946	5.10	Mar. 15, 1946	14.45
Delaware 3	Dec. 11, 1946	12.07	Dec. 11, 1946	10.47	Dec. 21, 1946	10.65
Dubois 2	Dec. 1, 1936	17.89	Dec. 1, 1943	5.77	May 5, 1943	13.85
Dubois 5	July 28, 1944	22.16	Dec. 29, 1944	8.28	Mar. 9, 1945	19.67
Elkhart 2	Sept. 10, 1945	6.64	Sept. 9, 1946	.86	Oct. 1, 1945	5.61
Fayette 1	July 12, 1945	6.68	Aug. 25, 1945	4.32	Feb. 6, 1946	4.58
Fayette 2	Apr. 24, 1946	14.54	Dec. 27, 1946	3.38	May 21, 1946	14.53
Floyd 1	Dec. 21, 1943	47.06	Nov. 13, 1944	12.65	Feb. 27, 1945	43.69
			Nov. 14, 1944			
Floyd 2	Dec. 21, 1943	(d)	Aug. 20, 1945	9.50	Mar. 23, 1945	46.39
			Aug. 10-Nov. 21, 1946			
Floyd 3	Dec. 21, 1943	22.23	Feb. 18, 1944	7.40	Mar. 23, 1945	13.58
Floyd 4	Dec. 21, 1943	30.23	Feb. 18, 1944	9.70	Mar. 23, 1945	24.15
Floyd 5	Dec. 21, 1943	33.80	Feb. 18, 1944	11.73	Mar. 23, 1945	27.08
Floyd 6	Feb. 4, 1944	20.08	Feb. 28, 1944	1.53	Feb. 27, 1945	16.66
Fountain 1	May 26, 1944	42.45	Feb. 17, 1945	34.32	June 14, 1944	41.40
			Mar. 7, 1945			
Franklin 1a/	Dec. 8, 1936	31.71	Oct. 16, 1939	21.64	Jan. 18, 1937	29.5
Franklin 4	Feb. 18, 1944	44.28	Jan. 26, 1945	16.86	Apr. 7, 1944	30.98
Fulton 3a/	Sept. 10, 1935	11.18	Jan. 15, 1944	4.27	June 3, 1943	8.50
Gibson 1	Aug. 24, 1944	20.64	Oct. 12, 1944	13.70	Dec. 30, 1946	13.70
Grant 1a/	Mar. 8, 1945	98.6	Mar. 31, 1945	65.1	Dec. 30, 1946	65.1
			Apr. 3, 1945	7, 1945	Dec. 31, 1946	
Grant 2a/	Mar. 8, 1945	85.4	Apr. 30, 1945	58.00	May 13, 1946	59.91
Grant 5a/	Apr. 16, 1945	58.26	Oct. 18, 1946	46.21	Apr. 5, 1946	54.24
Grant 6	June 2, 1945	17.67	Dec. 22, 1946	7.00	Feb. 15, 1946	17.50
Hamilton 1a/	Nov. 2, 1935	27.33	Sept. 15, 1941	14.71	May 19, 1945	21.26
Hamilton 3	Mar. 27, 1945	10.78	Oct. 13, 1946	1.46	June 17, 1945	5.48
Hancock 1	Apr. 24, 1946	27.91	Nov. 6, 1946	12.95	June 20, 1946	27.01

\* See footnotes at end of table.

Water levels in observation wells in Indiana, in feet below land-surface datum, 1946--Continued

Well	Date of first measurement	Lowest observed water level		Highest observed water level		Water level on last date of record 1946
		Water level	Date	Water level	Date	
Harrison 1a/	Dec. 2, 1936	5.65	Nov. 15, 1941	0.00	Apr. 15, 1939	0.73
Harrison 3	Oct. 25, 1938	7.8	Sept. 30, 1941	2.00	Mar. 21, 1939	2.94
Hendricks 1	Feb. 25, 1944	8.69	Jan. 15, 1945	(c)	Apr. 17, 1944	7.24
					Apr. 24, 1944	
Henry 2	July 31, 1946	18.15	Nov. 17, 1946	13.90	July 31, 1946	16.35
Howard 3a/	Nov. 25, 1941	24.51	Oct. 23, 1946	11.73	Apr. 25, 1944	24.51
Howard 4	Mar. 28, 1945	14.42	Dec. 28, 1946	2.19	Mar. 24, 1946	14.42
Huntington 1	Sept. 27, 1945	36.25	Dec. 9, 1946	1.85	Mar. 17, 1946	35.70
Jackson 1	Dec. 3, 1936	11.90	Oct. 21, 1946	1.2	Apr. 15, 1939	8.58
Jackson 2	Feb. 16, 1944	18.87	Feb. 16, 1944	10.70	May 20, 1946	13.65
Jefferson 2	Mar. 3, 1937	32.5	Aug. 16, 1945	26.10	June 17, 1946	30.46
Jennings 1	Dec. 3, 1936	16.98	Dec. 15, 1943	1.86	Jan. 15, 1937	7.35
Johnson 1	Feb. 22, 1944	10.45	Oct. 25, 1944	2.61	Apr. 11, 1944	6.78
			Oct. 31, 1944			
Knox 1	Aug. 24, 1944	37.22	Feb. 22, 1945	34.00	Oct. 24, 1946	34.70
Kosciusko 2	Nov. 3, 1938	bl.46	Dec. 7, 1946	bl.33	May 1, 1944	bl.52
			Dec. 23, 1946			
Kosciusko 3	Sept. 11, 1945	13.51	Dec. 26, 1946	10.60	Feb. 14, 1946	13.51
LaGrange 1	Sept. 10, 1945	7.95	Sept. 24, 1945	6.33	Oct. 22, 1945	(e)
LaPortela/	July 4, 1942	15.5	July 18, 1942	3.70	Oct. 6, 1945	9.80
LaPorte 2	July 2, 1942	7.22	Oct. 11, 1946	1.07	June 1, 1943	5.87
Lawrence 1a/	Feb. 24, 1944	21.93	July 6, 1944	9.09	Mar. 8, 1945	18.49
Lawrence 2	Feb. 23, 1944	21.51	Mar. 15, 1944	8.22	Mar. 7, 1945	21.34
Madison 2a/	Oct. 16, 1935	18.40	July 5, 1944	10.9	Nov. 15, 1938	14.4
Madison 5a/	May 22, 1944	69.0	Sept. 20, 1946	28.6	Apr. 13, 1946	53.0
			Sept. 26, 1946			
Marion 1a/	Aug. 1, 1935	37.46	Aug. 5, 1941	13.85	Apr. 16, 1938	18.94
Marion 2a/	Oct. 15, 1935	71.55	Sept. 21, 1941	47.44	Apr. 12, 1938	53.65
Marion 3a/	Oct. 15, 1935	71.16	Oct. 7, 1941	50.00	Mar. 29, 1938	53.89
Marion 4a/	Dec. 3, 1937	15.72	Mar. 27, 1941	+3.92	Apr. 16, 1938	5.31
Marion 9a/	July 26, 1939	62.48	Oct. 3, 1942	43.38	Mar. 26, 1941	48.20
Marion 10a/	Aug. 2, 1939	70.78	Aug. 29, 1941	50.64	Feb. 13, 1940	58.44
Marion 13a/	Jan. 12, 1928	(f)	Sept. 20, 1930	+2.19	Jan. 20, 1932	(f)
			Jan. 12, 1945			
			Feb. 14, 1945			
			Sept. 9, 1946			
Marion 14a/	June 3, 1929	(g)	Nov. 1, 1930	11.75	Jan. 18, 1937	21.62
			Feb. 14, 1945			
Marion 16a/	Mar. 19, 1940	114.58	May 1, 1944	56.65	Jan. 28, 1941	102.45
Marion 18	Oct. 11, 1943	28.33	Feb. 5, 1945	13.41	Mar. 20, 1946	24.40
			Feb. 13, 1945			
			Feb. 14, 1945			
Marion 19	Oct. 19, 1943	21.48	Feb. 5, 1945	15.96	June 24, 1946	19.09
Marion 21a/	Mar. 28, 1944	67.28	Aug. 4, 1944	55.12	Mar. 18, 1946	59.14
Marion 22a/	Apr. 11, 1944	90.40	July 14, 1944	67.80	Apr. 12, 1944	74.73
Marion 24	Nov. 1, 1944	14.31	Feb. 12, 1945	2.10	Apr. 2, 1945	h5.03
Marion 25a/	May 7, 1945	47.18	Aug. 23, 1946	18.30	May 27, 1946	35.00
Martin 3	Mar. 1, 1944	22.71	Feb. 15, 1945	18.65	Mar. 3, 1945	21.51
Martin 4	Mar. 1, 1944	12.56	Dec. 2, 1944	2.40	Mar. 8, 1944	3.46
Monroe 2	Sept. 15, 1944	25.10	Sept. 11, 1945	16.00	Mar. 19, 1946	21.95
					May 28, 1946	
Monroe 3	Sept. 15, 1944	27.44	Feb. 27, 1945	17.80	June 23, 1945	26.50
Montgomery 1	Sept. 27, 1935	15.45	Nov. 16, 1945	3.66	May 17, 1945	10.23
Montgomery 4	Sept. 27, 1935	17.33	Oct. 15, 1940	1.33	Apr. 4, 1938	11.00
Morgan 3	Aug. 14, 1945	8.80	Sept. 11, 1945	2.51	Aug. 14, 1945	3.85
Noble 1a/	Nov. 1, 1935	19.37	Apr. 30, 1945	12.82	Oct. 19, 1938	117.32
Noble 3	Oct. 9, 1935	24.50	Sept. 15, 1936	9.90	Aug. 2, 1938	24.50
			Dec. 29, 1946			
Noble 5	May 1, 1942	9.20	Feb. 3, 1945	.49	May 17, 1943	8.39
			Feb. 17, 1945			

\* See footnotes at end of table.



Water levels in observation wells in Indiana, in feet below land-surface datum, 1946--Continued

Well	Date of first measurement	Lowest observed water level		Highest observed water level		Water level on last date of record 1946
		Water level	Date	Water level	Date	
Noble 6a/	May 28, 1946	24.45	Sept. 25, 1946	20.17	May 28, 1946	24.01
Ohio 1	Sept. 7, 1944	13.88	Nov. 2, 1946	+3.37	Mar. 3, 1945	12.29
Orange 1	Mar. 1, 1944	14.49	Mar. 1, 1944	(c)	Apr. 9, 1944	8.45
Owen 2	Sept. 10, 1946	25.65	Oct. 15, 1946	14.02	Nov. 26, 1946	15.63
Owen 3	June 5, 1946	109.94	July 17, 1946	108.96	Aug. 9, 1946	109.27
Owen 4	June 20, 1946	80.80	Nov. 2, 1946	72.58	June 21, 1946	74.70
Owen 5	June 5, 1946	13.39	Aug. 3, 1946	2.52	June 5, 1946	10.57
Owen 6	June 5, 1946	9.39	Nov. 3, 1946	5.07	Dec. 14, 1946	6.60
Parke 1	June 14, 1945	8.47	Sept. 20, 1945	2.38	June 21, 1945	5.13
Perry 1	Mar. 3, 1944	10.12	Aug. 13, 1944	1.47	Dec. 23, 1945	2.39
Pike 1	Dec. 1, 1936	12.94	Dec. 30, 1944	3.50	Mar. 31, 1945	6.90
Porter 1a/	Oct. 16, 1935	58.05	Mar. 31, 1944	50.63	Aug. 3, 1943	51.05
Porter 2a/	Oct. 18, 1935	13.8	Oct. 18, 1935	9.83	Oct. 1, 1945	11.02
Porter 3a/	Oct. 18, 1935	17.3	Dec. 23, 1940	11.19	July 2, 1945	12.67
Posey 1	Feb. 17, 1944	16.10	Feb. 27, 1944	3.14	Jan. 13, 1945	14.90
Pulaski 1	Dec. 1, 1935	10.08	Oct. 28, 1946	6.21	Mar. 25, 1946	8.51
Putnam 1	June 14, 1945	7.43	Sept. 19, 1945	1.48	June 17, 1945	5.88
Putnam 3	Sept. 10, 1946	132.29	Oct. 29, 1946	131.26	Oct. 8, 1946	131.52
Randolph 1a/	Feb. 8, 1942	18.43	Jan. 31, 1945	12.39	Apr. 15, 1944	16.61
Randolph 2	Dec. 19, 1946	12.84	Dec. 28, 1946	12.81	Dec. 21, 1946	12.84
Ripley 1	Sept. 7, 1944	13.10	Jan. 15, 1945	3.68	May 16, 1946	12.57
Rush 1	July 12, 1945	9.88	Aug. 4, 1946	2.74	Mar. 17, 1946	7.00
St. Joseph 1a/	Oct. 16, 1935	14.59	Aug. 1, 1946	4.46	May 25, 1943	9.68
St. Joseph 4T-1a/	Feb. 16, 1945	20.64	July 26, 1945	16.65	June 8, 1945	19.02
St. Joseph 4T-2	Feb. 16, 1945	9.08	Sept. 20, 1946	6.65	May 24, 1945	8.40
St. Joseph 10-2a/	Jan. 26, 1946	37.85	Dec. 31, 1946	35.81	May 27, 1946	37.85
St. Joseph 16-1a/	June 28, 1944	32.25	Sept. 27, 1946	23.2	Mar. 1, 1946	30.30
St. Joseph 16-2a/	Dec. 5, 1909	21.72	Feb. 22, 1945	13.99	Dec. 5, 1909	19.9
St. Joseph 22a/	June 8, 1944	45.36	July 21, 1946	29.97	Jan. 1, 1946	18.79
St. Joseph 28a/	Mar. 8, 1945	18.80	Dec. 6, 1946	16.77	Apr. 11, 1946	18.79
St. Joseph 34a/	Feb. 15, 1945	41.58	Apr. 5, 1945	37.02	Dec. 29, 1946	40.75
St. Joseph 53a/	Mar. 23, 1945	9.05	Oct. 27, 1946	4.19	May 23, 1946	5.38
St. Joseph 85	Jan. 19, 1945	15.86	Dec. 5, 1946	12.74	June 1, 1945	15.60
St. Joseph 89	Mar. 17, 1945	47.40	Sept. 7, 1946	44.28	Apr. 12, 1946	46.19
St. Joseph 90	Mar. 22, 1945	10.72	Sept. 7, 1946	8.45	Mar. 29, 1946	10.69
St. Joseph 91	Mar. 22, 1945	4.91	Nov. 28, 1946	3.97	June 28, 1945	4.91
St. Joseph 92	June 22, 1945	24.83	Oct. 24, 1946	23.64	June 13, 1946	24.83
Scott 1a/	May 4, 1942	27.61	Dec. 2, 1944	16.23	May 21, 1946	20.68
Shelby 1	Apr. 23, 1946	9.76	Dec. 3, 1944			
Spencer 4	Mar. 2, 1944	8.26	Nov. 24, 1946	7.10	May 12, 1946	9.10
Spencer 5	Mar. 2, 1944	31.88	Dec. 8, 1946			
Spencer 6	Aug. 23, 1944	30.25	Oct. 7, 1944	.46	Feb. 10, 1945	2.06
Spencer 7	Aug. 23, 1944	11.31	Dec. 23, 1944	1.31	June 1, 1946	6.99
Spencer 8	Aug. 23, 1944	8.23	Nov. 11, 1944	1.57	Mar. 17, 1945	6.66
Starke 1a/	Oct. 3, 1935	16.40	Apr. 2, 1945	11.58	June 1, 1943	13.63
Starke 2a/	Oct. 3, 1935	6.19	Sept. 15, 1941	1.15	Mar. 16, 1944	3.88
Starke 3a/	Oct. 3, 1935	5.45	Sept. 15, 1941	.00	Apr. 17, 1944	3.89
Starke 10	June 23, 1945	6.03	Aug. 26, 1945	+4.40	Apr. 22, 1946	4.40
Steuben 1	Sept. 16, 1935	4.72	Nov. 1, 1935	+1.00	June 1, 1943	3.4
Steuben 2	Sept. 16, 1935	6.7	Oct. 19, 1946	.03	Apr. 15, 1939	6.1
			Oct. 26, 1946			
			Nov. 2, 1946			

\* See footnotes at end of table.

Water levels in observation wells in Indiana, in feet below land-surface datum, 1946--Continued

Well	Date of first measurement	Lowest observed water level		Highest observed water level		Water level on last date of record 1946
		Water level	Date	Water level	Date	
Sullivan	Aug. 24, 1944	15.38	Nov. 5, 1944	0.70	Apr. 15, 1945	4.58
Switzerland 1	Sept. 7, 1944	21.90	Dec. 2, 1944	3.40	Mar. 22, 1945	15.50
			Dec. 15, 1944			
Tippecanoe 4a/	Apr. 24, 1944	22.16	Aug. 13, 1944	+1.00	May 19, 1945	15.8
Tippecanoe 5a/	Apr. 24, 1944	91.32	Dec. 30, 1946	87.83	May 1, 1944	91.32
Tippecanoe 7	Aug. 10, 1945	166.21	Dec. 2, 1946	164.41	Apr. 8, 1946	165.95
Tippecanoe 8a/	Nov. 28, 1945	14.05	Oct. 18, 1946	7.06	Jan. 14, 1946	12.75
Tippecanoe 9a/	Feb. 15, 1946	76.53	Oct. 26, 1946	69.80	Sept. 15, 1946	73.59
Tipton 1	Mar. 27, 1945	5.40	Sept. 23, 1945	+6.0	June 10, 1946	2.00
Union 1	July 11, 1945	8.66	Sept. 20, 1945	8.49	Jan. 5, 1946	.....
Union 3	Apr. 24, 1946	14.30	Dec. 9, 1946	5.44	May 27, 1946	14.10
Vigo 2	Feb. 13, 1946	56.96	Dec. 29, 1946	48.77	Feb. 22, 1946	56.86
Vigo 3	June 15, 1945	9.19	Nov. 22, 1946	.55	Jan. 11, 1946	5.30
Wabash 2	June 1, 1945	14.05	Sept. 5, 1946	2.16	May 21, 1946	12.81
Warren 1a/	May 26, 1944	18.84	Aug. 26, 1944	6.15	May 11, 1946	10.74
Warrick 2	Feb. 18, 1944	15.47	Feb. 18, 1944	(m)	Mar. 16, 1945	8.73
Wayne 1	July 11, 1945	31.84	Dec. 17, 1946	28.05	July 11, 1945	31.37
Wayne 2	Dec. 18, 1946	19.80	Dec. 18, 1946	18.60	Dec. 30, 1946	18.60
White 1a/	Dec. 4, 1935	20.34	Oct. 3, 1941	n8.00	Apr. 3, 1936	16.41
					June 5, 1936	

a Affected by pumping.

b Estimated.

c Flowing.

d Dry at 49.02

e Discontinued Jan. 14, 1946.

f Dry at 6.00

g Dry at 22.96

h Discontinued May 27, 1946.

i Discontinued May 12, 1946.

j Discontinued Apr. 30, 1946.

k Discontinued Feb. 12, 1946.

m Overflowing.

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

p Discontinued June 6, 1946.

q Discontinued July 22, 1946.

Of the 182 wells included in the table, the lowest recorded water level occurred in 65 wells and the highest recorded water level occurred in 83 wells. The records of many of these wells are comparatively short.

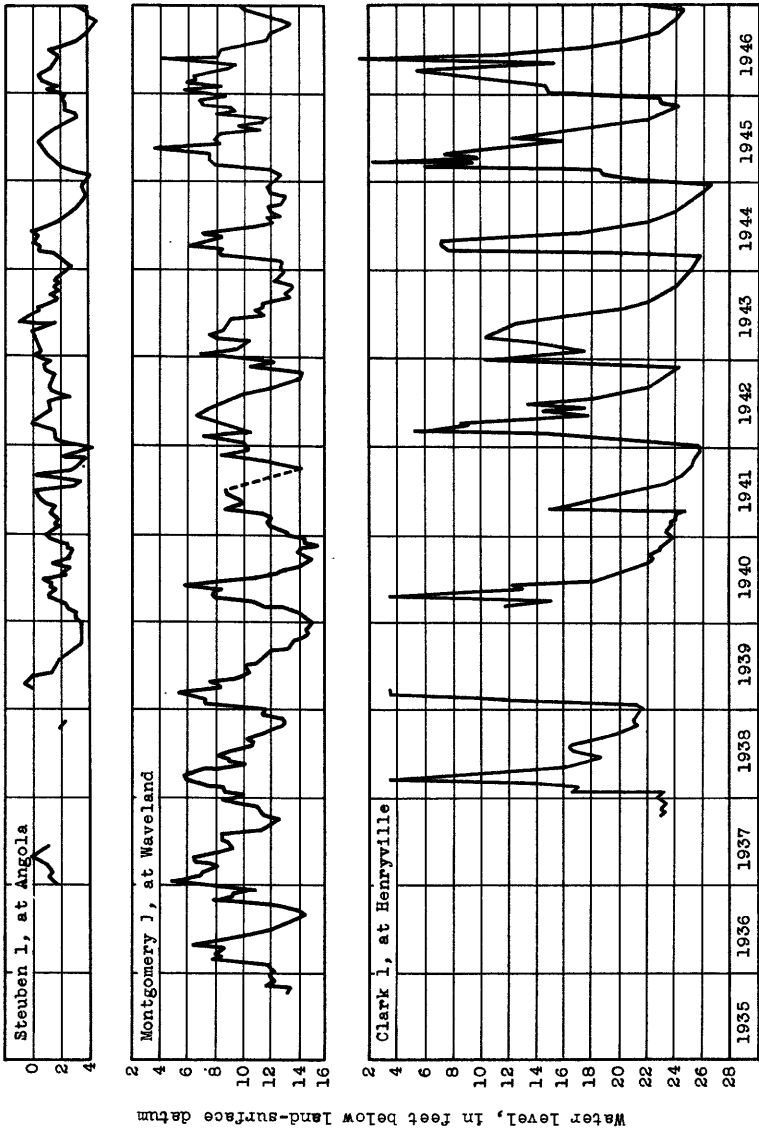
The net changes in ground-water levels in observation wells are given in the following table.

Net changes, in feet, in water levels in observation wells in Indiana during 1946

Well	Net rise (+) or net decline (-)	Well	Net rise (+) or net decline (-)
Adams 1	+3.15	Boone 11A	-26.54
Adams 2	+25.68	Boone 12	-2.30
Allen 3	+26	Boone 13A	-2.65
Benton 1	-.02	Boone 14A	-2.22
Benton 2	-8.11	Brown 2	-2.53
Blackford 1	-1.56	Brown 3	-6.36
Boone 2	-1.66	Carroll 1	-5.11
Boone 4	+1.65	Clark 1	-5.20
Boone 10A	-29.61	Clark 2	-5.52

Net changes, in feet, in water levels in observation wells  
in Indiana during 1946

Well	Net rise (+) or net decline (-)	Well	Net rise (+) or net decline (-)
Clark 3	+4.84	Marion 16	-3.11
Clark 5	-1.56	Marion 18	-3.38
Clinton 1	-1.50	Marion 19	-1.12
Clinton 2	-2.89	Marion 21	-2.48
Clinton 3	-18.00	Marion 22	-1.56
Crawford 1	-3.04	Marion 25	-13.99
Crawford 2	-.13	Martin 3	-1.28
Crawford 3	+1.70	Martin 4	-.31
Crawford 4	-.06	Monroe 2	-1.48
Daviess 1	-2.37	Monroe 3	-5.40
Dearborn 1-1	+11.34	Montgomery 1	-4.09
Dearborn 1-8	-6.96	Morgan 3	-2.96
Dearborn 3	-6.35	Noble 3	-1.77
Dearborn 4	-6.66	Noble 5	-3.60
Dearborn 5	-6.39	Ohio 1	-6.95
Decatur 1	+1.15	Orange 1	-7.70
DeKalb 1	+1.00	Parke 1	-1.78
DeKalb 2	-1.80	Perry 1	-.76
Delaware 2	-6.35	Pike 1	-1.10
Dubois 2	-1.07	Porter 1	-2.89
Dubois 5	-3.27	Pulaski 1	-1.18
Elkhart 2	-.11	Putnam 1	-.84
Floyd 1	-7.87	Randolph 1	-2.90
Floyd 2	-7.47	Ripley 1	-2.36
Floyd 3	+1.69	Rush 1	-1.36
Floyd 4	-1.20	St. Joseph 1	+91
Floyd 5	-1.02	St. Joseph 4T-1	-.04
Floyd 6	-.27	St. Joseph 4T-2	0
Fountain 1	-.35	St. Joseph 16-1	-1.11
Franklin 1	-3.00	St. Joseph 16-F	+1.29
Franklin 4	-3.51	St. Joseph 22	+2.27
Fulton 3	-1.00	St. Joseph 28	-.88
Gibson 1	+3.86	St. Joseph 34	-1.75
Grant 1	+6.3	St. Joseph 53	+1.19
Grant 2	+4.90	St. Joseph 85	-1.25
Grant 5	-.83	St. Joseph 89	-.63
Grant 6	-5.00	St. Joseph 90	-.49
Hamilton 3	-3.41	St. Joseph 91	-.29
Harrison 1	+1.17	St. Joseph 92	-.27
Harrison 3	+1.14	Scott 1	+3.33
Hendricks 1	-3.95	Spencer 4	+1.06
Howard 4	-4.92	Spencer 5	-1.09
Huntington 1	-33.1	Spencer 6	-1.93
Jackson 1	-3.08	Spencer 7	-2.76
Jackson 2	-1.86	Spencer 8	-1.53
Jefferson 2	-1.46	Starke 2	-.61
Jennings 1	+2.21	Steuben 1	-1.3
Johnson 1	-.11	Steuben 2	-1.2
Knox 1	+5.55	Sullivan 1	-2.33
Kosciusko 3	-1.41	Switzerland	-1.65
LaPorte 1	-2.79	Tippecanoe 4	-10.12
LaPorte 2	-.47	Tippecanoe 5	-1.42
Lawrence 1	-4.59	Tippecanoe 7	-.58
Lawrence 2	-3.99	Tippecanoe 8	-2.24
Madison 5	-16.3	Tipton 1	-1.80
Marion 1	-.64	Vigo 3	-4.23
Marion 2	+1.14	Wabash 2	-5.47
Marion 3	-1.30	Warren 1	-.72
Marion 4	-1.84	Warrick 2	-8.73+
Marion 9	-2.00	Wayne 1	-.90
Marion 10	-.58	White	-3.02



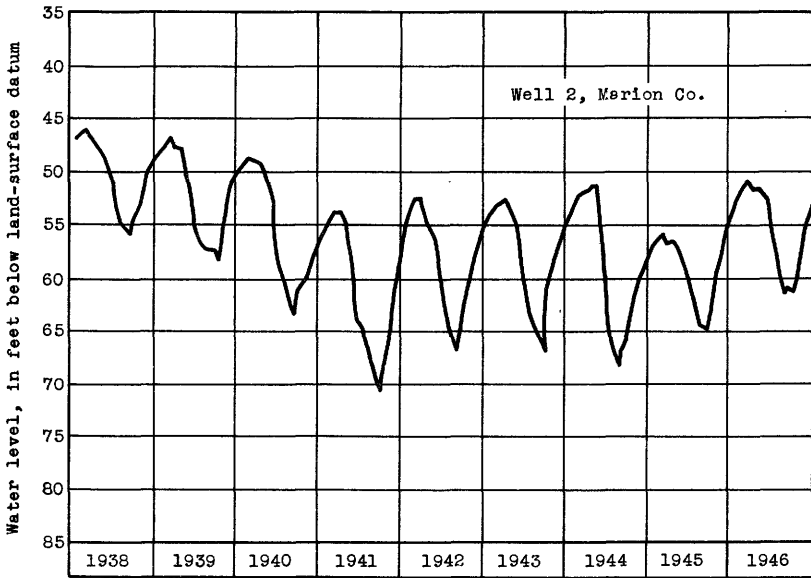


Figure 4.--Graph of water level in observation well Marion 2, ending in gravel, in the downtown area of Indianapolis, Marion County, Ind.

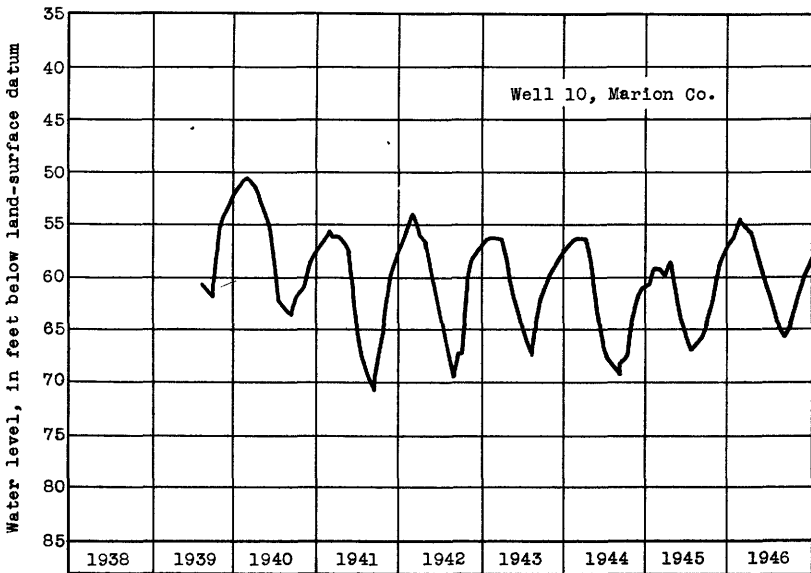


Figure 5.--Graph of water level in observation well Marion 10, ending in limestone, in the downtown area of Indianapolis, Marion County, Ind.

The net change during the year is computed by comparing the measurements of water level nearest to December 31, 1945 to those nearest December 31, 1946. Of the 139 wells for which records of net change are available, 112 wells showed net declines and 27 wells showed net rises in ground-water levels during the year. This may be due, in part, to the fact that during 1945 the lowest level for the year in many wells was reached during November and during 1946 the lowest levels of the year generally occurred in December.

In January 1946, water levels in observation wells were at a relatively high stage, and continued to rise through March. During April, largely because of deficient precipitation, water levels generally declined, but rose again during May. The highest water levels for the year generally occurred either in March or May. Ground-water levels generally declined throughout the rest of the year until December. The water levels in wells affected by pumping generally started to rise in October or November because of decreased pumping for cooling purposes.

The graphs of water levels in three key wells at widely spaced localities in the State are shown in figure 3. The generally rising trend in ground-water levels since 1941 and 1944 was at least temporarily halted and in many wells the lowest levels of 1946 are below those of 1945. The low levels of 1946, in general, were several feet above the low levels of 1941 and 1944, especially in observation wells unaffected by pumping.

The trends in ground-water levels in the downtown area of Indianapolis, where large quantities of ground water are pumped for air-conditioning purposes, are shown in figures 4 and 5. Marion 2 is a well ending in gravel and well Marion 10 is a limestone well. The large seasonal fluctuation in water level is due to pumping water for air-conditioning from nearby wells. The general trends in ground-water levels are similar to those of wells unaffected by pumping, although the net rises and declines are of greater magnitude.

#### WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

##### Adams County

Adams 1 (\*1016, p. 36; 1023, p. 32 ). City of Decatur. In Decatur, 50 feet north of Park St. and 120 feet east of North Fifth St. Measuring point, 1.80 feet above land surface datum. Measurements made by personnel of Water Department, Ralph E. Roop, superintendent.

## Adams 1--Continued.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	54.63	Apr. 20	49.50	July 13	52.19	Oct. 12	51.45
12	53.99	27	48.20	20	52.93	19	52.15
19	53.41	May 4	47.61	27	53.50	26	52.85
26	46.18	11	50.00	Aug. 3	53.40	Nov. 4	52.97
Feb. 2	53.22	18	43.40	10	53.50	9	52.86
9	52.16	25	50.56	17	53.90	16	52.71
16	52.26	June 1	50.98	24	52.96	23	52.94
Mar. 9	50.15	8	50.17	Sept. 7	53.01	30	52.15
16	49.58	15	51.91	14	53.18	Dec. 7	52.10
23	42.20	22	52.16	21	52.36	14	52.76
30	48.91	29	52.35	30	52.63	21	52.15
Apr. 6	49.16	July 6	52.30	Oct. 5	51.30	28	51.87
13	49.18						

Adams 2 (\*1023, p. 32 ). City of Decatur, "7th and Dayton well". In Decatur, at southwest corner of the 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, 1946							
Jan. 5	80.10	Apr. 20	69.80	July 13	83.71	Oct. 12	52.59
12	58.28	27	70.30	20	75.80	19	70.50
19	73.06	May 4	70.36	27	80.00	26	72.55
26	65.76	11	72.00	Aug. 3	75.60	Nov. 4	67.31
Feb. 2	56.26	18	77.60	10	75.00	9	66.20
9	54.77	25	77.76	17	72.20	16	56.60
16	61.00	June 1	78.32	24	66.58	23	64.95
Mar. 9	49.78	8	74.78	Sept. 7	78.73	30	57.55
16	50.60	15	79.08	14	73.71	Dec. 7	62.57
23	49.78	22	79.31	21	56.01	14	68.24
30	61.80	29	79.40	30	71.34	21	62.55
Apr. 6	51.75	July 6	79.30	Oct. 5	54.44	28	54.64
13	55.75						

Allen County

Allen 3 (\*1016, p. 36; 1023, p. 33). 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, 1946							
Jan. 5	11.30	Apr. 6	10.17	July 7	10.57	Oct. 5	12.54
12	11.20	13	10.30	14	10.79	12	12.52
19	11.27	20	10.48	20	10.93	19	12.65
26	11.42	27	10.57	27	11.19	26	12.48
Feb. 2	11.59	May 4	10.65	Aug. 3	11.37	Nov. 2	12.38
9	11.70	11	10.73	10	11.52	10	12.27
18	11.20	18	10.27	17	11.52	16	12.27
23	11.68	25	10.16	24	12.69	23	12.12
Mar. 2	11.60	June 1	10.20	31	12.70	30	12.06
9	10.47	8	10.60	Sept. 6	12.72	Dec. 7	11.86
16	10.10	15	10.28	14	12.07	14	11.60
23	9.88	22	10.25	21	12.23	21	11.43
30	9.98	29	10.48	28	12.38	28	11.38

Benton County

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

## Benton 1--Continued.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 17	41.91	Mar. 28	41.85	June 6	40.00	Sept. 12	47.98
Feb. 7	41.96	Apr. 25	38.44	July 4	38.95	Oct. 31	42.00
Mar. 7	38.04	May 16	42.95	Aug. 8	39.97	Nov. 21	42.94

Benton 2 (\*1016, p. 37; 1023, p. 33). City of Boswell. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 13, T. 24 N., R. 9 W., near northeast 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, 1946							
Jan. 3	6.97	Mar. 21	8.82	July 18	12.12	Oct. 10	16.04
10	6.71	Apr. 4	10.12	Aug. 1	13.30	17	14.89
17	6.79	11	9.26	8	15.50	24	15.85
24	6.69	18	9.96	15	13.79	Nov. 1	15.40
31	7.63	May 2	12.33	23	14.88	14	15.46
Feb. 7	7.40	16	11.42	29	14.41	21	13.63
14	7.07	23	12.16	Sept. 5	15.15	Dec. 6	12.80
21	7.13	June 13	13.34	13	14.85	13	13.73
Mar. 1	6.42	20	11.12	19	15.38	21	11.18
7	8.76	28	11.30	26	16.30	27	10.48
14	7.43	July 11	12.55	Oct. 5	15.86		

Blackford County

Blackford 1 (\*1023, p. 33). Owner unknown. In Hartford City, in SW $\frac{1}{4}$  sec. 35, T. 24 N., R. 10 E., about 500 feet east of State Highway 32 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, 1946							
Jan. 5	3.16	Apr. 6	2.51	July 6	3.40	Oct. 5	5.93
12	1.63	13	2.18	13	3.56	12	6.15
19	2.70	20	2.89	20	3.50	19	6.28
26	3.02	27	3.12	27	3.74	26	6.47
Feb. 2	3.23	May 4	4.35	Aug. 5	3.98	Nov. 1	6.59
9	3.33	11	3.49	10	4.23	9	6.84
16	2.93	18	2.82	17	4.45	16	7.02
23	3.15	25	2.47	24	4.64	23	7.27
Mar. 2	2.14	June 1	1.71	31	4.86	30	7.50
9	1.45	8	2.63	Sept. 7	5.06	Dec. 7	7.39
16	1.35	15	2.77	14	5.28	14	7.11
23	1.72	22	3.02	21	5.54	21	7.60
30	1.87	29	3.19	28	5.70	28	7.98

Boone County

Boone 1 (\*817, pp. 43-44; 840, p. 73; 845, p. 70; 886, p. 97; 906, p. 21; 936, p. 23; 944, p. 23; 986, p. 25; 1023, p. 34). Leland H. Dale. About 3 miles south of Lebanon and 1 mile west of State Highway 39. Measurements made by Leland H. Dale. Measurements discontinued Aug. 21, 1946. (See Boone 16.)

Water level, in feet below land-surface datum, 1946							
Jan. 7	1.24	Mar. 18	0.97	May 21	1.43	July 8	3.20
22	2.25	26	1.45	27	2.00	16	3.77
Feb. 4	2.46	Apr. 22	2.48	June 4	2.08	28	4.40
10	2.28	29	2.52	11	2.49	Aug. 6	4.82
27	1.20	May 7	1.24	21	1.86	12	5.10
Mar. 6	1.20	13	2.42	July 2	2.84	21	4.89



Boone 2 (\*817, pp. 43-44; 840, p. 73; 845, p. 70; 886, p. 97; 906, p. 21; 936, p. 23; 944, p. 23; 986, p. 25; 1023, p. 34). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	4.06	Apr. 5	5.26	July 5	6.34	Oct. 4	8.97
11	3.35	12	5.70	12	6.54	11	9.18
18	4.64	19	5.57	19	6.86	18	9.15
25	5.37	26	5.93	25	6.99	25	9.03
Feb. 1	5.47	May 3	3.16	Aug. 2	7.30	Nov. 1	8.99
7	4.87	10	3.93	9	7.60	8	8.58
15	3.70	17	2.79	16	7.63	15	8.06
22	3.99	24	4.18	23	7.32	22	8.08
Mar. 1	3.60	31	5.03	30	7.87	30	6.75
8	3.80	June 7	5.03	Sept. 6	8.00	Dec. 6	7.55
15	2.52	14	4.19	13	8.23	13	4.52
22	3.57	21	4.10	20	8.48	20	5.20
29	3.67	28	5.85	27	8.68	27	5.79

Boone 4 (\*1023, p. 34). 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, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	61.70	56.20	51.00	50.30	52.05	.....	64.98	64.50	65.62	65.03	64.14	
2	61.00	56.28	54.34	50.55	51.10	.....	61.64	62.90	64.30	64.88	64.31	
3	59.80	60.68	62.03	49.03	47.20	52.50	65.67	61.20	58.06	64.79	64.07	
4	50.10	63.52	52.58	51.92	52.50	53.15	65.60	61.00	61.80	58.20	64.15	
5	59.70	58.70	66.12	.....	49.38	59.40	57.60	59.45	63.60	63.52	64.98	63.85
6	62.55	55.20	56.90	59.46	47.48	55.20	63.75	63.46	65.75	65.60	65.00	63.72
7	61.20	55.70	57.40	51.20	51.20	50.00	63.80	60.92	65.85	65.60	64.60	63.23
8	62.60	57.20	54.20	47.34	51.23	57.60	65.08	65.29	65.75	65.78	64.45	63.84
9	56.70	58.70	57.40	55.10	52.12	64.48	65.27	61.20	65.60	65.81	64.75	63.70
10	60.05	54.85	60.20	57.50	60.64	54.60	65.00	65.61	65.60	65.52	64.50	63.74
11	59.75	52.10	54.70	60.36	56.20	56.40	61.30	57.00	65.70	64.30	64.48	63.64
12	.....	63.85	56.40	54.10	50.63	54.75	56.20	59.15	65.70	65.58	64.52	62.00
13	57.98	53.58	62.10	50.17	52.92	54.35	59.70	62.60	65.55	60.65	64.55	63.92
14	53.95	60.22	58.40	59.34	62.41	52.95	58.70	60.30	65.55	65.42	64.50	63.85
15	53.55	61.86	50.30	55.13	50.40	56.95	55.40	57.90	65.50	65.72	64.45	63.60
16	55.50	64.14	59.73	.....	50.60	65.52	65.04	60.45	61.60	61.42	64.30	63.61
17	56.57	67.04	61.80	55.20	50.40	59.72	59.20	58.90	65.60	61.95	64.65	63.82
18	59.38	56.30	63.02	54.68	52.20	54.95	62.40	65.65	65.80	64.35	64.50	63.80
19	58.30	57.78	55.00	60.79	63.40	56.70	63.90	62.10	65.60	56.33	64.35	63.58
20	64.78	61.20	54.10	58.10	49.60	55.90	65.00	61.70	65.52	63.73	63.20	63.52
21	64.14	57.00	54.50	57.20	50.20	62.30	58.95	64.40	65.38	58.74	64.20	63.50
22	65.26	55.60	54.60	59.70	49.15	56.40	53.20	66.05	65.46	60.92	64.18	63.63
23	64.46	55.12	53.48	53.40	52.40	58.70	59.85	63.80	60.40	65.30	64.38	63.55
24	62.70	52.34	53.97	58.53	59.29	54.90	60.50	63.75	65.40	65.25	63.99	63.48
25	59.93	54.68	56.12	58.16	50.40	63.20	62.20	65.00	62.00	63.20	59.80	63.32
26	.....	56.95	58.48	59.55	49.20	.....	60.68	65.70	63.60	65.30	64.10	63.22
27	60.90	54.72	56.75	59.10	53.60	.....	62.20	65.90	63.40	65.35	64.20	63.28
28	57.35	56.20	52.40	60.44	49.20	.....	61.10	.....	64.40	64.20	64.20	63.18
29	54.40	.....	60.40	60.90	52.90	.....	62.70	65.85	65.41	65.28	64.24	62.60
30	54.90	.....	54.00	54.15	56.60	.....	62.20	63.20	65.52	65.32	64.18	63.61
31	60.50	.....	55.20	.....	58.35	.....	65.55	62.70	.....	65.47	.....	63.82

Boone 10-A (\*1023, p. 35). 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, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	15.90	Apr. 5	14.07	July 5	34.95	Oct. 4	44.55
11	15.55	12	14.07	12	40.19	11	46.60
18	15.36	19	15.48	19	41.34	18	49.05
25	14.90	26	13.80	25	43.75	25	47.80
Feb. 1	15.11	May 3	13.65	Aug. 2	47.45	Nov. 1	49.78
7	15.03	10	13.59	9	45.65	8	45.66
15	15.18	17	13.95	16	44.38	15	45.03
22	14.92	24	14.65	23	41.09	22	45.49
Mar. 1	14.72	31	14.83	30	43.64	30	47.00
8	15.23	June 7	21.18	Sept. 6	42.53	Dec. 6	45.04
15	14.50	14	28.04	13	45.14	13	47.10
22	14.35	21	31.65	20	47.55	20	47.54
29	14.05	28	34.64	27	46.27	27	45.90

Boone 11 (\*1023, p. 35). 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, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	23.23	Apr. 5	22.25	July 5	35.94	Oct. 4	47.08
11	23.07	12	22.43	12	42.67	11	50.84
18	22.67	19	23.51	19	43.85	18	51.00
25	22.40	26	22.52	25	46.09	25	50.53
Feb. 1	22.98	May 3	22.28	Aug. 2	50.10	Nov. 1	52.40
7	22.69	10	22.27	9	49.76	8	49.83
15	23.05	17	22.44	16	47.00	15	47.28
22	22.86	24	22.94	23	46.20	22	47.74
Mar. 1	22.69	31	23.15	30	44.96	30	49.78
8	22.00	June 7	25.63	Sept. 6	45.04	Dec. 6	49.08
15	18.18	14	31.95	13	47.82	13	49.27
22	22.41	21	33.95	20	50.19	20	50.07
29	22.25	28	37.85	27	48.64	27	50.14

Boone 12 (\*1023, p. 35). 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, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	25.50	Apr. 5	26.82	July 5	28.90	Oct. 4	32.48
11	25.21	12	26.73	12	29.22	11	32.00
18	24.93	19	26.05	19	29.34	18	32.48
25	24.37	26	26.13	25	30.44	25	31.95
Feb. 1	24.80	May 3	26.00	Aug. 2	30.40	Nov. 1	32.58
7	24.78	10	25.67	9	30.95	8	30.84
15	25.20	17	23.15	16	31.59	15	29.72
22	23.95	24	25.13	23	32.14	22	29.84
Mar. 1	24.78	31	25.25	30	31.80	30	29.82
8	24.64	June 7	25.22	Sept. 6	31.68	Dec. 6	28.69
15	24.69	14	26.59	13	32.03	13	28.88
22	25.39	21	27.59	20	31.70	20	28.82
29	25.95	28	28.04	27	32.27	27	27.95

Boone 13 (\*1023, 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, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	9.57	Apr. 5	6.24	July 5	7.10	Oct. 4	11.76
11	8.30	12	5.72	12	7.78	11	11.96
18	8.18	19	6.79	19	8.23	18	12.25
25	8.23	26	7.14	25	8.64	25	12.49
Feb. 1	8.66	May 3	6.13	Aug. 2	9.02	Nov. 1	12.77
7	8.62	10	5.97	9	9.30	8	12.89
15	8.90	17	3.69	16	9.62	15	13.08
22	7.49	24	3.49	25	9.73	22	13.30
Mar. 1	6.91	31	4.40	30	9.96	30	13.38
8	6.60	June 7	5.22	Sept. 6	10.23	Dec. 6	13.47
15	6.16	14	6.05	13	10.55	13	13.44
22	5.46	21	5.27	20	10.87	20	13.18
29	5.45	28	6.35	27	11.30	27	13.05

Boone 14 (\*1023, 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, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	37.94	Apr. 5	43.04	July 5	45.75	Oct. 4	46.90
11	37.60	12	40.76	12	45.56	11	47.70
18	37.19	19	40.47	19	46.48	18	47.64
25	36.70	26	41.67	25	49.08	25	45.75
Feb. 1	36.95	May 3	40.54	Aug. 2	46.60	Nov. 1	45.88
7	36.98	10	39.74	9	49.09	8	45.05
15	37.25	17	38.84	16	49.90	15	43.18
22	37.10	24	38.83	23	50.14	22	43.03
Mar. 1	36.97	31	38.05	30	48.43	30	42.86
8	36.81	June 7	38.79	Sept. 6	48.30	Dec. 6	41.83
15	37.76	14	42.32	13	48.42	13	41.78
22	41.49	21	44.02	20	47.87	20	41.28
29	42.84	28	44.93	27	48.55	27	40.34

Boone 15. Lebanon Ice & Storage Co. In Lebanon, on northeast corner of Elm and Meridian Sts., in NW $\frac{1}{4}$  sec. 31, T. 19 N., R. 1 E., about 220 feet east and 200 feet south of Boone 1, and about 300 feet north of county road. Unused drilled well, diameter 6 inches, depth 154 feet. Measuring point, top of casing, 0.4 foot above land-surface datum. Measurements made by Fred Price, Lebanon Utilities, Inc.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	39.63	Apr. 26	54.40	July 19	85.00	Oct. 11	88.99
7	39.67	May 3	43.24	25	88.69	18	91.32
15	39.89	10	45.50	Aug. 2	90.15	25	83.90
22	39.84	17	43.46	9	84.05	Nov. 1	56.73
Mar. 1	39.59	24	44.34	16	93.67	8	53.29
8	39.51	31	45.05	23	93.40	15	50.26
15	39.45	June 7	44.65	30	92.44	22	47.55
22	50.16	14	68.95	Sept. 6	91.26	30	45.59
29	49.29	21	49.99	13	90.55	Dec. 6	44.18
Apr. 5	48.21	28	83.54	20	91.18	13	50.59
12	41.76	July 5	76.06	27	85.15	20	41.73
19	49.12	12	45.18	Oct. 4	56.18	27	48.60

Boone 16. 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. Un-used dug well, diameter 40 inches, depth 18.9 feet. Measuring point, top edge of metal barrel used as casing, 0.60 foot above land-surface datum. Measurements made by Leland H. Dale. Used to replace observation well Boone 1, which was destroyed.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 17	6.34	Oct. 12	7.15	Nov. 4	7.10	Dec. 4	6.94
23	6.50	21	6.78	13	7.20	26	4.37
Oct. 2	6.90	29	7.19	25	7.29		

#### 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). 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, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	2.11	May 18	2.52	July 20	6.10	Sept. 30	7.42
14	2.12	25	2.54	Aug. 5	4.91	Oct. 5	7.49
21	2.09	June 1	2.70	10	5.16	12	7.61
27	3.47	8	3.81	17	5.20	19	6.57
Feb. 18	2.06	15	4.62	24	5.98	26	6.77
Apr. 26	3.18	22	3.60	31	6.44	Nov. 3	6.00
27	3.20	29	4.48	Sept. 7	6.72	10	5.46
May 4	2.64	July 6	4.23	14	7.06	19	4.85
11	2.69	13	5.62	24	6.67		

Brown 3 (#840, p. 74; 845, p. 70; 886, p. 98; 906, p. 21; 946, p. 23; 944, p. 23; 986, p. 25; 1018, p. 37; 1023, 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, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	1.83	May 18	0.22	July 20	8.49	Sept. 24	8.22
14	1.86	25	1.14	27	8.65	Oct. 30	8.69
21	1.63	June 1	2.29	Aug. 5	8.62	Oct. 5	8.73
27	2.32	8	3.50	10	8.97	12	8.74
Feb. 18	1.33	15	5.70	17	8.54	19	8.74
Apr. 26	7.45	22	5.29	24	8.39	26	8.77
27	7.52	29	6.89	31	8.51	Nov. 3	8.27
May 4	6.95	July 6	7.60	Sept. 7	8.59	10	8.59
11	6.60	13	8.06	14	8.63	19	8.47

#### Carroll County

Carroll 1 (#1023, p. 36). Roy R. Richter, Flora. SW. corner SW $\frac{1}{4}$ 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, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	3.28	Apr. 13	6.78	July 13	8.82	Oct. 12	10.90
12	4.05	20	7.32	20	9.27	19	7.23
19	5.65	27	7.65	27	9.63	26	9.92
26	6.64	May 4	6.84	Aug. 3	10.00	Nov. 2	9.84
Feb. 2	7.05	11	5.49	10	10.12	9	10.08
9	7.01	18	5.34	17	7.82	16	10.30
16	4.02	25	6.48	24	9.35	23	10.60
23	5.95	June 1	6.68	31	10.05	30	10.50
Mar. 2	6.42	8	7.66	Sept. 7	10.60	Dec. 7	10.73
10	6.03	15	6.25	14	10.85	14	9.89
16	2.72	22	6.84	21	10.49	21	10.15
23	4.26	29	8.00	28	10.85	28	10.13
30	5.39	July 6	8.64	Oct. 5	11.20		

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). 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 Orman Neville, Clark State Forest.

Water level at 2 a.m., in feet below land-surface datum, 1946

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	14.77	14.87	8.52	6.18	15.71	11.37	17.35	20.69	22.32	23.22	23.91	24.25
2	14.70	15.00	8.73	6.87	15.81	11.79	17.48	20.77	22.36	23.25	23.92	24.28
3	14.73	15.16	9.02	7.44	14.58	11.17	17.61	20.84	22.40	23.28	23.94	24.32
4	14.82	15.32	9.26	7.94	14.00	12.40	17.76	20.92	22.44	23.31	23.96	24.34
5	14.88	15.49	9.58	8.54	13.15	12.65	17.90	20.99	22.47	23.34	23.99	24.37
6	14.90	.....	9.94	9.16	12.78	12.92	18.04	21.05	22.51	23.37	24.02	24.39
7	14.96	.....	7.97	9.76	12.78	13.21	18.16	21.10	22.54	23.40	24.04	24.42
8	14.97	.....	6.02	10.28	12.98	13.49	18.29	21.16	22.58	23.42	24.04	24.44
9	.....	7.24	5.87	10.80	13.25	13.74	18.41	21.22	22.61	23.44	24.06	24.47
10	.....	7.67	6.57	11.32	13.53	13.97	18.53	21.28	22.65	23.44	24.08	24.49
11	.....	8.09	7.16	11.78	13.76	14.17	18.64	21.34	22.68	23.45	24.09	24.51
12	8.94	8.78	7.64	12.20	13.53	14.34	18.76	21.40	22.71	23.47	24.06	24.53
13	8.81	9.12	8.11	12.60	13.28	14.50	18.87	21.47	22.74	23.50	24.14	23.78
14	9.24	.....	8.55	12.92	13.31	14.76	18.99	21.52	22.77	23.53	24.16	23.31
15	9.79	.....	6.74	13.19	12.35	14.82	19.11	21.59	22.80	23.56	24.18	23.07
16	10.41	4.52	5.19	13.45	6.24	14.98	19.24	21.64	22.84	23.59	24.20	22.99
17	10.96	5.54	5.23	13.61	1.36	15.13	19.34	21.70	22.86	23.61	24.23	22.95
18	11.48	6.45	3.42	13.71	2.17	15.29	19.43	21.74	22.89	23.62	24.26	22.97
19	11.96	7.05	1.40	13.83	3.64	15.46	19.54	21.79	22.92	23.64	24.29	.....
20	12.42	4.41	2.16	13.96	4.88	15.63	19.63	21.83	22.95	23.66	24.32	.....
21	12.85	5.12	3.18	14.12	5.24	15.79	19.73	21.88	22.97	23.70	24.33	23.09
22	13.08	5.92	4.08	14.27	6.13	15.95	19.83	21.93	22.99	23.73	24.34	23.14
23	13.20	6.58	4.98	14.42	6.99	16.13	19.92	21.98	23.01	23.75	24.37	23.16
24	13.37	7.12	5.83	14.57	7.72	16.31	20.01	22.02	23.04	23.77	24.39	23.26
25	13.58	7.67	6.59	14.72	8.37	16.47	20.10	22.07	23.07	23.79	24.40	23.30
26	13.78	8.14	7.16	14.85	8.89	16.63	20.19	22.12	23.09	23.80	24.41	23.33
27	14.00	8.57	2.44	15.00	9.21	16.77	20.28	22.16	23.11	23.82	24.18	23.36
28	14.18	8.40	3.01	15.19	9.53	16.92	20.38	22.20	23.13	23.86	24.21	23.36
29	14.37		3.72	15.36	10.00	17.07	20.47	22.22	23.16	23.89	24.22	23.32
30	14.56		4.50	15.54	10.49	17.21	20.56	22.25	23.20	23.91	24.24	20.89
31	14.71		5.37		10.95		20.63	22.29		23.90		20.24

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). Clark State Forest. NW 1/4 lot 282, Clark Military Grant, at intersection of Main Trail and Batty Road.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	11.50	Apr. 10	2.15	July 10	6.94	Oct. 2	12.08
11	10.88	17	1.43	17	7.57	9	12.20
18	10.72	24	2.26	24	8.17	16	12.30
Feb. 1	10.31	May 1	.95	31	8.85	23	12.39
11	7.39	8	1.90	Aug. 7	9.42	30	12.38
15	4.31	15	.88	14	9.96	Nov. 13	12.48
20	2.79	22	1.83	21	10.22	20	12.48
27	1.79	29	2.45	28	10.63	27	12.32
Mar. 6	1.50	June 6	2.71	Sept. 4	11.16	Dec. 4	12.35
13	1.45	12	3.99	11	11.56	11	12.40
20	1.00	19	4.78	18	11.80	18	11.98
27	.94	26	5.58	25	12.00	27	12.04
Apr. 3	1.64	July 3	6.32				

Clark 3 (\*986, p. 26; 1016, p. 39; 1023, p. 38). Public Service Co. of Indiana. In Jeffersonville 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, 1946

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	28.67	27.87	27.05	26.70	26.06	24.82	27.33	25.14	24.53	23.17	22.85	23.04
2	28.63	27.44	27.06	26.75	26.03	24.77	26.28	24.95	24.48	23.10	22.94	23.05
3	28.61	27.33	27.11	26.79	26.06	24.83	26.27	24.86	24.12	22.93	22.62	23.04
4	28.62	27.36	27.12	26.97	25.84	24.81	26.26	24.83	24.13	22.94	22.69	23.02
5	28.56	27.34	27.12	26.56	25.95	24.78	25.62	24.43	23.86	22.80	22.64	22.96
6	28.30	26.80	27.16	26.31	25.19	24.79	25.61	24.42	24.04	22.93	22.63	22.98
7	28.29	27.29	27.08	26.40	25.22	24.81	25.20	24.48	24.03	22.60	22.62	23.00
8	28.29	27.30	27.17	26.41	25.16	24.80	25.21	24.47	24.46	22.62	22.63	23.41
9	28.28	27.29	27.19	26.55	25.20	25.30	25.23	24.44	24.47	22.32	22.79	23.16
10	28.28	27.43	27.19	26.83	25.26	25.28	25.34	24.44	24.44	22.46	22.94	23.18
11	28.26	27.47	27.21	26.64	25.23	25.27	25.39	24.45	24.37	22.47	22.63	23.30
12	28.22	27.83	27.24	26.50	25.75	25.29	25.84	24.47	24.38	22.48	22.62	23.32
13	27.95	27.82	27.21	26.35	25.46	25.29	25.83	24.46	24.32	22.52	22.60	23.79
14	27.23	27.84	27.18	26.41	25.12	25.27	25.94	24.48	24.27	22.53	22.47	23.83
15	27.31	27.85	26.90	26.42	25.16	25.63	25.36	24.47	24.13	22.61	22.46	23.94
16	27.53	27.88	26.91	26.28	25.18	25.47	25.43	24.14	24.01	22.64	22.46	23.97
17	27.54	28.12	27.03	26.05	25.24	25.52	25.39	24.07	24.01	22.65	21.32	23.94
18	27.54	28.12	27.11	26.22	25.27	25.47	25.41	24.11	24.04	22.65	21.36	23.94
19	27.56	28.14	27.09	26.21	25.17	25.54	25.93	24.70	24.03	22.61	21.63	23.96
20	27.88	27.92	27.06	25.79	25.00	25.56	25.96	24.54	24.03	22.83	22.16	23.98
21	27.92	27.88	27.07	25.97	24.88	26.07	25.93	24.52	24.04	22.61	22.24	23.96
22	27.91	27.56	26.94	25.61	24.93	26.08	25.38	24.56	24.01	23.04	22.23	23.75
23	27.90	27.40	26.95	25.69	25.04	26.11	25.40	24.88	23.90	23.07	22.54	23.77
24	27.88	27.41	26.85	25.81	25.05	25.88	25.32	24.50	23.96	23.53	22.63	23.76
25	27.88	27.40	26.86	25.83	25.29	25.92	25.31	24.52	23.98	23.52	22.72	23.74
26	27.87	27.02	23.39	26.14	25.00	25.99	25.29	24.54	23.94	23.60	22.70	23.76
27	27.95	27.04	24.51	26.19	24.75	26.54	25.34	25.35	23.93	23.39	23.04	23.77
28	27.92	27.06	25.74	26.32	24.95	26.81	25.29	24.82	23.94	23.40	23.05	23.76
29	27.92		26.71	26.03	25.23	26.94	25.20	24.53	23.30	23.39	23.06	23.77
30	27.88		26.73	26.04	24.90	27.11	25.25	24.58	23.17	23.37	22.84	23.79
31	27.88		26.71		24.85		24.88	24.43		22.98		23.80

Clark 5 (\*1016, p. 40; 1023, p. 39). 46-17-4-a/ 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 Geol. Survey, U. S. Dept. of Interior.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	12.09	Apr. 6	7.23	July 13	12.27	Oct. 5	15.10
Feb. 15	8.05	May 14	9.24	Aug. 10	13.41	Nov. 21	15.70
Mar. 13	7.58	June 18	10.73	Sept. 12	14.48	Dec. 21	14.24

a Number in Louisville, Ky., areal investigation.

### Clinton County

Clinton 1 (\*1016, pp. 40-41; 1023, p. 39). 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, 1946

Jan.	5	45.43	Apr.	6	43.75	July	6	43.23	Oct.	11	49.07
	12	46.31		13	44.12		18	44.83		18	49.43
	19	45.93		20	45.17		26	45.79		25	48.99
Feb.	5	45.30		27	45.28		Aug. 2	46.99		Nov. 1	49.08
	9	44.76		4	44.80			9		8	49.28
	16	44.68		11	44.00			16		15	49.48
	23	44.06		25	44.62			30		22	48.55
Mar.	2	43.60		June 1	43.70		Sept. 6	48.22		29	47.48
	9	43.61		8	45.30			13		Dec. 6	46.80
	16	42.88		15	44.20			20		13	47.56
	23	43.41		22	42.60			27		20	47.82
	30	43.76		29	43.00		Oct. 4	48.90		27	47.50

Clinton 2 (\*1016, p. 41; 1023, 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 track of Toledo, St. Louis & Western Railroad. Equipped with automatic water-stage recorder. Measurements made by S. E. Stern, Frankfort Water Co.

Water level at 2 a.m., in feet below land-surface datum, 1946

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	62.43	61.98	60.80	59.95	61.56	60.58	60.34	62.46	64.27	65.17	65.74	.....
2	62.73	62.05	60.63	59.96	61.35	60.64	60.05	62.62	64.21	65.23	65.55	.....
3	.....	62.22	60.82	60.09	61.38	60.62	59.98	62.69	64.28	65.33	65.58	.....
4	.....	61.93	60.63	59.93	61.08	60.82	60.20	62.87	64.36	65.48	65.68	.....
5	62.43	61.62	60.57	60.34	61.31	60.92	.....	62.74	64.39	65.56	65.95	.....
6	62.16	61.25	60.33	60.20	61.10	61.06	.....	62.74	64.37	65.58	65.86	.....
7	62.65	61.52	60.50	60.35	61.16	61.02	.....	62.92	64.38	65.37	65.46	.....
8	62.89	61.66	60.46	59.78	61.32	61.30	.....	63.07	64.43	65.23	65.41	.....
9	62.41	61.66	60.37	60.26	61.17	61.62	.....	63.07	64.31	65.30	65.96	.....
10	62.77	61.67	60.66	60.42	61.18	61.69	.....	63.17	64.24	65.38	65.63	.....
11	62.83	61.70	60.66	60.50	60.67	61.47	.....	63.38	64.43	65.37	65.77	.....
12	62.77	61.81	60.30	60.68	60.89	61.50	60.53	63.15	64.50	65.67	66.18	.....
13	62.85	61.50	60.18	60.89	61.05	61.22	60.56	63.32	64.63	65.88	66.14	.....
14	62.48	61.22	60.07	60.81	60.91	61.34	60.66	63.40	65.78	65.66	65.97	64.68
15	62.47	61.92	59.93	60.44	60.81	61.32	60.77	63.31	64.85	65.79	66.00	64.58
16	62.76	61.68	60.05	60.94	60.87	60.99	60.90	63.22	64.83	65.69	65.91	64.39
17	62.53	61.84	59.92	61.21	61.09	60.49	60.95	63.38	65.01	65.53	66.32	64.51
18	62.32	61.99	59.85	61.22	60.74	60.32	60.99	63.28	65.16	65.09	66.23	64.79
19	62.44	61.50	60.01	61.48	61.23	60.50	61.24	63.19	65.29	65.91	65.97	64.89
20	62.31	61.45	60.27	61.35	60.88	60.35	61.63	63.44	65.26	65.89	65.78	64.65
21	62.00	61.78	60.32	61.53	61.15	60.33	61.43	63.63	65.26	65.78	65.75	64.23
22	62.39	61.25	60.25	61.20	61.52	60.35	61.32	63.78	65.35	65.67	65.80	64.65
23	62.16	61.26	60.31	61.06	61.49	60.36	61.40	64.03	65.20	65.64	65.93	64.39
24	61.73	60.80	60.12	61.29	61.32	60.33	61.67	.....	65.61	65.63	65.34	64.60
25	61.85	60.96	60.09	61.15	61.35	.....	62.04	.....	65.57	65.33	65.08	64.62
26	61.87	60.23	60.01	61.36	61.18	.....	.....	.....	65.55	65.59	65.38	64.27
27	62.31	60.55	60.22	61.61	60.91	.....	62.14	.....	65.45	65.84	65.53	64.37
28	62.10	60.88	60.19	61.56	61.12	.....	62.08	.....	65.49	65.73	65.73	64.24
29	62.38	.....	60.04	61.19	61.29	.....	61.70	.....	65.25	65.57	65.32	64.17
30	61.76	.....	60.16	61.47	61.21	60.16	61.90	.....	65.12	65.53	.....	64.97
31	61.62	.....	60.50	.....	60.68	.....	62.17	64.27	.....	65.71	.....	65.15

Clinton 3 (\*1016, pp. 41-42; 1023, p. 40). Frankfort Light Plant. In Frankfort, at southeast corner of settling ponds at municipal light plant. Water level affected by pumped well 500 feet north. Equipped with automatic water-stage recorder. Measurements made by S. E. Stern, Frankfort Water Co.

Water level at 2 a.m., in feet below land-surface datum, 1946

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	20.39	20.75	21.71	19.85	18.12	.....	33.05	38.11	34.86	37.60	.....	.....
2	20.62	20.55	22.38	19.49	19.50	23.57	33.31	38.17	.....	38.04	21.23	.....
3	20.51	20.70	22.84	19.87	.....	23.57	33.53	38.24	.....	38.08	21.70	.....
4	.....	19.93	21.62	19.96	.....	23.69	33.67	37.73	34.57	38.08	21.44	.....
5	.....	19.73	20.37	21.43	17.99	23.70	.....	37.75	35.67	38.13	20.68	.....
6	21.08	20.01	20.04	22.06	18.50	23.77	.....	38.37	35.69	37.45	.....	.....
7	20.87	20.05	19.81	28.47	18.95	.....	34.73	38.54	35.73	37.40	.....	.....
8	21.66	19.93	19.93	22.31	19.33	.....	34.69	38.16	35.55	37.40	.....	.....
9	22.69	20.31	19.73	22.68	19.53	24.00	34.90	38.42	34.95	37.44	37.01	.....
10	23.50	20.83	19.70	23.13	19.38	24.13	35.05	38.46	34.98	37.40	37.45	.....
11	.....	21.66	18.92	23.33	17.77	29.98	35.28	38.57	35.71	37.44	36.69	.....
12	.....	22.35	19.32	23.47	17.17	33.51	35.37	38.06	39.50	37.59	36.65	.....
13	22.30	22.03	19.20	22.69	16.46	34.91	35.45	37.69	40.80	37.68	36.09	.....
14	21.38	21.08	19.53	21.23	15.43	.....	35.52	38.06	41.03	37.40	36.48	37.81
15	20.91	20.95	19.24	20.65	13.87	.....	35.47	38.20	41.11	37.20	37.27	38.27
16	21.40	20.64	20.22	20.38	14.76	35.81	35.83	38.54	40.14	37.24	39.01	38.41
17	21.23	20.48	21.21	20.56	15.38	35.86	36.04	38.66	40.06	37.42	39.38	38.88
18	20.93	19.92	21.57	20.23	15.86	36.16	36.09	38.18	40.18	37.52	39.38	39.68
19	21.23	19.99	22.14	20.42	16.16	36.08	36.54	37.75	40.29	37.19	39.24	40.06

## Clinton 3--Continued.

Water level at 2 a.m., in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
20	20.94	19.76	22.51	20.89	16.16	35.82	35.86	38.06	40.20	36.58	38.67	40.22
21	20.31	19.48	21.30	22.00	16.53	35.68	35.97	38.59	40.23	36.23	38.62	39.86
22	20.24	19.66	20.74	22.39	18.09	35.41	35.73	36.50	40.22	36.82	38.58	39.28
23	20.79	19.57	20.21	22.84	19.02	35.30	35.99	37.08	39.40	37.40	39.00	38.80
24	20.56	19.65	19.88	20.66	18.71	35.28	36.33	.....	40.22	.....	39.47	38.94
25	20.60	18.93	18.90	18.68	21.52	35.47	36.99	.....	40.92	.....	39.34	38.71
26	21.55	18.80	19.56	17.93	22.32	34.50	.....	.....	38.55	.....	38.48	38.45
27	22.62	19.31	20.94	17.59	22.43	33.35	37.27	.....	37.88	.....	38.48	38.35
28	22.45	20.55	21.58	17.62	22.88	33.18	37.74	.....	37.65	.....	38.77	38.48
29	22.55		22.08	17.22	23.29	33.07	38.03	.....	37.68	.....	38.37	38.41
30	21.50		21.79	17.95	23.51	33.07	38.41	.....	37.38	.....	.....	38.61
31	21.08		20.80	.....	.....	.....	38.16	35.26	.....	.....	.....	38.65

## Crawford County

Crawford 1 (\*1016, p. 42; 1023, p. 41). J. F. Blevins. In English, in SE $\frac{1}{4}$ SW $\frac{1}{4}$  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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	4.43	Mar. 16	2.67	June 21	8.00	Sept. 25	10.97
12	3.15	22	3.39	27	8.71	Oct. 1	11.08
19	3.99	Apr. 4	4.65	July 10	9.67	23	11.41
26	4.26	11	5.70	22	8.92	31	11.34
Feb. 2	4.91	22	7.12	Aug. 5	10.39	Nov. 9	11.45
9	2.42	May 2	7.24	14	10.52	16	11.04
16	1.99	13	6.15	22	9.04	28	9.68
23	2.78	21	2.42	Sept. 3	9.79	Dec. 5	9.30
25	3.22	June 1	4.98	10	10.44	14	6.28
Mar. 2	3.82	10	6.94	17	10.72	21	6.90
9	3.67						

Crawford 2 (\*1016, p. 42; 1023, p. 41). Zenis R. Parkhill. In Leavenworth, in SE $\frac{1}{4}$ SW $\frac{1}{4}$  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 from edge of road. Measurements made by Zenis R. Parkhill.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	1.09	Apr. 5	2.36	July 5	4.01	Oct. 4	5.44
11	.50	12	3.09	12	4.12	11	5.47
18	1.80	19	3.23	19	4.29	18	5.58
25	1.75	26	3.54	26	4.42	25	5.73
Feb. 1	1.78	May 3	3.57	Aug. 2	4.53	Nov. 1	5.84
8	1.20	10	2.50	9	4.58	8	5.99
15	1.26	17	.42	16	4.56	15	6.12
22	1.36	24	1.47	23	4.41	22	6.26
Mar. 1	1.69	31	2.33	30	4.63	29	4.78
8	1.06	June 7	2.82	Sept. 6	4.81	Dec. 6	4.86
15	1.31	14	3.27	13	4.99	13	1.41
22	1.59	21	3.53	20	5.07	20	2.13
29	1.15	28	3.83	27	4.24	27	1.36

Crawford 3 (\*1016, p. 43; 1023, p. 41). 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.



## Crawford 3--Continued.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 22	16.76	Oct. 13	18.30	Nov. 11	17.40	Dec. 8	17.10
Oct. 6	17.20	27	18.50	Dec. 1	16.40	22	13.70

Crawford 4 (\*1016, p. 43; 1023, 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, 1946

Jan. 5	31.29	Feb. 9	31.22	Mar. 9	31.30	Apr. 22	31.36
12	31.33	16	31.19	16	31.21	May 2	31.30
19	31.37	23	31.28	22	31.28	13	31.28
26	31.36	25	31.31	Apr. 4	31.32	21	31.28
Feb. 2	31.36	Mar. 2	31.36	11	31.35	June 1	31.34

## Daviss County

Daviss 1 (\*1016, p. 43; 1023, p. 42). John Harbin. In Cannellburg, 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.

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

Feb. 21	20.59	May 16	20.70	Aug. 1	21.50	Oct. 17	22.75
28	20.50	23	20.60	8	21.60	24	22.85
Mar. 7	20.20	30	20.60	15	21.65	Nov. 2	23.00
14	19.99	June 6	20.50	22	21.90	8	23.20
21	20.10	13	20.60	29	22.00	14	23.15
28	19.90	20	20.75	Sept. 6	21.90	21	23.20
Apr. 4	20.20	27	20.85	13	22.20	29	23.30
11	20.50	July 4	21.05	19	22.30	Dec. 5	23.30
19	20.60	11	21.15	26	22.50	19	24.50
25	20.70	18	21.30	Oct. 4	22.60	26	24.50
May 9	20.85	25	21.40				

## Dearborn County

Dearborn 1-1 (\*986, p. 26; 1016, p. 43; 1023, p. 42). Schenley Distillers, Inc., Old Quaker plant, Greendale, Lawrenceburg. Measurements made by Frank C. Caveman, Schenley Distillers, Inc.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	75.58	67.67	61.17	61.17	84.00	69.79	73.83	55.48				
2	76.15	61.17	61.17	61.17	84.04	67.94	78.81	50.56				
3	75.27	61.17	61.17	61.17	66.94	66.27	80.38	66.31	82.00	74.92	66.31	
4	75.91	73.61	65.00	65.00	61.75	65.21	81.48	74.65	67.94	67.94	67.94	
5	73.83	65.38	63.34	63.34	55.98	61.64	61.75	67.77	67.77	67.77	67.77	
6	75.17	75.73	65.00	65.00	56.77	61.75	82.46	68.96	67.94	67.94	67.94	
7	80.15	75.58	66.40	63.34	66.98	55.98	58.98	82.84	67.77	67.77	67.77	
8	80.35	66.40	64.51	67.94	60.10	61.42	81.25	67.94	68.96	68.96	68.96	
9	80.75	66.42	68.00	55.48	61.83	76.15	68.02	70.77	70.77	70.77	70.77	
10	80.59	74.10	66.08	66.71	68.94	55.65	60.10	61.75	71.85	65.10	70.63	
11	60.29	65.21	65.21	55.60	57.94	61.42	68.94	65.10	70.63	70.63	70.63	
12	63.55	61.64	56.77	60.29	66.83	61.64	70.46	78.81	68.96	68.96	68.96	
13	77.58	65.21	58.98	56.25	67.94	61.17	70.46	78.81	68.96	68.96	68.96	
14	75.58	65.75	57.59	57.59	56.00	58.98	64.23	70.77	76.15	76.15	76.15	
15	78.81	65.71	57.75	57.00	58.81	66.98	63.34	78.81	71.85	71.85	71.85	
16	76.15	57.81	56.98	55.98	75.94	66.00	61.83	76.15	68.94	68.94	68.94	
17	73.83	65.00	60.29	56.94	55.92	75.98	61.42	71.85	76.15	68.94	68.94	
18	75.98	65.42	57.00	58.98	68.94	76.02	68.96	61.75	70.46	77.84	67.77	
19	63.39	65.48	57.94	77.56	75.98	67.77	61.64	67.94	67.94	67.94	67.94	
20												

## Dearborn 1-1--Continued.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
21	71.85	75.27	66.44	.....	60.29	80.77	.....	66.83	61.29	71.85	65.21	68.02
22	70.46	.....	70.25	57.94	61.64	79.92	76.08	66.98	.....	70.63	64.23	.....
23	71.85	.....	.....	58.98	61.17	.....	.....	66.83	61.17	68.96	65.10	68.96
24	73.83	.....	.....	57.00	58.98	79.56	68.96	67.77	82.00	66.31	.....	69.50
25	74.92	73.00	67.67	57.29	57.94	79.02	64.23	.....	82.48	64.23	64.58	69.42
26	.....	74.92	.....	57.81	.....	81.25	66.00	67.94	82.46	.....	65.54	68.94
27	.....	73.83	62.29	.....	57.59	82.48	66.98	.....	.....	.....	64.58	69.50
28	.....	73.61	.....	.....	57.81	84.77	.....	66.29	78.81	60.29	61.64	70.77
29	.....	.....	.....	60.29	60.29	84.23	.....	66.31	71.85	60.35	.....	.....
30	.....	.....	64.42	57.00	61.75	.....	77.59	66.00	68.94	66.31	58.98	69.08
31	75.17	.....	.....	.....	61.42	.....	.....	66.83	.....	68.96	.....	69.42

Dearborn 1-7 (\*1016, pp. 44-45; 1023, p. 43). Schenley Distillers, Inc., Old Quaker plant, Greendale, Lawrenceburg. Equipped with automatic water-stage recorder. Measurements made by Frank C. Caveman, Schenley Distillers, Inc. Measurements discontinued Jan. 31, 1946, and well put back into service.

Water level at 2 a.m., in feet below land-surface datum, 1946

(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	70.36	Jan. 15	69.81	Jan. 20	67.39	Jan. 25	65.40
11	70.60	16	69.87	21	66.05	26	65.43
12	70.70	17	69.61	22	66.01	27	65.55
13	70.52	18	68.85	23	65.85	28	64.29
14	69.81	19	68.10	24	65.61	29	64.34

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

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

Jan. 2	92.20	Apr. 9	79.26	July 9	88.17	Oct. 8	98.76
8	95.11	16	72.84	16	88.51	15	97.59
15	93.67	23	82.59	23	92.17	22	96.51
22	88.42	30	80.51	30	95.25	29	94.59
29	88.17	May 7	83.43	Aug. 6	94.51	Nov. 5	95.59
Feb. 5	89.88	14	86.67	13	98.59	12	95.25
12	89.50	21	87.67	20	97.42	19	95.51
19	90.50	27	86.59	27	96.67	26	95.67
26	86.00	June 4	87.34	Sept. 3	95.76	Dec. 3	95.09
Mar. 5	81.50	11	83.59	10	95.59	10	97.76
12	78.59	18	84.25	17	96.66	17	99.00
19	79.67	25	84.25	24	98.34	24	99.67
26	80.50	July 2	85.17	Oct. 1	98.92	31	99.92
Apr. 2	84.67						

Dearborn 1-10. Schenley Distillers, Inc., Old Quaker Plant, Lawrenceburg, 10 feet east of well 10 and 170 feet west of well 11. Unused test well, diameter 2 inches, depth 79.5 feet. Measuring point, top of 2-inch casing, 2.40 feet above land-surface datum. Measurements made by personnel of Schenley Distillers, Inc.

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

Feb. 26	20.60	May 21	27.02	Aug. 6	28.85	Oct. 22	35.92
Mar. 5	17.36	27	26.19	13	28.22	29	35.19
12	17.06	June 4	20.36	20	29.94	Nov. 5	36.52
19	16.10	11	18.19	27	32.52	12	33.03
26	13.08	18	20.60	Sept. 3	34.44	19	32.03
Apr. 2	10.60	25	18.69	10	33.77	26	31.44
9	11.94	July 2	26.85	17	33.92	Dec. 3	33.69
15	15.10	9	20.77	24	34.69	10	37.60
23	19.60	16	22.77	Oct. 1	38.10	17	39.10
30	23.19	23	24.19	8	36.03	24	40.08
May 7	26.03	30	26.02	15	36.12	31	41.10
14	24.77						

Dearborn 2 (\*1016, p. 44). City of Lawrenceburg. In Lawrenceburg, at municipal water plant, Third and Shipping Sts.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	57	Feb. 18	50	Mar. 18	49	Oct. 3	63
14	52	25	49	Apr. 16	50	27	64
21	54	Mar. 4	49	May 5	55	Nov. 12	64
28	54	11	49	Sept. 25	63	Dec. 23	64
Feb. 11	54						

Dearborn 3 (\*1016, p. 45; 1023, p. 44). City of Lawrenceburg. In Lawrenceburg, 31.51 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.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	48.84	Feb. 18	42.24	Apr. 16	44.14	Oct. 3	55.16
14	43.01	25	41.06	May 5	47.62	27	55.96
21	42.03	Mar. 4	41.16	Sept. 18	54.50	Nov. 12	55.93
28	44.71	11	40.17	25	54.88	Dec. 23	55.93
Feb. 11	45.55	18	39.00				

Dearborn 4 (\*1016, p. 46; 1023, p. 44). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	37.19	Feb. 18	28.10	Apr. 16	37.50	Oct. 3	44.19
14	23.94	25	31.18	May 5	37.70	27	44.76
21	33.79	Mar. 4	29.09	Sept. 18	43.80	Nov. 12	44.90
28	37.71	11	29.30	25	44.06	Dec. 23	44.24
Feb. 11	34.53	18	27.94				

Dearborn 5 (\*1023, p. 44). City of 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	33.78	Feb. 18	23.34	Apr. 16	32.59	Oct. 3	39.96
14	18.76	25	26.43	May 5	33.49	27	40.50
21	28.23	Mar. 4	24.64	Sept. 18	39.53	Nov. 12	40.55
28	32.31	11	24.98	25	39.84	Dec. 23	39.98
Feb. 11	30.03	18	23.51				

### Decatur County

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

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	2.59	Apr. 12	2.11	July 12	3.04	Oct. 11	3.76
18	3.00	19	2.21	19	3.57	18	4.87
25	3.25	26	2.02	26	3.72	25	6.64
Feb. 1	3.15	May 3	2.08	Aug. 2	2.72	Nov. 1	5.75
8	2.08	10	1.80	9	2.64	8	4.36
15	2.17	17	2.03	16	2.82	15	4.13
22	2.92	24	2.04	23	3.47	22	2.41
Mar. 1	2.02	31	2.88	Sept. 6	2.76	29	2.56
8	2.56	June 7	2.22	13	2.83	Dec. 6	2.73
15	2.02	14	2.66	20	3.88	13	2.76
22	2.03	21	2.16	27	3.92	20	1.37
29	2.85	28	2.66	Oct. 4	3.57	27	1.60
Apr. 5	2.02	July 5	2.57				

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). 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, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	9.5	Apr. 22	6.5	July 15	12.5	Oct. 14	9.5
Feb. 5	11.5	29	6.5	22	9.5	21	9.5
11	9.5	May 6	7.5	29	10.5	28	9.5
18	8.5	13	6.5	Aug. 12	13.5	Nov. 4	8.5
25	7.5	20	5.5	19	11.5	11	8.5
Mar. 4	7.5	27	6.5	26	9.5	18	11.5
11	8.5	June 3	6.5	Sept. 3	8.5	25	9.5
18	5.5	10	7.5	9	8.5	Dec. 2	10.5
25	7.5	17	5.5	16	8.5	9	9.5
Apr. 1	5.5	24	5.5	23	8.5	16	9.5
8	7.5	July 1	8.5	30	8.5	23	9.5
15	8.5	8	10.5	Oct. 7	11.5	30	9.5

De Kalb 2 (\*1023, p. 45). 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, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	3.10	Apr. 5	4.10	July 5	5.09	Oct. 4	11.40
11	2.34	12	4.59	12	5.18	11	12.10
18	2.32	19	4.76	19	6.10	18	12.40
25	3.72	26	5.29	26	6.38	25	13.81
Feb. 1	3.69	May 3	5.58	Aug. 2	6.80	29	14.30
8	4.77	10	5.51	9	7.29	Nov. 8	15.20
15	3.86	17	5.49	16	7.77	15	15.47
22	3.57	24	5.51	23	7.80	22	16.10
Mar. 1	4.00	31	5.77	30	8.20	29	16.79
8	3.33	June 7	5.80	Sept. 6	9.40	Dec. 6	17.10
15	2.90	14	2.77	13	9.55	13	15.90
22	2.93	21	2.82	20	10.40	20	13.20
29	3.49	28	2.85	27	10.79	27	10.90

Delaware County

Delaware 2 (\*1023, p. 45). 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, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	7.50	Apr. 13	7.44	July 12	9.83	Oct. 12	14.29
12	6.86	19	7.79	19	10.20	19	13.67
25	7.78	26	7.85	26	9.77	26	13.92
Feb. 1	8.44	May 3	8.75	Aug. 2	10.27	Nov. 2	13.86
8	8.88	10	8.64	9	10.72	9	14.25
15	7.78	18	6.49	16	11.16	16	13.52
22	7.33	24	6.50	26	11.56	23	14.48
Mar. 1	6.08	31	7.29	30	11.72	29	14.60
8	5.71	June 8	8.11	Sept. 6	12.09	Dec. 7	14.80
15	5.10	14	7.79	13	12.37	14	14.74
23	5.48	21	8.29	20	12.70	23	14.50
29	5.80	28	8.78	27	12.85	28	14.45
Apr. 6	6.70	July 5	8.65	Oct. 4	13.21		

Delaware 3. 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. Unused drilled well, diameter 6 inches, depth 32 feet. Measuring point, top of casing on edge of concrete at northwest corner, 1.5 feet above land-surface datum. Measurements made by Harry C. Stafford. Water levels, in feet below land-surface datum, 1946: Dec. 11, 12.07; Dec. 14, 10.57; Dec. 21, 10.47; Dec. 31, 10.65.

Dubois County

Dubois 2 (\*840, p. 75; 936, p. 24; 944, p. 24; 986, p. 27; 1016, p. 46; 1023, p. 46). Ferdinand State Forest. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 18, T. 3 S., R. 5 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	11.05	Mar. 16	8.25	May 25	8.38	Sept. 5	14.50
11	8.43	30	8.24	June 1	8.78	21	15.26
19	9.74	Apr. 6	9.74	15	11.90	28	15.11
26	10.15	13	10.90	26	12.49	Oct. 12	14.50
Feb. 2	11.10	27	11.39	29	12.51	Nov. 3	15.04
8	8.30	May 4	10.57	July 5	13.18	9	15.13
16	7.70	11	10.03	16	12.85	Dec. 3	14.15
Mar. 2	8.57	18	9.83	22	12.90	14	13.85
9	8.12						

Dubois 5 (\*1016, p. 47; 1023, p. 46). 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 Highway 45 and Main St. Measurements made by Joe M. Popp.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	16.20	Apr. 6	15.43	July 6	16.43	Oct. 5	20.77
11	14.12	13	16.77	13	17.27	12	20.82
18	13.80	20	16.34	22	17.84	19	20.59
25	14.06	27	17.40	27	18.07	26	20.46
Feb. 2	15.40	May 4	15.48	Aug. 3	18.66	Nov. 2	20.45
8	14.66	11	16.32	10	19.25	9	20.38
15	12.20	18	13.10	17	19.45	16	20.29
22	12.46	25	12.90	24	19.24	23	20.47
Mar. 1	13.30	June 1	11.30	31	19.60	30	19.65
8	13.80	8	12.70	Sept. 7	20.10	Dec. 7	20.20
15	14.36	15	14.77	14	20.40	14	19.81
22	13.78	22	15.47	21	20.48	21	19.68
29	14.25	29	16.16	28	20.63	28	19.67

Elkhart County

Elkhart 1 (\*936, p. 24; 944, p. 24; 986, p. 27; 1016, p. 47; 1023, p. 46). Elkhart City Waterworks. "Bucklen" well at city water plant on east side of North Main St. and north side of Christiana Creek. No measurements made during 1946.

Elkhart 2 (\*1023, p. 46). Grace Leer. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 29, T. 36 W., 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	4.68	Mar. 25	4.68	June 24	4.51	Oct. 8	6.53
7	4.24	Apr. 8	5.17	July 8	5.40	14	6.46
14	4.48	15	5.30	15	5.62	21	6.15
21	4.93	22	5.45	22	5.88	28	6.16
28	5.18	28	5.57	Aug. 12	5.68	Nov. 4	5.65
Feb. 4	5.45	May 6	5.63	19	6.08	11	5.60
11	5.47	13	5.66	26	5.99	17	5.61
18	4.83	20	5.56	Sept. 2	6.50	25	5.51
25	5.25	27	5.55	9	6.64	Dec. 9	5.77
Mar. 4	4.93	June 3	5.68	16	6.20	16	5.42
11	4.10	9	5.77	23	6.43	23	5.57
18	4.70	17	4.12	30	6.35	30	5.61

Fayette County

Fayette 1 (\*1023, p. 47). Francis H. Manlove. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 3, T. 14 N., R. 12 E., about 700 feet north of section line, and 100 feet east of road through Harrisburg. Measurements made by Francis H. Manlove. Measurements discontinued Aug. 23, 1946. Water levels, in feet below land-surface datum, 1946: Feb. 6, 4.32; Apr. 24, 6.17; May 15, 4.58.

Fayette 2. Irene Kerr. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 8, T. 14 N., R. 12 E., about 5.5 miles northwest of Connersville. Unused dug well, diameter 28 inches, depth 23.5 feet. Measuring point, top of sharp edge of opening in stone slab cover, at northwest corner of opening, at land-surface datum. Measurements made by Mrs. Irene Kerr.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 24	4.98	July 3	6.80	Sept. 3	8.95	Nov. 5	13.12
30	5.24	9	7.13	11	9.69	13	13.44
May 7	4.81	16	7.33	17	10.19	19	13.69
14	4.77	23	7.37	22	10.60	27	13.98
21	3.38	Aug. 1	8.37	Oct. 3	11.34	Dec. 4	14.25
28	4.34	6	7.73	9	11.70	11	14.45
June 5	5.18	13	8.61	15	12.09	18	14.39
11	5.70	21	7.11	22	12.44	27	14.54
18	5.77	27	8.12	29	12.80	31	14.53
26	6.30						

Floyd County

Floyd 1 (50-13-27) (\*1016, pp. 47-48; 1023, p. 47). 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 Geol. Survey, U. S. Dept. of Interior, Louisville, Ky.

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

Jan. 3	34.91	Apr. 6	33.40	Aug. 10	45.11	Nov. 21	46.50
Feb. 15	24.35	May 14	39.32	Sept. 12	45.98	Dec. 21	43.69
Mar. 13	30.06	July 13	42.54	Oct. 5	46.25		

Floyd 2 (50-13-26) (\*1016, p. 48; 1023, p. 47). 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 Geol. Survey, U. S. Dept. of Interior, Louisville, Ky.

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

Jan. 3	36.71	Apr. 6	33.88	July 13	46.14	Oct. 5	a 49
Feb. 15	24.85	May 14	41.47	Aug. 10	a 49	Nov. 21	a 49
Mar. 13	31.96	June 18	38.48	Sept. 12	a 49	Dec. 21	46.39

a Dry at this depth.

Floyd 3 (50-14-1) (\*1016, p. 48; 1023, p. 47). 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 Geol. Survey, U. S. Dept. of Interior, Louisville, Ky.

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

Jan. 3	12.85	Apr. 6	11.29	July 13	15.02	Oct. 5	17.97
Feb. 15	9.94	May 14	12.39	Aug. 10	15.46	Nov. 21	18.87
Mar. 13	10.44	June 18	13.40	Sept. 12	16.69	Dec. 27	13.58

Floyd 4 (50-14-2) (\*1016, p. 49; 1023, p. 48). 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 Geol. Survey, U. S. Dept. of Interior, Louisville, Ky.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	22.82	Apr. 6	16.10	July 13	22.33	Oct. 5	24.20
Feb. 15	18.43	May 14	19.45	Aug. 10	22.75	Nov. 21	24.91
Mar. 13	17.26	June 18	19.95	Sept. 12	23.34	Dec. 21	24.15

Floyd 5 (50-14-3) (\*1016, p. 49; 1023, p. 48). 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 Geol. Survey, U. S. Dept. of Interior, Louisville, Ky.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	24.40	Apr. 6	21.10	July 13	27.18	Oct. 5	29.87
Feb. 15	20.30	May 14	23.90	Aug. 10	28.17	Nov. 21	30.69
Mar. 13	19.74	June 18	24.21	Sept. 12	28.72	Dec. 21	27.08

Floyd 6 (50-15-1) (\*1016, p. 49; 1023, p. 48). 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 Geol. Survey, U. S. Dept. of Interior, Louisville, Ky.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	15.52	Apr. 6	8.17	July 13	14.23	Oct. 5	16.12
Feb. 15	5.03	May 14	12.45	Aug. 10	14.95	Nov. 21	16.97
Mar. 13	7.47	June 18	13.05	Sept. 12	15.58	Dec. 21	16.66

#### Fountain County

Fountain 1 (\*1016, p. 47; 1023, p. 48). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	40.26	May 6	39.50	July 23	38.94	Oct. 22	41.10
10	40.35	8	39.44	30	39.20	29	41.17
16	40.07	14	39.53	Aug. 7	39.49	Nov. 5	41.29
23	40.17	21	39.59	14	39.94	11	41.30
31	40.15	28	39.23	20	40.04	20	41.20
Feb. 6	40.35	June 4	39.33	29	40.50	26	41.30
13	40.37	11	39.38	Sept. 3	40.46	Dec. 3	41.32
25	39.36	18	39.15	10	40.50	10	41.35
Mar. 27	39.45	25	37.49	17	40.74	17	41.60
Apr. 4	39.68	July 2	38.15	Oct. 1	41.00	24	41.45
13	39.67	11	38.28	8	40.95	31	41.40
17	39.69	16	38.75	15	41.15		

#### 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). Brookville Water Department. At south end of pumping plant in Brookville. Measured by air line 100 feet long. Measurements made by Walter Cleaver, Brookville Water Department.

## Franklin 1--Continued.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	27.0	Apr. 6	27.5	July 6	29.25	Oct. 12	31.25
12	27.25	13	27.5	13	29.0	19	31.0
19	28.25	20	27.75	20	29.5	26	30.5
26	28.5	27	29.5	27	28.0	Nov. 2	29.75
Feb. 2	28.5	May 4	25.5	Aug. 3	29.25	9	29.5
9	27.5	11	27.5	10	29.5	16	29.75
16	25.5	18	25.5	17	29.25	23	29.25
24	27.0	25	26.25	31	29.5	30	28.75
Mar. 2	27.0	June 1	28.5	Sept. 7	30.75	Dec. 9	30.25
9	27.0	8	28.5	14	30.5	14	29.5
18	25.5	15	28.0	21	29.25	21	29.75
23	26.5	22	28.0	28	29.5	28	29.5
31	26.75	29	28.0	Oct. 5	30.75		

Franklin 4 (\*1016, p. 50; 1023, p. 49). 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, 1946							
Jan. 4	25.47	Apr. 19	19.78	July 19	26.17	Oct. 11	35.72
11	23.67	26	21.46	26	26.39	18	36.36
18	24.29	May 3	21.06	Aug. 2	27.22	25	36.66
25	25.22	10	20.64	9	30.46	Nov. 1	37.18
Feb. 1	25.69	17	19.76	16	30.66	8	37.64
8	26.98	24	19.68	23	30.75	15	36.98
15	27.69	June 7	19.73	30	32.69	22	36.56
Mar. 1	25.86	14	19.62	Sept. 6	35.33	29	36.44
8	23.64	21	21.54	13	34.73	Dec. 6	32.48
15	23.36	28	21.56	20	36.46	13	32.92
Apr. 5	20.87	July 5	21.92	27	36.94	20	32.34
12	20.51	12	21.74	Oct. 1	38.32	27	30.98

Fulton County

Fulton 3 (\*817, p. 45; 840, p. 76; 845, p. 72; 886, p. 99; 906, p. 22; 936, p. 25; 944, p. 25; 986, p. 28; 1016, p. 50; 1023, p. 49). City of Rochester. At Federal Fish Hatchery east of Rochester. Measurements made by C. H. Walker and R. A. Stewart.

Water level, in feet below land-surface datum, 1946							
Jan. 2	8.89	Mar. 25	8.30	June 24	7.29	Sept. 9	8.9
7	8.86	Apr. 1	8.29	July 1	7.50	30	8.95
Feb. 4	8.99	8	8.40	8	7.55	Oct. 21	8.92
11	8.77	15	8.09	15	7.67	Nov. 4	8.79
18	7.96	22	7.89	23	7.88	18	8.89
26	8.40	29	7.74	Aug. 5	8.0	Dec. 2	8.90
Mar. 4	8.37	May 26	7.60	12	8.2	9	8.76
11	8.30	14	7.50	19	8.25	23	8.72
18	7.50	June 17	6.91	26	8.4	31	8.50

Gibson County

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



Gibson 1--Continued.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	17.34	Apr. 4	16.45	July 11	16.14	Oct. 10	17.55
10	17.29	11	16.60	18	16.18	17	17.69
17	16.97	18	15.80	25	16.43	24	17.80
24	17.13	25	16.30	Aug. 1	16.46	28	17.50
31	17.07	May 2	15.99	8	16.55	Nov. 7	16.36
Feb. 7	16.87	9	15.94	15	16.36	14	18.15
14	16.60	16	15.67	22	16.80	21	17.67
21	16.44	23	15.62	29	16.92	28	18.03
28	16.45	30	15.50	Sept. 5	17.00	Dec. 9	16.80
Mar. 7	16.65	June 6	15.1	12	17.09	16	14.44
14	16.30	13	15.65	19	17.00	23	13.84
21	16.45	20	15.1	26	17.36	30	13.70
28	16.53	July 4	15.97	Oct. 3	17.37		

Grant County

Grant 1 (\*1023, p. 50). 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. Measurements made by personnel of Marion Waterworks, Wilmer Wilson, superintendent.

Water level, in feet below land-surface datum, 1946												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	71.6	71.2	70.5	69.8	68.7	72.2	....	72.9	71.8	71.2	70.6
2	....	....	68.4	75.6	69.7	....	73.7	....	73.2	76.9	71.2	69.6
3	....	....	....	75.8	69.6	66.2	71.5	....	74.5	75.0	71.1	68.1
4	....	....	67.5	77.9	69.6	67.6	71.3	....	71.8	76.7	71.2	67.9
5	....	....	67.8	78.9	....	67.4	71.3	....	72.5	72.7	71.4	68.7
6	....	....	67.5	73.2	....	70.7	69.0	....	71.1	72.7	72.0	68.6
7	72.7	....	67.7	....	....	73.3	....	....	74.7	73.6	72.4	67.6
8	73.4	....	67.3	70.5	....	71.5	....	....	72.1	74.8	73.8	67.6
9	71.9	....	67.0	70.3	....	....	....	....	73.5	72.7	73.3	67.4
10	72.1	....	....	73.6	....	69.8	....	....	72.7	74.6	73.1	67.1
11	71.9	71.6	67.5	71.1	....	72.3	....	....	72.3	75.2	72.8	67.2
12	72.0	69.0	67.1	72.1	....	71.8	....	73.4	75.4	73.8	72.4	66.6
13	....	68.3	67.0	71.0	68.0	70.4	....	71.3	75.7	72.1	71.8	67.1
14	72.1	71.6	66.9	....	68.1	72.6	....	71.1	72.9	72.4	72.0	66.9
15	71.6	70.6	66.8	71.1	68.2	70.9	....	71.0	73.6	72.3	....	67.3
16	71.6	71.6	66.7	69.5	67.3	....	....	71.0	72.6	76.0	75.8	66.6
17	71.4	....	....	69.0	67.6	69.7	....	73.0	71.5	78.3	73.1	66.9
18	70.4	....	66.7	69.6	67.2	75.8	....	72.6	72.6	73.7	73.1	66.9
19	70.0	....	66.6	72.7	....	71.7	....	71.1	76.2	76.8	73.5	67.0
20	....	....	66.8	70.6	67.2	70.6	....	71.6	74.0	75.4	72.7	66.7
21	69.6	....	66.6	....	67.0	73.9	....	70.4	72.1	76.0	72.3	65.6
22	72.4	....	66.4	68.8	67.7	71.5	....	70.5	74.3	75.9	72.2	67.8
23	69.9	....	66.4	67.8	67.8	....	....	70.5	74.8	73.6	72.0	66.4
24	68.6	....	....	69.8	67.8	71.4	....	70.4	73.5	73.0	71.4	66.4
25	70.8	71.1	67.4	69.4	68.2	76.6	....	70.3	73.3	72.7	70.7	66.2
26	70.1	70.0	67.5	70.1	....	74.3	....	71.7	75.1	73.0	69.7	67.1
27	69.8	70.2	70.6	70.0	67.1	77.7	....	69.4	74.4	71.6	69.4	66.2
28	68.9	69.0	69.8	....	67.0	73.3	....	73.2	73.0	68.3	69.9	65.1
29	68.6	....	69.3	69.6	68.1	73.7	....	71.4	....	71.2	69.6	66.1
30	68.6	....	72.6	68.6	67.8	....	....	76.9	72.0	70.8	69.6	63.7
31	72.6	....	....	....	67.8	....	....	72.2	....	71.6	....	63.7

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

Water level at 2 a.m., in feet below land-surface datum, 1946

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	64.76	64.66	62.20	61.80	62.61	61.12	65.04	67.69	66.12	65.60	.....	61.68
2	64.79	64.51	62.04	66.20	62.61	60.57	66.72	.....	65.99	67.50	.....	62.16
3	64.59	64.60	61.91	66.38	62.60	58.22	65.20	.....	65.28	67.44	.....	61.95
4	64.58	64.31	61.59	68.03	62.41	60.05	65.40	67.46	64.15	66.42	.....	61.69
5	64.22	64.01	61.48	69.26	62.68	60.99	64.18	66.12	66.26	69.66	.....	61.33
6	66.43	63.76	61.23	66.96	60.42	63.22	63.42	67.36	65.08	67.60	.....	61.28
7	65.33	63.88	61.25	65.60	61.24	63.51	64.05	66.36	67.90	66.65	65.32	61.19
8	66.42	63.20	61.09	63.56	.....	64.99	63.63	66.93	65.92	68.45	65.45	61.15
9	66.11	65.10	60.90	63.13	61.97	63.51	64.93	67.87	66.20	69.26	65.79	60.99
10	.....	63.64	60.99	65.72	62.23	63.01	66.49	66.07	64.56	68.43	65.41	60.73
11	.....	63.09	60.90	63.98	62.12	62.41	69.51	65.85	67.00	68.79	64.29	60.80
12	.....	62.81	60.53	65.40	62.38	65.28	70.22	66.64	66.62	.....	64.61	.....
13	64.95	62.23	60.62	64.28	58.00	63.70	69.60	65.00	66.75	.....	65.30	60.34
14	64.55	64.15	60.46	63.57	60.70	66.31	69.69	64.93	67.05	.....	64.98	60.71
15	.....	.....	60.30	61.50	61.30	64.43	69.39	64.69	66.77	66.68	65.09	60.70
16	64.41	.....	60.33	62.29	61.54	63.65	69.80	64.57	66.20	68.10	68.51	60.57
17	63.88	.....	60.18	62.64	61.83	63.11	69.68	64.47	65.18	69.31	67.32	60.38
18	64.71	.....	60.06	62.58	61.60	65.63	68.86	65.20	66.19	69.78	66.15	60.47
19	63.54	.....	60.10	62.73	62.00	65.69	69.42	64.71	67.07	69.64	66.00	60.49
20	62.93	.....	60.24	63.00	59.00	64.10	69.88	63.89	66.94	70.41	65.99	60.26
21	62.43	.....	60.10	63.05	60.29	64.70	67.50	63.97	65.99	68.90	65.10	59.99
22	62.55	.....	59.91	61.31	61.20	66.14	66.56	63.91	67.88	67.98	64.71	60.33
23	63.82	.....	59.91	61.52	.....	64.52	67.48	63.89	67.40	66.95	64.50	60.06
24	62.68	.....	59.63	62.78	.....	65.69	67.83	63.90	67.09	66.45	63.90	60.07
25	65.48	.....	59.59	62.37	.....	66.93	.....	63.83	67.03	66.32	64.46	.....
26	63.75	.....	59.63	62.93	.....	68.56	67.70	64.41	66.19	65.35	63.75	.....
27	63.27	63.15	59.59	62.80	.....	68.41	68.27	63.05	68.13	65.19	63.26	59.88
28	62.63	62.60	62.32	62.79	.....	67.49	66.63	66.50	66.90	.....	63.16	59.62
29	.....	.....	61.90	61.80	.....	68.99	65.91	64.83	66.23	.....	62.40	59.66
30	.....	.....	61.98	62.29	61.34	66.12	67.39	67.55	65.90	.....	61.50	59.99
31	.....	.....	65.42	.....	61.31	.....	65.38	65.85	.....	.....	.....	59.91

Grant 5 (\*1023, p. 51). 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. Automatic water-stage recorder installed Apr. 16, 1945. Measurements made by C. C. Bishop, plant engineer.

Water level at 2 a.m., in feet below land-surface datum, 1946

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	53.41	54.70	53.27	48.67	53.70	52.50	54.21	54.99	55.85	56.22	57.90	55.48
2	52.94	54.78	53.24	51.84	53.77	51.99	54.39	55.14	55.63	56.39	58.00	54.14
3	53.27	54.35	52.87	47.17	53.99	51.64	54.43	55.50	55.20	57.69	57.98	54.91
4	53.54	53.97	52.50	46.60	54.06	52.05	54.52	55.29	55.39	56.98	57.76	55.68
5	53.72	54.15	52.82	46.21	53.78	52.36	54.16	54.98	55.49	57.20	57.91	56.18
6	52.28	54.30	52.99	47.55	53.43	52.67	53.95	55.19	55.64	57.36	57.93	56.57
7	50.79	54.51	53.14	48.08	53.79	52.97	53.70	55.38	55.77	57.11	58.01	56.80
8	51.33	54.73	53.19	48.48	53.84	53.31	53.45	55.57	55.84	57.41	58.08	55.76
9	51.84	54.80	53.26	49.55	53.99	52.93	53.84	55.64	55.56	57.64	58.10	54.34
10	52.40	54.31	52.79	50.35	54.17	52.73	54.22	55.78	55.78	57.80	57.98	54.97
11	52.73	53.93	52.48	51.01	54.04	53.15	54.58	55.83	55.96	57.97	57.71	55.63
12	53.02	54.33	52.79	51.44	53.67	53.50	54.84	55.63	56.08	58.08	57.85	56.37
13	52.86	54.49	53.00	51.85	53.20	53.67	55.12	55.62	56.15	57.98	57.59	.....
14	52.47	54.68	53.16	51.74	53.46	53.86	54.84	55.64	56.25	57.73	57.78	.....
15	52.90	54.52	53.41	51.53	53.74	53.97	54.57	55.65	56.23	57.94	57.84	.....
16	53.16	54.43	53.30	52.07	53.84	53.43	54.78	55.64	55.88	58.05	56.86	.....
17	53.34	54.17	.....	52.39	53.92	53.04	54.93	55.67	56.03	58.20	55.69	.....
18	53.66	53.69	.....	52.61	53.86	53.68	.....	55.36	56.22	58.26	54.47	.....
19	53.86	53.94	.....	52.87	53.41	53.82	55.19	55.05	56.52	57.45	55.09	.....
20	53.77	54.10	.....	53.14	52.99	53.88	55.21	55.02	56.44	56.30	55.71	56.18
21	53.33	54.26	52.60	52.87	53.24	53.97	55.01	55.05	56.53	55.19	56.16	56.45
22	53.86	54.26	52.86	52.66	53.48	54.12	54.48	55.16	56.57	55.28	56.54	55.19



Hancock County

Hancock 1. Cleveland, Cincinnati, Chicago & St. Louis Railway Co. In Maxwell, in NW $\frac{1}{4}$  sec. 8, T. 16 N., R. 7 E. Unused drilled well, diameter 6 inches, depth 108 feet (reported 187 feet). Measuring point, top of casing at north side, at land-surface datum. Measurements made by J. L. Gant.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 24	25.45	June 14	25.10	Aug. 22	26.43	Oct. 4	27.44
May 6	25.42	20	12.95	29	27.28	9	26.09
16	25.36	July 24	23.97	Sept. 4	27.69	16	27.52
23	24.00	Aug. 1	24.95	11	26.62	24	27.62
29	24.74	8	26.91	18	26.43	Nov. 6	27.91
June 5	24.98	14	26.92	30	27.76	10	27.01

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). Harrison County State Forest. NE $\frac{1}{4}$  sec. 23, 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, 1946							
Jan. 7	0.88	Apr. 7	2.03	July 7	2.18	Oct. 6	3.14
13	.80	14	2.05	15	2.50	13	2.97
21	.81	22	2.08	21	2.13	20	2.99
27	1.35	29	2.10	28	2.44	27	2.12
Feb. 3	1.40	May 5	.89	Aug. 4	2.82	Nov. 4	2.62
11	.98	12	.95	11	2.53	10	1.42
17	.90	19	.85	18	.86	18	1.76
25	1.19	26	1.86	25	2.18	25	.45
Mar. 3	1.09	June 3	1.72	Sept. 1	2.62	Dec. 1	1.71
11	1.48	10	2.58	8	2.82	8	2.15
17	.62	16	2.39	15	2.69	15	.80
25	.69	23	2.48	23	2.60	22	1.59
31	1.70	July 1	1.68	30	2.94	29	.73

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). Harrison County State Forest. SE $\frac{1}{4}$  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, 1946							
Jan. 7	3.07	Apr. 7	3.12	July 7	5.07	Oct. 6	6.20
13	2.95	14	3.13	15	5.29	13	6.25
21	3.04	22	3.21	21	5.49	20	6.53
27	3.09	28	3.50	28	5.61	27	6.31
Feb. 3	3.09	May 5	2.87	Aug. 4	5.77	Nov. 4	6.38
11	3.07	12	2.95	11	5.58	10	6.37
17	3.08	19	2.82	18	5.13	18	6.38
25	3.09	26	3.11	25	5.56	25	6.34
Mar. 3	3.10	June 3	3.14	Sept. 1	5.54	Dec. 1	6.37
11	3.10	10	3.59	8	5.72	8	6.43
17	2.82	16	4.13	15	5.85	15	5.62
25	3.03	23	4.63	23	5.90	22	5.26
31	3.09	July 1	4.87	30	6.07	29	2.94

Hendricks County

Hendricks 1 (\*1016, p. 52; 1023, p. 54). Brocia A. Smith. W $\frac{1}{2}$ S $\frac{1}{2}$ 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, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	2.55	Apr. 8	1.93	July 8	4.53	Oct. 7	7.49
14	1.85	15	2.57	15	4.87	14	7.65
21	2.36	22	3.02	22	5.22	20	7.79
28	3.07	29	3.52	29	5.55	28	7.90
Feb. 4	3.44	May 6	2.75	Aug. 5	5.79	Nov. 4	8.01
11	3.29	13	1.10	12	6.10	11	7.94
18	2.38	20	1.10	18	6.15	18	8.30
25	1.98	27	.98	26	6.43	25	8.08
Mar. 4	1.75	June 3	1.67	Sept. 2	6.58	Dec. 2	8.03
11	1.77	10	2.54	9	6.84	9	8.01
18	.73	17	3.14	16	6.50	16	7.28
25	.10	24	3.70	23	7.08	23	7.25
Apr. 1	1.10	July 1	4.13	30	7.31	29	7.24

Henry County

Henry 2. 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. Unused driven well, diameter  $1\frac{1}{2}$  inches, depth 40 feet (reported 46 feet). Measuring point, base of pitcher pump, 4.0 feet above land-surface datum. Measurements made by G. M. Casey.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 31	13.90	Sept. 8	16.00	Oct. 20	17.63	Dec. 1	18.00
Aug. 4	14.90	15	16.38	28	17.85	8	17.97
11	15.02	23	16.57	Nov. 3	17.86	15	17.32
18	15.09	29	17.05	10	17.95	22	16.65
25	15.41	Oct. 6	17.25	17	18.15	29	16.35
Sept. 1	15.57	13	17.45	24	18.05		

Howard County

Howard 3 (\*944, p. 25; 986, p. 29; 1016, p. 53; 1023, p. 54). Pittsburgh Plate Glass Co. On north side of creek, 0.3 mile west of pumping station of Kokomo water works. Measurements made by personnel of Kokomo Water Co., M. A. Stearns, manager.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 3	16.80	May 22	17.41	July 10	20.10	Sept. 4	22.86
10	17.44	29	17.10	31	20.56	11	22.74
17	18.13	June 5	18.99	Aug. 7	21.48	18	23.71
24	19.00	12	18.52	14	22.15	Oct. 9	24.06
May 1	19.15	19	18.80	21	22.26	16	24.00
8	19.12	26	19.11	28	22.20	23	24.51
15	18.57	July 3	19.46				

Howard 4 (\*1023, p. 54). 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.

## Howard 4--Continued.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 23	4.33	Apr. 20	5.44	July 13	7.34	Oct. 19	11.74
Feb. 2	5.71	27	5.93	27	7.78	26	12.00
9	6.08	May 4	6.53	Aug. 2	8.37	Nov. 2	12.33
16	5.77	11	6.92	10	8.72	9	12.57
23	6.21	18	4.58	31	9.70	16	12.95
Mar. 2	6.20	25	4.52	Sept. 7	10.01	23	13.69
9	5.73	June 2	5.10	14	10.28	30	13.44
19	2.59	8	5.32	21	10.56	Dec. 7	13.68
24	2.19	15	6.04	28	10.77	14	13.88
30	3.13	22	5.10	Oct. 5	11.17	21	14.20
Apr. 6	3.66	29	6.71	12	11.48	28	14.42
13	4.94	July 6	6.88				

Huntington County

Huntington 1 (\*1023, 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, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	2.70	Apr. 7	2.84	July 8	5.00	Oct. 6	34.10
12	2.70	14	2.93	14	5.55	13	34.20
20	3.10	21	2.95	21	8.20	20	34.20
27	3.10	28	3.20	28	17.79	27	34.50
Feb. 3	3.10	May 5	3.32	Aug. 4	24.70	Nov. 5	34.70
11	3.10	13	2.96	11	29.20	10	34.80
17	2.60	19	2.46	18	30.40	17	34.98
24	2.70	27	3.12	25	32.20	24	35.12
Mar. 3	2.70	June 1	3.18	Sept. 1	35.70	Dec. 1	35.35
7	3.17	9	3.92	8	35.20	9	36.25
10	2.79	16	3.00	15	35.50	17	35.80
17	1.85	23	3.60	23	33.50	21	36.20
24	2.47	30	3.96	29	33.80	30	35.70
31	2.74						

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). 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, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	5.90	Apr. 8	6.30	July 8	9.12	Oct. 7	11.65
14	5.20	15	6.50	15	9.45	14	11.76
21	5.70	22	6.96	22	9.65	21	11.90
28	6.10	29	7.15	29	10.02	28	11.75
Feb. 4	6.33	May 6	5.80	Aug. 5	10.20	Nov. 4	11.83
11	5.26	13	5.26	12	10.38	12	11.73
18	4.57	20	3.90	19	10.20	18	11.48
25	4.74	27	4.70	26	10.56	25	11.33
Mar. 5	4.80	June 3	5.85	Sept. 3	10.64	Dec. 2	10.74
11	5.10	10	6.72	9	10.75	9	10.50
16	3.60	17	7.72	16	11.14	16	9.90
25	4.40	24	8.20	23	11.10	23	9.50
Apr. 1	4.86	July 1	8.65	30	11.46	30	8.58

Jackson 2 (\*1016, p. 53; 1023, 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 Ralph Fish and Doyle Fish.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	11.75	Apr. 8	10.71	July 8	11.81	Oct. 13	15.92
14	11.78	15	11.05	14	12.10	20	16.36
20	12.39	22	11.36	22	12.52	27	16.52
28	11.88	29	13.31	29	12.64	Nov. 3	16.10
Feb. 4	11.77	May 6	11.30	Aug. 4	12.81	10	16.10
11	11.61	13	11.22	11	12.90	17	15.78
18	11.67	20	10.70	18	12.90	24	15.14
25	11.18	27	10.75	26	13.10	Dec. 1	14.50
Mar. 4	11.58	June 3	10.79	Sept. 1	13.10	8	14.20
11	11.38	9	11.01	9	13.31	15	13.75
18	10.77	16	11.30	29	15.75	22	13.50
25	10.79	24	11.41	Oct. 6	15.44	29	13.65
31	11.09	30	11.44				

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). 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, 1946

Feb. 7	19.70	June 24	26.80	Sept. 2	28.10	Nov. 4	30.46
Apr. 1	15.33	July 1	26.45	9	28.30	11	30.10
8	16.00	8	27.50	16	28.30	18	28.90
15	16.58	15	27.70	23	28.40	25	30.47
29	17.06	22	29.40	30	28.80	Dec. 2	30.94
May 6	17.03	29	28.45	Oct. 7	28.40	9	30.49
20	17.00	Aug. 12	28.90	14	29.70	16	30.47
June 3	18.04	19	28.10	21	29.70	23	30.48
10	26.42	26	28.30	28	29.20	30	30.46
17	26.10						

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). Muscatatuck State Park. SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 3, T. 6 N., R. 8 E. Measurements made by Logan Summerfield.

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

Feb. 20	3.29	May 17	3.68	July 27	12.00	Oct. 6	14.51
27	3.33	24	4.32	Aug. 3	12.32	12	14.79
Mar. 6	2.30	June 1	2.16	15	12.49	18	14.93
13	3.53	15	7.23	24	12.09	25	15.01
20	2.48	22	8.60	31	12.58	Nov. 3	14.89
27	2.25	28	9.67	Sept. 14	13.16	9	14.78
Apr. 26	5.72	July 5	10.72	21	13.71	Dec. 6	10.97
May 3	2.80	13	10.82	29	14.13	15	7.35
10	3.80	20	11.76				

Johnson County

Johnson 1 (\*1016, p. 54; 1023, p. 56). City of Bargersville. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 35, T. 13 N., R. 3 E. Measurements made by D. D. Core.





## Kosciusko 3--Continued.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	11.80	May 1	11.70	Aug. 9	12.43	Oct. 17	13.29
Feb. 7	10.76	8	11.79	16	12.52	24	13.37
14	10.60	June 6	12.15	23	12.58	31	13.39
21	11.59	13	12.20	30	12.60	Nov. 7	13.18
28	11.58	20	11.98	Sept. 6	12.64	14	13.18
Mar. 7	11.62	27	12.00	13	12.88	21	13.18
14	11.66	July 4	12.10	20	13.02	28	13.31
21	11.60	11	12.19	27	13.08	Dec. 12	13.42
28	11.51	18	12.21	Oct. 4	13.15	19	13.48
Apr. 10	11.57	25	12.32	11	13.22	26	13.51
17	11.62	Aug. 2	12.38				

Lagrange County

Lagrange 1 (\*1023, p. 57). Morris Fryman. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 22, T. 37 N., R. 9 E., 3 miles west of intersection of State Highway 9 and U. S. Highway 20, on north side of U. S. Highway 20. Measurements discontinued Jan. 14, 1946. Water level, in feet below land-surface datum, 1946: Jan. 7, 6.57. Measurements made by Maynard Atwater.

La Porte County

La Porte 1 (\*944, p. 26; 986, p. 30; 1016, p. 55; 1023, p. 57). City of La Porte. Well 4 at pumping station of La Porte waterworks. 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, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	6.68	Apr. 6	6.22	July 6	12.22	Oct. 5	8.85
12	7.28	13	6.68	13	13.70	12	9.09
19	7.20	20	8.32	20	14.70	19	9.70
26	8.12	27	8.90	27	12.70	26	9.29
Feb. 2	8.18	May 4	8.11	Aug. 3	10.28	Nov. 2	9.67
9	7.18	11	8.68	10	9.70	9	9.70
16	7.70	18	8.41	17	10.70	16	9.70
23	7.06	25	8.11	24	10.90	23	9.28
Mar. 2	7.11	June 1	6.65	31	7.70	30	9.20
9	7.41	8	8.70	Sept. 7	11.66	Dec. 7	9.70
16	5.70	15	7.68	14	12.68	14	9.29
23	6.20	22	7.24	21	10.09	21	9.70
30	5.68	29	7.68	28	8.20	28	9.80

La Porte 2 (\*944, p. 27; 986, p. 30; 1016, p. 55; 1023, 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, superintendents, Kankakee State Game Preserve.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	4.00	Sept. 20	7.05	Oct. 18	7.08	Nov. 22	6.30
30	4.30	27	7.05	25	7.03	Dec. 6	6.28
Feb. 26	4.60	Oct. 4	7.15	Nov. 1	6.40	13	5.90
Sept. 6	6.84	11	7.22	8	6.47	20	5.87
13	6.90						

Lawrence County

Lawrence 1 (\*1016, p. 56; 1023, 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.

## Lawrence 1--Continued.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	16.71	Apr. 4	18.27	July 4	20.66	Oct. 3	21.76
10	15.03	11	19.14	11	20.89	10	21.75
17	16.66	18	19.93	18	21.20	17	21.77
24	18.13	25	20.14	25	21.47	24	21.77
31	18.60	May 2	19.07	Aug. 1	21.62	31	21.78
Feb. 7	15.74	9	18.61	8	21.73	Nov. 7	21.72
14	11.70	16	13.63	15	21.73	14	21.70
21	14.23	23	13.67	22	21.20	21	21.70
28	15.60	30	17.67	29	21.62	28	21.38
Mar. 7	17.06	June 6	18.66	Sept. 5	21.71	Dec. 5	20.61
14	17.46	13	19.87	12	21.72	12	18.60
21	15.21	20	20.26	19	21.73	19	18.06
28	17.36	27	20.48	26	21.74	26	18.49

Lawrence 2 (\*1016, p. 56; 1023, 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, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	19.26	Apr. 10	21.41	July 10	21.43	Oct. 9	21.47
9	20.33	17	21.43	17	21.43	16	21.48
23	21.40	25	21.42	24	21.30	23	21.44
30	21.41	May 1	21.43	31	21.40	30	21.43
Feb. 6	20.86	8	21.37	Aug. 7	21.41	Nov. 6	21.41
12	21.06	15	21.38	14	21.43	13	21.38
20	18.96	22	16.76	23	21.29	20	21.39
27	20.50	29	21.28	28	21.41	27	21.13
Mar. 6	21.00	June 5	21.40	Sept. 4	21.46	Dec. 3	21.38
13	21.08	12	21.41	11	21.43	11	21.41
20	20.46	19	21.41	18	21.45	18	21.10
27	20.71	26	21.38	25	21.45	25	21.34
Apr. 3	21.39	July 3	21.41	Oct. 2	21.48		

## Madison County

Madison 2 (\*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). Anderson Water Department well 2. Measurements made by Earl Walker, Anderson Water Department. Water levels, in feet below land-surface datum, 1946: Mar. 5, 13.9; Aug. 7, 14.4.

Madison 5 (\*1016, p. 56; 1023, p. 58). Elwood Water Works. At city well field. Measurements made by Roy Chance, Elwood Water Works.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	39.2	Apr. 5	29.2	July 11	59.0	Oct. 11	67.0
8	39.3	13	28.6	17	57.0	18	65.0
16	36.1	19	31.2	24	59.0	26	58.0
24	32.4	25	37.6	Aug. 2	61.0	31	63.0
Feb. 1	38.9	May 3	37.7	8	63.0	Nov. 7	62.0
8	39.4	9	34.3	15	59.0	14	68.0
16	35.7	17	40.7	31	61.0	20	60.0
20	31.7	23	37.0	Sept. 5	67.0	29	56.0
Mar. 1	36.0	31	29.0	12	67.0	Dec. 7	56.0
8	36.0	June 7	34.1	20	69.0	12	55.0
13	33.7	14	39.0	26	69.0	19	53.0
21	32.8	22	39.7	Oct. 5	67.0	28	53.0
Apr. 1	30.2	July 3	57.0				

Madison 7. 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. Unused driven well, diameter 1 $\frac{1}{4}$  inches, depth 18.5 feet. Measuring point, top of 1 $\frac{1}{4}$ -inch pipe, 0.50 foot above land-surface datum. Measurements made by personnel of Mounds State Park.

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

Date	Water level	Date	Water level	Date	Water level
Jan. 1	3.2	Feb. 15	2.65	Aug. 7	13.9
15	2.51	Mar. 1	1.98		

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). 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, 1946

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1a	18.22	.....	17.00	16.58a	17.52	16.80	.....	a17.10	.....	.....	a22.42	.....
2	.....	.....	17.04	16.74a	17.80	17.52	.....	17.64	.....	.....	a22.22	.....
3a	18.98	.....	16.78	16.78a	17.82	17.58	.....	17.84	.....	a22.00a	19.88	19.12
4a	18.85	.....	16.80	16.82	17.30	16.80	17.40	17.62	.....	a22.06a	21.52	19.32
5a	18.80	17.04	17.08	16.90	17.04	.....	17.44a	17.78	.....	a22.38a	22.26	19.28
6a	18.90	.....	17.10	16.84	17.16	16.96	17.50a	17.92	.....	19.82a	20.14	19.18
7a	18.94	.....	17.15	16.80	.....	17.06	17.35	17.94	.....	a21.30a	20.68	19.12
8a	19.06	.....	16.98	16.82	17.10	17.06	.....	18.06a	19.94a	a22.14a	20.88	19.02
9a	19.10	17.60	17.15	16.90	17.40	16.98a	18.44	17.94	.....	.....	.....	19.02
10a	18.74	17.38	16.96	17.02	17.43	17.12a	18.46	17.90	.....	.....	.....	19.32
11a	18.56	17.90	17.08	17.08	.....	21.04a	18.44	17.62	.....	a22.28a	18.82	19.18
12	17.34	17.91	17.86	17.10	16.60a	19.06	17.88a	17.98a	33.58a	20.16a	19.99	19.20
13	17.04	.....	17.18	17.10	.....	.....	17.74a	20.64a	32.36	.....	.....	.....
14	16.82	17.44	17.14	16.86	.....	.....	17.36	17.38a	20.60a	22.28a	21.33	.....
15	17.08	17.28	16.96	17.06	16.74	17.26a	17.82a	24.76a	21.16	.....	.....	.....
16	20.90	17.14	.....	.....	.....	17.06a	18.02	.....	a22.52a	21.44a	19.93	18.78
17	20.84	17.00	.....	17.10	16.36	17.06a	18.22a	20.80a	24.94	.....	a19.50	18.98
18	.....	17.06	.....	17.22a	16.26	.....	a18.42a	19.06a	25.38	.....	.....	18.97
19	.....	17.04	16.42	17.24a	18.96	17.10a	18.84	.....	a24.30	.....	.....	.....
20	17.16	17.28	16.60	17.24a	19.44	17.12	18.24	.....	.....	.....	.....	.....
21a	18.22	17.14	.....	17.04a	18.56	17.06	17.40	.....	a24.00a	26.00a	26.62	.....
22a	17.84	.....	.....	17.08a	16.88	16.98a	17.38a	28.18a	23.18	.....	20.16	.....
23a	17.84	.....	16.58a	17.40	.....	16.80a	21.54	.....	a25.10	.....	19.86	.....
24a	17.94	.....	16.44	17.52	16.72a	16.92a	20.28a	23.10a	25.76	.....	.....	.....
25a	22.10	.....	16.40a	18.34	.....	a17.20a	20.28	.....	a24.32	.....	19.52	.....
26a	17.70	.....	16.44	17.42	16.48	17.32a	18.20a	26.20a	26.98a	32.90	19.60	.....
27	.....	17.22	21.36	17.18	16.46	17.38a	17.98a	33.00	.....	a24.32	.....	a19.00
28a	17.44	17.04	16.74	17.14	16.66	17.40a	17.78a	33.62	.....	.....	19.20	.....
29a	17.44	.....	16.64	.....	16.70	17.34a	17.62a	32.76	.....	.....	.....	18.74
30a	17.48	.....	16.74	.....	.....	16.98a	17.72a	32.76	.....	.....	19.24	18.84
31	.....	.....	16.52	.....	16.64	.....	a17.92a	27.80	.....	a23.48	.....	18.94

a One or more gravel wells at White River filtration plant pumping at time of measurement.

Marion 2 (\*817, p. 48; 840, p. 80; 886, p. 102; 906, p. 26; 936, p. 32; 944, p. 28; 986, p. 31; 1016, p. 57; 1023, p. 59). Security Trust Bank Building, 130 East Washington St., Indianapolis. Equipped with automatic water-stage recorder. Measurements made by personnel of Geol. Survey, U. S. Dept. of Interior.

Water level at 2 a.m., in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	53.74	52.22	51.19	51.63	51.81	52.96	57.55	59.85	60.85	60.75	58.44	.....
2	53.64	52.18	51.12	51.58	51.86	53.31	57.62	59.95	60.77	60.39	58.33	.....
3	53.54	52.19	51.19	51.64	51.90	53.33	57.69	60.07	60.57	60.16	58.40	54.94
4	53.50	52.07	51.10	51.62	51.86	53.33	57.74	60.23	60.42	59.98	58.43	54.87
5	53.40	51.99	51.14	51.67	51.85	53.32	57.77	60.28	.....	59.89	58.28	54.79
6	53.30	51.92	51.25	51.64	51.77	53.34	57.79	60.28	.....	60.02	58.04	54.73
7	53.29	51.92	51.36	51.66	51.77	53.51	57.89	60.36	.....	60.08	57.83	54.67
8	53.27	51.95	51.44	51.53	51.77	53.79	57.92	60.44	.....	60.10	57.71	54.63
9	53.21	51.89	51.38	51.56	51.75	54.13	57.98	60.53	.....	60.12	.....	54.60
10	53.22	51.85	51.45	51.57	51.72	54.28	58.07	60.63	60.91	60.18	.....	54.56
11	53.21	51.75	51.37	51.54	51.73	54.42	58.23	60.76	61.02	60.28	.....	54.56
12	53.13	51.74	51.26	51.50	51.76	54.15	58.39	60.75	61.08	60.22	.....	54.61
13	53.16	51.63	51.20	51.47	51.73	54.90	58.54	60.75	61.12	60.03	57.01	54.56
14	52.04	51.61	51.22	51.43	51.65	55.11	58.69	60.74	61.12	59.79	56.82	54.68
15	52.95	51.64	51.23	51.36	51.64	55.32	58.68	60.74	61.15	59.62	56.68	54.68
16	52.96	51.64	51.31	51.41	51.64	55.53	58.72	60.78	61.10	59.42	56.55	54.59
17	52.90	51.58	51.32	51.43	51.86	55.61	58.79	60.87	61.06	59.30	56.49	54.41
18	52.85	51.52	51.33	51.41	51.92	55.77	58.89	61.00	61.04	59.23	56.38	54.40
19	52.81	51.42	51.31	51.55	51.91	55.98	59.04	61.02	61.02	59.22	56.26	54.39
20	52.78	51.38	51.32	51.57	52.03	56.05	59.23	61.04	61.03	59.10	56.18	54.26
21	52.67	51.44	51.30	51.67	52.04	56.16	59.39	61.09	61.05	59.05	56.14	54.15
22	.....	51.34	51.30	51.65	52.05	56.34	59.40	61.14	61.14	58.88	56.01	54.13
23	.....	51.31	51.38	.....	52.04	56.50	59.41	61.22	61.12	58.74	55.95	54.06
24	.....	51.29	51.41	.....	52.23	56.43	59.55	61.28	61.12	58.68	55.82	54.03
25	.....	51.24	51.34	.....	52.47	56.48	59.65	61.30	60.85	58.66	55.67	54.02
26	.....	51.14	51.34	.....	52.70	56.65	59.76	61.23	60.62	58.67	55.61	53.90
27	.....	51.16	51.38	.....	52.59	56.83	59.78	61.11	60.67	58.63	55.53	53.80
28	.....	51.21	51.43	.....	52.55	57.06	59.83	61.07	60.80	58.54	55.46	53.70
29	52.35	.....	51.53	.....	52.54	57.28	59.73	61.06	61.03	58.44	.....	53.69
30	52.25	.....	51.63	51.74	52.53	57.47	59.69	61.06	61.06	58.51	.....	53.68
31	52.18	.....	51.75	.....	52.61	.....	59.76	60.96	.....	58.51	.....	53.65

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). Emmerich Manual Training High School, Indianapolis. Measurements made by personnel of Geol. Survey, U. S. Dept. of Interior.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	54.31	Apr. 8	53.26	July 8	54.20	Oct. 7	55.66
7	54.25	15	52.37	15	55.15	14	54.87
14	53.90	22	52.21	22	55.40	21	55.54
21	53.92	29	52.60	29	55.90	28	54.43
28	53.46	May 6	52.82	Aug. 5	55.45	Nov. 4	54.62
Feb. 4	53.13	13	52.23	12	55.73	12	55.20
11	53.15	20	51.39	19	55.84	18	54.23
18	53.44	27	52.44	26	56.62	25	54.05
25	53.08	June 3	52.39	Sept. 3	55.60	Dec. 2	54.09
Mar. 4	52.97	10	53.20	9	55.79	9	54.14
11	52.85	17	53.68	16	56.36	16	53.54
18	52.69	24	53.83	23	56.89	23	53.63
25	52.47	July 1	53.21	30	56.13	30	53.89
Apr. 1	52.60						

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

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	3.28	Apr. 8	2.53	July 8	3.76	Oct. 7	5.49
7	3.22	15	2.59	15	3.41	14	5.53
14	3.03	22	2.62	22	3.23	21	5.66
21	2.92	29	2.95	29	3.67	28	5.73
28	2.84	May 6	2.63	Aug. 5	3.93	Nov. 4	5.59
Feb. 4	2.77	13	2.41	12	4.60	12	5.63
11	2.81	20	2.07	19	4.93	18	5.59
18	2.67	27	1.90	26	5.19	25	5.56
25	3.29	June 3	1.97	Sept. 3	4.74	Dec. 2	5.53
Mar. 4	3.11	10	3.32	9	4.82	9	5.35
11	2.80	17	2.88	16	4.87	16	5.22
18	2.01	24	2.93	23	4.93	23	5.27
25	2.13	July 1	3.07	30	5.35	30	5.31
Apr. 1	2.04						

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

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	46.03	Apr. 8	45.82	July 8	47.42	Oct. 7	50.60
7	45.69	15	46.08	15	47.72	14	50.75
14	45.29	22	46.31	22	48.34	21	49.12
21	44.95	29	46.32	29	48.75	28	47.49
28	46.56	May 6	46.11	Aug. 5	49.04	Nov. 4	47.57
Feb. 4	46.01	13	45.74	12	49.33	12	47.93
11	46.02	20	45.93	19	49.36	18	47.67
18	45.98	27	46.08	26	49.78	25	47.88
25	45.80	June 3	45.99	Sept. 3	49.88	Dec. 2	47.95
Mar. 4	45.73	10	46.49	9	49.89	9	48.12
11	45.75	17	46.74	16	50.04	16	48.17
18	45.60	24	47.05	23	50.29	23	48.24
25	45.54	July 1	47.29	30	50.52	30	48.20
Apr. 1	45.13						

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

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	57.49	Apr. 8	56.08	July 8	62.51	Oct. 7	64.69
7	57.33	15	56.17	15	63.60	14	64.20
14	57.34	22	56.39	22	63.70	21	63.80
21	57.23	29	56.41	29	64.59	28	61.82
28	56.37	May 6	56.19	Aug. 5	64.71	Nov. 4	61.63
Feb. 4	56.46	13	56.38	12	64.98	12	60.94
11	56.20	20	57.98	19	65.55	18	60.37
18	54.85	27	58.71	26	65.67	25	59.97
25	54.62	June 3	58.73	Sept. 3	64.88	Dec. 2	59.53
Mar. 4	55.56	10	59.47	9	65.13	9	59.14
11	55.73	17	58.89	16	64.90	16	58.85
18	55.47	24	61.54	23	64.93	23	58.77
25	55.76	July 1	62.32	30	64.83	30	58.44
Apr. 1	55.78						

Marion 13 (\*886, p. 106; 906, p. 29; 936, p. 34; 944, p. 31; 986, p. 34; 1016, p. 60; 1023, p. 62). Indianapolis Sanitation Plant. "East" observation well, about 500 feet east of powerhouse. Measurements made by W. R. Curran, Indianapolis Sanitation Plant.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	3.21	Apr. 10	2.10	June 7	2.50	Sept. 9	(a)
Mar. 1	2.30	May 13	2.43	Aug. 12	4.45		

a Dry.

Marion 14 (\*886, p. 106; 906, p. 29; 936, p. 34; 944, p. 31; 986, p. 34; 1016, p. 60; 1023, p. 62). Indianapolis Sanitation Plant. "Resettler" well, about 400 feet southeast of powerhouse at southeast end of resettler tank. Measurements made by W. R. Curran, Indianapolis Sanitation Plant.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	20.41	Apr. 10	19.21	June 7	19.66	Sept. 9	21.62
Mar. 1	19.63	May 13	19.81	Aug. 12	21.32		

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

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	94.63	Mar. 18	98.99	June 3	103.96	Oct. 14	108.35
7	105.22	25	108.14	10	106.67	21	106.89
14	104.26	Apr. 1	108.04	17	107.84	28	106.69
21	89.43	8	107.83	24	109.90	Nov. 4	106.34
28	95.49	15	107.68	July 1	107.87	12	108.31
Feb. 4	93.36	22	102.17	Sept. 3	101.77	18	106.93
11	105.28	29	107.01	9	107.11	25	103.83
18	103.03	May 6	104.13	16	107.92	Dec. 2	105.11
25	102.77	13	107.54	23	107.94	9	100.97
Mar. 4	108.45	20	107.83	30	107.82	16	101.68
11	100.69	27	107.66	Oct. 7	107.77	23	102.45

Marion 18 (\*986, p. 34; 1016, p. 60; 1023, 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. Equipped with automatic water-stage recorder. Measurements made by personnel of Geol. Survey, U. S. Dept. of Interior.

Water level at 2 a.m., in feet below land-surface datum, 1946

(From recorder charts)												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	20.99	19.72	18.03	.....	19.16	17.08	19.10	20.92	22.65	24.00	24.58	24.92
2	21.01	19.74	17.88	16.02	19.15	17.19	19.18	21.01	22.72	24.01	24.57	24.96
3	20.99	19.82	17.85	16.16	19.10	17.35	19.27	21.10	22.78	24.04	24.58	25.00
4	20.97	19.88	17.79	16.28	19.04	17.51	19.35	21.18	22.85	24.07	24.60	25.00
5	20.92	19.85	17.74	16.49	19.06	17.63	19.43	21.25	22.93	24.10	24.66	24.99
6	20.80	19.75	17.68	16.71	19.07	17.73	19.48	21.30	23.02	24.15	24.70	24.98
7	20.76	19.69	17.61	16.85	19.06	17.79	19.55	21.36	23.09	24.18	24.71	24.96
8	20.76	19.72	17.64	16.96	19.06	17.85	19.63	21.41	23.17	24.20	24.65	24.96
9	20.71	19.69	17.45	17.07	19.04	18.00	19.70	21.46	23.24	24.20	24.65	24.97
10	20.65	.....	17.50	17.26	19.00	18.22	19.74	21.48	23.28	24.21	24.67	24.97
11	20.63	.....	17.52	17.43	.....	18.39	19.79	21.56	23.30	24.23	24.67	24.97
12	20.56	20.73	17.49	17.56	.....	18.51	19.83	21.64	23.36	24.26	24.71	24.95
13	20.53	20.70	17.39	17.72	.....	18.58	19.89	21.74	23.45	24.30	24.76	24.87
14	20.49	.....	17.33	17.81	16.52	18.68	19.94	21.85	23.51	24.36	24.78	24.85
15	20.37	.....	.....	17.86	16.54	18.81	19.98	21.94	23.56	24.40	24.78	24.80
16	20.32	.....	.....	17.95	16.56	18.90	20.06	22.00	23.61	24.42	24.79	24.73
17	20.34	.....	.....	18.10	16.55	18.93	20.13	22.03	23.67	24.43	24.80	24.64
18	20.15	.....	.....	18.20	16.41	18.94	20.18	22.04	23.73	24.39	24.85	24.62
19	20.04	19.10	13.49	18.29	16.25	18.38	20.24	22.03	23.77	24.38	24.88	24.60

## Marion 18--Continued.

Water level at 2 a.m., in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
20	19.99	18.92	13.41	18.35	16.10	18.49	20.32	22.06	23.80	24.43	24.87	24.57
21	19.91	18.93	13.69	18.49	16.05	18.58	20.39	22.09	23.81	24.47	24.86	24.41
22	19.92	18.84	13.95	18.59	16.13	18.66	20.44	22.12	23.83	24.50	24.84	24.45
23	19.94	18.67	14.19	18.63	16.21	18.76	20.45	22.15	23.85	24.50	24.86	24.45
24	19.85	18.55	14.45	.....	.....	18.82	20.48	22.19	23.87	24.50	24.87	24.44
25	19.78	18.47	14.70	.....	.....	18.83	20.52	22.22	23.89	24.46	24.83	24.44
26	19.70	18.29	14.92	.....	.....	18.83	20.59	22.26	23.90	24.45	24.84	24.44
27	19.79	18.15	15.08	.....	.....	18.87	20.65	22.31	23.91	24.47	24.86	24.44
28	19.84	18.08	.....	.....	.....	18.93	20.70	22.35	23.92	24.52	24.90	24.40
29	19.87	.....	19.05	.....	19.00	20.75	22.41	23.94	24.55	24.92	24.40	
30	19.84	.....	19.12	16.93	19.06	20.79	22.51	23.97	24.56	24.93	24.38	
31	19.71	.....	.....	.....	17.03	.....	20.84	22.59	.....	24.56	.....	24.40

Marion 19 (\*986, p. 35; 1016, p. 61; 1023, 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 Geol. Survey, U. S. Dept. of Interior.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	17.73	Apr. 8	16.29	July 8	16.19	Oct. 6	18.10
7	17.75	15	16.38	15	16.35	14	18.28
14	17.58	22	16.54	22	16.13	21	18.42
21	17.47	29	16.68	29	16.31	28	18.58
28	16.86	May 6	16.74	Aug. 5	16.50	Nov. 4	18.70
Feb. 4	17.51	13	16.49	12	16.69	12	18.81
11	17.58	20	16.25	19	16.84	18	18.88
18	17.46	27	16.17	26	17.03	25	18.95
25	17.37	June 3	16.21	Sept. 3	17.24	Dec. 2	19.03
Mar. 4	17.34	10	16.30	9	17.43	9	19.07
11	17.37	17	16.37	16	17.64	16	18.98
18	17.05	24	15.96	23	17.83	23	19.02
25	16.57	July 1	16.08	30	17.99	30	19.09
Apr. 1	16.34						

Marion 21 (\*1016, p. 62; 1023, p. 63). Continental Baking Co., 339 East Market St., Indianapolis. Equipped with automatic water-stage recorder. Measurements made by personnel of Geol. Survey, U. S. Dept. of Interior.

Water level at 2 a.m., in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	56.53	57.06	56.96	55.32	56.74	56.35	59.62	62.67	62.03	62.65	61.39	59.78
2	56.64	57.03	56.76	56.16	56.68	56.42	60.13	62.69	61.29	62.44	61.22	59.64
3	57.09	56.94	56.70	56.59	56.63	.....	60.01	62.69	61.11	62.41	60.98	59.92
4	57.49	55.74	55.76	56.59	56.44	56.36	59.88	62.35	60.84	62.45	.....	59.98
5	57.58	56.19	56.37	56.94	56.42	56.52	59.16	61.56	61.92	62.57	61.18	59.92
6	57.10	56.10	56.36	56.88	55.53	56.50	59.28	62.32	.....	62.25	61.16	59.93
7	56.33	56.42	56.62	56.79	56.22	56.43	59.25	62.59	62.06	61.55	60.78	59.91
8	57.29	56.64	56.66	55.28	56.47	57.01	58.46	62.68	61.90	61.95	60.80	59.78
9	57.16	56.59	56.56	56.50	56.49	57.22	59.89	62.69	61.22	62.03	61.06	59.30
10	57.73	56.36	56.42	56.83	56.60	56.01	60.14	62.78	62.09	62.08	60.67	59.52
11	57.88	55.55	55.48	57.00	56.43	57.29	60.29	62.68	62.37	62.00	60.24	59.63
12	57.94	56.31	55.88	57.14	56.46	57.87	60.90	61.66	62.54	62.17	60.86	59.28
13	57.93	56.29	56.22	57.18	55.44	58.26	61.18	62.63	62.56	.....	60.86	59.73
14	56.64	56.55	56.20	56.94	56.00	58.78	61.00	62.79	62.69	.....	60.78	59.93
15	57.52	57.03	56.30	55.74	56.28	59.12	60.29	62.68	62.44	62.13	60.76	.....
16	58.01	56.95	56.47	56.70	56.42	58.58	61.44	62.57	61.83	61.92	60.66	.....
17	57.98	56.89	55.87	56.86	56.74	57.47	61.63	62.64	62.57	61.77	60.68	59.53
18	58.05	56.32	55.12	56.82	56.57	58.85	61.86	62.11	62.75	61.37	60.29	59.77
19	58.11	56.49	55.82	57.01	56.58	59.28	61.97	61.69	62.78	61.88	60.46	59.89

## Marion 21--Continued.

Water level at 2 a.m., in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
20	57.92	56.79	56.19	57.05	55.26	.....	62.13	62.64	62.76	.....	60.47	59.71
21	56.56	57.03	56.34	57.03	56.29	59.80	61.84	62.86	62.80	.....	60.43	59.47
22	57.57	56.72	56.40	55.75	56.57	60.14	61.09	62.84	62.69	61.70	60.55	.....
23	57.54	56.98	56.55	56.44	56.67	59.96	62.08	62.98	62.10	61.63	60.67	.....
24	57.30	56.61	56.06	56.78	56.71	58.52	62.37	62.91	62.83	61.61	60.10	59.61
25	57.30	56.14	55.21	56.76	56.90	59.71	62.60	62.43	62.71	61.42	59.67	59.00
26	57.27	56.40	55.76	56.96	56.96	60.10	62.69	61.74	62.74	61.58	60.18	58.03
27	57.26	56.79	56.10	57.12	55.55	60.57	.....	62.44	62.83	.....	60.43	58.73
28	56.19	57.05	56.19	56.86	56.62	60.92	.....	62.47	62.92	.....	60.37	58.66
29	56.93		56.20	55.53	56.91	61.18	.....	62.52	62.58	61.43	59.40	.....
30	56.67		56.43	56.53	56.93	60.70	62.40	62.58	62.06	61.42	59.90	.....
31	56.76		56.36		55.48		62.51	62.47		61.49		59.14

Marion 22 (\*1016, p. 62; 1023, p. 64). Arthur Baxter. In Indianapolis, about 290 feet north of Georgia St. and about 160 feet east of East St. Equipped with automatic water-stage recorder. Measurements made by personnel of Geol. Survey, U. S. Dept. of Interior.

Water level at 2 a.m., in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	67.00	76.01	77.87	70.83	77.27	.....	77.78	83.84	80.50	81.26	80.24	77.25
2	75.75	75.42	76.76	75.75	77.33	.....	77.33	83.80	78.20	81.28	80.00	76.25
3	78.72	71.10	72.50	76.85	77.18	.....	76.47	83.85	.....	81.37	78.31	79.32
4	79.31	69.80	73.26	76.05	76.98	76.00	76.36	.....	80.93	81.45	77.12	79.38
5	78.63	74.50	76.07	77.35	73.72	76.05	75.48	.....	81.04	81.53	79.85	79.51
6	72.05	75.07	75.92	76.51	72.58	76.00	74.87	82.87	81.31	80.48	80.08	79.52
7	72.79	75.28	76.50	72.62	76.70	76.14	75.10	83.46	81.40	78.00	79.97	79.25
8	79.42	75.88	76.26	.....	77.14	77.21	75.38	83.71	80.69	80.63	79.94	78.15
9	79.25	75.76	74.50	76.75	77.18	73.80	80.13	.....	78.37	80.94	80.22	76.05
10	79.57	70.33	71.78	77.35	77.05	72.24	80.18	.....	81.05	81.05	79.23	78.72
11	80.24	70.43	69.60	77.57	76.92	77.93	80.16	.....	81.52	80.83	77.73	78.85
12	80.28	77.03	75.32	77.62	73.23	78.84	82.17	.....	81.65	80.95	.....	78.72
13	74.25	76.90	76.56	77.25	72.47	79.25	82.82	82.93	81.72	80.30	80.10	79.34
14	73.34	77.79	76.15	74.38	.....	80.13	81.82	83.59	81.68	78.56	80.23	79.45
15	79.72	78.32	77.06	72.47	.....	80.13	79.19	83.85	81.02	80.66	79.89	76.44
16	80.38	78.46	75.73	77.10	.....	75.95	82.80	83.67	80.02	80.55	79.79	.....
17	80.37	77.52	71.29	77.45	.....	76.04	83.13	83.70	81.51	80.37	78.67	78.90
18	80.41	74.30	71.75	77.38	.....	80.86	83.33	82.38	81.67	80.11	76.78	79.34
19	80.38	78.80	75.80	77.50	.....	81.16	83.54	81.20	81.76	80.27	79.45	79.33
20	76.50	78.53	76.31	77.44	.....	81.40	83.64	82.89	81.76	79.38	79.67	79.34
21	70.43	78.50	76.52	71.64	75.87	81.25	82.06	83.46	81.93	79.15	79.61	79.05
22	77.37	77.00	76.57	73.18	76.33	81.77	80.98	83.73	81.61	80.13	79.64	77.07
23	77.60	79.18	76.04	76.82	76.49	80.63	83.26	83.82	81.00	80.18	79.67	76.21
24	77.16	72.33	70.10	77.42	76.60	74.92	83.85	83.59	.....	80.34	78.63	79.00
25	75.54	74.11	70.32	77.39	76.92	81.35	.....	82.00	.....	80.27	76.70	71.52
26	74.47	78.78	74.55	77.55	73.50	82.32	.....	79.83	81.60	80.42	79.30	68.35
27	71.05	79.25	75.29	77.56	71.92	84.33	.....	82.13	81.62	79.77	79.68	77.61
28	70.69	79.54	75.59	73.50	76.54	85.24	.....	82.42	81.62	78.34	76.40	78.15
29	75.23		75.00	72.00	77.00	83.53	.....	82.31	80.85	80.12	75.00	76.93
30	75.73		75.47	76.86	73.00	80.11	83.24	82.24	79.42	80.31	79.15	74.73
31	75.75		71.30	.....	.....	.....	83.76	81.92		80.21	.....	.....

Marion 24 (\*1016, p. 63; 1023, p. 64). Joe Ritter, 215 South High School Road, Indianapolis. About 100 feet east of High School Road and about 100 feet north of Big Four Railroad tracks. Measurements made by personnel of Geol. Survey, U. S. Dept. of Interior. Measurements discontinued May 27, 1946.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	4.53	Feb. 18	4.63	Mar. 11	3.97	Apr. 1	5.03
14	3.61	25	5.02	18	2.57	May 27	5.03
Feb. 11	5.18	Mar. 4	4.25	25	3.93		



Marion 25 (\*1023, p. 65). Electric Steel Castings Co. In Speedway City, on Main St. just north of Tenth St., 532 feet east of centerline of Main St. and 393 feet north of centerline of Tenth St. Automatic water-stage recorder installed May 7, 1945. Measurements made by personnel of Geol. Survey, U. S. Dept. of Interior.

Water level at 2 a.m., in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	23.39	24.83	.....	18.89	22.42	.....	23.18	42.58	30.11	30.67	.....	.....
2	23.95	24.37	.....	.....	23.25	.....	26.75	43.68	27.13	30.70	.....	.....
3	24.12	24.82	.....	.....	23.65	.....	28.52	37.80	.....	32.43	.....	.....
4	24.23	22.27	.....	.....	23.78	21.71	28.98	30.50	29.30	33.03	.....	.....
5	.....	24.02	21.22	.....	20.17	19.57	25.45	27.58	29.77	32.08	37.64	.....
6	23.98	24.37	21.62	.....	18.77	19.04	28.74	32.25	32.24	25.68	40.76	38.30
7	23.13	24.60	22.35	.....	21.80	18.84	24.97	33.53	33.47	.....	42.30	33.10
8	23.83	24.58	22.70	.....	22.85	21.32	23.60	34.20	27.32	41.94	43.11	26.15
9	24.01	24.05	25.83	28.18	23.50	21.80	24.77	34.70	25.15	41.18	36.02	22.83
10	.....	24.18	24.28	29.20	23.97	20.99	27.30	33.35	37.48	41.90	28.31	29.54
11	.....	20.83	23.62	29.70	23.87	21.24	29.12	27.55	40.89	42.70	25.26	31.38
12	.....	23.30	26.63	30.02	.....	28.13	29.48	24.73	42.45	36.93	.....	31.55
13	.....	.....	24.30	26.60	.....	28.65	30.42	45.40	43.22	28.30	32.15	32.00
14	.....	.....	23.75	22.03	.....	29.02	25.78	40.42	38.35	24.90	32.80	31.44
15	23.53	.....	22.90	19.95	.....	28.52	24.29	.....	30.38	30.10	33.09	25.52
16	24.23	.....	.....	.....	.....	24.30	27.40	.....	28.01	31.80	30.98	23.15
17	23.60	.....	.....	.....	.....	23.28	29.38	.....	33.78	32.78	25.50	34.56
18	23.95	.....	.....	.....	.....	27.55	30.25	.....	34.89	32.53	.....	38.00
19	25.13	21.46	21.13	.....	.....	.....	30.77	.....	35.80	30.72	30.57	39.85
20	23.90	21.92	21.46	.....	.....	.....	31.15	45.83	36.05	25.22	.....	40.70
21	.....	.....	21.91	.....	21.20	.....	29.77	38.18	34.25a	24.61	.....	34.60
22	22.75	.....	22.21	.....	21.88	.....	26.08	37.18	26.66	.....	.....	28.25
23	23.17	.....	22.27	21.83	23.17	.....	31.57	47.18	.....	.....	.....	24.30
24	23.02	.....	20.52	23.30	23.72	.....	32.86	37.78	35.95	.....	.....	30.33
25	23.57	.....	18.49	24.05	23.80	27.80	33.90	28.90	39.05	.....	.....	28.76
26	24.35	21.23	20.88	24.35	20.17	29.05	34.09	25.13	39.88	.....	.....	23.87
27	24.30	.....	21.70	24.59	18.30	30.02	.....	36.31	42.35	.....	.....	30.00
28	21.93	.....	21.93	20.52	.....	30.38	.....	40.75	38.50	.....	.....	29.40
29	23.94	.....	22.05	19.00	.....	30.22	.....	41.80	30.30	36.20	.....	24.12
30	24.51	.....	22.75	22.48	.....	25.80	41.82	42.19	.....	36.50	.....	22.65
31	24.60	.....	21.35	.....	.....	.....	41.55	37.07	.....	.....	.....	35.00

a Estimated.

#### Martin County

Martin 3 (\*1016, p. 63; 1023, p. 66). 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. Measurements made by George W. Melton.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 6	21.02	Mar. 7	19.97	Apr. 27	20.89	Dec. 8	21.52
14	21.01	14	19.95	Nov. 17	21.59	15	21.51
21	20.01	28	20.58	24	21.55	22	21.51
27	19.98	Apr. 19	20.89	Dec. 1	21.52	29	21.51

Martin 4 (\*1016, p. 63; 1023, p. 66). 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 well Martin 3. Measurements made by George W. Melton.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 6	3.17	Mar. 7	3.20	Apr. 27	3.36	Dec. 8	3.51
14	3.15	14	3.16	Nov. 17	3.39	15	3.35
21	3.26	28	3.33	24	3.36	22	3.48
27	3.22	Apr. 19	3.35	Dec. 1	3.36	29	3.46

Monroe County

Monroe 2 (\*1023, 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 C. Hacker, superintendent, Morgan-Monroe State Forest.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	17.78	Apr. 16	18.90	July 9	23.60	Oct. 1	23.30
9	17.90	24	22.25	16	23.90	8	23.60
15	21.58	30	22.00	23	23.60	16	24.30
29	21.80	May 7	21.45	30	23.80	22	24.00
Feb. 5	20.88	14	20.75	Aug. 6	23.90	Nov. 1	24.78
12	19.44	21	16.55	13	24.90	6	24.00
19	21.56	28	16.00	20	24.00	19	24.75
26	17.48	June 4	16.90	27	23.55	26	24.05
Mar. 6	17.55	11	19.20	Sept. 3	24.30	Dec. 10	21.98
19	16.00	19	18.95	10	24.40	18	21.80
27	16.50	25	20.85	17	24.30	31	21.95
Apr. 2	18.16	July 2	22.90	24	23.55		

Monroe 3 (\*1016, p. 64; 1023, 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, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	21.59	Mar. 8	20.80	June 7	22.77	Sept. 28	25.71
12	22.07	29	20.39	17	23.15	Oct. 4	25.88
25	22.91	Apr. 5	23.38	July 26	24.60	Nov. 1	26.17
Feb. 1	23.48	12	22.69	Aug. 2	24.68	29	26.30
8	23.31	19	23.11	9	24.55	Dec. 6	26.40
15	20.68	May 3	22.00	Sept. 20	24.65	20	26.50
22	20.79	31	22.50				

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). 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. Equipped with automatic water-stage recorder. Measurements made by Chester E. Heslar and G. W. Newell.

Water level at 2 a.m., in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	6.11	8.67	6.46	7.69	9.67	7.44	8.54	.....	11.79	12.99	13.02	11.02
2	6.34	8.75	6.46	7.70	8.78	7.05	8.35	.....	11.86	12.99	12.55	11.33
3	6.47	8.96	6.69	7.87	7.30	7.01	3.51	.....	11.93	13.02	12.39	11.34
4	6.73	9.03	6.75	7.93	6.71	7.15	8.60	.....	12.01	13.06	12.32	11.34
5	6.69	8.96	6.91	8.16	6.86	7.29	9.23	.....	12.03	13.13	12.35	11.34
6	6.20	8.50	6.96	8.25	7.04	7.53	9.54	.....	12.14	13.17	12.30	11.36
7	6.40	8.16	7.02	8.34	6.96	7.58	9.52	.....	12.15	13.19	12.10	11.42
8	6.48	8.23	7.21	8.35	6.74	7.25	9.49	11.25	12.21	13.16	11.99	11.50
9	6.25	8.21	7.15	8.47	6.66	9.50	9.44	11.25	12.37	13.18	12.18	11.57
10	5.96	8.32	7.46	8.53	6.87	8.70	9.48	11.81	12.32	13.21	12.00	11.59
11	5.95	8.40	7.55	10.18	6.74	10.30	9.47	11.75	12.33	13.22	11.90	11.36
12	5.71	8.60	7.53	9.22	5.50	9.05	9.37	11.68	12.38	13.33	11.89	10.89
13	5.75	8.59	7.53	9.15	6.68	8.40	9.86	11.73	12.44	13.44	11.79	10.16
14	5.90	5.52	7.57	9.06	6.89	8.12	9.49	11.68	12.43	13.49	11.67	9.97
15	6.08	5.82	6.19	9.07	6.28	8.13	9.57	11.63	12.47	13.52	11.65	9.80
16	6.54	5.88	5.74	8.96	5.91	8.12	9.70	11.41	12.67	13.50	11.67	9.79
17	6.70	5.99	5.70	8.94	4.84	8.40	9.87	11.36	12.62	13.47	11.78	9.81
18	6.82	6.26	5.88	8.92	4.08	8.39	9.91	11.03	12.67	13.03	11.92	10.16
19	7.09	6.36	6.04	9.02	4.58	6.08	9.97	11.25	12.70	13.29	11.74	10.26
20	7.34	6.13	6.28	8.98	5.06	6.13	10.10	11.10	12.69	13.28	11.66	10.23
21	7.48	6.27	6.43	9.20	6.05	5.73	10.15	11.15	12.70	13.23	11.65	.....

## Montgomery 1--Continued.

Water level at 2 a.m., in feet below land-surface datum, 1946

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
22	7.73	6.29	6.52	9.24	5.95	6.18	10.14	11.19	12.74	13.14	11.67	.....
23	7.95	6.45	6.57	9.25	6.72	6.55	.....	11.30	12.78	13.08	11.83	.....
24	7.95	6.59	6.81	9.34	6.47	7.02	.....	11.28	12.84	13.04	11.69	.....
25	8.13	6.82	6.90	9.34	6.65	7.11	.....	11.34	12.78	12.89	11.64	.....
26	8.17	6.77	7.03	9.43	6.85	7.50	.....	11.54	12.79	12.92	.....	.....
27	8.54	6.71	7.12	9.57	7.03	7.74	.....	11.51	12.78	13.04	.....	.....
28	8.61	6.52	7.22	9.67	7.18	8.01	.....	11.61	12.84	13.11	11.25	.....
29	8.73		7.25	9.63	7.48	8.21	.....	11.64	12.89	13.07	11.05	.....
30	8.68		7.34	9.65	7.64	8.32	.....	11.72	12.97	13.02	11.04	.....
31	8.52		7.62		8.11		.....	11.73		13.02		.....

Montgomery 4 (\*817, p. 49; 840, p. 82; 845, p. 70; 886, p. 109; 906, p. 30; 936, p. 35; 944, p. 32). 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. Unused dug well, diameter 36 inches, depth 21 feet. Measuring point Oct. 15, 1935, to Dec. 3, 1946, top of sharp edge of stone marked with arrow on west side of well, at land-surface datum. Measuring point after Dec. 3, 1946, top of wooden recorder shelf, 0.70 foot above former measuring point and 0.70 foot above land-surface datum. Measurements resumed June 26, 1946. Automatic water-stage recorder installed Dec. 4, 1946. Measurements made by Harriet and Marguerite Hillabold and Glenn R. Newell.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 26	5.21	Aug. 14	10.77	Oct. 2	14.94	Nov. 20	12.94
July 3	6.19	22	11.18	9	14.97	28	11.79
10	7.16	28	11.75	16	14.98	Dec. 4	11.96
17	7.97	Sept. 4	12.44	23	14.98	11	11.39
24	8.86	11	13.12	30	14.97	18	11.12
31	9.77	17	13.96	Nov. 6	14.93	25	11.06
Aug. 7	10.29	25	14.90	13	13.93	31	11.00

Morgan County

Morgan 3 (\*1023, 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	6.28	Apr. 16	4.05	July 9	8.10	Oct. 1	7.62
9	6.30	24	6.00	16	8.55	8	8.20
15	4.28	30	6.40	23	4.65	16	8.70
29	6.68	May 7	6.30	30	4.85	22	8.07
Feb. 5	6.70	14	6.05	Aug. 6	5.15	Nov. 1	7.60
12	6.56	21	6.35	13	6.50	6	7.50
19	6.15	28	4.20	20	4.40	19	3.70
26	5.10	June 4	8.30	27	5.32	26	3.65
Mar. 6	4.70	11	7.30	Sept. 3	5.05	Dec. 10	3.77
19	6.05	19	6.95	10	6.82	18	3.00
27	3.86	25	7.75	17	7.68	31	3.85
Apr. 2	6.60	July 2	8.39	24	6.40		

Noble County

Noble 1 (\*1023, p. 68). City of Kendallville, well 21. About 170 feet north of centerline of East Diamond St., and 45 feet west of Bixler Lake shore. Automatic water-stage recorder installed Apr. 24, 1945. Measurements discontinued May 12, 1946, and well put back into service. Replaced by well Noble 6. Measurements made by Don Debele, Kendallville Water & Light Dept.

## Noble 1--Continued.

Water level at 2 a.m., in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May
1	17.60	16.24	.....	16.49	17.43
2	17.33	16.29	16.25	16.55	17.42
3	17.22	16.30	16.66	16.55	17.27
4	17.72	16.54	.....	16.62	17.05
5	17.68	16.88	.....	16.65	17.41
6	17.48	16.48	.....	16.84	17.40
7	17.37	16.71	.....	16.93	17.58
8	17.32	16.58	.....	16.70	17.56
9	17.46	16.66	16.56	16.82	17.39
10	17.37	16.57	16.47	17.06	17.53
11	17.18	16.42	16.02	17.20	17.50
12	17.08	16.56	16.64	17.02	17.32
13	17.05	16.10	.....	17.16	.....
14	.....	16.32	.....	15.72	.....
15	16.77	16.05	.....	14.61	.....
16	16.78	16.00	16.22	16.66	.....
17	16.81	16.27	16.17	17.00	.....
18	16.85	16.47	16.15	17.06	.....
19	16.75	16.34	16.36	17.19	.....
20	16.70	16.23	16.66	17.25	.....
21	16.67	16.68	16.53	17.12	.....
22	16.66	.....	16.71	16.99	.....
23	16.66	16.26	16.80	17.17	.....
24	16.63	16.44	16.87	17.18	.....
25	16.62	.....	16.46	17.30	.....
26	16.59	.....	16.67	17.20	.....
27	16.58	.....	16.91	17.07	.....
28	16.55	.....	16.90	16.88	.....
29	16.63	.....	16.72	17.07	.....
30	16.60	.....	16.90	17.26	.....
31	16.58	.....	16.65	.....	.....

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). Della May Kitt. NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 23, T. 33 N., R. 9 E., about 1.1 mile northwest of Merriam, across road from owner's residence. Measurements made by Owen M. Leek and Arthur McClellan.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	22.69	May 5	22.51	July 28	23.18	Oct. 20	23.85
12	22.55	12	22.49	Aug. 4	23.27	27	24.10
19	22.60	19	22.39	11	23.33	Nov. 3	23.92
26	22.64	26	22.56	25	23.48	17	24.24
Feb. 2	22.64	June 2	22.70	Sept. 1	23.60	24	24.46
9	22.73	10	22.84	8	23.69	Dec. 1	24.26
18	22.63	16	22.57	15	23.77	19	23.90
Apr. 9	22.34	23	22.52	22	23.90	15	24.40
15	22.00	30	22.62	29	23.99	22	24.42
21	22.40	July 7	22.85	Oct. 6	24.06	29	24.50
28	22.49	14	22.84	14	24.16		

Noble 5 (\*944, p. 33; 986, p. 36; 1016, p. 65; 1023, p. 69). Rolla Becker. 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.

## Noble 5--Continued.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	3.78	Apr. 1	3.55	July 2	4.50	Oct. 16	8.28
16	3.56	15	4.09	15	5.19	Nov. 6	8.42
Feb. 1	4.06	May 2	4.53	Aug. 2	5.88	15	8.46
16	3.76	16	4.09	15	6.34	Dec. 2	8.50
Mar. 4	2.74	June 5	5.05	Sept. 2	7.01	16	8.39
16	3.31	17	3.47	Oct. 2	8.29		

Noble 6. 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 St., and about 68 feet west of Noble 1. Affected by pumping. Unused drilled well, diameter 6 inches, depth 39.9 feet. Measuring point, top edge of  $\frac{1}{2}$ -inch steel bar on shelf of recorder shelter, 0.40 foot above land-surface datum. Recorder installed on May 27, 1946. Measurements made by Don S. Deibebe, chief engineer, Kendallville Water Department.

## Water level a 2 a.m., in feet below land-surface datum, 1946

(From recorder charts)							
Day	May	June	July	Aug.	Sept.	Oct.	Nov.
1	.....	20.16	21.57	23.10	23.26	22.32	.....
2	.....	20.25	21.38	23.83	23.00	23.83	.....
3	.....	21.21	22.54	23.22	23.16	23.85	.....
4	.....	21.26	21.98	22.90	23.43	23.52	.....
5	.....	21.46	20.66	22.67	23.35	23.27	23.37
6	.....	21.69	.....	23.83	24.01	23.14	23.65
7	.....	21.50	.....	24.20	24.42	23.14	23.27
8	.....	21.79	.....	23.45	24.03	23.80	23.27
9	.....	21.90	21.56	23.21	23.17	24.20	23.39
10	.....	.....	23.06	23.23	.....	23.27	23.21
11	.....	.....	23.27	22.80	23.13	23.27	22.95
12	.....	.....	.....	23.55	24.37	23.31	23.27
13	.....	.....	23.16	23.97	23.71	23.07	23.02
14	.....	.....	23.23	24.12	23.79	22.94	22.91
15	.....	22.00	23.04	23.62	24.04	23.00	22.90
16	.....	22.54	23.02	23.03	22.45	22.97	22.91
17	.....	21.47	23.15	22.94	23.95	23.07	22.77
18	.....	21.62	24.38	23.37	24.09	23.10	22.79
19	.....	21.59	.....	22.65	23.12	23.13	23.00
20	.....	22.60	.....	22.68	24.15	23.33	23.16
21	.....	22.35	.....	24.01	23.19	23.11	22.91
22	.....	.....	.....	23.06	23.48	.....	23.13
23	.....	.....	21.86	22.83	22.89	23.48	23.22
24	.....	21.74	22.53	22.50	24.08	23.83	23.09
25	.....	21.26	23.22	23.83	24.45	23.43	22.98
26	.....	21.23	23.50	22.51	24.03	23.38	23.12
27	.....	22.46	23.63	22.46	.....	23.57	22.76
28	20.17	22.43	23.42	24.01	.....	23.43	22.76
29	20.24	23.01	23.13	23.51	.....	.....	22.69
30	20.44	21.86	23.41	23.01	.....	.....	22.93
31	20.55	.....	23.92	24.02	.....	.....	24.01

## Ohio County

Ohio 1 (\*1016, p. 66; 1023, 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	4.29	Feb. 2	3.67	Mar. 2	2.94	Mar. 30	1.81
12	2.96	9	4.83	9	2.86	Apr. 6	3.08
19	2.62	16	2.91	16	1.94	13	5.47
26	2.17	23	2.12	23	1.79	20	7.59

## Ohio 1--Continued.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 27	8.83	June 29	9.28	Aug. 31	12.99	Nov. 2	13.88
May 4	9.06	July 6	9.07	Sept. 7	13.11	9	13.76
11	9.23	13	10.45	14	13.22	16	13.54
18	6.38	20	11.56	21	13.31	23	13.69
25	4.11	27	12.12	28	13.37	30	13.77
June 1	3.23	Aug. 3	12.21	Oct. 5	13.53	Dec. 7	13.58
8	5.62	10	12.36	12	13.66	14	13.21
15	6.99	17	12.61	19	13.74	21	13.08
22	8.14	24	12.83	26	13.81	28	12.29

Orange County

Orange 1 (\*1016, p. 66; 1023, p. 69). Herman D. Wininger. 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, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	1.07	Apr. 8	2.33	July 6	4.67	Oct. 7	8.63
14	.90	13	2.74	13	5.20	12	8.77
19	1.48	22	3.10	20	5.50	19	9.04
26	1.04	29	3.65	27	5.80	28	9.23
Feb. 2	1.66	May 7	1.80	Aug. 5	6.40	Nov. 4	9.55
11	1.24	11	.64	10	6.44	11	9.90
18	1.07	20	.25	20	6.60	18	10.25
23	1.06	28	1.80	26	7.17	25	10.50
Mar. 2	.86	June 1	1.96	Sept. 3	7.33	Dec. 2	10.75
11	1.35	8	2.35	7	7.53	7	11.90
16	.77	17	3.35	16	7.90	16	10.96
23	1.16	22	3.70	23	8.08	23	10.15
30	1.27	July 1	4.40	28	8.28	30	8.45

Owen County

Owen 2. Agnes Stuckey. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 35, T. 12 N., R. 4 W., at Lower Cataract Falls, near Cataract. Unused drilled well, diameter 5-5/8 inches, depth 96 feet (reported 110), ending in limestone. Measuring point, top of casing, at land-surface datum. Measurements made by Miss Agnes Stuckey.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 10	23.43	Oct. 8	24.77	Nov. 5	22.34	Dec. 3	19.97
17	23.58	15	25.65	12	20.70	10	17.58
24	23.75	22	25.34	19	20.44	17	18.06
Oct. 1	24.00	29	24.44	26	14.02	31	15.63

Owen 3. Ben Lambert. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 34, T. 12 N., R. 4 W., about 2 miles west of Cataract. Unused drilled well, diameter 5-5/8 inches, depth 130 feet (reported 175 feet). Measuring point, top edge of casing, 1.0 foot above land-surface datum. Measurements made by Ben Lambert.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 5	109.07	July 17	109.94	Aug. 29	109.38	Nov. 28	109.41
6	109.08	26	109.89	Sept. 6	109.00	Dec. 5	109.40
20	108.98	Aug. 1	109.15	Oct. 22	109.58	12	109.21
27	109.00	9	108.96	Nov. 14	109.41	19	109.33
July 4	109.15	22	108.97	21	109.40	26	109.27
13	109.00						

Owen 4. 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. Unused drilled well, diameter 5-5/8 inches, depth 87 feet (reported 114 feet). Measuring point, top of 1-inch coupling in cover plate, 1.0 foot above land-surface datum. Measurements made by Pauline P. Coffey.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 20	72.60	Aug. 9	78.22	Sept. 28	79.12	Nov. 16	80.42
21	72.58	16	78.05	Oct. 5	79.20	23	80.60
28	75.70	23	78.60	12	79.75	30	78.31
July 5	76.05	31	78.49	19	80.26	Dec. 7	78.68
12	76.59	Sept. 7	78.80	26	80.59	14	76.10
19	76.70	14	78.72	Nov. 2	80.80	21	75.80
26	78.20	21	78.88	8	80.44	28	74.70
Aug. 2	78.39						

Owen 5. 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. Unused dug well, diameter 30 inches, depth 19 feet. Measuring point, top of sharp-edged stone on north side of well below concrete, 0.2 foot below land-surface datum. Measurements made by Ed Laudig.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 5	2.52	July 27	12.58	Sept. 21	12.68	Nov. 16	12.09
8	2.58	Aug. 3	13.39	28	11.78	23	12.46
15	5.75	10	12.67	Oct. 5	11.67	30	12.55
22	8.08	17	11.36	12	11.67	Dec. 7	12.66
29	6.98	24	11.80	19	11.78	14	11.68
July 6	9.08	31	11.28	26	12.08	21	10.99
14	8.38	Sept. 7	11.78	Nov. 3	12.58	28	10.57
20	8.78	14	13.10	10	12.08		

Owen 6. Ed Laudig. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 24, T. 12 N., R. 5 W. Unused dug well, diameter 36 inches, depth 19.5 feet. Measuring point, top of board platform, 0.3 foot above land-surface datum. Measurements made by Ed Laudig.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 5	5.98	July 27	8.17	Sept. 21	8.28	Nov. 16	8.87
8	6.28	Aug. 3	8.18	28	8.39	23	8.27
15	6.86	10	8.38	Oct. 5	9.06	30	7.59
22	7.35	17	8.28	12	9.15	Dec. 7	8.49
29	7.68	24	8.19	19	9.16	14	5.07
July 6	7.58	31	8.29	26	9.29	21	7.27
14	7.99	Sept. 7	8.39	Nov. 3	9.39	28	6.60
20	8.27	14	8.46	10	9.05		

#### Parke County

Parke 1 (\*1023, p. 69). 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, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	3.15	Apr. 4	3.10	July 4	3.78	Oct. 3	7.40
10	2.96	11	3.10	11	5.61	10	7.48
17	3.00	18	3.29	18	5.00	17	7.10
24	3.10	25	3.00	25	5.60	24	7.07
31	3.25	May 2	3.42	Aug. 1	5.69	31	6.92
Feb. 7	3.29	9	3.20	8	5.83	Nov. 7	6.55
14	3.30	16	3.12	15	5.94	14	6.16
21	3.15	23	3.06	22	6.13	21	5.78
28	3.12	30	2.86	29	6.45	28	5.65
Mar. 7	3.10	June 6	3.06	Sept. 5	6.58	Dec. 5	5.45
14	3.07	13	3.10	12	6.64	12	5.30
21	3.02	20	3.12	19	6.92	26	5.13
28	3.02	27	3.70	26	6.94		

Perry County

Perry 1 (\*1016, p. 66; 1023, p. 70). 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, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	4.18	Apr. 7	5.11	July 7	7.98	Oct. 6	9.45
13	2.97	14	5.70	14	8.30	13	9.43
20	4.14	21	5.02	21	8.66	20	9.48
27	4.79	28	6.79	28	8.60	27	9.40
Feb. 3	4.32	May 5	2.80	Aug. 4	9.02	Nov. 3	9.40
11	3.29	12	2.97	11	8.53	10	9.42
17	3.29	19	2.80	18	5.60	17	9.80
24	3.59	26	4.45	25	7.07	28	8.73
Mar. 3	3.62	June 2	5.29	Sept. 1	7.80	Dec. 1	5.34
10	3.64	9	5.80	8	8.45	8	5.05
17	1.92	16	7.10	15	8.80	15	3.10
24	2.93	23	7.49	22	9.02	22	4.63
31	3.42	30	7.94	29	9.24	29	2.39

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. 67; 1023, p. 70). A. J. Heuring. In Winslow, in front of residence at Lafayette and Main Sts. Measurements made by Denzel Russell and Minuad Beadles, Pike State Forest.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	5.40	Mar. 20	5.70	June 4	5.20	Sept. 28	7.20
16	5.60	29	5.50	18	5.90	Oct. 16	7.90
22	5.70	Apr. 5	5.40	28	5.80	Nov. 19	8.39
30	5.30	20	5.90	July 5	5.90	26	8.02
Feb. 4	5.80	24	6.00	Aug. 5	5.30	Dec. 3	8.02
14	5.80	May 4	5.90	Sept. 4	6.30	10	7.36
18	4.80	6	6.10	13	6.70	17	7.00
Mar. 4	5.20	22	4.90	20	6.70	31	6.90
13	5.50	28	5.10				

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). 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, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 17	52.40	July 16	51.95	Sept. 15	51.60	Nov. 15	51.63
31	52.35	Aug. 2	52.00	Oct. 1	51.25	30	51.45
May 31	51.95	15	52.00	15	51.50	Dec. 15	51.05
July 1	51.30	31	51.65	31	51.40		

Porter 2 (\*817, p. 50; 840, p. 83; 845, p. 80; 886, p. 108; 906, p. 32; 936, p. 37; 944, p. 33; 986, p. 37; 1016, p. 67; 1023, p. 71). Indiana Dunes State Park. At Waverly Beach. Measurements made by K. R. Cougill and Harry Bemisburger, superintendents, Indiana Dunes State Park. Measurements discontinued Apr. 30, 1946.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	11.13	Feb. 2	11.67	Mar. 2	12.58	Apr. 15	11.02
15	11.38	16	12.63	18	10.50		



Porter 3 (\*817, p. 50; 840, p. 83; 845, p. 80; 886, p. 108; 906, p. 32; 936, p. 37; 944, p. 34; 986, p. 37; 1016, p. 67; 1023, p. 71). Indiana Dunes State Park. Near grocery store on picnic ground. Measurements made by K. R. Cougill and Harry Bamesburger, superintendents, Indiana Dunes State Park. Measurements discontinued Apr. 30, 1946.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	13.42	Feb. 2	12.92	Mar. 2	13.06	Apr. 15	12.67
15	12.92	16	13.08	18	12.75		

Posey County

Posey 1 (\*1016, p. 68; 1023, p. 71). Alonzo Allyn. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 19, T. 6 S., R. 12 W., Bufkin-Caborn Road, about 6.9 miles from Mt. Vernon on north side of road. Measurements made by Emil G. Wolf. Water levels, in feet below land-surface datum, 1946: Jan. 6, 5.48; Jan. 13, 3.14; Jan. 20, 4.40; Jan. 27, 4.90. Measurements discontinued Feb. 12, 1946.

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. 68; 1023, p. 71). 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, 1946

Jan. 7	7.15	Mar. 25	6.21	July 9	7.38	Oct. 7	9.88
14	6.70	Apr. 1	6.56	22	8.05	14	10.04
21	6.95	9	6.86	29	8.41	21	10.05
28	7.14	16	6.96	Aug. 6	8.71	28	10.08
Feb. 4	7.18	22	6.85	12	9.03	Nov. 11	9.29
11	7.28	29	6.96	19	9.06	18	9.11
18	7.18	May 6	6.91	26	9.29	25	8.76
25	6.60	13	6.76	Sept. 2	9.38	Dec. 2	8.80
Mar. 4	6.67	27	6.45	9	9.48	9	8.72
11	6.66	June 3	6.79	16	9.68	17	8.59
18	6.27	10	7.04	23	9.60	30	8.51

Putnam County

Putnam 1 (\*1023, p. 71). Paul K. McMahan. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 14, T. 14 N., R. 5 E. Measurements made by Paul K. McMahan.

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

Jan. 21	2.15	Feb. 26	1.98	Apr. 28	4.17	May 29	5.03
28	2.70	Mar. 11	2.55	May 6	2.78	Aug. 19	4.50
Feb. 4	2.65	Apr. 15	3.24	14	1.75	27	5.22
11	2.20	22	3.86	22	4.69	Sept. 8	5.88
18	1.77						

Putnam 3. 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. Unused drilled well, diameter 6 inches, depth 157 feet (reported 225 feet). Measuring point, top of 6-inch casing, 4.30 feet below land-surface datum. Measurements made by Frederic A. Danforth.

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

Sept. 10	131.82	Oct. 15	131.30	Nov. 12	131.41	Dec. 12	131.34
17	131.45	22	131.42	19	131.48	17	131.41
24	131.32	29	132.21	26	131.37	24	131.72
Oct. 1	131.41	Nov. 5	131.44	Dec. 3	131.51	31	131.52
8	131.26						

Randolph County

Randolph 1 (\*944, p. 34; 986, p. 37; 1016, p. 68; 1023, p. 72). 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, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	13.24	Apr. 30	14.32	July 31	15.17	Oct. 31	17.56
Feb. 15	13.87	May 15	13.96	Aug. 15	15.71	Nov. 15	17.54
28	13.47	31	13.17	31	16.57	30	17.50
Mar. 15	12.82	June 15	13.94	Sept. 15	16.71	Dec. 15	17.19
31	12.77	30	14.12	30	17.17	31	16.61
Apr. 15	13.91	July 15	14.81	Oct. 15	17.47		

Randolph 2. 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. Unused dug well, diameter 36 inches, depth 21 feet. Measuring point, top edge of pump base, 0.2 foot above land-surface datum. Measurements made by James A. Lane. Water levels, in feet below land-surface datum, 1946: Dec. 19, 12.83; Dec. 21, 12.81; Dec. 28, 12.84.

Ripley County

Ripley 1 (\*1016, p. 68; 1023, p. 72). Cleve Fagan. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 19, 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, 1946							
Jan. 3	6.50	Mar. 21	4.93	June 27	6.30	Sept. 19	11.77
11	6.55	28	4.77	July 4	6.50	26	12.00
25	8.27	Apr. 25	7.09	31	11.40	Oct. 2	12.20
31	8.10	May 2	6.02	Aug. 7	11.20	10	12.30
Feb. 14	5.10	9	4.18	14	10.80	24	12.30
22	4.93	16	3.68	Sept. 12	11.70	31	12.37
28	5.02	23	4.00				

Rush County

Rush 1 (\*1023, p. 72). 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, 1946							
Jan. 4	4.24	Apr. 5	4.72	July 13	5.88	Oct. 12	9.55
11	2.90	14	6.43	22	8.50	21	9.73
18	4.48	20	7.24	26	9.22	28	9.82
25	5.84	26	8.15	Aug. 4	9.88	Nov. 2	9.75
Feb. 1	6.84	May 4	7.10	9	9.00	9	9.50
8	6.38	10	5.88	19	7.84	16	9.42
15	3.85	17	4.70	24	7.79	25	9.38
22	3.92	24	4.69	30	7.68	Dec. 6	9.00
Mar. 2	2.98	June 1	5.04	Sept. 9	8.17	10	8.80
9	3.45	7	5.48	13	8.26	16	7.27
17	2.74	14	6.17	20	8.14	21	7.22
22	3.37	22	5.62	27	8.31	27	7.00
29	3.16	July 9	5.96	Oct. 4	8.70		

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). Mishawaka Water & Light Department. In Mishawaka, at pumping plant. Measurements made by A. R. Klein, superintendent, Mishawaka Water & Light Department.

## St. Joseph 1--Continued.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	10.08	Apr. 1	8.84	July 1	10.33	Oct. 1	13.33
16	8.17	15	8.92	15	13.58	16	11.17
Feb. 1	10.24	May 1	10.75	Aug. 1	14.59	Nov. 1	10.67
15	8.75	16	10.50	15	13.00	15	11.16
Mar. 1	8.92	June 1	10.84	Sept. 2	12.67	Dec. 1	9.91
15	7.63	15	11.42	16	13.50	16	9.68

St. Joseph 4T-1 (\*1023, p. 73). 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, 1946

Jan. 4	19.11	Apr. 4	17.23	July 13	20.45	Sept. 20	19.68
11	18.90	11	17.31	19	20.50	Oct. 5	19.46
18	18.67	18	17.31	26	20.50	11	19.52
25	18.42	May 2	18.16	Aug. 2	20.64	21	19.22
Feb. 1	18.18	14	17.13	10	19.27	25	19.46
8	17.82	21	16.99	16	19.40	Nov. 8	19.10
Mar. 2	18.19	31	18.20	23	19.74	14	19.27
7	18.16	June 13	18.29	Sept. 3	19.40	Dec. 5	19.24
16	17.79	21	18.43	6	20.22	12	19.30
22	17.85	28	19.72	13	19.43	27	19.02
29	17.67	July 5	19.06				

St. Joseph 4T-2 (\*1023, p. 73). 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.

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

Jan. 4	8.28	Mar. 29	6.74	July 13	7.77	Oct. 5	9.07
11	8.18	Apr. 4	7.37	26	8.07	11	9.16
18	7.55	18	7.14	Aug. 2	8.58	21	8.95
25	7.63	25	7.50	10	8.63	25	8.92
Feb. 1	7.70	May 2	7.54	16	8.69	Nov. 8	8.86
8	7.82	14	7.49	23	8.71	14	8.76
Mar. 2	7.47	21	7.61	Sept. 3	8.88	Dec. 5	8.83
7	7.08	31	7.60	6	8.92	12	8.40
16	6.78	June 21	7.80	13	8.95	27	8.40
21	6.82	July 5	7.44	20	9.08		

St. Joseph 10-2. City Dairy Co. In South Bend, on S. 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. Abandoned drilled well, diameter 12 inches, depth 45.4 feet. Measuring point, top of board cover over well, 0.4 foot above land-surface datum. Automatic water-stage recorder installed Jan. 26, 1946. Measurements made by E. Fleming, City Engineer's office.

Water level at 2 a.m., in feet below land-surface datum, 1946

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	36.42	36.37	36.23	35.97	.....	.....	36.02	36.40	36.79	37.23	37.59	.....
2	36.44	36.36	36.23	35.96	.....	.....	36.03	36.41	36.80	.....	37.60	.....
3	36.45	36.36	36.22	35.95	.....	.....	36.03	36.42	36.81	37.26	37.61	.....
4	36.44	36.34	36.20	35.94	.....	.....	36.04	36.43	36.83	37.27	37.62	.....
5	36.42	36.35	36.20	35.94	.....	.....	36.05	36.45	36.85	37.29	37.63	.....
6	36.41	36.33	36.19	35.93	.....	.....	36.06	36.46	36.86	37.30	37.64	.....
7	36.42	36.34	36.18	35.92	.....	.....	36.08	36.48	36.87	37.31	37.66	.....
8	36.44	36.34	36.16	35.91	.....	.....	36.09	36.49	36.88	37.32	37.67	.....
9	36.44	36.32	36.17	35.90	.....	.....	36.10	36.50	36.90	37.33	37.68	.....
10	36.44	36.34	36.16	35.90	.....	.....	36.10	36.51	36.91	37.33	37.69	.....
11	36.43	36.34	36.15	.....	.....	.....	36.12	36.53	36.92	37.35	37.70	.....
12	36.43	36.32	36.15	.....	.....	.....	36.14	36.54	36.94	37.37	37.71	.....

## St. Joseph 10-2--Continued.

Water level at 2 a.m., in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
13	.....	36.41	36.32	36.14	.....	.....	.....	36.15	36.56	36.96	37.38	37.73
14	.....	36.39	36.31	36.12	.....	.....	.....	36.16	36.57	36.97	37.39	37.74
15	.....	36.43	.....	36.10	.....	.....	.....	36.18	36.58	36.99	37.41	37.74
16	.....	36.41	36.31	36.11	.....	.....	.....	36.19	36.59	37.00	37.43	37.75
17	.....	36.43	36.30	36.09	.....	.....	.....	36.21	36.60	37.01	37.45	37.76
18	.....	36.43	36.30	36.08	.....	.....	.....	36.22	36.62	37.02	37.46	37.77
19	.....	36.40	36.30	36.08	.....	.....	.....	36.23	36.63	37.05	37.47	37.78
20	.....	36.40	36.31	36.08	.....	.....	.....	36.25	36.65	37.06	37.48	37.78
21	.....	36.41	36.29	36.07	35.84	.....	.....	36.26	.....	37.08	37.49	37.79
22	.....	36.39	36.28	36.05	35.84	.....	.....	36.27	36.67	37.09	37.50	37.80
23	.....	36.40	.....	36.04	35.83	.....	.....	36.29	36.68	37.10	37.52	37.80
24	.....	36.38	36.27	36.03	35.82	.....	.....	36.30	36.70	37.11	37.52	37.81
25	.....	36.38	36.27	36.02	35.82	.....	.....	36.32	36.71	37.12	37.53	37.81
26	36.41	36.35	36.27	.....	35.82	.....	.....	36.33	36.72	37.14	37.54	37.82
27	36.43	36.37	36.27	35.99	35.81	.....	35.96	36.34	36.74	37.16	37.56	37.82
28	36.41	36.58	36.26	35.99	.....	.....	35.97	36.35	36.75	37.17	37.57	37.83
29	36.43	.....	36.25	35.98	.....	.....	35.98	36.36	36.76	37.18	37.58	37.83
30	36.40	.....	36.24	35.97	.....	.....	35.99	36.38	36.77	37.20	37.58	37.84
31	36.40	.....	36.25	.....	.....	.....	36.00	.....	.....	37.21	.....	37.85

St. Joseph 16-1 (\*1016, p. 69; 1023, p. 73). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	23.75	Mar. 27	29.18	May 23	28.09	Sept. 5	31.24
18	27.82	Apr. 3	28.26	31	26.80	27	32.25
30	27.15	11	28.55	June 7	28.75	Oct. 16	31.49
Feb. 7	27.18	18	28.27	21	27.40	23	30.94
15	27.46	25	27.93	28	28.73	Nov. 1	31.90
Mar. 1	23.2	May 3	29.26	July 19	32.20	25	30.25
8	28.37	9	29.3	Aug. 15	31.20	29	29.70
13	27.57	16	29.65	23	31.10	Dec. 5	30.30
20	28.69						

St. Joseph 16-F (\*1016, p. 69; 1023, p. 73). Singer Manufacturing Co. In South Bend, at Olive St. and Western Ave. "Fire well". Measurements made by personnel of Singer Manufacturing Co., J. R. Kerr, chief engineer.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	21.09	Apr. 18	19.9	July 19	19.9	Oct. 16	19.4
Mar. 20	20.39	May 3	19.9	Aug. 23	19.4	23	19.9
27	20.4	9	19.9	Sept. 5	19.4	Nov. 25	19.9
Apr. 3	20.4	16	19.9	27	19.4	29	19.9
11	19.9	June 7	19.9				

St. Joseph 22 (\*1016, pp. 69-70; 1023, p. 74). Palace Theater. In South Bend, at Colfax Ave. and Michigan St., West, in basement of theater. Equipped with automatic water-stage recorder. Measurements made by O. A. Lambert, engineer, Palace Theater.

Water level at 2 a.m., in feet below land-surface datum, 1946

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	29.97	.....	33.53	31.21	34.09	35.22	.....	43.65	38.55	35.31	35.34	33.17
2	30.49	.....	33.50	32.02	34.72	33.23	38.32	44.69	36.38	35.67	34.05	32.05
3	31.96	.....	33.19	32.83	.....	.....	37.93	45.00	35.68	36.07	34.31	32.97
4	31.97	.....	32.15	33.21	.....	33.48	38.64	45.20	36.78	36.57	32.59	33.69
5	31.05	32.63	32.44	33.03	34.25	34.57	39.00	44.62	37.67	36.82	33.22	34.32
6	.....	32.74	32.50	33.07	32.48	35.47	39.47	44.35	39.42	36.98	33.21	35.34

## St. Joseph 22--Continued.

Water level at 2 a.m., in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
7	....	32.99	32.46	32.29	32.28	36.92	40.14	44.58	40.77	35.51	33.75	35.24
8	....	33.07	32.97	30.82	33.21	37.29	39.90	44.56	41.90	36.48	33.74	34.32
9	....	34.23	32.90	31.00	32.54	38.02	40.89	45.07	40.89	36.41	34.17	33.07
10	....	33.48	31.98	32.07	33.83	36.62	42.05	43.91	41.27	36.69	33.97	33.52
11	....	32.03	31.05	32.10	32.82	37.88	42.50	40.31	39.69	37.55	32.68	34.35
12	....	32.47	31.70	31.87	32.42	....	42.71	37.47	39.00	36.50	33.39	34.29
13	....	32.77	31.65	....	31.23	....	42.72	38.14	....	35.37	33.95	33.12
14	....	32.53	32.40	31.90	33.06	....	42.40	38.78	36.02	34.00	34.38	33.97
15	....	31.91	32.63	30.42	34.53	37.88	41.77	39.67	35.02	34.51	33.65	34.24
16	....	32.64	32.80	31.69	34.86	36.31	41.88	40.10	33.57	35.58	33.60	32.22
17	....	31.21	32.62	32.45	34.76	34.85	42.36	40.55	35.30	36.38	33.58	33.09
18	....	30.93	31.13	32.65	....	36.68	43.44	40.50	36.84	34.77	33.07	33.37
19	....	31.72	31.60	33.20	....	35.60	44.56	37.52	37.29	34.72	34.00	34.00
20	....	31.72	32.25	33.00	....	35.30	45.29	38.88	38.64	34.35	34.52	34.53
21	....	32.43	32.78	32.61	32.40	35.72	45.36	39.09	38.75	32.96	34.67	35.07
22	....	32.93	32.86	31.74	33.05	35.47	....	40.08	37.98	33.60	34.57	34.59
23	....	32.79	32.93	32.60	33.73	35.87	43.73	39.85	....	34.84	34.71	32.45
24	....	32.76	32.22	32.93	34.32	35.55	44.37	39.85	36.82	35.28	34.27	32.49
25	33.50	32.03	30.96	33.55	34.72	38.11	44.87	39.38	37.12	35.15	33.23	32.89
26	33.72	31.84	31.77	33.86	34.30	40.53	43.93	39.30	37.15	35.52	33.22	31.37
27	33.48	32.67	30.95	33.50	33.25	41.34	42.51	39.93	37.54	35.07	33.32	32.57
28	32.35	33.12	31.85	....	33.36	41.11	43.10	40.91	38.12	33.92	34.15	32.83
29	32.75	....	32.29	31.03	34.14	40.04	40.64	39.95	38.45	34.42	33.53	33.19
30	33.03	....	32.34	32.22	34.87	38.64	41.91	38.84	35.33	35.41	33.44	31.20
31	33.13	....	32.35	....	35.60	....	43.25	38.70	....	35.15	....	....

St. Joseph 23 (\*1023, p. 75). 820th Army Air Forces Depot (Oliver Equipment Co.). In South Bend, at 1217 S. Walnut St. Measurements made by Ed Fleming, City Engineering Department.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	17.85	Mar. 22	17.07	June 28	17.01	Sept. 13	18.06
11	17.75	29	16.96	July 5	17.06	20	18.15
18	17.69	Apr. 4	16.85	13	17.12	Oct. 11	18.40
25	17.55	11	16.77	19	17.23	Nov. 8	18.65
Feb. 1	17.49	May 31	16.83	26	17.36	Dec. 6	18.80
8	17.42	June 13	16.95	Aug. 2	17.48	27	18.79
Mar. 16	17.32	21	16.96	Sept. 3	17.92		

St. Joseph 34 (\*1023, p. 75). White Swan Laundry. In South Bend, at 117 E. Sample St. Measurements made by Ed Fleming, City Engineering Department.

Water level at 2 a.m., in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	39.02	38.83	....	38.44	38.28	38.32	38.44	39.20	40.07	....	....	40.92
2	38.96	38.80	....	38.49	38.28	38.32	38.54	39.25	40.00	....	....	40.78
3	38.98	38.39	....	38.51	38.27	38.23	38.59	39.28	39.95	....	....	40.85
4	....	38.30	....	38.47	38.25	38.30	38.61	39.29	40.05	....	....	40.86
5	39.03	38.78	....	38.48	38.35	38.33	38.47	39.26	40.12	40.68	40.89	40.93
6	39.00	38.73	....	38.45	38.25	38.32	38.56	39.36	40.15	40.72	40.93	40.95
7	38.92	38.78	....	38.44	38.29	38.30	38.56	39.42	40.17	40.64	40.93	40.97
8	38.97	38.75	38.83	38.27	38.33	38.32	38.50	39.45	40.14	40.71	40.96	40.99
9	38.58	38.78	38.82	38.41	38.34	38.25	38.58	39.49	40.11	40.72	40.98	40.83
10	38.98	38.77	38.84	38.40	38.34	38.14	38.60	39.66	40.25	40.75	40.82	....
11	39.00	38.67	38.74	38.41	....	38.22	38.64	39.66	40.32	40.75	40.86	....
12	38.95	38.72	38.78	38.38	38.31	38.32	38.65	39.57	40.33	40.78	....	....
13	39.23	38.70	38.79	38.38	38.24	....	38.70	39.68	40.37	40.76	....	....
14	39.01	38.80	38.77	38.31	38.28	38.39	38.68	39.72	40.37	40.72	....	41.00
15	39.01	38.75	....	37.80	38.27	38.42	38.63	39.77	40.33	40.78	....	41.00
16	39.02	38.81	38.84	38.39	38.29	38.37	38.72	39.79	40.26	40.80	40.97	40.88

## St. Joseph 34--Continued.

Water level at 2 a.m., in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
17	38.99	39.18	.....	38.41	38.31	38.28	38.52	.....	40.35	40.83	40.18	40.95
18	38.96	.....	.....	38.38	38.30	38.35	38.82	.....	40.36	.....	40.98	40.97
19	38.91	.....	.....	38.39	.....	36.32	38.80	.....	40.41	40.90	41.00	40.99
20	38.90	.....	.....	38.38	.....	38.17	38.77	.....	40.42	40.87	41.00	41.00
21	38.78	.....	.....	38.35	38.32	.....	38.84	.....	40.47	40.75	40.98	40.97
22	38.84	38.81	.....	38.23	38.34	38.51	38.78	.....	40.43	40.83	41.01	40.95
23	38.86	38.83	.....	38.28	38.36	38.51	38.87	.....	40.33	40.86	41.01	40.78
24	38.85	.....	38.61	38.32	38.34	38.37	38.94	.....	.....	40.88	40.98	40.83
25	38.86	.....	38.57	38.30	38.37	38.48	38.98	39.98	.....	40.87	40.86	40.82
26	38.83	.....	38.61	.....	38.31	38.49	39.03	39.88	.....	40.92	40.90	40.69
27	38.87	.....	38.63	38.35	38.21	38.50	39.05	39.99	.....	40.90	40.95	40.76
28	38.82	.....	38.62	38.22	.....	37.72	39.05	40.02	40.62	40.77	40.94	40.76
29	38.84	.....	38.59	38.22	.....	38.57	38.99	40.07	40.60	40.79	40.79	37.02
30	38.80	.....	38.57	38.27	38.37	38.53	39.12	40.10	40.53	40.88	40.90	40.68
31	38.79	.....	38.55	.....	38.23	.....	39.16	40.12	.....	.....	.....	40.75

St. Joseph 53 (\*1023, p. 76). St. Mary's Convent, Notre Dame. 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 powerhouse. Measurements made by Thomas Bowland.

Water level at 2 a.m., in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	5.21	6.44	6.06	4.41	.....	4.35	5.34	5.03	.....	6.00	6.31	6.86
2	5.39	6.57	5.92	4.58	.....	5.40	5.48	.....	.....	5.82	5.78	7.01
3	.....	6.28	6.11	4.53	.....	7.65	5.49	7.88	.....	5.95	5.73	7.08
4	5.54	5.09	6.10	4.77	.....	6.65	7.47	4.66	.....	5.85	5.67	6.76
5	5.52	5.45	6.06	.....	4.84	4.72	5.49	7.27	.....	5.85	6.12	6.60
6	5.82	.....	5.85	5.03	4.93	5.80	6.85	4.95	.....	.....	6.20	7.38
7	5.62	5.66	6.03	.....	7.47	.....	5.18	7.58	.....	.....	5.80	7.43
8	5.36	5.66	4.91	.....	5.01	4.77	5.20	7.70	.....	.....	8.42	5.32
9	5.50	5.78	5.01	.....	.....	4.91	5.32	4.65	.....	.....	5.70	8.51
10	5.35	5.98	5.46	.....	5.11	6.48	5.42	5.35	.....	.....	5.78	5.38
11	5.38	5.68	5.54	.....	6.35	7.05	8.18	4.73	6.47	.....	6.28	5.52
12	5.06	5.76	5.75	.....	4.95	5.02	.....	4.78	8.13	.....	5.61	6.42
13	.....	5.70	5.61	.....	.....	4.53	5.52	7.03	5.77	6.18	8.72	6.11
14	.....	5.86	5.36	4.90	4.35	.....	5.44	4.48	7.96	6.93	5.60	5.87
15	.....	6.17	.....	4.87	7.50	4.34	8.28	4.58	5.90	6.08	5.78	5.60
16	.....	5.97	.....	4.89	4.36	4.85	8.30	7.35	5.70	8.92	5.77	5.78
17	.....	6.07	.....	4.88	4.47	7.57	8.64	7.92	5.90	6.06	5.65	5.95
18	.....	5.75	4.56	4.96	4.35	6.97	8.44	4.98	5.73	5.95	7.90	6.13
19	.....	5.87	7.93	5.37	4.72	6.73	6.73	5.15	6.10	6.28	6.67	6.24
20	5.83	5.94	8.16	4.98	4.31	4.89	5.64	5.03	.....	5.99	6.51	6.02
21	.....	5.90	5.89	4.78	4.32	6.42	6.43	7.47	5.92	5.90	6.62	5.90
22	.....	5.92	6.50	4.79	4.30	4.80	6.23	5.98	6.43	5.89	.....	5.77
23	.....	5.66	4.77	.....	4.19	7.45	6.06	4.69	5.87	5.94	.....	5.69
24	.....	5.77	.....	.....	6.79	4.99	5.36	.....	5.75	5.90	6.90	5.55
25	5.50	5.95	.....	.....	4.53	5.21	7.53	.....	6.10	6.04	6.92	5.56
26	.....	5.97	.....	.....	4.60	5.22	5.35	.....	5.84	5.98	6.80	6.15
27	6.12	5.94	.....	.....	4.36	5.36	7.48	.....	5.80	9.05	6.72	6.04
28	5.92	5.93	.....	4.45	4.40	5.72	5.03	.....	5.88	6.03	6.79	5.43
29	6.25	.....	.....	5.21	4.48	5.32	5.38	.....	5.94	8.15	6.60	5.26
30	5.52	.....	6.05	4.45	6.42	6.43	.....	.....	6.10	6.11	6.46	5.24
31	6.25	.....	4.45	.....	4.50	.....	5.28	.....	.....	6.11	.....	5.38

St. Joseph 85 (\*1023, p. 77). New Jersey, Indiana & Illinois Railroad. In South Bend, at 1508 Western Ave., in NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 15, T. 37 N., R. 2 E. Automatic water-stage recorder removed July 24, 1946. Measurements made by Ed Fleming, City Engineering Department, South Bend.

## St. Joseph 85--Continued.

Water level at 2 a.m., in feet below land-surface datum, 1946

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	14.33	.....	13.65	12.92	13.01	13.32	13.43	.....	.....	.....	.....	.....
2	14.32	13.69	13.63	12.90	13.04	13.32	13.40	al5.00	.....	.....	.....	.....
3	14.32	13.70	13.63	12.89	13.07	13.32	13.38	.....	.....	.....	.....	.....
4	.....	13.70	13.61	12.88	13.08	13.33	13.38	.....	.....	.....	.....	.....
5	14.32	13.69	13.60	12.87	13.10	.....	13.39	.....	al5.67	.....	al5.86	.....
6	14.28	13.69	13.58	12.86	13.11	13.33	13.41	.....	al5.42	.....	.....	.....
7	14.22	13.69	13.57	12.85	13.12	13.34	13.44	.....	.....	.....	.....	.....
8	14.16	13.70	13.53	12.84	13.13	13.36	13.46	.....	.....	al5.80	.....	.....
9	14.11	13.69	13.47	12.84	13.14	13.38	13.49	.....	.....	.....	.....	.....
10	14.07	13.68	13.45	12.84	13.16	13.39	13.52	al5.19	.....	.....	.....	.....
11	14.03	13.68	13.41	12.84	.....	13.40	13.55	.....	al5.71	.....	.....	.....
12	14.00	13.68	13.36	12.84	13.14	13.41	13.59	.....	.....	.....	al5.84	.....
13	13.96	13.69	13.32	12.85	13.15	.....	13.62	.....	al5.48	.....	.....	.....
14	13.92	13.68	13.17	12.84	13.15	13.44	13.66	.....	.....	al5.77	.....	.....
15	13.88	13.69	.....	12.84	13.17	13.45	13.69	.....	.....	.....	.....	.....
16	13.84	13.68	13.21	12.86	13.18	13.45	13.71	al5.21	.....	.....	.....	.....
17	13.81	13.69	13.18	12.86	13.21	13.44	13.73	.....	.....	.....	.....	.....
18	13.79	13.69	13.15	12.86	13.21	13.44	13.76	.....	.....	.....	.....	.....
19	13.77	13.68	13.13	12.87	.....	13.46	13.79	.....	.....	.....	.....	.....
20	13.75	13.67	13.11	12.87	.....	13.45	13.81	.....	al5.58	.....	.....	.....
21	13.74	13.67	13.09	12.89	13.23	.....	13.84	.....	.....	al5.76	.....	.....
22	13.72	13.67	13.07	12.89	13.24	13.44	13.87	.....	.....	.....	.....	.....
23	13.71	13.68	.....	12.89	13.24	13.42	13.89	al5.28	.....	.....	.....	.....
24	13.70	13.68	13.04	12.92	13.24	13.40	13.90	.....	.....	.....	.....	.....
25	13.69	13.68	13.03	12.92	13.25	13.38	.....	.....	.....	al5.79	.....	.....
26	13.69	13.66	13.01	.....	13.27	13.42	al4.88	.....	.....	.....	.....	.....
27	13.69	13.66	12.99	12.98	13.27	13.45	.....	.....	.....	.....	al5.60	.....
28	13.68	13.65	12.97	12.98	.....	13.47	.....	.....	.....	.....	.....	.....
29	13.68	.....	12.95	12.97	13.29	13.46	.....	.....	.....	.....	.....	.....
30	13.67	.....	12.94	12.98	13.30	13.45	.....	.....	.....	.....	.....	.....
31	13.67	.....	12.94	.....	13.31	.....	.....	.....	.....	.....	.....	.....

a Tape measurement.

St. Joseph 88 (\*1023, p. 78). Morris Park Country Club. In pump-house, 400 feet east of clubhouse. Measurements discontinued July 27, 1945.

St. Joseph 89 (\*1023, p. 78). Mr. Morgan. In South Bend, about 1½ 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	45.16	Mar. 29	44.70	July 13	46.43	Sept. 30	46.34
12	45.14	Apr. 6	44.64	19	47.00	Oct. 7	46.41
19	45.28	12	44.28	Aug. 2	47.38	11	46.80
25	45.60	20	44.38	10	46.95	18	46.41
Feb. 1	45.62	25	44.38	17	46.93	24	46.64
8	45.69	May 2	44.59	27	47.02	Nov. 8	46.32
Mar. 4	45.06	21	44.35	Sept. 7	47.40	14	46.42
9	45.16	June 8	44.98	14	46.60	Dec. 5	46.66
16	45.04	22	44.85	21	46.98	28	46.19
22	44.82	July 6	45.73				

St. Joseph 90 (\*1023, p. 78). Owner unknown. In South Bend, in SW¼SW¼ sec. 29, T. 38 N., R. 4 E., at north side of Douglas Road at Elm Road intersection. Measurements made by Ed Fleming, City Engineering Department.

## St. Joseph 90--Continued.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	10.20	Mar. 16	9.12	May 2	9.67	Aug. 2	10.35
12	10.18	22	8.62	13	9.87	10	10.50
19	9.79	29	8.45	21	9.89	17	10.58
25	9.34	Apr. 6	8.50	June 8	10.04	27	10.70
Feb. 1	9.61	12	9.17	22	9.46	Sept. 7	10.72
8	9.78	20	9.37	July 15	9.86	14	10.65
Mar. 4	9.70	25	9.51	19	10.04	21	10.69
9	8.96						

St. Joseph 91 (\*1023, p. 78). 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.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	4.60	Mar. 22	4.63	July 7	4.70	Sept. 27	4.81
11	4.60	29	4.63	19	4.71	Oct. 7	4.84
18	4.61	Apr. 6	4.64	Aug. 2	4.74	11	4.83
25	4.62	12	4.65	10	4.72	21	4.87
Feb. 1	4.63	20	4.65	17	4.74	24	4.86
8	4.63	25	4.67	27	4.77	Nov. 8	4.88
Mar. 1	4.64	May 21	4.68	Sept. 7	4.79	14	4.88
8	4.61	June 8	4.70	14	4.80	23	4.90
16	4.64	22	4.68	21	4.80	28	4.91

St. Joseph 92 (\*1023, p. 79). Camile Sargent. In South Bend, in W $\frac{1}{2}$ SE $\frac{1}{4}$  sec. 13, T. 37 N., R. 1 E., Chamberlain Lake. Measurements discontinued Oct. 24, 1946. Measurements made by Martha DeWitt.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	23.76	June 19	23.77	July 21	23.77	Aug. 13	24.06
May 28	23.65	26	23.68	30	24.00	Sept. 10	24.35
June 4	23.69	July 9	23.68	Aug. 6	24.06	Oct. 24	24.83
13	23.64						

## Scott County

Scott 1 (\*944, p. 35; 986, p. 38; 1016, p. 71; 1023, p. 79). Scottsburg Water Department well 3. Near northeast corner of intersection of Hyland and Thomas Sts. Equipped with automatic water-stage recorder. Measurements made by C. E. Robins, superintendent, Scottsburg Water Department.

Water level at 2 a.m., in feet below land-surface datum, 1946 (From recorder charts)												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	20.98	22.63	22.04	21.12	22.72	21.16	21.73	20.99	21.62	22.95	23.45	21.57
2	21.18	22.50	21.97	21.17	22.42	21.27	21.40	20.99	21.26	23.34	23.90	22.32
3	21.20	22.07	22.33	21.59	22.05	21.43	20.75	22.42	19.60	24.05	23.70	21.98
4	21.38	20.57	22.33	21.72	21.78	21.05	21.04	23.55	.....	24.32	22.95	22.73
5	21.22	21.80	22.43	22.02	21.74	21.06	20.20	22.55	23.45	25.22	23.28	21.98
6	21.25	22.47	22.36	22.02	21.37	20.94	20.10	22.43	24.03	24.57	23.78	21.52
7	22.16	21.90	21.10	22.15	.....	19.73	20.70	21.37	23.84	23.35	23.75	21.80
8	22.57	21.37	21.45	21.50	.....	19.63	20.43	21.35	22.90	23.42	23.75	23.07
9	22.05	21.75	21.34	22.13	23.23	20.45	19.76	21.69	21.37	24.05	24.00	23.55
10	21.74	21.83	21.43	22.65	22.84	18.29	20.27	22.48	21.92	24.48	24.10	23.34
11	21.25	22.05	21.59	22.80	22.02	19.40	20.91	22.97	23.33	23.80	23.30	23.38
12	19.29	22.24	21.45	22.74	21.41	19.74	21.51	21.85	23.43	23.44	23.17	22.41
13	21.30	22.13	.....	22.78	19.32	19.84	22.77	23.19	23.33	24.48	.....	20.46
14	21.82	21.23	.....	22.71	20.81	20.95	23.52	24.02	24.13	24.73	23.63	20.40
15	22.48	21.42	.....	22.38	21.90	21.07	23.08	23.99	24.42	23.84	23.15	19.95
16	.....	21.46	21.57	22.31	21.13	20.50	23.37	22.63	22.40	24.14	23.03	19.02
17	.....	21.43	21.55	22.60	19.09	19.50	.....	22.10	23.70	24.10	23.94	19.14



Scott 1--Continued.

Water level at 2 a.m., in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
18	.....	21.27	20.73	21.36	16.76	19.61	.....	19.55	23.53	24.34	23.62	21.23
19	22.82	20.88	20.65	22.28	16.63	.....	24.36	18.21	23.75	24.67	23.17	20.70
20	22.74	20.27	20.79	23.07	18.00	19.78	23.77	19.22	23.65	24.67	24.44	19.34
21	22.60	19.44	21.10	23.37	16.23	20.41	23.71	20.11	24.59	24.90	24.70	21.47
22	22.87	19.18	21.03	22.91	16.26	19.19	21.36	20.26	24.64	25.34	23.78	21.13
23	22.77	21.17	21.21	23.21	19.52	20.53	22.53	18.98	22.65	25.57	23.54	20.72
24	22.65	21.73	21.39	23.49	19.72	18.60	23.39	20.57	23.89	24.85	24.23	21.21
25	22.95	21.57	21.62	23.29	19.09	19.50	23.92	21.01	23.75	24.57	22.56	21.02
26	22.85	21.83	21.66	23.31	19.60	.....	24.06	18.06	24.30	23.28	23.30	20.31
27	22.95	22.13	21.27	22.88	17.07	.....	23.72	19.81	23.90	25.09	22.43	19.68
28	22.52	22.11	20.84	23.35	16.74	21.33	24.06	.....	24.54	23.67	22.25	19.47
29	21.60	.....	20.74	19.33	19.62	21.27	23.92	.....	24.94	24.56	21.42	20.72
30	.....	.....	20.93	22.53	20.86	21.55	21.71	.....	23.50	23.60	20.76	20.68
31	21.90	.....	21.28	.....	21.08	.....	21.09	.....	.....	23.78	.....	.....

Shelby County

Shelby 1. 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. Unused driven well, diameter 1 $\frac{1}{2}$  inches, depth 22.5 feet. Measuring point, top of 1 $\frac{1}{2}$ -inch coupling, 2.0 feet above land-surface datum. Measurements made by Clarence C. Milner.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 23	7.69	June 21	8.29	Sept. 1	9.31	Nov. 3	9.73
28	7.87	28	8.34	8	9.38	10	9.75
May 5	7.98	July 8	8.44	14	9.45	17	9.75
12	7.10	18	8.60	22	9.53	24	9.76
19	7.64	21	8.72	Oct. 1	9.59	Dec. 1	9.75
26	7.70	28	8.84	6	9.64	8	9.76
June 3	7.93	Aug. 13	9.08	13	9.68	15	9.39
11	8.07	18	9.15	20	9.68	22	9.30
16	8.18	25	9.28	27	9.71	29	9.10

Spencer County

Spencer 4 (\*1016, p. 71; 1023, p. 79). J. 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, 1946

Water level, in feet below land-surface datum, 1910								
Jan.	5	2.16	Apr. 6	4.40	July 6	6.28	Oct. 5	7.83
	12	2.26	13	4.99		13	12	7.88
	19	2.28	20	5.20		6.78	19	8.06
	26	2.28	27	5.49		7.08	26	7.99
Feb.	2	2.34	May 4	2.66	Aug. 3	7.32	Nov. 2	8.05
	9	2.24	11	2.24		7.23	9	8.09
	16	2.95	18	2.93		7.24	16	8.16
	23	2.98	25	2.12		7.28	23	8.24
Mar.	2	2.98	June 1	2.02		7.48	30	8.23
	9	3.00	8	4.10	Sept. 7	7.57	Dec. 7	8.26
	16	3.28	15	5.04		7.84	14	2.67
	23	2.11	22	5.72		7.76	21	2.83
	30	3.08	29	5.92		7.82	28	2.06

Spencer 5 (\*1016, p. 72; 1023, p. 80). 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.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	29.50	Apr. 3	27.30	July 3	29.68	Oct. 2	30.98
9	28.67	10	28.40	10	29.86	9	31.00
16	28.05	17	28.60	17	29.50	16	31.00
23	28.50	24	28.80	24	30.07	30	31.03
30	29.20	May 1	29.15	31	30.17	Nov. 6	31.09
Feb. 6	27.80	8	27.85	Aug. 7	30.25	13	31.10
13	27.20	15	27.60	14	30.37	20	31.10
20	26.70	22	26.70	21	30.32	27	31.06
27	27.77	29	27.68	28	30.42	Dec. 4	31.12
Mar. 6	28.13	June 5	26.70	Sept. 4	30.54	11	31.08
13	28.00	12	28.50	11	30.63	17	31.03
20	27.67	19	29.12	18	30.75	24	31.03
27	25.50	26	29.44	25	30.81		

Spencer 6 (\*1016, p. 72; 1023, p. 80). Lincoln State Park. In Lincoln City, in NW $\frac{1}{4}$ 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, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	23.20	Apr. 3	22.55	July 3	25.20	Oct. 2	27.80
9	23.22	10	22.90	10	25.80	9	27.80
16	22.98	17	23.20	17	26.02	16	27.80
23	22.90	24	23.40	24	26.42	30	28.68
30	23.05	May 1	23.65	31	26.77	Nov. 6	28.75
Feb. 6	22.92	8	23.25	Aug. 7	26.97	13	28.62
13	22.70	15	23.00	14	27.11	20	28.45
20	22.60	22	22.70	21	26.55	27	27.88
27	22.60	29	22.65	28	26.52	Dec. 4	27.10
Mar. 6	22.30	June 5	22.20	Sept. 4	26.89	11	26.80
13	22.72	12	23.16	11	27.27	17	25.90
20	22.70	19	23.88	18	27.80	24	25.63
27	22.53	26	24.58	25	27.80		

Spencer 7 (\*1016, p. 72; 1023, p. 80). 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 F. J. Meier.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	4.58	Apr. 6	2.62	July 6	6.63	Oct. 5	8.36
12	3.11	13	2.63	13	6.65	12	8.37
19	3.19	20	2.61	20	6.71	19	8.59
26	3.78	27	2.63	27	7.26	26	8.66
Feb. 2	4.40	May 4	1.66	Aug. 3	7.38	Nov. 2	8.69
9	2.84	11	1.63	10	7.37	9	8.81
16	2.80	18	2.16	17	6.77	16	8.87
23	2.72	25	1.42	24	7.24	23	8.85
Mar. 2	2.78	June 1	1.31	31	7.58	30	8.66
9	2.40	8	3.00	Sept. 7	7.85	Dec. 7	8.68
16	2.18	15	5.14	14	7.93	14	7.89
23	1.37	22	5.18	21	8.08	21	7.74
30	2.04	29	5.20	28	8.22	28	6.99

Spencer 8 (\*1016, pp. 72-73; 1023, p. 81). 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.

## Spencer 8--Continued.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	5.14	Apr. 6	2.57	July 6	3.72	Oct. 5	6.29
12	3.49	13	2.59	13	3.78	12	6.44
19	3.48	20	2.58	20	3.80	19	6.52
26	3.22	27	2.60	27	4.54	26	6.57
Feb. 2	3.21	May 4	2.07	Aug. 3	4.38	Nov. 2	6.66
9	2.24	11	2.10	10	4.52	9	6.70
16	2.36	18	2.44	17	4.60	16	6.67
23	2.37	25	2.17	24	4.80	23	6.68
Mar. 2	2.46	June 1	1.72	31	4.94	30	6.67
9	2.37	8	2.63	Sept. 7	5.20	Dec. 7	6.66
16	2.46	15	3.00	14	5.38	14	6.68
23	2.12	22	3.06	21	5.77	21	6.76
30	2.43	29	3.09	28	6.04	28	6.66

## Starke County

Starke 1 (\*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). Joe Tomassi. At Bass Lake State Fish Hatchery, about 200 feet north of superintendent's house. Measurements discontinued on June 11, 1946. Measurements made by Ernest Warkentien, Bass Lake State Fish Hatchery.

Water level, in feet below land-surface datum, 1946							
Jan. 3	13.88	Feb. 14	13.55	Mar. 28	13.60	May 2	13.51
10	13.74	21	13.60	Apr. 4	13.67	9	13.54
17	13.54	28	13.62	11	14.13	16	13.56
24	13.46	Mar. 7	13.60	18	13.52	23	13.59
31	13.47	15	13.96	25	13.52	June 6	13.63
Feb. 7	13.52	21	13.72				

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). 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, 1946							
Jan. 3	2.85	Apr. 4	3.20	July 4	3.50	Oct. 10	5.08
10	2.29	11	3.05	12	3.82	17	5.06
17	2.84	18	3.24	18	3.96	24	4.85
24	3.10	25	3.25	27	4.21	30	4.25
31	3.27	May 2	3.40	Aug. 1	4.33	Nov. 7	3.84
Feb. 7	3.20	9	3.50	8	4.55	14	3.84
14	2.78	16	3.39	15	4.66	21	3.71
21	2.89	23	3.46	22	4.65	27	3.81
28	2.69	31	3.68	29	4.81	Dec. 5	3.92
Mar. 7	2.40	June 6	3.75	Sept. 5	4.97	12	3.62
15	2.37	13	2.48	19	5.14	19	4.23
21	2.59	20	2.26	27	5.15	26	3.88
28	2.62	27	3.19	Oct. 3	5.08		

Starke 3 (\*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). S. A. Craigmile. At mint still about 0.25 mile northeast of owner's residence, near junction of State Highways 10 and 29 and about 1 foot from Starke 2. Well destroyed and measurements discontinued on July 12, 1946. Measurements made by Ernest Warkentien, Bass Lake State Fish Hatchery.

Water level, in feet below land-surface datum, 1946							
Jan. 3	2.69	Feb. 21	2.73	Apr. 11	2.90	May 31	3.53
10	2.14	28	2.51	18	3.07	June 6	3.61
17	2.68	Mar. 7	2.12	25	3.10	13	2.31
24	2.97	15	2.18	May 2	2.26	20	2.05
31	3.13	21	2.44	9	3.21	27	3.06
Feb. 7	3.03	28	2.47	16	3.33	July 4	3.29
14	2.58	Apr. 4	3.02	23	3.31		

Starke 10 (\*1023, p. 82). Fred A. White. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 11, T. 32 N., R. 2 W. Measurements discontinued July 22, 1946. Measurements made by Fred A. White. Water levels, in feet with reference to land-surface datum, 1946: Jan. 26, -0.10; Feb. 3, -1.80; Apr. 22, +0.40.

#### 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, pp. 38-39; 1016, p. 73; 1023, p. 82). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	1.7	Apr. 6	1.0	July 6	1.8	Oct. 12	4.6
12	1.2	13	1.1	13	2.3	19	4.6
22	1.6	20	1.2	20	2.6	26	4.6
26	1.7	27	1.4	27	3.0	Nov. 1	4.6
Feb. 2	1.9	May 4	1.6	Aug. 3	3.3	9	3.9
9	1.8	11	1.5	10	3.4	16	3.9
16	1.3	18	1.3	17	3.5	23	4.0
23	1.4	25	1.5	31	3.9	Dec. 2	3.9
Mar. 2	.7	June 1	1.8	Sept. 7	4.1	7	3.9
9	.6	8	2.1	14	4.2	14	3.9
16	.5	15	1.8	21	4.4	21	3.4
23	.6	22	2.1	28	4.4	28	3.4
30	.8	29	1.1	Oct. 5	4.5		

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). 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.

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

Jan. 7	4.30	Apr. 6	2.1	July 6	3.9	Oct. 12	6.6
12	3.60	13	2.2	13	4.3	19	6.7
22	3.60	20	2.6	20	4.6	26	6.7
26	3.60	27	2.8	27	5.0	Nov. 2	6.7
Feb. 2	3.7	May 4	3.1	Aug. 3	5.2	9	6.3
9	3.7	11	3.1	10	5.4	16	6.3
16	2.9	18	2.8	17	5.6	23	6.4
23	2.9	25	3.1	31	5.9	Dec. 2	6.4
Mar. 2	2.0	June 1	3.9	Sept. 7	6.0	7	6.5
9	1.6	8	4.0	14	6.3	14	6.4
16	1.4	15	3.9	21	6.4	21	6.2
23	1.5	22	4.3	28	6.5	28	6.1
30	1.8	29	3.2	Oct. 5	6.6		

#### Sullivan County

Sullivan 1 (\*1016, p. 74; 1023, p. 82). William Loenig. 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 south-east of Carlisle. Measurements made by John R. Howard.

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

Jan. 6	2.43	Apr. 7	6.01	July 7	7.84	Oct. 6	12.76
13	2.53	14	6.54	14	8.73	13	12.04
20	3.32	21	6.42	21	8.49	20	10.44
27	5.06	28	7.52	28	8.01	27	11.11
Feb. 3	5.87	May 7	4.59	Aug. 4	9.26	Nov. 3	12.79
10	3.03	12	3.32	11	9.45	10	10.69
17	4.59	19	1.11	18	9.35	17	10.65
24	4.13	26	2.71	25	9.55	24	9.54
Mar. 3	5.41	June 2	5.41	Sept. 1	10.81	Dec. 1	8.74
10	4.30	9	5.37	8	10.35	8	8.52
17	2.67	16	6.32	15	10.44	15	6.65
24	3.57	23	6.77	22	10.41	22	4.85
31	5.77	30	7.54	29	10.77	29	4.58

Switzerland County

Switzerland 1 (\*1016, p. 74; 1023, p. 83). 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 State Highway 250, on north side of road. Measurements made by Nellie M. Walker.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	12.	Apr. 4	9.20	July 10	15.55	Oct. 3	20.65
11	11.40	12	13.05	17	16.05	10	21.55
18	11.20	18	13.75	25	16.45	18	21.80
25	13.25	25	15.45	31	16.80	23	21.75
Feb. 1	14.40	May 1	15.50	Aug. 8	17.40	Nov. 1	21.65
7	13.60	8	10.45	15	17.85	8	21.55
16	6.30	16	12.85	22	17.85	15	21.30
22	6.10	23	8.10	30	17.95	22	21.15
Mar. 1	8.65	June 7	14.05	Sept. 5	18.35	30	18.70
8	8.30	13	15.20	13	18.30	Dec. 6	18.30
15	5.70	20	15.45	20	20.30	13	16.60
22	7.25	27	15.85	26	20.55	27	15.50
29	6.10	July 3	16.35				

Tippecanoe County

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

Water level at 2 a.m., in feet below land-surface datum, 1946 (From recorder charts)												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	11.95	.....	9.68	14.54	9.51	17.38	19.09	19.39	20.25	.....	.....
2	.....	11.32	.....	14.28	18.20	10.52	17.59	19.14	19.55	20.45	.....	.....
3	4.42	11.40	.....	16.77	19.29	9.82	17.54	19.60	19.50	20.55	.....	15.50
4	5.71	11.58	.....	15.70	20.18	10.31	.....	19.60	19.28	20.40	.....	16.00
5	.....	11.76	.....	11.63	18.12	11.19	.....	18.93	19.36	20.14	.....	16.12
6	.....	12.55	.....	11.64	18.17	15.80	.....	19.53	19.43	16.63	.....	16.10
7	.....	11.92	.....	11.70	.....	18.53	.....	19.57	19.48	16.33	.....	16.12
8	.....	12.10	.....	11.72	.....	18.77	.....	19.51	19.36	.....	.....	16.15
9	.....	12.09	.....	12.27	.....	18.67	.....	19.34	16.15	.....	.....	15.63
10	5.65	12.10	.....	16.81	.....	18.98	.....	19.56	20.51	.....	.....	15.91
11	5.05	12.30	.....	12.52	.....	19.07	18.87	19.44	20.67	.....	.....	16.01
12	6.10	12.53	.....	12.84	.....	.....	18.90	19.35	20.03	.....	.....	16.05
13	6.85	13.00	.....	12.62	.....	.....	19.00	19.32	20.30	.....	.....	15.88
14	7.25	11.08	.....	12.70	.....	.....	19.03	19.56	20.39	.....	.....	15.65
15	7.60	4.29	.....	12.82	13.64	.....	19.28	19.63	15.76	.....	.....	14.80
16	8.30	2.66	.....	13.00	13.80	.....	.....	19.51	15.96	20.60	.....	14.29
17	9.05	3.75	.....	13.24	13.49	.....	18.93	19.52	20.06	20.70	.....	14.61
18	9.55	5.01	.....	13.40	11.22	.....	19.02	19.47	20.30	20.30	.....	14.90
19	.....	6.25	4.12	13.25	9.40	11.83	19.13	19.21	.....	19.74	.....	15.15
20	.....	7.25	3.09	13.67	8.41	11.88	19.77	19.30	.....	15.91	.....	15.10
21	.....	8.28	4.30	13.80	9.06	11.30	19.14	19.47	20.38	15.72	.....	15.31
22	.....	8.57	6.39	13.58	10.00	11.12	19.10	19.19	20.14	19.88	16.22	15.38
23	.....	9.03	7.38	13.88	10.82	11.16	18.42	19.32	16.28	.....	16.30	15.35
24	11.62	9.30	8.05	13.79	11.47	11.53	18.37	19.31	19.90	.....	16.55	14.49
25	11.74	9.47	8.04	13.82	12.03	16.02	18.50	19.26	19.96	.....	16.53	15.27
26	11.75	9.74	7.76	14.37	12.38	.....	18.56	19.25	19.90	.....	17.35	15.29
27	11.38	10.30	8.13	14.53	12.22	18.70	18.67	19.20	20.29	.....	16.80	15.50
28	11.35	.....	8.80	14.21	12.49	17.42	18.76	19.28	.....	.....	16.00	15.61
29	11.26	.....	9.00	14.12	12.30	17.43	18.70	19.30	.....	.....	.....	15.25
30	11.80	.....	9.17	14.26	10.46	17.62	19.00	19.35	.....	.....	.....	15.18
31	11.93	.....	9.43	.....	9.96	.....	19.05	19.41	.....	.....	.....	.....

Tippecanoe 5 (\*1016, pp. 75 -76; 1023, p. 84). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	90.93	May 27	90.97	July 22	90.71	Sept. 23	90.70
Feb. 4	90.97	June 3	91.09	29	90.82	30	91.06
11	91.06	10	90.94	Aug. 5	90.94	Nov. 25	90.92
25	90.80	17	90.74	12	90.85	Dec. 2	91.18
Mar. 11	91.12	24	90.77	17	90.83	9	91.02
18	90.88	July 1	90.76	Sept. 2	90.85	16	91.27
25	90.92	8	90.74	9	90.82	23	91.29
Apr. 8	90.71	15	90.91	16	90.89	30	91.32
May 13	91.05						

Tippecanoe 7 (\*1023, p. 85). State of Indiana, Purdue University. SE  $\frac{1}{4}$  sec. 13, T. 23 N., R. 5 W., at research housing pumphouse. Automatic water-stage recorder installed Aug. 10, 1945. Measurements made by Wilbur C. Killin and L. A. Washburn.

Water level at 2 a.m., in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Mar.	Apr.	May	June	July
1	165.59	.....	164.44	164.71	.....	.....
2	165.62	.....	164.56	164.66	.....	.....
3	165.53	.....	164.58	164.50	.....	.....
4	165.58	.....	164.47	164.46	164.85	.....
5	165.38	.....	164.68	164.66	164.83	.....
6	.....	.....	164.53	164.68	164.78	.....
7	.....	.....	164.65	164.67	164.66	.....
8	.....	.....	164.41	164.71	164.74	.....
9	.....	.....	164.66	164.66	164.87	.....
10	.....	.....	164.65	164.71	164.91	.....
11	.....	.....	164.66	164.56	164.76	.....
12	.....	.....	.....	164.71	164.69	.....
13	.....	.....	.....	164.82	164.74	.....
14	.....	164.62	.....	164.69	164.88	.....
15	.....	164.60	.....	164.71	164.90	.....
16	.....	164.64	.....	164.62	164.83	.....
17	.....	164.61	.....	164.73	164.81	165.01
18	.....	164.58	164.58	164.49	164.78	165.00
19	.....	164.69	164.64	164.72	164.86	164.99
20	.....	164.76	164.61	164.68	164.80	165.05
21	.....	164.70	164.69	164.72	164.87	165.03
22	.....	164.59	164.60	164.84	164.97	165.01
23	.....	164.62	164.53	164.78	164.98	165.04
24	.....	164.45	164.59	.....	164.92	165.07
25	.....	164.54	164.48	164.67	.....	165.14
26	.....	164.48	164.57	164.74	.....	165.15
27	.....	164.60	164.65	164.72	.....	165.16
28	.....	164.52	164.66	164.75	.....	165.15
29	.....	164.42	164.63	164.79	.....	165.13
30	.....	.....	164.68	164.75	.....	165.11
31	.....	164.70	.....	164.67	.....	165.15

Water level at 2 a.m., in feet below land-surface datum, 1946  
(From recorder charts)

Day	Aug.	Sept.	Oct.	Nov.	Dec.
1	165.17	165.42	.....	.....	166.04
2	165.16	165.48	.....	.....	166.21
3	165.12	165.50	.....	.....	166.03
4	165.16	165.50	.....	.....	.....
5	165.20	165.50	.....	166.01	165.95
6	.....	165.50	.....	165.94	165.98
7	165.21	165.50	.....	165.63	165.98
8	165.22	165.50	.....	165.72	166.03

## Tippecanoe 7--Continued.

Water level at 2 a.m., in feet below land-surface datum, 1946  
(From recorder charts)

Day	Aug.	Sept.	Oct.	Nov.	Dec.
9	165.15	165.50	.....	165.88	166.03
10	165.20	165.41	.....	165.73	165.93
11	165.33	.....	.....	165.88	166.03
12	165.33	.....	.....	.....	165.76
13	165.30	.....	.....	165.91	166.08
14	.....	.....	.....	165.88	166.05
15	165.26	.....	.....	165.89	165.99
16	165.31	.....	.....	165.87	165.99
17	165.20	.....	165.71	.....	.....
18	165.29	165.57	165.42	.....	.....
19	165.34	165.54	165.90	165.80	.....
20	165.40	165.45	165.91	165.74	166.03
21	165.40	165.45	165.91	165.73	165.89
22	165.40	165.46	.....	166.00	166.13
23	165.44	165.46	.....	166.05	166.01
24	165.41	165.65	.....	165.82	166.13
25	165.42	.....	.....	165.88	166.16
26	165.45	165.62	.....	165.92	.....
27	165.40	165.65	.....	165.96	166.05
28	165.36	165.67	.....	.....	165.85
29	165.42	165.70	.....	166.06	165.95
30	165.44	165.74	.....	165.95	.....
31	165.40	.....	.....	.....	.....

Tippecanoe 8 (\*1023, p. 85). West Lafayette Water Co. SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 17, T. 23 N., R. 4 W., at West Lafayette waterworks. Automatic water-stage recorder installed Nov. 28, 1945. Measurements made by L. A. Washburn, West Lafayette Water Co.

Water level at 2 a.m., in feet below land-surface datum, 1946

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	9.96	8.98	....	7.40	10.57	9.88	.....	.....	13.01	13.75	13.97	13.29
2	9.38	9.04	....	7.49	10.63	9.80	10.50	.....	13.01	13.77	13.96	13.27
3	8.89	9.09	7.95	7.59	10.68	9.73	10.56	.....	13.02	13.79	13.94	13.26
4	8.53	9.14	8.01	7.71	10.72	9.69	10.62	.....	13.04	13.81	.....	13.26
5	8.30	9.18	8.07	7.85	10.77	9.66	10.68	.....	13.06	13.83	13.92	13.25
6	8.11	9.25	8.13	7.98	10.81	9.67	10.75	12.50	13.08	13.86	13.89	13.25
7	7.91	9.32	8.20	8.12	10.85	9.69	10.84	12.52	13.11	13.87	13.83	13.25
8	7.70	9.38	8.26	8.24	10.89	9.71	10.93	12.57	13.14	13.90	13.78	13.26
9	7.52	9.45	8.31	8.36	10.93	9.82	11.01	12.60	13.17	13.92	13.73	13.25
10	7.41	9.51	8.36	8.49	10.98	9.90	11.09	12.64	13.20	13.95	13.68	13.26
11	7.24	9.58	8.40	8.61	11.02	9.99	11.17	12.67	13.22	13.97	13.62	13.27
12	7.12	9.65	8.45	8.74	11.04	10.09	11.25	12.70	13.24	13.98	13.59	13.27
13	7.07	9.77	8.50	8.86	11.03	10.17	11.33	12.73	13.25	14.00	13.55	13.27
14	7.06	9.79	8.57	8.97	11.02	.....	11.40	12.77	13.27	14.01	13.52	13.26
15	7.07	9.60	8.63	9.08	11.01	10.20	11.49	12.81	13.29	14.02	13.50	13.22
16	7.11	9.04	8.66	9.19	11.01	10.10	11.55	12.83	13.31	14.03	13.48	13.17
17	7.18	8.48	8.64	9.30	11.01	10.02	11.62	12.85	13.35	14.04	13.46	13.12
18	7.27	8.07	8.50	9.41	10.97	10.01	11.70	12.87	13.39	14.05	13.44	13.08
19	7.39	7.77	8.23	9.52	10.84	10.02	11.80	12.88	13.43	14.03	13.43	13.04
20	7.51	7.59	7.82	9.63	10.57	10.04	11.90	12.89	13.47	14.01	13.42	13.01
21	7.63	7.51	7.46	9.72	10.27	10.04	11.96	12.90	13.51	13.98	13.41	12.99
22	7.77	7.48	7.25	9.82	10.21	10.03	11.98	12.91	13.55	13.97	13.40	12.97
23	7.91	7.49	7.15	9.92	10.10	10.01	12.02	12.93	13.59	13.97	13.39	12.93
24	8.07	7.51	7.11	10.01	10.04	10.00	12.04	12.93	13.61	13.97	13.39	12.89
25	8.22	7.54	7.10	10.09	10.02	10.01	12.07	12.95	13.63	13.96	13.38	12.86
26	8.35	7.59	7.10	10.18	10.02	10.03	12.08	12.95	13.65	13.97	13.38	12.83
27	8.49	7.65	7.10	10.27	10.03	10.08	12.10	12.95	13.67	13.97	13.38	12.81
28	8.60	7.74	7.13	10.35	10.07	10.14	12.12	12.96	13.70	13.96	13.37	12.79
29	8.70	.....	7.16	10.42	10.11	.....	12.15	12.97	13.72	13.96	13.34	12.78
30	8.79	.....	7.22	10.50	10.09	.....	.....	12.98	13.74	13.97	13.32	12.76
31	8.88	.....	7.31	.....	10.00	.....	.....	13.00	.....	13.98	.....	12.75

Tippecanoe 9. Aluminum Co. of America well 1. At Lafayette, in NW $\frac{1}{4}$  sec. 34, T. 23 N., R. 4 W., near intersection of Earl Ave. and U. S. Highway 52. Abandoned drilled well, diameter 16 inches, depth 160 feet (reported 201 feet). Measuring point, top of wooden recorder shelter base, 0.20 foot above top of 16-inch casing, 0.21 foot above concrete pump base, 1.21 feet above pumphouse floor, and 1.70 feet above land-surface datum. Automatic water-stage recorder installed Feb. 15, 1946. Measurements made by M. M. Ross, Aluminum Co. of America.

Water level at 2 a.m., in feet below land-surface datum, 1946  
(From recorder charts)

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	72.70	71.84	72.28	72.55	70.87	73.45	73.11	73.18	72.35	71.43
2	.....	71.70	72.40	72.55	70.25	72.03	.....	73.50	72.81	70.89	
3	.....	.....	72.27	71.15	71.08	72.92	73.29	.....	73.28	71.55	72.50
4	.....	71.72	71.95	71.83	72.70	71.60	72.27	73.09	73.52	70.95	73.74
5	.....	72.06	74.83	70.50	72.23	70.62	71.68	72.20	73.17	72.80	71.97
6	.....	71.67	72.20	70.87	71.68	71.20	73.62	72.62	70.59	72.12	72.40
7	.....	71.38	71.51	72.62	72.70	70.65	72.96	72.00	71.08	72.73	73.35
8	.....	71.57	70.91	72.66	73.15	70.46	72.95	.....	73.05	72.75	71.83
9	.....	70.94	70.56	73.20	71.10	71.85	73.25	.....	72.86	73.45	70.62
10	.....	71.25	73.99	73.22	71.05	.....	73.22a	72.90	73.19	71.82	72.76
11	.....	72.02	72.55	72.13	.....	70.30	72.47	72.95	71.25	73.04	
12	.....	71.97	72.54	70.35	72.62	.....	70.80	72.54	73.15	73.51	72.56
13	.....	71.58	71.52	71.70	72.29	.....	72.93	71.98	71.64	73.27	72.92
14	.....	72.18	71.02	72.77	72.06	.....	72.90	72.34	71.30	72.70	72.61
15	74.27	71.88	71.47	72.50	72.17	.....	.....	69.80	72.77	73.07	71.03
16	.....	71.55	71.90	72.19	70.07	.....	72.84	.....	72.85	72.49	71.43
17	.....	70.52	72.05	71.95	69.92	.....	73.17	.....	72.89	70.99	72.55
18	.....	71.05	72.12	71.48	71.32	.....	71.25	72.71	72.54	71.72	73.00
19	.....	71.93	72.47	70.97	72.13	.....	70.59	73.07	73.24	72.47	72.92
20	.....	72.82	72.00	70.99	71.08	.....	72.78	73.14	72.40	73.04	73.03
21	.....	72.33	70.05	71.55	72.72	.....	.....	72.36	71.13	72.80	72.70
22	.....	73.02	71.12	73.20	72.40	.....	.....	71.08	73.00	72.60	71.83
23	.....	.....	72.35	74.11	70.82	.....	.....	70.55	72.48	73.36	71.27
24	.....	.....	71.55	72.43	70.66	72.61	.....	73.17	73.07	70.30	72.43
25	.....	.....	72.02	72.45	72.66	.....	.....	73.48	72.84	71.18	70.45
26	.....	72.11	72.71	70.92	72.68	.....	.....	72.65	76.53	72.40	70.30
27	.....	72.53	72.18	71.29	72.23	72.97	.....	73.35	71.60	71.77	72.47
28	72.30	72.78	71.12	71.73	73.10	71.47	.....	73.36	71.58	71.40	72.24
29	.....	72.55	70.73	71.93	73.00	72.17	72.92	71.19	72.55	70.77	70.75
30	.....	72.55	71.90	72.38	70.55	72.60	73.00	71.80	.....	71.52	71.10
31	.....	73.35	.....	71.86	.....	72.80	.....	.....	73.21	.....	73.59

a Estimated.

b Tape measurement.

#### Tipton County

Tipton 1 (\*1023, p. 85). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	0.60	Apr. 6	1.80	July 8	3.10	Oct. 5	5.00
13	.50	14	2.20	15	3.30	13	5.10
20	2.30	22	2.40	21	2.70	21	5.05
27	2.10	28	2.70	28	3.10	29	5.34
Feb. 3	2.25	May 5	2.20	Aug. 2	3.50	Nov. 3	5.20
9	1.90	12	2.10	11	3.80	11	4.70
17	1.60	19	1.00	18	3.70	16	4.50
24	1.70	27	.55	25	3.50	24	4.37
Mar. 3	1.75	June 2	.60	Sept. 1	3.70	Dec. 1	4.35
10	2.00	10	a +.60	8	4.20	8	3.00
18	.55	16	2.40	15	4.20	16	2.40
24	.20	24	2.00	22	4.50	23	2.50
31	2.05	July 1	2.60	29	4.80	29	2.00

a Above land surface.



Union County

Union 1 (\*1023, p. 85). Town of College Corner. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 36, T. 10 N., R. 1 W., "Old Fire Well". Measurement made by Elmer Reister, superintendent, Water Works. Water level, in feet below land-surface datum, 1946: Jan. 5, 8.49.

Union 3. 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 0.5 mile east of State Route 101. Unused dug well, diameter 60 to 24 inches, depth 17 feet. Measuring point, inside edge of bell on 24-inch tile, at land-surface datum. Measurements made by Henry Carnes.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 24	5.60	June 23	5.46	Aug. 19	7.10	Nov. 3	14.20
29	5.59	30	5.61	24	7.20	11	13.90
May 6	5.61	July 8	5.90	Sept. 2	10.80	18	14.00
11	5.64	15	6.70	15	12.30	26	14.20
19	5.62	21	8.60	23	12.20	Dec. 1	14.20
27	5.44	28	9.50	Oct. 7	13.60	9	14.30
June 2	5.46	Aug. 3	9.60	14	13.70	16	14.20
10	5.48	12	9.70	22	13.90	23	14.10
16	5.60						

Vigo County

Vigo 2. Commercial Solvents Corporation test hole 1. In Terre Haute, on Washington Ave. at First St., about 156 feet west of centerline of South First St. and 177 feet south of centerline of Washington Ave. extended. Unused test well, diameter 6 inches, depth 133.7 feet. Measuring point, top of coupling on 6-inch casing, 4.00 feet above land-surface datum, 500.27 feet above sea level. Automatic water-stage recorder installed Feb. 13, 1946. 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, 1946  
(From recorder charts)

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	50.92	.....	50.56	51.48	50.65	53.96	54.90	55.60	56.73	56.57
2	.....	51.33	.....	.....	51.24	51.05	54.04	54.63	55.70	.....	56.54
3	.....	51.12	50.23	.....	50.47	51.30	53.90	54.78	55.72	.....	56.60
4	.....	50.87	50.49	.....	50.39	51.50	53.91	54.79	55.63	.....	56.68
5	.....	50.86	50.71	.....	50.37	51.60	53.86	54.87	55.07	.....	56.71
6	.....	51.12	50.76	.....	50.44	51.73	53.68	54.93	55.28	56.41	56.71
7	.....	51.33	50.75	.....	50.52	51.96	53.99	54.88	55.08	56.37	56.62
8	.....	51.55	50.65	.....	50.75	51.95	54.06	54.75	55.04	56.53	56.51
9	.....	.....	50.81	.....	50.77	52.08	54.21	54.43	55.38	56.57	56.47
10	.....	51.72	.....	52.53	50.79	52.23	54.32	54.71	.....	56.46	56.59
11	.....	51.45	.....	56.25	51.06	52.36	54.35	54.98	55.56	56.41	56.72
12	.....	51.38	.....	51.96	51.41	52.45	54.31	54.84	55.25	56.44	56.77
13	552.78	51.68	.....	51.43	51.77	52.56	54.42	55.14	.....	56.43	56.79
14	.....	51.78	.....	51.43	51.70	52.45	54.49	55.07	.....	56.48	56.79
15	.....	51.89	.....	51.47	51.32	52.50	54.72	55.13	.....	56.56	56.63
16	.....	51.71	.....	51.85	50.67	52.68	54.89	54.82	.....	.....	56.46
17	.....	51.48	51.70	52.10	50.30	52.78	54.99	54.93	.....	56.54	56.49
18	.....	51.11	51.85	51.87	50.30	52.96	55.07	55.04	.....	56.49	56.55
19	.....	51.88	51.99	51.46	50.57	52.98	54.93	55.18	.....	56.47	56.62
20	49.13	.....	52.02	50.90	50.55	53.22	55.00	55.49	.....	56.50	56.57
21	48.94	.....	56.02	50.76	50.12	53.33	55.04	55.66	.....	56.58	.....
22	48.77	.....	51.81	50.74	49.82	53.24	55.12	55.53	.....	56.46	56.72
23	48.78	.....	52.11	50.69	49.42	53.22	55.19	55.33	55.41	56.54	56.67
24	48.81	.....	.....	50.83	49.08	53.32	55.11	55.44	55.54	56.53	56.69
25	48.87	.....	.....	50.84	49.14	53.50	55.16	55.24	55.86	56.46	56.77
26	50.62	.....	.....	50.47	49.70	53.48	54.99	55.44	56.03	56.53	56.71
27	50.59	.....	52.32	50.20	50.12	53.65	55.18	55.60	56.23	56.62	56.80
28	50.83	.....	52.50	50.75	50.51	53.73	55.19	55.63	56.33	56.64	56.92

a Tape measurement.

## Vigo 2--Continued.

Water level at 2 a.m., in feet below land-surface datum, 1946  
(From recorder charts)

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
29		.....	52.38	51.00	50.91	53.70	55.19	55.52	56.44	56.54	56.96
30		.....	52.58	51.27	50.89	53.76	55.25	55.50	56.57	56.56	56.84
31		.....		51.47		53.84	55.07		56.67		56.86

Vigo 3 (\*1023, p. 86). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	1.25	Apr. 5	3.49	July 5	4.52	Oct. 4	8.87
11	.55	12	3.75	12	4.75	11	9.00
18	2.75	19	3.91	19	5.16	18	9.07
25	2.90	26	4.01	26	5.59	25	9.12
Feb. 1	2.71	May 3	1.19	Aug. 2	5.89	Nov. 1	9.15
8	1.81	10	2.49	9	6.36	8	9.10
15	1.40	17	1.07	16	6.63	15	9.06
22	1.44	24	2.75	23	6.94	22	9.19
Mar. 1	2.25	31	2.60	30	7.28	29	9.15
8	2.62	June 7	2.80	Sept. 6	7.60	Dec. 6	8.98
15	1.51	14	3.64	13	7.95	13	7.48
22	2.18	21	3.91	20	8.35	20	5.66
29	2.52	28	4.23	27	8.67	27	5.30

## Wabash County

Wabash 2 (\*1023, p. 86). 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, 1946

Jan. 3	5.35	Apr. 4	2.90	July 4	6.88	Oct. 3	13.18
10	2.26	11	3.15	11	7.89	10	13.37
17	2.58	18	3.65	18	8.80	17	13.97
24	3.30	25	4.21	25	9.40	24	13.85
31	3.95	May 2	4.90	Aug. 1	10.9	31	13.71
Feb. 7	4.06	9	5.05	8	10.54	Nov. 7	13.58
14	2.20	16	2.66	15	11.10	14	13.51
21	2.40	23	2.63	22	11.95	21	13.44
28	2.34	30	3.99	29	11.88	28	13.44
Mar. 7	2.28	June 6	4.85	Sept. 5	14.05	Dec. 5	13.38
14	2.40	13	4.30	12	13.82	12	13.26
21	2.16	20	4.60	19	13.44	19	13.19
28	2.24	27	5.54	26	13.21	26	12.81

## Warren County

Warren 1 (\*1016, p. 76; 1023, p. 86). 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, 1946

Jan. 5	6.78	Apr. 6	8.72	July 6	11.63	Oct. 5	18.22
12	6.78	13	10.18	13	14.48	12	18.26
19	7.65	20	11.30	20	16.17	19	17.62
26	8.89	26	12.54	27	17.02	26	17.35
Feb. 2	10.19	May 4	7.35	Aug. 3	17.74	Nov. 2	15.15
9	9.59	11	6.15	10	17.94	13	14.19
16	6.53	18	6.56	17	18.10	16	13.29
23	6.73	25	7.16	24	17.82	23	13.22
Mar. 2	7.62	June 1	8.99	Sept. 3	18.13	30	12.52
9	8.20	8	10.74	7	18.30	Dec. 7	13.00
16	6.53	15	10.22	14	18.48	14	10.20
23	6.92	22	6.62	21	18.52	21	10.19
30	7.08	29	8.72	28	18.22	28	10.74

Warrick County

Warrick 2 (\*1016, p. 77; 1023, p. 87). 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, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 19	8.88	Oct. 30	10.65	Nov. 27	11.38	Nov. 18	10.35
26	8.87	Nov. 6	10.96	Dec. 4	11.34	Dec. 25	9.90
Oct. 9	8.89	13	11.13	11	11.26	31	8.73
23	9.44	20	11.35				

Wayne County

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

Water level, in feet below land-surface datum, 1946											
Jan.	2	30.35	Mar.	26	28.95	June	25	28.83	Oct.	7	30.51
	7	30.18		1	28.81		2	28.85		15	30.65
	14	29.99		8	28.70		8	28.97		21	31.75
	21	29.89		15	28.69		Aug. 6	29.25		31	30.86
	28	29.87		23	28.79		19	29.53	Nov.	11	31.81
Feb.	4	29.87		29	28.88		26	29.69		18	31.82
	13	29.66		May 6	28.95		Sept. 3	29.87		25	31.17
	18	29.48		14	29.81		9	29.98	Dec.	5	31.26
	25	29.28		20	29.04		17	30.15		9	31.29
Mar.	4	29.24		27	29.07		23	30.26		17	31.84
	11	29.22		June 10	29.20		30	30.39		23	31.37
	18	29.17		17	29.29						

Wayne 2. 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. Unused dug well, diameter 30 inches, depth 22.7 feet. Measuring point, top of board cover over well, 1.0 foot above land-surface datum. Measurements made by Lewis W. Hormel. Water levels, in feet below land-surface datum, 1946: Dec. 18, 19.80; Dec. 23, 19.60; Dec. 30, 18.60.

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). Town of Monon. In basement of municipal building. Measurements made by John M. Winkley.

Water level, in feet below land-surface datum, 1946											
Jan.	7	12.00	Apr.	8	11.23	July	8	14.93	Oct.	7	18.53
	14	11.80		15	11.50		15	15.21		14	19.17
	20	12.61		22	11.76		22	15.16		21	18.63
	28	13.00		29	13.94		29	15.37		28	18.98
Feb.	4	13.40	May	6	12.14	Aug.	5	16.08	Nov.	4	17.64
	11	13.08		13	12.92		12	16.25		11	17.56
	18	12.65		20	12.07		19	16.34		18	17.07
	25	12.76		27	12.29		26	17.03		25	16.73
Mar.	4	12.74	June	3	13.08	Sept.	2	17.04	Dec.	2	16.54
	11	12.03		10	13.15		9	17.70		9	16.66
	18	10.71		17	13.42		16	17.64		16	16.60
	25	10.52		24	13.04		23	18.11		23	16.23
Apr.	1	10.92	July	1	13.65		30	18.41		30	16.41

# MAINE, 1946

By H. L. Pree, Jr.

## PROGRAM OF WORK

Periodic measurements of water level were continued in 1946 at five observation wells in Maine. Three of the wells are in the southern part of the State, at Amherst, Cornish, and Mercer; the other two are in the northern part of the State, at Portage and Sherman Mills. Readings were made about once a week and 260 measurements were made during the year.

### FLUCTUATIONS OF WATER LEVEL

The water levels in the 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 above-freezing temperature. The advent of the growing season causes a drop which continues until September or October. This is followed by a rise which continues until cold weather, when a decline is noted throughout the winter.

Water-level fluctuations in 1946 followed this pattern at all the observation wells in Maine. The drop continued until the end of February or the first week in March when snow melt resulting from high temperatures contributed to the abrupt rise in levels at all five wells. In March, the wells at Mercer and Cornish reached their highest recorded stages, and the Sherman Mills well was near its highest level. Cold weather in the first part of April resulted in a slight drop at Mercer, Portage, and Sherman Mills, but rain and melting snow raised the water levels near the end of the month. At Amherst there was gradual rise during April, although precipitation was slightly below normal. The beginning of the growing season was reflected in the decline in water levels at Cornish and Mercer in March, and in the other three wells in the latter part of April or in May. This decline, except for slight rises due to rainfall, as at Portage

in July, and at Cornish in August, continued until the end of the growing season in September or October. Increased precipitation contributed to the rise in water levels in the autumn. At the end of the year high stages for December were reached in the wells at Portage and Sherman Mills and the lowest level of record for this month was reported at Cornish. There was a net increase in ground-water storage during the year at two of the wells as indicated by the net rise in water level at Portage and Sherman Mills, and a net decrease at Cornish and Mercer. There was practically no net change at Amherst during the year.

Precipitation for the State as a whole during 1946 was 37.06 inches or about 3.2 inches below normal, and about 9.1 inches less than in 1945. Normal for the State is 40.23 inches. Precipitation was below normal for the year at 24 of 33 stations as compared with 2 of 33 in 1945. Rainfall was well below normal in March and June and well above normal in August. It was close to normal for the remainder of the year.

The following table summarizes the data pertaining to ground-water levels in Maine.

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

Well	Date of first measurement	Lowest observed water level	Date	Highest observed water level	Date	Water level on last date of record, 1946
Amherst 1	Nov. 5, 1943	(a)	Sept. 10, 17 1944	3.40	Jan. 1, 1945	5.86
US 158						
Cornish 1	Nov. 6, 1943	17.28	Sept. 6, 1944	8.10	May 6, 1945	13.95
US 159						
Mercer 1	Nov. 5, 1942	9.81	Sept. 29, 1946	4.30	Mar. 24, 1946	5.95
US 102						
Portage 1	Nov. 4, 1942	9.90	Mar. 4, 1944	.68	Apr. 1, 1945	4.75
US 103						
Sherman	July 14, 1939	16.00	Nov. 10, 1946	.68	May 6, 1940	5.40
Mills 1						
US 105						

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

#### WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

##### Aroostook County

US 103 (\*986, p. 41; 1016, p. 80; 1023, p. 92). 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, 1942, 1946

Date	Water level	Date	Water level	Date	Water level
Nov. 4, 1942	4.66	Jan. 27, 1946	7.21	Feb. 24, 1946	7.84
Jan. 6, 1946	6.65	Feb. 3	7.50	Mar. 3	7.81
13	6.30	10	7.67	10	5.55
20	6.85	17	7.63	17	2.98

US 103--Continued.

Water level, in feet below land-surface datum, 1942, 1946

Date	Water level	Date	Water level	Date	Water level
Mar. 24, 1946	1.87	June 30, 1946	6.51	Sept. 29, 1946	7.86
31	1.47	July 7	6.74	Oct. 6	7.92
Apr. 7	2.25	14	5.76	13	8.40
14	2.15	21	6.71	20	7.25
21	1.39	28	5.05	27	7.79
28	1.40	Aug. 4	5.77	Nov. 3	3.87
May 5	1.23	11	6.65	10	4.77
12	2.33	18	7.15	17	2.30
19	2.25	25	4.65	24	2.83
26	3.40	Sept. 1	5.69	Dec. 8	3.11
June 2	4.04	8	6.84	15	2.63
9	4.04	15	6.89	22	3.57
16	4.26	22	7.70	29	4.75
24	6.50				

US 105 (\*986, p. 42; 1016, p. 80; 1023, p. 92). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	9.87	Apr. 12	1.30	July 11	12.95	Oct. 11	15.75
18	5.70	17	.75	19	13.25	18	15.82
25	6.75	24	.80	24	13.45	24	15.65
31	10.55	30	.85	31	13.75	31	15.80
Feb. 7	12.00	May 8	1.15	Aug. 10	14.20	Nov. 10	16.00
14	12.70	17	2.45	17	14.45	17	13.12
23	11.35	24	3.67	23	14.65	24	11.90
28	12.85	31	7.10	31	14.72	Dec. 1	4.10
Mar. 7	12.40	June 4	8.55	Sept. 6	14.90	8	5.53
15	.80	14	11.12	13	15.10	15	2.10
23	.75	21	12.18	21	15.35	22	3.20
29	.71	27	13.75	26	15.50	29	5.40
31	.85	July 1	12.90	30	15.60		

Hancock County

US 158 (\*986, p. 43; 1016, p. 80; 1023, p. 92). 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, 1946

Jan. 6	5.94	Apr. 7	5.84	July 7	9.46	Oct. 6	13.50
13	6.03	14	5.48	14	10.05	13	13.43
20	6.71	21	5.50	21	10.60	20	13.27
30	6.56	28	5.19	28	10.70	27	12.59
Feb. 3	6.86	May 5	5.60	Aug. 5	12.00	Nov. 3	12.50
10	6.32	12	5.41	11	12.00	10	12.42
17	6.25	19	5.36	18	12.51	17	10.66
28	7.15	26	5.57	25	12.20	24	9.25
Mar. 3	6.43	June 2	6.16	Sept. 1	13.09	Dec. 1	7.34
10	5.75	9	6.56	8	13.30	8	6.89
17	5.87	16	7.34	17	13.52	15	5.67
20	5.87	24	8.21	22	13.76	22	5.04
24	6.02	July 2	9.06	29	13.88	29	5.86
31	6.00						

Somerset County

US 102 (\*986, p. 43; 1016, p. 81; 1023, p. 93). Mercer l. 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, 1942, 1946

Date	Water level	Date	Water level	Date	Water level
Nov. 5, 1942	8.78	May 5, 1946	5.46	Sept. 8, 1946	9.48
Jan. 6, 1946	5.69	14	5.31	16	9.62
14	5.55	20	5.27	22	9.76
20	5.95	26	5.57	29	9.81
27	6.18	June 2	5.88	Oct. 6	7.88
Feb. 3	6.32	9	6.11	13	7.18
10	6.37	16	6.49	20	6.27
17	6.47	24	6.92	29	6.52
27	6.48	30	7.26	Nov. 3	6.01
Mar. 5	6.45	July 7	7.60	10	5.71
11	6.40	14	7.95	17	5.50
17	4.62	21	8.35	24	5.48
24	4.30	28	8.18	Dec. 2	5.60
Apr. 1	5.06	Aug. 4	8.56	8	5.85
7	4.77	11	8.66	15	5.32
14	5.19	18	9.00	22	5.90
21	5.28	25	9.26	29	5.95
28	4.75	Sept. 1	9.28		

York County

US 159 (\*986, p. 44; 1016, p. 81; 1023, p. 93). Cornish l. 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	11.38	Apr. 6	9.98	July 7	13.93	Oct. 6	9.91
13	11.15	14	10.90	14	14.90	13	10.96
20	11.68	21	11.98	21	14.89	20	11.96
27	11.20	28	11.91	28	13.98	27	11.99
Feb. 3	12.68	May 6	11.93	Aug. 4	9.92	Nov. 3	12.93
10	13.33	12	11.92	11	10.94	10	12.97
17	13.40	19	11.92	18	11.92	17	12.97
24	13.48	26	11.90	25	11.98	24	12.98
Mar. 3	13.51	June 2	11.01	Sept. 1	10.95	Dec. 1	12.95
7	13.55	9	11.91	8	11.93	8	13.91
17	8.57	16	11.96	15	11.94	15	13.92
24	9.00	23	12.92	22	12.91	22	13.94
31	9.95	30	12.65	29	12.92	29	13.95

# MASSACHUSETTS, 1946

By H. N. Halberg

## PROGRAM OF WORK

Investigations of the ground-water resources of Massachusetts, begun in 1938, were continued in 1946 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 around Cambridge, in 2 wells in Worcester County, and in 1 well each in Berkshire, Essex, Franklin, and Hampden Counties. Water-stage recorders were operated throughout the year on three wells--on one well at Wilmington, Middlesex County, and on two wells at Leominster and Winchendon, in Worcester County. Water-level measurements were made monthly in all other wells except in three wells in Lowell and in four in Woburn in which measurements were made once during the year.

## FLUCTUATIONS OF WATER LEVEL

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

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 last date of record, 1946
		Water level	Date	Water level	Date	
Arlington 174	July 29, 1944	13.76	Sept. 11, 1944	5.82	Mar. 12, 1945	8.19
Brimfield 12	Feb. 6, 1936	(a)	(a)	7.32	June 7, 1943	
Cambridge 667	Oct. 30, 1944	22.40	Oct. 30, 1944	5.71	May 18, 1945	11.78
Cambridge 798	Aug. 7, 1944	16.72	Sept. 11, 1944	.93	May 18, 1945	6.89
Chelmsford 68	July 27, 1939	10.58	Oct. 4, 1941	5.69	Apr. 23, 1940	9.00
Chelmsford 69	Aug. 22, 1939	6.05	Aug. 23, 1941	.11	Feb. 24, 1943	2.00
Great Barrington 1	Mar. 4, 1936	22.14	Oct. 11, 1942	15.51	Aug. 1, 1945	21.65
Leominster 11	July 13, 1939	9.21	Oct. 31, 1939	.81	May 22, 1943	4.50
Lowell 4	May 26, 1939	12.18	Oct. 5, 1941	7.56	May 7, 1940	
Lowell 14	May 29, 1939	22.46	Nov. 7, 1939	9.67	May 7, 1940	16.54
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	16.89
Lowell 43	May 28, 1940	22.32	Dec. 27, 1946	10.62	June 4, 1940	22.32
Montague 5	Jan. 16, 1936	5.10	Aug. 30, 1944	.78	Apr. 27, 1944	4.40



Summary of water levels in observation wells in Massachusetts,  
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, 1946
		Water level	Date	Water level	Date	
Reading 1	Aug. 25, 1939	(b)	Dec. 26, 1941	13.73	Apr. 30, 1940	21.69
Reading 3	June 20, 1940	5.63	Nov. 1, 1941	1.14	Nov. 30, 1944	2.50
Topsfield 13	Feb. 8, 1936	17.48	Dec. 6, 1939	7.20	Apr. 22, 1939	15.66
Wilmington 10	July 18, 1940	(c)	Dec. 13, 1941	.73	Nov. 30, 1944	4.97
Wilmington 29	July 24, 1940	11.70	Sept. 27, 1941	8.40	Mar. 28, 1942	10.50
Wilmington 44	July 26, 1940	7.61	Oct. 11, 1941	.86	Dec. 7, 1945	4.58
Wilmington 56	Aug. 12, 1940	7.97	Oct. 4, 1941	2.06	Mar. 1, 1945	4.34
Wilmington 58	July 27, 1940	12.65	Nov. 1, 1941	2.77	Mar. 23, 1942	8.95
Winchendon 15	July 18, 1939	12.75	Nov. 27, 1939	1.97	Mar. 9, 1946	10.07
Winchester 4	Aug. 22, 1939	(d)	Dec. 27, 1941	7.45	May 7, 1940	10.17
Winchester 14	June 13, 1940	14.99	Dec. 14, 1941	5.62	Mar. 23, 1942	10.69
Winchester 18	July 15, 1940	(e)	(e)	1.15	Mar. 23, 1942	11.72
Woburn 1	Aug. 14, 1939	9.73	Sept. 29, 1943	4.47	Nov. 30, 1944	7.10
Woburn 3	Aug. 18, 1939	2.41	Aug. 16, 1941	f .71	Mar. 23, 1942	
Woburn 4	Sept. 12, 1939	2.57	Sept. 26, 1939	f .01	Nov. 30, 1944	1.29
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	6.64
Woburn 19	June 20, 1940	14.85	Oct. 18, 1941	4.84	Dec. 28, 1945	6.52
Woburn 21	June 21, 1940	9.69	Oct. 25, 1941	5.76	Mar. 12, 1945	8.19
Woburn 23	July 15, 1940	3.10	Sept. 27, 1941	.53	Mar. 1, 1945	
Woburn 36	June 28, 1940	4.01	Sept. 29, 1944	1.77	May 10, 1941	3.11
Woburn 38	June 28, 1940	18.15	Dec. 14, 1941	7.62	Mar. 8, 1945	10.73
Woburn 49	July 10, 1940	4.25	Dec. 5, 1941	f1.59	Feb. 8, 1941	
Woburn 53	July 13, 1940	10.69	Sept. 27, 1941	7.93	Mar. 23, 1942	

a Dry Nov. 6, Dec. 4, 1944. 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 8.0 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. 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, 1946

Well	Net change	Well	Net change
Arlington 174	-0.68	Wilmington 29	-0.88
Cambridge 667	-3.69	Wilmington 44	-1.77
Cambridge 798	-3.65	Wilmington 56	-1.64
Chelmsford 62	-1.09	Wilmington 58	-3.75
Chelmsford 69	-1.33	Winchendon 13	-4.80
Great Barrington 1	-2.40	Winchester 4	-1.89
Leominster 11	-2.70	Winchester 14	-2.33
Lowell 14	-5.19	Winchester 18	-7.95
Lowell 41	-2.38	Woburn 1	-1.33
Lowell 43	-2.35	Woburn 4	-.59
Montague 5	-.88	Woburn 17	-1.84
Reading 1	-5.15	Woburn 19	-1.68
Reading 3	-1.01	Woburn 21	-2.15
Topsfield 13	-6.17	Woburn 36	-.02
Wilmington 10	-3.74	Woburn 38	-2.47
		Woburn 49	-2.01

The preceding table indicates that there was a net drop in water level during 1946 in all the observation wells in the State for which readings were made during the entire year as the result of below normal precipitation.

Precipitation for the State as a whole during 1946 was 40.83 inches or about 2.2 inches below normal and about 9.5 inches less than in 1945. The total precipitation at Boston during the year was 38.07 inches or 2.1 inches below normal and about 9.2 inches less than in 1945. At Amherst the precipitation was 38.61 inches or about 5.4 inches below normal and about 12.8 inches less than in 1945.

At the beginning of the year the water table was at a high stage for the time of year in the eastern and central sections of the State and about normal in the western part.

In general, water levels throughout the State declined during January and February, rose during March, and declined during April. During May there was a rise as the result of heavy precipitation followed by a downward trend, except for sharp rises in August in the eastern part of the State, and in September in some of the wells in the central part of the State. There was some recovery of the water table in December, confined mostly to the eastern section of the State.

Water levels throughout the State reached high January stages at the end of that month and remained above average through February. The rise during March brought the water table to slightly above average in the eastern part of the State, both above and below average in the central part of the State, and below average in the western part. As a result of the seasonal drop throughout the State in April the water table was well below average at the end of the month.

As the result of the above-normal precipitation--168 percent for the State as a whole during May--the water table rose and at the end of the month was at a fairly high stage in eastern Massachusetts but somewhat below average in the western part. During June and July water levels declined seasonally and at the end of July water levels, in general, were below average, except in the eastern part of the State where they were about average.

During August precipitation was high, the average for the State being 7.70 inches, or 208 percent of normal. Rainfall was very high throughout eastern Massachusetts. Precipitation at Boston during August was 9.92 inches, and, at Sandwich, 17.85 inches. In the western part of the State precipitation was, in general, a little below normal. The water table reflected this condition, rising in eastern Massachusetts to well above average stages at the end of the month. Some water levels in the central sections rose and some declined, with all water levels in this area above average at the end of the month. In the western part, water levels dropped and at the end of the month were well below average.

At the end of September water levels were above normal, except in western Massachusetts. In eastern Massachusetts water levels were high and the average water level in 15 upland wells in Middlesex County reached its maximum September stage for the 7-year period 1940-46.

In October and November precipitation was deficient, amounting to a little more than 30 percent of normal each month. During both months water levels declined throughout the State. However, at the end of October water levels were seasonally high in eastern Massachusetts, at or above average in the central part of the State, and very low for this time of year in the western part. At the end of November conditions became less favorable with water levels in eastern Massachusetts a little below average, well below in the central part, and the western part again at a new low for the month.

Precipitation in December was about normal. At the end of the month the water table throughout the State was low for this time of year and there was a net loss in ground water storage during the year.

The water level in only one well, Winchendon 13, reached a new high for the period of record on March 9, and the water level in only one well, Lowell 43, which is affected by nearby pumpage, reached a new low on December 27.

## WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Berkshire County

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

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	19.33	Apr. 30	20.09	July 31	20.57	Oct. 30	21.95
Feb. 28	19.66	May 29	19.81	Aug. 30	21.14	Nov. 29	21.76
Mar. 30	19.49	June 28	19.88	Sept. 29	21.68	Dec. 30	21.65

Essex County

Topsfield 13 (\*944, p. 41; \*986, p. 48; 1016, p. 86; 1023, p. 97). 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.

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

Jan. 31	9.85	Apr. 30	10.82	Aug. 1	13.58	Oct. 30	16.91
Mar. 1	10.88	May 29	11.25	Sept. 3	14.92	Nov. 30	15.54
29	9.92	June 29	11.77	Oct. 1	14.68	Dec. 30	15.66

Franklin County

Montague 5 (\*944, p. 41; \*986, p. 49; 1016, p. 86; 1023, p. 97). U. S. 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, 1946

Jan. 31	3.78	May 31	2.70	Aug. 21	3.90	Oct. 31	4.05
Feb. 28	3.75	June 30	3.18	31	3.69	Nov. 30	4.39
Mar. 31	3.20	July 31	3.61	Sept. 30	2.70	Dec. 31	4.40
Apr. 30	3.37						

Hampden County

Brimfield 12 (\*944, p. 42; \*986, p. 49; 1016, p. 86; 1023, p. 98). U. S. 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, 1946

Feb. 11	9.42	May 26	11.72	July 25	12.55	Oct. 8	13.81
Mar. 4	11.08	29	11.64	Aug. 6	12.84	Nov. 4	14.29
Apr. 2	10.20	July 5	11.78	Sept. 4	13.21	29	14.85
30	11.55						

Middlesex County

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

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

Jan. 30	6.75	Apr. 30	7.32	July 30	8.95	Oct. 30	8.45
Feb. 28	7.50	May 31	8.11	Aug. 31	7.53	Nov. 30	9.15
Mar. 28	7.91	June 28	8.40	Sept. 28	8.00	Dec. 28	8.19

Cambridge 667 (\*1023, p. 99 ). City of 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	7.23	Apr. 30	7.18	July 30	9.97	Oct. 30	9.57
Feb. 28	9.63	May 31	9.12	Aug. 31	6.62	Nov. 30	12.75
Mar. 28	10.51	June 28	7.10	Sept. 28	8.02	Dec. 28	11.78

Cambridge 798 (\*1023, p. 100 ). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	2.47	Apr. 30	2.49	July 30	5.19	Oct. 30	4.77
Feb. 28	4.76	May 31	4.28	Aug. 31	1.92	Nov. 30	7.90
Mar. 28	5.65	June 28	2.47	Sept. 28	3.28	Dec. 28	6.89

Chelmsford 68 (\*886, p. 254; 906, p. 39; 936, p. 44; 944, p. 42; \*986, p. 49; 1016, p. 86; 1023, p. 98 ). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	7.95	Apr. 30	7.77	July 30	9.29	Oct. 30	9.15
Feb. 27	7.84	May 29	6.96	Aug. 31	9.00	Nov. 30	9.36
Mar. 28	7.13	June 28	8.02	Sept. 28	9.50	Dec. 27	9.00

Chelmsford 69 (\*886, p. 254; 906, p. 39; 936, p. 45; 944, p. 42; \*986, p. 49; 1016, p. 86; 1023, p. 99 ). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	0.80	Apr. 30	1.47	July 30	2.63	Oct. 30	2.09
Feb. 27	.87	May 29	.38	Aug. 31	1.15	Nov. 30	2.37
Mar. 28	.90	June 28	1.94	Sept. 28	2.17	Dec. 27	2.00

Lowell 4 (\*886, p. 254; 906, p. 39; 936, p. 45; 944, p. 43; \*986, p. 49; 1016, p. 87; 1023, p. 99 ). 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 level, in feet below land-surface datum, 1946: Sept. 28, 10.60.

Lowell 14 (\*886, p. 255; 906, p. 40; 936, p. 46; 944, p. 44; \*986, p. 50; 1016, p. 87; 1023, 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	10.53	Apr. 30	10.38	July 30	13.27	Oct. 30	15.27
Feb. 27	11.05	May 29	9.97	Aug. 31	13.73	Nov. 30	16.04
Mar. 28	9.84	June 28	10.89	Sept. 28	14.32	Dec. 27	16.54

Lowell 26 (\*886, p. 256; 906, p. 41; 936, p. 47; 944, p. 45; \*986, p. 51, 1016, p. 87; 1023, p. 101). Alfred Cimon (well 1). About 55 feet northeast of Pawtucket Boulevard Extension and 4,500 feet west of East Avenue, Lowell. Water level, in feet below land-surface datum, 1946: Sept. 28, 11.31.

Lowell 33 (\*886, p. 256; 906, p. 41; 936, p. 47; 944, p. 45; \*986, p. 51; 1016, p. 87; 1023, p. 101). Thomas Varnum. About 400 feet south and 50 feet west of intersection of Varnum Avenue and West Meadow Road, Lowell. Water level, in feet below land-surface datum, 1946: Sept. 28, 9.00.

Lowell 41 (\*886, p. 257; 906, p. 42; 936, p. 47; 944, p. 45; \*986, p. 51; 1016, p. 88; 1023, p. 101). City of Lowell (Cook test well 3). About 50 feet north and 75 feet east from northeast corner of owner's Cook well-field pump house. Pump house about 1,300 feet southwest of intersection of Plain and Manufacturers Streets, Lowell.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	14.13	Apr. 30	15.23	July 30	16.94	Oct. 30	16.36
Feb. 27	14.11	May 29	13.53	Aug. 31	14.19	Nov. 30	15.82
Mar. 28	12.83	June 28	14.17	Sept. 28	14.72	Dec. 27	16.89

Lowell 43 (\*906, p. 42; 936, p. 47; 944, p. 46; \*986, p. 51; 1016, p. 88; 1023, p. 101). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	19.72	Apr. 30	20.08	July 30	20.94	Oct. 30	21.57
Feb. 27	19.78	May 29	19.28	Aug. 31	21.33	Nov. 30	21.84
Mar. 28	18.00	June 28	20.33	Sept. 28	20.95	Dec. 27	22.32

Reading 1 (\*886, p. 257; 906, p. 42; 936, p. 48; 944, p. 46, \*986, p. 51; 1016, p. 88; 1023, 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	16.09	Apr. 30	17.72	July 30	19.83	Oct. 31	21.28
Feb. 27	16.85	May 29	18.10	Aug. 31	20.18	Nov. 30	21.74
Mar. 28	16.24	June 28	18.08	Sept. 28	20.60	Dec. 27	21.69

Reading 3 (\*906, p. 43; 936, p. 48; 944, p. 46; \*986, p. 52; 1016, p. 88; 1023, 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	1.66	Apr. 30	1.64	July 30	3.98	Oct. 31	2.95
Feb. 27	1.69	May 29	1.44	Aug. 31	1.84	Nov. 30	2.94
Mar. 28	1.61	June 28	2.45	Sept. 28	2.75	Dec. 27	2.50

Wilmington 10 (\*906, p. 43; 936, p. 48; 944, p. 47; \*986, p. 52; 1016, p. 88; 1023, 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.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	1.79	Apr. 30	1.53	July 30	5.76	Oct. 31	6.14
Feb. 27	2.01	May 29	1.00	Aug. 31	3.95	Nov. 30	6.52
Mar. 28	1.26	June 28	3.58	Sept. 28	5.82	Dec. 27	4.97

Wilmington 29 (#906, p. 43; 936, p. 49; 944, p. 47; #986, p. 52; 1016, p. 88; 1023, p. 102). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	9.77	Apr. 30	9.89	July 30	10.75	Oct. 31	10.66
Feb. 27	10.00	May 29	9.83	Aug. 31	10.37	Nov. 30	10.70
Mar. 28	9.84	June 28	10.13	Sept. 28	10.71	Dec. 27	10.50

Wilmington 44 (#906, p. 44; 936, p. 49; 944, p. 47; #986, p. 52; 1016, p. 88; 1023, p. 102). U. S. 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, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	2.37	3.68	3.70	3.88	3.92	3.67	4.87	6.18	4.52	4.68	5.55	5.39
2	2.55	3.71	3.63	3.87	3.99	3.72	4.90	6.15	4.63	4.58	5.55	5.43
3	2.80	3.75	3.34	3.31	4.08	2.66	4.87	5.41	4.74	4.67	5.53	5.47
4	2.99	3.78	2.70	3.07	4.17	2.93	4.90	5.22	4.82	4.77	5.51	5.48
5	3.11	3.78	2.19	3.18	4.21	3.15	4.95	5.21	4.91	4.88	5.53	5.49
6	2.46	3.82	2.34	3.35	4.08	3.30	5.00	5.26	4.98	4.96	5.57	5.53
7	1.70	3.51	2.46	3.53	4.07	3.49	5.03	5.35	5.02	5.02	5.58	5.56
8	1.93	3.22	2.40	3.65	4.04	3.64	5.07	4.77	5.08	5.08	5.59	5.53
9	2.22	3.28	2.28	3.70	3.96	3.12	5.06	4.45	5.13	5.15	5.60	5.55
10	1.87	3.41	2.41	3.70	3.98	3.30	5.08	4.49	5.13	5.20	5.62	5.55
11	2.18	3.54	2.60	3.77	4.03	3.58	5.16	4.60	5.16	5.25	5.60	5.55
12	2.35	3.65	2.77	3.84	4.07	3.63	5.22	4.73	5.22	5.28	5.58	5.59
13	2.45	3.75	2.85	3.90	4.00	3.68	5.31	....	5.27	5.31	5.52	5.57
14	2.68	3.22	2.97	3.95	3.99	3.79	5.39	....	5.30	5.35	5.47	5.60
15	2.87	2.49	3.07	3.97	4.02	3.90	5.47	....	5.35	5.37	5.48	5.61
16	3.08	2.82	3.19	4.00	3.93	3.98	5.54	....	5.39	5.39	5.50	5.64
17	3.27	3.07	3.29	4.06	3.95	4.05	5.61	4.78	5.44	5.41	5.50	5.65
18	3.42	3.25	3.38	4.09	3.89	4.12	5.68	4.73	5.49	5.42	5.51	5.67
19	3.54	3.40	3.46	4.13	3.64	4.18	5.74	4.75	5.53	5.43	5.51	5.69
20	3.64	3.51	3.52	4.16	3.69	4.23	5.80	4.56	5.57	5.46	5.51	5.70
21	3.71	3.63	3.60	4.20	3.76	4.29	5.86	4.45	5.66	5.47	5.54	5.42
22	3.77	3.70	3.64	4.24	3.53	4.34	5.90	4.51	5.67	5.48	5.52	4.48
23	3.81	3.75	3.70	4.26	3.61	4.40	5.93	4.62	5.72	5.50	5.51	4.29
24	3.84	3.79	3.76	4.28	3.78	4.45	5.90	4.68	5.74	5.52	5.48	4.27
25	3.44	3.80	3.79	4.28	3.92	4.52	5.86	4.75	5.74	5.53	5.44	4.27
26	3.24	3.85	3.48	4.24	4.01	4.57	5.90	4.82	5.73	5.55	5.42	4.30
27	3.36	3.88	3.37	3.90	4.06	4.64	5.98	4.87	5.76	5.54	5.40	4.40
28	3.42	3.87	3.47	3.78	3.29	4.72	6.01	4.61	5.79	5.53	5.39	4.47
29	3.50		3.60	3.83	2.93	4.78	6.06	4.47	5.79	5.50	5.37	4.55
30	3.59		3.72	3.88	3.17	4.84	6.10	4.44	5.72	5.52	5.40	4.58
31	3.62		3.82		3.46		6.14	4.44		5.52		....

Wilmington 56 (#944, p. 47; #986, p. 52; 1016, p. 89; 1023, 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	3.76	Apr. 30	3.96	July 30	6.71	Oct. 31	5.46
Feb. 27	4.03	May 29	3.08	Aug. 31	3.90	Nov. 30	5.27
Mar. 28	3.62	June 28	5.10	Sept. 28	5.51	Dec. 27	4.34

Wilmington 58 (\*906, p. 44; 936, p. 49; 944, p. 48; \*986, p. 52; 1016, p. 89; 1023, p. 103). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	6.42	Apr. 30	7.47	July 30	10.57	Oct. 31	10.05
Feb. 27	6.87	May 29	6.14	Aug. 31	8.64	Nov. 30	10.07
Mar. 28	6.46	June 28	8.30	Sept. 28	9.90	Dec. 27	8.95

Winchester 4 (\*886, p. 257; 906, p. 44; 936, p. 49; 944, p. 44; \*986, p. 53; 1016, p. 89; 1023, p. 103). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	8.54	Apr. 30	9.61	July 30	11.90	Oct. 31	10.68
Feb. 28	9.28	May 29	8.97	Aug. 31	9.27	Nov. 30	10.74
Mar. 28	8.72	June 28	10.04	Sept. 28	10.52	Dec. 28	10.17

Winchester 14 (\*906, p. 44; 936, p. 50; 944, p. 49; \*986, p. 53; 1016, p. 89; 1023, p. 103). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	9.66	Apr. 30	10.62	July 30	12.47	Oct. 31	12.39
Feb. 27	10.47	May 29	8.95	Aug. 31	8.03	Nov. 30	12.57
Mar. 28	9.75	June 28	10.74	Sept. 28	11.16	Dec. 27	10.69

Winchester 18 (\*944, p. 49; \*986, p. 53; 1016, p. 89; 1023, p. 103). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	7.48	Apr. 30	9.23	July 30	12.45	Oct. 31	12.32
Feb. 28	7.97	May 29	6.96	Aug. 31	10.63	Nov. 30	12.55
Mar. 28	7.90	June 28	10.50	Sept. 28	11.61	Dec. 28	11.72

Woburn 1 (\*886, p. 258; 906, p. 45; 936, p. 50; 944, p. 50; \*986, p. 53; 1016, p. 89; 1023, p. 104). E. P. Fox. About 225 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	6.58	Apr. 30	7.25	July 30	8.46	Oct. 31	7.95
Feb. 28	6.97	May 29	5.74	Aug. 31	5.87	Nov. 30	8.15
Mar. 28	6.97	June 28	7.41	Sept. 28	7.70	Dec. 28	7.10

Woburn 3 (\*886, p. 258; 906, p. 45; 936, p. 50; 944, p. 50; \*986, p. 53; 1016, p. 90; 1023, 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 & Maine Railroad tracks, 2.7 miles north of Woburn. Water level, in feet below land-surface datum, 1946: Sept. 28, 0.47.



Woburn 4 (\*886, p. 258; 906, p. 46; 936, p. 51; 944, p. 50; \*986, p. 53; 1016, p. 90; 1023, p. 104). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	1.09	Apr. 30	1.26	July 30	1.83	Oct. 31	1.57
Feb. 27	1.22	May 29	.68	Aug. 31	1.15	Nov. 30	1.58
Mar. 28	1.10	June 28	1.47	Sept. 28	1.52	Dec. 27	1.29

Woburn 5 (\*886, p. 259; 906, p. 46; 936, p. 51; 944, p. 51; \*986, p. 54; 1016, p. 90; 1023, p. 104). 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 level, in feet below land-surface datum, 1946: Sept. 28, 0.18.

Woburn 17 (\*906, p. 46; 936, p. 51; 944, p. 51; \*986, p. 54; 1016, p. 90; 1023, p. 104). 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.

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

Jan. 30	5.17	Apr. 30	6.78	July 30	7.61	Oct. 31	8.48
Feb. 27	5.93	May 29	6.25	Aug. 31	4.60	Nov. 30	8.37
Mar. 28	5.38	June 28	6.48	Sept. 28	6.79	Dec. 27	6.64

Woburn 19 (\*906, p. 47; 936, p. 52; 944, p. 51; \*986, p. 54; 1016, p. 90; 1023, 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, 1946

Jan. 30	5.35	Apr. 30	6.82	July 30	9.09	Oct. 31	7.98
Feb. 27	6.66	May 29	5.89	Aug. 31	6.59	Nov. 30	8.18
Mar. 28	6.55	June 28	7.87	Sept. 28	7.71	Dec. 27	6.52

Woburn 21 (\*906, p. 47; 936, p. 52; 944, p. 51; \*986, p. 54; 1016, p. 90; 1023, 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, 1946

Jan. 30	5.95	Apr. 30	6.72	July 30	7.90	Oct. 31	8.11
Feb. 28	6.20	May 29	6.65	Aug. 31	7.34	Nov. 30	8.40
Mar. 28	6.04	June 28	6.96	Sept. 28	7.80	Dec. 27	8.19

Woburn 23 (\*906, p. 47; 936, p. 52; 944, p. 52; \*986, p. 54; 1016, p. 91; 1023, p. 105). F. H. Bowser. About 490 feet southwest of intersection of Main and Elm Streets, 0.6 mile south of North Woburn. Water level, in feet below land-surface datum, 1946: Sept. 28, 1.64.

Woburn 36 (\*906, p. 47; 936, p. 52; 944, p. 52; \*986, p. 54; 1016, p. 91; 1023, 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, 1946

Jan. 30	2.94	Apr. 30	2.58	July 30	2.67	Oct. 31	2.84
Feb. 28	2.73	May 29	2.52	Aug. 31	2.66	Nov. 30	2.97
Mar. 28	2.61	June 28	2.40	Sept. 28	2.76	Dec. 28	3.11

Woburn 38 (\*906, p. 48; 936, p. 53; 944, p. 52; \*986, p. 55; 1016, p. 91; 1023, p. 105). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	9.37	Apr. 30	10.00	July 30	12.25	Oct. 31	10.77
Feb. 28	9.45	May 29	9.74	Aug. 31	9.66	Nov. 30	11.31
Mar. 28	9.43	June 28	10.29	Sept. 28	10.35	Dec. 28	10.73

Woburn 49 (\*906, p. 48; 936, p. 53; 944, p. 52; \*986, p. 55; 1016, p. 91; 1023, p. 105). 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, 1946

Jan. 30	+1.30	Apr. 30	+0.96	July 30	+0.25	Oct. 31	-0.03
Feb. 28	+1.17	May 29	+1.15	Aug. 31	+0.80	Nov. 30	-0.86
Mar. 28	+1.23	June 28	+0.98	Sept. 28	+0.50	Dec. 27	-0.66

Woburn 53 (\*906, p. 48; 936, p. 53; 944, p. 53; \*986, p. 55; 1016, p. 91; 1023, 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 level, in feet below land-surface datum, 1946: Sept. 28, 8.98.

Worcester County

Leominster 11 (\*986, p. 259; 906, p. 48; 936, p. 53; 944, p. 53; \*986, p. 55; 1016, p. 91; 1023, p. 106). U. S. 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, 1946

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	1.71	....	....	3.05	3.11	2.65	5.15	6.56	....	4.99	5.47	5.65
2	1.83	3.36	2.99	2.89	3.10	1.89	5.22	6.60	....	4.60	5.54	5.70
3	2.01	3.40	2.66	2.02	3.31	1.55	5.17	6.47	6.10	4.57	5.56	5.79
4	2.15	3.42	1.84	2.24	3.46	1.83	5.29	6.28	6.18	4.58	5.56	5.81
5	2.17	3.42	1.68	2.35	3.34	1.98	5.40	6.20	6.27	4.61	5.61	5.85
6	1.58	2.40	1.57	2.54	2.72	1.88	5.52	6.21	6.34	4.65	5.66	5.92
7	1.62	2.70	1.47	2.71	2.92	2.26	5.64	6.28	6.41	4.70	5.70	5.94
8	1.68	2.66	1.45	2.85	2.42	2.17	5.78	6.24	6.48	4.78	5.73	5.93
9	1.74	2.66	1.42	2.91	2.57	1.67	5.89	6.08	6.53	4.83	5.77	5.95
10	1.61	2.66	1.52	2.97	2.68	2.24	6.00	6.03	6.43	4.87	5.82	5.94
11	1.73	2.66	1.66	3.10	2.87	2.55	6.10	6.03	6.32	4.94	5.83	....
12	1.78	2.66	1.83	3.20	2.86	1.93	6.17	....	6.33	5.00	5.83	....
13	1.80	1.67	1.85	3.28	2.76	2.32	6.27	....	6.39	5.02	5.78	....
14	2.10	1.75	1.90	3.34	3.02	2.67	6.36	....	6.45	5.02	5.74	....
15	2.22	1.65	1.87	3.39	2.70	2.90	6.45	....	6.52	5.07	5.80	....
16	....	....	2.01	3.47	2.71	3.14	6.54	....	6.60	5.11	5.87	....
17	....	....	2.12	3.59	2.77	3.36	6.62	....	6.67	5.15	5.89	....
18	....	....	2.22	3.64	1.53	3.49	6.70	....	6.73	5.22	5.95	....
19	....	....	2.32	3.73	1.74	3.58	6.78	....	6.79	5.05	5.98	....
20	....	....	2.42	3.75	2.09	3.76	6.86	....	6.84	4.95	5.98	....
21	3.20	....	2.49	3.83	2.07	3.92	6.94	....	6.89	4.95	6.03	....
22	3.28	....	2.54	3.89	2.24	4.02	6.99	....	6.94	4.99	6.03	....
23	....	....	2.66	3.94	2.56	4.16	7.03	....	7.00	5.03	5.91	....
24	....	....	2.77	4.00	2.81	4.30	6.84	....	7.03	5.10	5.76	....
25	....	....	2.21	4.04	3.06	4.44	6.45	....	7.05	5.17	5.66	....
26	....	....	2.11	3.51	3.29	4.56	6.23	5.91	7.01	5.24	5.65	....
27	....	....	2.11	2.78	3.32	4.70	6.18	....	6.93	5.29	5.64	....
28	....	....	2.40	2.81	1.42	4.81	6.21	....	6.90	5.34	5.63	....
29	....	....	2.58	2.93	1.62	4.92	6.28	....	6.89	5.33	5.61	....
30	....	....	2.77	3.30	1.99	5.05	6.38	....	6.80	5.36	5.67	....
31	....	....	2.93	....	2.34	....	6.48	....	....	5.39	....	64.50

a Estimated.

b Tape measurement.

Winchendon 13 (\*886, p. 260; 906, p. 50; 936, p. 55; 944, p. 54; \*986, p. 56; 1016, p. 92; 1023, 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, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	5.17	5.93	5.54	4.06	4.84	4.27	6.16	8.17	8.53	10.30	9.23	10.06
2	5.15	5.90	5.55	4.05	4.90	4.00	6.15	8.30	8.62	10.00	9.27	10.05
3	5.20	5.99	5.52	3.21	5.05	3.29	5.91	8.37	8.71	9.61	9.31	10.06
4	5.24	6.06	5.43	3.34	5.19	3.64	5.85	8.44	8.82	9.26	9.33	10.07
5	5.28	6.12	4.99	3.55	5.25	3.93	5.98	8.49	8.91	9.00	9.36	10.08
6	5.17	6.13	4.55	3.76	5.03	4.00	6.16	8.58	9.00	8.82	9.40	10.09
7	4.05	5.79	3.63	3.97	5.05	4.20	6.36	8.66	9.06	8.68	9.43	10.10
8	3.38	5.66	2.85	4.13	4.96	4.35	6.57	8.73	9.14	8.62	9.46	10.12
9	3.41	5.57	1.97	4.23	4.82	4.04	6.75	8.78	9.22	8.60	9.49	10.13
10	3.22	5.55	2.86	4.33	4.89	4.29	6.91	8.81	9.28	8.60	9.54	10.14
11	3.35	5.62	3.13	4.45	4.97	4.51	7.07	8.82	9.34	8.63	9.58	10.15
12	3.50	5.71	3.44	4.55	4.99	4.15	7.16	8.72	9.41	8.68	9.62	10.16
13	3.67	5.74	3.57	4.65	4.86	4.10	7.30	8.62	9.48	8.72	9.66	10.16
14	3.91	5.40	3.36	4.75	4.86	4.45	7.44	8.55	9.54	8.81	9.69	10.18
15	4.05	4.06	3.05	4.79	4.76	4.68	7.57	8.43	9.59	8.87	9.73	10.20
16	4.29	4.04	3.14	4.89	4.50	4.89	7.74	8.21	9.65	8.91	9.77	10.22
17	4.42	4.06	3.19	5.04	4.44	5.07	7.86	8.04	9.70	8.93	9.80	10.23
18	4.56	4.27	3.25	5.10	3.61	5.20	7.98	7.94	9.77	8.96	9.83	10.25
19	4.72	4.37	3.32	5.20	3.59	5.33	8.10	7.90	9.82	9.00	9.86	10.25
20	4.99	4.40	3.41	5.20	3.84	5.48	8.22	7.89	9.87	9.06	9.88	10.27
21	5.04	4.52	3.46	5.32	4.00	5.61	8.36	7.97	9.93	9.08	9.91	10.28
22	5.21	4.55	3.42	5.36	4.16	5.74	8.47	8.07	9.98	9.08	9.93	10.28
23	5.35	4.58	3.43	5.41	4.35	5.88	8.55	8.17	10.03	9.07	9.95	10.29
24	5.42	4.61	3.55	5.47	4.53	6.02	8.37	8.22	10.08	9.07	9.98	10.28
25	5.37	5.10	3.34	5.54	4.69	6.17	7.94	8.19	10.13	9.07	9.99	10.25
26	5.55	5.25	3.03	5.49	4.88	6.32	7.71	8.18	10.18	9.08	10.01	10.22
27	5.69	5.34	3.14	4.99	4.95	6.45	7.65	8.19	10.23	9.12	10.02	10.19
28	5.75	5.41	3.34	4.88	3.51	6.51	7.68	8.23	10.28	9.17	10.04	10.16
29	5.80		3.51	4.86	3.38	6.32	7.77	8.30	10.33	9.18	10.04	10.13
30	5.89		3.70	4.83	3.69	6.18	7.88	8.38	10.36	9.18	10.06	10.09
31	5.85		3.90		4.01		8.03	8.45		9.20		10.07

## 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 1946 in cooperation with the Geological Survey Division of the Michigan Department of Conservation. With the end of World War II, materials and labor became available for long-deferred repair and construction programs by the waterworks industries. The intensive development of water supplies for the military and defense effort during the war years aggravated conditions in previously critical areas and increased the number of areas in short supply. The rapid conversion to peacetime production by some industries coupled with the reconversion needs of other industries and the acceptance of a large demand backlog contributed to the continuance of peak water consumption or increased the draft on this resource.

Several progressive cities which initiated water-supply improvement and development programs during the winter of 1945-46 appealed to the Michigan Department of Conservation for assistance in making quantitative studies of their water-resource potential. In accordance with these requests, comprehensive surveys of ground-water conditions were started during 1946 in the Alma, Battle Creek, Flint, Holland, and Kalamazoo areas. In each area the water-level records are of less than a year's duration and thus do not permit detailed comparison or discussion at this time.

One phase of the above-mentioned surveys and an important part of the State-wide inventory of water resources is the periodic measurement of water levels in selected observation wells to determine the trends and the changes in storage in the ground-water reservoirs. In this connection, about 4,500 individual measurements of water level were made in 1946. Continuous records of water level were obtained from 21 observation wells which were equipped with automatic water-stage recorders. Water levels

were measured at periods ranging from semiweekly to monthly in 202 additional wells. Of the total of 69 observation wells added during the year, automatic water-stage recorders were installed on 14 wells.

#### FLUCTUATIONS OF WATER LEVEL

The Grayling recorder well, Cr Gr 6, which is in Crawford County near Grayling, serves as a representative index of the trends of ground-water levels in shallow water-table aquifers through the Lower Peninsula of Michigan. This well is finished at a depth of 9 feet in sandy outwash deposits. The relatively shallow depth to the water table, the large porosity, and the moderate to large permeability of the drift deposits in this area are factors which contribute to the rapid response of this well to changing conditions of intake and discharge.

Throughout Michigan the calendar year of 1946 was the sixth warmest and the ninth driest year since the start of record in 1888. A decline of ground-water level in the Grayling recorder well, starting in mid-November 1945 was halted on January 5 at a depth of 6.43 feet below land-surface datum as a result of about a week of extremely mild weather accompanied by widespread rains. The ground-water level rose to an elevation of 5.50 feet below land surface by January 11. With the return to normal January temperatures, further precipitation occurred in the form of snow and water levels declined, in general, through the remainder of the month and through most of February. A limited amount of recharge to the water table occurred during the first part of February as a result of snow melt during a brief period of above-freezing temperature. Unseasonably warm weather during March, coupled with a widespread rain on March 6 raised the water table from 6.37 feet on March 1 to 4.73 feet below land surface by March 15.

Following this period, water levels declined through the remainder of March, April, and the first part of May. The month of April, in particular, was warm and exceedingly dry. Although total precipitation for the months of May and June was about normal, most of this rainfall occurred during the latter part of each month. In general, water levels declined through May and June. The carry-over of recharge from the June-end precipitation resulted in an appreciable rise of water level during the early part of July.

The months of July and August were among the driest on record. Water levels declined from a stage of 6.40 feet below land surface on July 3 to 8.33 feet below land surface by September 9. A widespread frost on September 3 ended the growing season through most of the Lower Peninsula. Through most of the balance of the month, temperatures were above normal and periods of near-normal precipitation resulted in a rise of the water table through the latter part of the month. Although temperatures during October were somewhat above normal, a sufficient number of widespread frosts occurred during the month to close the growing season in all areas not affected by the September frosts. The reduction of the evapotranspiration demand and the near-normal precipitation which occurred as rain through most of October halted the summer downtrend of water level. Above-normal precipitation and extended warm weather during November and December resulted in further recharge to the water table to raise water levels from the September 9 value of 8.33 feet below land surface to 7.30 feet below land surface by December 31. The net decline of water level in the Grayling recorder well was 0.91 foot for the year.

Ground-water levels in water-table aquifers with moderate to large depths to water approximate the trend of the Grayling recorder well, but in modified form with varying amounts of lag in the time of occurrence of the spring high. In general, most of the deeper water-table wells showed a rise in water level from the first part of January to periods ranging from mid-April to mid-June and a persistent decline through the balance of the year. In all cases water levels at the end of the year were below the early January levels.

In the highly industrialized areas in which the previously mentioned comprehensive ground-water surveys were started, ground water occurs under artesian conditions. In most cases, the distance from the observation well to the intake area is so large that seasonal or annual changes in recharge or discharge are too limited in duration for transmission. The most immediate effect on these wells results from changes in withdrawal rate by nearby pumping wells. As a consequence, the water-level trends shown by the observation wells, through the industrialized areas in the southern part of the Lower Peninsula, rise from the start of the year until spring, which is generally the period of minimum pumping for most

industries and municipalities. In nearly all cases, a progressive down-trend of water level occurred in these wells from the spring high to the end of the year, as a result of high rates of pumping through the summer and the large deficiency in precipitation accumulated during the summer drought, which, because of the transmission distance, did not affect the artesian wells until the late fall.

#### WELL-NUMBERING SYSTEM

Through mutual agreement with the Michigan Department of Conservation, a well numbering system was devised during the year and is used in the following tabulation. From a study of the numbering systems established elsewhere, it was agreed that it would be desirable to set up a system which avoids the use of cumbersome detail and undue length, but still suggests the well location to some extent. The system adopted uses a 4-letter prefix which is followed by the well number. The first half of the prefix consists of an upper and lower case letter, which indicate the county in which the well is located. The letters are selected as suggestive of the county name.

The second pair of letters indicate the city or the civil township in which the well is located. Upper case letters are used for cities, villages, or towns and an upper case followed by a lower case letter are used for the township designation. Again the letters are chosen to suggest the name involved. The use of civil townships, in preference to the township and range system, was considered desirable because of greater familiarity and more general use of the civil designation by the majority who will use these data. Appropriate references are included in the well description to cross index the wells included in this report with previously published reports.

#### WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

##### Allegan County

##### Martin Township

An Mn 1. Michigan Department of Conservation, Geological Survey Division. SE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 1, T. 2 N., R. 11 W. Observation well diameter 1 $\frac{1}{4}$  inches, measured depth 7.5 feet below land surface. Measuring point, top of 1 $\frac{1}{4}$ -inch pipe, 1.50 feet above land-surface datum.

An Mn 1--Continued.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 15	2.60	Oct. 3	2.45	Nov. 7	1.86	Dec. 12	1.53
Sept. 5	2.66	10	2.47	15	1.90	20	1.82
12	2.44	18	1.98	21	1.88	27	1.87
19	2.55	24	2.23	27	1.93	31	1.80
26	2.40	31	1.90	Dec. 5	1.95		

Calhoun County

## City of Battle Creek

Ch BC 130. Galloup Pipe Supply Co., 43 East State Street. Unused industrial well, diameter 2½ inches, measured depth 79.1 feet below land surface. Measuring point, top of 2½-inch pipe, 0.88 foot above land-surface datum. Well destroyed by building construction on Oct. 25, 1946.

Water level, in feet below land-surface datum, 1946							
Aug. 27	8.85	Sept. 6	8.95	Sept. 27	8.84	Oct. 11	9.00
30	8.89	19	9.01	Oct. 3	8.91	18	8.84

Ch BC 140. Oliver Farm Implement Co., 423 East Michigan Avenue. About 150 feet northeast of Michigan Avenue and about 470 feet southeast of Union Street. Unused industrial well, diameter 6 inches, measured depth 73.6 feet below land surface. Measuring point, top of 4-inch tee, 2.8 feet below land-surface datum.

Water level, in feet below land-surface datum, 1946							
Nov. 6	22.32	Nov. 29	21.55	Dec. 13	21.81	Dec. 27	20.54
15	22.35	Dec. 6	21.97	20	21.73		

Ch BC 150. H. B. Sherman Manufacturing Co., 22 Barney Street. About 430 feet southeast of Washington Avenue and about 80 feet northeast of Kalamazoo Street. Unused industrial well, diameter 2 inches, measured depth 21.8 feet below land surface. Measuring point, top of 2-inch pipe, 3.20 feet above land-surface datum.

Water level, in feet below land-surface datum, 1946							
Aug. 22	16.51	Sept. 27	16.94	Nov. 1	17.21	Dec. 6	17.55
30	16.48	Oct. 3	16.95	8	16.90	13	17.11
Sept. 6	17.51	11	17.11	15	16.95	20	17.12
12	16.87	18	17.25	22	17.43	27	16.74
19	17.78	25	17.24	29	17.17		

Ch BC 160. Post Cereals Division, General Foods Corporation. 400 feet northwest of Angell Street and 240 feet southwest of Lafayette Street. Unused industrial well, diameter 10 inches, measured depth 91.9 feet below land surface. Measuring point, top of wooden recorder shelf, 0.95 foot above land-surface datum.

Water level at 2:00 a.m., in feet below land-surface datum, 1946												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	8.05	8.04	7.07	8.11	6.98	....	....	....	....	8.79	8.92
2	....	8.08	7.75	7.20	8.11	6.87	....	....	....	....	8.61	8.88
3	....	8.04	7.61	7.29	8.16	6.85	....	8.50	....	....	8.48	8.99
4	....	8.01	7.55	7.22	8.15	6.95	....	8.47	....	....	8.41	9.05
5	....	8.13	7.44	7.54	8.05	7.04	....	8.45	....	8.98	8.55	9.04
6	....	8.12	6.77	7.39	8.04	7.11	7.73	8.53	....	8.87	8.60	9.08
7	....	8.17	6.49	7.41	8.15	7.17	7.74	8.58	8.84	8.82	8.67	9.07
8	....	8.21	6.37	7.39	8.20	7.26	7.74	8.63	....	8.96	8.64	8.99
9	....	8.23	6.24	7.49	....	7.31	7.82	8.65	....	8.92	8.70	8.94
10	....	8.12	6.19	7.54	....	7.31	....	8.47	....	8.98	8.56	9.07
11	....	8.13	6.19	7.59	8.28	7.38	....	8.42	....	8.98	8.47	9.09



Ch BC 160--Continued.

Water level at 2:00 a.m., in feet below land-surface datum, 1946

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
12	....	8.21	6.24	7.61	8.22	7.45	....	8.37	....	....	8.63	9.09
13	....	8.20	6.32	7.62	8.20	7.52	7.97	8.52	8.71	....	8.70	8.70
14	....	8.13	....	7.60	8.29	....	7.95	8.59	8.71	....	8.70	8.60
15	....	8.18	....	7.56	8.33	7.61	7.95	8.61	8.68	....	8.75	8.41
16	....	8.13	....	7.70	8.35	7.54	8.02	....	8.65	....	8.73	8.35
17	....	8.00	....	7.73	8.26	7.53	8.06	8.64	8.77	....	8.68	8.52
18	7.40	7.92	....	7.74	8.24	7.62	8.09	....	8.82	....	8.63	8.58
19	7.50	7.94	....	7.79	7.94	7.61	8.14	....	....	....	8.79	8.67
20	7.46	7.98	....	7.82	7.73	7.53	....	....	....	....	8.86	8.67
21	7.48	8.04	....	7.80	7.72	7.52	8.14	....	....	....	8.87	8.65
22	7.63	8.02	6.70	7.76	7.70	7.56	8.09	....	....	....	8.88	8.57
23	7.70	8.05	6.75	7.86	7.71	7.51	8.18	8.68	....	....	8.93	8.53
24	7.75	8.00	6.70	7.89	7.75	7.46	8.25	8.67	....	....	8.84	8.68
25	7.85	8.02	6.75	7.95	7.76	7.55	8.29	8.63	....	....	8.82	8.62
26	7.92	8.07	6.85	7.98	7.56	7.64	8.30	....	....	8.70	8.96	8.58
27	7.85	8.10	6.90	8.02	7.49	7.70	8.33	....	....	8.70	9.00	8.73
28	7.84	....	6.95	8.01	7.56	....	8.32	....	....	8.67	9.01	8.75
29	7.97	....	7.03	7.97	7.59	....	8.32	....	....	8.73	8.90	8.59
30	7.99	....	7.10	8.06	7.62	7.72	8.39	8.75	....	8.81	9.01	8.58
31	8.00	....	7.11	....	7.57	....	....	....	....	8.76	....	8.71

Ch BC 168 (\*1023, p. 112). Guy Elliott. About 400 feet west of Waubascon Road and 2,600 feet south of Morley Road.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	26.72	Apr. 4	25.57	July 5	25.92	Oct. 3	27.10
11	26.48	11	25.52	12	26.07	11	27.20
18	26.35	18	25.54	20	26.22	18	27.21
25	26.31	25	25.58	26	26.30	25	27.20
Feb. 1	26.35	May 1	25.62	Aug. 2	26.39	Nov. 1	27.19
7	26.43	10	25.73	9	26.44	8	27.18
14	26.37	17	25.84	16	26.58	15	27.19
21	26.38	24	25.78	22	26.48	22	27.28
28	26.41	31	25.84	29	26.77	29	27.33
Mar. 7	26.03	June 7	25.63	Sept. 6	26.86	Dec. 6	27.34
14	25.76	14	25.75	12	26.91	13	27.31
21	25.62	21	25.76	19	26.94	20	27.27
28	25.56	28	25.78	26	27.02	27	27.29

Ch BC 170 (\*1023, p. 112). Honer Brewing Co. 39 feet north of Hamblin Street and 290 feet west of McCambly Street.

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

Jan.	4	7.76	Apr.	4	8.71	July	5	9.22	Oct.	3	10.01			
	11	7.30		11	8.70		12	10.37		11	9.95			
	18	8.45		18	9.13		20	10.40		18	9.63			
	25	8.90		25	9.36		26	10.20		25	9.84			
Feb.	1	8.39	May	1	9.76	Aug.	2	10.76	Nov.	1	9.94			
	7	8.58			10		9.53			9	10.71		8	9.66
	14	8.44			17		9.10			16	10.80		15	9.69
	21	8.21			24		9.25			22	9.89		22	9.57
	28	8.70		31	8.80		29	9.94		29	9.34			
Mar.	7	6.78	June	7	9.32	Sept.	6	10.63	Dec.	13	9.33			
	14	7.02			14		9.68			12	9.70		20	9.16
	21	7.32			21		9.20			19	10.64		27	9.23
	28	8.24			28		10.10			27	10.00			

Ch BC 172 (\*1023, p. 112). Kellogg Cereal Food Co. 90 feet north of Porter Street and 110 feet east of Stiles Street.

Ch BC 172--Continued.

Water level at 2:00 a.m., in feet below land-surface datum, 1946

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	37.51	40.74	43.30	38.35	40.48	36.92	.....	45.89	45.80	46.20	.....	.....
2	39.03	41.07	43.45	41.20	41.93	36.48	.....	40.66	.....	46.22	.....	.....
3	39.62	40.88	43.35	41.60	42.37	36.65	.....	45.90	39.51	46.16	.....	.....
4	40.22	39.56	43.05	41.65	42.75	41.05	.....	45.56	.....	45.37	.....	.....
5	40.50	40.45	42.60	41.50	42.55	41.65	.....	.....	.....	45.23	.....	.....
6	40.60	40.65	41.75	41.65	38.68	41.90	.....	.....	.....	45.38	.....	.....
7	37.85	40.85	41.25	41.72	42.37	42.30	.....	45.35	.....	45.51	.....	.....
8	40.05	40.80	40.73	38.55	42.82	42.62	.....	45.50	.....	45.47	.....	.....
9	40.10	40.95	40.20	.....	.....	42.90	.....	45.00	.....	46.16	.....	.....
10	40.12	40.97	40.16	41.65	.....	42.85	.....	46.00	45.30	.....	45.95	.....
11	40.10	39.52	39.20	42.15	43.25	43.03	.....	45.95	45.65	.....	45.10	.....
12	40.05	40.70	39.35	41.92	39.25	43.13	.....	40.60	45.75	46.20	45.25	.....
13	40.05	40.85	39.80	42.34	38.80	43.38	44.34	44.45	45.85	46.07	45.45	.....
14	37.36	41.00	39.60	42.55	42.65	43.50	44.35	45.33	45.65	.....	45.44	44.42
15	39.40	41.19	39.60	40.50	43.28	.....	45.87	45.48	45.97	.....	45.60	44.20
16	39.45	42.60	39.87	42.46	43.60	.....	44.60	45.73	45.30	.....	45.55	40.60
17	39.53	42.55	39.84	42.77	43.99	.....	44.75	.....	45.47	.....	45.25	43.70
18	39.78	39.65	37.05	42.85	43.97	.....	44.80	.....	.....	.....	44.95	44.10
19	40.00	42.55	39.67	43.25	43.50	.....	45.10	.....	.....	45.68	45.10	44.12
20	39.95	42.65	39.90	43.35	39.37	.....	.....	.....	46.22	45.55	45.25	44.37
21	37.40	42.95	40.75	40.75	.....	.....	45.25	.....	46.35	41.40	45.25	44.60
22	39.66	42.93	40.10	39.55	.....	44.37	44.60	.....	46.15	44.05	45.35	44.15
23	39.90	43.10	40.42	42.25	.....	44.17	45.00	46.05	.....	.....	45.30	43.80
24	40.03	43.20	40.48	42.77	.....	40.48	45.20	46.10	.....	.....	45.30	43.55
25	40.20	39.65	40.40	42.90	38.87	43.32	45.35	46.09	.....	.....	45.05	39.05
26	40.35	42.35	40.52	42.73	38.07	43.62	45.54	45.45	.....	45.92	44.37	38.30
27	40.44	42.65	40.65	42.85	38.32	43.98	45.30	45.85	.....	45.90	45.37	37.84
28	37.95	43.15	40.85	37.96	42.47	44.25	45.55	46.05	46.32	45.46	43.75	37.44
29	40.05	.....	40.97	37.02	42.82	.....	45.10	46.12	46.25	45.60	39.70	38.25
30	40.28	.....	41.25	37.53	43.15	.....	45.45	46.15	45.72	45.90	39.72	38.40
31	40.40	41.27	.....	37.55	.....	45.85	46.13	.....	46.10	.....	40.84	.....

## Battle Creek Township

Ch Bc 2 (\*886, pp. 267-268; 906, p. 58; \*936, pp. 60-61; 944, p. 60; \*986, p. 61; 1016, pp. 96-97; 1023, p. 111). City of Battle Creek. Armstrong test well 3 at Goguac pumping station of city waterworks. Measurements by C. A. Bunce, operator.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 3	22.1	Apr. 28	21.6	July 29	20.6	Nov. 1	19.0
24	22.3	June 2	21.6	Aug. 25	22.4	26	21.3
Mar. 30	21.6	July 7	20.6	Oct. 8	20.7	Dec. 25	21.6

The average daily withdrawal of water from wells at the Goguac pumping station in 1946 ranged from 0.75 million gallons in October to 1.53 million gallons in July and averaged 1.25 million gallons for the year.

Ch Bc 50. E. H. Arnett. 447 North Twenty-second Street. About 400 feet south of Upton Avenue and 700 feet west of Twenty-second Street. Unused driven well; diameter  $1\frac{1}{4}$  inches, measured depth 24.6 feet below land surface. Measuring point, top of  $1\frac{1}{4}$ -inch pipe, 1.75 feet below land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 12	6.64	Oct. 1	6.84	Nov. 8	6.19	Dec. 6	6.26
19	6.76	18	6.60	15	6.21	13	5.64
26	6.73	25	6.51	22	6.18	20	5.59
Oct. 3	6.32	Nov. 1	6.38	29	6.24	27	5.68

Ch Bc 55. Dominic Conto, 630 Upton Avenue. About 200 feet north of Upton Avenue and 30 feet west of Twentieth Street. Unused driven well, diameter 2 inches, measured depth 11.6 feet below land surface. Measuring point, top of 1½-inch nipple, 2.8 feet above land-surface datum.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 29	6.86	Oct. 3	7.27	Nov. 8	6.41	Dec. 6	6.18
Sept. 6	7.08	11	7.30	15	6.36	13	5.78
12	6.95	18	7.21	22	6.32	20	5.84
19	7.16	25	6.82	29	6.19	27	5.95
26	7.19	Nov. 1	6.78				

Ch Bc 60. Eaton Manufacturing Co. About 490 feet north of Avenue C and 30 feet west of Twentieth Street. Drilled fire well, diameter 10 inches, measured depth 79.0 feet below land surface. Measuring point, invert of 3-inch nipple, 1.25 feet above land-surface datum.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 22	19.26	Sept. 26	20.07	Nov. 1	20.01	Dec. 6	19.97
30	19.80	Oct. 3	20.23	8	19.72	13	19.67
Sept. 6	20.03	10	20.13	15	19.90	20	19.62
12	20.00	18	20.14	22	19.82	27	19.27
19	20.22	25	19.96				

Ch Bc 137 (\*1023, p. 112). City of Battle Creek. About 530 feet west of Capital Avenue, S.W., and 70 feet north of George B. Place. Measuring point beginning Apr. 18, 1946, is cover seat on manhole frame, 0.56 foot above old measuring point and 0.56 foot above land-surface datum.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	12.48	Apr. 4	11.17	July 5	10.46	Oct. 4	12.83
11	12.15	11	11.22	12	10.84	11	12.85
18	11.95	18	11.33	20	11.20	18	12.86
25	11.95	25	11.39	26	11.43	25	12.68
Feb. 1	12.09	May 1	11.26	Aug. 2	11.65	Nov. 1	12.42
7	12.14	10	11.34	9	11.98	8	12.22
14	12.18	17	11.51	16	12.34	15	12.28
21	12.17	24	10.88	22	12.57	22	12.41
28	12.20	31	10.58	29	12.69	29	12.56
Mar. 7	11.75	June 7	10.34	Sept. 6	12.68	Dec. 6	12.68
14	11.35	14	10.37	12	12.63	13	12.70
21	11.30	21	10.34	19	12.65	20	12.64
28	11.15	28	10.43	26	12.79	27	12.67

Ch Bc 169 (\*1023, p. 112). Phillip E. Slayton. Formerly owned by Ernie Smith. About 70 feet west of Twentieth Street and 100 feet south of Avenue A (erroneously reported in 1945 report as Upton Avenue).

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	6.80	Apr. 4	5.14	July 5	7.56	Oct. 3	8.25
11	6.23	11	5.23	12	7.84	11	8.23
18	5.95	18	5.59	20	8.40	18	8.17
25	5.93	25	6.35	26	8.19	25	8.04
Feb. 1	6.08	May 1	6.77	Aug. 2	9.39	Nov. 1	7.88
7	6.22	10	6.32	9	7.44	8	7.81
14	6.31	17	6.27	16	8.59	22	7.64
21	6.22	24	5.84	22	8.15	29	7.76
28	6.39	31	6.09	30	8.03	Dec. 6	7.73
Mar. 7	5.18	June 7	5.86	Sept. 6	9.33	13	7.50
14	4.88	14	6.05	12	8.06	20	7.46
21	4.74	21	5.46	19	8.35	27	7.85
28	5.08	28	6.44	26	8.12		

## Emmet Township

Ch Em 10. 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 1.3 miles east of Raymond Avenue. Unused farm well, diameter 6 inches, measured depth 90.0 feet below land surface. Measuring point, top of 6-inch casing, 5.7 feet below land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 12	15.00	Oct. 11	15.20	Nov. 8	15.30	Dec. 6	15.41
19	15.07	18	15.23	15	15.28	13	15.40
26	15.09	25	15.25	22	15.34	20	15.37
Oct. 4	15.16	Nov. 1	15.25	29	15.38	27	15.44

Ch Em 60 (\*1023, p. 111). City of Battle Creek test well. 58 feet south of Golden Avenue and 530 feet west of Union City Road.

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

Jan. 4	1.54	Apr. 4	1.32	July 5	2.21	Oct. 4	3.02
11	1.04	11	1.46	12	2.50	10	2.99
18	1.51	18	1.57	20	2.62	18	2.48
25	1.94	25	1.88	26	2.70	25	2.65
Feb. 1	1.84	May 1	1.86	Aug. 2	2.86	Nov. 1	2.45
7	1.66	10	1.97	9	2.58	8	2.77
14	1.40	17	1.93	16	2.90	15	2.46
21	1.71	24	1.60	22	2.96	22	2.48
28	1.88	31	1.56	29	3.10	29	2.53
Mar. 7	.25	June 7	1.65	Sept. 6	3.11	Dec. 6	2.70
14	.64	13	1.71	12	2.92	13	1.85
21	.78	21	1.77	19	3.08	20	2.08
28	1.07	28	2.06	26	3.00	27	2.09

Ch Em 64 (\*1023, p. 112). City of Battle Creek test well. About 350 feet east of Overton Street and 1,060 feet north of Golden Avenue.

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

Jan. 4	9.46	Apr. 4	9.24	July 5	10.23	Oct. 4	11.17
11	9.04	11	9.44	12	10.39	11	11.22
18	9.20	18	9.63	20	10.57	18	11.09
25	9.27	25	9.83	26	10.68	25	11.04
Feb. 1	9.00	May 1	9.97	Aug. 2	10.78	Nov. 1	10.98
7	9.22	10	10.10	9	10.86	8	10.87
14	9.68	17	10.07	16	10.95	15	10.90
21	9.43	24	9.75	22	10.97	22	10.98
28	9.80	31	9.79	29	11.05	29	11.09
Mar. 7	8.44	June 7	9.42	Sept. 6	11.17	Dec. 6	11.12
14	8.14	14	9.77	12	11.06	13	10.78
21	8.46	21	9.90	19	11.18	20	10.57
28	8.85	28	10.07	26	11.20	27	10.75

## Pennfield Township

Ch Pr 1 (\*886, p. 267; 906, p. 58; \*936, pp. 59-60; 944, pp. 59-60; \*986, pp. 60-61; 1016, p. 96; \*1023, p. 110). City of Battle Creek. Well 22 at Verona pumping station of city waterworks. Measurements by Kenneth E. Garvey, Chief operator.

## Water level at 2:00 a.m., in feet below land-surface datum, 1946

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	5.23	a5.15	5.10	....	....	5.11	....	....	7.32	5.96	6.49	6.01
2	5.23	5.61	5.07	....	a6.42	4.70	....	a7.48	7.01	6.16	6.62	6.01
3	6.02	5.30	....	....	5.84	4.82	....	....	6.59	6.41	6.53	6.06
4	5.42	5.09	a4.00	a5.10	4.96	5.48	....	....	7.12	6.51	6.33	6.96
5	5.76	5.96	3.81	4.71	4.85	5.41	a5.88	a7.37	7.33	6.41	6.40	6.11
6	5.26	5.19	4.76	5.10	4.74	5.39	5.86	7.71	a8.32	8.56	6.66	6.09

a Wetted-tape measurement.

## Ch Pf 1--Continued.

Water level at 2:00 a.m., in feet below land-surface datum, 1946

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
7	5.06	6.14	4.69	5.06	5.10	4.97	6.56	7.73	7.21	6.54	6.88	6.21
8	5.11	5.33	4.27	4.56	....	5.38	6.41	7.96	6.91	7.26	6.59	6.08
9	4.91	5.31	4.13	4.60	....	4.46	6.81	7.68	6.21	6.96	6.36	5.93
10	5.10	5.30	4.16	4.69	a6.08	4.75	....	5.71	6.61	6.41	6.11	6.59
11	5.51	5.08	4.18	5.01	4.95	5.51	....	6.24	6.61	a7.25	6.18	6.19
12	5.12	6.11	4.11	4.71	5.01	5.34	a6.16	6.16	6.21	6.35	6.04	6.21
13	5.46	5.26	4.23	4.64	4.93	5.56	....	6.21	6.11	6.24	6.06	6.86
14	4.98	5.26	4.26	4.61	5.86	5.54	....	7.36	6.26	6.20	6.06	5.88
15	5.36	5.39	3.85	4.52	5.79	5.63	....	6.99	6.29	6.24	6.21	5.92
16	5.53	5.33	3.93	4.59	4.46	5.36	....	6.51	6.04	6.28	6.31	5.98
17	5.52	....	4.21	....	a5.04	5.13	....	6.91	6.99	6.43	6.03	6.11
18	5.21	....	4.27	a5.28	4.97	4.80	....	6.61	6.50	6.33	5.88	5.86
19	....	....	4.43	5.51	5.20	4.76	....	6.02	6.18	6.28	6.01	6.71
20	....	....	4.60	4.74	4.69	4.66	a6.68	6.98	6.31	6.21	6.03	5.93
21	....	....	4.46	4.72	4.98	4.66	....	6.61	6.24	5.80	6.31	5.92
22	a4.91	a5.32	4.21	4.60	4.82	4.99	....	6.88	6.26	6.16	6.83	6.23
23	5.01	5.19	....	6.03	5.08	4.66	....	6.43	5.93	6.51	6.01	6.09
24	4.91	5.28	....	....	4.91	5.44	....	7.16	5.79	6.61	6.52	6.16
25	4.91	5.16	a5.04	a5.71	5.01	4.85	6.76	6.21	6.41	6.71	6.00	5.91
26	5.78	5.46	5.06	....	4.88	4.88	a6.70	7.01	6.46	6.58	5.93	5.62
27	5.08	5.28	a4.84	....	4.76	5.55	6.86	7.56	6.53	5.68	5.91	5.96
28	4.92	5.27	4.94	....	5.11	5.40	....	7.16	6.60	6.52	6.20	5.86
29	5.21	....	a5.20	....	5.87	....	....	7.01	6.46	6.36	5.98	5.86
30	....	....	....	....	5.80	....	....	7.10	5.96	6.25	5.81	5.91
31	....	....	....	....	a5.59	....	....	7.15	....	6.91	....	6.51

a Wetted-tape measurement.

The average daily withdrawal of water from wells at the Verona pumping station in 1946 ranged from 4.01 million gallons in April to 7.71 million gallons in July and averaged 5.01 million gallons for the year.

Ch Pf 58 (\*1023, p. 111). City of Battle Creek test well. 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	2.92	May 1	2.35	July 26	3.50	Oct. 18	3.85
11	2.74	10	2.34	Aug. 2	3.69	25	4.01
18	2.70	17	2.37	9	3.76	Nov. 1	4.03
25	2.80	24	2.51	16	3.78	8	4.04
Feb. 1	2.81	31	2.42	22	3.74	15	4.06
7	2.83	June 7	2.35	29	3.84	22	3.88
14	2.80	14	2.35	Sept. 6	3.95	29	3.86
21	2.79	21	2.38	12	3.91	Dec. 6	3.86
28	2.83	28	2.67	19	3.96	13	3.76
Mar. 7	2.63	July 5	2.83	26	3.94	20	3.74
14	2.43	12	3.10	Oct. 3	3.97	27	3.73
28	2.38	20	3.31	11	3.99		

Ch Pf 102. Kenneth N. Sabin, 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 730 feet east of State Highway M-66. Unused dug well, diameter 15 inches, measured depth 7.7 feet below land surface. Measuring point, top of 15-inch tile pipe, 1.50 feet above land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 12	4.48	Oct. 18	4.62	Nov. 15	4.69	Dec. 6	4.88
26	4.58	25	4.69	22	4.70	13	4.82
Oct. 3	4.59	Nov. 1	4.65	29	4.83	26	4.90
10	4.64	8	4.71				

Ch Pf 105. Mrs. Harriet Rice, 1601 Capital Ave. 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. Unused drilled well, diameter 2 inches, measured depth 43.2 feet below land surface. Measuring point, top of 2-inch pipe, 1.05 feet above land-surface datum.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	12.91	Apr. 4	11.60	July 12	13.52	Oct. 10	14.54
4	12.92	11	11.66	20	13.83	18	14.38
11	12.57	18	11.72	26	14.01	25	14.55
18	11.97	25	11.78	Aug. 2	14.25	Nov. 1	14.66
25	12.34	May 10	12.14	9	14.49	8	14.69
Feb. 1	12.38	17	12.31	16	14.47	15	14.71
7	12.46	24	12.35	22	14.35	22	14.14
14	12.50	31	12.54	29	14.42	29	14.09
21	12.53	June 7	12.42	Sept. 6	14.48	Dec. 6	14.04
28	12.61	14	12.52	13	14.50	13	14.03
Mar. 7	12.34	21	12.50	19	14.53	20	13.93
14	11.91	28	12.84	26	14.39	26	13.89
28	11.67	July 5	13.14	Oct. 3	14.45		

Ch Pf 106 (\*1023, p. 112). W. E. Beadle, 163 Pennfield Boulevard. About 63 feet north of Pennfield Boulevard and 120 feet west of Kimball Avenue. Well reported in 1945 as Ch 167. Placed in service and measurements discontinued Mar. 21, 1946.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	12.94	Jan. 25	12.49	Feb. 14	12.77	Mar. 7	12.26
11	12.75	Feb. 1	12.60	21	12.83	14	11.79
18	12.45	7	12.71	28	12.80		

Ch Pf 108. 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. Unused drilled well, diameter 2 inches, measured depth 39.2 feet below land surface. Measuring point, top of 2-inch pipe, 2.00 feet above land-surface datum.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	7.95	Apr. 4	5.47	July 5	7.93	Oct. 3	9.35
4	7.98	11	6.70	12	8.18	10	9.39
11	7.16	18	6.89	20	8.44	18	9.37
18	6.36	25	7.06	26	8.57	25	9.39
25	7.08	May 1	7.20	Aug. 2	8.76	Nov. 1	9.41
Feb. 1	7.39	10	7.37	9	8.93	8	9.41
7	7.50	17	7.52	16	9.04	15	9.40
14	7.63	24	7.58	22	9.08	22	9.30
21	7.72	31	7.67	29	9.16	29	9.27
28	7.78	June 7	7.22	Sept. 6	9.22	Dec. 5	9.26
Mar. 7	6.33	14	7.45	13	9.28	13	9.21
14	5.50	21	7.59	19	9.29	20	9.09
28	6.15	28	7.74	26	9.31	26	9.06

Ch Pf 110. 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. Unused drilled well, diameter 2 inches, reported depth 200+ feet below land surface. Measuring point, top of 2-inch pipe, 1.75 feet above land-surface datum.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 12	55.37	Oct. 11	55.59	Nov. 8	55.77	Dec. 6	55.93
19	55.40	18	55.66	15	55.83	13	55.94
26	55.47	25	55.70	22	55.84	20	55.92
Oct. 3	55.51	Nov. 1	55.68	29	55.90	27	55.96

Cass County

## Mason Township

Cs Ma 1 (\*1023, p. 113). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	53.20	Apr. 7	53.03	July 7	52.93	Oct. 6	53.44
13	53.27	14	52.96	14	52.98	13	53.50
20	53.50	21	52.99	21	53.02	20	53.53
27	53.40	28	52.94	28	53.09	27	53.63
Feb. 3	53.41	May 5	52.94	Aug. 4	53.07	Nov. 3	53.63
10	53.37	12	52.89	12	53.15	10	53.66
17	53.37	19	52.90	18	53.18	17	53.77
24	53.39	26	52.90	25	53.23	24	53.60
Mar. 3	53.35	June 2	52.91	Sept. 1	53.27	Dec. 1	53.81
10	53.45	9	52.98	8	53.28	8	53.82
17	53.52	16	52.88	15	53.28	15	53.88
24	53.15	22	52.95	22	53.35	22	53.83
31	53.14	27	52.95	29	53.35	29	53.88

Charlevoix County

## Hudson Township

Cv Hu 1 (\*840, pp. 125, 126; 845, p. 153; 886, p. 268; 906, p. 58; 936, p. 61; 944, p. 61; 986, p. 61; 1016, p. 97; 1023, p. 113). SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 1, T. 32 N., R. 4 W. No measurements made in 1946.

Cv Hu 33 (\*840, pp. 125, 126; 845, p. 153; 886, p. 268; 906, p. 58; 936, p. 61; 944, p. 61; 986, p. 61; 1016, p. 97; 1023, p. 113). NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 10, T. 32 N., R. 4 W. No measurements made in 1946.

Cv Hu 34 (\*840, pp. 125, 126; 845, p. 153; 936, p. 61; 944, p. 61; 986, p. 61; 1016, p. 97; 1023, p. 113). NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 4, T. 32 N., R. 4 W. No measurements made in 1946.

## Chandler Township

Cv Ch 31 (\*840, pp. 125, 127-128; 845, p. 153; 886, p. 268; 936, p. 61; 944, p. 61; 986, p. 62; 1016, p. 97; 1023, p. 113). NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 36, T. 33 N., R. 4 W. No measurements made in 1946.

## Melrose Township

Cv Mr 12 (\*840, pp. 125, 128; 845, p. 153; 886, p. 268; 906, p. 58; 936, p. 61; 944, p. 61; 986, p. 62; 1016, p. 97; 1023, p. 113). NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 4, T. 33 N., R. 5 W. No measurements made in 1946.

Cheboygan County

## Nunda Township

Cb Nd 5 (\*886, p. 268; 906, p. 59; 936, p. 61; 944, p. 61; \*986, p. 62; 1016, p. 97; 1023, p. 113). SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 27, T. 33 N., R. 1 E. No measurements made in 1946.

Cb Nd 7 (\*840, pp. 129, 130; 845, p. 153; 886, p. 268; 906, p. 59; 936, p. 61; 944, p. 61; \*986, p. 62; 1016, p. 97; 1023, p. 113). NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 28, T. 33 N., R. 1 E. No measurements made in 1946.

Cb Nd 8 (\*840, pp. 129, 130; 845, p. 153; 886, p. 268; 906, p. 59; 936, p. 61; 944, p. 61; \*986, p. 62; 1016, p. 97; 1023, p. 113). NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 29, T. 33 N., R. 1 E. No measurements made in 1946.

Cb Nd 17 (\*840, pp. 129, 130; 845, p. 153; 886, p. 268; 906, p. 59; 936, p. 61; \*986, p. 62; 1016, p. 97; 1023, p. 113). NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 23, T. 33 N., R. 1 E. No measurements made in 1946.

Cb Nd 2 (\*840, pp. 129-130; 845, p. 153; 886, p. 268; 906, p. 59; 936, p. 61; 944, p. 61; \*986, p. 62; 1016, p. 97; 1023, p. 113). SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 3, T. 33 N., R. 1 W. No measurements made in 1946.

Cb Nd 4 (\*840, pp. 129-130; 845, p. 153; 886, p. 268; 906, p. 59; 936, p. 61; 944, p. 61; \*986, p. 62; 1016, p. 97; 1023, p. 114). SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 10, T. 33 N., R. 1 W. No measurements made in 1946.

Cb Nd 11 (\*840, pp. 129-130; 845, p. 153; 886, p. 268; 906, p. 59; 936, p. 61; 986, p. 62; 1016, p. 97; 1023, p. 114). NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 25, T. 33 N., R. 1 W. No measurements made in 1946.

#### Walker Township

Cb Wk 11 (\*845, p. 153; \*886, p. 268; 906, p. 59; 936, p. 61; 944, p. 61; \*986, p. 62; 1016, p. 98; 1023, p. 114). NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 1, T. 34 N., R. 1 W. No measurements made in 1946.

Cb Wk 33 (\*840, pp. 129, 130-131; 845, p. 153; 886, p. 268; 906, p. 59; 936, p. 61; 944, p. 61; \*986, p. 62; 1016, p. 98; 1023, p. 114). SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 26, T. 34 N., R. 1 W. No measurements made in 1946.

#### Clinton County

##### DeWitt Township

Ct Dw 159 (\*1023, p. 114). Michigan Department of Health Quarantine Farm. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 32, T. 5 N., R. 2 W. 220 feet west of DeWitt Road and 670 feet north of Sheridan Road. Measured depth 135.5 feet below land surface. Erroneously reported in 1945 as Biological Laboratory.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	48.31	Apr. 6	46.58	July 6	50.76	Oct. 5	50.81
12	48.01	13	47.43	12	51.36	12	50.63
19	48.08	20	47.77	19	51.45	19	50.86
26	47.66	27	47.90	26	52.57	26	51.10
Feb. 2	47.57	May 2	48.22	Aug. 3	53.73	Nov. 2	50.78
9	47.48	11	48.71	10	54.85	9	50.81
16	47.37	18	48.41	17	53.40	16	51.31
23	47.44	25	48.11	24	53.43	23	51.43
Mar. 2	47.49	31	48.20	31	52.56	30	51.47
9	47.30	June 8	48.90	Sept. 7	51.00	Dec. 7	51.19
15	47.12	15	48.96	14	51.63	14	50.94
23	46.51	22	48.84	21	52.49	21	50.67
30	46.13	29	50.45	28	51.72	30	50.72

#### Crawford County

##### Beaver Creek Township

Cr Bc 1 (\*840, pp. 133, 136; \*886, pp. 268, 269; 906, p. 59; 936, pp. 61-62; 944, p. 61; \*986, p. 62; 1016, p. 98; 1023, p. 114). SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 29, T. 25 N., R. 3 W.

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

Jan. 14	9.65	Apr. 15	9.35	July 16	9.94	Oct. 16	10.34
Feb. 26	9.86	May 16	9.57	Aug. 15	10.11	Nov. 14	10.35
Mar. 18	9.00	June 13	9.72	Sept. 17	10.25	Dec. 18	10.40



## 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). NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 2, T. 27 N., R. 4 W.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	4.98	Apr. 12	4.79	July 15	5.02	Oct. 15	5.58
Feb. 25	5.33	May 17	5.08	Aug. 14	5.43	Nov. 11	5.57
Mar. 15	4.29	June 14	5.15	Sept. 16	5.50	Dec. 17	5.60

Cr Fr 2 (\*886, pp. 268, 269; 906, p. 60; 936, p. 62; 944, p. 63; \*986, p. 64; 1016, p. 100; 1023, p. 117). NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 14, T. 27 N., R. 4 W.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	12.22	Apr. 12	11.84	July 15	12.24	Oct. 15	13.12
Feb. 25	12.55	May 17	12.14	Aug. 14	12.67	Nov. 11	13.26
Mar. 15	11.79	June 14	12.23	Sept. 16	12.95	Dec. 17	13.35

Cr Fr 3 (\*845, p. 155; 886, p. 269; 906, p. 60; 936, p. 62; 986, p. 65; 1016, p. 100; 1023, p. 117). SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 14, T. 28 N., R. 4 W.  
No measurements made in 1946.

## Grayling Township

Cr Gr 1 (\*840, pp. 134, 137; 845, p. 154; 886, p. 269; 906, p. 59; 936, pp. 61-62; 944, p. 61; \*986, p. 63; 1016, p. 98; 1023, p. 115). SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 12, T. 26 N., R. 2 W.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	2.03	Apr. 12	2.02	July 15	2.14	Oct. 15	2.10
Feb. 25	2.06	May 17	2.03	Aug. 16	2.17	Nov. 11	1.98
Mar. 15	1.93	June 14	2.08	Sept. 16	2.14	Dec. 17	2.05

Cr Gr 2 (\*840, pp. 134, 137-138; 845, p. 154; 886, p. 269; 906, p. 59; 936, pp. 61-62; 944, p. 61; \*986, p. 63; 1016, p. 98; 1023, p. 115). NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 19, T. 26 N., R. 3 W.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	9.62	Apr. 15	9.26	July 16	9.93	Oct. 16	10.71
Feb. 28	9.93	May 16	9.58	Aug. 15	10.52	Nov. 14	10.72
Mar. 18	8.84	June 13	9.73	Sept. 17	10.65	Dec. 18	10.72

Cr Gr 3 (\*840, pp. 134, 137-138; 845, p. 154; 886, p. 269; 906, p. 59; 936, pp. 61-62; 944, pp. 61-62; \*986, p. 63; 1016, p. 98; 1023, p. 115). SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 12, T. 26 N., R. 3 W.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	7.66	Apr. 12	7.18	July 15	7.85	Oct. 15	8.50
Feb. 25	7.98	May 17	7.53	Aug. 16	8.09	Nov. 11	8.64
Mar. 15	7.45	June 14	7.70	Sept. 16	8.33	Dec. 17	8.78

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). NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 6, T. 26 N., R. 4 W.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	0.70	Apr. 12	1.01	July 15	2.43	Oct. 15	3.69
Feb. 25	1.72	May 17	1.68	Aug. 14	3.30	Nov. 11	3.77
Mar. 15	a .18	June 14	2.12	Sept. 16	3.25	Dec. 17	3.70

a Above land surface.

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; pp. 98-99, 1023, p. 115). NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 10, T. 26 N., R. 4 W.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	4.04	Apr. 12	4.30	July 15	5.62	Oct. 15	6.47
Feb. 25	4.89	May 17	5.05	Aug. 14	6.64	Nov. 11	6.20
Mar. 15	3.31	June 14	5.21	Sept. 16	6.44	Dec. 17	5.78

Cr Gr 6 (\*986, pp. 63-64; 1016, p. 99; 1023, p. 115). 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, 1946

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	6.39	6.12	6.37	5.47	6.16	6.27	6.78	7.57	8.26	7.95	7.93	7.35
2	6.40	6.13	6.35	5.49	6.19	6.29	6.41	7.59	8.27	7.93	7.92	7.35
3	6.41	6.16	6.27	5.52	6.22	6.31	6.40	7.63	8.28	7.92	7.91	7.35
4	6.42	6.18	6.23	5.55	6.25	6.34	6.41	7.67	8.29	7.92	7.90	7.35
5	6.43	6.20	6.23	5.56	6.27	6.37	6.45	7.70	8.30	7.92	7.87	7.35
6	5.85	6.21	6.21	5.56	6.29	6.40	6.50	7.74	8.31	7.92	7.86	7.35
7	5.56	6.00	5.01	5.57	6.31	6.42	6.57	7.77	8.32	7.92	7.84	7.34
8	5.56	6.01	4.91	5.60	6.33	6.43	6.63	7.81	8.33	7.93	7.83	7.34
9	5.58	6.01	4.91	5.61	6.34	6.46	6.68	7.85	8.33	7.93	7.81	7.33
10	5.50	6.02	4.96	5.63	6.36	6.48	6.74	7.88	8.26	7.93	7.79	7.32
11	5.50	6.04	5.04	5.65	6.37	6.51	6.79	7.91	8.12	....	7.74	7.32
12	5.52	6.06	5.09	5.67	6.39	6.53	6.83	7.94	7.99	7.94	7.66	7.32
13	5.55	6.08	4.88	5.68	6.40	6.56	6.86	7.96	7.97	7.95	7.61	....
14	5.59	6.10	4.75	5.70	6.42	....	6.90	7.98	7.95	7.95	7.58	7.31
15	5.61	6.12	4.73	5.72	6.43	6.60	6.93	8.01	7.94	7.95	7.56	7.30
16	5.66	6.15	4.75	5.74	6.45	6.63	6.98	8.03	7.94	7.96	7.55	7.30
17	5.70	6.17	4.81	5.77	6.46	6.64	7.02	8.05	7.94	7.96	7.54	7.30
18	5.73	6.19	4.90	5.80	6.47	6.58	7.06	8.07	7.95	7.96	7.52	7.30
19	5.76	6.22	4.98	5.83	6.49	6.52	7.10	8.09	7.96	7.96	7.50	7.31
20	5.80	6.23	5.05	5.85	6.44	6.52	7.14	8.11	....	7.96	7.48	7.31
21	5.83	6.25	5.11	5.88	6.13	6.53	7.18	8.13	7.98	7.97	7.46	7.32
22	5.87	6.27	5.16	5.91	6.12	6.53	7.22	8.14	7.99	7.97	7.45	7.32
23	5.90	6.29	5.20	5.94	6.13	6.55	7.25	....	8.00	7.97	7.45	7.33
24	5.93	6.30	5.24	5.96	6.14	6.57	7.29	8.17	8.01	7.98	7.44	7.33
25	5.96	6.32	5.28	5.99	6.14	6.60	7.32	8.18	8.01	7.98	7.43	7.34
26	5.98	6.32	5.32	6.02	6.14	6.63	7.36	8.19	8.00	7.98	7.41	7.34
27	6.01	6.34	5.34	6.04	6.15	6.67	7.39	8.21	7.99	7.98	7.39	7.35
28	6.03	6.35	5.36	6.07	6.17	6.71	7.43	8.22	7.98	7.97	7.38	7.35
29	6.06	....	5.38	6.10	6.19	6.74	7.46	8.23	7.98	7.96	7.37	7.30
30	6.08	....	5.41	6.13	6.21	6.76	7.50	8.24	7.97	7.95	7.36	7.30
31	6.10	....	5.43	....	6.25	....	7.53	8.25	....	7.93	....	....

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). NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 5, T. 26 N., R. 4 W.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	3.71	Apr. 12	3.56	July 15	4.74	Oct. 15	6.18
Feb. 25	4.42	May 17	4.19	Aug. 14	5.80	Nov. 11	6.24
Mar. 15	2.90	June 14	4.46	Sept. 16	5.86	Dec. 17	6.11

## 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). Formerly well 22. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 20, T. 27 N., R. 1 W.

## Cr Lv 1--Continued.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	2.92	Apr. 12	2.49	July 15	2.47	Oct. 15	4.38
Feb. 25	3.56	May 17	3.02	Aug. 16	3.64	Nov. 11	4.57
Mar. 15	2.28	June 14	3.22	Sept. 16	4.34	Dec. 17	4.89

Cr Lv 2 (\*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). Formerly well 27. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 22, T. 27 N., R. 1 W.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	4.58	Apr. 12	4.32	July 15	4.89	Oct. 15	5.57
Feb. 25	4.98	May 17	4.68	Aug. 16	5.20	Nov. 11	5.68
Mar. 15	3.69	June 14	4.86	Sept. 16	5.38	Dec. 17	5.85

Cr Lv 3 (\*840, pp. 134, 139-140; 845, p. 154; 886, p. 269; 906, p. 60; 936, p. 64; 944, p. 62; \*986, p. 64; \*1016, p. 99; 1023, p. 116). Formerly well 8. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 4, T. 27 N., R. 1 W.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	3.52	Apr. 12	3.49	July 15	3.71	Oct. 15	3.70
Feb. 25	3.78	May 17	3.68	Aug. 16	3.95	Nov. 11	4.01
Mar. 15	2.96	June 14	3.77	Sept. 16	3.92	Dec. 17	4.07

Cr Lv 4 (\*840, pp. 135, 141-142; 845, p. 154; 886, p. 269; 906, p. 60; 936, p. 62; 944, p. 63; \*986, p. 65; 1016, p. 100; 1023, p. 117). Formerly well 6. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 8, T. 28 N., R. 1 W.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	5.83	Apr. 12	5.37	July 15	6.04	Oct. 15	7.37
Feb. 25	6.28	May 17	5.89	Aug. 16	6.65	Nov. 11	7.63
Mar. 15	5.16	June 14	6.16	Sept. 16	7.04	Dec. 17	7.92

Cr Lv 5 (\*840, pp. 135, 141-142; 845, p. 154; 886, p. 269; 906, p. 60; 936, p. 62; 944, p. 63; \*986, p. 65; 1016, p. 100; 1023, p. 117). Formerly well 18. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 20, T. 28 N., R. 1 W.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	5.07	Apr. 12	4.64	July 15	5.20	Oct. 15	6.38
Feb. 25	5.54	May 17	5.22	Aug. 14	5.70	Nov. 11	6.58
Mar. 15	3.64	June 14	5.46	Sept. 16	6.10	Dec. 17	6.73

Cr Lv 6 (\*986, p. 65; 1016, p. 100; 1023, p. 117). Formerly well 2. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 30, T. 28 N., R. 2 W.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	2.62	Apr. 12	2.57	July 15	3.18	Oct. 15	4.03
Feb. 25	3.25	May 17	3.07	Aug. 14	3.90	Nov. 11	3.87
Mar. 15	1.60	June 14	3.23	Sept. 17	3.94	Dec. 17	3.76

Eaton County

## Delta Township

Ea Dt 214 (\*1023, p. 117). John Schneesberger. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 10, T. 4 N., R. 3 W. 160 feet west of Creitz Road (previously known as Delta Mills Road), and 0.5 mile north of Saginaw Street. Measured depth is 120.6 feet below land surface.

Ea Dt 214--Continued.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	31.95	Apr. 6	31.32	July 6	31.87	Oct. 5	33.04
15	31.22	13	31.35	12	31.94	12	33.00
19	31.90	20	31.53	19	32.09	19	33.16
26	31.72	27	31.44	26	32.32	26	33.14
Feb. 2	31.75	May 2	31.59	Aug. 3	32.50	Nov. 2	33.12
9	31.68	11	31.48	10	32.31	9	33.35
16	31.75	18	31.24	17	32.04	16	33.14
23	31.71	25	31.47	24	32.10	23	33.96
Mar. 2	31.65	31	31.44	31	32.54	30	33.58
9	31.39	June 8	31.53	Sept. 7	32.79	Dec. 7	33.34
15	31.29	15	31.83	14	32.83	21	33.34
23	31.35	22	31.78	21	32.77	27	33.45
30	31.33	29	32.01	28	32.97		

Ea Dt 215 (\*1023, p. 118). Bernard B. Bosworth. SW $\frac{1}{4}$ SW $\frac{1}{4}$  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, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	10.04	Apr. 6	9.24	July 6	11.70	Oct. 12	15.00
13	9.91	13	9.72	19	12.19	19	15.11
19	10.10	20	10.01	26	12.42	26	15.28
26	9.60	27	10.26	Aug. 3	12.41	Nov. 2	15.37
Feb. 2	10.28	May 2	10.70	10	12.45	9	15.46
9	10.55	11	10.82	17	13.30	16	15.60
16	10.71	18	11.16	24	13.60	23	14.88
23	11.03	25	10.83	31	13.58	30	15.55
Mar. 2	11.12	31	10.70	Sept. 7	14.07	Dec. 7	15.85
9	9.67	June 8	10.86	14	14.35	14	15.54
15	8.00	15	11.25	21	14.43	21	15.85
23	7.99	22	11.20	28	14.71	27	15.81
30	8.56	29	11.49	Oct. 5	14.93		

Ea Dt 217 (\*1023, p. 118). F. B. Marsh. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 24, T. 4 N., R. 3 W. 250 feet northwest of U. S. Highway 27 and 300 feet southwest of Waverly Road.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	0.72	Apr. 6	3.93	July 6	14.70	Oct. 5	18.03
11	1.15	13	7.95	12	15.11	12	18.08
19	2.31	20	9.60	20	15.50	19	18.02
26	3.87	27	10.17	26	15.59	25	18.10
Feb. 2	7.25	May 2	11.08	Aug. 3	15.74	Nov. 2	18.05
9	8.29	11	12.48	10	16.69	9	18.10
16	9.74	18	13.09	17	16.55	16	18.16
23	10.26	25	12.71	24	16.68	23	18.20
Mar. 2	11.09	31	12.13	31	17.67	30	18.34
9	.65	June 8	12.88	Sept. 7	17.71	Dec. 7	18.29
15	.34	15	13.57	14	17.83	14	18.11
23	1.65	22	14.01	21	17.88	21	18.20
30	2.48	29	15.14	28	17.95	30	18.27

Ea Dt 218 (\*1023, p. 118). Marlon B. Matthews. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 27, T. 4 N., R. 3 W. 150 feet east of Delta Center Road and 300 feet north of Holmes Road. Measurements discontinued after Oct. 1945.

Genesee County

## City of Flint

Ge FL 353. City of Flint, community well. Southwest corner of Barney Avenue and Brandon Street. Unused domestic well, diameter 3 inches, measured depth 73.7 feet below land surface. Measuring point, top of 3-inch casing, 1.45 feet above land-surface datum.

## Ge FL 353--Continued.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 5	55.95	Sept. 27	55.95	Oct. 24	55.83	Dec. 6	55.38
12	55.97	Oct. 4	56.08	Nov. 7	55.82	12	55.58
20	55.89	17	55.98	15	55.79		

Ge FL 491. Consumers Power Co. 130 feet south of Sunnyside Avenue and 140 feet east of Franklin Avenue. Unused industrial well, reportedly finished in abandoned workings of What Cheer coal mine, diameter 12 inches, measured depth 221.9 feet below land surface. Measuring point, top of shelter base, 1.1 feet above land-surface datum.

Water level, in feet below land-surface datum, 1946							
July 28	29.57	Sept. 5	29.30	Oct. 17	29.12	Nov. 23	28.65
Aug. 7	29.68	12	29.48	24	29.17	Dec. 6	28.46
11	29.91	20	29.39	Nov. 1	29.31	12	28.33
18	29.96	27	29.55	7	28.92	23	28.43
23	29.82	Oct. 4	29.47	15	28.80	27	28.14
30	29.51						

Ge FL 500. Consumers Power Co. 540 feet north of East Court Street and 2,500 feet east of Dort Highway. Unused industrial well, diameter 12 inches, measured depth 288.4 feet below land surface. Measuring point is 0.06 foot above land-surface datum. Automatic water-stage recorder installed July 10, 1946.

Water level at 2:00 a.m., in feet below land-surface datum, 1946							
Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	
1	.....	22.01	22.43	22.24	.....	21.70	
2	.....	22.08	22.43	22.20	21.97	21.79	
3	.....	22.10	22.41	22.24	21.99	21.71	
4	.....	22.11	22.36	22.29	21.92	21.68	
5	.....	.....	22.33	22.35	21.95	21.62	
6	.....	.....	22.30	22.37	21.96	21.69	
7	.....	.....	22.32	22.32	21.89	21.71	
8	.....	22.20	22.37	22.27	21.77	21.75	
9	.....	22.24	22.32	22.26	21.85	21.76	
10	.....	22.18	22.22	22.28	21.85	21.75	
11	.....	22.24	22.17	22.29	21.75	21.76	
12	.....	22.27	22.22	22.34	21.80	21.69	
13	.....	22.27	22.27	22.41	21.81	21.59	
14	.....	22.33	22.28	22.36	21.78	21.63	
15	.....	22.38	22.29	22.33	21.87	21.59	
16	.....	22.39	22.30	22.27	21.88	21.59	
17	.....	22.41	22.31	22.26	21.91	21.46	
18	.....	22.42	22.35	22.13	22.03	21.64	
19	.....	22.29	22.37	22.14	21.93	21.71	
20	.....	22.34	.....	22.16	21.87	21.74	
21	.....	22.39	22.31	22.14	21.87	21.69	
22	21.66	22.43	22.31	22.08	21.76	21.74	
23	21.65	22.49	22.26	22.05	.....	21.77	
24	21.66	22.51	22.26	22.08	21.80	21.71	
25	21.74	22.50	22.24	22.00	21.74	21.73	
26	21.80	22.47	22.24	22.05	21.81	21.65	
27	21.88	22.41	22.25	22.15	21.76	21.73	
28	21.92	22.38	22.25	22.15	21.86	21.50	
29	21.91	22.40	22.25	22.06	21.80	21.62	
30	21.91	22.43	22.25	22.04	21.76	21.62	
31	21.96	22.41		22.05		21.62	

## Burton Township

Ge Bu 7. City of Flint. 330 feet west of Saginaw Street and 30 feet south of Bristol Road. Test well 35, diameter 6 inches, measured depth 209.3 feet below land surface. Measuring point, top of 6-inch casing, 1.16 feet above land-surface datum.

## Ge Bu 7--Continued.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Nov. 15	13.28	Nov. 23	12.18	Dec. 7	12.19	Dec. 26	12.29
20	12.57	29	12.50	13	12.07	27	12.14

Ge Bu 300. William F. Brooks, Jr., 3505 Columbine Avenue. About 280 feet north of Bristol Road and 75 feet east of Columbine Avenue. Unused domestic well, 18 inches square, measured depth 12.6 feet below land surface. Measuring point, top of concrete base around well, 0.80 foot above land-surface datum.

Water level, in feet below land-surface datum, 1946							
Sept. 27	5.47	Oct. 24	5.10	Nov. 15	4.34	Dec. 23	4.13
Oct. 4	5.67	Nov. 1	4.28	Dec. 6	4.68	27	4.19
17	5.37	7	4.10	12	4.47		

Ge Bu 302. Clifford Chapel, 1172 Bristol Road. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 31, T. 7 N., R. 7 E., about 1,200 feet south of Bristol Road. Unused farm well, diameter 2 inches, measured depth 131.8 feet below land surface. Measuring point, top of 2-inch casing, 4.8 feet below land-surface datum.

Water level, in feet below land-surface datum, 1946							
Sept. 5	15.60	Oct. 4	16.10	Nov. 15	15.81	Dec. 12	15.78
12	15.85	17	15.71	23	15.55	23	15.92
20	15.70	24	15.96	29	15.72	28	15.93
27	15.81	Nov. 7	15.60	Dec. 6	15.82		

Ge Bu 303. Clifford Clute, 2287 Bristol Road. 80 feet north of Bristol Road and about 360 feet east of Fern Avenue. Unused domestic well, 14-inch crook casing, measured depth 8.4 feet below land surface. Measuring point, top of barrel casing on pitcher pump, 3.8 feet above land-surface datum.

Water level, in feet below land-surface datum, 1946							
Sept. 27	4.84	Oct. 24	4.74	Nov. 15	3.97	Dec. 12	3.85
Oct. 4	5.17	Nov. 1	4.33	23	4.08	23	3.54
17	5.37	7	3.79	Dec. 6	4.20	27	3.60

Ge Bu 304. Burton Township. 70 feet east of Euston Street extended and 70 feet south of Carman Street. Unused test well, diameter 4 inches, reported depth 253 feet below land surface. Measuring point, top of 4-inch casing, 0.67 foot above land-surface datum.

Water level, in feet below land-surface datum, 1946							
Nov. 15	16.57	Nov. 27	15.83	Dec. 5	23.47	Dec. 23	21.77
23	22.88	29	16.85	13	19.91	27	21.06

Ge Bu 492. Arthur W. Arndt. 710 feet west of South Saginaw Street and 120 feet north of Maple Road. Unused domestic well, diameter 2 inches, measured depth 140.2 feet below land surface. Measuring point, top of 2-inch pipe, at land-surface datum.

Water level, in feet below land-surface datum, 1946							
Oct. 23	20.91	Nov. 7	20.79	Nov. 29	20.80	Dec. 23	20.66
25	20.74	15	20.78	Dec. 6	20.79	27	20.59
Nov. 1	20.37	23	20.71	12	20.66		

Grand Traverse County

## Blair Township

Gv Br 2 (\*840, pp. 143, 145-146; 936, p. 62; 944, p. 63; \*986, p. 66; 1016, p. 101; 1023, p. 119). NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 27, T. 26 N., R. 11 W. No measurements made in 1946.

Gv Br 4 (\*840, pp. 143, 146; 936, p. 63; 944, p. 63; \*986, p. 66; 1016, p. 101; 1023, p. 119). SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 18, T. 26 N., R. 11 W. No measurements made in 1946.

Gv Br 7 (\*840, pp. 143, 146; 936, p. 63; 944, p. 63; \*986, p. 66; 1016, p. 101; 1023, p. 119). NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 7, T. 26 N., R. 11 W. No measurements made in 1946.

Gv Br 14 (\*840, pp. 143, 146; 936, p. 63; 944, p. 63; \*986, p. 66; 1016, p. 101; 1023, p. 119). SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 21, T. 26 N., R. 11 W. No measurements made in 1946.

#### Fife Lake Township

Gv Ff 6 (\*840, pp. 143, 144; 936, p. 62; 944, p. 63; \*986, p. 65; 1016, p. 100; 1023, p. 118). NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 23, T. 25 N., R. 9 W. No measurements made in 1946.

Gv Ff 24 (\*840, pp. 143, 144; 936, p. 62; 944, p. 63; \*986, p. 65; 1016, p. 100; 1023, p. 118). NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 26, T. 25 N., R. 9 W. No measurements made in 1946.

Gv Ff 27 (\*840, pp. 143, 144; 936, p. 62; 944, p. 63; \*986, p. 65; 1016, p. 100; 1023, p. 118). NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 34, T. 25 N., R. 9 W. No measurements made in 1946.

#### Mayfield Township

Gv My 19 (\*840, pp. 143, 145; \*986, p. 66; 1016, p. 101; 1023, p. 119). SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 2, T. 25 N., R. 11 W. No measurements made in 1946.

#### Paradise Township

Gv Pr 25 (\*840, pp. 143, 144-145; 936, p. 62; 944, p. 63; \*986, p. 65; 1016, p. 100; 1023, p. 118). SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 2, T. 25 N., R. 10 W. No measurements made in 1946.

Gv Pr 26 (\*840, pp. 143, 144-145; 936, p. 62; 944, p. 63; \*986, p. 66; 1016, p. 101; 1023, p. 119). NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 8, T. 25 N., R. 10 W. No measurements made in 1946.

#### Union Township

Gv Un 2 (\*840, pp. 143, 145-146; 936, p. 62; 944, p. 63; \*986, p. 66; 1016, p. 101; 1023, p. 119). SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 13, T. 26 N., R. 9 W. No measurements made in 1946.

#### Whitewater Township

Gv Ww 1 (\*840, pp. 143, 147-148; 936, p. 63; 944, p. 63; \*986, p. 66; 1016, p. 101; 1023, p. 119). SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 36, T. 27 N., R. 9 W. No measurements made in 1946.

Gv Ww 6 (\*840, pp. 143, 147-148; 936, p. 63; 944, p. 63; \*986, p. 66; 1016, p. 101; 1023, p. 119). SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 25, T. 27 N., R. 9 W. No measurements made in 1946.

Gv Ww 15 (\*840, pp. 143, 147-148; 936, p. 63; 944, p. 63; \*986, p. 66; 1016, p. 101; 1023, p. 119). SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 28, T. 27 N., R. 9 W. No measurements made in 1946.

Gv Ww 18 (\*840, pp. 143, 147-148; 936, p. 63; 944, p. 63; \*986, p. 66; 1016, p. 101; 1023, p. 119). NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 4, T. 27 N., R. 9 W. No measurements made in 1946.

Gv Ww 25 (\*840, pp. 143, 147-148; 936, p. 63; 944, p. 64; \*986, p. 66; 1016, p. 101; 1023, p. 119). SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 34, T. 27 N., R. 9 W. No measurements made in 1946.

Gratiot County

## City of Alma

Gr AL 6. City of Alma. 65 feet south of Elizabeth Street and about 365 feet east of Lincoln Avenue. Municipal well, diameter 16 inches, reported depth 154 feet below land surface. Measuring point, top of 16-inch casing, 4.60 feet above land-surface datum.

Water level at 2:00 a.m., in feet below land-surface datum, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Dec. 11	24.16	Dec. 18	25.90	Dec. 23	24.80	Dec. 29	23.65
12	24.75	19	26.15	24	25.15	30	23.27
15	24.40	20	26.33	25	25.70	31	23.45
17	26.15	22	25.35				

Gr AL 23. City of Alma. 65 feet south of Elizabeth Street and about 380 feet east of Lincoln Avenue. Test well 17, diameter  $1\frac{1}{4}$  inches, measured depth 137 feet below land surface. Measuring point, top of  $1\frac{1}{4}$ -inch pipe, at land-surface datum.

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

June 25	26.60	Sept. 6	27.21	Oct. 10	27.61	Nov. 9	28.17
27	26.62	13	26.74	19	26.89	16	34.45
July 11	27.71	19	26.66	26	27.75	23	28.30
Aug. 23	27.76	26	26.73	Nov. 2	26.35	30	27.00
30	27.30	Oct. 3	27.30				

Gr AL 95. Robert McKee, 513 Gratiot Avenue. 115 feet west of Gratiot Avenue and 220 feet south of Hastings Street. Unused domestic well, diameter 2 inches, measured depth 26.4 feet below land surface. Measuring point, top of  $1\frac{1}{4}$ -inch length of pipe extended from 2-inch casing, 0.45 foot above land-surface datum.

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

July 9	15.49	Sept. 19	17.07	Oct. 26	17.59	Nov. 30	17.28
Aug. 23	16.82	26	17.19	Nov. 2	17.66	Dec. 7	17.02
30	16.78	Oct. 3	17.42	9	17.48	14	16.92
Sept. 6	17.00	10	17.50	16	17.39	21	16.98
13	17.16	19	17.64	23	17.45	28	16.83

Gr AL 96. Clifton A. Mapes, 613 Gratiot Avenue. 90 feet west of Gratiot Avenue and 200 feet south of Walnut Street. Unused domestic well, diameter 2 inches, measured depth 41.7 feet below land surface. Measuring point, top of 2-inch tee, 5.1 feet below land-surface datum. Water levels, in feet below land-surface datum, 1946: July 10, 34.35; Aug. 23, 35.53; Nov. 23, 33.43.

Gr AL 98. Marshall Dallas. Superior Sign Shop. 190 feet south of Superior Street and 100 feet east of State Street. Unused domestic well, diameter 2 inches, measured depth 48.2 feet below land surface. Measuring point, top of 2- by  $1\frac{1}{4}$ -inch reducer coupling, 4.15 feet below land-surface datum.

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

July 11	32.75	Sept. 19	29.48	Oct. 26	29.02	Nov. 23	31.21
Aug. 23	32.04	26	30.92	Nov. 2	29.50	30	29.63
Sept. 6	31.16	Oct. 3	30.43	9	29.89	Dec. 7	28.80
13	30.73	19	30.25	16	30.04	21	29.20

Gr AL 103. Vane Mills, 1208 Pine Avenue. 95 feet north of Chatterton Street and 115 feet east of Pine Avenue. Unused domestic well, diameter  $1\frac{1}{4}$ -inches, measured depth 12.9 feet below land surface. Measuring point, top of  $1\frac{1}{4}$ -inch pipe, 0.5 foot below land-surface datum.



## Gr AL 103--Continued.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 11	7.86	Sept. 19	8.72	Oct. 26	8.47	Nov. 30	7.84
Aug. 23	9.39	26	8.60	Nov. 2	8.33	Dec. 7	7.87
30	8.45	Oct. 3	8.67	9	7.89	14	7.65
Sept. 6	8.68	10	8.60	16	7.84	21	7.80
13	8.65	19	8.43	23	7.84	28	7.50

Gr AL 106. Harold J. Farwell, 713 Euclid Avenue. 90 feet west of Euclid Avenue and 140 feet north of Walnut Street. Unused domestic well, diameter 2 inches, measured depth 37.2 feet below land surface. Measuring point, top of  $1\frac{1}{4}$ -inch pipe extension, 2.50 feet above land-surface datum. Water level, in feet below land-surface datum, 1946: July 11, 19.47.

Gr AL 230. Fred M. Taylor, 128 Linwood Avenue. 65 feet east of Linwood Avenue and 290 feet south of Eastward Street. Unused domestic well, diameter  $1\frac{1}{2}$  inches, measured depth 10.9 feet below land surface. Measuring point, top of  $1\frac{1}{4}$ -inch coupling, 1.60 feet above land-surface datum. Water levels, in feet below land-surface datum, 1946: Dec. 14, 8.41; Dec. 21, 8.46; Dec. 28, 8.25.

Gr AL 255. Mattie J. Patterson, 525 River Avenue. 85 feet west of River Avenue and 130 feet south of Hastings Street. Unused domestic well, diameter 2 inches, measured depth 76.2 feet below land surface. Measuring point, top of 2- by  $1\frac{1}{4}$ -inch reducer coupling, 0.8 foot above land-surface datum.

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

July 8	30.83	Sept. 19	26.01	Oct. 26	25.35	Nov. 30	24.76
11	30.95	26	26.25	Nov. 2	25.80	Dec. 7	23.89
Aug. 23	28.66	Oct. 3	26.63	9	25.32	14	23.64
30	28.58	10	26.39	16	25.79	21	25.00
Sept. 6	27.43	19	26.30	23	26.63	28	23.31
13	27.07						

Gr AL 258. Joel R. McCartney, 219 Prospect Avenue. 100 feet west of Prospect Avenue and 50 feet north of north track of Ann Arbor Railroad. Unused domestic well, diameter 2 inches, measured depth 48.5 feet below land surface. Measuring point, top of 2-inch coupling, 1.10 feet above land-surface datum.

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

June 27	26.38	Sept. 19	23.41	Oct. 26	22.65	Nov. 30	26.13
July 11	27.63	26	24.78	Nov. 2	25.59	Dec. 7	22.55
Aug. 23	27.36	Oct. 3	26.62	9	27.82	14	22.88
30	26.84	10	27.60	16	26.32	21	25.82
Sept. 6	26.61	19	25.92	23	29.09	28	22.32
13	25.69						

Gr AL 260. R. V. Brown, 513 River Avenue. 115 feet west of River Avenue and 300 feet south of Hastings Street. Unused domestic well, diameter 3 inches, measured depth 62.5 feet below land surface. Measuring point, top of  $1\frac{1}{4}$ -inch nipple, 0.5 foot above land-surface datum.

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

June 26	29.92	Sept. 19	25.85	Oct. 26	25.07	Nov. 30	24.24
27	30.21	26	26.04	Nov. 2	24.74	Dec. 7	23.68
July 11	30.18	Oct. 3	26.52	9	24.89	14	22.99
Aug. 23	28.43	10	26.23	16	25.70	21	24.76
Sept. 6	27.23	19	26.15	23	26.58	28	22.59
13	26.99						

The average daily withdrawal from the municipal wells in Alma in 1946 ranged from 2.23 million gallons in January to 3.05 million gallons in July and averaged 2.63 million gallons for the year.

Ingham County

City of Lansing

Ig LS 2 (\*886, pp. 270, 271-272; 936, pp. 63, 64; 944, p. 64; \*986, p. 67; 1016, p. 101; 1023, p. 119). City of Lansing. Cedar pumping station, near northeast corner of Cedar and Kalamazoo Streets, Lansing. Water levels, in feet below land-surface datum, 1946: Apr. 24, 48.30; Aug. 7, 50.30; Sept. 25, 50.30; Dec. 6, 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). City of Lansing. Well 5 in Pennsylvania Avenue well field, at northwest corner of crossing of Pennsylvania Avenue and Grand Trunk Western Railway, Lansing.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	27.70	Apr. 6	27.44	July 6	28.89	Oct. 5	34.67
12	27.64	13	27.64	13	31.06	13	34.54
19	29.16	20	27.99	21	33.70	19	34.30
26	28.44	27	28.40	27	32.26	26	34.00
Feb. 2	28.17	May 2	28.95	Aug. 3	35.46	Nov. 2	33.69
9	28.59	11	27.83	10	34.30	9	33.77
16	28.44	18	25.89	17	35.34	16	33.47
23	28.40	25	26.12	24	35.29	23	33.64
Mar. 2	28.16	31	23.84	31	35.09	30	33.17
9	27.85	June 8	27.66	Sept. 7	34.40	Dec. 7	32.98
15	27.73	15	28.71	14	34.61	14	32.95
23	27.54	22	28.89	21	34.55	21	31.68
30	27.55	29	29.62	28	34.61	30	29.79

Ig LS 4 (\*886, pp. 265, 270, 271-272; 906, pp. 60, 61; 936, pp. 63, 64; 944, p. 64; \*986, p. 67; 1016, p. 102; \*1023, p. 120). City of Lansing. Well 9 in Pennsylvania Avenue well field, about 500 feet east of Pennsylvania Avenue and just north of the Grand Trunk Western Railway, Lansing.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	34.39	Apr. 6	33.29	July 6	34.68	Oct. 5	42.50
12	33.75	13	32.39	13	37.17	13	42.20
19	34.56	20	32.72	21	39.84	19	41.74
26	34.05	27	33.10	27	39.79	26	41.27
Feb. 2	34.06	May 2	33.72	Aug. 3	40.39	Nov. 2	40.83
9	33.97	11	33.06	10	39.69	9	40.72
16	33.61	18	31.60	17	42.54	16	40.17
23	33.55	25	32.87	24	42.56	23	40.30
Mar. 2	33.36	31	31.86	31	42.49	30	39.25
9	31.50	June 8	32.80	Sept. 7	42.50	Dec. 7	39.40
15	32.65	15	33.95	11	42.69	14	40.37
23	32.48	22	34.28	21	42.56	21	38.88
30	32.48	29	34.45	28	42.55	30	37.83

Ig LS 5 (\*886, pp. 270, 271-272; 906, pp. 60, 61; 944, p. 64; 986, p. 67; 1016, p. 102; 1023, p. 120). City of Lansing. Well 7 in Riverside well field, just north of Red Cedar River, on approximate line of Mifflin Avenue, Lansing. Red Cedar River previously reported as Cedar River. Measurements resumed. Water levels, in feet below land-surface datum, 1946: Apr. 24, 26.66; Dec. 6, 33.52.

Ig LS 6 (\*886, pp. 270-271-272; 906, pp. 60-61; 936, pp. 63, 64; 944, p. 64; \*986, p. 67; 1016, p. 102; \*1023, p. 120). City of Lansing. Logan well at Logan Street pumping station, Lapeer and Logan Streets, Lansing.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	84.04	Apr. 6	84.69	July 6	98.79	Oct. 5	103.68
12	83.98	13	86.35	13	96.90	12	103.42
19	83.88	20	86.25	20	97.69	19	103.72
25	83.49	27	87.57	27	97.74	26	104.87
Feb. 2	83.05	May 2	89.05	Aug. 3	101.39	Nov. 2	105.02
9	82.79	11	89.79	10	102.44	9	105.12
16	82.40	18	89.70	17	101.08	16	105.67
23	82.51	25	89.86	24	100.98	23	105.83
Mar. 2	82.26	31	89.19	31	100.90	30	105.03
9	81.99	June 8	89.70	Sept. 7	100.47	Dec. 7	105.24
15	82.20	15	93.79	14	102.67	14	105.05
23	82.14	22	93.80	21	103.72	21	105.39
30	83.01	29	96.98	28	103.84	30	105.28

Ig LS 7 (\*886, pp. 270, 271-272; 906, pp. 60, 61; 936, pp. 63, 64; 944, p. 64; \*986, p. 67; 1016, p. 102; \*1023, p. 121). City of Lansing Water Board. Seymour well, at Seymour Avenue pumping station, on north side of Josephine Street, about 500 feet east of Seymour (Grand River) Avenue, Lansing.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	62.48	Apr. 6	67.30	June 29	92.50	Oct. 5	102.72
12	61.41	13	70.19	July 6	90.00	19	101.98
19	61.17	20	73.50	20	93.45	26	102.52
26	60.78	27	77.83	Aug. 3	92.78	Nov. 2	102.46
Feb. 2	59.11	May 2	79.97	10	100.76	9	102.65
9	53.35	11	86.79	17	99.40	16	102.25
16	58.98	18	80.86	24	99.17	23	104.94
23	58.55	25	85.03	31	98.31	30	104.06
Mar. 3	58.71	31	83.59	Sept. 7	97.24	Dec. 7	105.22
9	58.69	June 8	85.62	14	100.82	14	96.83
15	58.55	15	88.59	21	101.91	21	96.57
23	59.84	22	88.70	28	102.50	30	90.83
30	63.72						

Ig LS 8 (\*886, pp. 265, 270, 271-272; 906, pp. 60, 61; 936, pp. 63, 64; 944, p. 65; \*986, p. 68; 1016, p. 102; \*1023, p. 122). City of Lansing Water Board. Former Townsend Street pumping station, on east side of Townsend Street at junction of Olds Avenue extended. Measuring point beginning May 25, 1946, top of 8-inch casing extension, 1.84 feet above former measuring point. Due to grading present measuring point is 4.6 feet below land-surface datum. Automatic water-stage recorder removed May 6, 1946. Weekly measurements resumed.

Water level at 2:00 a.m., in feet below land-surface datum, 1946

Day	Jan.	Feb.	Mar.	Apr.	May	June	Aug.	Sept.	Oct.	Nov.	Dec.
1	29.28	29.39	28.73	29.35	31.94	.....	.....	.....	.....	.....	.....
2	29.28	29.34	28.45	29.62	32.27	.....	.....	.....	.....	a36.46	.....
3	29.39	29.34	28.40	30.24	32.35	.....	.....	.....	.....	.....	.....
4	29.94	28.96	27.88	.....	32.32	.....	.....	.....	.....	.....	.....
5	29.70	28.95	28.35	.....	31.64	.....	.....	.....	a36.83	.....	.....
6	29.02	28.86	28.34	.....	30.99	.....	.....	.....	.....	.....	.....
7	28.96	29.13	28.23	.....	.....	.....	.....	a35.71	.....	.....	a36.02
8	29.46	29.56	28.43	.....	.....	.....	.....	.....	.....	.....	.....
9	29.69	29.22	27.98	.....	.....	.....	.....	.....	.....	a36.49	.....
10	29.75	28.90	28.10	.....	.....	.....	.....	.....	a36.70	.....	.....
11	29.87	28.56	27.75	.....	.....	.....	.....	.....	.....	.....	.....
12	29.60	28.84	27.99	.....	.....	.....	.....	.....	.....	.....	.....
13	29.30	28.87	28.36	.....	.....	.....	.....	.....	.....	.....	.....
14	28.98	28.32	28.43	.....	.....	.....	.....	a35.68	.....	.....	a35.88
15	29.17	28.86	28.54	.....	.....	a32.86	.....	.....	.....	.....	.....

a Wetted-tape measurement.

## Ig IS 8--Continued.

Water level at 2:00 a.m., in feet below land-surface datum, 1946											
Day	Jan.	Feb.	Mar.	Apr.	May	June	Aug.	Sept.	Oct.	Nov.	Dec.
16	29.57	28.90	28.74	.....	.....	.....	.....	.....	.....	a36.25	.....
17	29.61	28.68	28.22	.....	.....	.....	.....	.....	.....	.....	.....
18	29.65	28.37	27.65	.....	.....	.....	.....	.....	.....	.....	.....
19	29.64	28.67	28.17	.....	.....	.....	.....	.....	a36.44	.....	.....
20	29.43	28.66	28.77	.....	.....	.....	.....	.....	.....	.....	.....
21	28.65	28.98	29.22	.....	.....	.....	.....	a36.56	.....	.....	a36.27
22	29.07	29.04	29.50	.....	.....	.....	.....	.....	.....	.....	.....
23	29.45	28.99	29.63	.....	.....	.....	.....	.....	.....	a36.49	.....
24	29.45	28.43	29.02	.....	.....	.....	.....	.....	.....	.....	.....
25	29.47	28.16	28.76	.....	a31.46	.....	.....	.....	.....	.....	.....
26	29.45	28.15	29.14	.....	.....	.....	.....	.....	a36.66	.....	.....
27	29.17	28.57	29.66	31.37	.....	.....	.....	.....	.....	.....	.....
28	28.55	28.83	29.65	31.80	.....	.....	.....	a36.83	.....	.....	.....
29	29.27	.....	29.77	31.17	.....	.....	.....	.....	.....	.....	.....
30	29.37	.....	30.06	31.48	.....	.....	.....	.....	.....	a35.62	a35.33
31	29.07	.....	30.15	.....	a30.62	.....	a35.27	.....	.....	.....	.....

a Wetted-tape measurement.

Ig IS 9 (\*1023, p. 123). City of Lansing Water Board. At Cedar Street pumping station, 280 feet west of Cedar Street and 250 feet south of Jay Street, Lansing.

Water level at 2:00 a.m., in feet below land-surface datum, 1946												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	46.52	45.79	42.87	42.85	48.68	47.72	52.39	54.32	55.50	54.90	.....	55.46
2	46.11	45.35	42.65	43.75	49.08	47.05	52.71	54.22	52.52	54.88	a55.16	.....
3	46.55	45.43	42.88	44.71	49.25	46.71	53.04	54.35	51.40	54.86	.....	.....
4	46.75	45.06	42.39	44.85	a48.05	47.78	53.45	54.10	52.10	.....	.....	.....
5	45.85	45.28	42.65	45.71	48.65	48.50	52.80	.....	52.37	a55.38	.....	.....
6	45.23	45.22	b42.43	46.02	47.13	49.19	51.77	.....	52.97	55.93	.....	.....
7	45.53	45.50	.....	45.40	48.10	49.90	51.40	.....	a53.92	.....	.....	a55.95
8	46.90	46.00	.....	44.40	48.73	49.91	51.31	.....	54.30	.....	.....	55.41
9	47.35	45.24	a42.44	45.34	48.94	.....	52.54	.....	54.10	.....	a55.27	54.59
10	47.85	44.90	42.35	46.14	.....	.....	53.52	a54.20	54.40	.....	55.20	.....
11	48.32	44.42	42.04	46.66	a48.31	.....	53.85	54.70	54.36	.....	55.17	.....
12	46.95	44.41	43.06	46.35	48.00	.....	53.85	54.35	.....	a55.73	55.10	.....
13	46.40	44.00	43.60	46.66	47.60	.....	54.00	54.22	.....	55.55	55.03	.....
14	45.89	43.32	43.85	45.73	48.36	.....	53.95	54.30	a53.73	55.00	.....	a55.91
15	46.17	43.97	44.41	44.78	49.00	a51.83	52.90	54.51	54.20	55.47	.....	55.22
16	47.06	43.90	44.30	45.43	.....	51.25	53.50	.....	53.23	54.61	a55.18	54.62
17	47.34	43.63	43.36	45.51	.....	50.80	55.75	a54.67	53.90	54.80	55.37	.....
18	47.70	43.46	42.84	46.17	a47.98	51.65	54.02	.....	54.30	54.71	.....	.....
19	46.67	44.05	43.99	47.21	47.88	51.55	54.16	.....	.....	55.10	.....	.....
20	46.19	43.51	44.76	47.50	46.88	51.36	b54.55	.....	.....	55.02	.....	.....
21	45.45	43.95	44.74	46.92	48.20	51.43	54.30	.....	a54.82	53.55	.....	a55.05
22	46.05	44.07	45.00	45.92	48.28	50.72	53.35	.....	55.34	53.75	.....	55.20
23	46.77	43.81	44.28	46.60	.....	50.15	53.77	.....	55.07	54.15	a55.55	.....
24	47.12	43.15	43.30	47.50	.....	49.40	54.20	a54.10	54.95	54.68	55.59	.....
25	46.40	43.06	42.70	47.83	a48.49	50.75	54.40	54.22	54.52	54.82	55.55	.....
26	46.37	42.50	43.55	48.31	48.15	51.68	.....	54.05	54.68	b55.07	55.77	.....
27	45.96	42.84	.....	48.65	47.40	52.40	a53.67	54.25	55.40	55.36	55.81	.....
28	45.31	43.04	.....	48.55	48.40	53.05	54.00	.....	55.68	55.38	.....	a55.32
29	46.61	.....	.....	47.11	48.62	53.46	53.62	.....	56.21	55.02	.....	55.25
30	45.97	.....	a44.26	47.95	47.80	53.65	54.00	.....	55.10	55.20	a55.45	.....
31	46.06	.....	43.96	.....	47.47	.....	54.25	a53.36	.....	55.20	.....	.....

a Wetted-tape measurement.

b Estimated.

Ig IS 51. General Motors Corporation, Oldsmobile Drop Forge. 65 feet west of Verblinden Avenue and 30 feet south of Osborn Road. Unused drilled industrial well, diameter 12 inches, measured depth 416.8 feet below land surface. Measuring point, top of recorder shelf, 9.75 feet below land-surface datum.

Water level at 2:00 a.m., in feet below land-surface datum, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Dec. 4	a 105.45	Dec. 11	106.18	Dec. 16	105.11	Dec. 20	105.96
5	a 105.45	12	106.05	17	104.90	21	107.64
8	105.05	13	105.25	18	105.63	29	106.85
9	105.10	14	105.19	19	105.96	30	106.65
10	a 104.86	15	105.44				

a Estimated.

Ig IS 60 (\*1023, p. 124). Consumers Power Co. gas plant. About 15 feet south of Grand River and about 480 feet west of North Chestnut Street, Lansing.

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

Jan. 5	65.40	Apr. 6	71.09	July 6	86.28	Oct. 5	94.86
13	65.34	13	74.31	13	88.18	12	95.07
19	64.47	20	76.56	20	88.38	19	94.16
26	64.16	27	75.74	27	88.66	26	94.78
Feb. 2	63.11	May 2	76.50	Aug. 3	89.29	Nov. 2	94.64
9	62.62	11	81.63	10	92.10	9	94.66
16	62.78	18	76.79	17	91.58	16	94.53
23	62.93	25	78.28	24	91.78	23	94.29
Mar. 2	62.52	31	76.99	31	88.20	30	90.30
9	62.74	June 8	78.40	Sept. 7	88.03	Dec. 7	92.32
15	62.20	15	81.19	14	94.36	14	91.61
23	61.26	22	80.40	21	95.12	21	93.18
30	64.18	29	86.05	28	95.56	30	88.65

Ig IS 62. City of Lansing Water Board. Well 6 in Maple well field, about 50 feet from Princeton and between Willow and Dalesford Streets. Drilled well, intermittently in use, diameter 14 inches, reported depth 445 feet. Measuring point, top of recorder shelf, 1.00 foot above land-surface datum. Automatic water-stage recorder installed May 11, 1945, removed July 12, 1945. Reinstalled June 29, 1946, and removed again Oct. 31, 1946.

Water level at 2:00 a.m., in feet below land-surface datum, 1945-46

Date	Water level	Date	Water level	Date	Water level
May 11, 1945	129.02	June 4, 1945	128.44	July 8, 1945	130.24
12	128.99	5	128.57	9	129.80
13	128.58	6	128.82	10	129.85
14	129.00	7	130.93	11	130.19
15	127.90	15	131.24	12	130.84
16	128.06	16	130.72	June 30, 1946	139.30
17	128.19	17	130.55	July 1	139.15
20	128.27	22	130.23	2	139.10
21	124.10	23	130.32	3	139.45
22	126.32	24	130.66	4	139.75
23	127.35	25	129.60	5	139.27
24	128.02	26	129.82	6	138.48
25	128.58	28	130.36	7	138.78
26	128.86	29	130.75	8	138.65
27	128.95	30	130.86	9	138.44
28	128.33	July 1	130.66	10	138.65
29	128.59	2	130.17	11	139.05
30	128.91	3	130.21	12	140.25
31	128.66	4	130.04	13	134.25
June 1	128.71	5	129.30	14	133.35
2	128.75	6	129.35	15	132.78
3	128.74	7	130.38	16	132.95

Ig LS 62--Continued.

Water level at 2:00 a.m., in feet below land-surface datum, 1945-46					
Date	Water level	Date	Water level	Date	Water level
July 17, 1946	132.45	Aug. 18, 1946	141.20	Sept. 27, 1946	149.65
18	132.27	19	140.00	28	149.62
19	132.98	20	140.35	29	149.73
20	135.05	21	140.55	30	149.15
21	135.53	22	140.75	Oct. 1	148.40
22	134.90	23	140.80	2	148.55
23	135.15	24	140.85	3	148.53
24	135.68	25	140.95	4	148.60
25	136.03	26	140.30	5	148.83
26	136.10	27	139.80	6	148.86
27	136.50	28	139.95	7	147.93
28	137.34	29	140.25	8	147.75
29	137.26	30	140.20	9	148.06
30	137.65	31	139.00	10	148.56
31	138.17	Sept. 1	139.97	11	149.13
Aug. 1	144.08	2	139.35	13	149.50
2	145.37	3	139.23	14	148.72
3	145.92	10	138.95	15	148.13
4	145.78	11	139.47	16	148.40
5	145.45	12	146.20	17	148.71
6	145.56	13	148.05	20	148.97
7	146.01	14	148.65	21	148.49
8	146.12	15	149.12	22	148.07
9	146.17	16	148.61	23	148.45
10	146.23	17	148.12	24	148.82
11	144.30	18	148.64	25	149.29
12	141.50	22	149.82	27	149.68
13	140.45	23	149.30	28	148.88
14	140.55	24	148.85	29	148.40
15	140.60	25	149.16	30	149.10
16	140.60	26	149.41	31	149.37
17	141.30				

Ig LS 64. City of Lansing Water Board. Well 4 in Maple well field, about 40 feet north of Maple Street and 250 feet west of Pine Street. Drilled well, intermittently in use, diameter 14 inches, reported depth 432 feet. Measuring point, top of 14-inch casing, 1.10 feet above land-surface datum. Automatic water-stage recorder installed May 20, 1946; removed July 1, 1946.

Water level at 2:00 a.m., in feet below land-surface datum, 1946					
Date	Water level	Date	Water level	Date	Water level
May 21	116.80	May 30	117.72	June 9	115.28
22	117.50	31	117.02	10	110.34
23	117.70	June 2	116.15	11	107.67
24	117.87	3	115.73	12	107.35
25	117.90	4	116.33	13	107.50
26	116.95	5	116.92	14	108.10
27	115.80	6	117.10	15	108.27
28	116.40	7	117.20	23	110.42
29	117.12	8	117.65		
				June 24	109.35
				25	109.02
				26	109.82
				27	110.85
				28	120.25
				29	122.73
				30	123.00
				31	122.65

Ig LS 75 (\*1023, p. 124). Motor Wheel Corporation. On northwest corner of Saginaw and Summit Streets, Lansing. Water levels, in feet below land-surface datum, 1946: Jan. 2, 65.55; Feb. 11, 61.09; Apr. 29, 76.75.

Ig LS 76 (\*1023, p. 124). Lansing Co. About 230 feet west of Cedar Street and 255 feet south of Saginaw Street, Lansing.

Ig IS 76--Continued.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	65.45	Apr. 6	68.39	July 6	85.26	Oct. 5	103.88
12	65.37	13	71.78	13	100.31	13	103.64
19	64.29	20	72.21	20	102.45	19	103.65
26	64.01	27	74.90	27	104.02	26	103.62
Feb. 2	62.06	May 2	77.40	Aug. 3	105.18	Nov. 2	103.60
9	61.97	11	77.68	10	106.09	9	103.59
16	59.72	18	77.98	17	105.31	16	103.57
23	62.58	25	77.97	24	105.68	23	104.36
Mar. 2	59.78	31	77.56	31	104.10	30	103.21
9	57.33	June 8	77.87	Sept. 7	104.51	Dec. 7	103.88
16	59.75	15	83.26	14	99.48	14	103.60
23	60.19	22	86.18	21	104.32	21	104.40
30	64.43	29	88.71	28	103.76	30	102.38

Ig IS 110 (\*1023, p. 125). City of Lansing Water Board well C-1. About 150 feet west of Cedar Street and 50 feet south of Jay Street, Lansing.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	52.04	Apr. 6	49.08	July 6	57.96	Sept. 28	65.10
12	52.06	13	51.14	13	61.27	Oct. 19	64.89
19	52.03	20	52.97	20	62.12	25	65.33
26	51.56	27	54.02	27	61.05	Nov. 2	65.38
Feb. 2	50.75	May 2	54.42	Aug. 3	61.56	9	65.40
9	50.25	11	53.66	10	62.51	16	65.44
16	48.90	18	53.42	17	62.57	23	65.92
23	48.94	25	53.92	24	62.51	30	65.33
Mar. 2	47.89	31	53.25	31	62.15	Dec. 7	65.24
9	47.67	June 8	55.01	Sept. 7	62.20	14	66.49
16	48.70	15	58.05	14	62.10	21	66.59
23	49.12	22	58.09	21	63.45	30	64.94
30	49.10	29	60.08				

Ig IS 153 (\*1023, p. 125). City of Lansing Water Board well PM-9. About 120 feet north of Main Street and 80 feet east of Bensch Street, Lansing. Reported to nearest foot.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	77	Apr. 20	71	July 13	83	Oct. 12	86
14	74	27	70	20	86	19	86
24	71	May 2	74	27	90	26	83
Feb. 9	71	11	70	Aug. 3	a160	Nov. 2	88
16	69	18	72	10	a172	9	85
23	75	25	70	17	88	16	87
Mar. 2	68	31	69	24	86	23	81
9	70	June 8	70	Sept. 7	86	30	83
15	69	15	73	16	85	Dec. 7	82
23	67	22	76	21	85	14	80
30	69	29	79	28	85	21	83
Apr. 6	69	July 6	82	Oct. 5	86	30	78
14	69						

a Pumping.

Ig IS 157 (\*1023, p. 125). City of Lansing Water Board well PM-12. 145 feet north of East Main Street and 36 feet west of South Fairview Street, Lansing. Automatic water-stage recorder removed Apr. 12, 1945.

Ig LS 157--Continued.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	41.83	Apr. 6	40.15	July 6	58.69	Oct. 5	70.56
12	40.97	13	40.56	13	67.43	13	67.31
19	43.96	20	41.41	20	68.04	19	64.47
26	41.61	27	43.66	27	81.45	26	62.44
Feb. 2	42.58	May 2	48.16	Aug. 3	85.21	Nov. 2	61.62
9	41.11	11	44.81	10	86.51	9	61.25
16	39.97	18	48.31	17	86.41	16	60.66
23	39.92	25	46.96	24	84.91	23	59.17
Mar. 2	39.49	31	45.39	31	83.49	30	57.21
9	39.66	June 8	48.45	Sept. 7	82.14	Dec. 7	56.15
15	40.10	15	50.12	14	79.15	14	55.29
23	39.51	22	50.90	21	77.70	21	54.48
30	39.93	29	55.03	28	74.34	30	54.17

Ig LS 182 (\*1023, p. 126). Atlas Drop Forge Co. well 2. In southwest quadrant of intersection of Davis Avenue extended and Mt. Hope Avenue, Lansing. No measurements made in 1946.

Ig LS 183 (\*1023, p. 126). Atlas Drop Forge Co. well 1. On south side of Mt. Hope Avenue between Todd and Davis Avenues, Lansing. Water levels, in feet below land-surface datum, 1946: Feb. 11, 32.47; Apr. 29, 34.13.

The average daily withdrawal of ground water from municipal-supply wells in Lansing during 1946 ranged from 17.6 million gallons in July to 10.0 million gallons in February and averaged 13.4 million gallons for the year.

## Lansing Township

Ig Ls 10 (\*1023, p. 123). Glen A. Ballans, 2319 West Washtenaw Street, NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 18, T. 4 N., R. 2 W., 86 feet south of West Washtenaw Street and 70 feet east of Hungerford Street. Formerly owned by R. A. Allen.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	75.61	Apr. 13	76.65	July 20	84.19	Oct. 12	86.20
12	75.16	20	77.45	27	84.32	19	85.48
19	75.29	27	76.59	Aug. 3	84.74	25	86.12
26	74.13	May 2	77.24	10	86.10	Nov. 2	86.44
Feb. 2	73.85	11	77.25	17	86.09	9	86.06
9	73.55	18	77.30	24	85.28	16	85.70
16	72.85	31	76.78	31	85.21	23	86.17
Mar. 2	73.57	June 8	76.84	Sept. 7	84.93	30	86.34
9	73.72	15	81.26	14	85.62	Dec. 7	86.18
15	73.89	22	81.41	21	86.08	14	86.12
23	71.87	29	81.80	28	85.98	21	86.21
30	75.52	July 6	81.87	Oct. 5	86.03	30	86.25
Apr. 6	70.25	13	82.51				

Ig Ls 30 (\*1023, p. 123). George R. Byrnes, NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 6, T. 4 N., R. 2 W., 105 feet southeast of Delta River Drive, and about 0.6 mile southwest of U. S. Highway 16.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	43.54	Apr. 20	44.14	July 20	46.59	Oct. 12	47.30
12	43.23	27	44.56	27	46.09	19	47.42
19	44.03	May 2	44.48	Aug. 3	46.14	26	47.58
28	43.63	11	44.50	10	47.01	Nov. 2	47.72
Feb. 9	43.56	18	44.29	17	46.68	9	47.86
Mar. 2	44.09	25	44.27	24	46.50	16	47.89
9	44.00	31	44.65	31	47.63	23	48.64
15	44.15	June 8	44.69	Sept. 7	47.01	30	48.88
23	44.30	15	44.79	14	46.97	Dec. 7	48.80
30	44.28	22	44.78	21	47.09	21	47.99
Apr. 6	43.62	29	45.09	28	48.03	30	47.22
13	44.43	July 13	45.11	Oct. 5	47.15		



Ig Ls 35 (\*1023, p. 124). Tank Bros. Dairy. SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 7, T. 4 N., R. 2 W., 280 feet north of West Willow Street and 0.5 mile east of Waverly Road. Measuring point, 3.71 feet above land-surface datum and not 3.71 feet below land-surface datum as reported in 1945.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	59.22	Mar. 30	59.25	June 15	59.74	Aug. 31	61.90
12	58.72	Apr. 6	58.62	22	60.01	Sept. 7	60.64
19	58.96	13	59.31	29	60.28	14	60.74
24	59.12	20	61.23	July 7	60.38	21	60.85
Feb. 2	59.27	27	59.68	13	60.48	28	61.01
9	60.25	May 2	59.80	20	60.57	Oct. 5	60.93
16	60.13	11	60.19	27	61.12	12	61.78
23	59.72	18	60.36	Aug. 3	60.99	19	61.27
Mar. 2	59.16	25	60.35	10	61.10	26	61.17
9	58.80	31	59.24	17	61.08	Nov. 2	60.93
15	58.88	June 8	59.25	24	61.98	Dec. 30	63.29
23	59.27						

Ig Ls 91 (\*1023, p. 125). City of East Lansing well West 1. 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, East Lansing. Measuring point changed to 0.4 foot below former measuring point or 0.6 foot above land-surface datum.

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

Jan. 7	65.40	Apr. 13	68.87	July 20	70.29	Oct. 13	71.38
12	63.91	27	65.64	27	71.20	19	70.41
19	62.76	May 2	66.53	Aug. 3	72.14	26	65.90
26	62.24	11	63.64	10	72.09	Nov. 2	68.87
Feb. 11	63.71	18	66.49	17	72.67	9	68.83
16	62.28	25	65.74	24	72.78	16	68.70
23	62.65	June 8	64.86	31	71.13	23	68.78
Mar. 2	64.26	15	64.46	Sept. 7	72.28	30	67.73
9	63.98	22	63.34	14	67.53	Dec. 7	67.62
16	62.01	29	64.30	21	70.87	14	67.45
23	62.49	July 6	69.12	28	71.64	21	67.76
Apr. 6	68.80	13	69.49	Oct. 5	71.68	30	67.28

Ig Ls 97. General Motors Corporation. Oldsmobile Drop Forge well 2. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 18, T. 4 N., R. 2 W., 40 feet north of West Genesee Street extended and 190 feet east of Rosemary Street, Lansing. Drilled industrial well, intermittently used. diameter 12 inches, reported depth 427 feet below land surface. Measuring point, top of recorder shelf, 2.74 feet above land-surface datum. Automatic water-stage recorder installed June 20, 1945, and removed Nov. 23, 1946.

Water level at 2:00 a.m., in feet below land-surface datum, 1945

Day	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	65.16	71.51	.....	61.16	60.96	59.06
2	.....	65.36	72.41	.....	61.26	60.86	61.26
3	.....	.....	72.76	.....	62.26	61.06	58.68
4	.....	.....	72.26	.....	61.56	59.46	59.01
5	.....	.....	70.01	a64.07	61.36	59.26	61.06
6	.....	70.33	64.16	63.16	61.16	60.56	60.06
7	.....	70.71	71.41	64.71	59.96	62.56	61.26
8	.....	69.96	72.26	65.56	60.06	61.16	61.26
9	.....	64.26	.....	60.64	62.16	62.96	60.96
10	.....	68.98	.....	.....	61.26	61.96	62.66
11	.....	71.36	.....	62.96	60.86	61.16	63.18
12	.....	.....	.....	62.66	63.51	61.26	62.16
13	.....	72.10	a70.89	63.56	61.96	.....	61.76
14	.....	72.88	72.76	61.96	62.06	.....	60.96
15	.....	70.26	.....	61.86	61.76	62.46	58.86
16	.....	63.76	.....	61.36	62.26	63.16	60.36
17	.....	71.11	.....	62.36	60.76	60.71	58.46

a Wetted-tape measurement.

Ig Ls 97--Continued.

Water level, at 2:00 a.m., in feet below land-surface datum, 1945							
Day	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
18	.....	72.15	.....	61.26	61.46	61.06	58.76
19	.....	71.46	.....	63.66	61.96	60.16	59.96
20	71.20	69.84	a61.95	62.76	61.06	61.86	61.06
21	71.01	71.06	a64.06	60.11	61.56	63.96	59.56
22	69.36	70.01	63.21	61.46	60.26	61.26	59.56
23	68.28	.....	65.26	61.46	61.76	60.16	.....
24	64.26	.....	65.36	59.76	61.26	59.96	.....
25	68.96	.....	.....	60.96	62.06	59.76	.....
26	69.73	.....	.....	62.76	61.26	59.86	.....
27	71.16	73.71	a64.94	62.26	61.06	60.46	.....
28	.....	73.41	64.66	61.76	60.06	59.31	.....
29	69.43	.....	.....	61.26	59.66	59.96	.....
30	68.68	.....	.....	61.76	60.46	58.66	59.46
31	.....	.....	.....	.....	60.06	.....	59.66

Water level at 2:00 a.m., in feet below land-surface datum, 1946											
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
1	60.76	58.06	58.06	58.66	61.26	61.26	65.96	70.91	68.56	68.66	73.76
2	61.46	57.26	58.51	60.46	62.66	61.01	67.66	72.36	68.81	68.66	72.66
3	61.26	59.06	58.31	60.56	63.26	60.76	67.86	72.86	68.96	69.74	.....
4	60.66	60.06	58.06	60.76	63.76	62.46	67.96	69.46	69.46	68.81	.....
5	60.76	58.11	58.16	61.76	62.36	63.36	66.66	68.56	69.56	68.96	.....
6	.....	59.06	58.46	62.26	62.06	62.96	66.36	75.29	68.56	68.11	.....
7	60.26	58.06	58.26	60.26	62.26	62.56	66.61	76.01	68.71	67.66	.....
8	60.76	59.06	58.36	59.46	62.36	62.36	66.11	73.41	68.81	68.36	.....
9	60.91	58.41	57.86	61.96	62.56	61.11	67.66	76.24	68.94	68.56	a69.66
10	60.46	59.96	60.06	61.86	63.41	61.86	67.86	71.86	68.31	68.86	69.26
11	60.76	58.11	58.26	62.76	62.26	64.36	67.91	69.06	68.86	69.01	69.71
12	a60.15	58.11	58.36	62.06	61.26	65.06	68.66	68.26	68.56	69.16	74.26
13	60.56	58.76	58.26	61.76	61.46	.....	68.36	70.86	68.91	68.51	73.76
14	61.66	57.56	58.81	60.06	62.51	.....	67.46	71.06	69.08	68.36	74.24
15	60.31	57.66	58.26	60.96	63.56	a65.52	66.46	70.81	68.51	69.31	73.36
16	.....	58.26	59.06	62.56	63.56	64.16	68.46	70.56	68.31	70.06	74.86
17	.....	58.16	58.76	61.86	64.46	63.46	68.56	71.76	68.81	69.26	69.95
18	.....	58.06	59.46	62.26	64.36	65.56	68.46	69.26	69.16	68.36	73.06
19	a59.87	58.26	60.26	62.56	61.46	65.66	68.86	70.66	71.66	68.56	73.91
20	60.31	59.26	59.86	62.56	60.76	65.86	69.36	71.36	69.66	68.31	74.01
21	59.86	58.16	58.46	61.76	63.96	67.36	67.56	71.36	69.18	68.56	74.81
22	60.76	57.96	58.56	62.36	64.76	66.46	67.26	71.16	68.44	68.94	74.36
23	59.76	58.46	60.26	63.06	64.66	64.46	70.76	71.16	67.24	69.04	73.41
24	57.93	58.26	58.46	62.36	64.71	65.46	70.76	72.06	68.86	69.31	.....
25	58.86	57.91	58.01	61.96	63.86	66.16	71.01	68.76	68.96	69.66	.....
26	58.06	58.81	58.16	62.96	61.46	66.66	71.31	69.46	68.96	72.86	.....
27	59.31	58.96	58.56	62.36	61.21	67.26	70.31	68.66	69.11	69.51	.....
28	59.46	57.61	59.46	60.96	63.06	67.16	68.26	68.76	69.06	69.23	.....
29	60.06	.....	60.36	61.56	63.16	67.56	68.36	68.86	68.31	74.03	.....
30	59.96	.....	60.16	62.46	63.46	65.96	70.81	68.86	68.16	72.56	.....
31	58.56	.....	60.26	.....	61.31	.....	71.56	68.81	.....	72.11	.....

a Wetted-tape measurement.

Ig Ls 265 (\*1023, p. 126). 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.

Water level at 2:00 a.m., in feet below land-surface datum, 1946											
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
1	26.06	27.95	27.43	26.20	28.27	a28.14	32.82	44.63	40.52	36.91	35.77
2	26.11	27.88	27.42	26.20	28.44	28.02	32.85	45.35	39.40	37.04	35.58
3	26.06	28.09	27.35	26.42	28.69	27.71	33.40	45.80	38.55	36.82	35.56
4	26.18	27.93	26.87	26.50	28.63	27.95	33.85	46.10	38.13	36.95	34.76
5	a26.38	27.77	27.16	26.70	28.72	27.99	34.22	45.25	38.00	37.23	34.68
6	26.43	27.47	27.12	26.90	28.25	28.04	34.30	44.80	38.40	36.65	35.02
7	.....	27.58	27.29	26.93	.....	28.10	34.73	45.07	39.47	35.90	35.07
8	.....	27.90	27.39	26.44	.....	28.09	35.03	45.38	40.22	35.53	35.07

a Wetted-tape measurement.

## Ig Ls 265--Continued.

Water level, at 2:00 a.m., in feet below land-surface datum, 1946

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
9	.....	27.77	27.30	26.65	.....	28.45	34.90	45.97	39.17	36.40	35.56	34.17
10	.....	27.81	27.41	26.80	.....	28.23	36.30	45.70	38.74	36.77	35.39	34.22
11	.....	27.40	26.98	27.03	28.45	28.03	37.50	45.25	38.95	36.69	34.49	34.11
12	27.21	27.58	26.94	26.97	28.40	28.20	38.60	.....	39.18	36.90	34.45	34.98
13	27.19	27.48	26.93	27.00	28.05	28.15	39.05	.....	39.45	.....	34.51	33.85
14	26.62	27.16	27.20	26.97	28.15	28.65	39.23	.....	39.35	.....	34.92	33.98
15	26.93	27.54	27.05	26.45	28.17	29.27	38.68	.....	39.05	.....	35.26	34.32
16	27.15	27.67	27.31	26.79	29.02	29.60	38.22	.....	38.00	.....	35.20	34.46
17	27.12	27.34	27.04	26.82	29.65	29.91	38.65	43.07	37.55	.....	35.25	34.15
18	.....	27.21	26.57	26.87	29.50	29.92	39.78	43.15	37.80	.....	34.76	34.50
19	27.46	27.22	26.69	27.08	29.42	30.17	40.78	41.98	38.09	35.95	34.50	34.38
20	27.47	27.16	26.70	27.01	28.80	30.30	42.15	41.62	38.06	35.72	34.61	34.52
21	27.12	27.51	26.80	27.40	28.80	30.20	42.50	41.85	37.99	34.92	34.61	33.85
22	27.28	27.48	26.53	26.84	28.89	30.25	42.02	42.23	37.91	34.48	34.65	33.35
23	27.36	27.53	26.64	26.75	28.82	30.45	41.65	42.30	37.12	34.68	35.05	32.45
24	27.31	27.40	26.00	26.96	28.92	30.20	42.02	42.55	36.90	35.20	35.60	32.18
25	27.45	27.19	25.56	27.00	28.80	30.00	43.05	42.00	37.10	35.23	34.52	31.75
26	27.50	27.03	25.84	26.77	.....	30.49	43.35	40.60	37.40	35.74	34.42	31.41
27	27.58	27.16	25.88	27.03	.....	31.22	43.92	39.95	37.79	35.53	34.60	31.00
28	27.18	27.47	26.09	28.26	28.48	32.15	44.12	40.45	38.00	34.75	34.81	30.58
29	27.31	.....	26.18	27.88	28.17	32.65	43.65	41.40	38.14	34.37	34.22	30.55
30	27.26	.....	26.41	27.88	28.02	33.12	43.25	41.68	37.15	35.01	33.75	30.60
31	27.25	.....	26.54	.....	28.20	.....	44.10	41.20	.....	35.27	.....	30.62

a Wetted-tape measurement.

b Estimated.

Ig Ls 266 (\*1023, p. 126). Michigan State College lamb farm. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 25, T. 4 N., R. 2 W., about 190 feet east of Harrison Road, 360 feet south of Mt. Hope Avenue, and 1.7 miles south of East Lansing.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	23.25	Apr. 4	21.97	July 6	24.54	Oct. 5	26.96
12	23.04	13	22.11	13	25.39	13	26.88
19	22.77	20	22.02	20	26.09	19	26.88
26	22.75	27	22.33	27	26.96	26	26.85
Feb. 2	22.91	May 2	22.72	Aug. 3	27.20	Nov. 2	26.83
9	22.98	11	22.85	10	27.35	9	26.94
16	22.84	18	23.45	17	27.04	16	26.94
23	23.23	25	22.98	24	27.09	23	27.04
Mar. 2	23.06	31	23.00	31	27.01	30	26.77
9	22.50	June 8	23.08	Sept. 7	26.71	Dec. 7	26.89
16	22.02	15	23.45	14	26.90	14	27.02
23	21.75	22	23.52	21	26.72	21	27.45
30	21.60	29	24.22	28	26.99	30	26.35

Ig Ls 270 (\*1023, p. 127). Harris L. Fleming. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 34, T. 4 N., R. 2 W., about 90 feet north of Irvington Street and 100 feet west of South Pennsylvania Avenue.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	21.13	Apr. 6	21.60	July 6	22.66	Oct. 5	24.16
12	21.47	13	21.64	13	22.98	12	24.12
19	21.45	20	21.89	20	23.49	19	23.99
26	20.33	27	21.87	27	23.54	25	24.07
Feb. 2	22.19	May 2	22.02	Aug. 3	23.92	Nov. 2	24.18
9	22.08	11	22.05	10	23.80	9	24.25
16	22.06	18	21.89	17	23.97	16	23.93
23	22.07	25	21.91	24	23.87	23	23.92
Mar. 2	21.72	31	21.00	31	23.82	30	23.82
9	21.08	June 8	22.29	Sept. 7	24.18	Dec. 7	24.08
15	21.11	15	22.53	14	24.10	14	23.94
23	21.23	22	22.17	21	24.17	21	23.90
30	21.52	29	23.55	28	24.17	30	23.85

Ig Ls 271 (\*1023, p. 127). Harry DeLaere. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 31, T. 4 N., R. 2 W., about 25 feet north of Maybel Street and 315 feet east of Waverly Road.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	21.37	Apr. 6	20.28	July 6	21.31	Oct. 5	23.36
13	20.98	13	20.48	13	21.34	12	22.90
19	21.01	20	20.32	27	21.95	19	22.99
26	20.85	27	20.68	Aug. 3	22.30	25	23.06
Feb. 2	20.96	May 2	21.51	10	22.08	Nov. 2	23.02
11	20.98	11	20.91	17	22.00	9	23.17
16	20.44	18	20.84	24	22.04	16	23.15
23	21.23	25	20.34	31	22.06	23	23.27
Mar. 2	21.23	31	21.00	Sept. 7	22.55	30	23.30
9	21.07	June 8	21.11	14	23.04	Dec. 7	23.30
15	20.34	15	21.28	21	22.65	21	23.24
23	20.42	22	21.60	28	22.82	30	23.55
30	20.28						

### Kalamazoo County

#### City of Kalamazoo

Ko K0 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). Well B at Central (Burdick Street) pumping station of city waterworks, Kalamazoo. Water levels, in feet below land-surface datum, 1946: May 18, 20.83; Oct. 26, 24.17.

Ko K0 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). Well C at city waterworks, about 1,100 feet southeast of Central pumping station, Kalamazoo. Water levels, in feet below land-surface datum, 1946: May 18, 22.10; Oct. 26, 25.30.

Ko K0 3 (\*886, pp. 264, 273, 274; \*906, p. 62; 936, p. 65; 944, p. 66; 986, p. 69; 1016, p. 103; 1023, p. 128). At Balch Street pumping station of city waterworks, between supply wells 1 and 2, Kalamazoo. Water levels, in feet below land-surface datum, 1946: May 18, 25.59; Oct. 26, 29.00.

Ko K0 39. City of Kalamazoo, Maple Street well station, well M 2A. 40 feet west of Merrill Street extended and 120 feet south of Maple Street. Drilled public-supply well, diameter 12 inches, reported depth 150 feet below land surface. Measuring point, top of 2-inch pipe extension, 21.1 feet above land-surface datum. Measurements started June 5, 1946, and discontinued Dec. 13, 1946. Adjacent wells pumping intermittently.

Water level, in feet above land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 5	11.50	July 26	a 19.99	Sept. 13	9.22	Nov. 1	7.96
14	11.27	Aug. 2	a 20.53	20	8.47	7	7.91
21	11.13	9	10.28	27	8.39	14	7.92
28	11.03	16	12.26	Oct. 4	8.15	22	7.93
July 5	10.92	22	11.35	11	8.04	27	8.32
12	10.88	30	10.91	17	8.02	Dec. 5	8.37
20	a 19.89	Sept. 6	9.54	25	7.93	13	8.91

a Below land-surface datum.

Ko K0 114. City of Kalamazoo, Burdick Street Station. 165 feet east of Burdick Street and 40 feet south of Wall Street extended. Abandoned drilled well, diameter 6 inches, measured depth 115.1 feet below land surface. Measuring point, top of recorder shelf, 0.45 foot above land-surface datum. Automatic water-stage recorder installed Feb. 26, 1946.

Ko KO 114--Continued.

Water level at 2:00 a.m., in feet below land-surface datum, 1946

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	25.23	21.13	24.75	24.32	25.75	23.45	28.05	27.45	27.73	27.73
2	.....	25.22	21.84	24.68	24.25	25.60	28.52	28.00	27.43	27.77	27.65
3	.....	25.15	22.19	24.65	24.17	25.50	28.69	27.92	27.45	27.95	27.59
4	.....	25.04	22.37	24.58	24.11	25.40	28.83	27.82	27.52	27.90	27.56
5	.....	25.00	22.46	24.50	24.12	25.33	28.37	27.83	27.56	27.84	27.55
6	.....	24.73	22.74	23.83	24.31	25.25	28.70	28.28	27.55	27.97	27.55
7	.....	24.19	22.75	24.18	24.37	25.20	28.93	28.84	27.55	28.13	27.54
8	.....	23.81	22.65	24.33	24.45	25.12	28.10	28.82	27.51	28.25	27.61
9	.....	23.58	22.65	24.40	24.55	25.08	28.27	28.62	27.52	28.20	27.41
10	.....	23.39	22.77	24.48	24.58	25.09	28.28	28.52	27.56	28.25	27.35
11	.....	23.27	.....	24.54	24.58	25.47	28.76	28.42	27.65	28.15	27.57
12	.....	23.20	.....	24.40	24.67	26.02	28.40	28.32	27.70	28.57	27.35
13	.....	23.09	.....	24.36	24.70	26.45	28.10	28.21	.....	28.32	27.37
14	.....	.....	.....	24.39	24.75	26.25	27.93	28.11	.....	28.26	27.33
15	.....	.....	.....	24.50	24.80	26.05	27.87	28.02	.....	28.25	27.23
16	.....	.....	.....	24.54	24.75	25.92	27.80	27.99	.....	28.25	27.14
17	.....	.....	.....	24.60	24.77	26.55	28.07	27.92	.....	28.17	27.06
18	.....	.....	23.49	24.59	24.75	26.98	28.13	27.94	.....	28.08	27.06
19	.....	.....	23.48	24.11	24.78	27.20	27.90	27.99	28.30	28.00	27.02
20	.....	.....	23.53	24.25	24.80	27.43	27.76	27.99	.....	27.97	27.02
21	.....	.....	23.58	24.28	24.81	27.62	27.69	28.03	.....	27.99	26.99
22	.....	.....	23.54	24.36	24.85	27.30	27.69	27.98	.....	28.05	26.92
23	.....	23.08	23.58	24.40	24.85	27.60	27.70	27.97	.....	28.04	26.83
24	.....	.....	23.58	24.42	24.80	27.78	27.75	27.89	.....	27.97	26.78
25	.....	.....	23.58	24.45	24.85	27.70	27.80	27.82	.....	27.86	26.78
26	.....	22.16	23.63	24.41	25.60	27.57	27.78	27.74	27.14	27.94	26.67
27	.....	25.22	21.83	23.58	24.31	26.50	27.45	28.11	27.67	27.42	27.85
28	.....	25.25	21.62	23.75	24.29	26.32	27.30	28.60	27.60	27.40	27.87
29	.....	21.47	23.78	24.35	26.57	27.15	28.58	27.56	27.48	27.82	26.55
30	.....	21.37	24.05	24.38	26.00	27.77	28.32	27.47	27.54	27.79	26.50
31	.....	21.29	.....	24.36	.....	.....	28.16	.....	27.65	.....	26.45

a Wetted-tape measurement.

b Estimated.

Ko KO 136. Sutherland Paper Co., Standard Division. 640 feet north of East Patterson Street and 1,900 feet west of North Pitcher Street. Drilled test well, diameter 2 inches, measured depth 51.6 feet below land surface. Measuring point, top of 2-inch pipe, 1.90 feet above land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 9	17.46	Sept. 20	18.21	Oct. 25	16.76	Nov. 30	16.50
16	17.99	27	17.83	Nov. 1	15.30	Dec. 6	16.74
22	18.96	Oct. 4	18.17	7	16.12	13	16.10
30	18.99	11	18.45	14	15.77	19	12.71
Sept. 6	18.71	17	18.17	22	16.43	26	13.38
13	18.41						

Ko KO 137. Sutherland Paper Co., Standard Division. 195 feet east of north Pitcher Street and 145 feet south of Prouty Street extended. Drilled test well, diameter 2 inches, measured depth 46.9 feet below land surface. Measuring point, top of 2-inch pipe, 0.5 foot above land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 9	21.43	Sept. 20	21.76	Oct. 25	21.86	Nov. 27	21.34
16	21.44	27	21.78	Nov. 1	21.74	Dec. 6	21.36
22	21.43	Oct. 4	21.77	7	21.52	13	21.29
30	15.86	10	21.86	14	21.42	19	21.13
Sept. 6	21.52	17	21.93	22	21.43	26	19.59
13	21.74						

Ko KO 186. Sutherland Paper Co. 540 feet south of Michigan Avenue and 130 feet west of Wallace Avenue extended. Drilled test well, diameter 2 inches, measured depth 46.0 feet below land surface. Measuring point, top of 2-inch pipe, 0.73 foot above land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 9	20.55	Sept. 20	20.70	Oct. 24	19.64	Nov. 27	17.92
16	21.04	27	21.36	Nov. 1	18.29	Dec. 6	18.17
22	20.03	Oct. 4	21.03	7	17.82	13	18.43
30	21.58	11	20.16	14	17.93	19	18.31
Sept. 6	20.86	17	19.53	22	17.52	26	16.80
13	21.44						

Ko KO 211. Consumers Power Co. steam plant. 65 feet north of Michigan Avenue and 150 feet east of King's Highway. Unused industrial well, diameter 12 inches, measured depth 64.0 feet below land surface. Measuring point, top of 12-inch casing, 9.2 feet below land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 9	14.04	Sept. 20	14.48	Oct. 24	14.25	Nov. 27	14.13
16	14.25	27	14.28	Nov. 1	14.22	Dec. 6	14.27
22	14.24	Oct. 4	14.48	7	13.90	13	13.62
30	14.47	11	14.58	14	14.06	19	13.77
Sept. 6	14.54	17	14.54	22	14.17	26	13.95
13	14.29						

Ko KO 222. Eck-Rich Sausage Co. 360 feet east of Portage Street and 130 feet north of Second Street. Industrial well, used intermittently, diameter 12 inches, measured depth is 79.9 feet below land surface. Measuring point, top of concrete pump foundation, 0.61 foot above land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 14	15.38	Aug. 9	17.16	Sept. 27	17.99	Nov. 14	18.15
21	15.53	16	17.37	Oct. 4	18.07	21	19.17
28	18.49	23	17.70	11	18.18	27	18.55
July 5	15.59	30	17.86	17	20.70	Dec. 5	18.22
12	15.89	Sept. 6	19.63	24	20.61	12	20.86
20	16.18	13	20.80	Nov. 1	18.09	19	17.87
26	18.70	20	18.97	7	20.67	26	20.30
Aug. 2	19.69						

Ko KO 227. Hanselman Building Corporation. 25 feet west of Burdick Street and 100 feet north of Michigan Avenue. Unused industrial well, diameter 4 inches, measured depth 80.3 feet below land surface. Measuring point, top of 4-inch casing, 9.5 feet below land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 7	24.08	Aug. 2	24.42	Sept. 27	25.17	Nov. 14	26.35
14	24.10	9	24.88	Oct. 4	26.03	22	26.57
21	24.60	16	24.77	11	25.79	27	26.35
28	25.27	22	25.36	17	27.04	Dec. 5	26.88
July 5	24.28	30	26.02	25	26.48	12	26.45
12	24.53	Sept. 6	26.20	Nov. 1	26.02	19	26.09
20	23.78	13	26.17	7	26.25	26	25.90
26	23.77	20	26.09				

Ko KO 228. Wiggington Co. warehouse. 140 feet east of Church Street and 275 feet north of Kalamazoo Avenue. Unused industrial well, diameter 6 inches, measured depth 67.5 feet below land surface. Measuring point, top of recorder shelf, 2.47 feet above land-surface datum. Automatic water-stage recorder installed Aug. 12, 1946.

Ko KO 228--Continued.

Water level at 2:00 a.m., in feet below land-surface datum, 1946

Day	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	23.23	23.05	23.65	23.33
2	.....	23.23	23.18	23.65	23.33
3	.....	23.03	23.18	23.75	23.53
4	.....	a23.33	23.33	23.45	23.53
5	.....	a23.33	23.43	23.83	23.53
6	.....	a23.37	23.23	23.65	23.63
7	.....	23.53	23.33	23.71	23.63
8	.....	23.33	23.43	23.63	23.53
9	.....	23.23	23.63	23.63	23.53
10	.....	23.43	23.43	23.48	23.63
11	.....	23.53	23.73	23.33	23.73
12	.....	23.43	23.40	23.48	23.73
13	22.90	23.13	23.26	23.73	23.73
14	23.35	23.23	23.23	23.73	23.73
15	23.13	23.13	23.43	23.53	23.58
16	23.62	23.13	23.63	23.93	23.53
17	23.23	23.33	23.53	22.33	23.58
18	23.30	23.33	23.41	23.03	23.93
19	23.03	23.33	23.53	23.53	23.65
20	23.51	23.53	23.01	23.93	23.68
21	23.29	23.73	22.38	23.63	23.63
22	23.59	23.23	23.43	23.65	23.53
23	23.23	23.23	23.44	23.88	23.03
24	23.13	23.53	23.63	23.33	23.48
25	23.03	23.53	a24.03	23.03	23.08
26	22.93	23.23	23.63	23.55	23.03
27	23.03	23.33	23.18	23.58	23.53
28	23.23	23.43	23.28	23.59	23.53
29	23.13	23.13	23.63	23.40	23.48
30	a23.13	23.08	23.69	23.33	23.43
31	23.13		23.86		23.63

a Estimated.

Ko KO 242. Kalamazoo Creamery. 180 feet south of Lake Street and 200 feet east of Portage Street. Unused industrial well, diameter 12 inches, measured depth 61.4 feet below land surface. Measuring point, top of recorder shelf, 0.87 foot above land-surface datum. Automatic water-stage recorder installed June 13, 1946.

Water level at 2:00 a.m., in feet below land-surface datum, 1946

Day	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	a24.90	26.38	.....	b27.23	.....
2	.....	.....	24.92	26.57	.....	b27.23	.....
3	.....	.....	24.97	b26.57	.....	27.14	.....
4	.....	.....	25.01	.....	.....	27.14	.....
5	.....	a24.13	25.06	.....	.....	27.25	a27.42
6	.....	.....	25.11	a26.58	.....	27.23	27.42
7	.....	.....	25.15	b26.65	.....	27.21	b27.41
8	.....	.....	25.21	.....	.....	.....	.....
9	.....	.....	25.25	.....	.....	.....	.....
10	.....	.....	25.28	.....	.....	.....	.....
11	.....	.....	25.34	.....	.....	.....	.....
12	.....	a24.22	25.38	.....	.....	.....	.....
13	a23.75	.....	25.44	a26.80	.....	.....	a27.38
14	a23.77	.....	25.50	26.75	.....	a27.32	b27.35
15	23.78	.....	25.53	26.73	.....	.....	b27.30
16	23.77	.....	25.57	.....	.....	.....	27.25
17	23.78	.....	25.66	.....	a27.25	.....	27.23
18	23.80	.....	25.68	.....	.....	.....	27.20
19	23.84	.....	25.71	.....	.....	.....	27.19
20	23.83	24.39	25.99	a26.94	.....	.....	b27.19
21	a23.93	.....	25.82	.....	.....	a27.36	b27.17
22	.....	.....	26.10	.....	.....	b27.34	27.19
23	.....	.....	26.13	.....	.....	b27.35	27.15
24	.....	.....	25.95	.....	a27.29	27.31	27.15

a Wetted-tape measurement.

b Estimated.

Ko KO 242--Continued.

Water level at 2:00 a.m., in feet below land-surface datum, 1946							
Day	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
25	.....	.....	25.95	.....	b27.27	27.34	27.12
26	.....	a24.62	25.97	.....	27.28	27.35	27.10
27	.....	.....	26.21	.....	27.20	27.35	27.10
28	a24.02	.....	26.31	.....	27.16	.....	.....
29	.....	.....	26.14	.....	27.22	a27.40	.....
30	.....	.....	b26.34	.....	27.22	.....	.....
31	.....	.....	26.39	.....	27.24	.....	.....

a Wetted-tape measurement.  
b Estimated.

Ko KO 284. St. Regis Paper Co. Formerly Bryant Paper Co., 230 feet west of Portage Street and 240 feet north of Alcott Street. Unused industrial well, diameter 12 inches, measured depth 113.0 feet below land-surface datum. Measuring point, top of 12-inch flange, 2.46 feet above land-surface datum. Automatic water-stage recorder installed Aug. 8, 1946.

Water level at 2:00 a.m., in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 6	a 63.39	Sept. 6	a 63.51	Nov. 2	63.25	Nov. 28	62.94
7	a 63.80	7	63.66	3	63.31	29	63.05
8	a 64.01	8	63.80	5	62.45	30	63.05
9	64.03	Oct. 4	a 63.53	6	62.77	Dec. 1	63.19
10	64.14	5	63.54	7	a 63.06	3	62.28
11	64.22	6	63.54	8	63.12	4	61.67
13	63.34	8	62.73	9	63.23	5	62.58
14	63.75	9	62.88	10	63.23	6	62.66
15	62.89	10	63.00	12	62.62	7	62.78
16	64.06	11	a 63.22	13	62.93	12	a 62.37
17	64.12	12	63.31	14	63.07	13	62.54
18	64.14	13	63.40	15	63.19	14	62.50
20	62.82	15	62.64	16	63.26	15	62.43
21	63.14	16	62.85	17	63.40	17	61.75
22	63.83	17	63.04	19	62.40	18	61.99
23	63.99	18	63.09	20	62.79	19	62.12
24	64.04	19	63.26	21	62.98	20	62.15
25	63.33	20	63.37	22	63.07	21	62.15
30	a 64.27	24	a 63.07	23	63.15	22	62.19
31	64.30	25	63.08	24	63.15	26	a 60.96
Sept. 1	64.37	26	63.34	26	62.32	27	61.08
4	62.48	31	a 63.11	27	62.69	28	b 61.30
5	63.12	Nov. 1	63.17				

a Wetted-tape measurement.  
b Estimated.

Ko KO 311. Columbian Hotel. 90 feet south of Michigan Avenue and 90 feet west of Pitcher Street. Unused domestic well, diameter 5 inches, measured depth 65.4 feet below land surface. Measuring point, top of 5-inch cross, 4.66 feet below land-surface datum.

Water level, in feet below land-surface datum, 1946								
June	14	17.62	Aug. 2	18.70	Sept. 20	19.91	Nov. 7	19.63
	21	18.04	9	19.07	27	19.70	21	19.56
	28	18.33	16	19.93	4	20.04	27	19.71
July	5	18.29	22	19.55	Oct. 11	20.29	Dec. 5	19.63
	12	18.42	30	19.68	17	19.98	12	19.69
	20	18.56	Sept. 6	19.77	25	19.66	19	19.44
	26	18.91	13	19.83	Nov. 1	19.59	26	19.16

The average daily withdrawal of ground water from municipal-supply wells in Kalamazoo during 1946 ranged from 7.4 million gallons in December to 12.3 million gallons in July and averaged 9.0 million gallons.



## City of Parchment

Ko PT 6. Kalamazoo Vegetable Parchment Co. test well 6. About 950 feet north of Oak Grove Avenue and 75 feet west of Wilson Avenue. Drilled test well, diameter 2 inches, measured depth 25.2 feet below land surface. Measuring point, top of 2-inch pipe, 1.0 foot above land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 16	13.45	Sept. 20	13.30	Oct. 25	12.97	Nov. 27	12.76
22	13.41	27	13.14	Nov. 1	12.68	Dec. 6	12.87
30	13.45	Oct. 4	13.16	7	12.85	12	12.96
Sept. 5	13.38	11	13.19	14	12.75	19	12.51
13	13.29	17	13.18	22	12.74	26	12.44

## Village of Vicksburg

Ko VB 6. Lee Paper Co well 6A. About 200 feet south of Washington Street extended and about 400 feet west of west edge of mill pond. Unused industrial well, diameter 12 inches, measured depth 144.3 feet below land surface. Measuring point, top of 12-inch casing, 2.7 feet above land-surface datum. Automatic water-stage recorder installed May 27, 1946.

Water level at 2:00 a.m., in feet below land-surface datum, 1946

Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	a0.04	b5.34	2.25	7.52	....	4.10
2	....	....	a .25	5.30	1.91	7.83	b4.84	4.15
3	....	....	a .33	.30	1.69	8.55	4.80	4.40
4	....	....	a .36	1.02	8.28	7.67	4.80	4.31
5	....	b3.75	a .38	.82	8.55	7.75	4.70	4.36
6	....	3.75	a .38	5.07	8.72	7.80	4.61	4.33
7	....	3.90	a .45	5.18	8.87	7.85	4.59	4.30
8	....	4.05	a .52	5.30	8.95	7.70	4.36	4.39
9	....	a .35	3.65	5.30	8.87	6.55	4.47	.41
10	....	a .52	3.82	5.45	8.94	....	c4.30	4.07
11	....	3.90	4.08	5.40	9.14	....	b3.94	4.16
12	....	3.65	4.05	5.46	9.17	....	4.06	3.99
13	....	3.70	4.17	5.47	9.18	....	3.95	3.87
14	....	3.75	4.38	5.55	9.25	....	4.04	3.72
15	....	3.60	4.36	5.60	9.29	....	3.95	3.78
16	....	3.70	4.50	5.62	2.46	....	4.29	3.89
17	....	3.80	4.55	5.60	8.70	....	3.96	3.73
18	....	3.75	4.60	5.64	b9.05	....	3.90	3.69
19	....	3.70	4.64	1.20	8.35	....	3.94	3.68
20	....	b3.74	4.64	....	9.00	b4.86	3.87	3.72
21	....	3.85	4.70	b7.84	9.18	4.35	3.95	3.65
22	....	3.85	.53	....	9.10	4.30	3.86	3.80
23	....	3.87	4.70	....	9.06	4.40	3.90	.09
24	....	3.92	4.80	....	9.10	4.40	.20	.07
25	....	3.92	4.86	....	8.35	4.27	.11	a .07
26	....	3.97	4.92	....	8.30	4.13	3.89	a .07
27	....	3.98	5.00	b8.46	8.35	1.15	3.84	3.65
28	a .43	4.00	5.10	8.43	8.30	.98	5.88	3.66
29	3.78	4.15	5.05	8.49	2.62	3.98	3.88	3.70
30	....	.12	5.08	9.60	2.14	....	3.86	3.62
31	....	....	5.05	8.57	....	....	....	3.62

a Above land-surface datum.

b Wetted-tape measurement.

c Estimated.

Ko VB 7. Lee Paper Co. well 7A. About 250 feet south of Washington Street extended and about 500 feet west of west edge of mill pond. Unused industrial well, diameter 12 inches, measured depth 48.4 feet below land surface. Measuring point, top of "i" beam in old concrete pump foundation, 1.9 feet above land-surface datum. Automatic water-stage recorder installed May 27, 1946.

## Ko VB 7--Continued.

Water level at 2:00 a.m., in feet below land-surface datum, 1946								
Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	b8.20	5.18	7.63	5.28	4.70
2	....	....	....	8.18	4.29	7.98	5.16	4.79
3	....	....	b1.38	8.19	3.77	8.50	5.36	4.94
4	....	....	1.26	4.03	7.25	8.03	5.45	4.90
5	....	b5.45	1.13	3.25	8.35	8.07	5.36	4.97
6	....	5.55	1.02	7.00	8.66	8.10	5.29	4.93
7	....	5.65	.98	7.41	8.89	7.99	5.25	4.90
8	....	....	.87	7.65	9.07	7.93	5.15	4.95
9	....	....	5.05	7.80	9.12	6.85	5.23	2.12
10	....	....	5.60	7.93	9.28	....	....	4.42
11	....	....	6.21	8.03	9.40	....	b4.28	4.55
12	....	b5.21	....	8.08	9.46	....	4.72	4.48
13	....	....	....	8.12	9.50	....	4.69	4.17
14	....	....	....	8.18	9.57	....	4.76	4.20
15	....	....	....	8.18	9.62	....	4.70	4.29
16	....	....	....	8.24	5.43	....	4.75	4.45
17	....	....	b7.53	8.28	8.56	....	4.70	4.37
18	....	....	7.58	8.23	b9.10	....	4.68	4.36
19	....	....	7.67	4.07	8.78	....	4.67	4.40
20	....	b5.59	....	7.60	9.25	b6.19	4.60	4.40
21	....	....	....	8.00	9.34	5.58	4.60	4.28
22	....	....	....	....	9.41	5.24	4.55	4.36
23	....	....	....	....	9.46	5.17	4.63	1.78
24	....	....	b7.58	....	9.51	5.13	1.97	1.57
25	....	....	7.53	....	9.01	4.97	1.74	1.46
26	....	....	7.61	....	8.90	4.72	4.25	1.40
27	b4.70	b5.83	7.80	b9.15	8.85	2.86	4.32	3.96
28	5.00	6.45	7.95	9.25	8.82	2.55	4.43	4.05
29	1.75	6.95	7.99	9.27	5.44	4.03	4.50	4.15
30	4.80	2.62	8.11	9.30	4.60	5.22	4.45	4.21
31	5.05	....	8.00	9.37	....	5.25	....	4.26

b Wetted-tape measurement.

## Kalamazoo Township

Ko Ko 5. City of Kalamazoo, Henson property. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 11, T. 2 S., R. 11 W., 1,380 feet east and 450 feet north of center of section. Drilled test well, diameter 2 inches, measured depth 14.0 feet below land surface. Measuring point, top of 2-inch pipe, 0.30 foot above land-surface datum.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 6	8.89	Aug. 2	9.29	Sept. 27	9.39	Nov. 14	9.38
14	8.90	9	9.30	Oct. 4	9.47	22	9.41
21	8.91	16	9.33	10	9.47	27	9.43
28	9.01	22	9.35	17	9.48	Dec. 6	9.48
July 5	9.02	30	9.43	24	9.41	12	9.43
12	9.09	Sept. 6	9.47	Nov. 1	9.40	19	9.27
20	9.16	13	9.40	7	9.35	26	9.36
26	9.23	20	9.48				

Ko Ko 15. 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 Street and 30 feet south of Schipper's Lane. Driven pilot well, diameter 2 inches, measured depth 25.2 feet below land surface. Measuring point, top of 2-inch pipe, 5.11 feet above land-surface datum.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 6	11.56	Aug. 2	22.57	Sept. 27	(a)	Nov. 14	14.25
14	11.49	9	23.14	Oct. 4	20.10	22	13.85
21	11.67	16	23.73	11	18.66	27	13.80
28	11.79	22	24.05	17	16.40	Dec. 6	13.63
July 5	11.68	30	(a)	24	15.68	13	13.81
12	19.28	Sept. 6	(a)	Nov. 1	14.99	19	13.51
20	21.74	13	(a)	7	14.53	26	13.22
26	21.52	20	(a)				

a Dry.

Ko Ko 42. 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 500 feet west of Vande Giessen Road and about 1,000 feet north of U. S. Highway 12. Unused drilled well, diameter 8 inches, measured depth 77.7 feet below land surface. Measuring point, top of 8-inch casing, 3.00 feet below land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 9	35.98	Sept. 20	36.24	Oct. 25	36.35	Nov. 27	36.42
16	36.04	27	36.29	Nov. 1	36.36	Dec. 5	36.43
22	36.10	Oct. 3	36.28	7	36.33	13	36.35
30	36.15	11	36.26	14	36.36	19	36.36
Sept. 6	36.22	17	36.32	22	36.40	26	36.38
13	36.21						

Ko Ko 43. 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 about 20 feet north of Whites Road extended. Unused domestic well, diameter 2 inches, measured depth 47.4 feet below land surface. Measuring point, top of 2-inch coupling, 2.58 feet above land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 9	28.60	Sept. 13	28.81	Oct. 17	28.94	Nov. 27	29.03
16	28.65	20	28.86	25	28.95	Dec. 5	29.06
22	28.70	27	28.87	Nov. 7	28.97	13	29.07
30	28.74	Oct. 4	28.93	14	29.00	19	29.08
Sept. 6	28.78	11	28.91	22	29.02	26	29.10

Ko Ko 121. Allied Paper Co., Monarch Division. NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 34, T. 2 S., R. 11 W. About 150 feet south of Cork Street and about 160 feet west of New York Central railroad spur on east side of building. Unused industrial well, diameter 12 inches, measured depth 59.8 feet below land surface. Measuring point, top of 12-inch flange, 0.75 foot above land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 9	10.36	Sept. 20	10.30	Oct. 25	10.15	Nov. 27	10.08
16	10.33	27	10.24	Nov. 1	10.13	Dec. 5	10.09
22	10.33	Oct. 4	10.23	7	10.08	13	10.08
30	10.34	11	10.22	14	10.07	19	10.02
Sept. 6	10.33	17	10.07	21	10.06	26	9.98
13	10.32						

Ko Ko 136. 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 about 90 feet east of Moreland Street. Unused public-supply well, diameter 10 inches, measured depth 130.2 feet below land surface. Measuring point, top of recorder shelf, 1.78 feet above land-surface datum. Automatic water-stage recorder installed Aug. 5, 1946.

Water level at 2:00 a.m., in feet below land-surface datum, 1946

Day	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	41.47	41.94	41.67
2	.....	.....	41.27	41.32	41.82
3	.....	.....	41.35	41.40	41.62
4	.....	.....	41.33	41.77	41.62
5	.....	.....	41.35	41.34	41.79
6	43.22	a42.21	41.45	41.46	41.57
7	42.82	.....	41.72	41.32	41.97
8	44.57	.....	41.72	41.37	41.67
9	42.47	.....	41.44	41.37	42.27
10	41.42	.....	41.52	41.37	41.67
11	41.42	.....	41.57	41.42	41.63
12	41.80	.....	41.49	41.97	41.52
13	41.37	a41.60	41.94	41.54	41.57
14	41.52	41.26	41.39	41.42	41.65
15	41.60	41.65	41.47	41.62	42.22

a Wetted-tape measurement.

## Ko Ko 136--Continued.

Water level at 2:00 a.m., in feet below land-surface datum, 1946

Day	Aug.	Sept.	Oct.	Nov.	Dec.
16	41.74	41.52	41.52	41.47	41.57
17	41.97	41.52	41.42	41.57	41.49
18	41.32	41.52	41.27	41.82	41.67
19	41.36	41.55	41.47	41.42	41.62
20	41.22	41.57	41.47	41.59	42.07
21	41.32	41.47	41.82	41.69	41.47
22	41.48	41.58	41.33	41.57	41.52
23	41.47	41.52	41.57	41.52	41.77
24	.....	41.45	41.90	41.57	41.57
25	.....	41.32	41.24	41.67	41.57
26	.....	41.45	41.37	41.82	42.02
27	.....	41.47	41.57	41.58	41.59
28	.....	41.32	41.97	42.14	41.45
29	.....	41.35	41.47	41.64	41.62
30	.....	41.35	41.30	41.97	41.67
31	.....		41.40		41.53

## Schoolcraft Township

Ko Sc 4 (\*1023, p. 128). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	14.38	Apr. 7	13.46	June 24	13.98	Sept. 10	14.74
14	14.18	15	13.45	July 1	13.98	17	14.80
21	14.02	22	13.48	7	14.10	23	14.86
Feb. 4	14.02	29	13.48	15	14.18	30	14.95
11	14.01	May 6	13.52	22	14.22	Oct. 7	15.02
25	14.02	13	13.60	29	14.28	12	15.08
Mar. 4	13.95	20	13.67	Aug. 5	14.37	Dec. 2	15.49
11	13.69	24	13.73	12	14.45	8	15.56
17	13.64	June 3	13.80	19	14.52	16	15.60
24	13.60	10	13.87	26	14.58	22	15.64
Apr. 1	13.55	17	13.92	Sept. 1	14.65	30	15.70

Kalkaska County

## Clearwater Township

Ka Cw 13 (\*944, p. 67; \*986, p. 69; 1016, p. 103; 1023, p. 128), NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 27, T. 27 N., R. 5 W.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	14.42	Apr. 12	13.77	July 15	14.26	Oct. 15	14.93
Feb. 25	14.60	May 17	13.93	Aug. 14	14.44	Nov. 11	15.16
Mar. 15	14.37	June 14	14.15	Sept. 16	14.69	Dec. 17	15.48

Ka Cw 100 (\*986, p. 274; 906, p. 62; 936, p. 65; 944, p. 67; \*986, p. 69; 1016, p. 103; 1023, p. 128). NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 36, T. 27 N., R. 5 W.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	12.39	Apr. 12	11.74	July 15	12.17	Oct. 15	13.04
Feb. 25	12.58	May 17	12.04	Aug. 14	12.50	Nov. 11	13.24
Mar. 15	12.38	June 14	12.24	Sept. 16	12.83	Dec. 17	13.40

Missaukee County

## Butterfield Township

Mk Bf 1 (\*840, pp. 148, 150, 151; 845, p. 155; 886, pp. 274-275; 906, pp. 62-63; 936, p. 66; 944, p. 67; \*986, p. 69; 1016, p. 104; 1023, p. 128). NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 2, T. 22 N., R. 5 W. No measurements made in 1946.

## Norwich Township

Mk Nw 45 (\*840, pp. 149, 154, 155; 845, p. 156; 886, p. 275; 906, p. 63; 936, p. 66; 944, p. 67; \*986, p. 70; 1016, p. 104; 1023, p. 129). SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 13, T. 24 N., R. 6 W. No measurements made in 1946.

## West Branch Township

Mk Wb 17 (\*840, pp. 148, 152, 153; 845, p. 155; 886, pp. 274, 275; 906, pp. 62-63; 936, p. 66; 944, p. 67; \*986, p. 70; 1016, p. 104; 1023, p. 128). SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 13, T. 23 N., R. 6 W.

Montmorency County

## Albert Township

My Ab 7. Michigan Department of Conservation. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 27, T. 29 N., R. 2 E., about 20 feet south of county road 612 and about 200 feet east of Avery Lake Road. Unused jetted well, diameter 2 inches, measured depth 8.9 feet below land surface. Measuring point, top of 2-inch pipe, 1.5 feet above land-surface datum.

Water level, in feet above land-surface datum, 1945-46

Date	Water level	Date	Water level	Date	Water level
Nov. 8, 1945	0.73	Apr. 2, 1946	0.82	Aug. 1, 1946	a 0.54
10	.75	18	1.20	Sept. 1	a 1.13
Dec. 4	.50	May 2	1.10	Oct. 2	a .82
Jan. 3, 1946	.43	June 1	1.20	Nov. 1	1.06
18	.39	July 2	.90	Dec. 4	.74

a Below land-surface datum.

## Avery Township

My Av 5. Michigan Conservation Department. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 23, T. 30 N., R. 3 E. On east side of dirt road about 40 feet south of wood culvert. Unused jetted well, diameter 2 inches, measured depth 5.7 feet below land surface. Measuring point, top of 2-inch pipe, 2.5 feet above land-surface datum. Measurements discontinued July 2, 1946.

Water level, in feet above land-surface datum, 1945-46

Date	Water level	Date	Water level	Date	Water level
Nov. 9, 1945	0.21	Jan. 3, 1946	0.01	Apr. 18, 1946	0.00
10	.17	18	.06	May 2,	a .10
Dec. 4	.16	Mar. 8	.35	June 1	a .03
12	.10	Apr. 2	.07	July 2	.01

a Below land-surface datum.

## Briley Township

My Br 6 (\*840, pp. 156, 157-158; 845, p. 156; 886, p. 275; 906, p. 63; 936, p. 66; 944, p. 67; \*986, p. 70; 1016, p. 104; 1023, p. 129). NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 11, T. 31 N., R. 2 E. Measuring point is 1.0 foot above land-surface datum. Actual elevation unaltered; change of 0.1 foot probably due to road grading.

## My Br 6--Continued.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	9.40	Apr. 18	9.13	July 2	9.48	Oct. 2	11.10
18	9.87	May 2	9.37	Aug. 1	10.20	Nov. 1	11.22
Mar. 8	9.68	June 1	9.06	Sept. 1	10.82	Dec. 4	11.10
Apr. 2	8.77						

My Br 8. Michigan Conservation Department. 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. Unused jetted well, diameter 2 inches, measured depth 14.7 feet below land surface. Measuring point, top of 2-inch pipe, 2.0 feet below land-surface datum.

Water level, in feet below land-surface datum, 1945-46

Date	Water level	Date	Water level	Date	Water level
Nov. 7, 1945	2.12	Jan. 18, 1946	2.60	Aug. 1, 1946	2.38
10	2.19	Apr. 18	2.26	Sept. 1,	2.56
Dec. 4	2.63	May 2	2.44	Oct. 2	2.50
12	2.84	June 1	2.45	Nov. 1	2.64
Jan. 3, 1946	3.15	July 2	2.00	Dec. 4	2.80

My Br 15 (\*840, pp. 156, 157-158; 845, p. 156; 886, p. 275; 906, p. 63; 936, p. 66; 944, p. 67; \*986, p. 70; 1016, p. 104; 1023, p. 129). NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 14, T. 31 N., R. 2 E. No measurements made in 1946.

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). SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 15, T. 31 N., R. 2 E. No measurements made in 1946.

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). SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 34, T. 31 N., R. 2 E. No measurements made in 1946.

## Hillman Township

My Hm 1 (\*840, pp. 156, 160; 845, pp. 156-157; 886, p. 275; 906, p. 63; 936, p. 66; 944, p. 68; \*986, p. 70; 1016, p. 104; 1023, p. 129). NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 8, T. 31 N., R. 4 E.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	1.80	Apr. 18	1.80	July 2	1.58	Oct. 2	2.32
18	1.71	May 2	1.63	Aug. 1	2.09	Nov. 1	2.53
Mar. 8	1.29	June 1	1.54	Sept. 1	2.29	Dec. 4	2.57
Apr. 2	1.54						

My Hm 12 (\*840, pp. 156, 160; 845, pp. 156, 157; 886, p. 275; 906, p. 63; 936, p. 66; 944, p. 68; \*986, p. 70; 1016, p. 104; 1023, p. 129). SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 20, T. 31 N., R. 4 E. No measurements made in 1946.

My Hm 22 (\*840, p. 156, 158-159; 845, pp. 156, 157; 886, p. 275; 906, p. 63; 936, p. 66; 944, p. 68; \*986, p. 70; 1016, p. 104; 1023, p. 129). NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 9, T. 31 N., R. 3 E. No measurements made in 1946.

My Hm 23 (\*840, pp. 156, 160; 845, p. 156). NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 34, T. 31 N., R. 4 E. Previously reported NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 34. Measuring point is 1.4 feet above land-surface datum. Actual elevation unaltered; change of 0.2 foot probably due to road grading.

## My Hm 23--Continued.

Water level, in feet below land-surface datum, 1945-46

Date	Water level	Date	Water level	Date	Water level
Nov. 7, 1945	0.42	Mar. 8, 1946	0.10	Aug. 1, 1946	0.69
10	.40	Apr. 2	.48	Sept. 1	.70
Dec. 4	.42	18	.52	Oct. 2	.67
12	.59	May 2	.59	Nov. 1	.67
Jan. 3, 1946	.50	June 1	.60	Dec. 4	.70
18	.50	July 2	.50		

My Hm 30 (\*840, pp. 156, 158-159; 845, pp. 156-157; 886, p. 275; 906, p. 63; 936, p. 66; 944, p. 68; \*986, p. 70; 1016, p. 104; 1023, p. 129). SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 7, T. 31 N., R. 3 E. No measurements made in 1946.

## Loud Township

My Id 6. Michigan Department of Conservation. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 21, T. 29 N., R. 3 E., about 230 feet south of county road 612 and about 2.3 miles west of Highway M-33. Unused jetted well, diameter 2 inches, reported depth 15 feet below land surface. Measuring point, top of 2-inch pipe, 1.2 feet above land-surface datum.

Water level, in feet below land-surface datum, 1945-46

Nov. 9, 1945	4.37	Mar. 8, 1946	4.02	Aug. 1, 1946	4.15
10	4.39	Apr. 2	3.38	Sept. 1	4.59
Dec. 4	4.07	18	3.35	Oct. 6	4.80
12	4.05	May 2	3.47	Nov. 1	5.06
Jan. 3, 1946	4.10	June 1	3.51	Dec. 4	5.18
18	4.12	July 2	3.10		

## Rust Township

My Rs 4. Michigan Department of Conservation. About the center of SW $\frac{1}{4}$  sec. 5, T. 29 N., R. 4 E., about 50 feet northwest of dirt road and about 2.3 miles east of Highway M-33. Unused jetted well, diameter 2 inches, measured depth 13.6 feet below land surface. Measuring point, top of 2-inch pipe, 0.5 foot above land-surface datum.

Water level, in feet below land-surface datum, 1945-46

Nov. 7, 1945	10.16	Mar. 8, 1946	11.15	Aug. 1, 1946	11.28
10	10.13	Apr. 2	10.37	Sept. 1	12.13
Dec. 4	10.43	18	10.30	Oct. 2	13.42
12	10.45	May 2	9.90	Nov. 1	(a)
Jan. 3, 1946	10.40	June 1	10.93	Dec. 9	(a)
18	10.40	July 2	11.32		

a Dry.

My Rs 18 (\*840, pp. 155, 157; 845, p. 156). NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 26, T. 30 N., R. 4 E. Measuring point is 1.7 feet above land-surface datum. Actual elevation unaltered; change of 0.82 foot probably due to road grading.

Water level, in feet above land-surface datum, 1945-46

Nov. 7, 1945	0.55	Mar. 8	1.06	Aug. 1	a 0.98
10	.42	Apr. 2	.74	Sept. 1	a .41
Dec. 4	.45	18	.50	Oct. 2	.69
12	.16	May 2	.34	Nov. 1	.51
Jan. 3, 1946	.20	June 1	.50	Dec. 4	.68
18	.23	July 2	1.60		

a Below land-surface datum.

Oakland County

## City of Pontiac

On PT 1 (\*886, pp. 266, 276, 277; 906, pp. 63-64; 936, pp. 66, 67; 944, p. 68; \*986, p. 71; 1016, pp. 104, 105; 1023, p. 129). 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, 1946											
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. Dec.
1	....	73.8	70.8	....	....	....	....	....	....	....	93.1 ....
2	70.3	....	....	74.8	....	....	86.9	95.1	84.6	92.1	.... 92.8
3	....	....	....	....	....	74.3	....	....	....	....	....
4	....	74.1	69.9	76.1	....	....	....	....	88.8	93.3	91.0 91.4
5	....	....	....	....	....	77.3	86.8	90.3	....	....	....
6	....	74.3	70.3	....	80.3	....	....	....	94.3	....	92.9 93.3
7	70.3	....	....	....	....	78.1	....	92.6	....	93.1	....
8	....	70.3	69.3	73.3	83.8	....	86.3	....	....	....	92.1 ....
9	74.3	....	....	....	....	....	....	93.3	89.5	90.3	.... 90.9
10	....	....	....	74.3	83.8	77.8	88.7	....	....	....	....
11	74.8	69.8	67.8	....	....	....	....	....	92.1	92.6	87.7 94.1
12	....	....	....	74.8	....	81.3	91.2	89.5	....	....	....
13	....	....	67.8	....	79.3	....	....	....	89.2	....	91.3 92.9
14	74.3	....	....	....	....	82.3	....	89.7	....	88.1	....
15	....	73.3	69.3	75.3	84.8	....	87.3	....	....	....	92.7 ....
16	....	....	....	....	....	....	....	92.0	90.3	92.5	.... 88.1
17	....	....	....	77.3	83.3	81.8	91.6	....	....	....	....
18	....	73.3	67.8	....	....	....	....	....	91.3	91.9	91.3 92.5
19	....	....	....	79.9	....	79.3	96.1	90.7	....	....	....
20	....	73.8	69.3	....	78.8	....	....	....	91.9	....	91.3 93.1
21	74.3	....	....	....	....	....	....	89.1	....	89.4	....
22	....	73.8	....	75.3	....	....	89.9	....	....	....	91.5 ....
23	75.5	....	....	....	....	....	....	89.2	93.3	91.1	.... 90.3
24	....	....	....	78.8	81.8	77.6	92.7	....	....	....	....
25	73.3	72.7	68.3	....	....	....	....	....	93.2	92.3	88.1 88.3
26	....	....	....	80.3	....	84.3	91.9	85.3	....	....	....
27	....	74.1	70.1	....	81.3	....	....	....	93.3	....	89.9 91.3
28	73.8	....	....	....	....	85.8	....	90.4	....	91.3	....
29	....	....	70.3	81.3	82.8	....	91.0	....	....	....	88.6 ....
30	....	....	....	....	....	....	....	90.1	90.9	91.6	.... 90.3
31	....	....	....	....	80.3	....	91.9	....	....	....	....

On PT 2 (\*886, pp. 266, 276, 277; 906, p. 64; 936, pp. 66, 67-68; 944, p. 68; \*986, p. 71; 1016, p. 105; 1023, p. 130). 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, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	78.9	Feb. 27	83.3	Apr. 17	87.9	June 5	86.9
7	77.9	Mar. 1	78.9	19	89.4	7	87.9
9	81.9	4	78.3	22	87.4	10	86.9
11	83.9	6	77.8	24	88.9	12	91.9
14	83.6	8	77.8	26	90.2	14	91.9
21	82.9	11	77.8	29	89.9	17	88.9
23	82.9	13	76.3	May 6	90.8	19	89.9
25	82.9	15	76.3	8	91.3	24	87.9
28	82.9	18	74.9	10	93.9	26	88.9
Feb. 1	83.4	20	74.9	13	90.8	28	96.6
4	83.9	25	75.4	15	97.3	July 2	94.0
6	82.9	27	77.8	17	93.9	5	95.6
8	78.9	29	77.8	20	88.4	8	98.5
11	82.9	Apr. 2	81.9	24	90.9	10	97.7
15	84.9	4	85.9	27	91.9	12	98.3
18	82.9	8	83.9	29	93.7	15	97.0
20	80.9	10	83.9	31	94.9	Aug. 26	94.9
22	82.9	12	85.9	June 3	86.9	Sept. 2	92.1
25	81.9	15	86.4				



Oa PT 3 (\*886, pp. 266, 276, 277; 906, p. 64; 936, pp. 66, 68; 944, pp. 68-69; \*986, p. 71; 1016, p. 105; 1023, p. 131). City of Pontiac. Just outside pump house of East Boulevard supply well, near intersection of East Boulevard and Mount Clemens Street, Pontiac.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	22.9	24.1	....	....	....	....	....	....	....	44.3	....
2	25.6	....	....	22.6	....	....	37.8	42.6	39.1	42.1	....	41.2
3	....	....	....	....	....	30.6	....	....	....	....	....	....
4	....	21.6	25.6	23.4	....	....	....	....	40.0	44.4	41.6	43.4
5	....	....	....	....	....	33.1	34.8	42.8	....	....	....	....
6	....	22.6	24.9	....	28.1	....	....	....	40.7	....	44.3	41.6
7	25.4	....	....	....	....	32.6	....	43.2	....	40.8	....	....
8	....	21.6	25.6	20.9	28.6	....	37.4	....	....	....	44.6	....
9	24.6	....	....	....	....	....	....	42.9	38.8	43.3	....	43.1
10	....	....	....	24.6	30.9	33.6	39.5	....	....	....	....	....
11	24.6	24.6	25.6	....	....	....	....	....	40.5	44.6	43.1	45.4
12	....	....	....	23.2	....	34.6	40.3	42.0	....	....	....	....
13	....	....	25.6	....	28.6	....	....	....	40.9	....	44.3	43.6
14	23.1	....	....	....	....	34.6	....	43.9	....	40.0	....	....
15	....	22.6	25.6	23.1	29.6	....	40.3	....	....	....	44.9	....
16	....	....	....	....	....	....	....	....	39.6	42.2	....	41.1
17	....	....	....	23.4	30.1	32.6	41.6	41.3	....	....	....	....
18	....	22.6	25.6	....	....	....	....	....	40.7	43.2	41.8	43.2
19	....	....	....	24.6	....	33.6	42.6	40.5	....	....	....	....
20	....	23.1	21.6	....	28.6	....	....	....	41.4	....	43.6	43.6
21	22.6	....	....	....	....	....	....	43.1	....	41.4	....	....
22	....	23.1	....	24.6	....	....	42.1	....	40.4	....	42.0	....
23	22.6	....	....	....	....	....	47.6	....	43.4	....	....	40.6
24	....	....	....	25.6	30.6	32.6	42.1	....	....	....	....	....
25	22.1	22.6	20.1	....	....	....	....	41.7	44.4	42.0	39.9	....
26	....	....	....	26.1	....	33.1	42.9	42.6	....	....	....	....
27	....	22.4	20.6	....	30.6	....	....	....	42.6	....	44.3	52.8
28	22.1	....	....	....	....	36.1	....	41.3	....	41.6	....	....
29	....	....	19.6	24.6	....	....	41.4	....	....	....	41.6	....
30	....	....	....	....	....	....	....	41.5	41.0	43.6	....	39.6
31	....	....	....	....	31.6	....	43.4	....	....	....	....	....

Oa PT 4. G. A. Blaylock. Old Pierce well, about 150 feet west of Lake Avenue and 120 feet north of Grand Trunk railroad tracks. Unused drilled well, diameter 8 inches, reported depth 222 feet below land surface. Measuring point, top of recorder shelf, 6.32 feet above land-surface datum. Automatic water-stage recorder installed June 6, 1946.

Water level at 2:00 a.m., in feet below land-surface datum, 1946

Day	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	88.86	97.98	93.48	....	94.49	93.08
2	....	91.78	98.98	89.49	....	94.35	91.88
3	....	91.88	98.78	....	....	93.68	94.48
4	....	94.48	99.48	....	....	92.76	95.30
5	....	91.18	92.48	....	....	94.48	96.08
6	a85.58	95.88	a95.68	....	....	95.06	95.88
7	83.18	95.68	95.88	....	....	95.73	96.83
8	84.13	a89.63	97.88	....	....	95.18	94.88
9	85.38	....	96.48	....	....	95.17	93.63
10	84.38	....	97.28	....	....	93.71	95.03
11	85.33	....	94.58	....	....	91.68	96.48
12	86.83	....	90.88	....	....	90.23	95.55
13	85.83	....	94.48	....	....	93.38	95.11
14	....	....	95.48	....	....	91.68	95.78
15	....	a88.78	97.18	....	95.18	94.18	93.98
16	....	93.23	96.18	....	94.88	92.48	93.28
17	....	97.28	98.08	....	96.76	90.88	93.88
18	....	99.38	92.88	....	93.48	92.38	95.78
19	....	....	90.58	....	94.04	93.13	95.78
20	....	....	89.38	....	91.68	93.68	96.33
21	....	....	90.88	....	90.88	93.18	95.98

a Wetted-tape measurement.

## Oa PT 4--Continued.

Water level at 2:00 a.m., in feet below land-surface datum, 1946							
Day	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
22	.....	a91.27	92.08	.....	91.98	94.68	96.08
23	.....	93.48	90.38	.....	94.38	95.98	94.42
24	.....	95.08	90.28	.....	93.88	90.98	94.68
25	a89.23	.....	90.58	.....	95.28	88.18	94.28
26	87.78	97.48	88.88	.....	94.68	94.33	92.38
27	89.08	.....	90.08	.....	92.98	93.08	95.03
28	93.30	92.23	91.43	.....	93.08	94.89	93.07
29	91.28	91.84	93.23	.....	93.91	93.66	94.36
30	90.88	97.28	93.16	.....	93.93	94.18	a92.13
31		96.83	94.21		94.81		93.38

a Wetted-tape measurement.

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). SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 32, T. 29 N., R. 3 W.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	2.23	Apr. 12	1.91	July 15	2.01	Oct. 15	2.63
Feb. 25	2.49	May 17	2.22	Aug. 14	2.53	Nov. 11	2.46
Mar. 15	1.70	June 14	2.18	Sept. 16	2.53	Dec. 17	2.61

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). SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 29, T. 29 N., R. 3 W.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	7.63	Apr. 12	7.09	July 15	7.72	Oct. 15	8.02
Feb. 25	7.81	May 17	7.63	Aug. 14	7.80	Nov. 11	8.08
Mar. 15	7.22	June 14	7.77	Sept. 16	7.93	Dec. 17	8.14

Ottawa County

## Holland Township

Ot Ho 2 (\*1023, p. 132). City of Holland Board of Public Works. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 28, T. 5 N., R. 15 W. 28 feet south of East 8th Street and 507 feet west of Waverly Road, Holland.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	34.63	Apr. 29	34.36	Aug. 2	39.24	Oct. 12	40.73
11	34.55	May 14	35.05	8	39.66	18	40.70
18	34.53	20	35.41	16	39.65	25	40.56
25	34.31	June 11	34.60	23	39.90	Nov. 2	40.63
Feb. 8	34.23	20	35.93	30	40.03	8	40.89
18	34.64	28	36.50	Sept. 7	40.48	15	41.07
22	34.13	July 5	37.10	13	40.57	29	41.44
Mar. 19	34.31	12	37.90	21	40.59	Dec. 6	41.03
Apr. 16	34.13	19	38.33	28	40.79	20	41.02
22	33.88	26	39.02	Oct. 4	40.73	27	40.77

Ot Ho 5 (\*1023, p. 132). City of Holland Board of Public Works. NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 28, T. 5 N., R. 15 W. 28 feet south of East 8th Street and 730 feet west of Waverly Road, Holland.

## Ot Ho 5--Continued

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	34.80	Apr. 29	34.99	Aug. 2	40.92	Oct. 12	42.00
11	34.80	May 14	35.86	8	41.20	18	41.93
18	34.91	20	36.26	16	40.93	25	41.77
25	34.65	June 11	36.80	23	41.45	Nov. 2	42.06
Feb. 8	34.37	20	36.70	30	41.48	8	42.23
18	34.81	28	37.60	Sept. 7	41.99	15	42.37
22	34.35	July 5	38.40	13	41.96	29	42.65
Mar. 1	34.20	12	39.39	21	41.95	Dec. 6	42.28
19	34.57	19	39.92	28	42.02	20	42.53
Apr. 16	34.66	26	40.59	Oct. 4	41.97	27	42.16
22	34.50						

Ot Ho 6. City of Holland Board of Public Works. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 28, T. 5 N., R. 15 W. About 430 feet west of Waverly Road and about 1,020 feet north of 16th Street. Unused test well, diameter 1 $\frac{1}{2}$  inches, reported depth 140 feet below land surface. Measuring point, top of 1 $\frac{1}{2}$ -inch pipe, 1.3 feet above land-surface datum.

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

Aug. 8	53.90	Sept. 13	54.63	Oct. 18	54.49	Nov. 29	55.17
16	54.12	21	54.49	25	54.37	Dec. 6	54.82
23	54.36	28	54.79	Nov. 2	54.59	20	54.85
30	54.26	Oct. 4	54.71	8	54.50	27	54.51
Sept. 7	54.59	12	54.61	15	54.82		

Ot Ho 7. City of Holland Board of Public Works. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 28, T. 5 N., R. 15 W., about 30 feet west of Waverly Road and about 30 feet north of 16th Street, Holland. Unused test well, diameter 1 $\frac{1}{2}$  inches, reported depth 163 feet below land surface. Measuring point, top of 1 $\frac{1}{2}$ -inch pipe, 0.3 foot above land-surface datum.

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

Feb. 8	67.04	Sept. 7	69.22	Oct. 12	69.54	Nov. 15	70.05
Aug. 8	68.41	13	69.34	18	69.43	29	70.44
16	68.63	21	69.09	25	69.40	Dec. 6	70.07
23	69.03	28	69.60	Nov. 2	69.68	20	70.27
30	68.88	Oct. 4	69.59	8	69.54	27	69.89

Ot Ho 8. City of Holland Board of Public Works. 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, Holland. Unused test well, 6-inch casing penetrates deep formation, 8-inch casing over the 6-inch casing penetrates the next higher formation, reported depth of 6-inch casing 290 feet; reported depth of 8-inch casing 70 feet. Measuring points, top of 6-inch casing and top of 8-inch casing, which are 10.9 and 7.5 feet above land-surface datum, respectively.

Water level, in feet above land-surface datum, 1946

Date	Water level		Date	Water level	
	6-inch	8-inch		6-inch	8-inch
Aug. 8	0.80	0.75	Oct. 18	a0.50	....
16	.66	1.62	25	a.57	....
23	.54	....	Nov. 2	a.65	.54
30	.35	....	8	a.54	.53
Sept. 7	.13	....	15	a.55	.51
13	.01	....	29	a.43	....
21	a.15	....	Dec. 6	a.42	....
28	a.22	....	20	a.13	....
Oct. 4	a.36	....	27	.85	....
12	a.50	....			

a Below land-surface datum.

Ot Ho 9. City of Holland Board of Public Works. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 28, T. 5 N., R. 15 W., about 60 feet west of Waverly Road and 960 feet north of 16th Street, Holland. Unused test well, diameter 1 $\frac{1}{4}$  inches, reported depth about 100 feet below land surface. Measuring point, top of 1 $\frac{1}{4}$ -inch pipe, 2.5 feet above land-surface datum.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 8	56.44	Sept. 13	57.27	Oct. 18	57.22	Nov. 29	57.81
16	56.69	21	57.12	25	57.12	Dec. 6	57.59
23	57.00	28	57.48	Nov. 2	57.34	20	57.66
30	56.86	Oct. 4	57.42	8	57.24	27	57.29
Sept. 7	57.21	12	57.34	15	57.61		

Ot Ho 10. City of Holland Board of Public Works. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 27, T. 5 N., R. 15 W., about 150 feet east of Waverly Road and 750 feet north of 16th Street, Holland. Unused test well, diameter 1 $\frac{1}{4}$  inches, reported depth about 100 feet below land surface. Measuring point, top of 1 $\frac{1}{4}$ -inch pipe, 0.8 foot above land-surface datum.

Water level, in feet below land-surface datum, 1946							
Aug. 8	59.69	Sept. 13	60.53	Oct. 18	60.49	Nov. 15	60.93
16	59.92	21	60.36	25	60.42	Dec. 6	60.96
23	60.29	28	60.78	Nov. 2	60.67	20	61.02
30	59.98	Oct. 4	60.71	8	60.52	27	60.67
Sept. 7	60.45	12	60.61				

The average daily withdrawal of water from municipal wells at Holland in 1946 ranged from 1.57 million gallons in February to 3.22 million gallons in July and averaged 2.15 million gallons for the year.

#### Presque Isle County

##### Allis Township

Pr As 13 (\*840, pp. 164, 165-166; 845, pp. 157-158; 886, p. 277; 906, p. 65; 936, p. 68; 944, p. 69; \*986, p. 72; 1016, p. 107; 1023, p. 132). SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 29, T. 33 N., R. 2 E. No measurements made in 1946.

Pr As 16 (\*944, p. 69; \*986, p. 72; 1016, p. 107; 1023, p. 132). NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 17, T. 33 N., R. 2 E. No measurements made in 1946.

Pr As 17 (\*845, pp. 157-158; 886, p. 277; 906, p. 65; 936, p. 68; 986, p. 72; 1016, p. 107; 1023, p. 132). NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 20, T. 33 N., R. 2 E. No measurements made in 1946.

Pr As 18 (\*840, pp. 164, 165-166; 845, pp. 157-158; 886, p. 277; 906, p. 65; 936, p. 68; 944, p. 70; \*986, p. 73; 1016, p. 107; 1023, p. 132). NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 30, T. 33 N., R. 2 E. No measurements made in 1946.

Pr As 19 (\*840, pp. 165-166; 845, pp. 157-158; 886, p. 277; 906, p. 65; 936, p. 68; 944, p. 70; \*986, p. 73; 1016, p. 107; 1023, p. 132). SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 30, T. 33 N., R. 2 E. No measurements made in 1946.

Pr As 20 (\*840, pp. 165-166; 845, pp. 157-158; 886, p. 277; 906, p. 65; 936, p. 68; 944, p. 70; \*986, p. 73; 1016, p. 107; 1023, p. 132). NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 18, T. 33 N., R. 2 E. No measurements made in 1946.

Pr As 23 (\*845, pp. 157-158; 886, p. 277; 906, p. 65; 936, p. 68; 944, p. 70; \*986, p. 73; 1016, p. 107; 1023, p. 132). NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 6, T. 33 N., R. 2 E. No measurements made in 1946.

### Roscommon County

#### Au Sable Township

Ro As 30 (\*840, pp. 170, 178; 845, p. 159; 886, pp. 278-279; 906, p. 65; 936, pp. 60-70; 944, p. 71; \*986, p. 75; 1016, p. 109; 1023, p. 135). NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 34, T. 24 N., R. 1 W.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	16.65	Apr. 15	15.89	July 16	16.37	Oct. 16	(a)
Feb. 26	16.69	May 16	16.06	Aug. 15	16.64	Nov. 14	(a)
Mar. 18	16.18	June 13	16.27	Sept. 17	17.09	Dec. 18	(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). SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 6, T. 22 N., R. 2 W. No measurements made in 1946.

Ro Bk 9 (\*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). NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 14, T. 22 N., R. 2 W.

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

Jan. 14	4.61	Apr. 15	4.47	July 16	5.28	Oct. 16	7.01
Feb. 26	4.93	May 16	4.82	Aug. 15	6.32	Nov. 14	6.19
Mar. 18	3.79	June 13	4.87	Sept. 17	6.69	Dec. 18	5.97

Ro Bk 15 (\*840, pp. 169, 174-175; 845, p. 158; 886, p. 278; 906, p. 65; 936, p. 69; 944, pp. 70-71; \*986, p. 74; 1016, p. 108; 1023, p. 134). NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 17, T. 22 N., R. 2 W.

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

Jan. 14	2.64	Apr. 15	2.27	July 16	3.42	Oct. 16	5.11
Feb. 26	3.10	May 16	2.73	Aug. 15	4.43	Nov. 14	4.48
Mar. 18	1.65	June 13	2.87	Sept. 17	4.70	Dec. 18	4.24

Ro Bk 16 (\*840, pp. 169, 174-175; 845, p. 158; 886, p. 278; 906, p. 65; 936, p. 69; 944, p. 71; \*986, p. 74; 1016, p. 108; 1023, p. 134). NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 18, T. 22 N., R. 2 W.

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

Jan. 14	4.00	Apr. 15	3.46	July 16	4.73	Oct. 16	6.21
Feb. 26	4.50	May 16	3.90	Aug. 15	5.72	Nov. 14	5.67
Mar. 18	2.79	June 13	4.06	Sept. 17	6.05	Dec. 18	5.62

#### Denton Township

Ro Dt 7 (\*840, pp. 169, 175-177; 845, p. 159; 886, p. 278; 906, pp. 65-66; 936, p. 69; 944, p. 71; \*986, p. 74; 1016, p. 108; 1023, p. 134). SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 22, T. 22 N., R. 3 W.

## Ro Dt 7--Continued.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	5.58	Apr. 15	4.46	July 16	5.62	Oct. 16	7.47
Feb. 26	5.90	May 16	4.83	Aug. 15	6.56	Nov. 14	7.52
Mar. 18	4.38	June 13	4.98	Sept. 17	7.12	Dec. 18	7.61

Ro Dt 20 (\*840, pp. 170, 175-177; 845, p. 159; 886, p. 278; 906, pp. 65-66; 936, p. 69; 944, p. 71; \*986, pp. 74-75; 1016, p. 109; 1023, p. 134). SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 31, T. 22 N., R. 3 W.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	6.56	Apr. 15	6.44	July 16	7.54	Oct. 16	8.17
Feb. 27	6.89	May 16	6.77	Aug. 15	8.20	Nov. 14	7.53
Mar. 18	5.70	June 13	6.95	Sept. 17	8.26	Dec. 18	7.50

Ro Dt 26 (\*840, pp. 170, 175-177; 845, p. 159; 886, p. 278; 906, pp. 65-66; 936, p. 69; 944, p. 71; \*986, pp. 74-75; 1016, p. 109; 1023, p. 134). SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 34, T. 22 N., R. 3 W.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	6.04	May 16	5.04	Aug. 15	6.30	Nov. 14	7.42
Mar. 18	5.41	June 13	5.22	Sept. 17	6.85	Dec. 18	7.61
Apr. 15	4.79	July 16	5.64	Oct. 16	7.24		

## Gerrish Township

Ro Gr 1 (\*840, pp. 171, 180-181; 845, pp. 159-160; 886, pp. 278-279; 906, p. 66; 936, pp. 69-70; 944, p. 72; \*986, p. 76; 1016, pp. 110-111; 1023, p. 136). NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 24, T. 24 N., R. 3 W.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	9.18	Apr. 15	8.00	July 16	8.90	Oct. 16	10.29
Feb. 27	9.45	May 16	8.33	Aug. 15	9.41	Nov. 14	10.58
Mar. 18	8.33	June 13	8.52	Sept. 17	9.92	Dec. 18	10.82

Ro Gr 7 (\*840, pp. 171, 180-181; 845, pp. 159-160; 886, pp. 278-279; 906, p. 66; 936, pp. 69-70; 944, pp. 72-73; \*986, p. 77; 1016, p. 111; 1023, p. 136). SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 15, T. 24 N., R. 3 W.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	10.75	Apr. 15	9.62	July 16	11.15	Oct. 16	12.78
Feb. 27	11.06	May 16	10.25	Aug. 15	12.04	Nov. 14	12.79
Mar. 18	9.61	June 13	10.54	Sept. 17	12.55	Dec. 18	12.86

Ro Gr 17 (\*840, pp. 171, 180-181; 845, pp. 159-160; 886, p. 279; 906, p. 66; 936, p. 70; 944, p. 73; \*986, p. 77; 1016, p. 111; 1023, p. 136). NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 3, T. 24 N., R. 3 W.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	11.72	Apr. 15	11.26	July 16	11.88	Oct. 16	12.55
Feb. 26	12.00	May 16	11.50	Aug. 15	12.16	Nov. 14	12.64
Mar. 18	11.27	June 13	11.53	Sept. 17	12.42	Dec. 18	12.72

## Higgins Township

Ro Hg 1 (\*817, pp. 83, 85; \*840, pp. 123-124, 170, 179; \*845, pp. 152, 160; \*886, pp. 261-263, 267, 279; \*906, pp. 51, 53, 54, 67; \*936, pp. 58-59, 70; \*944, pp. 57-58, 72; \*986, pp. 75-76; 1016, pp. 95, 110; \*1023, p. 135). Roscommon recorder well. SW $\frac{1}{4}$  sec. 17, T. 24 N., R. 2 W. All measurements are by wetted tape.

## Ro Hg 1--Continued.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	4.78	Apr. 15	4.09	July 22	5.22	Oct. 22	6.04
12	4.77	20	4.18	29	5.38	28	6.14
19	4.85	29	4.28	Aug. 5	5.52	Nov. 6	6.02
26	4.98	May 6	4.36	15	5.67	12	6.05
Feb. 9	5.00	11	4.42	19	5.70	14	6.05
16	5.07	20	4.52	27	5.74	19	6.02
24	5.13	27	4.57	Sept. 2	5.84	26	6.06
Mar. 3	5.09	June 3	4.66	10	5.90	Dec. 3	6.09
10	4.28	11	4.72	16	5.94	8	6.11
23	3.87	13	4.76	24	6.00	15	6.12
30	3.92	17	4.81	Oct. 1	6.03	18	6.08
Apr. 2	3.91	24	4.88	7	6.06	24	6.09
6	3.91	July 9	4.98	14	6.09	30	6.09
13	4.08	16	5.07	16	6.09		

Ro Hg 81 (\*840, pp. 170, 179; 845, p. 159; 886, pp. 278-279; 906, p. 66; 936, pp. 69-70; 944, p. 72; \*986, p. 76; 1016, p. 110; 1023, p. 136). NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 3, T. 24 N., R. 2 W.

Water level, in feet below land-surface datum, 1946							
Jan. 14	3.86	Apr. 15	3.09	July 16	3.57	Oct. 16	4.23
Feb. 26	4.16	May 16	3.19	Aug. 15	3.78	Nov. 14	4.45
Mar. 18	3.18	June 13	3.38	Sept. 17	4.04	Dec. 18	4.73

Ro Hg 88 (\*840, pp. 170, 179; 845, p. 159; 886, pp. 278-279; 906, p. 66; 936, pp. 69-70; 944, p. 72; \*986, p. 76; 1016, p. 110; 1023, p. 136). NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 1, T. 24 N., R. 2 W.

Water level, in feet below land-surface datum, 1946							
Jan. 14	8.76	Apr. 15	7.84	July 16	8.58	Oct. 16	10.28
Feb. 26	9.02	May 16	8.17	Aug. 15	9.28	Nov. 14	10.47
Mar. 18	8.00	June 13	8.31	Sept. 17	9.91	Dec. 18	10.51

Ro Hg 107 (\*840, pp. 170, 179; 845, p. 159; 886, pp. 278-279; 906, p. 66; 936, pp. 69-70; 944, p. 72; \*986, p. 76; 1016, p. 110; 1023, p. 136). SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 7, T. 24 N., R. 2 W.

Water level, in feet below land-surface datum, 1946							
Jan. 14	7.08	Apr. 15	6.42	July 16	7.29	Oct. 16	7.92
Feb. 26	7.35	May 16	6.90	Aug. 15	7.63	Nov. 14	7.80
Mar. 18	6.16	June 13	7.11	Sept. 17	7.80	Dec. 18	7.90

Ro Hg 150 (\*840, pp. 171, 179; 845, p. 159; 886, pp. 278-279; 906, p. 66; 936, pp. 69-70; 944, p. 72; \*986, p. 76; 1016, p. 110; 1023, p. 136). NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 19, T. 24 N., R. 2 W.

Water level, in feet below land-surface datum, 1946							
Jan. 14	3.16	Apr. 15	2.30	July 16	3.80	Oct. 16	5.25
Feb. 27	4.12	May 16	3.01	Aug. 15	4.72	Nov. 14	4.63
Mar. 18	2.02	June 13	3.49	Sept. 17	5.02	Dec. 18	4.77

Ro Hg 1000 (\*886, pp. 278-279; 906, p. 66; 936, pp. 69-70; 944, p. 72; \*986, p. 76; 1016, p. 110; 1023, p. 136). NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 21, T. 24 N., R. 2 W.

Water level, in feet below land-surface datum, 1946							
Jan. 14	4.44	Apr. 15	3.40	July 16	4.85	Oct. 16	7.07
Feb. 27	5.08	May 16	4.02	Aug. 15	5.96	Nov. 14	7.34
Mar. 18	3.43	June 13	4.30	Sept. 17	6.62	Dec. 18	7.49

## Markey Township

Ro Mk 5 (\*840, pp. 170, 178; 845, p. 159; 886, p. 278; 906, pp. 65-66; 936, p. 69; 944, p. 71; \*986, p. 75; 1016, p. 109; 1023, p. 135). SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 25, T. 23 N., R. 3 W.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	4.58	Apr. 15	4.39	July 16	5.49	Oct. 16	6.47
Feb. 27	4.90	May 16	4.86	Aug. 15	6.23	Nov. 14	5.78
Mar. 18	5.71	June 13	5.05	Sept. 17	6.45	Dec. 18	5.73

Ro Mk 75 (\*845, pp. 158, 159; 886, p. 278; 906, pp. 65-66; 936, p. 69; 944, p. 71; \*986, p. 75; 1016, p. 109; 1023, p. 135). SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 12, T. 23 N., R. 3 W.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	8.10	Apr. 15	7.70	July 16	7.96	Oct. 16	9.17
Feb. 27	8.36	May 16	7.88	Aug. 15	8.55	Nov. 14	9.20
Mar. 18	7.45	June 13	7.96	Sept. 17	8.92	Dec. 18	9.22

## 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, pp. 73-74; 1016, p. 108; 1023, p. 133). NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 11, T. 22 N., R. 1 W.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	3.17	Apr. 15	2.52	July 16	3.42	Oct. 16	5.52
Feb. 26	4.08	May 16	2.92	Aug. 15	4.76	Nov. 14	4.88
Mar. 18	2.31	June 13	2.88	Sept. 17	5.18	Dec. 18	5.22

Ro Rf 50 (\*886, p. 278; 906, pp. 65-66; 936, p. 69; 944, p. 71; \*986, p. 75; 1016, p. 109; 1023, p. 134). SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 3, T. 23 N., R. 1 W.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	4.34	Apr. 15	3.57	July 16	4.30	Oct. 16	6.17
Feb. 26	4.81	May 16	4.04	Aug. 15	5.10	Nov. 14	6.39
Mar. 18	3.18	June 13	4.19	Sept. 17	5.71	Dec. 18	6.50

## 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). NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 2, T. 21 N., R. 3 W.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	15.47	Apr. 15	14.62	July 16	14.84	Oct. 16	15.72
Feb. 27	15.56	May 16	14.60	Aug. 15	15.12	Nov. 14	15.95
Mar. 18	15.16	June 13	14.69	Sept. 17	15.46	Dec. 18	16.19

Ro Ro 4 (\*840, pp. 170, 177; 845, p. 159; 886, p. 278; 906, pp. 65-66; 936, p. 69; 944, p. 71; \*986, p. 75; 1016, p. 109; 1023, p. 134). SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 15, T. 22 N., R. 4 W. Well plugged. Measurements discontinued Sept. 17, 1946.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	2.24	Apr. 15	2.32	June 13	2.90	Aug. 15	3.58
Feb. 26	3.00	May 16	2.78	July 16	2.95	Sept. 17	4.08
Mar. 18	1.60						



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, pp. 107-108; 1023, p. 133). NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 13, T. 21 N., R. 4 W.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	2.60	May 16	3.22	Aug. 15	4.86	Nov. 14	4.70
Mar. 18	1.75	June 13	3.39	Sept. 17	5.51	Dec. 18	4.37
Apr. 15	2.70	July 16	3.88	Oct. 16	5.70		

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). NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 5, T. 21 N., R. 3 W.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	9.65	Apr. 15	9.30	July 16	9.78	Oct. 16	10.18
Feb. 27	9.76	May 16	9.49	Aug. 15	10.06	Nov. 14	10.07
Mar. 18	9.18	June 13	9.59	Sept. 17	10.16	Dec. 18	10.11

Ro Ro 50 (\*886, p. 278; 906, p. 65; 936, p. 69; 944, p. 70; \*986, p. 73; 1016, p. 108; 1023, p. 133). NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 4, T. 21 N., R. 4 W.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	3.62	Apr. 13	2.86	July 16	4.80	Oct. 16	6.69
Feb. 26	4.29	May 16	3.61	Aug. 15	5.95	Nov. 14	5.88
Mar. 18	1.42	June 13	3.97	Sept. 17	6.53	Dec. 18	5.72

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). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	a 0.20	Mar. 11	1.02	May 18	0.80	July 20	5.05
12	1.65	16	1.10	25	.45	31	4.90
19	.75	26	.82	31	2.18	Aug. 2	4.30
26	.40	30	1.10	June 1	a .60	10	2.80
30	1.80	Apr. 8	a 1.90	8	2.50	17	a .50
Feb. 2	2.10	15	.50	15	a .30	31	2.25
9	2.25	22	1.87	22	a 1.70	Sept. 7	5.20
16	2.10	27	a 1.76	29	2.45	14	3.40
23	1.80	May 4	.87	July 6	1.50	21	2.75
28	1.70	11	2.20	13	2.75	30	3.57

a Above land-surface datum.

## Florence Township

Sp Fr 2 (\*1023, p. 137). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	14.29	Apr. 4	13.19	July 4	13.87	Oct. 3	14.95
10	14.04	11	13.13	11	13.95	10	15.01
17	13.83	18	13.11	18	14.01	17	15.07
24	13.78	24	13.14	25	14.11	24	15.13
31	13.71	May 2	13.25	Aug. 1	14.18	31	15.20
Feb. 7	13.68	8	13.38	8	14.26	Nov. 7	15.25
14	13.72	16	13.41	15	14.35	14	15.30
21	13.69	23	13.48	22	14.44	21	15.35
28	13.70	30	13.54	29	14.53	28	15.41
Mar. 7	13.63	June 6	13.60	Sept. 5	14.60	Dec. 5	15.45
14	13.53	13	13.65	12	14.70	12	15.47
21	13.41	20	13.72	19	14.78	19	15.53
28	13.30	27	13.80	25	14.85	26	15.48

Washtenaw CountyPittsfield Township

Wa Pf 1 (\*906, pp. 57, 67-68; 936, p. 71; 944, pp. 73-74; \*986, pp. 77-78; 1016, pp. 111-112; 1023, p. 137). City of Ann Arbor. About 200 feet south of main building of Steere Farm pumping station of city water works. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 16, T. 3 S., R. 6 E.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	(a)	0.59	0.81	....	....	....	....	....	....
2	(a)	....	.03	....	.32	....	2.06	2.98	2.74	4.64	2.75	....
3	....	(a)	....	....	.50	.67	....	....	3.75	4.69	....	1.97
4	(a)	....	....	....	....	....	....	....	3.84	4.49	....	1.94
5	(a)	....	....	....	....	.98	....	....	3.88	4.63	....	1.70
6	....	.18	b .09	....	.09	....	1.94	....	3.97	....	2.80	....
7	(a)	....	....	(a)	....	1.10	....	3.25	4.12	4.10	....	3.65
8	b .60	(a)	....	....	....	....	....	3.26	2.40	....	....	4.15
9	(a)	(a)	....	....	....	....	2.06	....	3.84	....	....	4.35
10	(a)	(a)	....	....	....	....	....	3.38	....	4.36	....	....
11	....	....	....	....	b .41	....	2.10	3.37	4.01	....	2.71	4.65
12	....	(a)	....	....	(a)	1.29	....	3.25	3.90	2.58	....	....
13	....	....	b .21	....	....	1.37	2.39	3.39	4.00	2.32	5.02	4.75
14	....	....	(a)	....	....	....	....	....	2.65	....	4.80	4.80
15	(a)	....	....	....	b .60	1.70	2.45	....	2.70	....	4.56	4.80
16	(a) b	.10	b .17	....	....	....	2.55	3.54	4.00	....	....	5.89
17	....	....	....	....	....	1.83	....	3.41	4.05	....	....	....
18	.16	....	....	....	....	....	2.58	....	4.10	4.30	....	5.89
19	.06	....	....	(a)	(a)	....	....	....	4.15	4.55	....	5.20
20	....	....	b .02	....	....	1.35	2.70	3.63	4.10	....	4.92	5.24
21	....	....	....	....	(a)	....	....	....	....	4.41	4.95	5.26
22	(a)	(a)	....	(a)	(a)	1.35	2.24	3.72	4.10	....	....	....
23	....	.32	....	(a)	.28	....	....	....	....	4.70	5.00	4.90
24	....	....	....	....	....	....	2.32	3.71	....	....	4.60	....
25	(a)	....	b .22	.16	....	1.66	....	2.82	3.84	2.71	....	....
26	....	(a)	....	....	....	1.65	2.47	3.55	4.56	4.70	....	5.03
27	....	....	....	....	(a)	1.77	2.65	3.63	5.57	2.80	4.86	3.50
28	(a)	.17	....	....	....	1.78	....	3.90	....	2.70	....	4.34
29	(a)	....	....	.39	.78	....	2.40	2.44	....	....	....	....
30	(a)	....	(a)	.44	....	....	....	3.74	3.70	4.00	....	5.05
31	(a)	....	....	....	....	....	....	3.93	....	3.75	....	....

a Flowing.

b Above land-surface datum.

York Township

Wa Yk 20. Ypsilanti State Hospital. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 9, T. 4 S., R. 6 E., 110 feet east of Moon Road and 1,050 feet south of Willis Road. Unused test well, diameter 6 inches, measured depth 183.6 feet below land surface. Measuring point, top of recorder shelf, 1.40 feet above land-surface datum. Automatic water-stage recorder installed Mar. 27, 1946.

Water level at 2:00 a.m., in feet below land-surface datum, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 27	53.5	Apr. 8	53.5	Apr. 22	53.8	May 4	54.0
28	53.6	9	53.5	23	53.7	5	54.0
29	53.5	10	53.6	24	53.8	6	54.0
30	53.5	11	53.7	25	53.7	7	54.1
31	53.6	12	53.6	26	53.8	8	54.1
Apr. 1	53.5	13	53.6	27	53.8	9	54.1
2	53.5	14	53.6	28	53.9	10	54.2
3	53.5	17	53.7	29	53.9	11	54.0
4	53.4	18	53.6	30	54.0	12	54.1
5	53.5	19	53.8	May 1	54.1	13	54.3
6	53.5	20	53.7	2	54.1	14	54.3
7	53.5	21	53.8	3	54.1	15	54.3

## Wa Yk 20--Continued.

Water level at 2:00 a.m., in feet below land-surface datum, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 16	54.3	May 25	54.3	June 1	54.4	June 8	54.5
18	54.2	26	54.4	2	54.4	9	54.6
19	54.2	27	54.3	3	54.5	10	54.8
20	54.2	28	54.4	4	54.5	11	54.6
21	54.2	29	54.5	5	54.6	12	54.6
22	54.4	30	54.5	6	54.5	13	54.6
23	54.4	31	54.4	7	54.5	14	54.8
24	54.4						

Wa Yk 22. Ypsilanti State Hospital, SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 10, T. 4 S., R. 6 E., 15 feet east of Warner Road and about 2,200 feet south of Willis Road. Unused test well, diameter 6 inches, measured depth 173.1 feet below land surface. Measuring point, top of recorder shelf, 0.90 foot above land-surface datum. Automatic water-stage recorder installed Mar. 27, 1946.

Water level at 2:00 a.m., in feet below land-surface datum, 1946

Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	73.9	77.3	....	76.1	76.8	78.3	79.7	72.8	75.7
2	....	73.8	77.3	....	76.2	76.9	78.4	79.6	72.5	76.0
3	....	73.9	77.3	....	76.3	77.0	78.5	79.7	72.4	76.1
4	....	73.9	77.4	....	76.3	77.1	78.5	79.6	72.3	76.1
5	....	74.0	77.4	....	76.3	77.2	78.6	79.6	72.4	76.2
6	....	74.1	77.6	....	....	77.4	78.6	79.5	72.4	76.2
7	....	74.3	77.7	....	....	77.6	78.6	79.3	72.4	76.2
8	....	74.3	77.8	78.3	....	77.6	78.7	79.1	72.2	76.1
9	....	74.3	77.8	78.1	....	77.7	78.7	78.8	72.4	76.1
10	....	74.5	78.0	78.1	....	77.7	78.7	78.6	72.6	76.0
11	....	74.7	77.9	77.8	....	77.9	78.7	78.3	72.7	75.8
12	....	74.8	78.0	77.6	a77.2	78.0	78.8	78.1	72.9	....
13	....	75.0	78.1	77.4	....	78.1	78.9	77.9	73.1	....
14	....	75.1	78.1	77.4	....	78.2	79.0	77.7	73.2	....
15	....	....	78.1	77.3	....	78.2	79.0	77.4	73.4	....
16	....	....	78.1	77.1	....	78.2	79.1	77.1	73.5	....
17	....	75.6	....	76.9	....	....	79.2	76.8	73.7	....
18	....	75.7	78.0	76.7	....	....	79.2	76.3	74.1	....
19	....	76.0	78.0	76.6	a77.2	78.1	79.3	76.1	74.2	....
20	....	76.1	77.9	76.5	....	78.2	79.3	75.9	74.3	....
21	....	76.4	78.0	76.4	....	78.2	79.2	75.6	74.4	76.0
22	....	76.5	78.1	76.4	....	78.2	79.3	75.1	74.4	76.0
23	....	76.5	78.1	76.4	....	78.2	79.3	75.0	74.7	76.1
24	....	76.7	78.1	76.3	....	....	79.4	74.7	74.8	76.1
25	....	76.7	78.1	76.2	....	....	79.4	74.3	74.8	76.1
26	....	76.8	78.1	76.1	....	78.2	79.4	74.1	75.1	76.1
27	....	76.9	78.1	76.1	....	78.2	79.5	74.0	75.2	76.2
28	73.9	77.0	78.2	76.1	....	78.2	79.6	73.9	75.4	75.9
29	73.8	77.1	78.3	76.1	76.4	78.2	79.6	73.6	75.5	76.1
30	73.8	77.1	78.3	76.1	76.5	78.3	79.6	73.3	75.7	76.1
31	74.0	....	78.3	....	76.6	78.3	....	73.0	....	76.2

a Wetted-tape measurement.

Wexford County

## Greenwood Township

We Gw 2 (\*840, pp. 181-182; 936, p. 72; 944, p. 74; \*986, p. 78; 1016, p. 112; 1023, p. 138). SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 22, T. 24 N., R. 10 W. No measurements made in 1946.

We Gw 3 (\*840, pp. 181, 182; 936, p. 72; 944, p. 74; \*986, p. 78; 1016, p. 112; 1023, p. 138). SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 26, T. 24 N., R. 10 W. No measurements made in 1946.

We Gw 4 (\*840, pp. 181, 182; 936, p. 72; 944, p. 74; \*986, p. 78; 1016, p. 112; 1023, p. 138). SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 26, T. 24 N., R. 10 W. No measurements made in 1946.

We Gw 42 (\*840, pp. 181, 182; 936, p. 72; 944, p. 74; \*986, p. 78; 1016, p. 112; 1023, p. 138). NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 36, T. 24 N., R. 10 W. No measurements made in 1946.

#### Liberty Township

We Lb 7 (\*840, pp. 181-182; 936, p. 72; 944, p. 74; \*986, p. 78; 1016, p. 112; 1023, p. 138). NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 27, T. 24 N., R. 9 W. No measurements made in 1946.

We Lb 38 (\*840, pp. 181-182; 936, p. 72; 944, p. 74; \*986, p. 78; 1016, p. 112; 1023, p. 138). SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 19, T. 24 N., R. 9 W. No measurements made in 1946.

## NEW HAMPSHIRE

By H. L. Pree, 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 1946. Thirteen measurements were made in 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. Publication of water level measurements on well Auburn 10 was discontinued on December 9, 1945.

### FLUCTUATIONS OF WATER LEVEL

The fluctuations of water level in the well near Bristol appear to be due largely to precipitation changes and seasonal variations in temperature. Precipitation at nearby Franklin was 40.72 inches during the year, which is 0.8 inch above normal and about 11 inches less than in 1945. The water level in this well was above normal in March, May, September, October, and December; and below normal in February, April, June through August, and November.

The abrupt rise in water level in the well near Bristol in March was largely the result of temperature high enough to melt the snow cover. This unseasonable warmth produced an agricultural advance of about three weeks ahead of season, which apparently accounts for the rapid decline of the water level to the lowest April stage of record, following the sharp rise in March. This general decline continued, except for a small rise in May caused by excessive rainfall, until the end of September. The rising water level from the beginning of October until the end of November marked the end of the growing season. The low December temperatures, which prevented the snow from melting and percolating to the water table, resulted in a slight drop. A slight decrease in ground-water storage during 1946 was indicated by a net drop in water level of 0.3 foot during the year.

The well in Auburn apparently reflects changes in precipitation and seasonal fluctuations in temperature. Precipitation at nearby Manchester during 1946 was 39.19 inches, or 0.04 inch above normal and about 12 inches less than in 1945. The water level in this well was above normal from January through June and from August through October; it was below normal in July, November, and December.

The rise in water level in the well in Auburn in March was largely the result of temperatures high enough to melt the snow cover. The ensuing advance of vegetation apparently accounts for the continued decline of the water level in this well. Heavy rains in August and September caused it to rise to its highest recorded level. Below-normal precipitation during October was reflected in a decline during that month. The end of the growing season having passed, the water level remained almost stationary during November and December, in spite of below-normal precipitation in November and only slightly above-normal precipitation in December. During 1946, a slight net loss in underground storage in the vicinity of well Auburn 8 was indicated by a net decline in the water level of 0.6 foot.

#### WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

##### Merrimack County

U. S. 91 (\*986, p. 79; 1016, p. 115; 1023, p. 140). 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.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	7.93	May 31	7.74	Sept. 6	8.94	Nov. 30	8.18
Feb. 27	8.92	June 27	8.56	30	9.10	Dec. 4	8.16
Mar. 27	4.12	July 30	8.78	Oct. 31	8.65	31	8.20
Apr. 27	8.26						

##### Rockingham County

Auburn 8 (\*1016, p. 115; 1023, p. 140). 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, 1946

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	1.47	1.71	1.75	1.48	1.63	1.62	2.14	....	2.23	1.60	2.09	....
2	1.52	1.72	1.74	1.44	1.66	1.61	1.54	....	2.30	1.79	2.11	2.08
3	1.54	1.73	1.59	1.30	1.69	1.53	1.85	2.13	2.34	1.88	1.95	2.11
4	1.54	1.73	1.56	1.39	1.71	1.59	....	2.26	2.40	1.95	1.96	2.12
5	1.58	1.70	1.51	1.43	1.58	1.60	....	2.38	2.45	1.98	2.01	2.12

a Estimated.

## Auburn 8--Continued.

Water level at noon, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
6	1.58	al.67	1.42	1.45	1.63	1.54	....	....	2.49	2.00	2.04	2.14
7	1.40	1.66	1.34	1.48	1.68	1.60	....	....	2.52	2.02	2.06	2.12
8	1.48	al.68	1.26	1.49	1.57	1.54	....	....	2.56	2.04	2.05	2.12
9	1.51	al.70	.71	1.47	1.66	1.57	2.49	....	2.51	2.04	2.05	2.12
10	1.35	al.72	1.19	1.46	1.70	1.65	a2.54	....	2.47	2.04	2.07	2.13
11	1.45	1.73	1.29	1.50	1.71	1.67	2.50	....	2.60	2.04	2.06	2.14
12	1.47	1.78	1.35	1.54	1.70	1.63	2.54	2.17	2.61	2.03	1.94	2.18
13	1.50	1.76	1.34	1.55	1.65	1.67	2.65	2.21	2.67	2.00	2.00	2.06
14	1.53	1.75	1.22	1.56	1.70	1.72	2.76	2.05	2.70	2.03	2.02	2.12
15	1.54	1.46	1.18	1.57	....	1.75	2.86	2.14	2.74	2.04	2.03	2.18
16	al.56	1.59	1.26	1.59	....	1.78	2.95	2.27	2.81	2.04	2.06	....
17	al.58	1.60	1.30	1.61	....	1.82	3.01	2.00	2.85	2.06	2.05	2.19
18	al.60	1.67	1.33	1.62	....	1.79	3.10	2.12	2.90	2.04	2.07	2.18
19	al.62	....	1.35	1.64	....	1.90	3.19	2.25	2.93	1.90	....	2.19
20	al.64	....	1.38	1.64	1.63	1.94	3.29	2.28	2.99	1.97	....	2.21
21	1.66	....	1.40	1.67	1.62	1.90	a3.35	2.42	3.03	1.99	....	1.89
22	1.67	....	1.39	1.68	1.64	1.97	3.16	2.51	3.01	....	....	1.81
23	1.67	....	1.42	1.69	1.68	2.03	2.90	2.13	2.96	....	1.94	1.89
24	1.67	....	1.43	1.64	1.73	2.09	2.04	1.82	2.95	2.02	2.00	1.92
25	1.67	1.74	1.06	1.69	1.76	2.11	....	1.96	2.57	2.03	2.00	1.97
26	1.68	1.74	1.29	1.40	1.77	2.19	....	2.06	2.70	2.03	2.02	1.99
27	al.69	1.74	1.35	1.56	1.69	2.25	....	2.05	2.82	2.02	1.98	2.01
28	1.69	1.74	1.39	1.58	1.30	2.14	....	1.90	2.90	2.03	2.02	2.02
29	1.70		1.42	1.63	1.53	1.88	2.91	2.01	2.91	2.05	....	2.04
30	1.71		1.45	1.55	1.62	2.01	3.03	2.07	.87	2.06	....	2.06
31	1.71		1.46		1.71		....	2.16		2.06		2.06

a Estimated.

## NEW JERSEY

By J. M. Birdsall and G. D. DeBucharanne

### PROGRAM OF WORK

The investigation of the ground-water resources of New Jersey in cooperation with the New Jersey Department of Conservation, Division of Water Policy and Supply, was continued in 1946. During the year about 3,600 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 216 wells were being observed. Measurements were made monthly or less frequently in some of the wells, biweekly and weekly in others and four 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 supplies or by industries.

### PRECIPITATION

The precipitation in New Jersey was above normal for the months of May, June, and July 1946, being 6.63 inches, 5.25 inches, and 5.91 inches, respectively. May of this year was the wettest since 1908. For the other 9 months the precipitation was below normal. There were no destructive storms during the year.

### FLUCTUATIONS OF WATER LEVEL

The Morrell well (29.11.1.2.3.), a shallow well near Old Bridge, in Middlesex County, 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, it would appear that the ground-water storage was rather uniformly high during the first 5 months of the year. Between June 4 and July 19 the water level declined rapidly from 74.25 feet above mean sea level to 71.25 feet. This decline was checked by the storm of July 21 to 23, when the precipitation was 6.39 inches at the nearby Runyon station. At the end of July 23, the water level had risen to 74.30 feet above mean sea level.



From this date until September 20 there was a more gradual decline until the water level reached approximately the same altitude as the low of July 19. This decline was probably the combined result of subnormal precipitation and the usual heavy transpiration by vegetation during the growing season. The trend thereafter was upward until the end of the year when the water level was 72.94 feet above mean sea level as compared with 74.45 feet at the end of December 1945. The net decline for the year in this well was 1.51 feet.

New high levels were observed in 10 wells in Salem County in 1946. There were no new lows. The highs occurred during the first 7 months of the year, 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 1945 and preceding years. However, at the beginning of the year the water level was slightly higher and at the end of the year it was lower than on the corresponding dates in 1945. In the Longport well, which is typical of the wells tapping this artesian aquifer, a new record low level of 55.3 feet below mean sea level was recorded on August 16, 1946. On December 31, 1946, the water level in this well was 38.7 feet below mean sea level as compared with 36.2 feet at the end of 1945. 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 June 26, 1946, when the water level stood 23.6 feet below mean sea level. This was probably due to a shift in the distribution of pumpage, as a review of the amount of water diverted from subsurface sources from that well field does not indicate an exceptionally high rate of total pumpage.

#### WELL-NUMBERING SYSTEM

An explanation of the well-numbering system used in New Jersey may be found in Water-Supply Paper 986, page 83.

## 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). 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. 28-29, 1929.

Water level at the end of day, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	31.0	....	30.4	30.3	30.3	30.5	31.2	32.6	34.5	35.4	35.3	....
2	31.0	....	30.4	30.3	30.3	30.5	31.2	32.7	34.5	35.4	35.3	....
3	31.0	....	30.4	30.3	30.3	30.5	31.2	32.8	34.5	35.4	35.3	....
4	30.8	....	30.4	30.3	30.4	30.5	31.3	32.8	34.6	35.4	35.3	....
5	30.7	....	30.4	30.3	30.4	30.5	31.3	32.9	34.6	35.4	35.3	34.9
6	30.6	....	30.4	30.3	30.4	30.5	31.3	33.0	34.7	35.5	35.3	34.9
7	30.5	30.4	30.4	30.3	30.4	30.6	31.3	33.0	34.7	35.5	35.3	34.9
8	30.4	30.4	30.4	30.3	30.4	30.6	31.4	33.1	34.8	35.5	35.2	34.9
9	30.2	30.4	30.4	30.3	30.4	30.6	31.4	33.1	34.8	35.5	35.2	34.8
10	30.1	30.4	30.4	30.3	30.4	30.7	31.4	33.2	34.9	35.5	35.2	34.8
11	30.1	30.4	30.4	30.3	30.4	30.7	31.5	33.3	34.9	35.4	35.2	34.8
12	30.1	30.4	30.4	30.3	30.4	30.7	31.5	33.4	34.9	35.4	35.2	34.8
13	30.1	30.4	30.4	30.3	30.4	30.7	31.5	33.4	35.0	35.4	35.2	34.7
14	30.1	30.4	30.5	30.3	30.5	....	31.6	33.5	35.0	35.4	35.1	34.7
15	30.1	30.4	30.5	30.3	30.5	....	31.6	33.6	35.0	35.4	35.1	34.7
16	....	30.4	30.5	30.3	30.5	....	31.7	33.6	35.1	35.4	35.1	34.7
17	....	30.4	30.5	30.3	30.4	....	31.7	33.7	35.1	35.4	35.1	34.7
18	....	30.5	30.4	30.3	30.5	....	31.8	33.7	35.1	35.4	35.1	34.7
19	....	30.4	30.4	30.3	30.4	....	31.9	33.8	35.2	35.4	35.1	34.6
20	....	30.4	30.4	30.3	30.4	....	31.9	33.8	35.2	35.4	35.1	34.6
21	....	30.4	30.4	30.3	30.5	....	32.0	33.9	35.2	35.4	35.1	34.6
22	....	30.4	30.4	30.3	30.5	....	32.0	34.0	35.2	35.4	35.1	34.5
23	....	30.4	30.3	30.3	30.5	....	32.1	34.0	35.3	35.4	35.1	34.5
24	....	....	30.3	30.3	30.5	....	32.1	34.1	35.3	35.4	35.1	34.5
25	30.3	30.4	30.3	30.4	30.5	31.0	32.2	34.1	35.3	35.4	35.1	34.5
26	30.3	30.4	30.3	30.3	30.5	31.0	32.3	34.2	35.3	35.4	35.1	34.5
27	30.3	30.4	30.3	30.3	30.5	31.0	32.3	34.2	35.3	35.3	....	34.4
28	....	30.4	30.3	30.3	30.5	31.1	32.4	34.3	35.4	35.3	....	34.4
29	....	....	30.3	30.3	30.5	31.1	32.5	34.3	35.4	35.3	....	34.4
30	....	....	30.3	30.3	30.5	31.2	32.5	34.4	35.4	35.3	....	....
31	....	....	30.3	....	30.5	....	32.6	34.4	....	35.3	....	....

Water level at the end of day, in feet below mean sea level, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	19.2	....	18.6	18.5	18.5	18.7	19.4	20.8	22.7	23.6	23.5	....
2	19.2	....	18.6	18.5	18.5	18.7	19.4	20.9	22.7	23.6	23.5	....
3	19.2	....	18.6	18.5	18.5	18.7	19.4	21.0	22.7	23.6	23.5	....
4	19.0	....	18.6	18.5	18.6	18.7	19.5	21.0	22.8	23.6	23.5	....
5	18.9	....	18.6	18.5	18.6	18.7	19.5	21.1	22.8	23.6	23.5	23.1
6	18.8	....	18.6	18.5	18.6	18.7	19.5	21.2	22.9	23.7	23.5	23.1
7	18.7	18.6	18.6	18.5	18.6	18.8	19.5	21.2	22.9	23.7	23.5	23.1
8	18.6	18.6	18.6	18.5	18.6	18.8	19.6	21.3	23.0	23.7	23.4	23.1
9	18.4	18.6	18.6	18.5	18.6	18.8	19.6	21.3	23.0	23.7	23.4	23.0
10	18.3	18.6	18.6	18.5	18.6	18.9	19.6	21.4	23.1	23.7	23.4	23.0
11	18.3	18.6	18.6	18.5	18.6	18.9	19.7	21.5	23.1	23.6	23.4	23.0
12	18.3	18.6	18.6	18.5	18.6	18.9	19.7	21.6	23.1	23.6	23.4	23.0
13	18.3	18.6	18.6	18.5	18.6	18.9	19.7	21.6	23.2	23.6	23.4	22.9
14	18.3	18.6	18.7	18.5	18.7	....	19.8	21.7	23.2	23.6	23.3	22.9
15	18.3	18.6	18.7	18.5	18.7	....	19.8	21.8	23.2	23.6	23.3	22.9
16	....	18.6	18.7	18.5	18.7	....	19.9	21.8	23.3	23.6	23.3	22.9
17	....	18.6	18.7	18.5	18.6	....	19.9	21.9	23.3	23.6	23.3	22.9
18	....	18.7	18.6	18.5	18.7	....	20.0	21.9	23.3	23.6	23.3	22.9
19	....	18.6	18.6	18.5	18.6	....	20.1	22.0	23.4	23.6	23.3	22.8
20	....	18.6	18.6	18.5	18.6	....	20.1	22.0	23.4	23.6	23.3	22.8

36.13.2.9.1--Continued.

Water level at the end of day, in feet below mean sea level, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
21	....	18.6	18.6	18.5	18.7	....	20.2	22.1	23.4	23.6	23.3	22.8
22	....	18.6	18.6	18.5	18.7	....	20.2	22.2	23.4	23.6	23.3	22.7
23	....	18.6	18.5	18.5	18.7	....	20.3	22.2	23.5	23.6	23.3	22.7
24	....	....	18.5	18.5	18.7	....	20.3	22.3	23.5	23.6	23.3	22.7
25	18.5	18.6	18.5	18.6	18.7	19.2	20.4	22.3	23.5	23.6	23.3	22.7
26	18.5	18.6	18.5	18.5	18.7	19.2	20.5	22.4	23.5	23.6	23.3	22.7
27	18.5	18.6	18.5	18.5	18.7	19.2	20.5	22.4	23.5	23.5	....	22.6
28	....	18.6	18.5	18.5	18.7	19.3	20.6	22.5	23.6	23.5	....	22.6
29	....	....	18.5	18.5	18.7	19.3	20.7	22.5	23.6	23.5	....	22.6
30	....	....	18.5	18.5	18.7	19.4	20.7	22.6	23.6	23.5	....	....
31	....	....	18.5	....	18.7	....	20.8	22.6	....	23.5	....	....

36.14.5.8.7 (\*906, p. 77; 936, p. 78; 944, p. 78; 986, p. 86; 1016, p. 120; 1023, p. 146). Pennsylvania-Reading Seashore Lines. Citizen Ice Co. Extremes of observed water level, in feet below mean sea level: Highest: when first drilled (see Annual Report of New Jersey State Geologist 1894) well flowed 40 gallons per minute 14 feet above mean sea level; lowest, 78.8 Sept. 2, 1929. Abandoned after Oct. 22, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
1	57.2	55.8	....	57.7	58.0	62.7	65.2	70.5	71.9	69.9
2	57.4	55.9	55.8	57.5	58.1	62.5	65.4	....	72.4	70.0
3	56.9	55.9	56.3	57.4	57.8	62.6	65.3	71.0	72.4	70.0
4	56.5	56.2	57.0	57.5	58.7	62.7	65.9	71.2	72.0	70.2
5	56.5	56.6	57.2	57.4	59.3	62.8	66.2	71.2	71.5	70.3
6	55.9	56.6	57.3	57.6	59.7	62.9	66.2	71.4	71.0	69.9
7	55.6	57.1	57.2	57.3	....	62.9	66.3	71.5	71.2	....
8	56.0	56.9	57.7	56.9	....	62.0	66.3	71.0	71.6	....
9	55.9	56.2	58.1	56.1	60.0	62.0	66.7	71.0	71.6	....
10	55.8	56.0	57.9	56.5	60.1	62.4	66.8	71.1	71.2	....
11	56.0	55.6	57.4	56.5	60.8	62.9	66.8	71.4	71.1	....
12	56.0	55.9	57.7	56.5	61.0	63.1	66.9	71.5	71.0	....
13	55.5	55.9	58.0	56.4	61.5	63.3	67.0	71.4	70.5	....
14	55.5	55.7	57.7	56.5	61.7	63.3	67.2	71.5	70.5	....
15	55.6	56.2	57.4	56.7	....	63.3	67.1	71.5	70.8	....
16	55.7	....	57.6	57.3	61.7	62.6	67.1	71.7	70.8	....
17	55.5	56.3	57.6	57.6	61.3	62.3	67.1	71.5	70.8	....
18	55.2	55.6	57.0	57.8	61.1	62.5	67.0	71.4	70.3	....
19	55.3	55.7	....	58.1	61.1	62.4	....	71.3	70.2	....
20	55.5	55.5	....	58.1	60.9	62.7	....	71.7	....	....
21	54.4	56.4	57.4	58.1	61.1	62.9	....	71.8	....	....
22	55.5	56.5	57.8	58.1	61.5	63.1	....	71.6	69.8	....
23	55.7	56.7	58.6	58.2	....	63.1	....	....	69.7	....
24	55.4	56.6	58.5	58.2	62.1	63.0	69.6	....	69.7	....
25	55.7	56.2	57.8	58.0	62.3	63.2	69.7	71.5	69.8	....
26	55.7	56.5	57.8	....	....	63.7	69.6	71.1	70.4	....
27	55.7	....	58.1	58.7	....	64.0	69.7	71.1	70.5	....
28	55.5	....	58.2	58.8	....	64.2	69.6	71.4	70.6	....
29	56.0	....	58.2	58.8	61.6	64.8	70.0	71.6	70.6	....
30	....	....	57.9	58.0	61.7	65.0	70.5	71.3	70.1	....
31	....	....	58.1	....	62.2	....	70.6	71.6	....	....

Lowest daily water level, in feet below mean sea level, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
1	50.2	48.8	....	50.7	51.0	55.7	58.2	63.5	64.9	62.9
2	50.4	48.9	48.8	50.5	51.1	55.5	58.4	....	65.4	63.0
3	49.9	48.9	49.3	50.4	50.8	55.6	58.3	64.0	65.4	63.0
4	49.5	49.2	50.0	50.5	51.7	55.7	58.9	64.2	65.0	63.2
5	49.5	49.6	50.2	50.4	52.3	55.8	59.2	64.2	64.5	63.3
6	48.9	49.6	50.3	50.6	52.7	55.9	59.2	64.4	64.0	62.9
7	48.6	50.1	50.2	50.3	....	55.9	59.3	64.5	64.2	....

## 36.14.5.8.7--Continued.

Lowest daily water level, in feet below mean sea level, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
8	49.0	49.9	50.7	49.9	....	55.0	59.3	64.0	64.6	....
9	48.9	49.2	51.1	49.1	53.0	55.0	59.7	64.0	64.6	....
10	48.8	49.0	50.9	49.5	53.1	55.4	59.8	64.1	64.2	....
11	49.0	48.6	50.4	49.5	53.8	55.9	59.8	64.4	64.1	....
12	49.0	48.9	50.7	49.5	54.0	56.1	59.9	64.5	64.0	....
13	48.5	48.9	51.0	49.4	54.5	56.3	60.0	64.4	63.5	....
14	48.5	48.7	50.7	49.5	54.7	56.3	60.2	64.5	63.5	....
15	48.6	49.2	50.4	49.7	....	56.3	60.1	64.5	63.8	....
16	48.7	....	50.6	50.3	54.7	55.6	60.1	64.7	63.8	....
17	48.5	49.7	50.6	50.6	54.3	55.3	60.1	64.5	63.8	....
18	48.2	48.6	50.0	50.8	54.1	55.5	60.0	64.4	63.3	....
19	48.3	48.7	....	57.1	54.1	55.4	....	64.3	63.2	....
20	48.5	48.5	....	51.1	53.9	55.7	....	64.7	....	....
21	47.4	49.4	50.4	51.1	54.1	55.9	....	64.8	....	....
22	48.5	49.5	50.8	51.1	54.5	56.1	....	64.6	62.8	....
23	48.7	49.7	51.6	51.2	....	56.1	....	....	62.8	....
24	48.4	49.6	51.5	51.2	55.1	56.0	62.6	....	62.8	....
25	48.7	49.2	50.8	51.0	55.3	56.2	62.7	64.5	62.8	....
26	48.7	49.5	50.8	....	....	56.7	62.7	64.1	63.4	....
27	48.7	....	51.1	51.7	....	57.0	62.7	64.1	63.5	....
28	48.5	....	51.2	51.8	....	57.2	62.6	64.4	63.6	....
29	49.0	....	51.2	51.8	54.6	57.8	63.0	64.6	63.6	....
30	....	....	50.9	51.0	54.7	58.0	63.5	64.3	63.1	....
31	....	....	51.1	....	55.7	....	63.6	64.6	....	....

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). Longport Water Dept. Longport 14th Avenue well. Extremes of observed water level, in feet with reference to mean sea level: Highest, about +19 in 1895; lowest, -55.3 Aug. 16, 1946.

Average daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	41.1	39.6	....	....	40.7	43.3	49.4	57.2	59.1	53.5	48.5	45.5
2	41.5	39.5	....	....	40.6	43.2	49.8	56.9	59.6	53.4	48.7	46.1
3	41.2	39.7	....	....	40.4	43.3	49.3	57.6	59.7	53.0	48.2	45.8
4	41.0	39.2	....	38.2	40.6	43.6	49.6	58.2	59.1	53.0	48.0	46.0
5	40.6	39.2	....	38.7	40.3	43.4	....	58.6	58.5	52.9	48.2	45.7
6	40.4	38.9	38.6	....	40.7	43.5	50.1	58.7	58.3	52.7	48.1	45.2
7	40.4	39.1	38.8	....	40.9	....	50.5	58.2	58.3	52.6	47.8	45.1
8	40.2	39.1	38.7	38.9	....	....	51.1	57.6	58.2	51.9	47.0	45.2
9	39.9	....	....	....	....	44.7	51.5	58.0	58.0	50.9	47.3	45.1
10	39.7	38.7	39.2	....	41.3	45.6	51.7	58.3	57.8	50.4	46.9	44.9
11	39.8	38.5	38.8	....	41.5	45.9	51.9	58.8	58.0	50.3	46.7	45.0
12	....	39.1	38.8	....	41.6	45.8	52.1	59.2	58.0	50.2	46.9	44.6
13	40.1	....	39.1	....	41.7	45.3	52.1	59.3	57.1	50.5	46.8	44.9
14	40.0	38.7	....	39.2	41.6	45.3	52.9	59.1	56.5	50.1	46.7	45.2
15	39.8	39.2	38.2	....	41.3	44.9	53.4	59.2	57.0	50.0	46.6	45.1
16	39.4	39.3	38.1	39.6	41.2	45.3	53.1	59.5	57.6	50.0	46.8	44.9
17	38.8	38.9	38.2	39.8	41.1	45.7	53.6	59.1	57.4	50.1	46.9	44.5
18	38.8	38.8	37.8	39.8	41.1	45.9	54.2	58.8	57.3	49.8	46.4	44.7
19	39.4	....	37.5	40.1	41.2	45.7	54.7	58.2	57.1	49.8	46.3	44.6
20	39.1	....	....	40.4	41.5	45.5	....	58.3	57.0	49.4	46.4	43.9
21	38.3	39.7	38.2	40.7	41.5	45.3	56.1	....	56.5	49.3	46.2	43.7
22	....	39.0	38.1	40.8	41.6	....	56.4	....	55.9	49.1	46.0	44.8
23	....	38.4	38.1	40.7	41.9	....	56.4	....	55.7	49.1	46.5	45.1
24	38.9	37.9	38.2	40.6	41.9	....	55.8	58.7	55.1	48.9	46.4	44.6
25	39.2	38.0	38.3	40.7	42.0	....	55.5	59.0	54.5	48.8	46.3	44.4
26	38.7	39.4	38.2	40.1	42.6	....	55.2	59.4	54.2	48.7	46.1	44.7
27	....	40.2	38.4	40.6	42.2	48.7	55.9	59.0	54.2	49.0	46.1	44.5
28	....	39.8	38.4	40.8	41.7	49.4	56.7	58.8	54.3	48.9	46.2	44.2
29	....	....	38.3	40.8	....	49.3	57.3	59.2	54.1	48.8	46.1	43.5
30	....	....	37.6	40.7	....	49.4	57.8	58.6	53.7	48.8	45.8	44.1
31	38.8	....	38.1	42.7	....	....	57.9	58.4	....	48.4	....	44.3

36.23.1.9.6--Continued.

Average daily water level, in feet below mean sea level, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	35.7	34.2	....	....	35.3	37.9	44.0	51.8	53.7	48.1	43.1	40.1
2	36.1	34.1	....	....	35.2	37.8	44.4	51.5	54.2	48.0	43.3	40.7
3	35.8	34.3	....	....	35.0	37.9	43.9	52.2	54.3	47.6	42.8	40.4
4	35.6	33.8	....	32.8	35.2	38.2	44.2	52.8	53.7	47.6	42.6	40.6
5	35.2	33.8	....	33.3	34.9	38.0	....	53.2	53.1	47.5	42.8	40.3
6	35.0	33.5	33.2	....	35.3	38.1	44.7	53.3	52.9	47.3	42.7	39.8
7	35.0	33.7	33.4	....	35.5	....	45.1	52.8	52.9	47.2	42.4	39.7
8	34.8	33.7	33.3	33.5	....	....	45.7	52.2	52.8	46.5	41.6	39.8
9	34.5	....	....	....	....	39.3	46.1	52.6	52.6	45.5	41.9	39.7
10	34.3	33.3	33.8	....	35.9	40.2	46.3	52.9	52.4	45.0	41.5	39.5
11	34.4	33.1	33.4	....	36.1	40.5	46.5	53.4	52.6	44.9	41.3	39.6
12	....	33.7	33.4	....	36.2	40.4	46.7	53.8	52.6	44.8	41.5	39.2
13	34.7	....	33.7	....	36.3	39.9	46.7	53.9	51.7	45.1	41.4	39.5
14	34.6	33.3	....	33.8	36.2	39.9	47.5	53.7	51.1	44.7	41.3	39.8
15	34.4	33.8	32.8	....	35.9	39.5	48.0	53.8	51.6	44.6	41.2	39.7
16	34.0	33.9	32.7	34.2	35.8	39.9	47.7	54.1	52.2	44.6	41.4	39.5
17	33.4	33.5	32.8	34.4	35.7	40.3	48.2	53.7	52.0	44.7	41.5	39.1
18	33.4	33.4	32.4	34.4	35.7	40.5	48.8	53.4	51.9	44.4	41.0	39.3
19	34.0	....	32.1	34.7	35.8	40.3	49.3	52.8	51.7	44.4	40.9	39.2
20	33.7	....	....	35.0	36.1	40.1	....	52.9	51.6	44.0	41.0	38.5
21	32.9	34.3	32.8	35.3	36.1	39.9	50.7	....	51.1	43.9	40.8	38.3
22	....	33.6	32.7	35.4	36.2	....	51.0	....	50.5	43.7	40.6	39.4
23	....	33.0	32.7	35.3	36.5	....	51.0	....	50.3	43.7	41.1	39.7
24	33.5	32.5	32.8	35.2	36.5	....	50.4	53.3	49.7	43.5	41.0	39.2
25	33.8	32.6	32.9	35.3	36.6	....	50.1	53.6	49.1	43.4	40.9	39.0
26	34.3	34.0	32.8	34.7	37.2	....	49.8	54.0	48.8	43.3	40.7	39.3
27	....	34.8	33.0	35.2	36.8	43.3	50.5	53.6	48.8	43.6	40.7	39.1
28	....	34.4	33.0	35.4	36.3	44.0	51.3	53.4	48.9	43.5	40.8	38.8
29	....	....	32.9	35.4	....	43.9	51.9	53.8	48.7	43.4	40.7	38.1
30	....	....	32.4	35.3	....	44.0	52.4	53.2	48.3	43.4	40.4	38.7
31	33.4	....	32.7	....	37.3	....	52.5	53.0	....	43.0	....	38.9

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). City of Garfield well 11. Extremes of observed water level, in feet with reference to mean sea level: Highest, +56.2 Mar. 8, 1926; lowest, -1.8 Nov. 5, 1932.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	49.0	....	56.1	57.4	55.3	52.7	50.6	50.9	55.7	58.0	61.6	63.5
2	49.0	....	56.3	57.6	55.5	51.5	51.8	50.1	55.1	58.0	61.7	63.2
3	47.8	....	56.5	58.0	55.5	50.8	52.2	51.5	55.5	57.0	61.6	63.5
4	49.0	....	56.7	58.0	55.3	50.8	52.2	51.5	56.3	57.0	59.7	63.5
5	49.4	....	56.8	58.2	54.4	49.5	51.5	51.9	56.3	57.9	60.8	63.5
6	48.4	....	....	58.3	53.6	49.5	51.5	52.2	56.1	58.7	61.7	63.2
7	47.9	....	....	58.3	54.5	48.8	52.1	51.6	56.8	59.1	62.1	62.7
8	49.4	....	....	58.1	54.9	49.5	52.5	52.0	56.8	59.1	62.1	59.5
9	48.6	....	....	58.0	55.5	49.6	52.4	52.4	56.1	59.2	62.3	60.5
10	49.3	....	....	58.3	56.0	49.3	52.8	52.8	57.0	59.5	62.6	61.2
11	49.3	....	....	58.4	56.0	49.4	52.6	52.9	57.0	59.5	62.9	61.9
12	49.7	....	....	58.4	54.6	49.4	51.9	53.1	57.3	59.6	62.9	61.9
13	48.8	....	....	58.5	55.7	49.4	52.7	53.1	57.2	59.9	62.7	61.4
14	47.9	....	57.3	58.6	55.7	49.3	52.8	53.7	55.0	60.0	62.7	61.2
15	48.4	....	57.5	58.5	56.2	49.3	51.9	54.4	56.1	60.1	63.2	60.8
16	....	....	58.0	58.5	55.6	49.3	52.4	54.9	57.0	60.1	63.5	59.8
17	....	....	58.1	58.8	56.0	49.2	53.0	55.5	57.0	59.1	63.4	60.1
18	....	....	57.8	58.8	55.9	49.6	53.2	55.7	57.9	58.5	62.0	60.5
19	....	....	57.9	59.2	55.1	49.7	53.8	54.6	57.9	58.8	63.0	60.2

## 26.3.1.7.3--Continued.

Lowest daily water level, in feet below land-surface datum, 1946

Lowest daily water level, in feet below land-surface datum, 1980 (From recorder charts)												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
20	....	55.4	57.9	59.2	55.0	49.7	54.2	55.7	58.5	59.6	63.4	59.8
21	....	55.9	57.9	58.5	54.9	49.8	54.2	55.7	58.5	59.7	62.3	59.6
22	....	55.9	58.1	56.3	53.0	50.5	50.4	56.0	57.6	59.7	62.7	59.3
23	....	55.7	58.1	56.5	52.8	50.7	50.6	56.3	58.3	59.8	63.7	60.4
24	....	55.7	57.8	57.9	54.2	51.7	51.7	56.4	58.3	60.7	64.0	62.3
25	....	....	56.6	58.3	54.8	52.3	51.7	56.4	58.6	61.1	63.9	62.4
26	....	55.7	57.1	58.2	54.8	52.5	51.3	55.8	58.8	61.2	63.9	60.5
27	....	55.8	57.2	55.3	53.3	52.9	51.7	56.1	58.7	60.2	64.5	61.2
28	....	55.8	57.4	55.3	53.5	53.0	50.0	56.6	58.6	59.9	64.7	62.0
29	....	....	57.5	55.3	53.5	47.9	51.1	56.6	57.7	59.9	64.3	59.9
30	....	....	57.8	55.3	53.2	49.3	51.3	56.8	56.7	59.9	64.6	61.1
31	....	....	57.9	....	52.7	....	51.4	56.7	....	61.0	....	62.6

Lowest daily water level, in feet above mean sea level, 1946

Lowest daily water level, in feet above mean sea level, 1910 (From recorder charts)												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	17.6	....	10.5	9.2	11.3	13.9	16.0	15.7	10.9	8.6	5.0	3.1
2	17.6	....	10.3	9.0	11.1	15.1	14.8	16.5	11.5	8.6	4.9	3.4
3	18.8	....	10.1	8.6	11.1	15.8	14.4	15.1	11.1	9.6	5.0	3.1
4	17.6	....	9.9	8.6	11.3	15.8	14.4	15.1	10.3	9.6	6.9	3.1
5	17.2	....	9.8	8.4	12.2	17.1	15.1	14.7	10.3	8.7	5.8	3.1
6	18.2	....	....	8.3	13.0	17.1	15.1	14.4	10.5	7.9	4.9	3.4
7	18.7	....	....	8.3	12.1	17.8	14.5	15.0	9.8	7.5	4.5	3.9
8	17.2	....	....	8.5	11.7	17.1	14.1	14.6	9.8	7.5	4.5	7.1
9	18.0	....	....	8.6	11.1	17.0	14.2	14.2	10.5	7.4	4.3	6.1
10	17.3	....	....	8.3	10.6	17.3	13.8	13.8	9.6	7.1	4.0	5.4
11	17.3	....	....	8.2	10.6	17.2	14.0	13.7	9.6	7.1	3.7	4.7
12	16.9	....	....	8.2	12.0	17.2	14.7	13.5	9.3	7.0	3.7	4.7
13	17.8	....	....	8.1	10.9	17.2	13.9	13.5	9.4	6.7	3.9	5.2
14	18.7	....	9.3	8.0	10.9	17.3	13.8	12.9	11.6	6.6	3.9	5.4
15	18.2	....	9.1	8.1	10.4	17.3	14.7	12.2	10.5	6.5	3.4	5.8
16	....	....	8.6	8.1	11.0	17.3	14.2	11.7	9.6	6.5	3.1	6.8
17	....	....	8.5	7.8	10.6	17.4	13.6	11.1	9.6	7.5	3.2	6.5
18	....	....	8.8	7.8	10.7	17.0	13.4	10.9	8.7	8.1	4.6	6.1
19	....	....	8.7	7.4	11.5	16.9	12.8	12.0	8.7	7.8	3.6	6.4
20	....	11.2	8.7	7.4	11.6	16.9	12.4	10.9	8.1	7.0	3.2	6.8
21	....	10.7	8.7	8.1	11.7	16.8	12.4	10.9	8.1	6.9	4.3	7.0
22	....	10.8	8.5	10.3	13.6	16.1	16.2	10.6	9.0	6.9	3.9	7.3
23	....	10.9	8.5	10.1	13.8	15.9	16.0	10.3	8.3	6.8	2.9	6.2
24	....	10.9	8.8	8.7	12.4	14.9	14.9	10.2	8.3	5.9	2.6	4.3
25	....	....	10.0	8.3	11.8	14.3	14.9	10.2	8.0	5.5	2.7	4.2
26	....	10.9	9.5	8.4	11.8	14.1	15.3	10.8	7.8	5.4	2.7	6.1
27	....	10.8	9.4	11.3	13.3	13.7	14.9	10.5	7.9	6.4	2.1	5.4
28	....	10.8	9.2	11.3	13.1	13.6	16.6	10.0	8.0	6.7	1.9	4.6
29	....	....	9.1	11.3	13.1	18.7	15.5	10.0	8.9	6.7	2.3	6.7
30	....	....	8.8	11.3	13.4	17.3	15.3	9.8	9.9	6.7	2.0	5.5
31	....	....	8.7	....	13.9	....	15.2	9.9	....	5.6	....	4.0

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). 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.

31.2.2.5.2--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	11.6	Mar. 4	11.8	May 4	12.2	July 25	10.9
2	11.5	5	12.0	5	11.6	26	10.6
3	11.6	6	12.0	6	12.2	27	10.3
4	12.0	7	11.7	7	12.3	28	10.1
5	12.1	8	11.9	8	12.3	29	10.5
6	12.0	9	11.9	9	12.2	30	11.0
15	11.4	10	11.5	10	12.5	31	11.0
16	11.6	11	11.8	11	12.3	Aug. 1	11.1
17	11.6	12	11.9	12	11.7	Sept. 18	11.4
18	11.3	20	11.4	24	11.7	19	11.6
19	11.5	21	11.4	25	11.6	20	11.7
20	11.7	22	11.4	26	11.2	21	11.7
21	11.2	23	11.4	27	11.4	22	10.4
22	11.4	24	11.2	28	11.5	23	10.8
23	11.9	25	11.2	29	11.4	24	11.3
24	11.9	26	11.4	30	11.3	25	11.3
25	11.9	27	11.5	31	10.7	26	11.3
26	11.7	28	11.6	June 1	10.7	27	11.1
27	11.8	29	11.6	2	10.7	28	11.1
28	11.5	30	11.2	3	9.8	29	10.3
29	12.0	31	10.8	4	10.0	30	10.7
30	12.4	Apr. 1	10.9	5	10.2	Oct. 1	10.1
Feb. 16	12.2	2	11.1	6	10.6	Nov. 28	12.8
17	12.1	3	11.3	7	10.8	29	12.5
18	12.0	4	11.3	8	10.3	30	12.6
19	12.0	11	11.2	9	10.4	Dec. 1	11.9
20	12.0	12	11.5	10	11.0	2	13.0
21	12.2	13	11.4	11	10.8	3	13.1
22	12.2	14	11.0	12	10.6	4	13.3
23	11.7	15	10.5	13	10.7	5	13.0
24	11.6	16	10.9	14	10.7	6	13.0
25	11.7	17	11.2	15	10.5	7	12.6
26	12.0	18	11.4	19	10.7	8	12.4
27	11.7	19	11.2	20	10.7	9	12.6
28	12.3	30	11.7	21	10.5	10	12.8
Mar. 1	12.4	May 1	12.2	22	10.7	11	12.9
2	12.4	2	12.3	23	10.3	12	13.0
3	12.0	3	12.3	24	10.6		

Lowest daily water level, in feet below mean sea level, 1946  
(From recorder charts)

Jan. 1	5.8	Feb. 18	6.2	Mar. 21	5.6	Apr. 30	5.9
2	5.7	19	6.4	22	5.6	May 1	6.4
3	5.8	20	6.4	23	5.6	2	6.5
4	6.2	21	6.4	24	5.4	3	6.5
5	6.5	22	6.4	25	5.4	4	6.4
6	6.2	23	5.9	26	5.6	5	5.8
15	5.6	24	5.8	27	5.7	6	6.4
16	5.8	25	5.9	28	5.8	7	6.5
17	5.8	26	6.2	29	5.8	8	6.5
18	5.5	27	5.9	30	5.4	9	6.4
19	5.7	28	6.5	31	5.0	10	6.7
20	5.9	Mar. 1	6.6	Apr. 1	5.1	11	6.5
21	5.4	2	6.6	2	5.3	12	5.9
22	5.6	3	6.2	3	5.5	24	5.9
23	6.1	4	6.0	4	5.5	25	5.8
24	6.1	5	6.2	11	5.4	26	5.4
25	6.1	6	6.2	12	5.7	27	5.6
26	5.9	7	5.9	13	5.6	28	5.7
27	6.0	8	6.1	14	5.2	29	5.6
28	5.7	9	6.1	15	4.7	30	5.5
29	6.2	10	5.7	16	5.1	31	4.9
30	6.6	11	6.0	17	5.4	June 1	4.9
Feb. 16	6.4	12	6.1	18	5.6	2	4.9
17	6.3	20	5.6	19	5.4	3	4.0

## 31.2.2.5.2--Continued.

Lowest daily water level, in feet below mean sea level, 1946  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 4	4.2	July 21	4.7	Sept. 20	5.9	Nov. 30	6.8
5	4.4	22	4.9	21	5.9	Dec. 1	6.1
6	4.8	23	4.5	22	4.6	2	7.2
7	5.0	24	4.8	23	5.0	3	7.3
8	4.5	25	5.1	24	5.5	4	7.5
9	4.6	26	4.8	25	5.5	5	7.2
July 10	5.2	27	4.5	26	5.5	6	7.2
11	5.0	28	4.3	27	5.3	7	6.8
12	4.8	29	4.7	28	5.3	8	6.6
13	4.9	30	5.2	29	4.5	9	6.8
14	4.9	31	5.2	30	4.9	10	7.0
15	4.7	Aug. 1	5.3	Oct. 1	5.3	11	7.1
19	4.9	Sept. 18	5.6	Nov. 28	7.0	12	7.2
20	4.9	19	5.8	29	6.7		

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). 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, -23.6 June 26, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	21.1	21.1	22.3	23.5	24.6	22.5	22.3	25.4	21.5	20.5
2	....	....	20.8	21.0	24.7	21.6	24.2	25.3	22.4	23.0	21.5	23.0
3	21.7	....	20.5	21.0	22.4	21.5	25.7	24.7	23.3	22.9	20.8	22.7
4	22.3	....	21.2	20.7	21.4	20.8	23.9	24.0	23.0	23.1	21.6	22.7
5	22.3	....	21.4	21.5	20.3	21.1	24.8	26.2	22.3	23.1	22.1	22.8
6	21.9	....	21.0	20.9	23.5	22.7	24.7	23.5	22.5	24.9	22.2	21.8
7	22.2	....	21.4	20.3	21.8	23.3	25.2	21.4	23.5	22.6	21.0	22.0
8	22.2	....	22.0	21.1	21.7	24.3	26.8	22.7	22.6	23.1	21.5	21.3
9	22.1	....	21.0	20.9	22.2	23.7	25.7	23.6	24.0	22.3	21.1	22.6
10	21.5	....	20.2	21.2	24.2	24.7	26.1	22.8	24.6	22.2	20.5	22.7
11	21.8	....	22.4	21.4	21.5	25.7	26.3	22.0	24.6	21.6	22.0	22.7
12	21.3	....	21.2	20.9	20.1	21.7	24.2	25.7	24.0	21.3	22.1	22.1
13	21.1	....	22.2	21.0	24.2	22.6	24.9	22.7	23.1	21.0	21.9	22.4
14	21.6	....	21.8	20.6	21.8	22.6	23.1	22.9	23.3	22.4	21.7	22.4
15	21.7	....	20.8	21.6	21.6	21.6	22.3	23.2	22.7	21.8	22.1	21.5
16	22.0	22.0	21.9	21.8	22.0	21.9	23.1	25.1	23.9	21.9	21.7	22.4
17	22.2	20.9	20.4	21.8	24.0	24.5	23.8	23.0	24.1	21.5	20.7	22.3
18	22.1	21.6	21.0	21.9	20.6	23.9	26.0	20.9	24.1	21.6	22.1	22.3
19	21.8	21.4	21.3	22.1	20.5	22.4	26.3	22.1	24.1	21.7	21.7	22.9
20	....	21.5	21.6	22.1	21.9	21.9	26.1	23.3	24.1	20.3	21.7	22.5
21	....	21.6	21.5	21.1	21.8	21.5	22.7	22.8	23.0	22.0	21.8	22.4
22	....	21.4	22.4	24.2	22.0	23.6	22.9	23.4	22.4	22.0	21.4	22.0
23	....	21.2	21.5	24.3	22.0	21.0	21.3	22.6	23.0	22.0	21.1	22.9
24	....	20.3	21.3	24.4	23.8	25.3	22.5	23.3	22.4	22.0	20.5	22.9
25	....	21.4	21.6	21.9	24.2	25.7	22.6	22.2	22.8	21.9	21.8	21.6
26	....	21.2	21.6	21.4	22.8	27.2	22.7	23.1	22.9	21.7	22.0	22.7
27	....	21.3	21.5	20.9	21.2	26.9	23.0	23.0	23.4	20.9	22.0	22.5
28	....	21.3	21.7	20.5	20.9	26.8	22.6	23.9	23.7	21.7	21.2	22.6
29	....	....	21.3	22.1	20.7	24.4	25.8	23.2	22.8	22.2	21.4	21.0
30	....	....	20.6	23.4	20.8	23.1	26.3	22.7	22.6	22.3	21.1	22.9
31	....	....	20.4	....	24.0	....	26.7	23.3	....	22.3	....	22.6

Lowest daily water level, in feet below mean sea level, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	17.5	17.5	18.7	19.9	21.0	18.9	18.7	21.8	17.9	16.9
2	....	....	17.2	17.4	21.1	18.0	20.6	21.7	18.8	19.4	17.9	19.4
3	18.1	....	16.9	17.4	18.8	17.9	21.6	21.1	19.7	19.3	17.2	19.1
4	18.7	....	17.6	17.1	17.8	17.2	20.3	20.4	19.4	19.5	18.0	19.1
5	18.7	....	17.8	17.9	16.7	17.5	21.2	22.6	18.7	19.5	18.5	18.7
6	18.3	....	17.4	17.3	19.9	19.1	21.1	19.9	18.9	21.3	18.6	18.2



## 31.2.4.5.1--Continued.

Lowest daily water level, in feet below mean sea level, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
7	18.6	....	17.8	16.7	18.2	19.7	21.6	17.8	19.9	19.0	17.4	18.4
8	18.6	....	18.4	17.5	18.1	20.7	23.2	19.1	19.0	19.5	17.9	17.7
9	18.5	....	17.4	17.3	18.6	20.1	22.1	20.0	20.4	18.7	17.5	19.0
10	17.9	....	16.6	17.6	20.6	21.1	22.5	19.2	21.0	18.6	16.9	19.1
11	18.2	....	18.8	17.8	17.9	22.1	22.7	18.4	21.0	18.0	18.4	19.1
12	17.7	....	17.6	17.3	16.5	18.1	20.6	22.1	20.4	17.7	18.5	18.5
13	17.5	....	18.6	17.4	20.6	19.0	21.3	19.1	19.5	17.4	18.3	18.8
14	18.0	....	18.2	17.0	18.2	19.0	19.5	19.3	20.2	18.8	18.1	18.8
15	18.1	....	17.2	18.0	18.0	18.0	18.7	19.6	19.1	18.2	18.5	17.9
16	18.4	18.4	18.3	18.2	18.4	18.3	19.5	21.5	20.3	18.3	18.1	18.8
17	18.6	17.3	16.8	18.2	20.4	20.9	20.2	19.4	20.5	17.9	17.1	18.7
18	18.5	18.0	17.4	18.5	17.0	20.3	22.4	17.3	20.5	18.0	18.5	18.7
19	18.2	17.8	17.7	18.5	16.9	18.8	22.7	18.5	20.5	18.1	18.1	19.3
20	....	17.9	18.0	18.5	18.3	18.3	22.5	19.7	20.5	16.7	18.1	18.9
21	....	18.0	17.9	17.5	18.2	17.9	19.1	19.2	19.4	18.4	18.2	18.8
22	....	17.8	18.8	20.6	18.4	20.0	19.3	19.8	18.8	18.4	17.8	18.4
23	....	17.6	17.9	20.7	18.4	17.4	17.7	19.0	19.4	18.4	17.5	19.3
24	....	16.7	17.7	20.8	20.2	21.7	18.9	19.7	18.8	18.4	16.9	19.3
25	....	17.8	18.0	18.3	20.6	22.1	19.0	18.6	19.2	18.3	18.2	18.0
26	....	17.6	18.0	17.8	19.2	23.6	19.1	19.5	19.3	18.1	18.4	19.1
27	....	17.7	17.9	17.3	17.6	23.3	19.4	19.4	19.8	17.3	18.4	18.9
28	....	17.7	18.1	16.9	17.3	23.2	19.0	20.3	20.1	18.1	17.6	19.0
29	....	....	17.7	18.5	17.1	20.8	22.2	19.6	19.2	18.6	17.8	17.4
30	....	....	17.0	19.8	17.2	19.5	22.7	19.1	19.0	18.7	17.5	19.3
31	....	....	16.8	....	20.4	....	23.1	19.7	....	18.7	....	19.0

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). Sea Isle City Water Dept. well 1. Extremes of observed water level, in feet below land-surface datum: Highest, 9.0 Apr. 7, 1930; lowest, 15.6 Sept. 13, 1931.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	12.9	....	12.6	12.3	12.4	12.2	12.6	13.2	13.5	13.6	13.6	13.4
2	12.9	....	12.6	12.2	12.3	12.1	12.6	13.0	13.6	13.6	13.5	....
3	13.0	....	12.5	12.2	12.3	12.1	12.5	13.1	13.6	13.7	13.4	....
4	13.0	....	12.6	12.1	12.2	12.1	12.6	13.2	13.6	13.7	13.4	....
5	13.0	....	12.6	12.1	12.2	12.1	12.6	13.2	13.5	13.8	13.5	13.6
6	12.9	12.7	12.6	12.1	12.3	12.1	12.6	13.2	13.5	13.8	13.6	13.6
7	12.9	12.7	12.5	12.1	12.2	12.1	12.6	13.2	13.6	13.8	13.5	13.5
8	12.9	12.8	12.6	12.1	12.1	12.1	12.6	13.1	13.6	13.7	13.5	13.5
9	12.8	12.7	12.6	12.0	12.2	12.2	12.6	13.1	13.6	13.5	13.5	13.5
10	12.8	12.6	12.6	12.1	12.3	12.3	12.7	13.2	13.6	13.3	13.5	13.4
11	12.8	12.6	12.6	12.2	12.3	12.3	12.7	13.2	13.6	13.4	13.4	13.4
12	12.7	12.7	12.6	12.2	12.2	12.3	12.7	....	13.7	13.4	13.4	13.4
13	12.9	12.7	12.6	12.1	12.4	12.2	12.7	....	13.6	13.5	13.4	13.4
14	12.9	12.6	12.6	12.1	12.4	12.3	12.7	....	13.5	13.5	13.3	13.4
15	12.9	....	12.5	12.2	12.3	12.3	12.8	....	13.5	13.5	13.4	13.4
16	....	....	12.4	12.2	12.2	12.4	12.8	....	13.6	13.5	13.4	13.4
17	....	....	12.4	12.2	12.2	12.4	12.8	....	13.6	13.5	13.5	13.4
18	....	....	12.3	12.2	12.1	12.3	12.8	....	13.6	13.5	13.5	13.4
19	....	....	12.1	12.3	12.1	12.3	12.9	....	13.6	13.5	13.4	13.4
20	....	....	12.1	12.3	12.1	12.3	12.9	....	13.6	13.6	13.4	13.5
21	....	....	12.2	12.3	12.1	12.3	13.0	....	13.6	13.6	13.4	13.1
22	....	....	12.2	12.3	12.2	12.4	13.0	13.4	13.6	13.5	13.3	13.3
23	....	....	12.2	12.2	12.3	12.4	13.0	13.4	13.6	13.5	13.4	13.5
24	....	12.5	12.2	12.1	12.3	12.4	13.0	13.5	13.6	13.4	13.4	....
25	....	12.4	12.2	12.1	12.3	12.5	13.0	13.5	13.6	13.5	13.4	....

36.31.9.1.9--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	....	12.4	12.2	11.9	12.3	12.5	13.1	13.5	13.6	13.5	13.4	....
27	....	12.5	12.3	12.1	12.3	12.6	13.1	13.5	13.6	13.6	13.4	....
28	....	12.5	12.3	12.3	12.1	12.6	13.1	13.4	13.6	13.6	13.5	....
29	....		12.3	12.3	12.1	12.7	13.2	13.5	13.6	13.6	13.5	....
30	....		12.2	12.3	12.1	12.7	13.2	13.5	13.5	13.6	13.4	....
31	....		12.3		12.1		13.2	13.5		13.5		....

Essex County

## Cancee 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). Commonwealth Water Co. well 30. Extremes of observed water level, in feet below land-surface datum: Highest 11.8 Aug. 25, 1931; lowest, 63.4 Sept. 5, 1929.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	26.2	....	....	27.8	47.0	26.4	32.6	....	....	29.1	....	37.6
2	25.6	....	....	28.4	46.4	25.9	31.9	....	....	28.1	....	37.3
3	25.1	29.9	25.7	29.6	46.8	....	40.2	....	....	26.7	....	47.2
4	....	29.5	27.8	28.6	45.9	....	....	....	....	28.2	....	37.1
5	25.7	29.3	25.9	....	45.8	....	....	....	....	30.4	....	37.2
6	25.5	27.7	27.5	....	46.3	....	....	....	....	31.3	....	37.2
7	24.6	29.0	31.5	25.1	46.5	....	....	31.1	....	35.6	46.5	37.1
8	24.1	29.0	40.3	28.1	....	....	33.2	30.5	....	33.6	45.2	37.1
9	25.2	28.4	36.3	29.0	....	....	30.5	22.2	....	32.5	45.1	37.0
10	25.2	26.6	32.2	29.4	....	30.7	29.3	32.2	....	32.9	43.4	38.1
11	25.2	25.9	29.9	28.8	43.4	29.4	....	31.7	....	33.0	44.8	37.9
12	28.2	25.8	29.7	28.9	43.5	26.9	....	31.4	....	33.1	45.1	37.1
13	28.0	25.6	29.4	28.9	43.0	26.6	29.5	30.1	....	33.1	44.1	36.6
14	26.6	....	....	28.4	36.6	28.2	....	....	....	33.0	42.9	36.6
15	26.4	....	....	28.7	30.0	....	....	....	....	32.8	42.7	36.5
16	26.5	....	29.1	29.8	28.2	27.2	....	....	....	32.9	42.7	37.4
17	26.5	25.1	29.1	30.3	....	26.6	....	29.5	....	32.8	42.3	37.4
18	28.6	25.0	28.1	....	29.0	26.9	....	29.3	....	....	42.9	36.6
19	28.5	25.1	28.7	....	28.7	....	....	29.3	....	....	42.9	36.5
20	29.6	25.1	29.1	31.2	27.0	....	41.9	31.9	....	....	37.4	36.9
21	33.8	25.4	29.2	31.3	26.5	....	39.5	31.5	....	....	32.1	37.3
22	34.4	....	....	31.1	25.9	....	31.5	....	....	....	32.5	37.5
23	31.8	....	29.1	31.8	25.6	27.9	....	....	....	....	34.3	37.5
24	31.3	25.1	27.9	33.3	26.4	29.0	....	....	34.1	....	34.5	37.1
25	....	25.1	28.6	41.3	28.3	29.7	....	....	36.4	....	36.6	37.2
26	....	25.1	28.6	43.5	25.9	30.1	....	....	36.3	....	36.0	36.9
27	29.4	28.5	28.4	45.3	25.8	32.0	31.0	....	33.8	....	35.2	36.9
28	30.8	30.2	....	45.6	28.7	....	30.8	....	33.7	....	37.2	36.7
29	30.9	....	....	46.3	26.5	....	35.2	....	31.8	....	37.6	37.3
30	31.4	....	28.7	46.8	25.7	28.6	33.5	....	29.0	....	37.7	37.7
31	32.0	....	27.7	....	....	....	38.0	....	....	....	....	38.1

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). Short Hills Water Co. test well 10. Extremes of observed water level, in feet below land-surface datum: Highest, 3.40 May 12, 1933; lowest, 28.78 Oct. 31, 1941.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 16	13.64	May 21	12.76	Aug. 14	8.65	Nov. 6	17.06
Mar. 5	12.69	July 11	11.64	Sept. 24	12.69	Dec. 18	16.44
Apr. 24	14.24						

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). Clyde Bowne. Brownstown test well. Extremes of observed water level, in feet above mean sea level: Highest, 28.14 Apr. 9-10, 1939; lowest, 21.83 Nov. 18, 1932.

Water level at end of day, in feet below land-surface datum, 1946

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	4.64	4.78	5.06	....	5.18	....	4.76	....	5.39	6.10	6.88	....
2	4.64	4.79	....	4.98	5.19	....	4.76	....	5.41	6.12	6.88	7.34
3	4.64	4.80	....	4.97	5.20	4.67	4.78	....	5.43	6.14	6.90	....
4	4.64	....	....	4.97	5.22	4.61	4.79	....	5.46	6.17	6.91	....
5	4.64	....	....	4.97	5.23	4.58	4.81	....	5.49	6.18	6.93	....
6	....	....	....	4.97	5.24	4.58	4.83	....	5.51	6.20	6.95	....
7	....	....	....	4.97	5.25	4.58	4.84	....	5.54	6.22	6.96	....
8	....	....	....	4.97	....	4.58	4.87	....	5.56	6.24	6.98	7.45
9	4.64	....	....	....	5.29	4.58	4.92	....	5.58	6.27	6.98	7.46
10	4.64	....	....	4.98	5.30	4.58	4.94	....	5.60	6.29	7.00	7.47
11	4.64	4.87	5.12	4.98	5.31	4.58	4.97	....	5.62	6.32	7.02	7.48
12	4.64	4.88	5.13	4.99	5.32	4.58	4.99	....	5.65	6.35	7.03	7.49
13	4.65	4.89	5.14	4.99	5.34	4.58	5.01	....	5.67	6.37	7.05	7.49
14	4.65	4.90	5.15	5.00	5.34	4.58	5.03	....	5.70	6.41	7.07	7.50
15	4.65	4.90	5.15	5.01	5.34	4.59	....	5.11	5.72	6.45	7.09	7.52
16	4.63	....	5.16	5.01	....	4.59	....	5.13	5.74	6.48	7.11	7.53
17	....	....	5.16	5.01	....	....	5.14	5.14	5.76	6.51	7.13	7.54
18	....	4.94	5.17	5.02	5.23	4.60	5.17	5.16	5.79	6.54	7.15	7.55
19	4.66	4.95	5.17	....	5.23	4.61	5.20	5.17	5.81	6.56	7.17	7.57
20	4.68	4.96	5.18	5.03	5.22	4.62	5.23	5.18	....	6.59	7.19	7.58
21	4.68	....	5.18	5.05	5.22	4.62	5.25	5.20	5.91	6.62	7.20	7.59
22	4.69	....	5.19	5.07	5.22	4.63	5.26	....	5.93	6.64	7.22	7.60
23	....	....	5.19	5.09	5.22	4.65	5.19	5.24	5.96	6.67	....	7.60
24	....	....	....	5.10	5.22	4.66	....	5.26	5.98	6.69	7.25	7.60
25	....	....	5.21	5.11	5.21	....	4.88	5.28	5.99	6.72	7.27	7.60
26	....	....	5.21	5.12	5.21	4.68	4.88	5.30	6.01	6.78	7.28	7.60
27	....	5.05	5.17	5.13	5.21	4.70	4.88	5.32	6.03	6.79	7.29	7.61
28	4.75	5.05	5.08	5.14	5.21	4.71	4.89	5.34	6.07	6.81	7.30	7.61
29	4.76	....	5.02	5.15	5.21	4.73	4.90	5.36	6.07	6.82	7.31	7.61
30	4.77	....	4.99	5.17	5.21	4.75	4.91	....	6.08	6.84	....	7.61
31	4.78	....	4.99	....	5.21	....	4.92	5.37	....	6.86	....	7.61

Water level at end of day, in feet above mean sea level, 1946

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	26.97	26.83	26.55	....	26.43	....	26.85	....	26.22	25.51	24.73	....
2	26.97	26.82	....	26.63	26.42	....	26.85	....	26.20	25.49	24.73	24.27
3	26.97	26.81	....	26.64	26.41	26.94	26.83	....	26.18	25.47	24.71	....
4	26.97	....	....	26.64	26.39	27.00	26.82	....	26.15	25.44	24.70	....
5	26.97	....	....	26.64	26.38	27.03	26.80	....	26.12	25.43	24.68	....
6	....	....	....	26.64	26.37	27.03	26.78	....	26.10	25.41	24.66	....
7	....	....	....	26.64	26.36	27.03	26.77	....	26.07	25.39	24.65	....
8	....	....	....	26.64	....	27.03	26.74	....	26.05	25.37	24.63	24.16
9	26.97	....	....	....	26.32	27.03	26.69	....	26.03	25.34	24.63	24.15
10	26.97	....	....	26.63	26.31	27.03	26.67	....	26.01	25.32	24.61	24.14
11	26.97	26.74	26.49	26.63	26.30	27.03	26.64	....	25.99	25.29	24.59	24.13
12	26.97	26.73	26.48	26.62	26.29	27.03	26.62	....	25.96	25.26	24.58	24.12
13	26.96	26.72	26.47	26.62	26.27	27.03	26.60	....	25.94	25.24	24.56	24.12
14	26.96	26.71	26.46	26.61	26.27	27.03	26.58	....	25.91	25.20	24.54	24.11
15	26.96	26.71	26.46	26.60	26.27	27.02	....	26.50	25.89	25.16	24.52	24.09
16	26.95	....	26.45	26.60	....	27.02	....	26.48	25.87	25.13	24.50	24.08
17	....	....	26.45	26.60	....	....	26.47	26.47	25.85	25.10	24.48	24.07
18	....	26.67	26.44	26.59	26.38	27.01	26.44	26.45	25.82	25.07	24.46	24.06
19	26.95	26.66	26.44	....	26.38	27.00	26.41	26.44	25.80	25.05	24.44	24.04
20	26.93	26.65	26.43	26.58	26.39	26.99	26.38	26.43	....	25.02	24.42	24.03
21	26.93	....	26.43	26.56	26.39	26.99	26.36	26.41	25.70	24.99	24.41	24.02
22	26.92	....	26.42	26.54	26.39	26.98	26.35	....	25.68	24.97	24.39	24.01

## 29.1.4.6.8--Continued.

Water level at end of day, in feet above mean sea level, 1946

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
23	.....	.....	26.42	26.52	26.39	26.96	26.42	26.37	25.65	24.94	.....	24.01
24	.....	.....	.....	26.51	26.39	26.95	.....	26.35	25.63	24.92	24.36	24.01
25	.....	.....	26.40	26.50	26.40	.....	26.73	26.33	25.62	24.89	24.34	24.01
26	.....	.....	26.40	26.49	26.40	26.93	26.73	26.31	25.60	24.83	24.33	24.01
27	.....	26.56	26.44	26.48	26.40	26.91	26.73	26.29	25.58	24.82	24.32	24.00
28	26.86	26.56	26.53	26.47	26.40	26.90	26.72	26.27	25.54	24.80	24.31	24.00
29	26.85	.....	26.59	26.46	26.40	26.88	26.71	26.25	25.54	24.79	24.30	24.00
30	26.84	.....	26.62	26.44	26.40	26.86	26.70	.....	25.53	24.77	.....	24.00
31	26.83	.....	26.62	.....	26.40	.....	26.69	26.24	.....	24.75	.....	24.00

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). 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, 1946

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	12.29	12.79	12.38	12.68	12.46	.....	12.49	13.03	13.52	13.87	14.16
2	12.13	12.31	12.80	.....	12.69	12.38	12.32	12.48	13.05	13.55	13.88	14.19
3	12.06	12.33	12.80	12.29	12.69	12.27	12.34	12.50	13.08	13.57	13.89	14.20
4	11.98	12.36	12.82	12.23	12.69	12.12	12.37	12.53	13.09	13.60	13.90	14.22
5	11.89	12.38	12.80	12.21	12.70	11.92	12.40	12.66	13.11	13.62	13.93	14.23
6	11.79	12.36	12.78	12.20	12.73	11.75	12.43	12.59	13.12	13.64	13.94	14.22
7	11.76	12.41	12.81	12.19	12.75	11.64	12.47	12.59	13.14	13.65	13.95	14.21
8	11.75	12.44	12.80	12.18	12.77	11.58	12.49	12.62	13.17	13.64	13.92	14.20
9	11.72	12.44	12.83	12.17	12.80	11.57	12.54	12.64	13.18	13.60	13.93	14.19
10	11.73	12.45	12.86	12.20	12.82	11.57	12.57	12.66	13.21	13.56	13.89	14.20
11	11.73	12.47	12.91	12.22	12.83	11.59	12.59	12.71	13.22	13.53	13.86	14.22
12	11.71	12.49	12.90	12.22	12.84	11.60	12.61	12.75	13.24	13.52	13.90	14.21
13	11.78	.....	12.90	12.23	12.87	11.65	12.64	12.75	13.22	13.55	13.92	14.23
14	11.81	.....	12.91	12.24	12.89	11.68	12.66	12.76	13.21	13.55	13.95	14.27
15	11.86	.....	12.90	12.25	12.90	11.72	12.70	12.79	13.24	13.56	13.97	14.30
16	11.87	.....	12.98	12.33	12.89	11.77	12.72	12.80	13.27	13.60	13.99	14.31
17	11.90	.....	12.86	12.40	12.89	11.79	12.74	12.82	13.32	13.63	14.00	.....
18	11.89	.....	12.83	12.42	12.85	11.85	12.77	12.83	13.34	13.65	14.01	.....
19	11.93	.....	12.79	12.46	12.85	11.90	12.81	12.81	13.36	13.68	14.00	.....
20	11.97	12.58	.....	12.50	12.87	11.93	12.84	12.83	13.37	13.70	14.01	.....
21	12.00	12.70	.....	12.54	12.88	11.96	12.86	12.85	13.38	13.70	14.02	.....
22	12.02	12.77	.....	12.56	12.90	12.01	12.86	12.86	13.39	13.71	14.02	.....
23	.....	12.77	.....	12.56	12.91	12.05	12.75	12.88	13.41	13.71	14.04	.....
24	.....	12.76	.....	12.57	12.90	12.09	12.66	12.90	13.40	13.72	14.05	14.34
25	.....	12.74	.....	12.57	12.97	12.12	12.61	12.91	13.42	13.72	14.07	14.34
26	.....	12.74	.....	12.57	12.85	.....	12.59	12.92	13.42	13.74	14.08	14.35
27	.....	12.75	12.82	12.61	12.78	.....	12.56	12.94	13.44	13.76	14.10	14.36
28	.....	12.77	12.75	12.63	12.69	.....	12.54	12.95	13.45	13.78	14.12	14.37
29	.....	.....	12.68	12.64	12.60	.....	12.52	12.97	13.46	13.81	14.14	14.31
30	12.25	.....	12.60	12.65	12.54	.....	12.51	12.98	13.47	13.83	14.15	14.32
31	12.24	.....	12.56	.....	12.50	.....	12.51	13.00	.....	13.85	.....	14.34

Water level at end of day, in feet above mean sea level, 1946

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	6.41	5.91	6.32	6.02	6.24	.....	6.21	5.67	5.18	4.83	4.54
2	6.57	6.39	5.90	.....	6.01	6.32	6.38	6.22	5.65	5.15	4.82	4.51
3	6.64	6.37	5.90	6.41	6.01	6.43	6.36	6.20	5.62	5.13	4.81	4.50
4	6.72	6.34	5.88	6.47	6.01	6.58	6.33	6.17	5.61	5.10	4.80	4.48
5	6.81	6.32	5.90	6.49	6.00	6.78	6.30	6.14	5.59	5.08	4.77	4.47
6	6.91	6.34	5.92	6.50	5.97	6.95	6.27	6.11	5.58	5.06	4.76	4.48
7	6.94	6.29	5.89	6.51	5.95	7.06	6.23	6.11	5.56	5.05	4.75	4.49
8	6.95	6.26	5.90	6.52	5.93	7.12	6.21	6.08	5.53	5.06	4.78	4.50
9	6.98	6.26	5.87	6.53	5.90	7.13	6.16	6.06	5.52	5.10	4.77	4.51
10	6.97	6.25	5.84	6.50	5.88	7.13	6.13	6.04	5.49	5.14	4.81	4.50
11	6.97	6.23	5.79	6.48	5.87	7.11	6.11	5.99	5.48	5.17	4.84	4.48

## 28.5.4.8.1--Continued.

Water level at end of day, in feet above mean sea level, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
12	6.99	6.21	5.80	6.48	5.86	7.10	6.09	5.95	5.46	5.18	4.80	4.49
13	6.92	....	5.80	6.47	5.83	7.05	6.06	5.95	5.48	5.15	4.78	4.47
14	6.89	....	5.79	6.46	5.81	7.02	6.04	5.94	5.49	5.15	4.75	4.43
15	6.84	....	5.80	6.45	5.80	6.98	6.00	5.91	5.46	5.14	4.73	4.40
16	6.83	....	5.82	6.37	5.81	6.93	5.98	5.90	5.43	5.10	4.71	4.39
17	6.80	....	5.84	6.30	5.81	6.91	5.96	5.88	5.38	5.07	4.70	....
18	6.81	....	5.87	6.28	5.85	6.85	5.93	5.87	5.36	5.05	4.69	....
19	6.77	....	5.91	6.24	5.85	6.80	5.89	5.89	5.34	5.02	4.70	....
20	6.73	6.12	....	6.20	5.83	6.77	5.86	5.87	5.33	5.00	4.69	....
21	6.70	6.00	....	6.16	5.82	6.74	5.84	5.85	5.32	5.00	4.68	....
22	6.68	5.93	....	6.14	5.80	6.69	5.84	5.84	5.31	4.99	4.68	....
23	....	5.93	....	6.14	5.79	6.65	5.95	5.82	5.29	4.99	4.66	....
24	....	5.94	....	6.13	5.80	6.61	6.04	5.80	5.30	4.98	4.65	4.36
25	....	5.96	....	6.13	5.83	6.58	6.09	5.79	5.28	4.98	4.63	4.36
26	....	5.96	....	6.13	5.85	....	6.11	5.78	5.28	4.96	4.62	4.35
27	....	5.95	5.88	6.09	5.92	....	6.14	5.76	5.26	4.94	4.60	4.34
28	....	5.93	5.95	6.07	6.01	....	6.16	5.75	5.25	4.92	4.58	4.33
29	....	....	6.02	6.06	6.10	....	6.18	5.73	5.24	4.89	4.56	4.39
30	6.45	....	6.10	6.05	6.16	....	6.19	5.72	5.23	4.87	4.55	4.38
31	6.46	....	6.14	....	6.20	....	6.19	5.70	....	4.85	....	4.36

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). Duhernal 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 1946.

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). Duhernal 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, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	Aug.	Sept.	Oct.	Nov.	Dec.
1	17.38	18.45	19.98	17.28	17.91	18.01	....	19.63	19.91	21.52	21.16
2	17.48	18.47	19.71	17.47	18.01	17.25	....	19.53	19.97	21.26	21.37
3	17.56	18.35	19.66	17.54	18.06	17.27	....	19.76	19.74	21.07	21.50
4	17.61	18.59	19.65	17.44	17.75	16.96	....	19.81	19.66	21.64	21.60
5	17.58	18.65	19.63	17.56	17.53	16.98	....	19.82	19.60	....	21.68
6	17.40	18.72	19.58	17.43	17.75	16.61	18.87	19.87	19.52	....	21.73
7	17.51	18.86	19.65	17.49	17.77	17.00	18.91	19.89	20.07	....	21.61
8	17.56	18.66	19.54	17.52	17.83	17.04	18.88	19.89	20.53	....	21.51
9	17.48	18.35	19.29	17.58	17.86	16.93	....	19.96	20.77	....	21.67
10	17.56	18.21	19.14	17.55	17.88	17.23	....	19.93	20.84	....	21.98
11	17.63	18.47	19.34	17.63	16.56	17.36	....	19.99	20.72	....	22.21
12	17.36	19.16	19.43	17.67	16.16	17.31	....	19.87	20.72	....	22.29
13	17.33	19.11	19.49	17.51	16.58	17.48	....	19.80	20.98	....	22.40
14	17.24	19.30	19.54	17.21	16.55	17.51	....	19.54	20.89	....	22.97
15	17.46	19.37	19.56	17.59	16.53	17.58	....	19.46	20.92	....	21.74
16	17.51	19.26	19.20	17.74	16.45	17.31	....	19.48	20.98	....	22.24
17	17.51	19.22	18.83	17.79	16.24	17.40	....	19.54	19.86	....	22.39
18	17.66	18.74	18.85	17.90	15.91	17.53	....	19.54	19.56	....	22.50
19	17.76	19.25	18.84	17.90	15.82	17.64	....	19.60	20.98	....	22.57
20	17.55	19.62	18.79	17.78	15.40	17.74	....	19.64	20.82	....	22.65
21	17.88	19.78	18.76	17.59	17.26	17.86	19.05	19.61	21.02	....	....
22	17.89	19.86	18.84	17.82	17.41	17.87	19.14	19.59	21.16	....	....
23	18.03	19.82	18.61	17.91	17.68	17.94	19.28	19.62	21.24	....	....
24	17.99	19.76	18.52	18.05	17.91	18.11	19.21	19.57	21.51	....	....
25	18.18	20.00	18.57	17.94	17.96	18.34	19.33	19.41	21.28	....	....
26	18.36	20.07	18.45	17.96	18.13	18.48	19.43	19.67	21.28	21.43	....
27	18.18	20.18	18.25	17.96	18.13	18.61	19.56	19.79	....	21.49	....
28	18.36	20.14	18.07	17.68	18.13	18.72	19.59	19.85	....	21.22	....
29	18.52	....	17.97	17.78	18.16	18.69	19.65	19.84	21.39	21.36	....
30	18.33	....	17.80	17.88	18.18	18.43	19.63	19.92	21.44	21.20	....
31	18.42	....	17.53	....	18.23	....	19.64	....	21.48	....	....

## 28.4.9.3.5--Continued.

Water level at end of day, in feet above mean sea level, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	Aug.	Sept.	Oct.	Nov.	Dec.
1	5.73	4.66	3.13	5.83	5.20	5.10	....	3.48	3.20	1.59	1.95
2	5.63	4.64	3.40	5.64	5.10	5.86	....	3.58	3.14	1.85	1.74
3	5.55	4.76	3.45	5.57	5.05	5.84	....	3.35	3.37	2.04	1.61
4	5.50	4.52	3.46	5.67	5.36	6.15	....	3.30	3.45	1.47	1.51
5	5.53	4.46	3.48	5.55	5.58	6.13	....	3.29	3.51	....	1.43
6	5.71	4.39	3.53	5.68	5.36	6.50	4.24	3.24	3.59	....	1.38
7	5.60	4.25	3.46	5.72	5.34	6.11	4.20	3.22	3.04	....	1.50
8	5.55	4.45	3.57	5.69	5.28	6.07	4.23	3.22	2.58	....	1.60
9	5.63	4.76	3.82	5.53	5.25	6.18	....	3.15	2.34	....	1.44
10	5.55	4.90	3.97	5.56	5.23	5.88	....	3.18	2.27	....	1.13
11	5.48	4.64	3.77	5.48	6.55	5.75	....	3.12	2.39	....	.90
12	5.75	3.95	3.68	5.44	6.95	5.80	....	3.24	2.39	....	.82
13	5.78	4.00	3.62	5.60	6.53	5.63	....	3.31	2.13	....	.71
14	5.87	3.81	3.57	5.90	6.56	5.60	....	3.57	2.22	....	1.14
15	5.65	3.74	3.55	5.52	6.58	5.53	....	3.65	2.19	....	1.37
16	5.60	3.85	3.91	5.37	6.66	5.80	....	3.63	2.13	....	.87
17	5.60	3.89	4.28	5.32	6.87	5.71	....	3.57	3.25	....	.72
18	5.45	4.37	4.26	5.21	7.20	5.58	....	3.57	3.55	....	.61
19	5.35	3.86	4.27	5.21	7.29	5.47	....	3.51	2.13	....	.54
20	5.56	3.49	4.32	5.33	7.71	5.37	....	3.47	2.29	....	.46
21	5.23	3.33	4.35	5.52	5.85	5.25	4.06	3.50	2.09	....	....
22	5.22	3.25	4.27	5.29	5.70	5.24	3.97	3.52	1.95	....	....
23	5.08	3.29	4.50	5.29	5.43	5.17	3.83	3.49	1.87	....	....
24	5.12	3.35	4.59	5.06	5.20	5.00	3.90	3.54	1.80	....	....
25	4.93	3.11	4.54	5.17	5.15	4.77	3.78	3.70	1.83	....	....
26	4.75	3.04	4.66	5.15	4.98	4.63	3.68	3.44	1.83	1.68	....
27	4.93	2.93	4.86	5.15	4.98	4.60	3.55	3.32	....	1.62	....
28	4.75	2.97	5.04	5.43	4.98	4.39	3.52	3.26	....	1.89	....
29	4.59	....	5.14	5.33	4.95	4.42	3.46	3.27	1.72	1.75	....
30	4.78	....	5.31	5.23	4.93	4.68	3.48	3.19	1.67	1.91	....
31	4.69	....	5.58	....	4.88	....	3.47	....	1.63	....	....

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). Duurnal 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, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	7.63	8.68	9.55	8.67	9.52	8.89	9.12	9.24	10.95	11.95	12.52	12.93
2	7.64	8.70	9.40	8.72	9.59	7.82	9.20	....	10.99	12.00	12.54	13.02
3	7.78	8.74	9.46	8.82	9.64	7.69	9.33	....	11.05	12.03	12.56	13.05
4	7.83	8.82	9.53	8.81	9.53	7.64	9.41	....	11.10	12.07	12.62	13.10
5	7.86	8.89	9.60	8.90	9.49	7.64	9.49	....	11.17	12.10	12.66	13.14
6	7.72	8.92	9.60	8.87	9.60	7.68	9.55	9.65	11.20	12.10	12.63	13.18
7	7.87	8.98	9.65	8.82	9.52	7.69	9.58	9.66	11.26	12.12	12.70	13.20
8	7.99	9.02	9.59	8.88	9.57	7.72	9.67	9.72	11.31	12.14	12.74	13.18
9	7.92	8.97	9.65	8.98	9.60	7.84	9.75	9.78	11.35	12.16	12.74	13.20
10	7.99	9.02	9.58	9.05	9.68	7.90	9.83	9.84	11.39	12.09	12.69	13.21
11	8.02	9.14	9.67	9.09	9.62	8.02	9.90	9.90	11.47	12.12	12.73	13.27
12	7.94	9.18	9.70	9.14	9.54	8.06	9.98	9.97	11.53	12.09	12.79	13.25
13	7.99	9.17	9.73	9.11	9.60	8.09	10.07	10.01	11.54	12.11	12.81	13.31
14	8.02	9.23	9.75	9.08	9.53	8.14	10.12	10.07	11.58	12.12	12.85	13.30
15	8.15	9.35	9.74	9.18	9.18	8.20	10.21	10.06	11.61	12.16	12.90	13.31
16	8.24	9.28	9.62	9.28	9.14	8.15	10.28	10.02	11.65	12.17	12.92	13.34
17	8.22	9.38	9.58	9.31	9.03	8.27	10.35	9.98	11.70	12.21	12.92	13.38
18	8.25	9.29	9.60	9.36	8.79	8.40	10.43	9.97	11.74	12.25	12.93	13.40
19	8.39	9.19	9.58	9.38	8.71	8.42	10.51	10.16	11.77	12.29	12.94	13.44
20	8.23	9.37	9.61	9.38	8.76	8.43	10.46	10.25	11.80	12.31	12.97	13.38
21	8.32	9.39	9.62	9.25	8.71	8.48	10.43	10.30	11.80	12.34	....	....
22	8.43	9.39	9.65	9.40	8.80	8.56	10.17	10.37	11.84	12.36	12.96	12.90
23	8.47	9.46	9.63	9.45	8.84	8.61	8.98	10.44	11.87	12.39	12.92	12.81
24	8.49	9.46	9.52	9.53	8.86	8.65	8.77	10.50	11.80	12.41	12.84	12.74
25	8.60	9.57	9.53	9.49	8.91	8.73	8.78	10.56	11.76	12.42	12.86	12.60

## 28.5.7.1.5--Continued.

Water level at end of day, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	8.66	9.58	9.38	9.49	8.90	8.84	8.85	10.61	11.80	12.46	12.91	12.57
27	8.58	9.60	9.02	9.40	8.85	8.95	8.86	10.69	11.85	12.46	12.96	12.48
28	8.73	9.57	8.84	9.31	8.82	9.02	8.81	10.76	11.88	12.44	12.91	12.49
29	8.82		8.78	9.41	8.85	9.04	8.94	10.80	11.88	12.42	12.98	12.35
30	8.79		8.74	9.49	8.82	9.04	9.02	10.84	11.90	12.44	12.91	12.36
31	8.70		8.70		8.89		9.12	10.91		12.50		12.33

Water level at end of day, in feet above mean sea level, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	13.45	12.40	11.53	12.41	11.56	12.19	11.96	11.84	10.13	9.13	8.56	8.15
2	13.44	12.38	11.68	12.36	11.49	13.26	11.88	.....	10.09	9.08	8.54	8.06
3	13.30	12.34	11.62	12.26	11.44	13.39	11.75	.....	10.03	9.05	8.52	8.03
4	13.25	12.26	11.55	12.27	11.55	13.44	11.67	.....	9.98	9.01	8.46	7.98
5	13.22	12.19	11.48	12.18	11.59	13.44	11.59	.....	9.91	8.98	8.42	7.94
6	13.36	12.16	11.48	12.21	11.48	13.40	11.53	11.43	9.88	8.98	8.45	7.90
7	13.21	12.10	11.43	12.26	11.56	13.39	11.50	11.42	9.82	8.96	8.38	7.88
8	13.09	12.06	11.49	12.20	11.51	13.36	11.41	11.36	9.77	8.94	8.34	7.90
9	13.16	12.11	11.43	12.10	11.48	13.24	11.33	11.30	9.73	8.92	8.31	7.88
10	13.09	12.06	11.50	12.03	11.40	13.18	11.25	11.24	9.69	8.99	8.39	7.87
11	13.06	11.94	11.41	11.99	11.46	13.06	11.18	11.18	9.61	8.96	8.35	7.81
12	13.14	11.90	11.38	11.94	11.54	13.02	11.10	11.11	9.55	8.99	8.29	7.83
13	13.09	11.91	11.35	11.97	11.48	12.99	11.01	11.07	9.54	8.97	8.27	7.77
14	13.06	11.85	11.33	12.00	11.55	12.94	10.96	11.01	9.50	8.96	8.23	7.78
15	12.93	11.73	11.34	11.90	11.90	12.88	10.87	11.04	9.47	8.92	8.18	7.77
16	12.84	11.80	11.46	11.80	11.94	12.93	10.80	11.06	9.43	8.91	8.16	7.74
17	12.86	11.70	11.50	11.77	12.05	12.81	10.73	11.10	9.38	8.87	8.16	7.70
18	12.83	11.79	11.48	11.72	12.29	12.68	10.65	11.11	9.34	8.83	8.15	7.68
19	12.69	11.89	11.50	11.70	12.37	12.66	10.57	10.92	9.31	8.79	8.14	7.64
20	12.85	11.71	11.47	11.70	12.32	12.65	10.62	10.83	9.28	8.77	8.11	7.70
21	12.76	11.69	11.46	11.83	12.37	12.60	10.65	10.78	9.28	8.74	....	....
22	12.65	11.69	11.43	11.68	12.28	12.52	10.91	10.71	9.24	8.72	8.12	8.18
23	12.61	11.62	11.45	11.63	12.24	12.47	12.10	10.64	9.21	8.69	8.16	8.27
24	12.59	11.62	11.56	11.55	12.22	12.43	12.31	10.58	9.28	8.67	8.24	8.34
25	12.48	11.51	11.55	11.59	12.17	12.35	12.30	10.52	9.32	8.66	8.22	8.48
26	12.42	11.50	11.70	11.59	12.18	12.24	12.23	10.47	9.28	8.63	8.17	8.51
27	12.50	11.48	12.06	11.68	12.23	12.13	12.22	10.39	9.23	8.62	8.12	8.60
28	12.35	11.51	12.24	11.77	12.26	12.06	12.27	10.32	9.20	8.64	8.17	8.59
29	12.26		12.30	11.67	12.23	12.04	12.14	10.28	9.20	8.66	8.10	8.73
30	12.29		12.34	11.59	12.26	12.04	12.06	10.24	9.18	8.64	8.17	8.72
31	12.38		12.38		12.19		11.96	10.17		8.58		8.75

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). 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 1946.

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). 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.

Water level at end of day, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	2.05	3.34	3.66	3.39	4.20	3.96	4.41	4.13	5.05	5.43	5.77	5.86
2	2.25	3.36	3.49	3.38	4.27	2.38	4.36	4.18	5.04	5.48	5.76	6.00
3	2.46	3.41	3.63	3.50	4.33	2.60	4.40	4.23	5.14	5.52	5.80	6.02
4	2.60	3.50	3.60	3.48	4.33	2.93	4.39	4.24	5.19	5.55	5.87	6.07
5	2.62	3.53	3.72	3.58	4.36	2.99	4.44	4.33	5.23	5.56	5.91	6.10
6	2.58	3.48	3.80	3.56	4.43	2.93	4.38	4.42	5.26	5.54	5.59	6.14
7	2.70	3.56	3.84	3.60	4.51	3.04	4.48	4.39	5.26	5.56	5.94	6.11
8	2.87	3.66	3.83	3.62	4.58	3.12	4.57	4.44	5.27	5.65	5.94	6.06
9	2.82	3.50	3.75	3.66	4.62	3.29	4.59	4.48	5.33	5.64	5.92	6.12

## 28.4.9.8.2--Continued.

Water level at end of day, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
10	2.88	3.49	3.80	3.72	4.65	3.41	4.66	4.50	5.38	5.51	6.02	6.11
11	2.98	3.66	3.91	3.75	4.65	3.37	4.68	4.50	5.46	5.48	5.95	....
12	2.93	3.71	3.93	3.76	4.60	3.39	4.70	4.56	5.49	5.45	5.98	....
13	2.66	3.57	3.95	3.75	4.61	3.67	4.73	4.62	5.44	5.57	5.97	....
14	2.78	3.54	3.98	3.73	4.50	3.75	4.76	4.66	5.41	5.55	6.00	....
15	2.99	3.64	3.93	3.74	4.32	3.79	4.86	4.68	5.45	5.54	6.07	....
16	3.07	3.58	3.86	3.85	4.28	3.82	4.93	4.69	5.48	5.53	6.06	....
17	3.06	3.56	3.80	3.89	4.11	3.87	4.96	4.69	....	5.56	6.00	....
18	3.09	2.63	3.79	3.91	3.90	3.96	5.00	4.56	5.60	5.61	6.02	....
19	3.21	3.44	3.76	3.93	3.93	4.03	5.06	4.07	5.60	5.67	6.00	....
20	3.16	3.58	3.86	3.94	4.05	4.03	4.91	4.62	5.63	5.67	6.01	....
21	3.17	3.66	3.89	3.92	3.52	4.06	4.65	4.69	5.56	5.68	6.04	....
22	3.33	3.64	3.89	3.95	3.81	4.12	4.47	4.75	5.59	5.69	5.88	....
23	3.39	3.65	3.93	3.98	4.11	4.14	3.14	4.80	5.61	5.69	5.85	....
24	3.20	3.55	3.90	4.02	4.17	4.20	....	4.83	5.49	5.71	5.79	....
25	3.32	3.65	3.89	3.93	4.09	4.35	3.49	4.83	5.42	5.74	5.87	....
26	3.44	3.69	3.76	3.87	4.10	4.40	3.60	4.91	5.43	5.79	5.90	....
27	3.48	3.72	3.52	3.90	4.02	4.43	3.66	4.95	5.46	5.81	5.96	....
28	3.51	3.67	3.51	3.98	4.01	4.45	3.69	4.99	5.47	5.72	5.90	....
29	3.57		3.47	3.99	4.03	4.27	3.77	5.02	5.46	5.70	5.97	....
30	3.44		3.46	4.13	4.06	4.36	3.94	5.02	5.42	5.71	5.90	....
31	3.31		3.45		4.09		4.05	5.03		5.75		....

Water level at end of day, in feet above mean sea level, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	17.89	16.60	16.28	16.55	15.74	15.98	15.53	15.81	14.89	14.51	14.17	14.08
2	17.69	16.58	16.45	16.56	15.67	15.76	15.58	15.76	14.90	14.46	14.18	13.94
3	17.48	16.53	16.31	16.44	15.61	17.34	15.54	15.71	14.80	14.42	14.14	13.92
4	17.34	16.44	16.34	16.46	15.61	17.01	15.55	15.70	14.75	14.39	14.07	13.87
5	17.32	16.41	16.22	16.36	15.58	16.95	15.50	15.61	14.71	14.38	14.03	13.84
6	17.36	16.46	16.14	16.38	15.51	17.01	15.56	15.52	14.68	14.40	14.35	13.80
7	17.24	16.38	16.10	16.34	15.43	16.90	15.46	15.55	14.68	14.38	14.00	13.83
8	17.07	16.28	16.11	16.32	15.36	16.82	15.37	15.50	14.67	14.29	14.00	13.88
9	17.12	16.44	16.19	16.28	15.32	16.65	15.35	15.46	14.61	14.30	14.02	13.82
10	17.06	16.45	16.14	16.22	15.29	16.53	15.28	15.44	14.66	14.45	13.92	13.83
11	16.96	16.28	16.03	16.19	15.29	16.57	15.26	15.44	14.48	14.46	13.99	....
12	17.01	16.23	16.01	16.18	15.34	16.55	15.24	15.38	14.45	14.49	13.96	....
13	17.28	16.37	15.99	16.19	15.33	16.27	15.21	15.32	14.50	14.37	13.97	....
14	17.16	16.40	15.96	16.21	15.44	16.19	15.18	15.28	14.53	14.39	13.94	....
15	16.95	16.30	16.01	16.20	15.62	16.15	15.08	15.26	14.51	14.40	13.87	....
16	16.87	16.36	16.08	16.09	15.66	16.12	15.01	15.25	14.46	14.41	13.88	....
17	16.88	16.38	16.14	16.05	15.83	16.07	14.98	15.25	....	14.38	13.94	....
18	16.85	17.31	16.15	16.03	16.04	15.98	14.94	15.38	14.34	14.33	13.92	....
19	16.73	16.50	16.18	16.01	16.01	15.91	14.88	15.87	14.34	14.27	13.94	....
20	16.78	16.36	16.08	16.00	15.89	15.91	15.03	15.32	14.31	14.27	13.93	....
21	16.77	16.28	16.05	16.02	16.42	15.88	15.29	15.25	14.38	14.26	13.90	....
22	16.61	16.30	16.05	15.99	16.13	15.82	15.47	15.19	14.35	14.25	14.06	....
23	16.55	16.29	16.01	15.96	15.83	15.80	16.80	15.14	14.33	14.25	14.09	....
24	16.74	16.39	16.04	15.92	15.77	15.74	....	15.11	14.45	14.23	14.15	....
25	16.62	16.29	16.05	16.01	15.85	15.59	16.45	15.11	14.52	14.20	14.07	....
26	16.50	16.25	16.18	16.07	15.84	15.54	16.34	15.03	14.51	14.16	14.04	....
27	16.46	16.22	16.42	16.04	15.92	15.51	16.28	14.99	14.48	14.13	13.98	....
28	16.43	16.27	16.43	15.96	15.95	15.49	16.25	14.95	14.47	14.22	14.04	....
29	16.37		16.47	15.95	15.91	15.67	16.17	14.92	14.48	14.24	13.97	....
30	16.50		16.48	15.81	15.88	15.58	16.00	14.92	14.52	14.23	14.04	....
31	16.63		16.49		15.85		15.89	14.91		14.19		....



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). 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, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	34.0	35.5	35.9	34.2	34.0	29.3	27.4	27.4	27.4	....	32.4	29.8
2	34.2	35.6	35.9	34.2	33.9	28.6	27.5	27.4	27.5	....	32.4	29.9
3	....	35.6	35.9	34.2	33.9	28.4	27.5	27.4	....	....	32.4	29.9
4	....	35.6	35.8	34.2	33.8	28.4	27.5	27.4	....	....	32.4	29.9
5	....	35.6	35.8	34.2	33.8	28.3	27.5	27.4	....	....	32.5	29.9
6	....	35.7	35.8	34.2	33.8	28.2	27.5	27.5	....	....	32.7	29.9
7	....	35.7	35.9	34.2	33.8	28.3	27.6	27.4	27.6	....	32.8	29.9
8	....	35.7	35.8	34.1	33.8	28.2	....	27.4	27.6	31.5	32.9	29.9
9	34.2	35.7	35.8	34.1	33.8	28.0	27.6	27.4	27.6	30.4	32.9	29.9
10	34.7	35.7	35.8	34.1	33.8	28.0	27.6	27.4	27.6	31.8	32.9	29.9
11	34.7	35.7	35.8	34.1	33.7	27.9	27.7	27.4	27.7	....	32.4	30.0
12	34.8	35.8	35.9	34.1	33.6	27.8	27.8	27.3	27.7	....	32.4	30.0
13	34.9	35.8	35.9	34.0	33.5	27.9	27.8	27.2	27.7	....	32.4	30.0
14	34.9	35.8	35.9	34.0	33.5	27.9	27.8	27.2	27.7	....	32.4	29.9
15	35.0	35.8	35.8	34.0	33.4	27.8	27.9	27.1	27.8	28.7	32.5	29.9
16	35.0	35.9	35.8	34.0	33.4	....	28.0	27.0	27.8	28.7	32.5	30.0
17	35.0	35.9	35.1	34.0	33.3	....	28.0	27.0	27.9	28.7	32.5	30.0
18	35.2	35.8	35.0	34.0	33.3	27.6	28.0	26.9	27.9	28.6	32.5	30.1
19	35.2	35.8	34.8	34.0	33.3	27.6	28.0	26.9	28.1	28.7	32.4	30.1
20	35.2	35.9	34.7	34.0	33.3	27.6	28.0	27.1	28.1	28.7	32.5	30.0
21	35.3	35.9	34.7	34.0	33.3	27.6	27.9	27.0	28.1	28.8	32.5	29.8
22	35.4	35.9	34.5	34.0	33.4	27.6	27.5	27.0	28.1	31.6	30.2	29.7
23	35.4	35.9	34.7	34.0	33.4	27.6	27.0	27.0	28.2	29.0	30.0	29.8
24	35.4	35.9	34.7	34.1	33.4	27.6	27.0	27.1	28.2	28.9	30.0	29.8
25	35.5	35.9	34.6	34.0	33.4	27.6	27.2	27.1	28.0	28.9	30.0	29.5
26	35.5	35.9	34.5	34.0	33.3	27.6	27.3	27.1	27.9	31.6	29.9	29.7
27	35.5	36.0	34.4	34.0	33.3	27.5	27.3	27.3	28.1	31.8	29.9	29.7
28	35.5	36.0	34.4	34.0	33.1	27.6	27.2	27.3	28.1	31.9	29.8	29.8
29	35.6	....	34.4	34.0	33.1	27.4	27.3	27.3	28.0	32.1	29.8	29.7
30	35.5	....	....	34.0	33.1	27.4	27.3	27.3	28.0	32.2	29.8	29.7
31	35.5	....	34.3	....	32.9	....	27.3	27.4	....	32.3	....	29.6

Water level at end of day, in feet with reference to mean sea level, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	+1.4	-0.1	-0.5	+1.2	+1.4	+6.1	+8.0	+8.0	+8.0	....	+3.0	+5.6
2	+1.2	-0.2	-0.4	+1.2	+1.5	+6.8	+7.9	+8.0	+7.9	....	+3.0	+5.5
3	....	-0.2	-0.5	+1.2	+1.5	+7.0	+7.9	+8.0	....	....	+3.0	+5.5
4	....	-0.2	-0.4	+1.2	+1.6	+7.0	+7.9	+8.0	....	....	+3.0	+5.5
5	....	-0.2	-0.4	+1.2	+1.6	+7.1	+7.9	+8.0	....	....	+2.9	+5.5
6	....	-0.3	-0.4	+1.2	+1.6	+7.2	+7.9	+7.9	....	....	+2.7	+5.5
7	....	-0.3	-0.5	+1.2	+1.6	+7.1	+7.8	+8.0	+7.8	....	+2.6	+5.5
8	....	-0.3	-0.4	+1.3	+1.6	+7.2	....	+8.0	+7.8	+3.9	+2.5	+5.5
9	+1.2	-0.3	-0.4	+1.3	+1.6	+7.4	+7.8	+8.0	+7.8	+5.0	+2.5	+5.5
10	+0.7	-0.3	-0.4	+1.3	+1.6	+7.4	+7.8	+8.0	+7.8	+3.6	+2.5	+5.5
11	+0.7	-0.3	-0.4	+1.3	+1.7	+7.5	+7.7	+8.0	+7.7	....	+3.0	+5.4
12	+0.6	-0.4	-0.5	+1.3	+1.8	+7.6	+7.6	+8.1	+7.7	....	+3.0	+5.4
13	+0.5	-0.4	-0.5	+1.4	+1.9	+7.5	+7.6	+8.2	+7.7	....	+3.0	+5.4
14	+0.5	-0.4	-0.5	+1.4	+1.9	+7.5	+7.6	+8.2	+7.7	....	+3.0	+5.5
15	+0.4	-0.4	-0.4	+1.4	+2.0	+7.6	+7.5	+8.3	+7.6	+6.7	+2.9	+5.5
16	+0.4	-0.5	-0.4	+1.4	+2.0	....	+7.4	+8.4	+7.6	+6.7	+2.9	+5.4
17	+0.4	-0.5	+0.3	+1.4	+2.1	....	+7.4	+8.4	+7.5	+6.7	+2.9	+5.4
18	+0.2	-0.4	+0.4	+1.4	+2.1	+7.8	+7.4	+8.5	+7.5	+6.8	+2.9	+5.3
19	+0.2	-0.4	+0.6	+1.4	+2.1	+7.8	+7.4	+8.5	+7.3	+6.7	+3.0	+5.3
20	+0.2	-0.5	+0.7	+1.4	+2.1	+7.8	+7.4	+8.3	+7.3	+6.7	+2.9	+5.4
21	+0.1	-0.5	+0.7	+1.4	+2.1	+7.8	+7.5	+8.4	+7.3	+6.6	+2.9	+5.6
22	0	-0.5	+0.9	+1.4	+2.0	+7.8	+7.9	+8.4	+7.3	+3.8	+5.2	+5.7
23	0	-0.5	+0.7	+1.4	+2.0	+7.8	+8.4	+8.4	+7.2	+6.4	+5.4	+5.6
24	0	-0.5	+0.7	+1.3	+2.0	+7.8	+8.4	+8.3	+7.3	+6.5	+5.4	+5.6
25	-0.1	-0.5	+0.8	+1.4	+2.0	+7.8	+8.2	+8.3	+7.4	+6.5	+5.4	+5.9
26	-0.1	-0.5	+0.9	+1.4	+2.1	+7.8	+8.1	+8.3	+7.5	+3.8	+5.5	+5.7
27	-0.1	-0.6	+1.0	+1.4	+2.1	+7.9	+8.1	+8.1	+7.3	+3.6	+5.5	+5.7

## 28.4.9.3.1--Continued.

Water level at end of day, in feet with reference to mean sea level, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
28	-0.1	-0.6	+1.0	+1.4	+2.3	+7.8	+8.2	+8.1	+7.3	+3.5	+5.6	+5.6
29	-.2		+1.0	+1.4	+2.3	+8.0	+8.1	+8.1	+7.4	+3.3	+5.6	+5.7
30	-.1		....	+1.4	+2.3	+8.0	+8.1	+8.1	+7.4	+3.2	+5.6	+5.7
31	-.1		+1.1	....	+2.5	....	+8.1	+8.0	....	+3.1		+5.8

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). 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, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	12.74	12.39	12.85	12.77	12.73	....	12.23	12.70	13.18	13.78	14.37	14.87
2	12.68	12.42	12.84	12.71	12.73	....	12.26	12.71	13.20	13.81	14.38	14.90
3	12.62	12.46	12.88	12.71	12.77	....	12.29	12.72	13.24	13.83	14.40	14.91
4	12.56	12.47	12.89	12.67	12.78	....	12.32	12.73	13.26	13.86	14.42	14.92
5	12.51	12.48	12.91	12.67	12.78	....	12.34	12.75	13.28	13.88	14.44	14.94
6	12.47	12.42	12.92	12.64	12.79	....	12.35	12.77	13.29	13.89	14.46	14.96
7	12.44	12.49	12.93	12.63	12.81	12.23	12.38	12.78	13.31	13.90	14.46	14.97
8	12.43	12.52	12.91	12.61	12.83	12.18	12.40	12.80	13.33	13.92	14.48	14.98
9	12.37	12.49	12.95	12.60	12.84	12.16	12.43	12.81	13.34	13.94	14.51	15.00
10	12.37	12.52	12.96	12.59	12.87	12.14	12.46	12.82	13.36	13.96	14.52	15.01
11	12.35	12.56	12.99	12.58	12.87	12.09	12.48	12.84	13.38	13.98	14.54	15.03
12	12.32	12.58	13.00	12.57	12.89	12.06	12.50	12.86	13.41	14.00	14.56	15.04
13	12.32	12.56	13.00	12.56	12.93	12.05	12.53	12.87	13.44	14.03	14.58	15.05
14	12.30	12.58	13.00	12.56	12.94	12.05	12.56	12.89	13.45	14.05	14.59	15.07
15	12.30	12.64	13.00	12.53	12.89	12.04	12.59	12.91	13.47	14.07	14.62	15.09
16	12.29	12.64	12.98	12.56	12.92	12.02	12.62	12.92	13.49	14.08	14.64	15.11
17	12.25	12.66	12.98	12.57	12.92	12.00	12.64	12.92	13.51	14.09	14.65	15.12
18	12.23	12.69	12.97	12.54	12.92	12.00	12.67	12.93	13.54	14.10	14.67	15.14
19	12.31	12.62	12.96	12.56	12.92	12.03	12.70	12.95	13.55	14.14	14.68	15.16
20	12.28	12.70	12.95	12.57	12.91	12.02	12.72	12.98	13.57	14.16	14.70	15.17
21	12.24	12.74	12.93	12.60	12.87	12.01	12.75	12.99	13.58	14.18	14.71	15.16
22	12.30	12.72	12.95	12.58	12.89	12.04	12.70	13.0	13.61	14.19	14.72	15.18
23	12.30	12.75	12.92	12.57	12.87	12.06	12.61	13.03	13.63	14.21	14.74	15.19
24	12.22	12.75	12.92	12.58	12.83	12.07	12.64	13.05	13.62	14.22	14.76	15.21
25	12.22	12.78	12.92	12.59	12.80	12.09	12.65	13.07	13.66	14.24	14.77	15.23
26	12.32	12.81	12.96	12.57	12.79	12.12	12.66	13.08	13.69	14.26	14.78	15.24
27	12.35	12.82	13.00	12.63	12.77	12.15	12.67	13.10	13.71	14.29	14.80	15.25
28	12.34	12.84	12.99	12.68	12.77	12.17	12.67	13.12	13.73	14.30	14.82	15.26
29	12.39		12.89	12.69	12.78	12.20	12.66	13.13	13.74	14.31	14.84	15.27
30	12.32		12.84	12.72	12.79	12.22	12.67	13.14	13.76	14.33	14.86	15.30
31	12.31		12.81		12.77		12.68	13.16		14.35		15.31

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). 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, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	0.52	0.69	0.66	0.86	1.21	....	2.45	1.89	2.66	2.59	1.72	....
2	.65	.79	.73	.86	1.26	....	2.26	....	2.71	2.39	....	1.43
3	.74	.88	.79	.88	1.31	.57	2.33	2.01	2.60	2.43	1.72	1.44
4	.78	.97	.83	.93	1.19	.47	2.46	2.14	2.61	2.48	1.71	1.44
5	.79	1.05	.89	1.00	1.14	.68	2.56	2.21	2.69	2.57	1.72	1.44
6	.80	.96	.92	1.04	1.24	.84	....	2.28	....	2.62	1.73	1.43
7	.80	.88	.95	1.10	1.26	1.02	2.72	1.61	2.75	2.67	1.73	....
8	.87	.94	.94	.94	1.31	1.24	2.77	....	2.81	2.70	....	....
9	.60	.86	.81	1.02	1.37	1.43	2.82	....	2.83	2.71	....	....
10	.70	.84	.90	1.10	1.39	1.56	2.81	1.95	2.89	1.80	1.66	....
11	.78	.93	.98	1.13	.88	1.31	2.94	2.01	2.99	....	1.66	....
12	.71	.98	1.03	....	.74	1.05	2.95	2.08	3.04	1.73	1.65	1.44

29.11.1.2.3--Continued.

Water level at end of day, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
13	0.88	0.99	1.06	1.18	0.98	1.28	....	2.08	....	1.78	1.65	1.46
14	.88	.86	1.07	1.20	.49	....	3.16	2.11	....	1.80	1.65	1.40
15	.95	.96	.61	1.21	.65	1.42	3.21	2.28	3.19	1.86	1.67	1.34
16	1.02	1.00	....	1.26	....	1.52	3.27	....	3.26	1.88	....	1.43
17	1.04	1.03	.70	1.27	....	1.57	3.34	....	3.34	1.89	1.60	1.44
18	1.08	1.08	.79	1.28	.54	1.66	3.43	1.88	3.40	....	1.47	1.43
19	1.14	1.07	.65	1.30	.77	1.65	3.51	1.80	3.46	....	1.47	1.45
20	1.18	.56	.62	....	.86	1.62	2.71	1.96	3.52	....	1.47	1.48
21	1.16	.64	.72	1.35	.95	....	1.76	2.03	....	....	1.52	.14
22	1.18	....	.81	1.35	1.13	....	.52	2.29	3.30	....	.94	.48
23	1.23	....	....	1.35	1.24	1.88	.41	....	3.23	....	....	.59
24	1.22	.78	.89	1.37	....	2.00	.62	2.26	3.05	....	1.11	.66
25	1.17	.84	.78	.91	1.39	2.13	.75	2.36	2.59	1.91	1.15	.72
26	1.16	.88	.10	....	1.47	2.25	....	2.40	2.54	....	1.21	.79
27	1.17	.55	.45	....	.67	2.37	1.10	2.45	2.58	1.85	1.24	....
28	1.23	.58	.58	1.08	.82	2.39	1.29	2.54	....	1.78	1.29	....
29	1.26	....	.69	1.13	.96	2.38	1.52	....	....	1.73	1.32	.53
30	.78	....	.74	1.18	1.16	2.33	1.69	....	2.48	1.71	....	.66
31	.54	....	.82	....	....	....	1.85	2.59	....	1.72	....	.78

Water level at end of day, in feet above mean sea level, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	74.20	74.03	74.06	73.86	73.51	....	72.27	72.83	72.06	72.33	73.00	....
2	74.07	73.93	73.90	73.86	73.46	....	72.46	....	72.01	72.33	....	73.29
3	73.98	73.84	73.93	73.84	73.41	74.15	72.39	72.71	72.12	72.29	73.00	73.28
4	73.94	73.75	73.89	73.79	73.53	74.25	72.26	72.58	72.11	72.24	73.01	73.28
5	73.93	73.69	73.83	73.72	73.58	74.04	72.16	72.51	72.03	72.15	73.00	73.28
6	73.92	73.76	73.80	73.68	73.48	73.88	....	72.44	....	72.10	72.99	73.27
7	73.92	73.84	73.77	73.62	73.46	73.70	72.00	73.11	71.97	72.05	72.99	....
8	73.85	73.78	73.78	73.78	73.41	73.48	71.95	....	71.91	72.02	....	....
9	74.12	73.86	73.91	73.70	73.35	73.29	71.90	....	71.89	72.01	....	....
10	74.02	73.88	73.82	73.62	73.33	73.16	71.81	72.77	71.83	72.92	73.06	....
11	73.94	73.79	73.74	73.59	73.84	73.41	71.78	72.71	71.73	....	73.06	....
12	74.01	73.74	73.69	....	73.98	73.67	71.77	72.64	71.68	72.99	73.07	73.28
13	73.91	73.73	73.66	73.54	73.74	73.44	....	72.64	....	72.94	73.09	73.26
14	73.84	73.86	73.65	73.52	74.23	....	71.56	72.61	....	72.90	73.07	73.32
15	73.77	73.76	74.11	73.51	74.07	73.30	71.51	72.54	71.53	72.86	73.05	73.38
16	73.70	73.72	....	73.46	....	73.30	71.45	....	71.46	72.84	....	73.29
17	73.68	73.69	74.02	73.45	....	73.15	71.38	....	71.38	72.83	73.12	73.28
18	73.64	73.64	73.93	73.44	74.18	73.06	71.29	72.84	71.32	....	73.25	73.29
19	73.58	73.65	74.07	73.42	73.95	73.07	71.21	72.92	71.26	....	73.25	73.27
20	73.54	74.16	74.10	....	73.86	73.10	72.01	72.76	71.20	....	73.25	73.24
21	73.56	74.09	74.00	73.37	73.77	....	72.96	72.69	....	....	73.20	74.58
22	73.54	....	73.91	73.37	73.59	....	74.20	72.43	71.42	....	73.78	74.24
23	73.49	....	....	73.37	73.48	72.84	74.31	....	71.49	....	....	74.13
24	73.50	73.94	73.83	73.35	....	72.72	74.10	72.46	71.67	....	73.61	74.06
25	73.55	73.88	73.94	73.81	73.33	72.59	73.97	72.36	72.13	72.81	73.57	74.00
26	73.56	73.84	74.62	....	73.25	72.47	....	72.32	72.18	....	73.51	73.93
27	73.55	74.17	74.27	....	74.05	72.35	73.62	72.27	72.14	72.87	73.48	....
28	73.49	74.14	74.14	73.64	73.90	72.33	73.43	72.18	....	72.94	73.43	....
29	73.46	....	74.03	73.59	73.76	72.34	73.20	....	....	72.99	73.40	74.19
30	73.94	....	73.98	73.54	73.56	72.39	73.03	....	72.24	73.01	....	74.06
31	74.18	....	73.90	....	....	....	72.87	72.13	....	73.00	....	73.94

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). Perth Amboy Water Department. Old Bridge observation well. Extremes of observed water level, in feet with reference to mean sea level: Highest, above top of casing Sept. 22, 1938, Apr. 21-25, 1940, and Sept. 14-15, 1944; lowest, -1.9 May 2, 1943. Gage removed Aug. 27, 1946.

28.5.4.7.2--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	5.8	Jan. 24	5.6	May 12	6.5	June 19	5.7
5	5.8	25	6.6	13	6.2	22	6.1
6	5.8	26	6.5	14	6.3	23	6.2
7	5.8	27	6.3	15	5.8	24	6.3
8	5.8	28	6.3	16	5.5	July 1	6.3
9	5.4	29	6.7	17	5.7	2	6.4
10	5.7	30	6.6	18	4.9	3	6.2
11	5.8	31	5.9	19	5.1	10	5.8
12	5.7	Feb. 1	6.0	20	5.6	11	5.7
13	6.1	Mar. 27	5.0	21	5.4	12	5.8
14	6.3	Apr. 26	5.3	22	5.9	16	5.8
15	6.3	27	6.2	23	6.1	17	5.8
16	6.2	May 5	6.1	June 8	5.4	19	6.3
17	5.9	6	6.3	9	5.7	22	5.5
18	6.1	7	6.3	13	5.6	23	5.2
19	6.6	8	5.9	14	5.7	24	2.9
20	6.4	9	6.2	15	5.6	25	4.1
21	5.2	10	6.5	16	5.7	Aug. 3	6.0
22	6.4	11	6.5	18	5.7	23	5.8
23	6.3						

Lowest daily water level, in feet with reference to mean sea level, 1946  
(From recorder charts)

Jan. 4	-0.5	Jan. 24	-0.3	May 12	-1.2	June 19	-0.4
5	-0.5	25	-1.3	13	-0.9	22	-0.8
6	-0.5	26	-1.2	14	-1.0	23	-0.9
7	-0.5	27	-1.0	15	-0.5	24	-1.0
8	-0.5	28	-1.0	16	-0.2	July 1	-1.0
9	-0.1	29	-1.4	17	-0.4	2	-1.1
10	-0.4	30	-1.3	18	+0.4	3	-0.9
11	-0.5	31	-0.4	19	+0.2	10	-0.5
12	-0.4	Feb. 1	-0.7	20	-0.3	11	-0.4
13	-0.8	Mar. 27	+0.3	21	-0.1	12	-0.5
14	-1.0	Apr. 26	0	22	-0.6	16	-0.5
15	-1.0	27	-0.9	23	-0.8	17	-0.5
16	-0.9	May 5	-0.8	June 8	-0.1	19	-1.0
17	-0.6	6	-1.0	9	-0.4	22	-0.2
18	-0.8	7	-1.0	13	-0.3	23	+0.1
19	-1.3	8	-0.6	14	-0.4	24	+2.4
20	-1.1	9	-0.9	15	-0.3	25	+1.2
21	+0.1	10	-1.2	16	-0.4	Aug. 3	-0.7
22	-1.1	11	-1.2	18	-0.4	23	-0.5
23	-1.0						

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). 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, -46.6 Oct. 25, 1935.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	10.2	12.5	11.8	12.8	14.1	17.7	....	....	45.7	46.3	48.3	....
2	9.6	12.5	12.4	12.5	....	17.5	....	....	44.9	46.8	48.3	....
3	9.9	12.2	12.6	12.6	14.8	16.8	....	39.1	44.4	46.9	47.8	....
4	10.2	12.1	12.3	12.7	14.6	16.6	....	39.4	44.6	47.6	47.2	....
5	10.2	11.9	11.8	12.8	13.9	16.6	....	40.5	44.6	47.7	47.2	....
6	10.2	12.0	12.7	12.7	13.3	16.5	....	40.6	45.1	47.6	50.6	....
7	10.1	12.5	12.7	12.5	13.2	17.1	....	40.8	45.1	47.0	50.6	....
8	10.3	12.7	12.7	12.4	13.4	17.1	....	42.7	45.2	47.2	48.8	....
9	10.3	12.8	12.4	12.5	13.7	17.1	42.9	48.7	45.3	47.2	47.7	....
10	10.4	....	12.2	12.6	14.9	17.0	43.5	45.3	45.7	47.2	47.6	60.3
11	10.5	....	11.9	12.7	14.9	16.9	44.0	45.3	46.3	....	47.3	60.7

## 28.5.4.3.9--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
12	10.5	....	11.7	12.8	14.4	16.7	44.3	45.0	46.5	....	47.2	60.9
13	10.7	....	11.7	12.8	14.3	16.9	44.3	45.1	46.5	....	47.2	61.7
14	10.7	....	12.1	12.8	14.4	17.0	44.2	45.6	46.3	....	47.1	62.0
15	10.7	....	12.3	12.6	15.1	16.9	45.2	45.7	45.9	....	47.2	62.8
16	10.7	....	12.5	12.8	15.2	17.0	47.4	45.6	45.5	....	47.2	62.9
17	10.7	....	12.5	12.8	15.7	17.0	46.7	45.5	46.2	....	47.1	63.0
18	10.6	....	12.2	12.7	15.7	16.8	46.7	45.0	46.4	....	46.8	63.2
19	10.8	16.8	12.6	12.8	15.4	16.8	46.5	47.7	46.8	....	....	63.4
20	10.9	15.6	13.2	12.8	14.8	16.8	46.3	47.8	47.2	....	....	63.4
21	10.9	14.6	13.4	12.8	19.0	16.8	45.6	47.0	47.2	....	....	63.4
22	10.6	14.3	13.5	12.6	19.1	16.8	52.4	47.1	46.9	....	....	63.6
23	10.7	13.6	13.5	12.6	18.7	16.6	....	46.7	....	46.9	....	63.9
24	11.0	13.1	13.1	12.8	18.1	16.3	....	46.6	....	47.1	....	64.0
25	11.3	12.3	12.7	12.8	17.5	16.4	....	46.1	....	47.4	....	64.0
26	11.5	12.0	13.3	12.8	16.9	16.9	....	45.5	47.6	47.9	....	....
27	11.5	11.8	13.4	13.3	16.5	....	....	45.5	47.6	47.9	....	....
28	11.6	11.8	13.5	13.3	17.0	....	....	45.7	47.5	47.8	....	....
29	11.6	....	13.5	13.1	17.0	....	....	45.9	47.1	47.8	....	....
30	12.0	....	13.3	13.4	17.0	....	....	45.9	46.4	48.0	....	....
31	12.2	....	13.1	....	17.7	....	....	45.9	....	48.0	....	....

Lowest daily water level, in feet with reference to mean sea level, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	+8.0	+5.7	+6.4	+5.4	+4.1	+0.5	....	....	-27.5	-28.1	-30.1	....
2	+8.6	+5.7	+5.8	+5.7	....	+7	....	....	-26.7	-28.6	-30.1	....
3	+8.3	+6.0	+5.6	+5.6	+3.4	+1.4	....	....	-20.9	-26.2	-28.7	-29.6
4	+8.0	+6.1	+5.9	+5.5	+3.6	+1.6	....	....	-21.2	-26.4	-29.4	-29.0
5	+8.0	+6.3	+6.4	+5.4	+4.3	+1.6	....	....	-22.3	-26.4	-29.5	-29.0
6	+8.0	+6.2	+5.5	+5.5	+4.9	+7	....	....	-22.4	-26.9	-29.4	-32.4
7	+8.1	+5.7	+5.5	+5.7	+5.0	+1.1	....	....	-22.6	-26.9	-28.8	-32.4
8	+7.9	+5.5	+5.5	+5.8	+4.8	+1.1	....	....	-24.5	-27.0	-29.0	-30.6
9	+7.9	+5.4	+5.8	+5.7	+4.5	+1.1	-24.7	-30.5	-27.1	-29.0	-29.5	....
10	+7.8	....	+6.0	+5.6	+3.3	+1.2	-25.3	-27.1	-27.5	-29.0	-29.4	-42.1
11	+7.7	....	+6.3	+5.5	+3.3	+1.3	-25.8	-27.1	-28.1	....	-29.1	-42.5
12	+7.7	....	+6.5	+5.4	+3.8	+1.5	-26.1	-26.8	-28.3	....	-29.0	-42.7
13	+7.5	....	+6.5	+5.4	+3.9	+1.3	-26.1	-26.9	-28.3	....	-29.0	-43.5
14	+7.5	....	+6.1	+5.4	+3.8	+1.2	-26.0	-27.4	-28.1	....	-28.9	-43.8
15	+7.5	....	+5.9	+5.6	+3.1	+1.3	-27.0	-27.5	-27.7	....	-29.0	-44.6
16	+7.5	....	+5.7	+5.4	+3.0	+1.2	-29.2	-27.4	-27.3	....	-29.0	-44.7
17	+7.5	....	+5.7	+5.4	+2.5	+1.2	-28.5	-27.3	-28.0	....	-28.9	-44.8
18	+7.6	....	+6.0	+5.5	+2.5	+1.4	-28.5	-26.8	-28.2	....	-28.6	-45.0
19	+7.4	+1.4	+5.6	+5.4	+2.8	+1.4	-28.3	-29.5	-28.6	....	....	-45.2
20	+7.3	+2.6	+5.0	+5.4	+3.4	+1.4	-28.1	-29.6	-29.0	....	....	-45.2
21	+7.3	+3.6	+4.8	+5.4	-.8	+1.4	-27.4	-28.8	-29.0	....	....	-45.2
22	+7.6	+3.9	+4.7	+5.6	-.9	+1.4	-34.2	-28.9	-28.7	....	....	-45.4
23	+7.5	+4.6	+4.7	+5.6	-.5	+1.6	....	-28.5	....	-28.7	....	-45.7
24	+7.2	+5.1	+5.1	+5.4	+1	+1.9	....	-28.4	....	-28.9	....	-45.8
25	+6.9	+5.9	+5.5	+5.4	+7	+1.8	....	-27.9	....	-29.2	....	-45.8
26	+6.7	+6.2	+5.1	+5.4	+1.3	+1.3	....	-27.3	-29.4	-29.7	....	....
27	+6.7	+6.4	+4.8	+4.9	+1.7	....	....	-27.3	-29.4	-29.7	....	....
28	+6.6	+6.4	+4.7	+4.9	+1.2	....	....	-27.5	-29.3	-29.6	....	....
29	+6.6	....	+4.7	+5.1	+1.2	....	....	-27.7	-28.9	-29.6	....	....
30	+6.2	....	+4.9	+4.8	+1.2	....	....	-27.7	-28.2	-29.8	....	....
31	+6.0	....	+5.1	....	+5	....	....	-27.7	....	-29.8	....	....

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). 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, -40.6 Oct. 25, 1935.



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). Perth Amboy Water Department. Runyon well 123. Extremes of observed water level, in feet above mean sea level: Highest, 6.14 Sept. 22, 1938 (flooded); lowest, 0.53 Jan. 23, 1940.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	1.40	1.80	1.85	1.65	2.00	....	1.80	....	1.85	2.15	1.95	....
2	1.65	....	1.85	....	2.00	....	1.85	....	1.85	2.25	1.75	....
3	....	2.00	1.90	1.65	1.90	....	1.80	....	1.75	1.95	1.85	....
4	1.70	2.05	1.95	....	1.85	.95	1.80	....	1.60	2.15	1.85	....
5	1.70	1.90	2.00	....	1.70	1.15	1.85	....	1.50	....	2.30	....
6	1.60	1.75	....	....	1.85	1.25	1.75	....	....	....	2.45	....
7	1.55	1.80	....	....	1.85	1.35	1.70	....	....	....	2.45	....
8	1.55	1.90	....	....	....	1.30	1.60	1.70	2.00	....	2.30	....
9	1.40	....	....	....	....	1.55	1.70	1.75	1.95	....	2.25	2.45
10	1.45	....	....	....	2.05	1.55	1.80	1.80	2.05	....	2.15	2.35
11	....	....	....	1.80	2.05	1.65	1.75	1.85	2.15	....	1.95	2.30
12	....	1.80	2.05	1.80	2.00	1.70	1.80	1.85	2.15	....	1.95	....
13	....	1.80	2.15	1.60	2.00	1.55	1.80	1.90	1.85	....	....	....
14	1.70	1.80	2.15	1.75	1.75	1.50	1.90	....	1.80	1.90	....	....
15	1.70	1.95	1.90	1.80	1.70	1.45	1.95	....	1.80	1.75	....	2.55
16	1.75	....	1.80	1.95	....	1.55	....	1.95	2.00	1.80	....	2.45
17	1.65	....	1.85	1.95	....	....	....	1.95	2.00	1.90	2.25	2.50
18	....	....	1.70	1.95	....	....	1.85	1.90	1.90	1.90	2.35	....
19	....	2.00	1.45	1.95	1.45	1.50	1.95	1.40	1.95	2.15	2.00	....
20	1.70	1.70	1.55	2.00	1.60	....	2.05	1.65	2.00	2.00	2.15	....
21	1.20	1.90	1.70	2.05	1.60	....	1.90	1.80	1.95	2.05	2.25	....
22	1.65	2.05	1.70	1.85	1.75	....	1.75	....	2.05	2.00	2.05	....
23	....	1.75	1.75	1.60	1.85	....	1.30	....	2.05	2.05	....	2.25
24	....	....	....	1.50	1.90	....	....	1.95	2.00	1.95	....	2.20
25	....	....	....	1.50	1.90	....	....	2.00	1.95	1.95	....	2.20
26	....	....	1.60	1.50	1.95	....	1.60	1.95	1.95	2.00	2.25	....
27	....	....	1.45	1.95	1.70	2.00	1.75	1.85	2.00	....	2.25	....
28	....	1.80	1.70	2.05	1.55	2.00	1.75	1.80	2.05	....	2.20	....
29	2.00	....	1.80	2.00	1.40	1.90	1.75	1.90	2.00	2.00	2.45	2.05
30	1.75	....	1.75	2.00	1.55	1.80	1.85	2.00	1.85	2.05	....	....
31	1.60	....	1.60	....	1.60	....	1.85	....	....	1.90	....	....

Lowest daily water level, in feet above mean sea level, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	2.18	1.78	1.73	1.93	1.58	....	1.78	....	1.73	1.43	1.63	....
2	1.93	....	1.73	....	1.58	....	1.73	....	1.73	1.33	1.83	....
3	....	1.58	1.68	1.93	1.68	....	1.78	....	1.83	1.63	1.73	....
4	1.88	1.53	1.63	....	1.73	2.63	1.78	....	1.98	1.43	1.73	....
5	1.88	1.68	1.58	....	1.88	2.43	1.73	....	2.08	....	1.28	....
6	1.98	1.83	....	....	1.73	2.33	1.83	....	....	....	1.13	....
7	2.03	1.78	....	....	1.73	2.23	1.88	....	....	....	1.13	....
8	2.03	1.68	....	....	....	2.28	1.98	1.88	1.58	....	1.28	....
9	2.18	....	....	....	....	2.03	1.88	1.83	1.63	....	1.33	1.13
10	2.13	....	....	....	1.53	2.03	1.78	1.78	1.53	....	1.43	1.23
11	....	....	....	1.78	1.53	1.93	1.83	1.73	1.43	....	1.63	1.28
12	....	1.78	1.53	1.78	1.58	1.88	1.78	1.73	1.43	....	1.63	....
13	....	1.78	1.43	1.98	1.58	2.03	1.78	1.68	1.73	....	....	....
14	1.88	1.78	1.43	1.83	1.83	2.08	1.68	....	1.78	1.68	....	....
15	1.88	1.63	1.68	1.78	1.88	2.13	1.63	....	1.78	1.83	....	1.03
16	1.83	....	1.78	1.63	....	2.03	....	1.63	1.58	1.78	....	1.13
17	1.93	....	1.73	1.63	....	....	....	1.63	1.58	1.68	1.33	1.08
18	....	....	1.88	1.63	....	....	1.73	1.68	1.68	1.68	1.23	....
19	....	1.58	2.13	1.63	2.13	2.08	1.63	2.18	1.63	1.43	1.58	....
20	1.88	1.88	2.03	1.58	1.98	....	1.53	1.93	1.58	1.58	1.43	....
21	2.38	1.68	1.88	1.53	1.98	....	1.68	1.78	1.63	1.53	1.33	....
22	1.93	1.53	1.88	1.73	1.83	....	1.83	....	1.53	1.58	1.53	....
23	....	1.83	1.83	1.98	1.73	....	2.28	....	1.53	1.53	....	1.33
24	....	....	....	2.08	1.68	....	....	1.63	1.58	1.63	....	1.18
25	....	....	....	2.08	1.68	....	....	1.58	1.63	1.63	....	1.18
26	....	....	1.98	2.08	1.63	....	1.98	1.63	1.63	1.58	1.33	....

## 28.5.4.7.3--Continued.

Lowest daily water level, in feet above mean sea level, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
27	....	....	2.13	1.63	1.88	1.58	1.83	1.73	1.58	....	1.33	....
28	....	1.78	1.88	1.53	2.03	1.58	1.83	1.78	1.53	....	1.18	....
29	1.58		1.78	1.58	2.18	1.68	1.83	1.68	1.58	1.58	1.13	1.53
30	1.83		1.83	1.58	2.03	1.78	1.73	1.58	1.73	1.53	....	....
31	1.78		1.98		1.98		1.73	....		1.68	....	....

28.5.4.6.3.A (\*936, p. 94; 944, p. 93; 986, p. 109; 1016, p. 142; 1023, p. 167). Perth Amboy Water Department test well A-2. No measurements made in 1946.

28.5.4.6.6 (\*936, p. 95; 944, p. 93; 986, p. 109; 1016, p. 142; 1023, p. 167). Perth Amboy Water Department test well A-3. No measurements made in 1946.

28.5.4.6.6.A (\*936, p. 96; 944, p. 93; 986, p. 109; 1016, p. 142; 1023, p. 167). Perth Amboy Water Department test well A-40. No measurements made in 1946.

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). Perth Amboy Water Department test well B-2. No measurements made in 1946.

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). Perth Amboy Water Department test well B-3. No measurements made in 1946.

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). Perth Amboy Water Department test well B-4. No measurements made in 1946.

28.5.4.5.9 (\*936, p. 97; 944, p. 94; 986, p. 109; 1016, p. 143; 1023, p. 167). Perth Amboy Water Department test well B-5. No measurements made in 1946.

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). Perth Amboy Water Department test well C-1. No measurements made in 1946.

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). Perth Amboy Water Department test well D-1. No measurements made in 1946.

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). Perth Amboy Water Department test well D-2. No measurements made in 1946.

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). H. C. Perrine farm well F-2. No measurements made in 1946.

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). Clyde Bowne farm well F-3. No measurements made in 1946.

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). A. R. Brown farm well F-4. No measurements made in 1946.

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). A. Hanley farm well F-5. No measurements made in 1946.

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). Owner unknown. Farm well F-9. No measurements made in 1946.



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). Maude Lamberton. Farm well F-10. No measurements made in 1946.

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). Charles Schnuck. Farm well F-11. No measurements made in 1946.

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). George Burlew. Farm well F-12. No measurements made in 1946.

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). George Burlew. Farm well F-13. No measurements made in 1946.

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). William Jurman. Farm well F-14. No measurements made in 1946.

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). Amos Burlew. Farm well F-16. No measurements made in 1946.

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). A. Fredda. Farm well F-20. No measurements made in 1946.

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). Mrs. A. Green. Farm well F-21. No measurements made in 1946.

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). Reuben Miller. Farm well F-22. No measurements made in 1946.

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). Ambrose Green. Farm well F-26. No measurements made in 1946.

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). Mrs. J. Green. Farm well F-27. No measurements made in 1946.

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). Perth Amboy Water Department test well G-1. No measurements made in 1946.

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). Perth Amboy Water Department test well G-2. No measurements made in 1946.

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). Perth Amboy Water Department test well G-3. No measurements made in 1946.

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). Perth Amboy Water Department test well G-4. No measurements made in 1946.

29.1.1.7.9.A (\*936, p. 103; 944, p. 96; 986, p. 111; 1016, p. 145; 1023, p. 170). Perth Amboy Water Department test well G-20. No measurements made in 1946.

29.1.4.2.4 (\*936, p. 104; 944, p. 96; 986, p. 112; 1016, p. 145; 1023, p. 170). Owner unknown. Test well H-1. No measurements made in 1946.

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). Owner unknown. Test well J-1. No measurements made in 1946.

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). Owner unknown. Test well J-2. No measurements made in 1946.

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). Owner unknown. Test well J-3. No measurements made in 1946.

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). Owner unknown. Test well J-4. No measurements made in 1946.

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). Owner unknown. Test well J-5. No measurements made in 1946.

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). Perth Amboy Water Department test well L-1. No measurements made in 1946.

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). Perth Amboy Water Department test well L-2. No measurements made in 1946.

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). Perth Amboy Water Department test well L-3. No measurements made in 1946.

28.5.4.4.9.A (\*936, p. 106; 944, p. 97; 986, p. 113; 1016, p. 146; 1023, p. 171). Perth Amboy Water Department test well N-1. No measurements made in 1946.

28.5.4.4.9.B (\*936, p. 107; 944, p. 97; 986, p. 113; 1016, p. 146; 1023, p. 171). Perth Amboy Water Department test well N-2. No measurements made in 1946.

28.5.4.8.1.A (\*936, p. 107; 944, p. 97; 986, p. 113; 1016, p. 146; 1023, p. 171). Perth Amboy Water Department test well N-3. No measurements made in 1946.

29.1.1.7.5.A (\*936, p. 107; 944, p. 97; 986, p. 113; 1016, p. 146; 1023, p. 171). Owner unknown. Test well P-1. No measurements made in 1946.

29.1.1.7.5.B (\*936, p. 108; 944, p. 97; 986, p. 113; 1016, p. 146; 1023, p. 171). Owner unknown. Test well P-2. No measurements made in 1946.

29.1.4.1.8 (\*936, p. 108; 944, p. 97; 986, p. 113; 1016, p. 146; 1023, p. 171). Perth Amboy Water Department test well R-1. No measurements made in 1946.

29.1.4.4.2.A (\*936, p. 109; 944, p. 97; 986, p. 113; 1016, p. 146; 1023, p. 171). Perth Amboy Water Department test well R-2. No measurements made in 1946.

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). Perth Amboy Water Department test well S-1. No measurements made in 1946.

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). 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.

28.5.1.8.4--Continued.

Lowest daily water level, in feet with reference  
to land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	+0.92	-1.78	-0.68	-1.68	-3.53	-6.63
2	+1.52	-1.53	-1.08	-1.28	-4.28	-5.58
3	+1.07	-1.13	-1.48	-1.18	-5.03	-4.93
4	+0.82	-1.08	-.98	-1.68	-3.58	-5.33
5	+0.82	-1.25	-.68	-1.53	-2.18	-5.08
6	+0.77	-1.48	-2.33	-1.23	-1.98	-4.73
7	+0.92	-2.48	-2.03	-.88	.....	-5.63
8	+0.52	-2.38	-1.68	-1.18	.....	-6.03
9	+0.52	-2.58	-1.33	-1.28	-2.53	-5.83
10	+0.62	-2.28	-.97	-1.43	-4.33	-5.98
11	+0.52	-1.18	-.63	-1.63	-4.23	-5.88
12	+0.62	-1.18	-.63	-1.48	-3.03	-4.98
13	+0.27	-1.18	-.53	-1.48	-3.13	-5.83
14	+0.27	.....	-1.18	-1.33	-3.28	-5.98
15	+0.32	.....	-1.43	-1.23	-4.18	-5.48
16	+0.32	.....	-1.53	-1.78	-4.18	-5.28
17	+0.57	.....	-1.48	-1.93	-4.88	-5.18
18	+0.22	.....	-1.23	-1.43	-4.83	.....
19	+0.22	.....	-1.58	-1.73	-3.83	.....
20	+0.27	-4.23	-2.33	-1.63	-3.98	-5.18
21	+0.68	-3.68	-2.53	-1.53	-9.58	-5.68
22	+0.22	-3.23	-2.68	-1.33	-9.43	-5.58
23	+0.17	-2.28	-2.33	-1.63	-8.03	-4.88
24	-.18	-1.73	-1.73	-1.93	-6.88	.....
25	-.48	-.88	-1.53	-1.83	-6.23	.....
26	-.58	-.73	-2.23	-1.68	-5.33	-6.58
27	-.65	-.53	-2.48	-1.93	-4.83	-6.63
28	-.78	-.73	-2.63	-1.93	-5.48	-7.43
29	.....	.....	-2.58	.....	-5.63	-7.23
30	-1.28	.....	-2.23	-2.63	-5.63	-6.18
31	-1.63	.....	-1.68	.....	-6.58	.....

Lowest daily water level, in feet with reference  
to land-surface datum, 1946  
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	-6.03	-7.78	-13.53	-14.08	-16.13	-13.03
2	-8.63	-8.83	-12.23	-14.53	-16.03	-13.18
3	-8.83	-10.03	-12.38	-14.43	-15.28	-13.18
4	-9.58	-10.03	-12.83	-15.48	-14.73	-13.13
5	-9.88	-13.63	-12.68	-15.48	-14.53	-13.08
6	-9.93	-11.58	-13.78	-15.23	.....	-14.78
7	.....	-11.73	-13.48	-14.73	.....	-16.58
8	.....	-13.08	-13.43	-14.78	-16.98	-17.18
9	.....	-14.58	-14.08	-14.73	-15.23	.....
10	.....	-14.23	-14.98	-14.73	-14.78	.....
11	.....	-13.88	-15.68	-14.83	-14.38	.....
12	-15.43	-13.33	-15.73	-14.58	-14.28	.....
13	-14.43	-13.38	-14.88	-14.43	-14.08	.....
14	-14.23	-14.83	-14.33	-14.08	-13.98	.....
15	-14.13	-14.48	-13.43	-13.98	-13.98	.....
16	-15.68	-14.33	-13.33	-14.28	-13.93	.....
17	-17.68	-13.68	-14.78	-14.38	-13.63	.....
18	-15.93	-12.98	-14.78	-14.68	-13.48	.....
19	-15.28	-18.43	-15.23	-15.03	-13.38	-22.53
20	-15.03	-17.73	-15.83	-14.83	-13.28	-22.43
21	-14.53	-16.48	-15.63	.....	-13.23	-22.58
22	-13.43	-16.23	-15.13	.....	-13.23	-22.63
23	-14.08	-15.43	-13.88	.....	-13.23	-22.93
24	-13.08	-15.33	-15.33	-14.58	-13.13	-22.93
25	-11.73	-14.03	-15.63	-15.33	-13.08	-22.58
26	-10.48	-13.78	-15.88	-15.78	-13.33	-21.73
27	-9.63	-14.03	-15.68	-15.63	-13.93	-19.23
28	-8.48	-14.53	-15.08	-15.78	-14.28	-17.88
29	-7.53	-14.78	-14.43	-15.73	-13.83	-17.53
30	-8.03	-14.58	-13.78	-16.03	-13.43	-16.93
31	-8.18	-14.18	.....	-15.73	.....	-17.13

## 28.5.1.8.4--Continued.

Lowest daily water level, in feet with reference to mean sea level, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	+6.65	+3.95	+5.05	+4.05	+2.20	-0.90
2	+7.25	+4.20	+4.65	+4.45	+1.45	+1.15
3	+6.80	+4.60	+4.25	+4.55	+1.70	+1.80
4	+6.55	+4.65	+4.75	+4.05	+2.15	+1.40
5	+6.55	+4.45	+5.05	+4.20	+3.55	+1.65
6	+6.50	+4.25	+3.40	+4.50	+3.75	+1.00
7	+6.65	+3.25	+3.70	+4.80	.....	+1.10
8	+6.25	+3.35	+4.05	+4.55	.....	-.30
9	+6.25	+3.15	+4.40	+4.45	+3.20	-.10
10	+6.35	+3.45	+4.80	+4.30	+1.40	-.25
11	+6.25	+4.55	+5.10	+4.10	+1.50	-.15
12	+6.35	+4.55	+5.10	+4.25	+2.70	+1.75
13	+6.00	+4.55	+5.20	+4.25	+2.60	-.10
14	+6.00	.....	+4.55	+4.40	+2.45	-.25
15	+6.05	.....	+4.30	+4.50	+1.55	+1.25
16	+6.05	.....	+4.20	+3.95	+1.55	+1.45
17	+6.10	.....	+4.25	+3.80	+1.85	+1.55
18	+5.95	.....	+4.50	+4.30	+1.90	.....
19	+5.95	.....	+4.15	+4.00	+1.90	.....
20	+6.00	+1.50	+3.40	+4.10	+2.75	+1.55
21	+6.35	+2.05	+3.20	+4.20	+3.85	+1.05
22	+5.95	+2.05	+3.05	+4.40	+3.70	+1.35
23	+5.90	+3.45	+3.40	+4.10	+2.30	+1.85
24	+5.65	+4.00	+4.00	+3.80	-1.15	.....
25	+5.25	+4.85	+4.20	+3.90	-.50	.....
26	+5.15	+5.00	+3.50	+4.05	+1.40	-.65
27	+5.05	+5.20	+3.25	+3.80	+1.90	-.90
28	+4.95	+5.00	+3.10	+3.80	+1.25	-1.70
29	.....	.....	+3.15	.....	+1.10	-1.50
30	+4.45	.....	+3.50	+3.10	+1.10	-.45
31	+4.10	.....	+4.05	.....	-.85	.....

Lowest daily water level, in feet with reference to mean sea level, 1946  
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	-0.30	-2.05	-7.80	-8.35	-10.40	-7.30
2	-2.90	-3.10	-6.50	-8.80	-10.30	-7.45
3	-3.10	-4.30	-6.65	-8.70	-9.55	-7.45
4	-3.85	-4.30	-7.10	-9.75	-9.00	-7.40
5	-4.15	-7.90	-6.95	-9.75	-8.80	-7.35
6	-4.20	-5.85	-8.05	-9.50	.....	-9.05
7	.....	-6.00	-7.75	-9.00	.....	-10.85
8	.....	-7.35	-7.70	-9.05	-11.25	-11.45
9	.....	-8.85	-8.35	-9.00	-9.50	.....
10	.....	-8.50	-9.25	-9.00	-9.05	.....
11	.....	-8.15	-9.95	-9.10	-8.65	.....
12	-9.70	-7.60	-10.00	-8.85	-8.55	.....
13	-8.70	-7.65	-9.15	-8.70	-8.35	.....
14	-8.50	-9.10	-8.60	-8.35	-8.25	.....
15	-8.40	-8.75	-7.70	-8.25	-8.25	.....
16	-9.95	-8.60	-7.60	-8.55	-8.20	.....
17	-11.95	-7.95	-9.05	-8.65	-7.80	.....
18	-10.20	-7.25	-9.05	-8.95	-7.75	.....
19	-9.55	-12.70	-9.50	-9.30	-7.65	-16.80
20	-9.30	-12.00	-10.10	-9.10	-7.55	-16.70
21	-8.80	-10.75	-9.90	.....	-7.50	-16.65
22	-7.70	-10.50	-9.40	.....	-7.50	-16.90
23	-8.35	-9.70	-8.15	.....	-7.50	-17.20
24	-7.35	-9.60	-9.60	-8.85	-7.40	-17.20
25	-6.00	-8.30	-9.90	-9.60	-7.35	-16.65
26	-4.75	-8.05	-10.15	-10.05	-7.60	-15.60
27	-3.90	-8.30	-9.95	-9.90	-8.20	-13.50
28	-2.75	-8.80	-9.35	-10.05	-8.55	-12.15
29	-1.90	-9.05	-8.70	-10.00	-8.10	-11.60
30	-2.30	-8.85	-8.05	-10.30	-7.70	-11.20
31	-2.45	-8.45	.....	-10.00	.....	-11.40

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). Avon Water Dept. 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.

Date	Water level, in feet, 1946	
	Below land-surface datum	Below mean sea level
Jan. 7	71.62	43.35
June 11	64.32	36.05
11	63.12	34.85
Sept. 17	66.92	38.65

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). Monmouth Consolidated Water Co. Bradley Beach 650-foot well. Extremes of observed water level, in feet below mean sea level: Highest, 5.17 Apr. 17, 1935; lowest, 136.68 Aug. 27, 1925.

Date	Water level, in feet, 1946	
	Below land-surface datum	Below mean sea level
Jan. 7	35.73	19.19
June 11	36.54	19.80
Sept. 17	34.40	17.86

## 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). Edward Huffrey. Farm well F-30. No measurements made in 1946.

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). W. Gibson. Farm well F-31. No measurements made in 1946.

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). 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.

Water level at end of day, in feet below land-surface datum, 1946<sub>a</sub>/  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	14.46	14.27	14.72	14.81	15.05	.....	14.52	14.37	15.34	16.04	16.55	17.04
2	14.44	14.30	14.69	14.75	15.06	.....	14.55	14.42	15.36	16.05	16.58	17.05
3	14.41	14.34	14.74	14.82	15.09	.....	14.60	14.45	15.39	16.08	16.59	17.06
4	14.34	14.35	14.74	14.76	15.09	.....	14.64	14.50	15.43	16.12	16.64	17.07
5	14.27	14.36	14.76	14.82	15.11	.....	14.65	14.54	15.44	16.14	16.65	17.08
6	14.23	14.34	14.78	14.81	15.14	.....	14.67	14.56	15.45	16.15	16.68	17.09
7	14.19	14.41	14.79	14.83	15.14	14.04	14.73	14.59	15.49	16.16	16.69	17.10
8	14.18	14.44	14.76	14.80	15.17	14.04	14.76	14.62	15.53	16.19	16.69	17.11
9	14.11	14.40	14.83	14.83	.....	14.06	14.75	14.65	15.54	16.22	16.73	17.12
10	14.10	14.43	14.83	14.84	.....	14.05	14.78	14.70	15.58	16.23	16.74	17.12
11	14.08	14.47	14.84	14.84	.....	14.04	14.82	14.74	15.59	16.24	16.75	17.11
12	14.04	14.49	14.84	14.84	.....	14.03	14.86	14.76	15.64	16.25	16.77	17.16
13	14.04	14.46	14.85	14.86	.....	14.06	14.90	14.82	15.65	16.27	16.79	17.18
14	14.03	14.49	14.86	14.86	.....	14.07	14.94	14.84	15.68	16.28	16.84	17.20
15	14.04	14.55	14.87	14.84	.....	14.08	14.98	14.87	15.22	16.29	16.84	17.24
16	14.04	14.54	14.88	14.91	.....	14.07	15.02	14.90	15.74	16.31	16.84	17.24
17	14.02	14.58	14.89	14.91	.....	14.06	15.06	14.93	15.74	16.34	16.84	17.24
18	14.02	14.62	14.89	14.92	.....	14.03	15.08	14.94	15.75	16.35	16.85	17.24

a From July 9-Dec. 31, record partly estimated; believed to be essentially accurate.

29.11.1.2.9--Continued.

Water level at end of day, in feet below land-surface datum, 1946a/  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
19	14.10	14.51	14.90	14.91	.....	14.15	15.10	14.99	15.76	16.36	16.88	17.24
20	14.06	14.62	14.89	14.94	.....	14.15	15.12	15.02	15.77	16.38	16.89	17.24
21	14.06	14.64	14.91	14.95	.....	14.19	15.14	15.04	15.78	16.39	16.88	17.24
22	14.14	14.62	14.92	14.96	.....	14.24	15.03	15.05	15.89	16.41	16.92	17.24
23	14.14	14.64	14.94	14.94	.....	14.26	14.62	15.10	15.90	16.44	16.93	17.23
24	14.06	14.64	14.94	14.96	.....	14.30	14.34	15.13	15.92	16.44	16.94	17.21
25	14.13	14.67	14.94	14.95	.....	14.34	14.18	15.14	15.92	16.45	16.94	17.19
26	14.22	14.69	14.88	14.98	.....	14.37	14.15	15.16	15.94	16.49	16.95	17.17
27	14.24	14.71	14.89	15.01	.....	14.42	14.17	15.23	15.95	16.51	16.96	17.15
28	14.24	14.73	14.86	15.04	.....	14.44	14.23	15.24	15.96	16.53	16.99	17.13
29	14.29		14.82	15.04	.....	14.46	14.25	15.26	16.02	16.54	17.01	17.11
30	14.24		14.84	15.05	.....	14.49	14.29	15.29	16.03	16.54	17.02	17.09
31	14.24		14.86	.....	.....	14.33	15.32		16.54		17.09	

a From July 9-Dec. 31, record partly estimated; believed to be essentially accurate.

Water level at end of day, in feet above mean sea level, 1946a/  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	98.88	99.07	98.62	98.53	98.29	.....	98.82	98.97	98.00	97.30	96.79	96.50
2	98.90	99.04	98.65	98.59	98.28	.....	98.79	98.92	97.88	97.29	96.76	96.29
3	98.93	99.00	98.60	98.52	98.25	.....	98.74	98.89	97.95	97.26	96.75	96.28
4	99.00	98.99	98.60	98.58	98.25	.....	98.70	98.84	97.91	97.22	96.70	96.27
5	99.07	98.98	98.58	98.52	98.23	.....	98.69	98.80	97.90	97.20	96.69	96.26
6	99.11	99.00	98.56	98.53	98.20	.....	98.67	98.78	97.89	97.19	96.66	96.25
7	99.15	98.93	98.55	98.51	98.20	99.30	98.61	98.75	97.85	97.18	96.65	96.24
8	99.16	98.90	98.58	98.54	98.17	99.30	98.58	98.72	97.81	97.15	96.65	96.23
9	99.23	98.94	98.51	98.51	.....	99.28	98.59	98.69	97.80	97.12	96.61	96.22
10	99.24	98.91	98.51	98.50	.....	99.29	99.56	98.64	97.76	97.11	96.60	96.22
11	99.26	98.87	98.50	98.50	.....	99.30	98.52	98.60	97.75	97.10	96.59	96.23
12	99.30	98.85	98.50	98.50	.....	99.31	98.48	98.58	97.70	97.07	96.57	96.18
13	99.30	98.88	98.49	98.48	.....	99.28	98.44	98.52	97.69	97.07	96.55	96.18
14	99.31	98.85	98.48	98.48	.....	99.27	98.40	98.50	97.66	97.06	96.50	96.14
15	99.30	98.79	98.47	98.50	.....	99.26	98.36	98.47	97.62	97.05	96.50	96.10
16	99.30	98.80	98.46	98.43	.....	99.27	98.32	98.44	97.60	97.03	96.50	96.10
17	99.32	98.76	98.45	98.43	.....	99.28	98.28	98.41	97.60	97.00	96.50	96.10
18	99.32	98.72	98.45	98.42	.....	99.21	98.26	98.40	97.59	96.99	96.49	96.10
19	99.24	98.83	98.44	98.43	.....	99.19	98.24	98.35	97.58	96.98	96.46	96.10
20	99.28	98.72	98.45	98.40	.....	99.19	98.22	98.32	97.57	96.96	96.45	96.10
21	99.28	98.70	98.43	98.39	.....	99.15	98.20	98.30	97.56	96.95	96.46	96.10
22	99.20	98.72	98.42	98.38	.....	99.10	98.31	98.29	97.45	96.93	96.42	96.10
23	99.20	98.70	98.40	98.40	.....	99.08	98.72	98.24	97.44	96.90	96.41	96.11
24	99.28	98.70	98.40	98.38	.....	99.04	99.00	98.21	97.42	96.90	96.40	96.13
25	99.21	98.67	98.40	98.39	.....	99.00	99.16	98.20	97.42	96.89	96.40	96.15
26	99.12	98.65	98.46	98.36	.....	98.97	99.19	98.18	97.40	96.85	96.39	96.17
27	99.10	98.63	98.45	98.33	.....	98.92	99.17	98.11	97.39	96.83	96.38	96.19
28	99.10	98.61	98.48	98.30	.....	98.90	99.11	98.10	97.38	96.81	96.35	96.21
29	99.05		98.52	98.30	.....	98.88	99.09	98.08	97.32	96.80	96.33	96.23
30	99.10		98.50	98.29	.....	98.85	99.05	98.05	97.31	96.80	96.32	96.25
31	99.10		98.48	.....	.....	99.01	98.02		96.80		96.25	

a From July 9-Dec. 31, partly estimated; believed to be essentially accurate.

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). 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.

## 30.23.1.8.5--Continued.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	3.81	Feb. 28	3.96	Apr. 24	4.43	Nov. 12	4.64
17	4.02	Mar. 14	4.25	May 14	4.35	23	4.69
Feb. 1	4.14	29	4.08	July 31	4.29	Dec. 7	5.63
14	4.02	Apr. 13	4.24	Sept. 13	4.76	21	4.58

30.23.4.1.9 (\*936, p. 113; 944, p. 100; 986, p. 118; 1016, p. 150; 1023, p. 175). 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.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	3.50	Feb. 28	3.92	Apr. 24	4.18	Nov. 12	4.94
17	3.78	Mar. 14	4.03	May 14	4.33	23	4.73
Feb. 1	3.98	29	3.89	July 31	3.99	Dec. 7	4.86
14	3.90	Apr. 13	4.04	Sept. 13	4.46	21	4.62

30.22.6.6.7 (\*936, p. 113; 944, p. 101; 986, p. 118; 1016, p. 150; 1023, p. 175). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	2.89	Feb. 28	3.13	Apr. 24	4.10	Nov. 12	4.57
17	3.21	Mar. 14	3.61	May 14	4.15	23	4.17
Feb. 1	3.50	29	3.25	July 31	4.02	Dec. 7	5.29
14	3.25	Apr. 13	3.62	Sept. 13	4.80	21	4.24

30.22.6.9.3 (\*936, p. 113; 944, p. 101; 986, p. 118; 1016, p. 150; 1023, p. 175). 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. 31, 1941; lowest, 6.89 Oct. 24, 1943.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	2.34	Feb. 28	2.34	Apr. 24	3.34	Nov. 12	4.53
17	2.65	Mar. 14	2.89	May 14	3.36	23	4.12
Feb. 1	3.08	29	2.50	July 31	3.32	Dec. 7	4.12
14	2.43	Apr. 13	2.93	Sept. 13	4.32	21	3.73

30.23.4.7.8 (\*936, p. 114; 944, p. 101; 986, p. 119; 1016, p. 150; 1023, p. 175). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	6.26	Feb. 28	6.08	Apr. 24	6.40	Nov. 12	7.38
17	5.96	Mar. 14	5.90	May 14	6.66	23	7.60
Feb. 1	5.97	29	6.20	July 31	6.22	Dec. 7	7.82
14	6.03	Apr. 13	6.29	Sept. 13	6.55	21	8.04

30.22.8.3.5 (\*936, p. 114; 944, p. 101; 986, p. 119; 1016, p. 151; 1023, p. 175). 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, +0.80 May 7, 1944; lowest, -2.32 Oct. 11, 1941.

## 30.22.8.3.5--Continued.

Water level, in feet with reference to land-surface datum, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	-0.20	Mar. 14	-0.24	May 14	-0.50	Nov. 23	-1.62
Feb. 1	+.05	29	+.12	July 31	-.38	Dec. 7	-1.74
14	+.17	Apr. 13	-.15	Sept. 13	-1.68	21	-1.84
28	.00	24	-.36	Nov. 12	-1.67		

30.22.9.2.1 (\*936, p. 114; 944, p. 102; 986, p. 119; 1016, p. 151; 1023, p. 176). 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, 1946

Jan. 4	1.42	Feb. 28	1.36	Apr. 24	3.20	Nov. 12	4.85
17	1.93	Mar. 14	2.37	May 14	3.34	23	4.69
Feb. 1	2.46	29	1.73	July 31	2.96	Dec. 7	4.83
14	1.39	Apr. 13	2.50	Sept. 13	4.19	21	4.86

30.22.9.6.2 (\*936, p. 115; 944, p. 102; 986, p. 119; 1016, p. 151; 1023, p. 176). 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, 1946

Date	Below land-surface datum	Above mean sea level
Jan. 4	3.43	21.95
17	3.96	21.42
Feb. 1	4.70	20.68
14	3.97	21.41
28	3.90	21.48
Mar. 14	4.65	20.73
29	4.12	21.26
Apr. 13	4.84	20.54
24	5.35	20.03
May 14	5.60	19.78
July 31	5.05	20.33
Sept. 13	6.16	19.22
Nov. 12	6.73	18.65
23	6.49	18.89
Dec. 7	6.59	18.79
21	6.34	19.04

30.22.9.5.8 (\*936, p. 115; 944, p. 102; 986, p. 120; 1016, p. 152; 1023, p. 176). 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, 9.71 July 31, 1946; lowest, 3.15 Nov. 6, 1942.

Water level, in feet, 1946

Jan. 4	15.49	8.29
17	14.50	9.28
Feb. 1	14.57	9.21
14	14.65	9.13
28	14.72	9.06
Mar. 14	14.66	9.12
20	14.16	9.62
Apr. 15	14.27	9.51
24	14.58	9.20
May 14	15.24	8.54
July 31	14.07	9.71
Sept. 13	14.70	9.08
Nov. 12	16.70	7.08
23	16.94	6.84
Dec. 7	17.73	6.05
21	17.46	6.32



30.22.9.5.5 (\*936, p. 115; 944, p. 102; 986, p. 120; 1016, p. 152; 1023, p. 177). Department of Conservation, Division of Water Policy and Supply. Penns Grove observation well 21. Well abandoned since June 1945; road built over site.

30.22.9.4.9 (\*936, p. 116; 944, p. 102; 986, p. 121; 1016, p. 153; 1023, p. 177). Penns Grove Water Co. observation well 22. In Water-Supply Paper 944, p. 102-103, the caption "Lowest daily water level, in feet above mean sea level, 1942" should read "Lowest daily water level, in feet below measuring point, 1942." In Water-Supply Papers 944, p. 102; 986, p. 121; 1016, p. 153; extremes of observed water level should read Highest, 14.42 Aug. 18, 1939, instead of 14.92. In Water-Supply Paper 986, p. 121, water level, on Mar. 28 should read above land-surface datum. Extremes of observed 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, 1946

Date	Below land-surface datum	Above mean sea level
Jan. 4	13.02	1.36.
17	12.80	1.58
Feb. 1	12.71	1.67
14	12.75	1.63
28	12.36	2.02
Mar. 14	12.53	1.85
29	12.25	2.13
Apr. 13	11.88	2.50
24	11.88	2.50
May 14	11.77	2.61
July 31	11.94	2.44
Sept. 13	12.46	1.92
Nov. 12	13.08	1.30
23	13.16	1.22
Dec. 7	13.93	.45
21	13.43	.95

30.22.9.7.3 (\*936, p. 117; 944, p. 103; 986, p. 121; 1016, p. 153; 1023, p. 178). 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, +7.24 June 24, 1946; lowest, -5.62 Nov. 30, Dec. 3, 1942.

Water level at end of day, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	13.49	12.73	12.93	12.01	11.03	11.59	11.79	12.54	13.39	14.07	
2	.....	13.75	13.37	12.67	12.90	.....	11.08	11.58	11.80	12.60	13.39	14.18
3	.....	13.70	13.45	12.76	13.00	.....	11.06	11.58	11.85	12.64	.....	14.18
4	.....	13.64	13.41	12.64	12.90	.....	11.18	11.58	11.89	12.67	.....	14.20
5	.....	13.47	13.45	12.72	12.94	.....	11.17	11.62	11.92	12.70	.....	14.20
6	14.80	.....	13.42	12.70	12.97	11.40	11.12	11.64	11.91	12.67	.....	14.25
7	14.70	.....	13.44	12.72	12.94	.....	11.18	11.53	11.90	12.66	.....	14.26
8	14.66	.....	13.32	12.62	13.02	11.35	11.22	11.51	11.95	12.74	13.52	14.28
9	14.48	.....	13.43	12.71	13.07	11.33	11.25	11.49	11.96	12.73	13.07	14.29
10	14.47	13.49	13.39	12.75	13.08	11.27	11.28	11.46	11.95	12.78	13.59	14.24
11	14.40	13.64	13.47	12.70	13.03	11.19	11.31	11.54	12.02	12.80	13.56	14.33
12	14.31	13.65	13.39	12.67	13.13	11.11	11.33	11.59	12.09	12.86	13.64	.....
13	14.27	13.49	13.51	12.70	13.21	11.13	11.38	11.61	12.10	12.91	13.62	.....
14	14.21	.....	13.25	12.68	13.14	11.14	11.41	11.68	12.11	12.93	13.65	.....
15	14.23	13.72	13.32	12.60	13.16	11.09	11.49	11.69	12.15	12.95	13.72	14.42
16	14.14	13.58	13.30	12.77	13.08	11.02	11.53	11.65	12.18	12.92	13.75	14.46
17	14.03	13.60	13.22	12.76	13.13	10.95	11.56	11.63	12.22	12.91	.....	14.49
18	13.93	13.69	13.20	12.75	12.93	10.98	11.60	11.63	12.27	12.97	13.82	14.54
19	14.08	13.35	13.19	12.73	12.76	11.00	11.64	.....	12.28	13.05	13.81	14.59
20	13.87	13.60	13.17	12.86	12.63	10.91	11.70	11.70	12.28	13.11	13.82	14.41
21	.....	13.66	13.14	.....	12.59	10.91	11.74	11.70	12.30	13.13	13.83	14.51
22	.....	13.45	13.08	.....	12.55	10.93	11.70	11.68	12.36	13.14	13.85	14.64
23	13.70	13.47	13.11	.....	12.49	10.91	11.64	11.70	12.38	13.16	13.90	14.56

30.22.9.7.3--Continued.

Water level at end of day, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
24	13.68	13.39	13.02	.....	12.39	10.90	11.54	11.70	12.37	13.17	13.90	14.59
25	13.67	13.49	12.99	.....	12.33	10.94	11.53	11.70	12.40	13.19	13.94	14.66
26	13.80	13.40	12.93	.....	12.29	11.01	11.55	11.70	12.45	13.26	13.93	14.72
27	13.81	13.43	12.91	.....	12.26	11.04	11.56	11.70	12.49	13.30	14.00	14.68
28	13.70	13.54	12.88	12.93	12.24	11.08	11.56	11.71	12.51	13.30	14.00	14.70
29	13.74		12.81	12.95	12.18	11.08	11.54	11.72	12.41	13.28	14.09	.....
30	13.58		12.91	12.97	12.11	11.07	11.54	11.74	12.47	13.29	14.05	.....
31	.....		12.90		12.04		11.54	11.76		13.35	.....	.....

Water level at end of day, in feet above mean sea level, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	4.65	5.41	5.21	6.13	7.11	6.55	6.35	5.60	4.75	4.07
2	....	4.39	4.77	5.47	5.24	....	7.06	6.56	6.34	5.54	4.75	3.96
3	....	4.44	4.69	5.38	5.14	....	6.98	6.56	6.29	5.50	....	3.97
4	....	4.50	4.73	5.50	5.24	....	6.96	6.56	6.25	5.47	....	3.94
5	....	4.67	4.69	5.42	5.20	....	7.02	6.52	6.22	5.44	....	3.94
6	3.34	....	4.72	5.44	5.17	6.74	7.02	6.50	6.23	5.47	....	3.89
7	3.34	....	4.70	5.42	5.20	....	6.96	6.61	6.24	5.48	....	3.88
8	3.48	....	4.82	5.52	5.12	6.75	6.82	6.63	6.19	5.40	4.62	3.86
9	3.66	....	4.71	5.43	5.07	6.81	6.89	6.65	6.18	5.41	4.57	3.85
10	3.67	4.75	4.75	5.39	5.06	6.87	6.86	6.68	6.19	5.36	4.55	3.90
11	3.74	4.50	4.67	5.44	5.11	6.95	6.83	6.60	6.12	5.34	4.58	3.81
12	3.83	4.49	4.75	5.47	5.01	7.03	6.81	6.55	6.05	5.28	4.50	....
13	3.87	4.65	4.83	5.44	4.93	7.01	6.76	6.53	6.04	5.23	4.52	....
14	3.93	....	4.89	5.46	5.00	7.00	6.73	6.46	6.03	5.21	4.49	....
15	3.91	4.42	4.82	5.54	4.98	7.05	6.65	6.45	5.99	5.19	4.42	3.72
16	4.00	4.56	4.84	5.37	5.06	7.12	6.61	6.49	5.96	5.22	4.39	3.68
17	4.11	4.54	4.92	5.38	5.01	7.19	6.58	6.51	5.92	5.23	....	3.65
18	4.21	4.45	4.84	5.39	5.21	7.16	6.54	6.51	5.87	5.17	4.32	3.60
19	4.06	4.79	4.95	5.41	5.38	7.14	6.50	....	5.86	5.09	4.33	3.55
20	4.27	4.54	4.97	5.28	5.51	7.23	6.44	6.44	5.86	5.03	4.32	3.73
21	....	4.48	5.00	....	5.55	7.23	6.40	6.44	5.84	5.09	4.31	3.63
22	....	4.69	5.06	....	5.59	7.21	6.44	6.46	5.78	5.00	4.29	3.50
23	4.44	4.67	5.03	....	5.65	7.23	6.50	6.44	5.76	4.98	4.24	3.58
24	4.46	4.75	5.12	....	5.75	7.24	6.60	6.44	5.77	4.97	4.24	3.55
25	4.47	4.65	5.15	....	5.81	7.20	6.61	6.44	5.74	4.95	4.20	3.48
26	4.34	4.74	5.21	....	5.85	7.13	6.59	6.44	5.69	4.88	4.21	3.42
27	4.33	4.71	5.23	....	5.88	7.10	6.58	6.44	5.65	4.84	4.14	3.46
28	4.44	4.60	5.28	5.21	5.90	7.06	6.58	6.43	5.63	4.84	4.14	3.44
29	4.40		5.33	5.19	5.96	7.06	6.60	6.42	5.73	4.86	4.05	....
30	4.56		5.23	5.17	6.03	7.07	6.60	6.40	5.67	4.85	4.09	....
31	....		5.24		6.10		6.60	6.38		4.79	....	....

30.32.2.2.3 (#936, p. 118; 944, p. 103; 986, p. 122; 1016, p. 155; 1023, p. 179). 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, +2.25 Feb. 28, 1946; lowest, -4.23 Nov. 22, 1941, Oct. 24, 1943.

Water level, in feet, 1946

Date	Below land-surface datum	Above mean sea level
Jan. 4	3.05	2.15
17	3.30	1.90
Feb. 1	3.42	1.78
14	3.09	2.11
28	2.95	2.25
Mar. 14	3.43	1.77
29	3.01	2.19
Apr. 13	4.24	.96
24	4.36	.84
May 14	4.66	.54
July 31	4.61	.59

## 30.32.2.2.3--Continued.

Water level, in feet, 1946		
Date	Below land-surface datum	Above mean sea level
Sept. 13	5.34	a 0.14
Nov. 12	5.79	a .59
23	5.57	a .37
Dec. 7	5.58	a .38
21	5.23	a .03

a Below mean sea level.

30.22.8.9.5 (\*936, p. 119; 944, p. 104; 986, p. 123; 1016, p. 155; 1023, p. 179). 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, +1.86 Jan. 4, 1946; lowest, -1.06 Nov. 22, 1941.

Water level, in feet, 1946		
Jan. 4	2.02	1.86
17	2.24	1.64
Feb. 1	2.26	1.62
14	2.34	1.54
28	2.28	1.60
Mar. 14	2.57	1.31
29	2.30	1.58
Apr. 13	2.59	1.29
24	2.77	1.11
May 14	2.88	1.00
July 31	3.43	.45
Sept. 13	2.86	1.02
Nov. 12	3.00	.88
23	3.16	.72
Dec. 7	3.31	.57
21	2.66	1.22

30.22.9.8.6 (\*936, p. 119; 944, p. 104; 986, p. 123; 1016, p. 156; 1023, p. 180). 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, 1946		
Jan. 4	13.60	7.01
17	13.19	7.42
Feb. 1	13.33	7.28
14	13.26	7.35
28	13.41	7.20
Mar. 14	13.39	7.22
29	13.05	7.56
Apr. 13	13.17	7.44
24	13.29	7.32
May 14	13.63	6.98
July 31	12.22	8.39
Sept. 13	12.96	7.65
Nov. 12	13.97	6.64
23	14.13	6.48
Dec. 7	14.33	6.28
21	14.30	6.31

30.32.9.8.4 (\*936, p. 119; 944, p. 104; 986, p. 124; 1016, p. 156; 1023, p. 180). 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, +5.31 July 31, 1946; lowest, -9.39 Dec. 4, 1942.

30.32.9.8.4--Continued.

Date	Water level, in feet, 1946	
	Below land-surface datum	Above mean sea level
Jan. 4	24.78	1.63
17	23.69	2.72
Feb. 1	23.40	3.01
14	23.37	3.04
28	23.42	2.99
Mar. 14	23.30	3.11
29	22.91	3.50
Apr. 13	22.67	3.74
24	22.59	3.82
May 14	23.07	3.34
July 31	21.10	5.31
Sept. 13	21.56	4.85
Nov. 12	22.86	3.55
23	23.16	3.25
Dec. 7	23.52	2.89
21	23.82	2.59

30.32.2.3.3 (\*936, p. 120; 944, p. 104; 986, p. 124; 1016, p. 157; 1023, p. 181). 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, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	+0.33	+0.36	+0.29	+0.19	+0.41	....	-0.79	-0.67	-1.29	....	-1.76
2	....	+0.31	+0.36	+0.17	+0.20	+0.98	....	-0.86	-0.75	-1.44	....	-1.88
3	....	+0.20	+0.26	+0.17	+0.32	+0.99	....	-0.94	-0.75	-1.51	....	-1.91
4	+0.64	....	+0.22	+0.17	+0.32	+0.96	....	-1.02	-0.79	-1.58	....	-1.94
5	+0.65	....	+0.16	+0.16	+0.31	+0.82	....	-1.09	-0.89	-1.65	....	-1.96
6	+0.68	....	+0.13	+0.10	+0.33	+0.71	....	-0.77	-0.97	-1.68	....	-2.01
7	+0.71	....	+0.12	+0.08	+0.38	+0.63	....	-0.13	-1.03	-1.71	....	-2.05
8	+0.65	....	+0.21	+0.08	+0.38	+0.52	....	-0.10	-1.11	-1.78	....	-2.05
9	+0.78	....	+0.22	+0.07	+0.44	+0.35	....	-0.13	-1.13	-1.79	....	-2.06
10	+0.72	....	+0.11	-0.02	+0.57	+0.22	....	-0.18	-1.19	-1.63	....	-2.06
11	+0.64	....	....	-0.06	+0.58	+0.17	....	-0.34	-1.29	-1.61	....	-2.10
12	+0.78	....	....	-0.06	+0.49	+0.40	....	-0.47	-1.38	-1.46	-2.01	-2.06
13	+0.65	....	....	-0.13	+0.42	+0.34	....	-0.54	-1.44	-1.37	-2.02	-2.07
14	+0.56	....	....	-0.18	+0.44	+0.25	....	-0.66	-1.49	-1.38	-2.06	-2.11
15	+0.53	+0.23	....	-0.22	....	+0.38	....	-0.75	-1.57	-1.41	-2.12	-2.14
16	....	+0.09	....	-0.17	....	+0.30	-1.39	-0.67	-1.64	-1.44	-2.15	-2.18
17	+0.40	+0.09	....	-0.14	....	+0.24	-1.45	-0.41	-1.69	-1.48	-2.07	-2.19
18	+0.36	+0.05	....	-0.12	....	+0.09	-1.52	-0.11	-1.76	-1.50	-1.97	-2.21
19	+0.31	+0.16	+0.71	-0.08	....	+0.17	-1.58	+0.01	-1.78	-1.62	-1.96	-2.24
20	....	+0.52	+0.59	-0.05	....	+0.23	-1.65	-0.04	-1.81	-1.67	-1.96	-2.01
21	....	+0.47	+0.48	-0.03	....	+0.22	-1.56	-0.09	-1.64	....	-1.97	....
22	....	+0.44	+0.46	+0.05	....	+0.11	-0.87	-0.07	-1.64	....	-1.75	....
23	....	+0.44	+0.33	+0.15	....	+0.01	-0.19	+0.01	-1.66	....	-1.74	....
24	....	+0.44	+0.33	+0.19	+0.17	-0.08	-0.10	-0.08	-1.37	....	-1.74	....
25	....	+0.43	+0.35	+0.19	+0.08	-0.20	-0.08	-0.21	-1.23	....	-1.74	....
26	....	+0.33	+0.36	+0.07	+0.08	-0.32	-0.19	-0.29	-1.25	....	-1.74	....
27	....	+0.29	+0.38	+0.07	+0.60	-0.42	-0.32	-0.39	-1.32	....	-1.71	....
28	....	+0.39	+0.33	+0.19	+0.79	....	-0.44	-0.51	-1.38	....	-1.77	....
29	....	....	+0.31	+0.19	+0.75	....	-0.54	-0.55	-1.40	....	-1.75	....
30	....	....	+0.32	+0.19	+0.62	....	-0.63	-0.45	-1.26	....	-1.76	....
31	....	....	+0.30	....	+0.51	....	-0.73	-0.56	....	....	....	....

30.32.2.3.3--Continued.

Water level at end of day, in feet above mean sea level, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	10.60	10.63	10.56	10.46	10.68	.....	9.48	9.60	8.98	.....	8.51
2	.....	10.58	10.63	10.44	10.47	11.25	.....	9.41	9.52	8.86	.....	8.39
3	.....	10.47	10.63	10.44	10.59	11.26	.....	9.33	9.52	8.76	.....	8.36
4	10.91	.....	10.49	10.44	10.59	11.23	.....	9.25	9.48	8.69	.....	8.33
5	10.92	.....	10.43	10.43	10.58	11.09	.....	9.18	9.38	8.62	.....	8.31
6	10.95	.....	10.40	10.37	10.60	10.98	.....	9.50	9.30	8.59	.....	8.26
7	10.98	.....	10.39	10.55	10.65	10.90	.....	10.14	9.24	8.56	.....	8.22
8	10.92	.....	10.48	10.35	10.65	10.79	.....	10.17	9.16	8.49	.....	8.22
9	11.05	.....	10.49	10.34	10.71	10.62	.....	10.14	9.14	8.48	.....	8.21
10	10.99	.....	10.38	10.25	10.84	10.49	.....	10.09	9.08	8.64	.....	8.21
11	10.91	.....	.....	10.21	10.85	10.44	.....	9.93	8.98	8.66	.....	8.17
12	11.05	.....	.....	10.21	10.76	10.67	.....	9.80	8.89	8.86	8.26	8.21
13	10.92	.....	.....	10.14	10.69	10.61	.....	9.73	8.83	8.90	8.25	8.20
14	10.83	.....	.....	10.09	10.71	10.52	.....	9.61	8.78	8.89	8.21	8.16
15	10.80	10.50	.....	10.05	.....	10.65	.....	9.52	8.70	8.86	8.15	8.13
16	.....	10.36	.....	10.10	.....	10.57	8.88	9.60	8.63	8.83	8.12	8.09
17	10.67	10.36	.....	10.13	.....	10.51	8.82	9.86	8.58	8.79	8.20	8.08
18	10.63	10.32	.....	10.15	.....	10.36	8.75	10.16	8.51	8.77	8.30	8.06
19	10.58	10.43	10.98	10.19	.....	10.44	8.69	10.28	8.49	8.65	8.31	8.03
20	.....	10.79	10.86	10.22	.....	10.50	8.62	10.23	8.46	8.60	8.31	8.26
21	.....	10.74	10.75	10.24	.....	10.49	8.71	10.18	8.63	.....	8.30	.....
22	.....	10.71	10.73	10.32	.....	10.38	9.40	10.20	8.63	.....	8.52	.....
23	.....	10.71	10.60	10.42	.....	10.28	10.08	10.28	8.61	.....	8.53	.....
24	.....	10.71	10.60	10.46	10.44	10.19	10.17	10.19	8.90	.....	8.53	.....
25	.....	10.70	10.62	10.46	10.35	10.07	10.19	10.06	9.04	.....	8.53	.....
26	.....	10.60	10.63	10.34	10.36	9.95	10.08	9.98	9.02	.....	8.53	.....
27	.....	10.56	10.65	10.34	10.87	9.85	9.95	9.88	8.95	.....	8.56	.....
28	.....	10.66	10.60	10.46	11.06	.....	9.83	9.76	8.89	.....	8.56	.....
29	.....	.....	10.58	10.46	11.02	.....	9.73	9.72	8.87	.....	8.52	.....
30	.....	.....	10.59	10.46	10.89	.....	9.64	9.72	9.01	.....	8.51	.....
31	.....	.....	10.57	10.78	.....	.....	9.54	9.71	.....	.....	.....	.....

30.32.2.3.9 (\*936, p. 120; 944, p. 105; 986, p. 125; 1016, p. 158; 1023, p. 182). 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, 10.99 Mar. 13, 1941, Feb. 24, 1945; lowest, 3.94 Oct. 24, 1943.

Water level, in feet, 1946		
Date	Below land- surface datum	Above mean sea level
Jan. 4	2.12	10.59
17	2.36	10.35
Feb. 1	2.14	10.57
14	2.12	10.59
28	2.10	10.61
Mar. 14	2.52	10.19
29	2.18	10.53
Apr. 13	2.61	10.10
24	3.30	9.41
May 14	3.19	9.52
July 31	3.68	9.03
Sept. 13	4.38	8.33
Nov. 12	4.56	8.15
23	4.06	8.65
Dec. 7	4.09	8.62
21	3.82	8.89

30.32.2.5.1 (\*936, p. 121; 944, p. 105; 986, p. 126; 1016, p. 158; 1023, p. 182). 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, 1946		
Date	Below land- surface datum	With reference to mean sea level
Jan. 4	8.44	-1.28
17	8.10	-.94
Feb. 1	7.66	-.50
14	5.85	+1.31
28	5.66	+1.50
Mar. 14	5.57	+1.59
29	5.16	+2.00
Apr. 13	7.42	-.26
24	7.92	-.76
May 14	9.05	-1.89
July 31	10.77	-3.61
Sept. 13	11.99	-4.83
Nov. 12	13.17	-6.01
23	12.56	-5.40
Dec. 7	10.95	-3.79
21	10.37	-3.21

30.32.2.6.5 (\*936, p. 121; 944, p. 105; 986, p. 126; 1016, p. 159; 1023, p. 183). 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, 1946		
Date	Below land- surface datum	Above mean sea level
Feb. 1	1.71	11.08
14	1.54	11.25
28	1.49	11.30
Mar. 14	2.08	10.71
29	1.87	10.92
Apr. 13	2.10	10.69
24	2.60	10.19
May 14	2.77	10.02
July 31	2.74	10.05
Sept. 13	3.11	9.68
Nov. 12	3.76	9.03
23	4.03	8.76
Dec. 7	4.05	8.74
21	3.83	8.96

30.32.3.5.5 (\*936, p. 121; 944, p. 106; 986, p. 127; 1016, p. 159; 1023, p. 183). 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, Dec. 1, 1944; lowest, 1.93 Oct. 20, 24, 1943.

Water level, in feet, 1946		
Date	Below land- surface datum	Above mean sea level
Jan. 4	1.40	6.82
17	1.72	6.50
Feb. 1	1.50	6.72
14	1.66	6.56
28	1.37	6.85
Mar. 14	1.97	6.25
29	1.66	6.56
Apr. 13	2.12	6.10
24	2.59	5.63
May 14	2.34	5.88
July 31	2.62	5.60
Nov. 23	2.21	6.01
Dec. 7	2.61	5.61
21	1.68	6.54

30.32.2.5.8 (\*936, p. 122; 944, p. 106; 986, p. 127; 1016, p. 160; 1023, p. 184). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	11.59	Feb. 28	8.38	Apr. 24	10.10	Nov. 12	16.04
17	10.78	Mar. 14	8.19	May 14	11.45	23	15.96
Feb. 1	10.58	29	7.70	July 31	13.36	Dec. 7	15.10
14	8.44	Apr. 13	9.58	Sept. 13	14.59	21	14.24

30.32.2.9.1 (\*936, p. 122; 944, p. 106; 986, p. 128; 1016, p. 160; 1023, p. 184). 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, 15.33 Mar. 25, 1944; lowest, 8.09 Oct. 24, 1943.

Water level, in feet, 1946

Date	Below land-surface datum	Above mean sea level
Jan. 4	2.93	14.88
17	3.44	14.37
Feb. 1	3.59	14.22
14	3.59	14.22
28	3.40	14.41
Mar. 14	4.00	13.81
29	3.47	14.34
Apr. 13	4.22	13.59
24	4.77	13.04
May 14	4.98	12.83
July 31	5.14	12.67
Sept. 13	5.88	11.93
Nov. 12	6.60	11.21
23	6.37	11.44
Dec. 7	6.26	11.55
21	6.09	11.72

30.32.2.9.5 (\*936, p. 122; 944, p. 106; 986, p. 128; 1016, p. 161; 1023, p. 185). Department of Conservation, Division of Water Policy and Supply, Penns Grove observation well 64. 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, 1946

Date	Water level	Water level
Jan. 4	3.54	1.48
17	3.77	1.25
Feb. 1	3.60	1.42
14	3.80	1.22
28	3.72	1.30
Mar. 14	3.97	1.05
29	3.94	1.08
Apr. 13	4.00	1.02
24	4.08	.94
May 14	3.99	1.03
July 31	3.93	1.09
Sept. 13	4.34	.68
Nov. 12	4.03	.99
23	3.62	1.40
Dec. 7	3.91	1.11
21	3.40	1.62

30.32.6.1.6 (\*936, p. 123; 944, p. 106; 986, p. 129; 1016, p. 161; 1023, p. 185). 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, 1946		
Date	Below land-surface datum	Above mean sea level
Jan. 4	2.51	8.34
17	2.86	7.99
Feb. 1	2.98	7.87
14	2.98	7.87
28	2.82	8.03
Mar. 14	3.36	7.49
29	2.87	7.98
Apr. 13	3.48	7.37
24	4.00	6.85
May 14	4.24	6.61
July 31	4.49	6.36
Sept. 13	5.63	5.22
Nov. 12	5.90	4.95
23	6.43	4.42
Dec. 7	5.35	5.50
21	5.14	5.71

30.32.1.9.5 (\*936, p. 123; 944, p. 107; 986, p. 129; 1016, p. 162; 1023, p. 185). 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, 4.74 Jan. 4, 1946; lowest, 10.87 Dec. 6, 1941.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	4.74	Feb. 28	5.20	Apr. 24	5.74	Nov. 12	8.10
17	4.90	Mar. 14	5.45	May 14	6.22	23	8.19
Feb. 1	5.34	29	5.00	July 31	6.11	Dec. 7	8.36
14	5.28	Apr. 13	5.41	Sept. 13	6.86	21	8.30

30.32.5.1.3 (\*936, p. 123; 944, p. 107; 986, p. 129; 1016, p. 162; 1023, p. 186). 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, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	3.18	Feb. 28	3.46	Apr. 24	4.73	Nov. 12	6.36
17	3.50	Mar. 14	3.92	May 14	5.08	23	6.25
Feb. 1	3.76	29	3.50	July 31	4.68	Dec. 7	6.27
14	3.50	Apr. 13	4.19	Sept. 13	5.73	21	6.01

30.32.4.6.4 (\*936, p. 124; 944, p. 107; 986, p. 130; 1016, p. 162; 1023, p. 186). 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, 1.16 Mar. 25, 1944; lowest, 5.52 Sept. 25, 1943.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	1.21	Feb. 28	1.28	Apr. 24	1.94	Nov. 12	2.24
17	1.41	Mar. 14	1.63	May 14	1.94	23	1.86
Feb. 1	1.30	29	1.40	July 31	1.98	Dec. 7	2.01
14	1.43	Apr. 13	1.65	Sept. 13	2.89	21	1.17



30.32.5.4.6 (\*936, p. 124; 944, p. 107; 986, p. 130; 1016, p. 162; 1023, p. 186). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	5.05	Feb. 28	5.42	Apr. 24	5.62	Nov. 12	6.63
Jan. 17	4.98	Mar. 14	5.50	May 14	5.97	Dec. 23	6.67
Feb. 1	5.24	29	5.33	July 31	5.89	Dec. 7	6.67
14	5.40	Apr. 13	5.40	Sept. 13	6.22	21	6.70

30.32.4.8.7 (\*936, p. 124; 944, p. 107; 986, p. 130; 1016, p. 162; 1023, p. 186). Department of Conservation, Division of Water Policy and Supply. Penns Grove observation well 81. Abandoned after November 1945.

30.32.5.7.7 (\*936, p. 125; 944, p. 108; 986, p. 130; 1016, p. 163; 1023, p. 186). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	0.79	Feb. 28	0.14	Apr. 24	2.23	Nov. 12	3.20
Jan. 17	1.05	Mar. 14	1.07	May 14	2.04	Dec. 23	2.28
Feb. 1	.45	29	.64	July 31	2.01	Dec. 7	2.62
14	.00	Apr. 13	1.44	Sept. 13	3.71	21	1.29

30.31.9.6.6 (\*936, p. 125; 944, p. 108; 986, p. 130; 1016, p. 163; 1023, p. 187). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	3.22	Feb. 28	3.54	Apr. 24	4.58	Nov. 12	4.58
Jan. 17	3.60	Mar. 14	4.06	May 14	4.62	Dec. 23	4.64
Feb. 1	3.57	29	3.70	July 31	4.16	Dec. 7	4.64
14	3.64	Apr. 13	4.14	Sept. 13	5.24	21	3.99

30.32.7.6.9 (\*936, p. 125; 944, p. 108; 986, p. 131; 1016, p. 163; 1023, p. 187). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	3.15	Feb. 28	4.56	Apr. 24	6.95	Nov. 12	8.97
Jan. 17	3.83	Mar. 14	5.36	May 14	8.00	Dec. 23	9.66
Feb. 1	5.22	29	4.49	July 31	6.33	Dec. 7	9.66
14	4.76	Apr. 13	5.99	Sept. 13	8.84	21	9.71

30.22.9.4.3 (\*936, p. 126; 944, p. 108; 986, p. 131; 1016, p. 163; 1023, p. 187). Logwood Inn. Penns Grove observation well E-14. 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, 1946

Date	Below land-surface datum	Above mean sea level
Jan. 17	5.72	15.42
Feb. 1	6.47	14.67
14	6.15	14.99
28	6.28	14.86
Mar. 14	6.60	14.54
29	5.88	15.26

## 30.22.9.4.3--Continued.

Date	Water level, in feet, 1946	
	Below land- surface datum	Above mean sea level
Apr. 13	6.53	14.61
24	7.17	13.97
May 14	7.45	13.69
July 31	7.22	13.92
Sept. 13	8.47	12.67
Nov. 12	9.79	11.35
23	9.91	11.23
Dec. 7	10.03	11.11
21	9.11	12.03

30.22.9.5.4 (\*936, p. 126; 944, p. 108; 986, p. 131; 1016, p. 164; 1023, p. 187). George Schmid. Penns Grove observation well E-15. 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, 1946		
Jan. 4	9.30	10.61
17	8.98	10.93
Feb. 1	9.64	10.27
14	9.38	10.53
28	9.65	10.26
Mar. 14	9.61	10.30
29	9.04	10.87
Apr. 13	9.25	10.66
24	9.68	10.23
May 14	10.22	9.69
July 31	9.68	10.23
Sept. 13	10.83	9.08
Nov. 12	12.01	7.90
23	12.65	7.26
Dec. 7	12.39	7.52
21	13.50	6.41

30.32.2.6.4 (\*936, p. 127; 944, p. 109; 986, p. 132; 1016, p. 164; 1023, p. 188). Owner unknown. Penns Grove observation well E-16. 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		
Jan. 4	0.54	14.51
17	.92	14.13
Feb. 1	.60	14.45
14	.39	14.66
28	.39	14.66
Mar. 14	1.04	14.01
29	.67	14.38
Apr. 13	1.44	13.61
24	2.05	13.00
May 14	2.25	12.80
July 31	2.14	12.91
Sept. 13	2.39	12.66
Nov. 12	3.08	11.97
23	2.89	12.16
Dec. 7	2.93	12.12
21	2.28	12.77

30.32.9.9.8 (\*936, p. 127; 944, p. 109; 986, p. 132; 1016, p. 165; 1023, p. 188). Penns Grove Water Supply Co. Penns Grove observation well R-5. Extremes of observed water level, in feet above mean sea level: Highest, 10.30 Apr. 24, 1940; lowest, 4.10 Oct. 24, 1943.

30.32.9.9.8--Continued.

Date	Water level, in feet, 1946	
	Below land- surface datum	Above mean sea level
Jan. 4	0.64	9.20
17	.77	9.07
Feb. 1	.83	9.01
14	.85	8.99
28	.85	8.89
Mar. 14	1.09	8.75
29	.82	9.02
Apr. 13	1.08	8.76
24	1.34	8.50
May 14	1.48	8.36
July 31	1.12	8.72
Sept. 13	1.76	8.08
Nov. 12	1.91	7.93
23	1.73	8.11
Dec. 7	1.79	8.05
21	1.66	8.18

30.23.7.1.4 (\*936, p. 128; 944, p. 109; 986, p. 133; 1016, p. 165; 1023, p. 189). Penns Grove Water Supply Co. Penns Grove observation well R-7. 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, 1946		
Jan. 4	0.87	23.68
17	1.19	23.36
Feb. 1	1.13	23.42
14	1.19	23.36
28	1.13	23.42
Mar. 14	1.68	22.97
29	1.25	23.30
Apr. 13	1.66	22.89
24	2.10	22.45
May 14	2.19	22.36
July 31	1.94	22.61
Sept. 13	2.83	21.72
Nov. 12	3.50	21.05
23	3.27	21.28
Dec. 7	3.36	21.19
21	3.14	21.41

30.32.3.6.5 (\*936, p. 128; 944, p. 109; 986, p. 133; 1016, p. 166; 1023, p. 189). Penns Grove Water Supply Co. Penns Grove observation well R-8. 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, 1946		
Jan. 4	3.02	6.11
17	3.21	5.92
Feb. 1	3.44	5.69
14	3.45	5.68
28	3.39	5.74
Mar. 14	3.60	5.53
29	3.37	5.76
Apr. 13	3.69	5.44
24	4.00	5.13
May 14	4.10	5.03
July 31	3.93	5.20
Sept. 13	4.43	4.70
Nov. 12	4.53	4.60
23	5.11	4.02
Dec. 7	4.34	4.79
21	4.37	4.76

## NEW YORK

### UPSTATE NEW YORK

By R. H. Brown and G. R. Ayer

#### PROGRAM OF WORK

Periodic measurement of water levels in observation wells in Upstate New York was continued during 1946. This included operation of weekly-type automatic water-stage recorders on four wells, in cooperation with the New York State Department of Conservation; operation of weekly-type recorders on three wells and periodic water-level measurements in six wells in cooperation with the New York State Water Power and Control Commission, and under the active sponsorship of the New York Department of Commerce, the New York Department of Health, the New York Department of Public Works, the New York State Museum, and the State Geologist.

#### FLUCTUATIONS OF WATER LEVEL

Water levels in wells Cn 1, C 100, C 101 and D 157 were high early in January and again early in March. Deficient precipitation in late March and early April brought rapid recessions with new lows established for that period. Recovery in early May was rapid and excessive rainfall caused levels in all wells to remain considerably above normal until late August when normal elevations were reached and these held quite steady throughout the balance of the year with little or no net change noted for the year as a whole.

Water-level records for wells Bm 49, at Johnson City, G 1, near West Coxsackie, G 2, near Ashland, Sn 128, near Schenectady, and Sb 250, near Cohocton, appear for the first time in this report. It is pertinent, therefore, to point out the principal topographic and geologic features affecting ground-water levels in the general areas in which these wells are situated. With the exception of well Bm 49 all are relatively shallow

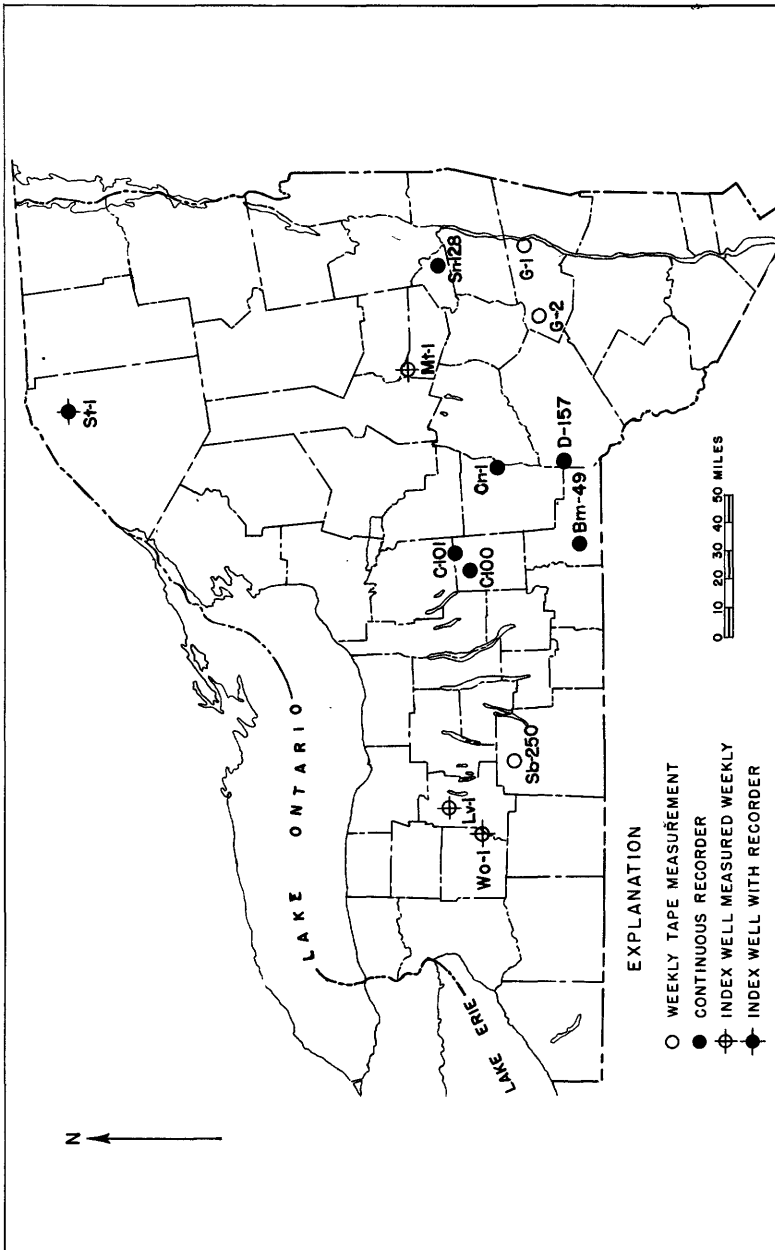


Figure 6.--Map showing location of observation wells in upstate New York.

wells ending in water-table aquifers. The principal water-bearing materials are stream-deposited sands and gravels mantling the underlying bedrock. Near Cohocton, however, well Sb 250 is excavated about 25 feet into bedrock that constitutes the principal aquifer. At Johnson City well Bm 49 penetrates surface clays and sands and taps underlying water-bearing sand and gravel. Artesian conditions exist at this site, although the piezometric surface is below the land surface.

The Johnson City well (Bm 49) is in the south-central part of New York State near the New York-Pennsylvania State line. It is in the southeastern part of a physiographic section of the State designated by Miller<sup>1/</sup> as the "southwestern plateau province." This "plateau", however, has been dissected almost beyond recognition by the Chenango River, the Susquehanna River, and numerous other smaller streams. The well site is on the floor, and near the north side of the broad east-west valley cut in this "plateau" by the Susquehanna River. Drainage is from the surrounding "plateau" down the valley slopes into either the surface streams or, by percolation and underflow, into the numerous sands and gravels deposited at random beneath the present valley floor. The Susquehanna River flows from southeast to northwest through the area and the present channel lies about 1.2 miles southwest of well Bm 49. Clays and fine sands lying at or near the present land surface in the vicinity of the well provide an effective confining blanket or seal for the ground water occurring in the underlying coarser sands, thus creating local artesian conditions.

Well G 1, near West Coxsackie, is about 0.6 mile west of the west bank of the Hudson River in a lowland area composed of glacial sands and clays laid down, according to Goldring,<sup>2/</sup> during the last stages of the ice age. This lowland is now in the process of dissection by numerous small streams draining into the Hudson. Although the entire general area is drained by the Hudson and its tributaries, drainage in the vicinity of well

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<sup>1/</sup> Miller, William J., The geological history of New York State: N. Y. State Mus. Bull. 255, p. 17, Nov. 1924.

<sup>2/</sup> Goldring, Winifred, Geology of the Coxsackie Quadrangle, New York: N. Y. State Mus. Bull. 332, p. 11, Feb. 1943.

G 1 is eastward about 0.2 mile into Coxsackie Creek and thence northeastward about 0.5 mile into the Hudson. The clay plains of this lowland area furnish level rich lands for farming, and mantle underlying rock of Cambrian and Ordovician age. About 1.3 miles west of this area the land rises sharply from an elevation of about 180 feet to over 500 feet above mean sea level, forming the eroded remnants of the Catskill escarpment.

Well G 2, near Ashland, is in the valley of the Batavia Kill in the heart of the Catskill Mountains. The well is developed in stream-deposited gravels and is about 500 feet northwest of the present channel of the Batavia Kill. The mountains on the south side of the valley rise to elevations above mean sea level of nearly 3,000 feet; those on the north side of the valley reach elevations of nearly 2,000 feet, but further to the north they merge with still higher peaks, reaching elevations of nearly 3,500 feet. Drainage in the area is from the mountain slopes into the Batavia Kill valley and reaches the stream either directly by way of the numerous small tributary streams or indirectly by subsurface flow through the valley sands and gravels. The Batavia Kill flows west into Schoharie Creek which flows north into the Mohawk River.

Well Sn 128, near Schenectady, is in the broad Mohawk Valley about 400 feet south of the present channel of the Mohawk River and about 15 miles above (west-northwest) its confluence with the Hudson River. The well is developed in gravels deposited, according to Stoller,<sup>3/</sup> by the moving ice or by the flooded waters resulting from the melting of the ice during the Pleistocene or glacial period. These gravels yield copious supplies of ground water to shallow dug, driven, or drilled wells. Drainage in this area is from the hills along the north and south sides of the Mohawk Valley into numerous small tributary streams and thence either into the Mohawk River or into any exposed deposits of sand and gravel mantling the old rock floor of the Mohawk Valley. Both surface and subsurface flow of water is then generally eastward.

Well Sb 250, near Cohocton, is in the upland region on the north side of the Cohocton Valley. From the present floor of the valley, proceeding

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<sup>3/</sup> Stoller, James H., Glacial geology of the Schenectady quadrangle, New York: N. Y. State Mus. Bull. 154, p. 5, Dec. 15, 1911.

northward, the land rises abruptly about 500 feet within a distance of 1 mile and then gradually rises an additional 160 feet in a distance of 1.25 miles. Well Sb 250 is in the area represented by this latter, more gradual, slope where the land is cultivated and successfully farmed. The thin soil cover (approximately 6 feet) in the vicinity of the well is composed principally of material formed by weathering and decomposition of the underlying shale rock. Drainage in the area is from the upland regions into numerous small collecting streams and thence into the Cohocton Valley and the Cohocton River. This river flows southeastward about 31 miles until it joins with the Tioga River, at the town of Painted Post, to form the Chemung River, which ultimately empties into the Susquehanna River near Waverly.

Summary of data on ground-water levels in Upstate New York,  
in feet below land-surface datum

Well No.	Date of first measurement	Lowest observed water level		Highest observed water level		Water level on last day of record, 1946
		Water Level	Date	Water level	Date	
Bm 49	Feb. 8, 1946	13.56	Sept. 24, 1946	6.99	May 28, 1946	b 11.87
Cn 1	Oct. 27, 1934	6.13	Oct. 10, 1936	.00	(a)	b .74
C 100	Oct. 22, 1938	6.15	Oct. 26, 1939	.00	(a)	b .72
C 101	Aug. 26, 1933	(d)	Aug. 17-Oct. 12, 1936; Sept. 7-Nov. 1, 1939	.00	(a)	b .76
D 157	Oct. 24, 1934	9.24	Oct. 27, 1935	.00	(a)	c 3.42
G 1	Dec. 13, 1945	12.44	Sept. 2, 1946	1.94	June 3, 1946	8.52
G 2	Jan. 8, 1946	9.96	Sept. 15, 1946	5.56	Jan. 8, 1946	....
Lv 1	Nov. 17, 1942	8.51	Nov. 25, 1944	.3	Mar. 15, 1945	4.47
Mt 1	Oct. 3, 1942	9.89	Sept. 17, 1946	4.76	Apr. 24, 1943	7.94
St 1	Oct. 4, 1942	17.00	Sept. 28, 1946	4.57	Mar. 17, 1945	b 6.47
Sn 128	Apr. 10, 1946	33.45	Dec. 29, 1946	27.14	May 30, 1946	b 33.10
Sb 250	July 2, 1937	33.0	Dec. 21, 1939	22.76	May 26, 1943	27.28
Wo 1	Nov. 18, 1942	12.40	Dec. 3, 1944	.58	Mar. 3, 1945	1.20

- a This level observed many times during period of record.  
 b Water level at noon on Dec. 31, 1946, from recorder chart.  
 c Estimated.  
 d Dry.

#### WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

##### Broome County

Bm 49. Latitude 42° 07' 11", longitude 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. Abandoned drilled public-supply well, concrete casing, diameter 18 inches, depth 64.2 feet below measuring point. Measuring point, blue kiel arrow on top flange of steel "I" beam embedded in concrete floor of pump house at land-surface datum and 839.97 feet above mean sea level datum. Stevens Type F weekly water-stage recorder installed Feb. 8, 1946.



Bm 49--Continued.

Daily noon water level, in feet below land-surface datum, 1946

(From recorder charts)

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Dec.
1	.....	10.00	10.42	11.04	9.29	10.34	11.02	12.34	11.48	.....
2	.....	9.68	10.42	11.03	8.76	10.05	11.08	12.43	11.43	.....
3	.....	9.71	10.51	11.07	8.61	10.09	11.11	12.52	11.44	.....
4	.....	9.71	10.49	11.10	8.97	10.17	11.17	12.60	11.47	.....
5	.....	9.80	10.56	11.10	.....	10.22	11.13	12.68	11.50	.....
6	.....	9.90	10.58	11.12	.....	10.26	11.13	12.74	11.49	.....
7	.....	9.81	10.66	11.16	9.48	10.35	11.05	12.79	11.48	.....
8	.....	9.38	10.66	10.97	9.59	10.45	10.95	12.85	11.52	.....
9	11.12	8.60	10.67	10.97	9.71	10.48	10.92	12.88	11.54	.....
10	11.19	8.97	10.73	11.01	9.82	10.40	10.89	12.91	11.57	.....
11	11.27	9.26	10.75	10.96	9.83	10.50	10.95	12.88	11.61	.....
12	11.37	9.46	10.76	10.98	9.77	10.54	11.03	12.97	11.60	.....
13	11.38	9.60	10.79	11.03	9.85	10.61	11.13	13.03	11.60	.....
14	11.19	9.69	10.83	11.02	9.98	10.67	11.22	13.07	11.46	.....
15	11.17	9.69	10.77	11.00	10.83	10.77	11.31	13.13	11.45	.....
16	11.20	9.56	10.82	10.98	.....	10.88	11.38	13.19	.....	.....
17	11.17	9.63	10.85	10.90	.....	10.95	11.44	13.25	.....	.....
18	11.26	9.70	10.82	10.65	.....	11.03	11.40	13.30	.....	.....
19	11.26	9.79	10.89	10.35	.....	11.12	11.34	13.35	.....	.....
20	11.26	9.87	10.90	10.32	.....	11.24	11.37	13.39	.....	.....
21	11.42	9.93	10.96	9.90	.....	11.00	11.46	13.44	.....	.....
22	11.42	9.96	10.93	9.64	.....	10.83	11.52	13.48	.....	11.95
23	11.48	10.07	10.93	9.72	.....	10.58	11.60	13.53	.....	11.95
24	11.48	10.10	10.96	9.81	.....	10.43	11.68	13.51	.....	11.94
25	11.55	10.15	10.94	9.89	10.10	10.45	11.76	13.11	.....	11.97
26	11.57	10.17	10.94	9.90	10.16	10.50	11.84	12.92	.....	11.97
27	11.43	10.21	10.97	9.33	10.23	10.57	11.91	12.82	.....	12.04
28	10.51	10.24	11.01	7.01	10.24	10.67	12.00	12.77	.....	11.93
29	.....	10.28	10.97	7.70	10.28	10.77	12.09	12.78	.....	11.86
30	.....	10.33	11.00	8.50	10.32	10.87	12.18	11.85	.....	11.88
31	.....	10.42	.....	8.98	.....	10.99	12.26	.....	.....	11.87

Chenango County

Cn 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). Latitude  $42^{\circ} 31' 55''$ , longitude  $75^{\circ} 25' 30''$ . 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	0.60	Apr. 8	0.73	July 8	0.83	Oct. 7	1.05
14	.71	15	.69	15	.87	14	.72
21	.73	22	.75	22	.84	21	.76
28	.78	29	.59	29	1.15	28	.72
Feb. 4	.71	May 6	.74	Aug. 5	.71	Nov. 4	.71
11	.81	13	.63	12	.95	11	.68
18	.81	20	.55	19	.79	18	.75
25	.83	27	.14	26	1.45	25	.76
Mar. 4	.80	June 3	.32	Sept. 2	1.76	Dec. 2	.79
11	.64	10	.58	9	2.15	9	.76
18	.74	17	.55	16	1.88	16	.76
25	.72	24	.62	23	2.25	23	.73
Apr. 1	.75	July 1	.84	30	.71	30	.74

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). Latitude  $42^{\circ} 43' 05''$ , longitude  $76^{\circ} 06' 50''$ . About 70 feet to the right (west) of creek and about 2.5 miles above (north) gaging station in East Homer.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	1.66	Apr. 7	1.78	July 7	1.79	Oct. 6	0.48
13	.66	14	1.42	14	2.31	13	.63
21	1.75	22	1.67	22	2.61	19	.48
27	1.83	28	1.32	28	2.54	27	.50
Feb. 3	1.59	May 5	2.28	Aug. 4	2.66	Nov. 3	.56
10	1.86	12	.55	11	2.33	10	1.00
17	1.77	19	.33	18	2.49	17	.95
24	1.90	26	1.37	25	2.05	24	1.27
Mar. 3	1.69	June 2	.23	Sept. 1	2.43	Dec. 1	1.42
10	1.05	9	.89	8	3.29	8	1.21
16	1.04	16	1.00	15	2.59	15	1.36
24	1.99	23	1.22	22	2.95	22	1.40
31	2.49	30	1.90	29	2.15	30	.66

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). Latitude  $42^{\circ} 46' 00''$ , longitude  $76^{\circ} 01' 10''$ . 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	0.26	Apr. 7	0.44	July 7	0.03	Oct. 6	0.93
13	.19	14	.54	14	.52	13	.54
20	.26	22	.65	21	.88	19	.42
27	.32	28	.71	28	1.26	27	.40
Feb. 3	.43	May 4	.76	Aug. 4	1.60	Nov. 3	.43
10	.65	12	.83	11	1.78	10	.49
17	.24	19	.32	18	2.02	17	.56
24	.55	26	.22	25	2.19	24	.63
Mar. 3	.40	June 2	.10	Sept. 1	2.37	Dec. 1	.69
10	.00	8	.16	8	2.61	7	.74
16	.04	16	.15	15	2.27	15	.72
24	.10	23	.17	22	2.35	21	.79
31	.21	30	.32	29	2.42	30	.76

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). Latitude  $42^{\circ} 09' 35''$ , longitude  $75^{\circ} 23' 35''$ . About 150 feet to left (east) of gaging station, about 1 mile upstream (north) from China, and 2 miles west of Upper Barbourville.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	0.99	Apr. 7	3.78	July 7	3.85	Oct. 6	3.85
13	1.69	14	3.68	14	4.52	13	4.58
20	3.79	21	3.26	21	5.03	20	2.94
27	4.50	30	2.47	28	3.44	27	2.02
Feb. 2	4.81	May 5	3.87	Aug. 4	4.42	Nov. 3	3.29
10	4.88	12	1.88	11	1.72	10	3.95
17	1.71	19	1.10	17	4.02	17	3.68
24	2.48	26	1.09	25	4.55	24	4.39
Mar. 3	1.10	30	1.45	Sept. 1	5.33	Dec. 1	3.43
10	.99	June 10	4.09	8	5.92	8	4.52
17	1.20	16	4.35	15	6.27	15	2.02
24	3.27	23	4.57	22	6.55	22	2.77
31	3.87	30	1.49	30	5.76		

Greene County

G 1. Latitude 42° 23' 20", longitude 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 kiel arrow at south edge of square hole in 3-inch plank well cover, at land-surface datum, which is about 125 feet above mean sea-level datum.

Water level, in feet below land-surface datum, 1945-46

Date	Water level	Date	Water level	Date	Water level
Dec. 13, 1945	2.59	Apr. 22, 1946	5.05	Sept. 2, 1946	12.44
14	2.77	29	4.93	9	12.43
21	3.97	May 6	5.16	16	11.92
29	2.61	13	5.40	23	12.09
Jan. 4, 1946	2.97	20	3.22	30	10.94
11	2.25	27	3.16	Oct. 7	8.88
18	3.42	June 3	1.94	14	8.20
25	4.97	10	3.11	21	7.26
Feb. 2	4.97	17	3.77	28	7.16
9	5.27	July 8	6.27	Nov. 4	7.20
15	6.02	15	8.60	11	7.76
23	6.03	22	9.10	18	8.06
Mar. 1	5.97	29	10.62	25	7.87
8	4.71	Aug. 5	11.46	Dec. 2	8.20
16	2.00	12	11.95	9	8.35
22	2.03	19	11.55	16	8.56
29	2.76	26	11.66	30	8.52
Apr. 19	4.29				

G 2. Latitude 42° 17' 41", longitude 74° 21' 17". 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 about 1,380 feet above mean sea-level datum.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	5.56	Feb. 26	9.53	May 25	8.83	Aug. 11	9.23
15	8.01	Mar. 5	7.47	June 15	7.06	18	9.93
22	8.56	12	7.47	30	8.58	25	9.94
29	8.81	28	8.59	July 7	8.95	Sept. 1	9.95
Feb. 5	8.90	Apr. 2	8.97	14	8.97	15	9.96
12	9.23	10	8.99	28	8.98	21	9.58
19	9.92	17	9.91	Aug. 4	9.23	29	9.45

Livingston County

Lv 1 (\*1023, p. 200). Latitude 42° 48' 00", longitude 77° 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	4.85	Apr. 26	5.14	July 27	5.73	Oct. 26	5.58
Feb. 25	5.10	May 25	4.57	Aug. 26	5.95	Nov. 25	4.98
Mar. 25	4.74	June 25	5.20	Sept. 25	6.58	Dec. 30	4.47

Montgomery County

Mt 1 (#1023, p. 201). Latitude 43° 01' 43", longitude 74° 42' 38". About 50 feet southwest of Groff residence, 0.35 mile east of gravel road and 1.7 miles north of U. S. Route 5, 1.8 miles west of St. Johnsville.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	6.81	Apr. 10	6.47	June 29	7.30	Sept. 28	9.19
Feb. 2	7.95	27	6.49	July 16	8.20	Oct. 17	8.76
4	7.96	May 1	6.93	27	8.49	Nov. 2	8.37
Mar. 2	8.30	June 1	5.90	Aug. 31	8.57	30	7.98
11	7.48	20	6.70	Sept. 17	9.89	Dec. 30	7.94
30	6.80	28	7.24				

St. Lawrence County

St 1 (#1023, p. 201). Stevens Type F weekly water-stage recorder installed on Dec. 18. Recorder set to same datum previously used for tape measurements. In the following table water levels for the period December 19 through 31, 1946, are noon daily readings as taken from the recorder charts. Latitude 44° 51' 52", longitude 74° 46' 53". About 155 feet west of Compeau residence and 95 feet south of dirt farm road at Brasher Center.

Water level, in feet below land-surface datum, 1946							
Jan. 5	5.85	May 5	7.44	Aug. 18	14.00	Dec. 5	5.69
14	5.78	12	6.88	23	14.57	7	6.99
20	5.82	18	6.20	24	14.30	14	5.00
26	6.18	25	6.20	31	15.10	18	5.42
Feb. 7	6.56	June 1	6.70	Sept. 8	15.90	19	a 5.53
9	6.62	4	6.97	14	16.10	20	a 5.68
16	7.70	8	7.10	21	16.50	21	a 5.79
23	7.85	14	7.54	28	17.00	22	a 5.90
Mar. 2	8.25	16	7.50	Oct. 5	16.90	23	a 6.00
10	5.97	22	8.89	6	16.95	24	a 6.06
16	5.30	29	8.70	12	16.30	25	a 6.13
23	6.30	July 6	9.50	19	14.90	26	a 6.19
30	8.98	14	10.30	Sept. 26	12.30	27	a 6.26
Apr. 6	7.10	16	10.55	Nov. 2	10.83	28	b 6.29
18	7.30	21	11.90	9	8.20	29	b 6.37
20	7.32	27	11.60	16	5.40	30	b 6.42
27	7.76	Aug. 3	12.60	23	6.90	31	b 6.47
May 4	7.30	10	13.00	30	5.30		

a From recorder chart.

b Estimated.

Schenectady County

Sn 128. Latitude 42° 49' 26", longitude 73° 59' 22". City of Schenectady. On southwest side of State Route 5S about 700 feet northwest of Schermerhorn Road and about 600 feet southwest of Mohawk River. Abandoned dug public-supply well, concrete casing, diameter 47 feet, depth 40.1 feet below measuring point. Measuring point, top of metal strip fastened to timber access cover at edge of ventilation hole, at land-surface datum and 241.36 feet above mean sea-level datum. Stevens Type F weekly water-stage recorder installed Apr. 10, 1946.

Sn 128--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	31.23	30.66	30.66	31.88	31.61	30.71	30.97	31.41
2	.....	31.10	28.75	30.76	31.86	31.30	30.87	30.76	31.62
3	.....	31.40	28.60	30.27	31.70	30.81	30.99	30.77	31.91
4	.....	31.91	29.27	30.19	31.80	31.05	31.46	30.72	31.99
5	.....	32.01	29.45	30.29	31.47	31.44	32.05	30.69	31.96
6	.....	.....	29.50	31.47	31.68	31.75	32.10	31.53	31.96
7	.....	.....	29.80	31.77	31.70	32.15	31.57	31.89	31.52
8	.....	.....	30.88	31.18	31.63	32.16	31.05	31.89	30.92
9	.....	.....	30.90	31.15	31.58	.....	31.37	31.67	30.81
10	.....	.....	29.35	31.26	31.58	.....	31.61	30.88	30.61
11	32.37	.....	29.73	31.80	31.29	.....	32.00	.....	30.74
12	32.34	.....	29.26	31.99	31.05	31.64	32.12	.....	30.77
13	32.53	.....	29.12	31.99	31.03	31.69	32.09	30.53	30.77
14	32.55	30.56	29.70	31.64	30.97	31.74	31.14	30.55	30.92
15	32.48	30.72	31.52	31.12	30.93	31.70	30.69	30.61	30.94
16	32.47	30.60	31.57	31.15	31.11	31.15	31.06	30.85	31.48
17	32.35	30.34	31.24	31.47	31.13	31.04	31.12	31.03	31.93
18	32.46	29.95	31.11	31.78	31.14	31.10	31.86	30.73	32.20
19	32.55	29.19	30.64	31.97	30.82	31.56	32.29	30.63	32.31
20	32.62	.....	30.25	32.28	30.88	32.01	31.79	31.00	32.86
21	32.49	.....	30.71	32.30	31.06	32.02	31.11	31.45	33.16
22	32.51	.....	30.81	.....	31.33	31.77	31.17	31.80	33.40
23	32.57	.....	31.47	.....	31.73	30.84	31.21	31.82	33.23
24	32.58	.....	31.52	.....	31.89	30.85	31.21	31.85	33.03
25	32.35	.....	31.52	.....	31.89	31.11	31.46	31.40	32.64
26	32.32	.....	31.70	.....	.....	31.45	31.49	31.43	32.25
27	32.25	.....	32.12	.....	.....	31.68	31.51	31.38	32.71
28	31.94	.....	32.19	.....	.....	31.82	30.63	31.38	33.41
29	31.40	.....	31.44	.....	.....	31.78	30.68	30.67	33.45
30	31.17	28.85	31.26	.....	.....	31.29	31.00	31.32	33.38
31	.....	29.94	.....	31.77	.....	.....	31.08	.....	33.28

Steuben County

Sb 250. Latitude 42° 30' 02", longitude 77° 27' 47". On Burke farm, about 30 feet south of farm road and 0.4 mile west of Raymond Strobel residence, 1.4 miles east of U. S. Route 15 and 1.5 miles east of center of Cohocton Village. Abandoned dug supply well, stone lined, diameter 24 inches, depth 31.8 feet below measuring point. Measuring point, top of brass strip fastened to 2-inch wood plank in well cover, at land-surface datum, which is about 1,890 feet above mean sea-level datum. Measurements prior to July 24, 1946, by U. S. Dept. of Agriculture, Soil Conservation Service, Harold W. Hobbs, project supervisor. Measurements after July 24, 1946, by the Geological Survey.

Water level, in feet below land-surface datum, 1937-46

Date	Water level	Date	Water level	Date	Water level
July 2, 1937	a 27.1	Apr. 30	a 27.1	Aug. 19	b 30.4
11	a 27.2	May 7	a 27.1	26	b 30.4
26	a 27.85	13	a 27.2	Sept. 2	b 30.5
Aug. 12	a 29.4	28	a 27.0	9	b 30.5
26	a 29.8	June 4	a 27.5	15	b 26.9
Sept. 7	a 29.9	10	b 27.6	23	b 25.2
20	a 30.3	18	b 27.7	30	b 27.4
Oct. 9	a 30.5	24	b 27.85	Oct. 7	b 27.6
15	a 30.5	29	b 27.85	14	b 27.70
25	a 30.4	July 9	b 27.85	21	b 27.85
29	a 30.3	16	b 28.4	Nov. 4	b 30.5
Nov. 8	a 30.3	23	b 30.3	18	b 30.5
27	a 27.0	Aug. 1	b 28.35	25	b 30.5
Dec. 8	a 27.5	9	b 30.5	Dec. 9	b 27.2
Jan. 21, 1938	a 28.2	12	b 30.4	16	b 27.5

\* See footnotes at end of table.

Sb 250--Continued.

Water level, in feet below land-surface datum, 1937-46					
Date	Water level	Date	Water level	Date	Water level
Jan. 6, 1939	b 27.5	June 7, 1941	c 30.1	Aug. 29, 1942	c 28.7
Feb. 9	b 28.8	14	c 30.4	Sept. 5	c 29.5
28	b 27.4	21	c 30.5	12	cd 30.2
Mar. 21	b 27.7	28	c 30.6	19	cd 30.6
Apr. 7	b 27.4	July 5	c 30.6	26	c 30.4
18	b 27.0	12	c 30.8	Oct. 3	c 29.3
May 10	b 27.6	19	c 30.9	10	cd 29.0
17	b 27.8	26	c 31.1	17	cd 29.8
22	b 27.9	Aug. 2	c 31.1	24	c 27.0
June 5	b 28.9	9	c 31.2	31	c 27.0
12	b 29.4	16	c 31.3	Nov. 7	c 26.8
19	b 30.1	23	c 31.4	14	c 27.0
28	b 30.3	30	c 31.4	21	c 26.7
July 10	b 30.5	Sept. 6	c 31.4	28	c 26.5
Aug. 7	b 31.4	13	c 31.5	Dec. 5	c 27.0
21	b 31.5	20	ce 31.5	12	c 27.0
Sept. 1	b 31.6	27	ce 31.6	19	c 27.3
Oct. 9	b 31.8	Oct. 4	c 31.6	26	c 27.7
27	b 32.5	11	c 31.6	Jan. 1, 1943	c 26.0
Nov. 18	b 32.8	18	c 31.6	16	c 27.0
Dec. 21	b 33.0	25	c 31.6	23	c 27.0
Feb. 12, 1940	b 29.5	Nov. 1	c 31.6	30	c 27.0
Apr. 10	b 27.1	8	c 31.6	Feb. 6	c 26.8
15	b 27.5	15	c 31.6	12	c 27.0
May 1	b 27.9	22	c 31.6	20	c 25.7
15	b 28.2	29	c 31.6	27	c 26.9
June 20	b 28.2	Dec. 6	c 31.6	Mar. 6	c 27.2
July 1	b 28.3	13	c 31.6	13	c 26.7
Aug. 7	b 27.35	20	c 31.6	20	c 26.7
12	b 27.2	27	c 30.0	27	c 27.0
17	c 27.5	Jan. 3, 1942	c 29.8	Apr. 3	c 26.6
24	c 28.5	10	c 30.1	10	c 26.9
31	c 29.2	17	c 30.7	17	c 27.1
Sept. 7	c 29.7	24	c 28.4	24	c 26.4
14	c 29.6	31	c 27.4	May 1	c 25.3
21	c 29.7	Feb. 7	c 29.5	8	c 26.0
28	c 26.9	14	c 30.2	15	c 26.5
Oct. 5	c 27.7	21	c 27.0	22	c 25.6
12	c 29.4	28	c 28.5	29	c 26.6
19	cd 29.8	Mar. 7	c 30.1	June 5	c 26.9
26	cd 30.1	14	c 26.7	12	c 27.0
Nov. 2	c 29.9	21	c 26.8	19	c 27.1
9	c 28.2	28	c 26.9	26	c 27.3
16	c 27.7	Apr. 4	c 26.5	July 3	c 27.6
23	c 26.8	11	c 26.9	10	c 28.0
30	c 27.0	18	c 26.8	17	c 27.1
Dec. 7	c 27.1	25	c 27.2	24	c 27.0
14	c 26.4	May 2	c 27.9	31	c 27.3
21	c 26.9	9	c 29.1	Aug. 7	c 27.8
28	c 25.2	16	c 29.7	14	c 28.6
Jan. 4, 1941	c 26.7	23	c 29.4	21	c 27.9
11	c 26.9	30	c 28.4	28	c 28.8
18	c 26.9	June 6	c 26.6	Sept. 4	c 27.8
25	c 27.1	13	c 27.2	11	c 28.1
Apr. 1	c 26.3	20	c 28.1	18	c 28.8
5	c 24.5	27	c 29.7	25	c 29.4
12	c 26.8	July 4	c 29.5	Oct. 2	c 29.6
19	c 27.1	11	c 29.6	9	c 29.6
26	c 27.4	18	c 24.8	16	c 29.7
May 3	c 29.0	25	c 27.0	23	c 29.7
10	c 29.8	Aug. 1	c 26.7	30	c 26.4
17	c 29.8	8	c 27.0	Nov. 6	c 27.0
24	c 29.9	15	c 27.3	13	c 26.7
31	c 30.1	22	c 27.8	20	c 26.9

\* See footnotes at end of table.

Sb 250--Continued.

Water level, in feet below land-surface datum, 1937-46

Date	Water level	Date	Water level	Date	Water level
Nov. 27, 1943	c 26.8	July 15, 1944	c 27.0	June 23, 1945	c 26.3
Dec. 4	c 26.9	22	c 27.0	30	c 26.9
11	c 27.0	29	cd 27.5	July 7	c 27.1
18	c 27.1	Aug. 5	cd 28.3	14	c 27.2
25	c 27.2	12	cd 30.2	21	c 27.0
Jan. 1, 1944	c 27.4	19	cd 30.6	28	c 27.0
8	c 27.7	26	cd 30.6	Aug. 4	c 27.0
15	c 28.3	Sept. 2	c 29.7	11	c 27.3
22	c 29.1	9	c 29.9	18	c 26.9
29	c 26.7	16	c 30.0	25	c 27.6
Feb. 5	c 27.0	23	c 30.2	Sept. 1	c 28.5
12	c 27.1	30	c 30.4	8	c 29.6
19	c 27.4	Oct. 7	c 30.6	15	c 27.6
26	c 26.4	14	c 30.8	22	c 26.7
Mar. 4	c 27.0	21	c 31.1	29	c 26.7
11	c 27.4	28	c 31.3	Oct. 6	c 26.5
18	c 26.3	Dec. 16	c 30.9	July 24, 1945	b 27.64
25	c 26.6	Mar. 4, 1945	c 25.2	27	b 27.39
Apr. 1	c 27.0	10	c 26.5	Aug. 3	b 27.34
8	c 27.1	17	c 26.1	10	b 28.50
15	c 26.2	24	c 25.7	17	b 29.06
22	c 26.6	31	c 26.9	24	b 27.28
29	c 26.6	Apr. 7	c 26.8	31	bd 28.67
May 6	c 27.0	14	c 27.0	Sept. 9	bd 30.15
13	c 26.7	21	c 27.0	Oct. 31	a 27.04
20	c 27.0	28	c 27.1	Nov. 2	a 27.10
27	c 26.7	May 5	c 25.5	9	a 27.16
June 3	c 27.0	12	c 26.3	18	a 27.24
10	c 27.1	19	c 25.7	26	a 27.22
17	c 27.0	26	c 26.9	Dec. 2	a 27.25
24	c 26.8	June 2	c 27.0	8	a 27.26
July 1	c 26.9	9	c 26.9	16	a 27.25
8	c 27.0	16	c 27.0	28	a 27.28

a Tape measurement.

b Float-gage reading.

c From recorder chart.

d Affected by pumping.

e Estimated.

Wyoming County

Wo 1 (\*1023, p. 202). Latitude 42° 37' 39", longitude 78° 00' 03".  
 About 2.5 miles east of village of Castile, 0.8 mile east of DeGolyer  
 Road and 0.15 mile south of Buffalo Street extended.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	2.45	Apr. 7	3.82	July 7	4.35	Oct. 6	8.32
12	2.04	14	3.84	14	4.75	14	7.74
19	2.92	21	3.97	21	5.07	21	5.08
27	3.72	28	3.85	28	5.63	27	4.00
Feb. 2	4.04	May 5	3.75	Aug. 4	4.74	Nov. 3	4.05
10	4.34	12	3.93	11	5.7	11	3.98
16	4.05	19	2.46	18	6.08	17	3.31
23	4.20	26	1.86	25	6.03	24	3.62
Mar. 2	4.16	June 2	1.33	Sept. 1	5.84	Dec. 1	2.92
9	1.76	9	2.77	8	6.7	7	3.44
16	2.26	16	3.45	15	7.61	14	2.48
24	2.73	23	3.72	22	7.36	21	3.33
31	3.47	30	4.21	29	8.0	28	1.20

LONG ISLAND

By M. L. Brashears, Jr., and H. D. Wilson, Jr.

The investigation of ground-water conditions on Long Island was continued during 1946 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 measurement of water levels in about 225 observation wells, 25 of which were equipped with automatic water-stage recorders. During the year about 4,000 individual measurements were recorded, the period of observation for manual readings being approximately a 1-month interval. In addition to those records, approximately 25 new well records have been included in this report. Most of these new observation wells are in the Riverhead area, in Suffolk County.

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 Cretaceous beds 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 lies 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 throughout much 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 in 1943 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 in the present report and which penetrate the deeper water-bearing formations are listed in the following table and are noted by proper symbols on other remaining tables:

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<sup>1/</sup> Leggette, R. M., Section entitled "Ground-water recharge on Long Island" in 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.

<sup>2/</sup> Jacob, C. E., "Correlation of ground-water levels and precipitation on Long Island," State of New York Water Power and Control Commission Bull. GW-14, 1945.

<sup>3/</sup> Leggette, R. M., "The mutual interference of artesian wells on Long Island, New York": Am. Geophys. Union Trans., pp. 490-494, 1937.

<sup>4/</sup> 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, Bull. GW-12, 1945.

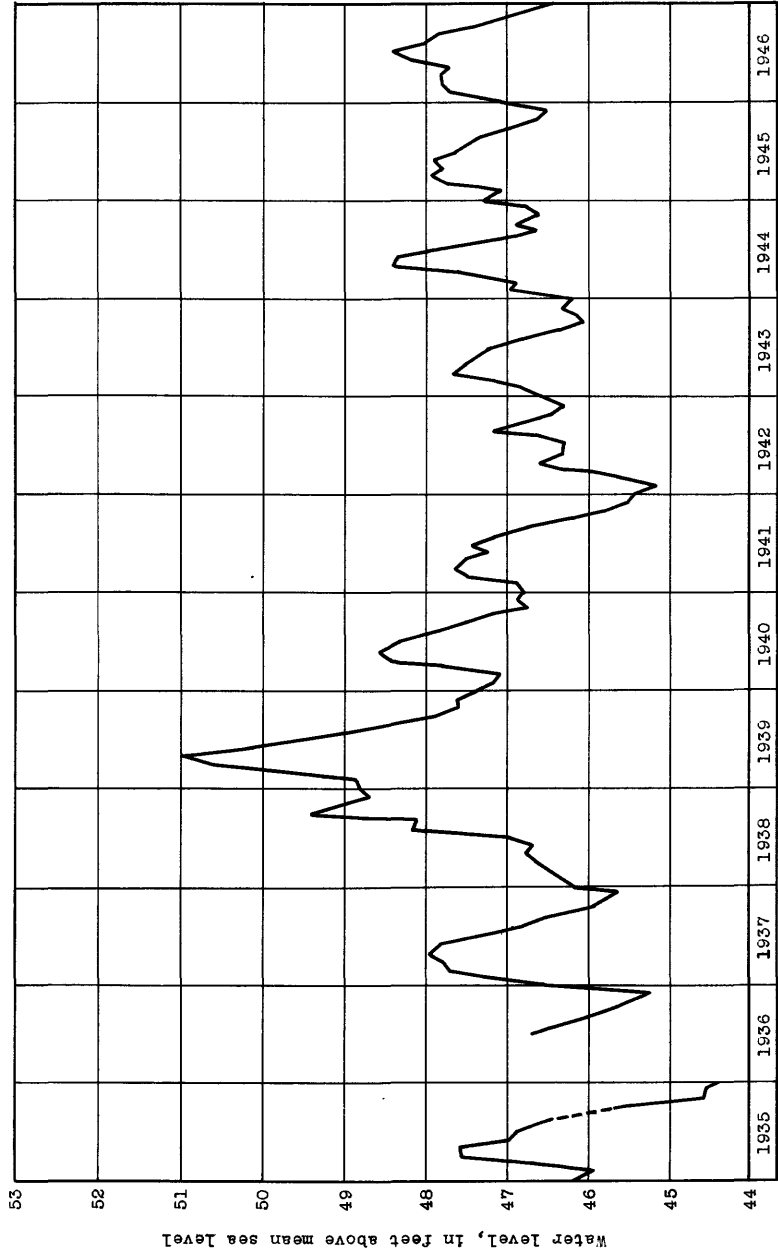


Figure 7.--Composite average water level of 14 selected wells in Nassau and Suffolk Counties, New York.

## Source formations of deeper observation wells on Long Island, N. Y.

Jameco gravel (J)	Magothy sands (M)	Lloyd sand (L)
K19	N9	K1057
K525	N152	N7
K533	N180	N657
Q1237	N844	Q273
	N1244	Q287
	N1245	Q470
	N1613	Q543
	S58	Q1222
	S203	S202
	S2314	

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 in 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.

For the period 1935-46 a comparison of the trend of water levels in these two areas is given in figures 7 and 8. Opposite trends are clearly shown for the period 1937-39 when the average water level in 14 selected wells in Nassau and Suffolk Counties was rising sharply and was declining just as sharply in well K30, a diagnostic well in Kings County.

Prior to 1935 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 even though State legislation was enacted in 1933 requiring that water pumped from new

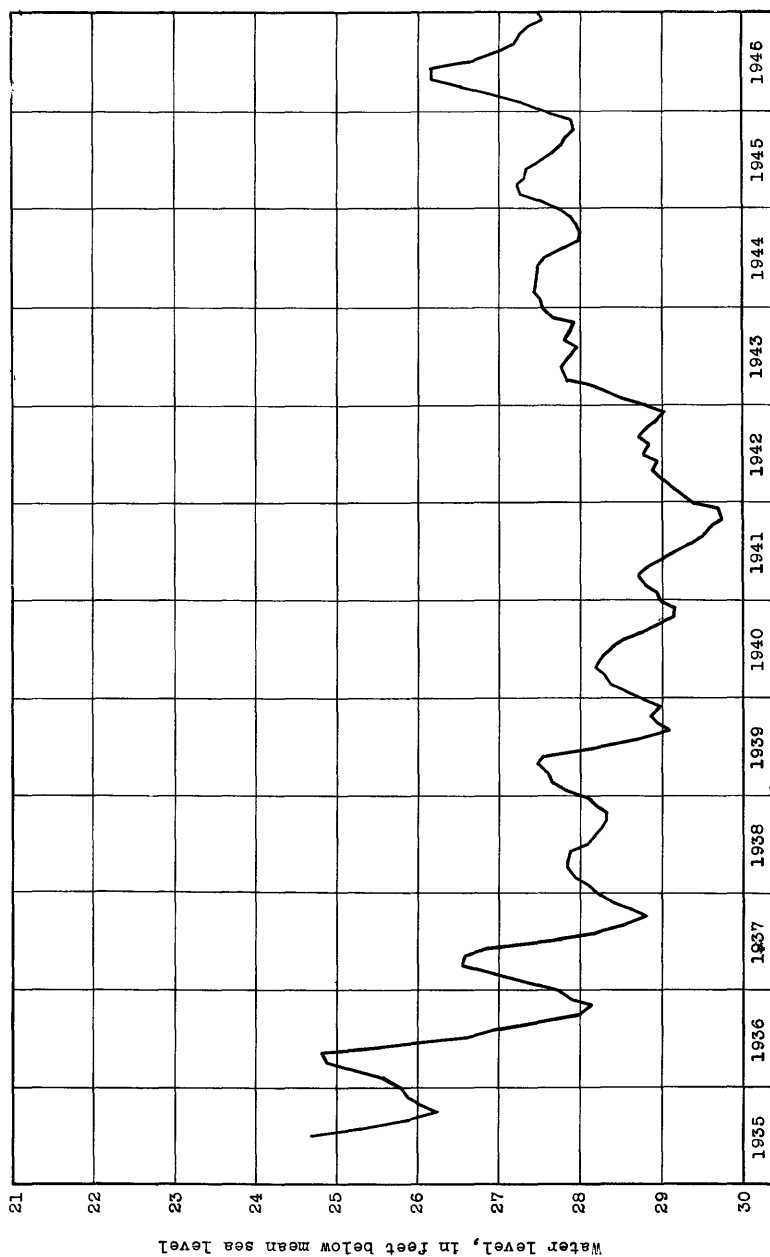


Figure 8.--Graph showing trend of water level in well K-30, Brooklyn, N. Y.

wells, for the purposes of cooling, be returned to the ground. Figure 8 is the water-level graph of an observation well near the center of the "crater".

In 1942 the water table in this critical area began to show signs of recovery since the declining levels through the latter part of the year were not nearly so pronounced as they had been in former years. This recovery trend continued on through 1946 with the total rise in water levels being nearly 2.5 feet. If a more favorable balance between pumping and recharge has been reached, as is indicated, this favorable upward trend can be expected to continue through 1947.

Water levels in several wells appearing in the following tables range about 1 foot due to tidal fluctuations, and therefore are not directly comparable in the net change table. The wells so affected are K1057, N657, N2071, Q287, Q470, Q543, and Q1222, all of which are equipped with automatic water-stage recorders, except Q1222 and N2071. For these recorder wells, the water-level measurements are published in terms of mean daily water level in feet above mean sea level.

Tables presented below include a summary of data pertaining to ground-water levels for Long Island, the net change in water levels during 1946 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 1946 (feet)
		Water level (feet)	Date	Water level (feet)	Date	
K 19	Sept. 10, 1940	a-26.80	Sept. 26, 1941	a-23.97	Mar. 25, 1946	a-24.75
K30	June 14, 1935	a-29.75	Nov. 8, 1941	a-24.34	June 14, 1935	a-27.52
K65	Nov. 8, 1937	-28.34	Aug. 25, 1939	-24.01	Apr. 9, 1938	-25.40
K67	Nov. 8, 1937	-20.75	Oct. 11, 1941	-18.49	Mar. 26, 1938	-19.93
K92	Dec. 11, 1937	-29.69	Dec. 11, 1937	-21.26	Mar. 3, 1944	-22.43
K97	Apr. 5, 1944	-26.58	Oct. 27, 1944	-24.77	Apr. 5, 1944	-25.92
K196	Sept. 12, 1942	-4.76	Mar. 5, 1944	-2.88	Sept. 28, 1944	-3.96
K523	Mar. 6, 1944	-1.91	Feb. 6, 1945	-.59	June 24, 1946	-1.42
					June 25, 1946	
K525	Dec. 13, 1945	+ .47	Dec. 16, 1946	ab+1.29	July 2, 1946	a +.54
			Dec. 20, 1946			
K533	Sept. 8, 1932	a-23.89	Sept. 16, 1942	a-12.73	Dec. 20, 1932	-16.34
K539	Oct. 28, 1939	-8.28	Feb. 21, 1942	-2.20	July 26, 1946	-2.81
K889	June 4, 1945	-38.35	Aug. 30, 1946	-20.51	Oct. 5, 1946	-31.90
K1057	Mar. 29, 1939	-.79	Sept. 1, 1944	+10.90	Jan. 1, 1945	+8.62
K1141	Oct. 24, 1936	-7.51	Nov. 6, 1945	-4.63	Sept. 30, 1938	-7.49
K1173	May 16, 1945	-6.58	Sept. 28, 1945	-5.24	July 5, 1946	-6.12

\* See footnotes at end of table.

Summary of data on ground-water levels on Long Island, N. Y.--Continued

Well	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 1946 (feet)
		Water level (feet)	Date	Water level (feet)	Date	
K1194	May 18, 1945	-2.87	Dec. 30, 1946	-2.00	Aug. 8, 1945	-2.87
K1198	Nov. 2, 1940	-8.45	May 14, 1942	-4.33	Aug. 29, 1946	-4.77
K1199	Nov. 16, 1940	-17.17	Jan. 1, 1944	-15.14	June 4, 1945	
K1235	Jan. 25, 1941	-10.65	June 27, 1942	-8.05	June 18, 1946	-15.28
K1256	Jan. 25, 1941	-19.42	Oct. 4, 1941	-17.41	July 1, 1946	
K1257	Jan. 18, 1941	-36.30	Dec. 27, 1946	-31.56	Nov. 26, 1946	-8.15
K1263	Apr. 21, 1933	-11.97	July 21, 1936	-7.58	May 3, 1941	-18.10
K1264	Apr. 21, 1933	-15.33	Dec. 30, 1946	-9.42	Apr. 12, 1941	-36.30
K1265	Apr. 21, 1933	-11.55	Aug. 22, 1942	-6.34	Nov. 2, 1933	-10.33
K1266	Apr. 21, 1933	-7.49	June 27, 1942	-2.02	June 28, 1933	-15.33
K1296	Sept. 6, 1941	-8.27	Mar. 7, 1942	-1.10	Apr. 21, 1933	-9.25
K1347	Oct. 15, 1942	-24.16	Sept. 10, 1945	-19.58	Dec. 5, 1944	-1.36
K1495	May 18, 1945	+1.94	Nov. 26, 1946	+2.93	Mar. 18, 1946	-21.98
N7	July 24, 1936	a +4.34	Aug. 16, 1946	a+12.75	Jan. 8, 1946	+1.94
N9	July 3, 1936	+20.99	Sept. 11, 1936	+23.57	Mar. 9, 1941	a +8.03
N53	Jan. 21, 1934	+12.05	Feb. 17, 1940	+16.49	Sept. 23, 1938	+21.63
N157	Sept. 22, 1932	+75.71	May 5, 1933	a+38.84	Apr. 15, 1939	-12.69
N180	Oct. 30, 1945	+18.18	Dec. 16, 1946	+20.49	Oct. 31, 1939	+86.27
N657	Feb. 12, 1945	+12.31	Dec. 27, 1946		June 8, 1946	+18.25
N844	Oct. 3, 1939	a+78.87	Mar. 14, 1945	+14.48	Feb. 12, 1945	+13.59
N1102	Apr. 21, 1939	+53.81	Apr. 16, 1942	a+85.48	Aug. 5, 1939	+82.01
N1103	Apr. 21, 1939	+54.06	July 31, 1942	+58.64	July 28, 1939	+56.55
N1104	Apr. 21, 1939	+55.27	Nov. 1, 1943	+60.46	June 30, 1939	+59.34
N1105	Apr. 21, 1939	+52.88	May 1, 1942	+61.15	June 2, 1939	+59.27
N1107	Apr. 21, 1939	+41.64	Mar. 30, 1942	+58.85	June 2, 1939	+55.99
N1108	Apr. 21, 1939	+36.94	Feb. 27, 1942	+43.21	Apr. 28, 1939	+44.04
N1109	Apr. 21, 1939	+25.28	Jan. 30, 1942	+43.62	Apr. 28, 1939	+39.56
N1110	Apr. 21, 1939	+18.68	Jan. 30, 1942	+50.04	Apr. 21, 1939	+26.38
N1111	Apr. 21, 1939	+11.82	Dec. 1, 1941	+21.05	Apr. 21, 1939	
N1112	Jan. 6, 1939	+6.84	Apr. 30, 1946	+14.79	June 6, 1946	+19.55
N1126	Mar. 12, 1938	+55.27	Dec. 13, 1941	+10.24	June 6, 1946	+12.66
N1132	Apr. 2, 1938	+6.06	Jan. 31, 1942	+62.21	June 6, 1946	+9.02
N1140	Jan. 7, 1939	+58.32	Feb. 24, 1940	+9.77	Apr. 29, 1939	+58.19
N1147	Jan. 6, 1939	+16.62	Feb. 7, 1942	+66.09	Sept. 23, 1938	+7.42
N1160	Jan. 7, 1939	+63.37	Dec. 13, 1941	+19.72	Apr. 29, 1939	+60.72
N1167	Mar. 12, 1938	+9.63	Jan. 31, 1942	+70.90	Apr. 8, 1939	+17.03
N1185	Apr. 2, 1938	+10.36	Dec. 13, 1941	+12.92	Apr. 15, 1939	+64.91
N1198	Jan. 6, 1939	+63.46	Feb. 7, 1945	+15.39	Apr. 15, 1939	+10.63
N1204	Jan. 7, 1939	+5.58	Feb. 7, 1942	+70.49	Apr. 8, 1939	+11.46
N1212	Jan. 1, 1943	a+83.72	Feb. 17, 1940	+12.26	May 6, 1939	+65.65
N1216	Jan. 7, 1939	+62.31	Jan. 20, 1943	a+88.18	Apr. 8, 1939	+7.71
N1222	Jan. 6, 1939	+1.27	Feb. 14, 1942	+69.16	Nov. 22, 1946	+87.54
N1234	Jan. 7, 1939	+59.01	Jan. 31, 1942	+9.67	May 20, 1939	+65.93
N1240	Jan. 6, 1939	-1.08	Feb. 14, 1942	+66.64	Apr. 8, 1939	+62.17
N1244	May 31, 1940	+71.31	Jan. 24, 1942	+11.29	May 6, 1939	+61.45
N1245	Feb. 2, 1940	+75.96	Oct. 30, 1942	+76.50	May 6, 1939	+82
N1246	May 31, 1940	+77.14	Oct. 30, 1942	+82.88	May 31, 1940	+74.64
N1247	Apr. 21, 1939	+70.52	Aug. 31, 1942	+82.12	Feb. 2, 1940	+79.61
N1249	Apr. 21, 1939	+50.34	July 31, 1942	+76.98	May 31, 1940	+79.79
N1250	Apr. 21, 1939	+43.20	Jan. 30, 1942	+58.18	July 28, 1939	+72.79
N1251	Apr. 21, 1939	+35.57	Jan. 30, 1942	+49.64	Apr. 21, 1939	+62.04
N1252	Apr. 21, 1939	+22.48	Jan. 30, 1942	+40.54	Apr. 21, 1939	+44.49
N1253	Jan. 6, 1939	+11.31	Jan. 30, 1942	+26.29	Apr. 29, 1944	+36.75
N1255	May 12, 1913	+58.57	Jan. 31, 1942	+16.89	June 5, 1946	+23.46
N1256	May 12, 1913	+70.30	Nov. 11, 1918	+65.59	Apr. 8, 1939	+12.15
N1257	Aug. 17, 1932	+5.83	Feb. 27, 1933	+80.97	Apr. 15, 1939	+59.98
N1258	Oct. 8, 1931	+33.68	Dec. 13, 1941	+10.17	May 20, 1939	+78.37
			Dec. 28, 1931	+59.58	Apr. 8, 1939	+6.77
					Apr. 8, 1939	+37.19

\*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 1946 (feet)
		Water level (feet)	Date	Water level (feet)	Date	
N1259	Feb. 5, 1909	+47.83	Jan. 24, 1933	+56.43	Apr. 29, 1939	+51.53
N1260	June 6, 1903	+16.52	Dec. 20, 1916	+23.68	Apr. 8, 1939	+18.48
N1262	Oct. 5, 1931	+32.66	Oct. 5, 1942	+36.20	Apr. 8, 1939	+34.20
N1263	Nov. 3, 1911	+46.22	Oct. 31, 1932	+54.98	Apr. 22, 1939	+49.79
N1264	Mar. 7, 1932	+2.70	Feb. 17, 1940	+9.41	Apr. 8, 1939	+4.76
N1265	Mar. 9, 1939	+2.43	Dec. 1, 1941	+4.34	Dec. 31, 1942	+2.99
N1269	Mar. 9, 1939	+3.41	Mar. 1, 1945	+9.57	Mar. 14, 1939	+4.47
N1271	Mar. 9, 1939	+1.19	Sept. 5, 1944	+3.66	Dec. 31, 1942	+1.43
N1273	Nov. 1, 1939	+4.34	Jan. 2, 1940	+7.79	June 5, 1946	+5.07
N1275	Nov. 1, 1939	+1.89	Oct. 31, 1941	+4.87	June 5, 1946	+2.16
N1278	Nov. 3, 1939	+4.87	Jan. 30, 1942	+8.13	June 5, 1946	+5.12
N1280	Jan. 2, 1940	+2.22	Jan. 30, 1942	+10.79	June 5, 1946	+3.57
N1282	Nov. 1, 1939	+3.34	Apr. 1, 1940	+2.58	Jan. 2, 1942	+1.48
N1285	Nov. 1, 1939	+2.12	Jan. 31, 1940	+4.16	Dec. 7, 1945	+2.38
N1288	Nov. 1, 1939	+2.21	Jan. 2, 1940	+5.21	June 5, 1946	+2.49
N1461	Apr. 27, 1943	a+74.34	Oct. 10, 1943	a+77.40	June 4, 1946	+76.70
N1462	May 6, 1943	a+61.41	Dec. 24, 1943	a+64.68	Aug. 8, 1946	+62.65
N1463	May 6, 1943	a+36.82	Oct. 15, 1943	a+40.75	May 7, 1944	a+37.14
N1464	May 13, 1943	a+13.13	Nov. 21, 1944	a+17.59	Apr. 29, 1944	+13.14
N1613	July 3, 1936	+21.73	Dec. 6, 1941	+24.58	Apr. 15, 1939	+22.62
N1614	Apr. 2, 1913	+61.90	Feb. 27, 1933	+71.03	May 1, 1914	+68.71
N1615	Mar. 17, 1913	+41.49	Oct. 27, 1932	+47.17	Mar. 28, 1939	+42.94
N1616	Mar. 17, 1913	+74.05	Feb. 27, 1933	+85.42	June 1, 1939	+82.24
N1682	Nov. 30, 1940	+41.29	Feb. 28, 1942	+44.91	July 26, 1946	+44.04
N1683	Dec. 3, 1940	+53.46	Jan. 31, 1942	+57.39	Sept. 24, 1946	+56.70
N1684	Nov. 30, 1940	+55.33	Feb. 7, 1942	+59.97	May 4, 1945	+57.91
N1828	June 10, 1942	a+58.45	July 27, 1942	a+62.93	May 7, 1944	+58.31
N1829	June 10, 1942	a+66.22	Oct. 15, 1943	a+69.39	Sept. 15, 1944	+67.00
N1830	June 3, 1942	a+49.05	June 7, 1942	+52.74	Aug. 28, 1946	+51.69
N2071	Feb. 12, 1946	+11.51	Nov. 1, 1946	+14.62	Mar. 15, 1946	+13.28
Q273	Mar. 15, 1935	a+11.12	Mar. 21, 1942	a+8.47	Apr. 20, 1939	+4.08
Q278	June 4, 1946	-1.12	July 1, 1946	+5.11	Nov. 29, 1946	+1.66
Q282	June 10, 1946	-8.09	July 29, 1946	-4.65	Nov. 29, 1946	-6.77
Q283	June 10, 1946	-8.09	July 29, 1946	-4.69	Nov. 29, 1946	-6.78
Q287	Apr. 13, 1939	a+3.35	Feb. 13, 1940	+10.79	Jan. 1, 1945	a+7.71
Q350	Mar. 17, 1937	-1.18	Mar. 29, 1944	+3.51	Apr. 29, 1939	+4.42
Q470	Sept. 21, 1933	a-12.75	July 15, 1937	a+6.78	Jan. 8, 1938	a+1.60
Q471	Mar. 31, 1939	+13.69	Mar. 31, 1939	+17.45	Sept. 30, 1946	+16.47
Q543	May 17, 1932	a-28.36	Feb. 13, 1940	+11.44	Jan. 1, 1945	a+8.51
Q577	Feb. 28, 1946	a-6.22	Aug. 13, 1946	a+6.83	Apr. 15, 1946	a-1.17
Q1089	Oct. 10, 1911	-4.42	Oct. 17, 1932	a+4.04	Sept. 23, 1938	+1.42
Q1090	Oct. 10, 1911	+1.19	Oct. 17, 1932	+8.29	May 12, 1913	+3.31
Q1222	Apr. 1, 1940	-9.19	Feb. 28, 1942	+4.35	Dec. 1, 1945	+1.88
Q1223	Jan. 28, 1933	+6.78	Dec. 12, 1946	+10.23	Aug. 4, 1939	+6.33
Q1224	Apr. 20, 1933	+6.88	July 18, 1942	+12.41	May 29, 1939	+7.23
Q1225	Apr. 20, 1933	+26.72	Feb. 7, 1942	+32.19	Apr. 4, 1939	+27.86
Q1237	Feb. 10, 1939	a+6.38	Mar. 1, 1942	a+5.03	May 4, 1939	a-.05
Q1248	Oct. 12, 1940	+34.48	Feb. 14, 1942	+37.10	May 30, 1944	+36.39
Q1249	Oct. 19, 1940	+30.46	Feb. 7, 1942	+33.41	Sept. 26, 1946	+32.29
Q1250	Oct. 19, 1940	+19.36	Feb. 7, 1942	+22.02	July 8, 1946	+20.22
Q1251	Oct. 19, 1940	+9.85	Feb. 14, 1942	+13.02	Oct. 19, 1940	+10.48
Q1252	Oct. 26, 1940	+11.69	Feb. 28, 1942	+13.70	Feb. 15, 1941	+12.08
Q1253	Nov. 2, 1940	+2.32	Aug. 8, 1942	+4.58	Apr. 26, 1941	+2.34
Q1254	Oct. 26, 1940	-2.24	June 20, 1942	+2.29	Apr. 12, 1941	-2.02
Q1255	Oct. 12, 1911	-5.95	Apr. 11, 1942	-12.03	May 12, 1914	-4.11
Q1256	Oct. 26, 1940	-6.98	Mar. 14, 1942	-2.44	Aug. 8, 1945	-3.48
Q1281	Oct. 11, 1911	-3.62	Mar. 7, 1942	+8.59	June 4, 1913	-1.63
Q1282	Jan. 31, 1933	+1.17	Jan. 31, 1933	+2.49	May 10, 1941	+5.52
Q1283	Oct. 12, 1911	+2.12	Mar. 3, 1933	+13.33	Nov. 10, 1911	+3.68
Q1284	Oct. 12, 1911	+5.01	Jan. 28, 1933	+11.55	June 2, 1913	+7.33
Q1285	Apr. 20, 1933	+5.74	Feb. 21, 1942	+8.05	May 31, 1941	*5.90

\* 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 1946 (feet)
		Water level (feet)	Date	Water level (feet)	Date	
Q1286	Apr. 20, 1933	+9.06	Aug. 1, 1942	+11.29	Apr. 26, 1941	+9.37
Q1287	Apr. 20, 1933	+10.85	Oct. 9, 1945	+15.80	Oct. 5, 1934	+11.82
Q1288	Apr. 20, 1933	+16.22	Jan. 31, 1942	+22.06	Oct. 5, 1934	+16.72
Q1289	Apr. 20, 1933	+30.10	Feb. 7, 1942	+34.56	Nov. 8, 1934	+31.81
Q1290	Apr. 20, 1933	+15.25	Jan. 31, 1942	+19.48	Oct. 5, 1934	+15.77
Q1292	May 10, 1941	+26.41	Feb. 28, 1942	+29.07	Aug. 29, 1946	+28.11
S58	Aug. 14, 1944	+22.39	Aug. 30, 1944	a+24.87	June 6, 1946	a+22.75
S202	May 25, 1936	a+36.93	Feb. 1, 1939	a+47.17	Apr. 10, 1937	+39.65
S203	Feb. 14, 1937	a+70.94	Feb. 17, 1937	a+77.13	Oct. 31, 1939	+73.14
S1803	Oct. 18, 1912	+14.93	Oct. 25, 1941	+18.19	Apr. 22, 1913	+15.68
S1805	Oct. 16, 1912	+37.90	Oct. 27, 1932	+47.01	Apr. 8, 1939	+40.35
S1806	Oct. 18, 1912	+50.61	Jan. 5, 1933	+61.69	Apr. 22, 1939	+54.07
S1807	Oct. 19, 1912	+20.59	Sept. 12, 1932	+23.48	Oct. 14, 1938	+21.11
S1808	Oct. 21, 1912	+9.45	Sept. 12, 1932	+12.94	Sept. 23, 1938	+10.61
S1809	Oct. 21, 1912	+25.00	Nov. 2, 1932	+32.56	Apr. 15, 1939	+25.97
S1810	Oct. 21, 1912	+45.24	Feb. 23, 1933	+56.19	Apr. 29, 1939	+49.58
S1811	Feb. 28, 1937	+51.41	Aug. 28, 1941	+55.56	Apr. 20, 1940	+52.10
S1812	Apr. 17, 1937	+45.12	Mar. 7, 1942	+51.09	May 27, 1939	+45.78
S1813	Nov. 4, 1939	+37.05	Jan. 31, 1942	+39.64	June 15, 1940	+37.47
S1814	Nov. 4, 1939	+35.01	Feb. 14, 1942	+38.28	June 29, 1940	+36.05
S1815	Dec. 2, 1939	+43.80	Mar. 14, 1942	+47.81	June 29, 1940	+44.87
S1816	Dec. 2, 1939	+55.01	Feb. 14, 1942	+59.93	June 1, 1940	+55.84
S1817	Dec. 2, 1939	+50.24	Jan. 17, 1942	+53.95	June 1, 1940	+50.69
S2314	Mar. 27, 1943	+58.76	Jan. 1, 1944	+60.49	May 30, 1944	+58.90
S2454	Sept. 21, 1940	+6.70	Oct. 4, 1941	+8.56	June 5, 1946	+7.37
S2455	June 23, 1933	a+19.93	Nov. 6, 1937	a+24.85	Sept. 23, 1938	+20.35
S3112	Aug. 30, 1941	+51.65	Feb. 7, 1942	+56.41	May 30, 1944	+52.27
S3496	Nov. 2, 1942	+46.62	Mar. 6, 1946	+48.33	Aug. 2, 1943	+48.21
S3497	Nov. 2, 1942	+46.11	Mar. 12, 1946	+48.56	Aug. 2, 1943	+47.63
S3498	Sept. 11, 1942	+43.72	Nov. 30, 1944	+45.49	July 30, 1946	+44.70
S3512	Apr. 24, 1942	+66.51	Jan. 31, 1944	+68.76	June 26, 1944	+67.26
S3513	Apr. 24, 1942	a+60.55	Jan. 11, 1946	a+63.32	May 27, 1943	a+61.29
					Sept. 27, 1944	
S3514	May 15, 1942	+66.09	Dec. 26, 1942	+68.18	Mar. 27, 1945	+67.12
S3515	Mar. 5, 1907	+51.19	Nov. 28, 1945	+34.64	May 8, 1907	+31.39
S3516	Mar. 5, 1907	+35.76	Dec. 2, 1909	+39.72	July 24, 1907	+36.50
S3517	Apr. 2, 1907	+11.60	Dec. 4, 1909	+13.86	Mar. 2, 1908	+12.20
S3518	Mar. 22, 1907	+30.24	Nov. 28, 1945	+33.04	May 8, 1907	+30.59
S3519	Mar. 22, 1907	+23.69	Dec. 3, 1909	+26.69	Aug. 21, 1942	+24.50
S3521	Feb. 28, 1907	+36.13	Nov. 30, 1944	+38.44	Aug. 2, 1907	+36.76
S3522	Feb. 6, 1907	+19.11	Nov. 1, 1944	+20.12	June 11, 1946	+19.28
S3524	Mar. 8, 1907	+21.47	Dec. 30, 1943	+23.28	Apr. 6, 1908	+22.12
S3526	Jan. 30, 1943	+26.11	Mar. 31, 1944	+28.07	Aug. 2, 1943	+27.93
S3527	Mar. 7, 1907	+51.29	Mar. 1, 1944	+35.69	June 4, 1908	+32.81
S3529	Mar. 8, 1907	+24.07	Nov. 29, 1944	+28.07	Apr. 27, 1907	+25.38
S3530	Mar. 8, 1907	+51.68	Nov. 29, 1944	+34.78	Aug. 5, 1908	+33.00
S3531	Aug. 9, 1907	+9.14	Dec. 11, 1909	+10.37	May 7, 1908	+9.67
S3532	Apr. 21, 1907	+45.76	Dec. 27, 1944	+51.74	June 8, 1908	+47.46
S3533	Apr. 4, 1907	+44.88	Dec. 27, 1945	+49.48	June 8, 1908	+46.15
S3534	June 9, 1907	+26.73	Dec. 31, 1942	+31.75	June 9, 1907	+28.01
S3535	Aug. 13, 1907	+18.13	Dec. 31, 1942	+21.75	Aug. 13, 1909	+19.28
S3536	Apr. 10, 1907	+22.83	Nov. 29, 1944	+28.62	June 5, 1908	+24.81
S3538	Jan. 11, 1908	+14.79	Nov. 30, 1942	+17.56	Aug. 19, 1908	+15.87
S3545	Mar. 12, 1907	+34.55	Jan. 3, 1946	+38.00	June 7, 1907	+35.54
S3727	July 13, 1943	+29.89	Nov. 30, 1945	+32.34	June 1, 1944	+30.81
S3728	May 28, 1943	+19.51	Dec. 30, 1943	+21.76	June 9, 1944	+20.37
S3729	Sept. 10, 1943	+27.45	Dec. 27, 1945	+29.55	July 3, 1946	+28.48
S3730	Sept. 21, 1943	+33.70	Dec. 27, 1944	+35.75	July 31, 1946	+35.09
S3731	May 28, 1943	+22.52	Dec. 30, 1943	+24.78	July 5, 1946	+23.44
S3732	Oct. 5, 1943	+52.25	Nov. 29, 1944	+57.38	Feb. 28, 1945	+53.78

\* 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 1946 (feet)
		Water level (feet)	Date	Water level (feet)	Date	
S3735	Oct. 1, 1943	+64.28	Mar. 31, 1944	+65.95	Oct. 1, 1946	+65.56
S3736	July 19, 1943	+42.35	Feb. 14, 1946	+44.75	Aug. 2, 1943	+43.65
S3737	Aug. 17, 1943	+55.20	Feb. 7, 1946	+57.13	Sept. 24, 1943	+56.36
S3738	Aug. 19, 1943	+55.16	Feb. 1, 1946	+57.12	Aug. 19, 1943	+56.19
S3739	July 20, 1943	+26.42	Nov. 30, 1945	+28.39	June 1, 1944	+27.28
S3760	Nov. 6, 1943	+24.75	Jan. 30, 1945	+25.99	Dec. 3, 1946	+25.99
S3868	June 26, 1944	+37.18	Mar. 1, 1945	+38.15	Oct. 1, 1946	+38.08
S3869	June 22, 1944	+53.63	Jan. 3, 1946	+55.41	Oct. 1, 1946	+54.94
S3870	June 16, 1944	+53.39	Jan. 3, 1946	+54.97	Oct. 1, 1946	+54.68
S3871	June 15, 1944	+46.25	Feb. 1, 1945	+48.62	Nov. 4, 1946	+48.49
S3955	May 31, 1944	+52.57	May 2, 1946	+54.43	Oct. 1, 1946	+54.28
S3956	May 31, 1944	+31.24	July 3, 1946	+32.22	Sept. 6, 1946	+32.12
S4134	Mar. 10, 1945	+11.69	Nov. 11, 1945	+13.00	Mar. 3, 1946	+12.16
S4268	Aug. 2, 1945	+49.83	Dec. 26, 1945	+50.56	Oct. 1, 1946	+50.29
S4269	Aug. 2, 1945	+13.31	Nov. 29, 1945	+14.77	Aug. 28, 1946	+14.41
S4270	Aug. 1, 1945	+51.67	Jan. 31, 1946	+53.18	Aug. 30, 1946	+52.64
					Nov. 22, 1946	
S4271	Aug. 2, 1945	+9.67	Nov. 21, 1945	+10.60	Oct. 26 - Nov. 9, 1946	+10.36
S4367	Aug. 2, 1945	+55.26	Apr. 4, 1946	+56.20	Nov. 1, 1946	+56.06
S4523	Aug. 2, 1945	+8.44	Oct. 4, 1945	+9.57	Mar. 6, 1946	+9.22
S4524	Aug. 2, 1945	+6.20	Oct. 30, 1945	+7.84	Mar. 6, 1946	+6.50
S4525	Oct. 4, 1945	+17.88	Dec. 27, 1945	+19.96	Sept. 20, 1946	+19.56
S4526	Aug. 2, 1945	+8.32	Dec. 27, 1945	+9.39	Apr. 10, 1946	+8.89
S4529	Oct. 4, 1945	+11.30	Dec. 27, 1945	+12.55	Sept. 30, 1946	+12.55
S4530	Aug. 2, 1945	+14.83	Oct. 30, 1945	+17.01	Mar. 6, 1946	+15.73

a Based on instrumental records.

b Also occurred on July 3, 7, 8, 9, 10, 1946.

c Estimated.

Net change in water level in wells on Long Island, N. Y., 1946

Well No.	Net change (feet)	Well No.	Net change (feet)	Well No.	Net change (feet)	Well No.	Net change (feet)
K19(J)	-0.12	K1347	-0.18	N1198	+0.24	N1269	-4.20
K30	+0.09	K1495	-0.45	N1204	-3.82	N1271	-2.12
K65	-1.13	N7(L)	-1.86	N1212	+0.68	N1273	-2.23
K67	-1.19	N9(M)	-0.04	N1216	+0.93	N1275	-0.30
K92	-0.52	N53	-1.36	N1222	-6.97	N1278	-2.21
K97	+1.17	N157(M)	+0.32	N1234	+1.12	N1280	-6.55
K196	-0.95	N180(M)	-1.90	N1240	-9.73	N1282	-0.65
K585	-0.37	N657(L)	+1.11	N1244(M)	+0.61	N1285	-1.78
K525(J)	-0.47	N844(M)	+0.85	N1245(M)	+0.84	N1288	-0.44
K533(J)	+0.83	N1102	-0.10	N1246	+0.28	N1461	+0.53
K539	-0.08	N1103	+0.37	N1247	+0.33	N1462	+0.32
K889	+2.88	N1104	+0.56	N1249	-0.07	N1463	-1.48
K1057(L)	-0.36	N1105	+1.18	N1250	-0.27	N1464	-3.37
K1141	-0.14	N1107	+0.11	N1251	-0.36	N1613(M)	-0.44
K1173	+0.50	N1108	+0.74	N1252	-1.11	N1614	+0.82
K1194	-0.56	N1109	-0.59	N1253	-3.39	N1615	-0.40
K1198	-0.03	N1110	-0.59	N1255	-0.92	N1616	+0.63
K1199	+0.27	N1111	-0.27	N1256	+0.81	N1682	+0.47
K1235	+0.13	N1112	-0.46	N1257	-1.00	N1683	+0.86
K1236	-0.58	N1126	+0.46	N1258	+0.97	N1684	-1.10
K1237	-1.76	N1132	-1.23	N1259	-0.21	N1828	-0.67
K1263	-0.48	N1140	+0.17	N1260	-2.42	N1829	-1.12
K1264	-0.55	N1147	-0.84	N1262	-0.56	N1830	+0.76
K1265	+0.40	N1160	-0.77	N1263	+0.06	Q273(L)	-2.11
K1266	+0.14	N1167	-0.45	N1264	-4.21	Q287(L)	-1.11
K1296	-0.70	N1185	-1.95	N1265	-0.37	Q350(J)	-0.66

## Net change in water level in wells on Long Island, N. Y., 1946--Continued

Well No.	Net change (feet)	Well No.	Net change (feet)	Well No.	Net change (feet)	Well No.	Net change (feet)
Q470(L)	-3.80	Q1289	+0.34	S3512	+0.52	S3731	+0.90
Q471	-.46	Q1290	-1.03	S3513	+.67	S3732	-.13
Q543(L)	-.49	Q1292	+.21	S3514	+.08	S3735	+1.15
Q1089	-1.11	S59(M)	-1.05	S3515	-.56	S3736	+.84
Q1090	-.26	S202(L)	+.37	S3516	-.02	S3737	+.95
Q1222(L)	-2.47	S203(M)	+.20	S3517	+.16	S3738	+.84
Q1223	-.29	S1803	-1.09	S3518	-.39	S3739	+.86
Q1224	-1.37	S1805	-1.61	S3519	-1.02	S3760	+1.17
Q1225	+.21	S1806	-.54	S3521	+.62	S3868	+.15
Q1237(J)	-1.75	S1807	-.73	S3522	+.10	S3869	+1.02
Q1248	+.39	S1808	-1.11	S3524	+.24	S3870	+1.10
Q1249	+.71	S1809	-1.25	S3526	+1.21	S3871	+1.61
Q1250	-.19	S1810	+.58	S3527	+1.31	S3955	+.92
Q1251	+.10	S1811	-.71	S3529	+.20	S3956	+.25
Q1252	-.59	S1812	+.48	S3530	+.91	S4134	-.28
Q1253	-1.01	S1813	+.23	S3531	+.11	S4268	+.46
Q1254	-.44	S1814	+.59	S3532	+1.66	S4269	+.80
Q1255	+.31	S1815	+.90	S3533	+1.27	S4270	+.53
Q1256	-.15	S1816	+.56	S3534	+.23	S4271	+.60
Q1281	.0	S1817	-.47	S3535	+.94	S4367	+.40
Q1282	-.57	S2314(M)	-1.16	S3536	+.79	S4523	-.16
Q1283	-.34	S2454	-.67	S3538	+.32	S4524	-.17
Q1284	+.87	S2455	-1.36	S3545	+.98	S4525	+1.68
Q1285	-.54	S3112	+.04	S3727	+.92	S4526	+.57
Q1286	-1.14	S3496	+.71	S3728	+.78	S4529	+1.25
Q1287	-.45	S3497	+.85	S3729	+1.03	S4530	+.31
Q1288	-.05	S3498	+.92	S3730	+1.32		

## Aquifers:

J - Jameco

L - Lloyd

M - Magothy

All others are water-table wells.

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. Water levels during the year 1946 followed this general pattern except that the highest stage was not reached until late in June.

The net change table reveals that water levels in Kings, Queens, and Nassau Counties at the end of 1946 were, for the most part, lower than at the end of 1945, whereas an over-all rise occurred in Suffolk County at the eastern end of the island. Precipitation at the Battery, in New York City, was 9.12 inches below normal, while at Setauket, in Suffolk County, it was only 0.58 inch below normal. This, in part, explains the declining levels in the western end of the island in contrast to the general rise experienced in the eastern section. In addition, much of the precipitation which falls in the densely populated areas in the western section is

channeled into storm sewers and is carried to surrounding tidal waters, thus reducing greatly direct recharge as contrasted with areas to the east.

According to records furnished by the U. S. Weather Bureau, precipitation for the year was far below normal. Above-normal precipitation was recorded in only 3 months, May, June, and July. At stations with long time records, such as the Battery, in New York City, 33.87 inches (9.12 inches below normal) was recorded, and at Setauket, on the north shore of Suffolk County, 43.91 inches (0.58 inch below normal) was recorded. On the basis of these records, it might be expected that ground-water levels at the end of the year should have been considerably lower than they were at the end of the previous year. However, the net change table reveals that only minor decreases in the water table were observed in Kings and Queens Counties with some appreciable decreases being registered in Nassau County.

As indicated by figure 7, this seeming anomaly resulted from heavy precipitation in May, June, and July which caused a steady contraseasonal rise of water levels during that period. Although precipitation was below normal during the first 4 months in 1946, it was sufficient in amount to cause seasonal recharge. As a result, the composite average water level rose steadily during this period.

According to records furnished by the New York State Water Power and Control Commission and by the Nassau County Department of Public Works, the combined pumpage for Kings, Queens, and Nassau Counties totaled an average daily withdrawal of 140.6 million gallons, or an increase of 18 percent over 1945. These figures are for public-supply withdrawals only and they do not include the large quantities of water withdrawn from private wells for industrial and other purposes. Unfortunately, there is no data available 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). Kew Pacific Garage. Dean Street and Fifth Avenue, Brooklyn.

Mean daily water level, in feet below mean sea level, 1946

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	24.45	24.40	.....	23.99	24.35	24.50	24.73	25.05	25.00	25.11	.....	24.82
2	24.46	24.36	.....	24.00	24.36	24.44	24.73	25.04	25.00	25.24	.....	24.81
3	24.48	24.34	.....	24.05	24.41	24.37	24.81	24.99	25.01	25.27	.....	24.87
4	24.51	24.27	.....	24.05	24.40	24.38	24.78	24.91	25.15	25.28	.....	24.87

K19--Continued.

Mean daily water level, in feet below mean sea level, 1946

(From recorder charts)												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	24.49	24.26	.....	24.07	24.29	24.45	24.72	24.89	25.20	.....	25.11	24.90
6	.....	24.26	.....	24.13	24.26	24.51	24.77	24.92	25.22	.....	25.13	24.92
7	24.47	24.28	24.14	24.07	24.34	24.53	24.71	24.90	25.20	.....	25.12	24.93
8	24.51	24.32	24.15	24.04	24.37	24.54	24.75	24.92	25.14	25.22	25.13	24.91
9	24.54	24.26	24.12	24.06	24.38	24.51	24.78	24.94	25.10	25.24	25.18	24.89
10	24.54	24.22	24.11	24.13	24.40	24.49	24.85	24.92	25.19	25.22	25.13	24.80
11	24.58	24.18	24.07	24.15	24.37	24.54	24.88	24.89	25.25	25.23	24.98	24.84
12	24.53	24.22	24.12	24.16	24.31	24.57	24.87	24.92	25.24	25.21	25.07	24.87
13	24.50	24.18	24.10	.....	24.32	24.64	24.90	24.99	25.22	25.16	25.11	.....
14	24.45	24.17	24.11	.....	24.37	.....	24.84	25.05	25.17	25.08	.....	24.79
15	24.45	24.26	24.11	24.12	24.36	.....	24.80	25.08	25.06	25.14	25.14	24.74
16	24.52	24.28	24.14	24.23	24.39	.....	24.88	25.09	25.05	25.14	25.16	24.71
17	24.48	24.14	24.03	24.26	24.40	.....	24.91	25.05	25.13	25.11	25.02	24.71
18	24.46	24.14	23.97	24.25	24.44	24.60	24.93	25.00	25.21	25.10	24.89	24.74
19	24.50	24.12	24.05	24.27	24.38	24.70	24.95	24.97	25.23	25.13	24.88	24.78
20	24.46	24.10	24.05	24.28	24.34	24.70	24.99	25.05	25.26	25.05	24.89	24.84
21	.....	24.17	24.08	24.24	24.40	24.70	24.92	25.11	25.26	25.98	24.92	24.82
22	.....	24.15	24.04	24.16	24.47	24.71	24.83	25.13	25.18	25.06	24.88	24.83
23	.....	24.09	24.05	24.23	24.48	24.67	24.89	25.15	25.16	25.09	24.91	24.78
24	.....	24.04	24.04	24.28	24.48	24.65	24.93	25.14	25.20	25.12	24.91	24.79
25	.....	24.03	23.97	24.31	24.47	24.69	24.97	25.03	25.25	25.14	24.86	24.70
26	.....	24.11	24.04	24.30	24.42	24.75	24.99	24.99	25.28	25.16	24.92	24.65
27	.....	.....	24.05	24.35	24.31	24.78	25.00	25.08	25.27	.....	24.97	24.78
28	24.36	.....	24.11	24.30	24.43	24.82	24.91	25.13	25.28	.....	.....	24.76
29	24.41	.....	24.08	24.23	24.45	24.85	24.92	25.15	25.17	25.07	.....	24.69
30	24.40	.....	24.09	24.31	24.43	24.77	24.99	25.19	25.10	25.13	24.89	24.70
31	24.34	.....	24.07	.....	24.42	.....	25.03	25.17	.....	25.16	.....	24.75

K30 (\*817, p. 201; \*840, p. 258; 845, p. 307; 886, p. 483; 906, p. 116; 956, p. 141; 944, p. 125; 986, p. 147; 1016, p. 180; 1023, p. 214).  
C. J. Tagliabue Manufacturing Co. Park and Nostrand Avenues, Brooklyn.

Water level at noon, in feet below mean sea level, 1946

(From recorder charts)												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	27.61	27.30	26.97	26.49	26.20	26.35	26.70	27.07	27.16	.....	27.37	27.51
2	27.59	27.27	26.93	26.45	26.19	26.35	26.74	27.09	27.12	.....	27.39	27.51
3	27.57	27.26	26.94	26.49	26.21	26.36	26.77	27.10	27.11	.....	27.35	27.53
4	27.56	27.22	26.89	26.46	26.21	26.37	26.79	27.06	27.14	27.37	27.31	27.55
5	27.55	27.22	26.89	26.46	26.16	26.39	26.80	27.03	27.16	27.38	27.35	27.55
6	27.54	27.18	26.88	26.45	26.12	26.40	26.80	27.07	27.18	27.32	27.35	27.58
7	27.51	27.21	26.87	26.44	26.10	26.41	26.79	27.09	27.17	27.26	27.37	27.59
8	27.54	27.22	26.86	26.39	26.10	26.41	26.79	27.12	27.15	.....	27.37	27.56
9	27.50	27.18	26.85	26.38	26.11	26.40	26.81	27.13	27.11	.....	27.42	27.53
10	27.52	27.17	26.84	26.42	26.16	26.38	26.83	27.13	27.11	27.32	27.40	27.53
11	27.52	27.15	26.81	26.43	26.13	26.36	26.86	27.12	27.14	27.35	27.36	27.58
12	27.50	27.14	26.79	26.43	26.11	26.38	26.87	27.09	27.20	27.35	27.39	27.57
13	27.48	27.12	26.78	26.43	26.11	26.42	26.90	27.11	27.22	.....	27.41	27.61
14	27.45	27.09	26.78	26.39	26.10	26.43	26.89	27.15	27.22	.....	27.44	27.61
15	27.43	27.14	26.77	26.33	26.09	26.50	26.89	27.16	27.20	.....	27.45	27.60
16	27.45	27.15	26.77	26.36	26.09	26.50	26.91	27.16	27.18	.....	27.45	27.58
17	27.41	27.09	26.74	26.35	26.08	26.45	26.92	27.15	.....	.....	27.44	27.57
18	27.42	27.09	26.71	26.32	26.11	26.46	26.94	27.13	.....	.....	27.42	27.61
19	27.47	27.06	26.67	26.34	26.10	26.54	26.96	27.08	27.24	27.38	27.44	27.64
20	27.41	27.06	26.66	26.35	26.09	26.55	26.99	27.10	27.26	27.35	27.46	27.64
21	27.33	27.10	26.65	26.32	26.11	26.57	26.98	27.14	27.27	27.30	27.49	27.60
22	27.36	27.06	26.63	26.27	26.19	26.61	26.96	27.16	27.28	27.29	.....	27.61
23	27.35	27.05	26.65	26.24	26.22	26.63	26.99	27.18	27.26	27.32	27.53	27.56
24	27.32	27.01	26.62	26.25	26.23	26.59	27.02	27.19	27.26	27.36	27.51	27.57
25	27.33	27.69	26.57	26.25	26.24	26.63	27.04	27.15	27.28	27.37	27.47	27.57
26	27.35	26.95	26.56	26.24	26.25	26.66	27.07	27.12	27.30	27.38	27.48	27.52
27	27.32	26.96	26.57	26.27	26.20	26.69	27.08	27.13	27.32	27.37	27.53	.....
28	27.28	26.96	26.56	26.25	26.27	26.71	27.07	27.17	27.33	27.33	27.53	27.52
29	27.29	.....	26.54	26.21	26.32	26.73	27.01	27.13	27.31	27.30	27.52	27.51
30	27.27	.....	26.55	26.21	26.34	26.73	27.03	27.20	27.26	27.33	27.53	27.52
31	27.25	.....	26.54	.....	26.33	.....	27.06	27.20	.....	27.33	.....	27.52

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). A. Ludwig Co. well 2 - 123 Mddleton Street, Brooklyn.

Water level, in feet below mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	25.12	May 10	24.52	July 26	24.90	Oct. 22	25.27
Feb. 15	24.86	June 10	24.57	Aug. 30	25.13	Nov. 26	25.26
Mar. 18	24.66	July 1	24.69	Sept. 26	25.19	Dec. 27	25.40
Apr. 12	24.62						

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). Young Men's Christian Association. 179 Marcy Avenue, Brooklyn.

Water level, in feet below mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	19.55	May 10	19.42	July 26	19.90	Oct. 22	19.90
Feb. 15	19.58	June 10	19.50	Sept. 16	20.10	Nov. 26	19.75
Mar. 18	19.46	July 1	19.69	26	20.14	Dec. 27	19.83
Apr. 12	19.44						

K92 (\*840, p. 260; 845, p. 309; 886, p. 484; 906, p. 117; 936, p. 143; 944, p. 125; 986, p. 149; 1016, p. 181; 1023, p. 214). St. Johns University, 75 Lewis Avenue, Brooklyn.

Water level, in feet below mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	21.55	May 10	21.78	July 26	22.04	Oct. 22	22.60
Feb. 15	21.41	June 18	21.85	Aug. 30	21.95	Nov. 26	22.34
Mar. 18	21.50	July 1	21.95	Sept. 26	22.22	Dec. 27	22.43
Apr. 12	21.67						

K97 (\*1016, p. 182; 1023, p. 215). Colony Foods. Grand & Lexington Avenues, Brooklyn.

Water level, in feet below mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	25.77	Apr. 29	25.25	July 26	25.60	Oct. 22	25.92
Feb. 11	25.52	June 10	25.34	Aug. 30	25.82	Nov. 26	25.96
25	25.44	July 1	25.40	Sept. 26	25.89	Dec. 27	25.92
Apr. 12	25.25						

K196 (\*986, p. 149; 1016, p. 182; 1023, p. 215). Knickerbocker Ice Co. well 1. Twelfth Avenue and 37th Street, Brooklyn.

Water level, in feet below mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	3.03	Apr. 29	2.88	July 26	3.81	Oct. 22	3.22
Feb. 14	2.91	June 10	2.95	Aug. 30	3.78	Nov. 26	3.54
Mar. 4	2.92	July 8	3.81	Sept. 26	3.86	Dec. 27	3.96
Apr. 12	3.18						

K523 (\*1023, p. 215). New York Water Service Corporation, 267 Newkirk Avenue, Brooklyn.

Water level at noon, in feet below mean sea level, 1946

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	...	0.78	0.90	0.98	0.94	0.90	0.62	0.67	0.74	0.95	1.22	1.36
2	...	.78	.88	.96	.94	.88	.62	.67	.75	.95	1.22	1.36
3	...	.78	.90	.97	.95	.87	.62	.67	.76	.96	1.22	1.36
4	...	.79	.90	.96	.95	.84	.62	.67	.77	.97	1.22	1.36
5	...	.80	.90	.96	.94	.82	.63	.66	.77	.97	1.23	1.37
6	...	.79	.91	.95	.93	.80	.62	.66	.78	.97	1.23	1.37
7	...	.79	.91	.96	.94	.78	.62	.66	.78	.98	1.23	1.38
8	...	.81	.91	.96	.94	.76	.62	.67	.79	.99	1.23	1.38
9	...	.80	.90	.95	.95	.75	.62	.68	.79	1.00	1.24	1.39
10	...	.80	.92	.96	.96	.74	.63	.67	.80	1.01	1.25	1.40
11	...	.81	.92	.96	.96	.71	.65	.68	.81	1.02	1.26	1.41
12	...	.82	.93	.95	.97	.70	.65	.68	.83	1.03	1.27	1.41

K523--Continued.

Water level at noon, in feet below mean sea level, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
13	...	0.82	0.93	0.95	0.97	0.69	0.66	0.68	0.84	1.04	1.27	1.42
14	...	.80	.94	.95	.97	.68	.67	.69	.84	1.04	1.28	1.42
15	...	.82	.94	.94	.96	.67	.70	.70	.85	1.05	1.28	1.42
16	...	.84	.96	.94	.96	.66	.71	.70	.85	1.06	1.28	1.42
17	.81	.84	.96	.95	.95	.65	.71	.70	.85	1.07	1.28	1.43
18	.80	.83	.96	.94	.95	.63	.71	.70	.86	1.07	1.29	1.43
19	.79	.83	.96	.94	.95	.63	.71	.70	.87	1.09	1.29	1.43
20	.79	.82	.97	.93	.96	.62	.72	.70	.87	1.10	1.30	1.42
21	.78	.84	.97	.95	.95	.61	.73	.71	.88	1.11	1.30	....
22	.79	.84	.97	.93	.96	.61	.73	.71	.89	1.12	1.31	....
23	.79	.84	.98	.93	.96	.61	.73	.71	.90	1.12	1.32	....
24	.78	.84	.98	.93	.96	.59	.72	.71	.91	1.13	1.32	....
25	.77	.86	.97	.92	.95	.59	.70	.71	.91	1.15	1.32	....
26	.77	.87	.97	.91	.95	.60	.69	.71	.92	1.16	1.33	....
27	.78	.88	.97	.92	.94	.60	.68	.71	.93	1.17	1.34	....
28	.77	.89	.97	.93	.94	.60	.68	.71	.94	1.18	1.34	....
29	.77		.96	.93	.93	.61	.67	.72	.94	1.19	1.35	....
30	.77		.97	.94	.92	.61	.67	.73	.95	1.20	1.35	....
31	.76		.98		.91		.67	.73		1.21		....

K525. New York Water Service Corporation, 363 Dahill Road, Brooklyn. Unused public-supply well, diameter 18 inches, depth 400 feet below measuring point. Measuring point, hole in wooden recorder shelf, 46.65 feet above mean sea level. First measured by Geological Survey on Dec. 13, 1945.

Water level at noon, in feet above mean sea level, 1945  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Dec. 13	0.98	Dec. 19	0.98	Dec. 24	0.96	Dec. 28	0.98
14	.98	20	.98	25	.96	29	1.00
15	.98	21	.98	26	.99	30	1.00
16	.98	22	.97	27	.98	31	1.01
18	.95	23	.97				

Water level at noon, in feet above mean sea level, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	1.01	1.10	1.02	1.00	1.11	....	1.28	1.25	1.18	1.05	0.76	0.57
2	.98	1.10	1.02	1.03	1.11	....	1.29	a1.25	1.18	1.04	.75	.56
3	.98	1.08	1.03	1.03	1.10	....	1.29	a1.25	1.18	1.03	.74	.53
4	.99	1.08	1.01	1.03	1.10	1.09	1.28	1.25	1.18	1.01	.74	.53
5	.99	1.08	1.00	1.03	a1.11	1.10	1.28	1.25	....	1.00	.73	.52
6	1.00	1.08	1.00	1.03	a1.10	1.11	1.28	1.25	....	1.00	.72	.52
7	1.01	1.09	.99	1.03	a1.10	1.12	1.29	1.25	....	1.00	.72	.51
8	....	1.09	.99	1.03	a1.10	1.13	1.29	1.24	....	.99	.72	.51
9	....	1.08	1.01	1.04	a1.09	1.15	1.29	1.24	....	.98	.70	.51
10	....	1.08	.99	1.04	1.07	1.17	1.29	1.24	a1.16	.98	.70	.50
11	....	1.08	.98	1.04	1.07	1.20	1.28	1.23	1.15	.97	.69	.49
12	....	1.08	.97	1.04	1.07	1.20	1.28	1.23	1.12	.96	.69	.49
13	....	1.08	.97	1.05	1.04	1.21	1.28	1.23	1.11	.94	.68	.48
14	1.04	1.09	.97	1.05	a1.04	1.22	1.27	1.23	1.11	.93	.67	.47
15	1.05	1.09	.98	1.09	1.04	1.23	1.25	1.22	1.10	.91	.65	.48
16	1.05	1.05	.96	1.08	1.04	1.24	1.24	1.22	1.09	.90	.64	.47
17	1.05	1.05	.96	1.07	1.06	1.25	1.24	1.23	1.09	.89	.64	.47
18	1.06	1.05	.96	1.07	1.05	1.26	1.24	1.23	1.09	.88	.63	.47
19	1.07	1.05	.96	1.07	1.05	1.26	1.24	a1.23	1.08	.87	.62	.47
20	1.07	1.09	.96	1.08	1.05	1.26	1.23	....	1.08	.86	.62	.47
21	1.10	1.06	.96	1.08	1.05	1.27	1.23	....	1.08	.85	.61	.51
22	1.09	1.04	....	1.10	1.05	1.27	1.21	....	1.07	.85	.62	....
23	1.09	1.04	....	1.11	1.05	1.27	1.21	....	1.05	.84	.60	....
24	1.09	....	....	1.11	1.05	1.28	1.20	....	1.06	.83	.59	....
25	1.12	1.05	....	1.11	1.06	1.28	1.21	....	1.05	.82	.59	....
26	1.12	1.05	.99	1.13	1.07	1.28	1.21	1.22	1.05	.81	.58	....

a Estimated.

K525--Continued.

Water level at noon, in feet above mean sea level, 1946

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
27	1.11	1.05	1.01	1.13	1.08	1.28	1.23	1.22	1.05	0.81	0.58	....
28	1.11	1.03	1.01	1.12	1.07	1.28	1.23	1.21	1.04	.81	.57	a.54
29	1.10		1.01	1.11	1.07	1.28	1.25	....	1.04	.80	.57	.53
30	1.10		1.01	1.11	....	1.28	1.25	....	1.06	.79	.56	.53
31	1.12		1.01	....	....		1.25	....		.78		.54

a Estimated.

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). New York Water Service Corporation test well. On south-west side of East 98th Street, near Rutland Road, Brooklyn.

Water level at noon, in feet below mean sea level, 1946

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	17.48	16.85	16.64	16.57	16.55	....	16.55	16.58	16.60	16.72	16.65	16.53
2	17.51	16.85	16.62	16.55	16.54	....	16.56	16.58	16.59	16.73	16.66	16.58
3	17.48	16.85	16.63	16.57	16.56	16.48	16.59	16.57	16.62	16.74	16.66	16.58
4	17.48	16.85	16.63	16.57	16.56	16.47	16.59	16.56	16.66	16.79	16.65	16.56
5	17.46	16.78	16.62	16.57	16.55	16.47	16.58	16.55	16.66	16.79	16.68	16.56
6	17.47	16.77	16.62	16.57	16.53	16.47	16.57	16.55	16.65	16.72	16.67	16.58
7	17.40	16.77	16.61	16.56	16.53	16.48	16.55	16.54	16.62	16.70	16.66	16.58
8	17.45	16.78	16.61	16.56	16.54	16.50	16.56	16.54	16.62	16.70	16.66	16.56
9	17.44	....	16.62	16.54	16.54	16.55	16.56	16.58	16.64	16.70	16.69	16.53
10	17.45	....	16.62	16.58	16.58	16.53	16.59	16.58	16.64	16.69	16.69	16.52
11	17.46	16.71	16.62	16.58	16.57	16.52	16.59	16.55	16.68	16.69	16.68	16.52
12	17.41	16.72	16.62	16.56	16.54	16.51	16.57	16.58	16.68	16.71	16.66	16.52
13	17.44	16.70	16.61	16.56	16.57	16.53	16.60	16.59	16.67	16.72	16.66	16.53
14	17.42	16.64	16.58	16.56	16.56	16.57	16.60	16.61	16.67	16.71	16.66	16.54
15	17.41	16.75	16.59	16.55	16.55	16.55	16.59	16.62	16.67	16.69	16.70	16.54
16	17.43	16.75	16.60	16.58	16.55	16.50	16.58	16.62	16.67	16.68	16.70	16.57
17	17.40	16.71	16.60	16.58	16.55	16.53	16.58	16.60	16.51	16.68	16.69	16.57
18	17.36	16.69	16.54	16.58	16.55	16.53	16.58	16.60	16.43	16.64	16.47	16.57
19	17.44	16.69	16.56	16.57	16.55	16.55	16.61	16.60	16.50	16.66	16.47	16.61
20	17.44	16.66	16.56	16.58	16.53	16.53	16.62	16.65	16.58	16.66	16.43	16.61
21	17.38	16.69	16.56	16.60	....	16.51	16.60	16.65	16.58	16.66	16.43	16.55
22	17.41	16.69	16.55	16.57	....	16.51	16.57	16.67	16.64	16.66	16.42	16.59
23	17.41	16.65	16.57	16.53	....	16.51	16.59	16.68	16.67	16.66	16.50	16.60
24	17.39	16.64	16.57	16.53	....	16.51	16.59	16.67	16.67	16.66	16.51	16.58
25	17.37	16.63	16.54	16.53	....	16.52	16.59	16.65	16.69	16.66	16.50	16.58
26	17.41	16.63	16.54	16.55	....	16.54	16.61	16.63	16.68	16.66	16.49	16.61
27	17.44	16.63	16.54	16.57	16.49	16.55	16.60	16.62	16.71	16.66	16.53	16.62
28	17.40	16.64	16.54	16.57	....	16.58	16.59	16.64	16.73	16.66	16.55	16.59
29	17.43		16.54	16.57	....	16.58	16.56	16.64	16.72	16.65	16.57	16.60
30	17.41		16.55	16.55	....	16.56	16.57	16.63	16.68	16.64	16.57	16.63
31	17.34		16.59	....	....		16.58	16.60		16.65		16.64

K539 (\*906, p. 120; 936, p. 146; 944, p. 128; 986, p. 151; 1016, p. 182; 1023, p. 216). New York City Department of Water Supply, Gas and Electricity, Atlantic Avenue and Logan Street, Brooklyn.

Water level, in feet below mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	2.66	May 6	2.78	July 26	2.20	Oct. 22	2.61
Feb. 8	2.63	June 18	2.44	Aug. 29	2.32	Nov. 26	2.78
Mar. 4	2.68	July 5	2.22	Sept. 27	2.50	Dec. 27	2.81
Apr. 12	2.76						

K889. Finest Steam Laundry. 199 Bogart Street, Brooklyn. Unused industrial well, diameter 6 inches, depth 73 feet below measuring point. Measuring point, top of 6-inch coupling, 15.29 feet above mean sea level. First measured by Geological Survey on June 4, 1945.

Water level, in feet below mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level
June 4, 1945	30.46	Mar. 4, 1946	35.75	May 27, 1946	36.17
July 3	30.41	11	35.79	June 10	36.63
23	30.27	18	35.80	July 8	37.25
Aug. 8	30.12	25	35.66	30	37.69
Sept. 12	32.54	Apr. 1	35.67	Aug. 19	38.17
28	33.23	8	35.56	30	38.35
Nov. 6	34.30	15	35.44	Sept. 16	37.75
Dec. 3	34.78	22	35.31	23	36.25
Jan. 8, 1946	35.07	29	35.07	Oct. 5	20.51
Feb. 11	35.61	May 6	35.32	12	27.83
18	35.67	13	35.55	19	31.90
25	35.66	20	35.97		

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). 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, 1946  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7 a	9.46	Nov. 3	8.30	Nov. 23	8.18	Dec. 13	8.95
Feb. 14 a	9.01	4	8.40	24	8.15	14	8.56
25 a	9.11	5	7.85	25	8.28	15	8.35
Apr. 2 a	8.74	6	7.85	26	8.44	16	8.35
26 a	9.53	7	8.03	27	8.28	17	8.68
June 7 a	9.49	8	8.54	28	8.05	18	8.50
July 5 a	8.41	9	8.27	29	8.18	19	8.46
26 a	7.58	10	8.49	30	8.30	20	8.85
Aug. 30 a	7.75	11	8.67	Dec. 1	8.65	21	9.25
Sept. 26 a	8.01	12	8.54	2	8.04	22	8.53
Oct. 24 a	7.77	13	8.36	3	8.23	23	8.23
25	8.11	14	8.46	4	8.15	24	8.65
26	8.14	15	8.27	5	8.28	25	8.74
27	7.91	16	8.10	6	8.43	26	8.53
28	7.88	17	7.98	7	8.48	27	8.35
29	7.97	18	8.07	8	8.50	28	8.80
30	7.95	19	8.78	9	8.63	29	9.25
31	8.15	20	8.21	10	8.35	30	8.83
Nov. 1	8.00	21	8.23	11	8.60	31	8.62
2	8.09	22	8.50	12	8.75		

a Tape measurement.

K1141 (\*840, p. 262; \*845, p. 311; 886, p. 488; 906, p. 122). New York City Department of Water Supply, Gas and Electricity. Avenue D and Remsen Avenue, Brooklyn. Measurements resumed Apr. 4, 1945.

Water level, in feet below mean sea level, 1945-46

Date	Water level	Date	Water level	Date	Water level
Apr. 4, 1945	6.75	Dec. 4, 1945	7.35	July 5, 1946	6.29
27	6.92	Jan. 10, 1946	6.90	30	6.41
June 5	6.84	Feb. 8	6.71	Aug. 29	6.66
July 3	7.03	25	6.79	Sept. 27	6.91
Sept. 13	7.29	Apr. 12	6.74	Oct. 26	7.11
28	7.31	May 9	6.95	Nov. 26	7.31
Nov. 6	7.51	June 21	6.22	Dec. 30	7.49



K1173. Rugby Can Co., 5819 Foster Ave., Brooklyn. Unused industrial well, diameter  $1\frac{1}{4}$  inches. Measuring point, top of coupling, 13.79 feet above mean sea level. First measured by Geological Survey on May 16, 1945.

Water level, in feet below mean sea level, 1945-46

Date	Water level	Date	Water level	Date	Water level
May 16, 1945	5.74	Dec. 4, 1945	6.48	July 5, 1946	5.24
June 5	5.64	Jan. 10, 1946	5.95	30	5.46
July 3	5.79	Feb. 8	5.56	Aug. 29	5.63
Aug. 7	6.00	25	5.70	Sept. 27	5.76
Sept. 13	6.49	Apr. 12	5.34	Oct. 22	5.78
28	6.58	May 9	5.65	Nov. 26	5.98
Nov. 6	6.55	June 18	5.40	Dec. 30	6.18

K1194 (\*906, p. 122; \*936, p. 148; 944, p. 130; 986, p. 152). New York City Department of Water Supply, Gas and Electricity. Atlantic and Nichols Avenues, Brooklyn. Measurements resumed May 18, 1945.

Water level, in feet below mean sea level, 1945-46

Date	Water level	Date	Water level	Date	Water level
May 18, 1945	2.05	Dec. 4, 1945	2.51	July 1, 1946	2.07
June 5	2.12	Jan. 10, 1946	2.42	30	2.05
July 4	2.14	Feb. 8	2.39	Aug. 29	2.20
Aug. 8	2.00	Mar. 4	2.44	Sept. 27	2.35
Sept. 13	2.17	Apr. 12	2.52	Oct. 23	2.45
28	2.20	May 6	2.50	Nov. 26	2.63
Nov. 6	2.40	June 18	2.15	Dec. 30	2.87

K1198 (\*906, p. 122; 936, p. 148; 944, p. 130; 986, p. 152; 1016, p. 183; 1023, p. 216). New York City Department of Water Supply, Gas and Electricity. Cleveland and Fulton Streets, Brooklyn.

Water level, in feet below mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	4.69	May 6	4.72	July 26	4.34	Oct. 22	4.57
Feb. 7	4.65	June 19	4.55	Aug. 29	4.33	Nov. 26	4.67
Mar. 4	4.65	July 1	4.43	Sept. 27	4.47	Dec. 30	4.77
Apr. 12	4.72						

K1199 (\*906, p. 123; 936, p. 149; 944, p. 131; 986, p. 152; 1016, p. 183; 1023, p. 216). New York City Department of Water Supply, Gas and Electricity. Jefferson and Howard Avenues, Brooklyn.

Water level, in feet below mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	15.43	May 10	15.20	July 26	15.16	Oct. 22	15.22
Feb. 14	15.26	June 18	15.14	Aug. 30	14.96	Nov. 26	15.29
Mar. 15	15.23	July 1	15.14	Sept. 26	15.21	Dec. 27	15.28
Apr. 12	15.20						

K1235 (\*936, p. 149; \*944, p. 131; 986, p. 153; 1016, p. 183; 1023, p. 216). New York City Department of Water Supply, Gas and Electricity. Fulton Street and Pennsylvania Avenue, Brooklyn.

Water level, in feet below mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	8.20	May 6	8.08	July 26	8.07	Oct. 22	8.11
Feb. 8	8.15	June 18	8.14	Aug. 29	7.92	Nov. 26	8.05
Mar. 15	8.07	July 1	8.12	Sept. 27	8.14	Dec. 30	8.15
Apr. 12	8.14						

K1236 (\*936, p. 149; 944, p. 131; 986, p. 153; 1016, p. 184; 1023, p. 216). New York City Department of Water Supply, Gas and Electricity. Lexington and Patchen Avenues, Brooklyn.

Water level, in feet below mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	17.58	May 10	17.81	July 26	17.79	Oct. 22	17.97
Feb. 14	17.52	June 18	17.84	Aug. 30	17.86	Nov. 26	18.06
Mar. 15	17.69	July 1	17.84	Sept. 26	17.95	Dec. 27	18.10
Apr. 12	17.74						

K1237 (\*936, p. 150; 944, p. 131; 986, p. 153; 1016, p. 184; 1023, p. 217). Department of Water Supply, Gas and Electricity. Delmonico Place and Hopkins Street, Brooklyn.

Water level, in feet below mean sea level, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	33.92	May 10	34.09	July 26	35.18	Oct. 22	35.92
Feb. 14	33.90	June 10	34.27	Aug. 30	35.71	Nov. 26	36.44
Mar. 18	33.72	July 1	34.64	Sept. 26	36.04	Dec. 27	36.30
Apr. 12	33.87						

K1263 (\*936, p. 150; 944, p. 132; 986, p. 153; 1016, p. 184; 1023, p. 217). 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, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	9.78	May 9	9.83	July 30	9.65	Oct. 22	10.12
Feb. 8	9.67	June 18	9.70	Aug. 29	9.58	Nov. 26	10.30
Mar. 4	9.69	July 5	9.79	Sept. 26	9.89	Dec. 30	10.31
Apr. 12	9.83						

K1264 (\*936, p. 151; 944, p. 132; 986, p. 153; 1016, p. 185; 1023, p. 217). 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, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	14.75	May 9	14.51	July 30	14.26	Oct. 22	14.80
Feb. 8	14.59	June 18	14.44	Aug. 29	14.33	Nov. 26	15.09
Mar. 4	14.49	July 5	14.30	Sept. 27	14.17	Dec. 30	15.33
Apr. 12	14.43						

K1265 (\*936, p. 151; 944, p. 132; 986, p. 154; 1016, p. 185; 1023, p. 217). New York City Department of Water Supply, Gas and Electricity. Riverdale Avenue and Thatford Street, Brooklyn.

Water level, in feet below mean sea level, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	9.39	May 9	9.69	July 30	9.45	Oct. 22	9.67
Feb. 8	9.52	June 18	9.33	Aug. 29	9.57	Nov. 26	9.24
Mar. 18	9.62	July 5	9.26	Sept. 27	9.76	Dec. 30	9.25
Apr. 12	9.64						

K1266 (\*936, p. 152; 944, p. 133; 986, p. 154; 1016, p. 185; 1023, p. 217). New York City Department of Water Supply, Gas and Electricity. Vermont Street and Livonia Avenue, Brooklyn.

Water level, in feet below mean sea level, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	4.92	May 9	5.10	July 26	4.45	Oct. 22	4.90
Feb. 8	4.83	June 18	4.52	Aug. 29	4.65	Nov. 26	4.96
Mar. 15	4.98	July 5	4.38	Sept. 27	4.83	Dec. 30	5.06
Apr. 12	5.00						

K1296 (\*936, p. 152; 944, p. 133; 986, p. 154; 1016, p. 185; 1023, p. 217). New York City Department of Water Supply, Gas and Electricity. Blake Avenue and Crystal Street, Brooklyn.

Water level, in feet below mean sea level, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	0.29	Apr. 12	0.67	July 30	0.12	Oct. 22	0.83
Feb. 8	.64	May 6	.89	Aug. 29	.47	Nov. 26	1.05
Mar. 18	.83	July 5	1.17	Sept. 27	.73	Dec. 30	1.36

K1347 (\*986, p. 154; 1016, p. 186; 1023, p. 217). R. K. O. Albee Theatre. DeKalb Avenue and Fulton Street, Brooklyn.

K1347--Continued.

## Water level, in feet below mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	21.72	Mar. 25	20.51	July 8	23.26	Oct. 26	22.13
14	21.58	Apr. 1	20.38	30	21.70	Nov. 2	22.10
21	21.43	8	20.33	Aug. 19	21.61	9	21.97
28	21.33	15	20.45	30	23.18	16	21.93
Feb. 4	21.23	22	20.45	Sept. 16	23.05	23	21.86
11	21.12	29	20.56	23	23.95	30	21.78
18	20.98	May 6	20.56	30	23.25	Dec. 7	21.73
25	20.87	13	20.68	Oct. 5	22.80	14	21.80
Mar. 4	20.80	20	20.47	12	22.50	21	21.93
11	20.75	27	21.97	19	22.35	28	21.98
18	19.58	June 10	21.53				

K1495. New York City Department of Water Supply, Gas and Electricity, Avenue S and E 16th Street, Brooklyn. Test well, diameter 2 inches. Measuring point, top of coupling, 18.10 feet above mean sea level. First measured by Geological Survey May 18, 1945.

## Water level in feet above mean sea level, 1945-46

Date	Water level	Date	Water level	Date	Water level
May 18, 1945	2.46	Dec. 4, 1945	2.39	July 15	2.49
June 5	2.18	Jan. 8, 1946	2.93	26	2.89
July 3	2.39	Feb. 8	2.69	Aug. 30	2.50
Aug. 7	2.44	25	2.48	Sept. 26	2.30
Sept. 12	2.37	Apr. 2	2.61	Oct. 26	2.34
28	2.44	29	2.85	Nov. 26	1.94
Nov. 5	2.19	June 10	2.76		

## 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). 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, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	a9.80	9.72	9.97	10.33	9.56	8.55	6.50	4.50	5.15	7.18	8.21	9.18
2	9.53	9.70	10.18	10.70	9.57	8.61	6.50	4.43	5.26	7.15	8.18	9.06
3	9.34	9.53	10.17	10.70	9.44	....	6.28	4.43	5.29	7.08	8.15	8.91
4	9.29	9.42	10.11	10.63	9.31	....	6.09	4.48	5.27	7.10	8.18	9.01
5	9.30	9.44	10.06	10.75	9.40	....	6.00	4.52	5.28	7.13	8.00	9.09
6	9.32	9.70	9.99	10.69	9.37	....	5.96	4.51	5.35	7.24	7.85	9.02
7	9.33	9.95	10.11	10.61	9.29	8.37	5.96	4.61	5.50	7.43	7.87	9.05
8	9.14	9.69	10.07	10.55	9.30	8.33	5.81	4.54	5.59	7.49	8.01	9.14
9	9.13	9.80	10.38	10.69	9.15	8.24	5.77	4.52	5.64	7.53	7.95	9.22
10	9.29	9.89	10.11	10.59	8.98	7.99	5.66	4.60	5.81	7.67	7.86	9.39
11	9.06	9.85	10.11	10.49	8.96	8.03	5.52	4.55	5.94	7.73	8.01	9.46
12	9.22	9.74	9.99	10.50	8.93	8.10	5.51	4.46	5.86	7.84	8.12	9.43
13	9.18	9.86	10.10	10.48	8.74	8.06	5.41	4.44	5.79	7.81	8.14	9.76
14	8.98	10.24	10.15	10.45	8.59	7.81	5.58	4.38	5.93	7.74	8.29	9.56
15	9.12	10.12	10.30	10.62	8.74	7.76	5.58	4.37	6.03	7.79	8.18	9.50
16	8.87	9.75	10.20	10.63	8.70	7.70	....	4.34	6.06	7.87	8.07	9.33
17	9.00	9.92	10.20	10.40	8.83	7.79	....	4.44	6.11	8.01	8.12	9.40
18	9.16	9.78	10.26	10.40	8.81	7.92	....	4.45	6.09	8.16	8.07	9.30
19	9.16	9.73	10.29	10.37	8.78	7.70	4.96	4.55	6.12	8.05	8.14	9.16
20	8.91	10.27	10.32	10.46	8.71	7.66	4.77	4.58	6.18	7.95	8.31	9.04
21	9.41	9.96	10.32	10.13	8.81	7.69	4.64	4.58	6.24	7.97	8.36	9.33
22	9.33	9.90	10.42	10.19	8.62	7.64	4.52	4.60	6.25	8.03	8.60	....
23	9.22	10.03	10.42	10.29	8.51	7.47	4.50	4.60	6.22	8.12	8.61	8.85
24	9.40	10.13	10.38	10.36	8.48	7.44	4.44	4.61	6.34	8.17	8.58	8.82

a Estimated.

N7--Continued.

Water level at noon, in feet above mean sea level, 1946

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
25	9.78	10.26	10.47	10.34	8.52	7.37	4.54	4.65	6.53	8.22	8.77	8.67
26	9.67	10.17	10.50	10.51	8.50	7.24	4.59	4.70	6.58	8.27	8.88	8.65
27	9.41	10.21	10.61	10.29	8.57	7.08	4.53	4.81	6.60	8.11	8.93	8.28
28	9.42	10.14	10.54	9.96	8.48	6.91	4.50	4.83	6.61	8.08	8.85	8.52
29	9.42		10.56	9.77	8.43	6.76	4.56	4.93	6.71	8.22	8.94	8.32
30	9.45		10.61	9.62	8.51	6.58	4.58	4.99	7.14	8.29	8.85	8.24
31	9.87		10.37		8.53		4.54	5.11		8.34		8.03

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). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	22.19	Apr. 5	21.80	Aug. 28	21.56	Nov. 26	21.62
Feb. 1	22.04	26	21.98	Sept. 24	21.74	Dec. 30	21.63
Mar. 1	21.86	May 31	21.88	Oct. 29	21.74		

N53 (\*777, p. 123; \*817, p. 201; \*840, p. 265; 845, p. 312; 886, p. 489; \*906, p. 124; 936, p. 154; 944, p. 134; \*986, p. 156; 1016, p. 188; 1023, p. 219). Village of Rockville Centre. In basement of municipal power station, Morris and Maple Avenues, Rockville Centre.

Water level, in feet above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	14.89	Apr. 30	14.49	July 26	14.41	Oct. 29	13.29
Feb. 12	14.91	June 6	15.14	Aug. 28	14.03	Nov. 26	12.93
28	14.78	28	14.83	Sept. 24	13.65	Dec. 30	12.69
Apr. 5	14.96						

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). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 5	85.26	Apr. 25	85.84	July 29	86.11	Nov. 1	86.55
26	85.49	June 4	85.95	Aug. 30	86.20	29	86.72
Apr. 3	85.72	July 3	86.02	Sept. 25	86.58	Dec. 31	86.27

N180. New York City Department of Water Supply, Gas and Electricity. Northeast corner of Condit Street and Seamans Neck Road, Seaford. Test well, depth 762 feet below land surface. Measuring point, hole in wooden recorder shelf, 25.10 feet above mean sea level. First measured by Geological Survey on Oct. 30, 1945.

Water level at noon, in feet above mean sea level, 1945

(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 30	19.15	Nov. 14	19.26	Nov. 29	19.80	Dec. 14	19.72
31	19.26	15	19.19	30	19.79	15	19.68
Nov. 1	19.17	16	19.11	Dec. 1	19.72	16	19.71
2	19.23	17	19.13	2	19.77	18	19.57
3	19.29	18	19.18	3	19.84	19	19.78
4	19.22	19	19.18	4	14.77	20	19.75
5	19.21	20	19.23	5	19.72	22	19.66
6	19.12	21	19.10	6	19.90	24	19.56
7	19.14	22	19.42	7	19.98	25	19.59
8	19.15	23	19.38	8	19.79	26	19.86
9	19.13	24	19.36	9	19.80	27	19.72
10	19.05	25	19.33	10	19.84	28	19.62
11	19.09	26	19.26	11	19.70	29	19.90
12	19.16	27	19.30	12	19.61	30	19.92
13	19.22	28	19.42	13	19.58	31	20.15

N180--Continued.

Water level at noon, in feet above mean sea level, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	20.02	20.07	19.90	20.06	19.71	19.89	19.97	19.37	19.42	19.21	18.70	18.58
2	19.90	20.09	20.09	20.29	19.76	20.11	20.06	19.37	19.41	19.11	18.71	18.39
3	19.95	19.91	20.04	20.15	19.70	20.13	19.99	19.36	19.34	19.05	18.80	18.32
4	20.03	19.86	20.00	20.22	19.69	20.25	19.97	19.40	19.28	19.04	18.89	18.39
5	20.12	19.94	19.92	20.22	19.84	20.36	19.94	19.39	19.27	19.02	18.74	18.43
6	20.18	20.10	19.91	20.18	19.81	20.40	19.97	19.34	19.30	19.08	18.67	18.56
7	20.20	20.15	20.00	20.07	19.74	20.46	19.98	19.62	19.32	19.12	18.70	18.42
8	20.09	19.95	19.94	20.04	19.77	20.49	19.89	19.65	19.29	19.05	18.81	18.47
9	20.17	20.06	20.09	20.13	19.72	20.42	19.92	19.70	19.29	19.09	18.73	18.47
10	20.24	20.05	19.85	20.02	19.61	20.30	19.89	19.75	19.34	19.17	18.65	18.53
11	20.08	20.00	19.84	19.97	19.66	20.35	19.86	19.70	19.30	19.14	18.81	18.42
12	20.21	19.91	19.78	19.98	19.68	20.38	19.90	19.65	19.16	19.20	18.81	18.43
13	20.15	19.99	19.87	19.97	19.59	20.35	19.82	19.66	19.14	19.07	18.77	18.49
14	20.00	20.20	19.87	19.96	19.54	20.21	19.78	19.63	19.24	19.03	18.78	18.34
15	20.08	20.00	19.99	20.08	19.72	20.24	19.74	19.60	19.25	19.03	18.62	18.28
16	19.92	19.91	19.93	19.96	19.73	20.23	19.69	19.62	19.22	19.05	18.58	18.18
17	19.93	19.89	19.98	19.83	19.80	20.29	19.73	19.67	19.17	19.05	18.61	.....
18	20.16	19.78	20.00	19.87	19.77	20.32	19.71	19.63	19.10	19.07	18.55	.....
19	20.03	19.80	20.01	19.83	19.78	20.17	19.68	19.71	19.11	18.90	18.61	.....
20	19.93	20.12	20.03	19.86	19.74	20.19	19.63	19.64	19.11	18.50	18.66	.....
21	20.23	19.92	20.00	19.70	19.78	20.21	19.58	19.55	19.10	18.91	18.60	18.56
22	20.03	19.83	20.05	19.78	19.63	20.15	19.57	19.53	19.11	18.93	18.79	18.43
23	19.93	19.81	19.98	19.87	19.58	20.08	19.59	19.50	19.08	18.95	18.63	18.28
24	20.02	19.92	19.97	19.87	19.59	20.09	19.56	19.47	19.13	18.94	18.55	18.33
25	20.15	19.94	20.05	19.88	19.64	20.07	19.55	19.46	19.18	18.94	18.63	18.30
26	20.00	19.86	20.04	20.04	19.64	20.04	19.46	19.47	19.11	18.93	18.62	18.40
27	19.86	19.85	20.11	19.90	19.77	20.00	19.43	19.52	19.04	18.83	18.56	18.18
28	19.91	19.87	20.09	19.75	19.79	19.98	19.42	19.49	18.99	18.84	18.45	18.41
29	19.87		20.12	19.71	19.84	19.95	19.47	19.54	19.05	18.90	18.46	18.37
30	19.90		20.13	19.69	19.90	19.95	19.44	19.49	19.32	18.85	18.40	18.33
31	20.20		20.04		19.89		19.38	19.49		18.82		18.25

N657. Town of North Hempstead. West Shore Road, Bar Beach. Unused public supply well, diameter 8 inches, depth 327 feet below land surface. Measuring point, top of coupling, 15.82 feet above mean sea level. First measured by Geological Survey on Feb. 12, 1945. Water levels affected by tidal fluctuations.

Mean daily water level, in feet above mean sea level, 1945-46

Date	Water level	Date	Water level	Date	Water level
Feb. 12, 1945	14.48	Mar. 14, 1945	12.31	July 16, 1945	13.07
20	12.78	20	13.43	23	13.41
21	12.84	26	13.36	30	13.53
22	13.11	29	13.47	Aug. 6	13.45
23	12.99	Apr. 2	13.18	13	13.41
24	12.76	9	13.36	20	13.25
25	13.07	12	13.42	27	13.48
26	13.38	16	13.38	Sept. 3	13.31
27	13.28	23	13.28	10	13.45
28	13.06	27	13.55	17	13.43
Mar. 1	13.11	30	13.43	24	13.57
2	13.14	May 7	13.37	Oct. 1	13.52
3	13.40	11	12.75	9	13.49
4	13.01	14	13.32	16	13.10
5	13.17	21	13.58	22	13.59
6	13.42	26	13.53	29	13.56
7	13.22	29	13.44	Nov. 5	13.75
8	12.95	June 4	13.58	13	13.78
9	13.14	11	13.61	19	13.59
10	13.31	18	13.35	26	13.45
11	13.56	25	13.34	Dec. 3	13.65
12	13.41	July 2	13.34	10	13.77
13	13.16	10	13.12	25	13.48

N657--Continued.

Mean daily water level, in feet above mean sea level, 1945-46					
Date	Water level	Date	Water level	Date	Water level
Jan. 1, 1946	13.99	May 5, 1946	13.65	Aug. 30, 1946	13.94
14	13.27	12	13.45	Sept. 7	13.82
22	13.14	19	13.69	13	14.02
29	12.95	26	13.68	20	13.58
Feb. 6	13.85	June 1	13.39	27	13.76
12	13.37	8	13.95	Oct. 4	13.98
18	13.39	14	14.23	17	14.25
24	13.68	21	13.88	24	14.34
Mar. 3	13.57	28	13.43	Nov. 1	14.06
10	13.10	July 5	13.96	7	14.00
17	13.64	12	13.29	14	14.30
24	13.52	19	13.29	20	14.03
31	13.77	26	13.34	28	13.77
Apr. 7	13.64	Aug. 2	13.72	Dec. 6	14.16
14	13.62	9	13.61	13	14.13
21	13.58	16	13.69	19	13.83
28	13.58	23	13.83	28	13.59

N844 (\*906, p. 126; 936, p. 155; \*944, p. 136; 986, p. 158; 1016, p. 190; 1023, p. 219). Long Island Railroad. Jerusalem Avenue about 110 feet north of railroad tracks, Hicksville.

Mean daily water level, in feet above mean sea level, 1946					
Date	Water level	Date	Water level	Date	Water level
Feb. 5	81.50	Apr. 25	82.31	July 29	82.46
26	81.89	June 4	82.29	Aug. 29	82.61
Apr. 3	82.27	July 3	82.41	Sept. 24	82.67
				Dec. 31	82.01

N1102 (\*886, p. 491; 906, p. 128; 936, p. 156; 944, p. 137; 986, p. 159; 1016, p. 191; 1023, p. 219). Nassau County Department of Public Works. Willets and Valley Roads, Lake Success.

Water level, in feet above mean sea level, 1946					
Feb. 5	56.56	Apr. 25	56.99	July 26	57.20
26	56.74	June 4	57.09	Aug. 30	57.29
Apr. 2	57.12	July 3	57.21	Sept. 24	57.43
				Dec. 27	56.55

N1103 (\*886, p. 493; 906, p. 128; 936, p. 156; 944, p. 137; 986, p. 160; 1016, p. 191; 1023, p. 219). Nassau County Department of Public Works. North side of Marcus Avenue and 253 feet east of Lakeville Road, Lake Success.

Water level, in feet above mean sea level, 1946					
Feb. 5	57.74	Apr. 25	58.15	July 26	58.48
26	57.88	June 4	57.86	Aug. 28	57.70
Apr. 2	58.10	July 3	57.60	Sept. 24	58.84
				Dec. 27	59.34

N1104 (\*886, p. 493; 906, p. 128; 936, p. 156; 944, p. 137; 986, p. 160; 1016, p. 191; 1023, p. 220). Nassau County Department of Public Works. Rhodes Street and 30th Avenue, New Hyde Park.

Water level, in feet above mean sea level, 1946					
Apr. 25	58.55	July 26	59.38	Sept. 24	60.11
June 4	58.82	Aug. 28	60.04	Oct. 29	60.08
July 3	59.05			Nov. 26	59.67
				Dec. 2	59.27

N1105 (\*886, p. 493; 906, p. 128; 936, p. 156; 944, p. 137; 986, p. 160; 1016, p. 191; 1023, p. 220). Nassau County Department of Public Works. Emerson and Whittier Avenues, New Hyde Park.

N1105--Continued.

## Water level, in feet above mean sea level, 1946.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 5	55.16	Apr. 25	55.44	July 26	56.44	Oct. 29	56.52
26	55.44	June 4	55.86	Aug. 28	56.90	Nov. 26	56.34
Apr. 2	55.58	July 3	56.29	Sept. 24	56.69	Dec. 27	55.99

N1107 (\*886, p. 493; 906, p. 128; 936, p. 157; 944, p. 138; 986, p. 160; 1016, p. 192; 1023, p. 220). Nassau County Department of Public Works. Bertha Street and Kingston Avenue, South Floral Park.

## Water level, in feet above mean sea level, 1946

Jan. 2	43.91	Apr. 30	44.34	July 26	45.09	Oct. 29	44.79
Feb. 12	44.67	June 6	44.99	Aug. 28	45.25	Nov. 26	44.46
28	44.61	June 28	45.40	Sept. 24	44.91	Dec. 27	44.04
Apr. 5	44.53						

N1108 (\*886, p. 492; 906, p. 128; 936, p. 157; 944, p. 138; 986, p. 161; 1016, p. 192; 1023, p. 220). Nassau County Department of Public Works. Jacob Street and Rosalind Avenue, Elmont.

## Water level, in feet above mean sea level, 1946

Jan. 2	39.09	Apr. 30	39.96	July 26	40.19	Oct. 29	39.48
Feb. 12	40.01	June 6	39.89	Aug. 28	40.02	Nov. 26	39.19
28	39.91	28	40.52	Sept. 24	39.69	Dec. 27	39.56
Apr. 5	39.69						

N1109 (\*886, p. 492; 906, p. 128; 936, p. 157; 944, p. 138; 986, p. 161; 1016, p. 192; 1023, p. 220). Nassau County Department of Public Works. Dutch Broadway and Henry Street, Elmont.

## Water level, in feet above mean sea level, 1946

Jan. 2	27.52	Apr. 30	27.37	July 26	27.78	Oct. 29	26.91
Feb. 12	27.95	June 6	28.24	Aug. 28	27.31	Nov. 26	26.73
28	27.73	28	28.29	Sept. 24	26.91	Dec. 27	26.38
Apr. 5	27.57						

N1110 (\*886, p. 492; 906, p. 129; 936, p. 157; 944, p. 138; 986, p. 161; 1016, p. 193; 1023, p. 220). 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, 1946

Jan. 2	20.67	Apr. 30	20.05	July 26	20.18	Oct. 29	19.73
Feb. 12	20.33	June 6	21.05	Aug. 28	19.87	Nov. 26	19.64
28	20.26	28	20.46	Sept. 24	19.67	Dec. 27	19.55
Apr. 5	20.35						

N1111 (\*886, p. 492; 906, p. 129; 936, p. 157; 944, p. 138; 986, p. 161; 1016, p. 193; 1023, p. 220). Nassau County Department of Public Works. Fletcher and Teneyck Avenues, Valley Stream.

## Water level, in feet above mean sea level, 1946

Jan. 2	13.22	Apr. 30	11.82	July 26	14.13	Oct. 29	13.70
Feb. 12	12.31	June 6	14.79	Aug. 28	14.00	Nov. 26	13.71
28	12.38	July 2	14.38	Sept. 24	14.00	Dec. 30	12.66
Apr. 5	12.18						

N1112 (\*886, p. 492; 906, p. 129; 936, p. 157; 944, p. 138; 986, p. 161; 1016, p. 193; 1023, p. 221). Nassau County Department of Public Works. Sunrise Highway and 2d Street, Valley Stream.

## Water level, in feet above mean sea level, 1946

Jan. 2	9.87	Apr. 30	9.17	July 26	9.21	Oct. 29	8.83
Feb. 12	9.54	June 6	10.24	Aug. 28	8.94	Nov. 26	8.78
28	9.41	28	9.40	Sept. 24	8.78	Dec. 30	9.02
Apr. 5	9.35						

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). Nassau County Department of Public Works. At northwest corner of Stewart Avenue and Sackville Road, Garder City.

Water level, in feet above mean sea level, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 5	58.72	Apr. 26	58.72	July 29	59.67	Oct. 30	59.09
26	58.92	June 4	58.69	Aug. 29	59.56	Nov. 27	58.70
Apr. 2	58.80	July 3	59.60	Sept. 24	59.37	Dec. 31	58.19

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). 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, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	9.14	Apr. 30	8.53	July 26	8.26	Oct. 29	7.76
Feb. 12	8.89	June 6	9.30	Aug. 28	8.01	Nov. 26	7.44
28	8.65	28	8.48	Sept. 24	7.88	Dec. 30	7.42
Apr. 5	8.83						

N1140 (\*886, p. 495; 906, p. 130; 936, p. 158; 944, p. 139; 986, p. 163; 1016, p. 194; 1023, p. 221). 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, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 5	61.33	Apr. 25	61.43	July 29	62.06	Oct. 30	61.48
26	61.56	June 4	61.38	Aug. 29	62.01	Nov. 27	61.12
Apr. 3	61.61	July 3	62.11	Sept. 24	61.81	Dec. 31	60.72

N1147 (\*886, p. 495; 906, p. 130; 936, p. 159; 944, p. 140; 986, p. 163; 1016, p. 194; 1023, p. 221). 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, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	18.71	Apr. 30	18.10	July 26	18.03	Oct. 31	17.37
Feb. 12	18.41	June 6	18.95	Aug. 28	17.93	Nov. 26	17.10
28	18.35	28	18.41	Sept. 24	17.70	Dec. 30	17.03
Apr. 5	18.53						

N1160 (\*886, p. 495; 906, p. 130; 936, p. 159; 944, p. 140; 986, p. 163; 1016, p. 194; 1023, p. 221). 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, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 5	66.85	Apr. 25	66.22	July 29	66.78	Oct. 31	65.84
26	66.56	June 4	66.73	Aug. 29	66.51	Nov. 27	65.37
Apr. 3	66.43	July 3	67.21	Sept. 24	66.27	Dec. 31	64.91

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). 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, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	11.67	Apr. 30	11.63	July 26	11.47	Oct. 29	10.94
Feb. 12	11.95	June 6	11.90	Aug. 28	11.08	Nov. 26	10.77
28	11.69	28	11.73	Sept. 24	10.91	Dec. 30	10.63
Apr. 5	11.68						

N1185 (\*845, p. 321; 886, p. 496; 906, p. 132; 936, p. 161; 944, p. 142; 986, p. 166; 1016, p. 195; 1023, p. 222). Nassau County Department of Public Works. Northwest corner of West Grand Avenue and Lindgren Street, Merrick.



N1185--Continued.

## Water level, in feet above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	14.33	Apr. 30	12.95	July 26	11.93	Oct. 29	11.29
Feb. 12	13.39	June 6	14.43	Aug. 28	11.50	Nov. 26	11.28
28	13.36	28	13.14	Sept. 24	11.27	Dec. 30	11.46
Apr. 5	13.55						

N1198 (\*886, p. 496; 906, p. 133; 936, p. 161; 944, p. 142; 986, p. 166; 1016, p. 195; 1023, p. 222). 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.

## Water level, in feet above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 5	66.94	Apr. 25	66.96	July 29	67.20	Oct. 29	66.57
26	67.00	June 4	66.60	Aug. 29	67.27	Nov. 27	66.16
Apr. 3	67.05	July 11	67.36	Sept. 24	67.02	Dec. 31	65.65

N1204 (\*886, p. 497; 906, p. 133; 936, p. 162; 944, p. 143; 986, p. 166; 1016, p. 195; 1023, p. 222). Nassau County Department of Public Works. At northwest corner of Harris Court and John Street, Bellemore.

## Water level, in feet above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	12.10	Apr. 30	11.31	July 26	9.78	Oct. 29	8.74
Feb. 12	11.46	June 6	12.04	Aug. 28	9.88	Nov. 26	8.61
28	11.53	28	11.37	Sept. 24	9.06	Dec. 30	7.71
Apr. 5	11.65						

N1212 (\*986, p. 166; 1016, p. 196; 1023, p. 222). 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, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	86.44	86.31	86.29	86.65	86.94	87.24	87.44	87.61	87.71	87.89	87.84	88.11
2	86.20	86.45	86.44	87.09	87.07	87.32	87.47	87.59	87.79	87.84	87.90	87.72
3	86.26	86.24	86.44	86.75	87.01	87.16	87.34	87.61	87.72	87.78	87.95	87.64
4	86.35	86.20	86.55	86.86	87.01	87.22	87.35	87.63	87.67	87.78	88.08	87.80
5	86.48	86.20	86.44	86.89	87.03	87.24	87.38	87.67	87.68	87.78	87.87	87.91
6	86.50	86.35	86.44	86.95	87.14	87.25	87.50	87.64	87.74	87.91	87.92	87.67
7	86.54	86.36	86.61	86.81	87.08	87.32	87.55	87.74	87.85	88.04	88.01	87.77
8	86.25	86.19	86.52	86.82	87.17	87.34	87.39	87.62	87.81	87.86	88.13	87.81
9	86.49	86.55	86.90	86.94	87.09	87.26	87.49	87.64	87.81	87.91	87.86	87.82
10	86.50	86.44	86.45	86.81	86.98	87.07	87.46	87.73	87.92	87.96	87.76	87.94
11	86.25	86.32	86.55	86.79	87.05	87.35	87.45	87.64	87.85	87.88	87.95	87.77
12	86.59	86.22	86.47	86.85	87.05	87.38	87.57	87.56	87.64	88.01	87.94	87.82
13	86.39	86.47	86.65	86.86	86.90	87.33	87.46	87.62	87.65	87.75	87.92	87.95
14	86.23	86.85	86.69	86.86	86.96	87.05	87.50	87.59	87.81	87.76	88.02	87.82
15	86.43	86.52	86.75	87.17	87.11	87.18	87.42	87.59	87.81	87.82	87.74	87.81
16	86.14	86.19	86.53	86.88	87.12	87.24	87.39	87.72	87.78	87.93	87.76	87.58
17	86.44	86.54	86.62	86.75	87.18	87.44	87.52	87.86	87.82	88.02	87.84	87.88
18	86.56	86.29	86.67	86.80	87.16	87.49	87.56	87.77	87.79	88.12	87.67	87.67
19	86.28	86.39	86.66	86.80	87.14	87.17	87.58	87.78	87.85	87.73	87.84	87.55
20	86.11	86.52	86.66	86.81	87.07	87.30	87.58	87.67	87.91	87.71	87.95	87.63
21	86.77	86.28	86.65	86.71	87.25	87.40	87.55	87.62	87.92	87.81	87.87	88.10
22	86.26	86.43	86.74	86.99	86.99	87.31	87.53	87.73	87.79	87.86	88.18	87.76
23	86.23	86.59	86.60	87.09	87.05	87.26	87.58	87.70	87.76	87.91	87.83	87.70
24	86.54	86.60	86.62	87.05	87.17	87.35	87.54	87.71	87.83	87.93	87.81	87.80
25	86.65	86.63	86.79	87.05	87.23	87.37	87.63	87.73	87.91	87.94	87.94	87.71
26	86.38	86.52	86.81	87.25	87.23	87.36	87.50	87.77	87.84	87.92	87.93	87.89
27	.....	86.54	86.72	86.95	87.32	87.36	87.51	87.79	87.77	87.73	87.82	87.56
28	86.29	86.41	86.72	86.80	87.12	87.37	87.53	87.74	87.79	87.83	87.69	87.99
29	86.21		86.85	86.84	87.19	87.39	87.63	87.82	87.94	88.01	87.85	87.84
30	86.35		86.79	86.84	87.25	87.40	87.63	87.70	88.14	88.02	87.76	87.50
31	86.37		86.55		87.22		87.60	87.79		88.04		87.54

a Estimated.

N1216 (\*886, p. 497; 906, p. 133; 936, p. 162; 944, p. 143; 986, p. 168; 1016, p. 198; 1023, p. 223). Nassau County Department of Public Works. On north side of Central Boulevard, 500 feet west of Wantagh Road, Central Park.

Water level, in feet above mean sea level, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 7	65.40	Apr. 26	65.92	July 29	66.64	Oct. 29	66.83
28	65.79	June 6	65.99	Aug. 29	67.33	Nov. 27	66.24
Apr. 5	65.76	28	66.29	Sept. 24	66.95	Dec. 31	65.93

N1222 (\*886, p. 497; 906, p. 134; 936, p. 162; 944, p. 143; 986, p. 169; 1016, p. 199; 1023, p. 223). Nassau County Department of Public Works. At southwest corner of Cecelia Place and John Street, Seaford.

Water level, in feet above mean sea level, 1946							
Jan. 2	9.51	Apr. 30	8.92	July 26	7.62	Oct. 29	3.84
Feb. 7	9.18	June 6	9.44	Aug. 28	6.23	Nov. 26	2.25
28	9.15	July 2	8.97	Sept. 24	5.22	Dec. 31	2.17
Apr. 5	9.19						

N1234 (\*886, p. 498; 906, p. 134; 936, p. 162; 944, p. 143; 986, p. 170; 1016, p. 200; 1023, p. 223). 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, 1946							
Jan. 4	61.33	Apr. 31	62.73	July 26	63.23	Oct. 30	62.52
Feb. 7	61.27	June 5	62.70	Aug. 29	63.25	Nov. 27	62.06
27	62.49	July 2	63.31	Sept. 25	62.95	Dec. 31	61.45
Mar. 29	62.83						

N1240 (\*886, p. 498; 906, p. 134; 936, p. 163; 944, p. 144; 986, p. 170; 1016, p. 201; 1023, p. 223). 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, 1946							
Jan. 2	10.88	Apr. 30	10.42	July 26	7.48	Oct. 30	2.29
Feb. 7	10.67	June 6	11.04	Aug. 28	5.47	Nov. 27	.94
28	10.53	July 2	10.54	Sept. 25	4.70	Dec. 30	.82
Apr. 5	10.71						

N1244 (\*906, p. 135; 936, p. 163; 944, p. 144; 986, p. 171; 1016, p. 201; 1023, p. 223). 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, 1946							
Jan. 4	73.98	Apr. 31	73.89	July 29	75.07	Oct. 30	74.45
Feb. 7	73.98	June 5	73.95	Aug. 29	74.21	Nov. 27	74.52
27	74.02	July 2	74.03	Sept. 25	74.34	Dec. 30	74.64
Mar. 29	73.75						

N1245 (\*906, p. 135; 936, p. 163; 944, p. 144; 986, p. 171; 1016, p. 202; 1023, p. 224). 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, 1946							
Jan. 4	78.65	Apr. 31	78.53	July 29	79.15	Oct. 30	79.38
Feb. 7	78.81	June 5	73.70	Aug. 29	78.99	Nov. 27	79.49
27	78.58	July 2	78.94	Sept. 25	79.18	Dec. 30	79.61
Mar. 29	78.54						

N1246 (\*906, p. 135; 936, p. 163; 944, p. 144; 986, p. 171; 1016, p. 202; 1023, p. 224). Nassau County Department of Public Works. On east side of Plainview-Melville Road, just west of Suffolk County line, Plainview.

Water level, in feet above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	79.16	Apr. 31	79.34	July 29	79.73	Oct. 30	80.28
Feb. 7	79.26	June 5	79.52	Aug. 29	79.96	Nov. 27	80.22
27	79.09	July 2	79.60	Sept. 25	80.12	Dec. 30	79.79
Mar. 29	79.36						

N1247 (\*886, p. 498; 906, p. 135; 944, p. 145; 986, p. 172; 1016, p. 202; 1023, p. 224). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	72.07	Apr. 31	72.72	July 29	73.14	Oct. 30	73.25
Feb. 7	72.42	June 5	72.85	Aug. 29	73.31	Nov. 27	73.07
27	72.46	July 11	73.05	Sept. 25	73.40	Dec. 30	72.79
Mar. 29	72.66						

N1249 (\*906, p. 136; 936, p. 164; 944, p. 145; 986, p. 172; 1016, p. 202; 1023, p. 224). Nassau County Department of Public Works. At northeast corner of Secatogue Avenue and Wall Street, Farmingdale.

Water level, in feet above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	53.47	Apr. 31	53.92	July 26	54.35	Oct. 20	53.05
Feb. 7	53.90	June 5	54.75	Aug. 29	54.12	Nov. 27	52.40
27	53.63	July 2	54.73	Sept. 25	53.39	Dec. 30	52.04
Mar. 29	54.15						

N1250 (\*886, p. 499; 906, p. 136; 936, p. 164; 944, p. 145; 986, p. 172; 1016, p. 202; 1023, p. 224). Nassau County Department of Public Works. About 275 feet west of Old Carmans Road and about 2,200 feet northwest of Great Neck Road, Farmingdale.

Water level, in feet above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	46.59	Apr. 30	46.57	July 26	46.64	Oct. 30	45.37
Feb. 14	46.72	June 5	47.75	Aug. 28	46.32	Nov. 27	44.89
27	46.50	July 2	47.25	Sept. 25	45.82	Dec. 30	44.49
Mar. 29	46.91						

N1251 (\*886, p. 499; 906, p. 136; 936, p. 164; 944, p. 145; 986, p. 172; 1016, p. 203; 1023, p. 224). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	39.13	Apr. 30	38.68	July 26	38.53	Oct. 30	37.31
Feb. 14	39.04	June 5	40.15	Aug. 28	38.25	Nov. 27	36.85
27	38.80	July 11	38.95	Sept. 25	38.78	Dec. 30	36.75
Mar. 29	39.10						

N1252 (\*906, p. 136; 936, p. 164; 944, p. 145; 986, p. 173; 1016, p. 203; 1023, p. 224). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	25.77	Apr. 30	25.50	July 26	25.25	Oct. 30	24.08
Feb. 14	25.73	June 5	26.29	Aug. 28	24.94	Nov. 27	23.65
27	25.63	July 2	25.99	Sept. 25	24.56	Dec. 30	23.46
Mar. 29	25.84						

N1253 (\*886, p. 499; 906, p. 137; 936, p. 164; 986, p. 173; 1016, p. 203; 1023, p. 225). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	16.21	Apr. 30	15.70	July 26	15.18	Oct. 30	13.19
Feb. 7	16.01	June 5	16.50	Aug. 28	14.50	Nov. 27	12.42
27	15.78	July 11	15.66	Sept. 25	13.86	Dec. 30	12.15
Apr. 5	16.05						

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). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 5	61.97	Apr. 25	61.31	July 29	61.88	Oct. 30	60.95
26	61.62	June 4	62.30	Aug. 29	61.65	Nov. 27	60.51
Apr. 3	61.66	July 3	62.41	Sept. 24	61.34	Dec. 31	59.98

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). Nassau County Department of Public Works. At junction of Hillside Avenue and Bacon Road, Westbury.

Water level, in feet above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 5	78.26	Apr. 25	78.30	July 29	78.77	Oct. 29	78.66
26	78.27	June 4	78.59	Aug. 29	78.82	Nov. 29	78.54
Apr. 3	78.56	July 3	78.91	Sept. 25	78.73	Dec. 31	78.37

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). New York City Department of Water Supply, Gas and Electricity. Carman and Scranton Avenues, East Rockaway.

Water level, in feet above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	9.33	Apr. 30	8.19	July 26	7.58	Oct. 29	7.17
Feb. 12	8.49	June 6	8.79	Aug. 28	7.03	Nov. 26	7.55
28	8.32	28	8.35	Sept. 24	6.79	Dec. 30	6.77
Apr. 5	8.14						

N1258 (\*840, p. 278; 845, p. 320; 886, p. 500; 906, p. 138; 936, p. 166; 944, p. 146; 986, p. 175; 1016, p. 204; 1023, p. 225). New York City Department of Water Supply, Gas and Electricity. West side of Carman's Road about 300 feet north of Southern State Parkway, Farmingdale. Measurements discontinued on Aug. 28, 1946.

Water level, in feet above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	38.12	Mar. 29	38.00	June 5	38.97	July 26	37.39
Feb. 7	38.12	Apr. 30	37.58	July 11	37.63	Aug. 28	37.19
27	37.71						

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). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	52.91	Apr. 26	52.98	July 26	53.25	Oct. 30	52.52
28	53.04	May 29	52.65	Aug. 30	53.36	Nov. 27	52.06
Mar. 29	53.11	June 27	53.46	Sept. 30	52.77	Dec. 31	51.53

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). Nassau County Department of Public Works. On west side of Main Street, 100 feet south of Pittsburg Avenue, Massapequa.

Water level, in feet above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	22.11	Apr. 26	21.54	July 26	20.86	Oct. 29	19.37
Feb. 7	21.93	June 6	22.86	Aug. 28	20.67	Nov. 27	18.77
28	21.60	28	21.81	Sept. 24	19.93	Dec. 30	18.48
Mar. 29	21.94						

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). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	35.29	Apr. 30	35.21	July 29	34.59	Oct. 29	34.41
Feb. 12	35.14	June 6	35.41	Aug. 29	35.12	Nov. 27	34.26
28	35.74	28	34.93	Sept. 24	34.53	Dec. 30	34.20
Apr. 5	35.39						

N1263 (\*840, p. 283; 845, p. 323; 886, p. 502; \*906, p. 139; 936, p. 167; 944, p. 147; 986, p. 176; 1016, p. 205; 1023, p. 226). 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.

Water level, in feet above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	50.46	Apr. 30	51.24	July 29	51.42	Oct. 29	50.84
Feb. 12	51.65	June 6	51.35	Aug. 29	51.77	Nov. 27	50.31
28	51.75	28	51.63	Sept. 24	51.27	Dec. 31	49.79
Apr. 5	51.59						

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). New York City Department of Water Supply, Gas and Electricity. On west side of Newbridge Road about 300 feet south of Sunrise Highway, Bellemore.

Water level, in feet above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	9.36	Apr. 30	8.09	July 26	6.36	Oct. 29	5.63
Feb. 12	8.30	June 6	9.16	Aug. 28	6.33	Nov. 26	5.57
28	8.51	28	8.12	Sept. 24	5.70	Dec. 30	4.76
Apr. 5	8.47						

N1265 (\*906, p. 140; \*936, p. 167; 944, p. 148; 986, p. 177; 1016, p. 206; 1023, p. 226). Nassau County Department of Public Works. At southwest corner of Albany Avenue and Merrick Road, Freeport. Water level, in feet above mean sea level, 1946: Mar. 21, 3.65; June 6, 4.08; Sept. 19, 3.14; Dec. 18, 2.99.

N1269 (\*906, p. 140; 936, p. 168; 944, p. 148; 986, p. 177; 1016, p. 206; 1023, p. 226). Nassau County Department of Public Works. At southwest corner of Babylon Turnpike and Poplar Street, Merrick. Water level, in feet above mean sea level, 1946: Mar. 21, 8.20; June 6, 9.28; Sept. 19, 4.47; Dec. 18, 4.47.

N1271 (\*906, p. 141; 936, p. 168; \*944, p. 148; 986, p. 177; 1016, 1023, p. 266). Nassau County Department of Public Works. At northeast corner of Beach Drive and Florence Street, Merrick. Water level, in feet above mean sea level, 1946: Mar. 21, 2.57; June 6, 3.45; Sept. 18, 1.61; Dec. 18, 1.43.

N1273 (\*906, p. 141; 936, p. 168; 944, p. 148; 986, p. 177; 1016, p. 207; 1023, p. 226). Nassau County Department of Public Works. At northwest corner of Cypress Street and Walters Avenue, Wantagh. Water level, in feet above mean sea level, 1946: Mar. 21, 7.21; June 5, 7.79; Sept. 19, 5.79; Dec. 18, 5.07.

N1275 (\*906, p. 141; 936, p. 168; 944, p. 148; 986, p. 177; 1016, p. 207; 1023, p. 226). Nassau County Department of Public Works. At northeast corner of Byron and Willow Streets, Wantagh. Water level, in feet above mean sea level, 1946: Mar. 21, 3.41; June 5, 4.87; Sept. 19, 2.43; Dec. 19, 2.16.

N1278; (\*906, p. 142; 936, p. 168; 944, p. 148; 986, p. 177; 1016, p. 207; 1023, p. 226). Nassau County Department of Public Works. At southeast corner of Nassau Street and Bay Drive, Massapequa. Water level, in feet above mean sea level, 1946: Mar. 21, 6.87; June 5, 8.13; Sept. 19, 5.86; Dec. 19, 5.12.

N1280 (\*906, p. 142; 936, p. 169; 944, p. 149; 986, p. 177; 1016, p. 207; 1023, p. 226). Nassau County Department of Public Works. At northwest corner of Harmony Drive and Park Boulevard, Massapequa. Water level, in feet above mean sea level, 1946: Mar. 21, 9.78; June 5, 10.79; Sept. 19, 6.41; Dec. 19, 3.57.

N1282 (\*906, p. 143; 936, p. 169; 944, p. 149; 986, p. 177; 1016, p. 207; 1023, p. 226). Nassau County Department of Public Works. On west side of Wantagh State Parkway, about 0.9 mile south of Merrick Road, Wantagh. Water level, in feet above mean sea level, 1946: Mar. 21, 2.04; June 5, 1.76; Sept. 19, 1.37; Dec. 19, 1.48.

N1285 (\*906, p. 143; 936, p. 169; 944, p. 149; 986, p. 178; 1016, p. 207; 1023, p. 227). Nassau County Department of Public Works. At northwest corner of Spruce and Melvin Streets, Wantagh. Water level, in feet above mean sea level, 1946: Mar. 21, 3.21; June 5, 3.96; Sept. 19, 2.60; Dec. 19, 2.38.

N1288 (\*906, p. 143; 936, p. 169; 944, p. 149; 986, p. 178; 1016, p. 207; 1023, p. 227). Nassau County Department of Public Works. On west side of Bay View Avenue at St. Regis Street, Wantagh. Water level, in feet above mean sea level, 1946: Mar. 21, 3.80; June 5, 5.21; Sept. 19, 2.87; Dec. 18, 2.49.

N1461 (\*986, p. 178; 1016, p. 207; 1023, p. 227). 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, 1946

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	76.15	76.44	77.00	77.29	77.26	77.13	77.03	76.76	76.97	77.19	.....	77.04
2	76.08	76.53	77.10	77.36	77.28	77.13	77.03	76.75	76.97	77.19	77.15	76.99
3	76.07	76.54	77.15	77.36	77.27	77.28	77.00	76.76	76.97	77.17	77.14	76.93
4	76.09	76.61	77.19	77.34	77.25	77.40	76.98	76.77	76.96	77.18	77.16	76.95
5	76.11	76.66	77.21	77.37	77.27	77.39	76.97	76.79	76.95	77.18	77.13	76.96
6	76.13	76.69	77.22	77.36	77.28	77.35	76.97	76.78	76.96	77.20	77.11	76.94
7	76.15	76.73	77.25	77.35	77.27	77.34	76.98	76.80	77.00	77.22	77.14	76.93
8	76.13	76.72	77.24	77.33	77.29	77.33	76.94	76.92	77.03	77.23	77.18	76.92
9	76.13	76.76	77.29	77.35	77.25	77.31	76.93	77.05	77.05	77.22	77.15	76.91
10	76.16	76.76	77.24	77.34	77.22	77.22	76.91	77.08	77.08	77.24	77.10	76.94
11	76.12	76.78	77.25	77.33	77.22	77.22	76.89	77.04	77.07	77.23	77.11	76.92
12	76.15	76.79	77.24	77.33	77.22	77.24	76.88	77.00	77.00	77.24	77.12	76.90
13	76.15	76.82	77.27	77.33	77.17	77.23	76.87	76.98	76.97	77.22	77.09	76.97
14	76.12	76.88	77.29	77.33	77.15	77.16	76.85	76.96	77.01	77.18	77.12	76.89
15	76.15	76.89	77.31	77.37	77.18	77.14	76.84	76.93	77.06	77.19	77.07	76.88
16	76.13	76.83	77.27	77.37	77.19	77.13	76.81	76.94	77.08	77.20	77.03	76.86
17	76.15	76.89	77.28	77.32	77.20	77.17	76.81	76.97	77.10	77.23	77.03	76.86
18	76.18	76.88	77.30	77.33	77.21	77.21	76.81	76.96	77.10	77.24	77.01	76.84
19	76.19	76.89	77.31	77.34	77.21	77.13	76.81	76.94	77.11	76.97	77.02	76.82
20	76.19	76.95	77.31	77.37	77.20	77.13	76.81	76.92	77.13	77.06	77.05	76.81

a Estimated.

N1461--Continued.

Water level at noon, in feet above mean sea level, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
21	76.24	76.91	77.31	77.33	77.24	77.16	76.80	76.89	77.14	77.07	77.04	76.90
22	76.22	76.91	77.33	77.34	77.19	77.13	76.80	76.89	77.14	77.08	77.08	76.85
23	76.21	76.96	77.32	77.37	77.17	77.11	76.80	76.90	77.13	77.09	77.05	76.79
24	76.24	76.98	77.31	77.38	77.18	77.12	76.79	76.91	77.15	.....	77.01	76.81
25	76.28	77.00	77.33	77.38	77.19	77.12	76.80	76.95	77.16	.....	77.04	76.79
26	76.28	76.99	77.34	77.39	77.20	77.10	76.78	76.96	77.15	77.20	77.03	76.80
27	76.28	77.00	77.33	77.39	77.14	77.08	76.77	76.98	77.14	.....	77.02	76.75
28	76.32	77.00	77.33	77.33	77.10	77.07	76.77	76.97	77.12	.....	76.98	76.82
29	76.35	.....	77.35	77.28	77.12	77.05	76.78	76.97	77.15	.....	76.99	76.75
30	76.37	.....	77.36	77.27	77.14	77.04	76.78	76.96	77.19	.....	76.96	76.74
31	76.42	.....	77.31	.....	77.13	.....	76.77	76.97	.....	.....	.....	76.70

N1462 (\*986, p. 179; 1016, p. 209; 1023, p. 227). Nassau County Department of Public Works. Along tracks of Long Island Railroad, at Bloomingdale Road, Island Trees.

Water level at noon, in feet above mean sea level, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	62.34	63.58	63.72	63.61	63.40	63.19	63.68	63.80	64.21	64.04	.....	.....
2	62.36	63.61	63.86	63.67	63.40	63.20	63.69	63.79	64.20	64.07a	63.54	.....
3	62.38	63.56	63.87	63.65	63.38	63.24	63.72	63.79	64.19	64.05	.....	.....
4	62.40	63.50	63.82	63.64	63.37	63.29	63.77	63.79	64.18	64.03	.....	.....
5	62.45	63.44	63.77	63.65	63.39	63.33	63.79	63.78	64.16	64.00	.....	.....
6	62.49	63.46	63.75	63.64	63.33	63.36	63.81	63.77	64.15	63.98	.....	.....
7	62.52	63.45	63.76	63.60	63.37	63.39	63.82	63.83	64.15	63.98	.....	a62.95
8	62.54	63.41	63.72	63.63	63.37	63.42	63.82	64.68	64.14	63.96	.....	.....
9	62.57	63.46	63.76	63.61	63.36	63.44	63.83	64.68	64.13	63.93a	63.43	.....
10	62.61	63.46	63.69	63.59	63.34	63.44	63.83	64.66	64.13	63.92	.....	.....
11	62.62	63.46	63.67	63.57	63.34	63.47	63.83	64.57	64.12	63.89	.....	.....
12	62.65	63.45	63.64	63.57	63.33	63.50	63.84	64.53	64.09	63.88	.....	.....
13	62.68	63.48	63.65	63.55	63.31	63.52	63.84	64.49	64.07	63.86	.....	.....
14	62.70	63.54	63.66	63.55	63.30	63.50	63.84	64.44	64.07	63.93	.....	a62.85
15	62.73	63.50	63.68	63.56	63.30	63.52	63.84	64.41	64.06	63.81	.....	.....
16	62.74	63.44	63.65	63.57	63.30	63.53	63.83	64.39	64.04	63.80a	63.32	.....
17	62.77	63.49	63.68	63.52	63.30	63.55	63.84	64.39	64.03	63.79	.....	.....
18	62.80	63.46	63.69	63.52	63.30	63.57	63.85	64.38	64.01	63.78	.....	.....
19	62.82	63.46	63.68	63.51	63.30	63.56	63.85	64.36	64.00	63.76	.....	.....
20	62.81	63.52	63.68	63.53	63.26	63.58	63.85	64.34	63.99	63.74	.....	.....
21	62.85	63.46	63.66	63.48	63.27	63.60	63.95	64.32	63.98	63.72	.....	a62.89
22	62.86	63.44	63.68	63.48	63.25	63.61	63.85	64.31	63.97	63.71	.....	.....
23	62.86	63.46	63.66	63.48	63.23	63.61	63.85	64.30	63.95	63.69a	63.19	.....
24	62.88	63.48	63.64	63.43	63.22	63.62	63.85	64.29	63.94	.....	.....	.....
25	62.93	63.50	63.65	63.48	63.23	63.63	63.85	64.28	63.93	.....	.....	.....
26	63.07	63.47	63.64	63.51	63.22	63.64	63.83	64.27	63.92a	63.65	.....	.....
27	63.12	63.46	63.65	63.48	63.22	63.65	63.92	64.25	63.90	.....	.....	.....
28	63.21	63.51	63.65	63.45	63.21	63.65	63.81	64.24	63.88	.....	.....	a62.65
29	63.18	.....	63.68	63.42	63.20	63.66	63.82	64.24	63.98	.....	.....	.....
30	63.17	.....	63.69	63.41	63.20	63.67	63.82	64.22	63.90	.....	.....	a63.08
31	63.31	.....	63.63	.....	63.19	.....	63.91	64.22	.....	.....	.....	.....

a Tape measurement.

b Estimated.

N1463 (\*986, p. 180; 1016, p. 210; 1023, p. 228). Nassau County Department of Public Works. Southern State Parkway and Seamens Neck Road, Jerusalem.

Water level at noon, in feet above mean sea level, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	38.71	39.57	39.57	39.38	39.00	38.77	39.48	39.82	39.10	38.61	38.01	37.49
2	38.81	39.56	39.57	39.43	38.99	39.02	39.68	38.80	39.07	38.59	37.99	37.47
3	38.89	39.55	39.57	39.44	38.97	39.41	39.52	38.76	39.05	38.56	37.97	37.45

N1463--Continued.

Water level at noon, in feet above mean sea level, 1946

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
4	38.98	39.53	39.57	39.42	38.95	39.48	39.47	38.81	39.03	38.53	37.96	37.44
5	39.06	39.52	39.58	39.42	38.94	39.58	39.45	38.74	39.01	38.50	37.94	37.42
6	39.12	39.53	39.55	39.41	38.92	39.66	39.44	38.72	38.99a	38.48	37.92	37.40
7	39.18	39.55	39.55	39.38	38.90	39.73	39.42	39.25	38.97a	38.46	37.90	37.39
8	39.21	39.50	39.53	39.36	38.89	39.79	39.39	39.64	38.95	38.45	37.89	37.37
9	39.24	39.51	39.55	39.37	38.37	39.83	39.38	39.60	38.93	38.44	37.86	37.36
10	39.29	39.52	39.49	39.35	38.84	39.84	39.36	39.57	38.91	38.43	37.85	37.35
11	39.29	39.49	39.47	39.33	38.83	39.87	39.34	39.53	38.89	38.42	37.84	37.33
12	39.31	39.47	39.43	39.32	38.82	39.89	39.32	39.51	38.87	38.41	37.82	37.32
13	39.31	39.47	39.42	39.30	38.79	39.90	39.28	39.50	38.84	38.40	37.80	37.30
14	39.30	39.51	39.40	39.29	38.76	39.87	39.26	39.49	38.82	38.34	37.79	37.28
15	39.32	39.45	39.41	39.30	38.84	39.86	39.23	39.46	38.79	38.33	37.76	37.26
16	39.30	39.40	39.44	39.28	38.78	39.84	39.22	39.45	38.76	38.32	37.73	37.25
17	39.31	39.42	39.44	39.25	38.78	39.84	39.20	39.44	38.74	38.31	37.72	37.24
18	39.31	39.38	39.45	39.24	38.75	39.83	39.16	39.42	38.71	38.30	37.71	37.22
19	39.30	39.37	39.45	39.22	38.74	39.79	39.13	39.40	38.68	38.27	37.69	37.20
20a	39.27	39.42	39.44	39.21	38.71	39.77	39.09	39.36	38.65	38.22	37.68	37.18
21a	39.31	39.35	39.42	39.17	38.71	39.75	39.06	39.33	38.63	38.21	37.66	37.31
22	39.28	39.33	39.42	39.16	38.70	39.71	39.03	39.30	38.60	38.19	37.69	37.24
23	39.25	39.32	39.41	39.15	38.68	39.68	39.00	39.28	38.58	38.17	37.64	37.22
24	39.26	39.32	39.39	39.14	38.68	39.66	39.00	39.24	38.55	38.16	37.62	37.22
25	39.39	39.30	39.39	39.12	38.68	39.65	38.98	39.21	38.56	38.14	37.61	37.20
26	39.41	39.27	39.37	39.14	38.67	39.63	38.95	39.18	38.53	38.11	37.59	37.19
27	39.37	39.25	39.47	39.09	38.77	39.60	38.92	39.17	38.50	38.10	37.57	37.17
28	39.36	39.58	39.45	39.07	38.75	39.57	38.90	39.15	38.47	38.08	37.55	37.17
29	39.34		39.45	39.03	38.75	39.58	38.88	39.23	38.45	38.07	37.53	37.15
30	39.33		39.46	39.01	38.77	39.50	38.86	39.17	38.68	38.05	37.50	37.15
31	39.56		39.41		38.77		38.84	39.13		38.04		37.14

a Estimated.

N1464 (\*986, p. 181; 1016, p. 211; 1023, p. 229). Nassau County Department of Public Works. Grant and Franklin Avenues, Seaford.

Water level at noon, in feet above mean sea level, 1946

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	16.67	16.52	16.33	16.45	16.02	.....	16.18	.....	.....	.....	.....	.....
2	16.93	16.51	16.38	16.50	16.01	.....	.....	.....	.....	.....	.....	.....
3	17.09	16.45	16.39	16.49	16.00a	16.67	.....	.....	.....	.....	.....	.....
4	17.17	16.41	16.37	16.48	15.98	.....	.....	.....	.....	.....	.....	.....
5	17.20	16.40	16.34	16.49	15.98	.....	.....	.....	.....	.....	.....	.....
6	17.19	16.42	16.32	16.47	15.97	.....	.....	.....	.....	.....	.....	.....
7	17.14	16.44	16.33	16.43	.....	.....	.....	.....	.....	.....	.....	.....
8	17.04	16.38	16.31	16.40	.....	.....	.....	.....	.....	.....	.....	.....
9	16.98	16.39	16.35	16.40	.....	.....	.....	.....	.....	.....	.....	.....
10	16.95	16.38	16.28	16.37	.....	.....	.....	.....	.....	.....	.....	.....
11	16.88	16.36	16.27	16.33	.....	.....	.....	.....	.....	.....	.....	.....
12	16.86	16.34	16.23	16.32	.....	.....	.....	.....	.....	.....	.....	.....
13	16.81	16.34	16.24	16.29	.....	.....	.....	.....	.....	.....	.....	.....
14	16.75	16.38	16.24	16.27	.....	.....	.....	.....	.....	.....	.....	.....
15	16.73	16.33	16.25	16.28	.....	.....	.....	.....	.....	.....	.....	.....
16	16.68	16.29	16.26	16.25	.....	.....	.....	.....	.....	.....	.....	.....
17	16.66	16.29	16.30	16.21	.....	.....	.....	.....	.....	.....	.....	.....
18	16.64	16.26	16.34	16.20	.....	.....	.....	.....	.....	.....	.....	.....
19	16.61	16.24	16.36	16.19	.....	.....	.....	.....	.....	.....	.....	.....
20	16.55	16.30	16.38	16.18	.....	.....	.....	.....	.....	.....	.....	.....
21	16.58	16.23	16.39	16.15	.....	.....	.....	.....	.....	.....	.....	.....
22	16.53	16.22	16.41	16.13	.....	.....	.....	.....	.....	.....	.....	.....
23	16.49	16.23	16.40	16.12	.....	.....	.....	.....	.....	.....	.....	.....
24	16.48	16.22	16.38	16.11	.....	.....	.....	.....	14.90	.....	.....	.....
25	16.54	16.22	16.38	16.10	.....	.....	.....	.....	.....	.....	.....	.....
26	16.53	16.19	16.36	16.11	.....	.....	.....	15.50	.....	.....	13.54	.....
27	16.47	16.18	16.38	16.09	.....	.....	.....	.....	.....	.....	.....	.....
28	16.45	16.27	16.41	16.06	.....	.....	.....	.....	.....	.....	.....	.....

a Tape measurement.



N1464--Continued.

Water level at noon, in feet above mean sea level, 1946

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
29	16.42		16.44	16.04	.....	.....	al5.73	.....	.....	al4.33	.....	.....
30	16.40		16.46	16.03	.....	.....	.....	.....	al4.84	.....	.....	al3.14
31	16.52		16.45	.....	.....	.....	.....	.....	.....	.....	.....	.....

a Tape measurement.

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). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	23.78	Apr. 26	23.43	July 26	23.57	Oct. 29	22.97
Feb. 1	23.86	May 31	23.67	Aug. 28	23.29	Nov. 26	22.75
Mar. 1	23.58	June 28	23.75	Sept. 24	23.02	Dec. 27	22.62
Apr. 5	23.61						

N1614 (\*906, p. 144; 936, p. 170; 944, p. 150; 986, p. 183; 1016, p. 212; 1023, p. 229). 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, 1946

Feb. 5	69.10	Apr. 25	69.23	July 29	70.24	Oct. 30	69.67
26	69.22	June 4	69.45	Aug. 29	70.20	Nov. 27	69.28
Apr. 3	69.23	July 3	70.71	Sept. 25	69.98	Dec. 31	68.71

N1615 (\*906, p. 145; 936, p. 170; 944, p. 150; 986, p. 183; 1016, p. 213; 1023, p. 230). 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, 1946

Jan. 2	44.22	Apr. 30	44.58	July 29	44.65	Oct. 30	43.50
Feb. 12	44.88	June 6	45.28	Aug. 29	44.27	Nov. 27	43.23
28	44.76	July 3	45.28	Sept. 24	43.91	Dec. 30	42.94
Apr. 5	44.86						

N1616 (\*906, p. 146; 936, p. 170; 944, p. 150; 986, p. 183; 1016, p. 213; 1023, p. 230). 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, 1946

Feb. 5	82.31	Apr. 25	82.76	July 29	83.24	Oct. 29	82.95
26	82.56	June 4	82.77	Aug. 29	83.17	Nov. 29	82.68
Apr. 3	82.68	July 3	83.16	Sept. 25	83.05	Dec. 31	82.24

N1682 (\*906, p. 151; 936, p. 171; 944, p. 151; 986, p. 184; 1016, p. 213; 1023, p. 230). Nassau County Department of Public Works. On southwest corner of Crocus and Elm Avenues, Bellerose.

Water level, in feet above mean sea level, 1946

Jan. 2	43.38	Apr. 30	44.00	July 26	44.91	Oct. 29	44.59
Feb. 12	43.95	June 6	44.41	Aug. 28	44.78	Nov. 26	44.47
28	44.03	28	44.77	Sept. 24	44.71	Dec. 27	44.04
Apr. 5	44.08						

N1683 (\*906, p. 151; 936, p. 171; 944, p. 151; 986, p. 184; 1016, p. 213; 1023, p. 230). Nassau County Department of Public Works. At northwest corner of Sixth Street and Stewart Avenue, New Hyde Park.

Water level, in feet above mean sea level, 1946

Feb. 5	56.82	Apr. 25	56.62	July 29	57.32	Oct. 30	57.17
26	56.77	June 4	56.69	Aug. 29	57.23	Nov. 27	56.89
Apr. 2	56.78	July 30	57.17	Sept. 24	57.39	Dec. 31	56.70

N1684 (\*906, p. 151; 936, p. 172; 944, p. 151; 986, p. 184; 1016, p. 214; 1023, p. 230). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 5	59.43	Apr. 25	58.81	July 29	59.83	Oct. 30	59.01
26	59.23	June 4	58.98	Aug. 29	59.70	Nov. 27	58.48
Apr. 3	58.99	July 3	60.36	Sept. 24	59.26	Dec. 31	57.91

N1828 (\*886, p. 499; 906, p. 136; 936, p. 164; \*944, p. 152; 986, p. 184; 1016, p. 214; 1023, p. 230). Nassau County Department of Public Works. Melville Road near Suffolk County line, Farmingdale.

Water level at noon, in feet above mean sea level, 1946

(From recorder charts)

Jan. 1	59.59	Jan. 23	60.34	Feb. 14	60.49	Mar. 8	60.50
2	59.60	24	60.33	15	60.48	9	60.52
3	59.67	25	60.41	16	60.42	10	60.49
4	59.83	26	60.40	17	60.43	11	60.49
5	60.00	27	60.36	18	60.41	12	60.48
6	60.13	28	60.34	19	60.39	13	60.50
7	60.23	29	60.33	20	60.45	14	60.51
8	60.29	30	60.32	21	60.39	15	60.53
9	60.35	31	60.46	22	60.37	16	60.54
10	60.41	Feb. 1	60.45	23	60.37	17	60.55
11	60.43	2	60.46	24	60.37	18	60.56
12	60.46	3	60.44	25	60.36	29 a	60.71
13	60.48	4	60.43	26	60.34	Apr. 31 a	60.70
14	60.47	5	60.42	27	60.33	June 5 a	61.19
15	60.48	6	60.45	28	60.42	July 1 a	61.41
16	60.45	7	60.48	Mar. 1	60.47	29 a	61.04
17	60.47	8	60.43	2	60.51	Aug. 26 a	60.90
18	60.47	9	60.44	3	60.51	Sept. 25 a	60.49
19	60.45	10	60.46	4	60.50	30 a	60.69
20	60.39	11	60.45	5	60.49	Oct. 30 a	60.34
21	60.43	12	60.45	6	60.49	Nov. 27 a	59.48
22	60.38	13	60.45	7	60.50	Dec. 30 a	58.91

a Tape measurement.

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). Nassau County Department of Public Works. Stewart Avenue, about 700 feet west of New Bridge Avenue, Salisbury.

Water level at noon, in feet above mean sea level, 1946

(From recorder charts)

Jan. 1	68.27	Jan. 23	68.40	Feb. 15	68.60	Mar. 9	68.66
2	68.28	24	68.42	16	68.54	10	68.60
3	68.29	25	68.87	17	68.54	11	68.57
4	68.31	26	68.87	18	68.52	12	68.52
5	68.34	27	68.66	19	68.49	13	68.51
6	68.37	28	68.60	20	68.56	14	68.50
7	68.40	29	68.57	21	68.47	15	68.49
8	68.40	30	68.55	22	68.45	16	68.49
9	68.42	31	69.28	23	68.46	17	68.48
10	68.45	Feb. 1	68.96	24	68.44	18	68.47
11	68.43	2	68.86	25	68.44	Apr. 3 a	68.34
12	68.46	3	68.80	26	68.41	25 a	68.06
13	68.46	5	68.74	27	68.39	June 4 a	68.64
14	68.44	6	68.75	28	69.00	July 1 a	68.80
15	68.46	7	68.75	Mar. 1	68.92	29 a	68.53
16	68.43	8	68.69	2	68.81	Aug. 26 a	68.39
17	68.45	9	68.69	3	68.76	Sept. 24 a	68.07
18	68.46	10	68.72	4	68.72	30 a	68.22
19	68.44	11	68.67	5	68.70	Oct. 29 a	67.72
20	68.40	12	68.62	6	68.68	Nov. 27 a	67.36
21	68.43	13	68.62	7	68.66	Dec. 31 a	67.00
22	68.44	14	68.65	8	68.64		

a Tape measurement.

N1830 (\*944, p. 153; 986, p. 187; 1016, p. 216; 1023, p. 231).  
Nassau County Department of Public Works. West side of Tyson Avenue, just north of Creedmore Spur of Long Island Railroad, Floral Park.

Water level, in feet above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	50.90	Apr. 30	51.30	July 26	52.55	Oct. 29	52.36
Feb. 12	51.30	June 6	51.95	Aug. 28	52.74	Nov. 26	52.04
28	51.35	28	52.34	Sept. 24	52.52	Dec. 27	51.69
Apr. 5	51.48						

N2071. Appleby Estate. About 2,000 feet west of Columbia Ribbon & Carbon Co. and 50 feet south of Herb Hills Road, Glen Cove. Unused flowing well, diameter 8 inches, depth 266 feet below measuring point. Measuring point, top edge of 2½ inch 3-way, 8.08 feet above mean sea level. First measured by Geological Survey on Feb. 12, 1946. Water level affected by tidal fluctuations.

Highest daily water level, in feet above mean sea level, 1946

Feb. 12	12.87	Apr. 16	14.30	June 28	12.10	Oct. 2	11.80
15	14.53	May 1	14.04	July 29	11.94	Nov. 1	11.51
Mar. 15	14.62	June 4	13.86	Aug. 26	13.68	Dec. 9	13.28

Queens County

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).  
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, 1946

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	6.08	5.86	5.75	5.90	5.66	4.98	4.55	4.64	4.53	4.89	4.67	4.93
2	5.83	5.76	5.85	6.13	5.61	5.08	4.67	4.48	4.56	4.79	4.60	4.95
3	5.70	5.63	5.93	6.22	5.48	4.98	4.59	4.48	4.56	4.68	4.61	4.85
4	5.72	5.51	5.85	6.14	5.30	5.00	4.57	4.59	4.50	4.64	4.69	4.92
5	5.82	5.53	5.82	6.20	5.32	4.99	4.54	4.58	4.49	4.60	4.64	5.00
6	5.88	5.71	5.77	6.19	5.30	4.98	4.58	4.56	4.50	4.64	4.57	5.00
7	5.93	5.92	5.85	6.12	5.28	5.02	4.65	4.65	4.58	4.72	4.65	4.98
8	5.85	5.74	5.86	6.05	5.28	5.05	4.61	4.55	4.62	4.76	4.76	5.05
9	5.82	5.74	6.07	6.13	5.17	4.99	4.60	4.49	4.59	4.71	4.68	5.09
10	5.97	5.82	5.94	6.07	5.04	4.78	4.59	4.52	4.62	4.75	4.51	5.19
11	5.83	5.78	5.89	5.98	5.01	4.79	4.55	4.52	4.66	4.72	4.50	5.21
12	5.87	5.67	5.81	5.99	5.04	4.92	4.57	4.48	4.52	4.75	4.55	5.08
13	5.88	5.70	5.87	5.98	4.93	4.96	4.56	4.45	4.40	4.67	4.51	5.08
14	5.75	5.96	5.94	5.93	4.81	4.81	4.51	4.44	4.47	4.58	4.57	4.85
15	5.82	5.93	6.14	6.02	5.00	4.77	4.49	4.43	4.55	4.60	4.49	4.71
16	5.70	5.66	5.96	6.06	5.03	4.78	4.39	4.47	4.55	4.70	4.37	4.54
17	5.75	5.74	5.93	5.91	5.12	4.88	4.41	4.61	4.56	4.82	4.39	4.50
18	5.89	5.71	5.94	5.86	5.12	5.01	4.46	4.67	4.52	4.93	4.36	4.44
19	5.85	5.66	5.93	5.76	5.06	4.97	4.50	4.68	4.51	4.82	4.38	4.36
20	5.60	6.05	5.96	5.72	4.96	4.98	4.47	4.66	4.54	4.66	4.58	4.32
21	5.81	5.89	5.96	5.58	5.01	5.01	4.42	4.66	4.58	4.61	4.77	4.70
22	5.75	5.81	6.02	5.63	4.92	4.96	4.43	4.56	4.61	4.65	5.06	4.64
23	5.62	5.93	6.04	5.75	4.84	4.84	4.58	4.58	4.54	4.71	5.11	4.43
24	5.71	5.99	5.98	5.85	4.84	4.80	4.63	4.53	4.59	4.74	5.06	4.46
25	5.94	6.03	6.04	5.85	4.93	4.77	4.82	4.52	4.71	4.75	5.14	4.45
26	5.88	5.93	6.06	6.02	4.98	4.70	4.82	4.52	4.70	4.78	5.08	4.47
27	5.65	5.94	6.16	5.98	5.10	4.62	4.73	4.66	4.65	4.64	4.96	4.31
28	5.57	5.89	6.10	5.77	5.03	4.66	4.67	4.55	4.59	4.58	4.79	4.45
29	5.60		6.11	5.69	4.95	4.53	4.66	4.57	4.64	4.68	4.70	4.36
30	5.62		6.16	5.65	4.95	4.53	4.63	4.56	4.91	4.75	4.66	4.29
31	5.91		5.98		4.97		4.59	4.56		4.78		4.08

Q278. New York City Department of Water Supply, Gas and Electricity. Alley Pond Parkway and Horace Harding Blvd., Douglaston. Public water-supply well, diameter 12 inches, depth 536 feet below measuring point. Measuring point, hole in pump base, 16.02 feet above mean sea level. First measured by Geological Survey on June, 4, 1946.

Water level, in feet above (+) or below (-) mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 4	+3.32	July 29	+0.53	Sept. 30	+3.90	Nov. 29	+5.11
July 1	-.12	Aug. 26	+1.84	Nov. 29	+3.24	Dec. 27	+1.66

Q282. New York City Department of Water Supply, Gas and Electricity. Underhill Avenue and 175th Street. Public-supply well, diameter 12 inches, depth 463 feet below measuring point. Measuring point, hole in pump base, 32.32 feet above mean sea level. First measured by Geological Survey on June 10, 1946.

Water level, in feet below mean sea level, 1946

June 10	6.24	July 29	8.09	Sept. 30	6.49	Nov. 29	4.65
July 1	7.30	Aug. 26	7.91	Nov. 6	6.26	Dec. 27	6.77

Q283. New York City Department of Water Supply, Gas and Electricity. Underhill Avenue and 171st Street. Public-supply well, diameter 12 inches, depth 447 feet below measuring point. Measuring point, hole in pump base, 27.44 feet above mean sea level. First measured by Geological Survey on June 10, 1946.

Water level, in feet below mean sea level, 1946

June 10	6.27	July 29	8.09	Sept. 30	6.52	Nov. 29	4.69
July 1	7.29	Aug. 26	7.92	Nov. 6	6.28	Dec. 27	6.78

Q287 (\*886, p. 504; 906, p. 153; 936, p. 174; 944, p. 155; 986, p. 189; 1016, p. 218; 1023, p. 232). Broad Channel Corporation. South-east side of Shad Creek Road, about 100 feet southwest of Ninth Road, Broad Channel. Water levels are affected by tidal fluctuations.

Water level, in feet above mean sea level, 1946  
(From recorder charts)

(From recorder charts)									
Jan. 11	a	8.71	Nov. 3	b	7.63	Nov. 26	7.65	Dec. 14	7.82
Feb. 14	a	7.46	4		7.59	27	7.50	15	7.87
Mar. 1	a	7.15	5		7.10	28	7.31	16	7.85
Apr. 2	a	7.59	6		7.25	29	7.42	17	8.14
May 9	a	7.60	7		7.47	30	7.57	18	7.90
June 7	a	8.74	8		8.00	Dec. 1	7.90	19	7.85
July 5	a	7.07	9		7.60	2	7.25	20	8.25
30	a	6.94	10		7.64	3	7.57	21	8.48
Aug. 29	a	6.85	11		7.69	4	7.45	22	7.65
Sept. 26	a	6.75	12		7.50	5	7.71	23	7.48
Oct. 24		6.60	13		7.51	6	7.89	24	7.85
25		7.40	17		7.15	7	7.93	25	7.90
28		6.85	18		7.25	8	7.89	26	7.67
29		7.03	19		7.41	9	8.06	27	7.50
30		6.99	20		7.46	10	8.25	28	8.05
31		7.30	21		7.45	11	8.00	29	8.43
Nov. 1		7.10	24		7.40	12	8.36	30	7.84
2		7.20	25		7.46	13	8.32	31	7.71

a Tape measurement.

b Estimated.

Q350 (\*840, 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). Aqueduct deep test well of New York Service Corporation. About 0.5 mile south of Rockaway Boulevard, 700 feet east of Centreville Street, and 200 feet north of owner's Aqueduct pumping station, Aqueduct.

Q350--Continued.

Water level, in feet above (+) or below (-) mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	+1.18	May 3	-0.11	July 30	+0.88	Oct. 23	+0.83
Feb. 14	+1.20	June 7	+1.08	Aug. 29	+ .94	Nov. 25	+ .70
Mar. 8	+ .91	July 9	+1.09	Sept. 26	+ .84	Dec. 31	+ .42
Apr. 12	+ .82						

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). New York City Department of Water Supply, Cross Island Parkway, about 325 feet south of Northern Boulevard, Bayside.

Water level at noon, in feet above mean sea level, 1946

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	5.39	4.54	5.27	6.39	5.36	3.04	1.33	0.65	1.74	2.67	3.29	3.98
2	5.31	4.75	5.31	6.45	5.23	3.05	1.20	.66	1.83	2.73	3.28	3.99
3	5.22	4.90	5.42	6.50	5.10	3.09	1.20	.66	1.93	2.77	3.27	3.83
4	5.14	4.86	5.49	6.51	4.95	3.09	1.19	.69	2.00	2.81	3.25	3.62
5	5.06	4.75	5.56	6.52	4.82	3.07	1.19	.76	2.07	2.83	3.20	3.47
6	5.00	4.65	5.60	6.49	4.70	3.07	1.19	.83	2.15	a2.87	3.10	3.36
7	4.96	4.79	5.63	6.45	4.57	3.05	1.19	.87	2.21	a2.92	3.00	3.24
8	4.91	4.95	5.66	6.44	4.47	3.04	1.20	.88	2.27	2.97	2.92	3.15
9	4.84	5.02	5.69	6.46	4.34	3.03	1.23	.88	2.36	3.01	2.83	3.11
10	4.84	5.20	5.71	6.47	4.19	2.99	1.25	.88	2.43	3.03	2.75	3.29
11	4.88	5.40	5.72	6.45	4.04	2.93	1.24	.88	2.50	3.05	2.71	3.51
12	4.92	5.51	5.73	6.44	3.93	2.90	1.21	.86	2.52	3.07	2.71	3.67
13	4.96	5.58	5.72	6.43	3.80	2.87	1.20	.90	2.50	3.07	2.71	3.86
14	4.98	5.66	5.75	6.43	3.66	2.82	1.16	.91	2.47	3.06	2.71	3.83
15	4.84	5.73	5.81	6.43	3.59	2.76	1.12	.87	2.45	3.07	2.70	3.69
16	4.78	5.58	5.88	6.44	3.53	2.70	1.07	.84	2.44	3.07	2.66	3.55
17	4.61	5.37	5.92	6.40	3.49	2.67	1.00	.86	2.43	3.08	2.66	3.41
18	4.46	5.37	5.97	6.36	3.48	2.69	.89	.90	2.41	3.11	2.71	3.29
19	4.32	5.38	6.06	6.33	3.46	2.66	.74	.96	2.38	3.15	2.80	3.16
20	4.14	5.35	6.12	6.28	3.44	2.61	.57	1.05	2.34	3.15	2.89	3.00
21	4.09	5.24	6.16	6.20	3.43	2.56	.38	1.11	2.32	3.17	2.96	2.93
22	4.07	5.01	6.16	6.14	3.42	2.51	.29	1.16	2.32	3.20	3.08	2.82
23	3.99	4.96	6.19	6.07	3.35	2.46	.25	1.22	2.30	3.23	3.21	2.63
24	3.94	5.05	6.19	6.04	3.27	2.43	.26	1.26	2.32	3.24	3.31	2.48
25	3.95	5.25	6.21	6.00	3.19	2.42	.33	1.31	2.38	3.25	3.46	2.34
26	4.15	5.31	6.25	5.96	3.11	2.38	.41	1.36	2.42	3.25	3.63	2.20
27	4.31	5.21	6.28	5.88	3.06	2.29	.47	1.45	2.45	3.25	3.79	2.05
28	4.30	5.21	6.30	5.75	3.07	2.01	.52	1.51	2.46	3.24	3.88	1.92
29	4.22		6.33	5.66	3.06	1.73	.58	1.55	2.47	3.25	3.92	1.82
30	4.11		6.36	5.49	3.07	1.45	.64	1.60	2.56	3.26	3.94	1.75
31	4.29		6.38		3.05		.65	1.67		3.29		a1.60

a Estimated.

Q471 (\*906, p. 155; 936, p. 176; 944, p. 157; 986, p. 192; 1016, p. 220; 1023, p. 233). 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.

Water level, in feet above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	16.52	Apr. 2	17.14	July 1	16.78	Sept. 30	17.45
Feb. 1	18.67	25	17.00	29	17.12	Nov. 5	17.18
Mar. 1	16.62	June 3	17.07	Aug. 26	17.22	Dec. 4	16.47

Q543 (\*840, p. 271; \*845, p. 316; \*886, p. 506; 906, p. 156; 936, p. 176; 941, p. 157; 986, p. 192; 1016, p. 220; 1023, p. 234). New York City Department of Water Supply well Rockaway Park 3, Rockaway Beach Boulevard and Beach 110th Street, Rockaway Park. Water level affected by tidal fluctuations.

Mean daily water level, in feet above mean sea level, 1946

(From recorder charts)												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	8.4	...	...	9.2	8.9	9.3	8.38	7.12	6.48	6.98	7.76	8.62
2	7.7	...	...	9.5	9.1	9.5	8.28	7.18	6.38	6.83	8.00	7.81
3	7.9	...	...	...	...	9.3	8.25	6.80	6.35	6.95	8.29	8.12
4	7.9	...	...	9.4	...	9.1	8.18	6.80	6.40	6.89	8.36	7.90
5	8.1	...	...	...	...	9.0	7.95	6.85	6.50	6.92	7.67	8.17
6	8.3	...	...	9.2	...	9.0	7.60	6.80	6.25	6.96	7.63	8.39
7	8.5	...	...	9.2	...	9.0	7.62	6.83	6.15	7.29	7.82	8.17
8	8.6	...	...	9.2	...	9.0	7.43	6.88	6.20	7.71	8.46	7.48
9	9.1	8.8	...	9.5	...	8.7	7.35	...	6.25	7.83	8.03	7.59
10	9.0	8.8	...	9.0	...	8.6	7.33	...	6.38	7.80	8.31	7.83
11	8.8	8.9	...	8.9	9.1	8.7	7.30	...	6.33	7.81	8.49	7.50
12	9.0	...	...	9.2	9.2	8.8	7.80	...	6.20	7.95	8.21	7.80
13	8.4	...	...	9.3	9.0	8.8	7.88	...	6.55	7.50	8.12	7.80
14	8.4	9.1	...	9.0	8.9	8.9	7.75	...	6.80	7.71	8.23	7.52
15	8.4	8.4	...	9.1	9.2	8.71	7.63	...	6.68	7.74	8.00	8.31
16	...	8.4	...	8.9	9.3	8.60	7.58	...	6.45	7.80	7.88	8.32
17	...	8.8	...	8.6	9.5	8.74	7.63	6.80	6.55	7.79	7.82	8.69
18	8.9	8.5	...	8.7	9.7	8.80	7.45	6.88	6.68	8.04	7.89	8.48
19	8.2	9.3	...	8.8	9.6	8.67	7.33	7.23	6.68	7.60	8.00	8.41
20	8.4	8.5	...	9.0	9.3	8.68	7.13	6.98	6.70	7.70	7.98	8.50
21	9.0	...	...	8.8	9.4	8.90	7.15	6.75	6.85	7.72	7.99	9.08
22	7.8	...	...	9.0	9.1	8.76	7.15	6.65	6.75	7.74	8.32	8.19
23	7.8	8.8	...	9.4	8.9	8.61	7.13	6.50	6.70	7.86	7.75	8.00
24	8.4	9.3	...	9.5	8.9	8.67	6.91	6.48	6.88	8.01	7.88	8.46
25	...	9.3	...	9.5	9.1	8.65	6.98	6.43	6.88	8.01	8.02	8.56
26	...	9.0	...	9.9	9.1	8.53	7.05	6.53	6.83	7.88	8.25	8.25
27	...	9.1	...	9.3	9.4	8.40	7.01	6.63	6.65	7.66	8.10	8.03
28	...	...	...	8.7	9.5	8.35	6.98	6.55	6.66	7.63	7.90	8.86
29	...	...	...	8.8	9.6	8.38	6.95	6.38	7.00	7.76	8.00	9.48
30	...	...	9.8	8.9	9.3	8.40	6.89	6.45	7.21	7.78	8.20	8.81
31	...	...	9.5	...	9.3	...	6.95	6.63	...	8.00	...	8.51

Q577. State of New York, Creedmoor Hospital. Hillside Avenue and Winchester Blvd. Unused supply well, diameter 8 inches to 12 inches, depth 707 feet below measuring point. Measuring point, top of floor channel iron, 113.72 feet above mean sea level. First measured by Geological Survey, Feb. 28, 1946.

Highest daily water level, in feet above (+)  
or below (-) mean sea level, 1946

(From recorder charts)											
Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	+6.40	+1.66	+1.31	-4.10	-4.10	-0.46	+0.81	+2.30	+4.06
2	.....	.....	+6.52	+1.90	-.18	-4.24	-4.30	+0.30	+1.60	+1.72	+4.24
3	.....	.....	+5.58	+0.70	+0.39	-3.00	-4.22	-.43	-.20	+0.92	+3.74
4	.....	.....	+3.82	+0.55	+0.79	-3.28	-3.90	-.20	+1.70	-.62	+3.39
5	.....	.....	+5.52	+1.98	-.20	-4.45	-3.68	-.38	+2.10	-1.40	+3.30
6	.....	.....	+5.30	+1.81	-1.22	-3.02	-4.32	-.22	+1.68	+1.18	+3.00
7	.....	.....	+6.78	+7.28	-.22	-2.24	-3.82	-.17	+1.90	+0.1	+2.50
8	.....	+5.73	+6.65	.....	+0.02	-2.24	-4.01	+0.89	+1.91	+0.31	+3.55
9	.....	.....	+4.30	.....	-.48	-3.11	-4.42	+1.31	+1.60	+0.30	+3.32
10	.....	.....	+5.81	.....	-.22	-3.18	-4.05	+1.10	+1.71	+0.20	+3.40
11	.....	.....	+5.99	+1.09	+0.12	-3.40	-3.59	+1.04	+1.58	+2.02	+2.00
12	.....	.....	+5.72	+1.50	-.46	-3.51	-3.22	+0.50	+1.62	+1.07	+3.30
13	.....	.....	+6.00	+1.56	-.96	-3.20	-6.22	+0.35	+1.10	+1.80	+0.29
14	.....	.....	+6.18	+1.65	-1.20	-3.68	-4.03	+0.19	+2.14	-.09	+3.20
15	.....	.....	+6.83	+2.28	-1.70	-4.00	-3.98	+0.80	+1.23	+1.40	+1.91
16	.....	.....	+4.12	+2.40	-.09	-4.57	-4.75	+1.00	+2.13	+0.60	+3.40
17	.....	.....	+5.95	+2.90	+0.18	-4.40	-2.78	+0.30	+0.81	+1.59	+2.20
18	.....	.....	+6.19	+1.25	+0.29	-5.39	-2.45	+0.54	+1.51	+1.85	+2.89

Q577--Continued.

Highest daily water level, in feet above (+)  
or below (-) mean sea level, 1946  
(From recorder charts)

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
19	.....	+6.08	+4.05	+1.70	+0.04	-5.11	-1.57	+0.28	+1.30	+2.20	+2.44
20	.....	+5.08	+4.41	+1.67	-.15	-5.80	-4.10	-.29	+2.51	+1.75	+1.65
21	.....	+4.45	+4.39	+1.28	-.20	-5.31	-3.68	+5.0	+2.60	+1.60	+4.2
22	.....	+5.28	+3.48	+.81	-.85	-5.90	-4.18	+.80	+2.58	+1.98	+.41
23	.....	+4.50	+4.71	+1.12	-.91	-5.22	-2.38	+1.16	+2.60	+2.21	-.46
24	.....	+5.80	+4.73	-.78	-1.00	-4.80	-2.00	+.80	+2.34	+2.59	-.86
25	.....	+4.54	+2.38	+.70	-2.19	-5.00	-3.08	+1.00	+2.38	+3.53	-1.46
26	.....	+5.36	+3.15	+1.04	-3.31	-4.82	-2.34	+1.11	+2.42	+3.00	+.60
27	.....	+5.28	+2.91	+1.30	-2.70	-4.70	-2.22	+.88	+2.60	+3.12	-.56
28	+5.05	+5.52	+2.71	.....	-3.27	-3.50	-2.70	+.78	+1.95	+3.12	-.46
29		+5.55	+2.95	+1.62	-3.22	-3.29	-1.82	+1.22	+.59	+3.63	-1.54
30		+5.61	+3.25	-.10	-2.81	-3.65	-1.72	+2.28	+2.61	+3.16	-.58
31		+6.45		+1.40		-3.85	-1.00		+1.95		-1.17

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). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	2.31	May 3	1.80	July 30	2.15	Oct. 23	2.00
Feb. 14	1.99	June 7	2.79	Aug. 29	2.07	Nov. 25	1.73
Mar. 8	1.91	July 9	2.21	Sept. 26	2.02	Dec. 31	1.42
Apr. 16	2.05						

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). New York City Department of Water Supply, Gas and Electricity. On east side of Hawtree Creek Road, about 350 feet south of 133d Avenue, Aqueduct.

Water level, in feet above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	3.92	May 3	4.07	July 30	4.49	Oct. 23	3.84
Feb. 14	4.40	June 7	4.24	Aug. 29	4.22	Nov. 25	3.66
Mar. 8	4.69	July 9	4.68	Sept. 26	3.99	Dec. 31	3.31
Apr. 16	4.22						

Q1222 (#906, p. 158; 936, p. 178; 944, p. 159; 986, p. 195; 1016, p. 221; 1023, p. 235). 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 fluctuations.

Water level, in feet above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	3.45	Apr. 26	3.71	July 31	1.66	Oct. 31	2.14
Feb. 8	3.47	June 4	2.73	Aug. 30	1.85	Nov. 26	2.26
Mar. 1	3.55	July 8	1.97	Sept. 27	2.03	Dec. 31	1.88
Apr. 3	3.97						

Q1223 (#906, p. 159; #936, p. 178; 944, p. 159; 986, p. 195; 1016, p. 221; 1023, p. 235). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	8.02	May 9	7.69	July 30	8.40	Oct. 23	7.76
Feb. 14	8.00	June 7	8.88	Aug. 29	8.05	Nov. 25	7.31
Mar. 8	7.80	July 9	8.70	Sept. 26	7.72	Dec. 31	6.83
Apr. 16	7.94						

Q1224 (\*906, p. 159; \*936, p. 179; 944, p. 159; 986, p. 195; 1016, p. 221; 1023, p. 235). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	8.02	May 9	8.10	July 31	8.42	Oct. 23	8.01
Feb. 13	8.33	June 17	8.37	Aug. 29	8.18	Nov. 25	7.33
Mar. 15	8.13	July 5	8.58	Sept. 27	8.18	Dec. 30	7.23
Apr. 16	8.18						

Q1225 (\*906, p. 160; \*936, p. 179; 944, p. 160; 986, p. 195; 1016, p. 222; 1023, p. 235). New York City Department of Water Supply, Gas and Electricity. Southwest corner of 109th Avenue and 200th Street.

Water level, in feet above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	28.00	May 9	28.36	July 29	28.31	Oct. 31	28.37
Feb. 13	28.38	June 7	28.77	Aug. 29	28.66	Nov. 25	28.15
Mar. 8	28.40	July 8	29.05	Sept. 26	28.38	Dec. 31	27.86
Apr. 2	28.41						

Q1237 (\*906, p. 160; 936, p. 179; 944, p. 160; 986, p. 196; 1016, p. 222; 1023, p. 235). New York City Department of Water Supply. Belt Parkway, about 1,450 feet west of 150th Street, Baisley Park.

Mean daily water level, in feet with reference to mean sea level, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	+1.05	+1.10	+1.30	+0.30	+1.70	-1.00	-0.70	+0.50	+0.55	+0.20	+0.30
2	.....	+1.10	+1.10	+1.50	.....	+2.25	-.75	-.10	+.60	+.45	+.10	+.20
3	+1.35	+.90	+1.10	+1.55	.....	+2.55	-.35	-.25	+.45	+.40	+.20	+.05
4	+1.20	+.73	+1.00	+1.50	+.85	+2.65	-.35	-.25	+.60	+.40	+.40	+.10
5	+1.20	+.75	+1.05	+1.65	+1.05	+2.70	-.25	+.25	+.45	+.20	+.40	+.15
6	+1.20	+.95	+1.05	+1.60	+1.15	+2.60	-.20	-.30	+.65	+.10	+.20	+.30
7	+1.55	+1.15	+1.05	+1.40	+1.25	+2.70	-.35	-.15	+.40	+.05	+.15	+.35
8	+1.55	+1.15	+1.05	+1.45	+1.30	+2.15	-.35	+.40	-.15	+.15	+.30	+.35
9	+1.55	+1.20	+1.15	+1.55	+1.20	+1.25	-.45	+.05	-.40	+.35	+.25	+.35
10	+1.85	+1.25	+.85	+1.45	+1.10	+.75	-.70	-.15	-.40	+.55	+.20	+.15
11	+1.60	+1.40	+.80	+1.40	+1.05	+.45	-.90	-.20	-.90	+.70	+.45	+.20
12	+1.50	+1.40	+.70	+1.15	+1.05	+.45	-.50	-.35	-1.10	+.80	+.45	+.45
13	+1.40	+1.35	+.75	+1.15	+1.10	+.75	-.40	-.35	-.63	+.75	+.40	+.60
14	+1.15	+1.55	+.75	+1.15	+.90	+.75	-.90	+.30	-.45	+.70	+.45	+.50
15	+1.25	+1.50	+.90	+1.15	+1.35	+.80	-.80	+.25	-.55	+.70	+.35	+.30
16	+1.10	+1.10	.....	+1.15	+1.75	+.80	-.70	+.25	-.90	+.70	+.22	+.20
17	+1.30	+1.00	.....	+.95	+2.40	+.85	-.85	+.70	-1.20	+.75	+.15	+.20
18	+1.50	+1.10	.....	+.80	+2.70	+.95	-.95	+.40	-1.45	+.80	+.10	+.35
19	+1.40	+1.00	.....	+.75	+2.85	+1.20	-1.10	+.50	-1.55	+.80	+.05	+.40
20	+1.05	+1.65	+1.25	+.65	+2.35	+1.10	-1.50	+.45	-1.63	+.60	+.15	+.45
21	+1.30	+1.35	+1.25	+.45	+2.60	+1.15	-1.30	+.30	-1.25	+.70	+.30	+.95
22	+1.25	+1.10	+1.30	+.60	+2.55	+1.05	-.80	+.20	+.10	+.55	+.35	+.75
23	+1.05	+1.25	+1.25	+.60	+2.00	+.60	-.55	+.15	+.55	+.70	+.30	+.35
24	+1.10	+1.40	+1.10	+.65	+1.85	+.15	-.35	+.25	+.75	+.70	+.10	+.10
25	+1.25	+1.70	+1.20	+.75	+1.50	-.45	-.60	+.10	+.80	+.75	+.05	-.05
26	+1.00	+1.50	+1.30	+1.15	+1.35	-1.00	-.50	+.40	+.50	+.70	+.05	+.05
27	+.80	+1.60	+1.40	+1.05	+1.45	-1.25	-.55	+.50	+.30	+.50	+.05	-.10
28	+.80	+1.45	+1.30	+.85	+1.65	-1.50	-.55	+.45	.....	+.40	-.05	.00
29	+.80		+1.15	+.90	+2.10	-1.35	-.30	+.40	+.10	+.35	+.10	-.05
30	+.75		+1.30	+1.05	+2.00	-1.25	-.60	+.27	+.45	+.30	+.15	+.10
31	+1.00		+1.20		+1.95		-.85	+.55		+.30		-.05



Q1248 (\*906, p. 161; \*936, p. 180; 944, p. 161; 986, p. 197; 1016, p. 223; 1023, p. 236). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	36.12	Apr. 26	36.70	July 29	36.78	Oct. 31	36.96
Feb. 13	36.64	June 7	36.99	Aug. 29	36.55	Nov. 25	36.80
Mar. 1	36.73	July 8	37.04	Sept. 26	36.36	Dec. 31	36.39
Apr. 2	36.75						

Q1249 (\*906, p. 161; \*936, p. 180; 944, p. 161; 986, p. 197; 1016, p. 223; 1023, p. 236). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	31.79	May 9	32.35	July 29	32.82	Oct. 31	32.57
Feb. 13	32.28	June 7	32.68	Aug. 29	32.63	Nov. 25	32.34
Mar. 8	32.37	July 8	33.12	Sept. 26	33.41	Dec. 31	32.29
Apr. 2	32.43						

Q1250 (\*906, p. 161; \*936, p. 181; 944, p. 161; 986, p. 197; 1016, p. 224; 1023, p. 236). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	20.90	May 9	20.79	July 29	21.67	Oct. 31	21.03
Feb. 13	21.02	June 7	21.81	Aug. 29	21.44	Nov. 25	20.68
Mar. 8	20.87	July 8	22.02	Sept. 26	21.05	Dec. 30	20.22
Apr. 2	20.93						

Q1251 (\*906, p. 161; \*936, p. 181; 944, p. 161; 986, p. 198; 1016, p. 224; 1023, p. 236). New York City Department of Water Supply, Gas and Electricity. At northwest corner of 107th Avenue and 172th Street, Jamaica.

Water level, in feet above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	10.77	May 9	10.74	July 31	11.59	Oct. 31	10.92
Feb. 13	11.09	June 7	11.49	Aug. 29	11.35	Nov. 25	10.75
Mar. 8	10.85	July 8	12.02	Sept. 26	10.91	Dec. 30	10.48
Apr. 2	10.86						

Q1252 (\*906, p. 161; \*936, p. 181; 944, p. 162; 986, p. 198; 1016, p. 224; 1023, p. 236). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	12.87	Apr. 29	12.56	July 29	12.72	Oct. 23	12.67
Feb. 13	12.88	June 10	13.10	Aug. 29	12.78	Nov. 25	12.39
Mar. 15	12.66	July 5	13.02	Sept. 27	12.57	Dec. 30	12.08
Apr. 12	12.63						

Q1253 (\*906, p. 161; \*936, p. 182; 944, p. 162; 986, p. 198; 1016, p. 224; 1023, p. 236). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	3.22	May 9	3.18	July 31	3.36	Oct. 23	2.84
Feb. 13	3.47	June 17	3.30	Aug. 29	3.15	Nov. 25	2.67
Mar. 15	3.49	July 5	3.45	Sept. 27	2.97	Dec. 30	2.34
Apr. 16	3.30						

Q1254 (\*906, p. 162; \*936, p. 182; \*944, p. 162; 986, p. 198; 1016, p. 225; 1023, p. 237). 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 below mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	1.62	May 9	1.58	July 31	1.16	Oct. 23	1.67
Feb. 13	1.39	June 17	1.42	Aug. 29	1.34	Nov. 25	1.87
Mar. 15	1.39	July 5	1.17	Sept. 27	1.50	Dec. 30	2.02
Apr. 16	1.51						

Q1255 (\*936, p. 182; 944, p. 162; 986, p. 199; 1016, p. 225; 1023, p. 237). New York City Department of Water Supply, Gas and Electricity. At northwest corner of Atlantic Avenue and Woodhaven Boulevard, Woodhaven.

Water level, in feet below mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	4.20	May 6	4.72	July 30	3.79	Oct. 23	4.32
Feb. 13	4.13	June 18	4.11	Aug. 29	4.29	Nov. 25	4.57
Mar. 4	4.22	July 1	4.12	Sept. 27	4.48	Dec. 30	4.11
Apr. 12	4.39						

Q1256 (\*906, p. 162; \*936, p. 184; 944, p. 163; 986, p. 199; 1023, p. 237). New York City Department of Water Supply, Gas and Electricity. At southeast corner of 95th Avenue and 82d Street, Woodhaven.

Water level, in feet below mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	3.18	May 9	3.25	July 30	2.62	Oct. 23	3.06
Feb. 13	3.14	June 17	2.71	Aug. 29	2.79	Nov. 25	3.27
Mar. 15	3.23	July 1	2.57	Sept. 27	3.04	Dec. 30	3.48
Apr. 12	3.30						

Q1281 (\*936, p. 184; 944, p. 163; 986, p. 199; 1016, p. 225; 1023, p. 237). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	1.57	May 9	1.68	July 29	0.81	Oct. 23	1.23
Feb. 14	1.32	June 17	1.02	Aug. 29	.91	Nov. 25	1.41
Mar. 15	1.51	July 1	.83	Sept. 27	1.27	Dec. 30	1.63
Apr. 12	1.55						

Q1282 (\*936, p. 185; 944, p. 163; 986, p. 199; 1016, p. 225; 1023, p. 237). 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 above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	1.10	May 3	1.16	July 29	1.43	Oct. 23	1.04
Feb. 14	1.02	June 17	1.25	Aug. 29	1.29	Nov. 25	.90
Mar. 15	1.28	July 5	1.44	Sept. 27	1.15	Dec. 30	.52
Apr. 16	1.62						

Q1283 (\*936, p. 186; 944, p. 163; 986, p. 199; 1016, p. 226; 1023, p. 237). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	4.45	May 3	4.47	July 30	4.73	Oct. 23	4.22
Feb. 14	4.82	June 7	4.87	Aug. 29	4.54	Nov. 25	4.00
Mar. 8	5.63	July 9	4.98	Sept. 26	4.35	Dec. 31	3.88
Apr. 16	4.57						

Q1284 (\*936, p. 187; 944, p. 164; 986, p. 200; 1016, p. 226; 1023, p. 237). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	6.92	Apr. 16	7.10	July 9	7.93	Sept. 26	8.07
Feb. 14	7.24	May 3	7.15	Aug. 30	7.64	Oct. 23	8.28
Mar. 8	7.08	June 7	7.97	Aug. 29	7.56	Nov. 25	7.33

Q1285 (\*936, p. 187; 944, p. 164; 986, p. 200; 1016, p. 226; 1023, p. 238). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	6.72	May 3	6.93	July 30	7.38	Oct. 23	6.66
Feb. 14	7.24	June 7	7.18	Aug. 29	7.08	Nov. 25	6.38
Mar. 8	7.16	July 9	7.56	Sept. 26	6.82	Dec. 31	5.90
Apr. 2	7.03						

Q1286 (\*936, p. 188; 944, p. 164; 986, p. 200; 1016, p. 226; 1023, p. 238). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	10.34	Apr. 29	10.05	July 31	10.35	Oct. 23	9.91
Feb. 13	10.30	June 10	10.32	Aug. 29	10.20	Nov. 25	9.62
Mar. 15	10.25	July 9	10.55	Sept. 27	10.11	Dec. 30	9.37
Apr. 12	10.15						

Q1287 (\*936, p. 188; 944, p. 154; 986, p. 200; 1016, p. 227; 1023, p. 238). New York City Department of Water Supply, Gas and Electricity. At northeast corner of Merrick Boulevard and 116th Avenue, St. Albans.

Water level, in feet above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	13.31	May 9	12.29	July 30	12.63	Oct. 31	12.25
Feb. 13	12.78	June 7	14.42	Aug. 29	12.40	Nov. 25	11.84
Mar. 8	12.57	July 9	12.95	Sept. 26	12.17	Dec. 31	11.82
Apr. 2	12.95						

Q1288 (\*936, p. 189; 944, p. 165; 986, p. 201; 1016, p. 227; 1023, p. 238). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	17.88	May 9	17.61	July 30	18.36	Oct. 31	17.67
Feb. 15	17.93	June 7	19.00	Aug. 29	18.04	Nov. 25	17.24
Mar. 8	17.70	July 9	18.76	Sept. 26	17.59	Dec. 31	16.72
Apr. 2	17.95						

Q1289 (\*936, p. 189; 944, p. 165; 986, p. 201; 1016, p. 227; 1023, p. 238). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	31.65	May 9	32.18	July 30	32.86	Oct. 31	32.42
Feb. 13	32.12	June 7	32.56	Aug. 29	32.58	Nov. 25	32.27
Mar. 8	32.21	July 8	33.10	Sept. 26	32.33	Dec. 31	31.81
Apr. 2	32.23						

Q1290 (\*936, p. 190; 944, p. 165; 986, p. 201; 1016, p. 227; 1023, p. 238). New York City Department of Water Supply, Gas and Electricity. At southwest corner of Merrick Road and Springfield Boulevard, Springfielda.

Q1290--Continued.

Water level, in feet above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	17.23	May 9	16.89	July 30	16.71	Oct. 31	16.34
Feb. 13	17.07	June 7	17.59	Aug. 29	16.60	Nov. 25	16.04
Mar. 8	16.97	July 8	16.96	Sept. 26	16.57	Dec. 31	15.77
Apr. 2	17.06						

Q1292 (\*936, p. 190; 944, p. 166; 986, p. 201; 1016, p. 228; 1023, p. 238). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	27.94	May 9	28.23	July 29	28.87	Oct. 31	28.88
Feb. 8	28.22	June 7	28.41	Aug. 29	29.07	Nov. 27	28.58
Mar. 1	28.26	July 9	28.79	Sept. 27	28.84	Dec. 30	28.11
Apr. 2	28.38						

Suffolk County

S58 (\*1016, p. 228; 1023, p. 239). 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 1946

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	23.87	23.81	23.75	23.73	23.39	23.90	23.74	23.16	23.30	22.97	22.75	22.63
2	23.98	23.82	23.80	23.77	23.39	23.92	23.73	23.14	23.28	22.95	22.74	22.62
3	24.14	23.83	23.81	23.78	23.37	24.04	23.70	23.13	23.26	22.93	22.74	22.62
4	24.27	23.83	23.82	23.79	23.36	24.48	23.68	23.13	23.24	22.92	22.74	22.61
5	24.33	23.84	23.82	23.81	23.35	24.77	23.65	23.12	23.23	22.91	22.72	22.61
6	24.35	23.87	23.82	23.72	23.34	24.87	23.64	23.10	23.21	22.90	22.72	22.60
7	24.33	23.89	23.83	23.79	23.32	24.86	23.61	23.25	23.20	22.89	22.72	22.60
8	24.25	23.87	23.82	23.77	23.31	24.77	23.58	23.38	23.18	22.89	22.72	22.59
9	24.19	23.87	23.84	23.77	23.30	24.67	23.56	23.45	23.17	22.88	22.72	22.59
10	24.15	23.86	23.80	23.74	23.28	24.57	23.54	23.50	23.15	22.87	22.70	22.58
11	24.08	23.82	23.79	23.71	23.28	24.52	23.52	23.52	23.13	22.86	22.70	22.58
12	24.06	23.78	23.76	23.69	23.27	24.48	23.50	23.52	23.12	22.86	22.70	22.58
13	24.01	23.76	23.75	23.66	23.27	24.42	23.48	23.54	23.10	22.85	22.69	22.58
14	23.96	23.77	23.73	23.64	23.26	24.35	23.45	23.55	23.09	22.84	22.69	22.57
15	23.94	23.72	23.72	23.64	23.31	24.30	23.43	23.56	23.07	22.83	22.68	22.57
16	23.89	23.67	23.71	23.61	23.37	24.25	23.40	23.55	23.05	22.83	22.68	22.57
17	23.87	23.67	23.71	23.58	23.44	24.21	23.38	23.54	23.04	22.83	22.68	22.57
18	23.85	23.64	23.70	23.57	23.51	24.17	23.36	23.52	23.02	22.83	22.67	22.56
19	23.81	23.63	23.69	23.55	23.56	24.15	23.34	23.51	23.01	22.81	22.67	22.55
20	23.77	23.63	23.67	23.54	23.62	24.12	23.31	23.50	23.01	22.81	22.66	22.55
21	23.77	23.61	23.66	23.52	23.69	24.08	23.30	23.47	23.00	22.80	22.66	22.61
22	23.74	23.60	23.66	23.51	23.75	24.05	23.29	23.46	22.98	22.80	22.66	22.71
23	23.72	23.59	23.65	23.50	23.79	24.01	23.27	23.45	22.97	22.79	22.67	22.75
24	23.70	23.58	23.63	23.49	23.83	23.97	23.28	23.43	22.96	22.79	22.66	22.73
25	23.74	23.57	23.64	23.48	23.85	23.94	23.27	23.41	22.98	22.79	22.66	22.79
26	23.73	23.55	23.63	23.48	23.86	23.90	23.25	23.39	22.96	22.79	22.66	22.79
27	23.69	23.54	23.66	23.46	23.86	23.87	23.23	23.38	22.95	22.77	22.65	22.78
28	23.68	23.70	23.70	23.44	23.87	23.82	23.22	23.35	22.94	22.77	22.64	22.77
29	23.66		23.73	23.43	23.88	23.80	23.20	23.34	22.94	22.77	22.64	22.76
30	23.65		23.75	23.41	23.88	23.77	23.19	23.34	22.95	22.76	22.63	22.76
31	23.78		23.73		23.89		23.17	23.32		22.76		22.75

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). New York Water Service Corporation. Abandoned well at Spring Street pumping station, 450 feet south of Gains Avenue, Huntington.

Water level, in feet above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 5	39.07	Apr. 25	39.68	Aug. 1	39.61	Nov. 1	39.47
26	39.16	June 4	39.71	Sept. 4	39.49	Dec. 4	39.65
Apr. 3	39.61	July 10	39.84	Oct. 1	39.64		

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). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 6	72.58	Apr. 25	72.63	Aug. 1	72.84	Nov. 1	73.16
27	72.64	June 4	72.58	Sept. 4	72.97	Dec. 4	73.14
Apr. 3	72.55	July 10	72.67	Oct. 1	73.10		

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). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 6	16.82	May 1	16.17	July 26	15.96	Oct. 31	15.43
Mar. 7	16.61	June 5	17.38	Aug. 30	16.10	Nov. 29	15.34
Apr. 4	16.70	27	16.61	Sept. 27	15.59	Dec. 31	15.68

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). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 6	43.10	May 1	43.05	July 26	43.39	Oct. 31	41.45
Mar. 7	43.20	June 5	43.99	Aug. 30	42.78	Nov. 29	40.79
Apr. 4	43.43	27	44.14	Sept. 27	42.09	Dec. 31	40.35

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). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	54.68	May 1	56.55	July 26	56.78	Oct. 31	55.04
Feb. 6	55.75	June 5	56.15	Aug. 30	56.06	Nov. 29	54.57
Mar. 7	56.02	27	57.40	Sept. 27	55.55	Dec. 31	54.07
Apr. 4	56.03						

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). 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 northeast of Babylon.

Water level, in feet above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 6	22.11	May 8	21.70	July 26	21.74	Oct. 31	21.16
28	21.89	June 6	22.59	Aug. 30	21.59	Nov. 29	21.03
Apr. 4	22.03	27	22.13	Sept. 27	21.26	Dec. 31	21.11

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. 250; 1023, p. 240). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 6	11.32	May 1	10.80	July 26	10.70	Oct. 31	10.11
28	11.65	June 5	12.22	Aug. 30	10.66	Nov. 29	10.10
Apr. 4	11.27	27	10.92	Sept. 27	10.27	Dec. 31	10.61

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. 251; 1023, p. 240). 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, 1946

Feb. 6	28.45	Apr. 25	28.58	July 26	28.87	Oct. 31	26.88
28	28.50	June 6	29.65	Aug. 30	28.16	Nov. 29	26.37
Apr. 4	28.69	27	29.55	Sept. 27	27.54	Dec. 31	25.97

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. 251; 1023, p. 241). 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, 1946

Jan. 3	48.64	Apr. 4	49.95	June 27	51.38	Sept. 27	50.59
Feb. 7	49.39	May 1	50.18	July 26	51.44	Oct. 31	50.06
Mar. 7	49.78	June 5	50.25	Aug. 30	51.01	Nov. 29	49.58

S1811 (\*840, p. 292; 845, p. 326; \*886, p. 512; \*906, p. 167; \*936, p. 194; 944, p. 169; 986, p. 204; 1016, p. 251; 1023, p. 241). 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, 1946: Aug. 30, 52.20; Oct. 1, 52.13; Nov. 1, 52.11; Dec. 4, 52.10.

S1812 (\*840, p. 292; 845, p. 327; 886, p. 512; \*906, p. 168; 936, p. 195; 944, p. 170; 986, p. 204; 1016, p. 251; 1023, p. 241). 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, 1946

Feb. 7	45.67	May 2	46.09	July 26	46.83	Nov. 1	46.15
Mar. 7	45.88	June 11	46.34	Aug. 30	46.73	Dec. 4	45.78
Apr. 9	46.05	July 3	46.81	Oct. 1	46.47		

S1813 (\*906, p. 168; 936, p. 195; 944, p. 170; 986, p. 204; 1016, p. 252; 1023, p. 241). 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, 1946

Feb. 14	37.53	May 2	37.75	July 26	38.29	Oct. 31	37.72
Mar. 7	37.66	June 13	38.37	Aug. 30	38.25	Dec. 2	37.47
Apr. 9	37.79	July 3	38.32	Sept. 27	37.97		

S1814 (\*906, p. 169; 936, p. 196; 944, p. 170; 986, p. 204; 1016, p. 232; 1023, p. 241). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 14	36.17	May 2	36.43	July 26	37.04	Oct. 31	36.37
Mar. 7	36.28	June 13	36.79	Aug. 30	37.03	Nov. 29	36.05
Apr. 9	36.44	July 3	37.09	Oct. 1	36.73		

S1815 (\*906, p. 169; 936, p. 196; 944, p. 171; 986, p. 205; 1016, p. 232; 1023, p. 241). Geological Survey, U. S. Dept. of Interior. On northwest corner of Suffolk and Eastern Avenues, Brentwood.

Water level, in feet above mean sea level, 1946

Feb. 14	44.59	May 1	44.90	July 26	45.79	Oct. 31	45.28
Mar. 7	44.77	June 13	45.16	Aug. 30	45.91	Nov. 29	44.87
Apr. 4	44.86	27	45.49				

S1816 (\*906, p. 170; 936, p. 196; 944, p. 171; 986, p. 205; 1016, p. 232; 1023, p. 241). 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, 1946

Jan. 3	55.34	Apr. 4	56.76	June 27	58.01	Sept. 27	56.93
Feb. 7	55.54	May 1	56.89	July 26	57.83	Oct. 31	56.37
Mar. 7	55.76	June 5	56.86	Aug. 30	57.43	Nov. 29	55.84

S1817 (\*906, p. 170; 936, p. 196; 944, p. 171; 986, p. 205; 1016, p. 233; 1023, p. 242). 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, 1946

Jan. 3	52.26	May 1	51.76	July 26	51.79	Oct. 31	50.78
Feb. 6	52.15	June 5	53.17	Aug. 30	51.76	Nov. 29	50.51
Mar. 7	52.17	27	52.26	Sept. 27	51.07	Dec. 31	50.69
Apr. 4	52.21						

S2314 (\*986, p. 205; 1016, p. 233; 1023, p. 242). 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, 1946

Jan. 3	59.22	May 1	59.72	July 26	60.06	Oct. 31	59.58
Feb. 6	59.65	June 5	59.88	Aug. 30	59.95	Nov. 29	59.21
Mar. 7	59.79	27	60.20	Sept. 27	59.68	Dec. 31	58.90
Apr. 4	59.84						

S2454 (\*906, p. 171; 936, p. 197; 944, p. 171; 986, p. 206; 1016, p. 233; 1023, p. 242). 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, 1946

Feb. 6	7.70	May 1	7.32	July 26	7.34	Oct. 31	7.05
Mar. 7	7.61	June 5	8.56	Aug. 30	7.49	Nov. 29	7.07
Apr. 4	7.71	27	7.50	Sept. 27	7.17	Dec. 31	7.37

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). 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.

S2455--Continued.

## Water level, in feet above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	22.63	Apr. 26	22.39	July 26	22.39	Oct. 31	20.72
Feb. 27	22.52	May 29	22.70	Aug. 30	21.94	Nov. 29	20.34
Mar. 29	22.69	June 27	23.26	Sept. 27	21.30	Dec. 31	20.35

S3112 (\*936, p. 199; 944, p. 172; 986, p. 207; 1016, p. 234; 1023, p. 242). 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, 1946

Jan. 3	53.12	Apr. 4	54.55	June 27	55.64	Nov. 29	52.73
Feb. 6	54.32	May 1	54.57	July 26	55.02	Dec. 31	52.27
Mar. 7	54.39	June 5	54.45	Oct. 31	53.18		

S3496 (\*944, p. 175; 986, p. 207; \*1016, p. 234; 1023, p. 242). 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, 1946

Jan. 3	47.08	Apr. 9	46.73	July 5	47.38	Sept. 27	48.68
Feb. 14	46.73	May 7	46.88	July 31	48.14	Nov. 1	48.43
Mar. 6	46.62	June 13	47.12	Sept. 4	48.73	Dec. 2	48.21

S3497 (\*944, p. 173; 986, p. 208; 1016, p. 234; 1023, p. 242). 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, 1946

Jan. 3	46.38	Apr. 10	46.22	July 5	46.95	Sept. 27	48.13
Feb. 14	46.13	May 8	46.35	July 31	47.71	Nov. 1	47.85
Mar. 12	46.11	June 11	46.56	Sept. 4	48.27	Dec. 2	47.63

S3498 (\*944, p. 173; 986, p. 208; 1016, p. 235; 1023, p. 243). 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, 1946

Jan. 3	43.52	Apr. 10	44.33	July 5	45.23	Sept. 27	45.15
Feb. 14	43.83	May 2	44.36	July 30	45.49	Oct. 25	44.97
Mar. 12	44.13	June 11	44.46	Aug. 29	45.39	Dec. 2	44.70

S3512 (\*944, p. 175; 986, p. 208; 1016, p. 235; 1023, p. 243). 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, 1946

Jan. 31	66.79	May 2	67.45	July 31	68.39	Oct. 1	68.03
Mar. 5	67.09	June 11	67.61	Aug. 28	68.35	Dec. 4	67.26
Apr. 9	67.24	July 10	68.19				

S3513 (\*944, p. 173; 986, p. 208; 1016, p. 235; 1023, p. 243). 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, 1946

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	60.58	60.63	60.80	61.00	61.20	61.32	61.64	62.01	62.13	62.09	61.83	61.65
2	60.57	60.64	.....	61.05	61.21	61.34	61.66	62.01	62.14	62.07	61.83	61.61
3	60.55	60.63	60.83	61.02	61.20	61.32	61.66	62.01	62.13	62.05	61.84	61.59
4	60.55	60.63	60.85	61.04	61.21	61.34	61.67	62.02	62.13	62.03	61.82	61.57
5	60.56	60.63	60.84	61.05	61.23	61.34	61.68	62.02	62.13	62.02	61.81	61.58
6	60.56	60.67	60.85	61.06	61.24	61.34	61.71	62.02	62.14	62.03	61.81	61.55

a Estimated.



## S3513--Continued.

Water level at noon, in feet above mean sea level, 1946

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
7	60.56	60.69	60.86	61.05	61.24	61.35	61.73	62.04	62.15	62.04	61.81	61.54
8	60.54	.....	60.86	61.06	61.25	61.36	61.73	62.03	62.14	62.02	61.82	61.55
9	60.57	60.71	60.90	61.08	61.25	61.36	61.75	62.04	62.14	62.03	61.79	61.54
10	60.57	60.71	60.87	61.07	61.24	61.35	61.76	62.06	62.15	62.01	61.78	61.54
11	60.53	60.70	60.89	61.07	61.26	61.38	61.78	62.06	62.15	62.00	61.78	61.52
12	60.58	60.69	60.89	61.08	61.26	61.40	61.80	62.05	62.12	.....	61.77	61.52
13	60.56	60.72	60.92	61.09	61.24	61.41	61.81	62.06	62.11	61.97	61.76	61.54
14	60.54	60.77	60.92	61.09	61.24	61.41	61.82	62.06	62.13	61.95	61.75	61.50
15	60.58	60.74	60.94	61.11	61.27	61.42	61.83	62.06	62.13	61.95	61.73	61.49
16	60.54	60.71	60.93	61.10	61.28	61.44	61.84	62.07	62.13	61.95	61.71	61.47
17	60.59	60.75	60.93	61.09	61.28	61.47	61.86	62.10	62.13	61.97	61.71	61.48
18	60.60	60.73	60.94	61.11	61.28	61.49	61.87	62.10	62.12	62.00	61.69	61.45
19	60.59	60.74	60.94	61.11	61.28	61.48	61.89	62.10	62.13	61.94	61.70	61.44
20	60.54	60.78	60.95	61.13	61.28	61.51	61.90	62.10	62.13	61.92	61.70	61.43
21	60.62	60.74	60.95	61.10	61.30	61.53	61.91	62.10	.....	61.91	61.68	61.48
22	60.59	60.75	60.97	61.13	61.27	61.54	61.92	62.11	62.11	61.92	61.72	.....
23	60.57	60.79	60.96	61.15	61.28	.....	61.93	62.11	62.10	61.91	61.67	61.37
24	60.62	60.81	60.97	61.15	61.29	.....	61.94	62.11	62.11	61.91	61.66	61.39
25	60.64	60.81	60.99	61.16	61.29	61.55	61.95	62.12	62.12	61.91	61.67	61.37
26	60.61	60.81	61.00	61.19	61.30	61.57	61.96	62.12	62.10	61.88	61.66	61.35
27	60.67	60.81	60.98	61.19	61.30	61.58	61.96	62.13	62.08	61.86	61.65	61.33
28	60.60	60.80	60.99	61.17	61.32	61.60	61.97	62.13	62.07	61.85	61.64	61.33
29	60.58		61.00	61.18	61.30	61.61	61.98	62.14	62.08	61.88	61.63	61.37
30	60.63		61.01	61.18	61.30	61.62	61.99	62.13	62.12	61.87	61.61	61.36
31	60.66		60.99		61.32		62.00	62.14		61.86		61.29

a Estimated.

S3514 (\*944, p. 174; 986, p. 208; 1016, p. 236; 1023, p. 244). Herman Jurgen . On south side of Jericho Turnpike (State Highway 25), about 0.5 mile east of Lakefield Avenue, Commack.

Water level, in feet above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	66.96	Apr. 25	67.35	Aug. 1	67.32	Nov. 4	67.56
Feb. 27	67.16	June 4	67.33	Sept. 4	67.33	Dec. 4	67.12
Apr. 3	67.14	July 9	67.37	Oct. 1	67.37		

S3515 (\*944, p. 174; 986, p. 209; 1016, p. 237; 1023, p. 244). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 6	32.82	Apr. 26	32.87	July 26	33.20	Oct. 31	31.78
Mar. 7	32.92	June 5	33.23	Aug. 30	32.75	Nov. 29	31.39
Apr. 4	32.99	27	33.80	Sept. 27	32.26		

S3516 (\*944, p. 174; 986, p. 209; 1016, p. 237; 1023, p. 244). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 6	37.61	Apr. 26	37.86	July 26	38.49	Oct. 31	36.97
Mar. 7	37.71	June 5	37.95	Aug. 30	37.99	Nov. 29	36.50
Apr. 4	37.76	27	38.92	Sept. 27	37.48		

S3517 (\*944, p. 175; 986, p. 209; 1016, p. 237; 1023, p. 244). New York City Board of Water Supply test well 60. On southwest corner of Lake-land Avenue and Tariff Street, Sayville.

Water level, in feet above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	12.62	Apr. 9	13.11	July 5	13.42	Sept. 27	12.86
Feb. 13	13.19	May 8	12.90	July 31	12.96	Nov. 1	12.45
Mar. 6	13.20	June 13	13.88	Sept. 4	13.25	Dec. 2	12.20

S3518 (#944, p. 175; 986, p. 209; 1016, p. 237; 1023, p. 244). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 6	31.85	May 1	31.78	July 26	31.96	Oct. 31	30.93
28	31.84	June 6	32.27	Aug. 30	31.66	Nov. 29	30.59
Apr. 4	31.95	27	32.64	Sept. 27	31.31		

S3519 (#944, p. 176; 986, p. 210; 1016, p. 238; 1023, p. 244). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 6	26.06	May 1	25.63	July 26	25.67	Oct. 31	24.83
28	25.86	June 6	26.61	Aug. 30	25.70	Nov. 29	24.50
Apr. 4	25.99	July 3	26.06	Sept. 27	25.20		

S3521 (#944, p. 176; 986, p. 210; 1016, p. 238; 1023, p. 244). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	36.23	Apr. 10	36.99	July 5	37.87	Sept. 27	37.31
Feb. 14	36.79	May 2	37.01	30	37.57	Oct. 25	37.08
Mar. 12	36.95	June 11	37.30	Aug. 29	37.53	Dec. 2	36.76

S3522 (#944, p. 177; 986, p. 210; 1016, p. 238; 1023, p. 245). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	19.48	Apr. 10	19.67	July 5	19.87	Oct. 25	19.42
Feb. 14	19.72	May 8	19.61	31	19.62	Dec. 2	19.28
Mar. 12	19.68	June 11	20.12	Sept. 27	19.52		

S3524 (#944, p. 177; 986, p. 211; 1016, p. 239; 1023, p. 245). 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.

Water level, in feet above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 13	22.47	May 8	22.14	July 30	22.25	Nov. 4	22.29
Mar. 13	22.40	June 12	22.41	Aug. 29	22.90	Dec. 2	22.12
Apr. 11	22.23	July 5	22.45	Sept. 27	22.56		

S3526 (#1016, p. 239; 1023, p. 245). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 13	26.85	May 8	26.74	July 30	27.60	Nov. 4	28.01
Mar. 13	26.45	June 12	26.94	Aug. 29	27.92	Dec. 2	27.93
Apr. 11	26.56	July 9	27.24				

S3527 (#944, p. 178; 986, p. 211; 1016, p. 239; 1023, p. 245). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 13	31.53	May 8	32.08	July 30	32.97	Oct. 25	33.10
Mar. 13	31.71	June 12	32.23	Aug. 29	33.25	Dec. 2	32.81
Apr. 11	31.91	July 5	32.56	Sept. 27	33.23		

S3529 (#944, p. 179; 986, p. 211; 1016, p. 240; 1023, p. 245). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 13	25.70	May 8	25.66	July 30	25.99	Oct. 25	25.76
Mar. 13	25.68	June 12	26.54	Aug. 29	26.47	Dec. 2	25.38
Apr. 11	25.81	July 5	26.18	Sept. 27	26.08		

S3530 (#944, p. 179; 986, p. 212; 1016, p. 240; 1023, p. 246). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 13	32.60	May 8	32.62	July 5	33.14	Aug. 29	33.77
Mar. 13	32.65	June 12	32.89	30	33.04	Dec. 2	33.00
Apr. 11	32.63						

S3531 (#944, p. 180; 986, p. 212; 1016, p. 240; 1023, p. 246). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 13	9.66	May 8	9.64	July 30	10.03	Oct. 25	9.84
Mar. 13	9.57	June 12	10.04	Aug. 29	10.22	Dec. 2	9.67
Apr. 11	9.69	July 5	9.91	Sept. 30	10.03		

S3532 (#944, p. 180; 986, p. 212; 1016, p. 241; 1023, p. 246). 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.

Water level, in feet above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	46.02	May 7	46.94	July 31	47.94	Nov. 4	47.79
Mar. 14	46.66	June 12	47.06	Aug. 29	48.14	Dec. 3	47.46
Apr. 10	46.78	July 10	47.73	Sept. 30	48.14		

S3533 (#944, p. 181; 986, p. 212; 1016, p. 241; 1023, p. 246). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	45.40	May 7	46.01	July 31	46.62	Nov. 4	46.45
Mar. 14	45.94	June 12	46.29	Aug. 29	46.90	Dec. 3	46.15
Apr. 10	46.01	July 10	46.67	Sept. 30	46.74		

S3534 (#944, p. 181; 986, p. 212; 1016, p. 241; 1023, p. 246). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 13	26.96	May 8	27.56	July 30	28.50	Nov. 4	28.18
Mar. 13	27.16	June 12	27.70	Aug. 29	28.52	Dec. 2	28.01
Apr. 11	27.35	July 9	28.26	Sept. 30	28.46		

S3535 (#944, p. 161; 986, p. 213; 1016, p. 241; 1023, p. 246). 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.

S3535--Continued.

Water level, in feet above mean sea level, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 13	18.79	May 8	19.33	July 30	19.86	Oct. 25	19.61
Mar. 13	19.10	June 12	19.38	Aug. 28	19.92	Dec. 2	19.28
Apr. 11	19.28	July 9	19.80	Sept. 30	19.83		

S3536 (\*944, p. 182; 986, p. 213; 1016, p. 242; 1023, p. 247). 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 2.5 miles northeast of Center Moriches.

Water level, in feet above mean sea level, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 13	23.90	May 8	24.52	Aug. 28	25.17	Oct. 25	25.02
Mar. 13	24.12	June 12	24.68	Sept. 30	25.21	Dec. 2	24.81
Apr. 11	24.33						

S3538 (\*944, p. 183; 986, p. 213; 1016, p. 242; 1023, p. 247). 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-Quogue road (State Highway 113), and about 0.6 mile west of Oakville.

Water level, in feet above mean sea level, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	15.75	May 8	16.05	July 30	16.26	Oct. 25	16.14
Mar. 13	15.88	June 12	16.25	Aug. 28	16.38	Dec. 3	15.87
Apr. 10	16.03	July 9	16.33	Sept. 30	16.33		

S3545 (\*944, p. 185; 986, p. 214; \*1016, p. 242; 1023, p. 247). 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, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	34.35	Apr. 9	35.42	July 5	36.79	Sept. 21	36.39
Feb. 14	35.08	May 8	35.53	31	36.56	Nov. 1	35.99
Mar. 6	35.23	June 13	36.05	Sept. 4	36.54	Dec. 2	35.54

S3727 (\*1016, p. 242; 1023, p. 247). 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, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	30.11	Apr. 9	31.15	July 5	32.28	Sept. 27	31.76
Feb. 14	30.80	May 8	31.15	31	31.92	Nov. 1	31.29
Mar. 6	30.95	June 13	32.04	Sept. 4	32.05	Dec. 2	30.81

S3728 (\*1016, p. 243; 1023, p. 247). New York Board of Water Supply test well 186. 0.2 mile east of Taylor Avenue and 0.2 mile north of Montauk Highway, Hagerman.

Water level, in feet above mean sea level, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 13	20.45	May 3	20.93	July 31	21.44	Oct. 25	20.79
Mar. 12	20.70	June 11	21.03	Aug. 29	21.26	Dec. 2	20.37
Apr. 11	20.81	July 5	21.70	Sept. 27	21.04		

S3729 (\*1016, p. 243; 1023, p. 247). New York City Board of Water Supply test well 204. Barton and Dunston Avenues, North Hagerman.

Water level, in feet above mean sea level, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 13	27.95	May 3	28.53	July 31	29.41	Oct. 25	28.88
Mar. 12	28.21	June 11	28.75	Aug. 29	29.27	Dec. 2	28.48
Apr. 11	28.40	July 3	29.55	Sept. 27	29.11		

S3730 (\*1016, p. 243; 1023, p. 247). New York City Board of Water Supply test well 207. Duntun Avenue and south Haven Road, South Plainfield.

Water level, in feet above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 13	33.87	May 3	34.53	July 31	35.75	Oct. 25	35.42
Mar. 12	34.14	June 11	34.73	Aug. 29	35.64	Dec. 2	35.09
Apr. 11	34.41	July 3	35.35	Sept. 27	35.55		

S3731 (\*1016, p. 244; 1023, p. 248). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 13	23.29	May 3	23.87	July 31	24.48	Oct. 25	23.84
Mar. 13	23.54	June 11	24.06	Aug. 29	24.26	Dec. 2	23.44
Apr. 11	23.71	July 5	24.78	Sept. 27	24.07		

S3732 (\*1016, p. 244; 1023, p. 248). New York City Board of Water Supply test well 259. Mt. Sinai Road, 2.6 miles north of Route 25, Coran.

Water level, in feet above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	53.60	Apr. 10	53.83	July 3	53.54	Oct. 1	52.90
30	55.02	May 7	52.90	31	52.99	Nov. 4	54.19
Mar. 14	54.38	June 12	54.35	Aug. 29	53.12	Dec. 3	53.78

S3735 (\*1016, p. 245; 1023, p. 248). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 7	64.58	May 2	64.91	July 31	65.66	Nov. 1	65.87
Mar. 5	65.11	June 13	65.01	Sept. 4	65.93	Dec. 4	65.56
Apr. 9	65.01	July 3	65.12	Oct. 1	65.95		

S3736 (\*1016, p. 245; 1023, p. 248). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	42.41	Apr. 9	42.68	July 5	43.66	Sept. 27	44.16
Feb. 14	42.35	May 8	42.81	31	44.19	Nov. 1	43.93
Mar. 6	42.43	June 13	42.99	Sept. 4	44.33	Dec. 2	43.65

S3737 (\*1016, p. 245; 1023, p. 248). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 7	55.20	May 2	55.48	July 31	56.09	Nov. 1	56.52
Mar. 5	55.28	June 13	55.58	Sept. 4	56.39	Dec. 2	56.36
Apr. 9	55.41	July 3	55.80	Oct. 1	56.52		

S3738 (\*1016, p. 246; 1023, p. 248). 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 mile northwest of New Village.

Water level, in feet above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	54.94	May 2	55.40	July 31	56.49	Nov. 1	56.37
Mar. 5	55.18	June 13	55.53	Sept. 4	56.81	Dec. 4	56.10
Apr. 9	55.34	July 3	55.89	Oct. 1	56.36		

S3739 (\*1016, p. 246; 1023, p. 249). 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.

## S3739--Continued.

## Water level, in feet above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	26.64	Apr. 9	27.80	July 5	28.82	Sept. 27	28.24
Feb. 14	27.53	May 8	27.80	July 31	28.45	Nov. 1	27.75
Mar. 6	27.71	June 13	28.77	Sept. 4	28.53	Dec. 2	27.28

S3760 (\*1016, p. 247; 1023, p. 249). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	24.84	May 7	25.22	July 31	25.46	Nov. 4	26.14
Mar. 14	25.16	June 12	25.26	Aug. 29	25.81	Dec. 3	25.99
Apr. 10	25.20	July 10	25.35	Sept. 30	26.11		

S3868 (\*1016, p. 248; 1023, p. 249). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	38.04	May 2	37.30	July 31	37.83	Nov. 1	38.11
Mar. 5	37.42	June 13	37.82	Aug. 29	38.10	Dec. 3	38.08
Apr. 9	37.70	July 3	37.82	Oct. 1	38.15		

S3869 (\*1016, p. 248; 1023, p. 249). Geological Survey, U. S. Dept. of Interior. East side of Mt. Sinai Road, about 13 miles north of Middle Country Road (State Highway 25), North Coram.

## Water level, in feet above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	53.63	Apr. 10	54.34	July 3	55.04	Oct. 1	55.41
30	53.82	May 7	54.46	31	55.21	Nov. 4	54.21
Mar. 14	54.21	June 12	54.60	Aug. 29	55.40	Dec. 3	54.94

S3870 (\*1016, p. 248; 1023, p. 249). Geological Survey, U. S. Dept. of Interior. West side of Mill Pond, about 0.7 mile south of Middle Country Road (State Highway 25), South Coram.

## Water level, in feet above mean sea level, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	53.39	Apr. 10	54.00	July 3	54.69	Oct. 1	54.97
30	53.63	May 7	54.07	31	54.84	Nov. 4	54.89
Mar. 14	53.92	June 12	54.21	Aug. 29	54.94	Dec. 2	54.68

S3871 (\*1016, p. 249; 1023, p. 249). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	46.65	Apr. 10	46.75	July 31	47.55	Nov. 4	48.62
30	46.48	May 7	46.82	Aug. 29	48.03	Dec. 2	48.49
Mar. 4	46.69	July 3	47.12	Oct. 1	48.43		

S3955 (\*1016, p. 249; 1023, p. 249). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	53.03	May 2	52.51	July 31	53.42	Nov. 1	54.39
Mar. 5	52.76	June 13	52.70	Aug. 29	54.11	Dec. 3	54.28
Apr. 9	52.61	July 3	52.81	Oct. 1	54.43		

S3956 (\*1016, p. 249; 1023, p. 250). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	31.68	Apr. 10	31.25	July 3	31.24	Oct. 1	32.08
30	31.52	May 7	31.17	31	31.43	Nov. 4	32.21
Mar. 14	31.35	June 12	31.14	Aug. 29	31.79	Dec. 3	32.12

S4134. Riverhead Water District. Northeast corner of old fairgrounds, Riverhead. Test well, diameter 4 inches, depth 70 feet below measuring point. Measuring point, top of coupling, 23.90 feet above mean sea level. First measured by Geological Survey on Mar. 10, 1945.

Water level at noon, in feet above mean sea level, 1945

(From recorder charts)

Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	a12.86	12.82	12.91	12.46	12.31	12.05	11.80	11.78	12.00
2	.....	12.84	12.82	12.91	12.46	12.31	12.05	11.88	11.76	11.97
3	.....	12.85	12.82	12.94	12.49	12.32	12.00	11.88	11.78	12.05
4	.....	12.78	12.92	12.94	12.50	12.31	11.96	11.77	11.77	12.05
5	.....	12.87	12.93	12.91	12.49	12.26	11.97	11.74	11.78	12.02
6	.....	.....	12.92	12.89	12.50	12.23	11.96	11.75	11.73	12.08
7	.....	12.72	12.91	12.88	12.52	12.25	11.93	11.78	11.71	12.22
8	.....	12.73	12.90	12.88	12.51	12.25	11.93	11.83	11.72	12.16
9	.....	12.74	12.89	12.88	12.50	12.24	11.91	11.82	11.73	12.12
10	12.88	12.74	12.87	.....	12.50	12.23	11.92	11.77	11.70	12.22
11	12.90	12.74	13.00	.....	12.49	12.23	11.94	11.75	11.69	12.19
12	12.89	12.74	12.93	12.84	12.43	12.21	11.96	11.77	11.75	12.13
13	12.90	12.75	12.93	12.80	12.39	12.22	11.93	11.78	11.76	12.13
14	12.87	.....	12.93	12.76	12.38	12.21	11.91	11.76	11.78	12.25
15	12.86	12.74	12.88	12.71	12.37	12.22	11.92	11.81	11.88	12.23
16	12.91	12.71	12.88	12.68	12.42	12.21	11.92	11.84	11.79	12.24
17	12.92	12.71	12.87	12.68	12.41	12.20	11.89	11.83	11.78	12.22
18	12.91	a12.74	12.90	12.69	12.40	12.17	11.89	11.80	11.83	12.17
19	12.90	a12.70	12.95	12.68	12.40	12.15	11.98	11.78	11.81	12.24
20	12.93	12.68	12.93	12.66	12.40	12.15	11.94	11.78	11.92	12.31
21	12.94	12.69	12.92	12.68	12.41	12.12	11.93	11.77	11.81	12.26
22	12.94	12.70	12.93	12.67	12.40	12.10	11.88	11.77	11.91	12.20
23	12.93	12.66	12.93	12.67	12.41	12.05	11.86	11.77	11.89	12.23
24	12.93	12.66	12.91	12.65	12.40	12.03	11.87	11.81	11.87	12.22
25	12.89	12.67	12.90	12.65	12.36	12.16	11.87	11.81	11.87	12.20
26	12.86	12.86	12.89	12.60	12.35	12.17	11.87	11.86	11.83	12.42
27	12.87	12.85	12.89	12.61	12.33	12.15	11.85	11.84	11.80	12.33
28	a12.86	12.85	12.91	12.60	12.30	12.10	11.82	11.77	11.86	12.27
29	12.84	12.82	12.99	12.56	12.33	12.09	11.83	11.76	12.04	12.44
30	12.86	12.82	12.99	12.53	12.33	12.06	11.82	11.77	12.06	.....
31	12.86	.....	12.96	.....	12.31	12.05	.....	11.78	.....	.....

a Estimated.

Water level at noon, in feet above mean sea level, 1946

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	12.89	12.96	12.83	12.68	12.63	12.49	12.29	12.91	12.79	12.45	.....
2	.....	12.86	12.96	12.91	12.70	12.68	12.56	12.34	12.92	12.70	12.42	12.36
3	.....	.....	13.00	12.93	12.69	12.78	12.59	12.34	12.91a12.64	12.43	12.31	.....
4	.....	.....	12.99	12.83	12.65	12.78	12.59	12.34	12.88	12.62	12.47	12.21
5	.....	.....	12.94	12.89	12.71	12.81	12.58	12.34	12.87	12.61	12.45a12.21	.....
6	12.57	.....	12.90	12.85	12.72	12.82	12.58	12.33	12.86	12.63	12.40	12.26
7	12.60	12.91	12.96	12.84	12.70	12.84	12.59	12.50	12.88	12.65	12.42	12.25
8	12.59	12.88	12.96	12.80	12.72	12.86	12.58	12.67	12.88	12.65	12.46	12.25
9	12.53	12.88	13.07	12.83	12.68	12.86	12.50	12.69	12.88	12.61	12.43	12.27
10	12.66	.....	12.98	12.82	12.64	12.79	12.50	12.75	12.88	12.63	12.36	.....
11	12.61	.....	12.96	12.78	12.62	12.81	12.48	12.79	12.89	12.61	12.38	.....
12	12.65	.....	12.93	12.78	12.66	12.89	12.50	12.78	12.80	12.61	12.42	.....
13	12.67	12.88	12.94	12.78	12.65	12.89	12.49	12.75	12.77	12.60	12.39	.....
14	12.62	12.94	12.95	12.77	12.57	12.79	12.40	12.79	12.78	12.57	12.41	.....

a Estimated.

S4134--Continued.

Water level at noon, in feet above mean sea level, 1946

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
15	12.64	.....	12.84	12.79	12.68	12.80	12.42	12.78	12.78a	12.56	12.37	12.19
16	12.59	.....	12.91	12.84	12.68	12.80	12.36	12.78	12.78a	12.57	12.31	12.19
17	12.63	12.78	12.91	12.74	12.72	12.83	12.35	12.84	12.75a	12.59	12.31	12.20
18	12.69	12.70	12.92	12.74	12.71	12.86a	12.35	12.82	12.72	12.59	12.31	12.20
19	12.71	.....	12.92	12.75	12.69	12.81	12.31	12.88a	12.75	12.57	.....	12.17
20	12.57	12.75	12.92	12.77	12.67	12.77	12.28	12.89	12.76	12.50	.....	12.15
21	12.72	.....	12.90	12.75	12.66	12.80	12.27	12.88	12.75	12.50	12.33	12.38
22	12.68	.....	12.88	12.74	12.65	12.76	12.32	12.88	.....	12.51	12.35	12.37
23	12.59	12.90	12.91	12.74	12.61	12.69	12.34	12.93	.....	12.52	12.36	12.28
24	12.53	12.91	12.87	12.74	12.59	12.71	12.42	12.92	.....	12.53a	12.32	12.31
25	12.87	12.93	12.88	12.74	12.63	12.64	12.45	12.92	.....	12.51	12.37	12.50
26	12.80	12.94	12.88	12.84	12.63	12.60	12.43	12.95	.....	12.52	12.35	12.31
27	12.71	12.95	12.94	12.83	12.63a	12.53	12.36	12.96	.....	12.46	12.35	12.17
28	12.69	12.96	12.91	12.74	12.67	12.49	12.34	12.93	12.66	12.44	12.30	12.28
29	12.72	.....	12.91	12.69	12.65	12.45	12.35	12.95	12.67	12.46	12.32	12.22
30	12.70	.....	12.93	12.69	12.63	12.44	12.33	12.96	12.77	12.49	12.26	12.28
31	12.87	.....	12.86	.....	12.63	.....	12.31	12.95	.....	12.49	.....	12.16

a Estimated.

S4268. 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. Test well, diameter 4 inches, depth 74 feet below measuring point. Measuring point, top of casing, 111.11 feet above mean sea level. First measured by Geological Survey Aug. 2, 1945.

Water level, in feet above mean sea level, 1945-46

Date	Water level	Date	Water level	Date	Water level
Aug. 2, 1945	50.21	Jan. 31, 1946	49.91	Aug. 1, 1946	50.29
Sept. 7	50.27	Feb. 27	50.14	Sept. 4	50.50
Oct. 2	50.26	Apr. 3	50.18	Oct. 1	50.56
Nov. 31	50.09	May 25	50.02	Nov. 4	50.50
Dec. 27	49.91	June 4	49.90	Dec. 4	50.29
Dec. 26	49.83	July 10	50.14		

S4269. County of Suffolk, Superintendent of Highways. North side of Reeves Avenue, 2,000 feet west of Roanoke Avenue, North Riverhead. Test well, diameter 4 inches, depth 66 feet below measuring point. Measuring point, top of casing, 68.95 feet above mean sea level. First measured by Geological Survey Aug. 2, 1945.

Water level, in feet above mean sea level, 1945-46

Date	Water level	Date	Water level	Date	Water level
Aug. 2, 1945	13.88	Jan. 31, 1946	14.14	July 30	13.91
Sept. 6	13.74	Mar. 6	14.71	Aug. 28	14.77
Oct. 4	13.56	Apr. 10	14.57	Sept. 30	14.69
Nov. 30	13.44	May 7	14.47	Oct. 25	14.65
Dec. 27	13.31	June 12	14.35	Dec. 3	14.41
	13.61	July 9	14.10		

S4270. County of Suffolk, Superintendent of Highways. Crooked Hill Road, about 0.8 mile northwest of intersection with Wicks Road, Brentwood Park. Test well, diameter 4 inches, depth 83 feet below measuring point. Measuring point, top of casing, 120.86 feet above mean sea level. First measured by Geological Survey on Aug. 1, 1945.

Water level, in feet above mean sea level, 1945-46

Date	Water level	Date	Water level	Date	Water level
Aug. 1, 1945	53.04	Jan. 31, 1946	51.67	July 26	52.81
Sept. 7	52.78	Feb. 27	51.89	Aug. 30	53.18
Oct. 2	52.61	Apr. 4	52.26	Sept. 27	52.90
Nov. 31	52.40	May 25	52.25	Oct. 31	52.91
Dec. 27	52.01	June 4	52.28	Dec. 2	52.54
Jan. 3, 1946	51.82	July 10	52.60		



S4271. County of Suffolk, Superintendent of Highways. About 500 feet south of Sound Avenue, and 0.8 mile west of Roanoke Avenue., Baiting Hollow. Test well, diameter 4 inches, depth 105 feet below measuring point. Measuring point, top of casing, 101.26 feet above mean sea level until Nov. 7, 1945, after Nov. 7, 101.83 feet above mean sea level. First measured by Geological Survey on Aug. 2, 1945.

Water level at noon, in feet above mean sea level, 1945  
(From recorder charts after Nov. 7)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 2	9.84	Nov. 18	9.69	Dec. 3	9.72	Dec. 18	9.71
Sept. 6	9.77	19	9.68	4	9.72	19	9.74
Oct. 4	9.75	20	9.68	5	9.72	20	9.71
30	9.73	21	9.67	6	9.73	21	9.71
Nov. 7	9.72	22	9.68	7	9.75	22	9.70
8	9.72	23	9.68	8	9.75	23	9.69
9	9.72	24	9.68	9	9.75	24	9.68
10	9.72	25	9.69	10	9.76	25	9.68
11	9.72	26	9.69	11	9.77	26	9.71
12	9.72	27	9.69	12	9.77	27	9.70
13	9.72	28	9.69	13	9.76	28	9.69
14	9.73	29	9.71	14	9.76	29	9.73
15	9.72	30	9.72	15	9.74	30	9.71
16	9.70	Dec. 1	9.72	16	9.74	31	9.76
17	9.70	2	9.71	17	9.72		

Water level at noon, in feet above mean sea level, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	9.73	9.80	9.99	10.16	10.24	10.24	9.95	9.84	10.29	10.46	10.60	10.54
2	9.73	9.86	10.07	10.18	10.24	10.25	9.92	9.84	10.31	10.46	10.60	10.52
3	9.73	9.87	10.04	10.18	10.24	10.24	9.92	9.86	10.32	10.46	10.60	10.50
4	9.73	9.89	10.08	10.18	10.24	10.24	9.92	9.87	10.32	10.46	10.60	10.50
5	9.73	9.88	10.08	10.19	10.25	.....	9.92	9.87	10.32	10.49	10.60	10.50
6	9.74	9.90	10.10	10.20	10.25	.....	9.93	9.87	10.33	10.49	10.60	10.48
7	9.74	9.90	10.11	10.20	10.24	.....	9.93	9.90	10.35	10.49	10.60	10.48
8	9.73	9.88	10.11	10.20	10.25	10.25	9.93	9.89	10.35	.....	10.60	10.48
9	9.73	9.91	10.12	10.20	10.25	10.24	9.93	9.94	10.35	.....	10.60	10.48
10	9.74	9.91	10.11	10.20	10.25	10.24	9.92	9.98	10.37	.....	10.59	10.48
11	9.73	9.92	10.11	10.20	10.24	10.23	9.90	10.00	10.37	.....	10.59	10.47
12	9.74	9.92	10.11	10.21	10.25	10.23	9.87	10.03	10.37	10.51	10.59	10.47
13	9.74	9.94	10.12	10.21	10.24	10.23	9.85	10.05	10.38	10.51	10.59	10.48
14	9.73	10.00	10.12	10.21	10.23	10.22	9.85	10.05	10.38	10.51	10.59	10.47
15	9.74	9.97	10.12	10.23	10.23	10.21	9.83	10.09	10.39	10.51	10.59	10.46
16	9.73	9.95	10.12	10.22	10.23	10.21	9.82	10.10	10.39	10.52	10.59	10.45
17	9.73	9.96	10.12	10.22	10.23	10.21	9.80	10.12	10.39	10.52	10.59	10.44
18	9.73	9.97	10.12	10.22	10.23	10.22	9.78	10.12	10.39	10.54	10.59	10.44
19	9.73	9.97	10.12	10.22	10.23	10.21	9.77	10.13	10.39	10.55	10.59	10.43
20	9.73	9.98	10.12	10.23	10.23	10.21	9.76	10.13	10.39	10.55	10.59	10.43
21	9.76	9.97	10.12	10.23	10.23	10.21	9.75	10.15	10.39	10.56	10.59	10.45
22	9.75	9.99	10.13	10.23	10.23	10.17	9.75	10.17	.....	10.56	10.60	10.43
23	9.74	9.98	10.14	10.23	10.22	10.13	9.75	10.18	.....	10.57	10.59	10.41
24	9.75	9.99	10.14	10.23	10.22	10.10	9.75	10.18	.....	10.57	10.58	10.41
25	9.76	9.99	10.14	10.23	10.23	10.08	9.77	10.18	.....	10.57	10.58	10.41
26	9.73	9.99	10.14	10.24	10.23	10.05	9.77	10.20	.....	10.60	10.58	10.41
27	9.73	9.98	10.14	10.24	10.23	10.02	9.78	10.23	.....	10.60	10.58	10.39
28	9.78	9.96	10.15	10.24	10.23	10.00	9.79	10.27	10.44	10.60	10.56	10.40
29	9.76		10.15	10.24	10.23	9.97	9.81	10.28	10.44	10.60	10.55	10.39
30	9.80		10.16	10.24	10.23	9.97	9.82	10.28	10.45	10.60	10.53	10.37
31	9.86		10.16		10.23		9.85	10.29		10.60		10.36

S4367. M. E. Geotsinger. 200 feet north of Florida Avenue, 1.0 mile east of Babylon. Abandoned supply well, diameter 36 inches, depth 125 feet below measuring point. Measuring point, base of pump, 176.06 feet above mean sea level. First measured by Geological Survey Aug. 23, 1945.

Water level, in feet above mean sea level, 1945-46

Date	Water level	Date	Water level	Date	Water level
Aug. 2, 1945	55.84	Jan. 31, 1946	55.41	Aug. 1, 1946	55.69
Sept. 7	56.03	Feb. 27	55.28	Sept. 4	55.98
Oct. 2	56.12	Apr. 4	55.26	Oct. 1	56.19
31	56.05	25	55.28	Nov. 1	56.20
Nov. 27	55.80	June 4	55.32	Dec. 4	56.06
Dec. 26	55.66	July 10	55.50		

S4523. Geological Survey, U. S. Dept. of Interior. Northville Turnpike and Route 58, Riverhead. Observation well, diameter 1½ inches, depth 13.4 feet below measuring point. Measuring point, top of casing, 16.31 feet above mean sea level. First measured by Geological Survey on Aug. 2, 1945.

Water level, in feet above mean sea level, 1945-46

Date	Water level	Date	Water level	Date	Water level
Aug. 2, 1945	8.70	Jan. 31, 1946	9.46	July 30, 1946	8.82
Sept. 9	8.51	Mar. 6	9.57	Aug. 28	9.37
Oct. 4	8.44	Apr. 10	9.32	Sept. 30	9.14
30	8.52	May 7	9.21	Oct. 25	8.92
Nov. 29	8.94	June 12	9.35	Dec. 3	9.22
Dec. 27	9.38	July 9	9.03		

S4524. Geological Survey, U. S. Dept. of Interior. Tuthills Lane, 0.15 mile north of Route 25, Riverhead. Observation well, diameter 1½ inches, depth 23 feet below measuring point. Measuring point, top of casing, 23.57 feet above mean sea level. First measured by Geological Survey on Aug. 2, 1945.

Water level, in feet above mean sea level, 1945-46

Date	Water level	Date	Water level	Date	Water level
Aug. 2, 1945	6.83	Jan. 31, 1946	7.45	July 30, 1946	6.60
Sept. 6	6.53	Mar. 6	7.84	Aug. 28	7.30
Oct. 4	6.29	Apr. 10	7.48	Sept. 30	6.97
30	6.20	May 7	7.26	Oct. 25	6.79
Nov. 29	6.22	June 12	7.10	Dec. 3	6.50
Dec. 27	6.67	July 9	6.79		

S4525. Geological Survey, U. S. Dept. of Interior. 7,800 feet south of Sound Avenue, at intersection of Deep Hole Road, Riverhead. Observation well, diameter 4 inches, depth 60 feet below measuring point. Measuring point, top of iron bar, 75.82 feet above mean sea level. First measured by Geological Survey on Aug. 4, 1945.

Water level, in feet above mean sea level, 1945-46

Date	Water level	Date	Water level	Date	Water level
Oct. 4, 1945	18.24	Mar. 6, 1946	18.97	July 30, 1946	18.71
30	18.18	Apr. 10	19.22	Aug. 28	19.60
Nov. 29	17.98	May 7	19.14	Sept. 30	19.96
Dec. 27	17.88	June 12	19.00	Oct. 25	19.79
Jan. 31, 1946	18.41	July 9	18.85	Dec. 3	19.56

S4526. J. T. Downs. Southeast corner of West Lane and Sound Avenue, Riverhead. Dug well, diameter 36 inches, depth 63 feet below measuring point. Measuring point, top of wooden sill, 67.93 feet above mean sea level. First measured by Geological Survey on Aug. 2, 1945.

Water level, in feet above mean sea level, 1945-46

Date	Water level	Date	Water level	Date	Water level
Aug. 2, 1945	8.90	Jan. 31, 1946	8.76	July 30, 1946	8.75
Sept. 6	8.76	Mar. 6	9.32	Aug. 28	9.23
Oct. 4	8.62	Apr. 10	9.39	Sept. 30	9.25
30	8.50	May 7	9.29	Oct. 25	9.10
Nov. 29	8.38	June 12	9.15	Dec. 3	8.89
Dec. 27	8.32	July 9	8.91		

S4529. J. Gresseck. Sound and Twomey Avenues intersection, Riverhead. Private supply well, diameter 4 inches, depth 107 feet below measuring point. Measuring point, top of casing, 104.68 feet above mean sea level. First measured by Geological Survey on Oct. 4, 1945.

Water level, in feet above mean sea level, 1945-46

Date	Water level	Date	Water level	Date	Water level
Oct. 4, 1945	11.43	Mar. 6	11.65	July 9	11.86
Oct. 30	11.47	Apr. 10	11.84	July 30	11.73
Nov. 29	11.50	May 7	12.03	Aug. 28	12.13
Dec. 27	11.30	June 12	12.03	Sept. 30	12.55
Jan. 31, 1946	11.48				

S4530. Geological Survey, U. S. Dept. of Interior. Roanoke Avenue and Middle Road, Riverhead. Observation well, diameter  $1\frac{1}{4}$  inches, depth 12.3 feet below measuring point. Measuring point, top of casing, 21.56 feet above mean sea level. First measured by Geological Survey on Aug. 2, 1945.

Water level, in feet above mean sea level, 1945-46

Aug. 2, 1945	15.78	Jan. 31, 1946	16.30	July 30	15.74
Sept. 6	15.37	Mar. 6	17.01	Aug. 28	16.98
Oct. 4	15.00	Apr. 10	16.73	Sept. 30	16.60
Oct. 30	14.83	May 7	16.47	Oct. 25	16.19
Nov. 29	14.92	June 12	16.58	Dec. 3	15.73
Dec. 27	15.42	July 9	16.08		

## OHIO

By D. W. Van Tuyl

### PROGRAM OF WORK

Ground-water investigations in Ohio were continued in 1946 in cooperation with the Ohio Water Resources Board, the Ohio Engineering Experiment Station, the Commissioners of Butler and Hamilton Counties, and the Federal Works Agency. A cooperative program with the city of Canton ended during 1946 and a report describing the ground-water resources of the Canton area was published by the Ohio Water Resources Board. <sup>1/</sup> A detailed investigation of the geology and water resources of Montgomery County, with particular reference to the Dayton area, was started in January 1946. Ground-water investigations were started in three other counties during 1946 in cooperation with the Ohio Water Resources Board. Field work was begun in Lucas and Mahoning Counties in June, and in Tuscarawas County in August.

A survey of industrial ground-water pumpage in Ohio was continued during 1946 by the Ohio Water Resources Board in cooperation with the Federal Geological Survey. At the end of the year the survey had covered 51 counties and had accounted for an estimated 90 percent of the total ground-water pumpage in the State.

Automatic water-stage recorders were installed on 65 new observation wells throughout the State, making a total of 102 recorders in operation at the end of 1946. Ground-water levels were measured or recorded in 209 observation wells and 6 gravel pits during the year. Individual tape measurements were made daily in 9 wells, weekly in 100 wells, and monthly in 6 wells. Approximately 7,300 individual measurements of water levels were made during the year. Automatic recorders were installed and observation wells were measured for short periods in connection with pumping tests at Canton, Hudson, Toledo, Reese, and Columbus.

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<sup>1/</sup> Schaefer, E. J., White, G. W., and Van Tuyl, D. W., The ground-water resources of the glacial deposits in the vicinity of Canton, Ohio: Ohio Water Resources Board, Bull. 3, June 1946.



Figure 9.--Map of Ohio showing locations of observation wells.

The water-level records for 203 observation wells in 44 of the 88 counties in the State are listed alphabetically by counties in this report, and all measurements of water level are given in feet below land-surface datum. The well numbers of all wells except those in Butler and Hamilton Counties include letter symbols corresponding to the county names and numbers for successive wells in each county. The new numbers of observation wells for which records have been published in previous water-supply papers are followed by the original number or name in parentheses.

Data concerning the new observation wells established in Ohio during 1946 are listed in the following table. The water-level records were obtained by means of automatic water-stage recorders unless otherwise indicated. The locations of these observation wells are shown on the map in figure 9,, which also shows the number of water-level records obtained prior to 1946 in various parts of the State. The locations of observation wells in the Dayton and Canton areas are shown on the maps in figures 10 and 11 of this report and the locations of those in Butler and Hamilton Counties were shown on individual maps in Water -Supply Paper 1016.

Observation wells established in Ohio during 1946

County	Well No.	Location a/	Date	Depth	Type of aquifer
Allen	Al-1	Lima	June 27	320	Dolomite
Ashland	As-1	Ashland	July 17	77	Shale
Ashtabula	Ab-1	Jefferson, 3S	3	40	Shale
Auglaize	Au-1	N. Hampshire, 3E	Apr. 30	96	Limestone
	Au-2	St. Marys	June 24	100	Gravel
Clinton	Cn-1	Melvin, 4N	Feb. 26	24	Gravel
Delaware	Dl-1	Delaware, 2N	Mar. 18	116	Limestone
Fairfield	F-1	W. Rushville	7	110	Sandstone
	F-2	Pickerington, $\frac{1}{2}$ E	Apr. 16	190	Sandstone
Fayette	Fa-1	Jasper Mills, 2NW	Feb. 27	78	Limestone
Franklin	Fr-1	Grove City 1E	Jan. 26	156	Gravel
	Fr-2	Hilliards	29	299	Limestone
	Fr-3	Reese	Apr. 26	60	Gravel
	Fr-4	Reese	Dec. 24	38	Gravel
	Fr-5	Reese	24	42	Gravel
	Fr-6	Reese	24	45	Gravel
Fulton	Fu-1	Delta	Sept. 4	130	Gravel
	Fu-2	Wauseon, 2S	5	150	Gravel
Geauga	Ge-1	Chardon	May 16	360	Sandstone
	Ge-2	Burton, 5SW	22	61	Gravel
Hancock	Ha-1	Williamstown, 3E	Aug. 16	45	Limestone
Hardin	Hn-1	Alger	Apr. 2	140	Limestone
	Hn-2	Dola	- 3	50	Limestone
Henry	Hy-1	Deshler, 2N	Oct. 16	81	Limestone
Huron	Hu-2	New London	Oct. 3	105	Sandstone
Knox	K-1	Mt. Vernon	Apr. 18	90	Gravel
Logan	Lo-1	Bellefontaine, 2W	24	120	Gravel
Lorain	Ln-1	LaGrange, 1 $\frac{1}{2}$ N	Sept. 12	54	Sandstone

a Figures and letters indicate distance in miles and direction from place named.

## Observation wells established in Ohio during 1946--Continued

County	Well No.	Location <sup>a/</sup>	Date	Depth (feet)	Type of aquifer
Lucas	Lu-1	Toledo	Mar. 12	250	Limestone
	Lu-2	Toledo		26	100 Limestone
	Lu-3	Toledo		29	300 Limestone
Madison	M-1	Mt. Sterling		6	60 Gravel
Mahoning	Ma-1	Canfield, 1S	May 28	300	Sandstone
Marion	Mn-1	Larue	Mar. 19	100	Limestone
Medina	Md-1	Lodi	Sept. 17	65	Gravel
Mercer	Mr-1	Rockford, 3SW	July 9	130	Limestone
Miami	Mi-1	Troy	May 21	49	Gravel
Montgomery	Mt-4	Dayton, 5S	Feb. 14	48	Gravel
	Mt-5	Dayton		19	156 Gravel
	Mt-6b/	Dayton		5	60 Gravel
	Mt-7b/	Dayton, 4NE		5	59 Gravel
	Mt-8b/	Dayton		6	32 Gravel
	Mt-9b/	Oakwood		6	69 Gravel
	Mt-11b/	Dayton, 4S		20	125 Gravel
	Mt-12b/	Dayton		8	65 Gravel
	Mt-13b/	Dayton		5	50 Gravel
	Mt-14b/	Dayton, 5NW		20	68 Shale
	Mt-15b/	Dayton, 4NE		27	30 Gravel
	Mt-16b/	Dayton, 3N	Mar. 13	25	Gravel
	Mt-17b/	Dayton, 3E	Feb. 27	50	Gravel
	Mt-20b/	Dayton, 4N	Mar. 6	50	Gravel
	Mt-22b/	Dayton, 2S		6	40 Gravel
	Mt-23b/	Dayton, 5NE		13	27 Gravel
	Mt-24b/	Dayton, 7N		13	27 Gravel
	Mt-26b/	Dayton, 5S		20	37.5 Gravel
	Mt-27b/	Dayton, 4SE		20	33 Gravel
	Mt-28b/	Vandalia, 1S		27	38 Gravel
	Mt-30b/	Dayton, 3SE		27	55 Gravel
	Mt-31b/	Centerville		27	13.5 Gravel
	Mt-32b/	New Lebanon, 1SF	Apr. 10	24	Gravel
	Mt-33b/	W. Carrollton, 1E		3	33.5 Gravel
	Mt-34b/	Dayton, 4SW		3	27 Gravel
	Mt-35b/	Dayton, 4W		3	37 Limestone
	Mt-36/	Dayton, 4NE	Mar. 29	60	Gravel
	Mt-37b/	W. Carrollton, 2W	Apr. 10	23	Gravel
	Mt-38b/	W. Carrollton, 4W	Apr. 10	23	Gravel
Paulding	P-1	Tipton	July 10	23	Gravel
Portage	Po-1	Windham	May 15	55	Sandstone
	Po-2	Kent		24	65 Gravel
Putnam	Pu-2	Columbus Grove	July 11	110	Limestone
Richland	R-1	Mansfield	Apr. 10	165	Sandstone
	R-2	Lexington		10	129 Sandstone
	R-3	Shiloh		11	150 Gravel
Sandusky	S-1	Woodville	Aug. 28	188	Limestone
Seneca	Se-1	Green Springs		27	86 Limestone
Shelby	Sh-1	Kettlersville, 3W	May 1	120	Limestone
Stark	St-10	Canton, 3W	Sept. 25	187	Gravel
	St-11	Canton, 3NW	Dec. 18	87	Gravel
	St-13	Canton, 3NW		13	20 Gravel
Summit	Su-1	Hudson	May 3	100	Sandstone
Trumbull	T-2	Warren, 3NW	July 31	120	Sandstone
Tuscarawas	Tu-1	Strasburg, 3N	July 18	23	Gravel
Union	U-1	Irwin	Feb. 7	85	Gravel
	U-2	Byhalia, 1N	July 23	80	Limestone
Warren	W-1	Mason, 1SW	Apr. 17	50	Gravel
Wayne	Wn-1	Rittman	June 20	180	Gravel
Wood	Wo-1	Wingston, 1W	Oct. 2	80	Limestone

<sup>a</sup> Figures and letters indicate distance in miles and direction from place named.

<sup>b</sup> Measured weekly.

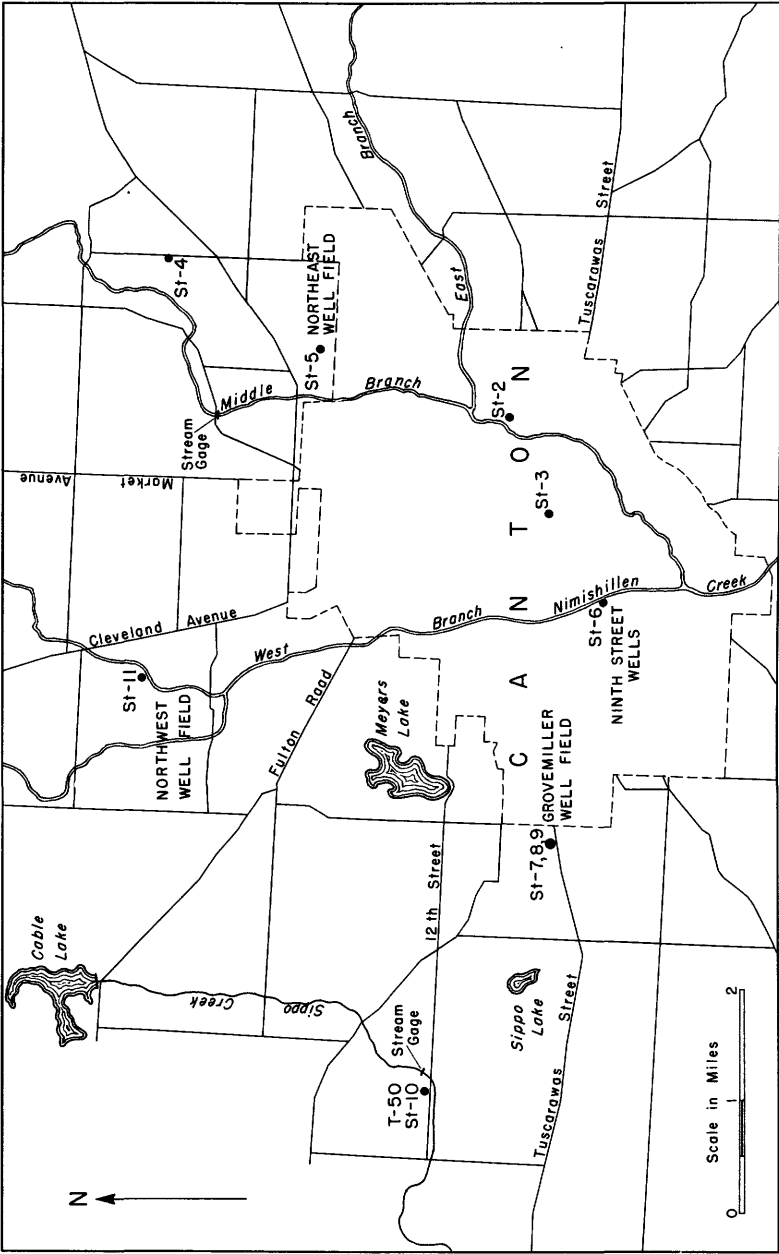


Figure 10.--Map showing well fields and observation wells at Canton, Stark County, Ohio.



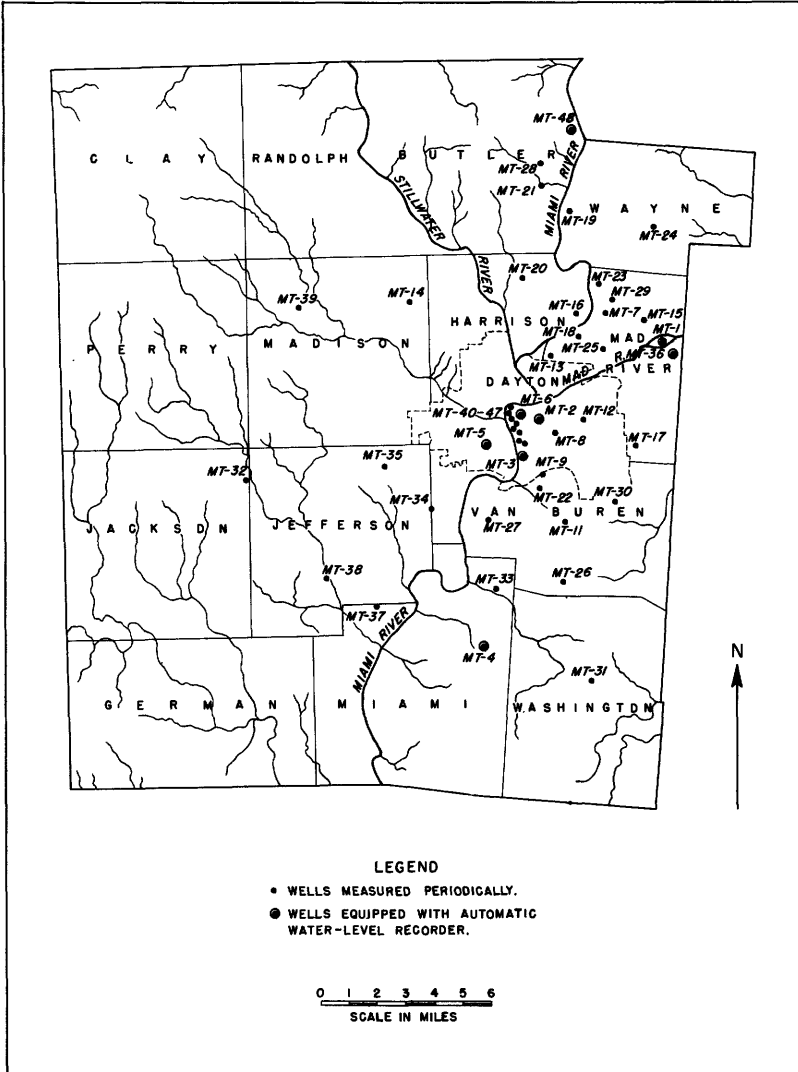


Figure 11.--Map of Montgomery County, Ohio, showing locations of observation wells.

## FLUCTUATIONS OF WATER LEVEL

The summary of Climatological Data for Ohio, prepared by the U. S. Weather Bureau, shows that the average precipitation in the State in 1946 was 35.96 inches, or about 1.95 inches below the average for 64 years of record. May and June were the only months in which rainfall was much above normal. The average for the State in May was 5.64 inches, or 1.88 inches above normal, and in June it was 5.94 inches, or 2.01 inches above normal. The total precipitation in the first 6 months of 1946 was 0.71 inch above the average for 64 years of record. However, the heaviest precipitation in these months occurred after the growing season had started, resulting in high losses to transpiration and evaporation.

The subnormal precipitation in the first 4 months of 1946 provided only moderate recharge to most ground-water reservoirs. Only minor flooding occurred in most streams in May and June, and recharge from this source to the adjacent water-bearing formations was considerably less in 1946 than in 1945. In general, only moderate rises occurred in water levels in observation wells in Ohio during the first half of the year. After the period of spring recharge water levels declined throughout the State for most of the remainder of the year. However, the excessive rainfall and favorable recharge received during 1945 continued to maintain higher-than-average water levels during 1946. Measurements in observation wells at the end of 1946 showed only slight changes from the water levels at the end of 1945 in most areas of the State.

The climatological conditions and water-level fluctuations in Ohio for the period 1938-46 have been summarized in a report published in March 1947 by the Ohio Water Resources Board in cooperation with the Federal Geological Survey.<sup>2/</sup> The report does not contain tabulated records of water level and artesian pressure since these are given in the annual water-supply papers of the U. S. Geological Survey. The text of that report, however, has been used liberally in the following discussions of water-level fluctuations in observation wells in Ohio during 1946.

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<sup>2/</sup> Van Tuyl, D. W., and Bernhagen, R. J., Summary of ground-water conditions in Ohio: Ohio Water Resources Board, Bull. 5, March 1947.

## BUTLER COUNTY

Ground-water levels were measured in 62 wells and 5 gravel pits in Butler County during 1946. The wells are located mainly in the Miami River Valley at Middletown, at Hamilton, and south of Hamilton, in Fairfield Township.

A review of the geology and water-bearing properties of the geologic formations together with a summary of ground-water conditions in these

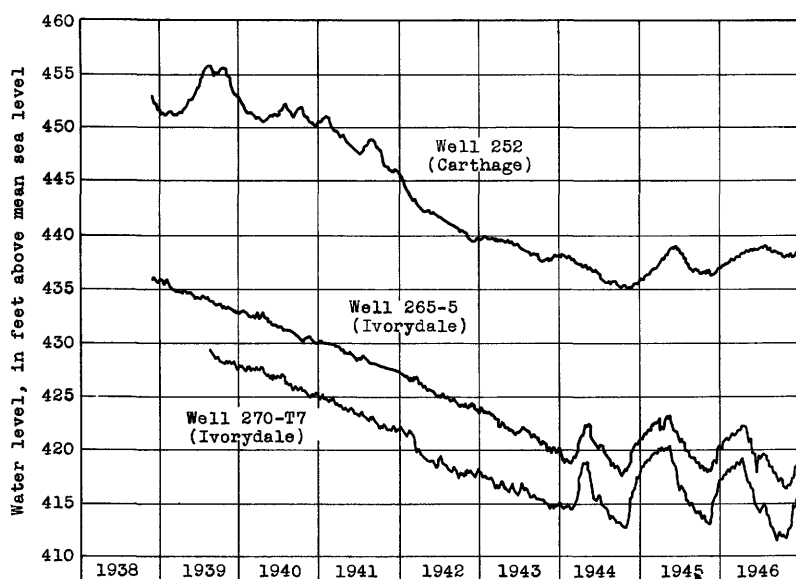


Figure 12.--Graphs showing water levels in observation wells 252 (Carthage), 265-5 (Ivorydale), and 270-T7 (Ivorydale), Hamilton County, Ohio.

areas is given in Bulletin 8 of the Ohio Water Resources Board. <sup>3/</sup>

Middletown area

Measurements of water levels in the gravels in the buried valley at Middletown were obtained in four observation wells and three gravel pits in 1946. Three of these wells and two gravel pits are in a heavily pumped area in the northern part of the city. The water-level records for well 29-1 and 25-5, shown in figure 13, are typical of those obtained in this part

<sup>3/</sup> Bernhagen, R. J. and Schaefer, E. J., Ground-water conditions in Butler and Hamilton Counties, Ohio, 1946: Ohio Water Resources Board, Bull. 8, May 1947.

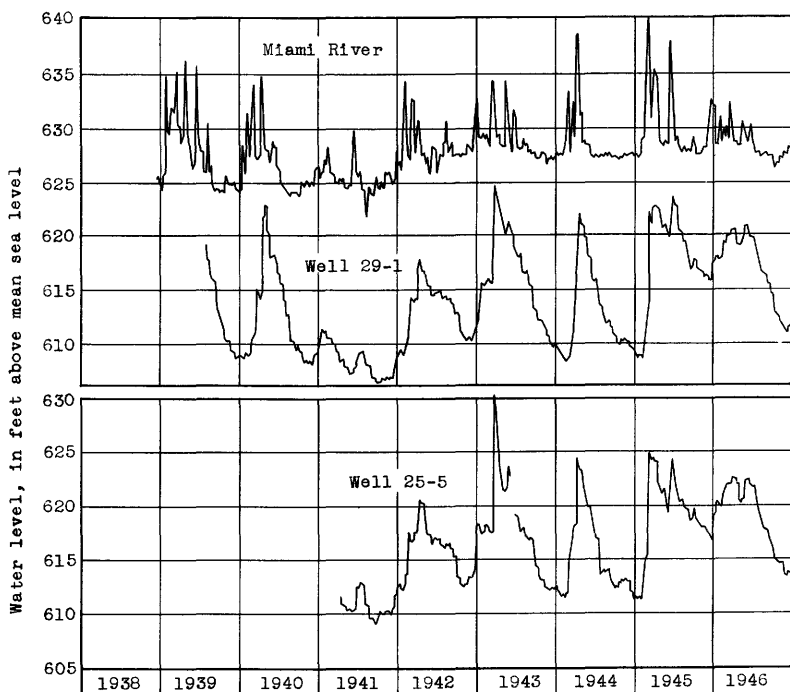


Figure 13.--Graphs showing water levels in observation wells 29-1 and 25-5 and weekly measurements of the Miami River at Central Avenue bridge, Middletown, Butler County, Ohio.

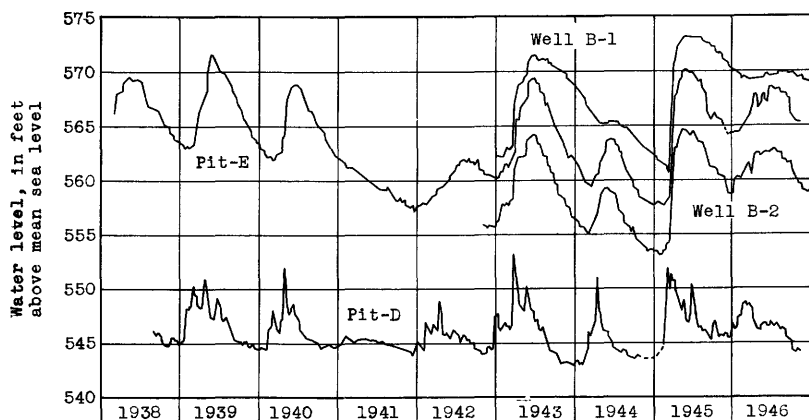


Figure 14.--Graphs showing water levels in observation wells in Fairmead Township, Butler County, Ohio.

of the city. When correlated with the stage of the Miami River as they are in figure 15 these records show that rising ground-water levels in this area occur in periods of high stream flow and that the declines occur in periods of low stream flow.

Ground-water levels rose in the northern part of the city principally in January, February, and May. Following the rise in May the water levels declined until nearly the end of the year when they were an average of about 5 feet lower than at the beginning of the year.

In southeast Middletown, at the plant of the American Rolling Mill Company, the water level in well 36-13 was 1.7 feet higher at the end of 1946 than at the beginning in spite of a 17 percent increase in pumping in the area over 1945. This area is a considerable distance from the main source of recharge to the buried valley which is the Miami River in the north-western and southeastern parts of the Middletown area. It, therefore, seems probable that a considerable lag occurs before recharge reaches the vicinity of well 36-13 and that the rise in this well in 1946 was due primarily to recharge received in 1945 when large rises in ground-water levels occurred close to the river.

#### Hamilton area

Water levels were measured in 20 observation wells in the Hamilton area in 1946. All of these wells tap the gravels in the buried valley underlying most of the city. The records for some of these wells (85-7, B-24, B-25, B-38) and the record of the stage of the Miami River at Hamilton are shown graphically in figure 15. They show that rises in ground-water levels in this area coincide with periods of high stream flow and that declines usually occur in periods of low stream flow. In 1946 the largest rises occurred in the first 6 months of the year, but were of smaller magnitude than those that occurred in 1945. As a result, water levels were generally lower at the end of 1946 than at the beginning, although they were generally higher than at the end of 1944.

In general, the records of water levels obtained to date at the Hamilton waterworks well field (observation well 85-7) and those obtained in Hamilton proper show that a persistent downward trend in ground-water levels has not occurred in the area in the period of record in spite of the heavy pumping.

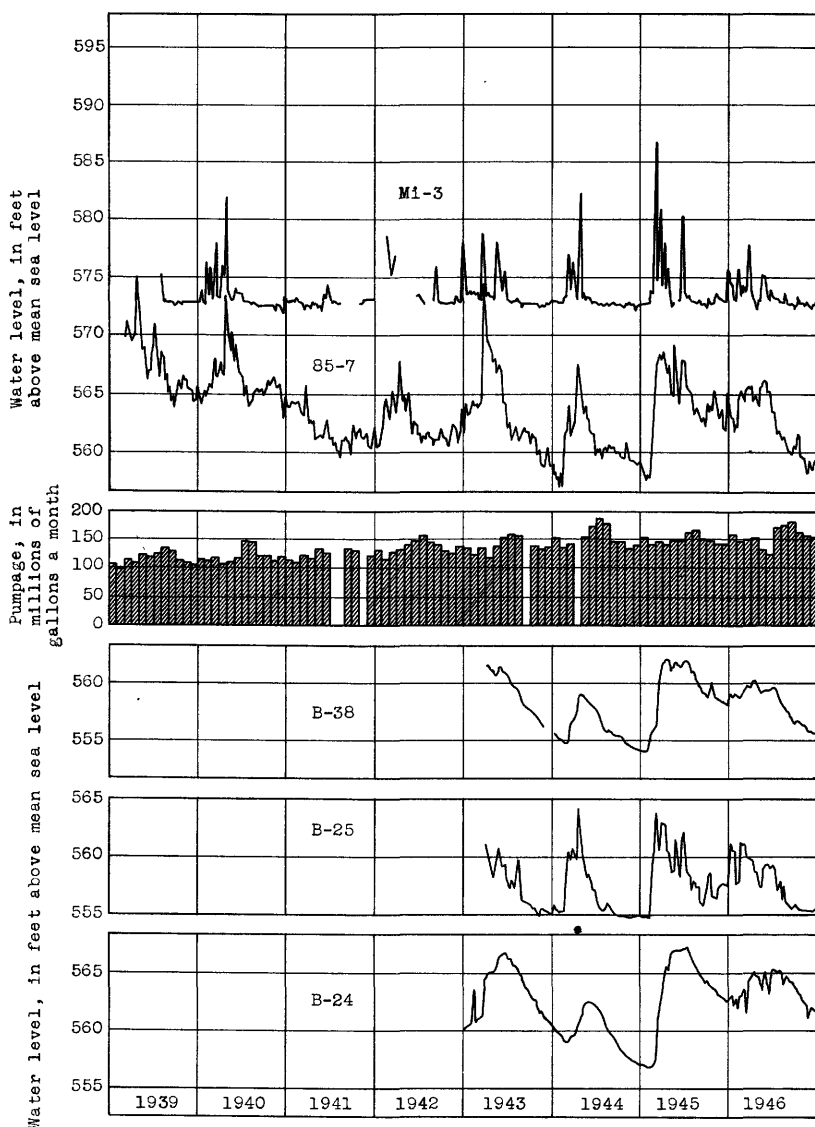


Figure 15.--Graphs showing stages of the Miami River at Hamilton, and water levels in observation wells at Hamilton, Butler County, Ohio.

Upper Mill Creek Valley

Ground-water levels in the gravels in the northern part of the Mill Creek Valley, in Butler County, were measured in 14 observation wells during 1946. The fluctuations of water levels in these observation wells are due almost entirely to natural causes since no heavy pumping is carried on in this part of the valley. The records obtained from three of these wells are shown graphically in figure 16, and indicate that recharge was received at several times from January through August. Additional recharge occurred during November and December, with the result that water levels were nearly as high at the end of the year as at the beginning.

Observation well 180 (US 134) has been used as a key well in reporting on the status of current ground-water resources throughout the United States. The monthly water levels and departure from average during 1946, as reported for the Water Resources Review, are shown in the following table. The data in this table show that the water level in this well was higher than average at the end of all except two months of 1946.

Water levels at end of each month in 1946, in feet below land-surface datum, in observation well 180, Butler County

Month	Water level	Departure from 8-year average	Month	Water level	Departure from 9-year average
Jan.	8.25	+4.83	July	8.10	+3.03
Feb.	6.50	+3.53	Aug.	12.02	+1.55
Mar.	6.99	+1.69	Sept.	14.50	-.07
Apr.	8.09	+.21	Oct.	15.47	-.09
May	6.74	+2.45	Nov.	12.67	+1.68
June	7.65	+2.22	Dec.	8.84	+4.75

Fairfield Township

Ground-water levels were measured in 22 observation wells and gravel pits in Fairfield Township in 1946. The records obtained from observation wells B-1 and B-2 and gravel pits E and D are shown graphically in figure 14. The fluctuations of ground-water levels in this area in 1946 were due almost entirely to natural causes since no heavy pumping occurred during the year. Because of the high permeability of the glacial gravels and the high rate of recharge, pumping for farm and household purposes is considered negligible. The well field developed by the Federal Works Agency in the war period was not pumped in 1946.

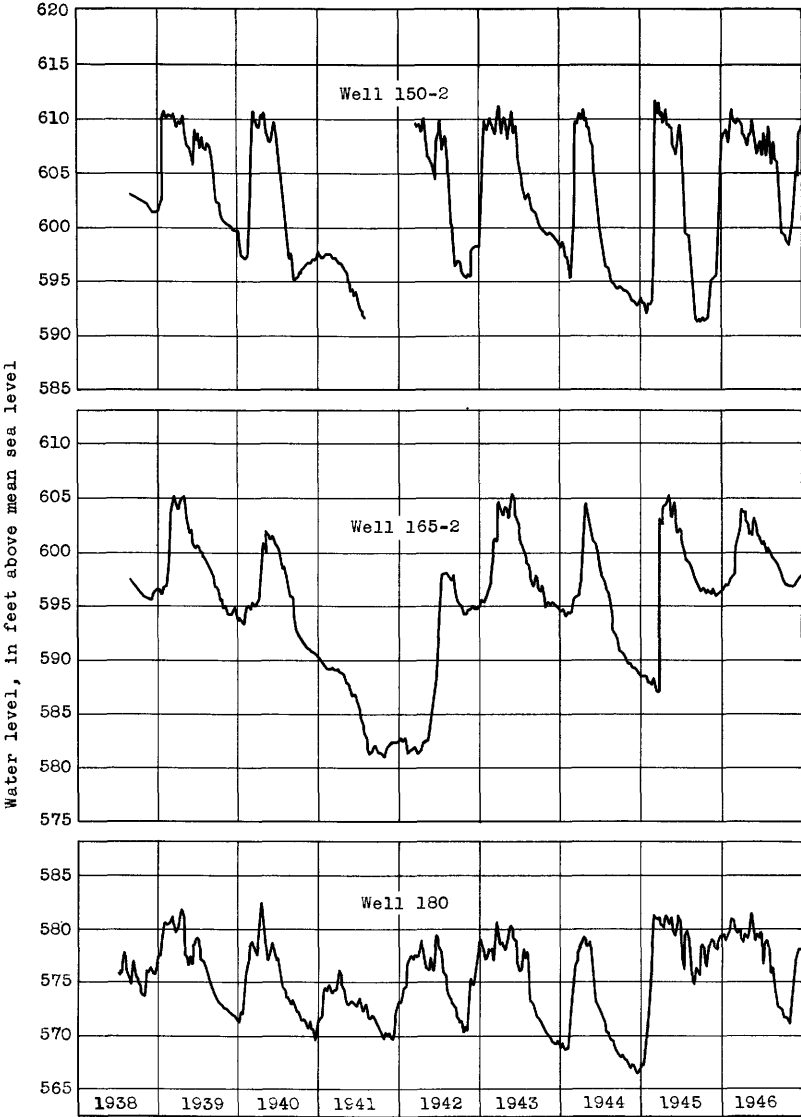


Figure 16.--Graphs showing water levels in observation wells in Upper Mill Creek Valley, Butler County, Ohio.



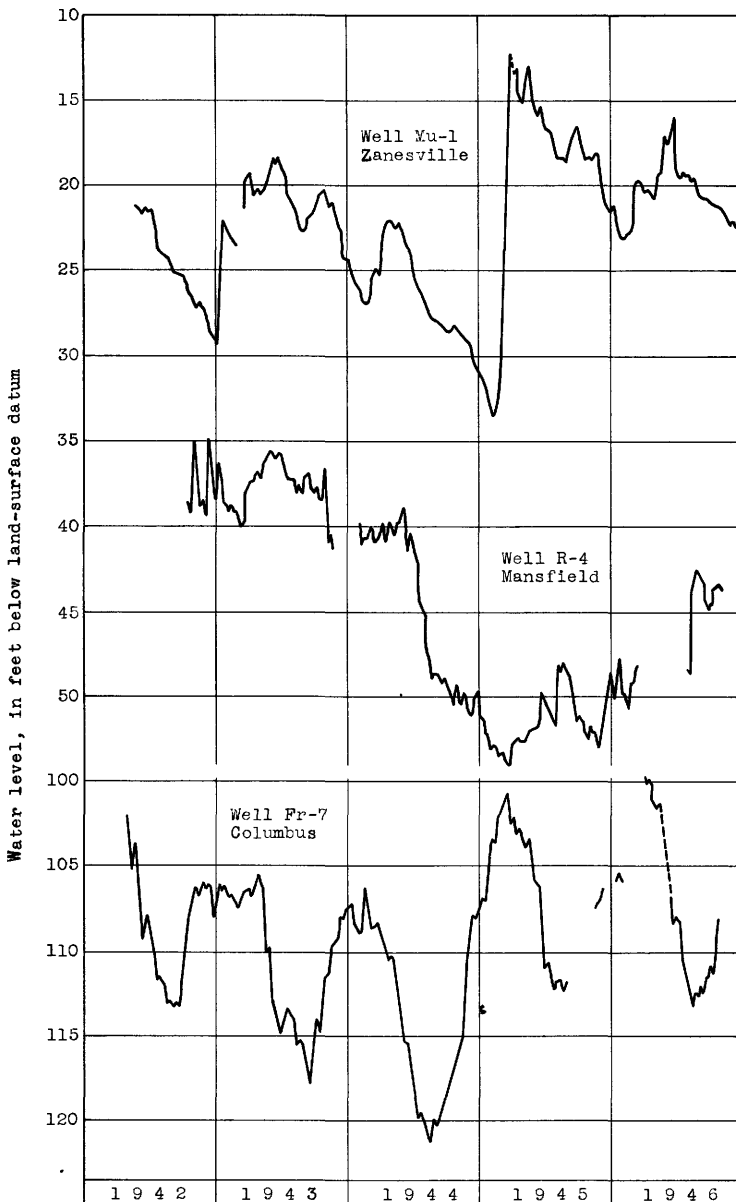


Figure 17.--Graphs showing water levels in observation wells at Columbus, Zanesville, and Mansfield, Ohio.

The records of ground-water levels obtained in Fairfield Township in 1946 show that less recharge was received than in 1945. However, the recharge received was sufficient to cause a slow rise in most of the area that continued from the beginning of the year to midsummer with the result that the ground-water levels at the end of 1946 were generally only slightly lower than at the end of 1945.

#### FRANKLIN COUNTY

Ground-water levels were measured at four locations in Franklin County during 1946. In addition to the record in a well in Columbus (Fr-7), dating from April 1942, records were started in wells at Grove City, Hilliards, and Reese. All are being obtained with automatic water-stage recorders. A hydrograph of the water levels in well Fr-7, in Columbus, is shown in figure 17. Graphs of the water levels in observation wells at Grove City and Reese are shown in figure 18. The record from well Fr-1, in a gravel aquifer at Grove City, shows fluctuations caused principally by changes in atmospheric pressure, indicating that the ground water in this aquifer occurs under artesian conditions. The record from well Fr-3, in a gravel aquifer bordering Big Walnut Creek at Reese, shows fluctuations mainly in response to changes in the stage of the stream.

A study of the relation of stream levels to ground-water levels was started at Reese in December 1946 by the drilling of three test wells in a line at right angles to Big Walnut Creek and by the installation of an automatic water-stage recorder on each well. The records of ground-water levels will be correlated with the record of river stage being obtained at the site by the Survey's division of surface water.

#### GREENE COUNTY

Measurements of ground-water levels in the Xenia municipal well field were continued in 1946. A hydrograph of the record from observation well Gr-1, figure 19, shows that water levels were generally high in the first half of the year and low in the last half. The total range of fluctuation during 1946 was 6.43 feet, from a low of 10.95 feet in October to a high of 4.52 feet below land-surface datum in February. The highest water level, recorded on Feb. 6, is not shown on the graph, because the graph shows only the lowest weekly water levels. The principal water-level fluctuations

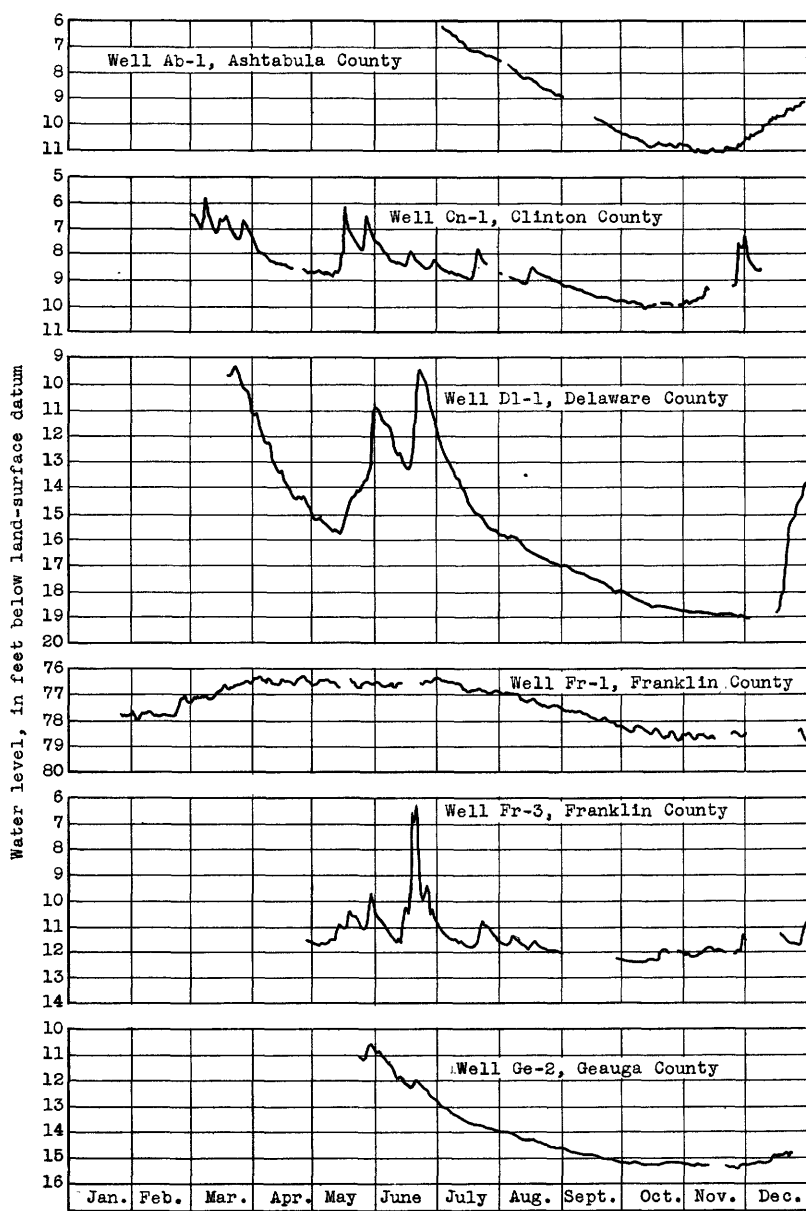


Figure 18.--Graphs showing water-level records obtained in observation wells in Ohio.

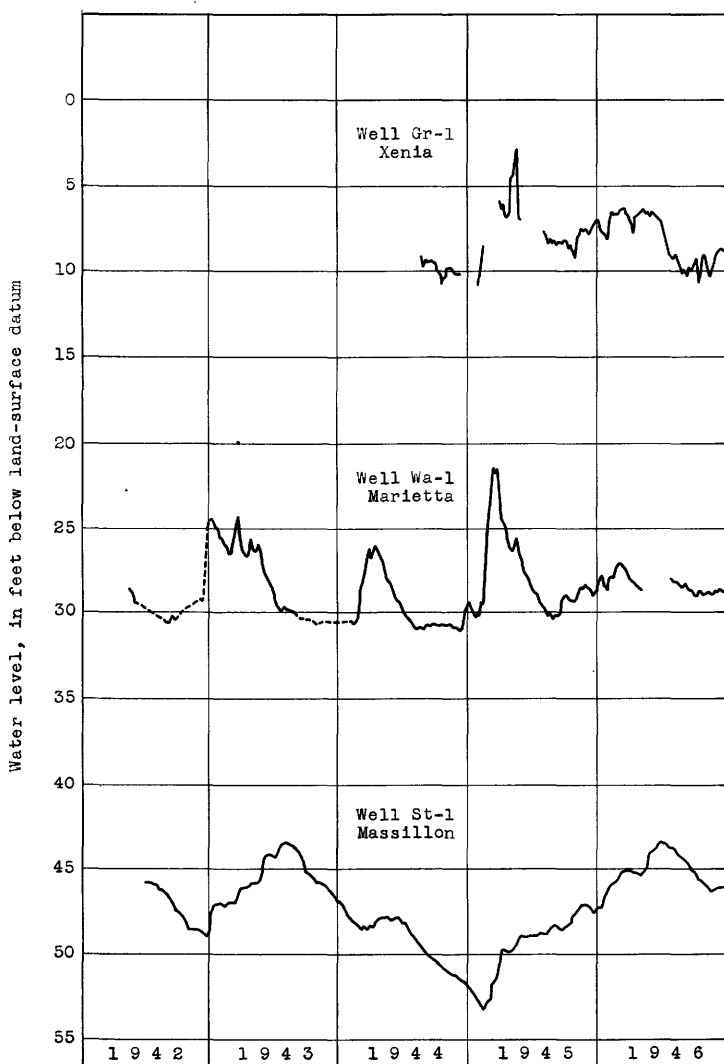


Figure 19.--Graphs showing water levels in observation wells at Xenia, Massillon, and Marietta, Ohio.

in this well are related to the amount of recharge received and the rate of pumping in the waterworks well field. Although the water level in well Gr-1 was lower at the end of 1946 than at the beginning of the year, the record as a whole, beginning in 1944, does not indicate a continuing downward trend. The record thus far obtained indicates that the recharge received in the period of record has been sufficient to sustain the pumping that has occurred in that period.

#### HAMILTON COUNTY

Ground-water levels were measured in 25 observation wells in Hamilton County during 1946. All are gravel wells in the Mill Creek Valley and in Cincinnati. Automatic water-stage recorders were in operation on seven of these wells during the year.

A review of the geology and water-bearing properties of the geologic formations together with a summary of ground-water conditions in the Mill Creek Valley, the Norwood area, and in Cincinnati is given in Bulletin 8 of the Ohio Water Resources Board<sup>4/</sup> and will not be repeated here.

#### Lower Mill Creek Valley

Ground-water levels in the gravels of the Mill Creek Valley, in Hamilton County, were measured in 20 observation wells during 1946. Weekly measurements were made in 13 observation wells and 7 wells were equipped with automatic water-stage recorders. The records obtained in three of these wells are shown graphically in figure 20. Pumpage in the lower Mill Creek Valley in 1946 was about 13.0 million gallons a day, which is about 1.4 million gallons a day less than the average of the 7 previous years of record. The changes of water levels in the observation wells during the year ranged from a net rise of 4.3 feet to a net decline of 7.8 feet and averaged a net decline of 1.6 feet.

The largest net declines during the year occurred in the area north of Lockland in the vicinity of the Wright Aeronautical plant and at the Glendale waterworks where exceptional recharge had produced high water levels in 1945.

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<sup>4/</sup> Bernhagen, R. J. and Schaefer, E. J., Op. cit.

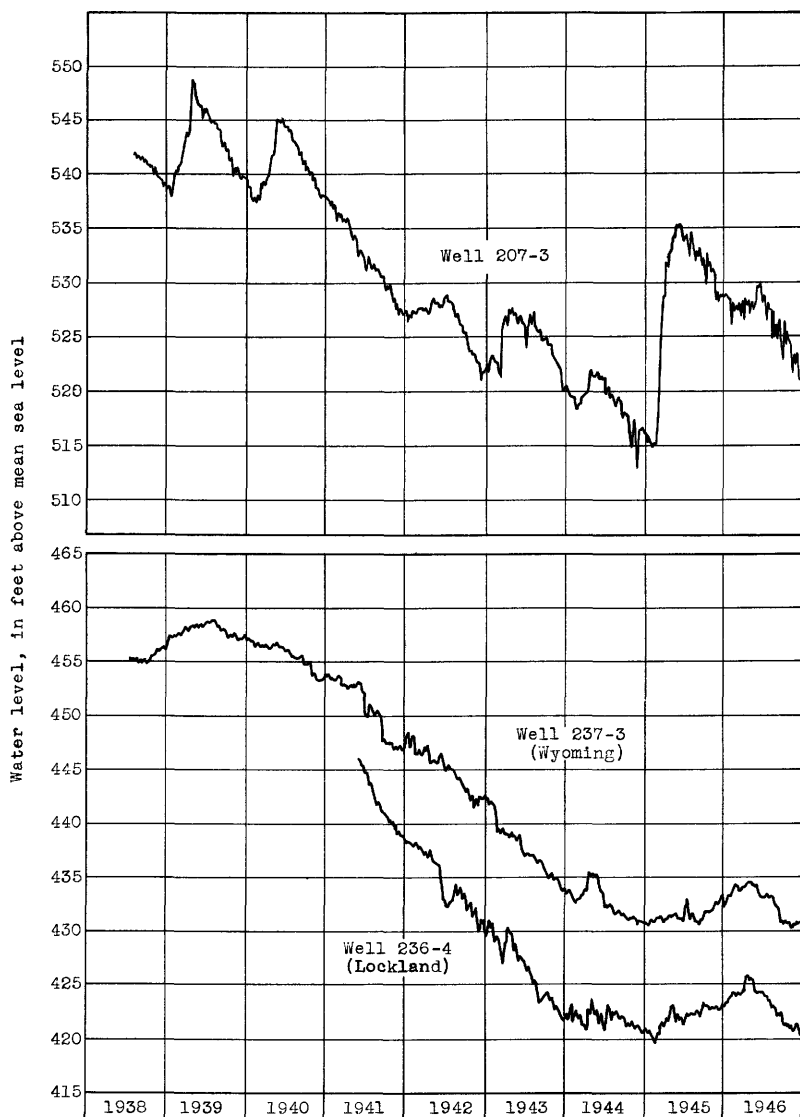


Figure 20.--Graphs showing water level in observation wells 207-3, 237-3, and 236-4, Hamilton County, Ohio.

The smallest declines occurred in the southern portion of the valley in the vicinity of Carthage and Ivorydale where two large industries continued to purchase water from the city of Cincinnati in the winter months instead of pumping well water.

#### Cincinnati and Norwood

Ground-water levels in the gravels in the business section of Cincinnati were measured at monthly intervals in four observation wells during 1946. During the year the water levels in these wells averaged a net decline of 1.2 feet. However, the range of fluctuations of the water levels in these wells is extremely great because of large variations in pumping rates in the area. The average decline in 1946 does not indicate a continued lowering of water levels. In 1945, for example, the net change in in these wells was an average rise of 6.96 feet.

Monthly measurements of water level were made in one well at Norwood during 1946 to define the trend of water levels in the gravels of the Norwood trough which connects the buried valleys in the Mill Creek Valley and the Little Miami River Valley. The water level in this well (315-3) declined 0.7 foot in 1946 indicating that the slow downward trend of ground-water levels in the Norwood trough is continuing.

#### MONTGOMERY COUNTY

Ground-water levels were measured in 40 observation wells in Montgomery County during 1946. All but 11 of these wells were first measured during the course of a detailed investigation of the geology and water resources of the county, begun in 1946 by S. E. Norris, geologist. Most of the observation wells are in the vicinity of Dayton, as shown on the map in figure 11.

#### Dayton

The industrial area of greater Dayton is probably the most productive ground-water area in Ohio. Large amounts of water are pumped by industries and commercial establishments, and for the municipal supply. The industrial pumpage is, at present, estimated to be about 40 million gallons a day, while the municipal pumpage averages about 38 million gallons a day. The total ground-water pumpage in Montgomery County probably exceeds 90 million gallons a day.

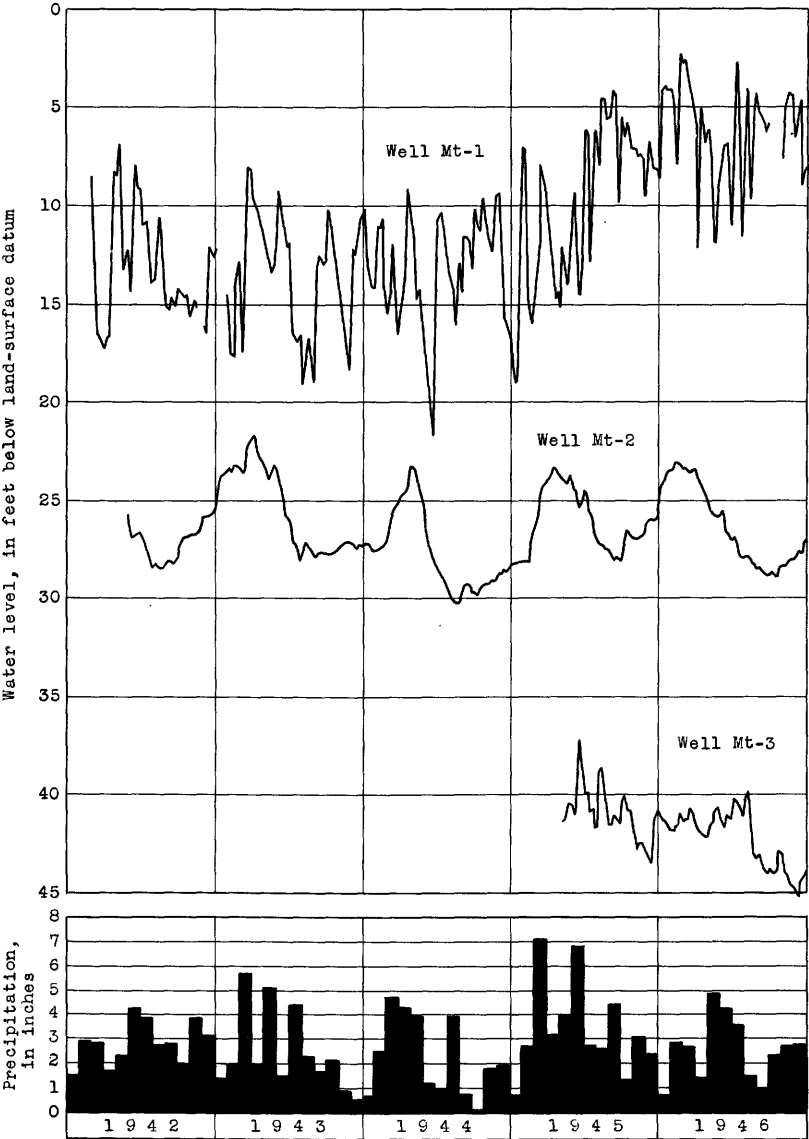


Figure 21.--Graphs showing water level in observation wells and monthly precipitation at Dayton, Montgomery County, Ohio.



Ground-water levels have been measured in Dayton and vicinity since 1942. The longest records are those obtained in observation wells Mt-1, Mt-2, and Mt-3. These records are shown graphically in figure 21.

Well Mt-1 is at the city well field on Rohrer's Island in the Mad River. The gravels in the buried valley underlying this area are recharged frequently by diverting water from the Mad River into infiltration ditches and ponds located on the island. The record obtained in observation well Mt-1 shows that this method of recharge has been effective in maintaining high ground-water levels in the well field in spite of the heavy pumping.

The fluctuations in well Mt-2, at the Dayton Power and Light Company plant in the main business section of Dayton, are caused by the regional pumping and by recharge. Although the water level at the end of 1946 was lower than at the beginning of the year there is no indication of a continuing downward trend.

Individual charts from the automatic water-stage recorder on well Mt-3 show close correlation of the water level with pumping at the National Cash Register Company, and with changes in the stage of the Miami River. However, the record is too short to indicate the long-term trend in this area.

#### RICHLAND COUNTY

An automatic water-stage recorder has been operated on an unused well, 129 feet deep, at the old North Main Street pumping station of the Mansfield water department since May 5, 1942. This well ends in gravel in a buried valley filled with glacial materials. Wide daily fluctuations, caused by industrial pumping a considerable distance from this well, indicate that the ground-water at the depth at which the well is screened occurs under artesian conditions. A fairly continuous rise occurred in this well throughout 1946, probably because of a shutdown of wells at the Westinghouse plant during a long strike of the workers. The exact amount of the rise is not known because the recorder was not operating at the end of the year. However, the trend, as shown on the hydrograph in figure 17, indicates that the total rise amounted to about 7 feet.

Automatic water-stage recorders were installed on three additional wells in Richland County in 1946; one was installed at Mansfield and one

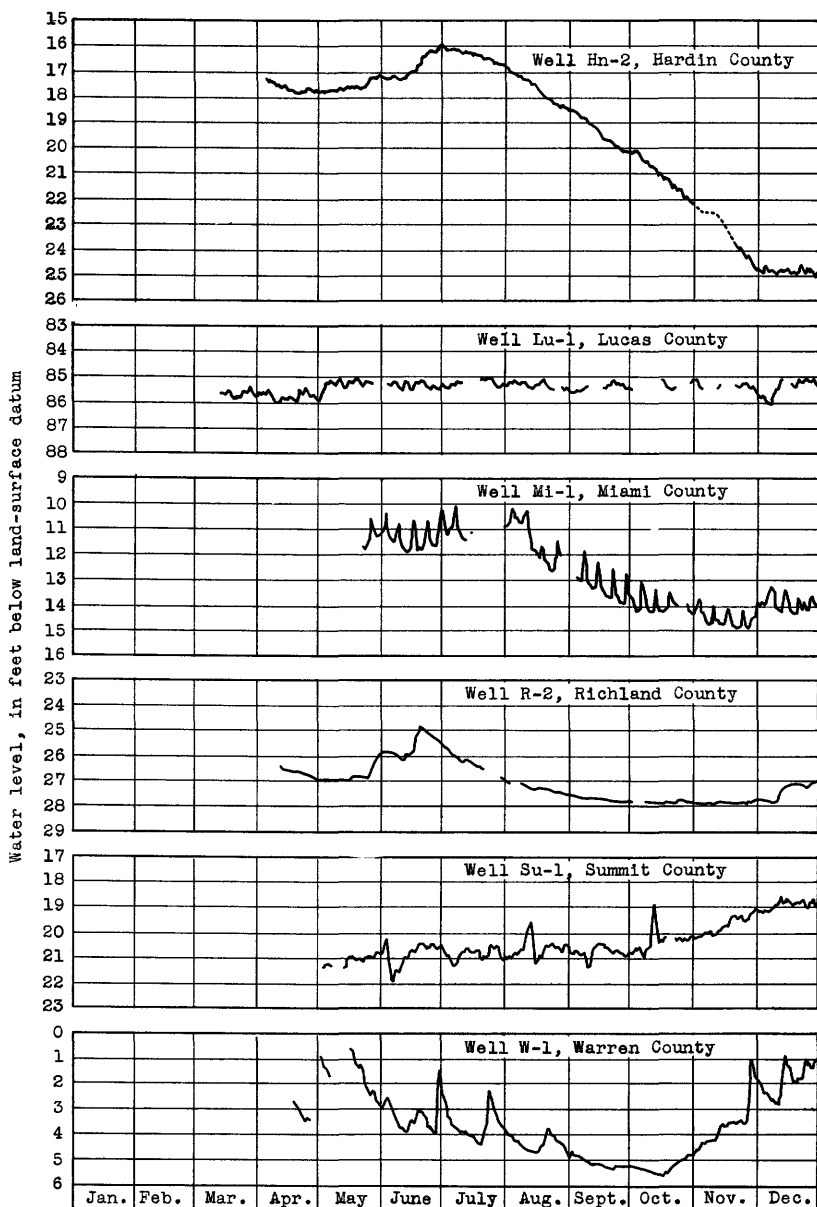


Figure 22.--Graphs showing water-level records obtained in observation wells in Ohio.

each at Lexington and Shiloh. The records obtained in these wells are too short to indicate trends. The record obtained in the Lexington well (R-2) is shown graphically in figure 22.

#### ROSS COUNTY

##### Chillicothe

Measurements of ground-water levels in four wells and one gravel pit were continued during 1946 in the Chillicothe area. The records obtained show that rises in water levels caused by recharge to the water-bearing gravels in the area in 1946 averaged about 8 feet. (See fig. 23.) The recharge, as indicated by rises in ground-water levels, occurred from February to June and as late as July following a flooding of the Scioto River. Water levels generally declined from July to December and were about the same at the end of 1946 as at the end of 1945. It is interesting to note that the greatest recharge occurred in the vicinity of the heavy pumping in the southern part of the city where the greatest storage space is available in the aquifer. The ground-water pumpage in Chillicothe in 1946 averaged 20 million gallons a day which was slightly greater than for any previous year for which records are available.

#### STARK COUNTY

##### Canton area

Large ground-water supplies in the Canton area are pumped from outwash glacial materials in a system of buried valleys underlying the Middle and East Branches of Nimishillen Creek and continuing through the city to the Tuscarawas River valley. The geology and hydrology of this area has been described in a report prepared cooperatively by the Geological Survey and the Ohio Water Resources Board and published by the Board in June 1946.<sup>5/</sup> This report points out that buried valleys other than those mentioned above exist in the Canton area. The most promising of these for ground-water supply is a buried valley which, in part, underlies the West Branch of Nimishillen Creek north of Meyers Lake in sections 20 and 30 of Plain Township and west of Cleveland Avenue (fig. 24). The city of Canton at present is planning development of this area as an addition to the municipal supply.

<sup>5/</sup> Schaefer, E. J., White, G. W., and Van Tuyl, D. W., The ground-water resources of the glacial deposits in the vicinity of Canton, Ohio: Ohio Water Resources Board, Bull. 3, June 1946.

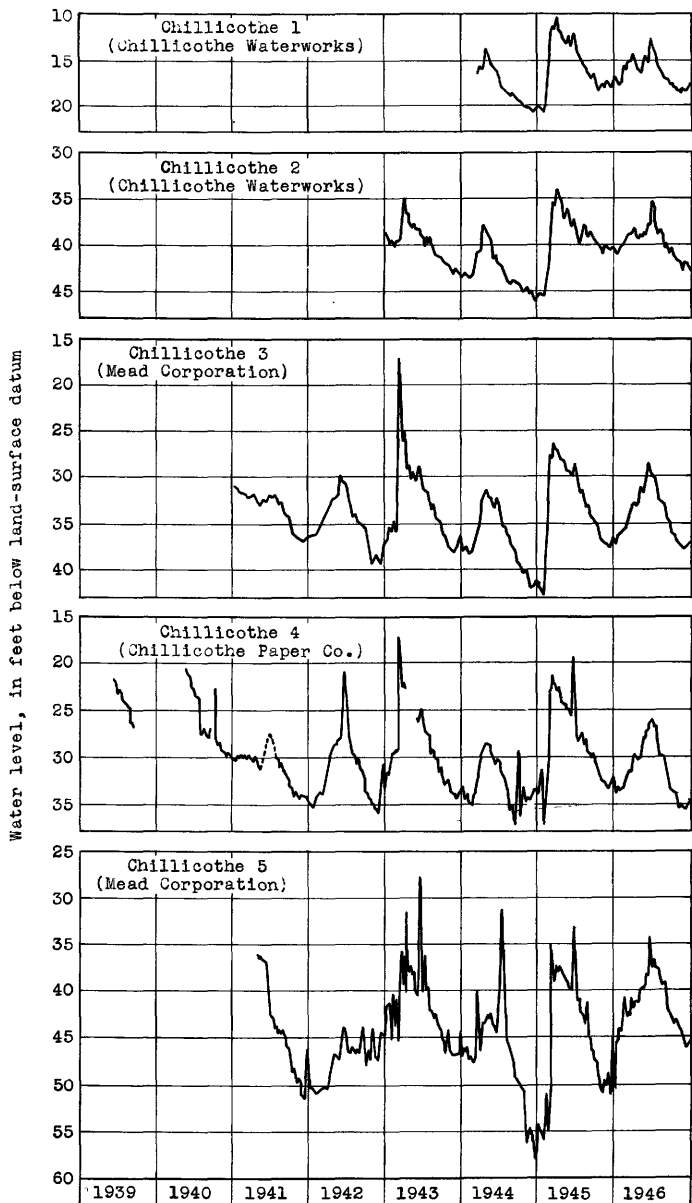


Figure 23.--Graphs showing water levels in four wells and one gravel pit at Chillicothe, Ross County, Ohio.

Measurements of ground-water levels were obtained in 10 observation wells in the Canton area in 1946. The locations of these wells are shown on the map in figure 10. Six of these observation wells were equipped with automatic water-stage recorders and four wells were measured at weekly intervals by the wetted-tape method.

A survey of industrial pumping in the Canton area was not made in 1946. However, records are available of the pumping by the Canton water department. These records, for the 6 years since 1941, are given in the following table.

Average daily pumpage, in millions of gallons, by Canton  
Water Department

<u>Year</u>	<u>Northeast</u>	<u>Well field</u>	
		<u>Ninth Street</u>	<u>Grovemiller</u>
1941	6.6	..	0.8
1942	7.5	1.9	4.1
1943	9.4	.3	5.0
1944	6.7	2.3	5.2
1945	7.6	3.3	3.7
1946	8.6	3.6	2.8

Practically all pumping by industries in the Canton area is confined to the city proper. The city also pumps water from the Ninth Street well for the municipal supply. Hydrographs of three observation wells which show the trends of ground-water levels in this area are shown in figure 26. In 1946 all three of these wells (St-2, St-3, and St-6) showed net rises in water levels which probably resulted, in large part, from reduced industrial pumping. The hydrographs show the same trend in the records for 1945.

In the valley traversed by Middle Branch of Nimishillen Creek--where the Canton water department's Northeast well field is located--rises in ground-water levels occurred principally in the first 6 months of 1946 as shown by the hydrographs of observation wells St-4 and St-5 in figures 24 and 25. In both wells the water levels declined in the last 6 months of the year and were slightly lower at the end of the year than at the beginning. However, examination of the entire record for each well beginning in 1941 shows that a continuing downward trend is not occurring in this area in spite of the heavy pumping. Recharge in this area is derived partly from stream flow induced by pumping and partly from precipitation falling locally. In the part of the valley north of the Goughnour well (St-4),

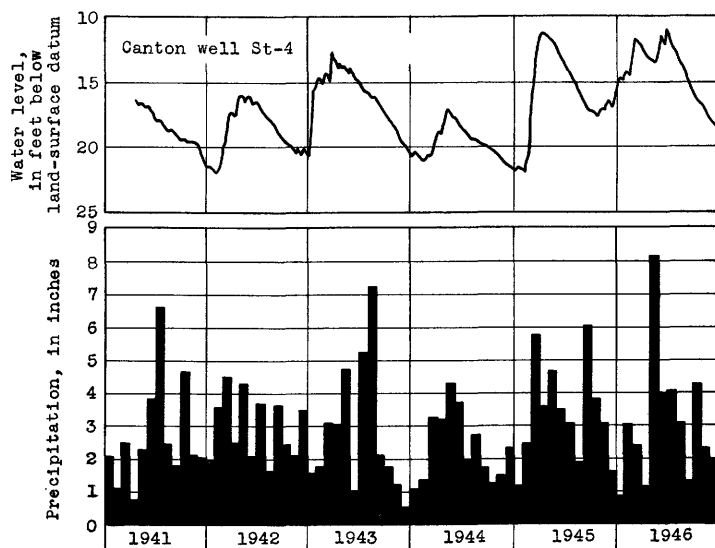


Figure 24.--Graphs showing monthly precipitation at Canton and water levels in Canton well St-4 (Goughnour well), Stark County, Ohio.

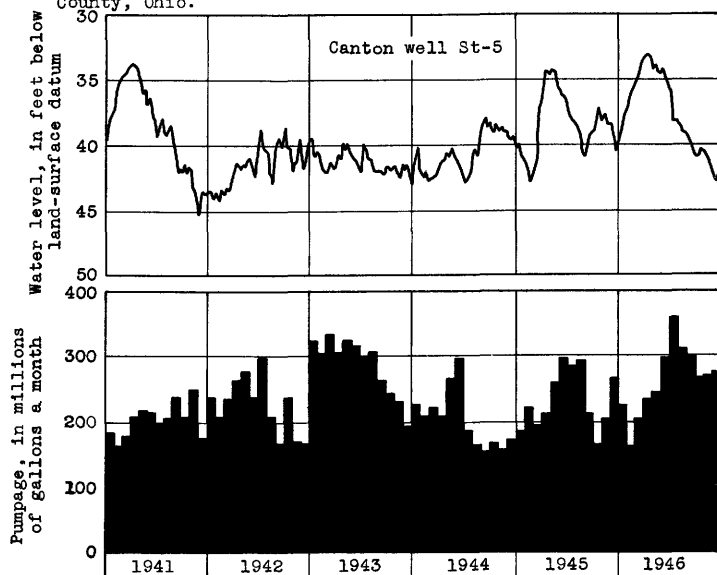


Figure 25.--Graphs showing monthly pumpage of the Canton water department Northeast well field and water levels in Canton well St-5 (Northeast well field observation well), Stark County, Ohio.

potential recharge from stream flow was probably lost in periods of high ground-water levels, such as those that occurred in the first 6 months of 1945 and 1946 when ground-water levels at times were higher than the stream level.

In the Grovemiller well field, 3 miles west of the central part of the city along Tuscarawas Avenue, the water levels in observation wells St-7, St-8, and St-9 followed a rising trend throughout 1946 because of reduced pumpage by the Canton water department. The average of the rises in these observation wells in 1946 was 6.26 feet. The recharge in the Grovemiller field is derived from local precipitation since no through-flowing streams traverse the area.

In the Sippo area, about  $5\frac{1}{2}$  miles west of the city of Canton, a pumping test of a 12-inch well was conducted from September 19, 1945, to April 30, 1946, as part of the cooperative investigation of the ground-water resources of the glacial deposits in the Canton area. A complete analysis of this test is given in Bulletin 3 of the Ohio Water Resources Board. <sup>6/</sup> The hydrograph of well T-50, which is 330 feet from the pumping well, is shown in figure 26. The drawdown shown on the hydrograph was caused by steady pumping at a rate of 1,000 gallons a minute. The apparent leveling off in the early part of 1946 was caused by recharge. Prior to that time only a minor amount of recharge occurred during the period of the test.

#### Massillon

Measurements of ground-water levels in observation well St-1 (Massillon 1) during 1946 showed continual recovery as a result of decreased industrial pumping from the gravels in the area. The net rise during the year was about 1.2 feet. A hydrograph of the water levels is shown in figure 19. The total range of fluctuation during 1946 was about 4.1 feet, and the highest water level was 43.4 feet below land-surface datum. The highest level since the beginning of record which was also 43.4 feet occurred in August 1943. It is believed that pumping from the gravel deposits in the vicinity of the observation well has decreased since 1944, due to a general decrease in industrial activity after the end of the war, or, in

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<sup>6/</sup> Schaefer, E. J., White, G. W., and Van Tuyl, D. W., Op. cit.

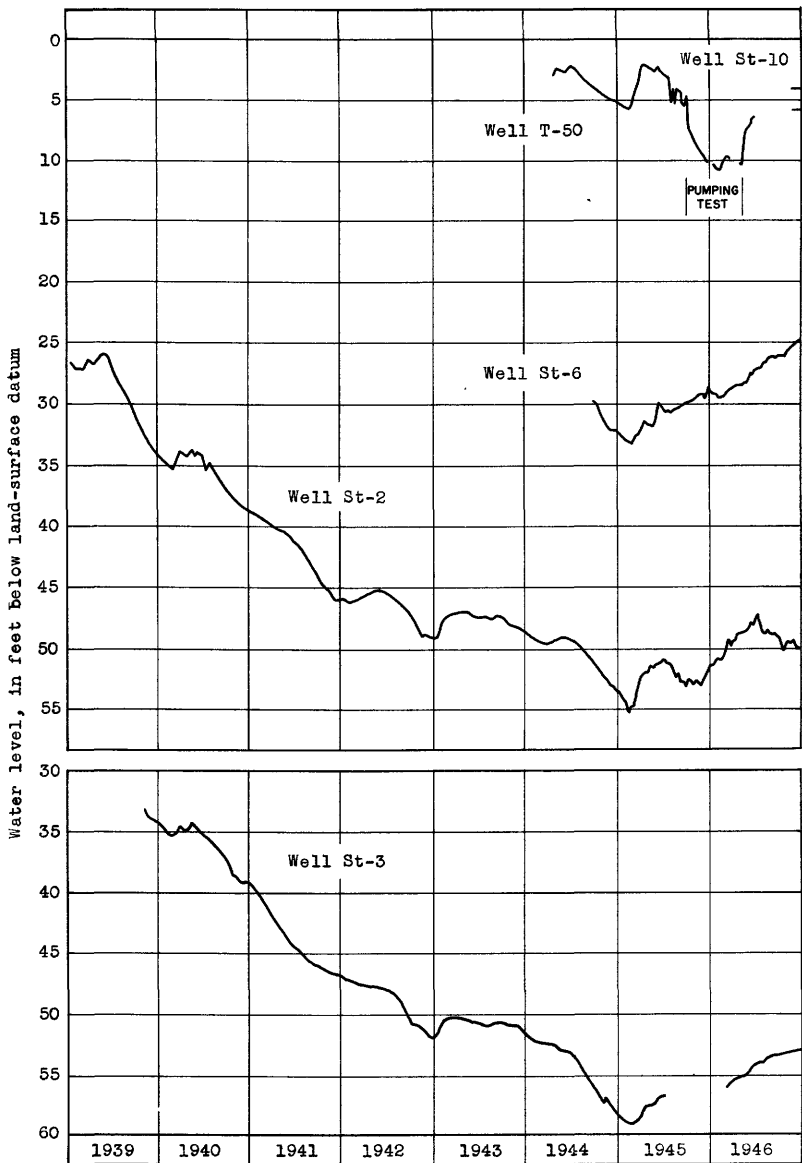


Figure 26.--Graphs showing water levels in observation wells at Canton, Stark County, Ohio.



some degree, to the high chloride content of the Tuscarawas River water from which the adjacent gravel deposits undoubtedly derive considerable recharge. If the latter assumption is true, more water is probably pumped from the sandstone aquifers in the area.

The following table shows the water level on December 31 of each year, in feet below land-surface datum, and the net change, in feet, each year since 1942.

<u>Year</u>	<u>Water level</u>	<u>Net change during year</u>
1942	48.55	.....
1943	46.91	+1.64
1944	51.70	-4.79
1945	47.53	+4.17
1946	46.25	+1.28

#### SUMMIT COUNTY

##### Akron

Ground-water supplies in Akron are obtained mainly from glacial deposits of sand and gravel filling preglacial valleys. In 1944 industrial pumpage averaged 12 million gallons a day, which was probably maintained during 1945 and 1946. During the spring and summer the pumpage increased to about 21 million gallons a day due to the increased demand for cold water for cooling purposes. Approximately 17 million of the 21 million gallons a day was pumped from wells in two preglacial valleys in the Akron area, one trending northwest and southeast through East Akron and the other trending north and south through the center of Akron. These two valleys join just north of the business district to form a single valley which continues northward under the Cuyahoga River. The eastern valley is traversed, in part, by the Little Cuyahoga River. Both tributary valleys are filled with alternating layers of sand and gravel, in some places to depths of more than 200 feet.

An automatic water-stage recorder has been maintained since February 4, 1944, on an abandoned well in the Goodyear Tire & Rubber Company well field. The well is drilled in the sand and gravel of the eastern preglacial valley. The water-level records obtained from this well and from a production well in the Goodyear well field are shown in figure 27. Large declines have occurred each spring and summer since the beginning of record, due to the seasonal pumping in nearby production wells. With the exception of 1945, large recoveries of water levels took place during the

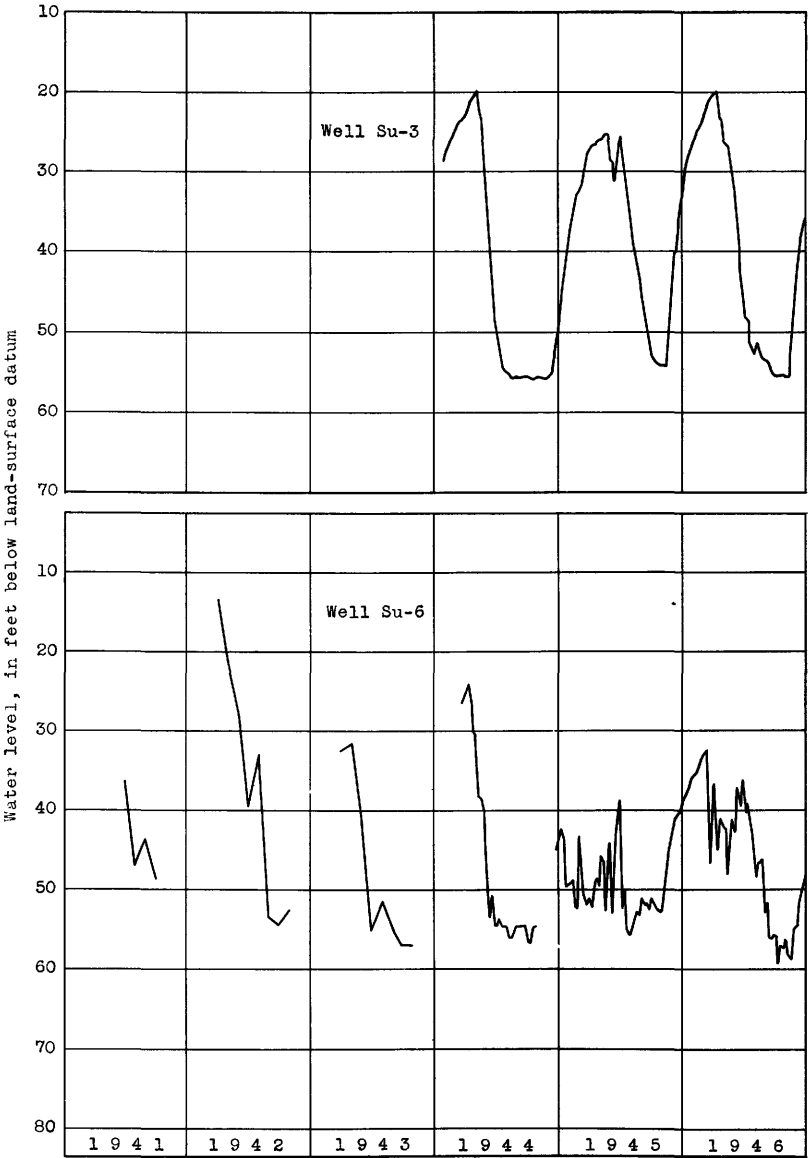


Figure 27.--Graphs showing water levels in observation wells at Akron, Summit County, Ohio.

fall and winter of each year. In 1945 pumping in the nearby wells was started in January, 3 or 4 months earlier than usual, with the result that net recovery was not as great as in the other years of record. The recovery is due to the cessation of pumping in the well field, to ground-water recharge from direct precipitation, and probably to infiltration from the Little Cuyahoga River.

#### Hudson

Measurements of ground-water levels at Hudson were begun in 1946. An automatic water-stage recorder was installed on an abandoned well in the municipal well field. A hydrograph of the water-level record is given in figure 22. Daily fluctuations are caused by pumping from nearby wells which end in sandstone. The record during 1946 shows a gradual upward trend, which started when pumping was reduced in the old city well field and begun at a new well which is farther from the observation well.

#### WASHINGTON COUNTY

#### Marietta

Measurements of ground-water levels in the gravels at Marietta were continued in 1946. A hydrograph of the record is shown in figure 19. The range of fluctuation during the year was less than during previous years of record. Although the automatic water-stage recorder was out of operation from May 16 to August 8, the maximum water level, 24.82 feet below land-surface datum, was recorded during this period. This stage probably occurred in June following heavy rains in May and June and relatively high river stages in June. The lowest water level during 1946 was 29.18 feet on November 4, which is 1.5 feet higher than the average of the lowest levels in the previous 4 years.

#### WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

#### Allen County

A1-1. Standard Oil Co. At Lima, in yard of refinery, west of U. S. Route 25. Abandoned drilled well, diameter 10 inches, depth 320 feet. Measuring point, floor of recorder shelter, 2.6 feet above land-surface datum. Automatic water-stage recorder installed June 27, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 19	128.10	Sept. 23	113.28	Sept. 27	137.27	Oct. 1	136.05
20	126.20	24	110.70	28	132.20	2	135.88
21	114.50	25	128.40	29	135.07	3	137.18
22	98.70	26	133.04	30	138.08	4	142.63

A1-1-- Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 5	138.60	Oct. 25	143.76	Nov. 22	152.35	Dec. 12	149.95
6	137.12	26	141.35	23	151.50	13	151.09
7	142.62	27	143.25	24	148.48	14	145.51
8	144.02	28	145.87	25	150.35	15	147.45
9	142.90	29	146.38	26	151.98	16	151.11
10	144.43	30	146.10	27	152.20	17	151.28
11	144.70	31	146.50	28	147.50	18	150.90
12	138.72	Nov. 1	145.85	29	151.58	19	150.85
13	142.08	7	150.20	30	149.55	20	151.24
14	144.67	8	150.37	Dec. 1	144.82	21	146.90
15	143.80	9	146.82	2	151.86	22	149.85
16	144.39	10	150.25	3	151.96	23	150.31
17	144.72	14	152.22	4	152.26	24	150.47
18	144.72	15	150.80	5	151.99	25	145.88
19	138.87	16	146.12	6	152.08	26	150.45
20	138.40	17	148.50	7	147.64	27	149.21
21	143.07	18	152.03	8	147.30	28	144.80
22	143.40	19	152.22	9	151.18	29	147.93
23	144.49	20	152.28	10	150.60	30	149.33
24	144.60	21	152.28	11	151.69	31	149.03

Ashtabula County

Ab-1. K. K. Tisch. 300 feet south of owner's house, 3 miles south of Jefferson, along State Highway 46. Abandoned drilled well, diameter 3.75 inches, depth 40 feet. Measuring point, floor of recorder shelter, 0.7 foot above land-surface datum. Automatic water-stage recorder installed July 3, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	7.51	8.94	10.34	10.80	10.52
2	....	7.52	....	10.35	10.80	10.57
3	6.20	7.54	9.13	10.41	10.82	10.57
4	6.28	7.55	....	10.48	10.90	10.43
5	6.31	7.60	....	10.53	11.00	10.40
6	6.32	7.63	....	10.56	11.03	10.36
7	6.38	7.73	....	10.55	11.03	10.31
8	6.45	7.80	..	10.56	10.94	10.24
9	6.52	7.81	....	10.57	11.03	10.21
10	6.57	7.85	8.24	10.62	11.03	10.03
11	6.58	8.00	....	10.65	11.03	10.03
12	6.61	8.10	....	10.70	11.03	9.94
13	6.74	8.17	....	10.75	11.03	9.79
14	6.74	8.26	....	10.77	10.93	9.79
15	6.74	8.25	....	10.79	10.93	9.71
16	7.10	8.24	....	10.73	10.93	9.69
17	7.11	8.22	9.76	10.71	11.01	9.64
18	7.12	8.22	9.30	10.65	11.02	9.64
19	7.12	8.26	9.83	10.69	11.01	9.63
20	7.16	8.39	9.81	10.73	10.91	9.61
21	7.16	8.50	9.81	10.74	10.89	9.37
22	7.16	8.58	9.90	10.74	10.86	9.44
23	7.16	8.65	9.93	10.73	10.90	9.44
24	7.17	8.68	10.01	10.73	10.90	9.29
25	7.24	8.72	10.05	10.67	10.89	9.27
26	7.31	8.75	10.10	10.78	10.89	9.24
27	7.35	8.76	10.15	10.83	10.78	9.24
28	7.35	8.76	10.20	10.83	10.76	9.07
29	....	8.82	10.21	10.74	10.64	9.07
30	7.39	8.87	10.25	10.74	10.64	9.10
31	7.44	8.87	....	10.78	....	9.10

Auglaize County

Au-1. C. W. Manchester. At New Hampshire, 3 miles west of U. S. Route 33, on south side of State Highway 385. Abandoned drilled well, diameter 4 inches, depth 96 feet. Measuring point, floor of recorder shelter, 1.2 feet above land-surface datum. Automatic water-stage recorder installed Apr. 30, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	15.61	15.63	15.43	16.07	17.02	18.09	19.20	19.96
2	.....	15.59	15.59	15.45	16.22	17.00	18.29	19.20	19.96
3	.....	15.59	15.61	15.45	16.21	17.26	18.18	19.26	.....
4	.....	15.59	15.62	15.48	16.26	17.13	18.17	19.32	19.99
5	.....	15.55	15.64	15.55	16.25	17.19	18.29	19.36	20.05
6	.....	15.55	15.77	15.72	16.51	17.14	18.36	19.36	20.09
7	.....	15.55	15.80	15.60	16.53	17.20	18.35	19.32	20.07
8	.....	.....	15.86	15.54	16.45	17.51	18.55	19.36	20.10
9	.....	15.75	16.10	15.74	16.31	17.38	18.60	19.41	20.12
10	.....	15.73	15.99	15.91	16.44	17.28	18.57	19.42	20.12
11	.....	15.64	16.00	15.68	16.48	17.55	18.52	19.50	20.11
12	.....	15.60	15.94	15.76	16.56	17.45	18.54	19.50	20.02
13	.....	15.59	15.78	15.66	16.53	17.43	18.61	19.56	19.96
14	.....	15.59	15.75	15.73	16.53	17.45	18.62	19.58	19.98
15	.....	15.50	15.78	15.76	16.48	17.46	18.76	19.62	20.04
16	.....	15.60	15.77	16.00	16.48	17.53	18.76	19.64	20.04
17	.....	15.55	15.74	15.71	16.46	17.65	18.76	19.74	20.22
18	.....	15.51	15.65	16.00	16.44	17.58	18.66	19.76	20.22
19	.....	15.52	15.55	15.87	16.49	17.90	18.72	19.76	20.13
20	.....	15.53	15.53	15.81	16.58	17.65	18.75	19.77	20.10
21	.....	15.54	15.52	15.75	16.60	17.69	18.85	19.77	20.01
22	.....	15.58	15.55	15.79	16.62	17.68	18.85	19.87	20.06
23	.....	15.57	15.55	15.79	16.79	17.72	18.88	19.87	20.04
24	.....	15.56	15.53	16.00	16.71	17.76	18.88	19.82	19.98
25	.....	15.54	15.56	15.90	16.87	17.77	18.92	19.83	19.97
26	.....	15.54	15.62	15.93	16.87	17.89	18.96	19.83	20.09
27	.....	15.53	15.60	16.00	16.80	17.91	19.06	19.90	19.97
28	.....	15.55	15.48	16.16	16.81	17.95	19.10	19.90	19.92
29	.....	15.56	15.44	16.01	16.92	17.96	19.12	19.96	19.92
30	15.62	15.65	15.46	15.99	16.91	18.09	19.16	19.96	19.90
31		15.63		16.04	16.96		19.18		

Au-2. City of St. Marys. At St. Marys, in abandoned well field at West Spring St. Abandoned drilled well, diameter 8 inches, depth 100 feet. Measuring point, floor of recorder shelter, 2.5 feet above land-surface datum.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	4.02	5.55	4.54	5.13	5.52	6.48
2	....	4.25	5.06	4.71	....	5.36	6.30
3	....	4.25	4.97	5.00	....	5.33	6.24
4	....	4.12	4.90	5.38	....	5.51	6.62
5	.....	4.08	4.94	5.47	....	5.62	6.60
6	....	4.20	4.90	5.57	....	5.60	6.14
7	....	4.24	4.96	5.62	....	5.44	6.58
8	....	4.27	4.98	5.72	....	5.50	6.58
9	....	4.30	4.90	5.66	5.35	5.72	6.06
10	....	4.40	4.94	5.18	5.41	5.60	6.25
11	....	4.48	5.05	5.69	5.40	5.57	6.08
12	....	4.53	1.30	5.95	5.54	5.76	5.86
13	....	4.56	.65	5.44	5.70	5.67	6.03
14	....	4.56	.44	5.80	....	5.70	6.04
15	....	4.64	.37	5.90	....	5.73	5.97

Au-2--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
16	....	4.69	2.61	5.46	5.16	5.70	5.83
17	....	4.67	3.67	5.46	5.33	6.46	6.17
18	....	4.65	4.46	5.46	5.45	6.51	6.24
19	....	4.64	4.73	5.42	5.66	6.34	6.30
20	....	4.68	....	5.28	6.21	6.30	6.08
21	....	4.64	....	5.26	6.25	6.22	5.88
22	....	4.60	....	5.23	6.21	6.32	6.19
23	....	4.74	....	5.38	5.66	6.32	5.99
24	4.99	4.74	....	5.48	5.52	6.32	5.48
25	5.00	5.26	....	5.47	5.92	6.54	1.76
26	5.18	4.81	....	5.46	5.64	6.18	4.71
27	4.62	5.51	....	5.46	5.66	6.70	4.82
28	3.77	5.23	4.98	5.44	5.67	6.70	5.06
29	3.92	4.85	1.66	5.18	5.56	5.98	4.91
30	3.98	5.56	3.35	5.15	5.47	6.31	5.28
31		5.59	4.28		5.52		5.51

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). Village of Trenton. Municipal water-supply well.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	35.02	May 20	33.78	July 23	33.68	Nov. 26	36.50
19	33.05	June 8	33.18	Oct. 15	35.91		

25-5 (\*936, p. 207; \*944, p. 203; \*986, p. 226; 1016, p. 270; 1023, p. 279). City of Middletown. Municipal water plant.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	31.43	30.66	28.20	27.37	30.04	27.58	28.42	30.50	32.84	33.90	35.23	36.42
2	30.94	30.72	27.95	27.47	30.05	27.58	28.29	30.56	32.50	33.92	35.27	36.40
3	30.57	30.73	27.92	27.54	30.10	27.50	28.28	30.63	32.32	33.96	35.28	36.50
4	30.41	30.76	27.80	27.69	30.14	27.62	28.27	30.95	32.35	34.00	35.25	36.55
5	30.37	30.83	27.80	27.80	29.96	27.65	28.30	31.00	32.40	34.05	35.27	36.60
6	30.30	30.83	27.82	27.87	29.84	27.74	28.40	30.98	32.44	34.10	35.28	36.65
7	30.09	30.67	27.90	27.89	29.84	27.84	28.40	31.04	32.50	34.15	35.40	36.67
8	29.92	30.51	27.91	28.03	29.83	27.95	28.52	31.10	32.56	34.21	35.44	36.64
9	29.79	30.34	27.97	28.11	29.86	28.00	28.63	31.20	32.61	34.26	35.46	36.66
10	29.66	30.22	27.97	28.30	29.87	28.04	28.80	31.30	32.68	34.50	35.46	36.74
11	29.58	30.24	27.93	28.53	29.52	28.30	29.02	31.44	32.72	34.68	35.41	36.81
12	29.51	30.25	27.96	28.75	29.36	28.50	29.17	31.49	32.75	34.73	35.50	36.86
13	29.50	30.25	28.06	28.93	29.40	28.62	29.21	31.52	32.80	34.81	35.63	36.83
14	29.40	30.22	28.06	29.03	29.33	28.75	29.23	31.58	32.85	34.94	35.75	36.84
15	29.45	29.92	28.06	29.10	29.14	28.87	29.19	31.67	32.93	34.94	35.87	36.81
16	29.53	28.56	28.03	29.18	29.02	28.90	29.25	31.75	32.98	35.00	35.90	36.47
17	29.60	28.09	27.97	29.26	28.95	28.96	29.31	31.80	33.04	35.07	35.89	36.33
18	29.70	28.04	27.85	29.39	28.70	28.95	29.45	31.83	33.11	35.14	35.98	36.22
19	29.80	28.13	27.85	29.56	28.42	28.90	29.64	31.84	33.22	35.22	36.07	36.17
20	29.80	28.25	27.70	29.69	28.15	28.72	29.73	31.85	33.27	35.27	36.13	36.17
21	29.85	28.32	27.43	29.71	28.02	28.45	29.84	31.87	33.33	35.35	36.22	36.20
22	29.93	28.40	27.31	29.50	27.92	28.25	29.87	31.96	33.41	35.37	36.27	36.17
23	29.99	28.41	27.27	29.68	27.81	28.23	29.88	31.99	33.47	35.08	36.31	36.10
24	30.10	28.41	27.23	29.75	27.70	28.44	29.81	32.09	33.51	35.15	36.32	36.11
25	30.19	28.48	27.28	29.92	27.67	28.54	29.95	32.16	33.56	35.18	36.32	36.03
26	30.28	28.55	27.28	30.09	27.66	28.60	30.03	32.23	33.61	35.21	36.41	35.84

25-5--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
27	30.30	28.56	27.29	30.09	27.71	28.85	30.03	32.28	33.65	35.22	36.47	35.94
28	30.38	28.54	27.36	29.94	27.80	28.86	30.25	37.35	33.72	35.17	36.51	35.95
29	30.43		27.42	29.89	27.77	28.76	30.38	32.42	33.77	35.19	36.42	35.94
30	30.54		27.57	30.02	27.74	28.57	30.45	32.50	33.87	35.19	36.43	35.97
31	30.56		27.51		27.69		30.45	32.57		35.23		36.00

Pit J (\*845, p. 373; \*886, pp. 560-561; \*906, p. 180; \*936, pp. 207-208; \*944, p. 204; \*986, p. 227; 1016, p. 270; 1023, p. 279). Moorman Sand & Gravel Co. gravel pit. In Middletown.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	21.00	Apr. 9	18.60	July 9	19.30	Oct. 8	23.96
8	19.94	16	19.33	16	19.91	15	24.17
15	19.50	23	19.94	23	20.32	22	24.43
22	19.80	30	20.45	30	20.60	29	24.50
29	20.50	May 7	20.58	Aug. 6	21.08	Nov. 5	24.59
Feb. 5	20.89	14	20.30	13	21.55	12	24.66
12	20.40	21	19.06	20	21.80	19	24.83
19	18.32	28	18.44	27	22.12	26	24.92
26	18.72	June 4	18.50	Sept. 3	22.47	Dec. 3	25.00
Mar. 5	18.28	11	19.09	10	22.75	10	25.05
12	18.38	18	19.52	17	23.15	17	24.76
19	18.38	25	18.98	24	23.35	24	24.41
26	17.77	July 2	18.95	Oct. 1	23.70	31	24.36
Apr. 2	18.02						

29-1 (\*886, pp. 565-566; \*906, p. 178; \*936, p. 208; \*944, p. 204; \*986, p. 227; 1016, p. 271; 1023, p. 280). Young Men's Christian Association. In Middletown.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	33.29	Apr. 2	29.89	July 9	30.70	Oct. 8	36.69
8	32.62	9	30.32	16	31.31	15	37.26
15	32.12	16	31.08	23	31.92	22	37.76
22	32.33	23	31.28	30	32.48	29	37.95
29	32.72	30	31.51	Aug. 6	32.98	Nov. 5	38.16
Feb. 5	32.86	May 7	31.53	13	33.55	12	38.40
12	32.56	14	30.99	20	33.96	19	38.80
19	31.00	21	30.00	27	34.29	26	39.21
26	31.12	28	29.74	Sept. 3	34.43	Dec. 3	39.43
Mar. 5	30.49	June 4	29.62	10	34.88	10	39.65
12	30.49	11	30.08	17	35.24	17	39.60
19	30.36	18	31.02	24	35.82	24	39.40
26	29.92	25	30.85	Oct. 1	36.25	31	39.11

29-2 (\*944, p. 205; \*986, p. 228; 1016, p. 271; 1023, p. 280). Young Men's Christian Association. In Middletown.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	40.82	May 7	39.09	July 30	41.90	Oct. 15	47.92
Feb. 19	40.37	14	36.61	Aug. 6	42.90	22	43.46
26	40.30	21	34.96	13	42.08	Nov. 5	51.26
Mar. 5	39.02	28	38.09	20	43.96	12	48.35
12	37.98	June 4	38.24	27	43.68	19	47.92
19	38.70	11	40.26	Sept. 3	43.37	26	48.10
26	38.78	18	39.60	10	44.35	Dec. 3	48.72
Apr. 2	38.50	25	40.95	17	45.83	10	48.47
9	38.11	July 9	39.25	24	46.07	17	49.32
16	38.28	16	41.02	Oct. 1	46.47	24	47.47
23	38.44	23	45.82	8	46.09	31	47.05

33-1 ( \*886, p. 569; \*906, p. 178; \*936, p. 208; \*944, p. 205; \*986, p. 228; 1016, p. 272; 1023, p. 282) Wardlow-Thomas Paper Co. In Middletown.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	36.39	Apr. 9	32.69	July 9	33.18	Oct. 8	40.12
8	35.84	16	32.75	16	33.96	15	40.58
15	35.36	23	32.91	23	34.50	22	40.93
22	35.13	30	33.13	30	34.85	29	41.30
29	35.08	May 7	33.03	Aug. 6	35.61	Nov. 5	41.63
Feb. 5	34.90	14	32.92	13	36.20	12	41.97
12	34.97	21	32.98	20	36.67	19	42.25
19	34.47	28	31.57	27	36.95	26	42.44
26	33.79	June 1	31.53	Sept. 3	37.11	Dec. 3	42.44
Mar. 5	33.20	11	31.86	10	37.66	10	42.57
12	33.03	18	32.78	17	38.16	17	42.69
19	33.09	25	33.36	24	39.02	24	43.09
26	32.67	July 2	33.67	Oct. 1	39.70	31	42.84
Apr. 2	32.49						

36-13 ( \*845, p. 375; \*886, p. 568; \*906, p. 209; \*944, p. 205; \*986, p. 228; 1016, p. 272; 1023, p. 281). American Rolling Mill Co. In Middletown.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	97.05	95.72	97.50	96.70	95.40	94.60	96.19	94.54	97.20	95.65	98.33	96.75
2	96.40	95.77	97.15	96.80	95.54	94.20	96.45	94.61	96.20	95.63	98.39	96.45
3	96.60	95.47	97.15	96.85	95.47	94.30	96.65	94.65	95.92	96.30	97.97	95.80
4	96.80	95.63	97.43	97.10	95.46	94.46	96.55	94.65	95.75	96.41	98.16	95.66
5	96.90	95.89	97.29	97.15	95.07	94.58	95.30	94.80	95.48	96.44	98.23	95.54
6	96.90	96.25	97.43	96.60	94.67	94.61	94.70	94.49	95.76	96.20	98.30	95.43
7	97.06	96.55	97.61	96.21	94.55	94.79	94.56	94.64	95.83	96.29	98.29	95.40
8	97.14	96.66	97.83	96.48	94.58	94.95	94.83	94.85	95.79	96.71	97.89	95.34
9	97.25	96.77	97.83	96.61	94.77	94.50	94.04	94.90	95.99	97.06	97.77	95.51
10	97.34	96.74	97.02	96.70	94.68	94.37	95.23	95.03	96.33	97.29	97.36	95.59
11	97.35	96.77	96.92	96.70	94.55	94.23	95.38	95.25	96.57	97.54	97.50	95.39
12	97.45	96.83	97.06	96.78	94.36	93.82	95.43	95.35	96.85	97.55	97.60	95.22
13	97.10	96.84	97.14	96.71	94.20	93.86	95.51	95.40	97.04	96.97	97.66	95.36
14	97.10	97.27	97.16	96.50	94.50	93.92	95.07	95.52	97.20	96.62	97.74	95.28
15	97.38	97.46	97.26	96.05	94.59	94.54	95.25	95.65	97.15	96.66	97.81	95.16
16	97.44	97.48	97.06	96.12	94.37	94.42	95.30	95.80	97.15	96.60	97.81	94.80
17	97.60	96.98	96.80	96.15	94.35	94.59	95.43	95.89	97.30	96.58	97.30	94.87
18	97.83	96.67	97.26	96.18	94.21	93.73	95.61	95.65	97.38	96.85	97.31	94.91
19	98.00	96.96	97.49	96.19	94.14	93.67	95.69	95.41	97.50	96.90	97.45	94.95
20	97.35	97.54	97.61	96.04	93.64	94.51	95.70	95.65	97.60	96.80	97.56	94.85
21	97.60	97.74	97.65	95.16	93.77	94.80	95.47	95.80	97.52	96.86	97.46	95.04
22	97.73	94.48	97.69	95.22	93.78	95.00	94.78	96.05	96.97	97.17	97.45	95.11
23	97.85	97.46	97.65	95.37	93.75	94.39	94.19	96.14	96.32	97.45	97.40	95.23
24	97.85	97.27	96.56	95.44	93.80	95.06	94.11	96.22	96.22	97.62	96.87	95.35
25	97.85	97.27	96.94	95.43	93.76	95.56	94.07	96.15	96.52	97.96	96.44	95.41
26	98.05	97.60	97.13	95.29	93.54	95.98	94.03	96.21	96.72	98.06	96.31	95.17
27	97.56	97.70	97.18	95.43	93.60	96.27	93.99	96.60	96.82	97.70	96.80	94.70
28	97.10	97.45	96.59	94.65	93.95	96.27	93.86	96.87	96.80	97.79	96.85	94.16
29	97.10		96.28	94.64	94.70	96.44	94.03	97.14	96.58	97.93	96.95	93.50
30	96.28		96.31	95.05	94.34	96.40	94.23	97.30	95.84	98.11	96.92	93.40
31	95.82		96.45		94.54		94.41	97.43		98.26		93.56



Pit P (\*906, p. 180; \*936, p. 210; \*944, p. 206; \*986, p. 229; 1016, p. 273; 1023, p. 282). South Middletown Sand & Gravel Co. gravel pit. In Middletown. Gage destroyed; no measurements made in 1946.

85-7 (\*886, p. 567; \*906, p. 210; \*944, p. 206; \*986, p. 230; 1016, p. 273; 1023, p. 282). City of Hamilton. On U. S. Highway 127, in Fairfield Township.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	23.47	23.26	19.92	20.23	23.88	21.51	24.96	26.30	27.75	27.15	...	28.81
2	24.26	23.26	20.68	22.35	22.03	21.63	24.86	26.31	27.49	27.17	...	28.87
3	24.30	23.27	20.69	22.47	23.70	21.71	24.62	26.25	27.62	27.97	...	28.95
4	24.80	23.27	19.93	22.61	24.00	21.85	24.76	26.19	27.71	27.77	...	29.00
5	24.82	25.66	23.54	20.22	24.02	22.38	24.85	26.38	27.81	27.75	28.50	29.49
6	24.50	25.22	23.43	20.23	24.05	22.65	24.96	26.60	27.95	27.65	28.48	29.62
7	24.26	24.48	23.53	20.23	24.06	23.40	24.82	27.09	27.66	27.98	28.48	29.72
8	24.77	24.55	22.44	20.23	23.95	23.50	24.86	27.25	27.62	27.98	29.00	29.60
9	24.89	24.63	22.30	22.28	23.62	23.63	25.50	27.35	27.62	27.97	28.89	29.63
10	24.95	24.64	22.26	22.67	23.92	23.72	25.78	27.45	27.90	27.80	28.78	29.61
11	24.99	25.05	22.28	22.77	23.98	23.75	25.85	27.38	27.90	27.89	28.80	29.60
12	25.04	25.06	22.33	22.67	23.74	22.83	25.98	27.28	27.92	27.86	28.80	29.53
13	24.94	26.10	22.37	22.72	23.53	22.86	25.00	26.82	27.92	27.75	29.50	29.31
14	24.93	25.03	22.33	20.92	23.42	22.70	25.93	26.79	27.90	27.78	29.65	27.68
15	25.01	23.62	22.90	20.92	23.14	23.04	26.15	26.74	27.74	27.78	29.64	27.29
16	25.16	22.75	22.78	23.87	23.34	22.78	26.20	26.66	27.95	27.42	29.72	27.32
17	25.41	23.17	22.71	....	23.24	22.60	25.88	26.75	27.95	27.86	29.60	28.10
18	25.58	23.33	22.63	....	20.45	22.97	26.08	26.56	27.95	27.86	29.67	27.54
19	25.67	23.55	22.35	23.96	19.47	22.97	26.47	26.53	27.95	27.86	29.75	28.38
20	25.19	23.64	22.05	24.11	21.70	23.34	26.54	26.57	27.88	27.87	29.80	28.61
21	25.34	23.08	20.20	24.04	22.06	23.56	25.84	26.63	27.92	27.94	29.52	28.73
22	25.25	23.18	20.19	24.04	....	23.73	25.81	26.68	27.95	27.95	28.08	28.74
23	25.30	23.24	20.19	24.07	....	24.36	26.31	26.75	27.97	....	28.12	28.80
24	25.32	23.25	20.19	23.01	21.15	24.03	26.55	26.78	27.97	....	27.89	28.78
25	25.48	23.28	20.20	23.07	21.91	24.67	26.64	26.55	27.97	....	27.82	28.83
26	26.55	22.80	22.25	23.00	....	25.05	26.73	26.68	27.90	....	28.40	28.75
27	26.72	22.80	22.35	23.07	....	25.23	26.80	26.81	27.32	....	27.78	28.72
28	26.66	22.44	20.83	23.05	21.56	25.22	26.55	26.72	27.33	....	27.75	28.79
29	26.79		20.94	23.13	21.51	25.01	26.50	27.02	27.25	28.48	27.28	28.57
30	26.70		20.95	23.79	21.37	24.93	26.35	27.29	27.20	28.48	28.55	28.28
31	25.30		20.95		21.46		26.32	27.37				28.15

86-7 (\*886, p. 567; \*906, p. 181; \*936, p. 211; \*944, p. 207; \*986, p. 230; 1016, p. 274; 1023, p. 282). City of Hamilton. On U. S. Highway 127, in Fairfield Township.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	12.05	Apr. 9	10.34	July 9	11.10	Oct. 8	14.82
8	11.92	16	10.42	16	11.73	15	15.01
15	11.89	23	10.56	23	11.82	22	15.31
22	12.06	30	12.88	30	12.40	29	15.20
29	12.27	May 7	11.11	Aug. 6	12.76	Nov. 5	15.35
Feb. 5	12.36	14	11.11	13	12.73	12	15.61
12	12.21	21	10.62	20	13.14	19	15.64
19	11.58	28	10.21	27	13.50	26	15.61
26	11.37	June 4	9.96	Sept. 3	13.45	Dec. 3	15.72
Mar. 5	10.97	11	10.31	10	13.61	10	15.68
12	10.79	18	10.22	17	13.02	17	15.47
19	10.47	25	10.49	24	14.26	24	15.67
26	10.23	July 2	10.61	Oct. 1	14.41	31	15.68
Apr. 2	10.04						

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 ). McGreevy Dairy Co. In Hamilton. Water levels, in feet below land-surface datum, 1946: Mar. 12, 34.95; Mar. 19, 34.75.

104-2 ( \*944, p. 208; \*986, p. 231; 1016, p. 275; 1023, p. 283 ). McGreevy Dairy Co. In Hamilton.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	37.60	Apr. 9	37.42	July 16	34.49	Oct. 15	36.05
15	37.78	16	37.25	23	34.61	22	36.24
22	37.87	23	37.21	30	34.68	29	36.48
29	37.95	30	37.15	Aug. 6	34.76	Nov. 5	36.69
Feb. 5	38.01	May 7	37.05	13	34.87	12	36.82
12	38.06	14	36.99	20	34.89	19	37.02
19	38.02	21	36.84	27	34.79	26	37.24
26	38.11	28	36.82	Sept. 3	35.13	Dec. 3	37.49
Mar. 5	38.05	June 4	36.78	10	35.24	10	37.66
12	38.20	11	36.78	17	35.35	17	37.87
19	38.01	25	34.19	24	35.49	24	38.09
26	37.87	July 2	34.31	Oct. 1	35.65	31	38.15
Apr. 2	37.63	9	34.39	8	35.81		

B-1 (\*944, p. 215; \*986, p. 241; 1016, p. 283; 1023, p. 283). Ohio State Highway Department. Along State Highway 4, in Fairfield Township.

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

Jan. 7	35.23	Apr. 8	36.05	July 15	35.61	Oct. 14	36.63
14	35.36	15	36.02	22	35.63	21	35.70
26	35.52	22	35.98	29	35.65	28	35.78
28	35.74	29	35.93	Aug. 5	35.57	Nov. 4	35.92
Feb. 4	35.68	May 6	35.97	12	35.45	11	35.84
11	35.85	13	36.00	19	35.47	18	36.01
18	35.89	20	35.98	26	35.43	25	36.12
25	35.95	27	35.93	Sept. 2	35.44	Dec. 2	36.18
Mar. 4	35.98	June 3	35.48	9	35.48	9	36.33
11	36.01	17	35.70	16	35.42	16	36.38
18	36.03	24	35.80	23	35.60	23	36.42
25	36.03	July 1	35.63	30	35.55	30	36.46
Apr. 1	36.05	8	35.65	Oct. 7	35.57		

B-2 (\*944, p. 215; \*986, p. 241; 1016, p. 283; 1023, p. 284). Ohio State Highway Department. Along U. S. Highway 127, in Fairfield township.

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

Jan. 7	33.42	Apr. 8	30.82	July 15	30.79	Oct. 14	33.15
14	33.23	15	30.79	22	30.82	21	33.40
26	33.19	22	30.90	29	30.85	28	33.59
28	33.19	29	30.02	Aug. 5	30.88	Nov. 4	33.79
Feb. 4	33.24	May 6	31.11	12	31.17	11	33.97
11	33.09	13	31.22	19	31.52	18	34.19
18	32.80	20	30.98	26	31.46	26	34.32
25	32.48	27	30.75	Sept. 2	31.69	Dec. 2	34.49
Mar. 4	32.13	June 3	30.64	9	31.76	9	34.55
11	31.92	17	30.67	16	31.79	16	34.54
18	31.57	24	30.65	23	31.82	23	34.53
25	33.23	July 1	30.57	30	32.66	30	34.51
Apr. 1	30.94	8	30.65	Oct. 7	32.89		

B-3 (#944, p. 215; #986, p. 241; 1016, p. 283; 1023, p. 284). E. H. Zinsmeister. Along River Road, in Fairfield Township.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	19.40	Apr. 2	16.25	July 8	17.12	Oct. 8	19.72
8	19.07	9	16.26	16	17.35	15	19.90
15	18.64	16	16.45	23	17.53	22	20.06
22	18.85	23	16.70	29	17.56	29	19.83
29	18.69	29	17.05	Aug. 6	17.75	Nov. 5	19.88
Feb. 5	18.78	May 7	17.19	13	18.00	12	19.92
12	18.63	14	17.31	20	18.10	19	20.59
19	18.20	21	16.97	27	18.33	26	20.65
26	17.70	28	16.55	Sept. 3	18.33	Dec. 3	20.72
Mar. 5	17.38	June 4	16.55	10	20.40	10	20.64
11	16.63	18	16.93	17	18.90	17	20.55
19	16.80	25	17.02	24	19.10	23	20.45
26	16.45	July 1	16.93	Oct. 7	19.51	31	20.62

B-4 (#944, p. 215; #986, p. 241; 1016, p. 283; 1023, p. 284). A. H. Kollstadt. Along River Road, in Fairfield Township.

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

Jan. 3	25.69	Apr. 1	24.85	July 8	25.94	Oct. 8	28.38
8	25.98	9	25.38	16	26.40	15	28.50
15	25.76	16	25.85	23	26.55	22	28.46
22	25.37	23	26.20	29	26.49	29	28.55
29	27.06	29	26.49	Aug. 6	26.80	Nov. 5	28.62
Feb. 5	27.12	May 7	26.59	13	27.12	12	28.66
12	26.42	14	26.45	20	27.18	18	28.73
19	25.19	21	25.27	27	27.57	26	28.78
26	25.49	28	25.26	Sept. 2	27.60	Dec. 3	28.66
Mar. 5	24.99	June 4	25.44	10	27.84	10	28.72
12	25.15	18	26.12	17	27.98	17	28.17
18	24.90	25	25.49	24	27.46	23	28.05
25	24.65	July 1	25.40	Oct. 7	28.26	31	28.02

B-6 (#944, p. 216; #986, p. 242; 1016, p. 284; 1023, p. 284). Andrew Groh. In Fairfield Township.

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

Jan. 3	18.17	Apr. 2	16.04	July 9	17.98	Oct. 8	20.15
8	17.98	9	16.84	16	18.33	15	20.29
15	17.75	16	17.37	23	18.25	22	19.94
22	18.12	23	17.71	30	18.38	29	20.25
29	18.52	29	18.04	Aug. 6	18.66	Nov. 5	20.42
Feb. 5	19.13	May 7	18.03	13	18.92	12	20.52
12	18.19	14	18.08	20	18.84	19	20.54
19	17.15	21	17.17	27	19.18	26	20.59
26	17.27	28	18.09	Sept. 3	19.22	Dec. 3	21.42
Mar. 5	16.72	June 4	17.28	10	19.62	10	20.56
12	17.84	18	17.78	17	19.78	17	20.04
19	16.50	25	17.78	24	19.92	24	19.93
26	16.28	July 1	17.37	Oct. 7	20.03	31	19.91

B-9 (#944, p. 216; #986, p. 243; 1016, p. 284; 1023, p. 285). Henrietta Joyce. In Fairfield Township.

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

Jan. 3	10.99	Feb. 5	13.03	Mar. 11	11.97	Apr. 16	11.89
8	11.09	12	12.75	18	11.95	23	12.80
15	11.06	19	12.08	26	11.81	29	13.39
22	10.79	26	12.07	Apr. 1	11.48	May 7	13.54
29	12.65	Mar. 5	11.99	9	12.03	14	13.72

B-9--Continued.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 21	12.67	July 23	13.99	Sept. 17	15.13	Nov. 11	15.74
28	12.42	30	13.63	24	13.82	18	15.74
June 4	13.00	Aug. 6	13.68	Oct. 7	13.89	26	15.77
18	12.67	13	14.47	8	15.58	Dec. 3	15.75
25	12.87	20	14.46	15	15.63	10	15.50
July 1	13.16	27	13.69	22	15.74	17	15.38
8	13.18	Sept. 3	13.87	29	15.69	24	15.32
16	13.95	10	15.19	Nov. 5	15.72	31	15.26

B-10 (\*944, p. 217; \*986, p. 243; 1016, p. 284; 1023, p. 285).  
Elizabeth Groh. In Fairfield Township.Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	9.17	10.91	8.40	9.22	11.08	9.75	9.70	11.26	12.00	12.45	12.55	12.41
2	9.08	10.95	8.46	9.32	11.08	9.87	9.87	11.30	12.05	12.47	12.55	12.41
3	9.18	10.98	8.58	9.43	11.07	9.95	10.07	11.34	12.08	12.48	12.55	12.41
4	9.34	11.05	8.65	9.55	11.06	....	10.25	11.39	12.11	12.49	12.56	12.42
5	9.46	11.04	8.77	9.67	11.05	....	10.40	11.42	12.14	12.50	12.56	12.43
6	9.51	10.52	8.94	9.79	11.03	....	10.54	11.47	12.15	12.52	12.57	12.44
7	9.51	9.63	9.00	9.90	11.03	....	10.65	11.50	12.17	12.52	12.58	12.45
8	9.37	9.71	9.08	10.01	11.03	....	10.68	11.53	12.19	12.51	12.58	12.47
9	9.35	9.84	9.10	10.09	11.00	....	10.75	11.56	12.20	12.52	12.58	12.51
10	9.32	9.99	9.16	10.16	10.98	10.75	10.78	11.59	....	12.54	12.59	12.52
11	9.37	10.13	9.27	10.25	10.98	10.82	10.78	11.62	....	12.55	12.58	12.53
12	9.41	10.25	9.38	10.32	10.98	10.89	10.89	11.65	....	12.55	12.58	12.54
13	9.43	10.33	9.49	10.39	10.96	10.90	10.96	11.67	....	12.56	12.58	12.27
14	9.43	9.86	9.58	10.44	10.62	10.88	11.03	11.70	....	12.61	12.58	11.86
15	9.50	8.30	9.52	10.48	10.55	10.81	11.10	11.71	....	12.62	12.58	11.56
16	9.63	8.26	8.96	10.51	10.52	10.74	11.15	11.73	12.33	12.62	12.58	11.54
17	9.77	8.52	8.76	10.54	9.90	10.71	11.20	11.73	12.35	12.63	12.58	11.60
18	9.90	8.65	8.77	10.58	9.48	10.69	11.25	11.64	12.36	12.63	12.59	11.65
19	10.02	8.92	8.76	10.61	9.28	10.40	11.30	11.54	12.37	12.63	12.59	11.69
20	10.13	9.00	8.01	10.66	9.22	9.86	11.33	11.56	12.38	12.63	12.59	11.73
21	10.23	9.13	7.97	10.70	9.08	9.25	11.33	11.60	12.40	12.59	12.59	11.77
22	10.35	9.25	8.22	10.74	9.07	9.44	10.75	11.65	12.42	12.59	12.59	11.82
23	10.45	9.39	8.48	10.82	9.22	9.65	10.66	11.67	12.43	12.58	12.60	11.84
24	10.53	9.52	8.71	10.85	9.40	9.99	10.72	11.72	12.40	12.57	12.60	11.82
25	10.60	9.65	8.88	10.89	9.57	10.15	10.81	11.76	12.40	12.56	12.60	11.85
26	10.66	9.72	9.00	10.94	9.73	10.30	10.89	11.81	12.40	12.55	12.60	11.87
27	10.72	9.72	9.06	10.99	9.84	10.30	10.96	11.85	12.40	12.55	12.58	11.89
28	10.81	8.85	9.12	11.03	9.87	9.63	11.05	11.87	12.42	12.55	12.48	11.90
29	10.87		9.19	11.07	9.70	9.58	11.12	11.91	12.43	12.55	12.44	11.90
30	10.91		9.22	11.07	9.47	9.61	11.17	11.94	12.44	12.55	12.43	11.49
31	10.91		9.18		9.60		11.21	11.97		12.55		11.24

B-11 (\*944, p. 217; \*986, p. 244; 1016, p. 285; 1023, p. 286). Fred  
Bandtel. In Fairfield Township.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	33.72	Feb. 12	32.75	Mar. 26	28.22	May 7	29.31
9	33.16	19	31.18	Apr. 2	27.92	14	29.50
15	33.15	26	30.43	9	28.36	21	27.28
22	33.07	Mar. 5	30.14	16	28.72	28	26.85
29	32.98	12	29.55	23	28.79	June 4	26.59
Feb. 5	32.86	19	28.59	30	28.35	11	28.49

B-11--Continued.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 18	27.49	July 30	26.21	Sept. 10	29.34	Oct. 15	32.05
25	27.92	Aug. 6	26.94	17	30.15	22	32.47
July 2	26.52	13	27.85	24	30.40	Dec. 17	34.55
9	26.33	20	27.91	Oct. 1	31.04	24	34.38
16	24.88	27	28.32	8	31.36	31	34.61
23	26.14	Sept. 3	28.98				

B-22 (\*986, p. 244; 1016, p. 285; 1023, p. 286). Joseph N. Conrad.  
In Fairfield Township.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	16.31	16.01	14.48	13.84	15.71	14.85	15.33	16.12	16.93	17.82	18.17	18.25
2	16.14	16.06	14.35	13.87	15.74	14.89	15.22	16.15	17.16	17.83	18.17	18.25
3	15.90	16.10	14.25	13.90	15.75	14.91	15.22	16.18	17.19	17.85	18.17	18.25
4	15.70	16.17	14.15	13.99	15.77	.....	15.30	16.22	17.22	17.86	18.24	18.25
5	15.56	16.20	14.08	14.06	15.80	.....	15.35	16.30	17.25	17.87	18.25	18.25
6	15.45	16.20	14.05	14.12	15.81	.....	15.40	16.34	17.28	17.89	18.25	18.25
7	15.43	16.17	14.05	14.20	15.80	.....	15.45	16.37	17.30	17.93	18.25	18.25
8	15.40	16.11	14.05	14.31	15.82	.....	15.55	16.40	17.33	17.95	18.26	18.26
9	15.35	15.96	14.09	14.39	15.83	.....	15.60	16.44	17.35	17.95	18.27	18.30
10	15.30	15.85	14.10	14.46	15.84	15.31	15.65	16.48	17.39	17.97	18.27	18.30
11	15.28	15.82	14.12	14.54	15.86	15.36	15.68	16.52	17.40	17.99	18.28	18.32
12	15.19	15.80	14.15	14.62	15.88	15.41	15.72	16.57	17.42	18.00	18.29	18.32
13	15.19	15.79	14.17	14.68	15.89	15.44	15.76	16.61	17.44	18.02	18.29	.....
14	15.20	15.76	14.21	14.75	15.88	15.48	15.80	16.64	17.46	18.04	18.29	.....
15	15.21	15.69	14.23	14.83	15.86	15.50	15.88	16.67	17.48	18.05	18.29	.....
16	15.21	15.52	14.22	14.90	15.82	15.51	15.90	16.70	17.51	18.05	18.30	18.08
17	15.24	15.20	14.14	14.95	15.75	15.53	15.95	16.72	17.52	18.05	18.30	18.05
18	15.26	14.94	14.06	15.00	15.66	15.54	16.00	16.72	17.54	18.08	18.30	17.98
19	15.34	14.70	14.00	15.05	15.52	15.55	16.05	16.73	17.56	18.09	18.30	17.92
20	15.37	14.58	13.95	15.12	15.37	15.54	16.10	16.74	17.58	18.10	18.30	17.87
21	15.44	14.53	13.85	15.18	15.22	15.50	16.10	16.75	17.60	18.12	18.31	17.83
22	15.51	14.42	13.71	15.27	15.11	15.40	16.06	16.77	17.62	18.12	18.32	17.80
23	15.54	.....	13.61	15.37	14.99	15.33	15.99	16.78	17.67	18.12	18.32	17.80
24	15.60	14.48	13.56	15.41	14.89	15.28	15.95	16.81	17.69	18.12	18.32	17.78
25	15.64	14.48	13.57	15.46	14.84	15.27	15.92	16.84	17.70	18.12	18.35	17.78
26	15.73	14.48	13.61	15.52	14.82	15.30	15.92	16.90	17.71	18.12	18.35	17.78
27	15.79	14.55	13.66	15.57	14.84	15.34	15.94	16.93	17.73	18.12	18.35	17.78
28	15.84	14.55	13.68	15.62	14.87	15.38	15.97	16.93	17.75	18.15	18.34	17.78
29	15.88	.....	13.71	15.65	14.88	15.38	16.00	16.93	17.76	18.15	18.30	17.78
30	15.91	.....	13.77	15.68	14.88	15.37	16.05	16.93	17.81	18.15	18.27	17.78
31	15.97	.....	13.80	.....	14.85	.....	16.08	16.93	.....	18.15	.....	17.77

B-23 (\*986, p. 245; 1016, p. 286; 1023, p. 286). Carl E. Schiering.  
In Fairfield Township.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	19.72	18.67	19.72	19.28	19.62	20.34	21.17	22.03	22.58	22.93
2	.....	.....	19.60	18.68	19.74	19.32	19.65	20.35	21.25	22.05	22.59	22.95
3	.....	.....	19.57	18.69	19.74	19.40	19.69	20.39	21.28	22.08	22.60	22.93
4	.....	.....	19.51	18.74	19.77	.....	19.72	20.41	21.32	22.10	22.64	22.93
5	.....	.....	19.50	18.76	19.80	.....	19.75	20.44	21.35	22.13	22.65	22.91
6	.....	.....	19.45	18.79	19.81	.....	19.78	20.49	21.39	22.14	22.66	22.92
7	21.13	.....	19.44	18.80	19.82	.....	19.82	20.54	21.43	22.17	22.62	22.94
8	21.11	.....	19.40	18.80	19.84	.....	19.88	20.57	21.46	22.18	22.69	22.95
9	21.05	.....	19.39	18.86	19.86	.....	19.90	20.59	21.50	22.21	22.70	22.96

B- 23--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
10	20.99	.....	19.36	18.90	19.87	19.61	19.93	20.65	21.53	22.23	22.70	22.95
11	20.96	21.00	19.38	18.94	19.90	19.64	19.97	20.67	21.56	22.26	22.73	22.96
12	20.91	.....	19.35	18.98	19.90	19.66	20.00	20.70	21.60	22.30	22.74	22.94
13	20.64	.....	19.34	19.01	19.99	19.70	20.03	20.73	21.62	22.32	22.74	22.95
14	20.87	.....	19.32	19.03	19.96	19.70	20.06	20.75	21.65	22.34	22.75	22.91
15	.....	.....	19.28	19.10	19.96	19.71	20.10	20.78	21.66	22.35	22.76	22.85
16	.....	.....	19.24	19.15	19.93	19.70	20.12	20.80	21.70	22.36	22.78	22.80
17	.....	.....	19.16	19.18	19.89	19.70	20.15	20.80	21.73	22.37	22.80	22.76
18	.....	20.28	19.09	19.22	19.79	19.70	20.19	20.80	21.75	22.42	22.86	22.75
19	.....	20.20	19.04	19.23	19.75	19.70	20.23	20.84	21.77	22.43	22.85	22.72
20	.....	20.10	18.96	19.30	19.65	19.69	20.25	20.88	21.78	22.45	22.86	22.69
21	20.82	.....	20.06	18.86	19.33	19.54	19.63	20.25	20.89	21.81	22.46	22.87
22	.....	20.00	18.78	19.34	19.50	19.62	20.20	20.94	21.83	22.46	22.90	22.65
23	.....	19.95	18.74	19.36	19.45	19.62	20.15	20.96	21.88	22.47	22.90	22.65
24	.....	19.90	18.70	19.39	19.40	19.62	20.13	20.97	21.90	22.48	22.90	22.65
25	.....	19.90	18.69	19.34	19.38	19.65	20.17	20.98	21.92	22.50	22.93	22.65
26	.....	19.85	18.67	19.49	19.36	19.69	20.19	21.00	21.93	22.52	22.93	22.62
27	.....	19.85	18.66	19.54	19.35	19.73	20.20	21.02	22.01	22.54	22.95	22.62
28	.....	19.80	18.65	19.57	19.35	19.73	20.23	21.05	.....	22.55	22.94	22.60
29	.....	.....	18.63	19.66	19.33	19.70	20.25	21.07	.....	22.55	22.92	22.58
30	.....	.....	18.66	19.70	19.29	19.64	20.27	21.08	22.01	22.56	22.90	22.62
31	.....	.....	18.68	.....	19.26	.....	20.30	21.15	.....	22.58	.....	22.60

B-24 (\*986, p. 245; 1016, p. 286; 1023, p. 287). City of Hamilton.  
At Minor Park in Hamilton.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	37.57	Apr. 8	35.49	July 15	35.25	Oct. 14	37.28
14	37.48	15	35.69	22	35.30	21	37.50
26	38.40	22	35.58	29	35.28	28	37.68
28	37.45	29	35.60	Aug. 5	35.34	Nov. 4	37.85
Feb. 4	37.48	May 6	35.72	12	36.53	11	37.99
11	37.42	13	35.82	19	35.66	18	39.23
18	37.27	20	37.02	26	35.79	25	38.35
25	36.93	27	35.35	Sept. 2	35.96	Dec. 2	38.40
Mar. 4	36.65	June 8	35.22	9	36.17	9	38.60
11	36.48	17	36.12	16	36.20	16	38.69
18	36.17	24	35.25	23	36.10	23	38.73
25	35.88	July 1	35.19	30	36.83	30	38.72
Apr. 1	35.66	8	35.13	Oct. 7	37.05	.....	.....

B-25 (\* 986, p. 246; 1016, p. 287; 1023, p. 287). Elizabeth J. Sipp.  
In St. Clair Township.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	13.96	Apr. 1	15.58	July 8	16.19	Oct. 7	19.40
8	14.88	8	16.42	15	18.25	14	19.77
14	14.66	15	16.67	22	18.29	21	19.84
22	14.78	22	16.74	29	17.45	28	19.90
28	17.88	29	17.01	Aug. 5	18.09	Nov. 4	19.93
Feb. 5	17.63	May 6	18.02	12	19.15	11	19.96
11	15.42	13	18.07	19	17.92	18	20.02
18	14.09	20	16.56	26	19.24	25	19.92
25	14.35	27	16.09	Sept. 2	19.29	Dec. 2	19.96
Mar. 4	14.49	June 3	16.02	9	19.77	9	20.03
11	15.45	18	16.23	16	19.80	16	19.86
18	15.56	24	16.15	23	19.89	23	19.63
25	15.89	July 1	16.11	30	19.62	30	19.62

B-26 (\*986, p. 246; 1016, p. 287; 1023, p. 288). Miami Conservancy District. In St. Clair Township.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	12.79	Apr. 1	14.24	July 8	14.40	Oct. 7	18.46
8	12.27	8	14.95	15	16.92	14	18.53
14	12.02	15	15.08	22	16.96	21	18.65
22	12.35	22	15.08	29	16.78	28	18.27
28	16.48	29	15.37	Aug. 5	16.80	Nov. 4	18.33
Feb. 5	16.08	May 6	16.43	12	17.62	11	18.38
11	15.25	13	16.41	19	16.23	18	18.44
18	13.10	20	15.48	26	17.75	26	18.33
25	13.30	27	14.99	Sept. 2	17.79	Dec. 2	18.37
Mar. 4	13.13	June 3	14.88	9	18.19	9	18.42
11	14.23	18	14.91	16	18.22	16	18.22
18	14.37	24	14.97	23	18.66	23	18.11
25	14.40	July 1	14.33	30	18.38	30	17.97

B-27 (\*986, p. 247; 1016, p. 287; 1023, p. 288). Andrews Asphalt Paving Co. In Hamilton.

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

Jan. 7	32.49	Apr. 8	31.35	July 15	31.85	Oct. 14	32.96
14	32.28	15	31.45	22	31.87	21	33.37
26	32.18	22	31.55	29	31.99	28	33.46
28	32.22	29	31.55	Aug. 5	32.06	Nov. 4	33.52
Feb. 4	32.27	May 6	30.69	12	31.98	11	33.56
11	32.25	13	31.86	19	32.33	18	33.68
18	32.12	20	31.92	26	32.40	26	33.78
25	31.96	27	31.73	Sept. 2	32.42	Dec. 2	33.83
Mar. 4	31.83	June 3	31.75	9	22.68	9	33.88
11	31.72	17	31.72	16	22.72	16	33.72
18	35.65	24	31.84	23	22.77	23	33.76
25	31.29	July 1	30.93	30	33.06	30	33.64
Apr. 1	31.21	8	30.91	Oct. 7	32.82		

B-28 (\*986, p. 247; 1016, p. 288; 1023, p. 288). Baltimore & Ohio Railroad Co. In Hamilton.

Water level, in feet below land surface datum, 1946

Jan. 7	39.17	Apr. 8	37.42	July 15	38.25	Oct. 14	38.53
14	39.05	15	37.39	22	37.29	21	39.50
26	38.97	22	37.45	29	37.54	28	39.68
28	39.03	29	37.54	Aug. 5	37.47	Nov. 4	39.83
Feb. 4	39.07	May 6	37.61	12	37.67	11	39.85
11	39.05	13	37.68	19	37.80	18	40.17
18	39.93	20	37.49	26	37.95	26	40.29
25	38.59	27	37.28	Sept. 2	37.96	Dec. 2	40.36
Mar. 4	38.39	June 3	37.12	9	38.28	9	40.51
11	38.23	17	37.17	16	38.30	16	40.55
18	37.99	24	37.21	23	38.40	23	40.66
25	37.76	July 1	37.17	30	38.93	30	40.52
Apr. 1	37.53	8	37.12	Oct. 7	38.46		

B-30-D (\*986, p. 247; 1016, p. 288; 1023, p. 288). City of Hamilton. On Pleasant Ave. in Hamilton.

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

Jan. 7	32.07	Feb. 4	31.87	Mar. 4	31.58	Apr. 1	30.95
14	31.99	11	31.88	11	31.45	8	30.80
26	31.92	18	31.85	18	31.30	15	30.67
28	31.87	25	31.73	25	31.08	22	30.60

## B-30-D--Continued.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 29	30.58	July 8	30.24	Sept. 9	30.32	Nov. 11	32.59
May 6	30.59	15	30.25	16	31.15	18	32.65
13	30.59	22	30.28	23	31.33	26	32.72
20	30.58	29	30.35	30	31.65	Dec. 2	32.78
27	30.53	Aug. 5	30.44	Oct. 7	31.38	9	33.27
June 3	30.41	12	30.55	14	31.48	16	33.18
17	30.34	19	30.70	21	31.65	23	33.13
24	30.27	26	31.29	28	32.39	30	33.18
July 1	30.26	Sept. 2	31.30	Nov. 4	32.56		

B-30-M (\*986, p. 248; 1016, p. 288; 1023, p. 289). City of Hamilton.  
On Pleasant Ave., in Hamilton.

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

Jan. 7	32.42	Apr. 8	31.02	July 15	31.02	Oct. 14	32.56
14	32.16	15	31.07	22	31.08	21	32.69
26	32.05	22	31.16	29	31.27	28	33.49
28	32.19	29	31.30	Aug. 5	31.42	Nov. 4	33.65
Feb. 4	32.33	May 6	31.34	12	31.62	11	33.70
11	32.35	13	31.44	19	31.75	18	33.74
18	32.15	20	31.29	26	31.88	26	33.12
25	31.83	27	30.99	Sept. 2	31.90	Dec. 2	33.17
Mar. 4	31.68	June 3	30.85	9	32.29	9	34.14
11	31.51	17	30.93	16	32.31	16	34.09
18	31.37	24	30.99	23	32.35	23	34.06
25	31.19	July 1	30.98	30	32.88	30	34.10
Apr. 1	31.05	8	30.95	Oct. 7	32.43		

B-30-S (\*986, p. 248; 1016, p. 288; 1023, p. 289). City of Hamilton.  
On Pleasant Ave., in Hamilton.

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

Jan. 7	32.77	Apr. 8	31.35	July 15	31.52	Oct. 14	32.97
14	32.42	15	31.44	22	31.60	21	33.12
26	32.28	22	31.58	29	31.74	28	33.91
28	32.42	29	31.73	Aug. 5	31.88	Nov. 4	34.00
Feb. 4	32.58	May 6	31.81	12	32.08	11	34.03
11	32.64	13	31.92	19	32.03	18	34.15
18	32.48	20	31.78	26	32.93	26	34.35
25	32.15	27	31.48	Sept. 2	32.36	Dec. 2	34.39
Mar. 4	31.98	June 3	31.30	9	32.75	9	34.47
11	31.79	17	31.39	16	32.78	16	34.42
18	31.66	24	31.50	23	32.83	23	34.45
25	31.50	July 1	31.48	30	33.30	30	34.47
Apr. 1	31.37	8	31.46	Oct. 7	33.09		

B-32 (\*986, p. 248; 1016, p. 289; 1023, p. 289). City of Hamilton.  
On Hamilton-Cleves Road, in Hamilton.

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

Jan. 3	27.99	Mar. 4	27.08	May 6	30.36	July 15	31.04
8	28.58	11	29.50	13	30.39	22	31.08
14	28.48	18	29.53	20	29.83	29	31.14
22	28.42	25	29.51	27	29.49	Aug. 5	31.19
28	30.63	Apr. 1	28.38	June 3	29.42	12	31.49
Feb. 5	31.02	8	28.51	18	30.32	19	31.48
11	27.47	15	29.17	24	29.43	26	31.63
18	27.57	22	29.93	July 1	29.41	Sept. 2	31.67
25	27.60	29	30.17	8	29.45	9	31.77



B-32--Continued.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 16	31.80	Oct. 14	32.06	Nov. 11	31.93	Dec. 9	32.04
23	31.88	21	32.12	18	32.00	16	31.88
30	31.93	28	31.82	26	31.91	23	31.92
Oct. 7	31.99	Nov. 4	31.88	Dec. 2	31.97	30	31.96

B-33-D (\*986, p. 249; 1016, p. 289; 1023, p. 290). City of Hamilton.  
On South Ave. and Front St., in Hamilton.

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

Jan. 3	20.72	Apr. 1	22.40	July 8	22.68	Oct. 7	26.36
7	21.58	8	22.89	15	25.13	14	26.44
14	22.19	15	24.42	22	25.15	21	26.63
21	22.33	22	24.72	29	25.14	28	26.20
28	24.76	29	24.76	Aug. 5	25.52	Nov. 4	26.24
Feb. 4	24.78	May 5	24.63	12	25.70	11	25.99
11	23.58	13	24.66	19	25.29	18	26.08
18	21.58	20	21.17	26	25.45	26	26.33
25	23.12	27	23.48	Sept. 2	25.78	Dec. 2	26.38
Mar. 4	21.30	June 3	23.66	9	26.15	9	26.27
11	22.47	18	24.22	16	26.18	16	26.12
18	21.58	24	23.25	23	26.22	23	25.93
25	22.26	July 1	22.51	30	26.30	30	25.87

B-33-S (\*986, p. 249; 1016, p. 289; 1023, p. 290). City of Hamilton.  
On South Ave. and Front St., in Hamilton.

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

Jan. 3	21.73	Apr. 1	23.20	July 8	23.71	Oct. 7	27.02
7	21.99	8	24.63	15	25.84	14	27.10
14	22.99	15	25.12	22	25.84	21	27.18
21	23.20	22	25.49	29	25.87	28	26.88
28	25.48	29	25.84	Aug. 5	26.22	Nov. 4	26.93
Feb. 4	25.53	May 6	25.29	12	26.35	11	26.98
11	24.57	13	25.33	19	25.95	18	27.04
18	22.27	20	21.71	26	27.53	26	26.98
25	23.89	27	24.22	Sept. 2	26.57	Dec. 2	27.02
Mar. 4	21.95	June 3	24.47	9	26.75	9	26.87
11	23.40	18	25.02	16	26.77	16	26.71
18	22.30	24	24.05	23	26.83	23	26.63
25	23.05	July 1	23.42	30	26.96	30	26.61

B-34 -D(\*986, p. 249; 1016, p. 290; 1023, p. 290). City of Hamilton.  
On South Ave. and Second St., in Hamilton.

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

Jan. 3	27.05	Apr. 1	27.98	July 8	28.22	Oct. 7	32.02
7	27.77	8	29.03	15	30.19	14	32.08
14	28.13	15	29.53	22	30.16	21	32.30
21	27.95	22	29.88	29	30.32	28	32.06
28	30.08	29	30.18	Aug. 5	30.74	Nov. 4	33.11
Feb. 4	30.24	May 6	29.99	12	30.98	11	33.17
11	29.18	13	30.03	19	30.82	18	33.33
18	27.44	20	27.64	26	31.24	26	32.18
25	27.66	27	28.64	Sept. 2	31.28	Dec. 2	32.23
Mar. 4	27.33	June 3	28.85	9	31.55	9	32.12
11	28.13	17	29.53	16	31.58	16	32.17
18	27.54	24	28.57	23	31.62	23	32.04
25	27.73	July 1	28.24	30	31.89	30	32.02

B-34-S (\*986, p. 250; 1016, p. 290; 1023, p. 290). City of Hamilton. On South and Second Sts., in Hamilton.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	27.41	Apr. 1	26.85	July 8	27.33	Oct. 7	29.95
7	27.39	8	27.13	15	28.08	14	30.03
14	27.39	15	27.68	22	28.10	21	30.16
21	27.27	22	27.98	29	28.26	28	31.32
28	28.35	29	28.21	Aug. 5	28.52	Nov. 4	30.41
Feb. 4	28.62	May 6	28.28	12	28.78	11	30.46
11	28.14	13	28.30	19	29.85	18	30.57
18	27.19	20	27.20	26	29.98	25	30.67
25	27.27	27	26.97	Sept. 2	29.02	Dec. 2	30.72
Mar. 4	26.78	June 3	27.13	9	29.42	9	30.60
11	27.02	17	27.79	16	29.44	16	30.63
18	26.92	24	27.25	23	29.50	23	30.56
25	26.58	July 1	27.26	30	29.87	30	30.58

B-35 (\*986, p. 250; 1016, p. 290; 1023, p. 291). Baltimore & Ohio Railroad Co., in Hamilton.

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

Jan. 3	34.72	Apr. 1	33.30	July 8	33.12	Oct. 7	34.94
7	34.60	8	33.35	15	33.20	14	34.72
14	34.51	15	33.43	22	33.23	21	34.84
21	34.44	22	33.67	29	33.66	28	36.07
28	34.69	29	33.63	Aug. 5	33.69	Nov. 4	36.13
Feb. 4	34.73	May 6	33.73	12	33.49	11	36.18
11	34.69	13	33.76	19	33.48	18	36.33
18	34.33	20	33.60	26	34.46	26	36.60
25	34.28	27	33.42	Sept. 2	34.50	Dec. 2	36.64
Mar. 4	33.97	June 3	33.38	9	34.79	9	36.77
11	33.91	17	33.44	16	34.82	16	36.82
18	33.85	24	33.19	23	34.88	23	36.85
25	33.89	July 1	33.16	30	35.37	30	36.88

B-36 (\*986, p. 250; 1016, p. 290; 1023, p. 291). Baltimore & Ohio Railroad Co., in Hamilton.

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

Jan. 3	35.11	Apr. 1	33.62	July 8	33.73	Oct. 7	36.13
7	34.77	8	33.53	15	33.71	14	36.20
14	34.59	15	33.87	22	33.73	21	36.36
21	34.51	22	33.85	29	34.31	28	36.70
28	34.88	29	34.23	Aug. 5	34.42	Nov. 4	36.75
Feb. 4	34.92	May 6	34.37	12	33.66	11	36.75
11	35.19	13	34.40	19	33.65	18	36.83
18	34.79	20	34.05	26	35.08	26	37.15
25	34.67	27	33.92	Sept. 2	34.92	Dec. 2	37.19
Mar. 4	34.09	June 3	33.89	9	35.47	9	37.22
11	34.02	17	33.84	16	35.50	16	37.27
18	33.96	24	33.82	23	35.66	23	37.33
25	33.93	July 1	33.76	30	36.08	30	37.36

B-37 (\*986, p. 251; 1016, p. 291; 1023, p. 291). Esther Spinelli and Mary Jelle. On northeast corner Mosler Ave. and Crawford Run, in Hamilton

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

Jan. 7	46.22	Feb. 18	45.93	Apr. 8	44.62	May 20	44.63
14	46.10	25	45.86	15	44.43	27	44.54
21	45.98	Mar. 4	45.52	22	43.99	June 3	44.48
28	45.99	11	45.35	29	44.56	17	44.43
Feb. 4	46.04	18	45.23	May 6	44.66	24	44.23
11	46.05	Apr. 1	44.68	13	44.70	July 1	44.37

B-37--Continued.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 8	44.32	Aug. 26	45.52	Oct. 14	46.65	Nov. 26	48.00
15	44.41	Sept. 2	45.57	21	46.71	Dec. 2	48.05
22	44.52	9	45.92	28	47.42	9	48.20
29	44.63	16	45.94	Nov. 4	47.48	16	48.23
Aug. 5	35.11	23	47.00	11	47.50	23	48.27
12	35.32	30	46.57	18	47.59	30	48.30
19	45.34	Oct. 7	46.08				

B-38 (\*986, p. 251; 1016, p. 291; 1023, p. 292). City of Hamilton.  
In rear of electric substation on Fifth St. and Maple Ave., in Hamilton.

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

Jan. 3	37.24	Apr. 8	35.85	July 15	36.95	Oct. 14	39.83
8	37.52	15	36.18	22	37.01	21	38.96
14	37.46	22	36.23	29	37.57	28	39.22
22	37.41	29	36.35	Aug. 5	37.59	Nov. 4	39.34
28	37.33	May 6	36.92	12	38.18	11	39.46
Feb. 5	37.38	13	36.95	19	38.08	18	39.62
11	37.72	20	36.82	26	38.77	25	40.55
25	37.35	27	36.75	Sept. 2	38.80	Dec. 2	40.60
Mar. 4	36.63	June 3	36.69	9	38.95	9	40.55
11	36.48	18	36.71	16	39.99	16	40.65
18	36.35	24	36.37	23	39.07	23	40.69
25	36.40	July 1	36.31	30	39.65	30	40.60
Apr. 1	35.89	8	36.33	Oct. 7	38.72		

B-39 (\*986, p. 251; 1016, p. 291; 1023, p. 292). City of Hamilton.  
On west side of North Third St., in front of transformer station, in Hamilton.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	30.10	30.34	29.06	27.92	28.78	27.76	28.37	29.54	30.98	32.00	33.03	33.37
2	30.03	30.33	28.82	28.24	29.24	27.73	28.42	29.70	31.24	32.52	32.84	33.65
3	29.90	30.33	29.08	27.95	29.05	28.10	28.47	29.66	31.03	32.65	33.03	33.68
4	29.92	30.48	28.99	28.20	28.86	27.93	28.41	29.29	31.07	32.70	32.86	33.52
5	29.92	30.52	28.96	28.00	28.78	28.13	28.50	29.73	31.32	32.66	32.83	33.57
6	29.92	30.27	28.66	28.23	29.18	28.05	28.53	29.77	31.51	32.12	32.89	33.23
7	29.91	30.23	28.96	27.93	28.98	27.98	28.53	29.86	31.12	32.38	33.06	33.51
8	29.88	30.18	28.92	28.20	29.19	27.95	.....	29.44	31.05	32.75	32.92	33.54
9	29.85	30.14	28.68	28.57	28.92	27.92	29.29	29.73	31.39	32.59	33.23	33.63
10	29.89	30.12	28.91	28.41	29.19	28.43	29.38	29.37	31.19	32.29	32.77	33.18
11	29.84	30.18	28.83	28.30	28.83	28.70	29.45	29.55	31.49	32.49	33.20	33.39
12	29.86	30.13	28.59	28.45	28.84	28.24	29.63	30.40	31.17	32.26	33.39	33.36
13	29.81	29.90	28.85	28.29	29.15	28.22	29.60	30.40	31.41	32.57	33.30	33.09
14	29.47	29.74	28.83	28.56	28.86	28.22	29.10	30.90	31.18	32.85	33.60	33.25
15	29.85	29.40	28.46	28.23	29.17	28.18	29.16	30.86	31.45	32.92	33.60	32.84
16	29.86	29.61	28.73	28.61	28.82	28.16	29.83	30.07	31.70	32.92	33.50	33.08
17	29.84	29.61	28.25	28.27	29.02	28.18	29.34	31.09	31.88	33.09	33.38	33.13
18	29.87	29.61	28.58	28.58	28.62	28.37	29.88	30.92	31.87	33.17	33.12	33.42
19	29.92	30.12	28.53	28.37	28.72	28.12	29.79	31.00	31.96	33.13	33.33	33.55
20	29.95	.....	28.41	28.66	.....	28.50	29.46	31.25	32.01	32.69	33.48	33.34
21	29.95	.....	28.18	28.39	28.31	28.50	.....	31.42	32.00	33.23	33.13	33.11
22	30.00	.....	28.38	28.75	28.57	28.49	.....	31.39	31.51	33.22	33.37	33.60
23	30.07	.....	28.06	28.46	28.20	27.99	29.53	31.51	31.96	33.19	33.11	33.75
24	30.03	.....	28.32	28.94	28.34	28.60	30.05	31.39	32.14	33.31	33.33	33.42
25	30.13	.....	28.29	28.58	28.07	28.72	30.11	30.82	32.04	33.33	33.36	33.06
26	29.91	28.96	28.20	28.84	27.94	28.30	30.26	31.48	32.20	33.31	33.34	33.34

## B-39--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
27	30.23	29.37	28.32	28.68	28.22	28.77	30.30	31.54	32.35	32.74	33.12	33.35
28	30.28	29.19	28.04	28.63	28.17	28.96	29.67	31.63	32.02	32.97	33.33	33.42
29	30.34		28.32	28.89	27.97	28.96	.....	31.47	31.79	32.78	33.07	33.00
30	30.29		27.98	28.97	27.79	28.43	29.43	31.63	32.42	33.00	33.35	33.23
31	30.33		28.28		28.15		29.40	31.25		32.86		33.37

B-40. Federal Works Agency. On southwest corner of Symmes and Gilmore Roads, about 30 feet south of well F-14, in Fairfield Township. Drilled test well, diameter 6 inches. Measuring point, top of casing, 4.0 feet above land-surface datum, and about 638 feet above sea level. Automatic water-stage recorder installed Apr. 19, 1946.

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

Date	Water level	Date	Water level	Date	Water level
Apr. 4, 1944	59.08	Nov. 7, 1944	65.58	May 29, 1945	44.25
11	58.11	14	65.25	5	44.68
18	57.14	21	65.35	12	44.70
25	56.39	28	65.28	19	44.26
May 2	55.59	Dec. 5	65.20	26	44.00
9	55.30	12	65.30	3	44.29
16	54.95	19	65.54	10	44.55
20	54.75	26	65.65	17	44.88
31	54.53	Jan. 2, 1945	65.72	24	45.05
June 6	54.63	9	65.75	31	44.93
13	54.63	17	65.95	Aug. 7	45.13
20	54.80	23	65.60	14	45.55
27	55.05	30	66.02	21	45.48
July 5	55.38	Feb. 6	65.92	Sept. 4	48.12
11	61.07	13	65.95	11	48.61
18	63.20	20	65.78	18	49.13
25	64.37	27	64.84	25	49.79
Aug. 1	65.42	Mar. 6	61.58	Oct. 2	50.27
8	66.19	8	60.12	9	50.67
15	66.75	13	56.21	16	51.01
22	67.42	20	53.20	23	51.65
Sept. 5	67.88	27	51.47	30	51.85
12	69.04	Apr. 3	51.26	Nov. 6	52.40
19	69.60	10	48.89	13	52.68
26	70.17	17	48.04	20	52.99
Oct. 3	70.57	24	46.97	27	52.93
10	70.79	May 1	45.36	Dec. 4	53.19
17	71.36	8	45.10	11	53.66
24	71.70	15	44.70	18	53.59
31	66.14	22	44.47	28	53.46

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	.....	.....	48.89	46.26	46.04	45.78	48.04	50.46	52.38	53.91
2	53.29	.....	.....	47.42	48.82	46.49	45.91	45.79	48.20	50.51	52.44	53.95
3	.....	.....	.....	.....	48.67	46.56	45.80	45.90	48.27	50.58	52.56	53.76
4	.....	.....	.....	.....	48.72	46.60	45.70	45.44	48.34	50.68	52.82	53.74
5	.....	52.42	49.20	.....	48.78	46.55	45.61	46.07	48.41	50.77	52.86	53.59
6	.....	.....	.....	.....	48.77	46.50	45.55	46.19	48.49	50.83	52.78	53.65
7	.....	.....	.....	.....	48.78	46.47	45.55	46.36	48.52	50.74	52.55	53.71
8	53.67	.....	.....	.....	48.84	46.67	45.52	46.47	48.61	50.72	52.82	53.80
9	.....	.....	.....	47.82	48.84	46.98	45.52	46.44	48.69	50.85	52.92	53.80
10	.....	.....	.....	.....	48.89	47.03	45.57	46.78	48.68	50.96	52.82	53.77
11	.....	.....	.....	.....	48.85	46.91	45.64	46.43	48.87	51.09	53.17	53.83
12	.....	52.26	49.32	.....	49.08	46.87	45.74	47.03	49.03	51.38	53.20	53.65

a Tape measurement

B-40--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
13	.....	.....	.....	.....	49.17	47.00	45.79	47.16	49.06	51.47	53.12	54.02
14	.....	.....	.....	.....	48.99	47.08	45.85	47.23	49.15	51.42	53.05	53.93
15	a52.73	.....	.....	.....	48.97	47.08	46.04	47.24	49.25	51.50	53.12	53.79
16	.....	.....	.....	a48.22	48.77	46.95	46.09	47.30	49.26	51.41	53.17	53.73
17	.....	.....	.....	.....	48.29	46.91	46.10	47.28	49.40	51.36	53.50	53.97
18	.....	.....	.....	.....	47.56	46.91	46.17	47.20	49.46	51.66	53.50	53.96
19	.....	a50.79	a47.80	48.05	47.46	47.02	46.34	47.16	49.48	51.76	53.30	53.97
20	.....	.....	.....	48.44	47.09	47.10	46.42	47.20	49.40	51.87	53.33	53.75
21	.....	.....	.....	48.50	47.01	47.24	46.41	47.23	49.51	51.92	53.27	53.77
22	a52.65	.....	.....	48.39	47.01	47.38	45.97	47.29	49.65	51.87	53.54	53.99
23	.....	.....	.....	48.31	46.75	47.45	45.60	47.40	49.87	51.89	53.59	53.87
24	.....	.....	.....	48.35	46.50	47.39	45.51	47.40	50.00	51.87	53.37	53.88
25	.....	.....	.....	48.28	46.37	47.35	45.46	47.49	49.93	51.99	53.51	53.48
26	.....	a50.00	a47.42	48.49	46.29	47.52	45.45	47.55	49.99	52.26	53.67	53.87
27	.....	.....	.....	48.69	46.31	47.63	45.40	47.57	50.09	52.38	53.82	53.86
28	.....	.....	.....	48.75	46.41	47.68	45.41	47.59	50.17	52.38	53.82	53.85
29	a52.49	.....	.....	48.76	46.46	47.42	45.42	47.84	50.30	52.32	53.68	54.01
30	.....	.....	.....	48.84	46.38	46.60	45.47	47.86	50.36	52.27	53.57	54.16
31	.....	.....	.....	.....	46.22	.....	45.63	47.94	.....	52.38	.....	54.13

e Tape measurement.

11-D-2 (\*986, p. 252; 1016, p. 292; 1023, p. 292). Federal Works  
Agency. In Fairfield Township.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	29.67	Apr. 8	26.15	July 15	27.14	Oct. 14	29.87
14	29.33	15	26.17	22	27.35	21	30.07
21	28.93	22	26.38	29	27.40	28	30.26
28	28.93	29	26.60	Aug. 5	27.54	Nov. 4	30.26
Feb. 4	28.90	May 6	26.87	12	27.75	11	30.38
11	28.82	13	27.12	19	27.95	18	30.43
18	28.65	20	26.85	26	28.12	25	30.50
25	28.15	27	26.59	Sept. 2	28.39	Dec. 2	30.55
Mar. 4	27.74	June 3	26.46	9	28.77	9	30.55
11	27.39	17	26.66	16	28.99	16	30.85
18	26.97	24	26.78	23	29.16	23	30.76
25	26.60	July 1	26.87	30	29.43	30	30.71
Apr. 1	26.31	8	26.40	Oct. 7	29.64		

11-D-3 (\*986, p. 252; 1016, p. 292; 1023, p. 293). Federal Works  
Agency. In Fairfield Township.

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

Jan. 7	29.05	Apr. 8	25.60	July 15	26.53	Oct. 14	29.29
14	28.77	15	25.64	22	26.76	21	29.47
21	28.46	22	25.82	29	26.80	28	29.66
28	28.35	29	25.99	Aug. 5	26.97	Nov. 4	29.82
Feb. 4	28.34	May 6	26.23	12	27.16	11	29.88
11	28.85	13	26.47	19	27.39	18	29.96
18	28.06	20	26.28	26	27.66	25	30.06
25	27.59	27	26.05	Sept. 2	27.78	Dec. 2	30.12
Mar. 4	27.21	June 3	26.86	9	28.23	9	30.21
11	26.84	17	26.10	16	28.40	16	30.27
18	26.45	24	26.22	23	28.60	23	30.00
25	26.07	July 1	26.32	30	28.85	30	30.14
Apr. 1	25.66	8	26.95	Oct. 7	29.08		

11-D-4 (\*1016, p. 292; 1023, p. 293). Federal Works Agency.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	28.80	28.95	28.85	28.33	27.83	27.59	27.39	27.35	27.45	27.72	28.15	28.61
2	28.80	28.95	28.83	28.32	27.82	27.58	27.36	27.35	27.45	27.73	28.17	28.62
3	.....	28.94	28.82	28.30	27.81	27.56	27.35	27.35	27.46	27.75	28.18	28.64
4	.....	28.94	28.82	28.27	27.80	.....	27.35	27.35	27.46	27.75	28.20	28.65
5	.....	28.94	28.81	28.25	27.79	.....	27.35	27.35	27.47	27.83	28.21	28.67
6	.....	28.94	28.80	28.23	27.78	.....	27.35	27.35	27.47	27.84	28.23	28.68
7	28.85	28.94	28.79	28.21	27.75	.....	27.34	27.35	27.48	27.85	28.24	28.70
8	28.85	28.93	28.77	28.20	27.74	.....	27.34	27.35	27.50	27.87	28.26	28.71
9	28.86	28.93	28.75	28.19	27.73	.....	27.34	27.35	27.50	27.88	28.27	28.72
10	28.87	28.93	28.74	28.17	27.72	27.48	27.34	27.35	27.51	27.89	28.29	28.74
11	28.87	28.93	28.72	28.15	27.71	27.48	27.33	27.35	27.52	27.90	28.30	28.75
12	28.87	28.92	28.71	28.13	27.71	27.47	27.33	27.35	27.53	27.92	28.32	28.77
13	28.88	28.92	28.70	28.11	27.72	27.47	27.33	27.35	27.54	27.93	28.33	28.78
14	28.88	28.92	28.67	28.09	27.71	27.46	27.33	27.35	27.54	27.94	28.34	28.80
15	28.95	28.92	28.66	28.06	27.71	27.45	27.34	27.36	27.55	27.96	28.36	28.81
16	28.95	.....	28.65	28.05	27.70	27.45	27.34	27.37	27.57	27.97	28.37	28.83
17	28.95	.....	28.63	28.04	27.70	27.45	27.34	27.37	27.57	27.98	28.39	28.84
18	28.95	28.98	28.61	28.02	27.69	27.44	27.34	27.37	27.58	28.00	28.41	28.85
19	28.95	28.98	28.59	28.00	27.68	27.43	27.34	.....	27.59	28.01	28.42	28.87
20	28.95	28.97	28.59	27.99	27.69	27.43	27.34	.....	27.60	28.02	28.44	28.88
21	28.95	28.97	28.55	27.97	27.69	27.42	27.34	.....	27.61	28.02	28.45	28.90
22	.....	28.96	28.53	27.95	27.68	27.41	27.35	.....	27.62	28.03	28.47	28.91
23	.....	28.95	28.51	27.92	27.67	27.41	27.35	.....	27.66	28.04	28.48	28.93
24	.....	28.95	28.48	27.92	27.67	27.41	27.35	.....	27.67	28.05	28.50	28.94
25	.....	28.93	28.46	27.90	27.66	27.41	27.35	.....	27.67	28.07	28.52	28.95
26	.....	28.88	28.40	27.89	27.65	27.41	27.35	27.42	27.68	28.08	28.53	28.96
27	.....	28.87	28.44	27.88	27.64	27.41	27.35	27.42	27.69	28.09	28.55	28.97
28	28.96	28.86	28.41	27.86	27.63	27.40	27.35	27.42	27.70	28.10	28.56	28.98
29	28.96	.....	28.39	27.85	27.62	27.40	27.35	27.43	27.71	28.11	28.58	28.99
30	28.96	.....	28.36	27.85	27.61	27.40	27.35	27.44	27.72	28.13	28.59	29.00
31	28.95	.....	28.34	.....	27.60	.....	27.35	27.44	.....	28.14	.....	29.01

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). Paul Benninghofen gravel pit. At Symmes (Symmes Lake) in Fairfield Township.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	15.00	Apr. 8	13.60	July 15	14.60	Oct. 14	16.80
14	13.50	15	14.10	22	14.40	21	16.90
21	13.70	22	14.50	29	14.40	28	16.80
28	13.50	29	14.80	Aug. 5	14.60	Nov. 4	16.90
Feb. 4	14.00	May 6	14.90	12	14.80	11	16.90
11	13.50	13	15.00	19	14.60	18	17.00
18	13.10	20	14.30	26	14.80	26	17.10
25	12.50	27	14.20	Sept. 2	14.70	Dec. 2	16.80
Mar. 4	12.40	June 1	14.10	9	15.30	9	16.90
11	12.80	17	14.60	16	15.50	16	16.60
18	12.50	24	14.50	23	15.70	23	16.40
25	12.50	July 1	14.10	30	15.90	30	16.40
Apr. 1	12.90	8	14.40	Oct. 7	16.00	.....	.....

110 (\*845, p. 373; \*886, p. 563; \*906, p. 183; \*944, p. 208; \*986, p. 232; 1016, p. 276; 1023, p. 294). Joe Conrad. At Symmes, in Fairfield Township.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	16.15	Apr. 8	15.60	July 15	17.25	Oct. 14	19.43
14	15.25	15	16.21	22	17.30	21	19.50
21	16.56	22	16.65	29	17.40	28	19.47
28	17.13	29	17.03	Aug. 5	17.42	Nov. 4	19.51
Feb. 4	17.52	May 6	17.08	12	18.04	11	19.53
11	16.83	13	17.26	19	18.08	18	19.55
18	15.40	20	16.25	26	18.32	26	19.56
25	15.49	27	15.98	Sept. 2	18.56	Dec. 2	19.47
Mar. 4	14.88	June 3	16.15	9	18.77	9	18.52
11	15.21	17	16.88	16	17.80	16	18.27
18	15.04	24	16.38	23	19.92	23	18.13
25	14.65	July 1	16.39	30	20.22	30	18.89
Apr. 1	15.02	8	16.85	Oct. 7	19.30		

112A (\*986, p. 232; 1016, p. 273; 1023, p. 294). Louis Mergy. At Symmes, in Fairfield Township.

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

Jan. 7	20.59	Apr. 8	20.70	July 15	21.95	Oct. 14	23.68
14	20.73	15	21.94	22	21.59	21	23.85
21	20.55	22	21.47	29	21.08	28	23.74
28	21.85	29	22.82	Aug. 5	22.38	Nov. 4	23.80
Feb. 4	22.86	May 6	25.83	12	22.48	11	24.46
11	21.35	13	26.35	19	22.45	18	24.23
18	21.39	20	20.55	26	22.82	26	24.28
25	20.54	27	20.75	Sept. 2	22.97	Dec. 2	23.73
Mar. 4	19.98	June 3	22.03	9	23.12	9	24.19
11	20.30	17	22.66	16	23.30	16	23.18
18	22.35	24	22.40	23	23.26	23	23.35
25	19.86	July 1	20.85	30	23.44	31	23.23
Apr. 1	20.19	8	20.27	Oct. 7	23.95		

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). Anna Magie. At Symmes, in Fairfield Township.

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

Jan. 3	25.36	Apr. 2	23.20	July 9	23.38	Oct. 8	25.59
8	25.03	9	22.21	16	23.22	15	25.80
15	24.62	16	22.30	23	23.42	22	25.97
22	24.54	23	22.62	29	23.44	29	26.14
29	24.63	29	22.97	Aug. 6	23.62	Nov. 5	26.23
Feb. 5	24.72	May 7	23.09	13	23.88	12	26.28
12	24.58	14	23.23	20	23.99	19	26.52
19	24.17	21	22.91	27	24.21	26	26.58
26	23.67	28	22.53	Sept. 3	24.24	Dec. 2	26.59
Mar. 5	23.37	June 4	22.46	10	24.73	10	26.58
12	23.08	18	22.84	17	24.77	17	26.48
19	22.78	25	22.93	24	24.47	23	26.35
26	22.43	July 2	22.82	Oct. 7	25.41	31	26.29

Pit M (\*944, p. 209; \*986, p. 233; 1016, p. 275; 1023, p. 295). Edward Hieb. Abandoned gravel pit. In Fairfield Township.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	2.40	Apr. 2	1.10	July 8	2.00	Oct. 8	6.00
8	3.20	9	1.60	16	3.60	15	6.50
15	2.20	16	1.80	23	3.80	22	6.60
22	2.60	23	3.20	30	4.20	29	6.60
29	2.60	29	3.00	Aug. 6	4.80	Nov. 5	6.70
Feb. 5	2.30	May 7	3.00	13	5.00	11	3.70
12	2.50	14	3.20	20	4.90	19	3.80
19	1.40	21	2.40	27	5.30	26	3.90
26	1.50	28	1.40	Sept. 2	5.60	Dec. 3	4.20
Mar. 5	1.00	June 4	1.60	10	5.50	10	4.40
12	1.60	18	3.20	17	5.60	17	4.70
19	1.10	25	3.10	24	5.70	23	4.60
26	.60	July 1	2.60	Oct. 7	5.90	31	4.50

Pit N (\*944, p. 209; \*986, p. 233; 1016, p. 275; 1023, p. 295). Edward Hieb. Abandoned gravel pit. In Fairfield Township.

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

Jan. 3	3.50	Apr. 2	2.30	July 8	2.90	Oct. 8	5.50
8	2.80	9	2.80	15	3.50	15	5.60
15	2.90	16	3.40	23	3.60	22	5.50
22	2.80	23	3.40	30	3.60	29	5.40
29	2.60	29	3.50	Aug. 6	4.00	Nov. 5	5.50
Feb. 5	2.80	May 7	3.90	13	4.70	11	5.50
12	1.50	14	3.20	20	4.50	19	5.70
19	1.90	21	2.40	27	4.70	26	5.70
26	1.20	28	2.00	Sept. 2	4.90	Dec. 3	5.60
Mar. 5	1.60	June 4	2.30	10	5.00	10	5.70
12	1.30	18	3.30	17	5.10	17	5.50
19	1.10	25	2.70	24	5.20	23	5.30
26	1.60	July 1	2.40	Oct. 7	5.40	31	5.20

T-50 (\*886, p. 563; \*906, p. 184; \*936, p. 213; \*944, p. 210; \*986, p. 234; 1016, p. 277; 1023, p. 295). Mary Gerber. On River Road, in Fairfield Township.

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

Jan. 3	14.00	Apr. 1	12.55	July 8	14.45	Oct. 8	14.92
8	13.79	9	12.73	16	14.02	15	15.03
15	13.63	16	12.98	23	13.39	22	15.12
22	13.72	23	13.22	30	13.47	29	15.19
29	13.96	29	13.39	Aug. 6	13.64	Nov. 5	15.20
Feb. 5	15.12	May 7	13.53	13	14.82	11	15.25
12	13.90	14	13.59	20	13.92	19	15.44
19	13.39	21	12.55	27	14.06	26	15.50
26	13.25	28	12.96	Sept. 2	14.09	Dec. 3	15.54
Mar. 5	12.95	June 4	12.97	10	14.39	10	15.55
12	12.93	18	13.28	17	14.42	16	14.75
18	12.78	25	13.83	24	14.07	23	15.20
26	12.49	July 1	13.52	Oct. 7	14.77	31	15.13



T-51 (\*886, p. 564; \*906, p. 184; \*936, p. 213; \*944, p. 210; \*986, p. 234; 1016, p. 277; 1023, p. 296). Miami Conservancy District. On River Road, in Hamilton.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	13.52	Apr. 2	14.24	July 8	15.98	Oct. 8	17.65
8	13.75	9	15.32	16	16.38	15	17.70
15	15.27	15	15.77	22	14.83	22	17.59
22	15.59	23	16.05	29	16.34	29	17.57
29	16.19	29	16.25	Aug. 6	16.72	Nov. 5	17.60
Feb. 5	16.28	May 7	15.99	13	16.90	11	17.64
12	15.32	14	15.32	20	16.54	19	17.62
19	13.72	21	14.06	26	17.07	26	17.69
26	14.85	28	15.03	Sept. 2	17.12	Dec. 3	17.65
Mar. 5	13.48	June 3	15.19	10	17.39	10	17.65
12	14.36	18	15.70	17	17.42	17	16.07
19	13.64	25	14.96	24	16.70	23	16.80
26	14.09	July 1	14.46	Oct. 7	17.51	31	16.71

122 (\*886, p. 563; \*944, p. 210; \*986, p. 234; 1016, p. 277; 1023, p. 296). Carl Federle. In Hamilton.

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

Jan. 7	40.82	Apr. 8	38.67	July 15	39.50	Oct. 14	41.14
14	40.49	15	38.92	22	39.54	21	41.35
26	40.41	22	39.17	29	39.41	28	41.40
28	40.52	29	39.55	Aug. 5	39.43	Nov. 4	41.48
Feb. 4	40.46	May 6	39.19	12	40.22	11	41.64
11	40.54	13	39.64	19	39.80	18	41.72
18	40.39	20	39.64	26	39.91	25	41.84
25	40.08	27	39.33	Sept. 2	40.03	Dec. 2	41.92
Mar. 4	39.82	June 3	38.93	9	40.25	9	41.93
11	39.60	17	39.42	23	40.47	16	42.04
18	39.40	24	39.06	30	40.82	23	41.89
25	39.13	July 1	39.13	Oct. 7	41.42	30	41.84
Apr. 1	38.77	8	40.58				

Pit E (\*845, p. 372; \*886, p. 560; \*906, p. 184; \*936, p. 213; \*944, p. 210; 1016, p. 277; 1023, p. 296). George Shearer. Formerly owned by South Hamilton Sand & Gravel Co. In Fairfield Township. Measurements discontinued after Nov. 18, 1946.

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

Jan. 7	35.30	Apr. 1	32.20	June 24	31.20	Sept. 9	31.90
14	35.20	8	32.00	July 1	31.10	16	32.00
21	35.10	15	31.70	8	31.30	23	32.10
28	35.10	22	33.00	15	31.50	30	33.50
Feb. 4	35.10	29	33.60	22	31.70	Oct. 7	33.80
11	34.10	May 6	33.00	29	31.30	14	34.00
18	34.80	13	32.90	Aug. 5	31.40	21	34.10
25	34.50	20	32.00	12	31.60	28	34.20
Mar. 4	34.20	27	31.80	19	31.90	Nov. 4	34.30
11	34.00	June 3	31.60	26	31.60	11	34.30
18	33.50	17	33.00	Sept. 2	31.80	18	34.50
25	33.30						

128 (\*886, p. 562; \*906, p. 185; \*936, p. 213; \*944, p. 211; \*986, p. 235; 1016, p. 278; 1023, p. 297). George Shearer. At Schenck, in Fairfield Township. No measurements made in 1946.

133 (\*886, p. 562; \*906, p. 185; \*936, p. 214; \*944, p. 211; \*986, p. 235; 1016, p. 278; 1023, p. 297). J. E. Ryan. At Schenck, in Fairfield Township.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	35.33	Apr. 2	31.20	July 9	29.90	Oct. 8	33.00
8	34.95	9	31.41	16	30.16	15	33.58
15	35.03	16	31.25	23	30.04	22	33.88
22	34.90	23	31.38	30	29.88	29	34.20
29	34.72	30	31.55	Aug. 6	30.03	Nov. 5	34.70
Feb. 5	34.60	May 7	31.67	13	30.60	12	35.12
12	34.59	21	31.00	20	30.80	19	35.25
19	33.88	28	30.50	27	30.79	26	35.69
26	33.29	June 4	30.17	Sept. 3	31.35	Dec. 3	35.83
Mar. 5	33.08	11	30.28	10	31.50	10	35.91
12	32.64	18	30.34	17	32.02	17	36.26
19	32.18	25	30.47	24	32.32	24	36.21
26	31.57	July 2	30.15	Oct. 1	32.84	31	36.49

150-2 (\*845, p. 376; \*886, p. 562; \*906, p. 186; \*936, p. 214; \*944, p. 211; \*986, p. 235; 1016, p. 278; 1023, p. 297). Harry A. Morris. At Flockton, in Fairfield Township.

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

Jan. 2	6.60	Apr. 2	3.10	July 2	3.49	Oct. 8	13.17
9	3.40	9	3.94	9	4.87	15	13.76
15	3.36	16	3.99	16	6.19	22	14.01
22	3.67	23	4.92	23	2.92	29	14.07
29	4.58	30	4.93	30	4.95	Nov. 5	13.52
Feb. 5	5.00	May 7	3.85	Aug. 6	5.84	12	13.17
12	3.01	14	3.85	13	6.74	19	12.95
19	1.45	21	2.48	20	4.39	26	10.10
26	2.19	28	3.82	27	6.46	Dec. 3	7.58
Mar. 5	2.74	June 4	4.50	Sept. 3	6.39	10	7.73
12	2.75	11	5.73	10	7.86	17	3.39
19	2.38	18	4.75	24	9.91	24	3.37
26	2.65	25	5.94	Oct. 1	12.96	31	2.67

151-1 (\*906, p. 186; \*936, p. 214; \*944, p. 212; \*986, p. 236; 1016, p. 278; 1023, p. 297). Harry A. Morris. At Flockton, in Fairfield Township.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	17.86	17.13	14.41	11.94	13.52	10.44	9.52	9.71	12.62	15.34	17.33	18.40
2	17.84	17.24	14.22	11.82	13.50	10.63	9.31	9.80	12.78	15.41	17.39	18.43
3	17.74	17.29	14.21	11.89	13.38	10.72	9.25	9.93	12.91	15.49	17.46	18.36
4	17.69	17.24	14.07	11.98	13.34	10.78	9.19	10.08	13.02	15.60	17.59	18.36
5	17.56	17.14	14.06	12.08	13.38	10.82	9.15	10.23	13.10	15.68	17.63	18.50
6	17.48	17.03	13.99	12.01	13.38	10.84	9.12	10.43	13.18	15.72	17.63	18.34
7	17.49	17.12	14.02	12.09	13.40	11.03	9.16	10.61	13.37	15.71	17.54	18.39
8	17.50	17.09	13.93	12.05	13.45	11.29	9.17	10.75	13.36	15.77	17.71	18.43
9	17.38	16.93	13.79	12.25	13.48	11.35	9.20	10.82	13.42	15.85	17.75	18.44
10	17.38	16.89	13.76	12.34	13.52	11.35	9.30	11.09	13.50	15.91	17.76	18.45
11	17.34	16.94	13.74	12.34	13.50	11.36	9.41	11.29	13.64	16.02	17.91	18.46
12	17.29	16.94	13.55	12.46	13.66	11.40	9.53	11.43	13.78	16.21	17.93	18.39
13	17.29	16.77	13.47	12.50	13.72	11.47	9.61	11.62	13.85	16.30	17.92	18.50
14	17.19	16.57	13.37	12.48	13.64	11.46	9.72	11.71	13.94	16.36	17.94	18.45

151-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
15	17.15	16.47	13.15	12.53	13.64	11.44	9.91	11.79	14.04	16.40	17.97	18.37
16	17.15	16.21	13.00	12.68	12.37	11.35	9.98	11.86	14.12	16.39	17.02	18.32
17	17.00	15.95	12.62	12.73	12.57	11.35	10.07	11.86	14.23	16.39	17.18	18.40
18	16.97	15.84	12.43	12.77	11.75	11.38	10.26	11.78	14.29	16.56	17.18	18.41
19	17.01	15.58	12.37	12.82	11.48	11.46	10.41	11.56	14.34	16.64	17.15	18.43
20	16.96	15.45	12.39	12.92	11.15	11.56	10.50	11.55	14.33	16.75	18.17	18.33
21	17.07	15.41	12.30	12.99	10.97	11.70	10.45	11.57	14.45	16.79	18.16	18.21
22	17.11	15.13	12.17	12.95	10.96	11.85	9.67	11.65	14.55	16.82	18.28	18.41
23	17.02	14.94	12.12	12.94	10.79	11.92	9.20	11.75	14.71	16.87	18.30	18.37
24	16.91	14.80	12.05	12.98	10.59	11.93	9.14	11.80	14.79	16.87	18.25	18.39
25	16.92	14.80	12.06	12.95	10.49	11.97	9.11	11.92	14.86	16.91	18.33	18.44
26	17.11	14.52	12.04	13.11	10.42	12.12	9.15	12.00	14.94	17.10	18.40	18.39
27	17.17	14.56	12.07	13.28	10.43	12.23	9.17	12.04	15.02	17.20	18.43	18.38
28	17.17	14.56	12.00	13.33	10.46	12.27	9.25	12.14	15.10	17.22	18.43	18.36
29	17.18		11.85	13.39	10.51	11.50	9.31	12.33	15.21	17.25	18.34	18.41
30	17.03		12.05	13.48	10.48	10.16	9.37	12.39	15.28	17.28	18.28	18.46
31	17.11		12.09		10.39		9.55	12.51		17.35		18.45

151-2 (\*906, p. 187; \*936, p. 215; \*944, p. 211; 986, p. 236; 1016, p. 279; 1023, p. 298). Harry A. Morris. At Flockton, in Fairfield Township.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	17.60	17.11	14.70	12.36	13.64	11.04	.....	9.79	12.52	15.24	17.29	18.25
2	17.59	17.19	14.55	12.27	13.61	11.20	9.40	9.86	12.66	15.33	17.33	18.27
3	17.50	17.26	14.53	12.32	13.52	11.28	9.41	10.04	12.74	15.41	17.38	18.21
4	17.48	17.21	14.40	12.38	13.55	11.32	9.35	10.09	12.85	15.50	17.47	18.25
5	17.40	17.14	14.36	12.45	13.58	11.36	9.31	10.23	12.94	15.58	17.54	18.39
6	17.32	17.05	14.24	12.39	13.59	11.35	9.31	10.41	13.03	15.64	17.54	18.22
7	17.35	17.09	14.28	12.46	13.62	11.34	9.35	10.54	13.13	15.64	17.48	18.27
8	17.35	17.06	14.19	12.42	13.67	11.46	9.38	10.68	13.21	15.70	17.62	18.30
9	17.26	16.93	14.11	12.57	13.66	11.68	9.43	10.73	13.28	15.78	17.65	18.31
10	17.30	16.91	14.06	12.64	13.72	11.73	9.52	11.18	13.35	15.83	17.67	18.30
11	17.23	16.95	14.02	12.65	13.69	11.71	9.61	11.20	13.49	15.95	17.81	18.30
12	17.21	16.96	13.85	12.73	13.80	11.73	9.72	11.30	13.62	16.11	17.85	18.24
13	17.21	16.82	13.79	12.76	13.88	11.83	9.82	11.44	13.69	16.19	17.84	18.31
14	17.13	16.70	13.69	12.73	13.82	11.78	9.92	11.55	13.80	16.25	17.87	18.25
15	17.12	16.59	13.52	12.77	13.82	11.78	10.09	11.63	13.91	16.32	17.90	18.20
16	17.09	16.38	13.38	12.92	13.44	11.69	10.19	11.72	14.00	16.32	18.02	18.17
17	17.00	16.10	13.10	12.94	12.88	11.70	10.27	11.73	14.12	16.34	18.08	18.24
18	16.96	16.00	12.90	12.98	12.32	11.73	10.37	.....	14.19	16.48	18.08	18.24
19	17.02	15.81	12.80	13.02	12.08	11.79	10.51	.....	14.23	16.55	18.07	18.26
20	16.96	15.65	12.72	13.10	11.83	11.86	10.61	11.50	14.26	16.66	18.10	18.14
21	17.04	15.61	12.73	13.17	11.66	11.98	10.42	11.53	14.36	16.71	18.13	18.17
22	17.09	15.35	12.60	13.14	11.61	12.10	9.58	11.60	14.47	16.74	18.19	18.23
23	16.99	15.20	12.56	13.15	11.43	12.15	9.24	11.70	14.65	16.80	18.22	18.16
24	16.91	15.08	12.48	13.18	11.26	12.16	9.21	11.76	14.69	16.81	18.18	18.19
25	16.94	15.05	12.48	13.15	11.16	12.20	9.27	11.85	14.74	16.92	18.25	18.24
26	17.08	14.84	12.43	13.27	11.10	12.32	9.31	11.94	14.84	16.95	18.26	18.21
27	17.13	14.85	12.47	13.39	11.08	12.40	9.35	12.00	14.92	17.11	18.26	18.18
28	17.12	14.84	12.40	13.47	11.10	12.36	9.42	12.08	15.00	17.15	18.25	18.16
29	17.15		12.28	13.51	11.15	11.05	9.47	12.25	15.11	17.17	18.20	18.22
30	16.99		12.44	13.60	11.10	10.29	9.52	12.36	15.20	17.22	18.12	18.26
31	17.08		12.50		11.02		9.64	12.42		17.31		18.24

156 (\*944, p. 212; \*986, p. 237; 1016, p. 280; 1023, p. 299). Ray Milder's Inn. At Symmes, in Fairfield Township.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	29.49	Apr. 8	26.45	July 15	26.77	Oct. 14	29.85
14	29.25	15	26.09	22	26.90	21	30.08
26	29.08	22	26.21	29	25.95	28	30.30
28	28.96	29	26.35	Aug. 5	27.16	Nov. 4	30.47
Feb. 4	28.89	May 6	26.49	12	27.49	11	30.65
11	28.73	13	26.67	19	27.75	18	30.79
18	28.40	20	26.30	26	27.87	26	30.85
25	27.97	27	26.00	Sept. 2	27.90	Dec. 2	30.90
Mar. 4	27.66	June 3	25.76	9	28.49	9	30.83
11	27.36	17	26.07	16	28.52	16	30.67
18	27.05	24	26.17	23	28.58	23	30.62
25	26.73	July 1	26.48	30	29.33	30	30.51
Apr. 1	26.42	8	26.56	Oct. 7	29.60		

158-1 (\*944, p. 212; \*986, p. 238; 1016, p. 280; 1023, p. 299). Ralph Miller. On Seward Road, in Fairfield Township.

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

Jan. 2	34.80	Apr. 9	29.85	July 9	26.74	Oct. 8	32.77
9	34.50	16	30.11	16	27.33	15	33.36
15	34.41	23	30.29	23	26.34	22	33.83
22	34.32	30	30.79	30	26.64	29	34.23
29	34.22	May 7	30.87	Aug. 6	27.45	Nov. 5	35.66
Feb. 5	34.22	14	31.00	13	28.52	12	34.96
12	34.10	21	29.08	20	28.65	19	35.15
19	33.05	28	28.51	27	28.98	26	35.43
26	32.02	June 4	28.58	Sept. 3	29.76	Dec. 3	35.40
Mar. 5	31.60	11	28.79	10	30.35	10	35.46
12	31.02	18	28.84	17	31.16	17	35.50
19	30.15	25	29.28	24	31.72	24	35.40
26	29.72	July 2	27.03	Oct. 1	32.31	31	35.43
Apr. 2	29.50						

158-2 (\*944, p. 213; \*986, p. 238; 1016, p. 280; 1023, p. 299). Ralph Miller. On Seward Road, in Fairfield Township.

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

Jan. 2	2.38	Apr. 9	3.13	July 9	3.75	Oct. 8	5.79
9	1.61	16	3.25	16	4.18	15	6.00
15	2.16	23	3.80	23	2.65	22	5.70
22	3.07	30	3.94	30	3.48	29	5.58
29	3.83	May 7	2.85	Aug. 6	4.09	Nov. 5	5.00
Feb. 5	3.25	14	2.81	13	4.57	12	5.82
12	2.34	21	1.43	20	3.10	19	4.76
19	1.40	28	2.60	27	3.88	26	3.39
26	1.63	June 4	3.05	Sept. 3	4.48	Dec. 3	2.79
Mar. 5	1.99	11	3.80	10	4.82	10	3.34
12	1.98	18	3.32	17	5.17	17	2.11
19	1.42	25	4.05	24	5.29	24	2.20
26	1.80	July 2	3.14	Oct. 1	5.59	31	1.85
Apr. 2	2.10						

160-1 (\*906, p. 188; \*936, p. 215; \*944, p. 213; \*986, p. 238; 1016, p. 281; 1023, p. 299). Orin James. 0.9 mile east of Flockton, in Union Township.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	23.80	Apr. 2	19.18	July 2	18.19	Oct. 8	22.17
9	23.34	9	19.62	16	17.79	15	22.84
15	23.30	16	20.01	23	17.80	29	23.63
22	23.24	23	20.10	30	16.89	Nov. 5	23.18
29	23.21	30	20.42	Aug. 6	17.33	12	24.36
Feb. 5	16.94	May 7	20.70	13	18.39	19	24.47
12	23.30	14	20.57	20	18.67	26	24.45
19	23.00	21	19.43	27	18.74	Dec. 3	24.76
26	21.50	28	18.45	Sept. 3	19.43	10	24.24
Mar. 5	21.05	June 4	18.67	10	19.89	17	25.62
12	20.64	11	19.35	17	20.74	24	24.28
19	20.19	18	18.65	24	21.32	31	25.13
26	19.41	25	19.85	Oct. 1	21.78		

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). Orin James. 0.9 mile east of Flockton, in Union Township.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	16.28	Apr. 2	2.18	July 2	5.07	Oct. 1	11.03
9	14.10	9	3.05	9	5.28	8	11.99
15	11.30	16	3.13	16	5.97	15	12.80
22	10.53	23	3.71	23	5.53	29	13.18
29	10.39	30	4.35	30	4.77	Nov. 5	14.79
Feb. 5	10.31	May 7	2.79	Aug. 6	4.79	12	15.32
12	5.29	14	2.72	13	5.83	19	15.83
19	1.53	21	1.80	20	5.63	26	16.15
27	1.19	28	3.00	27	5.65	Dec. 3	16.44
Mar. 5	2.25	June 4	3.68	Sept. 3	6.81	10	16.32
12	2.16	11	4.84	10	7.04	17	13.43
19	1.52	18	4.78	17	9.13	24	12.05
26	1.73	25	5.54	24	10.22	31	8.52

165-1 (\*944, p. 213; \*986, p. 239; 1016, p. 281; 1023, p. 300). E. C. Sheperd. 0.7 mile north of Port Union, in Union Township.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	35.40	Apr. 9	35.29	July 9	34.53	Oct. 8	38.73
8	35.48	16	36.03	16	35.24	15	39.13
15	35.64	23	36.03	23	35.18	22	39.36
22	36.20	30	36.72	30	35.09	29	39.58
29	36.71	May 7	36.24	Aug. 6	35.39	Nov. 5	39.67
Feb. 5	36.93	14	36.18	13	36.09	12	39.59
12	36.22	21	34.40	20	36.04	19	39.50
19	35.00	28	34.40	27	36.33	26	39.15
26	34.97	June 4	35.04	Sept. 3	36.58	Dec. 3	38.24
Mar. 5	35.21	11	35.51	10	37.24	10	38.19
12	35.10	18	35.50	17	37.74	17	37.68
19	34.76	25	35.92	24	38.09	24	37.85
26	34.85	July 2	34.50	Oct. 1	38.49	31	37.75
Apr. 2	34.96						

165-2 (\*845, p. 375; \*886, p. 561; \*906, p. 188; 936, p. 216; \*944, p. 213; \*986, p. 239; 1016, p. 281; 1023, p. 300). E. C. Sheperd. 0.7 mile north of Port Union, in Union Township.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	13.33	Apr. 9	6.80	July 9	9.09	Oct. 8	12.75
8	13.25	16	7.35	16	9.66	15	12.88
15	13.12	23	7.79	23	9.85	22	12.96
22	12.93	30	8.06	30	9.62	29	13.06
29	13.05	May 7	7.94	Aug. 6	10.07	Nov. 5	13.10
Feb. 5	12.59	14	8.13	13	10.45	12	13.10
12	12.35	21	6.46	20	10.45	19	13.08
19	11.82	28	7.17	27	10.70	26	12.88
26	10.39	June 4	7.94	Sept. 3	10.93	Dec. 3	12.80
Mar. 5	8.64	11	8.50	10	11.24	10	12.64
12	7.48	18	8.69	17	11.69	17	12.39
19	5.85	25	9.19	24	12.00	24	12.16
26	6.14	July 2	8.67	Oct. 1	12.41	31	11.97
Apr. 2	6.04						

168 (\*906, p. 188; \*936, p. 216; \*944, p. 214; \*986, p. 240; 1016, p. 282; 1023, p. 301). M. Haugbers. In Port Union, in Union Township.

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

Jan. 2	21.82	Apr. 9	22.33	July 16	22.40	Oct. 15	25.17
8	22.34	16	23.09	23	21.84	22	25.56
15	22.18	23	22.84	30	21.36	29	25.53
22	22.66	30	23.23	Aug. 6	22.21	Nov. 5	25.27
29	23.05	May 14	22.84	13	22.70	12	26.06
Feb. 5	23.15	21	21.29	20	22.22	19	24.78
12	22.51	28	21.81	27	22.74	26	24.17
26	21.54	June 4	22.81	Sept. 3	23.21	Dec. 3	23.50
Mar. 5	21.81	11	22.66	10	23.55	10	23.66
12	21.80	18	22.53	17	23.92	17	23.58
19	21.29	25	23.52	24	24.25	24	24.01
26	21.82	July 2	20.92	Oct. 1	24.89	31	22.75
Apr. 2	21.95	9	21.82	8	24.78		

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). J. W. Margonett. At Rialto, in Union Township.

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

Jan. 2	5.89	Apr. 9	7.22	July 9	8.70	Oct. 8	11.31
8	6.20	16	7.73	16	9.50	15	11.28
15	6.03	23	8.64	23	8.62	22	11.13
22	6.84	30	9.07	30	8.47	29	11.02
29	7.80	May 7	8.47	Aug. 6	9.41	Nov. 5	10.72
Feb. 5	8.40	14	7.90	13	10.24	12	10.24
12	6.10	21	5.98	20	9.20	19	10.13
19	5.55	28	6.75	27	9.79	26	9.00
26	5.86	June 4	7.52	Sept. 3	10.39	Dec. 3	17.48
Mar. 5	5.90	11	8.97	10	10.82	10	8.37
12	5.80	18	8.53	17	10.98	17	6.13
19	5.55	25	9.25	24	10.07	24	6.72
26	6.04	July 2	7.07	Oct. 1	11.17	31	5.83
Apr. 2	6.08						

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). Fox Paper Co. At Crescentville, in Union Township.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	7.69	Apr. 9	7.44	July 8	8.35	Oct. 8	14.47
8	7.79	16	7.41	16	10.55	15	15.20
15	7.45	23	7.54	23	8.37	22	15.24
22	7.98	30	8.09	30	8.10	29	15.47
29	8.34	May 7	7.69	Aug. 5	8.76	Nov. 5	15.60
Feb. 5	8.02	14	7.50	13	10.99	12	15.66
12	7.57	21	5.55	20	10.56	19	14.89
19	6.04	28	6.39	27	11.30	26	12.67
26	6.45	June 4	7.22	Sept. 3	12.56	Dec. 3	10.12
Mar. 5	7.11	11	8.03	10	12.99	10	9.77
12	7.17	18	7.25	17	13.75	17	9.07
19	7.11	25	7.99	24	14.23	24	8.83
26	7.06	July 2	7.51	Oct. 1	14.54	31	8.84
Apr. 2	6.97						

## Clinton County

Cn-1. 4 miles north of Melvin and about  $2\frac{1}{2}$  miles west of State Highway 72, at abandoned brick schoolhouse. Abandoned drilled well, diameter 4 inches, depth 24 feet. Measuring point, floor of recorder shelter, 0.8 foot above land-surface datum. Automatic water-stage recorder installed Feb. 28, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	6.54	7.42	8.69	7.51	8.38	....	9.07	9.73	9.90	8.18
2	....	6.54	7.62	8.67	7.50	8.48	8.71	9.15	9.76	9.73	8.22
3	....	6.53	7.69	8.64	7.57	8.54	....	9.16	9.76	9.74	8.30
4	....	6.81	7.88	8.70	7.70	8.58	....	9.21	9.80	9.83	8.36
5	....	6.99	7.96	8.71	7.81	8.60	8.81	9.21	9.84	9.84	8.41
6	....	7.13	8.00	8.71	7.90	8.64	8.84	9.22	9.83	9.75	8.49
7	....	6.68	8.08	8.71	8.01	8.68	8.89	9.23	9.82	9.73	8.56
8	....	5.74	8.14	8.73	8.15	8.71	8.91	9.25	9.84	9.66	8.62
9	....	6.15	8.26	8.75	8.30	8.64	8.93	9.27	9.84	9.66	8.63
10	....	6.49	8.31	8.82	8.30	8.71	9.04	9.28	9.85	9.62	8.63
11	....	6.68	8.31	8.71	8.33	8.76	9.06	9.32	9.88	9.50	....
12	....	6.93	8.36	8.61	8.37	8.82	9.09	9.38	9.96	9.17	....
13	....	7.18	8.36	8.66	8.38	8.80	9.13	9.38	10.10	9.27	....
14	....	7.25	8.37	8.61	8.39	8.84	9.14	9.42	9.95	....	....
15	....	6.61	8.36	8.03	8.41	8.92	9.14	9.44	9.94	....	....
16	....	6.68	8.42	7.99	8.46	8.94	9.14	9.46	9.93	....	....
17	....	6.77	8.42	6.20	8.46	8.94	8.67	9.50	9.94	....	....
18	....	6.65	8.49	6.84	7.90	8.98	8.40	9.53	9.86	....	....
19	....	6.50	8.50	7.07	7.93	9.02	8.51	9.54	....	....	....
20	....	6.75	8.58	7.22	8.08	8.99	8.65	9.61	9.87	....	....
21	....	6.94	8.60	7.40	8.22	8.18	8.66	9.64	9.90	....	....
22	....	7.18	8.55	7.53	8.31	7.72	8.75	9.64	9.90	....	....
23	....	7.26	....	7.66	8.36	8.00	8.78	9.64	9.88	....	....
24	....	7.38	....	7.78	8.42	8.18	8.82	9.66	9.89	....	....
25	....	7.46	8.54	7.89	8.48	8.31	8.88	9.65	9.87	9.22	....
26	....	7.46	8.59	7.77	8.57	8.38	8.88	9.66	9.82	9.20	....
27	....	6.58	8.67	6.45	8.60	....	8.89	9.70	9.90	7.58	....
28	6.40	6.76	8.69	6.56	8.57	....	8.92	9.73	....	7.64	....
29	....	7.01	8.64	6.90	8.16	....	9.02	9.73	9.90	7.78	....
30	....	7.20	8.67	7.15	8.23	....	9.02	9.73	9.92	7.84	....
31	....	7.27	....	7.39	....	....	9.03	....	9.95	....	....

e Estimated.

Delaware County

D1-1. Oscar Case. 2½ miles north of Delaware, 1.1 miles east of U. S. Route 33, just west of Pennsylvania Railroad tracks. Abandoned drilled well, depth 116 feet. Measuring point, floor of recorder shelter, 3.7 feet above land-surface datum. Automatic water-stage recorder installed Mar. 18, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	11.11	15.23	10.90	11.80	15.74	16.96	18.04	18.77	.....
2	.....	11.22	15.20	11.19	12.19	15.77	17.04	18.09	18.78	.....
3	.....	11.48	15.13	11.33	12.45	15.75	17.08	18.12	18.79	19.01
4	.....	11.70	15.08	11.44	12.62	15.81	17.12	18.17	18.80	.....
5	.....	12.01	15.29	11.52	12.72	15.83	17.15	18.21	18.81	.....
6	.....	12.16	15.38	11.56	12.88	15.79	17.18	18.23	18.82	.....
7	.....	12.35	15.43	11.63	13.06	15.83	17.21	18.29	18.83	.....
8	.....	12.31	15.50	11.97	13.22	15.82	17.22	18.31	18.84	.....
9	.....	12.83	15.58	12.52	13.41	15.86	17.25	18.32	18.86	.....
10	.....	13.07	15.66	12.65	13.58	15.96	17.21	18.35	18.87	.....
11	.....	13.11	15.52	12.57	13.65	16.00	17.25	18.38	18.87	.....
12	.....	13.31	15.63	12.60	13.96	16.19	17.31	18.42	18.88	.....
13	.....	13.41	15.75	13.01	14.10	16.30	17.35	18.45	18.89	.....
14	.....	13.42	15.56	13.19	14.22	16.38	17.39	18.45	18.89	.....
15	.....	13.39	15.26	13.23	14.54	16.44	17.43	18.48	18.90	.....
16	.....	13.81	14.97	13.16	14.64	16.48	17.49	18.59	18.91	18.55
17	.....	13.90	14.67	13.16	14.69	16.50	17.53	18.51	18.91	18.48
18	9.66	14.01	14.42	12.30	14.73	16.51	17.58	18.56	18.92	18.94
19	9.68	14.11	14.34	11.31	14.78	16.57	17.61	18.56	18.93	17.31
20	9.57	14.36	14.14	10.25	14.94	16.63	17.61	18.58	18.93	16.48
21	9.34	14.46	14.11	9.37	14.99	16.68	17.63	18.61	18.94	15.11
22	9.17	14.37	14.18	9.41	14.99	16.72	17.66	18.62	18.94	14.91
23	9.33	14.26	14.05	9.63	15.13	16.77	17.73	18.64	18.95	14.84
24	9.50	14.35	13.81	9.77	15.19	16.80	17.78	18.65	18.95	14.49
25	9.75	14.25	13.63	10.04	15.32	16.82	17.82	18.68	18.95	14.38
26	9.95	14.36	13.64	10.51	15.43	16.84	17.87	18.70	.....	14.20
27	10.19	14.65	13.45	10.90	15.47	16.84	17.97	18.70	.....	14.19
28	10.27	14.81	12.71	11.17	15.50	16.84	17.96	18.72	.....	13.73
29	10.35	14.94	12.00	11.38	15.51	16.88	18.00	18.73	.....	13.67
30	11.01	15.11	11.33	11.48	15.51	16.90	18.02	18.75	.....	13.48
31	11.19	.....	10.88	.....	15.61	16.92	.....	18.76	.....	13.21

Fairfield County

F-1. Charles E. Howdyshell. At West Rushville, north of U. S. Route 22, in rear of residence. Abandoned drilled well, diameter 4 inches, depth 110 feet. Measuring point, floor of recorder shelter, 4.0 feet above land-surface datum. Automatic water-stage recorder installed Mar. 7, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	12.62	13.20	12.31	11.81	13.05	13.49	14.43	15.05	15.72
2	.....	12.56	13.18	12.26	11.84	13.08	13.53	14.47	15.07	15.75
3	.....	12.56	13.01	12.31	11.87	13.10	13.56	14.51	15.09	15.75
4	.....	12.56	12.93	12.31	11.89	13.14	13.61	14.55	15.16	15.72
5	.....	12.58	12.87	12.31	11.90	13.13	13.65	14.59	15.21	15.70
6	.....	12.56	12.86	12.30	11.90	13.13	13.71	14.63	15.22	15.68
7	13.68	12.56	12.83	12.27	11.94	13.15	13.74	14.62	15.21	15.68
8	13.68	12.53	12.83	12.27	11.96	13.20	13.78	14.61	15.20	15.69
9	13.62	12.59	12.85	12.32	11.99	13.21	13.82	14.62	15.24	15.70
10	13.62	12.63	12.86	12.34	12.05	13.22	13.78	14.64	15.25	15.69
11	13.59	12.63	12.83	12.32	12.09	13.27	13.81	14.66	15.28	15.66
12	13.51	12.66	12.86	12.30	12.14	13.30	13.87	14.69	15.22	15.62
13	13.46	12.67	12.94	12.22	12.20	13.33	13.92	14.74	15.35	15.59
14	13.42	12.69	12.93	12.20	12.24	13.38	13.94	14.76	15.36	15.61
15	13.32	12.69	12.92	12.24	12.31	13.37	13.99	14.79	15.41	15.60



F-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
16	13.31	12.73	12.88	12.26	12.37	13.30	14.02	14.80	15.41	15.58
17	13.27	12.76	12.83	12.21	12.41	13.17	14.06	14.79	15.50	15.57
18	13.26	12.79	12.80	12.16	12.46	13.05	14.10	14.76	15.52	15.58
19	13.25	12.83	12.82	12.12	12.50	13.01	14.13	14.83	15.52	15.58
20	13.26	12.88	12.76	12.10	12.57	13.04	14.13	14.87	15.53	15.57
21	13.23	12.93	.....	12.05	12.55	13.07	14.11	14.90	15.57	.....
22	13.14	12.95	.....	12.02	12.57	13.10	14.16	14.91	15.59	.....
23	13.07	12.94	.....	11.99	12.65	13.17	14.16	14.92	15.59	.....
24	12.99	12.93	.....	11.96	12.70	13.20	14.21	14.93	15.59	.....
25	12.94	12.94	.....	11.91	12.71	13.23	14.23	14.86	15.59	.....
26	12.86	12.99	.....	11.89	12.79	13.27	14.26	14.95	15.61	.....
27	12.77	13.06	12.41	11.90	12.84	13.30	14.31	15.02	15.64	15.43
28	12.76	13.10	12.40	11.82	12.89	13.32	14.34	15.02	15.63	.....
29	12.70	13.10	12.42	11.85	12.93	13.39	14.39	15.03	15.70	.....
30	12.65	13.15	12.40	11.82	12.97	13.41	14.40	15.03	15.70	15.44
31	12.65	.....	12.36	.....	13.03	13.44	.....	15.05	.....	15.45

F-2. Pickerington Creamery. 0.5 mile east of Pickerington, south of State Highway 256, in barnyard. Abandoned drilled well, diameter 6 inches, depth 190 feet. Measuring point, floor of recorder shelter, 3.3 feet above land-surface datum. Automatic water-stage recorder installed Apr. 16, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	20.63	19.93	21.34	22.26	22.07	21.86	21.67	21.89
2	.....	20.60	19.93	21.37	22.29	22.20	21.85	21.66	21.90
3	.....	20.59	19.93	21.43	22.47	22.37	21.84	21.67	21.91
4	.....	20.58	19.98	21.47	22.49	22.37	21.83	21.63	21.94
5	.....	20.49	20.02	21.47	22.34	22.34	21.80	21.65	21.94
6	.....	20.47	20.07	21.45	22.39	22.28	21.83	21.64	22.00
7	.....	20.43	20.12	21.44	22.48	22.25	21.89	21.66	22.08
8	.....	20.40	20.15	21.43	22.55	22.15	21.88	21.67	22.08
9	.....	20.40	20.18	21.47	22.68	22.10	21.84	21.67	22.07
10	.....	20.41	20.18	21.53	22.79	22.05	21.80	21.66	22.06
11	.....	20.40	20.17	21.58	22.81	22.03	21.82	21.58	22.05
12	.....	20.32	20.19	21.59	22.77	22.00	21.82	21.57	21.99
13	.....	20.34	20.19	21.59	22.91	21.95	21.77	21.56	22.00
14	.....	20.34	20.30	21.56	23.01	22.02	21.74	21.57	22.00
15	.....	20.31	20.56	21.54	23.02	22.02	21.72	21.58	.....
16	20.86	20.27	20.60	21.54	22.92	22.01	21.72	21.57	.....
17	20.86	20.20	20.54	21.82	22.75	21.97	21.73	21.60	.....
18	20.89	20.19	20.58	21.86	22.45	21.96	21.72	21.60	.....
19	20.91	20.19	20.58	21.88	22.42	21.95	21.65	21.56	.....
20	20.95	20.20	20.55	21.85	22.37	21.95	21.63	21.57	.....
21	20.97	20.17	20.64	21.66	22.30	21.93	21.63	21.58	.....
22	20.93	20.09	20.64	21.63	22.27	21.94	21.61	21.56	.....
23	20.87	20.09	20.67	21.73	22.25	21.91	21.62	21.60	.....
24	.....	20.09	20.64	21.77	22.22	21.81	21.62	21.72	.....
25	.....	20.09	20.68	21.76	22.20	21.81	21.66	21.73	.....
26	20.73	20.07	20.72	21.78	22.15	21.83	21.65	21.73	.....
27	20.75	19.99	20.74	21.80	22.12	21.87	21.64	21.78	.....
28	20.76	19.95	21.21	21.84	22.12	21.86	21.67	21.81	.....
29	20.72	19.85	21.35	21.84	22.10	21.87	21.72	21.81	.....
30	20.66	19.89	21.35	21.95	22.08	21.88	21.69	21.82	.....
31	.....	19.93	.....	22.11	22.10	.....	21.70	.....	.....

Fayette County

Fa-1. Martha L. Slagle. At Jasper Mills, 2½ miles northwest of U. S. Route 22, at abandoned brick schoolhouse. Abandoned drilled well, diameter 5 inches, depth 78 feet. Measuring point, floor of recorder shelter, 3.3 feet above land-surface datum. Automatic water-stage recorder installed Feb. 27, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	6.13	5.90	7.03	6.16	6.70	7.60	7.75	7.92	8.24	8.22
2	....	5.98	6.02	6.84	6.10	6.69	7.82	7.38	8.27	8.24	8.29
3	....	5.94	6.05	6.77	6.16	6.74	7.86	8.49	8.11	8.28	8.15
4	....	5.98	6.06	6.73	6.23	6.98	7.60	8.15	8.25	8.36	8.05
5	....	5.98	6.08	6.72	6.49	7.05	7.59	8.17	8.24	8.55	8.00
6	....	5.98	6.11	7.00	6.35	6.92	7.57	7.90	8.17	8.56	8.07
7	....	5.91	6.13	6.85	6.29	6.93	7.51	8.38	8.15	8.42	8.07
8	....	5.73	6.32	6.72	6.51	6.90	7.50	8.06	8.38	8.29	8.05
9	....	5.81	6.28	6.76	6.46	6.17	7.45	7.83	8.28	8.50	7.95
10	....	5.92	6.32	6.80	6.61	6.74	7.38	8.25	8.27	8.47	8.11
11	....	6.10	6.30	6.77	6.69	6.77	7.38	7.97	8.37	8.37	7.99
12	....	6.05	6.33	6.77	6.76	6.80	7.50	8.27	8.16	8.34	7.81
13	....	6.03	6.32	6.79	6.65	7.13	7.71	7.97	8.13	8.32	7.57
14	....	6.02	6.37	6.72	6.49	7.20	7.67	7.72	8.10	8.27	7.57
15	....	5.73	6.40	6.28	6.55	7.14	7.50	7.73	8.08	8.29	7.68
16	....	5.85	6.60	6.11	6.53	7.54	7.31	8.43	8.24	8.30	7.63
17	....	5.86	6.54	5.98	....	7.33	7.23	8.03	8.17	8.63	7.60
18	....	5.80	6.53	6.07	....	8.12	7.10	8.13	8.05	8.54	7.62
19	....	5.64	6.56	6.12	....	7.88	7.13	8.57	8.10	8.36	7.49
20	....	5.66	6.68	6.28	....	7.17	7.13	8.20	8.13	8.31	7.26
21	....	5.71	6.70	5.91	....	6.87	7.21	....	8.32	8.31	7.38
22	....	5.75	6.87	5.95	6.48	7.02	7.18	....	8.25	8.39	7.42
23	....	5.93	6.78	5.99	6.50	6.95	7.18	....	8.21	8.56	7.31
24	....	5.93	6.87	6.09	6.45	6.91	7.37	....	8.41	8.48	7.22
25	....	6.07	6.82	6.37	6.46	7.12	7.54	....	8.19	8.33	7.24
26	....	5.98	6.72	6.36	6.71	7.21	7.45	....	8.23	8.24	7.20
27	5.86	5.70	6.74	6.15	6.68	7.23	7.48	7.92	8.27	8.15	7.19
28	6.13	5.67	6.77	6.03	6.66	7.48	7.54	7.88	8.41	8.20	7.33
29	....	5.86	6.81	6.07	6.61	7.34	8.49	8.03	8.42	8.20	7.31
30	....	5.87	7.03	6.11	6.69	7.31	7.50	7.94	8.36	8.25	7.11
31	....	5.88	....	6.14	....	7.62	7.98	....	8.38	....	7.18

Franklin County

Fr-1. L. E. Keller. Near Grove City. 0.25 mile south of Stringtown Road, in grove 177 feet east of Hoover Road. Unused drilled well, diameter 4 inches, depth 156 feet. Measuring point, floor of recorder shelter, 2.6 feet above land-surface datum. Automatic water-stage recorder installed Jan. 26, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	77.69	77.28	76.57	76.64	76.50	76.35	76.93	77.46	78.28	78.57	78.45
2	....	77.89	77.06	76.34	76.57	76.55	76.48	76.93	77.56	78.27	78.47	78.59
3	....	78.01	77.17	76.39	76.46	76.67	76.55	76.98	77.59	78.31	78.51	....
4	....	78.00	77.11	76.33	76.36	76.70	76.57	76.98	77.64	78.37	78.67	....
5	....	77.81	77.15	76.48	76.47	76.68	76.55	76.97	77.64	78.41	78.74	....
6	....	77.66	77.08	76.45	76.48	76.65	76.54	76.95	77.64	78.43	78.74	....
7	....	77.68	77.09	76.59	76.44	76.58	76.60	76.99	77.64	78.36	78.53	....
8	....	77.71	77.10	76.38	76.48	76.50	76.56	77.06	77.67	78.24	78.42	....
9	....	77.66	77.10	76.53	76.51	76.71	76.56	77.04	77.70	78.15	78.53	....
10	....	77.64	77.13	76.59	76.56	76.77	76.58	77.04	77.63	78.21	78.54	....
11	....	77.84	77.22	76.59	76.51	76.66	76.58	77.23	77.68	78.21	78.62	....
12	....	77.87	77.14	76.57	76.65	76.50	76.65	77.26	77.80	78.34	78.67	....
13	....	77.80	77.01	76.59	76.78	76.51	76.75	77.29	77.81	78.54	78.67	....
14	....	77.77	76.95	76.50	76.74	76.71	76.83	77.34	77.85	78.56	78.55	....

Fr-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
15	.....	77.85	76.79	76.35	.....	76.66	76.82	77.29	77.91	78.56	78.58	78.43
16	.....	77.85	76.79	76.50	.....	76.54	76.87	77.24	77.93	78.50	78.80	.....
17	.....	77.78	76.65	76.56	.....	76.53	76.86	77.21	77.94	78.36	.....	.....
18	.....	77.84	76.60	76.54	76.38	76.53	76.85	77.16	77.98	78.22	.....	78.65
19	.....	77.83	76.75	76.55	76.53	76.53	76.83	77.19	77.99	78.49	.....	.....
20	.....	77.81	76.84	76.58	76.48	.....	76.79	77.33	77.90	78.63	.....	.....
21	.....	77.81	76.83	76.67	76.66	76.51	76.80	77.35	77.81	78.72	.....	.....
22	.....	77.81	76.70	76.61	76.78	76.58	76.76	77.35	77.89	78.72	.....	.....
23	.....	77.78	76.68	76.45	76.74	76.65	76.78	77.43	77.93	78.65	78.55	.....
24	.....	77.15	76.59	76.37	76.65	76.55	76.87	77.43	78.08	78.62	78.50	.....
25	.....	77.20	76.66	76.27	76.55	76.43	76.90	77.48	78.05	78.42	78.37	.....
26	77.78	76.97	76.59	76.23	76.51	76.42	77.00	77.44	78.08	78.65	78.40	.....
27	77.88	77.14	76.55	76.44	76.54	76.48	77.00	77.40	78.11	78.80	78.59	.....
28	77.86	77.28	76.52	76.52	76.54	76.49	76.95	77.35	78.20	78.80	78.63	78.35
29	77.90	.....	76.39	76.51	76.67	76.47	76.91	77.40	78.20	78.72	78.61	78.32
30	77.77	.....	76.52	76.59	76.64	76.41	76.88	77.43	78.22	78.62	78.57	78.61
31	77.68	.....	76.62	.....	76.55	.....	76.89	77.42	.....	78.51	.....	78.88

Fr-2. Hilliard High School. At Hilliard, in old boiler room of school building. Abandoned drilled well, diameter 6 inches, depth 199 feet. Measuring point, top of well casing, 0.2 foot below land-surface datum. Measuring point raised to 0.7 foot above land-surface datum on Nov. 7, 1946. Automatic water-stage recorder installed Jan. 29, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Nov.	Dec.
1	.....	22.76	.....	.....	21.00	.....	20.84	21.48	.....	23.80
2	.....	22.83	.....	.....	20.96	20.53	20.90	21.49	.....	23.78
3	.....	22.85	.....	.....	20.95	20.52	20.93	21.49	.....	23.71
4	.....	22.83	.....	.....	20.89	20.58	20.96	21.52	.....	23.73
5	.....	22.71	21.75	.....	20.96	20.59	20.95	21.53	.....	23.70
6	.....	22.57	21.80	.....	20.96	20.58	20.97	21.54	.....	23.72
7	.....	22.63	.....	.....	20.91	20.65	20.98	21.54	23.57	23.74
8	.....	22.62	.....	.....	20.95	20.62	21.00	.....	23.60	23.74
9	.....	.....	21.62	.....	20.97	20.77	21.03	.....	23.60	23.73
10	.....	.....	21.67	.....	20.93	21.06	21.07	.....	23.61	23.69
11	.....	.....	21.66	.....	21.00	21.02	.....	.....	23.63	.....
12	.....	22.56	21.62	.....	21.05	21.02	.....	.....	23.65	.....
13	.....	22.53	21.56	.....	21.00	20.97	.....	.....	23.61	23.48
14	.....	22.32	.....	.....	20.95	21.02	.....	.....	23.64	23.47
15	.....	22.48	.....	20.70	20.95	21.04	.....	.....	.....	23.43
16	.....	22.48	.....	20.78	20.90	21.01	.....	.....	.....	23.40
17	.....	22.45	.....	20.79	20.85	.....	21.59	.....	.....	23.43
18	.....	22.45	.....	20.77	20.79	.....	21.67	.....	.....	23.43
19	.....	22.38	.....	20.78	20.83	20.84	21.71	.....	23.72	23.42
20	.....	.....	.....	20.83	20.79	.....	21.76	.....	23.72	23.36
21	.....	.....	.....	20.84	20.86	.....	.....	.....	23.71	.....
22	.....	.....	.....	20.82	20.92	.....	.....	.....	23.77	.....
23	.....	.....	.....	20.81	20.90	.....	21.42	.....	23.77	.....
24	.....	.....	.....	20.80	20.86	.....	21.47	.....	23.74	.....
25	.....	.....	.....	20.80	20.82	.....	21.49	.....	23.70	.....
26	.....	.....	.....	20.78	20.77	20.77	21.49	.....	23.70	.....
27	.....	.....	.....	20.84	20.72	20.82	21.49	.....	23.76	22.80
28	.....	.....	.....	20.91	20.69	20.80	21.47	.....	23.79	22.81
29	22.88	.....	.....	20.91	.....	20.82	21.49	.....	23.74	22.80
30	22.87	.....	.....	20.95	.....	20.82	21.47	.....	23.73	22.87
31	22.71	.....	.....	.....	.....	.....	21.44	.....	.....	22.89

Fr-3. R. C. Hann farm. South of Reese, in pasture about 200 feet west of Big Walnut Creek. City of Columbus test well, diameter 12 inches, depth 60 feet. Measuring point, floor of recorder shelter, 3.4 feet above land-surface datum. Automatic water-stage recorder installed Apr. 26, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	11.67	10.51	10.91	11.57	.....	12.28	12.10	11.52
2	.....	11.68	10.67	10.97	11.61	.....	12.29	12.12	.....
3	.....	11.70	10.65	11.09	11.67	.....	12.29	12.14	.....
4	.....	11.70	10.81	11.20	11.71	.....	12.31	12.19	.....
5	.....	11.65	10.96	11.28	11.71	.....	12.31	.....	.....
6	.....	11.66	11.09	11.36	11.60	12.18	12.31	.....	.....
7	.....	11.66	11.21	11.42	11.43	12.19	12.32	12.12	.....
8	.....	11.61	11.35	11.46	11.29	12.19	12.32	12.12	.....
9	.....	11.47	11.45	11.51	11.41	.....	12.33	12.02	.....
10	.....	11.51	11.52	11.54	11.50	.....	12.33	11.96	.....
11	.....	11.52	11.68	11.44	11.59	.....	12.33	11.90	.....
12	.....	11.24	11.63	10.62	11.67	.....	12.31	11.76	.....
13	.....	10.90	11.63	11.59	11.72	12.24	12.24	11.78	.....
14	.....	10.97	10.72	11.65	11.77	.....	12.26	11.85	.....
15	.....	11.01	10.27	11.70	11.90	.....	12.28	11.90	.....
16	.....	11.05	10.55	11.73	11.81	.....	12.29	11.95	.....
17	.....	11.00	10.54	11.77	11.71	.....	12.30	11.97	.....
18	.....	10.34	6.45	11.80	11.55	.....	12.30	11.97	11.20
19	.....	10.45	7.07	11.82	11.64	.....	12.09	11.96	11.34
20	.....	10.62	6.27	11.79	11.72	.....	11.95	11.97	11.42
21	.....	10.65	8.37	11.68	11.77	12.25	11.89	12.00	11.51
22	.....	10.60	9.12	11.35	11.81	.....	11.85	.....	11.59
23	.....	10.78	9.75	10.66	11.85	.....	12.00	.....	11.65
24	.....	10.93	10.01	10.85	11.86	12.23	12.04	.....	11.69
25	.....	11.01	9.27	10.90	11.91	12.26	12.07	12.07	11.70
26	11.54	11.08	9.59	10.99	11.94	.....	12.08	12.07	11.70
27	11.57	11.02	10.59	11.09	11.96	12.25	.....	11.84	11.72
28	11.60	10.34	10.59	11.23	11.98	12.26	12.02	11.97	11.74
29	11.61	9.52	10.35	11.33	12.00	12.27	12.00	11.22	11.41
30	11.64	9.97	10.61	11.43	12.01	12.27	12.04	11.37	10.63
31	.....	10.31	.....	11.50	.....	.....	12.09	.....	10.66

a Tape measurement.

Fr-7 (Formerly Columbus 1) (\*944, p. 189; \*986, p. 253; 1016, p. 294; 1023, p. 302). Moores' & Ross Dairy Co. In Columbus.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
1	.....	105.93	.....	101.18	.....	108.09	113.13	111.59	.....	107.74
2	.....	.....	.....	100.99	.....	108.09	113.18	110.65	.....	107.61
3	.....	.....	.....	.....	.....	107.98	113.09	110.63	.....	106.48
4	.....	.....	.....	101.13	.....	107.73	112.38	111.73	110.63	107.11
5	.....	.....	.....	100.83	.....	107.68	112.94	111.83	110.60	.....
6	.....	.....	99.29	100.83	.....	106.13	112.93	112.04	110.00	.....
7	.....	.....	99.39	100.98	.....	.....	113.31	111.79	110.28	108.01
8	.....	.....	99.54	101.73	.....	.....	113.32	112.33	111.63	107.94
9	.....	.....	99.63	101.65	.....	.....	113.24	112.58	110.73	106.23
10	.....	.....	99.78	101.23	.....	.....	112.85	112.81	110.83	106.81
11	105.52	.....	99.93	98.53	.....	.....	111.95	112.81	110.93	106.99
12	105.58	.....	100.06	.....	.....	.....	112.15	112.73	110.83	106.50
13	105.53	.....	100.13	101.19	.....	110.39	112.13	112.58	109.76	106.76
14	105.33	.....	99.38	101.13	.....	110.33	112.21	112.28	110.27	106.43
15	105.89	.....	99.38	101.15	106.39	.....	112.36	111.39	110.26	.....
16	105.62	.....	99.68	101.15	105.88	.....	112.61	111.64	110.22	.....
17	105.03	.....	99.68	101.15	106.80	.....	112.13	111.69	110.13	.....
18	105.25	.....	99.88	99.73	107.28	.....	112.18	111.58	110.38	.....
19	104.98	.....	99.88	.....	107.63	.....	.....	111.56	109.78	.....
20	104.98	.....	99.78	.....	107.81	111.63	.....	111.65	108.56	.....

a Estimated.

Fr-7--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
21	104.98	.....	99.75	.....	108.63	111.48	.....	111.65	108.20	.....
22	105.15	.....	99.90	.....	108.48	111.36	112.58	110.97	108.68	.....
23	105.14	.....	.....	.....	107.93	111.95	111.93	111.35	108.79	.....
24	104.98	.....	.....	.....	107.71	112.07	111.83	111.47	108.43	.....
25	105.30	.....	.....	.....	107.88	112.15	111.68	111.63	108.27	.....
26	105.42	.....	101.28	.....	107.88	112.16	.....	111.56	107.88	.....
27	105.89	.....	101.33	.....	107.88	112.13	.....	111.63	.....	.....
28	105.93	.....	100.88	.....	107.59	111.28	.....	.....	107.18	.....
29	.....	.....	101.14	.....	107.48	112.13	112.59	.....	106.40	.....
30	.....	.....	101.36	.....	108.06	112.51	112.76	.....	106.71	.....
31	.....	.....	.....	.....	.....	112.88	112.76	.....	107.20	.....

Fulton County

Fn-1. City of Delta. In Delta, at water tower north of U. S. Alternate Route 20. Abandoned drilled well, diameter 8 inches, depth 130 feet. Measuring point, floor of recorder shelter, 1.5 feet above land-surface datum. Automatic water-stage recorder installed Sept. 4, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 3	62.58	Sept. 27	62.61	Oct. 20	62.84	Nov. 18	62.89
4	62.58	28	62.67	21	62.90	21	62.94
5	62.50	29	62.71	22	62.90	22	63.01
6	62.49	30	62.78	23	62.78	23	62.95
7	62.52	Oct. 1	62.78	24	62.71	24	63.40
8	62.46	2	62.80	25	62.29	25	63.50
9	62.26	3	62.75	26	62.54	26	63.32
10	62.46	4	62.80	27	62.94	27	63.06
12	62.80	5	62.89	28	62.95	28	63.00
13	62.80	6	62.89	29	62.84	Dec. 6	63.27
14	62.74	7	62.77	30	62.69	7	63.16
15	62.77	8	62.59	31	62.74	8	63.42
16	62.82	9	62.49	Nov. 1	62.69	20	64.98
17	62.82	10	62.40	2	62.52	21	65.28
18	62.83	11	62.30	3	62.53	22	65.33
19	62.77	12	62.42	4	62.78	23	65.35
20	62.62	13	62.84	5	63.00	24	65.36
21	62.42	14	62.88	6	63.02	26	65.74
22	62.47	15	62.89	7	62.89	27	65.63
23	62.56	16	62.89	14	62.21	28	65.24
24	62.68	17	62.61	15	62.37	29	65.59
25	62.63	18	62.40	16	62.60	30	65.56
26	62.58	19	62.69	17	62.59	31	65.37

Fn-2. Village of Wauseon. 2 miles south of Wauseon, in well house at municipal well field. Abandoned drilled well, diameter 8 inches, depth 150 feet. Measuring point, top of well casing, at land-surface datum. Automatic water-stage recorder installed Sept. 5, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Sept. 5	57.20	Sept. 11	57.94	Sept. 17	57.74	Sept. 23	58.21
6	57.68	12	57.68	18	57.67	24	57.74
7	57.67	13	57.77	19	57.89	25	57.91
8	57.81	14	57.89	20	58.16	26	58.04
9	57.93	15	57.89	21	57.87	27	57.91
10	58.08	16	57.98	22	57.95	28	57.86

Pn-2--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 29	57.85	Nov. 10	57.86	Nov. 25	57.55	Dec. 16	58.67
30	57.96	11	57.84	26	57.33	17	58.26
31	57.73	12	57.20	27	57.69	18	58.07
Oct. 1	57.73	13	57.28	28	57.30	19	57.86
2	57.82	14	57.27	29	57.63	20	57.84
3	57.78	15	57.72	30	57.67	21	58.56
31	57.35	16	57.60	Dec. 1	57.46	22	58.19
Nov. 1	57.59	17	57.57	2	57.25	23	58.53
2	57.56	18	56.95	3	57.07	24	58.40
3	57.42	19	57.13	4	57.54	25	57.89
4	57.81	20	57.13	5	57.79	26	57.87
5	57.15	21	57.47	6	57.28	27	58.31
6	57.66	22	57.49	13	58.16	28	58.46
7	58.26	23	57.18	14	57.72	29	58.72
8	57.88	24	57.75	15	58.30	31	58.78
9	57.53						

Geauga County

Ge-1. Village of Chardon. In Chardon, at municipal water standpipe. Abandoned drilled well, diameter 8 inches, depth 360 feet. Measuring point, floor of recorder shelter, 1.0 foot above land-surface datum. Automatic water-stage recorder installed May 16, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	50.99	51.41	52.10	52.17	52.48	52.60	52.94
2	.....	51.05	51.58	52.09	52.30	52.57	52.51	53.12
3	.....	51.09	51.65	52.01	52.38	52.66	52.53	53.05
4	.....	51.00	51.62	51.99	52.42	52.70	52.77	52.90
5	.....	51.00	51.53	52.05	52.43	52.43	52.89	52.70
6	.....	50.92	51.40	52.06	52.33	52.71	52.67	52.75
7	.....	50.78	51.42	52.13	52.28	52.53	52.50	52.75
8	.....	50.89	51.48	52.20	52.31	52.40	52.45	52.77
9	.....	51.21	51.58	52.14	52.34	52.31	52.71	52.73
10	.....	51.21	51.64	51.20	52.18	52.34	52.63	52.65
11	.....	50.88	51.59	52.32	52.36	52.32	52.76	52.70
12	.....	50.73	51.75	52.38	52.53	52.64	52.90	52.46
13	.....	51.07	51.78	52.40	52.53	52.81	52.79	52.59
14	.....	51.18	51.78	52.46	52.47	52.80	.....	52.60
15	.....	51.21	51.98	52.35	52.49	52.76	.....	52.65
16	51.05	51.11	51.93	52.21	52.50	52.57	.....	52.69
17	51.14	50.99	51.88	52.13	52.53	52.34	.....	52.80
18	51.03	51.09	51.79	52.13	52.51	52.48	.....	52.89
19	51.25	51.12	51.71	52.17	52.46	52.65	52.77	53.01
20	51.12	51.04	51.82	52.33	52.28	52.73	52.70	52.84
21	51.37	51.08	51.81	52.31	52.20	52.76	52.65	52.45
22	51.50	51.26	51.77	52.36	52.35	52.65	52.63	52.87
23	51.41	51.32	51.96	52.42	52.41	52.54	52.75	52.84
24	51.23	51.21	52.00	52.39	52.55	52.47	52.59	52.65
25	51.08	51.17	52.00	52.35	52.46	52.30	52.64	52.82
26	51.12	51.28	52.14	52.32	52.48	52.71	52.65	52.92
27	51.07	51.58	52.13	52.19	52.58	52.84	52.89	52.90
28	51.22	51.39	52.07	52.11	52.59	52.83	52.94	52.78
29	51.25	51.39	52.03	52.20	52.49	52.63	52.89	52.80
30	51.12	51.33	51.99	52.20	52.51	52.48	52.82	53.10
31	50.93		52.06	52.13		52.57		53.29

Ge-2. D. L. Cameron. About 5 miles southwest of Burton, 0.8 mile east of State Highway 44, in farmyard. Abandoned drilled well, diameter 6 inches, depth 60.8 feet. Measuring point, floor of recorder shelter, 3.4 feet above land-surface datum. Automatic water-stage recorder installed May 22, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	10.81	12.84	13.97	14.64	15.12	15.23	15.22
2	.....	10.81	12.94	13.97	14.66	15.15	15.24	15.21
3	.....	10.93	13.01	14.00	14.70	15.17	15.24	15.19
4	.....	11.07	13.05	14.03	14.73	15.18	15.28	15.19
5	.....	11.23	13.08	14.05	14.75	15.20	15.28	15.19
6	.....	11.30	13.13	14.08	14.77	15.20	15.25	15.18
7	.....	11.44	13.20	14.14	14.80	15.21	15.25	15.19
8	.....	11.62	13.21	14.16	14.81	15.22	15.29	15.19
9	.....	11.84	13.26	14.14	14.81	15.23	15.30	15.19
10	.....	11.86	13.30	14.24	14.80	15.24	15.29	15.19
11	.....	11.88	13.35	14.25	14.85	15.25	15.28	15.11
12	.....	11.79	13.41	14.27	14.86	15.24	15.27	15.03
13	.....	12.06	13.44	14.30	14.86	15.23	15.25	14.95
14	.....	12.17	13.50	14.32	14.89	15.22	.....	14.87
15	.....	12.20	13.57	14.32	14.91	15.23	.....	14.87
16	.....	12.27	13.58	14.32	14.93	15.21	.....	14.88
17	.....	12.25	13.60	14.30	14.96	15.21	.....	14.91
18	.....	12.20	13.63	14.28	14.97	15.21	.....	14.86
19	.....	12.07	13.68	14.34	14.98	15.19	15.29	14.88
20	.....	11.96	13.68	14.38	15.00	15.19	15.31	14.82
21	.....	12.01	13.65	14.37	15.02	15.20	15.31	14.87
22	11.05	12.14	13.66	14.44	15.05	15.19	15.34	14.92
23	11.08	12.20	13.65	14.46	15.06	15.18	15.35	14.87
24	11.17	12.27	13.73	14.49	15.06	15.18	15.33	14.83
25	11.20	12.35	13.77	14.51	15.08	15.18	15.35	.....
26	11.05	12.50	13.81	14.53	15.10	15.21	15.33	.....
27	10.64	12.56	13.83	14.54	15.12	15.21	15.22	.....
28	10.48	12.61	13.86	14.58	15.13	15.20	15.20	.....
29	10.60	12.69	13.89	14.57	15.14	15.20	15.18	.....
30	10.74	12.73	13.90	14.57	15.13	15.20	15.16	.....
31	10.88		13.93	14.61		15.23		14.72

#### Greene County

Gr-1 (\*1016, p. 295; 1023, p. 303). Xenia Water Works. About 2.8 miles north of the corporate limits of Xenia.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	7.62	9.02	7.40	7.35	7.42	7.57	7.79	8.71	8.63	9.79	8.94	8.50
2	7.80	9.11	7.42	7.56	7.38	7.31	7.86	9.09	9.78	9.79	9.33	9.02
3	7.86	8.94	7.48	7.53	7.74	7.43	7.92	9.00	9.76	9.65	9.03	8.71
4	7.91	9.07	7.53	7.60	7.68	7.52	7.90	9.01	9.76	9.79	8.88	8.62
5	8.01	8.49	7.60	7.65	7.70	7.54	8.12	9.08	10.00	9.91	8.98	8.60
6	7.90	6.52	7.70	7.60	7.70	7.56	8.09	8.59	9.90	9.31	9.05	8.60
7	7.99	7.18	7.54	7.69	7.60	7.62	7.80	8.85	10.02	9.90	8.99	8.60
8	7.92	7.19	7.38	7.48	7.70	7.70	7.90	9.12	9.50	9.30	9.01	8.40
9	7.81	7.62	7.35	7.59	7.73	7.60	7.92	8.92	10.03	9.71	9.08	8.60
10	7.80	7.57	7.22	7.69	7.76	7.77	8.08	9.20	9.92	9.34	9.00	8.52
11	7.70	7.41	7.51	7.50	7.60	8.00	8.45	8.80	10.00	9.28	8.90	8.68
12	7.80	9.32	7.58	7.82	7.69	7.80	8.48	9.00	9.30	9.18	9.06	8.67
13	7.70	9.08	7.61	7.82	7.60	7.60	8.52	9.15	9.70	9.10	9.11	7.90
14	7.93	7.67	7.63	7.83	7.43	7.45	8.33	9.33	9.36	....	9.05	7.95
15	8.66	7.01	7.44	7.66	7.39	7.44	8.55	8.08	9.53	9.26	9.05	8.00
16	8.16	7.30	7.46	7.56	7.42	7.55	8.65	8.79	10.30	9.28	9.05	8.14
17	8.22	7.31	7.42	7.59	7.26	7.39	8.80	8.85	10.42	9.50	9.09	8.79

Gr-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
18	8.52	7.49	7.40	8.28	7.29	6.58	8.95	8.40	10.22	9.04	9.05	8.34
19	8.60	7.50	7.14	8.18	7.21	6.60	9.05	8.99	10.22	9.13	9.12	8.57
20	8.48	7.40	7.20	7.99	7.41	6.80	8.98	8.90	10.33	9.10	9.20	8.46
21	8.59	7.50	7.25	8.02	7.29	6.89	8.49	9.02	10.28	10.88	9.30	8.49
22	8.71	7.61	7.25	9.10	7.38	7.11	8.58	9.03	9.68	10.95	10.01	8.47
23	8.71	7.61	7.37	8.35	7.49	7.12	8.47	8.80	9.43	9.91	10.50	8.80
24	8.72	7.60	7.19	7.93	7.29	7.30	8.26	9.00	9.28	9.36	10.40	8.61
25	8.88	7.78	7.38	8.04	7.30	7.48	8.40	8.86	9.66	9.15	9.28	8.51
26	8.76	7.80	7.40	7.85	7.18	7.60	8.55	9.20	9.70	9.00	8.65	8.51
27	8.83	7.18	7.39	7.91	7.38	7.80	8.50	9.53	9.68	8.99	8.12	8.59
28	9.11	7.32	7.35	7.97	7.66	7.70	8.59	9.26	9.83	9.06	8.27	8.50
29	8.78		7.41	7.75	7.78	7.62	8.94	8.93	9.38	9.02	8.30	8.33
30	9.00		7.34	7.60	7.64	7.60	8.90	9.27	9.90	9.00	8.75	7.90
31	8.85		7.30		7.52		8.39	9.60		9.00		8.00

Hamilton County

T-74 (\*906, p. 190; \*936, p. 217; \*944, p. 217; \*986, p. 255; 1016, p. 296; 1023, p. 303). Frederick Hauck. On Crescentville Road, in Sycamore Township.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	6.88	Apr. 9	7.92	July 8	7.13	Oct. 8	11.24
15	6.69	16	7.08	15	7.77	15	11.53
22	7.89	23	7.12	23	7.15	22	11.66
29	7.29	29	7.31	30	7.17	29	11.78
Feb. 5	7.30	May 7	7.08	Aug. 6	7.68	Nov. 5	11.66
12	6.58	13	5.38	13	8.62	12	11.06
19	5.50	21	5.18	19	7.89	19	10.59
26	6.13	28	6.38	27	8.67	26	9.65
Mar. 5	6.49	June 4	6.86	Sept. 3	9.43	Dec. 2	9.47
11	6.37	11	7.07	10	9.87	10	9.17
19	6.19	18	6.90	17	10.35	17	8.39
26	6.47	25	7.15	24	10.74	24	8.30
Apr. 2	6.46	July 1	6.92	Oct. 1	11.02	31	7.71

T-75 (\*906, p. 190; \*936, p. 217; \*944, p. 218; \*986, p. 255; 1016, p. 296; 1023, p. 304). Frederick Hauck. On Crescentville Road, in Sycamore Township.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	7.25	Apr. 9	7.32	July 8	7.53	Oct. 8	9.54
15	7.13	16	7.38	16	7.83	15	9.75
22	7.56	23	7.54	23	7.14	22	9.83
29	7.77	30	7.65	29	7.12	29	9.96
Feb. 5	7.71	May 7	7.38	Aug. 5	7.55	Nov. 5	9.86
12	7.03	14	5.29	12	8.10	12	9.68
19	6.33	21	5.73	20	7.98	19	9.44
26	6.80	28	6.69	27	8.28	26	7.95
Mar. 5	7.04	June 4	7.36	Sept. 3	8.58	Dec. 3	8.19
12	6.80	11	7.55	10	8.81	10	8.19
19	6.50	18	7.35	17	9.03	17	7.48
26	6.74	25	7.63	24	9.82	24	7.54
Apr. 2	6.94	July 2	7.04	Oct. 1	9.42	31	7.00



204-4 (\*886, p. 587; \*906, p. 190; \*936, p. 217; \*944, p. 218; \*986, p. 255; 1016, p. 296; 1023, p. 304). Albert Sorter Estate. In Sycamore Township. No measurements made in 1946.

T-67 (\*906, p. 191; \*936, p. 218; \*944, p. 219; \*986, p. 256; 1016, p. 297; 1023, p. 304). Emmitt Ferris. In Sycamore Township.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	4.06	Apr. 8	3.83	July 8	4.28	Oct. 7	7.10
14	3.83	15	3.92	15	4.55	14	7.30
21	4.15	22	4.08	22	3.47	21	7.34
28	4.35	29	4.14	29	3.51	28	7.39
Feb. 4	4.46	May 6	4.02	Aug. 5	4.47	Nov. 4	7.37
11	3.75	13	3.84	12	4.91	11	7.20
18	2.83	20	2.07	19	4.56	18	7.21
25	3.30	27	3.07	26	5.31	26	5.72
Mar. 4	3.58	June 3	3.66	Sept. 4	5.85	Dec. 2	6.31
11	3.52	10	4.00	9	6.10	9	6.36
18	3.10	17	3.95	16	6.48	16	5.17
25	3.64	24	4.13	23	6.41	23	5.32
Apr. 1	3.61	July 1	4.04	30	6.90	30	4.74

T-8 (\*886, p. 583; \*906, p. 194; \*936, p. 220; \*944, p. 220; \*986, p. 258; 1016, p. 299; 1023, p. 306). St. Rita School for Deaf Children. Near crossing of Glendale-Milford Road and Pennsylvania Railroad.

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

Jan. 7	18.64	Apr. 8	17.23	July 8	17.53	Oct. 7	18.33
14	18.69	15	17.32	15	17.53	14	18.39
21	18.70	22	17.30	22	17.64	21	18.47
28	18.72	29	17.30	30	17.72	28	18.54
Feb. 4	18.73	May 6	17.39	Aug. 5	17.77	Nov. 4	18.61
11	18.72	13	17.47	12	17.86	11	18.67
18	18.67	20	17.37	19	17.85	18	18.77
25	18.42	27	17.29	26	17.94	25	18.82
Mar. 4	18.16	June 3	17.24	Sept. 4	18.01	Dec. 2	18.92
11	17.93	10	17.22	9	18.00	9	18.99
18	17.77	17	17.32	16	18.13	16	19.04
25	17.68	24	17.40	23	18.19	24	19.10
Apr. 1	17.58	July 1	17.44	30	18.26	31	19.17

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). Village of Glendale. At Municipal Water Plant, in Sycamore Township.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	42.81	43.90	43.55	44.31	43.59	42.33	43.05	44.70	45.26	46.04	47.63	48.45
2	43.23	44.51	43.47	43.49	42.84	42.05	43.15	43.95	45.01	45.85	49.37	48.23
3	43.85	46.44	45.15	42.99	43.77	42.64	43.06	48.09	45.35	46.36	47.61	48.51
4	42.85	44.45	43.75	43.44	43.30	42.35	42.57	45.21	45.16	46.60	47.60	48.48
5	42.70	43.95	43.22	43.23	43.37	42.33	42.85	44.35	44.90	46.55	48.17	48.55
6	43.58	44.64	44.92	42.87	43.75	.....	43.13	44.14	45.44	47.55	48.74	48.19
7	42.85	44.51	43.95	43.60	43.51	.....	42.55	43.77	45.09	45.05	47.94	48.55
8	42.95	44.33	43.58	42.96	43.04	.....	44.07	43.84	44.99	45.63	48.04	51.24
9	42.77	44.16	44.53	43.05	42.55	.....	46.35	44.79	44.88	45.81	50.98	48.51
10	43.05	43.22	43.33	43.23	43.11	.....	46.25	44.48	45.06	46.40	48.26	48.27
11	42.65	43.76	43.94	43.57	43.25	.....	43.67	44.22	44.94	48.27	49.36	48.45
12	43.45	43.95	43.91	43.45	45.16	.....	42.65	44.31	45.20	48.61	47.88	48.23
13	42.95	43.75	43.27	43.55	43.15	.....	43.68	45.15	45.37	.....	48.10	49.38
14	43.53	43.24	43.56	44.80	43.48	41.99	43.63	44.42	48.29	41.86	48.22	48.55
15	43.16	43.90	43.83	42.87	42.77	42.22	43.75	44.91	44.94	46.83	48.16	48.90

a Tape measurement.

207-3--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
16	43.05	43.86	44.02	42.97	43.58	42.15	43.77	45.17	45.37	46.62	48.49	48.57
17	43.00	44.95	45.77	42.96	42.65	41.95	43.70	47.74	45.45	48.05	48.67	48.95
18	42.98	44.15	45.27	43.62	42.48	42.77	43.86	45.09	45.27	47.45	48.55	49.11
19	43.56	44.55	43.47	43.35	42.72	42.96	43.81	44.66	45.63	47.03	48.67	49.03
20	45.45	44.56	44.35	43.32	42.47	42.92	43.43	45.14	45.44	47.00	48.17	48.50
21	43.85	44.65	43.35	42.66	42.45	42.76	43.91	44.77	48.87	46.90	48.13	51.45
22	43.55	44.03	43.64	43.38	42.39	44.63	43.45	44.95	46.28	46.73	48.55	49.42
23	43.25	44.85	43.76	43.24	42.10	43.31	43.46	46.27	45.28	47.13	48.35	49.00
24	43.23	43.97	43.77	43.00	42.40	42.84	43.47	44.90	46.34	47.16	50.21	49.34
25	43.49	44.27	43.55	43.23	43.53	43.09	44.06	45.07	45.86	47.93	48.27	49.05
26	43.33	43.25	43.01	42.99	42.47	42.95	44.75	44.86	45.55	49.94	48.24	48.97
27	44.04	43.75	43.42	43.76	41.76	42.58	44.58	45.02	45.35	47.32	48.24	48.56
28	43.67	44.74	43.00	45.57	42.26	42.70	43.32	44.94	49.93	47.08	48.03	48.58
29	43.86		43.64	42.85	42.55	43.65	44.73	44.93	.....	48.05	48.61	48.17
30	43.75		42.98	42.87	42.47	43.16	44.30	45.26	44.75	48.92	48.35	48.56
31	43.79		46.20		41.96		43.54	47.74		47.31		49.32

a Tape measurement.

212-1 (\*845, p. 382; \*886, p. 193; \*936, p. 219; \*944, p. 220; \*986, p. 257; 1016, p. 298; 1023, p. 305). Johns-Manville Corporation. In Sycamore Township.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	45.37	46.14	45.60	45.23	45.49	44.32	44.97	45.80	47.14	48.20	49.56	50.58
2	45.46	46.29	45.52	45.08	45.24	44.55	44.98	45.98	47.16	48.19	49.62	50.70
3	45.55	46.36	45.52	44.97	45.41	44.70	45.07	46.04	47.23	48.19	49.66	50.53
4	45.49	46.26	45.60	45.12	45.28	44.72	45.00	46.04	47.19	48.33	49.95	50.59
5	45.35	46.00	45.58	45.43	45.35	44.66	44.98	45.97	47.23	48.35	49.99	50.35
6	45.30	46.01	45.51	45.28	45.39	44.74	44.92	45.82	47.32	48.35	49.98	50.33
7	45.51	46.29	45.72	45.19	45.62	44.65	44.92	46.08	47.23	48.15	49.70	50.38
8	45.45	46.22	45.66	45.01	45.66	44.69	44.87	46.17	47.34	47.98	49.96	50.57
9	45.15	46.11	45.74	45.16	45.55	44.82	45.06	46.07	47.22	48.16	50.07	50.40
10	45.55	46.07	45.62	45.27	45.53	44.82	45.44	46.25	47.22	48.34	50.00	50.41
11	45.34	46.25	45.69	45.18	45.39	44.65	45.25	46.33	47.30	48.48	50.29	50.42
12	46.21	46.20	45.39	45.27	45.71	44.67	45.15	46.46	47.53	48.80	50.27	50.30
13	45.95	45.96	45.72	45.28	45.79	44.73	45.31	46.46	47.49	48.80	50.22	50.72
14	45.55	45.97	45.25	45.17	45.70	44.97	45.33	46.48	.....	48.89	50.21	50.58
15	45.59	46.11	45.40	45.03	45.59	44.93	45.52	46.46	.....	48.89	50.31	50.63
16	45.82	46.02	45.33	45.31	45.38	44.81	45.52	46.52	.....	48.85	50.39	50.58
17	45.76	46.04	45.31	45.19	45.28	44.70	45.49	46.58	.....	48.83	50.60	50.78
18	45.53	46.03	45.30	45.28	44.93	44.72	45.46	46.52	.....	49.02	50.52	50.92
19	45.86	45.65	45.36	45.12	45.01	44.89	45.48	46.55	.....	49.11	50.30	50.96
20	45.54	45.80	45.50	45.23	44.97	44.82	45.58	46.70	.....	49.21	50.27	50.83
21	45.75	45.87	45.52	45.28	45.00	45.00	45.49	46.66	.....	49.21	50.12	50.63
22	45.91	45.65	45.32	45.29	45.08	45.17	45.47	47.10	47.62	49.10	50.42	50.99
23	45.71	45.55	45.35	44.98	44.89	45.10	45.50	47.16	47.76	49.15	50.37	50.85
24	45.69	45.45	45.32	45.07	44.48	45.05	45.54	47.05	47.95	49.16	50.22	50.79
25	45.61	45.35	45.35	45.04	44.33	44.87	45.73	46.98	47.84	49.03	50.36	50.92
26	45.99	45.12	45.28	45.03	44.66	45.13	45.94	46.92	47.89	49.37	50.43	50.93
27	46.11	45.54	45.30	45.39	44.75	45.28	45.77	46.95	47.99	49.44	50.57	50.76
28	46.14	45.75	45.13	45.22	44.69	45.12	45.74	46.94	48.24	49.45	50.57	50.67
29	46.14		45.18	45.21	44.73	45.10	45.74	47.01	48.10	49.52	50.50	50.87
30	45.72		45.34	45.35	44.48	44.98	45.72	47.02	47.98	49.56	50.53	51.00
31	46.01		45.48		44.44		45.77	47.14		49.56		51.15

214-3 (\*886, p. 583; \*906, p. 195; \*936, p. 220; \*944, p. 220; \*986, p. 258; 1016, p. 299; 1023, p. 306). Tennessee Corporation. Near crossing of Glendale-Milford Road and Big Four Route tracks in Sycamore Township.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	27.71	Apr. 8	26.55	July 15	26.78	Oct. 7	28.86
14	27.73	15	26.65	22	26.85	14	29.04
21	27.81	22	26.74	30	27.09	21	29.17
28	27.95	29	26.86	Aug. 5	27.27	28	29.32
Feb. 4	28.08	May 6	26.99	12	27.45	Nov. 4	29.45
11	28.00	13	27.12	19	27.64	11	29.91
18	27.58	20	27.71	26	27.82	25	29.83
25	27.23	27	26.40	Sept. 4	28.00	Dec. 2	29.75
Mar. 4	27.43	June 3	26.36	9	28.14	9	29.60
11	26.88	10	26.32	16	28.33	16	29.58
18	26.78	17	26.36	23	27.82	23	29.39
25	26.62	July 1	26.56	30	28.69	30	29.49
Apr. 1	26.62	8	26.59				

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). Pennsylvania Railroad Co. On Harry F. Pittman farm, in Sycamore Township.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	30.01	Apr. 22	29.77	June 3	29.51	Aug. 12	29.81
21	30.03	May 6	29.74	24	29.54	Oct. 14	30.08
Mar. 18	29.75	20	29.63	July 30	29.69	Dec. 2	30.19
Apr. 4	29.86						

216-C (\*936, p. 224; \*944, p. 222; \*986, p. 259; 1016, p. 300, 1023, p. 307). Wright Aeronautical Corporation. In Lockland.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	76.77	Apr. 8	76.39	July 8	76.66	Oct. 7	78.10
14	79.65	15	76.40	15	76.91	14	78.76
21	76.96	22	76.49	22	77.37	21	81.83
28	77.05	29	76.62	30	77.10	28	79.25
Feb. 4	77.04	May 6	77.75	Aug. 5	77.12	Nov. 4	79.78
11	77.16	13	77.89	12	77.66	11	79.65
18	77.25	20	76.77	19	77.49	18	80.01
25	76.64	27	76.79	26	77.72	25	79.94
Mar. 4	76.95	June 3	76.87	Sept. 4	77.87	Dec. 2	81.33
11	77.19	10	76.75	9	77.72	9	80.14
18	76.61	17	76.59	16	77.88	16	81.43
25	76.71	24	79.70	23	77.80	23	81.79
Apr. 1	76.49	July 1	76.77	30	78.20	30	80.82

216-D (\*936, p. 223; \*944, p. 222; \*986, p. 259; 1016, p. 300; 1023, p. 307). Wright Aeronautical Corporation. In Lockland.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	84.49	Mar. 11	84.98	May 13	84.92	July 15	84.50
14	84.72	18	84.28	20	84.58	22	84.46
21	84.39	25	84.43	27	84.49	30	84.72
28	83.82	Apr. 1	84.39	June 3	84.55	Aug. 5	84.71
Feb. 4	84.88	8	84.13	10	84.61	12	85.07
11	84.72	15	83.99	17	84.40	19	84.90
18	84.98	22	84.34	24	84.56	26	85.17
25	84.48	29	84.23	July 1	84.44	Sept. 4	85.32
Mar. 4	84.70	May 6	84.63	8	84.41	9	85.20

216-D--Continued.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 16	85.40	Oct. 14	86.14	Nov. 11	86.60	Dec. 9	87.23
23	85.18	21	86.35	18	87.26	16	87.20
30	85.66	28	86.55	25	86.69	23	87.43
Oct. 7	85.66	Nov. 4	86.56	Dec. 2	87.50	30	87.71

216-E (\*936, p. 224; \*944, p. 222; \*986, p. 259; 1016, p. 300; 1023, p. 307). Wright Aeronautical Corporation. In Lockland.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	58.43	58.46	58.49	58.12	58.97	58.04	58.46	58.90	59.51	60.14	60.86	62.26
2	58.46	58.68	58.40	57.97	58.62	58.02	58.66	58.78	59.61	60.10	60.87	62.26
3	58.31	58.82	58.53	58.05	58.52	58.39	58.60	58.83	59.46	60.15	61.00	62.18
4	58.31	58.67	58.40	58.15	58.31	58.42	58.52	58.75	59.60	60.27	61.53	62.07
5	58.05	58.40	58.43	58.29	58.75	58.15	58.47	58.82	59.55	60.32	61.43	61.85
6	58.00	58.15	58.31	58.12	58.77	58.42	58.35	58.86	59.56	60.21	61.22	61.85
7	58.20	58.63	58.50	58.12	58.75	58.15	58.32	59.02	61.33	60.10	60.85	61.94
8	58.25	58.64	58.48	57.90	58.87	58.00	58.27	59.15	59.33	59.84	60.96	62.00
9	58.10	58.46	58.55	58.13	58.75	58.54	58.37	58.87	61.39	59.92	61.29	62.06
10	58.28	58.46	58.58	58.17	58.84	58.27	58.34	58.99	61.19	60.10	61.14	61.85
11	58.28	58.73	58.63	58.15	58.48	58.35	58.15	59.16	61.37	60.22	61.57	61.95
12	58.40	58.76	58.44	58.15	58.88	58.10	58.46	59.26	61.46	60.50	61.75	61.55
13	58.50	58.43	58.28	58.15	59.16	58.00	58.50	59.25	61.15	60.70	61.64	62.20
14	58.40	58.44	58.15	57.93	58.98	58.45	58.39	59.30	61.59	60.64	61.45	62.22
15	58.38	58.94	58.11	57.86	58.81	58.45	58.50	59.26	60.95	60.62	61.62	62.13
16	58.38	61.18	58.11	58.14	58.53	58.25	58.57	59.34	59.50	60.51	61.50	62.07
17	58.10	61.38	57.98	58.14	58.61	58.30	58.70	59.12	61.13	60.31	61.91	62.40
18	58.24	58.79	58.06	58.05	58.27	58.11	58.55	59.03	59.07	60.37	61.93	62.41
19	58.19	58.45	58.35	58.11	58.72	58.25	58.43	59.15	61.24	60.84	61.60	62.51
20	58.46	58.65	58.80	58.11	58.48	58.29	58.60	59.25	60.96	60.82	61.54	62.18
21	58.59	58.75	58.50	58.18	58.87	58.50	58.57	59.28	59.48	60.86	61.41	62.96
22	58.43	58.37	58.23	58.02	58.77	58.35	58.47	59.30	61.07	60.71	61.72	62.38
23	58.07	58.24	58.16	57.82	57.25	58.65	58.57	59.30	59.55	60.70	61.85	62.53
24	58.08	58.26	58.05	57.83	58.54	58.49	58.75	59.36	59.99	60.65	61.82	62.31
25	58.56	58.26	58.11	57.67	58.40	58.20	58.76	59.35	59.65	60.50	61.49	62.48
26	58.70	57.82	58.05	57.90	58.47	58.72	58.80	59.35	59.96	60.94	61.84	62.33
27	58.70	58.42	58.14	58.05	58.20	58.62	58.82	59.33	60.06	61.13	61.92	62.16
28	60.37	58.57	58.05	58.11	58.54	58.61	58.75	59.46	59.95	61.12	62.14	62.21
29	58.81		57.84	58.10	58.48	58.51	58.63	59.46	60.11	61.03	61.97	62.18
30	58.25		58.25	58.47	58.40	58.36	58.62	59.48	59.95	60.90	61.93	62.65
31	58.37		58.34		58.19		58.79	59.23		61.11		62.89

236-4 (\*936, p. 226; \*944, p. 223; \*986, p. 260; 1016, p. 301; 1023, p. 308). E. I. duPont de Nemours Co., Grasselli Chemicals Division. In Lockland.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	122.40	Mar. 4	121.01	Apr. 29	119.59	June 24	121.14
14	122.27	11	121.68	May 6	119.71	July 8	121.18
21	122.19	18	121.06	13	120.06	15	121.47
28	122.19	25	121.45	20	119.74	22	121.48
Feb. 4	121.78	Apr. 1	121.20	27	120.39	30	121.88
11	121.72	8	121.17	June 3	121.02	Aug. 5	121.86
18	121.60	15	119.96	10	121.12	12	122.55
25	120.93	22	119.67	17	120.79	19	122.23

236-4--Continued.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 26	122.56	Sept. 30	123.57	Nov. 4	124.46	Dec. 9	124.50
Sept. 4	123.16	Oct. 7	123.67	11	124.34	16	123.94
9	123.16	14	124.08	18	124.98	23	123.97
16	123.40	21	124.28	25	124.23	30	125.05
23	123.22	28	124.02	Dec. 2	125.10		

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). Village of Wyoming. At municipal water plant, in Wyoming.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	143.50	142.33	141.73	141.72	141.60	141.54
2	143.92	142.59	141.55	141.47	141.41	141.52
3	143.87	142.97	141.93	141.56	141.33	141.75
4	144.05	142.98	141.76	141.63	141.20	141.83
5	144.05	142.35	141.53	141.92	141.24	141.87
6	143.00	142.00	141.60	141.90	141.55	141.71
7	143.66	141.97	141.75	141.56	141.38	141.38
8	143.40	142.32	141.69	141.40	141.65	141.31
9	142.85	142.54	142.63	141.70	141.57	142.07
10	142.83	141.84	142.64	142.15	141.40	142.31
11	143.14	142.14	142.67	141.97	141.42	142.25
12	143.42	142.74	142.46	141.91	141.49	142.25
13	142.72	142.14	142.28	141.88	141.93	142.35
14	143.05	141.82	141.96	141.88	141.64	142.47
15	143.05	142.44	142.17	141.79	141.22	142.52
16	143.18	141.95	141.79	141.87	141.07	141.77
17	142.92	142.22	142.03	141.77	141.17	141.80
18	142.77	142.48	142.15	141.64	141.23	142.04
19	142.43	142.06	142.40	141.78	141.25	142.28
20	142.73	141.95	142.46	142.13	141.20	142.26
21	142.36	142.12	142.30	141.62	141.40	142.50
22	142.50	142.10	141.64	141.94	141.89	142.67
23	142.43	141.90	142.04	141.62	141.72	142.61
24	141.97	141.30	141.52	141.45	141.41	142.59
25	141.96	141.60	142.26	141.33	141.45	142.64
26	142.97	141.40	142.00	141.77	141.60	142.73
27	142.32	141.74	141.96	141.92	141.48	142.79
28	142.73	141.81	141.70	141.43	141.62	142.86
29	142.91		141.66	141.52	141.90	142.73
30	141.90		141.79	141.56	142.00	142.62
31	142.13		142.22		141.74	

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	142.54	143.01	142.97	145.45	145.30	145.32
2	142.71	143.00	143.55	145.31	145.01	145.53
3	142.85	143.00	143.69	145.45	145.75	145.21
4	142.51	.....	143.64	145.51	145.40	145.21
5	142.57	142.92	143.14	145.61	145.00	145.13
6	142.50	142.97	143.63	144.80	145.00	145.15
7	142.64	143.07	143.36	144.98	143.65	145.13
8	142.49	143.11	143.87	144.91	144.65	145.15
9	142.40	142.97	143.67	144.87	144.90	145.20
10	142.59	143.13	143.44	145.03	144.93	144.72
11	142.64	143.24	143.27	145.04	145.26	144.62

237-3--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
12	142.74	143.42	143.40	145.17	.....	144.36
13	142.45	143.50	143.42	145.18	.....	144.88
14	142.21	143.52	143.42	145.39	145.26	145.15
15	142.65	143.42	143.47	145.53	145.37	144.64
16	142.73	143.38	143.62	145.34	145.94	144.55
17	142.60	143.39	145.28	145.15	145.92	144.94
18	142.67	143.39	145.32	145.03	145.52	145.27
19	142.76	143.37	144.63	145.25	145.45	145.54
20	142.78	143.54	144.63	144.98	145.43	145.31
21	142.72	143.63	144.17	145.31	145.43	144.52
22	142.52	143.61	144.39	145.40	145.60	145.35
23	142.82	143.71	144.84	145.22	145.60	144.28
24	142.88	143.67	145.15	145.30	144.80	144.90
25	142.70	143.77	145.06	145.17	145.02	144.86
26	142.97	143.77	145.17	145.48	145.04	144.13
27	143.03	143.68	145.27	145.31	144.80	144.50
28	142.86	143.47	145.07	145.50	144.90	144.86
29	142.85	143.67	145.12	145.35	145.19	144.76
30	142.85	143.60	145.32	145.31	145.18	145.06
31	142.91	143.63		145.43		145.50

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). Gardner-Richardson Co. On South Cooper Ave., in Lockland.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	127.11	128.18	127.39	127.21	129.91	128.99
2	127.11	128.14	127.28	127.05	129.64	129.18
3	127.25	128.20	127.39	127.15	129.35	129.23
4	127.31	127.86	127.22	127.34	129.35	129.25
5	127.10	128.06	127.22	127.44	129.39	129.23
6	127.17	128.19	127.06	127.30	129.22	129.14
7	127.40	128.72	127.24	127.31	129.16	129.01
8	127.44	128.33	127.19	127.15	129.20	130.00
9	127.34	127.82	127.28	127.40	129.38	129.87
10	127.45	127.76	127.30	127.77	129.65	130.52
11	127.45	127.84	127.37	128.08	129.15	129.95
12	127.60	127.88	127.12	128.82	129.29	129.55
13	127.68	127.48	127.03	128.95	129.35	129.60
14	127.50	128.15	127.05	129.05	129.43	129.70
15	127.60	128.41	127.77	129.23	129.67	129.73
16	127.50	128.05	127.68	129.69	130.05	129.58
17	127.27	127.85	127.16	129.78	130.22	129.41
18	127.20	127.84	127.03	130.01	129.62	129.38
19	127.30	127.45	127.22	130.11	129.65	129.50
20	127.27	127.86	127.28	130.35	129.38	129.50
21	127.84	127.74	127.13	130.48	129.60	129.62
22	127.97	127.33	126.95	129.76	129.65	129.74
23	127.79	127.25	126.94	130.08	129.42	129.79
24	127.63	127.23	126.86	130.18	129.22	129.57
25	127.62	127.24	127.06	130.26	129.17	129.40
26	127.94	127.00	127.14	130.55	129.20	129.50
27	128.06	127.44	127.22	130.79	129.17	129.55
28	127.83	127.53	127.15	130.85	129.25	129.85
29	128.30		126.97	130.82	129.30	130.06
30	128.24		127.43	130.34	129.21	129.70
31	128.16		127.52		129.00	

241-3--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	129.52	130.14	132.89	131.69	.....	132.15
2	129.60	130.10	132.89	131.68	.....	132.19
3	129.90	130.04	132.84	131.70	.....	131.95
4	129.92	130.07	132.98	131.75	131.75	131.93
5	129.53	130.39	133.08	131.80	131.98	131.75
6	129.38	130.26	132.55	131.78	131.63	131.83
7	129.40	130.22	132.12	131.34	131.19	131.93
8	129.32	130.29	131.90	131.45	131.49	132.02
9	129.29	130.11	131.73	131.66	131.60	131.83
10	129.33	130.35	131.58	131.89	131.32	131.85
11	129.36	130.40	131.63	132.03	131.67	131.92
12	129.43	130.38	131.68	131.64	131.71	131.82
13	129.45	130.40	131.68	.....	131.64	132.25
14	129.46	130.43	131.67	131.35	131.56	132.24
15	129.17	130.33	131.53	131.50	131.64	131.94
16	129.05	130.35	131.63	131.57	131.70	132.05
17	129.20	130.33	131.61	131.57	131.58	132.43
18	129.45	130.32	131.64	132.05	131.55	132.44
19	129.70	130.39	131.61	132.20	131.45	132.48
20	129.70	130.49	131.45	131.98	131.45	132.17
21	130.05	130.53	131.49	131.84	131.45	132.31
22	129.50	130.55	131.63	131.69	131.36	132.54
23	129.72	130.65	131.64	132.00	132.05	132.09
24	129.76	131.26	131.75	132.17	132.50	131.82
25	129.93	131.71	131.62	131.71	131.59	131.79
26	130.00	131.90	131.63	131.94	131.80	131.72
27	130.08	132.05	131.70	132.06	132.06	131.70
28	130.29	132.25	131.77	131.86	132.05	131.76
29	130.40	132.56	131.72		131.85	132.08
30	130.10	132.63	131.65		131.68	132.21
31	130.08	132.78				132.25

242-T-1 (\*944, p. 226; \*986, p. 263; 1016, p. 304; 1023, p. 310).  
Philip Carey Mfg. Co. On South Wayne Ave., in Lockland.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	139.83	Mar. 25	139.65	(a)		Oct. 21	141.59
14	139.92	Apr. 1	139.53	Aug. 12	140.47	28	140.89
21	140.09	8	139.47	19	140.50	Nov. 4	140.99
28	140.21	22	139.70	26	141.80	11	140.65
Feb. 4	139.98	May 6	140.13	Sept. 4	140.70	18	141.20
11	140.22	20	140.04	9	140.74	25	140.72
18	140.40	27	140.15	16	140.74	Dec. 9	141.53
25	139.93	June 3	140.27	30	141.13	16	140.92
Mar. 4	139.95	17	140.07	Oct. 7	140.86	23	141.08
11	140.10	24	140.37	14	141.18	30	141.18
18	139.90						

a Dry July 1--Aug. 5.

246-1 (\*1016, p. 304; 1023, p. 311). National Distiller's Corporation.  
At company's plant at Wayne Ave. and 78th St., in Carthage.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	108.30	107.89	107.00	105.92	105.60	104.73
2	108.41	108.10	106.70	105.91	105.55	104.87
3	108.62	107.82	106.70	105.93	105.43	105.10
4	108.60	107.55	106.80	105.96	105.18	106.61

246-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
5	108.23	107.61	106.70	106.00	105.40	106.90
6	108.00	107.63	106.80	105.76	105.40	107.00
7	108.50	107.51	106.68	105.77	105.39	107.08
8	108.42	107.70	106.60	105.80	105.48	105.64
9	108.50	107.72	106.46	105.90	105.41	105.69
10	108.50	107.42	106.52	105.90	105.43	107.00
11	108.30	107.39	106.58	105.90	105.20	107.10
12	108.52	107.58	106.50	105.93	105.22	107.25
13	108.12	107.30	106.72	105.84	105.51	107.40
14	108.13	107.49	106.55	105.50	105.43	107.59
15	108.42	107.54	106.64	105.59	105.40	106.00
16	108.30	107.48	106.45	105.82	105.29	105.71
17	108.21	107.19	106.12	106.01	105.31	107.21
18	108.13	107.22	106.46	105.83	105.17	107.32
19	108.22	107.29	106.22	105.79	105.12	107.52
20	108.00	107.15	106.35	105.59	106.11	107.50
21	108.22	107.18	106.59	105.49	106.30	107.47
22	108.22	106.92	106.31	105.54	106.38	106.02
23	108.09	106.75	106.29	105.55	106.24	105.78
24	107.92	108.73	106.09	105.55	106.12	106.92
25	107.79	107.28	106.14	105.47	105.91	105.90
26	107.23	107.00	106.13	105.51	105.90	105.58
27	107.80	107.22	106.18	105.47	105.95	106.40
28	108.05	107.70	106.09	105.32	105.02	106.92
29	107.99		105.98	105.52	105.11	105.66
30	107.68		105.90	105.60	105.04	105.59
31	107.89		106.12		104.82	

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	105.52	107.72	106.82	108.90	108.88	106.85
2	106.40	107.90	106.63	108.15	108.97	107.29
3	106.00	106.30	107.95	108.81	108.51	107.07
4	105.21	105.82	110.26	109.18	108.62	107.12
5	105.30	108.03	108.32	109.86	108.61	107.21
6	105.20	107.55	108.40	109.28	108.40	107.18
7	105.04	107.82	106.66	108.83	107.92	107.17
8	105.91	108.40	106.39	108.49	107.93	106.66
9	106.03	110.10	107.39	109.78	107.95	106.97
10	105.82	109.00	110.30	109.90	107.58	107.02
11	105.98	108.52	107.85	109.75	107.83	107.03
12	106.11	108.93	107.76	109.93	107.81	106.90
13	106.20	109.06	107.52	108.88	107.69	107.30
14	105.31	109.00	108.95	108.68	107.50	107.13
15	106.82	109.57	108.43	108.63	107.48	106.60
16	107.35	109.61	108.81	108.49	107.40	106.84
17	107.58	108.34	109.10	108.37	107.47	107.21
18	107.05	107.73	108.99	108.38	107.41	107.28
19	106.47	108.78	109.18	108.38	107.24	107.18
20	105.60	108.90	109.22	108.11	107.18	.....
21	105.30	109.02	109.00	108.20	107.08	.....
22	105.51	108.89	107.87	108.27	107.15	.....
23	105.98	108.88	108.56	108.37	108.40	106.54
24	107.03	107.25	107.89	108.28	.....	106.81
25	107.61	107.00	107.80	108.27	107.22	106.39
26	107.50	108.41	107.75	108.36	107.00	106.92
27	106.00	108.49	107.79	108.30	107.14	106.69
28	105.60	108.45	108.00	108.61	107.23	106.79
29	107.41	108.53	108.85	108.67	107.70	106.45
30	107.37	108.54	109.40	108.72	107.04	107.01
31	107.88	107.12		108.87		107.02



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). Flintkote Co. At 75th St. and Longview Ave., in Carthage.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	110.35	Apr. 8	108.95	July 8	108.29	Oct. 7	108.96
14	110.20	15	109.00	15	108.35	14	109.20
21	110.08	22	108.90	22	108.23	21	109.30
28	110.07	29	110.81	30	108.31	28	109.32
Feb. 4	109.98	May 6	108.75	Aug. 5	108.34	Nov. 4	109.59
11	109.93	13	108.78	12	108.62	11	109.24
18	109.89	20	108.52	19	108.64	18	109.40
25	108.59	27	108.45	26	108.74	25	109.04
Mar. 4	109.56	June 3	108.52	Sept. 4	108.75	Dec. 2	109.33
11	109.60	10	108.55	9	108.68	9	109.06
18	109.28	17	108.45	16	108.81	16	108.99
25	109.27	24	108.52	23	108.83	23	108.99
Apr. 1	109.12	July 1	108.30	30	108.96	30	109.23

265 (\*886, p. 575; \*906, p. 205; \*936, p. 229; \*944, p. 227; \*986, p. 263; 1016, p. 305; 1023, p. 312). Cities Service Co. In Cincinnati.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	131.91	Apr. 8	129.62	July 8	132.44	Oct. 7	134.54
14	131.26	15	129.60	15	132.30	14	134.90
21	131.13	22	129.90	22	132.45	21	134.99
28	131.05	29	130.40	30	132.85	28	135.11
Feb. 4	131.88	May 6	130.78	Aug. 6	133.17	Nov. 4	135.31
11	130.83	13	131.25	12	133.65	11	135.09
18	130.76	20	131.08	19	133.70	18	135.14
25	130.30	27	131.96	26	133.93	25	134.25
Mar. 4	130.35	June 3	131.91	Sept. 4	134.09	Dec. 2	134.20
11	130.52	10	132.22	9	134.13	9	133.43
18	130.00	17	134.05	16	134.33	16	132.96
25	129.05	24	132.64	23	134.48	23	132.70
Apr. 1	129.90	July 1	132.73	30	134.65		

270-A-4 (\*886, p. 574; \*906, p. 206; \*936, p. 230; \*944, p. 227; \*986, p. 264; 1016, p. 306; 1023, p. 313). Procter & Gamble Co. In Cincinnati.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	88.86	88.49	88.24	87.91	87.78	88.60	90.05	91.84	92.17	92.75	92.20	91.30
2	88.85	88.53	88.20	87.85	87.72	88.67	90.32	91.81	92.50	92.94	92.43	91.23
3	88.69	88.56	88.25	87.92	87.63	88.72	90.60	91.75	92.60	93.05	92.62	91.07
4	88.68	88.44	88.10	88.01	88.15	88.68	90.70	91.22	92.65	93.16	92.57	90.98
5	88.50	88.25	88.11	88.04	88.81	88.87	90.85	91.45	92.66	93.21	92.31	90.84
6	88.59	88.22	88.01	87.91	88.95	88.95	90.95	91.76	92.65	93.14	92.14	90.81
7	88.67	88.46	88.19	87.92	89.10	88.10	90.85	92.04	92.63	92.62	91.85	90.79
8	88.68	88.44	88.13	87.85	89.18	88.16	90.94	92.12	91.98	92.67	92.03	90.80
9	88.65	88.28	88.23	87.96	89.31	89.21	91.14	92.31	92.10	92.99	92.32	90.76
10	88.67	88.32	88.20	87.92	89.37	89.37	91.24	92.36	92.39	93.04	92.76	90.66
11	88.66	88.42	88.20	87.89	89.27	89.57	91.37	90.92	92.59	93.14	93.15	90.67
12	88.71	88.42	88.01	87.91	89.16	89.75	91.39	91.25	92.75	93.32	93.17	90.60
13	88.73	88.17	88.00	87.87	89.32	89.12	91.35	91.59	92.79	93.35	93.15	90.82
14	88.61	88.35	87.92	87.75	89.42	90.33	90.55	91.82	92.83	93.26	93.14	90.71
15	88.64	88.62	87.97	87.75	89.50	90.35	90.90	92.02	92.31	93.22	93.20	90.60
16	88.64	88.37	87.97	87.90	89.57	89.75	91.01	92.13	92.47	93.14	93.26	90.55
17	88.47	88.32	87.92	87.84	89.62	90.01	91.36	92.14	92.72	93.10	93.50	90.75
18	88.45	88.33	87.97	87.78	89.43	90.37	91.54	91.52	92.78	93.24	93.47	90.70
19	88.58	88.15	88.11	87.80	89.14	90.52	91.72	91.92	92.84	93.25	93.28	90.63
20	88.49	88.35	88.16	87.84	89.44	90.70	91.46	92.21	92.77	93.05	92.64	90.43

270-A-4--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
21	88.68	88.37	88.08	87.85	89.73	90.85	91.08	92.30	92.73	93.05	92.22	90.47
22	88.70	88.10	87.89	87.81	89.80	90.94	91.40	92.48	92.50	92.97	92.05	90.63
23	88.51	88.10	87.95	87.69	89.72	90.75	91.66	92.56	92.85	93.01	91.94	90.48
24	88.40	88.15	87.93	87.71	89.42	90.83	91.76	92.50	92.96	93.02	91.60	90.44
25	88.40	88.15	87.94	87.64	89.27	90.94	91.90	92.37	92.86	93.09	91.50	90.48
26	88.64	88.05	87.95	87.73	89.10	91.20	91.95	92.41	92.93	93.20	91.50	90.37
27	88.68	88.30	87.99	87.82	89.10	91.28	91.95	92.50	92.95	93.01	91.50	90.35
28	88.54	88.34	87.92	87.82	88.95	91.24	92.00	92.57	92.98	92.61	91.50	90.36
29	88.54		87.80	87.77	89.02	90.52	92.04	92.67	92.61	92.74	91.29	90.74
30	88.26		88.09	87.80	88.94	89.87	92.04	92.59	92.57	92.45	91.16	90.57
31	88.47		88.11		88.60		91.85	92.57		92.26		90.50

270-T-7 (\*886, p. 574; \*906, p. 205; \*936, p. 230; \*944, p. 228; \*986, p. 264; 1016, p. 306; 1023, p. 313). Procter &amp; Gamble Co. In Cincinnati.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	122.55	Apr. 8	120.94	July 8	125.24	Oct. 14	128.31
14	122.74	15	120.94	15	124.83	21	128.24
21	122.27	22	121.28	22	125.43	28	128.31
28	122.34	29	121.84	30	126.22	Nov. 4	128.30
Feb. 4	122.10	May 6	122.44	Aug. 5	126.53	11	127.83
11	121.77	13	122.78	12	127.01	18	127.46
18	121.93	20	123.36	19	127.32	25	126.22
25	121.61	27	123.81	26	127.45	Dec. 2	125.86
Mar. 4	121.60	June 3	124.33	Sept. 4	127.68	9	125.20
11	121.78	10	125.28	16	128.15	16	124.76
18	121.32	17	125.53	23	128.30	23	124.46
25	121.30	24	126.11	30	128.05	30	124.03
Apr. 1	121.24	July 1	125.91	Oct. 7	128.10		

294-A (\*1016, p. 306; 1023, p. 314). Rollman Co. Between Race and Vine Sts., in Cincinnati.

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

Jan. 10	106.18	Mar. 30	103.89	June 20	126.88	Oct. 25	106.62
18	102.62	Apr. 15	106.25	July 25	129.74	Nov. 21	111.57
25	104.91	May 1	111.42	Aug. 16	118.49	Dec. 12	104.12
Feb. 1	105.22	16	125.86	Sept. 11	129.82	27	104.68
Mar. 6	100.07						

298-2 (\*1016, p. 307; 1023, p. 314). Hudepohl Brewing Co. At Stone and 6th Sts., in Cincinnati. New measuring point, beginning Aug. 16, 1946, 4.8 feet below land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level
Aug. 16	69.31	Oct. 25	71.99	Dec. 12	71.90
Sept. 9	70.68	Nov. 21	73.00	27	71.97

301-A (\*1016, p. 307; 1023, p. 314). Palace Theater. At Vine and 6th Sts., in Cincinnati.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	106.10	Mar. 6	102.16	May 16	122.86	Oct. 25	106.54
18	104.66	30	109.35	June 20	124.53	Nov. 21	111.23
25	104.80	Apr. 15	107.94	July 25	127.41	Dec. 12	106.10
Feb. 1	105.11	May 1	113.28	Aug. 16	128.79	27	107.24

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). Globe-Wernicke Co. At Norwood and Carthage Aves., in Norwood.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 4	187.89	June 17	187.91	Sept. 23	187.90	Dec. 23	188.78
Apr. 22	189.30	July 29	187.90	Nov. 11	187.94		

300-3. Union Central Life Insurance Co. In engine room of building at Fourth and Vine Sts., in Cincinnati. Abandoned drilled well, 113 feet deep (ending in gravel), diameter 8 inches. Measuring point, top of casing, 34 feet below land-surface datum.

Water level, in feet below land-surface datum, 1945- 46

Date	Water level	Date	Water level	Date	Water level
Sept. 28, 1945	85.37	Mar. 30, 1946	80.00	Aug. 16 *	84.25
Dec. 12	82.32	Apr. 15	81.32	Sept. 11	85.24
Jan. 10, 1946	81.73	May 1	82.89	Oct. 25	84.83
18	79.89	16	84.41	Nov. 21	82.50
25	80.84	June 20	82.48	Dec. 12	84.43
Feb. 1	81.82	July 25	84.83	27	83.92
Mar. 3	81.35				

#### Hancock County

Ha-1. W. T. Miller. 3 miles east of Williamstown, at old schoolhouse on north side of U. S. Route 30N. Abandoned drilled well, diameter 4 inches, depth 45 feet. Measuring point, floor of recorder shelter, 1.5 feet above land-surface datum. Automatic water-stage recorder installed Aug. 16, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 16	12.86	Sept. 3	13.77	Sept. 27	14.37	Oct. 15	15.14
17	12.93	4	13.72	28	14.62	16	15.40
18	13.15	5	13.87	29	14.56	17	15.09
19	13.00	6	13.96	30	14.58	18	15.01
20	13.22	7	14.02	Oct. 1	14.65	19	15.18
21	13.24	8	14.00	2	14.73	20	15.42
22	13.20	9	14.09	3	14.72	21	15.27
23	13.32	10	13.81	4	14.66	22	15.25
24	13.35	11	14.05	5	14.89	23	15.37
25	13.52	12	13.97	6	14.94	24	15.21
26	13.34	13	13.95	7	14.96	25	15.20
27	13.36	14	14.03	8	14.87	26	15.36
28	13.43	15	14.03	9	14.88	27	15.43
29	13.40	16	14.11	10	14.96	28	15.47
30	13.46	17	14.12	11	14.92	Nov. 1	15.40
31	13.56	18	14.28	12	15.06	2	15.45
Sept. 1	13.69	19	14.22	13	15.20	3	15.48
2	13.54	20	14.19	14	15.19	4	15.63

Ha-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Nov. 8	15.61	Nov. 20	15.62	Dec. 2	15.89	Dec. 16	15.31
9	15.63	21	15.72	3	15.91	17	15.52
10	15.53	22	15.76	4	15.82	18	15.52
11	15.72	23	15.69	5	15.68	19	15.52
12	15.73	24	15.64	6	15.57	20	15.38
13	15.63	25	15.71	7	15.74	21	15.16
14	15.65	26	15.65	8	15.81	27	15.13
15	15.71	27	15.86	9	15.72	28	15.14
16	15.59	28	15.78	10	15.58	29	15.13
17	15.76	29	15.95	11	15.61	30	15.13
18	15.71	30	15.81	12	15.62	31	15.13
19	15.75	Dec. 1	15.78	13	15.63		

Hardin County

Hn-1. Village of Alger. In Alger, at grain elevator off State Highway 69. Drilled well, diameter 6 inches, depth 140 feet. Measuring point, floor of recorder shelter, 1.5 feet above land-surface datum. Automatic water-stage recorder installed Apr. 2, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	7.92	7.71	a5.85	8.54	9.57	.....	11.66	10.77
2	....	7.68	7.65	.....	8.70	9.13	.....	11.67	10.91
3	7.27	7.80	7.56	.....	8.75	8.75	.....	11.67	10.44
4	7.46	7.55	8.13	.....	8.54	8.75	.....	11.74	10.53
5	7.28	....	7.81	.....	8.55	8.95	.....	12.06	10.42
6	7.37	....	7.90	.....	8.75	9.99	.....	12.07	10.46
7	7.45	7.66	8.00	.....	8.73	10.20	a10.53	11.57	11.12
8	7.35	7.56	7.90	a6.30	8.81	9.95	.....	11.77	10.87
9	7.44	7.91	8.27	.....	8.90	10.25	.....	11.65	11.13
10	7.43	8.00	8.15	.....	8.63	10.33	.....	11.84	10.93
11	7.69	7.52	8.00	.....	8.65	10.20	.....	11.52	11.14
12	7.73	7.54	7.75	.....	8.76	10.38	.....	11.80	10.45
13	7.57	7.76	7.87	.....	9.06	.....	.....	11.87	10.82
14	7.66	7.94	7.62	.....	9.14	10.32	a11.42	11.80	10.90
15	7.76	7.92	7.80	7.67	8.95	.....	.....	11.85	9.40
16	7.62	7.71	7.80	7.94	8.78	10.38	12.04	11.64	10.47
17	7.86	7.65	6.58	8.10	9.03	.....	12.26	11.61	10.66
18	7.69	7.58	7.48	8.16	9.12	.....	11.90	11.68	10.23
19	7.57	7.68	7.25	8.13	8.40	.....	11.53	11.78	10.63
20	7.96	7.60	6.60	8.26	8.91	.....	12.13	11.40	10.62
21	7.79	7.60	7.37	8.15	9.25	.....	11.96	11.50	.....
22	7.72	7.72	7.26	8.05	9.15	10.37	11.83	11.50	.....
23	7.77	7.52	7.18	7.84	9.25	10.30	11.84	12.00	9.77
24	7.72	7.47	7.01	8.19	9.18	.....	11.76	11.26	10.05
25	....	7.46	7.05	8.25	9.28	.....	11.83	11.64	9.99
26	7.78	7.48	7.05	8.25	9.32	.....	11.10	11.65	9.39
27	7.83	7.42	7.03	8.43	9.35	.....	11.85	11.48	9.20
28	7.85	7.57	7.02	8.47	9.00	.....	11.83	10.83	.....
29	7.70	7.74	7.03	8.17	9.35	.....	11.85	10.84	.....
30	7.88	7.77	7.03	8.81	9.46	.....	11.68	10.83	8.88
31		7.83		8.32	9.30		11.30		8.86

a Tape measurement.

Hn-2. Edward Abaier. At southeast edge of Dola, on northside of State Highway 81, at electric power substation. Abandoned drilled well, diameter 4 inches, depth 50 feet. Measuring point, floor of recorder shelter, 2.3 feet above land-surface datum. Automatic water-stage recorder installed Apr. 3, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	17.82	17.26	16.08	16.90	18.59	20.12	.....	24.86
2	.....	17.78	17.25	16.16	16.96	18.60	20.15	.....	24.78
3	17.25	17.78	17.29	16.17	17.03	18.63	20.15	.....	24.78
4	17.34	17.77	17.27	16.18	17.08	18.66	20.39	a22.39	24.87
5	17.47	17.77	17.28	16.17	17.13	18.77	20.51	.....	24.68
6	17.42	17.71	17.22	16.17	17.19	18.85	20.51	.....	24.61
7	17.47	17.73	17.18	16.21	17.23	18.89	20.67	.....	24.86
8	17.45	17.73	17.23	16.23	17.27	18.92	20.55	.....	24.82
9	17.55	17.73	17.32	16.28	17.34	19.04	20.78	.....	24.94
10	17.59	17.74	17.32	16.30	17.35	19.10	20.72	.....	24.84
11	17.58	17.66	17.26	16.23	17.37	19.19	20.78	a22.55	24.80
12	17.66	17.70	17.19	16.29	17.44	19.28	20.89	.....	24.73
13	17.62	17.70	17.06	16.32	17.51	19.33	21.13	.....	24.80
14	17.60	17.64	17.06	16.32	17.55	19.47	21.00	.....	24.86
15	17.68	17.65	17.00	16.42	17.64	19.54	21.25	.....	24.82
16	17.74	17.62	16.90	16.40	17.75	19.63	21.30	.....	24.80
17	17.73	17.61	17.03	16.40	17.86	19.68	21.14	.....	24.95
18	17.83	17.62	16.67	16.42	17.93	19.71	21.26	a23.48	24.95
19	17.83	17.63	16.50	16.42	18.02	19.74	21.31	.....	24.94
20	17.88	17.52	16.30	16.51	18.08	19.74	21.62	23.92	24.88
21	17.88	17.65	16.26	16.52	18.12	19.82	21.52	23.97	24.50
22	17.83	17.68	16.33	16.50	18.18	19.93	21.70	23.90	24.86
23	17.79	17.60	16.23	16.59	18.24	19.99	21.66	24.10	24.93
24	17.79	17.53	16.16	16.65	18.28	20.02	21.62	24.32	24.84
25	17.68	17.34	16.14	16.72	18.32	20.09	21.65	24.40	24.78
26	17.71	17.23	16.22	16.70	18.36	20.20	22.00	24.11	24.92
27	17.79	17.24	16.26	16.70	18.38	20.12	21.90	24.33	24.82
28	17.83	17.26	16.13	16.73	18.42	20.12	21.94	24.56	25.01
29	17.75	17.30	16.10	16.77	18.47	20.12	22.04	24.68	25.06
30	17.80	17.26	15.99	16.77	18.49	20.12	22.12	24.63	25.02
31		17.20		16.85	18.53		22.12		24.93

a Tape measurement.

### Henry County

Hy-1. A. F. Beam. 2 miles north of Deshler, on northeast corner of road intersection, at ruins of old schoolhouse. Abandoned drilled well, diameter 4 inches, depth 81 feet. Measuring point, floor of recorder shelter, 4.0 feet above land-surface datum. Automatic water-stage recorder installed Oct. 16, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 16	21.39	Oct. 29	21.30	Nov. 17	21.23	Nov. 30	21.14
17	21.40	30	21.26	18	21.22	Dec. 1	21.23
18	21.29	31	21.27	19	21.16	2	21.26
19	21.36	Nov. 7	20.97	20	21.13	3	21.24
20	21.35	8	21.07	21	21.13	4	21.22
21	21.34	9	21.09	22	21.15	5	21.19
22	21.33	10	21.09	23	21.15	6	21.20
23	21.27	11	21.09	24	21.12	7	21.21
24	21.20	12	21.10	25	21.13	8	21.21
25	21.22	13	21.10	26	21.13	9	21.22
26	21.31	14	21.06	27	21.14	10	21.19
27	21.35	15	21.09	28	21.16	11	21.18
28	21.35	16	21.08	29	21.16	12	21.07

Hy-1. -Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Dec. 12	21.07	Dec. 17	21.19	Dec. 22	21.20	Dec. 27	21.20
13	21.10	18	21.23	23	21.19	28	21.13
14	21.12	19	21.23	24	21.18	29	21.15
15	21.13	20	21.22	25	21.19	30	21.23
16	21.13	21	21.13	26	21.19	31	21.32

Knox County

K-1. City of Mt. Vernon. In Mt. Vernon, on West High St., near well house in municipal well field and near pumping station. Drilled test well, diameter 8 inches, depth 90 feet. Measuring point, floor of recorder shelter, 1.0 foot above land-surface datum. Automatic water-stage recorder installed Apr. 18, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Apr.	May	June	July	Aug.	Sept.	Oct.
1.	....	4.50	4.12	6.20	8.49	8.68	10.39
2	....	4.61	4.00	6.43	9.35	9.46	10.61
3	....	5.86	4.98	6.92	9.09	9.54	11.81
4	....	4.77	5.20	6.00	8.93	9.41	10.87
5	....	4.33	4.89	6.10	11.21	9.72	10.90
6	....	4.37	4.92	6.62	9.40	10.16	.....
7	....	4.79	4.93	5.30	11.10	10.20	.....
8	....	5.08	5.03	7.24	11.50	9.50	.....
9	....	5.49	5.01	9.10	11.47	11.60	.....
10	....	4.87	4.96	8.40	11.39	10.12	.....
11	....	4.62	5.10	7.60	10.00	10.82	.....
12	....	4.15	7.70	7.52	11.45	11.70	.....
13	....	4.78	7.30	7.70	11.86	10.06	.....
14	....	5.10	7.43	6.32	11.62	10.05	.....
15	....	5.36	5.90	7.10	10.45	10.05	.....
16	....	5.35	5.78	7.50	10.24	10.06	.....
17	....	5.27	6.61	7.50	9.90	10.87	.....
18	4.31	5.50	6.51	9.60	8.40	11.78	.....
19	4.41	5.02	5.42	7.40	10.70	10.64	.....
20	4.16	5.43	5.40	7.40	9.81	10.62	.....
21	4.11	5.30	5.61	5.70	10.67	10.73	.....
22	4.26	6.45	6.20	7.00	11.05	10.74	.....
23	4.61	6.30	5.29	7.40	11.30	11.42	.....
24	4.57	5.70	6.35	7.41	10.86	11.51	.....
25	4.55	5.10	5.40	7.70	8.76	10.50	.....
26	4.48	4.64	8.25	7.55	9.81	11.31	.....
27	4.19	5.20	6.51	7.58	10.01	10.81	.....
28	4.25	5.22	6.40	6.91	9.91	10.50	.....
29	4.42	5.50	6.61	7.55	9.86	9.03	.....
30	4.51	4.85	5.67	7.62	9.70	10.70	.....
31		4.74		7.53	9.71		.....

Logan County

Lo-1. Ohio State Grange. 2 miles west of Bellefontaine, at abandoned township school No. 2, on State Highway 47. Abandoned drilled well, diameter 4 inches, depth 120 feet. Measuring point, floor of recorder shelter, 2.0 feet above land-surface datum.

Lo-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	17.25	.....	16.73	18.21	19.19	20.16	20.98	21.78
2	.....	.....	.....	16.81	18.21	19.24	20.19	21.05	21.73
3	.....	.....	.....	16.90	18.25	19.26	20.24	21.07	21.76
4	.....	.....	.....	16.92	18.28	19.29	20.29	21.14	21.79
5	.....	.....	.....	16.93	18.30	19.30	20.32	21.16	21.82
6	.....	.....	17.27	16.99	18.33	19.34	20.34	21.16	21.84
7	.....	.....	17.33	17.07	18.39	19.39	20.33	21.12	21.86
8	.....	.....	17.42	17.11	18.42	19.42	20.35	21.23	21.88
9	.....	.....	17.52	17.12	18.41	19.43	20.36	21.26	21.85
10	.....	.....	17.52	17.21	18.51	19.45	20.40	21.25	21.81
11	.....	.....	17.49	17.29	18.54	19.51	20.44	21.33	21.81
12	.....	.....	17.50	17.38	18.56	19.57	20.53	21.34	21.87
13	.....	.....	17.55	17.40	18.60	19.58	20.55	21.32	21.87
14	.....	.....	17.57	17.44	18.65	19.61	20.54	21.37	21.78
15	.....	.....	17.58	17.52	18.64	19.64	20.56	21.40	21.74
16	.....	.....	17.56	17.56	18.68	19.67	20.56	21.43	21.71
17	.....	.....	17.57	17.57	18.69	19.71	20.56	21.52	21.76
18	.....	.....	17.18	17.61	18.71	19.76	20.69	21.52	21.76
19	.....	.....	17.14	17.65	18.78	19.78	20.71	21.49	21.75
20	.....	.....	16.73	17.71	18.81	19.78	20.75	21.53	21.69
21	.....	.....	16.66	17.71	18.85	19.87	20.75	21.52	21.74
22	.....	.....	16.75	17.75	18.91	19.89	20.75	21.59	21.83
23	.....	.....	16.80	17.86	18.92	19.94	20.78	21.58	21.84
24	16.98	.....	16.79	17.92	18.93	19.96	20.78	21.58	21.86
25	17.00	.....	16.79	17.97	18.97	19.99	20.82	21.65	21.86
26	17.08	.....	16.88	18.02	18.99	20.03	20.89	21.68	21.88
27	17.19	.....	16.83	18.03	19.01	20.06	20.92	21.70	21.86
28	17.20	.....	16.76	18.07	19.04	20.09	20.92	21.70	21.92
29	17.17	.....	16.64	18.08	19.09	20.14	20.92	21.72	21.92
30	17.23	.....	16.62	18.10	19.10	20.14	20.94	21.69	21.94
31	.....	.....	.....	18.18	19.15	.....	20.98	.....	21.99

Lucas County

Lu-1. State Hospital. In Toledo, in orchard at hospital, Detroit Ave. and Arlington St. Abandoned drilled well, diameter 12 inches, depth 250 feet. Measuring point, floor of recorder shelter, 1.0 foot above land-surface datum. Automatic water-stage recorder installed Mar. 12, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	85.75	85.97	.....	85.25	85.36	85.54	85.47	85.24	85.75
2	.....	85.48	85.87	.....	85.38	85.33	85.64	85.43	85.02	85.85
3	.....	85.67	85.46	85.36	85.43	85.20	.....	85.47	85.02	85.85
4	.....	85.48	85.17	85.36	85.42	85.17	85.58	.....	85.32	85.87
5	.....	85.68	85.16	85.35	85.35	85.22	85.57	.....	85.59	85.79
6	.....	.....	85.24	85.28	85.25	85.20	85.48	.....	85.59	86.11
7	.....	85.66	85.16	85.12	85.25	85.25	85.46	.....	.....	86.04
8	.....	85.49	85.20	85.11	85.20	85.30	85.49	.....	.....	85.78
9	.....	85.80	85.24	85.48	85.20	85.25	85.44	.....	.....	85.64
10	.....	85.93	85.33	85.57	85.24	85.25	.....	.....	.....	85.48
11	.....	85.92	85.13	.....	85.20	85.39	85.23	.....	.....	85.41
12	85.69	85.88	85.32	85.10	.....	85.49	.....	.....	85.47	85.07
13	85.69	85.83	85.54	85.30	.....	85.51	.....	.....	85.26	85.02
14	85.67	85.73	85.40	85.46	.....	85.50	.....	.....	.....	.....
15	85.66	85.80	85.29	85.50	.....	85.40	.....	.....	.....	.....
16	85.66	85.79	85.11	85.29	.....	85.30	.....	85.12	.....	.....
17	85.48	85.79	85.14	85.16	.....	85.27	85.50	85.20	.....	85.38
18	85.52	85.73	.....	85.25	85.15	85.21	85.51	85.41	.....	85.54

## Lu-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
19	85.88	85.75	85.14	85.27	85.05	85.18	85.46	85.56	.....	85.56
20	85.87	85.86	85.01	85.18	85.11	85.32	85.40	85.63	85.46	85.47
21	85.82	85.89	85.27	85.20	85.09	85.40	85.17	85.50	85.46	85.07
22	85.70	85.69	85.42	85.40	85.05	85.50	85.14	85.45	85.43	85.34
23	85.76	85.48	85.35	85.51	85.10	85.60	85.15	85.35	85.44	85.33
24	85.51	85.69	85.19	85.41	85.17	85.55	85.33	.....	85.25	85.18
25	85.53	85.46	85.12	85.27	85.35	.....	85.31	.....	85.28	85.22
26	85.48	85.48	85.18	85.29	85.42	.....	85.35	.....	85.29	85.32
27	85.56	85.63	85.20	85.40	85.42	.....	85.37	.....	85.55	85.32
28	85.53	85.73	.....	85.40	85.37	85.46	85.38	.....	85.59	85.08
29	85.35	85.72	.....	85.40	85.28	85.58	85.46	.....	85.53	85.17
30	85.86	85.85	.....	85.22	85.20	85.58	85.49	85.32	85.47	85.50
31	85.92	.....	.....	.....	85.30	85.47	.....	85.17	.....	85.67

Lu-2. Henry Miller. In Toledo, at Succor and Dorr Sts., in boiler room of Miller's greenhouse. Abandoned drilled well, diameter 12 inches, depth 100 feet. Measuring point, floor of recorder shelter, 1.8 feet above land-surface datum. Automatic water-stage recorder installed Mar. 26, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	63.23	63.66	63.37	65.06	.....	.....	66.27	66.13	66.12
2	.....	63.12	63.74	63.30	65.12	.....	.....	66.29	65.93	66.18
3	.....	.....	63.96	63.38	65.32	.....	.....	66.32	65.96	66.15
4	.....	.....	63.91	63.47	65.27	.....	.....	.....	66.11	66.17
5	.....	.....	63.53	63.61	65.08	.....	.....	.....	66.16	66.13
6	.....	.....	63.26	63.71	65.07	.....	.....	.....	66.16	66.35
7	.....	62.31	63.46	63.88	64.99	67.33	.....	.....	66.10	66.35
8	.....	62.22	63.68	63.97	.....	67.36	.....	.....	.....	66.32
9	.....	62.41	63.97	63.99	.....	67.35	.....	.....	.....	66.04
10	.....	62.85	64.06	64.23	65.78	67.33	.....	.....	.....	66.02
11	.....	62.64	63.96	.....	66.11	67.23	.....	.....	.....	66.06
12	.....	62.70	63.65	64.45	66.29	66.80	.....	.....	66.04	65.97
13	.....	62.69	63.47	64.60	66.29	67.28	.....	.....	66.06	66.00
14	.....	62.68	63.40	64.71	66.24	.....	.....	.....	.....	66.04
15	.....	62.41	63.34	64.89	66.03	.....	.....	.....	.....	66.00
16	.....	62.53	63.34	64.88	66.60	.....	.....	.....	.....	65.99
17	.....	62.61	63.26	64.79	.....	.....	.....	.....	.....	66.08
18	.....	62.72	63.13	64.51	66.65	.....	.....	.....	.....	66.25
19	.....	62.74	63.10	64.53	66.64	.....	.....	.....	.....	66.27
20	.....	62.89	63.08	64.46	66.59	.....	.....	.....	66.10	66.26
21	.....	62.89	63.30	64.50	66.16	67.67	.....	.....	66.10	66.06
22	.....	62.76	63.42	64.59	65.76	67.64	.....	.....	.....	66.12
23	.....	62.71	63.53	64.61	.....	67.79	.....	.....	.....	66.05
24	.....	62.86	63.53	64.69	66.00	67.76	.....	.....	.....	66.12
25	.....	62.83	63.50	64.95	66.20	67.52	66.30	.....	65.92	66.16
26	63.04	62.93	63.44	65.32	.....	67.69	66.42	.....	65.95	66.15
27	63.14	63.01	63.32	65.67	.....	67.84	66.51	.....	66.14	66.17
28	63.16	63.01	63.32	65.72	.....	.....	66.50	.....	66.17	66.06
29	63.15	63.05	63.41	65.59	.....	.....	66.40	.....	66.11	66.08
30	63.25	63.32	63.41	65.36	.....	.....	66.29	66.11	66.10	66.23
31	63.27	.....	63.33	.....	.....	.....	.....	66.15	.....	66.39



Madison County

M-1. Max A. Chenoweth. At east edge of Mt. Sterling, on U. S. Route 62, in rear of residence. Abandoned drilled well, diameter 4 inches, depth 60 feet. Measuring point, floor of recorder shelter, 0.5 foot above land-surface datum. Automatic water-stage recorder installed Mar. 6, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	24.58	25.06	24.34	24.34	25.39	26.24	27.68	26.99	27.00
2	.....	24.45	25.04	24.41	24.42	25.40	26.46	28.05	27.20	27.12
3	.....	24.52	25.01	24.86	24.48	.....	26.74	28.13	27.20	27.12
4	.....	24.63	25.10	24.73	24.54	.....	26.89	28.13	26.79	27.10
5	.....	24.68	25.10	24.70	24.62	.....	27.16	.....	27.06	27.07
6	25.33	24.70	25.13	24.59	24.62	.....	27.25	.....	27.04	27.05
7	25.25	24.68	25.12	24.57	24.53	.....	27.31	.....	26.88	27.06
8	25.18	24.70	25.23	24.65	24.49	.....	27.31	.....	26.76	27.06
9	25.21	24.88	25.19	24.71	24.36	.....	27.10	.....	26.83	27.03
10	25.21	24.90	25.18	24.74	24.53	25.58	27.20	.....	26.82	26.98
11	25.35	24.90	25.12	24.73	24.73	25.55	27.38	27.52	26.74	26.95
12	25.33	24.89	25.08	24.71	24.79	25.63	27.53	.....	26.80	26.83
13	25.22	24.95	25.22	24.62	24.86	25.71	27.53	.....	26.76	.....
14	25.21	24.85	25.20	24.58	24.86	25.79	27.49	.....	26.80	27.03
15	24.96	24.80	25.06	24.67	24.87	25.86	27.49	.....	26.83	27.03
16	24.94	24.84	24.99	24.64	24.97	25.78	27.83	.....	26.83	26.98
17	24.93	24.89	24.71	24.48	24.97	25.71	28.17	.....	26.92	27.07
18	24.82	24.91	24.64	.....	24.99	25.67	28.02	26.68	26.96	27.15
19	24.82	24.88	24.63	.....	25.04	25.82	28.02	27.01	26.96	27.19
20	24.82	24.94	24.59	.....	25.10	25.85	27.93	27.03	26.96	27.10
21	24.77	24.95	24.63	.....	25.10	25.82	.....	27.12	26.88	26.96
22	24.71	25.00	24.75	24.09	25.09	25.83	.....	27.02	26.91	27.07
23	24.73	25.14	24.75	24.18	25.09	25.83	.....	27.02	26.91	27.04
24	24.69	24.89	24.66	24.15	25.13	25.89	.....	26.92	26.88	27.01
25	24.75	24.84	24.68	24.24	25.21	25.89	.....	26.74	27.01	27.01
26	24.70	24.99	24.65	24.28	25.27	25.94	.....	26.96	26.96	26.98
27	24.72	25.01	24.51	24.26	25.33	26.13	27.83	.....	26.94	26.98
28	24.70	25.01	24.40	24.25	25.33	26.13	27.83	26.85	26.94	26.94
29	24.67	25.00	24.48	24.29	25.28	26.25	27.83	26.85	27.00	26.91
30	24.65	25.06	24.44	24.29	25.28	26.21	27.57	26.65	26.97	26.92
31	24.65	.....	24.35	.....	25.35	26.24	.....	26.73	.....	27.05

Mahoning County

Ma-1. Village of Canfield. 1 mile south of Canfield, east of State Highway 46, in municipal well field at county fairgrounds. Abandoned drilled well, diameter 10 inches, depth 300 feet. Measuring point, top of wooden recorder platform, 0.5 foot below land-surface datum. Automatic water-stage recorder installed May 28, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	110.01	109.51	.....	.....	110.65	109.62	49.50
2	.....	109.94	109.47	.....	.....	110.72	110.38	49.33
3	.....	109.89	.....	.....	.....	109.98	110.27	48.86
4	.....	109.77	.....	.....	.....	109.78	.....	48.83
5	.....	109.97	.....	.....	109.94	109.80	.....	48.65
6	.....	109.94	.....	.....	110.02	110.56	.....	79.90
7	.....	109.82	.....	.....	110.02	110.54	.....	94.00
8	.....	109.84	.....	.....	110.07	109.90	.....	99.55
9	.....	110.10	.....	.....	110.61	109.62	.....	103.00
10	.....	110.12	.....	.....	110.73	109.62	.....	105.03
11	.....	109.75	.....	.....	107.20	109.63	.....	105.72
12	.....	109.67	.....	.....	105.60	110.34	.....	106.00
13	.....	109.70	.....	.....	108.90	110.43	.....	106.22
14	.....	109.58	.....	95.40	109.40	110.47	.....	106.37

Ma-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
15	.....	109.49	.....	88.00	109.70	109.63	.....	106.63
16	.....	109.45	97.34	103.20	109.90	109.53	.....	96.50
17	.....	109.45	.....	108.50	110.48	109.43	.....	103.80
18	.....	109.46	.....	109.25	110.75	109.90	.....	106.72
19	.....	109.41	.....	109.71	110.00	110.20	54.51	107.03
20	.....	109.45	.....	109.80	109.10	110.20	54.38	107.03
21	.....	109.40	.....	110.00	109.60	109.54	53.67	83.30
22	.....	109.42	.....	110.35	109.82	109.35	53.02	73.20
23	.....	109.44	88.44	.....	109.96	109.31	52.61	90.70
24	.....	109.49	.....	.....	110.25	109.57	52.07	100.80
25	.....	109.45	.....	.....	110.70	109.96	51.54	.....
26	.....	109.41	.....	.....	110.70	109.71	51.19	.....
27	.....	109.20	.....	81.87	110.75	109.42	50.70	.....
28	110.10	109.54	.....	.....	109.80	109.35	50.43	.....
29	110.13	109.20	.....	.....	109.85	109.40	50.03	.....
30	110.05	109.33	.....	.....	110.50	110.00	49.81	.....
31	110.03	.....	.....	.....	.....	110.13	.....	.....

Marion County

Mn-1. Village of Larue. In Larue, on west side of State Highway 37, at southeast corner of Baptist Church. Unused drilled well, diameter 4 inches, depth 100 feet. Measuring point, floor of recorder shelter, 3.3 feet above land-surface datum. Automatic water-stage recorder installed Mar. 19, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	8.73	9.55	8.67	8.40	9.88	10.38	10.90	10.84	10.96
2	....	8.82	9.41	8.72	8.67	9.82	10.51	10.94	10.84	10.98
3	....	8.94	9.55	8.85	8.74	9.90	10.51	10.93	10.88	11.00
4	....	8.97	9.46	8.99	8.81	9.81	10.55	10.96	11.10	10.99
5	....	9.01	9.43	8.96	8.89	9.86	10.54	11.03	11.15	10.98
6	....	9.01	9.44	9.02	8.96	9.76	10.54	10.95	11.10	10.96
7	....	8.96	9.42	9.04	9.02	9.79	10.55	11.03	10.84	10.94
8	....	9.02	9.45	9.18	9.15	9.87	10.55	10.95	10.93	10.89
9	....	9.16	9.55	9.19	9.28	9.89	10.65	11.00	10.98	11.06
10	....	9.16	9.55	9.22	9.30	9.88	10.65	11.02	10.84	10.95
11	....	9.16	9.46	9.23	9.35	9.88	10.72	11.06	10.86	10.98
12	....	9.21	9.38	9.14	9.33	10.02	10.79	11.02	10.91	10.82
13	....	9.19	9.52	8.93	9.38	10.03	10.77	11.00	10.89	10.80
14	....	9.16	9.47	8.35	9.40	10.01	10.69	11.10	10.91	10.59
15	....	9.13	9.43	8.11	9.48	10.01	10.58	11.04	10.91	10.56
16	....	9.29	9.45	8.07	9.61	10.05	10.80	11.05	11.07	10.59
17	....	9.32	9.15	8.03	9.65	10.02	10.70	10.95	10.94	10.66
18	....	9.37	8.80	6.60	9.64	9.96	10.75	10.85	11.04	10.71
19	7.74	9.29	8.70	6.47	9.66	10.10	10.83	10.90	10.98	10.72
20	7.79	9.45	8.85	6.45	9.62	10.14	10.80	10.88	10.98	10.61
21	7.89	9.32	8.92	6.68	9.52	10.10	10.76	10.90	10.92	10.68
22	8.03	9.52	8.94	7.06	9.59	10.17	10.72	10.86	11.00	10.64
23	8.12	9.57	8.96	7.35	9.47	10.20	10.80	10.92	10.96	10.59
24	8.23	9.49	8.93	7.74	9.56	10.24	10.80	10.89	10.90	10.61
25	8.36	9.43	8.93	8.05	9.59	10.25	10.84	10.78	11.01	10.57
26	8.43	9.49	8.84	8.20	9.59	10.26	10.88	10.87	10.96	10.59
27	8.53	9.44	8.80	8.18	9.60	10.32	10.89	10.80	10.96	10.54
28	8.58	9.42	8.63	7.90	9.58	10.38	10.96	10.92	10.92	10.60
29	8.60	9.47	8.62	8.03	9.84	10.40	10.85	10.92	10.85	10.45
30	8.73	9.50	8.61	8.13	9.86	10.37	10.91	10.92	10.79	10.67
31	8.73	.....	8.65	.....	9.78	10.52	.....	10.93	.....	10.44

Medina County

Md-1. Village of Lodi. Near south corporation line of Lodi, in municipal well field. Drilled test well, diameter 6 inches, depth 65 feet. Measuring point, floor of recorder shelter, 1.5 feet above land-surface datum. Automatic water-stage recorder installed Sept. 17, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 17	22.56	Oct. 9	22.00	Oct. 26	20.86	Nov. 25	18.00
18	22.52	10	21.70	27	20.28	26	18.10
19	23.00	11	22.75	28	20.74	27	18.31
20	22.97	12	23.21	29	20.41	30	18.70
21	23.21	13	22.28	30	20.55	Dec. 1	17.85
22	23.30	14	22.00	Nov. 1	20.65	2	18.33
23	21.88	15	20.82	2	20.70	3	18.12
24	22.33	17	20.94	3	20.69	4	17.89
27	21.40	18	20.87	4	20.74	5	18.21
28	21.20	19	20.85	5	20.39	6	17.50
29	20.61	20	20.75	8	all 2.38	7	17.70
30	22.68	21	21.00	22	18.14	8	17.58
Oct. 1	22.30	22	20.97	23	17.88	13	all 6.14
4	22.30	24	20.54	24	18.07	20	all 1.84
8	23.20	25	20.72				

a Tape measurement.

Mercer County

Mr-1. S. O. Self. About 4 miles southwest of Rockford, 1 mile west of State Highway 118, at schoolhouse on south side of State Highway 707. Unused drilled well, diameter 4 inches, depth 130 feet. Measuring point, floor of recorder shelter, 4.0 feet above land-surface datum. Automatic water-stage recorder installed July 9, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	9.83	10.09	10.42	10.51	10.71
2	....	9.82	10.19	10.42	10.47	10.75
3	....	9.84	10.22	10.48	10.50	10.67
4	....	9.86	10.24	10.49	10.60	10.68
5	....	9.88	10.23	10.53	10.63	10.67
6	....	9.87	10.24	10.56	10.58	10.66
7	....	9.90	10.27	10.51	10.50	10.69
8	....	9.93	10.20	10.47	10.55	10.73
9	9.66	9.89	10.20	10.46	10.56	10.73
10	9.69	9.91	10.13	10.47	10.55	10.69
11	9.69	9.95	10.24	10.52	10.58	10.68
12	9.72	9.96	10.25	10.62	10.61	10.57
13	9.72	9.97	10.24	10.62	10.57	10.62
14	9.74	9.97	10.21	10.63	10.53	10.63
15	9.81	9.95	10.24	10.63	10.56	10.63
16	9.83	9.95	10.25	10.58	10.55	10.63
17	9.75	9.91	10.28	10.50	10.71	10.72
18	9.75	9.91	10.32	10.47	10.71	10.77
19	9.77	9.96	10.32	10.53	10.62	10.76
20	9.77	10.06	.....	10.56	10.61	10.72
21	9.74	.....	.....	10.56	10.60	10.68
22	9.74	10.05	.....	10.52	10.66	10.75
23	9.80	10.05	.....	10.50	10.66	10.73
24	9.82	10.09	.....	10.50	10.59	10.75
25	9.90	10.05	.....	10.42	10.63	10.75
26	9.91	10.05	10.35	10.55	10.63	10.79
27	9.93	10.01	10.37	10.58	10.62	10.79
28	9.90	10.01	10.38	10.58	10.63	10.75
29	9.88	10.10	10.41	10.52	10.61	10.81
30	9.90	10.10	10.41	10.50	10.56	10.88
31	9.78	10.09		10.52		10.94

Miami County

Mt-1. Troy Sunshade Co. In Troy, between Garfield and Lincoln Aves., in boiler room of factory. Unused drilled well, diameter 8 inches, depth 49 feet. Measuring point, top of pipe extension, 2.0 feet above land-surface datum. Automatic water-stage recorder installed May 21, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	11.15	10.88	10.83	.....	13.78	14.27	13.70
2	.....	10.31	11.20	10.80	.....	14.00	14.15	13.93
3	.....	11.04	11.25	10.52	12.30	14.16	13.57	13.79
4	.....	11.26	11.05	10.07	12.82	14.28	13.95	13.75
5	.....	11.45	10.98	10.53	12.93	14.10	14.22	13.80
6	.....	11.53	10.70	10.60	13.03	12.90	14.35	13.79
7	.....	11.61	9.90	10.66	12.95	13.67	14.64	13.62
8	.....	11.35	10.92	10.69	11.79	14.00	14.75	13.08
9	.....	10.65	11.16	10.68	12.70	14.18	14.70	13.24
10	.....	11.50	11.34	10.45	13.00	14.23	13.86	13.45
11	.....	11.75	11.49	10.08	13.19	14.28	14.50	13.85
12	.....	11.86	11.56	11.05	13.31	14.17	14.49	14.06
13	.....	11.90	.....	11.50	13.37	13.19	14.57	14.11
14	.....	12.00	.....	11.78	13.30	13.90	14.61	14.04
15	.....	11.53	11.19	11.92	12.13	14.25	14.62	13.21
16	.....	11.55	.....	12.02	12.96	14.28	14.55	13.69
17	.....	11.63	.....	12.00	13.30	14.14	13.84	13.97
18	.....	11.84	.....	11.43	13.45	14.12	14.22	14.18
19	.....	11.77	.....	11.79	13.56	13.97	14.60	14.27
20	.....	11.77	.....	12.20	13.67	13.27	14.77	14.35
21	11.72	11.87	.....	12.35	13.67	13.65	14.81	14.26
22	11.77	11.40	.....	12.45	12.39	13.82	14.87	13.52
23	11.82	10.50	.....	12.61	13.36	13.95	14.68	13.91
24	11.73	11.35	.....	12.60	13.62	.....	13.87	13.97
25	11.44	11.65	.....	11.27	13.77	.....	14.40	13.79
26	10.52	11.75	.....	12.05	13.84	.....	14.63	13.92
27	11.08	11.75	.....	.....	13.87	.....	14.80	14.16
28	11.29	11.65	.....	.....	13.78	13.72	14.77	14.09
29	11.36	11.00	.....	.....	12.57	13.98	14.29	13.44
30	11.25	10.00	10.80	.....	13.49	14.14	14.15	13.83
31	11.16	.....	10.81	.....	.....	14.20	.....	14.00

Montgomery County

Mt-1 (Formerly Dayton 1) (\*944, p. 190; \*986, p. 265; 1016, p. 307; 1023, p. 314). City of Dayton water department. In Rohrer's Island well field.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	8.77	4.15	4.43	8.57	4.50	6.83	11.02	3.62	3.76	....	5.62	3.74
2	9.26	4.22	5.62	6.50	4.55	6.98	4.50	3.58	4.05	....	5.18	3.70
3	9.78	4.77	6.03	9.76	4.55	6.80	3.02	3.97	4.47	....	5.28	3.76
4	10.56	5.05	6.52	11.23	5.40	7.43	2.07	3.83	4.98	....	5.12	4.22
5	10.72	4.58	4.60	12.17	6.04	7.65	1.97	4.43	5.17	....	4.92	4.50
6	10.38	5.35	3.68	9.00	6.83	5.68	1.97	4.69	5.13	....	4.50	4.53
7	10.19	6.72	3.52	6.13	7.28	5.12	1.82	4.69	5.08	....	4.52	4.35
8	7.60	7.88	2.68	4.95	7.48	5.58	1.82	4.35	5.17	....	4.12	4.54
9	5.02	5.89	2.65	4.28	6.35	5.62	2.12	4.27	5.37	....	....	4.84
10	4.08	4.54	2.78	4.16	6.13	6.42	2.16	4.28	5.17	....	....	4.52
11	4.13	4.12	3.16	3.97	7.09	7.10	1.66	4.18	5.50	....	....	4.43
12	4.11	4.13	3.78	3.55	7.39	4.12	2.22	4.47	5.52	....	....	6.97
13	3.82	4.95	4.07	3.23	8.57	6.05	2.24	5.33	5.48	....	4.20	9.10
14	3.85	7.08	3.84	3.25	9.03	7.56	1.91	5.33	4.58	....	4.35	....
15	4.24	8.62	6.00	4.70	9.15	6.91	1.83	4.92	4.98	....	4.40	....
16	5.23	8.35	7.66	5.35	8.84	5.97	1.85	7.30	5.60	....	....	....

Mt-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
17	5.20	4.22	7.73	5.19	10.57	6.67	2.43	9.34	5.54	....	....	7.30
18	5.02	2.38	7.77	5.92	10.97	....	2.87	9.88	5.90	....	4.11	8.20
19	4.26	4.73	5.00	6.89	11.83	....	2.87	5.40	5.98	....	4.56	7.95
20	4.24	8.47	7.37	6.17	11.88	....	6.24	4.23	6.00	....	4.40	7.50
21	4.68	8.98	7.72	4.68	6.50	....	8.32	5.02	6.31	....	4.23	7.68
22	5.11	5.35	5.80	5.83	3.97	....	10.58	5.30	6.17	....	....	....
23	5.16	3.32	6.35	6.38	3.54	....	11.57	5.10	5.79	....	....	7.86
24	4.93	2.91	6.28	6.33	3.95	....	11.55	5.12	5.08	....	....	7.88
25	4.58	2.77	6.58	2.85	3.96	3.12	....	4.67	....	....	....	7.42
26	4.58	2.94	6.50	2.90	3.05	2.82	....	4.37	....	....	....	7.08
27	4.80	3.46	5.87	3.00	3.89	4.08	....	4.22	....	....	5.86	7.14
28	4.92	4.86	6.54	2.97	7.70	7.92	....	4.03	....	....	6.12	6.00
29	4.91	....	8.25	3.82	8.97	9.93	....	3.77	....	....	6.64	3.95
30	4.93	....	....	4.27	6.94	11.07	2.33	3.22	....	7.62	4.90	4.06
31	4.54	....	....	....	6.73	....	3.48	3.77	....	7.20	....	5.95

Mt-2 (Formerly Dayton 2) (\*944, p. 191; \*986, p. 265; 1016, p. 308;  
1023, p. 315). Dayton Power & Light Co. At steam distribution plant,  
118 Fourth St., in fan room.Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	24.77	23.44	23.40	23.36	25.45	25.32	26.66	27.91	28.40	....	28.37	27.65
2	24.50	23.44	23.33	23.51	25.57	25.26	26.63	27.97	28.14	....	28.41	27.59
3	24.32	23.42	23.24	23.60	25.63	25.22	26.63	27.97	27.97	....	28.33	27.62
4	24.30	23.35	23.16	23.76	25.62	25.33	26.56	27.90	28.00	28.68	28.16	27.60
5	24.25	23.34	23.24	23.88	25.57	25.41	26.41	27.79	28.07	28.66	28.18	27.62
6	24.15	23.29	23.29	23.92	25.51	25.55	26.43	27.93	28.13	28.60	28.20	27.68
7	24.08	23.24	23.40	23.91	25.59	25.73	26.38	28.03	28.22	28.50	28.23	27.68
8	24.08	23.19	23.43	23.93	25.65	25.84	26.38	28.10	28.21	28.62	28.25	27.57
9	24.10	23.06	23.44	24.07	25.72	25.84	26.52	28.14	28.16	28.74	28.23	27.53
10	24.16	22.99	23.37	24.15	25.77	25.96	26.71	28.17	28.30	28.79	28.15	27.64
11	24.15	22.98	23.29	24.21	25.78	26.17	26.86	28.11	28.45	28.85	28.05	27.68
12	24.14	23.00	23.40	24.25	25.75	26.40	27.05	28.01	28.55	28.78	28.07	27.73
13	24.11	22.98	23.50	24.25	25.57	26.61	27.16	28.10	28.58	28.62	28.07	27.72
14	23.94	23.05	23.57	24.21	25.63	26.78	27.15	28.20	28.61	28.41	28.04	27.65
15	23.91	23.10	23.66	24.22	25.71	26.83	27.18	28.27	28.57	28.43	28.07	27.48
16	23.87	23.02	23.64	24.33	25.79	26.77	27.33	28.31	28.43	28.42	28.04	27.22
17	23.75	22.90	23.54	24.43	25.84	26.73	27.44	....	28.53	28.44	27.97	27.20
18	23.67	22.83	23.38	24.54	25.75	26.85	27.57	....	28.60	28.45	27.80	27.15
19	23.59	22.90	23.39	24.64	25.63	26.93	27.73	....	28.67	28.40	27.87	27.13
20	23.55	23.03	23.38	24.67	25.35	26.94	27.81	....	28.77	28.28	27.94	27.12
21	23.55	23.11	23.29	24.66	25.38	26.97	27.80	....	28.80	28.17	27.99	27.05
22	23.58	23.14	23.27	24.61	25.42	26.93	27.63	28.28	28.80	28.21	28.05	26.96
23	23.57	23.17	23.26	24.78	25.48	26.84	27.70	28.35	28.65	28.21	28.04	26.87
24	23.58	23.12	23.13	24.92	25.55	26.67	27.83	28.43	28.76	28.30	27.97	26.89
25	23.58	23.19	23.12	25.04	25.58	26.80	27.87	28.49	28.80	28.35	27.87	26.85
26	23.56	23.30	23.22	25.13	25.55	26.94	27.88	28.54	28.83	28.29	27.95	26.76
27	23.54	23.43	23.31	....	25.47	27.02	27.86	28.34	28.84	28.22	27.94	26.78
28	23.47	23.43	23.38	....	25.52	27.05	27.79	28.43	....	28.12	27.94	....
29	23.46	....	23.46	25.20	25.55	26.96	27.65	28.50	....	28.17	27.76	....
30	23.40	....	23.47	25.32	25.53	26.87	27.73	28.43	....	28.27	27.75	....
31	23.42	....	23.46	....	25.35	....	27.82	28.45	....	28.32	....	26.79

Mt-3 (Formerly Dayton 3) (#1023, p. 315). State Highway Department and Geological Survey, U. S. Dept. of Interior test well. 100 feet north of Stewart St., between Patterson Boulevard and Miami River.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	37.53	41.73	40.50	40.50	42.04	39.72	39.92	41.00	43.03	43.75	42.95	44.37
2	39.42	41.53	40.50	40.96	42.17	39.52	40.12	41.00	41.17	43.77	43.02	44.13
3	40.25	40.66	39.70	41.17	42.18	39.74	40.19	41.00	41.76	43.63	42.97	44.31
4	40.61	40.85	40.36	41.33	42.17	40.26	40.19	40.60	42.17	43.46	42.68	44.49
5	40.66	41.51	40.84	41.50	41.66	40.56	39.77	40.26	42.62	43.47	43.17	44.57
6	40.01	41.73	40.01	43.53	41.17	40.97	39.87	40.13	42.95	43.32	43.48	44.85
7	40.33	41.77	40.23	41.35	41.53	41.17	39.86	40.02	43.08	42.83	43.84	44.86
8	40.70	41.84	41.36	41.13	41.69	41.25	39.95	39.95	42.92	43.03	44.07	44.00
9	40.90	41.64	41.33	41.65	41.72	41.05	40.09	39.87	42.53	43.20	44.09	44.25
10	41.20	40.91	40.39	41.84	41.78	40.53	40.24	39.79	43.04	43.71	44.05	44.59
11	41.16	41.73	40.66	41.85	41.78	41.15	40.36	39.79	43.32	43.97	43.56	44.86
12	40.92	41.66	40.91	41.86	41.57	41.51	40.46	39.84	43.47	44.01	43.80	45.04
13	40.30	41.90	41.00	41.87	40.82	41.55	40.49	39.61	43.55	43.65	43.93	45.11
14	40.01	41.76	41.00	41.18	41.15	41.72	40.45	39.75	43.56	43.18	44.04	45.11
15	40.68	40.73	41.23	41.24	41.39	41.74	40.14	39.84	43.55	43.62	44.14	43.82
16	40.97	40.50	41.23	41.62	41.46	43.32	40.31	39.66	43.10	43.83	44.15	43.82
17	41.27	40.23	40.83	41.85	41.47	40.94	40.43	39.59	43.33	43.84	43.91	44.18
18	41.38	40.17	40.57	42.00	41.14	41.19	40.55	39.38	43.57	43.31	43.59	44.27
19	41.23	40.60	40.60	42.00	40.28	41.20	40.62	41.28	43.72	43.28	43.86	44.26
20	40.80	41.00	40.42	42.01	40.03	40.88	40.63	41.92	43.82	42.65	44.11	44.34
21	41.05	41.19	40.45	41.52	40.41	40.82	40.55	42.35	43.84	42.40	44.28	44.34
22	41.45	41.54	40.67	41.35	40.61	40.86	39.87	42.62	43.68	42.54	44.48	43.38
23	41.55	41.54	40.67	41.87	40.67	40.77	40.09	42.83	43.17	42.65	44.54	43.78
24	41.74	40.98	40.20	42.07	40.80	40.50	40.20	42.87	43.52	42.72	44.54	43.81
25	41.75	40.46	39.95	42.16	40.80	41.02	40.31	42.63	43.75	42.80	44.18	43.07
26	41.63	40.94	40.34	42.16	40.48	41.24	40.78	42.08	43.87	42.80	44.54	43.48
27	40.96	40.95	40.52	42.11	40.65	41.25	40.85	42.57	44.02	42.61	44.70	44.00
28	40.85	40.60	40.59	41.58	40.70	40.70	40.69	42.86	44.05	42.35	44.71	44.03
29	41.23		40.98	41.30	40.70	40.22	40.80	43.04	43.88	42.57	44.21	43.58
30	41.61		40.98	41.76	40.41	39.99	41.20	43.23	43.55	42.72	44.38	43.43
31	41.82		40.62		39.70		41.07	43.25		42.87		43.16

Mt-4. United States Government powder plant. 5 miles south of Dayton, in building on Springboro Pike. Unused drilled well, diameter 8 inches, depth 48 feet. Measuring point, floor of recorder shelter, 3.0 feet above land-surface datum. Automatic water-stage recorder installed Feb. 14, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	1.63	....	1.64	1.48	1.64	1.80	2.08	2.38	....	2.46
2	....	1.66	1.51	1.54	1.45	1.65	1.80	2.10	2.40	....	2.48
3	....	1.69	1.53	1.53	1.50	1.67	1.80	2.12	2.40	....	2.48
4	....	1.69	1.60	1.64	1.52	1.67	1.82	2.14	....	....	2.51
5	....	1.69	1.60	1.66	1.53	1.67	1.85	2.16	....	....	2.51
6	....	1.66	1.55	1.66	1.58	1.67	1.85	2.16	....	2.43	2.55
7	....	1.59	1.57	1.65	1.63	1.66	1.83	2.17	....	2.45	....
8	....	1.52	1.59	1.58	1.67	1.66	1.85	2.19	....	2.46	....
9	....	1.57	1.63	1.64	1.73	1.58	1.84	2.20	....	2.44	....
10	....	1.61	1.61	....	1.72	1.66	1.88	2.20	....	2.44	....
11	....	1.65	1.59	....	1.70	1.69	1.88	2.22	....	2.45	....
12	....	1.62	1.46	....	1.70	1.74	1.85	....	....	2.46	....
13	....	1.64	1.42	1.68	1.64	1.76	1.85	....	....	2.44	....
14	1.56	1.61	1.44	1.64	1.58	1.80	1.84	....	....	....	....
15	1.72	1.44	1.47	1.49	1.59	1.82	1.83	....	....	....	....
16	1.68	1.47	1.42	1.47	1.62	1.83	1.71	....	....	....	....
17	1.74	1.49	1.39	1.32	1.63	1.83	1.55	....	....	....	....
18	1.77	1.51	1.35	1.44	1.42	1.82	1.59	2.30	....	....	....

## Mt-4--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
19	1.68	1.44	1.34	1.47	1.25	1.84	1.70	2.31	....	....	....
20	1.72	1.48	1.55	1.45	1.37	1.66	1.74	2.29	....	....	....
21	1.76	1.50	1.58	1.36	1.46	1.41	1.76	2.31	....	2.38	....
22	1.71	1.52	1.58	1.38	1.56	1.47	1.80	2.32	....	2.46	....
23	1.71	1.53	1.61	1.39	1.53	1.57	1.81	2.31	....	2.48	....
24	1.77	1.53	1.61	1.39	1.55	1.61	1.87	2.24	....	2.46	....
25	1.77	1.55	1.63	1.41	1.54	1.66	1.93	2.28	....	2.50	....
26	1.70	1.54	1.66	1.41	1.59	1.67	1.95	2.31	....	2.34	2.28
27	1.60	1.42	1.71	1.44	1.59	1.69	1.98	2.33	....	2.05	2.26
28	1.65	1.48	1.71	1.52	1.59	1.72	2.03	2.33	....	2.14	2.22
29		1.51	1.61	1.53	1.58	1.73	2.07	2.34	....	2.24	1.94
30		1.47	1.64	1.55	1.60	1.74	2.07	2.36	....	2.27	2.03
31		....		1.54		1.78	2.07		....		2.10

Mt-5. Kuhns Bros. Co. In Dayton, in foundry building at 1800 McCall St. Abandoned drilled well, diameter 6 inches. Measuring point, top of casing, 4.5 feet above land-surface datum. Automatic water-stage recorder installed Feb. 19, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	38.93	37.95	38.44	38.58	38.71	38.61	....	....	....	41.39
2	....	38.89	37.98	38.46	38.58	38.72	38.62	....	....	....	41.40
3	....	38.87	37.98	38.48	38.57	38.71	38.64	39.30	40.20	....	41.41
4	....	38.83	37.98	38.51	38.57	38.71	38.66	39.34	....	....	41.43
5	....	38.81	37.98	38.52	38.56	38.70	38.68	39.37	....	....	41.45
6	....	....	37.97	38.55	38.55	38.68	38.71	39.39	....	....	41.47
7	....	38.70	37.98	38.57	38.55	38.68	38.73	39.42	....	....	41.48
8	....	38.68	37.98	38.59	38.57	38.70	38.75	39.44	....	....	41.48
9	....	38.66	38.00	38.61	38.60	38.63	38.77	39.47	....	....	41.50
10	....	38.62	....	38.62	38.60	38.60	38.80	39.42	....	....	41.52
11	....	38.59	....	38.65	38.62	38.58	38.82	39.46	....	....	41.52
12	....	38.54	....	38.67	38.64	....	38.85	39.49	....	....	41.53
13	....	38.53	....	38.69	38.67	....	38.87	39.52	....	....	41.53
14	....	38.50	....	38.70	38.68	....	38.89	39.56	....	....	41.52
15	....	38.47	....	38.70	38.69	38.55	38.93	39.58	....	....	41.52
16	....	38.44	....	38.69	38.70	38.56	38.94	39.62	....	....	41.52
17	....	38.41	....	38.68	38.71	38.56	38.88	39.66	....	....	41.53
18	....	38.39	....	38.67	38.72	38.57	38.88	39.76	....	....	41.54
19	39.17	38.36	....	38.68	38.70	38.61	38.91	39.78	....	41.21	41.54
20	39.16	38.32	....	38.66	38.71	38.59	38.93	39.81	....	41.22	41.54
21	39.14	38.30	....	38.67	38.71	38.54	38.95	39.85	....	41.24	41.55
22	39.09	38.26	38.19	38.66	38.73	38.51	38.98	39.87	....	41.27	41.55
23	39.07	38.24	....	38.65	38.73	38.53	38.98	39.92	....	41.28	41.53
24	39.03	38.20	....	38.64	38.71	38.55	....	39.94	....	41.28	41.52
25	39.01	38.17	....	38.61	38.70	38.56	....	39.97	....	41.31	41.51
26	39.00	38.14	....	38.61	38.72	38.56	....	40.01	....	41.33	41.51
27	38.99	38.07	....	38.61	38.72	38.57	....	40.05	....	41.35	41.49
28	38.96	38.04	....	38.60	38.73	38.58	....	40.08	....	41.34	41.51
29		38.01	38.39	38.60	38.71	38.59	....	40.11	....	41.37	41.48
30		38.00	38.42	38.60	38.71	38.59	....	....	....	41.36	41.46
31		37.99		38.58		38.59	....	....	....		41.45

Mt-6. City of Dayton. In Dayton, at Third and Ludlow Sts., in southeast corner of basement in municipal building. Abandoned drilled well, diameter 8 inches, depth 60 feet. Measuring point, top of 1½-inch pipe nipple, 12 feet below land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 5	25.60	Apr. 24	27.39	July 14	31.45	Oct. 16	30.29
13	25.57	May 8	27.71	Aug. 2	31.79	23	30.14
20	25.13	15	27.81	9	32.07	30	30.12
27	25.64	22	27.08	19	32.24	Nov. 6	30.18
Mar. 6	25.20	29	27.47	30	30.70	13	30.03
13	25.59	June 5	27.38	Sept. 10	31.85	20	29.88
20	25.17	19	29.87	20	30.85	27	29.95
27	25.48	26	29.67	27	30.94	Dec. 5	29.63
Apr. 3	25.97	July 3	30.34	Oct. 4	30.68	11	29.79
10	26.48	10	30.54	9	30.78	26	28.40
17	26.77						

Mt-7. Mrs. Augusta Rich. In Dayton, in sec. 25, Mad River Township, on Rural Route 9. Drilled well, diameter 5 inches, depth 59 feet. Measuring point, top of 1½-inch pipe, 1.5 feet above land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 5	36.70	Apr. 17	34.63	July 23	35.20	Oct. 23	35.54
13	36.68	24	34.62	Aug. 2	35.20	30	36.62
20	36.46	May 8	34.85	19	35.48	Nov. 6	36.69
27	36.32	15	34.94	26	35.63	13	36.80
Mar. 6	36.02	22	34.94	Sept. 11	35.90	20	36.86
13	35.76	June 5	35.00	16	35.95	27	36.92
20	35.51	19	35.18	Oct. 4	36.25	Dec. 5	37.00
27	35.16	July 3	35.09	9	36.32	13	37.06
Apr. 3	34.84	10	35.20	17	35.70	26	36.88
10	34.67	14	35.35				

Mt-8. Advance Laundry. In Dayton, in building at 205 Quitman Street. Abandoned drilled well, diameter 8 inches, depth 32 feet. Measuring point, edge of trap door opening into well pit, 1.0 foot above land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 5	23.90	Apr. 24	23.15	July 23	23.06	Oct. 16	23.90
13	23.78	May 8	23.26	Aug. 2	23.12	23	24.05
20	23.70	15	23.26	9	23.20	30	24.07
27	23.65	22	23.20	19	23.26	Nov. 7	24.10
Mar. 6	23.55	29	23.18	26	23.56	13	24.15
13	23.46	June 5	23.24	Sept. 11	23.55	21	24.16
20	23.36	19	23.29	18	23.63	29	24.14
27	23.23	26	23.24	27	23.75	Dec. 6	24.06
Apr. 3	23.13	July 3	23.15	Oct. 4	23.85	13	24.10
10	23.08	10	23.05	9	23.95	26	23.30
17	23.09	14	23.20				

Mt-9. City of Oakwood. In Oakwood, in municipal well field at Brown and Irving Sts. Unused drilled well, diameter 8 inches, depth 69 feet. Measuring point, top edge of manhole cover over well, at land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 6	35.70	Mar. 27	37.07	May 15	38.94	July 3	37.56
20	36.19	Apr. 3	37.10	22	37.50	10	37.45
27	36.34	10	37.26	30	38.36	14	37.66
Mar. 6	35.89	17	37.25	June 5	37.56	23	37.40
13	38.62	24	37.39	19	39.76	Aug. 2	37.40
20	36.95	May 8	37.48	26	37.22	9	37.37



## Mt-9--Continued.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 19	39.98	Oct. 4	38.32	Oct. 30	40.36	Nov. 27	38.90
26	40.80	9	38.08	Nov. 6	42.09	Dec. 6	38.82
Sept. 11	38.03	16	38.83	13	40.87	13	41.44
18	40.77	23	38.53	21	39.76	26	41.38
27	38.10						

Mt-11. H. C. Huber. In Van Buren Township, sec. 35, at Avonway and Canterbury Sts. Abandoned drilled well, diameter 6 inches, depth 125 feet. Measuring point, top of casing, 0.2 foot above land-surface datum.

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

Feb. 20	54.48	May 8	54.00	Aug. 2	53.60	Oct. 23	53.79
27	54.38	15	53.90	9	53.55	30	53.74
Mar. 6	54.23	22	54.10	19	53.56	Nov. 6	53.78
13	54.23	30	53.93	26	53.55	13	53.86
20	54.44	June 5	53.88	Sept. 11	53.63	21	53.77
27	54.67	19	53.77	18	53.69	27	54.03
Apr. 3	54.22	July 3	53.70	27	53.70	Dec. 5	53.91
10	54.26	10	53.67	Oct. 4	53.78	13	54.11
17	54.18	14	53.66	9	53.64	26	54.13
24	54.00	23	53.68	16	53.69		

Mt-12. Hewitt Soap Co. In Dayton, entrance to plant at 333 Linden Street. Abandoned drilled well, diameter 8 inches, depth 65 feet. Measuring point, edge of trap door opening into well pit, 6 feet above top of casing and 4 feet above land-surface datum.

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

Feb. 8	21.11	Apr. 24	20.13	July 23	19.78	Oct. 16	20.74
13	21.00	May 8	20.31	Aug. 2	19.88	23	21.26
20	21.10	15	20.10	9	19.70	30	20.70
27	20.98	22	20.03	19	19.25	Nov. 7	21.21
Mar. 6	20.89	29	21.17	26	19.30	13	21.71
13	20.86	June 5	20.22	Sept. 11	19.98	21	21.80
20	20.70	19	20.62	17	20.17	29	21.43
27	20.44	26	19.81	27	20.42	Dec. 6	21.88
Apr. 3	20.28	July 3	19.03	Oct. 4	21.48	13	22.29
10	20.11	10	19.56	9	21.18	26	21.65
17	20.73	14	19.66				

Mt-13. Northridge Ice Station. In Mad River Township, sec. 5, 0.25 mile north of Miami River, and one block east of New Troy Pike. Drilled well, diameter 5 inches, depth 50 feet. Measuring point, top edge of concrete well pit, 4 feet above top of casing, at land-surface datum.

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

Feb. 5	10.75	May 8	10.53	July 23	10.22	Oct. 16	12.13
20	9.81	15	10.47	Aug. 2	10.53	23	12.10
27	9.82	22	9.86	9	10.84	30	12.13
Mar. 6	9.49	30	10.10	19	11.21	Nov. 6	12.13
13	9.65	June 5	10.32	26	11.40	13	12.16
20	9.24	19	10.28	Sept. 11	11.71	20	12.17
27	9.41	26	10.56	20	11.86	27	12.12
Apr. 3	9.67	July 3	10.22	27	11.97	Dec. 11	12.16
10	10.01	10	10.66	Oct. 4	12.02	13	11.70
17	10.24	14	10.80	9	12.08	26	11.58
24	10.53						

Mt-14. Turner Quality Cleaners. In Madison Township, sec. 12, at 5655 Salem Pike. Abandoned drilled well, diameter 6 inches, depth 68 feet. Measuring point, top of casing, 2.0 feet above land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 20	8.91	May 8	9.40	July 23	8.44	Oct. 17	13.72
27	8.24	15	9.53	Aug. 2	10.34	23	13.83
Mar. 6	9.20	22	8.98	9	11.00	30	13.80
13	9.57	30	9.94	22	12.03	Nov. 7	13.29
20	8.38	June 5	10.53	27	12.37	14	13.30
27	8.85	19	9.75	Sept. 11	13.25	21	13.40
Apr. 3	9.45	26	10.60	18	13.17	27	13.26
10	10.35	July 3	10.41	24	13.21	Dec. 7	13.22
17	10.77	10	9.60	Oct. 4	13.33	16	12.05
24	11.07	14	10.74	9	13.50	27	11.72

Mt-15. George Boedeker. In Dayton, Mad River Township, sec. 19, on rural route 9. Drilled well, diameter 5 inches, depth 30 feet. Measuring point, top of casing, 1.5 feet above land-surface datum.

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

Feb. 27	24.69	May 15	24.35	Aug. 9	24.50	Oct. 23	25.80
Mar. 6	24.02	22	24.09	19	24.88	30	26.54
13	23.62	30	23.82	26	25.15	Nov. 6	26.67
20	23.37	June 5	23.98	Sept. 11	25.38	13	26.66
27	23.08	19	24.16	16	25.51	21	26.48
Apr. 3	22.98	July 3	24.00	27	25.67	27	26.48
10	23.24	10	24.30	Oct. 4	25.84	Dec. 5	25.80
17	23.58	14	23.57	9	25.97	13	26.40
24	23.86	23	24.48	17	26.22	26	26.40
May 8	24.29	Aug. 2	24.30				

Mt-16. Leo Handwerker. In Harrison Township, SE. corner sec. 11. Dug well, depth 25 feet. Measuring point, top edge of concrete well caisson, at land-surface datum.

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

Mar. 13	18.76	May 22	19.50	Aug. 9	20.46	Oct. 23	21.20
20	18.57	30	19.54	19	20.68	30	21.70
27	18.51	June 5	19.70	26	21.00	Nov. 6	22.03
Apr. 3	18.65	19	20.83	Sept. 11	20.91	13	22.09
10	18.99	July 3	19.65	20	21.47	20	22.11
17	19.17	10	19.98	27	21.59	27	22.15
24	19.38	14	20.14	Oct. 4	21.75	Dec. 5	22.15
May 8	19.76	23	19.80	9	21.79	13	22.11
15	19.86	Aug. 2	20.20	16	21.85	26	21.30

Mt-17. R. Kelley. In Mad River Township, center of sec. 21, at 3820 Xenia Pike. Drilled well, diameter 4 inches, depth 50 feet. Measuring point, top of casing, at land-surface datum.

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

Feb. 27	18.11	May 15	18.94	Aug. 2	17.66	Oct. 23	21.23
Mar. 6	17.89	22	18.19	9	18.00	30	21.32
13	17.74	30	18.14	19	26.38	Nov. 6	21.41
20	17.04	June 5	18.31	26	26.65	13	21.44
27	16.88	19	18.24	Sept. 11	19.66	21	21.47
Apr. 3	16.97	26	18.44	17	20.01	27	21.58
10	17.50	July 3	16.50	27	20.48	Dec. 5	21.48
17	17.83	10	17.20	Oct. 4	20.78	13	21.34
24	18.28	14	17.88	9	20.95	26	20.20
May 8	18.79	23	16.94	16	21.17		

Mt-20. Ford Service Station. In Harrison Township, sec. 4. Drilled well, diameter 5 inches, depth 50 feet. Measuring point, top of casing, 1.0 foot above land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 6	22.61	May 22	23.92	Aug. 9	24.79	Oct. 23	25.66
13	22.62	30	22.83	19	25.00	30	27.25
20	21.90	June 5	23.01	26	26.16	Nov. 6	26.52
27	21.56	19	24.01	Sept. 11	25.62	13	25.77
Apr. 3	22.17	July 3	23.90	20	28.65	20	26.41
10	22.88	10	25.07	27	25.90	27	29.66
17	22.38	14	24.36	Oct. 4	25.72	Dec. 5	27.30
24	23.16	23	25.40	9	25.62	13	26.03
May 8	24.59	Aug. 2	24.50	16	26.00	26	27.78
15	22.64						

Mt-22. C. F. Weckesser. In Dayton, at 635 Shantz Avenue. Abandoned drilled well, diameter 8 inches, depth 40 feet. Measuring point, top of casing, 2.0 feet above land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 6	3.38	May 22	3.18	Aug. 9	3.46	Oct. 23	3.60
13	3.38	30	3.30	19	3.38	30	3.50
20	3.25	June 5	3.33	26	3.36	Nov. 6	3.40
27	3.24	19	3.08	Sept. 11	3.68	13	3.36
Apr. 3	3.32	26	3.39	18	3.71	21	3.37
10	3.37	July 3	3.40	27	3.74	27	3.22
17	3.30	10	3.34	Oct. 4	3.79	Dec. 6	3.40
24	3.33	14	3.41	9	3.83	13	3.13
May 8	3.23	23	3.28	16	3.70	26	3.42
15	3.23	Aug. 2	3.42				

Mt-23. R. H. Hamiel. Mad River Township, sec. 26. Dug well, depth 27 feet. Measuring point, top of well platform, at land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 13	15.15	May 22	14.87	Aug. 9	20.09	Oct. 23	19.55
20	14.75	30	17.33	19	20.33	30	19.44
27	15.85	June 5	18.40	26	20.88	Nov. 6	18.23
Apr. 3	16.27	19	14.48	Sept. 11	21.59	13	17.75
10	17.17	July 3	18.56	20	21.35	20	17.61
17	17.62	10	19.57	27	21.15	27	18.05
24	17.98	14	20.20	Oct. 4	20.47	Dec. 5	17.61
May 8	17.06	23	18.35	9	20.60	13	16.33
15	17.05	Aug. 2	18.51	16	20.62	26	16.39

Mt-24. M. E. Lehman. Wayne Township, sec. 22. Dug well, 27 feet deep. Measuring point, top of well platform, at land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 13	22.88	May 22	21.79	Aug. 9	22.55	Oct. 23	23.62
20	22.72	30	21.51	19	23.53	30	23.66
27	22.40	June 5	21.56	26	22.56	Nov. 6	23.60
Apr. 3	22.12	19	21.63	Sept. 11	23.03	13	24.24
10	22.05	July 3	21.78	16	23.11	20	23.85
17	22.18	10	21.40	27	23.24	27	24.02
24	22.08	14	22.42	Oct. 3	23.33	Dec. 5	23.96
May 8	22.26	23	22.14	9	23.38	13	24.02
15	22.47	Aug. 2	22.35	16	23.41	26	24.07

Mt -26. John Colvard. In Van Buren Township, sec. 34. Dug well, depth 37.5 feet. Measuring point, top edge of well, at land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 20	32.72	May 30	32.54	Aug. 19	32.64	Oct. 30	32.80
27	32.63	June 5	32.56	26	32.57	Nov. 7	32.82
Apr. 3	32.59	19	32.53	Sept. 11	32.68	13	32.83
10	32.56	July 3	32.50	18	32.71	21	32.83
17	32.65	10	32.54	27	32.74	27	32.84
24	32.52	14	32.54	Oct. 4	32.74	Dec. 6	32.86
May 8	32.52	23	32.56	9	32.78	13	32.10
15	32.53	Aug. 2	32.57	16	32.10	26	32.10
22	32.57	9	32.60	23	32.83		

Mt-27. City of Dayton. In Van Buren Township, sec. 13. At Staley farm. Drilled well, diameter 6 inches, depth 33 feet. Measuring point, top of 1½-inch pipe nipple, 1.0 foot above land-surface datum.

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

Mar. 20	13.71	May 30	14.33	Aug. 19	15.46	Oct. 30	16.86
27	14.00	June 5	14.58	26	15.50	Nov. 7	16.86
Apr. 3	14.10	19	14.44	Sept. 11	16.17	13	16.70
10	14.52	July 3	14.40	19	16.35	21	17.08
17	14.74	10	14.67	27	16.53	27	17.16
24	14.86	14	13.70	Oct. 4	16.58	Dec. 6	17.23
May 8	15.09	23	14.73	9	16.67	16	16.90
15	14.94	Aug. 2	15.17	17	16.83	26	17.04
22	14.43	9	15.37	23	16.76		

Mt-28. Weston Afflerbach. In Butler Township, sec. 22. Drilled well, diameter 6 inches, depth 38 feet. Measuring point, top of casing, 1.0 foot above land-surface datum.

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

Mar. 27	7.61	June 5	7.69	Aug. 26	8.58	Oct. 30	8.44
Apr. 3	7.62	19	7.74	Sept. 11	8.71	Nov. 6	8.44
10	7.86	July 3	7.89	20	8.77	13	8.41
17	7.67	10	7.80	27	8.70	20	8.31
24	7.63	14	8.12	Oct. 4	8.80	27	8.42
May 8	7.34	23	8.20	9	8.68	Dec. 5	8.26
15	7.46	Aug. 2	8.37	16	8.90	13	8.14
22	7.53	9	8.47	23	8.86	26	8.34
30	7.53	19	8.63				

Mt-30. Henry Saunders. In Van Buren Township, sec. 25. Drilled well, diameter 6 inches, depth 55 feet. Measuring point, top of casing, at land-surface datum.

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

Mar. 27	20.30	June 5	21.26	Aug. 19	22.42	Oct. 30	23.97
Apr. 3	20.26	19	21.64	26	22.61	Nov. 6	24.09
10	20.88	26	21.79	Sept. 11	23.03	13	24.23
17	21.16	July 3	21.64	18	23.23	21	24.36
24	21.37	10	21.88	27	23.41	27	24.51
May 8	21.49	14	22.14	Oct. 4	23.57	Dec. 6	26.60
15	21.59	23	22.84	9	23.64	13	24.46
22	20.97	Aug. 2	22.41	16	23.55	26	24.37
30	21.12	9	22.57	23	23.88		

Mt-31. H. R. Von Nieda. In Washington Township, sec. 25. Dug well, depth 13.5 feet. Measuring point, top of well platform, at land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 27	5.09	June 5	8.12	Aug. 26	9.72	Oct. 30	11.17
Apr. 3	5.53	19	7.22	Sept. 11	10.19	Nov. 7	11.25
10	6.77	July 3	7.66	19	10.40	13	11.33
17	7.28	10	8.27	27	10.60	21	11.41
24	7.78	14	8.76	Oct. 4	10.76	27	11.33
May 8	8.18	23	8.32	9	10.86	Dec. 6	11.52
15	8.43	Aug. 2	9.00	16	10.30	13	11.41
22	7.23	9	9.26	23	11.08	26	11.57
30	7.73	19	9.52				

Mt-32. A. D. Furguson. In Jackson Township, sec. 12. Dug well, depth 24 feet. Measuring point, top of well platform, at land-surface datum.

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

Apr. 10	13.83	June 19	13.80	Aug. 27	18.98	Oct. 30	20.71
17	14.79	July 3	16.26	Sept. 11	19.79	Nov. 7	20.73
24	15.45	10	16.79	18	20.06	14	20.84
May 8	15.74	14	17.67	24	20.14	21	20.68
15	15.75	23	17.50	Oct. 4	20.37	27	20.31
22	13.02	Aug. 2	18.20	9	20.40	Dec. 7	20.60
30	14.64	9	18.49	17	20.58	16	20.06
June 5	15.64	21	18.40	23	20.73	27	20.04

Mt-33. Hochwalt. In Miami Township, sec. 15. Drilled well, diameter 6 inches, depth 33.5 feet. Measuring point, top of casing, 2.0 feet above land-surface datum.

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

Apr. 3	14.50	June 19	15.50	Aug. 26	17.13	Oct. 30	18.90
10	14.61	July 3	15.35	Sept. 11	17.69	Nov. 7	19.02
17	14.77	10	15.58	19	17.97	13	19.06
24	14.89	14	14.90	27	18.22	21	19.17
May 8	15.18	23	15.05	Oct. 4	18.41	27	19.13
15	15.23	Aug. 2	16.34	9	18.57	Dec. 6	19.16
22	15.22	9	16.67	16	18.72	16	19.05
30	15.18	19	16.84	23	18.80	26	19.13
June 5	15.25						

Mt-34. J. R. Baker. In Jefferson Township, sec. 13. Dug well, depth 27 feet. Measuring point, top of well platform, 1.0 foot above land-surface datum.

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

Apr. 3	0.87	June 19	0.67	Aug. 27	3.08	Oct. 30	3.77
10	1.29	July 3	1.98	Sept. 11	4.11	Nov. 7	3.41
17	1.23	10	1.97	18	4.71	13	3.21
24	1.60	14	2.69	24	4.48	21	3.32
May 8	1.18	23	1.94	Oct. 4	4.66	27	1.41
15	1.18	Aug. 2	2.74	9	5.83	Dec. 6	2.80
22	.89	9	3.07	17	5.83	16	.79
30	1.33	20	2.30	23	4.35	26	1.12
June 5	1.41						

Mt-35. Montgomery County Infirmary. In Jefferson Township, sec. 2. Abandoned drilled well, diameter 6 inches, depth 37 feet. Measuring point, top of 1½-inch pipe, at land-surface datum.

## Mt-35--Continued.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 3	9.74	June 19	11.30	Aug. 27	11.96	Oct. 30	12.63
10	10.37	July 3	11.30	Sept. 11	12.44	Nov. 7	12.46
17	10.67	10	11.50	18	12.57	13	12.49
24	11.89	14	11.84	24	12.63	21	12.38
May 8	10.85	23	11.53	Oct. 4	12.77	27	12.20
15	10.87	Aug. 2	11.98	9	12.73	Dec. 6	12.28
22	10.07	9	11.99	16	12.77	16	11.61
30	10.62	20	11.74	23	12.73	26	11.86
June 5	10.97						

Mt-36. Wright Field. About 4 miles northeast of Dayton, south of State Highway 4, in abandoned well house at north side of reservation. Abandoned drilled well, diameter 16 inches, depth 60 feet. Measuring point, top of casing, at land-surface datum.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	18.12	19.16	17.76	18.76	19.20	18.51	19.77	19.51	17.72
2	.....	18.16	19.23	17.82	18.70	19.28	18.65	19.95	19.21	17.86
3	.....	18.32	19.24	18.24	18.55	18.72	18.80	19.92	18.84	17.85
4	.....	18.56	19.00	18.44	18.22	18.70	18.91	20.12	18.85	17.92
5	.....	18.92	18.70	18.59	17.88	19.17	19.03	20.05	18.70	18.16
6	.....	19.06	18.70	18.46	17.55	19.20	18.90	19.82	18.69	18.25
7	.....	19.05	18.67	18.29	17.31	19.34	18.62	19.96	18.73	18.04
8	.....	19.18	18.62	18.06	17.38	19.37	18.52	20.04	18.62	17.84
9	.....	18.83	18.68	18.30	17.39	19.51	18.98	19.92	18.28	18.09
10	.....	18.78	18.67	18.32	17.64	18.97	19.22	19.96	18.13	18.13
11	.....	18.77	18.47	18.43	17.65	18.55	19.21	19.95	18.00	18.08
12	.....	18.71	18.24	18.44	17.94	19.34	19.31	19.76	18.10	18.10
13	.....	18.37	18.42	18.38	17.95	19.54	19.44	19.15	17.97	18.03
14	.....	18.12	18.76	18.09	17.59	19.17	19.28	18.97	18.10	17.99
15	.....	18.25	18.96	17.97	17.46	19.21	19.20	19.18	17.90	18.10
16	.....	18.37	18.97	17.98	17.60	18.99	19.41	19.18	17.92	18.30
17	.....	18.90	18.76	18.23	17.50	19.07	19.52	19.24	17.59	18.78
18	.....	19.11	18.69	18.40	17.81	19.17	19.60	19.08	17.51	18.88
19	.....	19.34	18.52	18.10	17.74	19.24	19.93	18.83	17.84	19.07
20	.....	19.22	18.96	17.79	17.68	19.20	19.78	18.50	18.01	19.08
21	.....	19.12	18.96	18.01	17.36	19.65	19.61	18.80	18.04	18.90
22	.....	19.24	18.67	18.26	18.03	19.18	19.54	19.35	17.71	18.95
23	.....	19.34	18.35	18.21	18.68	19.22	19.72	19.66	17.64	19.11
24	.....	19.47	18.24	18.51	19.09	19.13	19.61	19.86	17.62	19.06
25	.....	19.32	18.06	19.00	19.26	18.90	19.58	20.18	17.94	18.94
26	.....	19.16	17.88	18.80	19.17	18.82	19.70	20.06	18.00	19.08
27	.....	18.96	17.61	18.38	18.39	18.97	19.63	19.79	18.07	19.65
28	.....	18.66	17.18	18.27	17.86	19.01	19.43	19.97	18.01	19.20
29	17.91	18.72	17.52	18.22	18.67	19.00	19.45	20.04	18.08	19.44
30	17.74	19.04	17.87	18.17	18.77	18.96	19.62	20.18	17.94	17.94
31	17.63		17.90		18.91	18.90		19.90		17.64

Mt-37. E. Hartzell. In Miamisburg, Miami Township, sec. 25, on Rural Route 2. Dug well, depth 23 feet. Measuring point, top of well platform, at land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 10	19.13	May 22	19.60	July 10	19.88	Aug. 20	20.62
17	19.08	30	19.67	14	19.00	27	20.83
24	19.09	June 5	19.73	23	20.06	Sept. 11	21.18
May 8	19.37	19	19.65	Aug. 2	20.29	18	21.35
15	19.49	July 3	19.78	9	20.44	24	21.35

## Mt-37--Continued.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 4	21.73	Oct. 23	22.10	Nov. 14	22.45	Dec. 7	22.76
9	21.75	30	22.21	21	22.58	16	23.41
17	21.40	Nov. 7	22.35	27	22.74	27	23.77

Mt-38. R. D. Gebhart. In Jefferson Township, sec. 28. Drilled well, diameter 4 inches, depth 23 feet. Measuring point, top of casing, 3.0 feet above land-surface datum.

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

Apr. 10	6.66	June 19	6.79	Aug. 27	8.32	Oct. 30	8.88
17	6.89	July 3	7.50	Sept. 11	8.57	Nov. 7	8.85
24	7.09	10	7.70	18	8.49	14	8.30
May 8	7.29	14	7.88	24	8.71	21	8.95
15	7.38	23	7.82	Oct. 4	8.78	27	8.91
22	7.00	Aug. 2	8.06	9	8.78	Dec. 7	8.98
30	7.25	9	8.10	17	8.80	16	8.53
June 5	7.42	21	8.18	23	8.84	27	8.67

Mt-41 (Formerly Dayton 4) (#1023, p. 316). State Highway Department. 25 feet west of Miami Boulevard East, along Miami River, about 3,000 feet north of Stewart St.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	29.20	26.00	26.95	28.73	27.31	26.97	29.19	.....	31.58	31.81	.....
2	26.38	.....	.....	27.16	28.75	.....	27.35	29.29	.....	31.64	.....	32.41
3	27.14	.....	.....	27.29	28.72	27.60	27.67	.....	30.63	31.67	.....	32.50
4	27.70	29.30	26.57	27.38	.....	27.75	.....	.....	30.65	31.71	31.90	32.55
5	27.97	29.36	26.80	27.53	.....	27.90	27.91	29.46	30.68	.....	31.94	32.57
6	.....	27.85	27.02	.....	28.59	28.05	28.01	29.45	30.71	.....	31.97	32.59
7	27.32	27.47	27.22	.....	28.52	28.16	.....	29.54	.....	31.75	31.92	.....
8	27.48	27.92	27.15	27.72	28.44	.....	28.24	29.59	.....	31.78	31.93	.....
9	27.65	.....	.....	27.82	28.53	.....	28.12	29.66	30.79	31.81	.....	32.64
10	27.79	.....	.....	27.90	28.60	28.39	28.20	.....	30.82	31.84	.....	32.68
11	27.88	28.64	27.29	27.95	.....	28.48	28.32	.....	30.85	31.86	32.15	32.70
12	.....	28.78	27.41	28.02	.....	28.58	28.47	29.73	30.91	.....	32.13	32.67
13	.....	.....	27.54	.....	27.38	28.51	.....	29.82	30.96	.....	32.14	32.53
14	27.77	26.39	.....	.....	27.64	28.35	.....	29.83	.....	31.88	32.32	.....
15	28.05	25.09	27.28	28.12	27.85	.....	28.63	29.87	.....	31.90	32.40	.....
16	28.25	25.81	26.57	28.13	27.74	.....	28.80	29.72	31.05	31.93	.....	30.24
17	28.38	.....	.....	28.16	26.92	28.03	28.93	.....	31.10	31.98	.....	31.48
18	28.45	27.12	26.77	28.20	.....	27.18	29.04	.....	31.14	31.87	32.40	31.60
19	.....	27.35	25.91	28.28	.....	26.50	29.10	29.70	31.17	.....	32.50	31.74
20	.....	27.55	25.47	.....	.....	25.14	.....	29.87	31.22	.....	32.50	31.85
21	28.65	27.64	25.99	.....	26.47	25.95	.....	29.96	.....	31.79	32.42	.....
22	28.76	.....	26.30	28.43	26.72	.....	28.74	30.04	.....	31.80	35.35	.....
23	28.85	27.88	.....	28.49	27.03	.....	27.95	30.18	.....	31.82	.....	.....
24	28.90	.....	.....	28.56	27.26	27.31	28.20	.....	.....	31.84	.....	.....
25	28.92	27.98	26.89	28.60	27.44	27.63	28.45	.....	31.30	31.85	32.59	.....
26	.....	28.02	26.92	28.68	.....	27.89	28.53	30.32	31.36	.....	32.58	.....
27	.....	27.05	26.99	.....	27.61	27.63	.....	30.43	31.41	.....	32.53	.....
28	29.10	25.66	26.93	.....	26.39	26.75	.....	30.47	.....	31.82	.....	.....
29	29.15	.....	27.05	28.50	26.27	.....	28.89	30.50	.....	31.91	.....	.....
30	29.15	.....	28.64	.....	.....	.....	29.00	30.52	31.53	31.94	.....	31.96
31	29.16	.....	.....	.....	27.10	.....	29.09	.....	.....	31.81	.....	31.21

Mt-42 (Formerly Dayton 5) (\*1023, p. 317). State Highway Department.  
At northeast corner of Washington St. and Miami Boulevard East, along Miami River.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	29.99	26.52	27.57	29.94	28.37	28.25	30.55	.....	32.81	33.48	.....
2	26.82	.....	.....	27.68	30.00	.....	28.55	30.61	.....	32.84	.....	33.75
3	27.24	.....	.....	27.79	30.05	28.65	28.81	.....	32.13	32.87	.....	33.78
4	27.59	30.12	27.02	27.87	.....	28.85	.....	.....	32.18	32.91	33.50	33.81
5	27.83	30.17	27.32	27.99	.....	28.03	29.23	30.83	32.21	.....	33.52	33.80
6	.....	27.89	27.50	.....	30.12	28.19	29.38	30.90	32.24	.....	33.52	33.82
7	27.52	27.69	27.66	.....	30.12	29.36	.....	30.97	.....	32.94	33.53	.....
8	27.65	27.93	27.57	28.29	30.05	.....	29.62	31.01	.....	33.02	33.54	.....
9	27.79	.....	.....	28.38	30.05	.....	29.72	31.12	32.31	33.07	.....	33.82
10	27.90	.....	.....	28.46	30.07	29.69	29.80	.....	32.33	33.08	.....	33.86
11	27.98	28.61	27.79	28.54	.....	29.80	29.86	.....	32.36	33.14	33.57	33.90
12	.....	28.82	27.90	28.63	.....	29.90	29.89	31.24	32.30	.....	33.55	33.85
13	.....	.....	28.04	.....	28.48	29.96	.....	31.32	32.39	.....	33.58	33.84
14	27.92	26.38	.....	.....	28.55	29.99	.....	31.35	.....	33.19	33.60	.....
15	28.11	25.69	27.80	28.85	28.74	.....	29.10	31.39	.....	33.22	33.65	.....
16	28.30	26.29	27.11	28.91	28.75	.....	30.20	31.27	32.44	33.24	.....	29.21
17	28.47	.....	.....	29.05	27.97	29.54	30.27	.....	32.46	33.25	.....	29.49
18	28.65	27.09	27.27	29.10	.....	28.29	30.40	.....	32.49	33.28	33.65	29.64
19	.....	27.26	26.51	29.19	.....	27.70	30.48	31.37	32.50	.....	33.65	29.86
20	.....	27.44	26.24	.....	.....	26.31	.....	31.44	32.53	.....	33.68	30.39
21	29.06	27.60	26.72	.....	27.52	26.97	.....	31.46	.....	33.34	33.63	.....
22	29.20	.....	26.88	29.43	27.75	.....	28.99	31.49	.....	33.34	33.69	.....
23	29.31	27.85	.....	29.48	27.01	.....	29.17	31.53	.....	33.37	.....	.....
24	29.40	.....	.....	29.48	28.24	27.92	29.36	.....	.....	33.40	.....	.....
25	29.49	28.14	27.35	29.60	28.43	28.21	29.57	.....	32.64	33.42	33.72	.....
26	.....	28.25	27.46	29.67	.....	28.48	29.87	31.71	32.67	.....	33.74	.....
27	.....	27.46	27.58	.....	28.70	29.25	.....	31.76	32.70	.....	33.73	.....
28	29.85	26.10	27.65	.....	27.63	28.36	.....	31.80	.....	33.41	.....	.....
29	29.82	.....	27.69	29.85	27.47	.....	30.37	31.86	.....	33.44	.....	.....
30	29.90	.....	.....	29.89	.....	.....	30.43	31.90	32.78	33.45	.....	29.99
31	29.95	.....	.....	.....	28.16	.....	30.49	.....	.....	33.46	.....	28.57

Mt-43 (Formerly Dayton 6) (\*1023, p. 317). State Highway Department.  
On east levee of Miami River just south of Baltimore & Ohio Railroad bridge.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	34.00	30.83	31.43	33.48	32.13	31.76	33.56	.....	36.10	36.55	.....
2	31.14	.....	.....	31.65	33.52	.....	31.96	33.64	.....	36.16	.....	36.83
3	31.95	.....	.....	31.78	33.54	32.31	32.02	.....	34.94	36.22	.....	36.78
4	32.45	34.07	31.22	31.86	.....	32.49	.....	.....	35.05	36.26	36.54	36.84
5	32.70	33.93	31.52	32.02	.....	32.69	32.17	33.60	35.10	.....	36.56	36.90
6	.....	32.92	31.73	.....	33.37	32.74	32.24	33.73	35.16	.....	36.60	36.94
7	31.92	32.74	31.82	.....	33.30	32.84	.....	33.79	.....	36.28	36.61	.....
8	32.12	33.03	31.85	32.12	33.27	.....	32.41	33.86	.....	36.55	36.64	.....
9	32.30	.....	.....	32.30	33.38	.....	32.38	33.93	35.17	36.40	.....	36.96
10	32.48	.....	.....	32.42	33.46	33.02	32.60	.....	35.27	36.39	.....	37.01
11	32.56	33.45	31.96	32.50	.....	33.12	32.66	.....	35.34	36.41	36.60	36.99
12	.....	33.64	32.12	32.66	.....	33.24	31.76	33.99	35.40	.....	36.59	36.91
13	.....	.....	32.25	.....	32.30	32.00	.....	34.11	35.46	.....	36.59	36.27
14	32.47	31.02	.....	.....	32.60	32.30	.....	34.15	.....	36.45	36.70	.....
15	32.80	29.80	32.10	32.65	32.76	.....	32.95	34.23	.....	36.48	36.73	.....
16	33.00	30.68	31.20	32.79	32.76	.....	33.09	34.22	35.52	36.51	.....	35.47
17	33.20	.....	.....	32.86	32.10	32.72	33.21	.....	35.59	36.57	.....	35.59
18	33.30	31.85	31.35	32.90	.....	32.09	33.30	.....	35.65	36.57	36.50	35.70
19	.....	32.08	30.45	32.95	.....	31.58	33.39	34.13	35.70	.....	36.75	35.83
20	.....	32.45	30.15	.....	.....	29.67	.....	34.28	35.76	.....	36.80	35.91
21	33.48	32.47	30.68	.....	31.57	30.88	.....	34.36	.....	36.42	36.77	.....
22	33.66	.....	30.95	33.02	31.81	.....	32.38	34.43	.....	36.42	37.05	.....



Mt-43--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
23	33.75	32.68	.....	33.10	32.04	.....	32.54	34.50	.....	36.44	.....	.....
24	33.76	.....	.....	33.18	32.19	31.97	32.71	.....	.....	36.47	.....	.....
25	33.73	32.70	31.40	33.21	32.31	32.23	32.90	.....	35.88	36.48	35.88	.....
26	.....	32.82	31.50	33.30	.....	32.28	32.99	34.59	35.93	.....	36.91	.....
27	.....	32.02	31.54	.....	32.42	32.38	.....	34.68	35.98	.....	36.88	.....
28	33.94	30.37	31.59	.....	31.52	31.76	.....	34.74	.....	36.45	.....	.....
29	33.98	.....	31.62	33.32	31.39	.....	33.26	34.82	.....	36.47	.....	.....
30	33.96	.....	.....	33.39	.....	.....	33.38	34.88	36.02	36.48	.....	35.18
31	33.85	.....	.....	.....	31.94	.....	33.47	.....	.....	36.51	.....	34.73

Mt-44 (Formerly Dayton 7) (\*1023, p. 318). State Highway Department.  
At intersection of West Fourth St. and South Roberts Boulevard.Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	Oct.	Nov.	Dec.
1	.....	22.46	19.23	19.97	21.97	20.55	.....	24.82	.....
2	19.20	.....	.....	20.15	21.99	.....	24.51	.....	25.01
3	19.78	.....	.....	20.28	22.00	20.75	24.57	.....	25.05
4	20.30	22.59	19.49	20.36	.....	20.89	24.61	24.81	25.09
5	19.59	22.60	19.77	20.42	.....	21.03	.....	24.86	25.17
6	.....	21.86	20.00	.....	21.89	21.16	.....	24.89	25.19
7	20.12	21.42	20.20	.....	21.83	21.27	24.68	24.90	.....
8	20.19	21.50	20.16	20.73	21.78	.....	24.70	24.89	.....
9	20.38	.....	.....	20.85	21.85	.....	24.73	.....	25.31
10	20.56	.....	.....	20.96	21.92	21.47	24.76	.....	25.34
11	20.69	21.92	20.38	21.04	.....	21.56	24.78	24.88	25.32
12	.....	22.05	20.52	21.18	.....	21.65	.....	24.89	25.19
13	.....	.....	20.65	.....	21.10	21.60	.....	24.90	24.51
14	20.75	20.68	.....	.....	21.13	21.47	24.83	24.95	.....
15	21.02	18.93	20.55	21.27	21.22	.....	24.85	24.97	.....
16	21.22	19.20	19.95	21.33	21.19	.....	24.87	.....	23.63
17	21.45	.....	.....	21.38	21.78	21.23	24.92	.....	23.76
18	21.58	20.09	19.83	21.42	.....	20.76	.....	25.00	23.90
19	.....	20.31	19.17	21.49	.....	20.37	.....	25.00	23.99
20	.....	20.59	18.65	.....	.....	18.80	.....	25.05	24.10
21	21.92	20.77	18.99	.....	19.98	.....	24.60	25.01	.....
22	22.05	.....	19.25	21.59	20.18	.....	24.60	24.97	.....
23	22.17	21.03	.....	21.63	20.38	.....	24.61	.....	.....
24	22.18	.....	.....	21.69	20.54	.....	24.67	.....	.....
25	22.18	21.18	19.82	21.73	20.68	.....	24.72	25.21	.....
26	.....	21.25	19.92	21.80	.....	.....	.....	25.17	.....
27	.....	20.70	20.00	.....	20.86	.....	.....	25.08	.....
28	22.43	19.33	20.02	.....	20.32	.....	24.70	.....	.....
29	22.47	.....	20.08	21.86	20.05	.....	24.73	.....	.....
30	22.44	.....	.....	21.90	.....	.....	24.75	.....	23.69
31	22.39	.....	.....	.....	20.40	.....	24.83	.....	23.24

Mt-45 (Formerly Dayton 8) (\*1023, p. 319). State Highway Department.  
At intersection of West Second St. and North Roberts Boulevard.Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	Oct.	Nov.	Dec.
1	.....	22.62	19.92	20.48	.....	24.61	.....
2	19.57	.....	.....	20.61	.....	.....	24.90
3	19.83	.....	.....	20.75	.....	.....	24.82
4	20.19	22.64	19.79	20.73	25.65	24.66	24.84
5	20.48	22.70	19.95	21.00	25.76	24.72	25.05

Mt-45--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	Oct.	Nov.	Dec.
6	.....	22.53	20.10	.....	.....	24.34	25.08
7	20.60	22.12	20.32	.....	25.50	24.78	.....
8	20.61	21.80	20.42	21.24	.....	24.76	.....
9	20.65	.....	.....	21.30	.....	.....	25.07
10	20.79	.....	.....	21.36	.....	.....	25.10
11	20.90	22.25	20.56	21.42	.....	24.77	25.18
12	.....	22.00	20.70	20.00	.....	24.74	25.14
13	.....	.....	20.80	.....	.....	24.78	24.95
14	20.99	21.90	.....	.....	.....	24.80	.....
15	21.16	20.82	20.99	20.00	.....	24.90	.....
16	21.34	19.88	20.84	20.00	.....	.....	23.59
17	21.50	.....	.....	.....	.....	.....	23.67
18	21.67	19.98	20.29	.....	.....	24.80	23.59
19	.....	20.22	20.17	.....	.....	24.90	23.70
20	.....	20.53	20.60	.....	.....	24.90	23.82
21	21.95	20.73	19.43	.....	24.57	24.89	.....
22	22.10	.....	19.54	.....	24.59	24.85	.....
23	22.21	21.02	.....	.....	24.62	.....	.....
24	22.30	.....	.....	.....	24.64	.....	.....
25	22.36	21.23	20.08	.....	24.68	24.93	.....
26	.....	21.35	20.25	.....	.....	25.06	.....
27	.....	21.32	20.37	.....	.....	24.97	.....
28	22.48	21.71	20.42	.....	24.53	.....	.....
29	22.57	.....	20.50	.....	24.55	.....	.....
30	22.58	.....	.....	.....	24.57	.....	23.92
31	22.62	.....	.....	.....	24.62	.....	23.73

Mt-46 (Formerly Dayton 9) (\*1023, p. 319). State Highway Department.  
At intersection of Monument Ave. and Roberts Boulevard.Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	25.36	22.26	23.94	25.69	24.45	24.32	26.25	.....	27.35	27.13	.....
2	22.10	.....	.....	24.14	25.60	.....	24.67	26.29	.....	27.34	.....	27.02
3	22.83	.....	.....	24.29	25.60	24.72	24.96	.....	26.93	27.28	.....	27.07
4	23.38	25.43	22.92	24.40	.....	24.83	.....	.....	26.95	27.34	27.11	27.11
5	23.72	25.42	23.20	24.55	.....	24.96	25.17	26.38	26.95	.....	27.15	27.15
6	.....	24.28	23.47	.....	25.51	25.11	25.38	26.44	26.96	.....	27.17	27.18
7	23.34	23.75	23.69	.....	25.47	25.24	.....	26.45	.....	27.33	27.15	.....
8	23.17	24.15	23.69	24.79	25.40	.....	25.57	26.48	.....	27.33	27.18	.....
9	23.54	.....	.....	24.86	25.45	.....	25.54	26.52	27.04	27.38	.....	27.23
10	23.72	.....	.....	24.93	25.50	25.56	25.63	.....	27.08	27.39	.....	27.25
11	23.88	24.72	23.84	24.98	.....	25.65	25.69	.....	27.11	27.38	27.11	27.23
12	.....	24.86	24.00	25.05	.....	25.75	25.78	26.59	27.14	.....	27.10	27.10
13	.....	.....	24.16	.....	24.57	25.75	.....	26.62	27.16	.....	27.08	26.44
14	23.86	22.73	.....	.....	24.70	25.65	.....	26.62	.....	27.35	27.08	.....
15	24.13	22.37	24.09	25.11	24.85	.....	26.00	26.65	.....	27.35	27.10	.....
16	24.34	21.92	23.33	25.12	24.85	.....	26.06	26.60	27.20	27.35	.....	25.67
17	24.54	.....	.....	25.11	24.30	25.44	26.13	.....	27.22	27.33	.....	25.87
18	24.66	23.18	23.45	25.16	.....	24.73	26.21	.....	27.25	27.24	27.10	26.00
19	.....	23.48	22.64	25.22	.....	24.24	26.28	26.62	27.27	.....	27.15	26.12
20	.....	23.73	22.19	.....	.....	22.45	.....	26.67	27.28	.....	27.15	26.22
21	24.92	23.87	22.55	.....	23.58	23.21	.....	26.71	.....	27.06	27.11	.....
22	25.02	.....	22.91	25.35	23.82	.....	25.30	26.73	.....	27.06	27.07	.....
23	25.10	24.17	.....	25.38	24.12	.....	25.40	26.78	.....	27.06	.....	.....
24	25.14	.....	.....	25.45	24.36	24.54	25.57	.....	.....	27.08	.....	.....
25	25.16	24.39	23.68	25.50	24.56	24.83	25.75	.....	27.26	27.07	27.27	.....
26	.....	24.47	23.74	25.55	.....	25.28	25.80	26.86	27.29	.....	27.21	.....
27	.....	23.68	23.82	.....	24.81	25.12	.....	26.89	27.32	.....	27.07	.....
28	25.33	21.99	23.85	.....	23.89	24.32	.....	26.89	.....	27.06	.....	.....
29	25.36	.....	23.96	25.55	23.50	.....	26.11	26.93	.....	27.08	.....	.....
30	25.36	.....	25.55	.....	.....	.....	26.17	26.95	27.35	27.11	.....	25.65
31	25.31	.....	.....	24.24	.....	.....	26.22	.....	.....	27.13	.....	25.39

Mt-47 (Formerly Dayton 10) (\*1023, p. 320). State Highway Department.  
At Longworth St. pump station, about 200 feet east of test well Mt-41.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	28.02	26.20	26.14	27.71	26.98	26.95	28.31	.....	30.50	30.91	.....
2	27.12	.....	.....	26.23	27.76	.....	27.07	28.37	.....	30.56	.....	31.39
3	27.21	.....	.....	26.31	27.80	27.14	27.19	.....	29.50	30.59	.....	31.44
4	27.40	28.02	26.20	26.36	.....	27.22	.....	.....	29.55	30.61	30.88	31.46
5	27.47	28.05	26.25	26.47	.....	27.30	27.33	28.49	29.59	.....	30.87	31.48
6	.....	27.81	26.30	.....	27.83	27.38	.....	28.52	29.63	.....	30.89	31.51
7	27.44	27.69	26.43	.....	27.82	27.48	.....	28.55	.....	30.64	30.90	.....
8	27.42	27.61	26.40	26.61	27.84	.....	27.57	28.59	.....	30.68	30.89	.....
9	27.39	.....	.....	26.72	27.86	.....	27.61	28.61	29.72	30.71	.....	31.55
10	27.45	.....	.....	26.79	27.88	27.68	27.67	.....	29.75	30.73	.....	31.60
11	27.52	27.72	26.47	26.79	.....	27.73	.....	.....	29.76	30.75	30.88	31.59
12	.....	27.75	26.50	26.92	.....	27.79	27.76	28.70	29.78	.....	30.87	30.57
13	.....	.....	26.56	.....	27.69	27.85	.....	28.73	29.91	.....	30.88	30.82
14	27.40	27.43	.....	.....	27.63	27.90	.....	28.75	.....	30.73	31.08	.....
15	27.44	26.70	26.60	27.00	27.64	.....	27.90	28.79	.....	30.75	31.10	.....
16	27.50	26.41	26.46	27.09	27.64	.....	27.95	28.78	29.98	30.76	.....	30.91
17	27.56	.....	.....	27.13	27.51	27.80	28.01	.....	.....	30.78	.....	31.04
18	27.60	26.62	26.25	27.16	.....	27.69	28.07	.....	30.02	30.79	31.20	31.10
19	.....	26.64	26.13	27.22	.....	27.65	28.13	28.76	30.04	.....	31.25	31.18
20	.....	26.80	25.80	.....	.....	27.03	.....	28.85	30.05	.....	31.20	31.23
21	27.67	26.86	25.76	.....	26.88	26.76	.....	28.91	.....	30.80	31.23	.....
22	27.73	.....	25.81	27.30	26.89	.....	27.80	28.95	.....	30.79	31.12	.....
23	27.77	26.95	.....	27.33	26.96	.....	27.80	29.05	.....	30.80	.....	.....
24	27.80	.....	.....	27.40	27.03	27.09	.....	.....	.....	30.81	.....	.....
25	27.81	26.99	26.02	27.48	27.10	27.23	27.91	.....	30.29	30.82	31.35	.....
26	.....	27.00	26.06	27.55	.....	27.39	27.98	29.18	30.31	.....	31.30	.....
27	.....	26.95	26.12	.....	27.23	27.54	.....	29.25	30.38	.....	31.30	.....
28	27.92	26.46	26.13	.....	27.17	27.30	.....	29.30	.....	30.83	.....	.....
29	27.96	.....	26.15	27.62	27.42	.....	28.13	29.35	.....	30.84	.....	.....
30	27.92	.....	.....	27.67	.....	.....	28.19	29.39	30.47	30.86	.....	31.02
31	27.97	.....	.....	.....	26.89	.....	28.26	.....	.....	30.88	.....	30.89

Mt-48 (Formerly Vandalia 1) (\*1016, p. 308; 1023, p. 320). Vandalia  
Water Works. In flood plain of the Little Miami River, Dayton quadrangle,  
NE $\frac{1}{4}$  sec. 14, T. 3 N., R. 6 E.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	20.80	23.13	24.30	24.39	25.95	28.89	29.80	.....	19.98	29.15
2	.....	.....	20.70	23.48	24.80	24.41	.....	28.88	30.21	.....	19.80	29.65
3	.....	.....	20.62	23.68	25.00	24.80	.....	28.80	30.59	.....	19.72	.....
4	.....	.....	21.00	23.80	24.70	25.10	16.86	28.70	30.80	.....	19.69	.....
5	.....	.....	21.00	24.00	24.70	25.20	.....	29.40	30.99	.....	19.83	19.84
6	.....	.....	21.20	23.85	25.93	25.42	26.60	28.99	30.92	.....	19.97	19.82
7	.....	.....	21.80	23.82	26.05	25.73	26.90	29.12	19.90	.....	20.00	19.80
8	.....	.....	.....	24.19	26.09	26.80	27.20	29.22	19.58	.....	20.02	19.65
9	.....	.....	.....	24.60	25.88	27.01	27.00	29.22	30.10	.....	20.01	19.65
10	.....	.....	.....	24.41	25.87	27.00	27.00	28.78	19.38	21.03	19.80	19.75
11	.....	.....	22.01	24.57	25.60	28.20	27.80	29.12	30.18	31.00	19.79	19.80
12	.....	24.30	21.40	25.01	25.49	27.30	27.00	29.80	30.50	30.80	19.79	19.80
13	.....	24.21	21.28	.....	25.62	27.20	27.20	29.88	30.60	30.61	19.72	19.70
14	20.68	24.12	21.30	.....	25.43	27.30	27.20	30.39	30.40	30.80	19.77	19.78
15	20.89	22.83	21.32	.....	25.26	26.70	27.50	30.21	30.60	30.00	19.75	18.85
16	.....	21.69	21.48	.....	25.13	27.01	28.82	30.20	30.85	19.90	19.72	18.75
17	.....	21.18	21.82	25.83	24.92	26.75	29.50	30.19	.....	19.98	19.60	18.73
18	.....	21.02	.....	25.89	24.30	28.03	29.23	30.17	.....	20.00	19.72	18.84
19	.....	21.20	.....	25.89	23.76	28.70	29.80	30.40	.....	19.98	19.85	18.85
20	.....	21.30	.....	25.80	23.59	27.43	29.40	30.22	.....	19.82	19.98	18.76
21	.....	21.55	.....	25.78	15.60	26.83	28.90	30.04	.....	19.78	27.80	18.68
22	.....	21.50	.....	25.98	23.22	26.38	29.20	30.20	29.90	19.68	20.19	18.50
23	.....	21.60	.....	25.89	24.72	26.20	28.99	30.51	30.30	19.58	20.18	18.41

Mt-48--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
24	.....	21.75	.....	25.85	.....	26.58	28.80	30.10	30.22	19.60	28.90	18.55
25	.....	21.90	21.80	26.05	.....	26.68	28.66	29.86	30.11	19.70	19.98	18.54
26	.....	.....	22.40	26.25	.....	26.95	28.71	30.22	30.79	19.70	19.15	18.57
27	.....	.....	25.45	26.00	.....	26.95	28.35	30.42	30.95	29.58	19.14	18.78
28	.....	.....	23.03	25.99	24.53	26.70	28.10	30.42	31.50	19.93	19.00	18.80
29	.....	.....	22.82	17.00	24.63	26.25	28.63	30.30	.....	20.02	18.75	27.80
30	.....	.....	22.60	17.71	24.39	25.78	28.90	30.40	.....	20.10	18.75	27.37
31	.....	.....	22.61	.....	24.32	.....	28.80	30.15	.....	20.09	.....	18.38

Muskingum County

Mu-1 (Formerly Zanesville 1) (\*944, p. 192; \*986, p. 266; 1016, p. 309; 1023, p. 321). City of Zanesville water department. On east bank of Muskingum River, 0.5 mile north of north corporation line.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	21.53	23.05	22.25	19.66	20.57	15.82	16.46	18.60	19.16	20.65	21.13	21.31
2	21.17	23.19	21.44	19.76	20.52	15.17	16.30	19.07	18.85	20.35	20.94	21.67
3	20.50	23.21	20.60	19.82	20.46	15.35	16.57	18.88	19.41	20.63	20.70	21.74
4	20.60	23.28	19.80	19.90	20.51	15.50	17.05	19.03	19.26	20.47	20.62	22.15
5	20.65	23.35	19.60	20.05	20.46	15.95	17.32	18.58	19.85	20.75	20.74	22.07
6	20.70	23.39	19.50	20.06	20.71	16.10	17.20	18.92	19.90	20.45	21.02	22.24
7	20.76	23.56	19.56	19.92	20.51	16.35	17.28	18.56	20.28	20.73	21.02	22.11
8	20.76	23.34	19.35	19.92	20.52	16.65	18.31	19.05	20.25	20.44	21.13	21.97
9	20.86	23.22	19.30	20.05	20.34	16.83	18.55	18.70	20.51	20.80	21.07	21.88
10	20.70	23.14	19.29	20.11	20.17	16.95	18.62	19.24	20.40	20.55	20.92	22.15
11	21.00	23.06	19.28	20.11	20.17	17.35	19.30	18.69	20.61	21.00	20.85	22.06
12	21.00	23.10	19.28	20.19	19.84	17.60	19.40	19.02	20.50	20.70	21.03	21.97
13	21.00	23.11	19.28	20.26	19.50	17.62	19.02	18.72	20.67	20.50	21.44	22.08
14	20.85	23.07	19.38	20.13	19.47	17.42	19.50	19.71	20.51	20.61	21.27	22.10
15	21.10	23.04	19.26	20.10	19.30	17.07	19.39	19.40	20.42	20.52	21.45	22.10
16	21.20	23.11	19.51	20.16	19.13	16.80	18.85	19.77	20.02	21.00	21.28	21.85
17	21.30	22.85	19.55	20.20	19.03	16.58	19.45	19.40	20.66	20.96	21.11	.....
18	21.40	22.55	19.54	20.21	18.85	16.30	19.49	19.40	20.35	21.22	21.22	.....
19	21.60	22.20	19.55	20.26	18.57	15.75	19.55	18.50	20.85	20.92	21.29	22.05
20	21.60	22.02	19.55	20.27	18.33	15.35	20.10	19.60	20.42	20.84	21.55	22.13
21	21.70	22.17	19.56	20.29	18.60	14.60	20.13	18.81	20.78	20.50	21.53	22.27
22	21.87	22.11	19.63	20.20	18.58	14.35	19.13	19.20	20.78	20.97	21.85	22.19
23	22.02	22.02	19.70	20.25	18.40	14.17	19.20	18.78	20.63	20.72	21.70	22.19
24	22.10	21.91	19.63	20.30	18.25	13.90	18.88	19.10	20.53	21.14	21.67	22.36
25	22.32	21.93	19.65	20.38	18.06	14.50	18.65	18.62	20.79	20.90	21.73	22.20
26	22.39	22.30	19.70	20.39	17.87	14.80	18.98	18.52	20.64	21.15	21.89	22.18
27	22.53	22.48	19.77	20.41	17.69	15.40	18.70	19.07	20.83	20.69	21.93	22.25
28	22.60	22.45	19.76	20.45	17.70	15.72	18.75	18.82	20.45	20.93	21.72	22.47
29	22.75	.....	19.76	20.43	17.27	15.85	18.27	19.41	20.63	20.75	21.65	22.37
30	22.83	.....	19.87	20.55	16.76	15.85	19.00	19.07	20.25	20.88	21.42	22.26
31	23.00	.....	19.80	.....	16.00	.....	18.75	19.54	.....	20.86	.....	22.30

Paulding County

P-1. E. A. Green. At Tipton, north of State Highway 114, on east side of north-south road. Abandoned drilled well, diameter 4 inches, depth 23 feet. Measuring point, floor of recorder shelter, 4 feet above land-surface datum. Automatic water-stage recorder installed July 10, 1946.

P-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	2.96	4.06	4.68	5.64	....
2	....	2.95	3.68	4.63	5.63	....
3	....	3.06	3.70	4.67	5.68	....
4	....	3.36	3.74	4.73	5.84	....
5	....	2.98	4.14	4.82	5.92	6.74
6	....	2.97	3.88	5.41	5.92	6.76
7	....	3.01	3.77	4.88	6.32	6.77
8	....	3.50	4.33	4.86	5.84	6.80
9	....	2.99	3.79	4.83	5.90	7.33
10	2.59	3.03	3.78	4.85	5.90	6.80
11	2.62	3.04	3.84	5.33	6.00	6.71
12	2.66	3.30	3.88	4.97	6.08	6.89
13	3.08	3.11	4.46	5.05	6.11	6.65
14	2.71	3.12	3.96	5.20	6.07	6.72
15	3.11	3.23	4.02	5.19	6.13	6.73
16	2.78	3.18	4.09	5.14	6.14	6.76
17	2.79	3.54	4.62	5.72	6.36	6.84
18	3.14	3.18	4.22	5.01	....	7.34
19	2.72	3.18	4.30	5.14	....	....
20	2.87	3.26	4.21	5.22	....	....
21	2.77	3.73	4.67	5.34	6.26	....
22	3.01	3.38	4.18	5.32	6.33	....
23	2.74	3.40	4.18	5.87	6.35	....
24	2.78	3.55	4.28	5.34	6.31	....
25	2.83	3.52	4.28	5.27	6.81	6.57
26	2.96	4.03	4.83	5.40	6.34	6.97
27	3.41	3.47	4.40	5.50	6.44	6.45
28	2.89	3.81	4.45	5.59	6.45	6.45
29	2.93	3.53	4.48	5.58	....	6.62
30	2.90	3.54	5.16	6.07	....	6.70
31	3.37	3.54	....	5.62	....	7.05

Portage County

Po-1. Edward Tiddle. In Windham, on east side of house on north side of High Street. Abandoned drilled well, diameter 6 inches, depth 55 feet. Measuring point, floor of recorder shelter, 0.6 foot above land-surface datum. Automatic water-stage recorder installed May 15, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	15.89	15.75	.....	18.32	19.44	19.81	20.16
2	.....	15.85	15.78	.....	18.36	19.46	19.82	20.17
3	.....	15.81	15.80	.....	18.47	19.46	19.86	20.15
4	.....	15.77	15.81	.....	18.49	19.49	19.88	20.16
5	.....	15.77	15.79	.....	18.53	19.51	.....	20.15
6	.....	15.72	15.82	17.08	18.60	19.51	19.88	20.17
7	.....	15.66	15.85	17.13	18.63	19.53	19.86	20.17
8	.....	15.69	15.91	17.16	18.67	19.54	19.91	20.18
9	.....	15.76	15.92	17.23	18.68	19.57	19.93	20.18
10	.....	15.74	15.98	17.28	18.71	19.57	19.92	20.17
11	.....	15.65	15.98	17.37	18.78	19.58	19.96	20.17
12	.....	15.63	16.06	17.43	18.86	19.61	19.96	20.13
13	.....	15.68	16.09	17.45	18.87	19.65	19.97	20.16
14	.....	15.70	16.13	17.46	18.93	19.65	.....	20.15
15	16.96	15.68	16.20	17.51	18.98	19.67	.....	20.13
16	16.95	15.65	16.24	17.53	19.02	19.64	.....	20.13
17	16.93	15.63	16.26	17.56	19.17	19.66	.....	20.17
18	16.80	15.64	16.31	.....	19.18	19.68	.....	20.17

Po-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
18	16.80	15.64	16.31	.....	19.18	19.68	.....	20.17
19	16.80	15.64	.....	.....	19.19	19.71	20.02	20.18
20	16.72	15.60	.....	.....	19.42	19.74	20.04	20.14
21	16.68	15.62	.....	.....	19.26	19.71	20.04	20.12
22	16.67	15.67	.....	.....	19.29	19.75	20.08	20.17
23	16.59	15.67	16.55	.....	19.50	19.72	20.08	20.15
24	16.49	15.63	16.60	.....	19.31	19.75	20.06	20.13
25	16.42	15.72	16.64	.....	19.31	19.75	20.10	.....
26	16.40	15.70	16.70	.....	19.32	19.78	20.11	.....
27	16.31	15.72	16.72	18.10	19.33	20.17	20.14	.....
28	16.18	15.72	16.80	18.13	19.37	19.81	20.14	.....
29	16.11	15.72	16.79	18.17	19.38	19.79	20.15	.....
30	16.01	15.72	16.82	18.21	19.42	19.82	20.12	.....
31	15.90	.....	.....	18.25	.....	19.81	.....	20.15

Po-2. City of Kent water department. In Kent, about 1,000 feet southeast of pumping station, in well house. Abandoned drilled well, diameter 10 inches, depth 65 feet. Measuring point, top of wooden well cover, at land-surface datum. Automatic water-stage recorder installed May 24, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	14.05	17.64	16.77	16.00	16.12	15.64
2	.....	.....	14.19	17.75	16.45	16.10	16.07	15.63
3	.....	.....	14.20	17.77	17.90	16.16	16.66	15.66
4	.....	17.95	14.24	17.78	18.10	16.20	15.95	15.67
5	.....	17.95	14.23	17.67	18.30	16.20	15.97	15.74
6	.....	14.82	14.25	17.80	18.33	16.25	15.97	15.77
7	.....	14.40	14.28	17.82	18.34	15.99	15.94	15.77
8	.....	14.40	14.33	17.99	16.95	16.08	16.05	15.76
9	.....	14.40	14.41	18.06	18.27	16.14	16.08	15.67
10	.....	14.22	14.43	18.20	18.35	16.21	16.06	15.72
11	.....	14.25	14.63	16.80	18.42	16.29	15.94	15.72
12	.....	14.20	14.68	16.40	18.46	16.28	15.95	15.58
13	.....	14.21	14.70	17.85	18.41	17.00	.....	15.50
14	.....	14.20	14.77	17.95	18.44	16.06	.....	15.30
15	.....	14.15	14.85	18.09	18.42	16.10	.....	15.32
16	.....	14.02	14.94	18.03	18.25	16.12	.....	15.32
17	.....	13.96	15.10	16.05	18.49	16.15	.....	15.50
18	.....	14.04	15.23	16.55	17.43	16.12	.....	15.56
19	.....	14.00	15.36	17.85	16.49	16.11	15.97	15.59
20	.....	13.96	15.42	17.92	16.36	16.04	15.99	15.59
21	.....	14.00	15.42	.....	16.24	15.96	15.99	15.65
22	.....	14.00	15.31	.....	16.17	15.96	16.09	15.68
23	.....	13.93	15.35	18.15	16.04	15.99	16.11	.....
24	13.95	13.80	15.43	18.16	16.01	16.00	16.75	15.55
25	.....	13.87	15.60	16.64	16.02	16.03	15.95	15.50
26	.....	13.94	16.96	17.95	16.07	16.05	15.96	15.45
27	.....	14.04	17.00	18.19	16.10	16.05	15.92	15.45
28	.....	14.04	15.51	18.25	16.12	15.94	15.70	15.49
29	13.84	14.06	17.16	18.32	16.06	15.99	15.65	15.44
30	13.69	14.06	17.41	18.40	15.97	16.04	15.63	15.40
31	.....	.....	17.61	17.27	.....	16.11	.....	15.38

Putnam County

Pu-1. City of Columbus Grove. About 2 blocks south of business section of Columbus Grove, on south side of Broadway. Abandoned drilled well, diameter 6 inches, depth 110 feet. Measuring point, floor of recorder shelter, 0.5 foot above land-surface datum. Automatic water-stage recorder installed July 11, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 11	16.63	Oct. 9	20.08	Nov. 8	18.55	Dec. 5	18.43
12	15.39	10	19.82	9	18.70	6	18.53
13	15.12	11	19.42	10	17.76	7	18.39
Sept. 12	18.53	12	19.50	11	18.50	8	18.33
13	18.45	13	18.86	12	17.98	9	18.28
14	18.93	14	19.39	13	18.25	10	18.70
15	18.03	15	17.43	14	18.17	11	18.62
16	16.71	16	19.75	15	18.35	12	18.35
19	19.80	17	19.35	16	17.37	13	18.35
20	20.01	18	19.22	17	18.02	14	18.36
21	19.89	19	19.03	18	17.60	15	17.94
22	18.53	20	18.68	19	17.57	16	18.05
23	16.59	21	18.71	20	17.30	17	18.10
24	15.52	22	19.25	21	17.86	18	17.99
25	15.52	23	19.17	22	17.66	19	17.92
26	20.00	24	18.98	23	18.20	20	17.83
27	20.10	25	18.61	24	17.55	21	17.71
28	20.50	26	18.70	25	17.47	22	18.01
29	19.60	27	18.11	26	17.40	23	17.98
30	19.79	28	18.46	27	17.70	24	18.01
Oct. 1	19.90	31	18.12	28	17.63	25	17.91
2	19.70	Nov. 1	18.20	29	17.99	26	18.20
3	19.84	2	18.45	30	18.08	27	18.26
4	20.10	3	17.73	Dec. 1	17.80	28	17.80
5	20.17	4	18.50	2	18.56	29	17.43
6	19.50	5	17.99	3	18.35	30	17.72
7	20.09	6	18.09	4	18.31	31	17.71
8	19.57	7	17.73				

Richland County

R-1. State of Ohio. In Mansfield, at Ohio State Reformatory, 80 feet east of railroad and 200 feet north of old ice house. Abandoned drilled well, diameter 10 inches, depth 165 feet. Measuring point, floor of recorder shelter, 2.2 feet above land-surface datum. Automatic water-stage recorder installed Apr. 10, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
1	.....	28.84	30.38	32.20	32.30	32.73	32.83	33.06
2	.....	29.01	30.21	32.41	32.30	32.80	32.87	32.96
3	.....	29.25	29.60	32.47	32.23	32.80	32.97	32.99
4	.....	29.54	30.40	32.45	32.27	32.83	33.01	33.26
5	.....	29.90	30.78	32.38	31.72	32.81	33.04	33.20
6	.....	30.09	30.99	32.31	31.10	32.76	33.00	33.12
7	.....	30.44	31.27	32.34	30.88	32.71	32.89	32.85
8	.....	30.46	31.31	32.30	31.10	32.47	32.81	32.88
9	.....	30.72	31.70	32.30	31.24	32.45	32.80	32.94
10	27.16	30.81	31.74	32.31	31.92	32.40	32.86	32.90
11	27.21	30.89	31.63	32.28	32.12	32.48	.....	33.05
12	27.30	31.19	31.64	32.38	32.24	32.60	33.02	33.10
13	27.28	31.31	31.90	32.40	32.33	32.61	33.19	33.02
14	27.19	31.26	32.05	32.32	32.40	32.61	33.08	32.92

R-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
15	27.05	31.37	32.10	32.44	32.35	32.68	33.05	33.02
16	27.24	31.38	32.07	32.45	32.29	32.71	32.91	32.92
17	27.21	31.42	32.05	32.38	32.22	32.73	32.80	.....
18	27.08	31.58	32.07	32.30	.....	32.05	32.95	.....
19	27.12	31.71	32.11	32.30	.....	31.74	33.05	33.02
20	27.14	31.64	32.10	32.30	.....	31.94	33.07	33.35
21	27.16	30.80	32.18	32.20	.....	32.10	33.07	33.35
22	26.94	31.28	32.55	32.16	.....	32.52	32.98	35.12
23	26.74	31.38	32.41	32.30	.....	32.38	32.91	33.04
24	25.95	30.82	32.30	32.30	.....	.....	32.86	33.00
25	25.13	30.73	32.23	32.39	.....	.....	32.92	33.08
26	25.67	31.08	32.28	32.39	32.65	.....	33.18	33.12
27	27.05	31.15	32.32	32.35	32.66	32.77	33.28	33.10
28	27.77	31.40	32.32	32.32	32.60	32.79	33.25	33.30
29	28.26	31.08	32.32	32.19	32.70	32.77	33.10	33.33
30	28.58	.....	.....	32.20	32.72	32.80	33.02	.....
31		31.28		32.23	32.66		33.06	

R-2. Village of Lexington. At Lexington, 300 feet south of State Highway 42, in abandoned well pit at east edge of village. Abandoned drilled well, diameter 6 inches, depth 129 feet. Measuring point, top of recorder platform, 4.0 feet below land-surface datum. Automatic water-stage recorder installed Apr. 10, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	26.93	25.89	25.56	26.97	27.55	27.81	27.90	27.76
2	.....	26.94	25.85	25.65	26.99	27.57	27.85	27.91	27.77
3	.....	26.95	25.85	25.72	27.03	27.58	27.85	27.91	27.78
4	.....	26.96	25.87	25.78	27.04	27.60	.....	27.91	27.79
5	.....	26.97	25.90	25.85	27.09	27.62	.....	27.92	27.81
6	.....	26.98	25.93	25.91	.....	27.63	27.85	27.92	27.82
7	.....	26.99	25.97	25.98	.....	27.65	27.85	27.92	27.83
8	.....	27.00	26.02	26.04	27.10	27.67	27.85	27.92	27.84
9	.....	27.02	26.07	26.12	27.11	27.68	27.86	27.92	27.85
10	26.48	27.03	26.11	26.18	27.14	27.68	27.86	27.92	27.85
11	26.50	27.02	26.15	26.22	27.17	27.70	27.87	27.92	27.80
12	26.53	26.95	26.17	26.18	27.19	27.71	27.87	27.91	27.74
13	26.56	26.96	26.16	26.17	27.22	27.70	27.88	27.90	27.50
14	26.58	26.96	25.89	26.24	27.24	27.70	27.88	27.89	27.26
15	26.59	26.97	25.92	26.29	27.25	27.70	27.89	27.90	27.22
16	26.61	26.97	25.96	26.33	27.26	27.71	27.90	27.91	27.19
17	26.62	26.93	25.80	26.38	27.28	27.72	27.90	27.91	27.16
18	26.64	26.85	25.15	26.41	27.29	27.72	27.88	27.91	27.14
19	26.65	26.84	25.09	26.46	27.32	27.76	27.82	27.90	27.15
20	26.68	26.84	24.88	26.51	27.34	27.76	27.82	27.91	27.15
21	26.71	26.85	24.91	26.53	27.36	27.77	27.81	27.91	27.16
22	26.72	26.85	24.99	26.59	27.37	27.78	27.84	27.93	27.18
23	26.75	26.87	25.05	26.60	27.38	27.78	27.84	27.93	27.18
24	26.77	26.88	25.13	26.64	27.40	27.77	27.86	27.94	27.18
25	26.80	26.90	25.18	26.69	27.42	27.79	27.86	27.94	27.19
26	26.82	26.90	25.26	26.72	27.44	27.79	27.86	27.94	27.21
27	26.85	26.70	25.33	26.76	27.46	27.79	27.86	27.83	27.21
28	26.88	26.35	25.39	26.80	27.47	27.79	27.88	27.78	27.18
29	26.90	26.10	25.47	26.83	27.50	27.79	27.88	27.76	27.11
30	26.92	26.00	25.52	26.89	27.51	27.79	27.89	27.75	27.02
31		25.94		26.91	27.53		27.90		27.00



R-3. Voisard Factory. At Shiloh, south of State Highway 178 and east of New York Central Railroad, on east side of factory road. Abandoned drilled well, diameter 8 inches, depth 150 feet. Measuring point, floor of recorder shelter, 3.0 feet above land-surface datum. Automatic water-stage recorder installed Apr. 11, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	26.75	26.24	25.86	26.70	27.30	27.89	.....	28.52
2	.....	26.90	26.15	26.23	26.66	27.37	27.96	28.00	28.70
3	.....	26.52	26.15	26.00	26.71	27.55	28.04	27.97	28.58
4	.....	26.42	26.79	26.30	26.72	27.40	28.10	28.18	28.26
5	.....	.....	26.56	26.49	26.69	27.45	28.24	28.30	28.15
6	.....	.....	26.36	26.07	26.62	27.58	28.27	28.18	28.19
7	.....	.....	26.18	25.99	26.71	27.51	28.10	27.88	28.18
8	.....	26.56	26.32	26.01	26.77	27.58	28.36	28.48	28.25
9	.....	26.53	26.63	26.14	.....	27.60	27.97	28.90	28.24
10	.....	26.56	26.58	26.25	26.77	27.30	27.96	28.51	28.10
11	26.16	26.46	26.35	26.18	27.04	27.52	27.96	28.48	28.14
12	26.30	26.48	26.32	26.04	27.02	27.71	28.21	28.54	27.91
13	26.31	26.73	26.42	26.28	27.08	27.64	28.38	28.40	28.18
14	26.22	.....	26.47	26.05	27.08	27.55	28.24	28.36	.....
15	26.07	26.37	26.45	26.21	27.08	27.60	28.15	28.39	.....
16	26.35	26.30	26.36	26.19	27.08	27.61	28.07	28.36	28.12
17	26.36	26.30	26.23	.....	26.96	27.72	27.94	28.67	28.52
18	26.37	26.18	25.96	26.63	26.94	27.72	28.01	28.64	28.59
19	26.41	26.38	26.41	26.53	26.92	27.77	28.18	28.41	28.59
20	26.54	26.29	26.15	26.48	27.05	27.58	28.33	28.30	28.50
21	26.56	26.48	26.01	26.50	27.05	27.61	28.25	28.20	28.13
22	26.35	26.56	26.09	26.52	27.12	28.14	28.15	28.35	28.45
23	26.59	26.56	26.15	26.37	27.10	27.73	28.09	28.43	28.42
24	26.36	26.34	26.10	26.36	27.08	27.64	28.03	28.23	.....
25	26.02	26.20	25.96	26.45	27.08	27.92	27.90	28.13	.....
26	26.58	26.29	25.92	26.57	27.12	27.82	28.18	28.10	.....
27	26.88	26.26	25.81	26.56	26.99	27.93	28.34	28.32	.....
28	27.24	26.34	26.19	26.58	27.33	28.07	28.27	28.47	.....
29	26.82	26.39	25.97	26.63	27.72	27.88	28.10	28.33	.....
30	26.94	26.30	25.11	26.52	27.25	27.92	27.97	28.33	.....
31		26.19		26.60	27.22		28.13		.....

R-4 (Formerly Mansfield 1) (\*944, p. 193; \*986, p. 267; 1016, p. 310; 1023, p. 322). City of Mansfield. At North Main St. pumping station.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	46.83	48.70	.....	40.85	43.70	43.35	39.45
2	.....	49.52	48.40	.....	35.80	45.02	42.90	40.20
3	.....	48.93	48.02	.....	39.65	44.05	41.60	.....
4	.....	47.95	46.90	.....	41.20	42.89	41.75	.....
5	48.30	48.90	47.53	.....	42.07	42.10	42.68	.....
6	48.30	49.69	47.90	.....	42.46	.....	43.18	.....
7	47.83	50.07	48.16	.....	41.95	.....	43.37	.....
8	48.80	50.02	47.84	.....	40.55	.....	43.32	.....
9	49.29	49.80	48.02	.....	39.70	.....	43.03	.....
10	49.79	49.69	47.70	47.84	41.45	.....	42.22	.....
11	49.80	48.88	46.72	43.35	42.14	.....	41.82	.....
12	50.13	50.00	47.30	44.90	42.56	.....	42.96	.....
13	49.78	49.83	47.46	46.90	42.65	.....	43.20	.....
14	47.85	50.10	47.54	47.81	42.24	.....	43.47	.....
15	48.63	50.78	47.75	48.43	40.65	.....	43.72	.....
16	48.43	50.54	47.43	48.42	40.78	.....	42.92	.....
17	47.95	49.06	.....	47.99	42.11	.....	.....	.....
18	47.89	47.90	.....	44.50	42.51	.....	.....	.....
19	47.95	48.60	.....	45.15	42.69	42.64	.....	.....

R-4--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Aug.	Sept.	Oct.	Nov.	Dec.
20	47.53	49.18	.....	47.40	42.84	42.14	.....	.....
21	41.28	48.95	.....	47.99	42.20	41.05	.....	.....
22	41.28	48.84	.....	48.52	39.85	42.48	.....	.....
23	41.28	48.51	47.38	48.60	40.00	43.35	.....	.....
24	41.28	48.07	46.30	48.15	41.87	43.27	.....	.....
25	41.28	47.20	43.45	47.40	42.85	43.72	41.30	.....
26	42.64	48.25	44.40	42.49	43.49	43.00	42.66	.....
27	42.67	49.05	44.70	43.37	43.70	42.31	43.00	.....
28	41.40	48.75	44.75	43.33	43.08	41.56	42.80	.....
29	42.52		44.75	43.75	42.20	42.83	38.92	.....
30	43.27		44.78	42.44	41.50	42.83	39.40	.....
31	45.50		.....	42.88		43.55		.....

Ross County

Ro-1 (Formerly Chillicothe 1) (\*1016, p. 310; 1023, p. 322). Chillicothe Water Department. In City Park, Chillicothe.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	16.91	17.91	14.75	14.62	16.18	14.21	12.65	15.53	16.59	.....	17.94	17.98
2	16.53	17.93	14.00	14.75	.....	14.28	13.10	15.57	16.62	.....	17.95	18.04
3	16.71	17.93	14.27	14.84	.....	14.33	13.35	15.64	.....	.....	17.95	.....
4	16.84	17.90	14.45	14.96	.....	14.43	13.55	15.68	.....	.....	18.00	.....
5	16.94	17.92	14.65	15.03	.....	.....	13.75	15.74	.....	.....	.....	.....
6	17.04	17.81	14.85	15.13	.....	.....	13.90	15.74	16.82	.....	18.06	.....
7	17.06	16.73	14.94	15.18	.....	.....	14.03	15.70	16.85	17.70	18.09	.....
8	17.05	16.25	14.80	15.25	16.36	.....	14.10	15.69	16.87	17.72	18.11	.....
9	17.05	16.54	14.40	.....	16.36	.....	.....	15.74	16.89	17.75	18.11	.....
10	17.07	16.71	14.51	15.43	16.32	15.12	.....	15.84	16.92	17.77	18.09	18.42
11	17.10	16.85	14.72	15.47	16.36	15.17	14.43	15.87	16.95	17.79	18.10	18.44
12	17.15	16.96	14.91	15.55	16.36	15.30	14.52	15.93	16.95	17.79	18.10	18.44
13	17.16	17.00	15.04	15.59	16.26	15.38	14.64	15.97	16.93	17.78	18.02	18.44
14	17.14	16.98	15.14	15.62	16.07	15.38	14.72	16.05	16.95	17.76	18.00	18.05
15	.....	16.15	15.15	15.67	16.04	14.78	14.81	16.10	16.97	17.80	18.05	17.27
16	.....	14.85	15.06	15.71	15.75	14.65	14.88	16.10	17.00	17.82	18.11	17.40
17	.....	14.95	14.90	15.73	15.66	14.65	14.95	16.06	17.04	17.84	18.12	17.60
18	.....	15.25	14.92	15.83	14.61	13.80	15.02	16.02	17.06	17.87	18.19	.....
19	.....	.....	14.91	15.84	14.59	11.50	.....	16.00	17.09	17.87	18.24	17.82
20	.....	.....	14.31	15.90	14.74	7.65	.....	16.07	.....	17.80	18.25	17.87
21	.....	.....	12.80	15.90	14.82	6.35	.....	16.12	.....	17.78	18.27	17.95
22	.....	.....	13.27	15.92	14.83	6.65	15.00	.....	.....	.....	18.30	17.99
23	.....	.....	13.67	15.97	14.89	8.40	14.95	.....	17.32	.....	18.32	18.03
24	.....	.....	13.98	16.01	15.01	9.75	15.03	.....	17.33	.....	18.33	18.08
25	.....	16.05	14.21	16.05	15.13	10.70	15.10	.....	17.33	.....	18.36	18.11
26	.....	16.13	14.33	16.08	15.22	11.40	15.15	16.36	17.36	.....	18.38	18.10
27	.....	16.15	14.32	16.13	15.23	12.00	15.21	16.41	17.40	.....	18.24	.....
28	17.85	15.95	14.36	16.16	15.10	12.22	15.28	16.45	17.42	17.89	17.97	.....
29	17.86	.....	14.48	16.17	14.06	12.20	.....	16.50	17.45	17.91	17.80	.....
30	17.87		14.51	16.18	13.60	12.45	15.42	16.53	17.45	17.92	17.88	17.78
31	17.89		14.52		13.95		15.49	16.56		17.94		17.48

Ro-2 (Formerly Chillicothe 2) (\*1016, p. 311; 1023, p. 323). Chillicothe Water Department. In Chillicothe, 40 feet south of the centerline of Chestnut St. and 100 feet east of the centerline of Park St.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	40.70	39.16	37.67	39.10	37.80	35.30	38.10	40.30	40.45	41.33	41.60
2	.....	40.90	39.17	37.80	39.08	38.30	35.35	38.25	39.80	40.35	.....	41.65
3	.....	41.00	39.10	37.95	38.38	37.80	35.50	38.00	39.65	40.40	41.30	41.68
4	.....	41.10	39.17	37.81	38.65	37.90	35.65	38.35	39.41	40.45	41.34	41.70
5	.....	40.90	39.16	37.90	38.75	38.10	.....	38.08	39.35	40.40	41.31	41.70
6	.....	40.66	38.55	37.95	38.63	37.90	35.80	38.12	39.45	40.65	41.39	41.69
7	.....	40.62	38.60	38.05	38.75	38.10	35.90	38.15	39.44	40.75	41.30	41.71
8	40.18	40.65	38.85	38.00	38.82	37.64	35.50	38.18	39.48	40.83	41.20	41.55
9	.....	40.11	38.80	37.95	38.81	37.60	35.80	38.20	39.40	40.80	41.43	41.93
10	.....	40.08	38.86	38.00	38.79	37.62	35.75	.....	39.40	41.01	41.40	41.95
11	.....	40.00	38.83	38.15	38.75	.....	35.60	38.20	39.43	41.05	41.25	41.98
12	39.60	40.07	38.38	38.35	38.89	.....	.....	38.10	39.47	41.03	41.35	41.60
13	40.08	40.08	38.60	38.40	38.89	.....	.....	38.20	39.45	40.81	41.40	41.50
14	40.10	40.10	38.42	38.50	38.85	.....	.....	38.16	.....	40.80	41.35	41.50
15	40.06	40.12	38.79	38.42	38.74	.....	.....	38.05	.....	41.15	41.40	41.60
16	40.00	40.08	38.76	38.40	38.79	.....	36.85	38.25	39.19	41.05	41.42	41.93
17	39.98	40.07	38.43	38.46	38.75	37.62	36.85	37.60	.....	.....	41.35	41.90
18	40.00	39.38	38.55	38.85	37.81	37.00	36.88	37.62	40.65	40.85	41.20	41.92
19	40.02	38.30	38.45	38.86	37.91	36.40	.....	.....	40.17	40.48	41.61	41.90
20	40.00	39.30	38.81	38.90	37.90	35.80	.....	38.85	40.42	40.49	41.60	41.93
21	40.02	39.17	37.75	38.92	37.94	35.20	37.60	38.16	40.40	40.45	41.65	41.95
22	40.00	39.15	37.80	38.89	37.99	34.61	.....	38.15	40.41	.....	42.30	.....
23	39.98	39.25	37.91	38.20	38.00	34.60	38.11	38.55	40.35	40.40	41.60	41.90
24	39.90	39.15	37.90	38.71	38.02	34.60	38.15	38.40	40.40	41.00	41.61	41.92
25	39.98	39.10	37.93	38.65	37.90	34.62	38.21	38.65	40.40	40.95	41.63	.....
26	40.00	39.12	38.00	39.25	37.92	34.64	38.26	38.92	40.35	41.15	41.66	41.90
27	39.98	39.17	.....	39.11	37.90	34.65	38.31	38.94	40.45	41.08	41.50	41.90
28	39.96	39.18	38.45	38.95	38.09	.....	37.95	38.50	40.39	41.21	41.55	41.91
29	39.98	.....	37.71	39.02	38.10	35.18	38.00	38.82	40.40	41.23	41.58	41.92
30	40.00	.....	37.74	39.02	38.11	35.25	38.35	38.84	40.45	41.20	41.85	41.91
31	40.90	.....	37.80	.....	37.73	.....	38.05	38.83	.....	41.31	.....	41.92

Ro-3 (Formerly Chillicothe 3) (\*1023, p. 323). Mead Corporation well 7. In Chillicothe, about 1,700 feet east of Hickory St. and 200 feet south of Baltimore & Ohio Railroad tracks.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	36.50	36.46	35.35	33.41	32.64	30.92	.....	29.97	32.76	34.57	37.15	38.10
2	36.25	36.53	35.37	33.12	32.70	30.95	.....	30.18	32.66	34.75	37.27	38.00
3	36.45	36.56	35.39	33.13	32.77	30.76	.....	30.33	32.12	34.89	37.31	37.60
4	36.76	36.52	35.20	33.19	32.82	30.35	.....	30.40	31.94	35.10	37.23	37.73
5	36.90	36.26	34.80	33.46	32.86	30.50	27.81	30.27	32.20	35.20	36.91	37.83
6	36.99	36.45	34.90	33.25	32.68	30.60	27.71	30.10	32.58	35.24	37.05	37.91
7	36.99	36.49	34.99	33.24	32.40	30.65	27.52	30.35	32.76	35.04	37.21	37.98
8	37.00	36.51	35.00	33.07	32.58	30.73	27.32	30.55	32.76	34.90	37.32	38.02
9	37.09	36.48	34.90	32.66	32.73	30.77	27.45	30.77	32.45	35.10	37.40	38.00
10	37.21	36.44	34.90	32.74	32.82	30.61	27.79	30.94	32.70	35.30	37.43	37.92
11	37.32	36.34	34.71	32.77	32.93	30.24	28.09	31.03	32.92	35.42	37.41	38.03
12	37.42	36.09	34.30	32.84	32.98	30.41	28.28	30.92	33.11	35.57	37.39	38.10
13	37.45	36.06	34.36	32.86	32.87	30.56	28.62	30.70	33.15	35.65	37.47	38.15
14	37.31	36.11	34.40	32.88	32.48	30.67	28.72	30.94	33.51	35.62	37.54	38.17
15	36.73	36.13	34.50	32.66	32.59	30.75	28.56	31.12	33.42	35.64	37.61	38.17
16	36.58	36.10	34.50	32.36	32.60	30.78	28.52	31.44	33.42	35.79	37.68	37.99
17	36.56	36.00	34.46	32.46	32.59	30.59	28.78	31.57	33.50	35.93	37.72	37.67
18	36.57	35.93	34.35	32.56	32.46	30.05	29.00	31.66	33.66	36.03	37.63	37.78
19	36.60	35.72	34.11	32.67	32.27	29.97	29.20	31.65	33.80	36.10	37.34	37.86
20	36.60	35.77	34.12	32.75	31.80	29.89	29.38	31.75	34.00	36.15	37.51	37.92
21	36.54	35.80	34.12	32.80	31.43	29.80	29.46	31.91	34.12	36.09	37.64	37.99

## Ro-3--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
22	36.44	35.76	34.11	32.62	31.40	29.76	29.34	32.07	34.19	35.71	37.75	38.03
23	36.51	35.75	34.10	32.26	31.41	29.78	29.10	32.14	34.10	35.82	37.85	38.00
24	36.57	35.75	34.10	32.41	31.42	29.65	29.33	32.26	34.12	36.06	37.90	37.90
25	36.61	35.65	33.96	32.51	31.20	29.23	29.52	32.33	34.01	36.16	37.90	37.89
26	36.67	35.20	33.55	32.60	31.22	29.40	29.65	32.22	34.17	.....	37.93	37.48
27	36.69	35.30	33.62	32.70	31.03	29.55	29.80	32.00	34.31	.....	38.03	37.08
28	36.54	35.35	33.63	32.76	30.63	29.65	29.87	32.22	34.44	.....	38.06	37.25
29	36.13		33.61	32.71	30.73	.....	29.74	32.42	34.50	.....	38.08	37.33
30	36.23		33.55	32.53	30.79	.....	29.55	32.55	34.50	.....	38.08	37.28
31	36.35		33.56		30.87		29.78	32.69		.....		37.07

Ro-4 (Formerly Chillicothe 4) (\*1023, p. 324). Chillicothe Paper Co. At Chillicothe corporation line, about 750 feet southeast of Eastern Ave., between tracks of Norfolk &amp; Western and Baltimore &amp; Ohio Railroads.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	32.2	33.7	32.8	27.4	29.6	27.8	22.2	26.6	29.9	31.6	34.6	34.5
2	32.7	33.8	32.8	30.0	29.8	26.0	25.9	26.8	...	32.0	34.8	31.2
3	32.8	....	....	30.4	29.9	24.6	26.4	27.0	25.1	32.4	33.8	34.7
4	33.0	30.1	29.0	30.5	30.0	27.4	25.3	23.1	28.6	32.6	30.1	35.1
5	33.0	33.0	31.9	30.6	29.5	27.7	21.0	23.3	29.2	32.7	34.2	35.3
6	....	33.5	32.3	30.6	26.0	27.8	24.9	26.6	29.6	32.6	34.2	35.4
7	29.6	33.7	32.4	29.0	29.2	27.9	24.4	27.1	29.8	28.6	34.7	35.6
8	32.5	33.8	32.5	26.8	29.7	28.0	21.3	27.4	29.6	31.9	34.8	34.3
9	32.9	33.8	32.5	29.5	30.3	27.4	24.1	27.6	27.1	32.6	35.3	32.6
10	33.4	....	32.1	29.9	29.9	24.9	24.6	27.8	29.3	32.9	34.5	34.9
11	33.4	30.2	28.6	30.0	30.0	27.2	24.7	27.1	29.9	33.1	31.6	35.4
12	33.8	33.1	31.3	30.1	29.9	27.6	25.1	24.7	30.0	33.2	34.6	35.7
13	....	33.5	31.6	30.1	26.7	27.7	....	27.2	30.3	32.6	34.9	35.8
14	30.0	33.6	31.7	29.4	29.3	27.8	25.6	27.8	30.5	28.1	35.1	35.8
15	32.6	33.7	31.8	26.6	29.8	27.9	22.6	28.0	30.2	31.7	35.3	....
16	33.1	33.7	31.8	29.1	29.9	27.8	24.8	28.2	27.4	33.4	35.4	32.4
17	33.4	....	31.1	29.5	29.9	23.9	25.3	28.3	30.2	33.5	34.8	35.0
18	33.4	29.9	28.2	29.7	30.0	26.9	25.7	28.2	30.8	33.6	32.1	35.4
19	33.4	32.8	31.0	29.8	29.3	27.1	25.9	25.3	31.1	33.6	34.6	35.6
20	....	33.2	31.5	29.8	23.9	27.1	26.1	28.1	31.2	33.3	34.7	35.7
21	29.6	33.3	31.6	29.6	28.3	27.0	....	28.6	31.4	29.6	35.1	35.8
22	32.8	33.3	31.6	26.6	28.5	27.0	23.1	28.8	31.1	32.7	35.1	35.3
23	33.4	33.6	31.5	29.0	28.5	26.7	24.4	29.0	27.4	33.2	35.6	32.2
24	33.6	....	31.1	29.4	28.6	....	20.6	29.2	30.7	33.4	35.4	32.2
25	33.8	29.6	28.0	29.6	28.6	24.9	26.2	29.0	31.3	33.6	32.2	....
26	27.8	32.2	30.6	29.7	26.9	24.4	26.4	26.1	31.6	33.8	34.9	31.3
27	....	32.6	30.9	29.8	25.3	26.6	26.6	28.7	31.7	33.4	35.4	29.4
28	30.1	32.7	31.0	29.7	27.6	26.6	25.8	29.2	32.0	30.6	35.4	34.8
29	33.0		31.0	26.6	28.0	26.7	23.6	29.4	32.0	32.9	35.4	34.0
30	33.4		30.9	29.2	28.1	26.6	25.9	29.6	28.1	....	35.5	30.7
31	33.6		32.2		28.1		26.4	29.8		34.5		....

Ro-5 (Formerly Chillicothe 5) (\*1023, p. 328). The Mead Corporation. In Chillicothe, 20 feet from center of Ranney well (Mead 12), 400 feet south of Eighth St., 150 feet east of Hickory St., and about 2,000 feet from Mead well 7 (Ro-3).

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	49.50	Feb. 1	43.93	Mar. 1	41.68	Mar. 29	42.51
11	50.50	8	43.93	8	43.60	Apr. 5	40.76
18	45.85	15	43.93	15	42.34	12	42.26
25	45.43	22	44.43	22	42.93	19	41.93

Ro-5--Continued.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 26	41.35	June 28	37.59	Aug. 30	39.01	Nov. 1	43.68
May 3	41.01	July 5	33.96	Sept. 6	38.85	8	43.85
10	41.18	12	37.76	13	39.93	15	44.18
17	40.01	19	36.51	20	40.60	22	44.26
24	39.93	26	37.09	27	41.53	29	44.68
31	39.76	Aug. 2	37.43	Oct. 4	42.18	Dec. 6	45.35
June 7	38.18	9	37.43	11	42.68	13	45.68
15	38.78	16	37.93	18	43.33	20	46.53
21	38.34	23	38.43	25	43.18	27	45.93

Sandusky County

S-1. City of Woodville. In Woodville, east of Walnut St. and north of First St., near water tank. Abandoned drilled well, diameter 10 inches, depth 188 feet. Measuring point, floor of recorder shelter, 2.5 feet above land-surface datum. Automatic water-stage recorder installed Aug. 28, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Aug. 28	a20.65	Oct. 21	23.53	Nov. 9	23.53	Dec. 12	23.40
Sept. 6	a20.40	22	23.53	10	23.54	13	23.59
12	a22.25	23	23.62	11	23.54	14	23.60
19	a22.66	24	23.48	12	23.53	15	23.31
26	a22.79	25	23.53	13	23.17	19	23.39
Oct. 3	23.10	26	23.49	14	23.40	20	23.44
4	23.19	27	23.51	15	23.29	21	23.53
5	23.29	28	23.45	16	23.56	22	23.50
6	23.25	29	23.53	17	23.46	23	23.49
7	23.26	30	23.35	21	23.40	24	23.46
8	23.32	31	23.37	22	23.48	25	23.40
9	23.36	Nov. 1	23.30	28	23.17	26	23.41
10	23.40	2	23.48	Dec. 5	23.38	27	23.30
16	23.33	3	23.41	6	23.35	28	23.53
17	23.42	4	23.48	7	23.38	29	23.46
18	23.57	5	23.48	8	23.34	30	23.43
19	23.54	7	23.42	9	23.39	31	23.51
20	23.51	8	23.54	10	23.40		

a Tape measurement

Seneca County

Se-1. Myers farm. 1.5 miles south of Green Springs, 600 feet west of State Highway 19, in field. Abandoned drilled well, diameter 10 inches, depth 88 feet. Measuring point, floor of recorder shelter, 2.0 feet above land-surface datum. Automatic water-stage recorder installed Aug. 27, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Sept. 26	33.92	Oct. 9	33.87	Oct. 22	33.93	Nov. 4	34.20
27	33.81	10	34.35	23	33.72	5	33.00
28	33.89	11	34.40	24	33.70	6	33.95
29	33.89	12	34.04	25	33.79	7	33.50
30	33.59	13	34.02	26	33.68	8	33.62
Oct. 1	33.60	14	33.92	27	33.64	9	34.00
2	33.78	15	34.19	28	33.24	10	33.10
3	34.00	16	34.09	29	33.93	11	33.40
4	33.60	17	33.40	30	34.00	12	34.40
5	33.91	18	33.62	31	33.52	13	33.82
6	33.96	19	33.80	Nov. 1	33.53	14	33.60
7	33.40	20	33.54	2	33.52	15	32.38
8	33.93	21	33.40	3	33.56	16	33.53

Se-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Nov. 17	33.80	Nov. 29	33.40	Dec. 10	33.38	Dec. 21	33.12
18	33.20	30	33.29	11	33.48	22	33.07
19	33.80	Dec. 1	33.40	12	33.04	23	33.12
20	33.50	2	33.90	13	33.40	24	33.22
21	33.00	3	33.71	14	33.15	25	33.14
22	33.35	4	33.31	15	33.25	26	33.29
23	33.65	5	33.50	16	33.38	27	33.15
24	33.73	6	33.10	17	33.48	28	33.36
25	33.69	7	33.55	18	33.42	29	33.21
26	33.60	8	33.30	19	33.26	30	33.18
27	33.15	9	33.13	20	33.12	31	33.45
28	33.45						

Shelby County

Sh-1. John Wenger. 3 miles east of Kettlersville, 1.25 miles west of U. S. Route 25, on south side of State Highway 274. Abandoned drilled well, diameter 4 inches, depth 120 feet. Measuring point, floor of recorder shelter, 1.5 feet above land-surface datum. Automatic water-stage recorder installed May 1, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts )

Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	12.83	12.60	12.64	13.29	13.74	14.16	14.36	....
2	12.85	12.62	12.74	13.29	13.78	14.19	14.32	....
3	12.82	12.70	12.78	13.29	13.84	14.21	14.35	....
4	12.80	12.73	12.82	13.31	13.86	14.22	14.42	14.61
5	12.83	12.75	12.81	13.33	13.87	14.23	14.45	14.60
6	12.83	12.75	12.87	13.33	13.87	14.27	14.45	14.58
7	12.83	12.73	12.82	13.35	13.89	14.25	14.40	14.58
8	12.84	12.78	12.85	13.40	13.89	14.22	14.32	14.60
9	12.87	12.89	12.86	13.38	13.90	14.20	14.40	14.60
10	12.87	12.92	12.92	13.41	13.90	14.23	14.40	14.59
11	12.81	12.89	12.91	13.44	13.92	14.22	14.38	14.56
12	12.78	12.86	12.96	13.48	13.97	14.25	14.42	14.51
13	12.84	12.83	13.00	13.50	13.97	14.33	14.42	14.25
14	12.82	12.84	13.00	13.53	13.93	14.33	14.38	14.25
15	12.79	12.85	13.07	13.53	13.94	14.34	14.40	14.50
16	12.75	12.84	13.10	13.52	13.97	14.33	14.39	14.19
17	12.44	12.80	13.09	13.51	13.98	14.28	14.50	14.25
18	12.11	12.62	13.09	13.47	14.04	14.17	14.51	14.28
19	12.16	12.56	13.10	13.51	14.03	14.25	14.46	....
20	12.16	12.47	13.07	13.57	14.00	14.32	14.43	....
21	12.29	12.54	13.03	13.62	13.97	14.33	14.41	....
22	12.40	12.61	13.04	13.62	14.00	14.32	14.45	....
23	12.41	12.66	13.12	13.63	14.02	14.31	....	....
24	12.41	12.67	13.14	13.65	14.06	14.29	....	....
25	12.40	12.68	13.14	13.65	14.06	14.21	....	14.05
26	12.44	12.74	13.21	13.67	14.09	14.30	....	14.07
27	12.46	12.73	13.23	13.67	14.10	14.35	14.58	14.07
28	12.54	12.66	13.25	13.65	14.12	14.37	14.59	13.96
29	12.59	12.65	13.24	13.71	14.14	14.36	....	....
30	12.58	12.64	13.25	13.73	14.14	14.34	....	....
31	12.56		13.26	13.74		14.34	....	....

Stark County

St-1 (Formerly Massillon 1 ) (\*944, p. 197; \*986, p. 274; 1016, p. 317; 1023, p. 333). Republic Steel Corporation. In Massillon, on Oberlin Ave.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	47.48	46.54	45.64	44.99	45.36	44.34	43.55	43.86	.....	.....	46.03	46.34
2	47.49	46.49	45.55	45.03	45.37	44.23	43.58	43.89	.....	.....	46.04	46.34
3	47.49	46.47	45.50	.....	45.40	44.11	43.60	43.90	44.50	.....	46.04	46.34
4	47.50	46.45	45.43	45.16	.....	44.14	43.60	43.81	44.55	45.25	46.06	46.34
5	47.49	46.38	45.34	45.20	.....	44.15	43.50	43.75	44.57	.....	46.07	46.34
6	47.45	46.35	45.32	45.21	45.34	44.15	43.55	43.83	44.60	.....	46.10	46.34
7	47.40	46.33	45.35	45.19	45.36	44.14	43.55	43.91	44.57	.....	46.10	46.34
8	47.37	46.33	45.30	45.08	45.41	44.15	43.50	43.95	44.55	.....	.....	46.32
9	47.38	46.22	45.25	45.17	45.42	44.08	43.60	43.99	44.63	.....	.....	46.30
10	47.40	46.14	45.22	45.23	45.38	44.01	43.65	44.02	44.68	.....	.....	46.29
11	47.40	46.10	45.11	45.29	45.31	44.05	43.71	44.01	44.63	45.85	46.23	46.29
12	47.40	46.05	45.12	45.30	45.19	44.10	43.74	43.97	44.68	.....	46.23	46.22
13	47.35	46.03	45.14	45.27	45.21	44.08	43.77	44.04	44.68	.....	46.25	46.22
14	47.25	45.99	45.14	45.15	45.22	44.03	43.75	44.08	44.68	.....	46.28	46.15
15	47.50	45.89	45.15	45.25	45.23	44.03	43.69	44.13	44.68	45.82	46.29	46.11
16	47.32	45.82	45.15	45.28	45.23	43.95	43.78	44.15	44.68	45.83	46.32	46.14
17	47.33	45.76	45.05	45.32	45.16	43.82	43.84	44.16	44.82	45.84	46.32	46.17
18	47.34	45.67	44.95	45.34	45.10	43.79	.....	44.07	44.85	45.84	46.34	46.17
19	47.40	45.65	45.05	45.28	45.01	43.75	.....	43.97	44.85	45.84	46.35	46.17
20	47.35	45.68	45.07	45.34	45.06	43.72	.....	44.07	.....	45.84	46.36	46.15
21	47.20	45.76	45.08	45.30	45.08	43.65	.....	.....	.....	45.86	46.40	46.21
22	47.15	45.83	45.11	45.18	45.08	43.61	43.85	.....	.....	45.88	46.40	46.22
23	47.09	45.84	45.12	45.25	45.08	43.57	43.95	44.21	.....	45.88	43.59	46.21
24	47.02	45.78	45.01	45.28	45.07	43.43	44.00	44.21	.....	45.93	46.40	46.20
25	46.94	45.70	44.95	45.31	45.00	43.46	43.86	44.23	.....	45.96	46.40	46.13
26	46.85	45.76	45.02	45.33	44.87	43.56	43.84	44.20	.....	45.97	46.42	46.10
27	46.84	45.77	45.06	45.35	44.78	43.58	43.84	44.25	45.08	45.97	46.42	46.10
28	46.83	45.73	45.07	45.34	44.73	43.60	43.77	44.30	45.11	45.98	46.40	46.17
29	46.70		45.09	45.24	44.69	43.50	43.76	44.35	45.11	45.99	46.37	46.19
30	46.66		45.13	45.31	44.56	43.45	43.80	44.39	45.10	46.02	46.35	46.22
31	46.58		45.11		44.38		43.82			46.03		46.24

St-2 (Formerly well 20) (\*886, p. 590; \*906, p. 210; \*936, p. 237; \*944, p. 196; \*986, p. 271; 1016, p. 315; 1023, p. 332). Republic Steel Corporation. In Canton, at Lippert St. and Warner Road, N. E.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	50.97	Apr. 5	49.10	July 20	48.60	Oct. 18	49.95
11	50.93	12	48.72	26	48.85	26	49.37
19	50.81	19	48.70	Aug. 2	48.85	Nov. 1	49.39
25	50.62	27	48.64	9	48.85	2	49.18
Feb. 2	50.52	May 2	48.60	13	48.54	9	49.43
8	50.60	6	48.52	21	48.81	12	49.27
19	50.72	17	48.64	31	48.91	20	49.27
23	50.70	25	48.60	Sept. 7	48.91	26	49.31
Mar. 1	50.10	June 1	48.10	14	48.91	Dec. 3	49.60
7	49.81	8	47.93	21	48.93	14	49.85
15	49.47	18	48.12	28	49.08	20	49.93
23	49.20	22	47.83	Oct. 5	49.14	26	50.02
29	49.18	29	47.10	12	50.02		

St-3 (Formerly well 21A) (\*986, p. 273; 1016, p. 316; 1023, p. 332).  
Ohio Power Co. In Canton, on Second St. at Savannah St., S. E.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Mar.	Apr.	May	June	July	Aug.	Sept.
1	.....	55.30	55.14	54.84	54.08	53.98	53.71
2	56.05	55.27	.....	54.75	54.08	53.97	53.70
3	56.04	55.26	.....	54.70	54.09	53.90	53.70
4	55.99	55.25	55.18	54.64	54.09	53.89	53.68
5	55.94	55.24	55.17	54.59	54.03	53.88	53.68
6	55.90	55.24	55.17	54.55	54.06	53.86	53.63
7	55.87	55.20	55.17	54.51	54.06	53.84	53.60
8	55.85	55.19	55.16	54.42	54.06	53.83	.....
9	55.80	55.17	55.16	54.41	54.04	53.82	53.60
10	55.76	55.17	55.15	54.41	54.06	53.80	53.60
11	55.73	55.17	55.10	54.39	54.06	53.80	53.61
12	55.69	55.16	55.10	54.36	54.07	53.80	53.62
13	55.66	55.16	55.10	54.34	54.10	53.78	53.62
14	55.63	55.16	55.09	54.33	54.10	53.78	53.62
15	55.61	55.15	55.08	54.33	54.09	53.78	53.62
16	55.59	55.13	55.08	54.32	54.09	53.77	53.60
17	55.59	55.13	55.08	54.30	54.20	53.77	.....
18	55.58	55.13	55.08	54.28	.....	53.77	.....
19	55.57	55.14	55.09	54.26	.....	53.76	.....
20	55.57	55.14	55.09	54.24	54.20	53.74	.....
21	55.56	55.15	55.08	54.21	54.20	53.74	.....
22	55.56	55.13	55.09	54.18	54.13	53.72	.....
23	55.55	55.11	55.09	54.18	54.12	53.69	53.57
24	55.54	55.16	55.07	54.16	54.15	53.70	53.57
25	55.51	55.11	55.08	54.12	54.14	.....	53.58
26	55.50	55.11	55.08	54.09	54.14	.....	53.59
27	55.48	55.13	55.08	54.08	54.10	.....	53.60
28	.....	55.13	55.07	54.09	54.07	.....	53.60
29	.....	55.12	55.06	54.09	54.03	.....	53.60
30	.....	55.10	55.01	54.09	54.01	.....	53.60
31	.....	.....	54.92	.....	53.99	53.72	.....

St-4 (Formerly well 12) (\*936, p. 236; \*944, p. 195; \*986, p. 268; 1016, p. 312; 1023, p. 329). Goughnour well. Adessi Bros. In Canton quadrangle.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	13.12	12.30	13.58	11.18	11.18	13.10	14.39	15.73	16.82	17.77
2	.....	.....	12.94	12.34	13.41	11.21	11.28	13.14	14.43	15.77	16.85	17.83
3	.....	.....	12.84	12.38	13.44	11.26	11.37	13.19	14.48	15.81	16.89	17.86
4	.....	.....	12.51	12.40	13.48	11.33	11.45	13.24	14.52	15.86	16.93	17.88
5	.....	.....	12.51	12.45	13.52	11.40	11.52	13.29	14.58	15.91	16.97	17.92
6	.....	.....	12.46	12.50	13.54	11.46	11.59	13.34	14.62	15.96	16.99	17.95
7	15.00	.....	12.47	12.52	13.57	11.53	11.66	13.40	14.67	15.98	17.02	17.98
8	14.97	.....	12.31	12.54	13.59	11.64	11.71	13.44	14.71	16.01	17.07	18.02
9	14.90	.....	12.10	12.62	13.64	11.74	11.80	13.52	14.76	16.07	17.11	18.05
10	14.86	.....	11.91	12.66	13.66	11.78	11.86	13.57	14.80	16.11	17.14	18.08
11	.....	15.55	11.83	12.68	13.69	11.84	11.95	13.64	14.85	16.15	17.17	18.11
12	.....	15.56	11.77	12.72	13.66	11.91	12.02	13.70	14.91	16.21	17.20	18.13
13	.....	15.56	11.77	12.75	13.44	11.95	12.07	13.76	14.95	16.25	17.22	18.14
14	14.82	15.47	11.77	12.77	13.45	11.99	12.14	13.81	14.99	16.27	17.25	18.05
15	.....	14.90	11.82	12.83	13.48	12.05	12.23	13.88	15.03	16.30	17.29	18.01
16	.....	.....	11.92	12.97	13.52	12.13	12.28	13.92	15.05	16.33	17.32	18.06
17	.....	.....	11.80	12.89	13.57	11.97	12.34	13.96	15.10	16.37	17.37	18.12
18	.....	14.41	11.83	12.92	13.62	10.90	12.41	13.96	15.15	16.41	17.39	18.16
19	.....	14.40	11.88	12.95	13.66	10.77	12.50	13.73	15.18	16.41	17.42	18.19
20	.....	14.45	11.92	13.02	13.68	10.56	12.58	13.81	15.24	16.40	17.44	18.22
21	14.98	14.48	11.94	13.04	13.68	10.59	12.63	13.87	15.29	16.44	17.48	18.25

a Tape measurement.



St-4--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
22	.....	.....	11.99	13.06	13.13	10.37	12.68	13.94	15.34	16.46	17.52	18.29
23	.....	.....	12.03	13.10	12.93	10.46	12.74	13.99	15.37	16.50	17.66	18.31
24	.....	.....	12.06	13.11	12.94	10.55	12.80	14.02	15.41	16.53	17.59	18.34
25	.....	14.49	12.06	13.12	13.00	10.65	12.78	14.07	15.45	16.58	17.63	18.38
26	.....	14.45	12.08	13.18	13.04	10.77	12.76	14.11	15.49	16.62	17.66	18.42
27	.....	14.41	12.12	13.24	13.04	10.88	12.81	14.14	15.54	16.66	17.68	18.45
28	.....	13.57	12.13	13.28	12.54	10.96	12.87	14.19	15.61	16.68	17.69	18.50
29	.....		12.15	13.31	11.42	11.03	12.92	14.25	15.66	16.71	17.72	18.52
30	.....		12.24	13.35	11.29	11.10	12.99	14.30	15.69	16.74	17.74	18.53
31	.....		12.27		11.11		13.04	14.35		16.78		18.54

St-5 (Formerly well 13) (\*936, p. 237; \*944, p. 196; \*986, p. 269; 1016, p. 313; 1023, p. 330). City of Canton. In Canton water department's North-east well field.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	38.96	37.42	35.36	33.26	34.13	34.60	35.80	38.15	39.29	40.50	40.45	41.76
2	39.19	37.30	35.35	33.42	34.30	34.60	35.82	38.23	39.10	40.56	40.45	41.76
3	39.24	37.40	35.19	33.48	34.30	34.33	35.83	38.32	39.00	40.64	40.40	41.72
4	38.80	37.30	35.20	33.40	34.37	34.15	35.85	38.38	38.85	40.70	40.42	41.77
5	38.97	37.00	35.10	33.34	34.37	34.15	35.90	38.33	38.94	40.75	40.50	41.85
6	39.10	36.83	35.10	33.34	34.32	34.18	35.95	38.35	39.05	40.75	40.61	41.92
7	38.60	36.83	35.02	33.26	34.32	34.27	35.99	38.44	39.17	40.70	40.74	42.00
8	38.76	37.00	34.96	33.26	34.32	34.30	36.12	38.52	39.29	40.58	40.85	42.08
9	38.75	37.00	34.96	33.12	34.38	34.50	36.41	38.60	39.42	40.70	40.91	42.09
10	38.86	36.90	34.87	33.26	34.46	34.56	36.72	38.70	39.53	40.71	40.91	42.09
11	38.84	36.69	34.70	33.41	34.42	34.50	37.05	38.75	39.64	40.76	40.90	42.20
12	38.35	36.41	34.36	33.56	34.26	34.53	37.30	38.74	39.74	40.81	40.84	42.30
13	38.47	36.36	34.13	33.63	34.21	34.65	37.48	38.69	39.82	40.80	40.92	42.40
14	38.15	36.29	33.98	33.56	34.18	34.77	37.53	38.67	39.87	40.70	41.01	42.50
15	38.25	36.22	33.97	33.31	34.20	34.86	37.54	38.73	39.87	39.60	41.10	42.52
16	38.55	36.26	33.97	33.26	34.41	34.76	37.54	38.80	39.82	39.56	41.14	42.52
17	38.60	36.26	33.88	33.33	34.64	34.70	37.68	38.86	39.73	39.60	41.14	42.58
18	38.25	36.26	33.75	33.45	34.71	34.64	37.91	38.86	39.85	39.65	41.01	42.70
19	38.20	36.15	33.62	33.67	34.71	34.80	38.17	38.77	39.99	39.65	41.02	42.83
20	38.20	35.96	33.70	33.68	34.62	34.93	38.38	38.75	40.13	39.60	41.08	42.95
21	37.78	35.87	33.83	33.66	34.76	35.06	38.38	38.86	40.25	40.22	41.15	42.99
22	37.69	35.80	33.92	33.51	34.84	35.20	38.38	38.99	40.29	40.20	41.25	42.99
23	38.05	35.75	33.92	33.68	34.80	35.20	38.22	39.12	40.29	40.20	41.34	42.94
24	37.99	35.77	33.84	33.74	34.83	35.15	38.19	39.20	40.30	40.21	41.35	42.80
25	37.53	35.77	33.84	33.84	34.94	35.06	38.21	39.20	40.37	40.30	41.36	42.75
26	37.61	35.65	33.50	34.11	34.97	35.14	38.26	39.14	40.47	40.32	41.48	42.73
27	37.64	35.52	33.36	34.15	34.96	35.24	38.30	39.06	40.53	40.32	41.63	42.60
28	37.57	35.47	33.36	34.11	34.81	35.34	38.30	39.15	40.61	40.30	41.76	42.47
29	37.44		33.34	33.92	34.64	35.47	38.20	39.26	40.62	40.23	41.76	42.43
30	37.42		33.38	33.95	34.65	35.70	38.05	39.30	40.62	40.28	41.76	42.36
31	37.42		33.36		34.60		38.06	39.30		40.40		42.27

St-6 (Formerly well 14A) (\*1016, p. 314; 1023, p. 330). Canton Water Department. In West Park, Canton.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	28.98	29.42	29.34	28.51	.....	27.42	27.05	26.41	26.06	.....	25.50	25.06
2	29.00	29.42	29.34	28.44	.....	27.42	27.05	26.41	26.04	.....	25.44	25.10
3	29.03	29.48	28.96	28.44	.....	27.39	27.07	26.41	26.04	.....	25.39	25.10
4	29.05	29.48	28.96	28.44	.....	27.30	27.07	26.41	26.04	.....	25.42	25.08
5	29.06	29.46	28.93	28.42	.....	27.33	27.07	26.41	26.04	.....	25.42	25.08
6	29.05	29.46	28.93	28.42	28.37	27.34	27.07	26.30	26.04	.....	25.42	25.08
7	29.10	29.45	28.92	28.42	28.37	27.40	27.07	26.31	26.04	25.96	25.40	25.08
8	29.10	29.44	28.91	28.42	28.37	27.39	27.02	26.33	26.04	25.96	25.37	25.08

## St-6--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
9	29.09	29.49	28.82	28.43	28.37	27.39	27.01	26.33	26.04	25.96	25.32	25.08
10	29.05	29.49	28.79	28.43	28.37	27.42	27.01	26.33	26.03	25.96	25.32	25.01
11	29.06	29.49	28.79	28.43	28.37	27.42	27.01	26.33	26.03	25.96	25.28	24.97
12	29.07	29.49	28.74	28.43	28.37	27.42	27.00	26.34	26.10	25.96	25.26	24.92
13	29.09	29.49	28.74	28.43	28.25	27.42	27.00	26.34	26.15	25.94	25.24	24.86
14	29.10	29.44	28.74	28.43	28.25	27.41	27.00	26.34	26.16	25.91	25.20	24.86
15	29.12	29.37	28.74	28.43	28.25	27.28	26.99	26.34	26.16	25.90	25.20	24.86
16	29.16	29.26	28.74	28.43	28.25	27.28	26.99	26.34	26.02	25.90	25.20	24.88
17	29.17	29.27	28.70	28.43	28.25	27.22	26.99	26.32	26.02	25.90	25.19	24.90
18	29.18	29.35	28.66	28.43	28.24	27.19	26.99	26.12	26.01	25.90	25.19	24.90
19	29.22	29.35	28.60	28.43	28.23	27.19	26.99	26.11	26.01	25.52	25.17	24.93
20	29.22	29.35	28.60	28.43	28.23	27.19	26.99	25.85	26.00	25.60	25.16	24.93
21	29.25	29.35	28.58	28.43	28.22	27.04	26.99	25.90	25.90	25.64	25.16	24.88
22	29.27	29.35	28.58	28.43	28.20	27.00	26.94	25.98	25.90	25.65	25.10	24.93
23	29.28	29.35	28.58	28.42	28.20	27.00	.....	26.02	25.90	25.67	25.12	24.93
24	29.28	29.35	28.58	28.42	28.20	27.00	.....	26.03	25.95	25.67	25.12	24.92
25	29.28	29.35	28.58	28.42	28.20	26.98	.....	26.04	25.95	25.63	25.19	24.92
26	29.35	29.34	28.52	28.42	28.20	27.03	.....	26.06	25.96	25.62	25.19	24.94
27	29.35	29.34	28.52	28.42	28.20	27.08	.....	26.05	25.96	25.58	25.15	24.94
28	29.40	29.34	28.51	28.43	28.00	27.08	.....	26.05	25.97	25.54	25.11	24.90
29	29.40		28.51	28.43	28.00	27.08	26.40	26.05	25.97	25.55	25.09	24.90
30	29.40		28.51	.....	27.98	27.08	26.41	26.06	25.97	25.55	25.09	24.91
31	29.40		28.51		27.50		26.41	26.06		.....		24.90

St-7 (Formerly Grovemiller 1) (\*1016, p. 314; 1023, p. 331). Canton Water Department. SE  $\frac{1}{4}$  NE  $\frac{1}{4}$  sec. 12, Perry Township, about 340 feet west of township line and 400 feet northwest of Tuscarawas St. extended.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 14	94.98	Apr. 15	93.64	July 15	92.05	Oct. 14	90.05
21	94.98	22	93.54	22	91.79	21	89.97
28	94.84	29	93.53	29	91.65	28	89.90
Feb. 4	94.84	May 6	93.38	Aug. 5	91.47	Nov. 4	89.90
11	94.90	13	93.30	12	91.27	11	89.90
18	94.85	20	93.18	19	91.03	18	89.73
25	94.70	27	93.10	26	90.80	25	89.73
Mar. 4	94.68	June 3	93.07	Sept. 2	90.66	Dec. 2	89.70
11	94.64	10	92.90	9	90.50	9	89.42
18	94.34	17	92.68	16	90.36	16	89.13
25	94.26	24	92.49	23	90.21	23	89.13
Apr. 1	93.95	July 1	92.27	30	90.13	30	89.58
8	93.74	8	92.10	Oct. 7	89.98		

St-8 (Formerly Grovemiller 2) (\*1016, p. 315; 1023, p. 331). Canton Water Department. SE  $\frac{1}{4}$  NE  $\frac{1}{4}$  sec. 12, Perry Township, about 400 feet west of township line and 310 feet northwest of Tuscarawas St. extended.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	95.14	Mar. 25	92.83	June 3	91.60	Aug. 12	89.82
21	93.95	Apr. 1	92.58	10	91.50	19	89.60
28	93.47	8	92.31	17	91.25	26	89.35
Feb. 4	93.41	15	92.12	24	91.05	Sept. 2	89.23
11	93.45	22	92.10	July 1	90.83	9	89.02
18	93.55	29	92.05	8	90.66	16	88.93
25	93.19	May 6	91.93	15	90.60	23	88.78
Mar. 4	93.25	13	91.86	22	89.94	30	88.70
11	93.24	20	91.74	29	90.20	Oct. 7	88.57
18	93.00	27	92.66	Aug. 5	90.02	14	88.58

## St-8--Continued.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 21	88.57	Nov. 11	88.48	Dec. 2	89.05	Dec. 23	87.75
28	88.48	18	88.35	9	88.85	30	88.12
Nov. 4	88.48	25	88.35	16	88.63		

St-9 (Formerly Grovemiller 3 ) (\*1016, p. 315; 1023, p. 331). Canton Water Department. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 12 Perry Township, about 200 feet west of township line and 280 feet northwest of Tuscarawas St. extended.

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

Jan. 7	111.06	Apr. 8	109.65	July 8	107.81	Oct. 7	105.58
14	110.90	15	109.54	15	107.70	14	105.53
21	110.87	22	109.40	22	107.54	21	105.50
28	110.20	29	109.38	29	107.37	28	105.39
Feb. 4	110.74	May 6	109.20	Aug. 5	107.05	Nov. 4	105.43
11	110.79	13	109.07	12	106.95	11	105.46
18	110.75	20	108.94	19	106.61	18	104.99
25	110.42	27	108.03	26	106.45	25	104.93
Mar. 4	110.54	June 3	108.80	Sept. 2	106.25	Dec. 2	99.65
11	110.55	10	108.66	9	105.90	9	102.30
18	110.35	17	108.39	16	105.97	16	102.20
25	110.20	24	108.18	23	105.82	23	104.50
Apr. 1	109.88	July 1	108.00	30	105.70	30	104.70

St-10. City of Canton. In Perry Township, 500 feet north of centerline of Twelfth St. extended and about 3,000 feet east of centerline of Jackson Lane. Drilled well, used for pumping test, diameter 12 inches, depth 187 feet. Measuring point, hole in base of recorder shelter, 1.3 feet above land-surface datum. Automatic water-stage recorder installed Sept. 25, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Sept. 25	3.67	Oct. 8	3.75	Dec. 7	4.01	Dec. 20	3.98
26	3.68	Nov. 25	4.02	8	4.02	21	3.96
27	3.69	26	4.02	9	4.03	22	4.00
28	3.70	27	4.02	10	4.03	23	4.00
29	3.70	28	4.02	11	4.03	24	3.99
30	3.70	29	4.00	12	4.01	25	4.01
Oct. 1	3.71	30	3.99	13	4.00	26	4.02
2	3.72	Dec. 1	4.02	14	3.99	27	4.02
3	3.73	2	4.03	15	3.96	28	4.01
4	3.74	3	4.00	16	3.96	29	4.00
5	3.75	4	4.01	17	3.98	30	4.02
6	3.75	5	4.00	18	3.98	31	4.01
7	3.74	6	4.01	19	4.00		

T-50 (Formerly Boron well) (\*1016, p. 315; 1023, p. 332). SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 3, T. 10 N. R. 9 W., in Perry Township, 970 feet north of the centerline of Twelfth St. extended and 2,280 feet west of the east section line of sec. 3.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	Sept.	Nov.	Dec.
1	.....	10.63	10.29	9.78	8.70	6.38	5.47	....	5.80
2	.....	10.66	10.28	9.81	8.41	6.32	5.48	....	5.80
3	.....	10.68	10.25	9.82	8.27	6.30	5.48	....	5.79
4	.....	10.69	10.18	9.52	8.14	6.24	5.49	....	5.79
5	.....	10.70	10.11	9.66	8.03	6.20	5.49	....	5.78
6	.....	10.71	10.06	....	7.94	6.18	5.49	....	5.80

T-50--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	Sept.	Nov.	Dec.
7	.....	10.73	10.01	.....	7.85	6.13	5.49	....	5.80
8	.....	10.75	10.01	.....	7.78	6.10	5.50	....	5.80
9	.....	.....	9.92	.....	7.74	6.09	....	....	5.81
10	.....	.....	9.90	.....	7.68	6.08	....	....	5.81
11	.....	.....	9.86	.....	....	6.06	....	....	5.81
12	.....	.....	9.83	.....	....	....	....	....	5.80
13	.....	.....	9.79	.....	....	....	....	....	5.78
14	.....	.....	9.77	.....	....	....	....	....	5.78
15	.....	10.63	9.75	.....	....	....	....	....	5.76
16	.....	10.62	9.70	.....	....	....	....	....	5.74
17	10.34	10.59	9.68	.....	....	....	....	....	5.75
18	10.36	10.59	9.68	.....	....	....	....	....	5.75
19	10.38	10.59	9.66	.....	....	....	....	....	5.76
20	10.39	10.60	9.66	.....	....	....	5.37	....	5.75
21	10.42	10.61	9.66	.....	7.09	....	5.39	....	5.75
22	10.42	10.62	9.66	.....	7.09	....	5.41	....	5.77
23	10.43	10.63	.....	.....	7.06	....	5.42	....	5.77
24	10.46	10.65	.....	10.35	7.03	....	5.43	....	5.77
25	10.47	10.67	.....	10.38	6.99	....	5.43	5.80	5.79
26	10.48	10.67	.....	10.40	6.96	....	5.43	5.80	5.79
27	10.50	10.65	.....	10.44	6.93	....	5.45	5.80	5.79
28	10.53	10.50	.....	10.48	6.82	....	....	5.79	5.79
29	10.54	.....	9.73	10.51	6.65	....	....	5.78	5.79
30	10.56	.....	9.76	10.55	6.54	....	....	5.78	5.81
31	10.60	.....	9.76	.....	6.45	....	....	....	5.81

Summit County

Su-1. Village of Hudson. In southeastern part of village of Hudson, in municipal well field. Abandoned drilled well, diameter 8 inches, depth 100 feet. Measuring point, floor of recorder shelter, 0.4 foot above land-surface datum. Automatic water-stage recorder installed May 3, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	20.86	20.44	21.00	20.60	20.70	20.10	19.10
2	21.30	20.86	20.70	20.92	20.76	20.73	20.12	19.35
3	21.34	20.98	20.92	20.88	20.76	20.62	20.11	19.25
4	21.20	20.24	20.89	20.97	20.82	20.57	20.10	19.34
5	21.18	20.25	20.83	20.88	20.70	20.64	20.03	19.30
6	21.13	22.00	21.30	20.73	20.77	20.51	19.98	19.25
7	21.19	21.70	21.42	20.88	20.87	20.97	19.96	19.25
8	21.20	21.35	21.33	20.53	20.80	20.93	20.01	19.26
9	21.24	21.40	20.83	20.66	20.62	20.61	20.10	18.97
10	.....	21.40	20.75	20.60	21.36	20.58	20.08	18.97
11	.....	21.51	20.70	19.81	21.34	20.38	20.04	18.97
12	.....	.....	20.50	19.58	21.38	20.50	19.87	18.60
13	21.39	20.81	20.50	19.40	20.88	20.52	19.89	18.81
14	21.38	20.90	20.50	20.63	20.48	20.43	19.71	18.81
15	21.30	20.81	20.80	21.21	20.36	20.40	19.81	18.79
16	20.82	20.65	20.70	21.10	20.40	20.35	19.63	18.80
17	20.81	20.64	20.60	20.91	20.40	20.13	19.66	18.78
18	20.82	20.70	20.70	20.92	20.43	20.15	19.52	18.85
19	20.91	20.50	21.10	20.72	20.40	.....	19.34	18.96
20	21.08	20.30	21.08	20.53	20.60	.....	19.39	18.81
21	21.01	20.40	20.90	20.40	20.60	20.27	19.35	18.75
22	21.02	20.40	21.02	20.44	20.70	20.29	19.41	18.86
23	21.01	20.50	20.85	20.51	20.79	20.29	19.46	18.66
24	21.20	20.61	20.39	20.44	20.75	20.24	19.29	19.07
25	21.00	20.51	20.32	20.42	20.63	20.25	19.65	19.14

## Su-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	20.91	20.50	20.62	20.62	20.70	20.27	19.52	18.93
27	20.88	20.35	20.60	20.50	20.76	20.30	19.50	18.77
28	20.88	20.50	20.38	20.62	20.81	20.17	19.30	18.87
29	20.93	20.58	21.01	20.63	20.89	20.20	19.30	18.63
30	20.76	20.73	21.20	20.39	20.73	20.16	19.09	19.01
31	20.85		20.92	20.39		20.03		18.92

Su-3 (Formerly Goodyear 4) (\*1016, p. 317; 1023, p. 334). Goodyear Rubber Co. In Akron, 1,480 feet east of the centerline of Seiberling Ave., along the north side of Springfield Road.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	34.20	28.00	24.07	20.51	23.15	29.85	45.60	52.64	53.43	55.37	55.25	49.82
2	33.99	27.82	23.78	20.40	23.69	29.90	46.15	52.74	53.46	55.39	....	49.35
3	33.71	27.74	23.72	20.36	24.21	29.90	46.70	52.67	53.46	55.39	....	48.80
4	33.47	27.63	23.60	20.27	24.79	30.00	47.02	52.47	53.30	55.39	....	48.25
5	33.08	27.42	23.49	20.30	25.11	30.15	47.28	52.15	52.97	55.25	....	47.70
6	32.92	27.20	23.35	20.25	25.15	30.30	47.64	52.00	52.62	55.27	....	47.14
7	32.74	27.03	23.17	20.20	25.14	30.60	47.89	51.78	52.43	55.30	....	46.57
8	....	26.98	23.09	20.16	25.13	31.30	47.89	51.59	52.49	55.34	55.67	46.02
9	....	26.80	22.84	20.06	25.53	32.10	47.83	51.43	52.61	55.35	55.64	45.49
10	....	26.67	22.81	20.06	25.91	32.77	47.70	51.33	52.77	55.37	55.65	44.96
11	31.67	26.55	22.68	20.02	26.38	33.45	47.56	51.29	52.90	55.50	55.64	44.45
12	31.47	26.46	22.56	19.95	26.65	34.10	47.56	51.19	53.06	....	55.64	43.96
13	31.31	26.26	22.41	19.89	26.69	34.75	47.93	51.05	53.27	....	55.63	43.50
14	31.14	26.02	22.28	19.85	26.70	35.36	48.39	50.86	53.57	....	55.57	43.11
15	30.90	25.95	22.10	20.24	26.70	35.96	48.85	50.71	53.73	....	55.51	42.65
16	30.75	25.90	22.01	20.88	26.75	36.58	49.33	50.72	53.80	....	55.37	42.21
17	30.54	25.72	21.88	20.88	26.80	37.19	49.80	50.93	53.81	....	55.15	41.72
18	30.32	25.60	21.75	20.75	26.89	37.85	50.29	51.15	53.83	55.41	54.92	41.43
19	30.12	25.50	21.64	20.80	26.95	38.54	50.75	51.37	53.93	....	54.61	41.06
20	29.99	25.23	21.56	20.98	26.93	39.20	51.20	51.59	54.10	....	54.25	40.70
21	29.76	25.20	21.46	21.03	27.11	39.77	51.53	51.74	54.28	....	53.90	40.24
22	29.63	25.06	21.33	21.00	27.46	40.45	51.69	51.89	54.45	....	53.53	39.90
23	29.48	24.90	21.23	21.05	27.86	41.05	51.70	52.12	54.63	....	53.23	39.58
24	29.26	24.75	21.11	21.24	28.36	41.65	51.73	52.32	54.77	....	52.82	39.22
25	29.06	24.65	21.00	21.50	28.81	42.25	51.86	52.49	54.90	55.40	52.40	38.90
26	28.92	24.50	20.92	21.82	29.09	42.84	51.93	52.65	55.00	....	52.00	38.60
27	28.85	24.38	20.82	22.16	29.21	43.40	52.06	52.81	55.20	....	51.59	38.35
28	28.68	24.21	20.75	22.37	29.25	43.95	52.17	52.97	55.26	....	51.17	37.90
29	28.54		20.65	22.46	29.45	44.50	52.30	53.14	55.31	....	50.73	37.65
30	28.35		20.59	22.68	29.52	45.05	52.42	53.19	55.35	....	50.35	37.40
31	28.10		20.59		29.65		52.54	53.41		....		37.14

a Tape measurement.

Su-6 (Formerly Goodyear 7) (\*1016, p. 318; 1023, p. 334). Goodyear Rubber Co. In Akron, 110 feet west of the centerline of Seiberling Ave.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	38.67	Mar. 2	33.97	Apr. 19	45.25	June 7	42.48
15	38.33	8	33.35	26	40.75	14	42.17
18	37.96	15	32.77	May 3	42.00	21	36.75
Feb. 1	36.89	22	32.25	10	42.10	28	39.70
8	35.75	29	43.83	17	48.35	July 5	35.54
15	35.31	Apr. 4	46.67	24	45.60	12	40.04
22	35.00	12	36.25	31	40.78	19	39.08

Su-6--Continued.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 26	41.70	Sept. 9	52.84	Oct. 18	59.47	Nov. 29	57.60
Aug. 2	43.90	13	51.10	25	56.83	Dec. 6	54.75
9	48.45	20	55.75	Nov. 1	57.35	13	54.46
16	46.58	27	56.05	8	56.00	20	52.47
23	46.40	Oct. 4	55.33	15	58.20	27	49.90
30	45.75	11	55.50	22	58.80		

a Lowest of record.

Trumbull County

T-2. Copperweld Steel Co. About 3 miles northwest of Warren, west of State Highway 45, in open field about 500 feet west of factory buildings. Unused drilled well, diameter 10 inches, depth 120 feet. Measuring point, floor of recorder shelter, 3.0 feet above land-surface datum. Automatic water-stage recorder installed July 31, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	36.54	34.79	36.78	37.60	36.76
2	.....	36.54	33.90	36.76	37.35	36.01
3	.....	35.73	34.67	37.12	37.22	36.23
4	.....	34.39	35.24	37.17	37.16	36.45
5	.....	34.59	35.74	.....	37.48	36.55
6	.....	35.38	36.05	.....	37.78	36.70
7	.....	35.80	.....	.....	37.68	36.69
8	.....	35.35	.....	36.46	37.50	36.58
9	.....	35.82	.....	36.92	37.30	36.45
10	.....	35.00	36.52	37.10	36.73	36.46
11	.....	34.91	37.03	37.13	37.01	36.41
12	.....	34.62	37.32	37.03	37.06	36.35
13	.....	35.02	37.52	36.72	37.15	36.38
14	.....	35.30	37.52	36.95	.....	36.45
15	.....	35.42	36.81	37.12	.....	36.42
16	.....	35.92	37.06	37.22	.....	36.86
17	.....	35.88	37.83	37.32	.....	37.16
18	.....	34.89	38.26	37.36	.....	37.14
19	.....	35.49	38.54	37.14	36.49	37.62
20	.....	36.07	39.42	36.73	37.14	37.71
21	.....	36.24	39.44	36.16	37.17	37.14
22	.....	36.20	39.30	36.39	37.06	36.72
23	.....	36.35	40.40	36.65	36.96	35.61
24	.....	36.34	39.80	36.76	36.96	.....
25	.....	35.64	38.53	37.00	36.65	.....
26	.....	35.65	37.74	36.74	36.52	.....
27	.....	36.30	37.64	36.60	36.42	.....
28	.....	36.15	37.18	37.05	36.47	.....
29	.....	36.00	36.81	37.18	37.00	.....
30	.....	35.60	36.30	37.37	36.68	.....
31	36.33	35.24		37.56		36.99

Tuscarawas County

Tu-1. Everet Waltz. About 3 miles north of Strasburg, on north side of driveway to Waltz Drilling Co. shop on west side of U. S. Route 21. Unused driven well, diameter 4 inches, depth 23 feet. Measuring point, floor of recorder shelter, 0.9 foot above land-surface datum. Automatic water-stage recorder installed July 18, 1946.

Tu-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	12.49	12.97	13.08	12.96
2	.....	11.61	12.50	12.99	13.09	12.95
3	.....	11.62	12.52	12.99	13.09	12.95
4	.....	11.65	12.55	13.04	13.09	12.95
5	.....	11.69	12.56	13.04	13.09	12.95
6	.....	11.72	12.60	13.04	13.10	12.96
7	.....	11.75	.....	13.07	13.10	12.97
8	.....	11.82	.....	13.07	13.11	12.98
9	.....	11.82	.....	13.08	13.11	13.00
10	.....	11.89	.....	13.12	13.11	13.00
11	.....	11.92	.....	13.12	13.11	13.00
12	.....	11.98	12.73	13.12	13.11	13.00
13	.....	12.07	12.73	13.12	13.10	12.97
14	.....	.....	12.74	13.12	13.06	12.90
15	.....	.....	12.74	13.12	13.06	12.85
16	.....	12.08	12.74	13.12	.....	12.83
17	.....	12.08	12.75	13.12	.....	.....
18	.....	12.09	12.81	.....	13.06	.....
19	.....	12.09	12.81	13.00	13.06	.....
20	.....	12.09	12.86	12.90	13.06	.....
21	.....	12.18	12.87	12.80	13.06	.....
22	.....	12.20	12.87	12.75	13.07	.....
23	.....	12.27	12.90	12.85	13.09	a12.80
24	.....	12.28	12.91	13.00	.....	.....
25	.....	12.29	12.91	13.00	13.09	.....
26	11.36	12.32	12.91	13.02	13.08	.....
27	11.39	12.32	12.95	13.01	13.03	.....
28	11.46	12.39	12.95	13.01	12.98	.....
29	.....	12.40	12.95	13.01	12.97	.....
30	.....	12.45	12.95	13.02	12.96	a12.73
31	.....	12.45	.....	13.02	.....	.....

a Tape measurement.

Union County

U-1. Irwin Public School. At Irwin, 30 feet north of State Highway 161, in abandoned school yard. Abandoned drilled well, diameter 4 inches, depth 85 feet. Measuring point, floor of recorder shelter, 1.2 feet above land-surface datum. Automatic water-stage recorder installed Feb. 7, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Dec.
1	....	....	9.06	9.65	8.53	8.38	9.70	.....	10.08	.....
2	....	....	9.09	9.63	8.60	8.56	9.71	.....	10.69	10.01
3	....	....	9.09	9.63	8.69	8.70	9.73	.....	10.70	10.01
4	....	....	9.19	9.63	8.78	8.81	9.76	.....	10.73	10.04
5	....	8.76	9.23	9.64	8.83	8.90	9.75	.....	.....	.....
6	....	8.81	9.25	9.65	8.90	8.98	9.70	.....	.....	.....
7	9.17	8.82	9.28	9.62	8.98	9.06	9.65	.....	.....	.....
8	9.28	8.68	9.31	9.56	9.08	9.11	9.67	.....	.....	.....
9	9.40	8.78	9.36	9.56	9.17	9.19	9.68	.....	.....	.....
10	9.49	8.87	9.39	9.56	9.19	9.22	9.73	.....	10.71	.....
11	9.50	8.92	9.39	9.46	9.22	9.27	9.76	.....	10.71	.....
12	9.59	8.95	9.40	8.93	9.25	9.32	9.76	.....	10.69	.....
13	....	9.03	9.31	9.01	9.22	9.36	9.78	.....	10.69	8.35
14	....	9.05	9.29	9.01	8.57	9.41	9.84	.....	10.69	8.59
15	....	8.74	9.30	9.05	8.73	9.44	9.84	.....	10.69	8.80
16	....	8.61	9.31	9.05	8.87	9.48	9.84	.....	10.69	8.94

U-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Dec.
17	....	8.65	9.33	8.30	8.80	9.50	9.83	....	10.70	9.11
18	....	....	9.38	8.40	7.76	9.53	9.86	....	10.55	....
19	....	....	9.40	8.56	6.97	9.56	....	....	10.55	....
20	....	7.61	9.46	8.32	7.15	9.54	....	....	10.58	....
21	....	7.99	9.47	8.22	7.80	9.47	....	10.60	10.58	....
22	....	8.29	9.48	8.44	8.14	9.51	....	10.61	....	....
23	9.05	8.46	9.51	8.60	8.37	9.56	....	10.58	....	9.30
24	9.10	8.64	9.51	8.75	8.55	9.62	....	10.57	10.60	9.31
25	9.12	8.78	9.52	8.87	8.75	9.61	....	10.60	10.60	9.43
26	9.11	8.82	9.56	8.87	8.77	9.62	....	10.62	10.56	9.51
27	....	8.91	9.58	7.88	8.86	9.65	....	10.64	....	9.51
28	....	....	9.61	7.84	7.10	9.68	....	10.66	....	9.26
29	....	....	9.61	8.12	7.77	....	....	10.66	....	6.66
30	....	....	9.64	8.33	8.11	9.60	....	10.66	....	8.18
31	....	9.05	....	8.46	....	9.66	....	....	....	8.47

U-2. J. B. Gray. About 1 mile north of Byhalia, 600 feet east of U. S. Route 31, east of barn. Abandoned drilled well, diameter 4 inches, depth 80 feet. Measuring point, floor of recorder shelter, 1.2 feet above land-surface datum. Automatic water-stage recorder installed July 23, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	13.04	14.07	14.92	15.04	14.97
2	....	13.14	14.10	15.00	15.05	15.07
3	....	13.15	14.12	14.99	15.13	15.07
4	....	13.17	14.25	15.06	15.19	15.14
5	....	13.20	14.24	15.10	15.25	15.07
6	....	13.17	14.28	15.13	15.21	15.17
7	....	13.21	14.36	15.14	15.05	15.15
8	....	13.28	14.41	15.13	15.09	15.09
9	....	13.31	14.41	15.14	15.16	15.15
10	....	13.29	14.34	15.11	15.16	15.14
11	....	13.35	14.43	15.13	15.08	15.14
12	....	13.48	14.47	15.19	15.21	14.96
13	....	13.41	14.51	15.22	15.12	14.57
14	....	13.50	14.57	15.20	15.10	14.40
15	....	13.54	14.56	15.23	15.06	14.35
16	....	13.49	14.51	15.20	15.11	14.31
17	....	13.47	14.65	15.08	15.12	14.43
18	....	13.52	14.77	15.19	15.18	14.44
19	....	13.58	14.69	15.14	15.18	14.52
20	....	13.70	14.71	15.16	15.15	14.45
21	....	13.72	14.78	15.18	15.14	14.40
22	....	13.70	14.78	15.12	15.09	14.50
23	12.73	13.80	14.85	15.10	15.14	14.44
24	12.85	13.80	14.74	15.14	15.09	14.51
25	12.89	13.81	14.75	15.01	15.11	14.63
26	12.96	13.89	14.83	15.08	15.10	14.53
27	12.95	13.95	14.90	15.18	15.08	14.49
28	12.83	13.86	14.90	15.13	15.05	14.38
29	12.98	13.95	14.87	15.14	15.07	14.20
30	13.00	13.95	14.98	15.20	15.02	13.94
31	13.04	14.00	....	15.09	....	13.96



Warren County

W-1. Everybody's Farm. 1 mile southwest of Mason, near northwest side of U. S. Route 42, on farm of radio station WLW. Abandoned dug well, diameter 4 feet, depth 50 feet. Measuring point, floor of recorder shelter, 0.5 foot above land-surface datum. Automatic water-stage recorder installed Apr. 17, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	3.01	2.44	4.00	4.59	5.27	4.60	2.02
2	....	1.00	2.91	2.86	4.09	4.66	5.29	4.66	2.16
3	....	1.31	2.49	3.18	4.14	4.71	5.32	4.40	2.25
4	....	1.34	2.76	3.41	4.20	4.79	5.35	4.31	2.31
5	....	1.76	3.06	3.56	4.28	4.83	5.38	4.31	2.34
6	....	....	3.27	3.60	4.29	4.88	5.40	4.31	2.48
7	....	....	3.45	3.68	4.37	4.93	5.41	4.31	2.56
8	....	2.70	3.60	3.73	4.41	4.98	5.43	4.23	2.64
9	....	2.87	3.74	3.78	4.46	5.01	5.44	4.23	2.71
10	....	....	3.81	3.84	4.53	5.02	5.45	4.19	2.72
11	....	....	3.90	3.84	4.57	5.07	5.45	4.14	2.63
12	....	....	3.91	3.89	4.63	5.11	5.46	3.89	2.34
13	....	....	3.91	3.97	4.65	5.12	5.48	3.64	.86
14	....	....	3.43	4.05	4.68	5.13	5.49	3.56	1.10
15	....	.55	3.36	4.10	4.68	5.16	5.50	3.66	1.26
16	....	.55	3.45	4.16	4.68	5.20	5.50	3.64	1.36
17	2.56	.62	3.46	4.24	4.62	5.23	5.50	3.61	1.56
18	2.75	.78	2.93	4.32	4.46	5.26	5.38	3.44	1.79
19	2.93	1.27	3.03	4.37	4.25	5.29	5.34	3.51	2.02
20	3.16	1.37	2.97	4.37	3.75	5.31	5.31	3.64	2.00
21	3.30	1.13	3.22	4.12	3.77	5.33	5.23	3.56	1.93
22	3.40	1.67	3.45	3.47	3.85	5.35	5.17	3.47	1.81
23	3.45	2.12	3.74	2.15	3.95	5.36	5.11	3.50	1.73
24	3.45	2.26	3.78	2.53	4.04	5.25	5.08	3.53	.95
25	3.37	2.47	3.90	2.83	4.12	5.25	5.04	3.56	1.25
26	3.41	2.51	4.00	3.13	4.22	5.24	4.94	3.38	1.31
27	3.45	2.45	4.05	3.38	4.28	5.24	4.91	1.10	1.33
28	....	2.20	2.50	3.56	4.36	5.24	4.85	1.58	1.48
29	....	2.51	1.37	3.68	4.42	5.24	4.80	1.71	1.48
30	....	2.79	2.01	3.79	4.47	5.25	4.77	1.81	1.04
31	....	2.99	....	3.91	4.53	....	4.73	....	1.36

Washington County

Wa-1 (Formerly Marietta 1) (#944, p. 198; #986, p. 275; 1016, p. 318; 1023, p. 335). Marietta Osteopathic Clinic. At Fourth and Putnam Sts., in Marietta.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	Aug.	Sept.	Oct.	Nov.	Dec.
1	28.45	28.43	27.60	27.64	.....	.....	28.40	28.67	28.89	28.92
2	28.35	28.49	27.25	27.37	.....	.....	28.41	28.67	28.90	28.92
3	28.25	28.51	27.10	27.43	.....	.....	28.43	28.95	29.15	.....
4	28.31	28.52	27.44	27.56	.....	.....	28.30	28.70	29.13	.....
5	28.30	28.54	27.00	27.57	.....	.....	28.32	29.00	28.95	.....
6	28.35	28.51	27.01	27.62	.....	.....	28.62	29.03	28.95	.....
7	28.75	28.41	27.13	27.66	.....	.....	28.64	29.04	28.94	28.90
8	28.35	28.39	27.12	28.05	.....	27.78	28.69	28.76	29.02	28.90
9	28.15	28.38	27.05	27.82	28.95	27.80	28.67	28.77	29.04	28.90
10	27.70	28.41	26.98	28.11	28.97	28.11	28.72	28.78	28.97	28.92
11	27.40	28.79	27.23	.....	28.97	28.13	28.73	28.78	29.02	28.94
12	27.30	28.48	26.76	.....	28.94	28.07	28.55	28.83	29.00	28.92
13	27.27	28.46	26.71	.....	28.93	27.91	28.43	28.83	28.98	28.98
14	27.70	28.35	26.75	.....	28.87	27.90	28.52	28.82	28.96	28.90
15	27.42	28.35	26.86	.....	29.02	27.92	28.53	28.82	28.96	28.80

Wa-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	Aug.	Sept.	Oct.	Nov.	Dec.
16	27.42	28.25	26.86	.....	.....	28.22	28.54	28.81	28.97	28.75
17	27.57	27.95	26.80	.....	.....	28.26	28.55	29.01	29.00	28.79
18	27.65	27.94	27.14	.....	.....	28.23	28.55	28.87	28.99	28.75
19	27.76	27.85	26.75	.....	.....	28.15	28.56	28.90	.....	28.74
20	27.79	27.86	26.60	.....	.....	28.15	28.55	28.90	.....	.....
21	27.91	27.87	26.61	.....	.....	28.12	28.56	28.87	.....	28.73
22	28.00	27.85	26.71	.....	.....	27.96	28.84	28.84	.....	28.77
23	28.01	27.86	26.87	.....	.....	27.97	28.87	28.84	29.00	28.76
24	28.08	27.92	27.00	.....	.....	28.04	28.88	28.84	29.00	28.77
25	28.14	27.92	27.44	.....	.....	28.40	28.62	28.88	29.02	28.78
26	28.21	27.91	27.14	.....	.....	28.15	28.63	28.88	29.05	28.77
27	28.23	27.95	27.11	.....	.....	28.15	28.63	28.86	29.05	28.77
28	28.62	27.87	26.95	.....	.....	28.15	28.85	28.85	29.01	28.83
29	28.35	.....	26.96	.....	.....	28.17	28.90	28.85	28.94	28.85
30	28.34	.....	27.18	.....	.....	28.17	28.85	28.88	28.92	28.82
31	28.42	.....	27.20	.....	.....	28.23	.....	28.88	.....	28.74

Wayne County

Wn-1. Ohio Boxboard Co. At Rittman, 1 block east of State Highway 94, in basement of factory building on east side of Industrial St. Abandoned drilled well, diameter 6 inches, depth 180 feet. Measuring point, floor of recorder shelter, at land-surface datum. Automatic water-stage recorder installed June 20, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	97.00	97.32	98.02	88.98	88.56
2	.....	.....	96.82	97.38	96.53	88.08	90.15
3	.....	.....	96.25	97.58	98.20	87.76	90.33
4	.....	.....	96.49	97.93	99.00	88.06	89.97
5	.....	96.35	97.10	97.11	99.42	88.01	89.32
6	.....	96.10	97.82	96.49	99.41	88.22	89.30
7	.....	100.40	97.98	98.07	99.65	87.86	88.92
8	.....	100.70	98.73	97.95	99.50	87.64	89.32
9	.....	98.02	98.88	98.32	99.00	87.68	88.73
10	.....	97.22	99.28	98.52	99.26	87.33	88.29
11	.....	96.56	99.08	96.30	99.03	88.09	88.26
12	.....	98.92	.....	95.56	98.40	87.49	89.66
13	.....	96.65	.....	95.75	95.72	87.35	90.68
14	.....	96.57	.....	96.11	96.51	87.37	88.75
15	.....	96.60	96.98	97.88	96.50	88.23	88.18
16	.....	.....	96.47	97.66	96.99	88.61	87.51
17	.....	.....	94.31	97.72	97.12	88.55	87.75
18	.....	.....	94.48	97.47	96.11	88.87	88.34
19	.....	96.90	92.50	98.07	95.95	89.18	88.32
20	97.74	96.56	91.86	98.43	93.10	88.90	88.15
21	96.92	97.40	.....	98.16	92.34	88.86	87.41
22	96.04	97.52	93.73	98.01	90.78	88.30	87.57
23	95.32	96.70	93.43	97.53	90.08	91.14	86.55
24	96.70	96.42	92.61	96.85	90.14	88.82	85.61
25	95.35	96.75	93.25	97.72	89.65	88.87	84.24
26	97.14	95.58	94.31	97.65	88.93	88.00	.....
27	94.42	95.00	95.24	97.80	88.81	88.50	.....
28	94.97	96.22	95.73	96.34	89.19	88.61	.....
29	95.01	97.15	96.40	96.58	88.87	88.61	.....
30	94.60	99.36	96.87	97.38	88.68	88.78	.....
31	.....	99.89	96.32	.....	88.60	.....	.....

Wood County

Wo-1. Paul W. Kale. 1 mile west of Wingston, 5 miles west of State Highway 68, on southeast corner of road intersection at Liberty school-house. Abandoned drilled well, diameter 4 inches, depth 80 feet. Measuring point, floor of recorder shelter, 1.5 feet above land-surface datum. Automatic water-stage recorder installed Oct. 2, 1946.

Lowest daily water level, in feet below land-surface datum, 1946  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 2	4.42	Oct. 19	5.04	Nov. 9	5.96	Nov. 30	6.67
3	4.47	20	5.08	10	5.95	Dec. 5	6.90
4	4.52	21	5.17	11	6.04	6	6.93
5	4.61	22	5.24	12	6.07	7	6.96
6	4.65	23	5.31	14	6.11	8	6.99
7	4.68	24	5.33	15	6.17	9	7.01
8	4.73	25	5.31	16	6.31	10	7.00
9	4.76	26	5.41	17	6.39	11	6.99
10	4.76	27	5.51	21	6.40	12	6.90
11	4.80	28	5.59	22	6.43	13	6.98
12	4.90	31	5.61	23	6.46	14	7.00
13	4.97	Nov. 1	5.64	24	6.48	19	7.03
14	5.03	2	5.70	25	6.48	20	7.03
15	5.06	3	5.87	26	6.48	21	6.99
16	5.10	4	5.86	27	6.52	26	6.98
17	5.10	7	5.85	28	6.61	27	6.99
18	5.09	8	5.90	29	6.66		

## PENNSYLVANIA, 1946

By N. H. Klein

### PROGRAM OF WORK

The measurement of water levels in observation wells in Pennsylvania was continued in 1946 in cooperation with the Topographic and Geologic Survey of the Pennsylvania Department of Internal Affairs. Eleven new observation wells were established during the year; 3 in Philadelphia, 5 in Pittsburgh and 3 were added to the State-wide network of wells in which measurements have been made since 1931.

About 8,000 measurements of water levels, distributed among 67 wells, are recorded for the year. Twenty-one automatic water-stage recorders were in use in 1946 and daily measurements are given for all wells equipped with recorders. Weekly measurements were made in all other Pennsylvania observation wells.

### FLUCTUATIONS OF WATER LEVEL

Weekly measurements of 27 observation wells, more or less evenly distributed over the State, have been converted to feet above assumed datum planes and arithmetically averaged. The weekly average for 1946 is shown in figure 28, together with the highest and lowest weekly averages occurring previously.

Fluctuations of the average weekly water level correspond closely to changes in the State-wide average of precipitation in Pennsylvania. The year began with an upward trend in the average water level as a result of a thaw early in January. The level rose to record highs in the second and third weeks of the month. However, below-normal precipitation in January and February sent the level downward until the end of February. Then, melting snows and rather general rain in the first half of March caused the water level to rise to record high in the middle of the month.

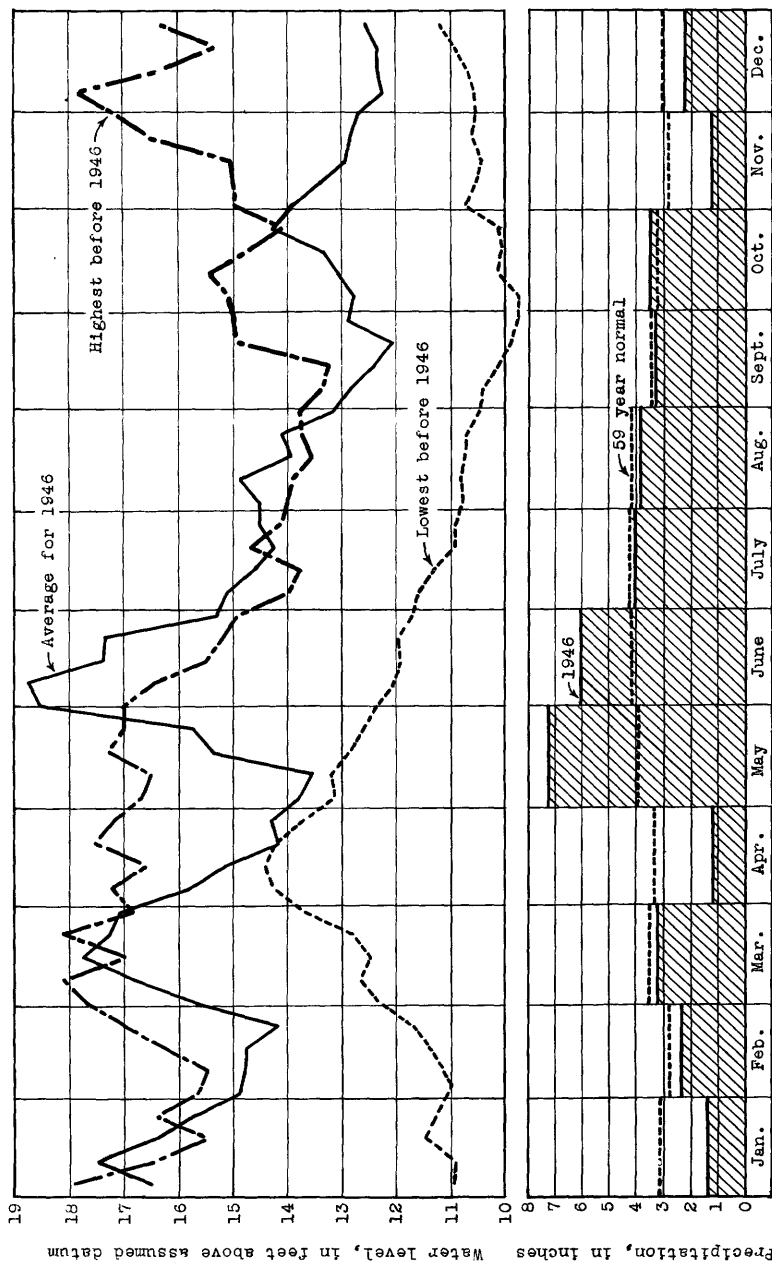


Figure 28.--Graphs showing average ground-water levels and precipitation in Pennsylvania in 1946, in comparison with previous years of record.

The driest April on record, with precipitation only 35 percent of normal, was responsible for an abrupt drop in the water level which resulted in a near record low in the third week of April. This decline continued through the second week of May. Precipitation in May, the heaviest since August 1933, and in June, the fourth highest on record for that month, sent the level upward even more abruptly and resulted in record highs for every week of June, July, and August except two.

Declining to a low for the year of 12.03 feet above assumed datum in the third week of September, the trend was once again reversed by a concentration of precipitation in the latter third of that month. This upward trend was terminated at the end of October. As the precipitation for November was only 44 percent of normal, the average water level dropped during this month and the first week of December. As the year ended the level was rising slowly, although considerably below the 14-year average.

The 1946 average water-level curve was characterized by very sharp upward and downward trends. There were record highs established in 17 weeks of the year. The level fell below the 14-year average for only two short periods of 5 weeks during the year; the first period was April 12-May 10, and the second was the final 5 weeks of the year.

#### Philadelphia area

The sands and gravels which underlie portions of south Philadelphia constitute the most favorable source of ground-water supply in Philadelphia. Many industrial wells have been drilled in these sediments and most of the supply of the Philadelphia Naval Base is derived from this source. During 1946, 25 observation wells in south Philadelphia were measured weekly or daily. Nineteen of these wells were equipped with automatic water-stage recorders. Hydrographs of these wells indicate that for the year water levels, in general, were maintained at about the same elevation except for the effects of tides and periodic operation of large wells. Water levels in south Philadelphia do not indicate depletion of the ground-water supply at the present rate of withdrawal nor is there any evidence of a significant increase in the available supply.

Pittsburgh area

As a part of the cooperative ground-water program in Pennsylvania, a field office was established in Pittsburgh, Allegheny County, in March 1946. Large quantities of ground water are obtained by industries and suburban water companies from sands and gravels deposited in the valleys of the major rivers in the Pittsburgh area. Measurements were made in a few wells in downtown Pittsburgh beginning in 1945 and by the end of 1946, 12 wells were being measured weekly. While the period of record is short, observations to date do not indicate any pronounced lowering of water levels in the areas of heavy ground-water use in Pittsburgh.

Average of water levels in observation wells in Pennsylvania,  
by weeks, in feet above assumed datum planes, 1946

Date	Number of wells	1946 average	14-year average	Date	Number of wells	1946 average	14-year average
Jan. 4	23	16.52	13.69	July 5	26	15.13	12.90
11	23	17.50	13.67	12	24	14.63	12.67
18	22	16.41	13.49	19	25	14.26	12.43
25	20	15.75	13.51	26	23	14.52	12.34
Feb. 1	23	14.88	13.53	Aug. 2	26	14.52	12.18
8	23	14.77	13.47	9	26	14.88	12.02
15	22	14.75	13.74	16	26	13.95	12.00
22	21	14.17	13.89	23	25	14.11	11.89
Mar. 1	22	15.67	14.24	30	24	13.16	11.83
8	23	16.83	14.43	Sept. 6	24	12.83	11.71
15	22	17.77	14.84	13	24	12.39	11.57
22	22	17.26	15.43	20	24	12.03	11.66
29	22	17.07	15.46	27	24	12.89	11.51
Apr. 5	23	15.84	15.55	Oct. 4	25	12.79	11.44
12	21	15.17	15.54	11	26	13.08	11.43
19	22	14.19	15.39	18	25	13.37	11.38
26	22	14.30	15.13	25	24	14.29	11.60
May 3	24	13.79	14.84	Nov. 1	24	13.95	12.02
10	24	13.55	14.55	8	24	13.41	12.21
17	26	15.35	14.36	15	24	12.93	12.52
24	25	15.74	14.31	22	23	12.85	12.74
31	25	18.57	14.04	29	25	12.73	12.85
June 7	24	18.77	13.73	Dec. 6	24	12.24	12.95
14	23	17.40	13.38	13	22	12.35	13.07
21	26	17.36	13.35	20	24	12.35	13.17
28	25	15.30	13.07	27	23	12.57	13.50

## WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Allegheny County

A1. City of Pittsburgh. At Liberty Avenue and Short Street. Altitude 730.94 feet above mean sea level. Unused drilled well, diameter 12 inches, depth 36 feet. Measuring point, edge of hole drilled in plug in top of casing, at land-surface datum. Extremes of observed water level, in feet below land-surface datum: Highest, Dec. 20, 1945, 23.64; lowest, Aug. 10, 1946, 29.46.

Water level, in feet below land-surface datum, 1945-46

Date	Water level	Date	Water level	Date	Water level
May 1, 1945	26.68	May 25, 1945	27.26	June 23, 1945	28.48
8	26.83	June 1	27.16	30	28.88
15	27.12	13	27.70	July 7	28.83

A1--Continued.

Water level, in feet below land-surface datum, 1945-46					
Date	Water level	Date	Water level	Date	Water level
July 14, 1945	28.81	Jan. 22, 1946	26.34	June 27, 1946	27.50
20	28.86	30	26.09	July 5	28.72
27	28.88	Feb. 7	26.89	11	29.14
Aug. 3	28.69	14	27.43	18	29.16
9	28.86	21	27.94	25	29.20
17	28.77	28	28.03	Aug. 1	29.04
23	28.47	Mar. 8	28.10	10	29.46
29	28.24	16	28.34	15	28.82
Sept. 7	28.16	20	28.43	22	28.71
14	28.29	27	28.15	29	28.56
21	28.22	Apr. 3	28.12	Sept. 5	28.12
28	28.14	11	28.42	12	28.22
Oct. 4	27.94	18	28.28	19	28.03
11	27.20	25	28.38	27	27.62
19	27.08	May 2	28.37	Oct. 3	27.02
25	27.12	9	28.10	10	26.66
Nov. 2	27.14	16	28.30	17	26.50
8	27.18	23	28.69	24	26.66
14	27.13	29	27.15	31	27.02
21	27.03	31	27.46	Nov. 7	27.00
29	26.90	June 3	26.58	14	26.85
Dec. 6	26.13	4	26.30	21	26.86
13	24.80	5	26.73	27	27.07
20	23.64	6	27.02	Dec. 5	27.14
28	26.64	7	27.27	12	27.18
Jan. 5, 1946	28.89	13	27.92	19	27.30
12	26.93	20	28.34	26	27.10

A2. City of Pittsburgh. At First Avenue and Short Street. Altitude 731.84 feet above mean sea level. Unused drilled well, diameter 12 inches, depth 36 feet. Measuring point, edge of hole drilled in plug in top of casing, at land-surface datum. Extremes of observed water level, in feet below land-surface datum: Highest, Dec. 20, 1945, 20.98; lowest, July 18, 1946, 29.88.

Water level, in feet below land-surface datum, 1945-46					
Sept. 7, 1945	28.82	Mar. 8, 1946	29.21	July 18, 1946	29.88
14	28.80	16	29.36	25	29.87
21	28.52	20	29.38	Aug. 1	29.74
28	28.66	27	29.08	10	29.78
Oct. 4	28.47	Apr. 3	29.53	15	29.66
11	28.06	11	29.34	22	29.46
19	27.91	18	29.25	29	29.38
25	27.94	25	29.36	Sept. 5	29.08
Nov. 2	27.98	May 2	29.12	12	29.06
8	27.95	9	29.03	19	28.94
14	27.93	16	29.08	27	28.78
21	27.96	23	29.47	Oct. 3	28.20
29	28.03	29	28.54	10	27.72
Dec. 6	27.93	31	28.13	17	27.50
13	25.16	June 3	28.10	24	27.55
20	20.98	4	27.29	31	27.86
28	24.70	5	27.44	Nov. 7	28.02
Jan. 5, 1946	27.24	6	27.77	14	27.95
12	27.80	7	27.98	21	27.86
22	27.54	13	28.72	27	28.00
30	26.81	20	29.10	Dec. 5	28.10
Feb. 7	27.09	27	29.42	12	28.18
14	27.64	July 5	29.53	19	28.22
21	28.40	11	29.75	26	28.22
28	29.03				



A3. City of Pittsburgh. At Water and Short Streets. Altitude 730.50 feet above mean sea level. Unused drilled well, diameter 12 inches, depth 34.8 feet. Measuring point, edge of hole drilled in plug in top of casing, at land-surface datum. Extremes of observed water level, in feet below land-surface datum: Highest, Feb. 28, 1946, 23.66; lowest, Mar. 16, 1946, 28.59.

Water level, in feet below land-surface datum, 1945-46

Date	Water level	Date	Water level	Date	Water level
May 25, 1945	26.40	Dec. 20, 1945	26.70	June 13, 1946	26.85
June 1	26.40	28	26.94	20	27.16
13	26.62	Jan. 5, 1946	25.89	27	27.47
23	27.16	12	26.19	July 5	27.56
30	27.50	22	26.37	11	27.77
July 7	27.44	30	26.65	18	27.82
14	27.48	Feb. 7	26.01	25	27.80
20	27.61	14	25.49	Aug. 1	27.66
27	27.46	21	24.92	10	28.08
Aug. 3	27.73	28	23.66	15	27.60
9	27.90	Mar. 8	26.87	22	27.39
17	27.37	16	28.39	29	27.35
23	27.09	20	27.97	Sept. 5	27.07
29	27.38	27	27.47	12	27.10
Sept. 7	26.96	Apr. 3	28.34	19	27.00
14	26.89	11	27.46	27	26.80
21	26.60	18	27.35	Oct. 3	26.07
28	26.78	25	27.77	10	25.82
Oct. 4	26.53	May 2	27.38	17	25.67
11	26.32	9	27.19	24	25.80
19	26.69	16	27.18	31	26.06
25	26.35	23	27.50	Nov. 7	26.08
Nov. 2	26.33	29	25.05	14	26.03
8	26.43	31	26.00	21	26.00
14	26.79	June 3	24.75	27	26.16
21	26.11	4	24.60	Dec. 5	26.38
29	26.61	5	25.42	12	26.43
Dec. 6	26.17	6	25.89	19	26.51
13	26.23	7	26.05	26	26.45

A4. Commonwealth Building. 316 Fourth Avenue, Pittsburgh. Altitude 714.00 feet above mean sea level. Unused drilled well, diameter 8 inches, depth 54.8 feet. Measuring point, at edge of hole in cement basement floor, 23.5 feet below land-surface datum. Extremes of observed water level, in feet below land-surface datum: Highest, Sept. 7, 1945, 39.53; lowest, Apr. 3, 1946, 58.91.

Water level, in feet below land-surface datum, 1945-46

May 1, 1945	52.44	Sept. 21	50.75	Feb. 7, 1946	58.05
8	50.44	28	58.08	14	55.82
15	48.63	Oct. 4	56.86	21	54.61
25	53.34	11	54.06	28	52.88
June 1	51.59	19	52.88	Mar. 8	52.93
13	52.27	25	50.46	16	54.47
23	48.20	Nov. 2	48.89	20	58.10
30	41.72	8	50.93	27	56.80
July 7	45.99	14	52.17	Apr. 3	58.91
14	50.41	21	52.85	11	51.07
20	48.20	29	51.63	18	55.48
27	46.33	Dec. 6	55.10	25	54.75
Aug. 3	47.83	13	56.01	May 2	56.13
9	48.70	20	58.57	9	56.10
17	47.41	28	53.87	16	50.93
23	46.67	Jan. 5, 1946	54.36	23	56.58
29	48.52	12	58.28	29	56.19
Sept. 7	39.53	22	55.65	31	53.28
14	48.73	30	57.19	June 3	48.16

## A4--Continued.

Water level, in feet below land-surface datum, 1945-46					
Date	Water level	Date	Water level	Date	Water level
June 4, 1946	49.22	Aug. 1, 1946	45.55	Oct. 17, 1946	49.98
5	50.62	10	46.30	24	46.40
6	50.96	15	40.14	31	44.50
7	48.34	22	48.09	Nov. 7	42.12
13	50.01	29	46.98	14	49.16
20	49.70	Sept. 5	48.70	21	48.04
27	49.09	12	50.14	27	50.00
July 5	47.32	19	51.34	Dec. 5	49.68
11	44.72	27	50.90	12	51.16
18	49.10	Oct. 3	50.34	19	47.82
25	44.72	10	51.38	26	42.84

A5. Keystone Building. 324 Fourth Avenue, Pittsburgh. Altitude 724.70 feet above mean sea level. Unused drilled well, diameter 8-3/4 inches, depth 95.0 feet. Measuring point, top of casing, 12.8 feet below land-surface datum. Extremes of observed water level, in feet below land-surface datum: Highest, Dec. 26, 1946, 37.70; lowest, Apr. 3, 1946, 53.93.

Water level, in feet below land-surface datum, 1945-46					
May 1, 1945	47.55	Dec. 6, 1945	46.23	June 7, 1946	46.54
8	46.17	13	47.95	13	46.95
15	45.68	20	50.42	20	46.79
25	49.92	28	48.44	27	45.45
June 1	46.43	Jan. 5, 1946	47.50	July 5	44.00
13	47.17	12	48.99	11	42.24
22	44.02	22	49.60	18	44.92
30	39.73	30	48.37	25	41.74
July 7	40.74	Feb. 7	48.97	Aug. 1	41.96
14	44.35	14	47.22	10	42.25
20	44.17	21	47.97	15	38.70
27	43.24	28	48.62	22	44.94
Aug. 3	43.92	Mar. 8	49.34	29	43.80
9	44.78	16	50.31	Sept. 5	46.81
17	42.96	20	52.79	12	46.82
23	42.33	27	51.27	19	47.26
29	44.08	Apr. 3	53.93	27	47.04
Sept. 7	38.00	11	45.86	Oct. 3	45.68
14	43.54	18	50.68	10	47.02
21	46.29	25	47.83	17	46.86
28	49.40	May 2	51.44	24	44.78
Oct. 4	48.92	9	51.69	31	41.88
11	48.21	16	47.43	Nov. 7	39.35
19	47.08	23	51.74	14	43.60
25	45.86	29	51.32	21	44.24
Nov. 2	45.73	31	46.92	27	46.22
8	45.07	June 3	43.62	Dec. 5	45.30
14	46.53	4	44.50	12	45.45
21	47.18	5	46.78	19	44.58
29	47.69	6	47.40	26	37.70

A6. Fulton Building. Sixth Street and Duquesne Way, Pittsburgh. Altitude 719.85 feet above mean sea level. Unused drilled well, diameter 12 inches, depth 34.2 feet. Measuring point, top of casing, 13.15 feet below land-surface datum. Extremes of observed water level, in feet below land-surface datum: Highest, Dec. 28, 1945, 30.86; lowest, Aug. 10, 1946, 37.90.

Water level, in feet below land-surface datum, 1945-46					
May 8, 1945	32.12	July 7, 1945	36.78	Aug. 23, 1945	36.04
15	32.12	14	36.50	29	35.60
25	32.56	20	36.84	Sept. 7	35.91
June 1	32.76	27	36.98	14	36.07
13	34.75	Aug. 3	36.57	21	33.67
20	35.99	9	35.87	28	34.51
30	36.69	17	35.77	Oct. 4	33.33

A6--Continued.

Water level, in feet below land-surface datum, 1945-46					
Date	Water level	Date	Water level	Date	Water level
Oct. 11, 1945	32.89	Mar. 27, 1946	35.24	July 25, 1946	37.50
19	32.42	Apr. 3	34.85	Aug. 1	37.71
25	32.59	11	34.69	10	37.80
Nov. 2	32.40	18	34.57	15	37.09
8	32.32	25	35.34	22	37.05
14	32.26	May 2	35.55	29	36.75
21	32.50	9	35.54	Sept. 5	35.47
29	32.22	16	35.60	12	36.02
Dec. 6	32.28	23	36.05	19	35.69
13	32.44	29	34.96	27	33.25
20	32.69	31	35.25	Oct. 3	32.13
28	30.86	June 3	32.26	14	31.64
Jan. 5, 1946	32.84	4	33.12	17	31.43
12	32.30	5	33.10	24	31.71
22	32.18	6	33.12	31	32.35
30	31.84	7	35.07	Nov. 7	32.43
Feb. 7	32.06	13	35.30	21	32.21
14	32.62	20	36.20	27	32.55
21	32.78	27	37.04	Dec. 5	32.75
28	33.51	July 5	37.10	12	33.01
Mar. 8	33.79	11	37.47	19	32.87
16	35.91	18	37.61	26	32.77
20	35.35				

A7. Stanley Theater. Penn Avenue and Seventh Street, Pittsburgh. Altitude 715.11 feet above mean sea level. Unused drilled well, diameter 12 inches, depth 63.2 feet. Measuring point, top of casing, 15.9 feet below land-surface datum. Extremes of observed water level, in feet below land surface datum: Highest, May 8, 1945, 31.93; lowest, July 11, 1946, 39.10.

Water level, in feet below land-surface datum, 1945-46					
May 8, 1945	31.93	Dec. 13, 1945	33.16	June 13, 1946	35.34
15	32.27	20	33.27	20	36.04
25	32.91	28	33.06	27	37.04
June 1	32.81	Jan. 5, 1946	33.20	July 5	37.26
13	34.15	12	35.11	11	39.10
23	36.20	22	34.87	18	38.23
30	37.42	30	34.66	25	38.58
July 7	37.26	Feb. 7	34.14	Aug. 1	37.84
14	37.11	14	33.78	10	38.67
20	37.74	21	34.10	15	38.15
27	38.15	28	34.31	22	38.22
Aug. 3	38.00	Mar. 8	34.68	29	37.48
9	38.38	16	34.96	Sept. 5	36.36
17	37.36	20	35.01	12	36.76
25	36.87	27	34.87	19	36.50
29	36.09	Apr. 3	35.46	27	35.44
Sept. 7	36.43	11	35.49	Oct. 3	34.10
14	37.41	18	35.46	10	33.14
21	35.10	25	35.49	17	32.65
28	35.86	May 2	35.42	24	32.66
Oct. 4	34.64	9	35.38	31	33.20
11	33.77	16	35.59	Nov. 7	33.24
19	33.29	23	35.89	14	33.10
25	33.27	29	35.91	21	33.14
Nov. 2	33.16	31	35.51	27	33.32
8	33.24	June 3	35.12	Dec. 5	33.28
14	33.19	4	34.92	12	33.63
21	33.09	5	34.70	19	33.72
29	33.37	6	34.53	26	33.44
Dec. 6	33.31	7	34.52		

A8. Pittsburgh Plate Glass Co. 632 Duquesne Way, Pittsburgh. Altitude 722.00 feet above mean sea level. Unused drilled well, diameter 3 inches, depth 30.2 feet. Measuring point, top of casing, 11.0 feet below land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 23	34.19	June 27	34.60	Aug. 29	34.84	Oct. 31	31.50
29	32.95	July 5	34.88	Sept. 5	33.82	Nov. 7	31.58
31	33.03	11	35.62	12	34.05	14	31.54
June 3	31.86	18	35.58	19	33.83	21	31.48
4	32.02	25	35.86	27	32.75	27	31.72
5	32.14	Aug. 1	35.89	Oct. 3	31.68	Dec. 5	31.82
6	32.56	10	35.58	10	30.94	12	32.08
7	32.64	15	35.32	17	30.76	19	32.18
13	33.22	22	35.36	24	30.98	26	31.98
20	34.08						

A9. Century Building. 130 Seventh Street, Pittsburgh. Altitude 718.00 feet above mean sea level. Unused drilled well, diameter 3 inches, depth 30.8 feet. Measuring point, top of casing, 12.0 feet below land-surface datum.

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

May 23	32.30	June 27	33.04	Aug. 29	32.80	Oct. 31	29.34
29	30.97	July 5	33.14	Sept. 5	31.90	Nov. 7	29.28
31	31.36	11	33.76	12	32.24	14	29.22
June 3	29.86	18	33.73	19	31.94	21	29.23
4	30.07	25	33.85	27	30.84	27	29.42
5	30.28	Aug. 1	33.78	Oct. 3	29.66	Dec. 5	29.52
6	30.28	12	33.43	10	28.84	12	29.82
7	30.64	15	33.49	17	28.53	19	29.94
13	31.37	22	33.27	24	28.60	26	29.75
20	32.05						

A10. Duff & Sons, Inc. Garrison Place and Duquesne Way, Pittsburgh. Altitude 718.40 feet above mean sea level. Unused drilled well, diameter 6 inches, depth 50.0 feet. Measuring point, top of casing, 11.6 feet below land-surface datum.

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

May 23	38.35	June 27	40.48	Aug. 29	39.80	Oct. 31	37.32
29	39.05	July 5	40.35	Sept. 5	39.60	Nov. 7	37.44
31	39.27	11	41.25	12	40.23	14	37.50
June 3	38.67	18	41.60	19	39.76	21	37.57
4	38.76	25	41.85	27	39.12	27	37.68
5	38.38	Aug. 1	41.88	Oct. 3 a	33.56	Dec. 5	37.45
6	38.26	10	41.42	10	37.58	12	37.90
7	38.71	15	41.35	17	36.60	19	37.88
13	38.77	22	41.32	24	36.86	26	38.02
20	39.68						

a Nearby well shut down.

A11. Victory Building. Liberty Avenue and Ninth Street, Pittsburgh. Altitude 713.60 feet above mean sea level. Unused drilled well, diameter 4 inches, depth 38.5 feet. Measuring point, top of casing, 22.4 feet below land-surface datum.

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

May 23	40.90	June 27	41.60	Aug. 29	42.44	Oct. 31	38.18
29	40.80	July 9	42.47	Sept. 5	41.48	Nov. 7	38.31
31	40.33	11	42.76	12	41.74	14	38.27
June 3	40.14	18	43.05	19	41.46	21	38.28
4	39.92	25	43.22	27	40.70	27	38.38
5	39.72	Aug. 1	43.50	Oct. 3	39.48	Dec. 5	38.40
6	39.69	12	43.20	10	38.44	12	38.68
7	39.48	15	43.20	17	37.92	19	38.83
13	40.20	22	43.16	24	37.77	26	38.58
20	40.69						

A12. Wabash Building. Ferry and Water Streets, Pittsburgh. Altitude 729.00 feet above mean sea level. Unused drilled well, diameter 8 inches, depth 65.8 feet. Measuring point, top of casing, 7.0 feet below land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 13	31.47	Aug. 10	31.93	Sept. 27	31.26	Nov. 14	30.58
20	31.68	15	31.92	Oct. 3	30.65	21	30.78
27	31.90	22	31.86	10	30.62	27	30.98
July 5	31.90	29	31.75	17	30.60	Dec. 5	31.06
11	32.14	Sept. 5	31.60	24	30.50	12	31.02
18	32.20	12	31.60	31	30.83	19	31.05
25	32.20	19	31.38	Nov. 7	30.90	26	30.92
Aug. 1	31.80						

Bedford County

116 (\*936, p. 241; 944, p. 233; 986, p. 279; 1016, p. 323; 1023, p. 339). At West Saxton. Extremes of observed water level, in feet below land-surface datum: Highest, Jan. 1, 1943, 45.49; lowest, Feb. 2, 1945, 53.91.

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

Jan. 4	51.48	Apr. 5	50.15	July 12	50.95	Oct. 11	51.88
11	49.17	12	50.80	19	51.13	18	51.81
18	49.96	19	51.06	26	51.28	25	51.52
25	50.74	26	51.25	Aug. 2	51.48	Nov. 1	51.17
Feb. 1	51.11	May 3	51.40	9	51.60	8	50.92
8	51.24	10	51.60	16	51.12	15	51.22
15	51.40	24	50.30	23	51.26	22	51.47
22	51.58	31	49.47	30	51.39	29	51.59
Mar. 1	51.02	June 7	48.65	Sept. 6	51.55	Dec. 6	51.82
8	50.65	14	49.07	13	51.74	13	52.03
15	50.12	21	49.50	20	52.71	20	52.24
22	49.17	28	50.26	27	51.88	27	52.48
29	48.80	July 5	50.80	Oct. 4	51.86		

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). 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, 1946

Jan. 5	11.98	Apr. 6	15.30	July 3	15.93	Oct. 5	17.51
12	12.97	7	15.90	13	16.31	12	17.86
19	14.92	20	16.32	20	16.71	19	17.90
26	15.67	27	16.59	27	16.41	26	17.96
Feb. 2	15.99	May 4	16.87	Aug. 3	16.70	Nov. 2	17.98
9	16.19	11	17.00	10	16.88	9	18.11
16	16.33	19	15.09	17	16.94	16	18.18
23	16.80	June 1	14.03	24	16.73	23	18.39
Mar. 2	16.04	8	10.30	31	16.79	30	18.47
9	15.69	15	13.30	Sept. 7	16.99	Dec. 7	18.59
16	15.44	22	14.36	14	17.29	14	18.65
23	14.82	25	13.84	21	17.40	21	18.50
30	14.69	29	15.30	28	17.53	28	18.25

Bradford County

81 (\*817, p. 268; 845, p. 417; 886, p. 628; 906, p. 217; 936, p. 242; 944, p. 233; 986, p. 280; 1016, p. 324). 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.

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Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 3	3.43	July 5	3.25	Sept. 6	3.59	Nov. 8	2.72
10	3.17	12	3.10	13	3.37	15	2.79
17	3.20	19	3.55	20	3.90	22	2.82
24	3.00	26	2.87	27	2.75	29	2.81
31	2.98	Aug. 2	2.70	Oct. 4	2.67	Dec. 7	2.20
June 7	3.14	9	2.60	11	2.70	13	2.72
14	3.22	16	2.96	18	2.57	20	3.00
21	3.16	23	2.86	25	2.67	27	2.86
28	2.90	30	2.98	Nov. 1	2.65		

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). At East Towanda. Extremes of observed water level, in feet below land-surface datum: Highest, May 23, 1943, 26.00; lowest, Feb. 15, 1942, 61.70.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	34.29	Apr. 7	35.67	July 13	37.16	Oct. 13	32.38
10	30.34	14	38.17	21	39.85	15	29.84
13	29.99	21	40.00	28	34.38	20	31.36
20	34.28	23	40.38	Aug. 4	36.62	27	31.32
27	37.48	28	41.34	8	35.48	Nov. 3	32.18
Feb. 3	39.80	May 5	42.60	10	34.22	10	35.29
10	41.43	12	43.48	18	37.60	17	37.33
17	42.76	19	44.14	25	36.57	21	38.47
24	43.68	26	41.35	Sept. 1	39.41	24	39.19
Mar. 3	40.47	June 2	28.80	8	41.01	Dec. 1	42.72
10	37.71	9	29.47	11	39.97	8	42.00
17	30.07	15	33.32	15	40.30	15	42.88
24	30.16	22	31.94	22	41.99	22	43.75
26	31.07	29	35.81	29	32.00	29	44.32
31	31.79	July 7	38.70	Oct. 6	31.00		

Butler County

120 (\*936, p. 242; 944, p. 234; 986, p. 280; 1016, p. 324; 1023, p. 340). 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, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	7.30	Apr. 13	9.25	July 13	9.50	Oct. 12	11.15
12	7.99	20	9.06	20	9.88	19	11.04
19	8.71	27	9.24	27	10.09	26	10.68
Feb. 2	9.06	May 4	9.45	Aug. 3	10.30	Nov. 2	10.61
9	8.70	11	9.42	10	10.48	9	10.40
16	8.65	18	9.29	17	10.60	16	10.34
23	8.60	25	8.41	24	10.65	23	10.16
Mar. 2	8.22	June 1	8.15	31	10.80	30	9.89
9	7.48	8	8.66	Sept. 7	11.00	Dec. 7	9.72
16	8.06	15	8.70	14	11.10	14	9.32
23	8.76	22	7.92	21	11.16	22	9.15
30	8.93	29	8.60	28	11.18	28	8.80
Apr. 6	9.20	July 6	9.39	Oct. 5	11.22		

Centre County

38 (\*817, p. 271; 845, p. 418; 886, p. 629; 906, p. 219; 936, p. 243; 944, p. 234; 986, p. 281; 1016, p. 324; 1023, p. 340). At Central City. Measurements discontinued after June 8, 1945.

124. At Milesburg. At abandoned residence on property of G. C. Benner, one block west and one block south of public school in Milesburg. Altitude 698 feet above mean sea level. Unused dug well, diameter 4 feet, depth 21.8 feet. Measuring point, edge of galvanized-iron marker on wood platform at hole drilled through well cover, 0.5 foot above land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 19	13.90	July 13	12.08	Sept. 6	15.12	Nov. 9	13.40
28	12.40	20	13.85	14	15.58	16	14.60
June 1	3.80	27	12.93	21	15.50	23	15.11
8	4.10	Aug. 10	4.34	Oct. 5	15.28	30	14.38
15	4.95	17	9.62	12	14.64	Dec. 7	15.50
22	5.34	24	13.30	19	14.26	14	16.20
July 6	8.73	31	14.40	Nov. 2	10.57	28	16.54

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). At Clarion. Extremes of observed water level, in feet below land-surface datum: Highest, A pr. 9, 1938, 11.36; lowest, Sept. 23, 1944, 20.76.

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

Jan. 5	15.15	Apr. 6	15.85	July 6	18.06	Oct. 12	20.71
6	14.60	13	17.45	13	18.64	19	19.98
12	12.36	20	17.35	20	19.16	25	19.08
19	13.93	27	17.36	27	19.17	26	18.94
26	16.43	May 4	17.98	31	19.55	Nov. 2	18.52
Feb. 2	17.50	11	17.66	Aug. 3	19.61	9	19.36
9	17.61	18	16.56	10	19.10	16	19.70
16	16.40	25	16.45	17	19.69	23	19.13
23	16.59	June 1	13.01	Sept. 7	20.07	30	18.59
Mar. 2	12.69	8	13.95	14	19.97	Dec. 7	18.89
9	13.35	15	14.17	21	20.41	14	18.06
16	13.30	22	14.98	28	20.55	21	16.73
23	13.37	29	17.00	Oct. 5	20.65	28	17.43
30	14.05						

Clearfield County

111 (\*817, p. 274; 845, p. 419; 886, p. 330; 906, p. 220; 936, p. 243; 944, p. 235; 986, p. 281). Near Mahaffey. Measurements resumed in 1946. Extremes of observed water level, in feet below land-surface datum: Highest, May 29, 1946, 15.12; lowest, Dec. 15, 1939, 21.12.

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

May 10	17.27	July 10	15.42	Sept. 4	17.92	Nov. 6	16.76
18	16.52	18	17.48	13	18.27	12	17.04
29	15.12	23	17.72	20	18.04	25	16.68
June 3	15.50	Aug. 1	17.54	31	17.58	Dec. 2	15.44
12	15.80	9	16.65	Oct. 7	16.54	13	16.18
19	15.40	16	17.52	16	16.48	18	16.58
26	15.60	24	16.38	24	15.56	27	16.74
July 3	15.96	29	16.86	30	15.14		

cf-4 123. At Curwensville. In front yard of J. I. McNaul residence on north side of State Route 453, 2 blocks southeast of bridge over Anderson Creek. Altitude about 1,160 feet above mean sea level. Unused dug well, diameter 5 feet, depth 29.9 feet. Measuring point, top of 1-inch pipe cemented into buried well cover, at land-surface datum.

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

June 15	19.18	Aug. 3	20.35	Sept. 21	20.50	Nov. 9	20.20
22	19.40	10	20.40	28	20.80	16	20.50
29	19.60	17	20.40	Oct. 5	20.80	23	20.20
July 6	19.40	24	20.30	12	20.60	30	20.20
13	19.60	31	21.40	19	20.70	Dec. 7	20.20
19	20.08	Sept. 7	21.30	26	20.60	12	20.70
26	20.25	14	20.75	Nov. 2	20.30	21	20.80

Co-1

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). 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.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	12.78	Apr. 6	12.62	July 6	13.55	Oct. 5	15.35
12	12.54	13	13.29	13	14.91	12	15.28
19	12.04	20	13.60	20	14.52	19	14.90
26	13.28	27	13.72	27	14.09	26	14.74
Feb. 2	13.32	May 4	13.99	Aug. 3	13.82	Nov. 2	14.70
9	13.65	11	12.02	10	13.80	9	15.80
16	13.80	18	13.54	17	14.56	16	15.42
23	13.94	25	14.40	24	14.51	22	15.54
Mar. 2	12.72	June 1	11.55	31	14.76	30	15.62
9	12.70	8	14.51	Sept. 7	14.91	Dec. 7	15.75
16	12.28	15	14.64	14	15.29	21	15.82
23	12.60	22	13.08	21	15.51	28	15.15
30	12.62	29	13.55	28	15.22		

Elk County

118 (\*936, p. 244; 944, p. 236; 986, p. 282; 1016, p. 326; 1023, p. 341). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	10.04	Apr. 5	10.10	July 5	9.82	Oct. 4	11.20
11	9.72	12	10.25	12	10.00	11	11.04
18	9.59	19	10.25	19	10.35	18	10.72
25	9.70	26	10.20	26	10.50	25	10.62
Feb. 1	9.60	May 3	10.48	Aug. 2	10.54	Nov. 1	10.57
8	10.25	10	10.31	9	10.63	8	10.52
15	10.33	17	10.28	16	10.70	15	10.73
22	10.26	24	10.11	23	10.63	22	10.52
Mar. 1	10.19	31	9.66	30	10.74	29	10.65
8	9.86	June 7	9.71	Sept. 6	10.96	Dec. 6	10.58
15	9.81	14	9.41	13	11.11	13	10.36
22	9.79	21	9.42	20	11.12	20	10.15
29	9.83	28	9.70	27	11.20	27	10.52

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). Near Carters Corner. Extremes of observed water level, in feet below land-surface datum: Highest, Apr. 4, 1940, 8.92; lowest, Sept. 8 to Dec. 1, 1934, when well was dry.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	14.15	Apr. 9	16.27	July 11	14.30	Oct. 6	18.84
13	11.88	14	17.34	14	15.43	13	18.73
20	13.06	21	17.95	21	17.03	20	17.93
22	13.32	28	18.10	28	17.87	23	17.71
27	14.41	May 5	18.21	Aug. 4	17.81	27	17.92
Feb. 3	15.92	12	17.97	11	18.23	Nov. 3	17.97
10	16.42	19	15.87	13	18.20	10	18.09
17	15.09	21	15.18	18	18.32	17	17.21
24	14.62	26	14.84	26	18.43	Dec. 1	15.96
Mar. 3	13.47	June 2	11.65	Sept. 1	18.54	8	16.22
10	10.51	9	12.41	8	18.66	14	14.65
17	11.74	16	12.31	15	18.71	15	14.77
24	12.81	23	11.60	21	18.76	22	14.11
31	14.32	30	13.40	25	18.62	29	13.15
Apr. 7	15.92	July 7	13.50	29	18.84		



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). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	11.31	Apr. 7	16.12	July 6	15.58	Oct. 5	17.46
12	12.99	14	18.48	13	11.34	13	18.56
19	17.10	20	19.64	23	16.80	20	19.17
26	18.90	27	20.68	27	18.70	23	3.80
Feb. 2	19.84	May 5	21.31	Aug. 3	13.33	Nov. 2	12.99
9	12.24	11	21.45	13	8.71	12	16.53
16	14.20	18	.34	18	15.33	16	18.50
24	16.80	26	7.71	25	17.24	24	19.74
Mar. 2	9.84	June 1	8.29	31	18.62	30	20.02
10	5.28	8	9.23	Sept. 7	19.67	Dec. 7	20.85
16	5.22	15	5.22	14	19.29	14	21.50
23	13.01	22	2.76	21	20.10	21	21.90
30	9.49	29	11.82	29	16.74	28	22.06

50 (\*817, p. 281; 845, p. 422; 886, p. 631; 906, p. 221; 936, p. 245; 944, p. 237; 986, p. 283; 1016, p. 326; 1023, p. 342). Near Petersburg. Measurements discontinued after Aug. 11, 1945.

Indiana County

200 (\*1016, p. 327; 1023, p. 342). 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, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sépt.	Oct.	Nov.	Dec.
1	82.98	84.28	83.90	83.22	84.76	83.62	82.71	83.96	85.18	86.15	86.69	.....
2	83.12	84.29	83.43	83.21	84.63	83.55	82.65	84.04	85.19	86.21	86.63	.....
3	83.21	84.56	83.71	83.66	84.71	83.49	82.48	84.04	85.15	86.25	86.62	.....
4	82.98	84.38	83.57	83.38	84.66	83.38	82.38	83.99	85.12	86.26	86.72	.....
5	82.70	84.20	83.62	83.90	84.77	83.22	82.28	83.99	85.26	86.28	86.73	.....
6	82.33	84.00	83.53	83.88	84.80	83.16	82.18	83.92	85.29	86.28	86.62	.....
7	82.41	84.43	83.50	84.08	84.70	83.06	82.12	83.92	85.33	86.37	86.55	.....
8	82.70	84.59	83.45	83.90	84.84	83.14	82.13	83.94	85.36	86.40	86.76	.....
9	82.26	84.32	83.31	84.17	84.81	83.33	82.18	83.84	85.42	86.42	86.90	.....
10	82.38	84.32	83.47	84.30	84.90	83.44	82.33	83.78	85.40	86.53	86.75	.....
11	82.42	84.63	83.40	84.25	84.70	83.20	82.42	83.96	85.52	86.53	86.82	.....
12	82.37	84.76	83.21	84.21	84.82	83.09	82.55	84.00	85.61	86.77	86.93	.....
13	82.69	84.47	83.20	84.27	85.06	82.78	82.74	84.01	85.61	87.00	86.78	.....
14	82.63	84.35	83.12	84.29	84.85	82.63	82.79	84.13	85.55	86.89	86.85	86.62
15	82.68	84.78	83.00	84.07	84.70	82.51	82.97	84.09	85.65	86.90	86.88	86.57
16	82.90	84.61	82.95	84.49	84.65	82.35	83.13	84.10	85.69	86.82	86.77	86.62
17	82.70	84.49	82.76	84.50	84.60	82.16	83.15	84.15	85.72	86.82	86.78	86.51
18	82.70	84.61	82.66	84.36	84.45	82.17	83.24	.....	85.77	86.75	86.85	86.52
19	83.20	84.17	82.71	84.42	84.50	82.49	83.35	.....	85.78	87.03	86.69	86.53
20	83.18	84.35	82.80	84.55	84.28	82.42	83.50	.....	85.76	86.94	86.68	86.32
21	82.92	84.72	82.81	84.70	84.20	82.32	83.52	.....	85.83	86.93	86.71	86.11
22	83.58	84.21	82.70	84.49	84.41	82.30	83.50	.....	85.95	86.84	86.60	86.27
23	83.51	84.36	82.98	84.40	84.27	82.33	83.51	.....	85.93	86.82	86.82	86.45
24	83.25	84.15	82.85	84.51	84.12	82.28	83.50	84.48	86.02	86.78	86.73	86.17
25	83.42	84.36	82.96	84.38	84.00	82.34	83.48	84.51	85.98	86.74	86.76	86.16
26	82.76	84.01	82.90	84.42	.....	82.60	83.56	84.58	86.05	86.95	86.80	86.11
27	84.00	84.10	83.10	84.69	.....	82.88	83.63	84.61	86.10	86.99	86.96	86.30
28	83.90	84.15	83.05	84.82	84.00	82.91	83.65	84.63	86.09	86.81	86.95	85.89
29	84.13	.....	82.90	84.72	83.94	82.82	83.87	84.71	86.08	86.71	86.76	85.85
30	83.82	.....	83.00	84.75	83.75	82.75	83.76	84.81	86.05	86.70	86.77	86.10
31	83.80	.....	83.38	.....	83.66	.....	83.81	84.84	.....	86.73	.....	85.90

Lackawanna County

101 (\*817, p. 283; 845, p. 422; 886, p. 631; 906, p. 221; 936, p. 245; 944, p. 237; 986, p. 283; 1016, p. 327; 1023, p. 343). At Waverly. Measurements discontinued after Nov. 3, 1945.

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). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	5.10	Apr. 12	5.90	July 12	6.35	Oct. 11	9.08
12	3.39	19	7.08	19	7.60	18	9.20
18	5.05	27	7.08	26	5.94	25	9.31
25	6.60	May 4	7.17	Aug. 1	4.83	Nov. 1	8.30
Feb. 1	7.50	10	7.14	7	4.65	7	8.39
8	8.25	18	4.98	16	5.75	16	9.00
15	8.28	24	3.62	23	6.06	22	9.18
Mar. 1	9.03	31	3.30	31	7.14	30	9.65
8	6.48	June 7	4.03	Sept. 7	8.33	Dec. 6	9.83
15	3.66	14	5.27	13	9.05	14	9.90
21	4.10	21	6.05	20	9.57	20	10.20
29	4.49	29	7.65	27	8.58	26	10.02
Apr. 5	5.35	July 6	4.78	Oct. 4	8.80		

Lancaster County

119 (\*936, p. 246; 944, p. 238; 986, p. 284; 1016, p. 328; 1028, p. 344). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	8.72	Apr. 14	12.72	July 21	14.11	Oct. 13	18.52
13	9.49	28	13.93	28	13.02	20	18.61
20	10.70	May 5	14.80	Aug. 5	14.38	27	18.80
28	12.64	12	15.39	11	15.06	Nov. 3	18.82
Feb. 3	13.32	19	8.99	18	15.67	10	18.85
10	13.62	26	10.47	25	16.24	17	19.01
17	14.38	June 2	.99	Sept. 1	16.64	24	19.10
24	14.55	9	7.78	8	17.06	Dec. 1	19.22
Mar. 10	10.23	16	7.73	14	17.46	8	19.52
17	11.37	23	8.46	22	17.72	15	19.54
24	9.23	30	10.92	29	18.05	22	19.59
31	10.73	July 7	14.09	Oct. 6	18.32	29	19.62
Apr. 7	11.79						

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). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	23.50	Mar. 31	23.05	July 5	24.19	Sept. 29	25.35
8	23.29	Apr. 7	23.70	8	24.05	Oct. 13	25.95
14	23.20	14	24.05	14	24.40	17	25.60
21	23.80	21	24.00	22	24.90	22	25.90
Feb. 4	24.45	28	24.40	Aug. 5	23.20	27	25.35
12	24.54	29	24.32	6	23.17	Nov. 3	25.10
13	24.75	May 5	24.55	11	23.40	13	25.60
18	24.85	12	24.80	19	23.60	19	25.67
24	24.85	19	22.95	26	23.90	25	25.95
Mar. 3	24.75	26	23.00	Sept. 2	24.50	Dec. 2	26.25
10	22.75	June 2	22.90	8	24.80	8	26.30
17	22.25	5	22.37	13	24.70	16	26.50
19	22.37	20	23.68	16	25.10	22	26.35
24	23.10	28	23.75	24	25.30	29	25.45

Mifflin County

117 (\*936, p. 247; 944, p. 238). At Naginey. Measurements resumed in 1946. Extremes of observed water level, in feet below land-surface datum: Highest, May 23, 1942, 8.38; lowest, Nov. 29, 1941, 22.52.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 17	17.93	July 19	22.18	Sept. 13	22.30	Nov. 8*	16.24
24	16.92	26	22.05	20	22.48	15	18.50
31	12.42	Aug. 2	15.80	26	19.19	22	20.29
June 7	14.45	9	18.57	Oct. 4	20.85	29	19.80
14	15.00	16	21.82	11	21.59	Dec. 9	21.63
21	17.10	23	21.61	18	17.60	13	20.80
28	18.45	30	22.01	25	15.99	20	22.00
July 5	20.65	Sept. 6	22.21	Nov. 1	16.79	27	20.79
12	21.77						

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). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	16.89	Apr. 12	16.65	July 5	14.75	Oct. 3	18.16
11	16.09	17	16.83	12	15.19	11	18.37
18	16.41	19	16.86	19	15.66	18	18.31
25	16.74	26	17.10	23	15.82	25	18.50
Feb. 1	16.98	May 3	17.29	26	15.94	Nov. 1	18.49
4	17.13	10	17.47	Aug. 2	16.25	4	18.52
8	17.20	15	17.48	9	16.44	8	18.63
15	17.37	17	17.46	16	16.72	15	18.61
22	17.51	24	16.80	23	16.98	21	16.43
Mar. 1	17.53	31	8.36	30	17.33	22	18.90
8	17.15	June 7	10.82	Sept. 6	17.48	29	19.03
15	16.24	14	12.55	13	17.76	Dec. 6	19.12
22	16.07	21	13.46	20	17.93	13	19.24
29	16.28	28	14.23	27	18.09	20	19.28
Apr. 5	16.42	July 3	14.68	Oct. 1	18.25	27	19.36

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). At Newport. Extremes of observed water level, in feet below land-surface datum: Highest, June 7, 1940, 7.92; lowest, Dec. 12, 1941, 17.54.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	13.19	Apr. 14	12.46	July 13	12.82	Oct. 5	15.31
13	12.07	21	12.99	18	13.56	12	15.43
20	12.36	28	13.28	28	13.74	17	15.39
26	12.56	May 7	13.79	31	13.82	19	15.29
Feb. 3	13.33	12	13.96	Aug. 4	13.80	26	15.02
9	13.55	19	13.52	11	13.72	Nov. 2	14.98
17	13.97	23	13.71	15	13.91	12	14.86
24	14.09	26	12.79	26	14.23	16	15.07
Mar. 2	13.97	June 2	10.90	31	14.38	23	15.19
10	12.52	7	9.73	Sept. 5	14.38	30	15.37
14	12.65	21	10.58	9	14.63	Dec. 7	15.55
24	11.86	27	14.11	13	14.87	14	15.66
30	11.26	28	11.48	20	15.02	20	15.80
Apr. 7	12.01	July 5	12.27	28	15.18	28	15.83

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). 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.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	2.69	Apr. 6	2.75	June 29	2.85	Oct. 5	2.87
7	2.75	13	2.79	July 6	2.85	12	2.79
12	2.65	16	2.75	13	2.89	17	2.77
19	2.74	20	2.83	20	2.80	19	2.84
26	2.73	27	2.88	31	2.69	26	2.83
Feb. 2	2.75	May 4	2.91	Aug. 3	2.69	Nov. 2	2.85
4	2.75	11	2.85	10	1.80	9	2.88
9	2.77	17	2.67	17	2.74	15	2.95
23	2.72	20	2.68	24	2.77	16	2.95
Mar. 2	1.74	25	2.62	31	2.80	23	2.97
9	1.82	June 1	2.64	Sept. 4	2.75	30	2.98
14	2.70	8	2.69	7	2.84	Dec. 7	2.99
16	2.03	15	2.74	14	2.82	14	3.00
23	2.34	22	2.81	21	2.83	21	2.88
30	2.68	28	2.70	28	2.88	28	2.95

Philadelphia County

P1 (\*986, p. 285; 1016, p. 329; 1023, p. 345). 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, 1946

Jan. 4	33.58	Apr. 8	31.79	July 5	33.15	Oct. 4	33.99
11	31.64	12	31.68	12	33.23	11	33.83
21	31.86	19	31.59	19	33.05	18	33.51
25	32.53	26	31.11	26	32.93	25	(a)
Feb. 1	33.40	May 3	31.46	Aug. 2	32.69	Nov. 1	33.50
8	31.23	10	31.74	9	33.40	8	33.37
15	31.16	17	31.39	16	32.84	15	33.42
21	31.28	24	31.62	23	32.30	22	32.61
Mar. 1	33.64	June 3	(a)	30	33.49	29	32.85
8	32.51	7	32.27	Sept. 6	(a)	Dec. 6	33.26
15	32.19	17	33.15	13	(a)	20	31.40
22	31.39	21	32.89	20	33.20	27	31.49
29	32.38	28	33.80	27	33.26		

a Depth to water is greater than 34 feet below land-surface datum.

P3 (\*986, p. 286; 1016, p. 329; 1023, p. 346). 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 14, 1946, 36.62.

Daily noon water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	29.00	29.40	29.36	28.30	28.30	35.40	34.28	32.27	30.73	31.50	30.30	30.30
2	28.55	29.14	29.14	27.53	27.53	33.15	35.72	31.71	30.96	30.61	34.16	34.16
3	29.11	29.05	28.18	28.18	29.10	34.90	33.60	30.00	30.91	30.20	35.07	35.07
4	29.05	29.04	28.40	28.40	30.00	33.40	33.95	31.16	31.10	30.45	35.42	35.42
5	28.38	29.16	28.40	28.40	30.82	33.06	34.93	31.16	29.74	31.38	33.66	33.66
6	28.49	29.28	27.38	27.45	29.90	32.50	34.25	31.30	30.02	31.56	33.60	33.60
7	27.40	29.91	26.20	27.75	30.31	32.90	30.05	30.41	31.46	32.20	32.20	32.20
8	28.88	29.23	29.22	25.72	28.70	31.20	34.50	29.55	31.08	31.16	31.80	31.80
9	28.91	28.90	28.26	27.56	27.40	31.72	34.15	30.80	31.09	29.30	31.92	31.92
10	28.72	28.72	28.40	28.04	28.00	34.90	32.94	31.06	31.07	29.31	31.36	31.36
11	29.15	28.75	28.83	25.49	35.10	31.58	31.58	31.24	28.21	31.54	31.54	31.54
12	27.40	29.02	28.10	27.74	24.38	36.07	31.60	28.00	31.12	31.41	31.41	31.41
13	26.00	28.92	27.19	26.75	26.68	36.58	33.03	31.42	31.52	30.00	31.25	31.50
14	27.60	28.48	26.90	28.15	36.62	31.72	31.59	30.25	30.70	31.41	31.11	31.11

P3--Continued.

Daily noon water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
15	28.55	28.80	26.55	26.00	28.06	36.00	32.80	31.52	29.20	31.09	30.78	31.48
16	29.05	29.36	26.75	27.70	28.55	.....	32.60	32.81	31.00	31.11	.....	31.68
17	28.90	28.97	25.65	27.35	29.95	.....	32.50	32.35	31.38	31.28	.....	31.57
18	28.67	29.08	26.00	.....	30.33	.....	.....	32.00	31.39	30.97	.....	31.72
19	28.05	29.20	.....	27.80	27.12	.....	34.76	31.63	31.35	30.40	.....	31.93
20	27.26	28.76	.....	.....	30.07	.....	33.75	33.77	31.32	29.26	.....	31.94
21	28.20	29.50	.....	.....	.....	36.56	33.40	32.48	29.50	30.61	.....	31.47
22	28.80	29.37	28.50	25.90	.....	35.28	34.36	33.70	29.10	31.06	31.20	.....
23	29.13	29.02	27.30	27.45	.....	34.05	31.50	32.62	30.83	31.12	31.24	.....
24	28.97	28.76	25.76	27.67	31.70	35.79	34.30	32.60	31.22	31.15	31.02	.....
25	28.67	28.83	26.43	27.77	31.58	36.08	34.26	32.34	31.26	31.05	31.42	.....
26	28.62	29.02	27.65	27.00	31.30	36.13	34.42	32.49	31.37	30.00	31.58	.....
27	27.70	28.95	28.20	.....	29.81	36.24	33.39	32.10	31.56	29.81	33.18	31.70
28	28.86	.....	28.40	.....	32.45	35.30	34.54	32.72	29.23	30.81	31.05	29.17
29	29.13	.....	28.40	26.40	30.94	36.21	35.40	32.39	30.00	31.13	31.49	.....
30	29.16	.....	27.10	27.50	30.30	34.42	35.60	32.42	30.22	.....	30.20	.....
31	28.73	.....	26.66	.....	27.85	.....	35.57	32.41	.....	.....	.....	.....

P4 (\*986, p. 286; 1016, p. 330; 1023, p. 346). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	7.57	Apr. 19	11.43	July 19	11.69	Oct. 11	11.56
18	10.49	26	11.59	26	10.20	18	11.54
25	9.78	May 3	11.63	Aug. 2	10.89	25	11.65
Feb. 8	11.20	10	11.59	9	10.72	Nov. 1	11.65
15	11.08	17	11.18	16	11.24	8	11.76
21	11.39	24	11.05	23	11.32	15	12.29
Mar. 1	10.74	June 3	9.58	30	11.55	22	11.77
8	11.02	7	10.02	Sept. 6	11.69	29	12.15
15	10.83	17	10.47	13	11.77	Dec. 6	12.15
22	10.72	21	10.97	20	11.81	13	12.29
29	10.74	28	10.89	27	11.68	20	12.31
Apr. 8	11.06	July 5	11.15	Oct. 4	11.73	27	11.78
12	11.10	12	11.23				

P5 (\*1016, p. 330; 1023, p. 347). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	27.02	Apr. 19	26.25	July 19	28.77	Oct. 11	27.70
11	22.82	26	25.69	26	28.77	18	27.44
25	27.96	May 3	26.35	Aug. 2	28.90	25	27.54
Feb. 1	26.85	10	26.16	9	28.49	Nov. 1	27.83
8	26.95	17	26.78	16	27.86	8	27.58
21	27.16	24	27.45	23	27.83	15	27.93
Mar. 1	27.06	June 3	26.56	30	27.61	22	27.63
8	28.64	7	27.11	Sept. 6	27.93	29	27.55
15	25.77	17	27.65	13	27.99	Dec. 6	28.45
22	26.56	21	28.34	20	27.68	13	27.91
29	26.40	28	29.05	27	27.86	20	28.21
Apr. 8	24.90	July 5	27.76	Oct. 4	27.70	27	28.22
12	26.20	12	28.59				

P6 (\*1016, p. 330; 1023, p. 347). 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.

P6--Continued.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	25.42	Apr. 12	24.66	July 12	26.78	Oct. 11	26.04
11	27.62	19	24.72	19	26.73	18	25.90
18	25.05	26	24.28	26	27.01	25	25.99
25	25.04	May 3	24.79	Aug. 2	26.80	Nov. 1	26.24
Feb. 1	25.23	10	24.67	9	27.48	8	26.05
8	25.34	17	25.27	16	26.07	15	26.31
15	25.23	24	25.82	23	26.02	22	26.11
21	25.44	June 5	25.13	30	25.89	29	26.07
Mar. 8	25.88	7	25.77	Sept. 6	26.14	Dec. 6	26.85
15	24.37	17	26.21	13	26.18	13	26.39
22	24.80	21	27.07	20	26.00	20	26.64
29	24.84	28	26.95	27	26.17	27	26.65
Apr. 8	23.73	July 5	25.98	Oct. 4	26.00		

P8 (\*1016, p. 331; 1023, p. 347). McCahan Sugar Co. In south Philadelphia. Extremes of observed water level, in feet below land-surface datum: Highest, June 2, 1945, 38.00; lowest, Sept. 16, 1944, 61.57.

Water level, in feet below land-surface datum, 1946							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	47.55	Mar. 15	53.70	May 24	51.38	Oct. 18	46.08
11	50.42	22	52.44	June 3	45.89	25	49.14
21	47.67	29	52.34	7	52.06	Nov. 1	48.67
25	46.34	Apr. 8	52.29	17	51.95	8	48.08
Feb. 1	54.70	12	51.48	21	51.89	15	48.80
8	54.69	19	52.80	28	42.53	22	50.68
15	51.97	26	52.63	July 5	46.56	29	47.30
21	52.90	May 3	50.48	12	52.53	Dec. 6	51.51
Mar. 1	53.28	10	51.27	19	52.44	16	48.08
8	53.78	17	52.76	26	52.57	23	47.51

NO-1 (\*1023, p. 347). 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, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	34.04	34.57	32.38	32.75	.....	34.18	34.51	32.49	33.64	34.04	31.42
2	33.71	33.20	34.27	32.51	32.48	.....	34.17	34.56	32.25	33.95	33.51	33.67
3	34.20	33.85	33.68	32.70	32.68	31.92	34.20	33.86	32.84	34.05	33.12	34.66
4	34.26	34.55	34.22	32.98	31.60	32.58	33.60	33.58	33.90	34.15	33.17	34.74
5	33.81	34.58	34.29	32.80	30.13	33.46	32.50	33.97	34.12	33.20	33.94	34.62
6	33.72	34.16	34.40	32.47	30.68	33.10	32.76	34.25	34.14	33.15	34.19	33.69
7	33.03	33.75	34.21	31.57	32.11	33.09	31.85	33.99	33.50	33.08	34.07	32.75
8	33.89	34.35	34.35	31.00	32.04	31.81	32.95	34.19	32.99	33.68	33.70	32.28
9	34.05	34.10	33.50	32.30	32.28	32.10	34.01	34.32	33.55	33.74	33.08	32.40
10	33.71	33.87	33.68	32.84	32.61	33.42	34.30	34.23	33.79	33.61	32.54	33.70
11	34.25	33.88	33.88	33.12	31.50	33.55	34.40	33.44	33.81	33.75	32.30	33.80
12	33.05	34.23	33.67	32.85	30.42	34.13	34.40	33.29	34.12	32.58	32.30	33.98
13	32.18	34.15	32.80	32.37	31.45	34.40	33.58	33.22	34.32	32.84	33.69	33.53
14	32.95	33.51	32.57	31.00	32.70	34.81	32.91	33.20	34.06	33.40	33.69	33.72
15	33.61	33.82	32.06	31.10	32.69	34.60	33.21	33.25	32.52	33.74	34.00	34.01
16	34.21	34.60	32.33	32.35	32.80	32.87	33.57	33.20	33.33	33.71	33.70	34.25
17	34.07	34.19	31.34	32.50	32.50	33.60	34.40	32.80	34.11	33.72	33.33	34.18
18	33.70	34.28	31.60	32.57	33.08	34.42	34.54	32.52	34.21	33.40	33.97	34.30
19	33.40	34.44	32.05	32.70	31.42	34.95	34.68	32.31	34.17	33.20	34.14	34.51
20	33.26	33.80	32.91	31.16	32.88	34.60	34.33	32.70	34.07	32.41	34.03	34.55
21	33.30	34.50	33.12	30.86	33.34	34.73	33.95	32.93	32.99	33.30	34.01	33.85
22	33.82	34.54	33.16	31.00	33.67	34.02	34.50	32.92	32.65	33.69	33.68	34.12
23	34.30	34.13	32.57	32.26	33.13	33.67	34.44	32.91	33.65	33.74	33.69	34.60
24	34.14	33.91	31.82	32.33	33.76	34.25	34.70	33.00	33.99	33.73	33.64	34.37
25	33.55	33.86	31.50	32.39	33.05	34.77	34.63	32.94	34.01	33.58	33.92	32.91
26	33.75	34.15	32.62	31.75	32.87	34.87	34.75	32.91	34.09	32.85	34.01	33.20
27	33.39	34.04	32.85	31.10	32.70	34.92	34.15	32.80	34.25	32.72	34.13	.....
28	34.17	34.29	33.11	30.40	33.50	34.82	33.82	32.84	32.99	33.44	33.90	.....
29	34.30		33.10	31.43	33.67	34.87	34.09	32.74	33.23	33.74	32.51	.....
30	34.45		32.25	32.30	33.49	33.85	34.30	32.81	33.09	34.21	32.16	.....
31	33.80		32.07		31.77		34.36	32.75		33.97	.....	.....

NO-2 (\*1016, p. 334; 1023, p. 348). 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, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	33.50	34.03	32.53	32.50	.....	33.63	33.72	32.12	32.91	33.30	31.20
2	33.35	32.56	33.67	32.20	32.21	.....	33.40	33.79	32.10	33.18	32.80	33.20
3	33.73	33.74	33.36	32.50	32.45	31.82	33.70	33.18	32.51	33.36	32.52	33.68
4	33.74	34.03	33.75	32.56	31.60	32.27	32.91	32.86	33.20	33.51	32.62	33.68
5	33.30	33.95	33.85	32.61	30.54	32.80	32.41	33.30	32.34	32.76	33.21	33.68
6	33.20	33.40	33.92	32.21	31.15	32.65	32.45	33.47	33.40	32.60	33.36	32.80
7	32.75	33.30	33.71	31.85	31.78	32.73	31.69	33.24	32.81	32.67	33.16	32.30
8	33.45	33.85	33.84	31.50	31.80	31.56	32.80	33.50	32.50	32.98	32.91	31.91
9	33.40	33.51	33.08	32.20	31.98	31.91	33.29	33.54	32.99	32.99	32.33	32.12
10	33.26	33.36	33.39	32.61	32.35	33.02	33.53	33.39	33.00	32.96	32.35	32.80
11	33.73	33.45	33.57	32.81	31.30	32.81	33.62	32.90	33.04	33.08	31.75	33.01
12	32.61	33.78	33.31	32.59	30.69	33.15	33.55	32.85	33.37	32.00	32.50	33.00
13	32.10	33.58	32.76	32.21	31.88	33.42	33.03	32.79	33.60	32.52	32.99	32.80
14	33.05	32.90	32.51	31.37	32.48	33.91	32.51	32.82	33.16	32.96	32.77	32.95
15	33.20	33.40	32.05	31.52	32.37	33.60	32.86	32.83	32.53	33.13	33.25	33.20
16	33.72	34.05	32.42	32.24	32.40	32.58	33.29	32.70	33.19	33.07	33.00	33.51
17	33.35	33.65	31.62	32.46	32.15	33.24	33.68	32.34	33.39	32.96	32.73	33.30
18	33.11	33.88	31.89	32.58	32.52	33.50	33.70	32.03	33.48	32.60	33.41	33.49
19	33.00	33.81	32.20	32.58	31.37	34.02	33.79	32.03	33.41	32.58	33.39	33.76
20	33.10	33.27	32.70	31.29	32.45	33.82	33.50	32.30	33.30	32.27	33.20	33.71
21	32.85	34.06	32.87	31.52	32.65	33.87	33.34	32.44	32.45	32.89	33.22	33.00
22	33.50	33.95	32.74	31.56	32.89	33.39	33.73	32.43	32.31	33.03	32.91	33.38
23	33.77	33.63	32.40	32.02	32.72	33.20	33.66	32.40	33.10	33.01	33.12	33.70
24	33.38	33.35	31.76	32.07	33.16	33.70	33.88	32.48	33.20	32.96	33.12	33.45
25	33.08	33.40	32.10	32.05	32.64	33.90	33.79	32.42	33.21	32.88	33.21	32.40
26	33.18	33.51	32.33	31.61	32.70	33.99	33.96	32.40	33.29	32.23	33.33	32.58
27	33.26	33.50	32.60	31.10	32.45	34.05	33.53	32.28	33.53	32.38	33.41	33.66
28	33.65	33.86	32.78	30.85	33.00	34.02	33.36	32.32	32.44	33.00	33.02	31.92
29	33.83		32.67	31.72	33.05	34.06	33.60	32.19	32.53	33.04	32.44	31.81
30	33.70		32.02	32.25	32.50	33.32	33.61	32.30	32.61	33.50	32.10	33.20
31	33.10		32.23		31.65		33.65	32.24		33.07		33.73

NO-3 (\*1023, p. 349). United States Navy. In south Philadelphia, on League Island. Extremes of observed water level, in feet below land-surface datum: Highest, Apr. 26, 1946, 28.28; lowest, Nov. 29, 1946, 30.85.

Daily noon water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	30.02	30.35	28.80	28.94	.....	29.61	29.74	29.40	29.65	29.70	.....
2	30.25	30.14	29.95	28.54	28.80	.....	29.60	29.76	29.34	29.90	29.68	.....
3	30.40	30.50	30.05	28.91	29.00	28.90	29.73	29.70	29.48	30.08	29.53	.....
4	30.31	30.65	30.13	28.91	29.00	28.75	29.82	29.60	29.66	30.07	29.33	.....
5	30.11	30.37	30.14	28.89	28.56	29.03	29.67	29.51	29.72	30.02	.....	.....
6	29.90	29.75	30.17	28.99	28.42	29.26	29.41	29.62	29.71	29.74	.....	.....
7	29.65	29.66	29.88	29.11	28.40	28.70	29.22	29.50	29.60	29.07	.....	29.90
8	30.05	30.24	29.90	29.06	28.65	29.18	29.28	29.68	29.50	29.03	.....	29.66
9	29.96	29.91	29.42	28.83	28.85	29.29	29.34	29.71	29.47	29.43	29.56	29.52
10	29.76	29.80	29.85	29.21	29.03	29.71	29.51	29.55	29.32	.....	29.75	29.35
11	30.24	29.35	29.80	29.40	28.90	29.50	29.59	29.67	29.38	29.40	29.35	29.49
12	29.82	30.16	29.47	29.24	28.79	29.15	29.51	29.73	29.70	29.17	29.33	29.23
13	29.85	30.02	29.49	29.25	29.10	29.37	29.64	29.70	29.59	29.51	.....	29.29
14	30.10	29.38	29.42	29.20	29.25	29.82	29.61	29.73	29.52	29.58	.....	29.71
15	29.80	30.02	29.06	28.70	29.01	29.96	29.53	29.75	29.49	29.50	29.75	29.81
16	30.31	30.60	29.32	28.90	28.92	29.85	29.65	29.60	29.56	29.41	.....	30.06
17	29.87	30.13	29.02	29.31	28.80	29.49	.....	29.10	29.62	29.20	.....	29.36
18	29.65	30.35	28.91	29.17	28.84	29.45	29.70	28.97	29.43	28.96	.....	29.83
19	29.85	30.20	28.89	29.17	28.89	29.90	29.71	28.82	29.71	29.50	.....	30.24
20	30.32	29.52	28.95	28.91	29.00	29.85	29.86	29.11	29.68	29.59	.....	30.10
21	29.47	30.44	29.08	28.40	28.93	29.71	29.82	29.31	29.48	29.51	.....	29.40
22	29.90	30.35	28.88	28.98	29.50	29.92	29.83	29.31	29.60	29.48	.....	29.81
23	30.28	30.08	29.18	28.78	29.59	30.03	29.81	29.35	29.66	29.35	.....	30.22

## NO-3--Continued.

Daily noon water level, in feet below land-surface datum, 1946 (From recorder charts)											
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. Dec.
24	29.70	29.78	29.00	28.70	29.50	29.89	29.93	29.49	29.60	29.05	..... 29.99
25	29.57	29.80	28.65	28.65	29.32	29.86	29.85	29.46	29.59	29.20	29.39 .....
26	29.91	29.90	28.81	28.28	29.30	29.67	29.80	28.91	29.70	29.27	29.61 29.82
27	30.37	29.86	28.92	28.50	29.04	29.80	29.98	29.14	29.88	29.56	29.60 30.40
28	30.30	30.15	29.11	28.72	29.21	29.85	29.94	29.18	29.93	29.58	..... 29.65
29	30.36		28.97	28.55	29.23	29.89	29.78	28.98	29.71	29.37	30.85 29.78
30	30.31		28.72	28.93	29.20	29.77	29.75	29.32	29.33	29.49	..... 29.91
31	29.67		29.19		29.09		29.72	29.24		29.00	30.30

NO-4 (\*1023, p. 349). United States Navy. In south Philadelphia, on League Island. Extremes of observed water level, in feet below land-surface datum: Highest, Apr. 26, 1946, 30.13; lowest, Feb. 4, 1946, 32.64.

Daily noon water level, in feet below land-surface datum, 1946 (From recorder charts)											
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. Dec.
1	.....	32.05	32.30	31.17	30.94	.....	31.56	31.60	31.01	31.11	31.41 30.83
2	32.12	32.01	31.86	30.48	30.87	.....	31.50	31.68	30.96	31.32	31.40 31.39
3	32.37	32.41	31.87	30.75	30.80	30.66	31.61	31.60	31.03	31.62	31.26 31.42
4	32.35	32.64	32.02	30.96	30.82	30.62	31.71	31.59	31.31	31.76	31.06 31.58
5	32.09	32.50	32.09	30.85	30.36	30.85	31.55	31.33	31.44	31.74	31.36 31.63
6	31.88	31.86	32.18	30.93	30.25	31.02	31.31	31.39	31.52	31.47	31.53 31.74
7	31.70	31.62	31.95	30.97	30.20	30.88	31.05	31.35	31.39	31.09	31.33 31.60
8	31.95	32.30	32.02	30.90	30.26	30.89	31.07	31.41	31.25	31.08	31.01 31.29
9	31.90	32.03	31.47	30.68	30.53	30.95	31.18	31.50	31.21	31.16	31.26 31.10
10	31.68	31.83	31.95	31.05	30.70	31.45	31.37	31.37	31.10	31.10	31.40 31.02
11	32.12	31.92	31.90	31.26	30.53	31.28	31.50	31.33	31.07	31.21	31.10 31.02
12	31.75	32.29	32.01	31.15	30.31	31.10	31.42	31.35	31.40	31.02	31.00 31.21
13	31.76	32.16	31.67	31.20	30.57	31.10	31.49	31.35	31.62	31.22	31.16 30.95
14	31.99	31.42	31.46	31.12	30.87	31.63	31.50	31.38	31.49	31.32	30.57 31.30
15	31.70	32.05	30.94	30.60	30.68	31.75	31.33	31.50	31.32	31.32	31.37 31.43
16	32.32	32.58	31.56	30.70	30.67	31.67	31.56	31.48	31.36	31.29	31.64 31.78
17	31.89	32.18	31.13	31.15	30.59	31.27	31.58	31.13	31.40	31.04	31.52 31.57
18	31.65	32.42	30.91	31.10	30.67	31.17	31.59	30.95	31.51	30.71	31.70 31.71
19	31.87	32.40	30.88	31.09	30.68	31.64	31.58	30.82	31.52	31.15	31.70 32.05
20	32.28	31.62	31.02	30.72	30.80	31.75	31.55	30.90	31.43	31.24	31.49 31.98
21	31.42	31.51	31.11	31.16	30.73	31.57	31.60	31.12	31.30	31.25	31.43 31.15
22	31.97	31.40	31.00	30.80	31.26	31.70	31.63	31.12	31.26	31.28	31.11 31.54
23	32.25	31.12	31.12	30.61	31.38	31.83	31.65	31.08	31.37	31.27	34.45 31.92
24	31.88	30.84	31.12	30.51	31.34	31.72	31.79	31.14	31.37	31.17	31.59 31.69
25	31.55	30.81	30.80	30.56	31.16	31.72	31.70	31.12	31.31	31.02	31.40 31.66
26	31.80	31.00	30.82	30.13	31.07	31.71	31.85	31.09	31.40	31.01	31.35 31.37
27	32.30	.....	30.89	30.43	30.82	31.80	31.86	30.95	31.56	31.30	31.42 31.99
28	32.30	32.04	31.01	30.70	31.00	31.84	31.84	30.97	31.61	31.36	31.77 31.21
29	32.37		30.93	30.63	31.12	31.81	31.73	30.86	31.39	31.24	31.41 31.45
30	32.35		30.77	30.88	31.14	31.75	31.65	30.97	30.87	31.37	31.49 31.55
31	31.61		31.22		30.97		31.61	30.90		31.23	31.99

NO-5 (\*1023, p. 350). United States Navy. In south Philadelphia, on League Island. Extremes of observed water level, in feet below land-surface datum: Highest, Apr. 26, 1946, 29.70; lowest, Nov. 10, 1945, 31.97.

Daily noon water level, in feet below land-surface datum, 1946 (From recorder charts)											
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. Dec.
1	.....	31.55	31.87	30.86	30.38	.....	31.02	31.20	30.63	30.87	31.13 30.70
2	31.65	31.56	31.46	30.10	30.05	.....	31.02	31.34	30.59	31.10	31.13 31.10
3	31.85	31.98	31.53	30.24	30.50	30.39	31.15	31.26	30.70	31.32	31.00 30.64
4	31.75	32.06	31.61	30.68	30.60	30.31	31.23	31.12	30.91	31.42	30.78 31.23
5	31.59	31.76	31.66	30.37	30.17	30.62	31.19	31.00	31.00	31.43	31.12 31.32
6	31.37	31.15	31.71	30.61	29.93	30.71	30.96	31.08	31.00	31.13	31.19 31.50
7	31.25	31.35	31.45	30.66	29.90	30.55	30.71	31.00	30.86	30.60	30.95 31.31
8	31.40	31.72	31.56	30.71	30.16	30.70	30.75	31.17	30.78	30.65	30.58 31.02
9	31.30	31.40	31.10	30.37	30.28	30.80	30.82	31.18	30.72	30.79	30.92 30.80



NO-5--Continued.

Daily noon water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
10	31.20	31.28	31.51	30.69	30.55	31.13	30.99	31.02	30.56	30.79	31.05	30.62
11	31.60	31.16	31.50	30.95	30.34	30.90	31.08	31.10	30.62	30.85	30.70	30.87
12	31.25	31.65	.....	30.81	30.18	30.61	31.01	31.16	30.93	30.66	30.73	30.42
13	31.25	31.37	.....	30.83	30.55	31.01	31.09	31.15	31.12	30.93	30.78	30.64
14	31.40	30.90	31.00	30.80	30.66	.....	31.10	31.19	31.00	31.00	29.90	31.02
15	31.20	31.43	30.57	30.18	30.51	31.48	31.05	31.20	30.90	30.98	31.08	31.10
16	31.70	31.91	30.90	30.40	30.31	31.36	31.16	31.08	30.93	30.85	31.40	31.42
17	31.20	31.52	30.65	30.80	30.24	30.98	31.17	30.70	30.99	30.61	31.30	30.81
18	31.03	31.80	.....	30.65	30.30	.....	31.20	30.53	30.89	30.46	31.45	31.31
19	31.10	31.41	.....	30.72	30.35	.....	31.22	30.39	31.05	30.91	31.37	31.69
20	31.64	31.20	.....	30.40	30.42	.....	31.19	30.56	31.10	31.02	31.13	31.62
21	30.85	31.75	.....	30.86	30.40	31.12	31.27	30.73	30.90	31.00	31.14	30.90
22	31.30	31.69	30.58	30.42	30.92	31.32	31.28	30.72	30.97	30.98	30.78	31.24
23	31.60	31.40	30.75	30.22	31.00	31.45	31.29	30.74	31.04	30.89	.....	31.51
24	30.92	31.05	30.67	30.18	31.02	31.30	31.40	30.80	31.00	30.60	.....	31.30
25	30.95	31.20	.....	30.11	30.80	31.28	31.31	30.79	30.98	.....	.....	31.30
26	31.28	31.16	.....	29.70	30.73	31.24	31.45	30.41	31.07	.....	.....	31.20
27	31.72	31.24	30.48	29.92	30.51	31.33	31.42	30.62	31.21	.....	.....	31.72
28	31.60	31.79	30.63	30.20	30.71	31.33	31.42	30.64	31.27	.....	.....	30.96
29	31.82	.....	30.61	30.07	30.79	31.31	31.26	30.49	31.05	.....	31.22	31.01
30	31.45	.....	30.44	30.38	30.73	31.22	31.20	30.59	30.63	.....	31.24	31.40
31	30.96	.....	30.82	.....	30.56	.....	31.18	30.52	.....	.....	.....	31.73

NO-6 (\*1023, p. 350). United States Navy. In south Philadelphia, on League Island. Extremes of observed water level, in feet below land-surface datum: Highest, Apr. 26, 1946, 27.53; lowest, Feb. 4, 1946, 30.00.

Daily noon water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	29.45	29.71	28.50	28.28	.....	28.90	29.08	28.61	28.82	28.91	28.50
2	29.51	29.48	29.28	27.85	27.95	.....	28.92	29.18	28.54	29.07	28.89	.....
3	29.67	29.87	29.34	28.14	28.29	28.21	29.07	29.09	28.64	29.25	28.73	.....
4	29.65	30.00	29.50	28.25	28.30	28.15	29.09	28.98	28.86	29.33	28.52	.....
5	29.43	29.68	29.60	28.21	27.86	28.41	29.00	28.88	28.93	29.31	28.93	.....
6	29.22	29.06	29.53	28.30	27.56	28.62	28.79	28.96	28.92	29.00	28.97	29.38
7	29.00	29.25	29.28	28.39	27.72	28.10	28.56	28.89	28.81	28.42	28.73	29.19
8	29.31	29.65	29.45	28.43	27.96	28.47	28.60	29.06	28.70	28.45	28.45	28.80
9	29.13	29.30	28.95	28.08	28.03	28.60	28.69	29.02	28.67	28.65	28.83	28.70
10	29.18	29.20	29.38	28.44	28.32	29.00	28.65	28.87	28.50	28.61	28.92	28.51
11	29.56	28.91	29.30	28.70	28.16	28.70	28.90	28.97	28.57	28.66	28.53	28.80
12	29.15	29.53	28.95	28.53	28.01	28.50	28.84	29.02	28.86	28.41	28.62	28.27
13	29.20	29.30	28.88	28.57	28.37	28.82	28.97	29.00	29.04	28.80	28.50	28.50
14	29.36	28.77	28.76	28.54	28.50	29.17	28.90	29.03	28.90	28.83	28.00	28.92
15	29.15	29.31	28.36	28.10	28.34	29.26	28.88	29.03	28.80	28.75	28.97	29.02
16	29.68	29.90	28.71	28.08	28.20	29.12	28.91	28.88	28.90	28.62	29.21	.....
17	29.17	29.46	28.42	28.60	28.05	28.76	28.97	28.43	28.97	28.45	29.10	.....
18	29.06	.....	28.26	28.52	28.14	28.75	29.01	28.30	28.72	28.20	29.34	.....
19	29.19	.....	28.28	28.55	28.20	29.25	29.05	29.15	29.00	28.73	29.16	.....
20	29.66	.....	28.36	28.25	28.30	29.02	29.06	28.40	29.95	28.79	28.95	29.40
21	28.90	29.81	.....	28.73	28.30	29.00	29.12	28.59	28.73	28.72	28.92	28.68
22	29.36	29.76	28.35	28.36	28.83	29.21	29.15	28.58	28.87	28.70	28.56	29.08
23	29.65	29.45	28.55	28.15	28.87	29.32	29.16	28.66	28.92	28.59	29.00	29.36
24	29.00	29.12	28.50	28.00	28.78	29.18	29.23	28.72	28.86	28.31	29.05	29.19
25	28.95	29.21	28.10	28.00	28.60	29.17	29.20	28.69	28.84	28.53	28.69	29.27
26	29.26	29.26	28.20	27.53	28.60	29.07	29.25	28.38	28.95	28.56	28.76	29.07
27	29.71	27.26	28.30	27.80	28.35	29.17	29.30	28.54	29.10	28.83	28.85	29.65
28	29.64	29.63	28.46	28.08	28.57	29.21	29.25	28.56	29.13	28.82	29.17	28.86
29	29.76	.....	28.31	27.92	28.61	29.22	29.07	28.40	28.92	28.68	29.05	28.90
30	29.45	.....	28.15	28.24	28.53	29.09	29.03	28.55	28.55	28.72	29.05	29.27
31	29.00	.....	28.50	.....	28.40	.....	29.00	28.46	.....	28.32	.....	.....

NO-7 (\*1023, p. 351). United States Navy. In south Philadelphia, on League Island. Extremes of observed water level, in feet below land-surface datum: Highest, Nov. 30, Dec. 1, 1945, 3.10; lowest, Jan. 28, 1946, 5.28. Water-stage recorder removed Apr. 15, 1946

Daily noon water level, in feet below land-surface datum, 1946  
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	3.26	Jan. 29	5.02	Feb. 21	3.80	Mar. 23	3.95
3	3.42	30	4.85	22	3.91	24	4.00
4	3.53	31	4.73	23	3.96	25	4.01
5	3.55	Feb. 1	4.70	24	4.00	26	4.02
6	3.57	2	4.65	25	4.05	27	4.05
7	3.58	3	4.68	26	4.08	28	4.05
8	3.62	4	4.80	27	4.11	29	4.06
9	3.63	5	4.42	28	4.14	30	4.08
10	3.55	6	4.38	Mar. 1	4.15	31	4.08
11	3.73	7	5.20	2	4.14	Apr. 1	4.11
15	4.30	8	4.32	3	4.10	2	4.09
16	4.16	9	4.30	4	4.17	3	4.11
17	4.20	10	4.24	5	4.18	4	4.14
18	4.37	11	4.22	6	4.05	5	4.18
19	4.48	12	4.29	8	4.29	6	4.20
20	4.69	13	4.29	15	4.22	7	4.22
21	4.72	14	4.22	16	4.20	8	4.25
22	4.86	15	4.30	17	4.20	9	4.27
23	5.00	16	4.38	18	4.10	10	4.31
24	5.00	17	4.33	19	3.56	11	4.33
25	4.97	18	4.37	20	3.75	12	4.30
26	5.01	19	4.40	21	3.83	13	4.30
27	5.13	20	4.02	22	3.86	14	4.29
28	5.28						

NO-8. United States Navy. In south Philadelphia, on League Island, at navy yard. Drilled observation well, diameter 8 inches, depth 218 feet. Measuring point, top of casing, at land-surface datum. Altitude 12.70 feet above mean sea level. Automatic water-stage recorder installed Feb. 19, 1946.

Daily noon water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	50.30	48.45	47.97	.....	50.30	49.70	45.83	47.67	48.35	40.60
2	.....	49.89	48.41	47.35	.....	49.35	49.85	45.59	48.05	46.29	48.43
3	.....	48.61	49.30	47.75	45.50	50.00	48.58	47.07	47.59	45.42	49.25
4	.....	49.70	49.45	45.74	47.35	47.42	47.58	49.01	47.95	47.75	49.73
5	.....	.....	49.35	43.08	49.18	46.02	49.33	47.96	44.63	49.00	50.03
6	.....	.....	47.50	45.30	47.73	47.30	49.46	48.70	45.10	48.33	44.62
7	.....	50.00	45.86	47.10	48.30	45.00	48.17	46.60	47.60	49.10	42.55
8	.....	49.80	43.90	47.00	44.45	49.00	48.28	46.89	48.05	48.23	42.70
9	.....	48.82	47.49	46.92	45.95	49.75	48.48	47.59	48.31	44.98	44.95
10	.....	49.10	47.75	47.42	48.70	50.28	48.59	48.60	48.70	44.67	48.67
11	.....	49.50	48.20	44.51	48.40	50.20	46.47	48.75	48.58	43.68	48.73
12	.....	49.20	48.17	43.10	50.71	50.55	46.33	48.80	44.65	47.03	48.48
13	.....	47.91	46.39	46.10	51.03	48.50	46.41	48.80	46.02	48.45	48.71
14	.....	47.86	44.52	47.58	51.01	47.00	46.51	48.69	48.52	48.50	48.00
15	.....	47.50	45.60	47.95	49.00	48.81	46.10	47.25	48.45	48.88	48.65
16	.....	47.69	47.89	48.30	47.10	49.13	46.35	48.79	48.30	46.79	49.21
17	.....	45.83	47.35	47.80	50.05	50.30	46.90	49.33	48.68	46.10	49.02
18	.....	46.90	47.63	48.65	51.00	50.50	45.35	48.30	48.40	48.43	49.30
19	50.37	47.82	47.93	45.14	51.45	50.78	45.14	48.05	45.82	48.56	49.20
20	49.72	48.93	45.05	46.55	50.90	49.60	46.85	48.35	45.00	48.85	49.72
21	50.15	49.47	43.78	48.70	51.10	48.98	46.56	46.45	47.24	48.48	48.00
22	49.98	49.72	45.80	46.48	49.10	50.40	46.03	45.20	48.42	47.92	49.13
23	49.31	48.12	46.57	46.00	47.65	49.76	46.68	48.11	48.22	48.23	49.55
24	47.00	46.16	47.50	48.67	50.20	50.44	46.69	48.59	48.80	47.65	49.69
25	49.20	47.27	47.48	47.45	50.42	50.17	46.62	48.60	48.30	49.50	45.10
26	49.70	48.50	47.02	48.05	51.10	49.70	46.90	48.66	45.24	49.39	46.26
27	49.62	48.83	44.75	48.00	50.70	48.85	46.70	49.64	45.10	49.32	49.41

NO-8--Continued.

Daily noon water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
28	50.08	49.23	43.47	49.28	50.93	48.63	46.86	44.70	48.42	47.00	44.04
29		49.50	46.32	49.23	51.05	49.53	46.50	46.06	48.97	46.30	46.25
30		47.35	47.60	47.76	49.07	49.32	46.52	46.96	49.35	43.70	48.66
31		47.28		45.10		49.90	46.87		.....		49.32

NO-9. United States Navy. In south Philadelphia, on League Island, at navy yard. Drilled observation well, diameter 8 inches, depth 274 feet. Measuring point, top of casing, at land-surface datum. Altitude 10.68 feet above mean sea level. Automatic water-stage recorder installed Apr. 15, 1946.

Daily noon water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	50.67	.....	52.50	.....	46.62	50.92	52.20	41.70
2	.....	50.17	.....	51.40	52.85	46.50	51.25	48.90	.....
3	.....	50.85	47.83	52.70	50.00	48.66	51.00	48.11	.....
4	.....	46.25	49.50	46.95	48.90	51.39	.....	50.10	.....
5	.....	41.41	52.00	46.37	51.71	51.56	.....	52.15	.....
6	.....	46.50	49.77	47.17	52.41	51.97	.....	52.33	47.21
7	.....	50.00	50.30	44.50	51.80	49.35	.....	52.23	45.31
8	.....	49.40	45.79	50.26	52.25	48.34	.....	51.96	44.66
9	.....	49.68	45.67	52.60	52.50	50.97	.....	47.65	45.67
10	.....	50.77	49.48	53.20	52.19	51.59	.....	47.49	51.36
11	.....	46.10	50.03	53.33	49.00	51.94	.....	45.70	52.19
12	.....	43.21	52.58	53.64	48.37	52.08	.....	.....	52.27
13	.....	47.61	53.60	50.23	48.11	51.96	.....	.....	52.63
14	.....	50.31	53.90	47.25	48.02	50.86	.....	.....	51.02
15	48.00	50.18	50.75	49.60	47.93	47.75	51.41	52.20	52.07
16	50.21	51.42	46.00	51.47	48.41	51.31	51.67	48.90	52.22
17	49.70	50.50	51.65	53.35	47.69	52.24	52.11	48.16	51.99
18	49.90	51.81	53.45	53.68	46.30	52.19	51.52	51.36	52.34
19	50.60	45.22	53.88	53.67	46.87	52.08	48.50	51.91	52.65
20	.....	50.98	52.50	52.60	47.87	52.21	45.81	52.11	52.51
21	.....	52.00	53.52	51.30	48.00	48.18	50.30	52.16	51.93
22	.....	51.53	49.80	52.73	48.02	47.03	51.31	52.06	52.42
23	.....	50.45	48.55	52.61	48.01	50.85	.....	51.39	52.67
24	50.60	51.65	52.30	53.20	47.97	51.72	.....	51.20	52.20
25	50.45	49.29	53.20	53.24	47.81	51.89	51.66	52.25	.....
26	49.90	49.70	53.48	.....	47.95	51.80	48.65	52.40	.....
27	45.10	50.20	53.60	.....	47.90	52.10	48.22	52.72	51.28
28	42.51	51.60	53.75	.....	47.99	45.10	50.98	49.30	46.10
29	47.95	51.80	53.50	.....	47.82	46.95	51.83	46.96	.....
30	49.46	48.17	50.30	.....	47.73	50.35	52.64	41.78	.....
31		45.15	.....	.....	47.49		52.41	.....	.....

NO-10. United States Navy. In south Philadelphia, on League Island, at navy yard. Drilled observation well, diameter 8 inches, depth 266 feet. Measuring point, top of casing, at land-surface datum. Altitude 13.26 feet above mean sea level. Automatic water-stage recorder installed July 16, 1946.

Daily noon water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	57.78	50.37	56.40	57.05	48.30
2	.....	57.94	49.71	56.35	55.23	56.35
3	.....	52.50	52.55	56.16	54.55	57.75
4	.....	52.52	56.63	56.52	55.36	58.42
5	.....	56.80	.....	52.90	57.15	58.28
6	.....	57.47	57.10	54.85	57.35	55.02
7	.....	56.23	52.18	55.65	57.25	53.26
8	.....	57.33	50.90	56.60	57.84	52.69
9	.....	57.76	55.97	56.60	51.60	53.65
10	.....	57.49	56.67	56.70	53.10	56.81

NO-10--Continued.

Daily noon water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
11	.....	52.94	56.98	56.92	49.00	57.52
12	.....	52.29	57.12	51.53	54.30	57.22
13	.....	52.00	.....	54.29	56.56	57.30
14	.....	52.01	.....	55.87	56.89	56.80
15	.....	51.90	.....	56.45	57.18	57.29
16	55.60	52.38	.....	56.63	55.45	57.38
17	57.91	51.64	.....	56.87	54.88	57.24
18	58.06	49.20	.....	56.51	56.66	57.46
19	58.19	50.70	.....	55.20	57.00	57.60
20	55.95	51.31	56.40	52.45	57.15	57.56
21	54.85	51.78	.....	55.69	57.08	57.08
22	57.62	51.89	.....	56.37	56.96	57.60
23	57.40	52.06	.....	56.77	56.71	57.75
24	57.92	52.01	.....	56.73	56.37	56.90
25	57.90	51.97	.....	55.97	57.15	51.80
26	58.33	51.98	.....	54.29	57.12	54.70
27	52.84	51.59	57.11	53.96	57.65	56.64
28	52.03	.....	50.15	55.73	52.60	51.06
29	56.90	.....	52.26	56.27	50.00	48.62
30	57.56	51.62	55.91	56.73	48.15	56.50
31	57.55	51.61	.....	56.61	.....	57.38

N-1 (\*986, p. 286; 1016, p. 331; 1023, p. 351). United States Navy. In south Philadelphia, on League Island. Extremes of observed water level (well pumping), in feet below land-surface datum: Highest, Dec. 13, 1943, Jan. 15, 1944, 98; lowest, June 17, 18, July 17, 18, 1946, 142.5.

Daily noon water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
1	.....	135.0	137.5	136.0	.....	.....	142.0	135.5	131.0	134.0
2	.....	132.0	136.0	137.5	.....	.....	141.0	135.5	131.0	134.0
3	.....	134.0	134.0	137.5	.....	.....	142.0	132.5	134.5	133.5
4	129.0	135.0	137.0	138.0	.....	134.5	133.0	131.5	136.5	134.5
5	130.5	135.5	137.0	133.0	.....	137.0	132.5	134.0	135.5	.....
6	.....	135.0	137.0	133.0	.....	135.5	133.0	141.5	135.5	.....
7	129.0	135.5	137.5	136.0	.....	136.5	128.5	134.0	132.0	133.0
8	131.0	136.5	137.5	.....	.....	129.5	137.5	135.0	132.0	134.0
9	131.0	136.0	135.5	.....	.....	132.0	141.0	135.0	135.5	135.0
10	.....	134.0	134.0	.....	.....	136.5	142.0	134.0	136.0	136.0
11	.....	134.5	135.5	.....	.....	137.5	142.0	131.5	136.0	136.0
12	.....	135.5	135.0	.....	.....	140.5	142.0	132.0	137.5	138.0
13	.....	136.0	135.0	.....	.....	141.0	142.0	132.0	136.0	.....
14	130.0	135.0	134.5	.....	137.0	142.0	139.5	132.0	132.0	.....
15	132.0	135.5	133.5	.....	.....	134.0	141.0	132.5	134.0	.....
16	133.0	135.5	133.0	.....	.....	130.5	142.0	132.0	137.5	.....
17	133.5	135.5	.....	.....	.....	142.5	142.5	130.0	137.0	.....
18	134.0	137.5	133.0	.....	.....	142.5	142.5	128.0	136.0	.....
19	129.5	137.0	135.0	.....	.....	142.0	137.5	134.5	135.5	.....
20	.....	137.0	137.0	.....	133.5	141.5	135.0	132.5	136.0	.....
21	133.5	138.5	137.0	.....	133.0	141.5	134.5	132.5	132.0	.....
22	134.5	137.5	138.5	.....	.....	137.5	138.0	132.0	131.5	.....
23	135.5	136.0	134.0	.....	.....	136.5	137.0	132.5	136.0	.....
24	135.0	135.0	133.5	.....	137.5	141.5	137.0	.....	136.5	.....
25	134.5	137.0	134.5	.....	136.5	.....	137.0	138.0	136.5	.....
26	129.5	136.5	136.0	.....	137.0	141.0	137.0	133.0	135.5	.....
27	132.5	137.0	136.5	.....	139.5	141.5	134.5	133.0	137.0	.....
28	134.0	137.5	137.0	.....	139.5	142.0	134.0	133.5	129.0	.....
29	134.5	.....	136.5	.....	139.5	141.5	137.5	135.0	129.5	.....
30	135.0	.....	134.5	.....	141.0	139.0	137.0	131.5	133.5	.....
31	135.0	.....	133.5	.....	132.5	.....	135.0	131.0	.....	.....

N-2 (\*986, p. 286; 1016, p. 331; 1023, p. 352). United States Navy.  
In south Philadelphia, on League Island. Extremes of observed water level  
(well pumping), in feet below land-surface datum: Highest, Mar. 15, 16, 20,  
1945, 97; lowest, June 5, 7, 1946, 161.

Daily noon water level, in feet below land-surface datum, 1946

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
1	120.5	(a)	(a)	156.0	159.5	.....	.....	158.5	.....	158.5
2	120.0	(a)	(a)	155.5	159.0	.....	.....	158.5	.....	158.0
3	123.5	(a)	(a)	157.0	159.5	158.0	.....	154.5	159.0	157.0
4	123.5	(a)	(a)	157.0	152.0	160.0	155.0	154.0	159.0	158.5
5	129.5	(a)	(a)	157.5	142.5	161.0	153.0	157.0	159.5	.....
6	133.5	(a)	(a)	146.0	158.5	159.5	156.0	159.5	160.0	.....
7	.....	(a)	(a)	145.0	159.5	161.0	147.0	157.5	.....	158.0
8	.....	(a)	(a)	155.0	158.5	152.5	.....	159.0	.....	158.5
9	.....	(a)	(a)	158.0	159.5	157.5	.....	158.5	159.5	160.0
10	.....	(a)	(a)	157.5	.....	.....	.....	157.5	159.5	160.0
11	.....	(a)	(a)	158.0	150.5	.....	.....	155.0	159.5	.....
12	.....	(a)	(a)	157.5	146.0	.....	.....	156.0	159.5	.....
13	131.5	(a)	152.0	148.0	.....	.....	.....	154.5	.....	.....
14	.....	(a)	153.5	145.5	.....	.....	.....	155.5	.....	.....
15	.....	(a)	151.5	156.0	.....	156.5	.....	155.0	.....	.....
16	.....	(a)	149.5	158.0	.....	150.5	.....	155.5	.....	.....
17	.....	(a)	140.0	157.5	.....	.....	.....	154.0	.....	.....
18	.....	(a)	151.5	158.0	158.5	.....	.....	158.0	.....	.....
19	139.5	(a)	154.0	158.0	155.0	.....	.....	158.5	.....	.....
20	139.0	(a)	155.5	149.5	.....	.....	154.5	157.5	.....	.....
21	(a)	(a)	156.0	143.5	.....	.....	155.0	159.0	.....	.....
22	(a)	(a)	157.5	156.0	.....	.....	159.0	157.0	.....	.....
23	(a)	(a)	152.5	158.5	.....	.....	157.0	155.5	.....	.....
24	(a)	(a)	143.0	159.0	.....	.....	157.0	159.5	.....	.....
25	(a)	(a)	154.0	158.5	.....	.....	157.0	160.0	.....	.....
26	(a)	(a)	155.5	158.0	.....	.....	157.5	157.0	.....	.....
27	(a)	(a)	155.5	151.0	.....	.....	155.0	157.0	.....	.....
28	(a)	(a)	156.0	145.0	.....	.....	155.0	155.0	.....	.....
29	(a)	.....	156.0	.....	.....	.....	157.5	155.0	.....	.....
30	(a)	153.5	159.0	153.5	.....	.....	157.0	155.0	.....	.....
31	(a)	152.0	.....	155.5	.....	.....	158.0	.....	.....	.....

a Depth to water is greater than 140 feet below land-surface datum.

N-3 (\*986, p. 286; 1016, p. 332; 1023, p. 352). United States Navy.  
In south Philadelphia, on League Island. Extremes of observed water level  
(well pumping), in feet below land-surface datum: Highest, May 16, 1945,  
58; lowest, Jan. 24, Feb. 26, 1944, 90.

Daily noon water level, in feet below land-surface datum, 1946

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	74.0	76.0	71.5	72.0	....	78.0	77.5	....	75.0	74.5	....
2	76.5	....	76.0	72.0	71.0	....	72.0	78.0	....	75.5	71.0	77.0
3	76.5	75.5	73.5	72.5	....	73.0	78.0	70.0	....	75.5	71.0	77.5
4	76.5	75.5	76.0	72.5	....	76.0	....	....	....	75.5	72.5	78.0
5	75.5	75.5	76.0	73.0	....	77.5	....	77.0	....	71.5	74.5	78.0
6	70.5	75.5	76.0	76.0	....	....	....	77.5	....	73.0	74.5	72.0
7	73.0	75.5	76.0	78.0	....	77.5	....	76.5	69.5	74.5	74.5	69.5
8	77.0	76.5	76.5	68.5	....	....	77.5	77.0	69.0	76.0	....	69.5
9	77.0	75.5	74.5	72.0	....	....	77.5	78.0	76.5	76.0	....	74.5
10	77.0	75.5	71.0	72.0	74.5	....	78.0	77.5	77.0	76.0	....	76.0
11	77.0	75.0	75.5	72.5	....	76.5	78.0	....	77.5	76.5	....	77.0
12	72.0	75.5	68.0	72.5	....	77.0	78.5	....	77.5	68.0	....	76.5
13	....	75.5	67.5	65.0	72.0	79.5	70.0	....	77.0	72.5	....	77.0
14	75.0	75.0	67.0	....	74.5	79.5	....	....	76.0	75.5	....	76.5
15	76.0	76.0	66.5	72.0	75.0	....	78.0	....	72.5	76.0	....	76.5
16	76.0	....	66.0	71.0	75.5	....	80.5	76.0	76.0	76.0	....	76.5
17	76.0	76.0	....	71.5	75.0	....	81.0	77.5	76.5	76.5	....	76.5
18	74.0	76.0	66.0	71.0	76.5	....	81.0	78.5	76.5	76.5	....	76.5
19	69.0	76.0	73.5	71.5	....	....	81.0	76.5	76.5	73.0	76.5	77.0
20	67.5	75.5	75.0	....	76.0	....	80.0	75.5	77.0	....	76.5	77.0
21	75.0	77.0	75.0	....	77.0	70.5	80.0	76.0	....	73.5	76.5	76.5

## N-3--Continued.

Daily noon water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
22	76.0	76.5	75.5	69.5	76.0	....	81.0	....	....	74.0	77.0	77.0
23	76.5	76.0	....	71.0	75.0	....	81.0	....	76.0	74.0	76.5	77.0
24	76.0	75.5	....	71.0	72.0	77.5	81.0	....	76.0	74.0	76.0	76.5
25	74.0	76.0	73.5	71.0	....	78.5	81.0	....	76.5	74.0	77.0	67.0
26	70.0	76.0	74.5	71.0	77.0	78.5	78.0	....	76.0	71.0	76.5	72.5
27	75.0	76.0	75.0	....	77.0	79.0	70.5	....	77.0	70.5	76.5	76.0
28	74.5	76.0	75.0	....	77.5	78.0	69.5	....	70.5	73.5	....	....
29	73.5	....	75.0	70.0	77.0	79.0	77.0	....	71.0	74.0	....	....
30	74.0	....	....	71.0	76.0	70.5	77.5	....	75.5	74.5	....	75.5
31	74.5	....	....	....	....	....	77.0	....	....	74.0	....	76.0

N-4 (\*986, p. 286; 1016, p. 333; 1023, p. 353). United States Navy.  
In south Philadelphia, on League Island. Extremes of observed water level  
(well pumping), in feet below land-surface datum: Highest, May 16, 1945,  
52; lowest, Jan. 27, 29, 1944, 90.

Daily noon water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	Oct.	Nov.	Dec.
1	....	65.5	66.0	60.0	62.5	....	60.0	....
2	64.5	....	....	62.5	61.5	....	58.0	68.5
3	66.5	65.5	....	63.0	62.0	....	57.0	64.0
4	67.0	65.0	....	63.5	....	....	55.0	64.5
5	63.5	65.0	64.0	63.5	....	....	57.5	64.5
6	....	65.0	63.5	57.5	....	....	58.5	63.5
7	58.0	64.5	64.0	54.0	....	....	58.0	63.5
8	65.0	65.0	64.0	55.0	....	....	....	64.0
9	66.0	65.0	....	62.5	....	....	....	63.5
10	66.0	65.0	....	63.0	....	....	....	63.5
11	66.0	64.5	64.0	63.5	....	....	....	64.0
12	56.5	65.0	....	61.5	....	....	....	64.0
13	....	65.0	....	....	....	....	57.5	64.0
14	63.0	64.0	....	....	....	....	57.5	63.5
15	65.0	65.0	....	....	....	....	57.5	64.0
16	66.0	66.0	....	62.0	....	60.0	56.5	63.5
17	65.5	65.5	....	60.0	....	60.0	55.0	64.0
18	74.0	65.0	....	60.0	....	59.5	56.5	64.5
19	69.0	65.0	59.0	61.0	....	....	60.5	65.0
20	67.5	65.0	62.5	....	....	....	61.5	65.0
21	75.0	66.0	62.5	....	....	....	61.5	64.5
22	76.0	66.0	63.0	52.0	....	....	61.5	65.0
23	76.5	65.5	....	61.0	....	....	62.0	65.0
24	76.0	65.0	....	62.0	....	59.0	60.5	65.5
25	64.0	65.0	59.0	62.0	....	57.0	60.5	....
26	64.0	65.5	61.0	59.0	....	56.0	62.0	60.0
27	60.0	65.5	63.5	....	....	57.0	62.5	62.5
28	65.0	65.5	63.5	....	....	59.0	....	60.0
29	66.0	....	63.5	58.5	....	59.5	....	....
30	65.5	....	56.0	61.0	....	59.5	....	....
31	65.0	....	54.0	....	....	60.0	....	63.5

N-5 (\*986, p. 287; 1016, p. 333; 1023, p. 353). 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.

Daily noon water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	38.4	43.2	43.5	41.3	43.6	42.1	47.2	47.8	43.3	46.5	47.6	40.5
2	42.2	38.2	43.6	42.6	42.5	39.3	46.4	48.0	43.0	46.8	46.5	47.7
3	43.8	43.1	41.3	43.2	43.2	43.5	47.2	44.9	45.0	46.6	45.9	48.2
4	43.0	43.6	43.7	43.0	39.5	45.2	43.0	44.7	47.2	46.6	45.8	....
5	42.0	43.5	43.6	43.2	35.5	46.0	41.5	47.2	47.5	45.0	47.6	....
6	42.5	43.4	43.6	41.7	39.4	44.7	42.6	47.7	47.6	46.0	47.8	46.8

N-5--Continued.

Daily noon water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
7	40.3	43.4	43.6	39.4	42.4	45.4	40.0	47.2	44.7	46.2	47.6	45.3
8	43.0	44.2	43.7	39.0	42.7	40.6	44.8	47.8	43.7	47.2	47.0	44.6
9	43.0	43.5	42.0	42.3	42.2	40.6	47.2	47.9	46.5	46.8	44.8	45.2
10	43.2	43.4	41.6	43.2	42.8	44.4	47.6	47.7	47.2	47.0	44.9	47.2
11	43.8	43.2	43.0	43.3	38.7	45.0	47.9	45.2	47.4	46.7	42.8	47.6
12	40.0	43.6	40.7	42.8	36.3	47.1	47.3	44.7	47.5	42.0	44.8	47.6
13	37.0	43.4	39.5	40.0	40.7	48.0	44.8	44.3	47.5	45.5	46.9	47.8
14	41.0	43.0	39.1	36.3	43.0	48.4	42.3	44.3	46.3	46.1	47.3	47.5
15	42.6	43.7	38.8	39.4	43.5	46.2	44.0	44.0	47.7	46.8	47.8	48.0
16	43.1	44.1	38.6	42.2	44.6	41.3	45.5	44.2	46.8	46.9	46.7	48.0
17	43.2	43.6	36.0	41.8	44.5	45.9	47.8	44.0	47.5	47.0	46.4	47.8
18	43.0	43.4	38.0	42.0	46.0	47.9	48.2	43.3	47.6	46.8	47.4	48.0
19	41.5	43.6	39.8	42.5	39.6	48.3	48.5	43.4	47.4	46.3	47.4	48.2
20	38.6	43.4	42.3	37.4	45.2	47.3	47.1	44.0	47.6	44.3	47.6	48.1
21	42.0	44.8	42.5	35.7	46.6	48.2	46.3	44.2	44.1	44.2	47.4	47.4
22	43.3	44.0	44.0	39.2	46.9	45.2	48.0	44.4	43.2	44.8	47.1	47.8
23	43.5	43.7	41.3	42.0	46.3	43.6	47.7	44.3	46.4	47.0	47.4	48.3
24	43.3	43.2	38.0	42.5	46.3	46.6	48.0	44.6	47.1	47.1	46.8	48.0
25	43.5	43.8	40.1	42.6	44.2	48.0	48.1	44.2	47.3	46.5	47.4	43.8
26	43.0	43.5	42.0	42.2	44.4	48.2	48.4	44.3	47.4	45.9	47.5	46.0
27	41.0	43.4	43.2	37.8	44.2	48.3	45.3	44.1	47.5	45.6	47.8	47.6
28	43.2	43.8	43.4	35.6	46.0	48.0	44.6	44.2	44.0	46.6	46.2	44.2
29	43.7		43.4	40.3	45.9	48.2	46.8	44.2	45.4	47.0	43.4	43.1
30	43.6		40.5	41.8	43.8	44.7	47.0	44.1	46.2	47.5	41.9	46.7
31	43.1		39.9		40.1		47.4	44.1		47.4		47.8

N-6 (\*986, p. 287; 1016, p. 334; 1023, p. 354). United States Navy. In south Philadelphia, on League Island. Automatic water-stage recorder removed Dec. 13, 1945. No measurements made in 1946.

N-7. United States Navy. In south Philadelphia, on League Island. Used drilled well, diameter 12 inches, depth 228 feet. Measuring point, top of pipe, in breather hole of pump base, at land-surface datum. Altitude 11.93 feet above mean sea level. Measured by air-line pressure gage; gage out of operation after Oct. 13, 1946. Well pumping when measured.

Daily noon water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
1	102.0	108.5	113.0	119.0	124.0	94.0	125	122.0	.....	.....
2	103.0	.....	90.0	116.0	124.5	94.0	125	119.0	.....	.....
3	117.0	.....	89.5	.....	123.0	125	125	.....	.....	.....
4	103.0	104.0	113.0	122.0	94.0	124.5	90.5	.....	.....	.....
5	104.0	105.5	114.0	.....	94.5	125	91.5	125	.....	99.0
6	91.0	105.5	.....	90.0	123.5	125	90.5	123.5	.....	101.5
7	108.0	.....	116.0	90.5	122.0	125	92.0	125	.....	114.0
8	106.0	112.0	120.5	114.5	124.5	93.0	125	125	.....	106.0
9	.....	97.0	105.0	117.0	124.5	93.0	125	120	.....	.....
10	117.0	97.0	93.0	119.0	124.5	125.0	125	.....	.....	.....
11	106.0	105.0	116.0	119.0	96.5	124.0	125	.....	.....	.....
12	92.0	109.0	114.0	117.5	97.0	124.0	125	124.0	.....	105.0
13	92.0	114.0	111.0	90.5	.....	124.5	96.5	101.0	.....	112.0
14	95.5	107.5	116.5	90.5	.....	123.5	96.5	103.0	.....	.....
15	102.0	110.0	117.0	120.0	.....	123.0	125	103.5	.....	.....
16	107.0	.....	91.5	120.0	.....	93.0	125	103.5	.....	.....
17	106.5	.....	89.0	122.5	115.5	125	125	125	.....	.....
18	105.5	109.5	95.5	122.5	90.0	125	119.5	125	.....	.....
19	.....	111.0	110.0	120.5	96.5	119	125	103.5	.....	.....
20	.....	113.5	114.0	91.5	125	119	102.0	103.0	.....	.....
21	98.0	.....	119.0	91.5	125	119	100.5	123.0	.....	.....
22	108.5	.....	119.0	120.0	125	93.0	125	123.0	.....	.....
23	107.0	.....	86.0	120.5	125	93.0	125	114.5	.....	.....
24	108.5	.....	85.0	123.5	125	124.0	125	120.0	.....	.....
25	107.0	97.5	116.0	123.0	96.0	125	125	123.0	.....	.....
26	.....	110.5	117.0	124.0	97.0	125	125	.....	.....	.....

N-7--Continued.

Daily noon water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
27	.....	110.5	115.5	94.5	124.5	111.5	122.0	.....	.....	.....
28	109.0	120.0	119.0	94.5	124.5	125	123.5	.....	.....	.....
29	109.0		119.5	119.5	125	111.5	125	.....	100.0	.....
30	109.0		92.0	120.0	93.5	96.0	.....	97.5	.....	.....
31	108.5		92.0		93.0		125	.....	.....	.....

N-8 (\*1023, p. 355). United States Navy. In south Philadelphia, on League Island. Extremes of observed water level (well pumping), in feet below land-surface datum: Highest, Mar. 30, Apr. 8, 1946, 69; lowest, Jan. 27, 1945, 91.

Daily noon water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	80.5	79.0	72.0	71.0	80.5	88.0	89.0	....	86.0	85.5	73.0
2	....	70.5	78.0	73.0	70.5	73.5	85.0	89.0	....	86.0	83.0	88.0
3	84.5	78.0	75.5	73.0	....	72.5	89.0	84.0	....	86.0	82.0	88.5
4	84.5	78.0	78.0	73.0	....	84.5	78.5	83.0	....	85.0	83.5	89.0
5	83.5	78.5	78.0	73.5	....	85.5	77.5	88.0	....	81.5	85.5	89.0
6	82.5	78.0	78.0	69.5	....	84.5	80.5	89.0	....	83.0	85.5	84.5
7	79.0	78.0	77.5	....	81.0	86.0	74.5	87.5	....	84.0	85.5	82.0
8	82.0	79.0	78.0	69.0	80.0	78.0	87.0	88.5	....	85.0	85.0	82.0
9	82.5	78.5	75.0	71.0	80.0	76.0	89.0	89.0	....	85.0	79.5	83.0
10	83.0	78.0	73.0	71.5	84.0	84.0	89.0	87.5	....	85.5	80.5	87.5
11	83.5	78.0	76.0	72.0	75.0	84.5	88.5	83.0	....	85.5	77.0	88.0
12	75.0	78.0	72.0	71.0	70.0	87.0	89.0	82.5	....	79.0	83.5	88.0
13	71.0	78.0	70.5	....	81.5	88.5	83.0	82.0	....	82.0	87.0	88.0
14	78.0	77.5	70.5	....	85.0	89.5	78.0	82.5	....	84.0	87.5	87.0
15	79.5	78.5	69.5	69.5	86.0	82.0	82.5	82.0	....	85.0	88.0	87.5
16	80.0	78.5	69.5	71.5	86.5	76.0	86.0	83.0	....	85.0	85.5	88.0
17	80.0	78.5	....	71.5	84.5	....	89.0	82.0	....	85.5	84.5	88.0
18	80.0	78.5	....	71.5	87.0	....	88.5	79.0	....	85.0	87.0	88.0
19	76.0	78.5	72.0	72.0	75.0	....	89.5	81.0	....	83.0	87.5	88.5
20	74.0	78.5	74.0	....	82.5	89.0	86.0	81.5	....	80.0	87.5	88.5
21	79.5	79.5	74.0	....	83.0	88.5	84.0	81.0	....	84.0	88.0	88.0
22	80.5	79.0	74.5	69.5	83.5	84.5	89.0	80.5	....	85.0	87.5	88.0
23	80.5	78.5	70.5	71.0	83.0	....	88.5	77.0	....	85.0	87.0	88.5
24	80.5	78.0	....	71.0	86.0	....	88.5	....	....	85.5	86.5	87.5
25	81.0	78.5	71.5	71.0	85.0	....	88.5	....	....	85.0	88.0	79.5
26	79.0	78.5	73.0	71.0	85.5	....	89.0	....	87.5	83.0	88.0	84.5
27	77.5	78.5	73.5	....	86.0	....	84.0	....	87.5	82.5	88.5	87.0
28	80.0	78.5	74.0	....	87.5	89.5	83.0	....	80.5	84.5	82.5	80.0
29	81.0		73.5	70.0	....	89.0	88.0	....	82.5	85.0	79.5	77.0
30	81.0		69.0	70.5	89.0	83.5	88.0	....	86.0	86.0	77.5	87.0
31	80.5	....			74.5		88.5	....		85.5		88.0

M-1 (\*1016, p. 335; 1023, p. 355). United States Navy. In south Philadelphia, at Naval Ammunition Depot, Fort Mifflin. Extremes of observed water level, in feet below land-surface datum: Highest, Apr. 15, 1946, 14.20; lowest, Apr. 6, 1945, 23.30. Measurements discontinued after July 8, 1946.

Daily noon water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July
1	.....	15.35	15.48	14.51	14.83	.....	18.15
2	15.52	15.36	15.16	14.30	14.31	.....	18.25
3	15.32	15.82	15.33	14.70	16.35	17.76	18.21
4	15.30	15.72	15.32	14.35	17.20	17.74	18.22
5	14.83	15.40	15.46	14.62	16.99	18.02	18.21
6	14.60	15.05	15.39	.....	17.00	18.12	18.09
7	14.68	15.07	15.07	.....	17.20	17.98	17.99
8	14.80	15.63	15.48	14.46	16.35	17.92	18.02
9	14.60	15.23	14.90	14.45	16.95	18.02	.....
10	14.52	15.18	15.52	14.85	17.78	18.31	.....
11	14.92	15.24	15.24	14.96	17.72	18.08	.....



M-1--Continued.

Daily noon water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July
12	14.82	15.60	15.23	14.68	17.82	18.00	.....
13	15.00	15.25	15.12	14.82	18.11	18.00	.....
14	15.19	14.70	15.10	14.60	18.20	18.29	.....
15	14.90	15.60	14.40	14.20	18.12	.....	.....
16	15.30	15.88	14.62	.....	17.95	.....	.....
17	14.89	15.50	14.53	.....	17.90	17.89	.....
18	14.70	15.61	14.31	.....	18.10	17.84	.....
19	15.25	15.48	14.27	.....	18.08	18.20	.....
20	15.35	15.02	14.41	15.00	18.05	18.02	.....
21	14.42	16.09	14.70	15.15	17.93	17.99	.....
22	15.56	15.87	14.72	14.71	18.68	18.19	.....
23	15.52	15.40	14.87	14.60	18.60	18.27	.....
24	15.03	14.97	14.70	14.61	18.38	18.09	.....
25	14.77	15.43	14.50	14.55	18.30	18.00	.....
26	15.45	15.20	14.49	14.30	18.35	18.23	.....
27	15.47	15.11	14.70	14.80	18.00	18.37	.....
28	15.27	15.50	14.72	14.91	18.15	18.30	.....
29	15.60		14.62	14.55	17.91	18.48	.....
30	15.41		14.40	14.80	18.06	18.32	.....
31	14.90		14.63		17.98		.....

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). Near Pine Grove.  
Extremes of observed water level, in feet below land-surface datum:  
Highest, Aug. 31, 1930, 4.14; lowest, Nov. 5, 1944, 31.78.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	14.60	Apr. 5	16.20	July 5	19.76	Oct. 4	21.76
11	14.00	12	15.74	12	20.76	13	21.80
18	15.10	19	18.74	19	21.80	18	23.80
25	16.80	26	19.40	26	19.10	25	20.71
Feb. 1	16.10	May 3	20.00	Aug. 2	21.80	Nov. 2	19.72
8	18.73	10	20.60	9	21.80	9	18.75
15	18.74	17	19.80	16	21.00	15	21.77
22	18.80	24	18.72	23	22.79	22	21.72
Mar. 1	13.10	31	15.00	30	24.72	Dec. 1	19.78
8	13.80	June 8	16.74	Sept. 6	24.80	7	21.80
15	13.74	14	17.00	12	24.80	13	20.80
22	14.40	22	18.80	20	25.78	22	19.72
29	12.73	28	19.80	27	23.75	30	16.00

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). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	14.39	Mar. 4	14.15	May 1	14.85	July 8	14.23
7	13.25	11	13.83	6	14.90	15	14.70
14	13.45	18	13.35	12	14.90	22	15.15
21	14.00	20	13.48	19	13.51	29	15.50
28	14.70	25	13.85	26	13.89	Aug. 2	15.67
Feb. 4	14.85	31	13.30	June 4	13.14	6	15.62
11	14.73	Apr. 8	13.62	10	13.75	12	15.76
13	14.73	15	14.04	17	13.68	19	15.90
18	14.76	22	14.44	25	13.23	26	15.93
25	14.50	29	14.74	30	13.70	Sept. 3	16.15

16--Continued.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 9	16.32	Oct. 7	16.50	Nov. 4	15.97	Dec. 2	16.06
10	16.35	14	16.54	11	16.05	9	16.18
17	16.40	15	16.52	18	16.10	16	15.85
23	16.58	21	16.32	25	16.10	24	15.60
30	16.40	28	16.00	26	16.16	30	15.18

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). Near Trent. Extremes of observed water level, in feet below land-surface datum: Highest, Dec. 19, 1942, 35.47; lowest, Apr. 17, 1937, 41.70.

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

Jan. 5	34.20	Mar. 11	34.13	May 27	34.20	Aug. 5	33.90
10	34.22	Apr. 8	33.80	June 10	34.10	12	33.70
19	34.30	15	33.90	17	33.90	19	33.60
26	34.28	22	33.60	24	33.80	26	33.90
Feb. 2	34.30	29	34.10	July 1	34.00	Sept. 5	34.10
9	34.16	May 1	34.02	8	34.10	Oct. 10	33.70
13	34.13	6	34.20	22	34.10	15	35.41
16	34.19	17	34.30	29	33.60	Nov. 26	35.17
Mar. 2	34.06	20	34.05	Aug. 2	34.44		

## Sullivan County

105 (\*817, p. 298; 845, p. 428; 886, p. 635; 906, p. 225; 936, p. 249; 944, p. 240; 986, p. 288; 1016, p. 336; 1023, p. 357). Near Millview. Extremes of observed water level, in feet below land-surface datum: Highest, Mar. 3, 1945, 18.22; lowest, dry, several periods 1935-1939, 1941, 1943-1944, 1946.

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

Jan. 5	25.92	Apr. 6	24.08	July 13	25.43	Oct. 12	26.18
12	23.83	20	25.37	20	(a)	19	24.30
19	23.95	27	25.79	27	(a)	26	23.72
26	22.11	May 4	26.13	Aug. 3	26.70	Nov. 2	24.88
Feb. 2	22.25	11	26.02	10	26.54	9	25.54
9	23.14	18	25.45	17	26.42	16	25.92
16	23.42	25	24.13	24	26.75	23	26.14
23	23.84	June 1	20.28	31	26.83	30	26.09
Mar. 2	22.95	8	21.67	Sept. 7	(a)	Dec. 7	25.21
9	21.88	15	22.73	14	(a)	14	26.29
16	21.92	22	23.46	21	(a)	21	26.31
23	22.61	29	25.22	28	26.38	28	26.24
30	23.32	July 6	26.15	Oct. 5	26.63		

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). 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, 1946

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	6.95	....	7.68	6.16	9.10	4.19	6.17	8.98	8.62	8.42	5.60	8.10
2	6.97	....	7.76	6.25	9.13	4.20	6.32	8.97	8.68	8.17	5.60	8.10
3	7.07	8.42	7.85	6.35	9.16	3.85	6.48	8.95	8.72	7.95	5.57	8.12
4	7.08	8.52	7.88	6.48	9.19	4.01	6.60	8.90	8.79	7.73	5.57	8.18
5	7.16	8.56	7.72	6.60	9.21	4.20	6.74	8.82	8.84	7.56	5.60	8.20
6	6.70	8.70	7.77	6.70	9.25	4.31	6.89	8.76	8.90	7.40	5.68	8.22
7	5.06	8.68	7.80	6.80	9.29	4.50	7.04	8.65	8.95	7.28	5.73	8.28
8	4.53	8.75	7.56	6.98	9.28	4.60	7.24	8.51	9.00	7.16	5.60	8.37

Sq-1

100--Continued.

Daily noon water level, in feet below land-surface datum, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
9	4.50	8.82	6.92	7.12	9.29	4.70	7.42	8.33	9.05	7.07	5.88	8.40
10	4.36	8.88	6.74	7.29	9.30	4.84	7.62	8.15	9.10	7.01	6.04	8.46
11	4.35	8.93	6.70	7.47	9.32	4.96	7.80	8.02	9.12	6.99	6.16	8.49
12	4.45	9.00	6.70	7.67	9.35	4.96	7.97	7.91	9.17	6.98	6.27	8.52
13	4.54	9.06	6.70	7.80	9.35	....	8.14	7.83	9.20	6.80	6.38	8.56
14	....	8.50	6.70	8.00	9.36	....	8.30	7.80	9.21	6.68	6.46	8.57
15	....	8.48	6.69	8.11	9.36	....	8.38	7.78	9.30	6.55	6.57	8.53
16	....	8.57	6.15	8.21	9.38	5.70	8.47	7.78	9.34	6.42	6.69	8.53
17	....	8.68	5.95	8.32	9.37	5.75	8.54	7.80	9.38	6.30	6.83	8.53
18	....	8.75	5.76	8.41	9.34	5.72	8.60	7.83	9.40	6.20	6.99	8.52
19	....	8.81	5.68	8.50	9.23	5.62	8.63	7.86	9.42	6.11	7.11	8.52
20	5.67	8.87	5.62	8.56	9.19	....	8.76	7.89	9.46	6.08	7.25	8.52
21	....	8.93	5.60	8.63	4.00	....	8.91	7.93	9.46	6.05	7.38	8.52
22	....	8.99	5.59	8.70	3.33	....	8.94	8.00	9.47	6.01	7.48	8.50
23	....	9.03	5.59	8.75	3.73	5.15	8.98	8.02	9.48	5.98	7.60	8.51
24	....	9.15	5.76	8.82	4.00	5.22	8.99	8.10	9.50	5.96	7.50	8.51
25	....	9.20	5.80	8.86	4.15	5.30	9.00	8.20	9.51	5.94	7.59	8.51
26	....	9.23	5.86	8.91	4.25	5.41	9.00	8.29	9.25	5.87	7.69	8.52
27	7.09	9.01	5.90	8.95	4.28	5.53	9.00	8.33	9.12	5.87	7.77	8.53
28	....	7.53	5.93	9.01	2.56	5.69	8.97	8.42	8.99	5.80	7.83	8.54
29	....	....	5.98	9.02	3.10	5.87	8.97	8.44	8.82	5.73	7.89	8.54
30	....	....	6.01	9.05	3.61	6.02	8.97	8.52	8.64	5.66	7.92	8.54
31	....	....	6.04	....	3.98	....	8.98	8.55	....	5.61	....	8.55

Ti-1

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). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	16.62	Apr. 6	14.98	July 13	12.75	Oct. 12	14.10
12	10.00	13	17.36	20	14.02	19	12.11
19	11.32	20	18.75	27	14.02	26	12.12
26	12.52	May 4	18.55	Aug. 3	14.55	Nov. 2	11.75
Feb. 2	13.52	11	15.36	10	13.36	9	13.90
9	16.35	18	14.72	17	14.13	16	14.05
16	16.99	25	13.68	24	14.73	23	13.82
23	18.60	June 1	9.12	31	16.65	30	14.82
Mar. 4	17.20	8	9.97	Sept. 7	14.70	Dec. 7	16.73
9	13.26	15	10.60	14	18.14	14	16.77
16	11.32	22	11.76	21	18.83	21	16.90
23	11.74	29	13.35	28	15.88	28	18.02
30	13.22	July 6	11.35	Oct. 5	13.55		

Union County

122. At Laurelton, at abandoned residence on east side of State Route 235, opposite Pursley's general store in Laurelton. Altitude about 655 feet above mean sea level. Unused dug well, diameter 5 feet, depth 12.9 feet. Measuring point, nail driven into wooden well cover on west side of opening into well, 2 feet above land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 3	8.00	July 5	7.50	Sept. 6	8.60	Nov. 8	7.10
11	7.88	12	7.90	13	8.90	15	7.55
18	7.00	19	7.90	20	8.90	22	7.60
24	6.80	27	8.20	26	8.90	29	7.90
June 1	6.40	Aug. 2	7.00	Oct. 4	7.90	Dec. 7	8.20
8	6.60	9	6.40	18	7.30	13	8.10
15	7.00	16	7.60	25	7.10	20	8.25
21	6.60	23	7.60	Nov. 1	6.85	27	8.75
27	6.30	30	8.10				

Washington County

112 (\*817, p. 299; 845, p. 432; 886, p. 637; 906, p. 226; 936, p. 251; 944, p. 242; 986, p. 289; 1016, p. 338; 1023, p. 358). At Amity. Extremes of observed water level, in feet below land-surface datum: Highest, June 22, 1946, 9.09; lowest, Oct. 1, 1938, 34.84.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	13.25	Mar. 9	17.50	May 18	20.50	Aug. 17	24.80
5	13.50	15	13.27	25	21.03	24	24.25
14	15.50	23	14.50	June 8	12.40	30	29.10
19	16.40	30	15.40	15	12.20	Sept. 7	29.40
26	18.40	Apr. 3	14.58	22	9.09	14	30.30
Feb. 2	20.50	6	15.50	26	16.50	17	30.73
9	19.10	13	19.60	July 13	17.09	27	30.50
16	18.50	20	19.20	20	19.06	Oct. 5	30.70
18	17.04	27	17.50	27	21.08	12	30.80
23	19.40	May 4	18.09	Aug. 3	19.20	Dec. 4	31.25
Mar. 2	14.50	11	22.02	10	18.09		

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). 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, 1946

Jan. 6	9.42	Apr. 13	9.52	July 6	10.47	Oct. 5	12.04
12	8.23	21	9.94	13	10.75	12	12.56
Feb. 3	10.06	27	10.31	20	11.49	19	12.46
8	9.98	May 4	10.62	28	11.32	26	12.48
16	10.32	11	10.84	Aug. 3	11.36	Nov. 2	12.76
23	10.92	18	10.60	11	8.89	9	12.92
Mar. 2	10.66	24	10.71	18	9.65	14	13.22
9	10.32	June 1	5.58	24	10.73	23	13.71
16	7.56	8	8.11	31	11.42	30	13.98
23	8.03	18	9.35	Sept. 14	12.47	Dec. 7	14.01
30	8.32	22	9.04	21	12.91	21	14.62
Apr. 6	9.22	29	10.21	28	12.71		

## RHODE ISLAND, 1946

By W. B. Allen

### PROGRAM OF WORK

The investigation of the ground-water resources of Rhode Island, begun in the autumn of 1944, was continued in 1946 in cooperation with the Rhode Island Industrial Commission. Periodic water-level measurements were continued in a number of wells in Providence and Kent Counties, and in one well in Bristol County. During the year measurements were begun in 17 wells in Providence County and in 6 in Washington County. A water-stage recorder was operated throughout the year on one of the wells in Providence County (Providence 48). At the end of 1946, water levels were being measured daily in 6 wells, weekly in 12 wells, and monthly in 17 wells, a total of 35 wells. In all, about 2,500 individual measurements were made. Readings at one well in Providence County (Providence 66) were discontinued in December 1945.

A monthly program for the collection of samples of ground water for determination of chloride content was started in February 1946. Samples of water were collected from pumping wells at Nicholson File Co., U. S. Rubber Co., and Providence Gas Co., all plants in the industrial areas of Providence where it is thought that salt-water encroachment is taking place. These studies of changes in salinity of ground water have not progressed far enough to warrant conclusions as to progressive changes that may be taking place. However, data covering 1946 does show that seasonal changes are taking place. The relation of these changes to other hydrologic factors will not become apparent until records for at least a number of years are available. The records of 45 samples available for the Providence area indicate a range in chloride content of about 24 parts per million to more than 8,000 parts per million. The determinations of the chloride content of these samples were made by the Division of Sanitary Engineering of the Rhode Island Department of Health, under the direction of Walter J. Shea, acting chief.

Field investigations in the Pawtucket quadrangle, an area to the north of Providence, begun in 1945, were completed in 1946. A report on the ground-water resources of this area is in press. In the meantime, the report is available for inspection in the offices of the U. S. Geological Survey at Boston, Mass., and Providence, R. I. The results of a preliminary investigation by the U. S. Geological Survey of ground-water conditions in the vicinity of Exeter School, a State institution at Lafayette, Washington County, Rhode Island, have enabled the State to develop a critically needed water supply.

## FLUCTUATIONS OF WATER LEVEL

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

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 date of record 1946
		Water level	Date	Water level	Date	
Barrington 1	Jan. 10, 1945	46.92	Dec. 15, 1945	43.61	Mar. 3, 1945	45.71
Charlestown 18	Oct. 3, 1946	20.71	Dec. 27, 1946	18.65	Oct. 3, 1946	20.71
Cranston 3	Aug. 22, 1938	33.3	Aug. 26, 1945	24.5	Aug. 26, 1938	30.6
Cranston 4	June 22, 1939	34.6	Dec. 2, 1946	22.3	June 22, 1939	34.1
Cranston 12	Oct. , 1938	31.4	Dec. 23, 28, 1946	24.0	Oct. , 1938	31.2
Cranston 39	May 7, 1946	10.44	Dec. 28, 1946	9.25	Sept. 2, 1946	10.44
Cranston 40	May 7, 1946	18.95	Dec. 28, 1946	17.93	Sept. 2, 1946	18.95
Cranston 41	May 7, 1946	18.82	Dec. 28, 1946	17.54	May 7, 1946	18.82
Cumberland 64	July 7, 1946	9.06	Nov. 29, 1946	7.93	Aug. 26, 1946	9.06
Cumberland 129	July 18, 1946	13.66	July 29, 1946	7.61	Aug. 26, 1946	13.13
Cumberland 265	Aug. 19, 1946	15.87	Nov. 29, 1946	12.84	Aug. 26, 1946	15.87
Cumberland 315	Aug. 22, 1946	19.22	Nov. 29, 1946	13.44	Aug. 26, 1946	19.02
East Greenwich 3	July 17, 1944	23.5	Aug. 15-Sept. 11, 1944	7.3	Feb. 27, 28, 1945	12.0
East Providence 1	Dec. 14, 1944	22.5	Dec. 14, 1944	22.2	July 11, 1946	22.3
			Feb. 12, 1946		Aug. 29, 1946	
			Aug. 8, 1946		Sept. 19, 1946	
			Aug. 15, 1946		Oct. 28, 1946	
Exeter 8	July 9, 1946	16.42	Nov. 22, 1946	12.22	July 9, 1946	15.60
Exeter 16	July 9, 1946	14.00	Dec. 17, 1946	10.96	Sept. 2, 1946	13.99
Lincoln 84	June 11, 1946	6.39	Nov. 30, 1946	4.72	June 11, 1946	6.07
Lincoln 181	June 4, 1946	3.10	Nov. 25, 1946	1.63	June 10, 1946	3.01
Lincoln 199	Mar. 13, 1946	11.47	Nov. 29, 1946	2.92	Mar. 13, 1946	11.47
North Smithfield 2	Mar. 7, 1946	16.25	Nov. 29, 1946	9.85	Mar. 7, 1946	16.26
Providence 5	Dec. 16, 1944	9.46	Nov. 3, 1946	7.80	Mar. 4, 1946	8.93
Providence 48	Dec. 16, 1944	9.94	Sept. 4, 1946		Mar. 11, 1946	9.36
Providence 81	Oct. 1941	24.8	Sept. 29, 1946	14.0	Oct. 1941	23.0
Providence 82	May 26, 1946	22.8	Aug. 4, 1946	15.0	May 26, 1946	17.0
Providence 94	Dec. 23, 1944	28.34	Sept. 1, 1945	11.93	Dec. 14, 1945	21.31
Providence 113	Dec. 16, 1944	49.12	Nov. 9, 1945	47.65	May 6, 1946	47.85
Providence 1110	Nov. 5, 1945	6.78	Nov. 29, 1946	5.94	Dec. 7, 1945	6.66
Providence 1111	Nov. 14, 1946	16.51	Dec. 20, 1946	15.46	Nov. 4, 1946	15.56

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 date of record 1946
		Water level	Date	Water level	Date	
Smithfield 43	Apr. 16, 1946	14.65	Nov. 29, 1946	10.59	Apr. 16, 1946	14.65
Warwick 33	July 17, 1944	23.5	Aug. 16, Sept. 12, 1944	5.0	Dec. 27, 1945	9.1
Warwick 39	July 1, 1943	39.8	Sept. 10, 1944	11.1	Aug. 9, 1946	23.0
Warwick 40	July 1, 1943	22.8	Sept. 6, 1944	4.6	Aug. 8, 1946	7.5
Westerly 4	Oct. 3, 1946	8.32	Dec. 19, 1946	7.48	Oct. 3, 1946	8.05
Westerly 133	Oct. 17, 1946	17.83	Dec. 5, 1946	16.55	Nov. 7, 1946	16.90
Westerly 178	Oct. 17, 1946	7.13	Nov. 21, 1946	3.98	Oct. 24, 1946	4.28

Net change, in feet, in water levels in observation  
wells in Rhode Island, 1946

Well	Net change	Well	Net change
Barrington 1	-0.78	Providence 94	-6.51
Cranston 3	-1.3	Providence 113	+6.67
Cranston 4	-2.3	Providence 1110	-5.58
East Greenwich 3	-.5	Warwick 33	-3.4
Providence 5	-.90	Warwick 39	+1.50
Providence 48	-.58	Warwick 40	-.30

As indicated in the foregoing table, all but two of the observation wells in Rhode Island included in this report, for which there are complete records in 1946, showed a net decline during the year. In general, the decline was greatest in wells that penetrate more or less stratified sand and gravel. The decline of water levels during 1946 is chiefly the result of deficient precipitation during the year.

The water level in one of the two wells that showed a net rise in 1946, Providence 113, a well penetrating bedrock, did not react to the heavy precipitation of 1944 and 1945 as rapidly as did the other observation wells, and, as a result, the water levels in this well were relatively lower than in other wells at the beginning of 1946. Consequently, the rise in water level during the early part of 1946 was relatively greater than in other wells, resulting eventually in a net rise for the year.

The water level in the other of the two wells that showed a net rise in 1946, Warwick 39, is affected by pumping from nearby wells.

In 1946 the precipitation for the State as a whole was about 5 inches less than the normal and about 3.6 inches less than in 1945. The precipitation at Providence was about 1 inch less than the normal, and about 9 inches less than in 1945. Water levels, which were high at the beginning

of the year, rose slightly in January and then dropped off in February, March, and April as the result of below-normal precipitation. The decline was checked by heavy rains in May, but lack of rainfall in June and July caused the water levels to fall again. The decline was again checked in August by abnormally heavy rains. During this period the water levels in a number of wells reached the highest stage of record. Recurrent dry conditions during September and October caused further decline of water levels. When the water levels finally began to rise after the end of the growing season, recovery was insufficient to bring them up to their position at the beginning of the year.

## WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Bristol County

Barrington 1 (\*1023, p. 362). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	44.91	Mar. 30	43.91	June 22	44.40	Sept. 14	44.71
12	43.91	Apr. 6	43.95	29	44.54	21	44.85
19	43.91	13	43.99	July 6	44.62	28	44.86
26	43.91	20	44.30	13	44.66	Oct. 5	45.00
Feb. 2	43.90	27	44.33	20	44.70	12	44.96
9	43.75	May 4	44.38	27	44.90	19	44.98
16	43.79	11	44.63	Aug. 3	44.88	26	45.30
23	43.84	18	44.43	10	44.89	Nov. 2	45.39
Mar. 2	43.78	25	44.66	17	44.88	30	45.55
9	43.75	June 1	44.30	24	44.81	Dec. 21	45.70
16	43.78	8	44.32	31	44.70	28	45.71
23	43.86	15	44.36	Sept. 7	44.72		

Kent County

East Greenwich 3 (\*1023, p. 362). 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, 1946

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	12.0	12.2	8.3	9.3	10.2	10.4	11.3	12.8	10.3	11.0	12.0	12.0
2	12.1	12.3	8.3	9.3	10.2	10.3	11.3	12.7	10.3	11.1	12.0	12.0
3	12.2	12.2	8.3	9.4	10.3	10.0	11.3	12.7	10.3	11.1	12.0	12.0
4	12.2	12.0	8.2	9.5	10.2	10.0	11.3	12.8	10.5	11.1	12.0	12.0
5	12.3	12.0	8.5	9.5	10.3	10.1	11.3	12.8	10.4	11.1	12.1	12.0
6	12.3	11.5	8.8	9.5	10.3	10.3	11.4	12.9	10.5	11.1	12.1	12.0
7	12.0	8.0	8.9	9.5	10.5	10.3	11.5	12.0	10.5	11.1	12.1	12.0
8	12.3	8.1	8.9	9.6	10.4	10.3	11.7	11.5	10.6	11.1	12.0	12.1
9	12.3	8.1	8.9	9.6	10.5	10.3	11.7	11.5	10.7	11.1	12.0	12.1
10	12.3	8.0	8.8	9.6	10.6	10.3	11.7	11.5	10.7	11.1	12.0	12.1
11	12.5	8.1	9.0	9.7	10.7	10.4	11.8	11.6	10.7	11.1	12.0	12.1
12	12.5	8.1	9.0	9.7	10.7	10.5	11.8	11.7	10.8	11.1	12.0	12.1
13	12.5	8.0	9.2	9.6	10.7	10.4	11.9	11.8	10.8	11.1	12.0	12.0
14	12.6	8.1	9.3	9.7	10.8	10.5	12.0	11.8	10.7	11.1	12.0	12.0



## East Greenwich 3-- Continued.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
15	12.7	8.1	9.3	9.7	10.3	10.6	12.0	11.9	10.8	11.1	12.0	12.0
16	12.8	8.0	9.3	9.8	10.3	10.6	12.0	11.9	10.7	11.1	12.1	12.0
17	12.8	8.0	9.3	9.8	10.3	10.7	12.0	11.9	10.8	11.1	12.0	12.1
18	12.8	8.2	9.3	9.8	10.4	10.8	12.3	11.8	11.1	11.1	12.0	12.1
19	12.8	8.1	9.5	9.8	10.6	10.8	12.3	10.2	11.1	11.1	12.0	12.1
20	12.9	8.1	9.4	10.0	10.5	10.8	12.3	10.2	11.2	11.1	12.0	12.1
21	12.9	8.2	9.4	10.0	10.5	10.8	12.3	10.0	11.1	11.1	12.0	12.1
22	12.8	8.0	9.4	10.0	10.6	10.8	12.3	10.0	11.1	11.1	12.0	12.0
23	12.7	8.1	9.4	10.2	10.5	10.8	12.4	10.2	11.2	11.1	12.0	12.0
24	12.0	8.2	9.4	10.2	10.7	10.9	12.4	10.3	11.2	11.1	12.0	12.1
25	12.0	8.2	9.5	10.3	10.8	11.0	12.4	10.3	11.1	11.1	12.0	12.0
26	12.0	8.2	9.5	10.3	10.8	11.2	12.5	10.4	11.1	11.1	12.0	12.1
27	12.0	8.3	9.3	10.3	10.8	11.1	12.5	10.0	11.2	11.1	12.1	12.1
28	12.1	8.3	9.3	10.3	10.4	11.2	12.5	10.2	11.2	11.1	12.0	12.0
29	12.3		9.3	10.3	10.4	11.2	12.5	10.2	11.1	11.1	12.0	12.0
30	12.3		9.2	10.0	10.5	11.3	12.5	10.2	11.2	11.1	12.0	12.0
31	12.3		9.2		10.6		12.7	10.2		11.1		12.0

Warwick 33 (\*1023, p. 363). 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, 1946

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	5.8	6.8	8.8	9.0	9.5	9.5	10.3	10.8	8.8	9.0	9.1	9.1
2	5.8	6.8	8.9	9.0	9.6	9.4	10.3	10.8	8.8	9.0	9.1	9.1
3	6.0	6.7	8.8	9.1	9.5	9.3	10.3	10.8	8.8	9.0	9.1	9.1
4	6.1	7.0	8.9	9.1	9.5	9.2	10.4	10.8	8.8	9.0	9.1	9.1
5	6.1	7.2	8.8	9.1	9.5	9.2	10.3	10.9	8.8	9.0	9.1	9.1
6	6.2	7.2	8.8	9.0	9.6	9.3	10.4	10.9	8.8	9.0	9.1	9.1
7	6.0	8.5	8.8	9.1	9.7	9.3	10.3	10.5	8.8	9.0	9.1	9.1
8	6.2	8.6	8.8	9.2	9.7	9.3	10.5	10.0	8.8	9.0	9.1	9.1
9	6.2	8.6	8.7	9.3	9.8	9.3	10.5	10.1	8.8	9.1	9.1	9.1
10	6.3	8.6	8.8	9.2	9.8	9.3	10.6	10.0	8.8	9.1	9.1	9.1
11	6.3	8.7	8.8	9.2	9.8	9.4	10.7	10.0	8.8	9.1	9.1	9.1
12	6.3	8.6	8.8	9.2	9.7	9.3	10.6	10.1	8.8	9.1	9.1	9.1
13	6.4	8.7	8.9	9.2	9.8	9.4	10.7	10.2	8.8	9.1	9.1	9.1
14	6.5	8.8	8.8	9.2	9.7	9.5	10.8	10.2	8.8	9.1	9.1	9.1
15	6.5	8.7	8.8	9.3	9.4	9.5	10.8	10.3	8.8	9.1	9.1	9.1
16	6.7	8.6	8.8	9.3	9.5	9.5	10.8	10.3	8.8	9.1	9.1	9.1
17	6.8	8.6	8.9	9.3	9.5	9.5	10.9	10.3	8.8	9.1	9.1	9.1
18	6.8	8.7	8.9	9.4	9.4	9.6	10.9	10.2	9.0	9.1	9.1	9.1
19	6.8	8.8	9.0	9.4	9.5	9.6	10.8	9.0	9.1	9.1	9.1	9.1
20	6.8	8.7	9.0	9.5	9.5	9.7	10.8	9.0	9.1	9.1	9.1	9.1
21	6.8	8.7	9.1	9.5	9.6	9.8	10.8	8.7	9.1	9.1	9.1	9.1
22	6.8	8.7	9.1	9.5	9.7	9.8	10.8	8.7	9.0	9.1	9.1	9.1
23	6.8	8.8	9.1	9.7	9.7	9.8	10.8	8.8	9.1	9.1	9.1	9.1
24	6.5	8.8	9.0	9.7	9.8	9.8	10.9	8.8	9.2	9.1	9.1	9.1
25	6.5	8.8	9.2	9.7	9.7	9.8	10.8	8.8	9.2	9.1	9.1	9.1
26	6.5	8.8	9.2	9.6	9.8	10.0	10.9	8.8	9.3	9.1	9.1	9.1
27	6.5	8.8	9.0	9.6	9.7	10.0	10.8	8.5	9.3	9.0	9.1	9.1
28	6.5	8.9	9.0	9.6	9.3	10.1	10.8	8.5	9.2	9.0	9.1	9.1
29	6.6		9.0	9.5	9.4	10.2	10.8	8.6	9.2	9.0	9.1	9.0
30	6.7		9.0	9.4	9.5	10.3	10.8	8.7	9.3	9.1	9.1	9.0
31	6.7		9.0		9.5		10.8	8.7		9.1		9.1

Warwick 39(\*1023, p. 365 ). 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, 1946

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	22.8	22.0	23.1	23.2	12.3	22.7	13.6	24.6	22.3	23.5	24.5	13.9
2	22.5	22.3	23.4	23.1	12.4	22.5	21.0	24.2	11.8	23.5	24.3	24.4
3	22.8	22.6	23.5	12.5	26.5	22.5	23.8	24.4	11.8	23.8	24.1	24.2
4	22.9	12.8	23.0	11.8	22.3	22.3	23.8	24.5	21.8	23.7	24.3	24.4
5	23.0	13.0	23.5	23.2	22.7	22.5	13.2	24.6	21.9	13.6	24.3	24.5
6	23.2	22.3	22.8	23.2	22.3	12.3	23.4	24.4	22.1	13.3	24.4	24.4
7	23.0	21.3	12.8	23.3	22.4	22.4	22.5	12.8	12.3	23.7	24.1	14.2
8	23.3	21.0	23.0	23.2	22.5	21.9	22.5	22.0	12.3	23.8	23.5	14.0
9	22.0	21.3	22.5	12.5	22.7	22.2	23.8	11.1	21.3	24.3	13.4	24.4
10	22.3	22.2	22.3	23.3	12.4	21.3	23.6	11.3	21.3	24.2	23.8	24.5
11	22.3	22.4	22.5	22.5	12.6	21.3	13.5	11.8	21.4	24.3	23.6	24.6
12	23.0	23.0	22.5	12.1	21.8	22.4	23.5	22.7	22.0	13.6	23.8	24.8
13	23.3	11.8	22.3	23.6	22.0	22.4	13.3	22.9	22.6	13.6	24.3	24.9
14	23.3	11.3	22.3	23.4	21.8	22.4	23.3	22.7	22.7	24.5	24.0	14.3
15	23.3	22.0	22.8	12.3	12.2	22.3	23.4	22.8	22.5	24.6	13.7	14.5
16	23.2	22.3	12.3	22.9	22.7	24.5	22.9	22.9	22.5	24.7	13.3	25.0
17	23.1	22.2	11.7	12.3	22.5	21.8	13.3	23.2	12.8	24.0	13.3	25.0
18	23.2	22.5	22.5	22.6	12.4	22.1	13.3	23.3	23.2	24.2	13.3	14.8
19	23.3	22.7	22.7	22.8	22.4	21.9	23.8	22.8	23.5	23.9	13.4	14.6
20	23.5	22.8	22.7	22.5	12.6	21.8	15.3	22.0	23.8	23.8	24.5	24.4
21	23.3	22.8	22.7	22.6	12.6	21.9	15.3	21.8	13.7	23.8	24.3	13.8
22	23.4	23.0	12.3	12.3	22.8	11.3	13.5	22.2	23.5	24.0	24.2	13.8
23	23.1	12.3	12.0	12.2	22.8	11.3	13.5	22.3	13.5	24.3	24.3	24.9
24	12.3	11.8	12.2	22.6	22.5	11.3	13.5	22.2	24.6	24.5	24.3	13.5
25	21.9	12.1	22.3	21.3	22.5	21.8	22.9	22.2	23.7	24.5	24.4	12.0
26	21.9	23.0	22.4	22.5	22.3	22.3	22.8	22.3	23.6	14.2	24.7	22.5
27	22.3	23.0	22.4	12.3	22.4	23.1	24.1	22.2	23.9	24.0	24.5	12.9
28	23.0	23.0	12.1	12.2	22.5	23.1	24.3	21.9	13.5	24.2	23.5	13.1
29	22.3		11.6	22.5	22.1	23.2	24.5	11.3	13.5	14.3	23.3	13.0
30	22.5		22.1	22.4	22.3	23.3	24.5	22.3	23.7	24.3	24.3	23.5
31	21.8		22.5		22.3		24.6	22.4		24.5		23.0

Warwick 40(\*1023, p. 366 ). 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, 1946

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	6.5	6.0	6.6	6.2	8.5	6.5	9.0	6.5	6.3	7.1	7.7	9.9
2	6.5	6.3	8.6	6.2	8.4	6.3	7.2	6.5	8.4	7.1	7.7	7.8
3	6.4	6.2	6.1	8.3	6.4	6.3	7.0	6.5	8.4	7.3	7.7	8.4
4	6.5	8.8	8.5	8.2	6.4	6.3	7.0	6.5	6.3	7.5	7.8	8.3
5	6.5	8.5	8.3	6.1	6.4	6.3	7.1	6.5	6.3	9.3	7.9	8.3
6	6.5	6.5	6.1	6.2	6.5	8.4	6.5	8.3	6.3	9.2	7.9	8.5
7	6.5	6.0	8.3	6.3	6.5	6.4	6.5	8.4	8.3	7.3	7.9	9.9
8	6.5	5.5	6.3	6.3	6.5	6.3	6.5	4.6	8.5	7.4	7.7	9.7
9	6.5	5.7	6.0	8.3	6.5	6.4	9.9	5.0	5.8	7.2	9.4	8.3
10	6.0	5.7	6.0	6.3	8.5	6.4	10.0	8.1	5.8	7.3	9.1	8.5
11	6.0	5.6	6.0	6.0	8.4	6.4	10.2	8.3	5.8	7.4	7.6	8.3
12	6.2	5.8	6.3	8.3	6.1	6.4	6.6	6.3	5.8	9.2	7.8	8.4
13	6.3	8.1	6.2	6.3	6.2	6.5	9.3	6.6	5.8	9.3	7.6	8.8
14	6.5	8.2	6.1	6.3	6.0	6.5	6.5	6.6	5.9	7.6	7.7	10.0
15	6.5	5.7	6.2	8.2	8.8	6.3	13.4	6.5	8.7	7.7	8.0	10.2
16	6.6	5.7	8.4	6.4	8.2	6.3	11.8	6.5	6.0	9.8	9.4	8.8
17	6.6	5.7	8.4	8.3	8.2	6.3	9.5	6.5	9.0	7.5	9.3	8.8
18	6.7	5.5	6.7	7.1	6.3	6.4	9.7	6.5	7.3	7.5	9.3	10.3
19	6.5	5.5	6.7	8.3	6.3	6.7	9.8	6.5	7.4	7.3	9.4	8.6
20	6.5	5.4	6.4	6.7	8.3	6.4	8.7	5.9	9.7	7.3	7.7	8.4

Warwick 40--Continued.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
21	6.4	5.5	6.6	6.7	8.2	6.4	9.7	5.8	9.7	7.3	8.1	9.6
22	6.5	5.6	8.3	8.3	6.4	6.3	9.8	6.1	7.5	7.3	8.0	9.8
23	6.7	8.3	8.3	8.2	6.4	6.3	9.8	6.2	10.0	7.5	7.8	9.7
24	8.3	8.5	8.3	6.4	6.4	8.5	9.9	6.2	7.8	7.5	8.0	8.5
25	5.8	8.7	6.3	6.4	6.5	6.4	6.6	6.3	7.3	7.3	8.0	8.3
26	5.6	5.6	6.5	6.4	6.5	6.4	6.6	6.3	7.3	9.5	8.0	9.5
27	5.8	6.8	6.4	8.2	6.5	7.1	6.5	6.3	9.5	7.3	7.9	7.2
28	5.7	5.5	8.3	8.3	6.5	7.1	6.6	6.2	9.3	9.8	7.7	9.1
29	6.3		8.2	6.4	6.3	6.8	9.8	8.4	9.2	7.8	7.5	9.0
30	8.7		6.2	6.4	6.3	6.8	9.9	6.2	9.5	9.8	7.7	7.5
31	8.1		6.2		6.3		6.6	6.3		7.8		...

Providence County

Cranston 3 (\*1023, p. 368). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	28.8	Apr. 15	29.6	July 15	31.5	Oct. 14	30.5
8	29.8	22	29.0	22	30.5	21	31.0
21	29.7	29	29.7	29	30.7	28	30.7
28	28.7	May 6	29.3	Aug. 5	30.7	Nov. 4	31.0
Feb. 4	28.8	13	30.0	12	30.5	11	29.9
11	29.3	20	30.4	19	30.1	18	30.9
18	29.5	27	30.3	26	30.4	26	31.2
25	30.2	June 3	30.2	Sept. 2	30.4	Dec. 2	30.7
Mar. 4	28.5	11	31.0	9	30.3	9	30.7
11	29.0	17	30.0	16	30.2	16	31.0
18	29.5	24	30.0	23	30.5	23	30.7
25	29.5	July 1	30.7	30	31.2	28	30.7
Apr. 1	29.2	8	30.9	Oct. 7	30.7	30	30.6
8	29.0						

Cranston 4 (\*1023, p. 368). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	31.7	Apr. 15	32.9	July 15	33.8	Oct. 14	33.6
8	31.6	22	33.3	22	33.7	21	33.6
21	31.6	29	33.2	29	33.8	28	33.2
28	31.3	May 6	33.4	Aug. 5	34.1	Nov. 4	33.7
Feb. 4	31.6	13	33.7	12	33.7	11	33.7
11	31.6	20	33.6	19	33.6	18	34.1
18	32.1	27	33.7	26	33.4	26	34.3
25	31.5	June 3	33.5	Sept. 2	32.9	Dec. 2	34.6
Mar. 4	31.9	11	33.6	9	33.1	9	34.3
11	31.6	17	33.3	16	32.9	16	34.3
18	32.3	24	33.6	23	32.5	23	34.4
25	32.5	July 1	33.4	30	33.6	28	34.4
Apr. 1	32.6	8	33.7	Oct. 7	33.5	30	34.1
8	32.7						

Cranston 12. 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. Unused gravel-packed well, diameter 24 inches, depth 56 feet below land surface. Measuring point, top edge of casing, at land-surface datum and 68.91 feet above mean sea level.

Water level, in feet below land-surface datum, 1938, 1946

Date	Water level	Date	Water level	Date	Water level
Oct. 1938	24.0	June 11, 1946	30.3	Sept. 30, 1946	31.1
Feb. 25, 1946	30.3	17	30.0	Oct. 7	30.2
Mar. 4	29.7	24	29.9	14	30.3
11	29.3	July 1	30.7	21	30.4
18	29.6	8	30.7	28	30.7
25	29.6	15	30.8	Nov. 4	30.4
Apr. 1	29.4	22	30.8	11	30.5
8	29.5	29	30.8	18	30.5
15	29.6	Aug. 5	31.0	26	30.5
22	29.9	12	30.5	Dec. 2	30.5
29	30.2	19	30.7	9	30.9
May 6	30.3	26	30.6	16	31.2
13	30.5	Sept. 2	30.5	23	31.4
20	30.6	9	30.3	28	31.4
27	30.8	16	30.1	30	31.2
June 3	30.7	23	30.7		

Cranston 39. Narragansett Brewing Co. 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. Diameter  $2\frac{1}{2}$  inches, depth 19.6 feet below land surface. Measuring point, top edge of iron casing, 1.2 feet above land-surface datum and 47.18 feet above mean sea level.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 7	9.50	Sept. 2	9.25	Sept. 23	9.55	Oct. 28	9.83
Aug. 12	9.56	9	9.26	30	9.66	Nov. 29	10.18
20	9.60	16	9.40	Oct. 14	9.75	Dec. 28	10.44
26	9.46						

Cranston 40. Narragansett Brewing Co. 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. Diameter  $2\frac{1}{2}$  inches, depth 40.0 feet below land surface. Measuring point, top edge of iron casing, 1.6 feet above land-surface datum and about 55 feet above mean sea level.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 7	18.15	Sept. 2	17.93	Sept. 23	18.30	Oct. 28	18.40
Aug. 20	18.28	9	17.98	30	18.36	Nov. 29	18.79
26	18.16	16	18.06	Oct. 14	18.38	Dec. 28	18.95

Cranston 41. Narragansett Brewing Co. 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. Diameter  $2\frac{1}{2}$  inches, depth 33.1 feet below land surface. Measuring point, top edge of iron casing, 1.0 foot above land-surface datum and 57.53 feet above mean sea level.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 7	17.54	Aug. 26	17.97	Sept. 23	18.30	Oct. 28	18.43
Aug. 8	18.33	Sept. 2	17.90	30	18.39	Nov. 29	18.78
12	18.13	9	17.88	Oct. 14	18.40	Dec. 28	18.82
20	18.25	16	18.05				

Cumberland 64. Rev. W. Bath (parsonage). On north side of Sneece Pond Road, about 0.25 mile west of Arnold Mills. Unused dug domestic well, diameter 30 inches, depth 17 feet below land surface. Measuring point, top of granite slab well casing south side, at land-surface datum, and about 155 feet above mean sea level.

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

Date	Water level	Date	Water level	Date	Water level
July 5	8.01	Aug. 26	7.93	Oct. 28	8.37
29	8.39	Sept. 24	8.15	Nov. 29	9.06

Cumberland 129. Thomas Cooney Estate. About 90 feet west of Diamond Hill Road, 0.4 mile south of Cumberland Hill. Unused dug domestic well, diameter 30 inches, depth 30 feet below land surface. Measuring point, at arrowhead on top of timber in well shelter, 3.1 feet above land-surface datum and about 330 feet above mean sea level.

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

Date	Water level	Date	Water level	Date	Water level
July 18	11.88	Aug. 26	7.61	Oct. 28	12.45
29	13.66	Sept. 24	11.15	Nov. 29	13.13

Cumberland 265. Clarence Lawton. About 55 feet south of Scott Road, 0.25 mile northeast of Ashton. Unused dug domestic well, diameter 30 inches, depth 20.4 feet below land surface. Measuring point, arrowhead on timber brace in middle of well cover, 3.8 feet above land-surface datum and about 130 feet above mean sea level.

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

Date	Water level	Date	Water level	Date	Water level
Aug. 19	13.70	Sept. 24	13.60	Nov. 29	15.87
26	12.84	Oct. 28	15.37		

Cumberland 315. J. L. Carpenter. Northeast corner of Abbott Run Valley and Bear Hill Roads and 0.9 mile south of Abbott Run village. Unused dug domestic well, diameter 28 inches, depth 29.9 feet below land surface. Measuring point, top of slate slab southwest side of well, at land-surface datum and about 135 feet above mean sea level.

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

Date	Water level	Date	Water level	Date	Water level
Aug. 22	15.10	Sept. 24	14.39	Nov. 29	19.92
26	13.44	Oct. 28	18.18		

East Providence 1. 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. Pumped dug well, diameter 48 inches, depth 34 feet below land surface. Measuring point, top edge of casing, 20.0 feet below land-surface datum and 66.44 feet above mean sea level. Readings made when pump shut down.

Water level, in feet below land-surface datum, 1944,1946

Date	Water level	Date	Water level	Date	Water level
Dec. 14, 1944	22.5	Aug. 8, 1946	22.5	Sept. 19, 1946	22.2
Feb. 12, 1946	22.5	15	22.5	26	22.3
July 11	22.2	22	22.4	Oct. 28	22.2
18	22.4	29	22.2	Nov. 29	22.3
29	22.4	Sept. 5	22.3	Dec. 30	22.2
Aug. 1	22.4	12	22.3		

Lincoln 84. Lincoln Bleachery & Dye Works, Lonsdale. About 5 feet north of machine shop, 0.1 mile northwest of Lonsdale. Unused driven industrial well, diameter 3 inches, depth 107.3 feet below land surface. Measuring point, top of casing, 2.7 feet below land-surface datum and about 60 feet above mean sea level.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 11	4.72	July 31	6.06	Sept. 12	5.85	Nov. 2	6.12
19	4.92	Aug. 7	5.90	20	5.89	8	6.07
26	5.35	14	5.86	26	5.87	23	6.16
July 9	5.83	22	5.78	Oct. 3	5.40	30	6.39
16	5.88	29	5.61	9	5.85	Dec. 31	6.07
23	5.89	Sept. 5	5.83				

Lincoln 181. Sayles Finishing Plants, Inc., upper bleachery well. About 0.2 mile southwest of Walker Street and 0.2 mile southwest of Scott Pond. Unused driven industrial well, diameter 3 inches, depth 110 feet below land surface. Measuring point, top of casing, at land-surface datum and about 60 feet above mean sea level.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 4	1.75	July 15	2.21	Aug. 19	2.54	Sept. 23	2.67
10	1.63	22	2.33	26	2.56	30	2.71
17	1.71	29	2.56	Sept. 3	2.38	Oct. 28	2.85
24	1.91	Aug. 5	2.63	9	2.56	Nov. 25	3.10
July 8	1.83	12	2.45	16	2.63	Dec. 30	3.01

Lincoln 199. Mrs. Mary Greene. 50 feet east of Louisquisset Pike, 0.5 mile south of junction of Washington and Louisquisset Pikes. Unused dug domestic well, diameter 36 inches, depth 18.7 feet below land surface. Measuring point, top of projecting stone in well casing, at land-surface datum and about 205 feet above mean sea level.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 13	2.92	June 24	4.97	Aug. 26	3.48	Oct. 28	9.40
May 31	3.82	July 29	10.31	Sept. 24	6.84	Nov. 29	11.47

North Smithfield 2. Georges Malfait. About 400 feet west of Louisquisset Pike, about 350 feet southeast of Sayles Hill Road and 1.5 miles southwest of Manville. Unused drilled domestic well, diameter 6 inches, depth 117 feet below land surface. Measuring point, top of casing, at land-surface datum and about 350 feet above mean sea level.

## North Smithfield 2--Continued.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 7	9.85	June 24	12.34	Aug. 26	15.01	Oct. 28	15.66
May 31	10.54	July 29	15.43	Sept. 24	14.70	Nov. 29	16.26

Providence 5 (\*1023, p. 369). 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, 1946

Jan. 7	8.00	Mar. 25	8.00	June 10	8.20	Aug. 20	8.49
14	8.03	Apr. 1	8.03	17	8.30	26	8.38
21	7.99	8	8.02	24	8.40	Sept. 2	8.26
28	7.94	15	8.10	July 1	8.45	9	8.40
Feb. 4	8.07	22	8.20	8	8.48	16	8.40
11	7.93	29	8.32	15	8.55	23	8.56
18	8.00	May 6	8.20	22	8.61	30	8.47
25	7.88	13	8.36	29	8.66	Oct. 28	8.75
Mar. 4	7.80	20	8.22	Aug. 5	8.66	Nov. 29	8.93
11	7.80	27	8.30	12	8.42	Dec. 28	8.93
18	7.92	June 3	8.17				

Providence 48 (\*1023, p. 369). Gorham Manufacturing Co. On bank of Mashapaug Pond, 700 feet northwest of Adelaide Avenue and 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, 1946  
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	7.25	7.26	8.81	8.95	9.30	7.76	9.48	9.25	7.38	9.28	9.51	7.84
2	8.90	7.06	7.31	9.07	9.23	7.51	9.47	9.40	7.28	9.28	8.26	9.74
3	8.87	6.94	6.97	9.07	9.30	9.24	9.48	8.12	9.01	9.33	7.72	9.40
4	8.88	8.85	8.66	9.05	7.71	9.29	8.06	7.78	9.94	9.28	9.50	9.55
5	8.67	8.67	8.74	9.07	6.68	9.34	7.75	8.84	9.11	8.44	9.50	9.55
6	7.08	8.53	8.68	7.36	9.22	9.35	8.25	8.84	9.10	7.68	9.34	9.51
7	8.66	8.74	8.74	6.50	9.29	9.38	8.46	9.03	8.14	9.35	9.54	9.57
8	8.26	8.63	8.71	9.10	9.28	7.74	7.98	8.91	7.40	9.37	7.49	7.90
9	8.63	7.79	7.29	9.13	9.28	7.51	7.81	8.92	9.02	9.42	8.22	9.76
10	8.86	6.60	7.22	9.15	9.32	9.30	7.99	7.59	8.95	9.40	7.80	9.06
11	8.14	8.70	8.82	9.23	7.75	9.33	8.08	7.25	9.09	9.46	7.74	9.65
12	7.41	8.81	8.77	9.20	6.70	9.34	8.13	8.98	9.15	8.05	9.28	9.61
13	7.68	8.80	8.75	7.75	9.38	9.30	7.69	9.08	9.19	7.72	9.43	9.70
14	8.16	8.77	8.73	7.35	9.36	9.30	7.52	9.06	8.08	9.39	9.52	8.31
15	8.14	8.44	8.73	9.04	9.22	7.61	9.40	9.07	7.47	9.44	9.59	8.12
16	8.28	8.56	7.47	9.23	9.30	7.23	9.54	9.12	9.12	9.47	9.51	9.85
17	8.53	7.06	7.88	9.25	9.29	9.24	9.43	7.78	9.18	9.49	7.95	9.76
18	8.24	8.86	8.85	9.23	7.54	9.32	9.43	7.56	9.16	9.46	9.50	9.75
19	7.53	8.86	8.96	9.29	6.69	9.32	9.56	9.04	9.24	9.37	9.59	9.63
20	7.24	8.79	9.00	7.51	9.27	9.35	8.13	9.04	9.24	7.78	9.61	9.69
21	8.18	8.87	9.03	6.67	9.35	9.37	7.74	9.03	7.72	9.35	9.60	8.88
22	8.82	8.88	8.97	9.22	9.35	7.65	9.40	9.16	7.62	9.47	9.50	8.25
23	8.81	8.57	7.48	9.31	9.42	7.40	9.46	9.02	9.11	9.47	8.07	9.56
24	8.70	7.13	7.16	9.32	9.37	9.31	9.48	7.52	9.21	9.46	8.05	9.50
25	8.71	8.86	8.95	9.34	7.79	9.32	9.49	7.45	9.18	9.49	9.66	7.60
26	7.62	8.76	8.96	9.24	6.78	9.38	9.49	8.90	9.24	8.12	9.52	9.36
27	6.99	8.87	8.97	7.82	9.27	9.41	8.18	8.58	9.25	7.76	9.43	9.65
28	7.61	8.80	9.01	6.60	9.28	9.44	7.78	8.92	8.06	9.43	8.04	8.20
29	7.38		9.03	9.23	9.29	7.60	9.48	8.95	7.50	9.40	9.49	7.65
30	7.76		7.39	9.24	8.22	7.54	9.52	8.97	9.20	9.40	8.35	9.64
31	7.35		7.19		9.37		9.57	7.77		9.43		9.36

Providence 81. Nicholson File Co. well 2. About 120 feet west of Acorn Street, 230 feet north of Tingley Street and 2 miles west of Providence. Pumped gravel-packed well, diameter 10 inches, depth 145 feet below land surface. Measuring point, altimeter gauge, at land-surface datum and about 10 feet above mean sea level. Altimeter readings made on Sunday when pump was shut off.

Water level, in feet below land-surface datum, 1941, 1944-46

Date	Water level	Date	Water level	Date	Water level
Oct. 1941	14.0	July 28, 1946	24.5	Oct. 20, 1946	22.5
Sept. 1944	20.0	Aug. 4	23.5	27	23.0
May 1945	20.0	18	24.5	Nov. 3	22.8
May 26, 1946	22.0	25	24.3	10	23.0
June 2	22.0	Sept. 8	24.5	17	23.0
9	23.0	15	24.3	Dec. 1	22.5
23	23.0	22	24.5	8	22.5
30	23.0	29	24.8	15	23.5
July 7	23.0	Oct. 6	23.0	22	22.5
14	24.0	13	24.0	29	23.0
21	22.8				

Providence 82. Nicholson File Co. well 1. About 225 feet west of Acorn Street, 360 feet north of Tingley Street and 2 miles west of Providence. Pumped gravel-packed well, diameter 8 inches, depth 150 feet below land surface. Measuring point, altimeter gauge, at land-surface datum and about 8 feet above mean sea level. Altimeter readings made on Sunday when pump was shut off.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 26	15.0	July 21	16.8	Sept. 22	18.0	Nov. 10	16.3
June 2	18.0	28	18.0	29	18.0	17	16.3
9	17.0	Aug. 4	22.8	Oct. 6	16.3	Dec. 1	16.0
23	17.0	18	18.0	13	18.0	8	16.0
30	17.0	25	17.3	20	16.0	15	17.0
July 7	16.0	Sept. 8	18.0	27	15.8	22	16.0
14	17.5	15	17.5	Nov. 3	16.0	29	17.0

Providence 94 (#1023, p. 370). Providence Gas Co., Sassafraz 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, 1946

Jan. 7	14.60	Mar. 25	15.94	June 10	16.02	Aug. 20	20.90
14	16.43	Apr. 1	15.26	17	16.27	26	22.99
22	16.35	8	16.03	24	17.09	Sept. 2	23.67
28	15.90	15	16.04	July 1	16.05	9	23.08
Feb. 4	15.33	22	15.97	8	16.60	16	23.28
11	15.37	29	16.56	15	16.35	23	24.57
18	14.96	May 6	15.82	22	17.19	30	21.69
25	15.24	13	15.18	29	16.20	Oct. 28	21.74
Mar. 4	16.43	20	15.68	Aug. 5	16.78	Nov. 29	22.15
11	15.93	27	16.24	12	22.19	Dec. 28	21.31
18	14.65	June 3	14.96				



Providence 113 (\*1023, p. 371). 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, 1946

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	48.51	Mar. 25	47.79	June 10	47.77	Aug. 20	48.09
14	48.48	Apr. 1	47.82	17	47.79	26	48.13
21	48.23	8	47.76	24	47.87	Sept. 2	48.05
28	48.30	15	47.74	July 1	47.89	9	48.02
Feb. 4	48.26	22	47.74	8	47.87	16	47.97
11	48.16	29	47.80	15	47.98	23	48.02
18	48.14	May 6	47.65	22	48.02	30	47.82
25	47.91	13	47.77	29	48.07	Oct. 28	47.99
Mar. 4	48.69	20	47.72	Aug. 5	48.07	Nov. 29	48.02
11	47.92	27	47.74	12	48.15	Dec. 28	47.85
18	47.88	June 3	47.71				

Providence 1110 (\*1023, p. 371). 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, 1946

Jan. 7	6.10	Mar. 25	6.27	June 10	6.29	Aug. 20	6.41
14	6.21	Apr. 1	6.35	17	6.33	26	6.38
21	6.20	8	6.33	24	6.34	Sept. 2	6.48
28	6.23	15	6.33	July 1	6.43	9	6.49
Feb. 4	6.30	22	6.38	8	6.44	16	6.56
11	6.25	29	6.39	15	6.53	23	6.60
18	6.27	May 6	6.37	22	6.51	30	6.57
25	6.25	13	6.43	29	6.49	Oct. 28	6.70
Mar. 4	6.09	20	6.33	Aug. 5	6.42	Nov. 29	6.78
11	6.20	27	6.34	12	6.41	Dec. 28	6.66
18	6.18	June 3	6.13				

Providence 1111. Brown University. Opposite corner of George and Magee Streets, Providence, in basement of Rhode Island Hall. Unused dug well, diameter 30 inches, depth 23.7 feet below land surface. Measuring point, top of concrete floor, 8.3 feet below land-surface datum and about 110 feet above mean sea level. Measurements made by professors and students, Department of Geology, Brown University.

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

Nov. 14	15.46	Nov. 25	15.92	Dec. 8	16.34	Dec. 17	16.47
15	15.49	26	15.95	9	16.37	18	16.48
16	15.55	27	15.98	10	16.38	19	16.50
17	15.59	Dec. 1	16.12	11	16.40	20	16.51
18	15.65	2	16.15	12	16.41	24	16.10
19	15.68	3	16.19	13	16.42	28	15.86
21	15.76	5	16.25	14	16.44	29	15.72
22	15.79	6	16.26	15	16.45	30	15.57
23	15.83	7	16.31	16	16.46	31	15.56

Smithfield 43. L. M. Gardner. On north side of Washington Pike. 0.1 mile northeast of Jenks Hill Road and 3.3 miles west of Ashton. Unused dug stock well, diameter 36 inches, depth 20 feet below land surface. Measuring point, top edge of granite slab in well casing, at land-surface datum and about 400 feet above mean sea level.

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

Apr. 16	10.59	June 24	11.89	Aug. 26	11.26	Oct. 28	13.91
May 31	10.99	July 29	14.52	Sept. 24	12.90	Nov. 29	14.65

Washington County

Charlestown 18. U. S. Navy Dept. Naval Auxiliary Air Station (test well 2), about 0.5 mile south of U. S. Highway 1, 1,000 feet south of water towers and 3 miles southwest of Charlestown. Unused driven well, diameter  $2\frac{1}{2}$  inches, depth 31.5 feet below land surface. Measuring point, top edge of casing, at land-surface datum and 26.40 feet above mean sea level.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 3	18.65	Oct. 17	19.02	Oct. 30	19.44	Dec. 3	20.29
9	18.74	23	19.23	Nov. 6	19.60	27	20.71

Exeter 8. Rhode Island State Department of Social Welfare, Exeter School. About 150 feet southeast of boiler house, 300 feet west of nurses' home and 3.5 miles south of Exeter. Pumped dug well, diameter 30 inches, depth 17 feet below land surface. Measuring point, top of cement casing, at land-surface datum and about 100 feet above mean sea level.

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

July 9	12.22	Aug. 19	12.82	Sept. 30	12.64	Nov. 22	16.42
15	13.37	26	11.05	Oct. 7	12.93	23	15.83
22	12.26	Sept. 2	12.78	15	12.40	25	14.33
29	12.87	9	15.62	21	14.75	27	15.15
Aug. 5	12.77	16	14.60	28	14.65	Dec. 8	15.60
12	12.80	24	12.69				

Exeter 16. 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. Unused driven well, diameter  $2\frac{1}{2}$  inches, depth 25.6 feet below land surface. Measuring point, top edge of casing, at land-surface datum and about 100 feet above mean sea level.

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

July 9	11.40	Aug. 26	11.02	Oct. 3	11.93	Nov. 27	13.57
15	11.10	Sept. 2	10.96	7	12.00	29	13.54
22	11.87	9	11.00	15	12.40	Dec. 8	13.74
29	13.30	16	11.55	21	12.45	10	13.81
Aug. 5	12.28	24	11.72	28	12.60	17	14.00
12	11.40	30	11.47	Nov. 4	12.87	23	13.99
19	11.00						

Westerly 4. Westerly Water Works. Varietyville Pumping Station well 4. On west side of White Rock Road and 2.3 miles north of Westerly. Pumped driven well, diameter  $2\frac{1}{2}$  inches, depth 60 feet below land surface. Measuring point, top edge of casing, at land-surface datum and about 15 feet above mean sea level. Readings made when pump shut down.

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

Oct. 3	7.48	Oct. 31	7.98	Nov. 21	8.11	Dec. 12	8.11
17	8.20	Nov. 7	8.06	29	8.10	19	8.32
24	7.90	14	8.09	Dec. 5	8.14	31	8.06

Westerly 133. Westerly Water Works. White Rock Pumping Station well 31. On west side of White Rock Road and 3 miles north of Westerly. Pumped driven well, diameter  $2\frac{1}{2}$  inches, depth 40 feet below land surface. Measuring point, top edge of casing, at land-surface datum and about 25 feet above mean sea level. Pumping at time of each measurement.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 17	16.82	Nov. 7	16.55	Nov. 21	17.19	Dec. 5	17.83
24	16.58	14	16.90	29	17.08	31	16.90
31	16.69						

Westerly 178. Westerly Water Works. Bradford Pumping Station well 12A. On north side of Bradford Road and 1 mile southwest of Bradford. Pumped driven well, diameter  $2\frac{1}{2}$  inches, depth 40.1 feet below land surface. Measuring point, top edge of casing, at land-surface datum and about 50 feet above mean sea level. Except as noted, readings made when pump shut down.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 17	4.17	Nov. 7	4.28	Nov. 29	4.45	Dec. 19	4.65
24	3.98	14	a7.11	Dec. 5	4.54	31	4.28
31	4.08	21	a7.13	12	4.54		

a Pumping.

## VERMONT

By H. L. Pree, Jr.

### PROGRAM OF WORK

Periodic measurements of water level were continued in Vermont in 1946 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

The water level in the well near Montpelier appears to fluctuate with the precipitation and seasonal changes in temperature. In 1946 the net drop in water level was about 1.3 feet, with 34.91 inches of precipitation as measured at nearby Northfield, compared with 45.81 inches in 1945 and normal of 33.84 inches.

The water level was above average from the beginning of the year to the end of March and again at the end of May. During the remaining months it was below average.

The abrupt rise in water level in March was largely due to temperatures high enough to melt the snow cover. This early warm weather opened the growing season approximately three weeks earlier than usual. It apparently accounted for the drop in water level following the sharp rise in March. The slight rise in May can be attributed to heavy rainfall. After a drop in September, the water level rose in October after the end of the growing season. This rise continued through the end of December because of above-normal temperature and precipitation.

#### WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS Washington County

US 90 (\*986, p. 291; 1016, p. 339; 1023, p. 373). Montpelier 1. Burton Peterson. About 0.7 mile west of the North Branch of Winooski River and 3.0 miles north of Montpelier, in Middlesex.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	7.50	Apr. 30	6.56	July 31	10.17	Oct. 31	9.18
Feb. 28	7.34	May 31	6.47	Aug. 31	9.31	Nov. 30	8.98
Mar. 30	5.59	July 2	8.32	Sept. 30	9.89	Dec. 30	8.92



