

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

Part 1. Northeastern States

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

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Maine, Massachusetts, Michigan, New
Hampshire, New Jersey, New York,
Ohio, Pennsylvania, Rhode Island,
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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 Branch under the direction of:

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

Part 1. NORTHEASTERN STATES

INTRODUCTION

By A. N. Sayre and others

Significance of records of water level and artesian pressure

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

Annual publication of records by Geological Survey

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

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

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

Scope of present volume

The present volume covers the northeastern States and gives records of water level and artesian pressure in about 950 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, 170 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 34,360 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, with the exception

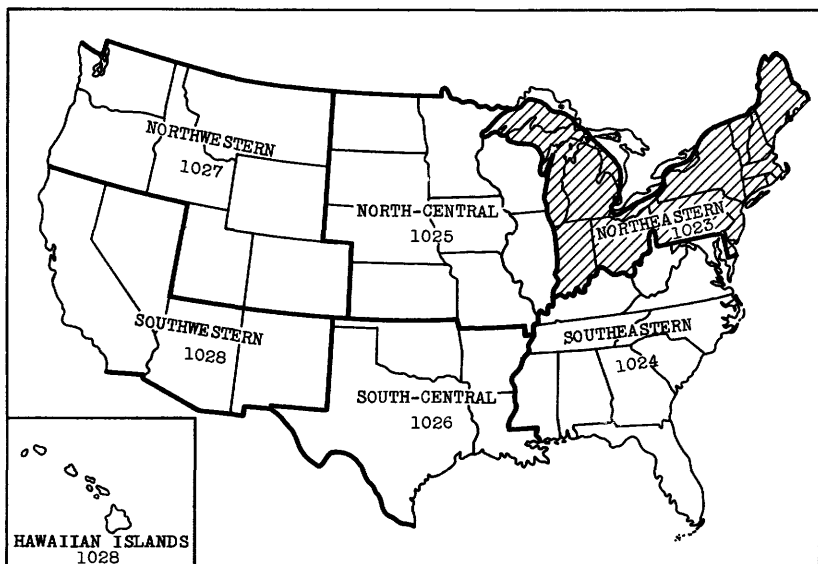


Figure 1.--Outline map of the United States, showing sections of the country covered by the six water-supply papers on water levels and artesian pressure in observation wells in 1945. The shaded section represents the part of the country covered by this volume.

of the wells on Long Island which are given in reference to mean sea level. 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 1945 the network included about 160 wells in 45 States. About 40 of the wells were established expressly for the network in 1942 and about 20 were established in 1943; the other 100 were selected from wells measured regularly in connection with cooperative ground-water investigations. The coverage of the country is still far from adequate, and it is expected that some wells not now included will be added to the network from time to time.

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

In 1945 the precipitation in each of the 13 States in the northeastern section of the country was above normal and the water levels rose in many wells of the section. The fluctuations of both water level and artesian pressure in wells depend, however, on many factors besides the amount of precipitation. In certain of the observation wells there are fluctuations caused by differences in the rate of pumping or artesian flow from other wells in the area, but most of the observation wells are not noticeably affected by pumping or artesian flow. A summary of the changes in ground-water level is given in the chapter for each State.

Acknowledgments

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

CONNECTICUT

By Jean Lowry

PROGRAM OF WORK

During 1945 ground-water studies in Connecticut were continued in cooperation with the Connecticut State Water Commission. These studies consisted, in part, of a program of periodic water-level measurements in about 15 wells in the city of New Haven, in about 20 wells in the town of Waterbury, and in a State-wide network of scattered observation wells situated in Burlington, Falls Village, Plainfield, Southbury, and Woodbury. Monthly observations were made in all but three of these wells. One well in Waterbury, one in Burlington, and one in Falls Village were measured weekly. In addition to the water-level observations, samples of water were collected at the beginning of the year from all ground-water pumping plants in New Haven for determination of chloride content. Also, ground-water samples for sulfate determination were collected on a bimonthly basis from some of the pumping plants in Waterbury.

In 1945, the average precipitation at 19 rainfall stations reported by the U. S. Weather Bureau was 50.94 inches. Precipitation in all parts of Connecticut was above normal during the year. In general, the rise and fall of ground-water levels followed closely the changing trend of the rate of precipitation.

HARTFORD COUNTY

Burlington

An observation well was located in Burlington in the watershed of Burlington Creek in 1944 and weekly measurements began on May 20, 1944. The following table shows the data for this well. It will be noted that the range in water level in this well is more than 6 feet. At the end of 1945, the water level was 3.9 feet higher than at the end of the preceding year. At Burlington, the precipitation amounted to 54.97 inches. The highest water level at well Bu 1 and the greatest rate of precipitation were both recorded in May.

Summary of data on water levels in Burlington, 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	
Bu 1	May 20, 1944	16.80	Oct. 9, 11, 23, 1944	10.10	May 20, 1945	12.60

LITCHFIELD COUNTY

Falls Village

Weekly measurements were begun on June 8, 1944, in an observation well (FV 1) near Falls Village. It was impossible, however, to continue measurements in this well after October 25, 1945. Therefore, a new well (FV 2) was located nearby and measurements begun on November 3, 1945. Data for these two wells follow. A net rise in water level in well FV 1 of 0.9 foot occurred in 1945. The annual precipitation at Falls Village was 52.67 inches or 9.55 inches above normal. The lowest recorded water level occurred in March, the month of least precipitation, and the highest water level for the year was recorded on the second day of August, the highest precipitation having occurred in July.

Summary of data on water levels in Falls Village, 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	
FV 1	June 8, 1944	16.76	Mar. 8, 1945	12.06	Aug. 2, 1945	14.93
FV 2	Nov. 3, 1945	10.96	Nov. 3, 1945	1.67	Dec. 17, 1945	2.17

a Last measured on Oct. 25, 1945.

Woodbury

Water levels in two wells in Woodbury have been observed monthly since April 1944. These wells were among those measured 30 years ago in connection with an investigation of hydrologic conditions in the Pomperaug River Basin by Meinzer.^{1/} The following tables show that the water level in both wells reached the highest point observed during May 1945. At the end of the year, the water level in well W 1 was 0.3 foot higher than at the end of the previous year; whereas in well W 2 the water level was 0.4 foot lower.

^{1/} Meinzer, O. E., and Stearns, N. D., A study of ground water in the Pomperaug Basin, Conn.: U. S. Geol. Survey Water-Supply Paper 597-B, 1929.

Summary of data on water levels in Woodbury, 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	
W 1	Oct. 4, 1913	33.5	Oct. 10, 1914	21.12	May 17, 1945	28.59
W 2	Oct. 4, 1913	18.7	Sept. 26, 1914 July 3, 1915	11.00	May 5, 1945	12.07

NEW HAVEN COUNTY

New Haven

To facilitate the investigation of ground-water conditions there, the city of New Haven has been divided into four somewhat arbitrary areas, based on the chief use of ground water in each. The boundaries of these areas were shown on a map of New Haven published in Water-Supply Paper 986. The Residential area comprises the north upland part of the city, where there are relatively few pumping wells, most of them being of small capacity. At widely separated locations in this area, however, there are a few industrial plants that pump considerable quantities of water. The Air-conditioning area includes the business section, in which theaters, stores, and restaurants use ground water for air conditioning. The Cold-storage area extends along State Street from Columbus Avenue to Grand Avenue. In this area ground water is used chiefly for refrigeration in plants that store meat, dairy, and similar products. The Industrial area is situated in the vicinity of the West and Mill Rivers where ground water is used chiefly for manufacturing purposes.

A summary of ground-water levels in New Haven is given in the following tables:

Summary of data on water levels in New Haven, Conn.
(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	Date	Water level	Date	
<u>Residential area</u>						
NHn 170	June 23, 1939	+15.64	Jan. 14, 1942	+18.41	June 23, 1939	+16.65
NHn 175	June 23, 1939	+2.27	Dec. 17, 1941	+4.51	June 23, 1939	+3.25
NHn 183	Dec. 13, 1939	+2.67	Dec. 3, 1941	+5.88	June 12, 1940	+3.58
NHn 270	May 21, 1941	+3.78	Dec. 17, 1941	+5.94	Apr. 28, 1943	+5.19
<u>Air-conditioning area</u>						
NHn 123	Feb. 26, 1941	a-1.22	Sept. 29, 1944	+2.48	June 1, 1943	+0.77
NHn 250	Oct. 9, 1940	+0.98	Aug. 30, 1944	+4.79	Oct. 9, 1940	+3.11

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

Summary of data on water levels in New Haven, Conn.
(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	Date	Water level	Date	
<u>Cold-storage area</u>						
NHn 108	May 12, 1939	-2.79	Aug. 30, 1944	+1.26	May 8, 1940	-.29
NHn 110	May 12, 1939	-2.20	Oct. 27, 1944	+.51	May 12, 1939	-1.56
<u>Industrial area</u>						
NHn 131	June 1, 1939	-5.65	May 26, 1944	-2.06	Feb. 19, 1941	-3.01
NHn 138	Feb. 28, 1940	-5.70	June 23, 1944	-1.83	Jan. 2, 1941	-2.71
NHn 160	June 7, 1939	-19.59	Nov. 1, 1945	+4.15	Mar. 6, 1940	+2.32
NHn 178	July 21, 1939	-6.38	Mar. 3, 1945	+.04	June 12, 1940	-5.63
NHn 179	July 21, 1939	-6.55	Aug. 28, 1945	-.17	July 17, 1940	-5.34
NHn 235	Oct. 2, 1940	-3.59	Feb. 1, 1945	+.15	Mar. 30, 1943	-.64

Net change in water levels in observation wells in New Haven, Conn.,
in feet, during 1945

Area	Well	Net rise (+) or net decline (-)
Residential	NHn 170	+0.21
	NHn 175	+.28
	NHn 183	+.23
	NHn 270	+.53
	NHn 123	+1.19
Air-conditioning	NHn 250	+.81
	NHn 108	-1.67
	NHn 110	+.55
Industrial	NHn 131	+2.13
	NHn 138	+1.75
	NHn 160	-1.44
	NHn 178	-.63
	NHn 179	+.61
	NHn 235	+.90

It will be noted in the summary table that during 1945 four of the wells in the Industrial area reached their lowest observed water level for the 6-year period of record. These four wells are all in the Mill River section of the Industrial area. The table of net changes in water level for the year shows, however, that at the end of the year the water levels in three of these four wells stood at a higher level than at the end of the preceding year.

During 1945, precipitation at New Haven was 47.33 inches or 5.35 inches above normal. The net change table indicates the effect of the heavy precipitation by showing that the water table, in general, was higher throughout the city at the end of 1945 than at the end of 1944. With the exception of two wells, the wells in the three pumping areas show a greater rise in water level during the year than those in the nonpumping Residential area. Even though precipitation was considerably above normal during the latter part of the year, this indicates that the amount of pumpage must have decreased toward the end of the year, allowing the water table to

make a partial recovery. The two wells which show an anomalous drop in water level during the year are both near pumping wells whose drawdown affects them considerably.

Southbury

One well in Southbury has been measured monthly since April 1944. This was also one of the wells measured during the course of the hydro-logic investigation made 30 years ago in the Pomperaug Basin by Meinzer.^{2/} The following tables show that the water level in this well reached its highest observed stage in May 1945, and at the end of the year it was 1.3 feet higher than at the end of 1944.

Summary of data on water levels in Southbury, 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	
S 1	Oct. 4, 1913	21.7	Oct. 14, 1916	13.49	May 17, 1945	14.47

Waterbury

One well (Wb 1) has been measured weekly since April 29, 1943. Eighteen other wells have been measured since February 1944, one since June 1944, and one since August 1944. During 1945 these wells have been measured on a monthly basis. It will be noted from the following tables that some of the wells in Waterbury have much larger range of fluctuation in water level than those at New Haven. This is due to the fact that many of the observation wells in Waterbury are on slopes and penetrate glacial till which is much less permeable than the stratified drift which supplies the wells in New Haven.

Precipitation at Waterbury was 50.93 inches or 4.39 inches above normal. However, the above-normal rates of precipitation occurred chiefly in the growing season, followed by below-normal precipitation in September and October. As a result, the water table dropped sharply until near the end of the year when heavy precipitation brought about rising stages. Three of the wells in Waterbury reached their lowest observed water level in the fall of 1945, while 15 of them (including the 3 just mentioned) reached their highest observed water level in the spring of the same year. At the end of the year the water levels in 14 of the wells were lower than at the end of 1944, and in 7 of them they were higher.

^{2/} Meinzer, O. E., and Stearns, N. D., op. cit.

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, 1945	10.99	Sept. 11, 1944	7.90	May 29, 1945	9.02
Wb 16	Feb. 2, 1944	15.86	Nov. 5, 1945	9.58	Jan. 3, 1945	14.32
Wb 25	Feb. 3, 1944	8.62	Aug. 29, 1944	4.28	Apr. 26, 1944	5.47
Wb 70	Feb. 2, 1944	17.01	Aug. 29, 1944	13.08	Apr. 26, 1944	15.54
Wb 93	Feb. 18, 1944	28.39	Aug. 29, 1944	25.38	Mar. 4, 1945	26.60
Wb 99	Feb. 18, 1944	26.20	Mar. 2, 1944	25.47	May 19, 1945	25.90
Wb 119	Feb. 18, 1944	12.34	Aug. 29, 1944	2.93	Nov. 30, 1944	4.17
Wb 130	Feb. 18, 1944	15.91	Nov. 5, 1945	1.14	Mar. 4, 1945	3.88
Wb 167	Feb. 18, 1944	11.01	Aug. 29, 1944	7.26	Mar. 4, 1945	8.30
Wb 176	Feb. 18, 1944	14.48	Aug. 29, 1944	3.14	Mar. 4, 1945	4.51
Wb 179	Feb. 18, 1944	22.15	Aug. 29, 1944	5.05	May 19, 1945	10.40
Wb 188	Feb. 18, 1944	28.21	Aug. 29, 1944	19.51	Mar. 4, 1945	19.99
Wb 191	Feb. 18, 1944	23.72	Sept. 27, 1944	17.95	Mar. 17, 1945	22.46
Wb 198	Feb. 18, 1944	18.25	Aug. 29, 1944	6.72	May 19, 1945	13.67
Wb 210	Feb. 18, 1944	11.02	Aug. 29, 1944	5.78	Apr. 26, 1944	6.27
Wb 234	Feb. 18, 1944	20.84	Aug. 29, 1944	15.87	May 19, 1945	19.05
Wb 236	Feb. 18, 1944	8.15	Aug. 29, 1944	2.27	Nov. 30, 1944	3.50
Wb 249	Feb. 18, 1944	13.18	Aug. 29, 1944	4.95	Mar. 17, 1945	8.66
Wb 261	Feb. 18, 1944	28.08	Aug. 29, 1944	6.75	May 19, 1945	15.14
Wb 336	June 20, 1944	20.40	Aug. 29, 1944	14.18	June 27, 1945	17.24
Wb 340	Aug. 8, 1944	24.87	Sept. 27, 1945	15.83	May 19, 1945	23.89

a Well inaccessible in the spring due to flooding of the well pit.

Net change in water levels in observation wells in Waterbury, Conn., in feet, during 1945

Well	Net rise (+) or net decline (-)	Well	Net rise (+) or net decline (-)
Wb 1	-0.17	Wb 188	+0.67
Wb 16	-2.96	Wb 191	-.19
Wb 25	-.68	Wb 198	+.67
Wb 70	-.37	Wb 210	+.33
Wb 93	-.10	Wb 234	-.48
Wb 99	+.24	Wb 236	-1.23
Wb 119	-1.25	Wb 249	+.34
Wb 130	-1.58	Wb 261	+4.81
Wb 167	+.21	Wb 336	-1.16
Wb 176	-.27	Wb 340	-7.35

WINDHAM COUNTY

Plainfield

Monthly water-level measurements have been made in this well since October 1942. The following tables give water-level data for this well. At the end of the year the water level was 0.6 foot lower than at the end of 1944.

Summary of data on water levels in Plainfield, 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	
P 1	Oct. 1, 1942	31.72	Feb. 3, 1944	28.79	Jan. 4, 1943	31.08

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Hartford County

Bu 1 (#1016, p. 13). Omar Chapman. Formerly owned by Mrs. Alice Green. R. D. No. 1, Unionville, Burlington. Measurements discontinued after Dec. 9, 1945

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	13.60	Feb. 27	15.10	June 3	12.50	Oct. 28	15.70
12	13.50	Mar. 7	13.40	10	13.20	Nov. 3	15.89
17	15.20	14	13.50	25	12.90	4	15.20
25	15.10	24	13.10	July 22	12.50	25	13.80
Feb. 2	15.10	28	13.20	Sept. 9	14.60	Dec. 2	14.70
10	10.95	May 13	11.04	Oct. 21	15.70	9	12.60
15	15.60	20	10.10				

Litchfield County

FV 1 (#1016, p. 13). Dwight Harris. Falls Village. Measurements discontinued after Oct. 25, 1945.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	15.79	Apr. 5	14.75	June 14	12.76	Aug. 23	13.54
11	15.73	12	14.77	21	13.29	30	13.88
25	15.73	19	15.72	28	12.99	Sept. 6	14.10
Feb. 1	15.73	26	15.76	July 5	13.32	13	14.20
8	15.73	May 3	12.79	12	13.30	20	14.20
15	15.73	10	12.78	19	12.70	27	14.38
22	15.73	17	12.74	26	12.87	Oct. 4	14.30
Mar. 1	15.72	24	12.15	Aug. 2	12.06	11	14.68
8	16.76	31	12.65	9	12.64	18	14.60
15	15.78	June 7	12.73	16	13.03	25	14.93
22	14.75						

FV 2. Theodore C. Mallory. In Falls Village, on west side of dirt road leading from Falls Village north to U. S. Route 44, about 2.5 miles south of intersection with U. S. Route 44. Unused dug domestic well, diameter 24 inches, stone casing, depth 12.3 feet. Penetrates glacial till. Measuring point, edge of wooden cover at top of well, at land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level
Nov. 3	10.96	Nov. 20	7.80	Dec. 17	1.67
13	8.30	Dec. 5	4.97	29	2.17

W 1 (*1016, p. 13). James Crowfut, Woodbury.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	22.20	Mar. 30	21.14	June 4	21.53	Sept. 28	29.50
Feb. 5	22.33	Apr. 18	21.66	25	22.34	Nov. 2	29.21
Mar. 3	22.40	May 5	21.60	July 27	22.66	28	28.59
17	21.19	17	21.12	Aug. 30	23.91		

W 2 (*1016, p. 13). Oliver Towles. Along Hesseky Brook, Woodbury.

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

Jan. 2	11.14	Mar. 30	11.62	June 4	11.24	Sept. 28	12.20
Feb. 5	12.47	Apr. 18	11.67	25	11.68	Nov. 2	12.00
Mar. 3	11.58	May 5	11.00	July 27	11.18	28	12.07
17	11.33	17	10.68	Aug. 30	11.99		

New Haven County

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

Water level, in feet, 1945

Date	Below land-surface datum	Below mean sea level
Jan. 4	16.85	0.99
Feb. 1	16.94	1.08
Mar. 3	16.85	.99
29	16.97	1.11
May 4	16.62	.76
June 2	16.31	.45
29	16.70	.84
July 26	17.23	1.37
Aug. 28	17.50	1.64
Sept. 26	17.81	1.95
Nov. 1	17.34	1.48
Dec. 1	16.55	.69
31	16.15	.29

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

Water level, in feet, 1945

Jan. 4	13.36	1.92
Feb. 1	13.21	1.77
Mar. 3	13.15	1.71
29	13.08	1.64
May 4	13.02	1.58
June 2	12.93	1.49
29	12.90	1.46
July 26	12.92	1.48
Aug. 28	12.93	1.54
Sept. 26	13.07	1.63
Nov. 1	13.13	1.69
Dec. 1	13.13	1.69
31	13.00	1.56

NHn 123 (*936, p. 13; 944, p. 13; *986, p. 13; 1016, p. 14). New York Life Insurance Co. On west side of Church Street, about 135 feet south of Center Street, New Haven.

Water level, in feet, 1945		
Date	With reference to mean sea level	Below land- surface datum
Jan. 4	-0.46	24.87
Feb. 1	-.50	24.91
Mar. 3	-.59	25.00
29	+0.08	24.33
May 4	+0.91	23.50
June 2	+1.63	22.78
Nov. 1	+0.88	23.53
Dec. 3	+1.21	23.20
31	+0.77	23.64

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

Water level, in feet, 1945		
Date	Below mean sea level	Below land- surface datum
Jan. 4	4.35	20.94
Feb. 1	4.68	21.27
Mar. 3	4.81	21.40
27	4.67	21.26
May 4	4.54	21.13
June 1	4.01	20.60
28	3.54	20.13
July 26	3.29	19.88
Aug. 28	3.09	19.68
Sept. 26	3.37	19.96
Nov. 1	3.49	20.08
Dec. 1	3.10	19.69
31	3.01	19.60

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

Water level, in feet, 1945		
Date		
Jan. 4	5.38	23.13
Feb. 1	4.06	21.81
Mar. 3	4.26	22.01
27	3.96	21.71
May 4	4.02	21.77
June 1	3.73	21.48
29	3.03	20.78
July 26	3.06	20.81
Aug. 28	2.86	20.61
Sept. 26	3.13	20.88
Nov. 1	3.01	20.76
Dec. 1	2.74	20.49
31	2.71	20.46

NHn 160 (*886, p. 61; 906, p. 11; 936, p. 15; 944, p. 15; *986, p. 15; 1016, p. 15). 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, 1945		
Date	With reference to mean sea level	Below land- surface datum
Jan. 4	+1.80	5.09
Feb. 1	-.01	6.90
Mar. 3	+1.60	5.29
29	+2.10	4.79
May 4	+2.48	4.41
June 2	+2.07	4.82

NHn 160--Continued.

Water level, in feet, 1945		
Date	With reference to mean sea level	Below land- surface datum
June 29	+1.71	5.18
July 26	+2.21	4.68
Aug. 28	+1.40	5.49
Sept. 26	-17.04	23.93
Nov. 1	-19.59	26.48
Dec. 1	+2.74	4.15
31	+2.32	4.57

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

Water level, in feet, 1945		
Date	Above mean sea level	Below land- surface datum
Jan. 4	17.00	24.09
Feb. 1	17.17	23.92
Mar. 3	17.31	23.78
29	17.32	23.77
May 3	17.26	23.83
June 2	17.45	23.64
29	17.52	23.57
July 26	17.29	23.80
Aug. 28	17.00	24.09
Sept. 26	16.75	24.34
Oct. 31	16.53	24.56
Dec. 1	16.40	24.69
31	16.65	24.44

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

Water level, in feet, 1945		
Date		
Jan. 4	3.22	30.62
Feb. 1	3.30	30.54
Mar. 3	3.32	30.52
29	3.50	30.34
May 3	3.51	30.33
June 3	3.78	30.06
29	3.89	29.95
July 26	3.68	30.16
Aug. 28	3.50	30.34
Sept. 26	3.33	30.51
Oct. 31	3.20	30.64
Dec. 1	3.15	30.69
31	3.25	30.59

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

Water level, in feet, 1945		
Date	Below mean sea level	Below land- surface datum
Jan. 4	5.70	20.06
Feb. 1	6.05	20.41
Mar. 3	6.38	20.74
27	6.25	20.61
May 4	6.17	20.53
June 2	5.97	20.33
29	6.02	20.38
July 26	5.47	19.83
Aug. 28	5.99	20.35
Sept. 26	6.13	20.49
Nov. 1	6.27	20.63
Dec. 1	6.34	20.70
31	5.63	19.99

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

Water level, in feet, 1945		
Date	Below mean sea level	Below land- surface datum
Jan. 4	5.54	19.89
Feb. 1	5.93	20.28
Mar. 3	6.15	20.50
27	6.11	20.46
May 4	5.94	20.29
June 2	5.55	19.90
29	5.68	20.03
July 26	5.21	19.56
Aug. 28	5.55	19.90
Sept. 26	5.66	20.01
Nov. 1	5.96	20.31
Dec. 1	5.92	20.27
31	5.34	19.69

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

Water level, in feet, 1945		
Date	Above mean sea level	Below land- surface datum
Jan. 4	3.86	20.08
Feb. 1	3.68	20.26
Mar. 3	3.72	20.22
29	3.97	19.97
May 3	4.02	19.92
June 2	4.40	19.54
29	4.04	19.90
July 26	3.93	20.01
Aug. 28	3.83	20.11
Sept. 26	3.45	20.49
Oct. 31	3.12	20.82
Dec. 1	3.14	20.80
31	3.58	20.36

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

Water level, in feet, 1945		
Date	Below mean sea level	Below land- surface datum
Jan. 5	1.18	15.98
Feb. 1	1.59	16.39
Mar. 3	1.26	16.06
27	1.22	16.02
May 4	1.14	15.94
June 1	.84	15.64
29	.94	15.74
July 26	.84	15.64
Aug. 28	.90	15.70
Sept. 26	1.08	15.88
Nov. 1	1.27	16.07
Dec. 1	.99	15.79
31	.64	15.44

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

Water level, in feet, 1945

Date	Above mean sea level	Below land- surface datum
Jan. 4	2.46	12.47
Feb. 1	2.15	12.78
Mar. 3	1.78	13.15
29	2.22	12.71
May 4	2.84	12.09
June 1	3.60	11.33
29	3.12	11.81
July 26	2.93	12.00
Aug. 28	2.33	12.60
Sept. 26	2.16	12.77
Nov. 1	2.79	12.14
Dec. 1	2.03	11.90
31	3.12	11.81

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

Water level, in feet, 1945

Jan. 4	5.19	32.99
Feb. 1	5.34	32.84
Mar. 3	5.32	32.86
29	5.43	32.75
May 3	5.45	32.73
June 2	5.72	32.46
29	5.78	32.40
July 26	5.63	32.55
Aug. 28	5.45	32.73
Sept. 26	5.15	33.03
Oct. 31	5.00	33.18
Dec. 1	4.83	33.35
31	5.19	32.99

Sl (*1016, p. 17). James Fleming, South Britain, Southbury.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	14.92	Mar. 30	13.61	June 4	13.71	Sept. 28	14.92
Feb. 5	15.01	Apr. 18	13.90	25	14.00	Nov. 2	14.59
Mar. 3	13.98	May 5	13.56	July 27	13.70	28	14.47
17	13.57	17	13.49	Aug. 30	14.35		

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

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

Jan. 4	8.22	Apr. 7	8.88	July 9	9.70	Oct. 10	10.06
10	8.87	13	9.22	16	9.78	17	10.10
23	9.62	19	9.34	24	9.05	23	10.23
31	9.87	May 1	8.21	30	9.33	31	10.23
Feb. 2	10.39	7	8.14	Aug. 7	9.34	Nov. 6	10.25
14	10.12	14	8.20	20	9.91	13	10.17
22	9.49	22	8.17	27	9.59	23	9.59
Mar. 1	7.93	30	8.82	Sept. 4	9.63	Dec. 4	9.04
13	8.39	June 13	9.56	10	10.13	11	8.44
20	7.99	21	8.64	17	10.06	26	9.02
28	8.64	July 2	9.35	24	9.96		

Wb 16 (*1016, p. 18). Chase Brass Co., Thomaston Avenue, Waterbury.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	9.58	Mar. 30	10.59	June 4	14.77	Sept. 27	14.85
Feb. 3	11.90	Apr. 19	12.12	27	15.10	Nov. 5	15.86
Mar. 5	9.94	May 5	10.10	July 26	15.54	28	14.32
17	9.65	17	10.75	Aug. 30	14.48		

Wb 25 (*1016, p. 18). U. S. Time Corporation. On northwest corner of Cherry Street and Cherry Avenue, Waterbury.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 12	5.14	Mar. 30	4.75	June 4	5.28	Sept. 27	6.08
Feb. 3	6.30	Apr. 19	5.49	27	5.59	Nov. 5	6.35
Mar. 5	4.47	May 5	4.82	July 26	5.62	28	5.47
16	4.77	17	4.99	Aug. 30	5.93		

Wb 70 (*1016, p. 19). Thomaston Avenue dump. On Thomaston Avenue, Waterbury.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	14.15	Mar. 31	14.74	June 4	15.17	Sept. 27	16.08
Feb. 3	16.26	Apr. 19	15.47	27	15.11	Nov. 2	16.32
Mar. 5	13.94	May 5	14.14	July 26	15.30	28	15.54
17	14.25	17	14.42	Aug. 31	15.82		

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

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 3	27.00	Apr. 19	26.83	June 27	26.99	Sept. 27	27.75
Mar. 4	25.38	May 5	26.03	July 28	26.90	Nov. 5	27.82
17	25.78	19	25.85	Aug. 31	27.64	Dec. 10	26.60
31	26.42	June 5	26.25				

Wb 99 (*1016, p. 20). John McNamara, Hill Avenue, Waterbury.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 3	25.89	Apr. 19	25.66	June 27	25.68	Sept. 27	25.90
Mar. 4	25.71	May 5	25.64	July 28	25.76	Nov. 5	25.95
17	25.72	19	25.47	Aug. 31	25.83	Dec. 10	25.90
31	25.60	June 5	25.57				

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

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 3	6.06	Apr. 19	5.11	June 27	5.80	Sept. 27	7.10
Mar. 4	3.77	May 5	3.99	July 28	5.69	Nov. 5	7.33
17	4.60	19	3.75	Aug. 31	6.64	Dec. 10	4.17
31	4.96	June 5	5.29				

Wb 130 (*1016, p. 20). Charles DeBisschop, 141 Peach Orchard Road, Waterbury.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 3	5.12	Apr. 19	3.69	June 5	3.10	Sept. 27	13.00
Mar. 4	1.14	May 5	1.28	July 27	5.43	Nov. 5	15.91
17	1.47	19	1.17	Aug. 31	9.20	Dec. 10	3.88
31	2.70						

Wb 167 (*1016, p. 20). Carmen Cefratti, Plank Road, Waterbury.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 12	8.29	Mar. 31	7.92	June 5	8.36	Sept. 27	10.92
Feb. 3	8.85	Apr. 19	8.49	27	8.89	Nov. 5	10.61
Mar. 4	7.26	May 5	7.48	July 28	9.38	Dec. 10	8.30
17	7.67	19	7.27	Aug. 31	10.31		

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

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 4	3.14	May 5	4.33	June 25	8.49	Sept. 27	13.74
17	4.06	19	3.74	July 28	8.83	Nov. 5	11.14
31	5.16	June 5	6.38	Aug. 31	10.98	Dec. 10	4.51
Apr. 19	6.77						

Wb 179 (*1016, p. 20). Paul Daunis, 320 Scott Road, Waterbury.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 3	11.34	Apr. 19	6.93	June 28	11.78	Sept. 27	20.17
Mar. 4	8.22	May 5	5.50	July 28	13.33	Nov. 5	15.06
17	8.32	19	5.05	Aug. 31	17.10	Dec. 10	10.40
31	7.89	June 5	5.15				

Wb 188 (*1016, p. 20). Paul Rechenberg, 183 Scott Road, Waterbury.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 3	23.15	Apr. 19	22.32	June 28	23.46	Sept. 27	27.10
Mar. 4	19.51	May 5	20.44	July 28	23.35	Nov. 5	26.16
17	20.20	19	20.27	Aug. 31	24.64	Dec. 10	19.99
31	21.14	June 5	21.52				

Wb 191 (*1016, p. 20). John French, 2472 East Main Street, Waterbury.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 12	18.01	Mar. 31	18.33	June 5	18.38	Sept. 27	23.09
Feb. 3	19.45	Apr. 19	19.30	28	20.26	Nov. 5	23.53
Mar. 4	19.08	May 5	18.79	July 28	21.26	Dec. 10	22.46
17	17.95	19	18.15	Aug. 31	22.04		

Wb 198 (*1016, p. 20). E. L. Bronson, Pierpont Road, Waterbury.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 12	10.48	Mar. 31	9.63	June 5	10.17	Sept. 27	15.08
Feb. 3	12.16	Apr. 19	11.23	28	11.90	Nov. 5	15.84
Mar. 4	9.13	May 5	9.51	July 28	12.29	Dec. 10	13.77
17	9.04	19	6.72	Aug. 31	13.72		

Wb 210 (*1016, p. 20). John Rasco, 4280 East Main Street, Waterbury.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 4	5.89	May 5	7.12	June 28	9.30	Sept. 27	10.13
17	7.66	19	7.27	July 28	8.98	Nov. 5	9.31
31	8.13	June 5	8.68	Aug. 31	9.78	Dec. 10	6.37
Apr. 19	8.74						

Wb 234 (*1016, p. 20). Arcanoglo Amicone, 577 Woodtick Road, Waterbury.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 12	16.27	Mar. 31	16.43	June 5	15.95	Sept. 27	19.99
Feb. 3	17.97	Apr. 19	17.47	28	17.80	Nov. 5	20.29
Mar. 4	17.76	May 5	16.96	July 28	18.76	Dec. 5	19.05
17	16.90	19	15.87	Aug. 31	19.43		

Wb 236 (*1016, p. 20). C. W. Faber, 864 Woodtick Road, Waterbury.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 12	2.95	Mar. 31	2.87	June 5	3.10	Sept. 27	6.77
Feb. 3	2.97	Apr. 19	3.26	28	3.71	Nov. 5	7.36
Mar. 4	2.43	May 5	2.87	July 28	4.31	Dec. 5	3.50
17	2.62	19	2.76	Aug. 31	5.74		

Wb 249 (*1016, p. 22). Nick Gugliotti, Stefano Avenue, Waterbury.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 12	5.79	Mar. 31	4.95	June 5	5.63	Sept. 27	10.49
Feb. 3	7.47	Apr. 19	6.30	28	7.54	Nov. 5	11.06
Mar. 4	6.51	May 5	5.62	July 28	8.04	Dec. 10	8.66
17	4.95	19	5.03	Aug. 31	9.25		

Wb 261 (*1016, p. 22). F. A. Alcott, Wolcott Road, Waterbury.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 12	9.56	Mar. 31	9.05	June 5	10.13	Sept. 27	21.26
Feb. 3	12.47	Apr. 19	11.27	28	13.69	Nov. 5	23.38
Mar. 4	7.94	May 5	8.74	July 28	15.98	Dec. 10	15.14
17	7.77	19	6.75	Aug. 31	18.99		

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

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 27	14.18	Aug. 30	16.37	Nov. 5	17.84		
July 26	15.50	Sept. 27	17.99	28	17.24		

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

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 12	17.11	May 5	16.23	June 27	21.01	Sept. 27	24.87
Mar. 17	15.97	19	15.83	July 26	20.56	Nov. 5	23.21
30	16.85	June 4	17.18	Aug. 30	21.37	28	23.89
Apr. 19	17.50						

Windham County

P 1 (*1016, p. 22). U. S. 94. W. P. Lewis, Pleasant Street, Plainfield.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	29.36	Apr. 2	28.85	July 2	30.09	Oct. 1	30.93
Feb. 2	29.38	May 2	29.43	Aug. 3	30.30	Nov. 1	31.22
Mar. 2	29.14	June 2	29.73	Sept. 12	30.76	Dec. 3	31.08

DELAWARE

By G. D. DeBuchananne

PROGRAM OF WORK

The program of ground-water investigations, which was started in 1943 in cooperation with the Town of Lewes, was continued through 1945. 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 well is equipped with an automatic water-stage recorder, and the other is measured once a week.

FLUCTUATIONS OF WATER LEVEL

The accumulated record is still insufficient to draw any positive conclusions as to water-level trends, but it is interesting to note that the water levels during 1945 seem to be lower than those in 1944. This is particularly interesting in that the precipitation for 1945 was about 11 inches above normal while in 1944 it was just about normal.

Only two months during the year had a deficiency in rainfall--March had a deficiency of 2.07 inches and October, 0.51 inch. The month of July, with 4.96 inches above normal, was the wettest since 1899.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Sussex County

S-1 (*1016, p. 23). 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, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	18.1	18.2	....	17.3	18.4	18.6	....	17.4	18.7	17.3	18.6	17.4
2	18.4	18.2	....	17.4	18.3	18.6	18.7	18.0	18.7	17.4	18.4	17.3
3	17.8	17.7	....	17.3	18.1	18.5	19.0	18.4	18.5	18.5	18.4	17.5
4	18.0	17.5	....	17.1	18.0	18.3	18.9	18.3	18.4	18.8	18.2	17.7
5	17.2	17.5	....	17.3	18.3	18.4	18.8	18.2	18.6	18.8	18.1	17.6
6	17.2	17.3	....	....	18.1	18.6	17.5	18.7	18.7	18.6	18.2	17.1
7	17.1	17.3	17.4	....	18.4	....	17.7	18.5	18.6	18.4	18.2	17.2
8	16.7	17.1	17.4	....	18.3	18.9	17.9	18.5	18.6	18.5	18.2	17.6
9	16.7	17.0	17.5	....	18.5	18.7	....	18.3	18.7	18.6	18.3	17.7
10	16.9	....	17.5	....	18.4	18.5	....	18.4	18.5	18.6	18.4	17.6
11	17.5	....	17.5	18.9	18.6	18.6	17.8	18.5	18.4	18.2	18.0	18.0
12	....	....	17.4	18.6	18.6	18.8	17.8	18.5	18.4	18.3	18.1	18.3
13	18.2	....	17.5	18.6	18.5	18.6	18.3	18.7	18.5	18.4	18.3	18.3
14	17.2	....	17.5	18.6	18.3	18.7	17.8	18.6	18.6	18.3	18.1	18.1

S-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
15	18.5	....	17.4	18.4	18.4	18.7	17.8	18.6	19.3	18.5	....	18.0
16	16.9	....	17.5	18.4	18.5	18.9	17.9	18.4	19.3	18.5	18.4	18.0
17	17.2	....	17.4	18.6	18.4	18.3	17.6	18.5	18.5	18.5	18.5	18.4
18	17.3	....	17.7	18.4	18.3	18.8	....	18.6	17.6	18.6	18.4	18.5
19	17.3	....	18.0	18.5	18.3	18.5	17.6	18.6	18.8	18.7	18.2	17.9
20	17.4	....	17.5	18.5	18.1	18.7	18.1	18.8	18.6	18.7	18.3	18.0
21	17.4	....	....	....	18.4	18.8	17.6	18.9	18.4	18.5	18.5	18.3
22	17.4	....	17.0	18.6	19.0	18.6	17.4	18.9	18.3	18.6	18.1	18.3
23	17.5	....	17.1	18.6	18.8	18.9	17.4	18.7	18.3	18.3	18.2	18.4
24	18.2	....	17.3	18.5	18.6	18.8	17.3	18.1	19.0	18.0	18.3	18.3
25	....	....	17.4	18.3	18.7	19.0	17.3	18.1	19.3	18.0	18.2	18.2
26	....	....	18.3	18.3	18.7	18.5	17.5	18.2	18.7	18.1	18.3	18.4
27	18.0	....	17.6	18.4	18.5	18.4	17.6	18.4	18.8	18.6	18.0	17.3
28	17.8	....	17.6	18.6	18.8	18.6	17.2	18.7	18.6	18.7	17.6	17.3
29	17.7	....	....	18.3	18.7	18.7	17.2	18.9	17.5	18.6	....	17.3
30	17.8	....	....	18.4	18.7	18.7	17.3	18.9	17.5	18.5	17.5	16.4
31	18.1	....	17.2	....	18.7	....	17.3	18.9	....	18.6	....	16.5

S-2 (*1016, p. 24). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	16.7	Apr. 21	16.8	July 18	17.0	Oct. 10	17.0
12	16.5	28	16.9	25	16.6	17	17.0
19	16.3	May 5	16.6	Aug. 1	16.4	24	16.6
22	16.5	12	16.8	8	16.6	31	16.9
26	16.6	19	16.7	15	16.8	Nov. 7	16.6
Feb. 2	16.8	26	16.8	22	17.0	15	16.5
9	16.4	June 2	16.8	29	16.8	21	16.6
Mar. 13	16.5	9	17.0	Sept. 5	16.7	29	16.4
21	16.5	16	17.0	12	16.8	Dec. 6	16.0
30	16.6	23	17.1	19	17.0	13	16.2
Apr. 6	16.9	July 1	18.0	26	16.9	20	16.1
13	17.0	10	17.0	Oct. 3	17.2	27	16.4

INDIANA

By F. H. Klaer, Jr. and R. W. Stallman

PROGRAM OF WORK

The observation-well program in Indiana was continued during 1945 as part of the State-wide investigation of water resources in cooperation with the Indiana Department of Conservation.

During the year, in addition to the investigation of the ground-water resources of St. Joseph County, areal investigations were started in Adams, Boone, Noble, and Tippecanoe Counties. Brief reports entitled, "Preliminary report of ground-water conditions in the vicinity of Scottsburg, Scott County, Indiana," by F. H. Klaer, Jr., and "Memorandum concerning pumping test at Gas City, Indiana, with a detailed discussion of the methods used in the quantitative analysis of water-well interference problems," by J. G. Ferris, were published in mimeographed form by the Indiana Department of Conservation. Work was continued on a reconnaissance survey of ground-water conditions in the State and on an inventory of water wells.

At the end of 1944 the observation-well program included 122 wells. Fifty-three new observation wells were added during 1945 and 9 wells were dropped from the program. Of the remaining 166 wells, 5 were measured daily, 105 weekly, 8 semimonthly, 24 occasionally, and 24 were equipped with automatic water-stage recorders. During the year, a total of nearly 5,600 individual tape measurements of water level and about 6,300 computations of water level from recorder charts were made. The locations of the observation wells included in the program in December 1945 are shown in figure 2.

PRECIPITATION

Precipitation in Indiana, on a State-wide basis, during 1945 was 49.68 inches, the heaviest recorded since 1887. All months, except January,

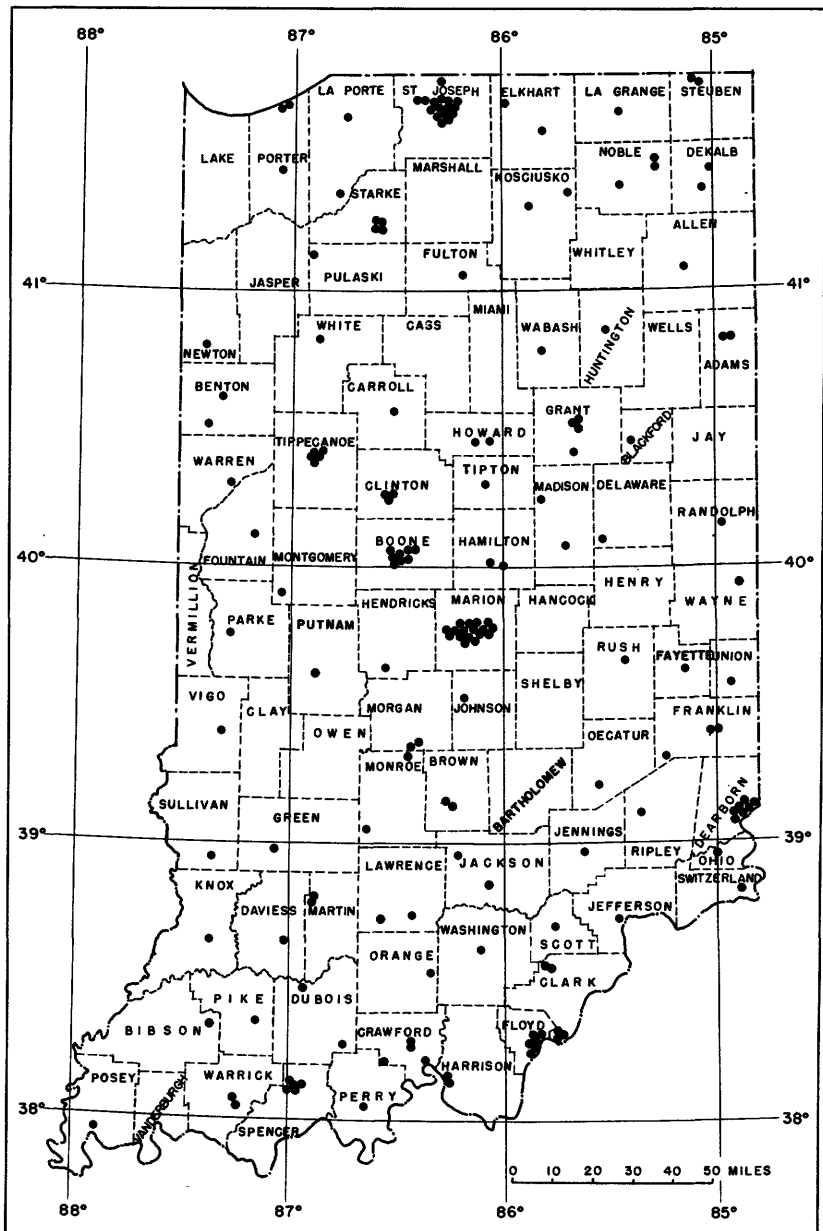


Figure 2.--Map of Indiana showing observation wells, 1945.

October, and December received above-normal precipitation. Precipitation was heaviest in the southern division of the State, as shown in the following table. The average for the central division was the highest on record.

<u>Precipitation, in inches, in Indiana during 1945</u>			
Division	Number of stations	Average annual precipitation	Departure from normal
Northern	29	41.05	+5.46
Central	23	49.14	+9.28
Southern	28	58.85	+16.36
Entire State	80	49.68	+10.25

Precipitation was heaviest during March, June, and September; the heaviest monthly precipitation of 14.40 inches occurred at Salem in March. The driest months were January, December, and October; the minimum precipitation of 0.29 inch was measured in Frankfort in January. The heaviest precipitation occurred generally in the western and southern parts of the State.

In general, the temperatures in the winter, spring, and fall months were above normal and during the summer months were below normal. Conditions were unusually favorable for recharge, and losses by evaporation and transpiration were probably less than during more normal years.

FLUCTUATIONS OF WATER LEVEL

The majority of the observation wells are in rural areas where the fluctuations of water level are due mainly to natural causes, such as precipitation and changes in level of nearby streams and lakes. Others, however, are in areas of large ground-water development and are affected by pumping from nearby wells or well fields. Of the 166 wells for which measurements are given in the following tables, the fluctuations of water in 67 wells are presumably affected by pumping from nearby wells, in 5 wells by the levels of adjacent streams and lakes, and in 94 wells by natural factors along.

In general, water levels in Indiana show a net rise during the year, because of above-normal precipitation and favorable recharge conditions. At the beginning of the year, water levels were at generally low stages. The lowest levels during 1944 had been reached generally in November and the general rise in water levels during December had been somewhat less than normal because of deficient precipitation. Water levels rose rapidly

during January and February, and several wells reached the highest stages of record during February. The majority of wells, however, reached the highest stages for the year in June. Water levels declined until October, then rose sharply, because of excessive precipitation, during September and continued to rise until the end of the year. Of the 118 wells for which records of water level are available for a period of more than 1 year, 42 wells reached the highest stage for the period of record and 17 reached their lowest stage of record. Pertinent data on water levels in observation wells are given below.

Water levels in observation wells in Indiana, in feet
below land-surface datum, 1945

Well	Date of first measurement	Lowest observed water level		Highest observed water level		Water level on last date of record
		Water level	Date	Water level	Date	
Adams 1 ^a /	May 27, 1944	55.90	Nov. 10, 1945	46.18	June 2, 1944	55.02
Adams 2 ^a /	June 23, 1945	83.45	Aug. 18, 1945	59.33	Dec. 1, 1945	80.32
Allen 3 ^a /	May 25, 1944	12.10	Sept. 22, 1945	7.84	May 26, 1945	11.64
Benton 1 ^a /	May 25, 1944	47.60	Nov. 2, 1944	37.38	June 1, 1944	42.92
Benton 2	May 25, 1944	17.05	Feb. 2, 1945	7.41	Nov. 22, 1945	8.19
Blackford 1	Sept. 27, 1945	6.42	Dec. 29, 1945	5.00	Oct. 13, 1945	6.42
Boone 1	Oct. 15, 1935	12.95	Sept. 16, 1936	.28	Mar. 16, 1938	1.35
Boone 2	Oct. 15, 1935	11.0	Oct. 18, 1940	2.09	Mar. 16, 1938	4.13
Boone 4 ^a /	May 24, 1945	71.30	Sept. 8, 1945	52.90	Dec. 9, 1945	65.47
Boone 10A ^a /	Oct. 26, 1945	20.96	Oct. 26, 1945	16.09	Dec. 26, 1945	16.09
Boone 11A ^a /	Oct. 26, 1945	34.59	Oct. 26, 1945	23.60	Dec. 28, 1945	23.60
Boone 12A ^a /	Oct. 26, 1945	27.95	Nov. 9, 1945	25.65	Dec. 28, 1945	25.65
Boone 13A	Oct. 26, 1945	11.62	Nov. 9, 1945	10.40	Dec. 28, 1945	10.40
Boone 14A ^a /	Oct. 26, 1945	41.40	Nov. 9, 1945	38.12	Dec. 28, 1945	38.12
Brown 2 ^a /	Dec. 8, 1936	17.65	Jan. 1, 1940	1.90	Feb. 28, 1945	2.29
			Feb. 1, 1940		May 15, 1945	
Brown 3	Dec. 8, 1936	11.4	Nov. 11, 1938	b .3	Feb. 2, 1943	2.11
Carroll 1	Sept. 28, 1945	8.72	Dec. 22, 1945	6.27	Oct. 6, 1945	5.02
Clark 1	Dec. 2, 1936	26.69	Dec. 31, 1944	1.3	Feb. 15, 1937	15.04
Clark 2	Dec. 2, 1936	24.86	Nov. 29, 1944	.45	June 3, 1943	11.52
Clark 3 ^a /	Aug. 26, 1943	33.99	May 12, 1944	28.24	Nov. 4, 1945	28.64
Clark 5	Feb. 21, 1944	17.86	Feb. 21, 1944	6.59	May 9, 1945	12.68
Clinton 1 ^a /	Feb. 7, 1944	54.38	Dec. 2, 1944	42.85	Oct. 20, 1945	46.00
Clinton 2 ^a /	Feb. 7, 1944	71.11	Dec. 3, 1944	59.97	Oct. 22, 1945	62.26
Clinton 3 ^a /	Apr. 20, 1944	38.90	Sept. 23, 1944	19.67	Dec. 17, 1945	20.65
Crawford 1	Mar. 3, 1944	11.21	Aug. 22, 1944	2.25	Apr. 14, 1944	3.86
Crawford 2	July 27, 1944	7.26	Dec. 22, 1944	b .01	Mar. 2, 1945	1.23
Crawford 3	July 27, 1944	16.57	Dec. 16, 1944	5.90	Mar. 8, 1945	15.40
Crawford 4	Aug. 22, 1944	31.70	May 21, 1945	30.33	Mar. 13, 1945	31.28
Davies 1	Feb. 24, 1944	28.30	Mar. 2, 1944	19.24	July 5, 1945	22.13
Dearborn 1-1 ^a /	Nov. 15, 1943	91.69	Sept. 21, 1944	48.30	Mar. 17, 1945	80.76
Dearborn 1-7 ^a /	Sept. 30, 1944	83.55	Sept. 30, 1944	37.10	Mar. 19, 1945	70.78
Dearborn 1-8 ^a /	Oct. 6, 1944	137.89	Oct. 12, 1944	65.56	Mar. 18, 1945	92.96
Dearborn 2 ^a /	Sept. 21, 1944	67.95	Nov. 20, 1944	32.7	Mar. 12, 1945	56.7
			Dec. 4, 1944			
Dearborn 3	Sept. 21, 1944	58.00	Nov. 26, 1944	18.24	Mar. 12, 1945	49.58
Dearborn 4	Sept. 21, 1944	45.50	Nov. 13, 1944	(c)	Mar. 12, 1945	37.53
			20, 1944			
Dearborn 5	Aug. 29, 1945	38.99	Sept. 17, 1945	32.24	Nov. 26, 1945	33.59
Decatur 1	Sept. 8, 1944	6.56	Sept. 7, 1945	1.70	Dec. 21, 1945	1.73
			Sept. 21, 1945			
Dekalb 1 ^a /	Nov. 24, 1936	14.5	Aug. 15, 1944	5.5	May 26, 1943	d10.5
					May 9, 1945	
					June 16, 1945	

* See footnotes at end of table.

Water levels in observation wells in Indiana, in feet
below land-surface datum, 1945--Continued

Well	Date of first measurement	Lowest observed water level		Highest observed water level		Water level on last date of record
		Water level	Date	Water level	Date	
Dekalb 2	Sept. 7, 1945	7.95	Sept. 21, 1945	4.26	Dec. 28, 1945	4.26
Delaware 2	Mar. 30, 1945	12.49	Sept. 21, 1945	5.78	June 22, 1945	8.10
Dubois 2	Dec. 1, 1936	17.89	Dec. 1, 1943	5.77	May 5, 1943	12.78
Dubois 5	July 28, 1944	22.16	Dec. 29, 1944	8.28	Mar. 9, 1945	16.40
Elkhart 2	Sept. 10, 1945	5.50	Dec. 24, 1945	.86	Oct. 1, 1945	5.50
Fayette 1	July 12, 1945	6.68	Aug. 25, 1945	4.48	Aug. 18, 1945	6.28
Floyd 1	Dec. 21, 1943	47.06	Nov. 13, 1944	12.65	Feb. 27, 1945	35.82
			Nov. 14, 1944			
Floyd 2	Dec. 21, 1943	49.02	Aug. 20, 1945	9.50	Mar. 23, 1945	38.92
Floyd 3	Dec. 21, 1943	22.23	Feb. 18, 1944	7.40	Mar. 23, 1945	15.27
Floyd 4	Dec. 21, 1943	30.23	Feb. 18, 1944	9.70	Mar. 23, 1945	22.95
Floyd 5	Dec. 21, 1943	33.80	Feb. 18, 1944	11.73	Mar. 23, 1945	26.06
Floyd 6	Feb. 4, 1944	20.08	Feb. 28, 1944	1.53	Feb. 27, 1945	16.39
Fountain 1	May 26, 1944	42.45	Feb. 17, 1945	34.32	June 14, 1944	41.05
			Mar. 7, 1945			
Franklin 1a/	Dec. 8, 1936	31.71	Oct. 16, 1939	21.64	Jan. 18, 1937	26.50
Franklin 3	Mar. 16, 1944	22.30	Nov. 4, 1944	15.60	Apr. 11, 1944	19.60
Franklin 4a/	Feb. 18, 1944	44.28	Jan. 26, 1945	16.86	Apr. 7, 1944	27.47
Fulton 3a/	Sept. 10, 1935	11.1	Feb. 1, 1940	4.27	June 3, 1943	9.40
Gibson 1	Aug. 24, 1944	20.64	Oct. 12, 1944	15.12	Sept. 27, 1945	17.56
Grant 1a/	Mar. 8, 1945	98.6	Mar. 31, 1945	68.6	Nov. 19, 1945	70.0
			Apr. 3, 5, 7, 1945			
Grant 2a/	Mar. 8, 1945	85.4	Apr. 30, 1945	60.78	Aug. 20, 1945	64.81
Grant 5a/	Apr. 16, 1945	56.42	July 29, 1945	48.46	Apr. 17, 1945	53.41
Grant 6	June 2, 1945	16.20	Sept. 21, 1945	10.26	June 24, 1945	12.5
Greene 1	Feb. 21, 1944	9.57	Dec. 18, 1944	.87	Oct. 10, 1944	2.58
Hamilton 2a/	Nov. 2, 1935	27.33	Sept. 15, 1941	14.71	May 19, 1943	23.47
Hamilton 3	Mar. 27, 1945	5.01	Sept. 9, 1945	1.46	June 17, 1945	2.07
Harrison 1a/	Dec. 2, 1936	5.65	Nov. 15, 1941	.00	Apr. 15, 1939	.90
Harrison 3	Oct. 25, 1938	7.8	Sept. 30, 1941	2.00	Mar. 21, 1939	3.08
Hendricks 1	Feb. 25, 1944	8.69	Jan. 15, 1945	(c)	Apr. 17, 1944	3.29
				Apr. 24, 1944		
Howard 4	Mar. 28, 1945	9.62	Mar. 28, 1945	3.16	May 23, 1945	9.50
Huntington 1	Sept. 27, 1945	24.72	Sept. 27, 1945	2.6	Dec. 31, 1945	2.6
Jackson 1	Dec. 3, 1936	11.4	Oct. 14, 1941	1.2	Apr. 15, 1939	5.50
Jackson 2	Feb. 16, 1944	18.87	Feb. 16, 1944	11.06	Apr. 23, 1945	11.79
Jefferson 2	Mar. 3, 1937	32.5	Aug. 16, 1943	27.5	Aug. 2, 1939	29.0
Jennings 1	Dec. 3, 1936	16.98	Dec. 15, 1943	1.86	Jan. 15, 1937	7.56
Johnson 1	Feb. 22, 1944	10.45	Oct. 25, 1944	2.61	Apr. 11, 1944	6.67
			Oct. 31, 1944			
Knox 1	Aug. 24, 1944	37.22	Feb. 22, 1945	35.00	Oct. 25, 1945	35.25
Kosciusko 3	Sept. 11, 1945	12.10	Dec. 27, 1945	11.09	Oct. 17, 1945	12.10
La Grange 1	Sept. 10, 1945	7.95	Sept. 24, 1945	6.33	Oct. 22, 1945	7.18
La Porte 1a/	July 4, 1942	15.5	July 18, 1942	3.70	Oct. 6, 1945	7.01
La Porte 2	July 2, 1942	6.90	Feb. 16, 1944	1.07	June 1, 1943	5.4
			Oct. 1, 1944			
Lawrence 1a/	Feb. 24, 1944	21.93	July 6, 1944	9.09	Mar. 8, 1945	13.90
Lawrence 2	Feb. 23, 1944	21.51	Mar. 15, 1944	8.22	Mar. 7, 1945	17.35
Madison 2a/	Oct. 16, 1935	18.40	July 5, 1944	10.9	Nov. 15, 1938	13.5
Madison 5a/	May 22, 1944	48.31	Oct. 5, 1944	31.10	May 9, 1945	36.7
Marion 1a/	Aug. 1, 1935	37.46	Aug. 5, 1941	13.85	Apr. 16, 1938	18.30
Marion 2a/	Oct. 15, 1935	71.55	Sept. 21, 1941	47.44	Apr. 12, 1938	53.79
Marion 3a/	Oct. 15, 1935	71.16	Oct. 7, 1941	50.00	Mar. 29, 1938	52.59
Marion 4a/	Dec. 3, 1937	15.72	Mar. 27, 1941	b 3.92	Apr. 16, 1938	3.47
Marion 9a/	July 26, 1939	62.48	Oct. 3, 1942	43.38	Mar. 26, 1941	46.20
Marion 10a/	Aug. 2, 1939	70.78	Aug. 29, 1941	50.64	Feb. 13, 1940	57.86
Marion 13a/	Jan. 12, 1928	(f)	Sept. 20, 1930	b 2.19	Jan. 20, 1932	4.27
			Jan. 12, 1945			
			Feb. 14, 1945			
Marion 14a/	June 3, 1929	(g)	Nov. 1, 1930	11.75	Jan. 18, 1937	21.31
			Feb. 14, 1945			
Marion 16a/	Mar. 19, 1940	114.38	May 1, 1944	56.65	Jan. 28, 1941	99.34

* See footnotes at end of table.

Water levels in observation wells in Indiana, in feet
below land-surface datum, 1945--Continued

Well	Date of first measurement	Lowest observed water level		Highest observed water level		Water level on last date of record
		Water level	Date	Water level	Date	
Marion 18a/	Oct. 11, 1943	28.33	Feb. 5, 1945 Feb. 13, 1945 Feb. 14, 1945	21.02	Dec. 31, 1945	21.02
Marion 19	Oct. 19, 1943	21.48	Feb. 5, 1945	17.12	May 22, 1944	17.97
Marion 21a/	Mar. 28, 1944	67.28	Aug. 4, 1944	56.66	Dec. 31, 1945	56.66
Marion 22a/	Apr. 11, 1944	90.40	July 14, 1944	67.80	Apr. 12, 1944	73.17
Marion 24	Nov. 1, 1944	14.31	Feb. 12, 1945	2.10	Apr. 2, 1945	8.47
Marion 25a/	May 7, 1945	39.95	July 27, 1945	21.31	Dec. 31, 1945	21.31
Martin 3	Mar. 1, 1944	22.71	Feb. 15, 1945	18.65	Mar. 3, 1945	20.23
Martin 4	Mar. 1, 1944	12.56	Dec. 2, 1944	2.40	Mar. 8, 1944	3.15
Monroe 2	Sept. 15, 1944	25.10	Sept. 11, 1945	20.47	Dec. 11, 1945	h20.47
Monroe 3	Sept. 15, 1944	27.44	Feb. 27, 1945	17.80	June 23, 1945	24.64
Montgomery 1	Sept. 27, 1935	15.45	Nov. 16, 1945	3.66	May 17, 1945	6.14
Morgan 3	Aug. 14, 1945	8.80	Sept. 11, 1945	2.61	Aug. 14, 1945	6.81
Noble 1a/	Nov. 1, 1935	19.37	Apr. 30, 1945	12.82	Oct. 19, 1938	17.55
Noble 3	Oct. 9, 1935	24.5	Sept. 15, 1936	9.90	Aug. 2, 1938	22.73
Noble 5	May 1, 1942	9.20	Feb. 3, 1945 Feb. 17, 1945	.49	May 17, 1943	4.79
Ohio 1	Sept. 7, 1944	13.46	Dec. 23, 1944	b .37	Mar. 3, 1945	4.34
Orange 1	Mar. 1, 1944	14.49	Mar. 1, 1944	(c)	Apr. 9, 1944	.75
Parke 1	June 14, 1945	8.47	Sept. 20, 1945	2.38	June 21, 1945	3.35
Perry 1	Mar. 3, 1944	10.12	Aug. 13, 1944	1.47	Dec. 23, 1945	3.15
Pike 1	Dec. 1, 1936	12.94	Dec. 30, 1944	3.50	Mar. 31, 1945	5.80
Porter 1a/	Oct. 16, 1935	58.05	Mar. 31, 1944	50.63	Aug. 3, 1943	53.94
Porter 2a/	Oct. 19, 1935	13.8	Oct. 18, 1935	9.83	Oct. 1, 1945	10.96
Porter 3a/	Oct. 18, 1935	17.3	Dec. 23, 1940	11.19	July 2, 1945	13.29
Posey 1	Feb. 17, 1944	16.10	Feb. 27, 1944	3.20	Mar. 4, 1945	5.30
Pulaski 1	Dec. 1, 1935	10.05	Nov. 2, 1944	7.33	Dec. 31, 1945	7.33
Putnam 1	June 14, 1945	7.43	Sept. 19, 1945	1.48	June 17, 1945	5.04
Randolph 1a/	Feb. 8, 1942	18.43	Jan. 31, 1945	12.39	Apr. 15, 1944	13.71
Ripley 1	Sept. 7, 1944	13.10	Jan. 15, 1945	4.60	Apr. 5, 1945	9.41
Rush 1	July 12, 1945	9.56	Sept. 21, 1945	4.15	Nov. 30, 1945	5.64
St. Joseph 1a/	Oct. 16, 1935	13.34	Aug. 1, 1941	4.46	May 25, 1943	10.59
St. Joseph 4-T1a/	Feb. 16, 1945					
St. Joseph 4-T2	Feb. 16, 1945					
St. Joseph 16-13	June 28, 1944	31.83	Mar. 29, 1945	28.58	Nov. 9, 1945	29.19
St. Joseph 16-F2a/	Dec. 5, 1909	21.72	Feb. 22, 1945	13.79	Dec. 5, 1909	21.19
St. Joseph 22a/	June 8, 1944	43.46	Aug. 8, 1944	30.45	Apr. 23, 1945	31.47
St. Joseph 25-3a/	Sept. 29, 1944	32.10	Mar. 22, 1945	28.37	July 5, 1945	30.40
St. Joseph 28a/	Mar. 8, 1945	17.91	Dec. 21, 1945	17.31	Aug. 17, 1945	17.91
St. Joseph 34a/	Feb. 15, 1945	41.58	Apr. 5, 1945	38.81	June 28, 1945	39.00
St. Joseph 53a/	Mar. 23, 1945	8.84	Sept. 22, 1945	4.62	June 3, 1945	6.57
St. Joseph 85	Jan. 19, 1945	14.57	Feb. 14, 1945 Feb. 17, 1945	12.74	June 1, 1945 June 2, 1945	14.35
St. Joseph 87	Jan. 24, 1945	6.01	July 12, 1945	2.54	Mar. 9, 1945	j 4.86
St. Joseph 89	Mar. 17, 1945	46.46	Apr. 6, 1945	45.01	Nov. 24, 1945	45.56
St. Joseph 90	Mar. 22, 1945	10.50	Aug. 30, 1945	8.59	May 18, 1945	10.20
St. Joseph 91	Mar. 22, 1945	4.62	Dec. 6, 1945	3.97	June 28, 1945	4.62
St. Joseph 92	June 22, 1945	24.56	Oct. 27, 1945 Nov. 3, 1945 Nov. 10, 1945 Nov. 17, 1945	23.95	Aug. 11, 1945	k24.56
Scott 1a/	May 4, 1942	27.61	Dec. 2, 1944	16.50	June 22, 1942	21.01
Spencer 4	Mar. 2, 1944	8.26	Oct. 7, 1944	.46	Feb. 10, 1945	2.12
Spencer 5	Mar. 2, 1944	31.88	Nov. 21, 1945	23.50	Mar. 8, 1944	29.94
Spencer 6	Aug. 23, 1944	30.25	Nov. 22, 1944 Dec. 20, 1944	22.7	Apr. 18, 1945	25.70
Spencer 7	Aug. 23, 1944	11.31	Dec. 23, 1944	1.84	Mar. 31, 1945	4.23
Spencer 8	Aug. 23, 1944	8.23	Nov. 11, 1944	1.57	Mar. 17, 1945	5.13
Starke 1a/	Oct. 3, 1935	16.40	Apr. 2, 1945	11.58	June 1, 1943	13.91
Starke 2a/	Oct. 3, 1935	6.19	Sept. 15, 1941	1.15	Mar. 16, 1944	3.27
Starke 3a/	Oct. 3, 1935	5.45	Sept. 15, 1941	.00	Apr. 17, 1944	3.11

Water levels in observation wells in Indiana, in feet
below land-surface datum, 1945--Continued

Well	Date of first measurement	Lowest observed water level		Highest observed water level		Water level on last date of record
		Water level	Date	Water level	Date	
Starke 10	June 23, 1945	1.20	Nov. 3, 1945	6.03	Aug. 26, 1945	4.90
Steuben 1	Sept. 16, 1935	4.72	Nov. 1, 1935	bl.00	June 1, 1943	2.1
Steuben 2	Sept. 16, 1935	6.4	Dec. 1, 1941	.03	Apr. 15, 1939	4.90
Sullivan 1	Aug. 24, 1944	15.38	Jan. 29, 1945			
Switzerland 1	Sept. 7, 1944	21.90	Nov. 5, 1944	.70	Apr. 15, 1945	2.25
			Dec. 2, 1944	3.40	Mar. 22, 1945	13.85
			Dec. 15, 1944			
Tippecanoe 1	Jan. 15, 1937	48.25	Oct. 31, 1941	39.96	May 4, 1945	45.07
Tippecanoe 4a/	Apr. 24, 1944	22.16	Aug. 13, 1944	bl.00	May 19, 1945	5.06
Tippecanoe 5a/	Apr. 24, 1944	89.34	Apr. 6, 1945	87.83	May 1, 1944	88.90
Tippecanoe 7	July 31, 1945	165.95	Sept. 21, 1945	165.37	Dec. 29, 1945	165.37
Tippecanoe 8a/	Nov. 28, 1945	11.26	Dec. 24, 1945	10.51	Dec. 31, 1945	10.51
			Dec. 25, 1945			
Tipton 1	Mar. 27, 1945	5.40	Sept. 23, 1945	b .05	June 17, 1945	.20
Union 1	July 11, 1945	8.66	Sept. 20, 1945	8.53	Dec. 29, 1945	8.53
Vigo 3	June 15, 1945	5.67	Sept. 28, 1945	.94	Nov. 23, 1945	1.07
Wabash 2	June 1, 1945	10.70	Aug. 31, 1945	3.80	June 8, 1945	7.34
Warren 1a/	May 26, 1944	18.84	Aug. 26, 1944	6.45	Mar. 31, 1945	10.02
Warrick 1a/	Dec. 1, 1936	21.15	Dec. 1, 1936	16.70	Mar. 1, 1944	19.10
Warrick 2	Feb. 18, 1944	15.47	Feb. 18, 1944	(n)	Mar. 16, 1945	(c)
					Apr. 4, 1945	(c)
					Dec. 24, 1945	(c)
Washington 1	Feb. 15, 1944	12.54	June 1, 1945	(c)	Mar. 3, 1945	(p)
			Aug. 18, 1945			
Wayne 1	July 11, 1945	30.47	Dec. 26, 1945	28.05	July 11, 1945	30.47
White 1a/	Dec. 4, 1935	20.34	Oct. 3, 1941	q8.00	Apr. 3, 1936	13.39
					June 5, 1936	

a Affected by pumping from nearby wells.

b Above land-surface datum.

c Flowing.

d No measurement after Sept. 15, 1945.

e Measurements discontinued June 16, 1945.

f Dry at 6.00 feet.

g Dry at 22.96 feet.

h No measurements between Sept. 15, 1944, and Aug. 21, 1945.

j Discontinued Aug. 17, 1945.

k Discontinued Nov. 17, 1945.

m Discontinued June 29, 1945.

n Overflow.

p Discontinued Aug. 18, 1945.

q Overflowing at measuring point 8.00 feet below land surface.

In the following table are given the net changes in water levels in the observation wells, for which records are available, from the dates of the measurements nearest to December 31, 1944, to those nearest December 31, 1945. Ninety-nine of the wells showed net rises and only 11 wells showed net declines in water level during 1945.

Net changes, in feet, in water levels in observation wells in Indiana during 1945

Well	Net rise (+) or net decline (-)	Well	Net rise (+) or net decline (-)	Well	Net rise (+) or net decline (-)
Adams 1a/	-2.65	Clark 2	+13.30	Crawford 2	+5.04
Allen 3a/	-.60	Clark 3a/	+2.98	Crawford 3	+1.17
Benton 1a/	+1.06	Clark 5	+3.76	Crawford 4	+1.08
Benton 2	+7.39	Clinton 1a/	+5.90	Daviess 1	+3.43
Brown 2a/	+3.53	Clinton 2a/	+6.76	Dearborn 1-1a/	+9.14
Brown 3	+7.01	Clinton 3a/	+4.51	Dearborn 1-7a/	+9.67
Clark 1	+11.65	Crawford 1	+6.00	Dearborn 1-8a/	+10.74

a Affected by pumping from nearby wells.

Net changes, in feet, in water levels in observation wells in Indiana during 1945--Continued

Well	Net rise (+) or net decline (-)	Well	Net rise (+) or net decline (-)	Well	Net rise (+) or net decline (-)
Dearborn 2a/	+9.0	Lawrence 1a/	+7.91	Porter 3 a/	+1.61
Dearborn 3	+7.92	Lawrence 2	+4.03	Posey 1	+9.08
Dearborn 4	+7.09	Madison 2a/	+4.3	Pulaski 1	+2.72
Decatur 1	+1.72	Madison 5a/	+3	Randolph 1a/	+4.41
Dubois 2	+4.74	Marion 1a/	+9.96	Ripley 1	+3.49
Dubois 5	+5.76	Marion 2a/	+1.96	St. Joseph 1a/	-.76
Floyd 1	+5.65	Marion 3a/	+8.36	St. Joseph 16-1a/	-.40
Floyd 2	+4.07	Marion 4a/	+1.90	St. Joseph 16-Fa/	+2.27
Floyd 3	-.09	Marion 9a/	+12.50	St. Joseph 22a/	+1.95
Floyd 4	+3.49	Marion 10a/	+3.06	St. Joseph 25-3a/	+2.90
Floyd 5	+2.69	Marion 14a/	-2.96	Scott 1 a/	+3.56
Floyd 6	-.24	Marion 16a/	+8.2	Spencer 4	+1.36
Fountain 1	+1.01	Marion 18	+6.68	Spencer 5	+1.41
Franklin 1a/	+3.50	Marion 19	+2.39	Spencer 6	+6.40
Franklin 4a/	+3.46	Marion 21a/	+19.58	Spencer 7	+5.40
Fulton 3a/	+2.95	Marion 22a/	+4.88	Spencer 8	+2.05
Gibson 1	-1.29	Marion 24	+5.77	Starke 1a/	+1.54
Greene 1	+6.93	Martin 3	+2.13	Starke 2a/	+1.33
Hamilton 2a/	+1.33	Martin 4	+9.30	Starke 3a/	+1.19
Harrison 1a/	+1.01	Monroe 3	+2.67	Steuben 1	+1.6
Harrison 3	+4.29	Montgomery 1	+5.94	Steuben 2	+1.45
Hendricks 1	+4.95	Morgan 3	+4.83	Sullivan 1	+11.47
Jackson 1	+2.80	Noble 3	-1.83	Switzerland 1	+7.90
Jackson 2	+1.62	Noble 5	+4.10	Tippecanoe 4a/	+10.24
Jefferson 2	+1.00	Ohio 1	+9.11	Tippecanoe 5a/	-.34
Jennings 1	+8.40	Orange 1	+12.65	Warren 1a/	+7.28
Johnson 1	+2.48	Perry 1	-.93	Warrick 1a/	+6.0
Knox 1	+1.79	Pike 1	+7.14	Warrick 2	+11.00
La Porte 1a/	+6.7	Porter 1a/	+2.71	White 1a/	+5.70
La Porte 2	+9	Porter 2a/	+1.14		

a Affected by pumping from nearby wells.

The hydrographs of three wells, Steuben 1, at Angola, in the north-eastern part of the State; Montgomery 1, at Waveland, in the west-central part; and Clark 1, at Henryville, in the southeastern part of the State, are shown in figure 3. The wells are probably not affected by pumping and were selected to show typical examples of water levels in several sections of the State. It should be noted that the lowest level reached in the fall of 1945 in each well was higher than that reached for several years prior to 1945.

There are also given in figure 4 hydrographs of changes in water level in two wells in the Indianapolis area, showing that the general trend in ground-water levels is at least temporarily upward. The regular seasonal fluctuation is caused by the cooling season when large quantities of ground water are pumped for air-conditioning use. The lowest levels reached during 1945 were 4 to 6½ feet higher than those reached during 1941, the low year of record. Observation well Marion 2 obtains water from glacial gravels and well Marion 10 taps the underlying Devonian and Silurian limestone aquifers.

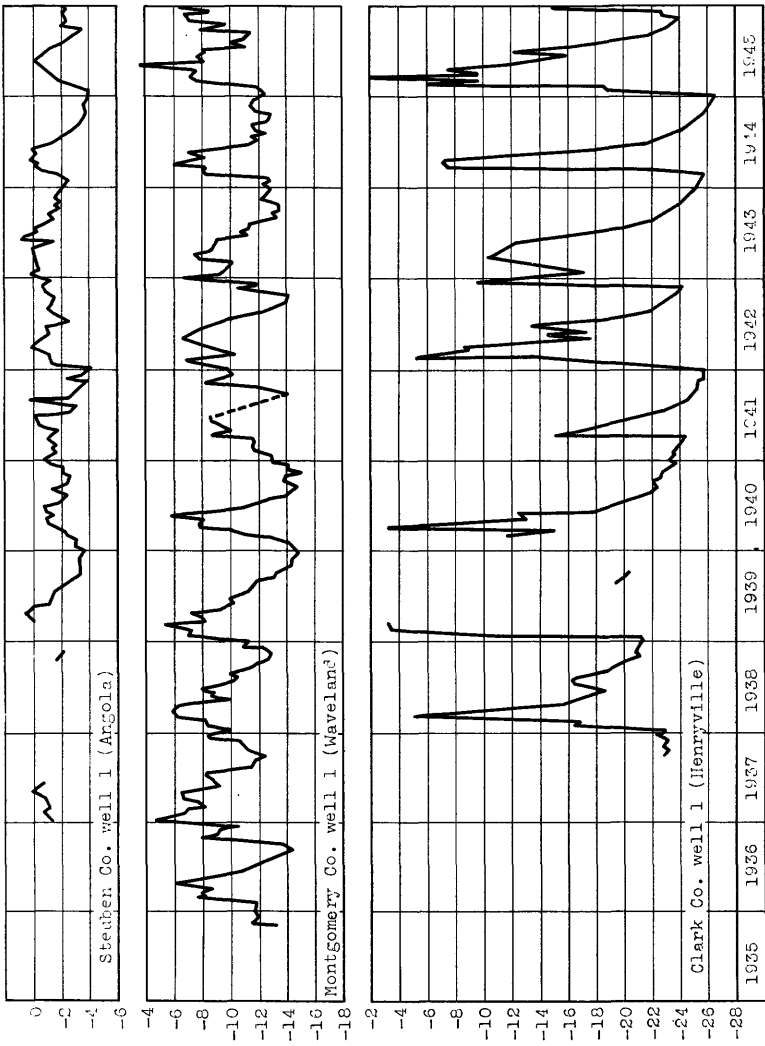


Figure 3.--Graphs showing fluctuations of water level in three wells in Indiana that represent widely separated parts of the State. These wells are not affected by pumping.

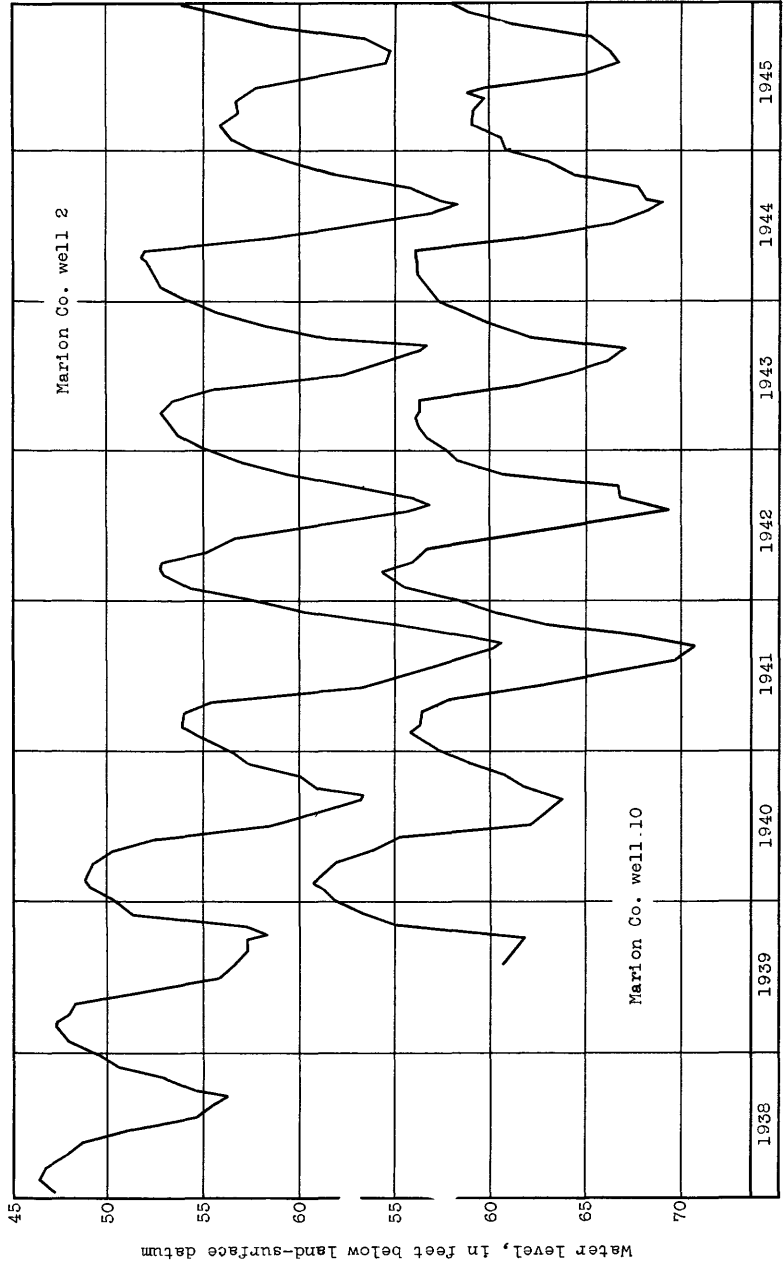


Figure 4.--Graphs of water levels in observation wells Marion 2, ending in gravel, and Marion 10, ending in limestone, in the downtown area of Indianapolis, Marion County, Indiana.

In general, it may be said that the outlook for ground-water supply during 1946 is favorable. The long-time trend in water levels in Indiana, which is closely related to that of precipitation, during 1945 was generally upward, indicating the addition to ground-water storage of large quantities of water. This is particularly true in rural areas, where pumping from wells is comparatively small. In some areas of heavy pumpage, the general trend is also upward, caused, in part, by favorable natural conditions for recharge and by decrease in pumpage from industrial wells during the reconversion period. In other industrial areas, however, the decrease in industrial pumpage has been more than offset by an increase in the demand for domestic water supply and ground-water levels are continuing to decline.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Adams County

Adams 1 (*1016, p.36). City of Decatur. In Decatur, 50 feet north of Park St. and 120 feet east of North Fifth St. Measurements made by personnel of Water Department, Ralph E. Roop, city engineer.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	52.28	Apr. 7	52.20	Aug. 18	53.50	Oct. 27	55.72
13	52.28	19	52.03	25	49.62	Nov. 3	55.40
20	52.78	21	51.37	Sept. 1	53.58	10	55.90
27	52.20	May 12	50.59	8	52.03	17	55.52
Feb. 3	52.53	June 9	49.95	15	54.53	24	55.66
10	51.45	23	51.19	22	54.72	Dec. 1	54.90
24	52.53	July 8	51.20	29	55.10	8	54.60
Mar. 3	51.45	14	51.15	Oct. 6	55.37	15	54.26
10	52.37	28	51.93	13	55.31	22	49.85
17	51.03	Aug. 4	52.78	20	55.39	29	55.02
24	50.95	11	49.78				

Adams 2. 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. Unused drilled well, diameter 6 inches, depth 250 feet (?), ending in limestone. Measuring point, top edge of 3-inch companion flange, 1.20 feet above sidewalk which is at land-surface datum. First measurement, June 23, 1945. Measurements made by personnel of Water Department, Ralph E. Roop, city engineer.

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

June 23	77.30	Aug. 26	82.38	Oct. 13	81.17	Nov. 24	81.05
July 7	77.40	Sept. 1	78.65	20	81.21	Dec. 1	59.33
14	77.40	8	82.38	27	81.58	8	65.24
28	82.75	15	80.86	Nov. 3	81.25	15	78.63
Aug. 4	83.36	25	83.17	10	82.26	22	79.71
11	82.30	29	81.04	17	81.12	29	80.32
18	83.45	Oct. 6	81.04				

Allen County

Allen 3 (*1016, p. 36). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	10.92	Apr. 21	8.85	July 14	9.86	Oct. 13	11.12
11	11.01	28	9.16	21	10.01	19	11.19
18	11.07	May 5	9.40	28	10.68	27	11.38
25	11.00	12	9.56	Aug. 4	10.95	Nov. 3	11.48
Feb. 1	11.03	19	7.96	11	11.21	10	11.57
8	10.98	26	7.84	18	11.55	17	11.69
15	10.85	June 2	8.44	25	11.65	24	11.77
22	10.41	9	9.30	Sept. 1	11.70	Dec. 1	12.05
Mar. 24	9.32	16	9.12	8	11.84	8	12.02
31	8.88	23	9.03	15	12.02	15	11.88
Apr. 7	8.68	30	9.32	22	12.10	22	11.85
14	8.36	July 7	9.60	29	12.05	29	11.64

Benton County

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

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

Jan. 18	43.98	Apr. 12	40.20	June 7	38.00	Aug. 2	43.93
25	43.40	26	39.94	14	42.98	23	45.98
Feb. 15	43.95	May 3	39.70	July 6	39.91	Sept. 20	43.92
Mar. 1	43.30	24	38.30	19	42.93	Nov. 29	38.91
8	42.97	31	38.00	26	39.10	Dec. 20	42.92
Apr. 5	42.00						

Benton 2 (*1016, p. 37). 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, 1945

Jan. 4	15.69	Apr. 6	10.57	July 20	8.88	Oct. 25	7.75
11	15.91	12	9.69	26	10.09	Nov. 1	7.55
18	15.94	27	9.21	Aug. 9	10.38	8	7.75
25	15.90	May 4	8.81	16	10.49	16	7.55
Feb. 2	17.05	31	8.16	24	10.13	22	7.41
22	15.50	June 7	8.68	30	10.97	30	7.43
Mar. 2	14.91	21	8.05	Sept. 13	11.65	Dec. 20	7.48
22	13.17	28	8.08	27	11.77	28	8.19
30	12.05	July 12	8.83	Oct. 5	8.78		

Blackford County

Blackford 1. Owner unknown. In Hartford City, in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 35, T. 24 N., R. 10 E., about 500 feet east of State Highway 32 and about 1 $\frac{1}{2}$ blocks north of south corporation line. Unused dug well, diameter 42 inches, depth 10 feet. Measuring point, top edge of brick at northeast side, 0.6 foot below land-surface datum. First measurement Sept. 27, 1945. Measurements made by Harry A. Miles.

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

Sept. 27	5.43	Oct. 27	5.92	Nov. 24	6.14	Dec. 15	5.70
Oct. 6	5.30	Nov. 3	6.03	Dec. 1	5.89	22	5.73
13	5.00	10	6.25	8	5.69	29	6.42
20	5.67	17	6.32				

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). Leland H. Dale. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 23, T. 18 N., R. 1 W., about 3 miles south of Lebanon and 1 mile west of State Highway 39. Measuring point, top of concrete cover over well, 1.0 foot above land-surface datum. First measurement Sept. 26, 1935. Measurements by owner. Water levels, in feet below land-surface datum, 1945: Dec. 7, 3.17; Dec. 17, 2.70; Dec. 24, 2.78; Dec. 31, 1.35.

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). Elmer P. Slipper, Zionsville. Formerly owned by R. W. Gorrell. 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, 45 feet south of center of State Highway 32, and 94 feet west of center of section road. Measuring point, top of manhole steel rim, at land-surface datum. First measurement Oct. 4, 1935. Measurements made by Robert S. Moore and Fred Price, Lebanon Utilities, Inc. Water levels, in feet below land-surface datum, 1945: Dec. 7, 4.38; Dec. 14, 5.34; Dec. 21, 5.50; Dec. 28, 4.13.

Boone 4. 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. Unused drilled well, diameter 8 inches, depth 104.5 feet. Measuring point, top edge of recorder shelter lower floor, 0.5 foot above top of casing, and 0.80 foot above land-surface datum. Automatic water-stage recorder installed May 24, 1945. Measurements made by Robert S. Moore and Fred Price, Lebanon Utilities, Inc.

Water level at 2 a.m., in feet below land-surface datum, 1945
(From recorder charts)

Day	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	67.47	66.60	.....	66.05	68.02	.....
2	.....	59.40	65.18	.....	65.29	67.53	.....
3	.....	64.96	67.61	.....	66.25	67.50	.....
4	.....	62.70	67.25	.....	68.40	62.10	.....
5	.....	55.00	63.30	.....	68.15	63.80	58.20
6	.....	56.40	60.20	.....	.....	59.30	56.57
7	.....	56.60	65.72	.....	.....	63.40	61.06
8	.....	58.70	.....	71.30	.....	64.90	58.50
9	.....	53.40	.....	68.56	.....	62.27	52.90
10	.....	63.20	.....	64.70	.....	68.12	.....
11	.....	.....	65.30	69.78	.....	a 67.32	.....
12	.....	.....	63.00	68.38	.....	64.20	58.20
13	.....	.....	60.98	65.56	.....	.....	59.38
14	64.74	.....	63.60	64.92	.....	.....	64.30
15	64.20	.....	63.20	62.00	.....	.....	59.20
16	67.30	.....	58.20	65.15	.....	.....	58.70
17	66.00	65.20	59.20	63.65	.....	.....	.....
18	67.56	69.39	64.35	66.40	.....	.....	.....
19	60.00	69.62	66.05	67.00	.....	.....	54.70
20	61.80	68.00	64.44	65.62	.....	58.20	59.45
21	63.20	68.30	67.43	66.03	.....	58.67	66.05
22	64.49	63.70	68.22	62.20	.....	62.12	64.62
23	65.02	68.04	64.29	61.50	.....	62.64	64.20
24	66.60	68.65	64.68	63.54	.....	66.88	65.47
25	62.13	68.80	59.34	66.30	.....	66.19	.....
26	64.34	66.80	63.68	66.98	.....	65.86	.....
27	68.40	68.20	57.20	66.40	61.34	.....	.....
28	67.97	68.30	65.27	66.80	64.30	.....	.....
29	68.38	62.30	62.02	.....	64.42	.....	.....
30	68.90	67.60	65.19	65.38	59.95	.....	.....
31	.....	.....	65.41	.....	67.48	.....	.....

a Estimated.

Boone 10-A. Lebanon Utilities, Inc. Near city water works, 165 feet south of center of Chicago Ave., and 143 feet east of center of Kersey St. Abandoned drilled well, diameter 12 to 10 inches, depth 216.5 feet. Measuring point, top of 3/4-inch steel plate over well, 1.00 foot above land-surface datum. First measurement made May 24, 1945. Measurements made by Fred Price, Lebanon Utilities, Inc.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 24	33.10	Nov. 9	19.17	Nov. 30	17.63	Dec. 21	16.66
Oct. 26	20.96	16	18.46	Dec. 7	16.94	28	16.09
Nov. 2	19.63	23	17.80	14	16.80		

Boone 11-A. Lebanon Utilities, Inc. At city water works, about 110 feet south of center of Chicago Ave., 35 feet west of center of Kersey St. Abandoned drilled well, diameter 8 inches, depth originally 816 feet, filled to 193.5 feet (casing dynamited at 230 feet). Measuring point, top of 1-inch hole in 8-inch plug, 0.5 foot above land-surface datum. First measurement made May 24, 1945. Measurements made by Fred Price, Lebanon Utilities, Inc.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 24	48.34	Nov. 9	25.75	Nov. 30	24.90	Dec. 21	23.97
Oct. 26	34.59	16	25.37	Dec. 7	23.95	28	23.30
Nov. 2	25.93	23	24.85	14	23.90		

Boone 12-A. 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. Abandoned drilled well, diameter 8 inches, depth 185 feet. Measuring point, top of 1-inch nipple at south side of 8-inch flange, 4.5 feet above land-surface datum. First measurement May 24, 1945. Measurements made by Fred Price, Lebanon Utilities, Inc.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 24	32.30	Nov. 9	27.95	Nov. 30	27.38	Dec. 21	26.01
Oct. 26	27.91	16	27.41	Dec. 7	26.27	28	25.65
Nov. 2	27.62	23	26.87	14	26.04		

Boone 13-A. 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 from park entrance located at west side and near northern end of park. Abandoned drilled well, diameter 5 inches, depth 20.2 feet. Measuring point, top of wood plug, 0.08 foot below top of casing, and 1.20 feet above land-surface datum. First measurement made May 24, 1945. Measurements made by Fred Price, Lebanon Utilities, Inc.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 24	10.26	Nov. 9	11.62	Nov. 30	11.19	Dec. 21	11.23
Oct. 26	11.28	16	11.39	Dec. 7	10.96	28	10.40
Nov. 2	11.29	23	11.16	14	11.01		

Boone 14-A. 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. Abandoned drilled well, diameter 6 inches, depth 143.3 feet. Measuring point, top of casing, 1.5 feet above land-surface datum. First measurement Oct. 26, 1945. Measurements made by Fred Price, Lebanon Utilities, Inc.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 26	41.24	Nov. 16	40.86	Dec. 7	38.94	Dec. 21	38.30
Nov. 2	40.94	23	40.46	14	38.53	28	38.12
9	41.40	30	40.33				

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). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 15	2.39	Apr. 21	2.33	July 16	5.50	Sept. 10	6.40
28	1.90	May 2	2.52	23	4.90	17	6.50
Mar. 6	2.18	7	2.30	30	5.30	Oct. 29	4.70
10	2.22	15	1.90	Aug. 6	5.50	Nov. 5	2.40
17	2.05	21	2.20	13	5.80	12	2.40
26	2.35	28	2.30	20	5.30	19	2.13
Apr. 1	2.19	June 4	2.90	27	5.70	26	2.35
8	2.26	11	2.80	Sept. 3	6.40	Dec. 3	2.29
14	2.31	July 9	3.80				

Brown 3 (*840, p. 74; 845, p. 70; 886, p. 98; 906, p. 21; 936, p. 23; 944, p. 23; 986, p. 25; 1016, p. 37). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 15	8.45	Apr. 21	2.53	July 16	5.20	Sept. 10	8.35
28	1.36	May 2	3.15	23	5.80	17	8.45
Mar. 6	1.15	7	3.20	30	6.60	Oct. 29	6.40
10	1.80	15	2.60	Aug. 6	7.10	Nov. 5	6.90
17	1.28	21	2.50	13	7.40	12	6.70
26	2.45	28	3.70	20	7.60	19	3.57
Apr. 1	1.38	June 4	4.70	27	7.80	26	2.11
8	2.19	11	5.20	Sept. 3	8.00	Dec. 3	2.11
14	3.02	July 9	4.10				

Carroll County

Carroll 1. 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. Unused dug well, diameter 42 inches, depth 18 feet. Measuring point, edge of wood floor, at land-surface datum. First measurement Sept. 28, 1945. Measurements made by Roy R. Richter.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 28	6.66	Oct. 27	7.82	Nov. 24	8.52	Dec. 15	8.49
Oct. 6	6.27	Nov. 3	8.42	Dec. 1	8.12	22	8.72
13	7.77	10	8.35	8	8.14	29	5.02
20	8.37	17	8.21				

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). 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, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	18.97	6.07	.....	7.31	13.68	12.30	18.31	21.43	22.82	23.75	22.53
2	.....	19.17	.....	.....	7.88	13.91	12.77	18.46	21.49	22.85	23.76	22.43
3	.....	19.86	.....	.....	8.35	14.12	13.19	18.59	21.56	22.88	23.77	22.36
4	21.30	19.56	.....	1.98	8.49	14.33	13.52	18.72	21.63	22.92	23.80	22.31

a Tape measurement at 4:00 p.m.

Clark 1--Continued.

Water level at 2 a.m., in feet below land-surface datum, 1945

(From recorder charts)											
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. Dec.
5	21.81	19.77	.....	1.91	8.47	14.53	13.77	18.85	21.70	22.92	23.82 22.28
6	21.84	20.00	.....	3.24	8.63	14.72	13.98	18.98	21.76	22.96	23.85 22.26
7	21.88	20.23	b 1.57	4.41	8.98	14.87	14.18	19.11	21.79	22.99	23.87 22.22
8	21.81	20.44	.....	5.59	9.43	15.05	14.37	19.23	21.85	23.02	23.90 22.22
9	21.54	20.60	.....	6.67	9.82	15.22	14.56	19.35	21.90	23.05	23.91 22.24
10	21.38	20.64	.....	7.47	10.03	15.41	14.72	19.46	21.95	23.08	23.94 22.27
11	21.27	20.51	.....	8.19	10.31	15.59	14.89	19.57	22.00	23.11	23.97 22.32
12	21.75	20.19	.....	8.84	10.42	15.76	15.05	19.68	22.04	23.16	24.01 22.39
13	21.27	.....	.....	9.51	10.66	15.91	15.23	19.78	22.08	23.18	24.03 22.45
14	21.23	.....	c 9.10	10.19	11.02	16.03	15.41	19.90	22.11	23.22	24.05
15	21.10	18.64	9.51	9.77	11.40	16.15	15.59	19.99	22.16	23.26	24.07
16	.....	18.29	10.20	.....	11.59	16.37	15.77	20.09	22.21	23.29	24.08
17	.....	18.05	10.48	.....	10.64	14.78	15.95	20.18	22.26	23.32	24.11
18	20.01	17.89	.....	2.66	9.01	.....	16.13	20.27	22.32	23.35	24.13
19	19.90	17.79	.....	4.16	8.12	.....	.....	20.37	22.36	23.41	24.15
20	19.32	.....	.....	5.14	8.02	d 3.80	15.49	20.47	22.40	23.43	24.05
21	18.78	.....	c 1.76	6.17	8.28	4.66	16.67	20.57	22.42	23.46	23.94
22	18.53	10.67	2.16	7.06	8.72	5.69	16.84	20.66	22.47	23.48	23.76 23.09
23a	18.56	9.41	3.42	7.76	9.37	6.95	17.00	20.75	22.51	23.51	23.49 23.14
24a	18.18	9.82	4.59	8.29	10.05	7.88	17.15	20.82	22.55	23.53	23.35 23.20
25	18.10	10.32	5.86	7.38	10.67	8.72	17.30	20.90	22.60	23.57	23.26 21.94
26	18.12	.....	6.86	5.77	11.17	9.47	17.44	20.98	22.63	23.58	23.20 17.70
27	18.20	.....	7.65	5.23	11.68	10.17	17.56	21.06	22.68	23.61	23.18 16.93
29	18.31	.....	8.35	5.69	12.14	10.74	17.71	21.13	22.69	23.65	23.11 16.60
29	18.43	.....	8.92	6.13	12.58	11.30	17.84	21.20	22.73	23.68	22.92 16.28
30a	18.60	.....	9.63	6.73	13.02	11.82	18.00	21.29	22.77	23.72	22.69 15.78
31a	18.78	.....	.....	.....	13.38	.....	18.16	21.36	.....	23.74	15.04

a Estimated.

b Tape measurement at 9:00 a.m.

c Tape measurement at 1:00 p.m.

d Tape measurement at 11:00 a.m.

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). Clark State Forest. NW $\frac{1}{4}$ lot 282, Clark Military Grant. At former Purdue Camp site. Measuring point, sharp edge of stone set in mortar on northeast side of well, at land-surface datum, and 0.44 foot below concrete base of pump, formerly used as measuring point. Date of removal of concrete pump base and change of measuring point unknown, but believed to be in January 1942. Measurements made prior to January 1942 should be corrected to present measuring point by subtracting 0.44 foot. Measuring point January 1942 to December 31, 1945, 0.1 foot above land-surface datum. Measurements January 1942 to December 31, 1942, should be corrected to present measuring point by subtracting 0.1 foot. Measurements made from Jan. 1, 1943, to Dec. 31, 1944, should be corrected to present measuring point by adding 0.40 foot. Measurements made by Orman Neville, Clark State Forest.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	24.45	Apr. 4	0.78	July 11	4.70	Oct. 11	11.53
10	24.50	11	2.40	18	5.45	18	11.65
17	24.40	18	1.28	26	6.09	25	11.68
24	24.15	25	1.80	Aug. 2	6.62	Nov. 2	11.75
31	24.11	May 2	1.74	9	7.46	8	11.77
Feb. 7	23.98	16	1.87	16	8.02	15	11.79
14	22.93	23	2.00	23	8.82	24	11.72
21	21.15	30	2.75	30	9.52	29	11.76
28	15.00	June 6	3.43	Sept. 6	10.40	Dec. 6	11.81
Mar. 7	7.05	13	2.38	13	11.11	13	11.37
14	5.25	20	1.57	20	11.45	21	11.40
20	.94	27	2.89	27	11.68	28	11.52
28	1.65	July 4	3.51	Oct. 4	11.50		

Clark 3 (*986, p. 26; 1016, p. 39). Public Service Co. of Indiana. In Jeffersonville, in public water-supply well field, Tenth and Fulton Sts. Measurements made by T. Himmel, Public Service Co. of Indiana.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	30.37	30.17	31.23	29.02	29.28	29.50	30.06	30.47	29.85	28.54	28.81
2	31.63	30.36	.....	31.18	29.03	29.50	29.38	30.03	30.63	30.16	28.46	28.95
3	31.65	30.74	30.16	31.15	29.03	29.50	29.29	30.02	30.49	30.15	28.49	28.94
4	31.32	30.75	30.06	31.14	29.04	29.36	29.27	30.02	30.49	30.15	28.24	28.92
5	31.55	30.71	29.79	30.23	28.98	29.26	29.28	29.91	30.38	30.13	28.37	28.39
6	31.56	30.68	29.79	30.22	28.90	28.94	29.10	29.39	30.40	29.84	28.46	28.87
7	31.69	30.60	30.34	30.08	28.38	28.92	29.04	29.91	30.46	29.35	28.46	28.92
8	31.18	30.52	30.43	31.35	28.31	28.93	.....	29.42	30.14	29.09	28.50	28.38
9	31.20	30.36	30.56	29.34	28.38	28.91	29.00	29.28	30.18	29.40	28.45	.....
10	31.19	30.31	30.84	29.43	28.41	28.62	29.09	29.30	30.21	29.43	28.48	.....
11	31.19	30.64	29.86	29.33	28.46	28.77	29.13	29.30	30.21	29.36	28.59	.....
12	31.17	30.12	30.89	30.24	28.61	28.82	29.32	29.33	30.52	29.63	28.55	.....
13	31.19	29.77	31.24	30.25	29.21	29.03	29.48	29.34	30.54	29.83	28.58	.....
14	31.64	29.89	31.43	30.24	29.23	29.12	29.54	29.30	30.46	30.32	28.56	.....
15	30.37	30.09	31.45	30.01	29.27	29.16	29.56	29.34	30.45	30.03	28.54	.....
16	30.88	30.24	31.49	30.00	29.25	29.21	29.49	29.33	30.13	30.47	28.56	28.64
17	30.39	30.23	31.61	29.56	29.26	29.13	29.51	29.32	30.04	30.46	28.57	28.65
18	30.91	30.64	31.60	29.42	29.26	28.99	29.19	29.32	30.05	30.46	29.02	28.65
19	30.90	30.44	30.90	29.27	29.18	28.93	28.97	29.77	30.09	30.43	28.86	28.69
20	30.93	30.39	31.04	29.08	29.15	28.64	28.98	29.77	30.13	30.49	28.84	28.75
21	31.01	30.34	31.05	28.93	29.15	28.41	28.90	29.96	30.33	30.45	28.64	28.78
22	31.03	30.30	31.07	29.19	29.17	28.31	28.95	29.94	30.44	30.46	28.62	28.79
23	31.03	30.23	31.14	28.84	29.13	28.33	29.18	29.93	30.10	30.43	28.82	28.77
24	30.81	30.16	31.13	28.86	29.14	.....	29.19	29.91	30.14	30.44	28.88	28.74
25	30.91	30.18	31.10	28.94	28.88	.....	29.44	29.93	30.08	30.46	28.63	28.62
26	30.85	30.19	31.20	28.97	28.90	.....	29.57	29.94	30.04	30.39	28.65	28.59
27	30.85	30.17	31.15	29.04	28.86	.....	29.65	30.31	29.97	30.33	28.63	28.60
28	.....	30.19	31.06	29.09	29.02	.....	29.66	30.37	30.11	29.61	28.76	28.58
29	.....	.....	31.05	28.96	28.87	.....	29.93	30.36	30.23	29.05	28.77	28.59
30	30.36	.....	31.03	28.94	29.19	.....	29.94	30.43	30.15	29.07	28.78	28.60
31	30.88	.....	30.69	.....	29.20	.....	30.02	30.45	.....	29.06	.....	28.64

Clark 4 (*986, p. 26; 1016, p. 39). Public Service Co. of Indiana test well 1. Arctic Springs well field, Jeffersonville. SW $\frac{1}{4}$ SE $\frac{1}{4}$ log 3, Clark Military Grant, 250 feet north of Ohio River. Equipped with automatic water-stage recorder. Recorder removed, well put in service, and measurements discontinued July 10, 1945. Measurements made by S. Ginther, Public Service Co. of Indiana.

Water level at 2 a.m., in feet below land-surface datum, 1945

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July
1	26.96	27.50	.....	25.03	26.99	27.03	.....
2	26.66	27.64	.....	25.48	26.87	27.08	.....
3	26.23	27.75	.....	25.82	26.80	26.96	.....
4	25.55	27.92	.....	26.07	26.98	27.08	.....
5	24.23	27.75	.....	a 26.26	27.11	27.26	.....
6	23.11	27.84	.....	26.46	27.07	.....	.....
7	23.45	27.67	.....	26.50	27.18	27.33	26.89
8	24.90	27.40	.....	a 26.46	27.11	a 27.36	26.65
9	25.82	27.36	.....	a 26.30	27.21	27.28	26.68
10	26.17	27.40	.....	26.23	27.05	a 27.24	26.69
11	26.09	27.29	.....	26.20	27.09	27.08	.....
12	26.10	27.20	.....	a 26.22	26.96	27.05	.....
13	26.21	27.21	.....	26.45	26.93	27.11	.....
14	26.26	a 27.28	.....	26.62	27.08	27.20	.....
15	26.43	27.40	.....	26.62	27.02	27.12	.....
16	26.75	27.46	4.61	26.79	26.95	27.04	.....
17	26.99	27.47	7.64	26.74	26.83	26.90	.....
18	27.03	27.37	.....	27.02	26.83	26.93	.....
19	27.11	27.18	.....	27.07	26.71	.....	.....
20	27.09	26.99	.....	26.98	a 26.49	.....	.....

a Estimated.

Clark 4--Continued.

Water level at 2 a.m., in feet below land-surface datum, 1945

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July
21	27.07	26.72	b 24.94	a 26.94	26.14	.....	.....
22	27.10	26.32	24.92	26.90	26.06	.....	.....
23	27.14	24.67	25.33	26.71	26.06	.....	.....
24	27.13	22.83	25.50	26.78	25.95	.....	.....
25	27.12	22.22	25.35	26.95	26.15	.....	.....
26	27.16	22.61	24.06	26.98	26.31	.....	.....
27	27.24	20.96	22.71	27.10	26.56	.....	.....
28	27.06	17.83	21.64	27.25	26.68	.....	.....
29	27.11		21.62	27.15	26.92	.....	.....
30	27.26		22.73	27.01	a 26.37	.....	.....
31	27.37		25.83		26.91	.....	.....

a Estimated.

b Tape measurement at 3:30 p.m.

Clark 5 (*1016, p. 40). (46-17-4.)^a Owner unknown. About 40 feet north of Kenwood Ave., about 100 feet east of the intersection with Gutford Road. Maintained in connection with Louisville, Ky. project, by Geological Survey, U. S. Dept. of Interior.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	14.85	May 9	6.59	July 27	10.98	Nov. 16	13.72
22	12.39	June 2	8.04	Aug. 20	12.45	Dec. 4	12.68
30	12.20	27	8.50	Sept. 20	13.53		

a Number in Louisville, Ky., areal investigation.

Clinton County

Clinton 1 (*1016, p. 40). 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, 1945

Jan. 6	51.94	Apr. 7	52.44	July 9	48.51	Oct. 6	43.33
13	52.10	14	52.03	14	47.66	13	43.40
20	52.10	21	51.75	21	47.97	20	42.85
27	52.82	28	52.20	28	47.86	27	45.97
Feb. 3	51.68	May 5	51.34	Aug. 4	47.38	Nov. 3	44.61
10	52.69	12	50.35	11	46.75	10	45.50
17	52.61	19	50.82	18	46.36	17	44.10
24	52.80	26	50.49	25	45.68	24	45.20
Mar. 3	51.28	June 2	49.99	Sept. 1	46.36	Dec. 1	46.08
10	51.30	9	50.66	8	46.58	8	45.13
17	52.17	16	50.25	15	45.68	22	45.62
24	51.97	23	49.67	22	44.80	29	46.00
31	51.73	30	49.73	29	44.88		

Clinton 2 (*1016, p. 41). Frankfort Ice Co. 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 Co. 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, 1945

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	68.76	69.51	.....	68.43	.....	66.40	66.16	65.48	63.70	62.11	61.06	.....
2	69.25	69.43	.....	68.06	.....	66.32	66.13	65.39	63.59	61.82	61.04	62.22
3	69.14	69.22	.....	68.48	.....	66.76	66.07	65.34	63.49	62.19	61.41	62.00
4	69.25	68.81	.....	68.16	.....	67.02	65.81	65.38	63.16	62.13	61.42	62.16
5	69.35	68.90	.....	68.49	.....	67.07	65.52	64.22	.....	.....	60.97	62.19
6	69.17	69.01	.....	68.85	.....	67.08	65.68	.....	.....	.....	61.26	62.00
7	68.88	68.83	.....	68.75	.....	67.18	65.64	.....	.....	.....	61.40	61.91

Clinton 2--Continued.

Water level at 2 a.m., in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
8	68.95	68.69	.....	68.46	.....	67.01	.....	.....	.....	.....	61.53	62.20
9	69.21	68.86	.....	68.11	.....	66.96	.....	.....	63.27	.....	61.36	62.18
10	69.35	68.90	.....	.....	.....	66.85	65.44	.....	63.00	61.28	62.27	62.27
11	69.45	69.09	.....	.....	.....	66.79	65.33	.....	.....	61.11	61.98	62.48
12	68.92	69.02	.....	.....	.....	66.98	65.62	.....	.....	61.01	.....	62.63
13	69.18	68.77	.....	.....	67.37	66.80	65.53	.....	.....	61.25	.....	62.40
14	68.85	69.01	.....	.....	67.27	68.37	65.40	.....	.....	61.05	.....	62.24
15	68.93	68.95	.....	68.16	67.25	66.83	65.17	.....	.....	60.93	.....	.....
16	69.30	69.18	.....	67.60	67.39	66.72	65.13	.....	63.32	60.78	.....	62.59
17	69.44	69.15	.....	67.69	67.26	66.92	65.18	.....	62.38	60.66	.....	62.60
18	69.25	.....	.....	68.08	67.50	66.73	65.10	.....	62.53	60.46	61.97	62.79
19	69.00	.....	.....	68.34	67.73	66.62	65.05	63.51	62.68	60.40	61.48	62.34
20	69.31	.....	68.37	67.99	67.40	66.56	65.00	63.39	62.63	60.66	61.92	62.77
21	69.21	.....	68.34	67.83	66.88	66.59	64.95	63.43	62.79	60.35	61.65	.....
22	68.91	.....	68.70	68.28	66.76	66.73	64.71	63.51	62.90	59.97	61.76	.....
23	69.10	.....	68.44	67.76	67.27	66.64	64.63	63.60	63.63	.....	61.76	63.26
24	69.04	.....	68.44	67.50	67.32	66.29	64.70	63.53	63.34	.....	61.92	62.90
25	69.28	.....	68.65	67.59	67.12	66.03	64.74	63.30	62.53	.....	61.77	.....
26	69.21	.....	68.39	67.42	67.01	66.06	64.92	63.44	62.59	.....	61.97	.....
27	69.34	.....	68.45	68.14	67.03	65.98	64.92	63.20	62.56	.....	.....	.....
28	69.17	.....	68.50	68.08	66.60	65.88	64.78	63.24	.....	61.07	.....	.....
29	69.13	.....	68.57	.....	66.85	65.90	65.62	63.45	.....	61.00	.....	.....
30	69.15	.....	68.66	.....	66.85	66.13	65.66	63.72	62.69	61.05	.....	61.97
31	69.30	.....	68.16	.....	66.76	.....	65.62	63.98	.....	60.85	.....	62.26

Clinton 3 (*1016, p. 41). Frankfort Light Plant. In Frankfort, at southeast corner of settling ponds at municipal light plant. Water level is 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, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	24.73	29.22	26.45	28.45	27.64	26.10	24.77	36.29	.....	37.23	22.92	.....
2	24.84	30.00	25.92	28.03	27.64	26.14	25.07	36.28	36.24	37.11	23.56	21.30
3	25.09	29.92	25.97	28.21	27.43	26.15	25.17	36.08	36.18	37.65	24.03	21.04
4	25.55	28.84	25.80	26.76	27.59	25.86	25.23	36.23	36.25	37.87	24.22	20.64
5	25.58	27.32	24.72	26.30	27.57	25.84	25.02	36.16	36.79	38.05	23.17	21.02
6	25.57	26.85	24.55	25.73	27.51	25.99	25.31	36.17	37.27	37.95	22.36	22.35
7	25.45	26.93	24.68	25.58	27.27	26.07	25.54	36.26	37.37	37.54	22.17	.....
8	24.64	27.26	26.06	25.01	27.05	26.08	.....	36.66	37.57	37.08	22.65	.....
9	25.24	26.43	27.37	24.42	27.29	26.32	.....	36.63	37.43	37.05	23.61	22.52
10	25.93	26.27	27.05	24.11	27.26	26.30	24.62	36.48	36.82	36.95	23.03	21.38
11	27.13	25.92	27.52	25.18	27.37	25.52	25.12	36.65	26.87	37.00	23.96	21.07
12	27.49	25.30	26.13	26.40	27.31	25.41	30.44	36.40	37.45	36.87	23.81	21.60
13	27.98	25.09	25.86	27.04	27.32	25.34	33.38	36.15	37.89	36.18	22.74	21.46
14	26.80	25.23	25.52	27.43	27.00	25.44	35.51	36.32	.....	35.70	21.82	21.31
15	25.48	25.76	25.65	27.43	27.00	25.47	35.92	36.35	.....	35.13	22.09	21.40
16	25.03	26.48	25.60	25.79	25.69	25.37	36.16	36.20	37.81	35.08	21.65	21.04
17	24.95	26.92	25.91	24.99	25.53	24.93	36.08	35.96	37.31	35.83	21.42	19.67
18	25.00	27.08	26.60	24.49	26.27	.....	36.25	36.13	37.32	36.14	21.75	21.54
19	24.95	26.54	25.22	24.56	26.62	25.09	36.25	36.17	37.80	36.32	22.03	22.87
20	24.99	26.79	26.60	24.04	26.64	25.46	36.19	36.26	37.94	36.39	23.40	23.55
21	25.34	28.24	28.70	24.20	26.17	24.98	36.27	36.77	38.19	36.38	23.86	24.08
22	24.46	29.66	30.31	25.12	25.92	25.03	36.43	36.79	33.47	35.55	24.24	23.15
23	24.13	30.51	30.84	26.01	26.28	25.44	36.12	36.72	38.30	34.96	24.42	22.31
24	24.41	30.57	30.05	26.48	26.39	25.41	36.16	36.87	37.75	35.55	23.77	21.53
25	24.80	29.73	28.00	26.39	26.37	25.46	36.30	36.92	37.36	31.50	22.93	20.95
26	24.93	23.73	26.71	27.01	26.56	25.75	36.26	37.20	37.52	27.90	22.40	21.08
27	25.17	28.40	26.00	27.23	26.50	25.55	36.19	36.70	37.21	26.47	22.27	.....
28	26.32	27.30	26.00	27.50	26.15	25.40	36.24	34.05	36.93	25.48	21.97	.....
29	26.29	.....	26.10	27.55	26.32	25.49	36.36	.....	37.24	24.72	21.47	.....
30	26.74	.....	27.19	27.53	26.69	25.44	36.18	.....	37.56	23.63	.....	21.12
31	27.65	.....	27.92	.....	26.51	.....	36.10	.....	.....	22.64	.....	20.65

a Estimated.

Crawford County

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

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 6	4.90	June 14	4.16	July 16	7.71	Nov. 23	5.30
14	4.97	17	3.17	24	8.67	30	5.04
17	4.78	19	3.68	31	9.04	Dec. 7	6.67
21	4.77	26	5.29	Aug. 6	9.37	17	7.50
June 5	7.18	July 2	6.09	16	9.88	29	3.86
11	6.36	13	8.23				

Crawford 2 (*1016, p. 42). 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 by owner.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	4.76	Apr. 6	1.96	July 6	3.50	Oct. 5	4.71
12	3.60	13	2.95	13	3.80	12	4.82
19	2.40	20	1.97	20	3.36	19	4.68
26	1.70	27	2.91	27	3.56	26	5.19
Feb. 2	.86	May 4	2.94	Aug. 3	3.30	Nov. 2	5.27
9	1.20	11	2.91	10	3.72	9	5.46
16	1.28	18	1.60	17	3.30	16	2.75
23	1.01	25	2.70	24	4.19	23	1.59
Mar. 2 a	.01	June 1	3.20	31	4.38	30	1.18
9	1.40	8	3.05	Sept. 7	4.02	Dec. 7	1.50
16	1.05	15	2.20	14	4.54	14	2.48
23	1.50	22	1.90	21	4.82	21	2.72
30	2.91	29	3.10	28	4.90	28	1.23

a Above land-surface datum.

Crawford 3 (*1016, p. 43). 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 by owner.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	15.30	June 11	13.84	Aug. 13	14.90	Oct. 22	14.60
20	12.51	18	9.20	20	15.46	29	15.41
Feb. 17	11.60	24	12.40	27	15.10	Nov. 19	15.10
Mar. 8	5.90	July 5	14.40	Sept. 3	15.70	26	16.30
17	11.38	9	14.20	10	15.80	Dec. 1	15.20
May 10	14.10	16	14.40	17	15.30	16	15.60
23	13.40	23	14.50	24	13.80	23	15.30
28	14.00	29	14.20	Oct. 1	14.40	30	15.40
June 4	14.20	Aug. 6	14.30	15	14.40		

Crawford 4 (*1016, p. 43). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 1	31.27	May 6	31.31	June 26	31.30	Aug. 6	31.30
5	31.16	14	31.30	July 2	31.27	16	31.32
13	30.33	17	31.29	6	31.30	Nov. 23	31.27
21	31.31	21	31.70	13	31.34	30	31.26
28	31.34	June 5	31.25	16	31.28	Dec. 7	31.30
Apr. 6	31.30	14	31.31	24	31.28	17	31.37
14	31.50	19	31.27	31	31.32	29	31.28

Daviess County

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

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	25.59	Apr. 5	23.70	July 5	19.24	Oct. 4	21.78
11	24.58	12	23.38	12	19.76	11	21.71
18	25.69	19	22.80	19	20.22	18	21.74
25	25.68	26	22.61	26	20.40	25	21.78
Feb. 2	25.66	May 3	22.26	Aug. 2	20.72	Nov. 1	21.89
8	25.79	10	22.28	10	20.99	8	22.07
15	25.81	17	22.02	16	21.14	15	22.13
22	25.82	24	22.02	23	21.25	22	22.14
Mar. 1	25.59	31	21.90	30	21.53	29	22.04
8	24.90	June 7	21.89	Sept. 6	21.61	Dec. 6	22.09
15	24.80	14	21.68	13	21.69	13	22.13
23	24.40	21	20.70	20	21.87	20	22.13
29	24.20	28	19.71	27	21.89		

Dearborn County

Dearborn 1-1 (*986, p. 26; 1016, 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, 1945

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	82.05	81.05	.....	66.55	70.85	.....	81.67	79.60	81.00	81.08	81.48	
2	88.25	82.85	79.75	52.50	67.10	69.10	77.10	81.88	.....	81.87	81.63	.....
3	89.20	82.80	79.10	53.60	67.40	.....	77.75	81.60	.....	82.08	81.83	79.42
4	89.65	.....	.....	54.05	67.65	69.65	77.90	.....	78.02	82.23	.....	81.35
5	89.40	81.20	72.75	54.60	68.10	69.90	78.10	80.40	78.88	80.67	78.19	80.76
6	90.10	81.50	70.65	54.90	.....	69.82	78.25	79.67	78.64	81.31	78.50	82.48
7	.....	81.70	69.25	55.40	68.60	70.35	78.40	80.80	78.20	.....	77.42	82.46
8	88.65	82.05	68.90	.....	68.75	70.75	.....	80.20	78.02	79.33	78.19	.....
9	88.25	81.90	65.40	55.85	68.95	71.20	79.05	81.00	.....	78.81	79.15	.....
10	89.10	82.25	62.10	58.17	69.05	.....	78.60	80.75	78.50	78.06	78.79	.....
11	89.50	.....	.....	58.50	69.25	71.50	78.75	81.20	78.30	80.17	.....	.....
12	88.90	81.10	52.00	59.10	69.40	73.90	73.90	.....	79.05	80.37	.....	80.19
13	88.65	82.84	52.15	59.90	.....	74.25	79.10	81.35	78.70	80.85	78.31	81.25
14	.....	82.60	49.30	59.95	69.20	75.00	79.40	81.88	78.02	.....	77.37	79.77
15	84.10	82.95	48.90	.....	71.40	75.35	.....	81.60	78.40	78.81	76.86	.....
16	86.70	82.40	48.58	60.20	72.70	75.60	80.35	80.95	.....	77.79	77.69	.....
17	87.40	82.10	48.30	61.50	73.25	.....	80.60	81.20	78.90	77.09	78.04	80.76
18	87.40	.....	.....	61.85	72.75	75.30	80.75	81.60	80.20	78.71	.....	.....
19	87.65	82.60	49.00	62.20	72.60	75.70	80.55	.....	80.70	79.56	77.52	.....
20	87.90	83.30	48.90	62.65	.....	75.60	80.90	80.75	80.40	79.38	78.82	.....
21	.....	83.67	49.25	62.90	73.40	75.75	81.05	81.40	80.10	.....	82.24	.....
22	83.80	83.25	49.75	.....	74.10	75.90	.....	81.70	80.35	78.04	.....	.....
23	84.60	83.10	49.80	65.75	73.65	76.10	81.30	81.45	.....	80.17	84.58	.....
24	84.83	83.70	49.65	66.50	72.75	.....	82.15	81.85	79.90	89.11	82.12	.....
25	84.75	.....	.....	66.65	72.40	75.80	82.65	81.50	81.90	81.56	.....	.....
26	84.80	81.05	49.70	66.00	72.60	76.20	82.35	.....	81.40	81.81	78.58	.....
27	84.95	81.60	52.50	66.45	.....	76.35	82.40	81.05	80.60	82.19	77.67	.....
28	.....	81.40	54.75	67.10	70.65	76.40	82.52	79.68	80.25	.....	77.02	.....
29	82.25	.....	54.75	.....	71.95	76.60	82.60	80.10	80.40	80.25	78.32	.....
30	82.33	.....	54.60	65.75	71.95	76.10	80.68	80.45	.....	80.98	79.83	.....
31	82.15	.....	54.85	.....	71.15	.....	81.50	80.70	.....	81.50	.....	.....

Dearborn 1-7 (#1016, p. 44). Schenley Distillers, Inc. Old Quaker plant, Greendale, Lawrenceburg. Equipped with automatic water-stage recorder. Measurements made by Frank C. Caveman, Schenley Distillers, Inc.

Water level at 2 a.m., in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	74.32	71.73	40.85	54.25	.....	65.02	69.89	71.31	72.36	71.62	70.93
2	.....	74.22	70.74	39.73	55.29	.....	65.03	69.99	71.23	72.46	71.66	71.29
3	.....	74.08	69.84	41.15	55.65	.....	65.25	69.87	70.68	72.80	71.77	70.69
4	.....	73.96	68.20	42.31	56.13	.....	65.70	69.97	70.49	72.99	71.78	70.97
5	.....	73.47	67.99	42.77	56.13	.....	65.78	69.61	70.36	72.96	71.00	71.32
6	.....	73.18	66.45	42.57	56.40	.....	66.04	69.02	70.52	72.80	70.90	71.61
7	.....	73.04	64.75	42.16	57.05	.....	66.31	69.49	70.90	72.60	70.78	71.86
8	.....	72.95	62.20	42.79	57.40	.....	66.40	69.68	70.93	71.95	70.58	72.03
9	.....	72.92	59.47	43.14	.....	.....	66.82	70.12	70.70	71.92	70.70	71.32
10	79.44	72.86	55.22	44.69	.....	.....	67.18	70.39	70.42	71.82	70.94	71.37
11	79.39	72.69	51.33	45.37	.....	.....	67.51	70.60	70.50	71.69	70.72	71.43
12	79.19	72.57	45.80	46.35	.....	.....	67.63	70.50	70.81	71.77	70.22	.....
13	79.01	72.79	42.94	47.10	.....	.....	68.23	70.00	70.96	71.77	70.31	71.59
14	73.30	72.98	41.71	48.00	.....	.....	68.15	70.41	71.12	71.60	70.49	71.69
15	77.28	73.18	41.38	48.45	.....	.....	68.41	70.83	71.40	71.01	70.32	71.81
16	77.40	73.41	40.06	47.50	.....	.....	69.04	70.86	71.65	70.91	70.30	71.82
17	77.63	73.62	39.38	48.61	.....	.....	68.75	70.35	71.24	70.72	70.26	70.98
18	77.49	73.81	37.53	49.46	.....	.....	69.34	70.20	71.16	70.53	70.33	70.78
19	77.28	73.66	37.10	49.86	.....	.....	69.53	70.20	.....	70.56	69.94	.....
20	77.11	73.42	38.74	50.36	.....	63.77	69.56	69.93	71.50	70.62	70.16	.....
21	77.00	73.53	38.80	50.98	.....	63.65	69.78	70.48	71.69	70.62	70.36	.....
22	76.18	73.65	38.29	50.79	.....	64.28	69.93	71.00	71.90	70.03	70.34	.....
23	75.92	73.77	39.28	51.47	.....	64.40	70.00	71.37	71.99	70.29	70.01	.....
24	75.80	73.90	39.03	52.04	.....	63.95	70.03	71.13	71.68	70.66	70.13	.....
25	75.70	73.68	40.34	53.32	.....	64.46	70.12	70.75	71.96	70.92	70.18	.....
26	75.54	73.18	38.54	53.65	.....	64.48	70.09	71.10	72.22	71.16	69.80	.....
27	75.39	73.05	40.35	53.85	.....	65.03	70.11	70.85	72.42	71.40	70.03	.....
28	75.10	72.78	40.42	54.09	.....	64.70	70.15	71.00	72.60	71.52	70.13	.....
29	74.53	.....	40.75	53.55	.....	64.77	70.11	71.09	72.75	71.18	70.23	.....
30	74.43	.....	41.05	52.13	.....	64.98	69.53	71.28	72.85	71.33	70.60	.....
31	74.35	.....	40.95	.....	.....	.....	69.62	71.40	.....	71.46	.....	.....

Dearborn 1-8 (#1016, p. 45). Schenley Distillers, Inc. Old Quaker plant, Greendale, Lawrenceburg. Equipped with company-owned automatic water-stage recorder. Measurements made by Frank C. Caveman, Schenley Distillers, Inc.

Water level at 2 a.m., in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Sept.	Oct.	Nov.	Dec.
1	100.05	99.43	97.56	71.10	82.05	88.40	93.31	.....	95.15	95.71	95.04
2	103.00	98.97	97.10	67.75	83.14	86.92	94.17	.....	95.45	95.57	94.30
3	103.68	98.78	95.84	70.36	84.02	87.27	94.27	.....	96.15	96.10	93.00
4	104.45	99.11	95.10	71.35	84.65	87.25	94.48	.....	96.25	94.55	95.32
5	105.02	96.99	90.22	72.50	84.73	86.43	94.56	.....	95.38	92.43	96.40
6	105.03	97.86	86.20	71.59	83.92	86.42	94.95	.....	95.85	93.30	96.88
7	103.30	97.06	85.80	72.36	84.70	86.47	95.06	.....	94.25	92.38	97.30
8	99.70	97.18	85.46	73.30	86.03	87.21	95.12	.....	95.30	91.93	96.40
9	103.10	96.72	82.80	73.27	87.04	87.48	95.02	.....	95.13	93.71	96.36
10	103.96	96.66	79.77	73.64	86.85	88.37	95.21	.....	93.15	92.38	94.06
11	103.52	95.80	75.21	74.86	87.34	88.44	95.32	.....	93.86	91.33	94.96
12	103.40	96.58	70.88	75.61	87.85	89.00	95.49	.....	94.40	90.90	.....
13	103.34	98.44	69.11	76.41	87.77	90.32	95.82	.....	94.58	92.70	95.56
14	103.12	98.95	68.29	77.08	82.30	90.88	96.19	.....	92.80	91.30	95.91
15	98.50	99.54	67.95	75.30	85.75	91.40	96.40	.....	93.60	91.40	95.95
16	101.00	100.15	67.10	75.05	88.30	91.20	96.72	.....	92.28	92.18	94.36
17	101.83	100.35	66.34	77.40	88.50	90.86	96.92	.....	92.03	92.10	92.02
18	101.62	99.40	65.56	79.80	88.62	89.77	.....	.....	92.30	91.80	92.96
19	101.59	97.80	66.44	80.53	88.90	90.55	.....	.....	93.00	91.00	.....
20	101.44	99.28	66.64	80.90	88.52	91.72	.....	.....	93.76	92.95	.....

Dearborn 1-8--Continued.

Water level at 2 a.m., in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Sept.	Oct.	Nov.	Dec.
21	101.85	99.28	65.95	81.43	88.67	91.61	.....	.....	92.00	93.66	.....
22	98.22	100.10	65.87	81.72	89.80	91.98	.....	.....	91.00	92.23	.....
23	99.66	99.76	68.57	82.22	89.64	92.60	.....	.....	93.70	92.30	.....
24	100.25	100.20	68.40	82.79	89.80	92.70	a99.20	.....	94.78	92.60	.....
25	100.60	99.26	65.71	83.01	89.90	92.70	.....	.....	95.15	92.68	.....
26	100.48	97.60	65.69	83.00	89.48	92.48	.....	a99.20	95.58	92.20	.....
27	100.43	96.82	68.12	83.26	89.81	93.15	.....	96.70	96.07	92.60	.....
28	100.20	97.72	69.44	83.64	88.52	92.92	.....	96.66	94.83	92.30	.....
29	98.30		70.05	84.11	87.38	93.27	.....	96.80	94.00	92.70	.....
30	98.63		71.80	80.55	87.52	94.06	.....	96.10	95.20	94.28	.....
31	98.33		70.85		87.78		.....		95.33		.....

a Tape measurement.

Dearborn 2 (*1016, p. 45). City of Lawrenceburg. In Lawrenceburg, at municipal water plant, Third and Shipping Sts. No measurements made in 1945.

Dearborn 3 (*1016, p. 45). City of Lawrenceburg. In Lawrenceburg, 31.5 feet south of centerline of Second St. and 26.7 feet west of centerline of Water St. Measurements made by R. C. Patton, Lawrenceburg Water Department.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	55.04	Mar. 28	22.82	June 18	43.00	Sept. 17	53.21
8	49.70	Apr. 2	25.37	25	42.63	Oct. 1	51.99
16	48.27	9	28.16	July 2	45.27	8	51.08
22	48.35	16	33.71	9	47.07	15	50.05
29	49.19	23	35.14	16	48.70	22	53.50
Feb. 5	50.27	30	37.02	30	50.17	29	52.20
12	51.18	May 8	40.66	Aug. 6	50.76	Nov. 19	52.43
20	49.99	14	40.65	13	51.06	26	50.44
26	42.26	21	37.56	20	51.95	Dec. 3	51.39
Mar. 5	25.80	June 4	41.21	27	52.43	10	51.40
12	18.24	11	43.69	Sept. 10	52.95	31	49.58
26	23.06						

Dearborn 4 (*1016, p. 46). 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, 1945

Jan. 2	36.97	Mar. 28	11.72	June 18	31.04	Sept. 17	43.14
8	32.20	Apr. 2	19.19	25	34.10	Oct. 1	39.03
16	36.63	9	18.90	July 2	38.20	8	38.89
22	37.30	16	28.85	9	39.37	15	40.45
29	39.48	23	28.20	16	40.19	22	41.90
Feb. 5	40.75	30	28.87	30	41.16	29	41.81
12	40.69	May 8	33.10	Aug. 6	40.06	Nov. 19	39.78
20	34.78	14	30.61	13	41.71	26	36.60
26	19.70	21	22.19	20	42.34	Dec. 3	37.54
Mar. 5	3.50	June 4	35.28	27	42.51	10	37.69
12	(a)	11	36.99	Sept. 10	43.13	31	37.58
26	10.85						

a Water running out top.

Dearborn 5. City of Lawrenceburg. At north side of East Center St. in northeast corner of alley between Arch and St. Clair Sts. Unused drilled well, diameter 3 inches, depth 60.8 feet. Measuring point, edge of concrete at well, at land-surface datum. First measurement Aug. 29, 1945. Measurements made by R. C. Patton, Lawrenceburg Water Department.

Dearborn 5--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 29	38.37	Oct. 8	34.44	Oct. 29	37.75	Dec. 3	33.00
Sept. 10	38.88	15	33.54	Nov. 19	36.05	10	32.25
17	38.99	22	37.52	26	32.24	31	33.59
Oct. 1	34.84						

Decatur County

Decatur 1 (*1016, p. 46). Decatur County, "public well". In Letts. Measurements made by Sam D. Elliott.

Water level, in feet below land-surface datum, 1945														
Jan.	5	3.38	Apr.	6	2.26	July	6	3.50	Oct.	5	3.24			
	12	3.26		13	2.16		13	4.00		12	3.88			
	19	3.30		20	2.66		20	4.50		19	3.82			
	26	2.92		27	2.78		27	4.60		26	4.10			
Feb.	2	2.76	May	6	2.16	Aug.	3	4.70	Nov.	2	2.77			
	9	2.69			11		2.34			10	5.35		9	2.72
	16	2.40			18		2.36			17	5.52		16	2.55
	23	2.42		25	2.30		24	5.78		23	2.27			
Mar.	2	2.03	June	1	3.28		31	5.90		30	2.16			
	9	2.20			8	3.25	Sept.	7	6.56	Dec.	7	1.79		
	16	2.44			15	2.94			14		6.42		14	1.82
	23	2.10			22	2.82			21		6.56		21	1.70
	30	2.02			29	3.25			28		5.82		28	1.73

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). 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, 1945							
Jan. 15	8.5	Mar. 15	7.5	June 16	5.5	July 30	9.5
31	9.5	Apr. 30	6.5	30	9.5	Aug. 16	11.5
Feb. 15	9.5	May 9	5.5	July 15	8.5	Sept. 15	10.5
Mar. 2	7.5	15	11.5				

De Kalb 2. 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. Unused dug well, diameter 36 inches, depth 30.3 feet. Measuring point, edge of tin plate under pump flange, 0.2 foot above land-surface datum. First measurement Sept. 7, 1945. Measurements made by Worth Wareham.

Water level, in feet below land-surface datum, 1945							
Sept. 7	7.32	Oct. 12	6.78	Nov. 9	5.79	Dec. 7	4.73
14	7.50	19	6.72	16	5.73	14	4.75
21	7.95	26	5.78	23	5.77	21	5.10
28	7.92	Nov. 2	5.79	30	5.72	28	4.26
Oct. 5	6.75						

Delaware County

Delaware 2. Merlin V. Painter. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 7, T. 19 N., R. 8 E. Unused formerly dug well, present diameter 6 inches, depth 21 feet. Measuring point, at east side of top of casing, at land-surface datum. First measurement Mar. 30, 1945. Measurements by owner.

Delaware 2--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 30	9.84	June 8	8.64	Aug. 17	10.88	Oct. 27	10.90
Apr. 6	9.73	15	8.96	25	11.26	Nov. 2	11.09
13	7.40	22	5.78	31	11.58	9	11.44
20	7.40	29	6.92	Sept. 7	11.36	17	11.33
28	7.35	July 6	7.73	14	12.21	24	10.96
May 4	8.13	13	8.44	21	12.49	Dec. 7	10.57
11	8.40	20	9.17	28	12.41	14	10.71
18	6.95	27	9.93	Oct. 4	10.47	22	10.79
26	7.57	Aug. 3	10.27	12	10.07	30	8.10
June 1	8.00	10	10.72	19	10.38		

DuBois County

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

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 3	7.50	May 8	10.31	July 5	12.27	Oct. 14	12.48
10	3.71	13	10.03	11	13.00	Nov. 2	14.34
17	9.39	20	9.20	18	13.30	9	14.50
26	11.39	23	10.14	30	13.57	21	9.99
31	8.79	June 8	10.82	Aug. 29	14.49	29	10.70
Apr. 8	8.09	19	8.20	Sept. 13	14.33	Dec. 7	11.70
27	9.62	28	11.22	Oct. 4	11.44	17	12.78

DuBois 5 (*1016, p. 47). Harry Baker. In Haysville, in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 25, T. 1 N., R. 5 W. About 1,000 feet north of intersection of State Highways 45 and 46. Measurements made by Joe M. Popp.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	21.66	Apr. 13	11.20	July 13	14.70	Oct. 12	14.04
12	21.55	20	10.70	20	15.85	19	15.86
19	21.08	27	12.35	27	16.80	26	17.25
Feb. 2	21.15	May 4	13.76	Aug. 3	17.52	Nov. 2	18.18
9	20.90	11	14.30	10	18.20	16	18.16
16	20.28	18	14.75	17	17.55	23	16.36
23	16.60	25	14.30	24	17.85	26	19.01
Mar. 2	9.25	June 1	14.78	31	18.50	30	14.78
9	8.28	8	13.36	Sept. 7	19.20	Dec. 8	15.34
16	11.65	15	11.26	14	19.47	14	16.45
23	8.70	22	9.50	21	19.53	21	17.85
30	11.25	29	12.48	28	18.87	28	16.40
Apr. 6	9.55	July 6	12.80	Oct. 5	11.76		

Elkhart County

Elkhart 1 (*936, p. 24; 944, p. 24; 986, p. 27; 1016, p. 47). Elkhart City Waterworks. "Bucklen" well at city water plant on east side of North Main St. and north side of Christiana Creek. Water level is affected by discharge from similar wells to the west, the nearest of which is about 300 feet distant. Water level, in feet below land-surface datum, 1945: Sept. 12, 12.39.

Elkhart 2. 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, and 3 miles north of Benton. Driven well, diameter 1 $\frac{1}{2}$ inches, depth 18.4 feet. Measuring point, top of pipe coupling, 1.6 feet above land-surface datum. First measurement Sept. 10, 1945. Measurements by owner.

Elkhart 2--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 10	4.92	Oct. 8	4.04	Nov. 5	5.30	Dec. 3	5.40
17	4.90	15	4.80	12	5.10	18	5.49
24	5.00	22	5.06	19	5.00	24	5.50
Oct. 1	.86	28	5.16	26	5.45		

Fayette County

Fayette 1. 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. Unused dug well, diameter 30 inches, depth 20 feet. Measuring point, edge of board in platform at north side of well, 2.5 feet above land-surface datum. First measurement July 12, 1945. Measurements made by Francis H. Manlove.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 12	5.97	Aug. 4	6.26	Aug. 18	4.48	Nov. 15	6.06
21	6.19	11	5.49	25	6.68	Dec. 13	6.28
28	6.24						

Floyd County

Floyd 1 (50-13-27). (*1016, 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. Equipped with automatic water-stage recorder until Feb. 27, 1945. Measurements made by personnel of the Geological Survey, U. S. Dept. of Interior, Louisville, Ky.

Water level, in feet below land-surface datum, 1945 (Daily noon water level from recorder charts for period Jan. 3, 1945 to Feb. 24, 1945)							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	22.80	Jan. 20	36.91	Feb. 7	43.98	Feb. 22	21.44
3	21.58	21	36.99	8	44.09	23	18.20
4	21.16	22	37.35	9	44.20	24	16.68
5	19.41	23	37.97	10	44.28	27	12.65
6	18.48	24	38.78	11	44.30	Mar. 23	14.40
7	18.49	30	41.87	12	44.35	May 9	38.83
8	19.23	31	42.18	13	44.03	June 2	36.80
9	21.41	Feb. 1	42.52	15	39.31	27	34.96
15 a	35.84	2	42.82	16	36.59	July 27	43.97
16	36.63	3	43.11	17	33.60	Aug. 20	43.34
17	37.04	4	43.37	19	29.76	Sept. 20	45.02
18	37.05	5	43.59	20	27.76	Nov. 16	43.50
19	36.92	6	43.81	21	25.13	Dec. 4	35.82

a Tape measurement at another hour.

Floyd 2 (50-13-26) (*1016, p. 48). Mr. Randall. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 22, T. 3 S., R. 6 E., on lane beside electric fence about 150 feet west of a point on River Road, about 0.57 mile north of an east-west line through Middle Creek stone bridge. Measurements made by personnel of the Geological Survey, U. S. Dept. of Interior, Louisville, Ky.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	20.50	Feb. 27	11.35	June 27	37.20	Sept. 20	46.50
9	20.00	Mar. 23	9.50	July 27	46.30	Nov. 16	46.20
22	33.40	May 9 a	37.20	Aug. 20	49.02	Dec. 4	38.92
30	37.70	June 2	32.27				

a Obstructed.

Floyd 3 (50-14-1) (*1016, p. 48). 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 1.06 miles north of an east-west line through Middle Creek stone bridge. Measurements made by personnel of the Geological Survey, U. S. Dept. of Interior, Louisville, Ky.

Floyd 3--Continued.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	11.47	Mar. 23	7.40	June 27	12.15	Sept. 20	18.37
9	10.58	May 9	12.71	July 27	15.04	Nov. 16	18.95
22	11.54	June 2	12.69	Aug. 20	16.51	Dec. 4	15.27
30	12.50						

Floyd 4 (50-14-2) (*1016, p. 49). 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 0.9 mile north of an east-west line through Middle Creek stone bridge. Measurements made by personnel of the Geological Survey, U. S. Dept. of Interior, Louisville, Ky.

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

Jan. 3	24.50	Feb. 27	12.75	June 27	18.10	Sept. 20	23.13
9	18.92	Mar. 23	9.70	July 27	19.80	Nov. 16	22.22
22	19.80	May 9	25.06	Aug. 20	22.87	Dec. 4	22.95
30	20.00	June 2	17.60				

Floyd 5 (50-14-3) (*1016, p. 49). 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, and 0.82 mile north of an east-west line through Middle Creek stone bridge. Measurements made by personnel of the Geological Survey, U. S. Dept. of Interior, Louisville, Ky.

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

Jan. 3	22.25	Feb. 27	13.74	June 27	22.30	Sept. 20	30.15
9	19.38	Mar. 23	11.73	July 27	27.37	Nov. 16	30.25
22	23.90	May 9	17.22	Aug. 20	28.60	Dec. 4	26.06
30	26.10	June 2	23.50				

Floyd 6 (50-15-1) (*1016, p. 49). 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 and 1.85 miles north of an east-west line through Middle Creek stone bridge. Measurements made by personnel of the Geological Survey, U. S. Dept. of Interior, Louisville, Ky.

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

Jan. 3	13.80	Feb. 27	1.53	June 27	9.25	Sept. 20	15.68
9	12.88	Mar. 23	2.18	July 27	13.40	Nov. 16	16.56
22	9.55	May 9	10.28	Aug. 20	14.67	Dec. 4	16.39
30	10.60	June 2	10.39				

Fountain County

Fountain 1 (*1016, p. 47). City of Hillsboro. In Hillsboro, at northeast corner of Regal Store, north of intersection of State Highways 34 and 341. Measurements made by Everett Kay.

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

Jan. 4	42.31	Apr. 4	41.45	July 12	40.22	Oct. 10	39.95
10	42.23	11	41.09	18	40.62	17	40.23
17	42.34	18	41.24	24	40.55	24	40.47
24	42.29	25	41.14	Aug. 4	40.82	31	40.55
31	42.27	May 9	41.26	9	40.87	Nov. 7	40.74
Feb. 7	42.33	17	40.85	15	40.50	15	40.95
14	42.45	23	40.57	21	40.09	21	40.42
21	42.20	31	40.44	30	40.78	28	40.84
Mar. 2	42.39	June 6	40.66	Sept. 7	41.00	Dec. 6	40.76
7	42.45	13	41.57	12	41.13	12	41.10
14	42.14	20	40.25	19	41.14	19	40.97
20	42.17	26	39.93	27	41.21	26	41.05
28	42.15	July 4	40.07	Oct. 3	40.88		

Franklin County

Franklin 1 (*840, p. 75; 845, p. 71; 886, p. 99; 944, p. 24; 986, p. 27; 1016, 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.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	30.50	Apr. 7	25.50	July 7	28.00	Oct. 6	27.75
13	30.25	14	27.50	14	27.50	13	28.50
20	30.25	21	25.50	21	27.50	20	28.50
27	30.50	28	27.50	28	28.50	27	29.00
Feb. 3	30.25	May 5	28.00	Aug. 4	29.25	Nov. 3	28.50
10	30.00	12	27.50	11	29.50	10	29.25
17	30.00	19	27.50	18	29.75	17	28.00
24	29.50	26	27.50	25	30.25	24	28.25
Mar. 3	27.50	June 2	28.25	Sept. 1	29.50	Dec. 1	28.00
10	23.50	9	29.00	8	29.25	8	28.50
17	26.00	16	27.00	15	29.50	17	29.50
24	24.50	23	24.00	22	29.25	22	29.50
30	26.00	30	27.00	29	27.50	29	26.50

Franklin 3 (*1016, p. 50). John Weber. In Brookville, in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 20, T. 9 N., R. 2 W., at old ice plant in southwest part of city, east of U. S. Highway 52. Measurements made by Walter Cleaver, Brookville Water Department. Measurements discontinued June 16, 1945; well put back in service.

Water level, in feet below land-surface datum, 1945					
Mar. 5	17.47	Mar. 29	18.80	Apr. 17	17.20
12	17.75	Apr. 5	16.00	25	19.00
22	15.70	10	18.00	May 4	19.80
				May 18	19.25
				June 16	19.60

Franklin 4 (*1016, p. 50). 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 by owner.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 5	41.79	Mar. 30	30.02	June 15	20.26
12	41.97	Apr. 13	29.63	July 6	27.97
19	43.63	20	27.98	13	29.47
26	44.28	May 4	28.97	20	29.56
Feb. 2	30.55	11	28.49	27	29.42
16	29.63	18	28.37	Aug. 3	27.69
23	30.77	25	26.86	Oct. 12	28.91
Mar. 16	31.37	June 1	26.08	19	27.67
23	30.93	8	21.67	26	28.44
				Nov. 2	28.30
				9	27.74
				16	26.22
				23	24.74
				30	25.37
				Dec. 7	25.02
				14	25.48
				21	25.68
				28	27.47

Fulton County

Fulton 3 (*817, p. 45; 840, p. 76; 845, p. 72; *886, p. 99; 906, p. 22; 936, p. 25; 986, p. 28; 1016, p. 50-51). City of Rochester. At Federal Fish Hatchery east of Rochester. Measuring point prior to Feb. 6, 1944, 2.0 feet above land-surface datum; after Feb. 6, 1944, 0.10 foot above land-surface datum. Published measurements made between Sept. 10, 1935, and Dec. 31, 1942, should be corrected to land-surface datum by subtracting 2.00 feet. Published measurements made between Jan. 1, 1943, and Dec. 31, 1944, should be corrected to land-surface datum by adding 1.00 foot. Present measuring point, top of 1 $\frac{1}{4}$ -inch pipe, 0.10 foot above land-surface datum. Measurements made by C. H. Walker, Federal Fish Hatchery.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 1	10.40	Feb. 27	10.10	Apr. 9	6.53
8	10.45	Mar. 5	10.00	16	6.15
15	10.44	12	9.74	23	5.67
Feb. 5	10.52	19	9.71	30	5.61
12	10.41	26	8.69	May 7	5.24
19	10.25	Apr. 2	7.75	14	5.78
				May 22	4.80
				28	5.58
				June 4	5.89
				11	6.31
				18	5.96
				25	6.10

Fulton 3--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 2	6.41	Aug. 13	7.72	Sept. 24	9.09	Nov. 4	9.19
9	6.76	20	8.17	Oct. 2	8.69	14	9.23
16	7.23	27	8.49	10	8.78	26	9.24
24	7.50	Sept. 4	8.35	15	9.15	Dec. 3	9.21
30	7.59	10	6.40	22	9.23	10	9.30
Aug. 6	7.37	17	9.07	29	9.21	17	9.40

Gibson County

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

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	18.98	Apr. 5	18.35	July 5	17.05	Oct. 4	15.83
11	19.50	12	16.43	12	17.00	11	16.50
18	19.97	19	17.57	19	17.17	18	16.30
25	19.89	26	17.78	26	16.90	25	17.20
Feb. 1	20.40	May 3	17.60	Aug. 2	16.95	Nov. 1	17.20
8	20.30	10	17.69	9	16.20	8	17.39
15	20.40	17	17.55	16	16.03	15	17.34
22	19.97	24	17.67	23	16.10	22	17.49
Mar. 1	16.92	31	17.67	30	17.50	29	17.42
8	18.27	June 7	17.65	Sept. 6	16.97	Dec. 6	17.36
15	18.27	14	16.48	13	16.62	13	17.59
22	18.03	21	17.10	20	16.64	20	17.40
29	18.44	23	17.03	27	15.12	27	17.56

Grant County

Grant 1. Marion Waterworks. 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. Drilled well, diameter 2 inches, depth 93 feet. Measuring point, top of pipe, 1.4 feet above land-surface datum. First measurement made Mar. 8, 1945. Measurements made by personnel of Marion Waterworks, Wilmer Wilson, Supt.

Water level, in feet below land-surface datum, 1945										
Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	84.60	85.00	....	....	75.36	74.4	72.0	70.6
2	.....	87.60	84.60	85.60	78.9	....	.....	74.2	71.3	....
3	.....	98.60	84.50	84.80	80.6	.....	71.00	75.8	72.4	69.5
4	.....	93.60	85.30	82.60	80.4	.....	74.00	74.7	....	70.4
5	.....	98.60	85.60	82.60	33.3	.....	72.30	74.0	70.0	70.4
6	.....	93.30	.....	83.80	30.6	81.6	77.10	75.1	70.3	69.9
7	.....	98.60	73.60	83.70	82.3	30.6	75.20	....	68.8	69.8
8	37.45	.....	85.00	84.6	....	82.6	78.30	73.0	69.7	73.2
9	85.95	91.60	82.00	35.0	79.4	81.6	.....	73.1	69.4	....
10	39.00	91.60	85.00	....	79.6	82.6	73.10	71.1	69.3	70.0
11	.....	90.60	85.60	80.6	.....	79.6	76.20	72.9	....	....
12	85.25	91.60	86.40	82.3	.....	.....	74.60	73.0	70.1	....
13	85.67	91.60	.....	84.1	.....	79.6	77.90	72.6	69.8	....
14	85.15	91.60	85.00	84.6	.....	80.1	75.3	....	69.5	....
15	87.25	.....	87.60	86.1	.....	80.4	74.2	72.4	68.8	....
16	87.47	90.60	87.30	35.9	.....	79.6	....	72.1	69.5	....
17	87.30	91.20	87.60	....	.....	79.5	74.4	72.1	70.7	....
18	.....	91.60	88.60	84.6	.....	77.9	74.6	70.7	....	....
19	84.80	87.60	86.60	85.1	.....	.....	77.3	70.4	68.6	....
20	88.60	87.10	.....	83.9	.....	78.4	78.1	73.1	70.3	....
21	90.95	84.60	86.20	86.5	.....	77.9	78.2	....	70.0	....
22	86.60	.....	96.10	85.2	....	79.6	77.7	71.3	70.4	....
23	87.50	87.00	35.90	85.9	.....	78.6	....	71.6	70.7	....
24	86.60	84.00	88.20	.....	.....	78.0	77.3	71.5	71.0	....
25	.....	83.60	88.20	83.0	.....	79.6	76.0	70.9	....	....
26	85.20	85.20	87.80	82.9	.....	.....	77.1	71.6	71.3	....

Grant 1--Continued.

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

Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
27	91.60	87.00	84.80	83.5	....	....	76.0	71.1	70.8	....
28	22.60	86.60	87.30	86.1	....	77.3	74.9	....	71.2	....
29	97.60	....	86.60	37.1	....	76.4	76.4	70.2	71.4	....
30	97.60	81.40	85.60	82.7	....	77.35	....	70.2	71.5	....
31	98.60	84.60	....	....	....	78.96	....	70.9	....	....

Grant 2. Marion Waterworks. At pumping station, west of reservoir, and north of railroad. Drilled well, diameter 10 inches, depth 110 feet. Measuring point, Mar. 8 to Aug. 30, 1945, top of casing, 1.07 feet above land surface; after Aug. 30, 1945, top edge of floor of recorder shelter, 1.8 feet above land-surface datum. First measurement Mar. 8, 1945. Measurements made by personnel of Marion Waterworks, Wilmer Wilson, Supt.

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

(From recorder charts at 2 a.m., beginning Sept. 1)

Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	82.0	76.7	....	....	69.7	67.06	64.54	64.29
2	....	81.9	82.7	....	73.9	....	70.12	66.99	63.41	64.20
3	....	84.3	78.3	....	76.3	....	66.7	68.34	64.45	61.67
4	....	83.3	78.9	76.1	73.9	....	....	67.37	63.60	63.08
5	....	84.9	77.7	75.6	75.1	....	....	66.87	62.04	62.90
6	....	83.8	....	75.7	74.0	72.2	....	67.74	62.28	62.27
7	....	84.9	73.9	75.9	74.8	73.1	....	66.86	61.41	62.05
8	81.00	....	77.9	77.9	....	73.4	....	65.56	63.89	65.17
9	80.98	83.9	83.9	77.1	....	73.5	68.26	65.78	62.52	62.07
10	82.03	84.9	78.3	....	....	73.9	67.60	65.92	62.53	62.40
11	....	83.9	75.4	78.4	....	73.3	....	66.07	62.17	62.24
12	79.63	84.9	77.9	75.6	....	....	68.78	66.02	60.78	62.12
13	80.51	84.9	....	70.9	....	71.9	....	66.18	60.99	65.27
14	80.71	84.9	77.9	76.6	....	72.9	69.23	66.10	61.30	63.45
15	80.81	....	79.4	77.9	....	71.4	68.23	65.30	61.50	62.95
16	80.53	82.9	80.4	77.9	....	72.3	67.80	65.44	61.39	62.62
17	80.63	83.6	80.4	....	....	71.4	....	65.52	63.10	62.50
18	....	83.9	81.4	75.0	....	71.4	....	64.52	62.23	62.30
19	79.33	81.9	79.4	77.0	....	....	....	64.19	60.85	64.00
20	81.13	81.5	....	77.0	....	69.9	....	65.56	62.34	62.97
21	82.31	79.75	78.9	78.0	....	71.0	70.32	64.76	62.70	....
22	81.53	....	79.4	77.6	....	71.8	....	63.48	62.98	....
23	81.13	78.9	78.9	78.0	....	71.4	69.42	63.76	63.25	....
24	81.63	78.9	78.9	....	....	71.9	....	63.73	63.61	....
25	....	78.5	....	76.0	....	71.8	....	63.48	63.64	64.62
26	80.20	84.6	....	76.5	....	....	69.15	63.55	....	64.82
27	82.10	80.3	....	76.4	....	....	....	63.59	....	65.17
28	82.65	80.2	....	77.9	....	....	69.04	....	63.86	65.02
29	82.7	....	79.4	78.5	....	....	68.93	....	64.07	64.82
30	84.2	86.1	78.9	76.8	....	....	68.37	....	64.21	64.50
31	83.8	78.9	....	....	....	....	....	63.45	....	64.81

Grant 5. 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. Measuring point, edge of shelter house floor, 1.20 feet above land-surface datum. Automatic water-stage recorder installed Apr. 16, 1945. Measurements made by C. C. Bishop, plant engineer, Anaconda Wire & Cable Co.

Water level at 2 a.m., in feet below land-surface datum, 1945

(From recorder charts)

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	53.70	....	53.67	56.20	56.01	55.15	54.18	....
2	54.88	53.66	53.52	55.90	55.91	55.18	54.12	54.62
3	55.02	53.78	53.54	55.96	56.15	54.93	54.25	54.18
4	55.13	53.81	53.35	56.08	56.26	54.73	54.32	54.47
5	55.20	54.03	....	56.10	56.17	54.76	53.86	54.68
6	55.12	54.18	....	55.74	56.11	54.82	54.13	54.74
7	54.35	....	55.91	56.14	54.81	54.22	54.82
8	54.50	....	55.99	56.18	54.46	54.33	54.78
9	54.62	....	56.09	56.08	54.63	54.54	54.77

Grant 5--Continued.

Water level at 2 a.m. in feet below land-surface datum, 1945
(From recorder charts)

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
10	.....	.....	54.61	.....	56.18	55.73	54.72	54.59	54.48
11	.....	.....	54.49	.....	56.20	55.85	54.83	54.59	54.71
12	.....	.....	54.61	.....	56.17	55.94	54.95	54.12	55.09
13	.....	.....	54.70	.....	55.77	56.08	55.06	54.21	55.32
14	.....	.....	54.70	.....	55.88	56.24	55.07	54.25	55.33
15	.....	.....	54.76	.....	55.42	56.33	54.63	54.27	55.24
16	.....	.....	54.74	.....	.....	56.25	54.83	54.32	55.10
17	48.46	.....	54.64	.....	54.15	55.97	55.12	54.36	54.64
18	49.47	.....	54.06	.....	54.45	56.20	55.20	54.32	54.82
19	50.46	.....	53.68	.....	54.59	56.19	53.36	53.76	54.96
20	51.23	.....	53.24	.....	54.28	56.22	55.41	53.96	55.05
21	51.85	.....	53.11	.....	54.66	56.18	55.34	54.18	55.22
22	51.94	.....	53.18	.....	55.00	56.17	54.76	54.21	55.32
23	50.93	.....	53.21	.....	55.29	56.04	54.97	53.72	55.26
24	51.87	.....	53.33	.....	55.54	55.74	55.07	53.95	54.84
25	52.50	.....	53.26	.....	55.69	55.96	55.08	54.07	54.50
26	52.91	.....	53.53	.....	55.66	55.98	55.12	53.67	54.11
27	52.56	.....	53.41	.....	55.14	55.82	55.09	54.06	54.19
28	53.13	.....	53.47	.....	55.48	55.91	54.64	54.31	54.17
29	53.32	.....	53.54	56.42	55.69	55.79	54.22	54.53	54.09
30	53.36	.....	53.66	56.05	.....	55.62	54.36	.....	54.03
31	.....	.....	.....	56.26	55.88	.....	54.26	.....	53.41

Grant 6. Joseph Wesco. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 18, T. 23 N., R. 8 E. Dug well, diameter 42 inches, depth 22.5 feet. Measuring point, top edge of 2 by 4 on west side of well opening, 1.0 foot above land-surface datum. First measurement made June 2, 1945. Measurements made by Blanch Rush.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 2	11.13	July 27	13.75	Sept. 21	16.20	Nov. 17	15.40
8	12.14	Aug. 3	13.86	29	15.75	23	14.70
14	12.67	10	13.95	Oct. 5	10.50	30	13.4
24	10.26	17	14.20	12	8.00	Dec. 7	12.7
July 2	11.00	24	14.70	19	10.00	14	13.2
6	12.10	30	15.20	26	10.50	21	13.8
13	12.71	Sept. 7	15.60	Nov. 2	10.00	28	12.5
20	13.89	14	15.80	9	10.00		

Greene County

Greene 1 (*1016, p. 51). Bert Edwards. In Lyons, about 700 feet southeast of State Highway 67 and about 80 feet northeast of street. Measurements made by Bert Edwards. Measurements discontinued Oct. 15, 1945.

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

Jan. 2	9.53	Mar. 19	0.91	June 5	2.52	Aug. 13	5.08
9	9.55	26	1.51	12	1.40	20	3.58
15	9.55	Apr. 2	1.30	18	1.51	27	4.09
22	9.48	9	1.45	25	1.75	Sept. 3	4.68
29	9.43	16	1.10	July 2	2.41	10	5.18
Feb. 6	9.30	23	1.68	9	2.77	17	5.46
12	9.22	30	1.64	16	3.36	26	3.76
19	8.70	May 7	1.76	23	3.85	Oct. 1	.90
26	1.80	14	1.69	30	4.26	8	2.04
Mar. 5	1.51	21	1.63	Aug. 6	4.66	15	2.59
12	1.70	28	2.10				

Hamilton County

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

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	24.75	Mar. 23	23.82	July 1	21.57	Sept. 25	24.44
7	24.75	Apr. 8	22.66	9	21.72	Oct. 2	24.47
21	24.85	17	22.90	19	22.32	8	23.40
30	23.95	30	22.84	26	22.98	25	22.77
Feb. 5	25.01	May 8	22.86	Aug. 8	23.10	Nov. 5	22.80
15	24.75	16	22.44	14	23.28	12	22.82
Mar. 2	24.65	21	22.75	29	23.15	27	22.85
9	23.85	June 5	22.81	Sept. 4	23.23	Dec. 12	22.81
16	23.79	20	21.05	14	23.40	31	23.47

Hamilton 3. Julius O. Ballard. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 32, T. 19 N., R. 4 E., about 1.5 miles east and 0.8 mile north of intersection of U. S. Highway 31 and State Highway 32, 100 feet east of road. Unused dug well, diameter 36 inches, depth 31 feet. Measuring point, top course of brick on south-east side, 1.0 foot above land-surface datum. First measurement Mar. 27, 1945. Measurements made by Julius O. Ballard.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 27	3.10	June 3	3.73	Aug. 12	3.55	Oct. 21	3.90
Apr. 1	1.67	11	2.58	19	3.46	28	3.48
8	2.30	17	1.46	26	4.50	Nov. 4	4.10
15	3.00	24	2.06	Sept. 2	4.66	11	4.10
22	2.99	July 1	3.12	9	5.01	18	3.37
29	2.11	8	3.69	16	4.58	Dec. 2	2.75
May 6	2.56	15	3.86	23	4.36	9	3.40
13	2.74	22	4.40	30	1.65	16	3.60
20	1.85	29	3.75	Oct. 7	2.10	23	4.60
27	3.05	Aug. 5	3.02	14	3.15	30	2.07

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). Harrison County State Forest. NE $\frac{1}{4}$ 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	0.95	June 4	1.87	Aug. 16	2.59	Oct. 22	2.62
17	1.00	11	.55	22	2.76	29	2.67
Feb. 2	1.63	20	.96	27	2.29	Nov. 5	1.97
14	.82	25	2.30	Sept. 3	2.88	12	.49
Mar. 7	.71	July 2	1.97	10	2.72	19	1.41
15	.69	11	2.47	17	2.39	26	1.13
Apr. 5	1.29	16	1.75	24	2.83	Dec. 2	1.34
14	.60	23	2.45	Oct. 1	1.87	9	2.01
May 5	.92	30	1.21	8	2.02	23	2.22
27	2.12	Aug. 8	2.34	15	2.47	30	.90

Harrison 2 (*840, p. 77; 845, p. 73; 936, p. 26; 944, p. 25; 986, p. 28; 1016, p. 52). No measurements made in 1945.

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

Harrison 3--Continued.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	5.25	June 4	4.28	Aug. 16	5.66	Oct. 22	6.32
17	3.06	11	2.54	22	5.83	29	6.35
Feb. 2	3.23	20	3.05	27	5.85	Nov. 5	6.40
14	3.02	25	3.46	Sept. 3	6.03	12	6.40
Mar. 7	2.69	July 2	4.16	10	6.15	19	6.42
15	3.03	11	4.32	17	6.18	26	6.02
Apr. 5	3.08	16	4.32	24	6.26	Dec. 2	3.40
14	3.12	23	5.18	Oct. 1	6.19	9	3.23
May 5	3.02	30	5.03	8	6.16	23	3.23
27	3.56	Aug. 8	5.45	15	6.24	30	3.08

Hendricks County

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

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

Jan. 1	8.20	Apr. 9	1.68	July 9	2.85	Oct. 8	4.38
8	8.44	16	1.90	16	3.53	15	4.64
15	8.39	23	1.70	22	4.00	21	4.95
22	8.56	30	1.55	30	4.49	29	5.29
29	8.46	May 7	1.90	Aug. 6	4.84	Nov. 5	5.49
Feb. 5	7.40	14	2.37	13	5.07	12	5.12
12	7.20	21	.88	20	5.32	19	5.38
19	8.26	28	1.59	27	5.59	26	4.29
26	7.67	June 4	2.57	Sept. 3	5.87	Dec. 3	3.73
Mar. 12	4.09	11	3.10	10	6.03	10	3.89
19	4.02	18	2.40	17	6.26	17	4.28
26	2.82	25	1.40	24	6.34	24	4.65
Apr. 2	2.53	July 2	2.26	Oct. 1	5.67	31	3.29

Howard County

Howard 3 (#944, p. 25; 986, p. 28; 1016, p. 52). Pittsburg Plate Glass Co. On north side of creek, 0.3 mile west of pumping station of Kokomo waterworks. No measurements made in 1945.

Howard 4. 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. Unused dug well, diameter 36 inches, depth 20 feet. Measuring point, west side of top brick course, 1.0 foot below land-surface datum. First measurement Mar. 28, 1945. Measurements made by Abe D. Bontroger.

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

Mar. 28	9.62	May 18	3.45	July 21	6.05	Oct. 5	8.31
Apr. 4	5.00	23	3.16	26	6.32	13	7.89
12	4.24	June 7	4.64	Aug. 3	6.73	19	8.09
18	4.70	20	4.21	9	7.17	Nov. 3	8.59
25	5.22	28	4.28	16	7.48	17	9.07
May 3	5.77	July 4	4.70	Sept. 19	9.07	Dec. 3	9.50
11	6.12	14	5.48				

Huntington County

Huntington 1. S. Woodward Schell. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 12, T. 27 N., R. 8 E. Unused dug well, diameter 36 inches, depth 41.6 feet. Measuring point, south edge of concrete cover, 0.4 foot above land-surface datum. First measurement Sept. 27, 1945. Measurements by owner.

Huntington 1--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 27	24.32	Oct. 28	3.4	Nov. 25	3.1	Dec. 16	3.2
Oct. 4	3.3	Nov. 4	3.3	Dec. 2	2.9	25	2.8
14	3.4	12	3.3	10	3.1	31	2.6
22	3.2	19	3.1				

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). Jackson State Forest. In Brownstown, 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 Forrest Miller and Roscoe Overshiner, Indiana Department of Conservation, Brownstown.

Water level, in feet below land-surface datum, 1945							
Jan. 2	7.70	Apr. 10	5.00	July 9	5.97	Oct. 8	8.20
8	6.80	16	3.22	16	7.00	15	8.90
15	5.60	23	4.06	23	7.40	22	9.30
22	6.72	30	5.70	30	8.19	29	9.50
29	7.50	May 7	5.95	Aug. 6	7.50	Nov. 5	9.40
Feb. 5	7.70	14	5.95	14	9.20	13	8.92
12	6.77	21	4.60	20	9.63	19	7.60
19	6.30	28	5.83	27	10.00	26	6.91
26	1.40	June 4	6.30	Sept. 4	10.40	Dec. 3	6.62
Mar. 5	3.50	11	6.54	10	10.60	10	7.20
12	4.50	18	2.60	17	10.90	17	7.52
19	4.20	25	3.80	24	11.05	24	7.70
26	4.30	July 2	3.70	Oct. 1	8.15	31	5.50
Apr. 2	3.20						

Jackson 2 (*1016, p. 53). 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.

Water level, in feet below land-surface datum, 1945							
Jan. 8	13.28	Apr. 9	11.44	July 8	11.21	Oct. 8	13.70
14	13.20	16	11.61	15	11.54	14	13.69
22	13.22	23	11.06	22	11.69	21	13.40
29	13.21	29	11.18	29	12.70	28	13.02
Feb. 5	13.22	May 6	11.22	Aug. 5	12.68	Nov. 4	13.45
12	13.19	13	11.76	12	12.44	11	13.43
19	13.10	20	11.36	20	13.30	18	13.39
26	13.08	28	11.84	26	13.68	25	12.46
Mar. 5	12.05	June 3	11.35	Sept. 2	13.90	Dec. 3	12.10
12	11.71	10	11.62	9	14.25	10	11.95
19	11.60	18	11.37	16	14.78	17	12.30
26	11.40	25	11.32	24	15.01	24	12.09
Apr. 2	11.34	July 1	11.99	Oct. 1	14.68	31	11.79

Jasper County

Jasper 2 (*1016, p. 53). Lottie Spalding. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 30, T. 27 N., R. 6 W., south of State Highway 24, 0.2 mile east of Remington. Measurements discontinued Jan. 3, 1945.

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). Clifty Falls State Park. At superintendent's house. Measurements made by Owen H. Vestal. Water levels, in feet below land-surface datum, 1945: Sept. 15, 28.5; Oct. 31, 29.0.

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

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 21	2.73	Aug. 22	12.98	Sept. 19	14.45	Oct. 17	13.59
24	3.99	28	13.05	26	14.30	Nov. 7	13.11
30	5.63	29	13.96	28	14.20	14	11.46
June 14	8.97	Sept. 5	13.56	Oct. 3	13.96	28	6.73
20	1.93	12	13.96	10	13.50	Dec. 5	7.56

Johnson County

Johnson 1 (*1016, p. 54). City of Bargarville. W $\frac{1}{2}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 35, T. 13 N., R. 3 E. Measurements made by L. I. Mardis and D. D. Core.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	9.09	Apr. 3	4.39	July 3	6.20	Oct. 9	7.70
9	9.06	10	5.32	11	6.86	16	8.18
16	8.91	17	6.00	24	7.96	23	8.19
23	8.77	24	5.60	31	8.50	30	8.04
30	8.70	May 1	5.90	Aug. 7	8.78	Nov. 6	8.02
Feb. 6	8.67	8	7.19	14	8.77	13	8.18
13	8.61	15	7.18	22	8.34	20	8.01
20	7.90	22	5.65	28	8.55	27	7.17
27	7.00	29	6.09	Sept. 4	8.78	Dec. 4	6.98
Mar. 6	3.49	June 5	6.69	11	8.53	11	8.15
13	4.99	12	7.03	18	9.09	18	6.99
20	4.95	19	5.68	25	9.00	26	6.67
27	5.02	26	5.51				

Knox County

Knox 1 (*1016, p. 55). William M. Downey. In Monroe City, one block north of State Highway 61 on lot 60. Measurements by owner.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	37.10	Apr. 12	36.78	July 12	35.40	Oct. 11	35.30
11	37.09	19	36.70	19	35.34	18	35.25
25	37.10	26	36.70	26	35.28	25	35.00
Feb. 1	37.20	May 3	36.68	Aug. 2	35.30	Nov. 1	35.25
8	37.16	10	36.60	9	35.20	8	35.30
15	37.16	17	36.37	16	35.28	15	35.10
22	37.22	24	36.05	23	35.26	22	35.28
Mar. 1	37.18	31	36.00	30	35.30	29	35.25
8	37.05	June 7	35.92	Sept. 6	35.30	Dec. 6	35.26
15	37.00	14	35.87	13	35.30	13	35.30
22	36.97	21	35.74	20	35.40	20	35.30
29	36.94	28	35.70	27	35.40	27	35.25
Apr. 5	36.80	July 5	35.48	Oct. 4	35.32		

Kosciusko County

Kosciusko 2 (*845, p. 74; 886, p. 101; 936, p. 28; 944, p. 26; 986, p. 29; 1010, p. 55). Wawasee State Fish Hatchery. Flowing well at sunken garden. No measurements made in 1945.

Kosciusko 3. Millard G. Stookey. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 1, T. 33 N., R. 5 E. Driven well, diameter 1 $\frac{1}{4}$ inches, depth 20.6 feet. Measuring point, base of pitcher pump, 2.0 feet above land-surface datum. First measurement Sept. 11, 1945. Measurements by owner.

Kosciusko 3--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 11	11.84	Oct. 17	11.09	Nov. 21	11.56	Dec. 13	11.84
17	11.90	24	11.10	28	11.66	20	11.88
24	11.20	31	11.13	Dec. 5	11.77	27	12.10
Oct. 3	11.10	Nov. 14	11.51				

Lagrange County

Lagrange 1. Morris Fryman. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 22, T. 37 N., R. 9 E. Three miles west of intersection of State Highway 9 and U. S. Highway 20, on north side of U. S. Highway 20. Unused dug well, diameter 24 inches, depth 23 feet. Measuring point, edge of concrete cover over well, 0.4 foot above land-surface datum. First measurement Sept. 10, 1945. Measurements made by Maynard Atwater.

Water level, in feet below land-surface datum, 1945							
Sept. 10	7.82	Oct. 8	7.55	Oct. 29	6.60	Nov. 19	7.01
17	7.92	15	7.51	Nov. 5	6.77	26	7.16
24	7.95	22	6.33	12	6.86	Dec. 3	7.18
Oct. 1	7.77						

La Porte County

La Porte 1 (*944, p. 26; 986, p. 29; 1016, p. 55). 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, 1945							
Jan. 6	7.68	Apr. 7	7.68	July 7	7.26	Oct. 6	3.70
13	8.18	14	8.28	14	8.22	13	11.48
20	8.68	21	8.68	21	10.70	20	11.28
27	9.18	28	7.68	28	7.54	27	6.70
Feb. 3	9.68	May 5	7.68	Aug. 4	6.18	Nov. 3	7.22
10	9.09	12	6.68	11	7.45	10	6.70
17	9.06	19	7.29	18	7.28	17	6.63
24	8.68	26	7.21	25	7.30	Dec. 1	6.70
Mar. 3	8.69	June 2	8.21	Sept. 1	7.41	8	7.28
10	8.28	9	8.60	8	8.28	15	7.20
17	8.28	16	8.61	15	6.30	22	8.42
24	8.28	23	8.61	22	6.70	29	7.01
31	8.28	30	8.21	29	6.28		

La Porte 2 (*944, p. 27; 986, p. 30; *1016, p. 55). 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 Arthur Timm and J. L. Short, superintendents, Kankakee State Game Preserve.

Water level, in feet below land-surface datum, 1945							
Jan. 15	6.2	Apr. 1	5.4	Aug. 8	6.82	Oct. 28	5.40
Feb. 1	6.2	15	4.8	Sept. 14	6.20	Nov. 28	5.20
19	6.0	May 2	4.4	28	5.40	Dec. 14	5.4
Mar. 19	5.4	June 5	4.2	Oct. 14	5.10		

Lawrence County

Lawrence 1 (*1016, p. 56). 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 owner.

Lawrence 1--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	21.78	Apr. 5	10.12	July 5	16.92	Oct. 11	18.18
11	21.75	12	16.21	12	19.11	18	19.64
18	21.56	19	12.41	19	20.09	25	20.23
25	20.05	26	17.06	26	20.25	Nov. 1	20.43
Feb. 1	20.63	May 3	18.31	Aug. 2	20.41	8	20.72
8	20.62	10	18.57	9	20.63	15	21.39
15	18.50	17	14.76	16	20.71	22	15.20
22	13.00	24	17.63	30	21.41	29	16.36
Mar. 1	10.99	31	18.73	Sept. 6	21.64	Dec. 6	17.79
8	9.09	June 7	19.84	13	21.73	13	18.31
15	15.52	14	16.94	20	21.76	20	19.80
22	10.02	21	10.43	27	21.37	27	13.90
29	16.36	28	16.63	Oct. 4	16.67		

Lawrence 2 (*1016, p. 56). 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. Measuring point to Aug. 29, 1945, 0.70 foot above land-surface datum, beginning Aug. 29, top of 2 by 6 oak board in box cover over well, 1.74 feet above land-surface datum. Measurements made by Roscoe Ingram.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	21.43	Apr. 11	18.93	July 11	21.35	Oct. 3	18.42
17	21.32	17	15.55	18	21.40	10	20.32
24	21.22	25	20.28	25	21.40	17	20.37
31	21.40	May 2	21.47	Aug. 1	21.40	24	20.39
Feb. 7	21.42	9	21.40	8	21.50	31	20.40
14	21.26	16	20.83	16	21.48	Nov. 7	20.40
21	20.43	22	21.25	22	21.44	14	20.34
28	20.20	30	21.40	29	20.42	28	19.12
Mar. 7	8.22	June 6	21.40	Sept. 5	20.42	Dec. 5	20.24
14	16.30	13	20.85	12	20.41	12	20.36
21	9.27	20	21.38	19	20.40	18	20.37
28	19.22	27	19.86	26	20.12	26	17.35
Apr. 4	14.25	July 3	20.05				

Madison County

Madison 1 (*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). Mounds State Park, Anderson. No measurements made in 1945.

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). Anderson Water Department well 2. Measurements made by Earl Walker, Anderson Water Department.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 2	17.20	Apr. 18	15.80	Dec. 26	13.5
Apr. 4	15.80	Oct. 25	13.50		

Madison 5 (*1016, p. 57). Elwood Water Works. At city well field. Measurements made by Roy Chance, Elwood Water Works.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	38.50	Feb. 22	38.00	Apr. 11	36.90	May 30	34.60
10	36.00	28	37.30	19	36.40	June 6	34.70
18	35.50	Mar. 7	35.30	27	35.30	13	34.80
24	38.70	14	37.40	May 3	33.40	20	38.60
Feb. 1	37.20	21	35.60	9	31.10	28	36.10
7	38.00	28	35.10	16	34.90	July 4	37.00
14	40.00	Apr. 4	35.80	24	32.10	11	40.10

Madison 5--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 18	39.00	Sept. 5	43.20	Oct. 17	31.30	Nov. 30	40.1
25	40.90	13	45.90	24	35.30	Dec. 5	38.6
31	41.80	22	46.60	31	31.90	12	38.8
Aug. 16	41.10	26	47.70	Nov. 7	39.70	20	41.3
22	37.10	Oct. 3	43.10	14	39.70	28	36.7
29	39.80	10	35.50	21	39.10		

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). Indianapolis Water Co. "motor well 15". In Riverside well field, Indianapolis. Measurements generally made at 10:00 a.m. Measurements made by personnel of Indianapolis Water Co., L. S. Finch, chief engineer.

Water level, in feet below land-surface datum, 1945											
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. Dec.
1	19.24a	28.60	20.40	.....	.....	17.42	16.60	.....	23.32	17.81	19.98 17.94
2	19.86a	24.86	20.26a	20.74	.....	.....	16.58	19.20	18.96	17.56	18.60 17.68
3	21.52a	24.60	20.24a	20.80	.....	17.26	16.66	28.86	18.10	17.44	18.56 17.84
4	26.92a	22.38	19.90a	20.50	.....	17.42	16.64	.....	19.46	17.32	18.16 17.96
5	27.66a	23.60	20.78	17.72	.....	17.54	16.80	17.82	21.76	17.34	..... 18.00
6	.....a	24.26	21.70	17.68	.....	17.58	16.94	17.66	18.47	17.52	18.60 18.04
7	.....a	24.44	19.64	17.50	.....	17.60	.....	18.18	19.76	17.40	18.46 18.12
8	.....a	24.60	19.30	17.48	17.72	17.64	17.88	17.92	18.52	17.52	18.46 18.04
9	28.38a	26.54	.....	17.50	.....	17.60	16.87	18.00	18.32	17.62	18.64 17.88
10	.....	26.98	.....	17.70	.....	17.40	17.20	.....	.....	17.68	18.32 18.16
11	32.10a	26.66	.....	.....	.....	17.58	17.10	17.78	19.50	17.66	18.44 18.12
12	28.54a	25.84	.....	17.74	.....	17.64	17.08	17.82	.....	17.72	18.16 18.28
13	.....a	27.90	19.22	17.84	.....	17.56	17.84	17.74	18.52	17.80	..... 18.00
14	28.52a	22.70	19.22	.....	17.44a	17.40	17.20	17.86	22.98	17.60	18.40 18.06
15	28.70a	24.64	19.20	.....	17.46a	17.64	17.22	17.74	.....	17.84	18.36 17.92
16	.....a	25.58	19.20	.....	17.38a	17.30	17.30	17.50	.....	.....	18.26a 17.84
17	29.04	.....	19.14	.....	.....a	16.90	17.46	17.67	.....	17.92	18.20a 19.52
18	29.04	.....	18.94	.....	17.10a	19.90	17.42	17.68	23.35	.....	18.18a 22.60
19	29.14	21.18	19.02	17.54	17.00a	19.50	.....	17.74	23.50	.....	.....a 18.40
20	29.20	21.14	18.96	17.64	16.80	16.70	17.52	17.82	18.82	17.94	18.10a 18.36
21	29.14	20.98	18.84	.....	16.88	16.28	.....	17.86	.....	.....	18.02a 18.46
22	29.30	20.96	18.80	.....	17.04	16.24	17.42	17.86	18.66	.....	17.98a 18.38
23	29.38	20.82	.....	.....	17.16	16.20	17.44	17.90	18.46	.....	17.90a 18.34
24	29.54	20.66	.....	17.64	.....	.....	22.16	18.10	19.00	.....	17.90a 18.22
25	29.56	20.36	.....	17.68	17.22	16.34	22.58	17.84	18.65a	23.60	17.82
26	.....	20.40	.....	17.72	17.16	16.44	18.55	17.88	.....	.....	18.02
27	.....	20.50	.....	.....	17.20	16.42	22.58	17.82	18.54a	23.88	18.02
28	.....	20.46	18.76	17.46	.....	.....	17.92	19.84	18.38	18.76	18.08a 19.02
29	.....	.....	18.80	17.24	.....a	17.16	17.68	18.64	18.16	18.66	18.04a 19.15
30	29.88	.....	18.86	.....	.....	16.76	17.70	19.02	17.74	19.46	18.06
31	29.90	.....	.....	.....	17.26	.....	17.90	.....	.....	18.70	18.30

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). Security Trust Bank Building, 130 East Washington St., Indianapolis. Equipped with automatic water-stage recorder. Measurements made by personnel of Geological Survey, U. S. Dept. of Interior.

Water level at 2 a.m., in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	57.63	56.48	55.87	56.81	56.66	57.72	61.88	64.60	65.02	63.01	58.31	55.72
2	57.63	56.44	55.82	56.72	56.64	57.94	62.01	64.66	65.22	62.75	58.26	55.62
3	57.56a	56.40	55.80	56.80	56.62	58.29	62.11	64.76	65.25	62.57	58.30	55.47
4	57.51a	56.37	55.92	56.84	56.61	58.12	62.18	64.92	65.04	62.29	58.24	55.39

a Estimated.

Marion 2--Continued.

Water level at 2 a.m., in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	57.46	56.32	55.84	56.92	56.59	57.88	62.19	65.01	64.93	62.02	58.06	55.30
6	57.39	56.28	55.83	56.96	56.55	57.67	62.31	65.03	64.91	61.77	57.95	55.21
7	57.30	56.25	55.94	56.89	56.46	57.51	62.45	65.04	64.99	61.65	57.89	55.12
8	57.23	56.20	55.99	56.81	56.46	57.38	62.59	65.15	65.19	61.43	57.89	55.07
9	57.20	56.21	55.96	56.71	56.56	57.31	62.65	65.20	65.35	61.20	58.02	54.99
10	57.18	56.18	55.91	56.71	56.47	57.46	62.67	65.12	65.42	60.95	58.04	54.90
11	57.15	56.21	55.92	56.84	56.44	57.61	62.81	65.09	65.43	60.72	57.85	54.87
12	57.06	56.16	55.84	56.96	56.35	57.73	62.89	65.19	65.40	60.50	57.65	54.83
13	57.03	56.11	55.85	57.04	56.33	57.97	62.99	65.22	65.34	60.58	57.61	54.75
14	56.97	56.14	55.83	57.13	56.41	58.30	63.09	65.24	65.07	60.23	....	54.65
15	56.92	56.12	55.86	....	56.44	58.66	63.30	65.26	64.65	60.05	....	54.64
16	56.93	56.12	55.92	57.07	56.47	58.93	63.30	65.16	64.21	59.87	....	54.58
17	56.94	56.14	56.04	....	56.38	59.30	63.24	64.94	63.86	59.71	57.22	54.49
18	56.90	56.13	56.24	57.08	56.42	59.44	63.30	64.90	63.53	59.60	57.14	54.14
19	56.84	56.12	56.23	57.06	56.47	59.69	63.36	64.96	63.23	59.55	56.98	54.28
20	56.83	56.05	56.30	56.94	56.40	59.83	63.49	64.93	63.01	59.52	56.93	54.27
21	56.81	55.98	56.42	56.91	56.29	60.01	63.65	64.88	62.98	59.42	56.78	54.24
22	56.72	55.87	56.45	56.94	56.30	60.22	63.84	64.97	62.91	59.31	56.69	54.19
23	56.69	55.96	56.39	56.80	56.43	60.41	63.88	64.93	62.91	59.21	56.53	54.26
24	56.64	56.01	56.43	56.76	56.50	60.64	63.91	64.80	63.08	59.05	56.44	54.15
25	56.63	56.00	56.55	56.82	56.54	60.70	64.03	64.76	63.49	58.89	56.31	54.04
26	56.59	55.86	56.50	56.83	56.70	60.84	64.17	64.89	63.42	58.74	56.20	54.04
27	56.58	55.85	56.57	56.89	56.99	61.02	64.34	64.82	63.55	58.64	56.06	54.12
28	56.55	55.84	56.64	56.83	57.16	61.22	64.49	64.69	63.52	58.53	55.95	54.08
29	56.50	....	56.71	56.76	57.39	61.40	64.59	64.68	63.70	58.40	55.87	53.97
30	56.48	....	56.81	56.70	57.58	61.65	64.58	64.72	63.47	58.35	55.80	53.86
31	56.47	....	56.76	....	57.65	....	64.55	64.86	....	58.28	....	53.79

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

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	60.35	Apr. 2	57.06	July 2	56.23	Oct. 8	56.99
8	60.75	9	57.89	9	56.25	15	56.43
15	61.13	17	58.42	16	55.16	22	56.46
22	60.18	23	57.39	23	56.90	29	56.90
29	60.30	30	56.78	30	55.29	Nov. 5	56.06
Feb. 5	60.43	May 7	56.27	Aug. 6	56.10	13	56.58
12	59.93	14	55.53	13	56.97	19	55.29
19	59.82	21	56.02	20	55.52	26	55.00
26	59.48	28	56.14	27	56.81	Dec. 3	55.08
Mar. 5	59.27	June 4	56.07	Sept. 4	57.00	10	55.13
12	58.99	11	56.18	17	56.64	17	54.75
19	59.17	18	56.49	24	56.70	26	52.59
26	58.90	25	56.78	Oct. 1	56.79		

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). Layne-Northern Co., Inc. In Indianapolis, in valley of Lick Creek, about 100 feet north of creek, about 700 feet west of South Meridian St., and about 350 feet south of Edwards Ave. Measurements made by personnel of Geological Survey, U. S. Dept. of Interior.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	5.41	Feb. 12	5.81	Mar. 19	5.12	Apr. 23	4.04
15	5.57	19	5.88	26	5.02	30	3.80
22	5.62	26	5.59	Apr. 2	4.61	May 7	3.71
29	5.68	Mar. 5	5.57	9	4.53	14	3.65
Feb. 5	5.75	12	5.45	17	4.11	21	3.21

Marion 4--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 28	3.57	July 23	3.94	Sept. 24	3.99	Nov. 13	3.51
June 4	4.03	30	3.76	Oct. 1	3.58	19	3.52
11	4.13	Aug. 6	3.48	8	3.50	26	3.54
18	3.47	13	3.40	15	3.58	Dec. 3	3.52
25	3.36	20	3.55	22	3.61	10	3.58
July 2	3.17	27	3.52	29	3.60	17	3.52
9	3.57	Sept. 4	4.14	Nov. 5	3.61	26	3.47
16	3.88	17	4.18				

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

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	58.82	Apr. 2	57.16	July 2	57.77	Oct. 1	51.00
8	58.84	9	57.04	9	57.86	8	50.62
15	58.62	17	57.91	16	57.93	15	50.17
22	58.51	23	57.93	23	58.27	22	49.90
29	58.27	30	57.66	30	58.43	29	49.53
Feb. 5	58.41	May 7	57.24	Aug. 6	60.59	Nov. 5	49.29
12	58.27	14	57.26	13	60.05	13	49.08
19	57.62	21	56.90	20	60.05	19	48.86
26	57.30	28	56.68	27	50.99	26	47.34
Mar. 5	57.44	June 4	56.86	Sept. 4	50.78	Dec. 3	46.75
12	57.30	11	57.39	11	51.17	10	46.56
19	57.09	18	57.62	17	50.83	17	46.35
26	57.25	25	57.67	24	50.96	26	46.20

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

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	61.18	Apr. 2	59.15	July 2	65.03	Oct. 1	65.45
8	60.29	9	59.56	9	65.65	8	63.40
15	60.24	17	60.36	16	66.11	15	62.39
22	60.03	23	59.96	23	67.08	22	61.74
29	60.69	30	59.30	30	66.90	29	61.43
Feb. 5	60.37	May 7	59.70	Aug. 6	67.03	Nov. 5	61.07
12	59.79	14	59.15	13	67.42	13	61.06
19	59.74	21	58.92	20	66.20	19	60.45
26	59.09	28	59.83	27	66.34	26	59.96
Mar. 5	59.41	June 4	60.04	Sept. 4	66.68	Dec. 3	59.12
12	59.41	11	59.94	11	66.33	10	58.77
19	61.46	18	63.29	17	65.46	17	58.47
26	63.17	25	64.40	24	66.16	26	57.86

Marion 11 (*886, p. 105; 906, p. 28; 936, p. 33; 944, p. 30; 986, p. 33; 1016, p. 59). Indianapolis Sanitation Plant well 3. No measurements made in 1945.

Marion 12 (*886, p. 106; 906, p. 29; 936, p. 34; 944, p. 31; 986, p. 33; 1016, p. 59). Indianapolis Sanitation Plant well 11 (?). In Indianapolis, on South Harding St., south of Raymond St., about 300 feet south of powerhouse and about 50 feet north of resettler tank. No measurements made in 1945.

Marion 13 (*886, p. 106; 906, p. 29; 936, p. 34; 944, p. 31; 986, p. 34; 1016, p. 60). Indianapolis Sanitation Plant. "East" observation well, about 500 feet east of powerhouse. Measurements made by D. O. Bender, Indianapolis Sanitation Plant. Measurements resumed.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 12	(a)	Apr. 3	1.45	June 6	3.79	Oct. 10	2.37
Feb. 14	(a)	May 17	2.74	Aug. 13	4.25	Nov. 6	4.27
Mar. 7	3.55						

a Dry.

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

Water level, in feet below land-surface datum, 1945							
Jan. 12	22.91	Apr. 3	18.53	June 6	20.82	Oct. 10	19.63
Feb. 14	(a)	May 17	20.03	Aug. 13	21.24	Nov. 6	21.31
Mar. 7	20.66						

a Dry.

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

Water level, in feet below land-surface datum, 1945											
Jan.	2	82.00	Apr.	9	105.07	July	9	100.57	Oct.	1	108.37
	8	95.93		18	107.15		16	104.41		8	107.84
	15	86.94		23	109.19		23	107.04		15	100.82
	22	93.96		30	109.09		30	105.40		22	101.07
	29	95.44	May	7	104.62	Aug.	6	108.74		29	107.90
Feb.	5	102.11		14	102.53		3	105.73	Nov.	5	103.94
	12	106.13		21	104.16		20	105.23		13	107.88
	19	86.95		28	102.63		27	108.44		19	107.93
	26	100.89	June	4	96.79	Sept.	4	108.19		26	104.35
Mar.	15	109.71		11	96.44		11	108.14	Dec.	3	104.15
	19	109.61		18	98.47		17	108.04		10	107.56
	26	109.45		25	101.26		24	107.27		26	99.34
Apr.	2	105.24	July	2	102.20						

Marion 18 (*986, p. 34; 1016, p. 60). 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 Geological Survey, U. S. Dept. of Interior.

Water level at 2 a.m., in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1a	27.73a	28.16	27.66	25.82	24.50	23.44a	21.81	22.88	22.29	22.59	21.94	21.50
2a	27.74a	28.20	27.61	25.71	24.47	23.48a	21.89	22.82	22.34a	22.38	21.89	21.49
3a	27.75a	28.25	27.52	24.94	24.42	23.53	21.96	22.77	22.42	22.20	21.89	21.45
4a	27.76a	28.29	27.44	24.79	24.38	23.60	22.01	22.73	22.47	22.07	21.94	21.44
5a	27.77a	28.33	27.32	24.71	24.37	23.66	22.04	22.70	22.53	21.94	21.95	21.43
6a	27.78	.....	27.18	24.71	24.36	23.72	22.06	22.65	22.61	21.80	21.91	21.40
7a	27.79	.....	27.03	24.71	24.36	23.78	22.11	22.60	22.69	21.67	21.92	21.35
8a	27.80	.....	26.90	24.71	24.34	23.84	22.15	22.56	22.77	21.58	21.92	21.34
9a	27.81	.....	26.76	24.69	24.36	23.89	22.19	22.56	22.83	21.53	21.91	21.33
10a	27.83	.....	26.61	24.68	24.37	23.98	22.22	22.56	22.86	21.52	21.97	21.35
11a	27.85	.....	26.50	24.69	24.37	23.88	22.28	22.55	22.85	21.50	22.02	21.39
12a	27.87	.....	26.40	24.70	24.37	23.86	22.34	22.53	22.93	21.48	22.00	21.44
13a	27.89	28.33	26.34	24.71	24.35	23.80	22.39	22.51	22.95	21.49a	21.92	21.47
14a	27.91	28.33	26.27	24.73	24.34	23.77	22.44	22.50	22.92	21.52	21.87	21.43
15a	27.93	28.31	26.22	24.76	24.25	23.72	22.49	22.45	22.91	21.57	21.86	21.43
16	27.95	28.29	26.17	24.77	23.63	23.67	22.54	22.41	22.93	21.60	21.86	21.45
17a	27.96	28.27	26.15	.....	23.42	23.49	22.59	22.35	22.95	21.61	21.82	21.49
18a	27.97	28.25	26.14	24.75	22.41	23.22	22.63	22.28	22.95	21.63	21.76	21.52

a Estimated.

Marion 18--Continued.

Water level at 2 a.m., in feet below land-surface datum, 1945

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
19a	27.99	28.24	26.14	24.76	22.37	22.39	22.67	22.22	22.93	21.64	21.73	21.51
20a	28.00	28.21	26.11	24.58	22.44	22.16	22.71	22.17	22.90	21.67	21.69	21.49
21a	28.01	28.15	26.05	24.75	22.50	21.99	22.75	22.13	22.89	21.72	21.65	21.49
22a	28.02	28.08	26.02	24.74	22.55	21.87	22.80	22.09	22.90	21.73	21.60	21.50
23	28.02	28.03	25.99	24.74	22.66	21.79	22.84	22.07	22.91	21.76	21.57	21.53
24a	28.03	27.98	25.94	24.71	22.79	21.73	22.87	22.06	22.90	21.81a	21.54	21.55
25a	28.04	27.92	25.92	24.67	22.91	21.68	22.90	22.05	22.89	21.84	21.52	21.44
26a	28.05	27.85	25.90	24.65	22.99	21.63	22.93	22.04	22.88	21.85	21.53	21.32
27a	28.06	27.78	25.88	24.63	23.08	21.63	22.97	22.06	22.88	21.89	21.54	21.29
28a	28.07	27.72	25.88	24.63	23.16	21.63	23.00	22.07	22.83	21.92	21.50	21.29
29a	28.08		25.88	24.38	23.23	21.66	22.94	22.10	22.77	21.95	21.49	21.24
30a	28.08		25.88	24.54	23.30	21.73	22.94	22.16	22.71	21.98	21.49	21.11
31a	28.11		25.87		23.38		22.93	22.22		21.96		21.02

a Estimated.

Marion 19 (*986, p. 35; 1016, p. 61). Peoria & Eastern Railway Co. In Indianapolis, Tenth St. at Big Four Railroad tracks, 60 feet south of centerline of Tenth St. and 250 feet west of Exeter Ave. Measuring point beginning June 18, edge of wood platform over well pit, 0.6 foot above land-surface datum. Measurements made by personnel of Geological Survey, U. S. Dept. of Interior.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	20.87	Apr. 9	19.96	July 9	17.35	Oct. 8	17.80
8	20.98	17	19.55	16	17.48	15	17.84
15	21.04	23	19.42	23	17.55	22	17.92
29	21.33	30	19.21	30	17.60	29	18.08
Feb. 5	21.48	May 7	19.06	Aug. 6	17.41	Nov. 5	18.12
12	21.45	14	18.95	13	17.57	13	18.19
19	21.47	21	18.56	20	17.42	19	18.25
26	21.15	28	18.21	27	17.50	26	18.28
Mar. 5	21.28	June 4	18.14	Sept. 4	17.67	Dec. 3	18.28
12	21.07	11	18.11	11	17.80	10	18.33
19	20.81	18	17.89	17	17.92	17	18.36
26	20.65	25	17.52	24	18.03	26	17.97
Apr. 2	20.47	July 2	17.43	Oct. 1	17.96		

Marion 20 (*1016, p. 61). Frozen Products Co., 601 Fulton St., Indianapolis. Measurements made by personnel of Geological Survey, U. S. Dept. of Interior. Measurements discontinued Dec. 23, 1944.

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

Water level at 2 a.m., in feet below land-surface datum, 1945

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	60.84	62.15	61.35	59.17	61.26	59.79	63.63	62.29	63.19	61.37	60.22	59.30
2	61.27	62.07	61.04	58.30	61.48	60.46	62.79	62.03	63.33	61.87	60.16	58.94
3	61.56	62.05	60.32	59.32	61.40	60.50	63.62	62.01	62.70	62.14	60.46	58.01
4	61.44	61.66	61.01	60.37	61.48	60.04	63.49	62.03	62.64	61.96	60.20	58.68
5	61.56	61.21	60.56	60.81	61.52	60.88	62.89	61.96	63.01	61.76	59.18	58.80
6	61.42	60.52	60.54	61.03	61.54	60.66	63.44	61.22	63.09	61.52	59.97	58.68
7	61.18	60.57	61.01	61.12	60.31	60.56	63.66	62.61	63.25	61.42	60.08	58.64
8	60.98	60.45	61.13	60.99	60.80	60.35	63.45	62.97	63.36	60.97	60.07	58.93
9	61.24	60.59	61.12	60.35	60.94	60.19	62.89	63.20	63.41	61.27	60.27	58.68
10	61.44	60.63	60.87	61.39	60.70	60.24	63.50	63.30	62.72	61.14	60.61	58.02
11	61.54	60.69	60.76	61.80	60.88	60.25	63.80	63.38	63.10	61.03	60.14	58.35
12	61.19	60.32	59.93	61.95	60.56	61.02	63.72	63.30	63.26	60.82	59.51	59.14
13	61.25	61.36	60.73	62.06	60.10	61.11	63.76	62.70	.....	60.92a	59.70	58.95
14	60.92	61.64	60.75a	62.16	59.20	61.66	63.72	63.29	.....	60.56	60.06	58.87

a Estimated.

Marion 21--Continued.

Water level at 2 a.m., in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
15	60.88	61.56	60.85	.....	59.84	62.00	63.47	62.86	.....	59.89	60.24	59.00
16	61.54	61.78	60.91	.....	60.10	62.13	62.86	62.09	.....	60.26	60.12	58.83
17	61.85	61.67	61.01	.....	59.92	62.24	63.64	61.66	.....	60.21	59.97	58.28
18	61.92	61.75	61.26	61.57	60.13	61.62	63.67	61.57	61.98	60.33	.....	58.81
19	61.86	61.74	60.78	61.92	60.25	62.39	63.75	61.38	62.37	60.36	.....	58.48
20	62.05	61.54	61.17	61.90	59.81	62.52	63.90	60.95	62.28	60.57	59.63	58.90
21	61.90	.....	61.20	62.01	58.81	62.71	63.92	62.10	62.63	60.25	59.40	59.05
22	61.06	.....	61.49	62.11	59.35	62.94	63.90	62.46	62.66	59.90	59.51	58.98
23	61.61	.....	61.55	61.04	59.86	63.15	63.36	62.57	62.30	60.24	58.56	58.98
24	61.52	.....	61.46	61.46	59.98	62.12	63.92	62.56	62.02	60.44	59.24	57.58
25	61.72	.....	61.52	61.72	59.93	62.52	64.00	62.41	62.35	60.27	58.97	.....
26	61.69	.....	60.83	62.14	59.91	63.12	64.16	62.60	63.47	60.31	59.36	.....
27	61.84	61.23	61.43	62.16	59.85	63.50	64.26	62.08	62.43	60.43	58.69	57.64
28	61.69	61.14	60.60	62.10	58.71	63.40	64.12	62.59	62.48	60.23	58.89	57.84
29	61.42	.....	60.34	61.70	59.71	63.69	63.56	62.78	62.70	60.13	59.10	57.88
30	61.70	.....	59.93	60.64	60.04	63.89	62.52	63.04	62.70	60.26	59.22	57.35
31	61.97	.....	59.20	.....	59.62	.....	62.60	63.28	.....	60.00	.....	56.66

Marion 22 (*1016, p. 62). 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 Geological Survey, U. S. Dept. of Interior.

Water level at 2 a.m., in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	76.90	80.45	78.15	72.02	79.12	76.10	81.05	.....	84.25	.....	81.75	80.97
2	77.97	80.27	77.75	.....	79.33	79.92	80.55	.....	82.50	82.03	81.83	76.40
3	78.43	80.21	.....	76.08	79.63	73.82	82.67	.....	80.54	82.67	82.00	74.20
4	78.35	78.35	.....	77.42	79.63	77.42	82.68	.....	80.48	82.70	79.70	79.75
5	78.63	76.26	.....	77.68	79.90	78.44	81.82	.....	82.70	82.64	78.70	80.40
6	78.75	79.18	77.51	78.37	79.78	79.70	82.32	.....	83.05	82.30	81.60	79.80
7	78.13	79.68	73.20	73.30	80.25	80.00	82.81	83.45	83.15	81.88	81.66	80.20
8	78.11	79.83	78.15	77.23	75.82	79.65	82.87	.....	82.58	81.46	81.62	80.80
9	78.25	79.40	77.85	76.54	75.87	79.72	82.20	.....	82.10	81.93	81.85	77.70
10	78.40	79.55	77.57	78.53	75.66	79.14	82.90	.....	.....	81.81	82.51	75.50
11	78.15	78.35	71.33	78.97	76.10	80.30	83.12	.....	.....	81.70	80.10	81.98
12	78.05	77.23	.....	79.23	75.95	81.02	83.02	.....	.....	81.50	79.80	82.41
13	77.60	78.80	78.08	79.38	71.35	81.23	83.09	.....	81.80	81.38	.....	82.32
14	75.30	79.15	78.38	78.86	71.60	81.25	83.10	81.42	82.37	79.70	81.90	82.15
15	79.05	79.05	78.36	73.42	74.69	81.92	81.75	79.80	83.28	76.85	81.91	82.28
16	79.65	79.65	.....	76.82	75.16	81.72	79.95	78.25	83.00	81.16	82.02	77.90
17	79.55	79.35	78.73	.....	75.04	81.87	82.77	75.65	80.65	81.05	82.07	78.85
18	80.10	78.50	77.57	79.50	75.10	79.89	82.99	74.78	80.83	81.56	78.60	81.85
19	30.40	78.95	78.00	79.25	75.82	81.75	83.23	74.28	82.62	81.60	77.02	81.63
20	.....	73.72	78.93	79.80	71.37	81.97	83.26	77.15	83.22	81.70	81.10	82.06
21	.....	78.21	78.79	79.85	71.82	82.79	83.43	80.89	83.78	81.07	81.30	82.32
22	77.00	73.07	79.02	78.38	74.69	82.89	83.25	81.44	84.31	81.16	77.35	82.28
23	79.01	78.59	79.33	77.35	74.87	83.00	83.50	81.30	82.83	81.40	78.15	78.34
24	79.45	80.00	79.12	79.41	75.11	82.94	.....	81.25	82.48	81.78	80.90	69.83
25	79.53	77.73	77.50	79.46	75.00	81.51	.....	80.83	80.95	81.50	76.85	.....
26	79.63	77.66	76.64	30.00	75.10	82.59	.....	80.63	81.96	81.48	75.95	.....
27	79.30	78.61	77.25	80.00	73.88	82.96	.....	80.46	82.72	81.40	80.72	79.59
28	78.00	78.61	75.10	79.15	76.60	82.92	.....	82.76	82.68	81.33	80.27	80.10
29	78.23	.....	73.82	80.22	75.47	82.92	.....	83.70	83.15	81.56	80.82	80.21
30	79.75	.....	72.82	80.00	75.65	83.04	.....	85.58	.....	81.59	81.08	75.46
31	80.33	.....	72.67	.....	75.03	.....	.....	86.05	.....	81.37	.....	73.17

a Estimated.

Marion 24 (*1016, p. 63). 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 Geological Survey, U. S. Dept. of Interior.

Marion 24--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	14.24	Apr. 2	2.10	July 2	6.39	Oct. 8	6.19
8	14.26	9	4.45	9	7.39	15	7.57
15	14.29	17	4.43	16	8.05	22	8.02
22	14.30	23	5.27	23	8.53	29	8.48
29	14.29	30	4.34	30	8.48	Nov. 5	8.58
Feb. 5	14.27	May 7	4.74	Aug. 6	8.03	13	8.43
12	14.31	14	5.58	13	8.41	19	7.87
19	14.28	21	3.93	20	7.06	26	6.97
26	14.20	28	5.90	27	8.10	Dec. 3	7.33
Mar. 5	13.32	June 4	7.17	Sept. 4	8.94	10	7.55
12	10.66	11	7.38	17	9.59	17	8.09
19	9.72	18	2.38	24	9.75	26	8.47
26	5.62	25	4.97	Oct. 1	6.37		

Marion 25. 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. Unused drilled test well, diameter 6 inches, depth 118.3 feet. Measuring point from May 7 to Nov. 19, top of base of recorder shelter, 0.30 foot above top of casing, 1.57 feet above land-surface datum; after Nov. 19, top of base of recorder shelter, 0.73 foot above top of casing, 2.0 feet above land-surface datum. Automatic water-stage recorder installed May 7, 1945. First measurement May 7, 1945. Measurements made by personnel of Geological Survey, U. S. Dept. of Interior.

Water level at 2 a.m., in feet below land-surface datum, 1945
(From recorder charts)

Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	36.41	38.36	38.58	39.01	30.28	30.15	.....
2	.....	33.93	34.31	38.98	35.50	33.33	30.90	.....
3	.....	34.03	35.58	39.43	34.36	34.25	31.20	.....
4	.....	31.76	35.27	39.45	33.70	34.63	30.56	24.47
5	.....	35.20	28.92	38.08	36.78	34.81	27.58	24.58
6	.....	36.21	32.49	35.18	38.40	34.85	30.03	24.74
7	.....	37.17	35.10	35.58	38.78	33.88	30.65	24.48
8	.....	37.09	34.52	35.60	39.18	30.71	30.76	24.17
9	.....	37.60	32.51	35.50	37.56	33.33	31.38	23.85
10	.....	35.93	36.51	35.39	34.33	34.08	31.40	.....
11	.....	35.31	37.34	35.39	38.06	34.53	28.28	.....
12	.....	37.81	37.29	34.56	37.39	34.78	27.65	.....
13	.....	38.43	38.23	33.89	37.22	34.83	.....	.....
14	.....	38.31	37.70	34.63	36.41	29.78	30.78	.....
15	26.78	38.98	38.29	34.10	37.11	25.06	30.83	.....
16	26.89	39.08	36.18	.....	32.87	30.99	30.11	.....
17	32.99	36.72	37.90	.....	26.55	32.63	30.65	.....
18	37.46	33.66	38.21	.....	33.04	33.28	30.33	.....
19	38.81	36.80	38.99	.....	.....	33.33	28.48	.....
20	.....	37.25	39.77	.....	.....	34.24	30.05	.....
21	.....	37.69	39.93	36.88	.....	.....	30.10	.....
22	29.50	35.91	39.31	37.96	.....	.....	29.93	24.08
23	28.59	36.71	35.58	37.86	.....	30.55	27.33	23.85
24	29.96	34.88	38.59	38.20	.....	.....	26.76	23.85
25	30.37	34.43	39.36	38.58	33.68	.....	26.12	22.15
26	31.09	37.08	39.35	35.23	34.38	.....	.....	21.50
27	30.73	37.48	40.08	33.93	34.58	.....	24.35	23.50
28	27.00	38.55	39.20	37.15	34.78	.....	.....	24.07
29	34.30	39.11	38.91	38.08	34.93	.....	.....	24.18
30	37.03	39.71	35.73	38.49	32.13	29.40	.....	23.98
31	35.13	.....	38.48	38.86	.....	30.18	.....	21.01

Martin County

Martin 3 (*1016, p. 63). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	22.54	Mar. 20	19.61	Aug. 12	21.09	Oct. 15	21.11
9	22.55	28	19.71	19	21.05	22	20.95
17	22.57	Apr. 5	19.72	Sept. 2	21.11	28	20.98
24	22.65	18	19.74	10	21.45	Nov. 5	20.99
30	22.62	July 8	19.94	16	21.45	12	20.98
Feb. 6	22.69	15	20.39	24	20.68	26	20.27
15	22.71	22	20.68	30	19.78	Dec. 2	20.25
Mar. 3	18.65	29	20.80	Oct. 7	19.76	10	20.23
12	19.67	Aug. 5	20.83				

Martin 4 (*1016, p. 63). 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, 1945

Jan. 2	11.58	Mar. 20	2.74	Aug. 12	4.18	Oct. 15	3.88
9	11.62	28	3.18	19	3.69	22	3.58
17	11.63	Apr. 5	3.20	Sept. 2	3.79	28	3.61
24	9.38	18	3.19	10	6.20	Nov. 5	3.63
30	8.62	July 8	3.28	16	6.25	12	3.61
Feb. 6	8.36	15	3.42	24	3.79	26	3.22
15	8.39	22	3.45	30	3.39	Dec. 2	3.20
Mar. 3	2.79	29	3.45	Oct. 7	3.33	10	3.15
12	3.27	Aug. 5	3.49				

Monroe County

Monroe 2. 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. Unused dug well, diameter 42 inches, depth 27 feet. Measuring point, north edge of top rock course, 0.4 foot below land-surface datum. First measurement Sept. 15, 1944. Measurements made by Fred O. Hacker, Superintendent, Morgan-Monroe State Forest.

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

Aug. 21	23.50	Sept. 18	24.80	Oct. 16	22.95	Nov. 13	23.46
28	24.30	25	24.10	23	22.43	20	23.35
Sept. 4	24.65	Oct. 2	22.90	30	24.65	Dec. 4	22.45
11	25.10	9	22.20	Nov. 6	24.20	11	20.47

Monroe 3 (*1016, p. 64). 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, 1945

Jan. 6	27.34	Mar. 17	23.39	May 27	24.02	Oct. 19	25.34
13	27.35	24	22.05	June 2	24.45	26	25.40
20	27.39	31	21.55	9	24.57	Nov. 2	25.41
27	27.40	Apr. 7	21.20	23	17.80	9	25.50
Feb. 3	27.42	14	22.60	July 7	22.18	16	25.34
10	27.41	21	21.80	21	23.25	23	22.85
17	27.31	28	22.38	Sept. 21	26.22	30	23.61
27	27.44	May 5	23.46	28	25.34	Dec. 7	23.80
Mar. 3	22.36	12	23.86	Oct. 5	24.92	14	24.64
10	21.84	19	23.60	12	25.14	28	21.10

Montgomery County

Montgomery 1 (*817, p. 49; 840, p. 82; 845, p. 79; 886, p. 109; 906, p. 50; 936, p. 35; 944, p. 32; 986, p. 35; 1016, p. 64). 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 W. F. Moore, Earl Moore, and Chester E. Heslar.

Water level at 2 a.m., in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	12.04	12.68	9.50	....	7.48	8.35	8.03	.....a	11.30	7.94	....	6.66
2	12.16	12.70	9.44	....	7.59	8.43	7.39	.....	.....	....	a	9.13 6.72
3	12.27	12.69	7.18	....	7.61	8.62	7.27	.....	.....	....	9.18	6.83
4	12.29	12.65	7.59	....	7.54	8.80	7.37	.....	.....	....	9.27	7.05
5	12.36	12.57	7.56	....	7.57	8.94	7.54	.....	.....	a	7.31	7.20
6	12.36	12.68	7.43	5.63	7.61	9.06	7.77	.....	.....	7.44	....	7.26
7	12.28	12.68	5.40	5.91	7.66	9.17	.....a	10.60	.....	7.67	....	7.34
8	12.28	12.62	6.17	6.19	7.56	9.22	.....	.....a	11.82	....	....	7.60
9	12.35	12.67	6.44	6.45	7.08	9.30	.....	.....	.....	....	....	7.72
10	12.51	12.64	6.60	6.77	6.93	9.20	.....	.....	.....	....	....	7.96
11	12.55	12.71	6.91	7.08	6.80	8.97	.....a	10.30	.....	....	....	8.15
12	12.56	12.72	7.07	7.29	6.74	8.91	.....	10.18	.....	a	8.94	8.34
13	12.49	12.63	7.37	7.53	6.83	8.67	.....	10.06	.....	9.12	....	8.38
14	12.40	12.43	7.52	7.35	7.08	7.85	.....	10.02a	11.58	9.33	a	6.96 8.30
15	12.30	12.26	7.63	....	6.53	....	....	9.73	11.60	....	7.00	8.53
16	12.33	12.08	7.74	....	4.99	....	....	9.53	11.69	....	7.07	8.68
17	12.41	11.98	7.99	....	3.66	....	a	8.00	9.45 11.65	....	7.07	8.86
18	12.42	11.77	8.27	....	....	....	....	9.53	11.58	a	9.97	6.81 8.97
19	12.32	11.71	8.34	....	5.12	....	....	9.73	11.60	....	6.56	8.90
20	12.27	11.72	....	6.24	5.47	....	....	9.93	11.57	....	6.38	9.04
21	12.31	11.56	....	6.54	5.72	....	....	10.08	11.60	....	6.21	9.17
22	12.27	11.25	....	6.93	6.05	....	....	10.22	11.64	....	6.04	9.30
23	12.22	10.56	6.85	7.10	6.57	6.22	....	10.37	11.44	....	6.10	9.48
24	12.21	10.40	6.93	7.23	6.89	6.56a	10.72	10.48	11.30	....	6.39	9.54
25	12.28	10.33	7.21	7.43	7.08	6.86	11.77a	10.56	10.97	....	6.50	9.15
26	12.30	10.15	7.35	7.61	7.23	7.14	10.88	....	10.51	a	8.65	6.87 8.18
27	12.37	9.89	7.55	7.47	7.45	7.33	10.98	....	10.28	8.72	6.97	7.88
28	12.41	9.69	7.71	7.24	7.56	7.49	11.03	....	9.82	8.77	6.76	7.79
29	12.44	....	7.93	7.15	7.83	7.77	11.03	....	8.85	8.90	6.64	7.61
30	12.50	....	7.31	7.31	8.04	8.07	11.14	....	8.30	....	6.60	7.04
31	12.58	....	....	....	8.22	....	11.22	....	....	....	....	6.14

a Tape measurement.

Morgan County

Morgan 2 (*1016, p. 65). State of Indiana, Morgan-Monroe State Forest. Truck trail 3 at Bucks Store, in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 27, T. 11 N., R. 1 E. No measurements made in 1945; well put back in use.

Morgan 3. State of Indiana, Morgan-Monroe State Forest, in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 27, T. 11 N., R. 1 E. Unused dug well, present diameter 8 inches, depth 46.3 feet. Measuring point, edge of pump hole in concrete cover, 0.4 foot above land-surface datum. First measurement Aug. 14, 1945. Measurements made by Fred O. Hacker, superintendent, Morgan-Monroe State Forest.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 14	2.51	Sept. 18	8.60	Oct. 23	7.75	Nov. 20	6.25
21	7.72	25	8.40	30	7.93	27	6.30
28	5.70	Oct. 2	5.60	Nov. 6	7.67	Dec. 4	5.55
Sept. 4	8.70	9	6.80	13	6.52	11	6.81
11	8.80	16	7.30				

Newton County

Newton 2 (* 1016, p. 65). Kentland Dairy Products Co. SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 16, T. 27 N., R. 9 W. No measurements made in 1945.

Noble County

Noble 1. City of Kendallville well 21. About 170 feet north of centerline of East Diamond St., and 45 feet west of Bixler Lake shore. Drilled well, diameter 6 inches, depth 38.1 feet. Measuring point, top of $\frac{3}{8}$ -inch steel bar on floor of recorder shelter, 1.7 feet above land-surface datum. First measurement Nov. 1, 1935. Automatic water-stage recorder installed Apr. 24, 1945. Measurements made by Don Deibele, Kendallville Water and Light Dept.

Water level at 2 a.m., in feet below land-surface datum, 1945
(From recorder charts)

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	17.73	.....	17.92	18.84	18.82	18.07	17.05	.....
2	15.63	16.30	17.60	18.88	17.96	17.98	17.07	16.44
3	18.48	15.31	17.84	18.72	17.92	17.95	17.05	16.15
4	17.30	18.21	18.08	18.62	17.87	18.37	17.10	.....
5	16.75	.....	18.01	18.47	18.23	18.05	17.05	16.48
6	15.86	.....	18.07	18.13	18.00	17.95	17.11	.....
7	15.57	.....	18.08	18.36	18.25	17.92	17.06	16.60
8	19.07	.....	18.07	18.11	18.34	17.88	17.01	.....
9	15.91	15.32	18.00	18.33	18.08	17.88	17.03	16.45
10	15.53	17.56	17.82	18.29	17.84	17.60	17.04	16.20
11	18.74	15.13	18.35	.....	18.13	17.69	17.04	16.30
12	15.74	16.95	18.32	.....	18.32	17.65	17.00	16.69
13	18.09	15.49	18.30	.....	17.73	17.98	16.98	16.94
14	16.25	.....	18.17	18.23	17.85	17.69	16.94	17.26
15	18.32	.....	18.41	18.12	18.03	17.52	16.95	17.18
16	18.05	15.32	18.02	15.73	18.05	17.43	16.95	.....
17	16.18	17.51	18.39	15.32	17.49	17.36	16.95	16.99
18	15.35	18.51	17.72	17.64	17.30	16.94	16.67
19	15.78	14.95	18.51	15.16	17.46	17.23	16.91	17.10
20	18.08	15.22	18.54	14.95	15.80	17.18	16.98	17.03
21	15.47	17.93	18.72	17.54	16.20	17.17	16.96	16.92
22	15.17	15.14	18.48	17.78	17.83	17.11	17.00	17.13
23	15.83	18.49	17.67	18.13	.....	16.98	17.30
24	14.96	18.77	17.64	18.20	17.10	16.61	17.09
25	14.75	18.96	18.06	18.08	17.08	16.53	16.93
26	16.52	.....	17.09	18.83	17.79	17.42	17.08	16.46	16.81
27	15.88	17.59	18.95	17.72	18.23	17.09	16.89	16.82
28	15.22	16.18	18.90	18.20	18.21	17.12	17.06	17.18
29	15.54	18.23	18.88	17.89	18.15	17.12	.....	17.35
30	19.37	.....	17.88	18.71	18.34	18.13	17.13	16.56	17.40
31	19.00	18.28	.....	17.05	.....	17.55

a Estimated.

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

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	23.90	Apr. 30	22.40	July 15	20.40	Sept. 6	21.32
28	23.30	May 1	22.10	Aug. 1	20.00	17	21.58
Mar. 15	23.90	15	21.20	16	20.00	Nov. 17	22.00
Apr. 1	22.10	July 1	20.30	Sept. 1	20.40	Dec. 30	22.73
15	22.30						

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

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	8.95	Apr. 17	3.69	July 2	3.69	Oct. 2	2.83
16	9.09	27	3.39	16	4.62	16	4.30
Feb. 3	9.20	May 2	3.39	Aug. 1	3.54	Nov. 1	4.51
17	9.20	15	3.41	16	4.52	15	4.48
Mar. 2	6.32	June 2	3.20	Sept. 1	5.15	Dec. 3	4.54
16	3.02	16	3.28	16	5.20	17	4.79
Apr. 4	2.50						

Ohio County

Ohio 1 (*1016, p. 66). 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 owner.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	13.35	Apr. 7	2.39	July 7	7.45	Oct. 6	10.31
13	12.72	14	2.19	14	8.66	13	10.82
20	12.55	21	4.58	21	10.17	20	10.59
27	12.52	28	1.90	28	10.96	27	11.41
Feb. 3	11.94	May 5	4.56	Aug. 4	11.24	Nov. 3	11.52
10	11.74	12	5.92	11	11.62	10	11.21
17	11.52	19	4.96	18	12.03	17	11.59
24	5.33	26	5.87	25	12.07	24	10.21
Mar. 3	.63	June 2	6.99	Sept. 1	12.11	Dec. 1	9.66
10	1.95	9	7.69	8	12.16	8	8.74
17	1.74	16	5.78	15	12.20	15	8.34
24	1.86	23	4.54	22	12.52	22	8.26
31	1.76	30	4.66	29	11.57	29	5.34

Orange County

Orange 1 (*1016, p. 66). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	13.68	Apr. 7	1.70	July 9	2.85	Oct. 6	6.93
13	13.90	13	.50	14	3.25	13	7.25
20	13.92	21	2.00	23	4.10	21	7.55
27	13.70	May 1	2.70	28	4.20	27	7.90
Feb. 3	14.10	5	2.80	Aug. 6	4.95	Nov. 5	8.05
10	13.60	12	2.90	11	5.20	12	8.30
17	11.15	19	2.00	18	5.64	19	7.95
24	4.05	28	3.00	27	6.10	26	3.65
Mar. 3	.38	June 2	3.60	Sept. 3	6.65	Dec. 1	1.65
10	1.25	11	3.70	10	6.65	10	1.87
17	.80	16	.74	17	7.20	17	2.42
24	1.50	23	2.00	24	7.40	25	.55
30	.45	July 2	1.80	Oct. 1	6.70	31	.75

Parke County

Parke 1. Donald C. Stutler. $E\frac{1}{2}SE\frac{1}{4}$ sec. 3, T. 15 N., R. 8 W. Unused dug well, diameter 42 inches, depth 19 feet. Measuring point, top edge of pump platform, 0.3 foot above land-surface datum. Measurements made by Donald C. Stutler. First measurement June 14, 1945.

Parke 1--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 14	2.71	Aug. 9	5.29	Sept. 27	8.02	Nov. 15	3.75
21	2.38	17	5.28	Oct. 4	5.23	22	3.15
28	3.56	23	6.14	11	5.93	29	2.55
July 5	3.94	30	7.00	18	6.51	Dec. 6	3.15
12	4.49	Sept. 6	7.77	25	4.15	13	3.45
19	4.87	13	7.91	Nov. 1	4.99	20	3.75
22	5.24	20	8.47	8	4.38	27	3.35
Aug. 2	5.00						

Perry County

Perry 1 (*1016, p. 66). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	2.55	Apr. 15	2.38	July 15	7.46	Oct. 14	6.47
14	2.76	22	4.99	22	7.79	21	6.80
21	6.13	29	4.36	29	8.19	28	7.45
28	3.78	May 6	3.57	Aug. 5	8.61	Nov. 4	7.27
Feb. 4	4.65	13	3.72	12	8.75	11	3.97
11	2.93	20	3.74	19	8.98	18	3.62
18	2.55	27	5.44	26	8.34	25	3.12
25	3.06	June 3	6.28	Sept. 2	8.68	Dec. 2	3.68
Mar. 4	1.75	10	6.22	9	9.53	9	4.60
11	3.14	17	1.72	16	9.17	16	5.53
25	3.27	24	5.32	23	9.35	23	1.47
Apr. 1	2.32	July 1	6.37	30	7.29	30	3.15
8	3.58	8	7.13	Oct. 7	5.69		

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). A. J. Heuring. In Winslow, in front of owner's residence at Lafayette and Main Sts. Measurements made by Hoyt McClure and Denzel Russell, superintendents, Pike State Forest.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	12.68	July 5	4.90	Sept. 19	8.25	Nov. 14	7.00
31	12.25	16	7.40	26	7.50	21	6.30
Feb. 15	11.82	27	6.60	Oct. 4	6.00	29	6.00
Mar. 15	6.49	31	7.70	11	6.30	Dec. 5	6.00
31	3.50	Aug. 10	5.70	17	6.80	12	6.10
Apr. 17	4.98	21	5.60	24	4.40	21	5.90
30	7.83	29	7.80	31	7.40	29	5.80
May 31	6.00	Sept. 5	7.40	Nov. 7	6.40	31	5.80
June 28	6.40	12	8.10				

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). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	57.35	Mar. 31	58.05	May 31	55.70	July 30	57.60
Feb. 15	56.85	Apr. 15	54.80	June 15	57.15	Sept. 15	54.50
28	57.05	30	53.75	30	57.10	30	54.00
Mar. 16	57.65	May 15	53.60	July 15	57.00	Oct. 15	53.94

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). Indiana Dunes State Park. At Waverly Beach. Measurements made by K. R. Cougill and Harry Bamesburger, superintendents, Indiana Dunes State Park.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 13	12.19	May 1	11.50	July 18	10.71	Oct. 1	9.83
Mar. 1	12.25	21	10.96	Aug. 1	10.00	16	10.50
19	12.10	June 2	10.67	17	10.71	Nov. 2	10.83
Apr. 4	11.00	19	10.87	Sept. 4	10.71	16	12.92
16	11.25	July 2	10.50	17	10.08	Dec. 4	10.96

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). Indiana Dunes State Park. Near grocery store on picnic ground. Measurements made by K. R. Cougill and Harry Bamesburger, superintendents, Indiana Dunes State Park.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 13	15.40	May 1	14.31	July 18	11.92	Oct. 1	12.83
Mar. 1	15.04	21	12.67	Aug. 1	11.67	16	12.67
19	14.98	June 2	12.21	17	12.06	Nov. 2	13.10
Apr. 4	14.67	19	12.12	Sept. 4	12.33	16	13.23
16	14.50	July 2	11.19	17	12.92	Dec. 4	13.29

Posey County

Posey 1 (*1016, p. 68). 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 level, in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	14.59	Apr. 8	3.76	July 8	6.44	Oct. 7	4.86
14	14.30	15	3.80	15	7.04	14	5.95
21	14.00	22	4.15	22	7.01	21	6.45
28	13.68	29	5.09	29	7.23	28	5.83
Feb. 4	13.36	May 6	5.52	Aug. 5	7.65	Nov. 4	7.15
11	12.97	13	5.79	12	7.20	11	7.34
18	12.60	20	5.95	19	7.12	18	7.34
25	8.33	27	6.25	26	7.31	25	6.94
Mar. 4	3.20	June 3	6.60	Sept. 2	7.84	Dec. 2	6.08
11	3.22	10	6.78	9	8.40	9	6.20
18	4.19	17	6.66	16	8.80	16	6.46
25	3.49	24	5.83	23	8.84	23	6.60
Apr. 1	3.80	July 1	6.13	30	4.88	30	5.30

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). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 17	8.09	Sept. 24	8.73	Oct. 29	7.99	Dec. 3	7.44
27	8.47	Oct. 1	8.18	Nov. 5	7.78	10	7.40
Sept. 3	8.60	8	7.73	12	7.77	17	7.62
10	8.61	15	7.92	19	7.67	24	7.54
17	8.83	22	7.99	26	7.72	31	7.33

Putnam County

Putnam 1. Paul K. McMahan. NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 14, T. 14 N., R. 5 E. Dug well, diameter 36 inches, depth 18.6 feet. Measuring point, top course of rock at south side of well, at land-surface datum. First measurement June 14, 1945. Measurements made by owner.

Putnam 1--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 14	2.28	July 9	3.60	Aug. 6	5.02	Sept. 12	6.73
17	1.48	16	4.16	13	5.08	19	7.43
25	2.48	23	4.58	22	5.34	Oct. 29	5.04
July 2	2.85	30	4.63	27	5.59		

Randolph County

Randolph 1 (*944, p. 34; 986, p. 37; 1016, p. 68). 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 owner.

Water level, in feet below land-surface datum, 1945							
Jan. 15	18.32	Apr. 15	13.77	July 15	14.12	Oct. 15	15.07
31	18.43	30	13.34	31	14.90	31	15.29
Feb. 15	18.12	May 15	13.77	Aug. 15	15.09	Nov. 15	15.25
28	16.55	31	13.95	31	15.70	30	14.37
Mar. 15	15.81	June 15	13.95	Sept. 15	16.11	Dec. 15	14.49
31	14.00	30	13.50	30	15.84	31	13.71

Ripley County

Ripley 1 (*1016, p. 68). 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 owner.

Water level, in feet below land-surface datum, 1945							
Jan. 15	13.10	Mar. 29	6.45	Apr. 26	5.35	May 31	4.71
Mar. 1	10.85	Apr. 5	4.60	May 3	5.40	June 7	5.50
9	6.10	12	6.10	11	5.50	Aug. 2	10.40
14	6.25	19	5.90	17	5.40	Dec. 13	10.01
22	5.60						

Rush County

Rush 1. Wilbert H. Hahn. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 8, T. 14 N., R. 10 E. Dug well, diameter 42 inches, depth 24.5 feet. Measuring point, edge of concrete cover, 1 foot north of pump opening, 0.6 foot above land-surface datum. First measurement July 12, 1945. Measurements made by owner.

Water level, in feet below land-surface datum, 1945							
July 12	6.55	Aug. 31	8.37	Oct. 12	7.77	Nov. 23	4.81
20	7.02	Sept. 7	8.40	19	8.12	30	4.15
27	6.99	14	9.49	26	7.00	Dec. 7	4.84
Aug. 3	6.49	21	9.56	Nov. 2	7.04	14	6.19
10	6.78	28	7.98	9	7.03	20	6.28
17	6.80	Oct. 5	6.38	17	5.79	28	5.64
24	6.90						

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

Water level, in feet below land-surface datum, 1945							
Jan. 1	11.18	Apr. 1	9.42	July 2	8.75	Oct. 1	9.08
16	11.51	15	10.00	16	10.67	15	8.42
Feb. 1	11.74	May 1	8.34	31	10.66	Nov. 1	10.25
15	9.66	16	9.00	Aug. 16	10.25	15	10.42
Mar. 1	9.25	June 1	9.25	Sept. 1	11.08	Dec. 1	10.75
26	9.82	15	10.08	15	10.58	15	10.59

St. Joseph 4T-1. City of South Bend. Olive St. Station, about 1,250 feet west of Olive St. and 200 feet south of New York Central Railroad. Drilled test well, diameter 4 inches, depth 151.6 feet. Measuring point, top of $1\frac{1}{2}$ -inch reducing plug, 2.0 feet above land-surface datum. First measurement Feb. 16, 1945. Measurements made by Ed Fleming, City Engineering Department.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 16	19.32	May 10	18.37	July 26	20.64	Oct. 4	18.41
23	19.18	17	18.24	Aug. 2	19.85	11	18.44
Mar. 9	18.28	24	16.82	9	19.14	19	18.25
22	18.46	31	16.82	17	18.69	26	18.46
30	18.82	June 8	16.65	23	19.09	Nov. 1	18.42
Apr. 5	18.46	21	17.42	30	18.84	15	18.63
13	18.56	28	17.65	Sept. 6	19.28	24	18.55
20	17.93	July 5	18.25	14	18.90	Dec. 1	18.98
26	18.26	12	19.90	21	19.00	8	19.07
May 4	18.35	19	20.09	27	18.76	21	18.98

St. Joseph 4T-2. City of South Bend. On east curb line of Lombardy Drive, 1 block south of Sample St., 900 block. Drilled test well, diameter 3 to $1\frac{1}{2}$ inches, depth 152 feet. Measuring point, top of $1\frac{1}{2}$ -inch reducing plug, 0.80 foot above land-surface datum, 712.8 feet above mean sea level. First measurement Feb. 16, 1945. Measurements made by Ed Fleming, City Engineering Department.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 16	8.56	May 10	7.20	July 26	7.99	Oct. 4	8.17
23	8.31	17	6.75	Aug. 2	7.74	11	8.21
Mar. 9	8.20	24	6.65	9	7.86	19	8.23
22	8.14	31	6.82	17	7.99	26	8.35
30	8.12	June 8	7.10	23	8.14	Nov. 1	8.32
Apr. 5	7.75	21	7.25	30	8.25	15	8.39
13	7.76	28	7.34	Sept. 6	8.33	24	8.28
20	7.73	July 5	7.50	14	8.40	Dec. 1	8.14
26	7.52	12	7.69	21	8.46	8	8.19
May 4	7.40	19	7.74	27	8.24	21	8.40

St. Joseph 16-1 (*1016, p. 69). Singer Manufacturing Co. In South Bend, at Olive St. and Western Ave. Observation well is 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	29.58	Apr. 6	30.50	June 28	30.17	Sept. 27	29.07
11	29.53	12	30.01	July 5	29.18	Oct. 4	29.03
17	29.38	19	30.80	12	30.61	10	28.94
24	28.85	26	30.51	19	31.41	18	29.22
Feb. 1	29.10	May 3	30.36	Aug. 2	30.67	25	28.74
8	28.63	10	30.17	8	30.84	Nov. 1	28.90
14	28.84	17	30.28	16	30.42	9	28.58
22	29.01	24	30.16	23	30.42	16	29.19
Mar. 1	28.84	June 1	29.73	30	30.57	30	29.17
8	29.01	7	29.55	Sept. 6	30.80	Dec. 9	29.55
15	30.74	14	30.23	14	29.74	13	29.37
22	29.76	21	29.98	20	29.09	21	29.19
29	31.83						

St. Joseph 16-F (*1016, p. 69). 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.

St. Joseph 16-F--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	21.63	Mar. 29	21.71	July 5	20.66	Oct. 4	21.11
11	21.58	Apr. 6	21.67	12	20.68	10	21.19
17	21.61	12	21.60	19	20.64	18	21.04
24	21.64	19	21.54	Aug. 2	21.39	25	21.14
Feb. 1	21.64	26	21.46	8	21.01	Nov. 1	21.14
8	21.71	May 3	21.41	16	21.01	9	21.09
14	21.70	10	21.52	23	21.13	16	21.09
22	21.72	June 1	20.74	30	21.14	30	21.15
Mar. 1	21.67	7	20.58	Sept. 6	21.14	Dec. 9	21.19
8	21.64	14	20.59	14	21.09	13	21.19
15	21.62	21	20.54	20	21.07	21	21.19
22	21.65	28	20.64	27	21.04		

St. Joseph 22 (*1016, p. 69). Palace Theater. In South Bend, at Colfax Ave. and Michigan St. West well 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, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	32.46	34.29	34.35	32.84	31.56	33.98	40.98	40.10	.....	31.70	32.23	32.08
2	32.74	34.61	35.18	32.48	31.98	34.27	40.24	41.29	40.30	31.82	32.53	31.35
3	32.42	34.22	35.00	32.03	31.87	33.36	39.65	41.88	37.30	32.18	32.63	30.50
4	33.70	34.64	34.62	32.37	31.04	31.47	39.81	41.80	36.57	31.89	32.58	31.95
5	34.34	33.02	33.53	31.58	31.70	32.54	39.30	40.30	37.89	32.28	31.72	32.28
6	35.71	33.62	33.64	32.18	32.53	34.01	40.45	38.50	39.03	32.10	32.22	32.65
7	.....	35.05	33.25	32.02	31.54	34.94	40.11	39.65	40.33	32.22	32.33	32.86
8	.....	35.02	33.00	32.27	32.16	35.58	41.17	39.16	40.98	31.06	32.68	32.75
9	33.91	.....	32.63	31.08	32.74	36.42	40.90	39.77	40.75	31.49	32.82	32.46
10	33.96	35.37	32.48	31.97	32.00	37.25	41.56	39.97	39.25	32.64	33.03	31.10
11	35.02	35.39	34.22	32.85	32.07	34.42	40.68	40.63	39.00	32.36	33.05	32.52
12	35.30	33.64	32.84	32.14	32.34	36.38	40.74	40.91	37.80	32.71	31.81	31.82
13	35.06	34.43	33.43	32.84	31.75	36.34	41.15	39.84	36.93	31.57	32.33	32.15
14	34.96	34.93	34.93	32.84	31.29	37.13	40.00	40.28	36.65	31.92	32.68	32.14
15	33.03	35.02	35.70	32.19	31.51	38.48	39.41	40.25	34.68	31.65	32.81	32.27
16	33.75	35.57	36.24	31.47	32.42	38.57	37.12	37.50	34.29	32.31	32.68	32.06
17	33.85	35.32	36.30	31.80	33.16	39.50	37.14	32.95	32.78	32.75	31.23	
18	34.35	35.75	36.95	31.97	32.69	36.38	38.48	38.08	33.68	33.31	31.95	31.90
19	34.63	35.03	34.65	32.25	32.31	36.89	39.89	38.93	34.14	33.42	31.85	33.33
20	35.16	35.49	35.40	32.42	32.74	37.24	41.80	38.18	34.53	33.30	31.45	33.61
21	34.46	35.35	35.21	.....	31.13	37.25	43.00	39.98	34.63	33.23	31.57	33.75
22	32.86	35.66	34.83	31.42	32.61	37.11	42.52	40.82	35.00	32.15	31.90	33.54
23	34.49	34.96	34.12	30.45	33.33	38.11	41.05	40.17	34.08	32.75	31.14	33.21
24	34.18	35.42	34.69	31.51	33.11	39.62	42.32	40.13	34.06	32.85	31.48	32.26
25	34.42	34.84	35.15	32.75	33.52	38.89	.....	40.22	34.30	32.90	32.18	31.98
26	33.74	32.95	33.73	32.68	34.48	38.79	.....	38.88	34.32	33.10	31.64	31.01
27	33.03	.....	34.10	32.16	35.42	39.09	42.37	36.50	34.25	33.20	31.38	31.06
28	34.07	34.49	34.18	32.43	34.07	39.88	42.60	37.47	34.13	32.40	31.61	31.61
29	32.75		33.83	32.44	34.28	40.42	42.35	39.35	34.32	31.66	31.98	31.22
30	34.30		34.03	31.06	34.85	41.29	39.87	38.65	33.58	31.95	32.19	31.15
31	34.32		32.92		34.78		40.63	38.55		32.02		31.47

a Estimated.

St. Joseph 25-3 (*1016, p. 70). Oliver Farm Equipment Co. In South Bend, at Chapin and Ford Sts. Measurements made by personnel of Oliver Farm Equipment Co., C. O. Drulliner, chief engineer. Well filled with concrete; measurements discontinued Sept. 6, 1945.

St. Joseph 25-3--Continued.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 18	31.63	Mar. 8	31.75	June 21	29.70
25	31.69	15	31.77	28	28.58
Feb. 1	31.70	22	32.10	July 5	28.37
8	31.82	29	31.81	12	29.15
15	31.76	Apr. 5	31.54	19	30.00
22	31.72	June 7	29.14	26	30.18
Mar. 1	31.75	14	28.74		
				Aug. 2	29.68
				9	29.54
				17	29.40
				23	30.35
				30	30.33
				Sept. 6	30.40

St. Joseph 28. 820th Army Air Forces Depot (Oliver Equipment Co.). In South Bend, at 1217 S. Walnut St. Unused drilled well, diameter 12 inches, depth 71.9 feet. Measuring point, at north side of top of 12-inch coupling, 5.70 feet below land-surface datum. First measurement Mar. 8, 1945. Automatic water-stage recorder installed Mar. 8, 1945. Tape measurements beginning Aug. 17, 1945. Measurements made by Ed Fleming, City Engineering Department.

Water level at 2 a.m., in feet below land-surface datum, 1945 (From recorder charts)					
Mar. 8	a 18.32	Apr. 21	18.01	May 23	17.61
12	18.31	22	18.00	24	17.58
13	18.31	23	17.98	25	17.55
14	a 18.29	24	17.97	26	17.51
15	18.29	25	17.96	27	17.47
16	18.30	26	17.95	28	17.42
22	a 18.26	27	17.94	29	17.39
23	18.27	28	17.93	30	17.36
24	18.28	29	17.92	31	17.33
25	18.29	30	17.91	June 1	17.31
26	18.28	May 1	17.90	2	17.27
27	18.30	2	17.89	3	17.25
28	18.31	3	17.89	4	17.23
29	18.32	5	17.89	5	17.20
30	a 18.32	6	17.88	6	17.18
Apr. 5	a 18.21	7	17.87	7	17.16
7	18.21	8	17.87	8	17.15
8	18.20	9	17.86	9	17.13
9	18.18	10	17.85	10	17.12
10	18.16	11	17.85	11	17.10
11	18.14	12	17.85	12	17.10
12	18.13	13	17.84	13	17.09
13	18.11	14	17.82	14	17.08
14	18.11	15	17.81	15	17.08
15	18.09	16	17.81	16	17.08
16	18.07	17	17.79	17	17.07
17	18.05	19	17.74	18	17.06
18	18.04	20	17.71	19	17.06
19	18.03	21	17.68	20	17.05
20	18.02	22	17.64		
				June 21	17.05
				22	17.05
				23	17.05
				24	17.05
				25	17.05
				26	17.05
				27	17.06
				28	17.06
				July 16	18.32
				17	18.33
				18	18.34
				19	18.35
				Aug. 17	17.61
				23	17.62
				30	17.68
				Sept. 6	17.73
				14	17.79
				21	17.80
				27	17.80
				Oct. 4	17.82
				11	17.82
				19	17.81
				26	17.84
				Nov. 1	17.84
				15	17.89
				24	17.87
				Dec. 1	17.89
				8	17.91
				21	17.91

a Tape measurement.

St. Joseph 34. White Swan Laundry. In South Bend, at 118 E. Sample St. Drilled well, diameter 12 inches, depth 81 feet. Measuring point, floor of shelter house, 0.40 foot above land-surface datum. Automatic water-stage recorder installed Feb. 15, 1945. Measurements made by Ed Fleming, City Engineering Department.

Water level at 2 a.m., in feet below land-surface datum, 1945 (From recorder charts)											
Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	39.42	39.05	.....	39.41	39.49	39.60	39.24
2	39.17	38.96	.....	39.61	39.60	39.55	39.24
3	39.56	39.03	.....	39.48	39.63	39.55	39.17
4	a41.09	39.31	39.03	.....	39.39	39.63	39.92	39.09
5	a41.58	.....	39.32	38.94	.....	39.50	39.64	39.53	39.15
6	a41.43	.....	.....	39.28	38.97	.....	39.56	39.63	39.58	39.16

a Tape measurement.

St. Joseph 34--Continued.

Water level at 2 a.m., in feet below land-surface datum, 1945
(From recorder charts)

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
7	41.27	.....	.....	39.28	38.97	.....	39.59	39.73	39.58	39.16
8	a40.33	39.28	38.95	.....	39.62	39.53	39.57	39.18
9	a41.55	.....	40.04	39.27	38.86	.....	39.64	39.58	39.57	.....
10	41.30	.....	39.98	39.92	38.91	.....	39.53	39.56	.....	.....
11	40.02	39.26	38.92	.....	39.61	39.58	.....	.....
12	40.00	39.23	38.96	.....	39.63	39.58	.....	.....
13	a41.28	40.16	39.22	38.96	.....	39.65	39.60	.....	.....
14	39.86	39.22	38.98	.....	.....	39.57	.....	.....
15	a41.28	.....	.....	39.93	.....	38.86	.....	39.73	39.49	.....	39.19
16	41.14	a41.42	.....	39.83	.....	38.85	.....	39.73	39.53	39.46	39.22
17	41.26	.....	39.90	.....	38.91a	39.47	39.60	39.53	39.46	39.11
18	39.93	.....	38.93	.....	39.63	39.58	39.47	39.20
19	39.90	.....	38.94	.....	39.67b	39.56	39.33	39.28
20	a41.43	39.86	.....	38.98	.....	39.69	39.25	39.39	39.26
21	39.76	a39.45	38.99	.....	.....	39.27	39.38	39.20
22	a41.55	.....	39.77	39.07	38.92	.....	39.73	39.16	39.38	.....
23	a41.39	41.28	.....	39.75	39.07	.....	.....	39.68	39.22	.....	.....
24	39.74	39.08	.....	.....	39.58	39.24	.....	.....
25	39.59	38.94	.....	.....	39.64	39.24	39.29	.....
26	a41.14	39.65	38.97	.....	.....	39.65b	39.23	39.25	.....
27	39.55	38.99	39.12	.....	39.68	39.52	39.17	.....
28	39.44	38.81	39.13	.....	39.65	39.84	39.20	39.08
29	39.10	39.11	.....	39.63	39.57	39.21	39.05
30	a41.53	.....	.....	39.11	.....	.....	39.65	39.61	39.22	38.92
31	a39.90	.....	.....	39.60	.....	39.58	.....	39.00

a Tape measurement.

b Estimated.

St. Joseph 53. 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 113.5 feet west of southwest corner of powerhouse. Unused drilled well, diameter 12 inches, depth 116.5 feet. Measuring point, top of floor of recorder shelter, 0.40 foot above land-surface datum. First measurement Mar. 23, 1945. Automatic water-stage recorder installed Mar. 23, 1945. Measurements made by Thomas Bowland.

Water level at 2 a.m., in feet below land-surface datum, 1945
(From recorder charts)

Day	Mar.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	4.67	7.02	....	6.05	8.14	5.11	....
2	4.67	5.36	4.97	5.06	4.55	5.18	....
3	4.62	5.26	....	5.00	6.85	5.15	....
4	8.26	....	5.04	6.25	....	5.04	....
5	4.72	5.34	5.14	5.23	....	....	....
6	4.90	....	5.15	5.13	....	5.10	....
7	4.78	....	5.28	5.06	8.00	5.21	....
8	4.78	....	5.03	5.23	....	5.22	....
9	5.17	4.89	....	....	5.22	....	5.26	5.33
10	8.29	4.90	....	5.20	5.24	....	5.18	....
11	5.11	5.54	....	....	5.60	....	5.20	4.95
12	8.59	4.94	....	5.15	5.13	....	5.27	5.53
13	5.01	4.84	....	....	7.10	....	5.15	5.60
14	4.98	4.20	....	5.10	5.15	5.30	5.16	5.69
15	6.12	5.26	5.40	5.11	5.45	....	4.78
16	8.23	....	4.98	6.02	8.58	....	....
17	4.94	5.24	....	5.43	8.81	5.21	....
18	4.92	....	5.04	5.38	8.83	5.06	....
19	5.18	4.98	5.39	5.27	5.79	5.87	....	....
20	5.02	5.01	5.50	8.31	5.50	5.54	....	5.42
21	5.08	4.97	5.49	5.95	5.38	8.13	....	5.37
22	5.12	4.98	5.49	6.64	8.84	8.32	....	5.86
23	5.14	4.98	5.51	5.28	5.51	4.91	....	5.75
24	6.32	5.14	5.06	....	....	5.25	4.88	....	5.83
25	4.73	5.09	5.52	5.29	4.93	4.93	....	5.83

St. Joseph 53--Continued.

Water level at 2 a.m., in feet below land-surface datum, 1945
(From recorder charts)

Day	Mar.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	4.97	....	....	5.60	4.87	4.97	....	5.77
27	4.83	5.05	6.35	5.95	5.05	5.13	....	5.70
28	4.97	....	5.42	8.75	4.87	8.40	....	5.78
29	4.97	5.31	5.29	6.61	5.10	5.09	....	5.87
30	8.37	5.28	5.56	6.71	4.82	6.95	....	5.78
31	5.11	....	6.25	8.75	....	5.06	....	6.57

St. Joseph 85. 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. Drilled well, diameter 8 inches, depth 80 feet. Measuring point, floor of shelter house, 0.37 foot above northeast side of top of casing, 0.9 foot above land-surface datum. First measurement Jan. 17, 1945. Automatic water-stage recorder installed Jan. 17, 1945. Measurements made by Ed Fleming, City Engineering Department.

Water level at 2 a.m., in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	14.45	14.37	14.09	13.70	12.74	13.19	14.00	14.13	14.23	14.22	14.29
2	....	14.46	14.35	14.09	13.71	12.74	13.21	14.00	14.14	14.22	14.23	14.29
3	....	14.47	14.36	14.07	13.71	12.75	13.22	14.00	14.13	14.21	14.24	14.29
4	....	14.47	14.36	14.06	....	12.75	13.23	13.99	14.12	14.20	14.24	14.28
5	....	14.48	14.35	14.05	13.71	12.75	13.25	13.99	14.12	14.19	14.24	14.26
6	....	14.48	14.34	14.03	13.69	12.76	13.26	13.99	14.14	14.17	14.23	14.25
7	....	14.49	14.34	14.00	13.68	12.78	13.29	13.98	14.16	14.16	14.24	14.25
8	....	14.50	14.33	13.98	13.66	12.81	13.31	13.99	14.18	14.15	14.25	14.27
9	....	14.52	14.32	13.94	13.65	12.84	13.34	13.98	14.20	14.14	....	....
10	....	14.53	14.30	13.91	13.60	12.87	13.37	13.98	14.22	14.14	....	....
11	....	14.54	14.27	13.89	13.57	12.88	13.40	13.98	14.23	14.14	....	....
12	....	14.55	14.22	13.86	13.54	12.89	13.43	13.99	14.24	14.12	....	....
13	....	14.56	14.18	....	13.51	12.90	13.47	13.98	14.25	14.13	....	....
14	....	14.57	14.15	13.84	13.49	12.91	13.50	13.97	....	14.13	....	....
15	....	....	14.12	13.82	13.46	12.93	13.52	13.97	14.25	14.13	....	14.30
16	....	....	....	13.81	13.44	12.94	13.54	....	14.25	14.13	14.26	14.31
17	....	14.57	14.09	13.78	13.41	12.96	13.55	....	14.26	14.13	14.25	14.31
18	....	14.56	14.08	13.77	13.39	12.97	13.56	13.94	14.26	14.13	14.25	14.32
19	14.32	14.55	14.07	13.76	13.34	12.97	13.58	13.94	14.26	....	14.25	14.32
20	14.33	14.54	14.06	13.75	13.27	12.97	13.60	13.95	14.26	14.13	14.24	14.33
21	14.34	14.54	14.07	13.73	13.18	12.99	13.64	13.96	14.27	14.13	14.24	14.34
22	14.35	14.53	14.08	13.74	13.10	13.02	13.68	13.98	14.28	14.14	14.24	14.34
23	14.36	14.51	14.07	13.73	13.04	13.02	13.71	14.00	14.29	14.14	....	14.35
24	14.37	14.47	14.07	13.72	12.98	13.04	13.74	14.02	14.29	14.14	....	14.35
25	14.38	14.45	14.08	13.73	12.91	13.06	13.73	14.04	14.29	14.14	14.24	14.33
26	....	14.43	14.08	13.72	12.88	13.08	13.82	14.06	14.27	....	14.26	14.33
27	14.39	14.41	14.08	13.72	12.84	13.09	13.85	14.07	15.26	14.18	14.27	14.33
28	14.40	14.39	14.08	13.71	12.80	13.11	13.89	14.08	14.25	14.19	14.27	14.34
29	14.41	....	14.08	13.70	12.79	13.14	13.93	14.09	14.24	14.10	14.28	14.35
30	14.42	....	14.09	13.70	12.77	13.17	13.96	14.12	14.24	14.22	14.29	14.35
31	14.43	....	14.09	....	12.76	....	13.98	14.12	....	14.21	....	14.35

a Estimated.

St. Joseph 87. D. W. Lynch. In South Bend, at 1138 Kinyon St., about 80 feet east of center of Kessler Boulevard, and 100 feet south of center of Kinyon St. Driven well, diameter 1 $\frac{1}{2}$ inches, depth 110 feet. Measuring point, top of pump base, 0.80 foot above land-surface datum. First measurement Mar. 9, 1945. Well plugged and measurements discontinued Aug. 23, 1945. Measurements made by Ed Fleming, City Engineering Department.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 9	2.54	Apr. 28	2.92	June 8	4.11	July 19	5.95
22	3.45	May 3	3.29	21	3.51	27	5.99
30	3.36	10	3.62	28	5.40	Aug. 2	5.96
Apr. 6	3.56	18	2.60	July 6	4.83	9	5.23
13	3.87	31	3.77	12	6.01	17	4.86
19	3.36	....	....	....	....	....	....

St. Joseph 88. Morris Park Country Club. In pumphouse, 400 feet east of clubhouse. Drilled well, diameter 12 inches, depth 86 feet. Measuring point, top of casing, 2.0 feet below land-surface datum. First measurement Apr. 6, 1945. Measurements made by Ed Fleming, City Engineering Department.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 6	10.75	Apr. 28	10.93	June 1	10.35	July 12	10.15
13	10.81	May 3	10.89	21	9.68	27	10.10
19	10.90	18	10.62	July 7	9.71		

St. Joseph 89. Mr. Morgan. In South Bend, about $1\frac{1}{2}$ blocks west of Ironwood Drive and $\frac{1}{2}$ block south of U. S. Highway 20. Unused drilled well, diameter 2 inches, depth 142.2 feet. Measuring point, top of casing, 0.1 foot above land-surface datum. First measurement made Mar. 30, 1945. Measurements made by Ed Fleming, City Engineering Department.

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

Mar. 30	46.29	June 7	45.52	Aug. 9	45.88	Oct. 11	45.26
Apr. 6	46.46	21	45.25	17	45.57	26	45.32
13	46.42	28	45.52	23	46.14	Nov. 3	45.17
19	46.11	July 7	45.61	30	45.96	16	45.24
26	46.13	12	46.07	Sept. 6	46.16	24	45.01
May 3	45.92	20	46.19	14	45.59	Dec. 1	45.14
10	45.68	27	46.12	28	45.39	6	45.26
18	45.46	Aug. 3	46.09	Oct. 4	45.31	21	45.56
June 1	45.46						

St. Joseph 90. Owner unknown. In South Bend, in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 29, T. 38 N., R. 4 E., at north side of Douglas Road at Elm Road intersection. Formerly dug well, diameter $1\frac{1}{2}$ inches, depth 14 feet. Measuring point, edge of sheet metal at east side of opening, at land-surface datum. First measurement Mar. 22, 1945. Measurements made by Ed Fleming, City Engineering Department.

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

Mar. 22	10.19	June 1	8.77	Aug. 9	10.26	Oct. 11	9.82
Apr. 2	9.96	7	8.82	17	10.34	27	9.85
6	9.95	21	9.49	23	10.37	Nov. 3	9.80
13	9.40	28	9.68	30	10.50	16	9.83
19	9.55	July 6	9.89	Sept. 6	10.38	24	10.31
28	9.48	12	10.03	14	10.48	Dec. 1	10.36
May 3	9.54	20	10.13	28	10.20	6	10.14
10	9.43	27	10.20	Oct. 4	9.86	21	10.20
18	8.59	Aug. 3	10.17				

St. Joseph 91. 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. Unused dug well, diameter 42 inches, depth 10.5 feet. Measuring point, top of flat stone at southwest side of well, 1.0 foot above land-surface datum. First measurement Mar. 22, 1945. Measurements made by Ed Fleming, City Engineering Department.

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

Mar. 22	4.23	May 31	4.27	Aug. 2	4.36	Oct. 4	4.52
30	4.26	June 8	4.25	9	4.37	11	4.48
Apr. 6	4.22	21	4.18	17	4.58	26	4.50
13	4.24	28	3.97	23	4.40	Nov. 1	4.56
19	4.23	July 6	4.32	30	4.40	16	4.59
28	4.22	12	4.33	Sept. 6	4.38	24	4.55
May 3	4.23	19	4.32	14	4.48	Dec. 1	4.60
10	4.25	27	4.32	28	4.43	6	4.62
18	4.24						

St. Joseph 92. Camile Sargent. In South Bend, in W¹S¹E¹ sec. 13, T. 37 N., R. 1 E., Chamberlain Lake. Driven well, diameter 1 1/4 inches, depth 27.2 feet. Measuring point from June 22 to Oct. 11, top of casing, 4.0 feet below land-surface datum. Casing extended 4.98 feet; measuring point, after Oct. 11, top of casing, 0.98 foot above land-surface datum. First measurement June 22, 1945. Measurements made by Julia Cherry, South Bend.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 22	24.54	Aug. 4	24.02	Sept. 8	24.05	Oct. 22	24.25
30	24.35	11	23.95	15	24.08	27	24.56
July 7	24.23	18	24.01	22	24.10	Nov. 3	24.56
14	24.24	25	23.99	29	24.13	10	24.56
21	24.06	Sept. 1	24.02	Oct. 11	24.21	17	24.56
28	24.03						

Scott County

Scott 1 (*944, p. 35; 986, p. 38; 1016, p. 71). 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. Robbins, superintendent, Scottsburg Water Department.

Water level at 2 a.m., in feet below land-surface datum, 1945

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	23.81	24.92	21.72	22.49	.....	22.67	21.43	23.37	24.35	25.22	24.04	22.75
2	23.62	24.88	21.52	21.95	22.00	22.68	20.73	23.51	24.75	24.61	24.45	22.95
3	23.44	24.63	20.62	.....	22.04	22.75	20.72	23.45	24.83	23.68	24.90	21.09
4	23.65	24.32	20.68	20.20	22.01	20.00	20.81	23.71	24.87	23.15	24.94	22.50
5	24.39	24.27	20.75	19.57	22.17	20.26	20.89	22.51	.....	23.08	24.53	23.15
6	24.10	23.88	20.90	21.43	22.24	20.56	21.35	21.55	25.09	22.85	24.35	23.61
7	23.63	24.04	20.99	22.55	22.23	20.58	22.05	20.98	24.75	22.84	.....	23.72
8	23.88	23.68	20.77	22.86	22.51	20.63	21.47	21.63	25.04	22.15	24.26	23.92
9	24.37	23.68	20.12	23.05	22.82	22.08	21.03	21.99	25.32	21.60	24.57	23.90
10	24.77	23.20	20.63	23.28	22.52	21.99	22.43	21.97	25.02	23.51	24.70	24.04
11	24.35	23.73	21.14	22.99	22.80	21.41	22.78	21.17	24.90	24.10	24.39	24.50
12	23.90	23.52	21.35	22.64	22.62	21.63	22.07	21.60	25.26	24.13	24.03	24.58
13	23.98	23.52	21.71	22.71	22.77	21.86	22.45	21.93	25.17	24.39	23.78	24.52
14	22.80	23.78	21.83	22.93	22.93	21.80	22.12	22.15	24.76	24.53	.....	24.50
15	23.03	23.65	21.97	22.92	22.58	21.58	22.52	22.33	25.36	24.75	.....	23.97
16	23.33	23.32	21.82	22.38	22.48	21.35	21.95	22.43	25.21	23.35	21.87	24.57
17	23.18	22.73	20.82	21.69	21.98	19.23	22.47	22.28	25.23	24.63	23.15	24.22
18	22.95	23.05	19.91	21.85	21.95	18.83	22.20	22.22	24.67	24.93	23.63	23.80
19	22.70	23.38	18.40	22.02	.....	.....	22.69	22.34	25.26	24.92	21.67	23.99
20	22.62	23.23	18.22	21.92	.....	18.37	22.20	21.93	25.24	24.85	22.37	24.57
21	21.68	22.83	.....	21.96	.....	18.56	22.42	.....	25.09	24.58	23.22	24.62
22	21.67	21.85	19.79	22.28	21.65	18.42	23.12	.....	24.42	23.80	23.83	24.38
23	22.35	21.94	20.28	22.09	22.05	19.18	22.47	22.46	24.34	.....	22.95	24.90
24	22.40	22.14	20.71	22.64	22.49	20.92	22.08	22.20	24.55	22.28	23.19	24.72
25	23.07	21.85	20.98	22.90	22.42	20.02	23.27	22.07	25.21	23.84	23.05	23.38
26	22.38	21.32	21.05	22.62	22.47	20.05	23.53	22.25	25.12	24.40	22.72	23.37
27	22.06	20.50	21.32	22.47	22.72	21.35	23.47	22.35	24.60	24.43	22.15	23.25
28	23.35	21.00	21.51	21.85	22.05	21.83	23.40	22.33	24.15	23.75	22.60	21.95
29	23.65	.....	21.70	21.77	22.53	21.85	23.30	22.60	24.98	23.87	21.55	21.33
30	24.17	.....	21.76	21.87	22.79	21.64	22.65	22.47	25.37	24.17	23.54	20.95
31	24.75	.....	22.34	.....	22.77	.....	23.17	23.39	.....	23.19	.....	21.01

a Estimated.

Spencer County

Spencer 4 (*1016, p. 71). J. Andrew Wetzel. SW¹NW¹ sec. 10, T. 5 S., R. 5 W., 0.5 mile east of Buffaloville and about 100 feet north of road. Measurements made by Elbert B. Meier and Raymond J. F. Meier.

Spencer 4--Continued.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 6	3.22	Apr. 21	3.03	July 21	6.23
13	2.00	28	3.08	28	6.27
20	2.06	May 5	3.74	Aug. 4	5.34
27	.44	12	3.16	11	6.69
Feb. 3	.47	19	2.89	18	4.92
10	.46	26	4.07	25	7.08
Mar. 3	2.21	June 3	4.72	Sept. 1	7.22
10	2.82	9	5.10	8	7.40
17	1.87	16	2.08	15	7.28
24	2.48	23	3.56	22	7.07
31	2.12	30	4.82	29	3.04
Apr. 7	2.89	July 8	5.40	Oct. 6	2.97
14	1.93	14	5.97		

Spencer 5 (*1016, p. 72). 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 Wayne Jones and Raymond Potter.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 3	31.45	Apr. 6	28.5	Aug. 8	28.6
10	31.25	11	27.7	15	30.4
17	31.25	18	24.4	23	30.7
24	31.25	25	27.8	29	30.7
31	31.30	May 2	28.7	Sept. 5	30.75
Feb. 7	31.25	9	28.7	12	30.85
14	31.25	15	28.9	19	30.85
20	31.30	23	28.8	25	30.80
27	31.15	June 6	29.7	Oct. 3	30.45
Mar. 14	31.05	July 18	27.5	10	30.52
21	31.05	25	27.7	17	30.68
28	28.4	Aug. 1	27.4	23	30.80
				Oct. 31	30.28
				Nov. 7	30.88
				14	30.55
				20	30.46
				21	31.88
				28	31.35
				Dec. 1	28.1
				5	30.30
				12	30.40
				19	30.40
				28	29.94

Spencer 6 (*1016, p. 72). 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 Wayne Jones and Raymond Potter.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 3	30.10	Mar. 28	23.4	Aug. 1	26.50
10	27.95	Apr. 6	23.2	8	26.80
17	27.40	11	23.2	15	27.00
24	27.0	18	22.7	23	27.09
31	26.9	25	23.2	29	27.28
Feb. 7	26.7	May 2	23.1	Sept. 5	27.50
14	26.3	9	23.30	12	27.85
20	26.0	15	23.30	19	27.85
27	25.1	23	23.30	25	28.58
Mar. 6	24.3	June 6	24.40	Oct. 3	25.95
14	23.7	July 18	25.50	10	25.40
21	25.6	25	25.30	17	25.25
				Oct. 23	25.90
				31	26.07
				Nov. 7	26.17
				14	25.47
				20	26.26
				21	26.60
				28	30.10
				Dec. 1	23.90
				5	23.80
				12	23.80
				19	23.70
				28	23.70

Spencer 7 (*1016, p. 72). 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 Elbert B. Meier and Raymond J. F. Meier.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 6	10.27	Mar. 10	4.08	Apr. 28	3.11
13	8.35	17	1.89	5	3.87
20	8.32	24	2.88	12	2.61
27	8.65	31	1.84	19	2.21
Feb. 3	8.62	Apr. 7	2.63	26	4.59
10	8.68	14	3.29	June 3	5.89
Mar. 3	3.32	21	2.98	9	5.81
				June 16	3.77
				23	2.61
				30	6.11
				July 8	6.50
				14	6.94
				21	7.15
				28	7.28

Spencer 7--Continued.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Aug. 4	7.42	Sept. 15	8.13	Oct. 27	7.81
11	7.60	22	8.18	Nov. 3	7.87
18	7.67	29	7.32	10	7.66
25	7.82	Oct. 6	6.92	17	6.99
Sept. 1	7.88	13	7.36	24	6.05
8	8.02	20	7.64		
				Dec. 1	5.56
				8	6.11
				14	6.56
				22	6.56
				29	4.23

Spencer 8 (#1016, p. 72). Lincoln State Park. In Lincoln City, in SW $\frac{1}{4}$ 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 Elbert B. Meier and Raymond J. F. Meier.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 6	8.15	Apr. 21	2.25	July 21	3.98
13	7.91	28	2.38	28	3.97
20	7.87	May 5	2.56	Aug. 4	4.18
27	7.85	12	2.28	11	4.23
Feb. 3	7.83	19	2.16	18	4.44
10	7.89	26	2.67	25	4.57
Mar. 3	1.86	June 3	3.02	Sept. 1	4.68
10	2.24	9	3.02	8	4.96
17	1.57	16	2.62	15	5.13
24	2.12	23	3.28	22	5.24
31	1.94	30	3.06	29	5.15
Apr. 7	2.18	July 8	2.95	Oct. 6	5.06
14	2.16	14	3.74		
				Oct. 13	5.12
				20	5.29
				27	5.33
				Nov. 3	5.39
				10	5.35
				17	5.46
				24	5.39
				Dec. 1	5.36
				8	5.37
				14	5.46
				22	5.46
				29	5.13

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). Joe Tomassi. At Bass Lake State Fish Hatchery, about 200 feet north of superintendent's house. Measurements made by Peter Brown and Ernest Warkentien, Bass Lake State Fish Hatchery.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 5	15.17	Apr. 17	15.10	Oct. 30	13.54
18	16.22	May 1	14.90	Nov. 1	13.54
Feb. 1	16.30	17	14.00	8	13.69
16	16.30	June 4	13.00	15	13.71
Mar. 2	16.27	15	13.10	23	13.74
Apr. 2	16.40	July 2	13.14		
				Nov. 29	13.75
				Dec. 7	13.73
				13	13.76
				20	13.90
				27	13.91

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). 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 Peter Brown and Ernest Warkentien, Bass Lake State Fish Hatchery.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 5	4.42	May 1	3.16	Sept. 14	4.60
18	4.20	17	1.67	21	4.70
Feb. 1	4.40	June 4	2.88	27	4.20
16	3.70	15	3.16	Oct. 4	2.80
Mar. 2	3.45	July 2	3.36	11	3.00
19	3.15	Aug. 16	4.10	18	3.30
Apr. 2	2.30	30	4.50	25	3.10
17	2.93	Sept. 6	4.70	Nov. 1	3.26
				Nov. 8	4.04
				15	3.21
				23	3.24
				29	2.77
				Dec. 7	3.04
				13	3.34
				20	3.47
				27	3.27

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). 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. Measurements made by Peter Brown and Ernest Warkentien, Bass Lake State Fish Hatchery.

Starke 3--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	4.19	May 1	3.00	Sept. 14	4.40	Nov. 8	3.28
18	4.10	17	1.50	21	4.50	15	3.05
Feb. 1	4.19	June 4	2.70	27	4.00	23	3.06
16	3.50	15	3.00	Oct. 4	2.60	29	2.60
Mar. 2	2.90	July 2	3.17	11	2.80	Dec. 7	2.88
19	3.15	Aug. 16	4.00	18	3.10	13	3.17
Apr. 2	2.10	30	4.40	25	2.90	20	3.31
17	2.80	Sept. 6	4.50	Nov. 1	3.15	27	3.11

Starke 10. Fred A. White. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 11, T. 32 N., R. 2 W. Former dug well, diameter 1 $\frac{1}{2}$ inches, depth 24.7 feet. Measuring point, top of pipe, 2.50 feet above land-surface datum. First measurement June 23, 1945. Measurements made by Fred A. White.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 23	3.94	July 21	5.16	Aug. 12	5.50	Nov. 3	1.20
30	4.29	28	5.10	26	6.03	17	4.81
July 7	4.80	Aug. 5	5.27	Sept. 1	3.00	Dec. 1	4.90
14	4.84						

Steuben County

Steuben 1 (*817, p. 53; 840, p. 87; 845, p. 83; 886, p. 111; 906, p. 34; 936, p. 40; 944, p. 36; 986, p. 38; 1016, p. 73). 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. Measuring point is 2.00 feet above land-surface datum. Measurements made by R. N. Sprague and R. L. Ridenour, superintendents, Pokagon State Park.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	3.75	July 28	1.80	Sept. 22	3.29	Nov. 24	2.18
Feb. 28	1.90	Aug. 25	2.50	28	3.10	Dec. 1	2.0
Mar. 28	1.10	28	2.50	Oct. 6	1.60	8	2.2
Apr. 28	.65	31	2.70	13	1.90	15	2.2
May 28	.10	Sept. 8	3.00	Nov. 3	2.14	26	2.1
June 28	.70	15	3.18	17	2.12		

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. 38; 1016, p. 74). 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 R. N. Sprague and R. L. Ridenour, superintendents, Pokagon State Park.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	6.40	July 28	4.20	Sept. 22	5.58	Nov. 24	5.00
Feb. 28	5.20	Aug. 25	4.95	28	5.60	Dec. 1	4.92
Mar. 28	3.20	28	5.10	Oct. 6	4.60	8	4.90
Apr. 28	1.50	31	5.05	13	4.68	15	5.00
May 28	.80	Sept. 8	6.11	Nov. 3	4.91	26	4.90
June 28	2.70	15	5.47	17	4.97		

Sullivan County

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

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	13.87	Feb. 11	13.58	Mar. 11	4.67	Apr. 8	1.80
14	13.79	18	13.14	18	4.80	15	.70
21	13.07	25	9.80	25	3.80	22	4.07
28	12.80	Mar. 4	4.4	Apr. 1	2.77	29	4.37

Sullivan 1--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 6	4.77	July 8	7.34	Aug. 30	6.62	Nov. 18	5.41
13	5.84	15	8.38	Oct. 7	5.64	25	3.54
20	4.37	22	8.34	14	6.38	Dec. 2	4.36
27	5.70	29	7.55	21	7.57	9	4.24
June 4	6.32	Aug. 5	8.73	28	8.14	16	5.57
11	4.25	12	9.07	Nov. 4	7.54	23	7.57
17	1.04	16	10.05	11	6.54	30	2.25
24	1.76	23	10.77				

Switzerland County

Switzerland 1 (*1016, p. 74). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	19.80	Apr. 6	4.95	July 5	14.40	Oct. 4	15.85
11	19.10	14	9.75	12	15.55	11	15.90
18	18.60	20	10.45	19	16.15	19	16.70
25	18.20	27	9.15	26	16.90	26	17.20
Feb. 1	17.75	May 4	11.65	Aug. 2	16.45	Nov. 2	17.60
9	17.55	11	13.55	9	16.42	9	17.85
16	16.30	17	11.70	16	17.00	16	17.85
24	10.20	25	10.20	23	17.45	23	13.70
Mar. 2	2.45	31	12.20	31	17.65	29	12.80
8	3.35	June 7	14.40	Sept. 6	17.85	Dec. 6	13.75
15	6.95	15	15.20	12	18.10	14	15.15
22	3.40	22	9.85	20	18.30	22	15.05
30	7.10	28	12.70	27	18.45	27	13.85

Tippecanoe County

Tippecanoe 1 (*840, p. 87; 845, p. 84; 886, p. 111; 906, p. 34; 936, p. 34; 944, p. 37; 986, p. 39; 1016, p. 74). Tippecanoe Township school. In Battle Ground, in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 26, T. 24 N., R. 4 W., in basement of school building. Measurements discontinued June 29, 1945. Measurements made by David Mikels.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 28	45.81	Mar. 30	43.97	May 11	39.99	June 15	45.00
Mar. 9	45.75	Apr. 13	45.30	18	45.50	22	45.08
16	45.90	20	45.35	June 8	44.90	29	45.07
23	43.92	May 4	39.96				

Tippecanoe 4 (*1016, p. 75). 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, 1945

(From recorder charts)												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	15.39	19.79	17.75	8.97	10.76	10.42	11.45	18.52	14.45	....	12.99	13.04
2	15.52	20.07	18.02	3.58	11.11	10.70	10.90	17.00	13.40	6.22	13.07	12.82
3	15.79	20.34	18.02	5.57	11.37	10.88	11.52	15.74	13.40	3.38	13.18	12.87
4	15.78	....	13.47	.10	10.80	10.83	11.50	16.60	13.77	....	13.29	13.06
5	15.80	....	11.57	4.55	....	11.15	11.49	16.92	14.07	2.72	13.30	13.17
6	15.75	....	15.16	.15	11.10	11.34	11.94	12.21	14.73	3.92	13.33	13.25
7	15.75	....	15.49	1.57	11.23	11.70	12.18	12.35	14.42	5.72	13.42	13.38
8	15.67	....	13.04	3.62	11.44	11.86	12.47	12.72	14.80	....	13.52	13.50
9	15.78	....	10.30	....	11.50	12.09	12.61	18.73	14.55	7.85	13.53	13.50

Tippecanoe 4--Continued.

Water level at 2 a.m., in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
10	15.88	16.66	7.03	6.44	11.50	12.10	12.73	18.26	14.53	8.61	13.46	13.51
11	15.90	15.92	8.03	7.50	11.54	11.89	12.96	18.43	14.80	9.20	13.28	13.70
12	15.88	15.72	8.83	8.36	11.54	12.02	13.45	13.84	14.67	9.70	13.25	13.87
13	15.70	19.60	14.05	8.99	11.49	11.94	13.70	13.78	14.70	10.25	13.36	13.63
14	15.68	16.66	14.61	9.49	11.50	10.89	13.25	13.86	.....	10.70	13.29	12.82
15	15.66	19.60	15.55	9.65	11.54	10.48	13.40	13.31	14.95	11.01	13.02	12.62
16	15.70	15.87	16.20	9.99	9.50	10.56	13.40	13.15	14.95	11.35	13.08	12.73
17	15.80	19.02	15.81	10.30	....	10.00	13.40	13.42	14.95	11.59	13.09	12.92
18	15.86	13.40	12.19	10.38	.46	.....	13.40	13.53	15.00	11.85	13.10	13.04
19	15.79	.....	12.13	10.48	+1.00	7.71	13.55	13.76	15.05	12.00	13.06	13.20
20	.....	17.70	16.98	10.39	+23	.....	17.72	13.78	15.12	12.21	13.50	13.80
21	.....	14.20	16.34	16.55	1.21	5.41	15.05	13.79	15.15	12.40	13.20	13.44
22	.....	17.24	14.79	11.50	3.08	5.51	14.10	14.13	.....	12.40	13.00	14.11
23	.....	13.33	14.18	11.51	4.80	6.52	14.16	14.15	.....	12.09	13.04	14.09
24	.....	16.45	14.62	11.67	5.98	7.80	14.15	14.23	.....	12.11	13.18	13.74
25	.....	12.32	10.20	11.87	6.92	8.75	16.00	14.50	14.40	12.61	13.18	.....
26	.....	12.50	10.59	12.00	7.60	9.29	18.60	14.58	13.51	12.78	13.18	.....
27	15.82	12.54	15.65	11.25	8.30	10.03	19.20	14.60	12.70	12.59	13.26	12.29
28	15.88	17.50	15.66	10.50	8.73	14.65	18.88	14.75	12.94	12.60	13.55	11.87
29	15.82	.....	16.56	10.08	9.30	18.55	14.37	15.15	12.70	12.55	13.30	11.03
30	15.82	.....	17.12	10.40	9.70	17.90	14.03	15.08	.....	12.73	13.20	9.37
31	20.08	.....	12.90	.....	10.13	.....	13.99	15.10	.....	12.88	.....	5.06

a Estimated.

Tippecanoe 5 (*1016, p. 75). Fairfield Manufacturing Co. In Lafayette, in main building, Earl Ave. and Wallace St. Equipped with automatic water-stage recorder. Recorder removed Nov. 28, 1945. Measurements made by personnel of Fairfield Manufacturing Co., C. C. Crook, chief engineer.

Water level at 2 a.m., in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	88.27	88.93	.....	.....	89.04	88.87	.....	89.12	88.56	88.75	.....	.....
2	89.04	88.82	.....	.....	88.88	88.82	.....	89.05	88.64	88.91	88.62	.....
3	88.83	88.66	.....	89.20	88.67	89.08	89.13	89.09	88.67	89.19	88.97	88.90
4	88.93	88.42	.....	88.81	88.88	89.14	88.74	88.91	.....	89.12	89.03	.....
5	88.94	88.57	.....	89.18	89.03	89.17	88.64	88.83	88.62	88.95	88.67	.....
6	88.79	88.69	88.61	89.34	88.93	89.11	88.97	88.57	88.67	88.88	88.83	.....
7	88.55	88.62	89.10	89.10	88.85	89.06	89.00	88.76	88.71	88.87	88.85	.....
8	88.45	88.45	89.18	88.90	88.99	88.95	.....	88.93	88.70	88.74	88.83	.....
9	88.98	88.64	89.04	88.74	89.26	88.89	.....	89.00	88.62	89.10	88.88	.....
10	88.92	88.68	88.85	88.93	88.88	88.76	89.02	88.87	88.61	89.06	89.29	.....
11	88.47	88.84	88.82	88.89	89.13	88.85	89.25	88.80	.....	89.00	89.00	.....
12	88.78	88.67	88.63	88.84	88.83	89.10	89.20	88.75	.....	88.93	88.66	.....
13	88.48	88.60	88.93	88.82	88.82	88.96	89.10	88.80	.....	89.16	88.45	.....
14	88.48	88.83	88.73	89.01	88.85	89.04	89.08	88.79	.....	89.09	88.89	.....
15	.....	88.82	88.72	88.96	88.92	89.07	89.08	88.77	.....	88.99	89.02	.....
16	89.06	89.01	88.71	88.59	89.02	89.00	89.15	88.74	.....	88.97	88.88	.....
17	89.10	89.03	88.85	88.50	88.92	89.07	89.18	88.61	.....	88.93	88.59	.....
18	88.91	88.97	89.07	89.06	89.13	88.92	89.12	88.68	88.95	88.95	88.87	.....
19	88.72	89.02	88.71	89.13	89.29	89.01	89.11	88.77	89.07	88.97	88.71	.....
20	88.88	88.79	88.75	88.86	88.98	88.99	89.08	88.76	88.92	89.09	.....	.....
21	88.75	88.63	88.81	88.72	88.74	88.94	89.05	88.71	89.12	88.97	.....	.....
22	88.48	.....	89.14	89.06	88.80	88.10	88.96	88.74	89.19	88.72	.....	.....
23	88.77	.....	88.86	88.70	89.31	89.07	88.87	88.76	88.98	89.11	.....	.....
24	88.66	.....	88.85	88.61	89.24	88.95	88.98	88.66	88.91	89.10	.....	.....
25	88.93	.....	88.89	88.75	89.02	88.85	89.01	88.58	89.01	88.85	.....	.....
26	88.80	.....	88.71	88.71	88.92	89.05	89.11	88.79	89.17	88.87	.....	.....
27	.....	88.87	89.01	89.26	89.00	89.04	89.10	88.65	89.04	89.06	88.88	.....
28	.....	88.90	89.00	89.14	88.80	88.99	89.01	88.68	89.01	88.90	88.89	.....
29	.....	.....	89.12	88.93	89.06	89.03	89.01	88.73	89.16	88.85	.....	.....
30	88.87	.....	89.18	88.95	89.09	.....	89.14	88.80	89.22	88.91	.....	.....
31	88.83	.....	.....	.....	89.03	.....	89.25	88.80	.....	88.55	.....	.....

a Tape measurement.

Tippecanoe 7. State of Indiana, Purdue University. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 13, T. 23 N., R. 5 W., at research housing pumphouse. Abandoned drilled well, diameter 8 inches, depth 206.5 feet. Measuring point, top of lower floor of recorder shelter, 0.80 foot above land-surface datum. First measurement Aug. 10, 1945. Automatic water-stage recorder installed Aug. 10, 1945. Measurements made by Wilbur C. Killin.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 10	165.46	Oct. 5	165.82	Nov. 9	165.71	Dec. 7	165.47
17	165.62	12	165.75	16	165.37	14	165.55
24	165.62	19	165.69	23	165.54	21	165.58
Sept. 14	165.70	26	165.69	30	165.58	29	165.37
21	165.95	Nov. 6	165.49				

Tippecanoe 8. West Lafayette Water Co. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 17, T. 23 N., R. 4 W., at West Lafayette waterworks. Abandoned drilled well, diameter 12 inches, depth 57.9 feet. Measuring point, top of 12-inch coupling at top of casing, 7.0 feet above land-surface datum. First measurement Nov. 28, 1945. 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, 1945 (From recorder charts)							
Nov. 29	10.87	Dec. 9	11.12	Dec. 17	11.20	Dec. 25	11.26
30	10.91	10	11.15	18	11.19	26	11.24
Dec. 1	10.94	11	11.18	19	11.19	27	11.20
2	10.96	12	11.21	20	11.20	28	11.15
3	10.98	13	11.23	21	11.22	29	11.07
4	11.00	14	11.25	22	11.24	30	10.91
5	11.02	15	11.23	23	11.25	31	10.51
8	11.10	16	11.21	24	11.26		

Tipton County

Tipton 1. William B. Richardson. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 28, T. 22 N., R. 4 E. Unused dug well, diameter 42 inches, depth 20.2 feet. Measuring point, top course of brick at west side, 1.0 foot above land-surface datum. First measurement Mar. 27, 1945. Measurements made by William B. Richardson.

Water level, in feet below land-surface datum, 1945							
Mar. 27	1.91	June 11	1.90	Aug. 19	3.15	Oct. 28	2.00
Apr. 1	.88	17	+0.05	25	3.50	Nov. 4	2.10
9	1.75	24	1.85	Sept. 3	4.20	11	1.90
16	2.37	July 1	.15	9	4.40	18	1.70
23	1.90	8	1.95	16	4.60	25	2.00
29	1.70	15	2.00	23	5.40	Dec. 2	1.90
May 6	1.85	22	3.00	30	1.50	9	1.90
14	1.95	30	3.20	Oct. 8	1.90	17	2.00
20	.80	Aug. 6	2.50	15	2.00	24	1.80
27	1.84	12	2.70	21	1.55	31	.20
June 2	2.10						

Union County

Union 1. Town of College Corner. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 36, T. 10 N., R. 1 W. "Old Fire Well". Dug well, diameter 9 feet, depth 15 feet. Measuring point, top course of stone at southwest side, at land-surface datum. First measurement July 11, 1945. Measurements made by Elmer Reister, Superintendent, Water Works.

Water level, in feet below land-surface datum, 1945							
July 11	8.58	Aug. 23	8.60	Sept. 20	8.66	Oct. 17	8.65
Aug. 2	8.54	30	8.63	27	8.64	Nov. 1	8.65
9	8.56	Sept. 6	8.65	Oct. 4	8.65	Dec. 29	8.53

Vigo County

Vigo 3. Owner unknown. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 29, T. 12 N., R. 8 W. Dug well, diameter 36 inches, depth 18.2 feet. Measuring point, north edge of concrete pump base, 0.50 foot above land-surface datum. First measurement June 15, 1945. Measurements made by Robert May.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 15	1.15	Aug. 10	3.15	Sept. 28	5.67	Nov. 16	1.93
22	1.40	17	2.94	Oct. 4	1.84	23	.94
29	2.75	24	3.91	12	3.27	30	1.25
July 6	3.30	31	4.35	19	3.75	Dec. 7	2.04
13	3.90	Sept. 7	5.05	26	3.50	14	3.15
20	3.71	14	5.24	Nov. 2	2.30	22	3.40
27	4.10	21	5.35	9	1.60	28	1.07
Aug. 3	2.80						

Wabash County

Wabash 2. Mrs. Robert S. Gearhart. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 25, T. 27 N., R. 6 E. Dug well, diameter 36 inches, depth 19.5 feet. Measuring point, edge of board across top at north side, at land-surface datum. First measurement June 1, 1945. Measurements made by Robert S. Gearhart.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 1	4.11	July 27	8.56	Sept. 21	10.31	Nov. 9	8.05
8	3.80	Aug. 3	8.35	27	10.38	16	8.04
15	4.69	10	8.42	Oct. 5	9.20	30	7.89
22	4.81	17	8.81	12	8.10	Dec. 6	7.80
29	5.26	23	9.34	19	8.10	14	7.67
July 6	6.18	31	10.70	26	8.10	20	7.65
13	6.65	Sept. 7	10.03	Nov. 2	7.70	27	7.34
20	7.39	14	10.14				

Warren County

Warren 1 (*1016, p. 76). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	16.29	Apr. 7	6.65	July 7	11.83	Oct. 6	6.94
13	15.80	14	7.28	14	13.72	13	9.03
20	17.15	21	7.76	21	14.66	20	11.47
27	17.32	28	7.73	28	15.18	27	11.69
Feb. 3	17.72	May 5	8.46	Aug. 4	13.05	Nov. 3	12.62
10	18.24	12	10.59	11	13.94	10	11.79
17	16.88	19	6.48	18	11.65	17	9.75
24	14.06	26	7.92	25	12.72	24	8.29
Mar. 3	12.99	June 2	11.02	Sept. 1	14.28	Dec. 1	9.45
10	10.46	9	12.45	8	14.29	8	10.29
17	10.65	16	7.63	15	15.37	15	11.25
24	10.02	23	7.72	22	15.48	22	12.14
31	6.45	30	10.84	29	8.55	29	10.02

Warrick County

Warrick 1 (*840, p. 88; 886, p. 112; 906, p. 35; 936, p. 41; 944, p. 37; 986, p. 39; 1016, p. 76). Sunlight Stripper Co. On east side of railroad tracks, about 0.7 mile north of Boonville, along Folsomville Road and about 0.1 mile east of road north of Scales Lake State Forest. Measurements discontinued Oct. 13, 1945. Measurements made by Shelby McLemore, Scales Lake State Forest.

Warrick 1--Continued.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 17	19.20	May 23	19.32	July 17	19.20
27	19.10	25	19.20	30	19.15
Feb. 10	19.20	June 11	19.15	Aug. 10	19.15
28	19.90	20	19.15	22	19.20
Mar. 16	19.10	July 2	19.20	29	19.10
Apr. 4	19.90	10	19.25		
				Sept. 3	19.09
				10	19.90
				21	19.10
				28	19.90
				Oct. 12	19.10

Warrick 2 (*1016, p. 77). 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 Shelby McLemore, Scales Lake State Forest.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 17	11.00	May 23	4.02	Aug. 10	15.00
Feb. 10	11.00	June 11	13.00	22	13.00
28	11.00	20	11.00	29	13.00
Mar. 16	(a)	July 2	11.00	Sept. 3	12.00
Apr. 4	(a)	30	13.00	10	13.00
				Sept. 21	13.00
				28	12.00
				Oct. 12	11.00
				Nov. 2	6.00
				Dec. 24	(a)

a Overflow.

Washington County

Washington 1 (*1016, p. 77). Ford Smith. In Salem, in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 7, T. 2 N., R. 4 E., on west side of county road, about 0.4 mile north of north corporation line. Measurements discontinued Aug. 18, 1945; well put back in service. Measurements made by Ray Stanley.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 4	11.88	Feb. 23	11.70	Apr. 27	12.52
12	12.06	Mar. 3	(a)	4	12.52
18	11.90	16	11.58	12	11.66
26	11.98	23	7.56	18	10.52
Feb. 2	12.10	30	11.59	25	12.53
10	11.80	Apr. 13	11.52	June 1	12.54
17	11.90	20	10.56	15	11.54
				July 6	12.52
				13	12.54
				20	12.54
				Aug. 9	12.04
				18	12.54

a Full.

Wayne County

Wayne 1. C. E. Rodenberg. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 25, T. 16 N., R. 12 E. Dug well, diameter 42 inches, depth 32.8 feet. Measuring point, edge of flagstone at west side of well opening, 0.1 foot above land-surface datum. First measurement July 11, 1945. Measurements made by Marshall B. Rodenberg.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
July 11	28.05	Sept. 3	29.84	Oct. 15	29.69
Aug. 2	28.54	10	29.46	22	29.80
6	28.61	17	29.69	29	29.88
13	28.80	24	29.78	Nov. 5	29.97
20	28.97	Oct. 1	29.68	13	30.07
27	29.17	8	29.59	19	30.15
				Nov. 26	30.23
				Dec. 3	30.22
				10	30.36
				18	30.44
				26	30.47

White County

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

White 1--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	19.47	May 15	12.20	Sept. 10	16.88	Nov. 12	13.29
15	19.40	June 1	11.09	17	16.90	19	12.73
Feb. 6	20.17	15	11.74	24	14.96	26	12.85
15	20.16	July 1	12.74	Oct. 1	13.27	Dec. 3	12.86
Mar. 1	18.25	Aug. 6	13.82	8	12.68	10	13.70
15	14.52	13	14.66	15	11.80	17	13.70
Apr. 1	11.61	20	14.58	22	12.22	24	15.96
16	13.23	27	16.24	29	12.77	31	13.39
May 1	12.17	Sept. 3	17.16	Nov. 5	12.72		

MAINE

By H. N. Halberg

PROGRAM OF WORK

The program of periodic measurements of water level was continued in 1945 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 a total of 244 measurements was made during the year.

FLUCTUATIONS OF WATER LEVEL

The water level in the wells in Maine, particularly those in the northern part of the State, usually shows a definite seasonal pattern which is different from that found in southern New England. The water level falls steadily during the winter, when the ground is frozen and snow covered, with no recharge of the ground-water reservoir until late March or early April, when the snow melts and the water level rises sharply to a high level in one or two weeks. This year, there was unseasonal recharge during the early part of January as the result of warm weather and some precipitation. After this rise there was a steady drop in water level during the rest of the winter. The spring recharge occurred in the wells at Mercer, Portage, and Sherman Mills (U. S. 102, 103, and 105, respectively) during the middle of March as the result of high temperatures and some precipitation. This effect is shown to a lesser degree in the well at Amherst, where some recharge occurred in February as the result of warm weather and rain. This well is near the seacoast.

This relationship is shown in figure 5, by comparing water levels in the well at Portage and in the well at Wilmington, in the northeastern part of Massachusetts. In 1945, recharge occurred in the former well in the middle of March and in the latter well recharge began toward the end of February. The end of the growing season in Maine was indicated by the rise

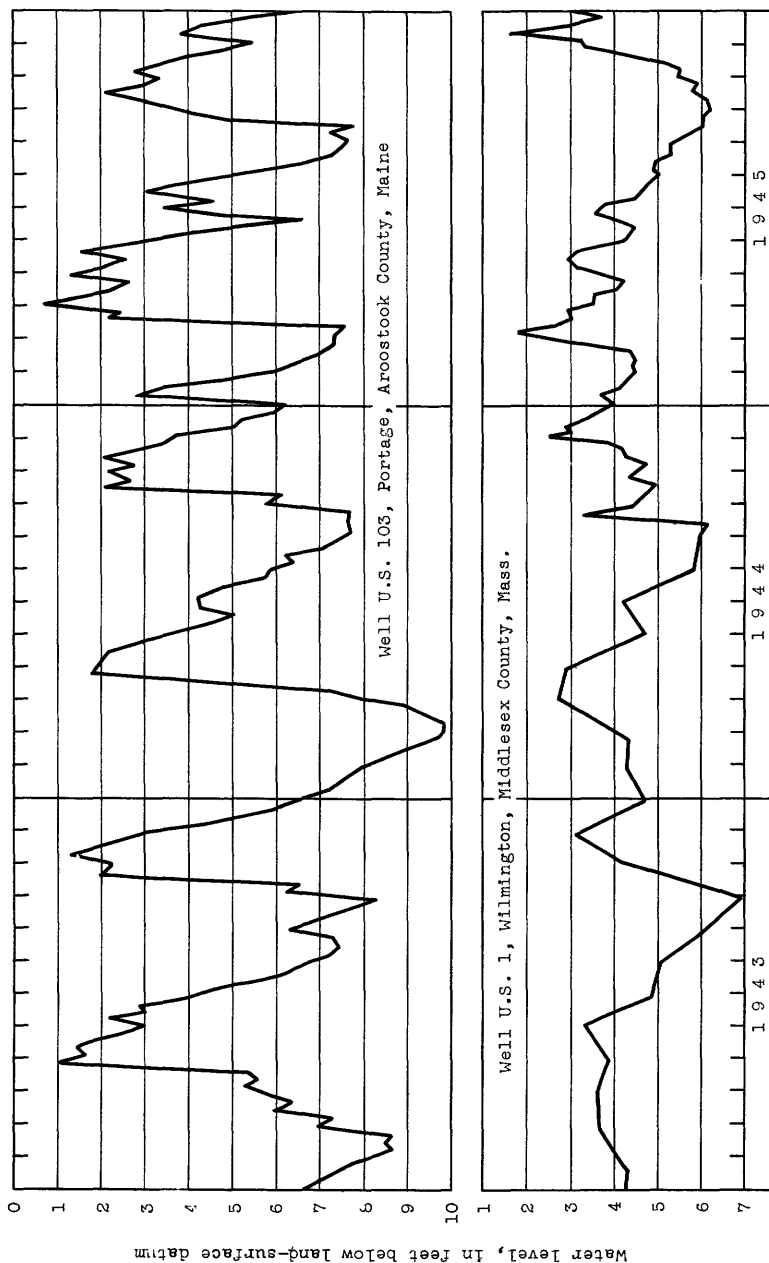


Figure 5.--Graphs showing fluctuations of water level in wells U.S.103, Portage, Me., and U.S.1, Wilmington, Mass.

of the water level during the latter part of September. In the well at Wilmington, Massachusetts, recharge did not begin until November, which was aided by above-normal precipitation. In September 1944 the abrupt rise in water level at Wilmington was caused by heavy precipitation during a hurricane.

The wells in southern Maine show this seasonal pattern to a limited extent. Occasionally there is some recharge of the ground-water reservoir in December. The records of the wells at Mercer and Amherst (U. S. 102 and 158) indicate that the spring recharge may begin in February and be completed either in March or April.

Precipitation for the State as a whole during 1945 was 46.15 inches or about 5.9 inches greater than normal, and about 7.8 inches more than in 1944. Normal for the State is 40.26 inches. Precipitation was above normal for the year at 31 of 33 stations, as compared with 12 of 29 in 1944. During March and August rainfall was low. During January, April, May, and November it was well above normal and was excessive in May. Precipitation for the remainder of the year was close to normal.

In general, the water level in the observation wells in Maine reflects changes in precipitation and temperature. All the wells show quite clearly the effect of the unseasonably warm weather in March, which melted much of the snow cover raising the water level abruptly. The decline in the water level in these wells starting in May was due to the needs of plants although precipitation in May was much greater than normal, being above 7 inches at several stations. The rise in September in the northern part of the State was due to above-normal precipitation and the end of the growing season.

Water levels were in general at high levels for the time of year at the end of January, March through July inclusive, and at the end of November.

The water level in the well at Amherst was at its highest level for the period of record on January 1, 1945. At Portage the highest water level of record occurred on April 1, and at Cornish and Mercer, in May.

At the end of the year the water level in the well at Mercer was at a high level for December and at Portage it was at a low December level.

There was a net decrease in ground-water storage at three of the wells as indicated by the net drop in water level in the wells at Amherst, Cornish, and Portage, and a net increase at Mercer and Sherman Mills.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Aroostook County

US 103 (*986, p. 43; 1016, p. 80). H. L. Stevens. Portage 1.
On west side of State Route 11, about 1.0 mile north of Portage Lake post office, Portage Lake.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	2.76	Apr. 8	1.67	July 8	4.53	Oct. 7	3.10
14	3.51	15	2.18	15	2.99	14	2.15
21	4.74	22	2.62	22	3.67	21	2.85
28	5.63	29	1.24	29	4.58	28	3.31
Feb. 4	6.23	May 5	2.02	Aug. 5	5.70	Nov. 4	2.71
11	6.65	13	2.50	12	6.66	11	3.26
18	7.11	20	1.53	19	7.31	18	3.89
25	7.34	27	2.65	26	7.56	25	4.74
Mar. 4	7.34	June 3	3.47	Sept. 2	7.65	Dec. 2	5.49
11	7.60	10	4.68	9	7.28	9	3.84
18	2.20	17	5.49	16	7.83	16	4.28
25	2.41	24	4.79	22	4.73	23	5.33
Apr. 1	.68	July 1	3.47	30	3.67	30	6.42

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

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

Jan. 10	2.95	Apr. 10	0.75	July 6	12.58	Oct. 13	14.75
19	4.55	19	1.10	14	13.20	20	4.85
26	8.20	27	1.30	17	6.45	24	6.35
31	10.15	30	1.00	25	8.90	31	8.40
Feb. 8	12.10	May 9	1.78	31	10.40	Nov. 10	2.20
15	13.00	18	.80	Aug. 24	13.55	17	3.35
22	13.40	24	1.22	31	13.87	24	4.35
28	13.10	31	2.65	Sept. 7	14.20	30	6.43
Mar. 9	13.00	June 7	3.70	14	14.50	Dec. 7	9.25
16	12.90	15	9.60	21	13.30	15	7.25
23	1.10	21	10.92	26	13.70	19	8.90
31	.70	30	11.75	30	13.05	27	10.25
Apr. 6	.75						

Hancock County

US 158 (*986, p. 43; 1016, p. 80). George C. Orcutt. Amherst 1.
On south side of State Route 9, about 0.3 mile west of junction with State Route 181, in Amherst. Depth 14.0 feet below land-surface datum.

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

Jan. 1	3.40	Apr. 8	4.25	July 8	7.42	Oct. 7	12.13
7	5.46	15	4.92	15	8.09	14	10.74
14	6.09	22	5.14	22	8.42	21	10.30
21	6.52	29	4.97	29	9.06	28	10.08
28	6.80	May 6	4.97	Aug. 5	9.57	Nov. 4	9.58
Feb. 4	7.44	13	4.55	12	10.13	11	8.43
11	7.73	21	4.00	19	10.68	18	7.50
18	7.64	27	5.09	26	11.11	25	4.40
25	6.41	June 3	5.63	Sept. 5	11.78	Dec. 2	5.20
Mar. 4	6.32	10	6.27	9	11.70	9	5.16
11	6.25	17	6.73	16	12.43	16	5.55
18	4.06	24	6.86	26	12.73	23	6.16
25	4.92	July 3	7.03	30	12.87	30	5.87
Apr. 1	4.68						

Somerset County

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

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	6.20	Apr. 8	4.89	July 8	6.69	Oct. 8	8.73
14	6.02	15	5.33	14	7.02	16	6.83
21	6.17	22	5.37	22	7.10	21	6.29
28	6.26	29	4.76	29	7.36	30	6.13
Feb. 4	6.37	May 6	4.95	Aug. 3	7.60	Nov. 4	6.00
11	6.46	13	4.45	13	7.86	11	5.63
18	6.40	20	4.77	19	8.14	18	5.82
25	6.44	27	5.50	26	8.45	25	5.06
Mar. 3	6.33	June 3	5.11	Sept. 2	8.65	Dec. 2	5.45
11	6.31	9	5.82	9	8.82	9	4.82
18	5.15	17	6.21	16	9.19	16	4.88
26	4.68	26	6.16	23	9.37	22	5.80
Apr. 1	4.49	July 2	6.33	Oct. 2	9.36	30	5.64

York County

U.S. 159 (*986, p. 44; 1016, p. 81). J. P. Small. Cornish l. On south side of Main Street, about 0.2 mile west of Little River crossing, Cornish.

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

Jan. 5	9.82	June 24	11.01	Sept. 2	14.35	Nov. 6	13.20
Feb. 26	14.57	30	9.05	9	14.45	11	13.68
Apr. 29	8.60	July 15	11.94	16	14.50	18	14.02
May 6	8.10	22	12.48	23	15.05	25	8.98
13	8.97	29	12.48	Oct. 1	15.20	Dec. 2	10.25
20	8.95	Aug. 4	13.89	6	15.10	9	9.97
27	8.98	12	13.94	13	15.05	16	9.98
June 3	10.25	19	14.05	20	11.05	23	10.90
10	11.01	26	14.10	24	12.60	30	11.08
17	11.60						

MASSACHUSETTS

By H. N. Halberg

PROGRAM OF WORK

Investigations of the ground-water resources of Massachusetts begun in 1938, were continued in 1945 in cooperation with the Massachusetts Department of Public Works. Periodic observations were continued in 33 wells in the Lowell and the Aberjona Valley areas, and in the vicinity of Cambridge, Middlesex County, 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 the two wells in Worcester County, at Leominster and Winchendon, on three wells in Middlesex County, on one at Wilmington, and on two in Cambridge through October. Water-level measurements were made weekly in three of the wells in Woburn and one well in Arlington through October, and monthly thereafter. Readings in three of the wells in Lowell and four in Woburn were discontinued at the end of the year.

Quantitative ground-water studies in the vicinity of Fresh Pond, in Cambridge, were begun in 1944 in cooperation with the Massachusetts Department of Public Works. As part of this project water-level measurements were made weekly through October, and monthly thereafter in 20 wells drilled by the Massachusetts Department of Public Health. Water-stage recorders were operated on two of these wells and on Fresh Pond through October. These water-level data are to be published in another report. In the meantime, the records are available in the office of the Geological Survey at Jamaica, New York, and at Boston, Massachusetts. Records for three of these wells, Arlington 174, Cambridge 667, and Cambridge 798 are included in this report, which presents a total of about 2,300 observations of water levels.

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, 1945
		Water level	Date	Water level	Date	
Arlington 174	July 29, 1944	13.76	Sept. 11, 1944	5.82	Mar. 12, 1944	7.51
Brimfield 12	Feb. 6, 1936 (a)		(a)	7.32	June 7, 1943	11.77
Cambridge 667	Oct. 30, 1944	22.40	Oct. 30, 1944	5.71	May 18, 1945	8.09
Cambridge 798	Aug. 7, 1944	16.72	Sept. 11, 1944	.93	May 18, 1945	3.24
Chelmsford 68	July 27, 1939	10.58	Oct. 4, 1941	5.69	Apr. 23, 1940	7.91
Chelmsford 69	Aug. 22, 1939	6.05	Aug. 23, 1941	.11	Feb. 24, 1943	.67
Great Bar-						
ington 1	Mar. 4, 1936	22.14	Oct. 11, 1942	15.51	Aug. 1, 1945	19.25
Leominster 11	July 13, 1939	9.21	Oct. 31, 1939	.81	May 22, 1943	1.80
Lowell 4	May 26, 1939	12.18	Oct. 5, 1941	7.56	May 7, 1940	9.40
Lowell 14	May 29, 1939	22.46	Nov. 7, 1939	9.87	May 7, 1940	11.35
Lowell 26	Aug. 9, 1939	12.65	Oct. 18, 1941	1.97	Apr. 2, 1940	9.82
				May 7, 1940		
Lowell 33	May 29, 1939	11.33	Oct. 4, 1941	6.29	Mar. 1, 1945	6.63
Lowell 41	Aug. 22, 1939	20.74	Oct. 17, 1942	4.66	Feb. 15, 1941	14.51
Lowell 43	May 28, 1940	19.97	Dec. 28, 1945	10.62	June 4, 1940	19.97
Montague 5	Jan. 16, 1936 (b)	5.10	Aug. 30, 1944	.78	Apr. 27, 1944	3.52
Reading 1	Aug. 25, 1939		Dec. 26, 1941	13.73	Apr. 30, 1940	16.54
Reading 3	June 20, 1940	5.63	Nov. 1, 1941	1.14	Nov. 30, 1944	1.49
Topsfield 13	Feb. 8, 1936 (c)	17.48	Dec. 6, 1939	7.20	Apr. 22, 1939	9.49
Wilmington 10	July 18, 1940		Dec. 13, 1941	.73	Nov. 30, 1944	1.23
Wilmington 29	July 24, 1940	11.70	Sept. 27, 1941	8.40	Mar. 28, 1942	9.62
Wilmington 44	July 26, 1940	7.61	Oct. 11, 1941	.86	Dec. 7, 1945	2.81
Wilmington 56	Aug. 12, 1940	7.97	Oct. 4, 1941	2.06	Mar. 1, 1945	2.70
Wilmington 58	July 27, 1940	12.65	Nov. 1, 1941	2.77	Mar. 23, 1942	5.20
Winchendon 13	July 18, 1939	12.75	Nov. 27, 1939	2.18	Apr. 26, 1944	5.27
Winchester 4	Aug. 22, 1939 (d)		Dec. 27, 1941	7.45	May 7, 1940	8.28
Winchester 14	June 13, 1940	14.99	Dec. 14, 1941	5.62	Mar. 23, 1942	8.36
Winchester 18	July 15, 1940 (e)		(e)	1.15	Mar. 23, 1942	3.77
Woburn 1	Aug. 14, 1939	9.73	Sept. 29, 1943	4.47	Nov. 30, 1944	5.77
Woburn 3	Aug. 18, 1939	2.41	Aug. 16, 1941 f	.71	Mar. 23, 1942 f	.59
Woburn 4	Sept. 12, 1939	2.57	Sept. 26, 1939 f	.01	Nov. 30, 1944	.70
Woburn 5	Sept. 12, 1939	1.00	Sept. 19, 1939 f	.22	Dec. 24, 1942 f	.19
Woburn 17	July 15, 1940 (g)		Dec. 26, 1941	4.13	Nov. 30, 1944	4.80
Woburn 19	June 20, 1940	14.85	Oct. 18, 1941	4.84	Dec. 28, 1945	4.84
Woburn 21	June 21, 1940	9.69	Oct. 25, 1941	5.76	Mar. 12, 1945	6.04
Woburn 23	July 15, 1940	3.10	Sept. 27, 1941	.53	Mar. 1, 1945	.72
Woburn 36	June 28, 1940	4.01	Sept. 29, 1944	1.77	May 10, 1941	3.09
Woburn 38	June 28, 1940	18.15	Dec. 14, 1941	7.62	Mar. 2, 1945	8.26
Woburn 49	July 10, 1940	4.25	Dec. 5, 1941 f	1.59	Feb. 8, 1941 f	1.35
Woburn 53	July 13, 1940	10.69	Sept. 27, 1941	7.93	Mar. 23, 1942	8.35

a Well dry Nov. 6, Dec. 4, 1944. Water level below 16.3 feet below land-surface datum.

b Well dry. Water level below 21.9 feet below land-surface datum.

c Well dry. Water level below 9.0 feet below land-surface datum.

d Well dry. Water level below 22.6 feet below land-surface datum.

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

f Above land-surface datum.

g Well dry. Water level below 12.0 feet below land-surface datum.

Net change, in feet, in water levels, in observation wells in
Massachusetts, 1945

Well	Net change	Well	Net change	Well	Net change
Arlington 174	+2.56	Lowell 43	-0.10	Winchester 18	+3.18
Cambridge 667	+7.14	Montague 5	+1.02	Woburn 1	+1.31
Cambridge 798	+6.99	Reading 1	+ .83	Woburn 3	+ .60
Chelmsford 68	+ .69	Reading 3	+ .34	Woburn 4	+ .32
Chelmsford 69	+ .97	Topsfield 13	+4.41	Woburn 5	+ .35
Great Bar- rington 1	+2.22	Wilmington 10	+ .82	Woburn 17	+ .25
Leominster 11	+1.48	Wilmington 29	+ .31	Woburn 19	+1.00
Lowell 4	+ .67	Wilmington 44	+1.16	Woburn 21	+ .71
Lowell 14	+1.26	Wilmington 56	+1.44	Woburn 23	+ .38
Lowell 26	+ .94	Wilmington 58	+1.56	Woburn 36	+ .38
Lowell 33	+1.05	Winchendon 13	+1.39	Woburn 38	+ .94
Lowell 41	+ .65	Winchester 4	+4.06	Woburn 49	+ .38
		Winchester 14	+1.34	Woburn 53	+ .32

As indicated in the preceding table, there was a net rise in water level during 1945 in all but one of the observation wells, as the result of heavy precipitation, particularly during November and December.

Precipitation for the State as a whole during 1945 was 50.30 inches or about 8.9 inches more than in 1944 and about 7.2 inches greater than normal. The precipitation at Boston during the year was 47.30 inches, or 10.23 inches more than in 1944 and about 8.8 inches greater than the average for the preceding 10 years.

At the end of 1944 the water table was high in the eastern part of the State and below normal in the western part. The water levels in eastern Massachusetts were above normal throughout 1945. In the central part of the State they were above normal except at the end of April, and in the western part of the State they were above except at the end of April, and just below normal at the end of December. At the end of February the water level in many of the wells in eastern Massachusetts was at a new monthly high for the period of record as the result of above-normal precipitation and melting snow. Throughout the State the seasonal drop in May due to the beginning of the growing season was checked as the result of heavy precipitation during that month, many of the wells showing rises. Thereafter the seasonal decline, due to the needs of plants, set in and continued through October. As the result of excessive rains in June the water level dropped but slightly. In the eastern part of the State rainfall was again high in July so that water levels reached new highs for that time of year at the end of the month and at the end of August. Heavy precipitation during November and December raised water levels to high stages in the eastern and central parts of the State and to just below-normal levels in the western part.

At the end of February four wells in Middlesex County reached new highs for the period of record, as did one during March. The water level in the well at Great Barrington reached a new high for the period of record on August 1 as the result of excessive precipitation, which amounted to 11.73 inches during July at nearby Stockbridge. The water level in two other wells, both in Middlesex County, reached new highs at the end of the year.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Berkshire County

Great Barrington 1 (*944, p. 41; *986, p. 48; 1016, p. 86).. 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, 1939-41, 1945

Date	Water level	Date	Water level	Date	Water level
Sept. 21, 1939	a 20.91	May 19, 1941	a 21.11	Aug. 1, 1945	15.51
Dec. 10	a 20.56	Jan. 3, 1945	20.34	Sept. 10	18.25
May 20, 1940	a 18.34	Feb. 3	21.12	Oct. 4	19.34
July 16	a 18.90	Mar. 3	20.47	Nov. 9	20.21
Oct. 23	a 20.80	28	18.97	27	19.88
Feb. 4, 1941	a 20.26	Apr. 18	19.29	Dec. 20	19.09
Mar. 10	a 20.23	May 27	17.55	31	19.25
Apr. 5	a 20.26	June 29	18.77		

a Not previously published.

Essex County

Topsfield 13 (*944, p. 41; *986, p. 48; 1016, p. 86). 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. Land surface datum is 132.95 feet above mean sea level (revised).

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 12	9.32	May 2	11.08	Sept. 13	13.74	Nov. 13	15.15
Feb. 1	10.83	June 7	11.32	Oct. 2	14.43	30	14.10
Mar. 1	7.55	July 2	10.13	10	14.65	Dec. 31	9.49
Apr. 9	9.83	Aug. 6	12.44				

Correction: On July 1, 1936, water level was 13.87 feet below land-surface datum; previously published as 12.87.

Water level Nov. 3, 1942, 15.66; previously published as Nov. 5, 1942.

Franklin County

Montague 5 (*944, p. 41; *986, p. 49; 1016, p. 86). 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, 1939, 1945

Date	Water level	Date	Water level	Date	Water level
July 30, 1939	a 3.14	Mar. 25, 1945	2.12	Aug. 13, 1945	3.34
Nov. 17	a 3.51	Apr. 20	2.60	Sept. 1	3.93
Jan. 10, 1945	4.53	May 28	1.50	Dec. 5	3.78
Feb. 5	4.96	June 30	1.80	30	3.52
Mar. 7	2.47	July 29	1.99		

a Not previously published.

Hampden County

Brimfield 12 (*944, p. 42; *986, p. 49; 1016, p. 86). U. S. 95.
Q. Q. 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, 1939-41, 1945

Date	Water level	Date	Water level	Date	Water level
Dec. 8, 1939	a 15.37	Apr. 4, 1941	a 14.69	June 26, 1945	8.25
Jan. 29, 1940	a 14.54	May 16	a 15.26	Aug. 1	10.33
Feb. 16	a 15.08	Jan. 5, 1945	14.21	Sept. 1	11.48
Apr. 6	a 15.36	Feb. 15	14.46	Oct. 10	12.94
May 23	a 9.50	Mar. 8	9.22	Nov. 16	13.84
Sept. 10	a 14.18	27	8.21	Dec. 2	13.78
Feb. 8, 1941	a 14.46	Apr. 22	10.98	23	11.77
Mar. 6	a 14.06	May 24	8.14		

a Not previously published.

Middlesex County

Arlington 174. Massachusetts Department of Public Health. At north-west corner of Margaret and Dorothy Roads. Driven observation well, diameter $2\frac{1}{2}$ inches, depth 176.25 feet below land-surface datum. Measuring point, top of pipe, 3.7 feet above land-surface datum which is 9.44 feet above mean sea level.

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

July 29, 1944	12.16	Jan. 8, 1945	9.95	June 18, 1945	7.26
Aug. 7	12.20	15	9.36	25	7.51
14	12.71	22	9.27	July 2	7.96
21	12.95	30	8.70	9	8.45
28	12.70	Feb. 5	8.54	16	8.14
Sept. 4	13.35	12	8.55	23	8.15
11	13.76	19	8.28	30	8.27
18	12.53	26	7.70	Aug. 6	8.37
25	12.71	Mar. 5	6.47	13	8.20
Oct. 2	12.77	12	5.82	20	8.31
9	13.05	19	7.23	27	8.52
16	12.93	26	7.04	Sept. 4	8.24
23	12.60	Apr. 2	7.16	10	8.78
30	12.43	9	7.25	17	8.58
Nov. 6	12.88	16	7.56	24	8.82
13	12.57	23	7.64	Oct. 1	8.58
20	12.45	30	7.60	8	8.26
27	12.00	May 7	7.66	15	8.29
Dec. 4	10.65	14	6.41	22	8.28
11	10.63	21	7.17	29	8.06
18	9.94	28	7.49	Dec. 1	7.26
26	10.07	June 4	7.59	28	7.51
Jan. 1, 1945	9.79	11	7.53		

Chelmsford 68 (*986, p. 254; 906, p. 39; 936, p. 44; 944, p. 42; *986, p. 49; 1016, p. 86). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	8.70	May 1	7.25	July 31	8.13	Oct. 30	9.58
Mar. 1	7.95	29	6.77	Aug. 30	9.13	Nov. 28	8.26
30	6.63	June 28	7.23	Sept. 28	9.47	Dec. 28	7.91

Chelmsford 69 (*886, p. 254; 906, p. 39; 936, p. 45; 944, p. 42; *986, p. 49; 1016, p. 87). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	1.60	May 29	1.29	Aug. 30	1.96	Nov. 28	1.75
Mar. 30	1.14	June 28	.81	Sept. 28	2.50	Dec. 28	.67
May 1	1.31	July 31	1.40	Oct. 30	2.32		

Lowell 4 (*886, p. 254; 906, p. 39; 936, p. 45; 944, p. 43; *986, p. 49; 1016, p. 87). 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, 1945

Jan. 27	10.14	May 1	8.62	July 31	9.11	Oct. 30	10.28
Mar. 1	8.80	29	8.11	Aug. 30	10.33	Nov. 28	9.14
30	8.24	June 28	8.43	Sept. 28	10.74	Dec. 28	9.40

Cambridge 667. City of Cambridge Water Department. On Fresh Pond golf course, 270 feet east of Blanchard Road and 950 feet south of Concord Avenue. Drilled observation well, diameter 8 inches, depth 128.6 feet below land-surface datum. Measuring point, Oct. 30 to Nov. 20, 1944, and beginning Dec. 1, 1945, top of casing, 1.8 feet above land-surface datum, Nov. 26, 1944, to Oct. 31, 1944, edge of hole in recorder platform, 2.17 feet above land-surface datum, which is 11.63 feet above mean sea level.

Water level at noon, in feet below land-surface datum, 1944

(From recorder charts)

Oct. 30	a 22.40	Dec. 2	19.46	Dec. 12	17.39	Dec. 22	16.22
Nov. 6	a 21.31	3	19.23	13	17.21	23	16.13
13	a 20.88	4	19.14	14	17.03	24	16.04
20	a 20.74	5	18.99	15	16.87	25	15.86
26	20.35	6	18.81	16	16.70	26	15.74
27	20.28	7	18.61	17	16.56	27	15.63
28	20.19	8	18.40	18	16.44	28	15.46
29	20.14	9	18.16	19	16.35	29	15.43
30	19.92	10	17.94	20	16.32	30	15.36
Dec. 1	19.65	11	17.70	21	16.26	31	15.23

a Tape measurement.

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

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Dec.
1	15.04	.....	10.55	6.17	6.35	5.93	6.06	6.42	8.57	8.89	b6.83
2	14.81	.....	10.43	6.10	6.54	5.99	6.06	6.40	8.74	8.79	....
3	14.66	.....	10.35	6.12	6.68	5.98	6.09	6.39	8.96	....	....
4	14.51	.....	10.26	6.12	6.48	6.05	6.12	6.43	9.12	....	....
5	14.40	10.20	10.12	5.98	6.45	6.06	6.11	6.44	9.30	....	....
6	14.32	.....	9.89	6.10	6.45	6.08	6.10	6.40	9.44	....	....
7	14.17	.....	9.82	6.07	6.32	6.12	6.12	6.18	9.63	....	....
8	14.04	.....	9.65	6.02	6.25	6.18	6.16	6.25	9.70	8.57	....
9	13.91	.....	9.48	6.01	6.25	6.21	6.17	6.30	9.74	8.54	....
10	13.79	.....	9.31	6.03	6.19	6.24	6.16	6.30	9.70	8.56	....
11	13.64	.....	9.13	6.01	5.83	6.16	6.09	6.32	9.67	8.53	....
12	13.43	10.43	8.92	6.02	5.86	6.21	6.17	6.33	9.68	8.48	....
13	13.27	.....	8.71	6.03	5.83	6.28	6.22	6.33	9.67	8.44	....
14	13.07	.....	8.57	6.04	5.82	6.34	6.23	6.32	9.63	8.40	....
15	12.90	.....	a8.40	6.08	5.82	6.37	6.17	6.30	9.55	8.34	....
16	12.65	.....	a8.22	6.07	5.87	6.28	6.13	6.36	9.56	8.28	....
17	12.48	a10.73	a8.03	5.98	5.84	6.29	6.08	6.38	9.54	8.28	....
18	12.33	10.78	a7.82	5.99	5.71	6.24	6.09	6.49	9.47	8.25	....
19	a12.15	10.84	7.57	6.07	5.76	6.28	6.13	6.60	9.35	8.21	....
20	11.93	10.88	7.35	6.06	5.78	5.86	6.14	6.74	9.33	8.19	....
21	11.75	10.99	7.16	6.05	5.77	5.90	6.17	6.87	9.27	8.14	....
22	11.53	10.94	6.84	6.09	5.76	5.95	6.19	7.06	9.29	8.06	....
23	11.33	.....	6.61	6.07	5.82	5.98	6.23	7.26	9.25	8.03	....

a Estimated.

b Tape measurement.

Cambridge 667--Continued.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Dec.
24	11.17	.....	6.51	6.09	5.86	6.08	6.27	7.43	9.18	7.93	....
25	11.06	.....	6.44	6.08	5.90	6.10	6.28	7.30	9.13	7.85	....
26	10.90	10.84	6.32	5.86	5.92	6.05	6.31	7.50	9.10	7.77	....
27	10.77	10.60	6.28	5.88	5.91	5.90	6.38	7.70	9.08	7.77	....
28	10.66	10.60	6.25	5.89	5.86	5.96	6.40	7.87	9.01	7.73	b8.09
29	10.45		6.18	6.04	5.82	6.00	6.35	8.07	8.96	7.67	....
30	10.39		6.20	6.16	5.81	6.04	6.41	8.25	8.95	7.62	....
31	.....		6.16		5.86		6.42	8.41		7.56	....

b Tape measurement.

Cambridge 798. Massachusetts Department of Public Health. On Fresh Pond golf course, 450 feet south of Concord Avenue, 970 feet east of Blanchard Road. Driven observation well, diameter 2½ inches, depth 31.5 feet below land-surface datum. Measuring point, Aug. 7, 1944, to Nov. 20, 1944, and beginning Dec. 1, 1945, top of casing, at land-surface datum; Nov. 22, 1944, to Oct. 31, 1945, hole in recorder platform, 1.52 feet above land-surface datum, which is 6.61 feet above mean sea level.

Water level at noon, in feet below land-surface datum, 1944
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 7	a 13.86	Nov. 13	a 15.77	Dec. 5	13.82	Dec. 19	11.25
14	a 14.68	20	a 15.63	6	13.67	20	11.22
21	a 15.70	22	15.47	7	13.50	21	11.17
28	a 16.48	23	15.42	8	13.31	22	11.15
Sept. 4	a 16.60	24	15.33	9	13.08	23	11.06
11	a 16.72	25	15.27	10	12.88	24	10.98
18	a 16.17	26	15.23	11	12.61	25	10.84
25	a 16.38	27	15.13	12	12.34	26	10.72
Oct. 2	a 16.38	28	15.07	13	12.11	27	10.60
9	a 16.44	29	b 14.98	14	11.95	28	10.44
16	a 16.52	Dec. 1	14.44	15	11.77	29	10.41
23	a 16.50	2	14.19	16	11.59	30	10.33
30	a 16.39	3	14.05	17	11.45	31	10.23
Nov. 6	a 16.18	4	13.95	18	11.36		

a Tape measurement.

b Estimated.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Dec.
1	10.01	5.41	5.51	1.44	1.50	1.22	1.38	1.73	3.77	4.11	b1.99
2	.....	5.40	5.40	1.38	1.65	1.29	1.39	1.72	3.95	4.03	....
3	....	5.41	5.34	1.35	1.83	1.27	1.41	1.70	4.17	4.05	....
4	....	5.39	5.30	1.37	1.70	1.33	1.46	1.72	4.33	4.07	....
5	....	5.30	5.11	1.21	1.57	1.32	1.46	1.72	4.41	4.02	....
6	....	5.35	4.93	1.32	1.59	1.35	1.46	1.74	4.47	4.00	....
7	....	5.39	4.88	1.34	a1.58	1.39	1.45	1.44	4.50	3.91	....
8	9.02	5.39	4.72	1.29	a1.55	1.46	1.50	1.56	a4.63	3.79	....
9	8.90	5.38	4.56	1.28	a1.51	1.48	1.51	1.62	a4.77	3.75	....
10	8.80	5.44	4.41	1.28	1.49	1.55	1.50	1.63	4.92	3.77	....
11	8.69	5.47	4.28	1.28	1.08	1.46	1.41	1.65	4.91	3.74	....
12	8.48	5.50	4.06	1.28	1.13	1.47	1.50	1.67	4.90	3.70	....
13	8.31	5.56	3.86	1.28	1.14	1.56	1.53	1.68	4.90	3.66	....
14	8.13	5.60	3.70	1.28	1.07	1.61	1.56	1.70	4.86	3.64	....
15	7.93	5.67	3.53	1.31	1.09	1.66	1.47	1.68	4.75	3.57	....
16	7.71	5.70	a3.33	1.33	1.15	1.53	1.46	1.73	4.74	3.54	....
17	7.54	5.84	a3.15	1.25	1.12	1.56	1.39	1.77	4.74	3.54	....
18	7.35	5.86	a2.98	1.23	.93	1.52	1.42	1.85	4.69	3.51	....
19	7.18	5.95	2.79	1.32	1.01	1.57	1.43	1.98	4.54	3.48	....
20	7.02	5.97	2.58	1.33	1.06	1.05	1.47	2.08	4.53	3.46	....
21	6.84	6.07	2.42	1.32	1.07	1.13	1.49	2.20	4.48	3.42	....
22	6.61	6.05	2.10	1.34	1.06	1.21	1.50	2.36	4.48	3.32	....

a Estimated.

b Tape measurement.

Cambridge 798--Continued.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Dec.
23	6.40	5.91	1.86	1.36	1.09	1.27	1.58	2.55	4.45	a3.29	....
24	6.26	5.85	1.77	1.36	1.15	1.37	1.60	2.67	4.39	3.20	....
25	6.16	5.88	1.71	1.36	1.17	1.42	1.63	2.53	4.35	3.13	....
26	6.00	5.86	1.60	1.12	1.21	1.34	1.65	2.73	4.33	3.03	....
27	5.89	5.60	1.56	1.11	1.20	1.16	1.71	2.95	4.31	3.02	....
28	5.78	5.56	1.52	1.18	1.16	1.24	1.75	3.10	4.28	3.00	b3.24
29	5.55		1.47	1.30	1.11	1.29	1.68	3.29	4.21	2.93	....
30	5.49		1.47	1.38	1.07	1.34	1.74	3.49	4.20	2.93	....
31	5.46		1.44		1.17		1.74	3.65		2.84	....

a Estimated.

b Tape measurement.

Lowell 14 (*886, p. 255; 906, p. 40; 936, p. 46; 944, p. 44; *986, p. 50; 1016, p. 87). Rogers Hall School. About 90 feet north of Rogers Street and 2,000 feet east of Fort Hill Avenue, Lowell.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	12.95	May 1	10.60	July 31	12.30	Oct. 30	15.40
Mar. 1	12.83	29	9.97	Aug. 30	13.18	Nov. 28	14.98
30	10.60	June 28	10.72	Sept. 28	14.30	Dec. 28	11.35

Lowell 26 (*886, p. 256; 906, p. 41; 936, p. 47; 944, p. 45; *986, p. 51; 1016, p. 87). Alfred Cimon (well 1). Formerly owned by A. W. Crosby. About 55 feet northeast of Pawtucket Boulevard Extension and 4,500 feet west of East Avenue, Lowell. New casing installed May 29, 1945, diameter $1\frac{1}{4}$ inches, depth 15.5 feet below land-surface datum. Measuring point, beginning May 29, top of $1\frac{1}{4}$ -inch casing, 0.48 foot above land-surface datum, which is 102.26 feet above mean sea level.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	10.90	May 29	5.26	Aug. 30	10.05	Nov. 28	10.92
Mar. 30	3.98	June 28	6.51	Sept. 28	11.06	Dec. 28	9.82
May 1	5.26	July 31	8.73	Oct. 30	11.55		

Lowell 33 (*886, p. 256; 906, p. 41; 936, p. 47; 944, p. 45; *986, p. 51; 1016, p. 87). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	7.67	May 1	7.05	July 31	7.75	Oct. 30	8.71
Mar. 1	6.29	29	7.02	Aug. 30	8.60	Nov. 28	7.43
30	6.72	June 28	7.04	Sept. 28	9.15	Dec. 28	6.63

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

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	15.44	May 1	14.40	July 31	16.13	Oct. 30	17.72
Mar. 1	13.73	29	12.29	Aug. 30	16.80	Nov. 28	14.29
30	12.75	June 28	14.16	Sept. 28	18.67	Dec. 28	14.51

Lowell 43 (*906, p. 42; 936, p. 47; 944, p. 46; *986, p. 51; 1016, p. 88). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	19.74	May 1	17.33	July 31	15.35	Oct. 30	18.17
Mar. 1	19.85	29	16.16	Aug. 30	17.04	Nov. 28	18.59
30	17.26	June 28	15.40	Sept. 28	17.44	Dec. 28	19.97

Reading 1 (*986, p. 257; 906, p. 42; 936, p. 48; 944, p. 46; *986, p. 51; 1016, p. 88). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	18.20	May 1	17.36	July 31	19.56	Oct. 30	21.86
Mar. 1	18.36	28	16.64	Aug. 30	20.52	Nov. 28	21.54
30	15.23	June 28	18.51	Sept. 28	21.30	Dec. 28	16.54

Reading 3 (*906, p. 43; 936, p. 48; 944, p. 46; *986, p. 52; 1016, p. 88). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	1.97	May 1	1.65	July 31	2.33	Oct. 30	3.06
Mar. 1	1.40	28	1.81	Aug. 30	2.96	Nov. 28	2.21
30	1.64	June 28	1.52	Sept. 28	4.06	Dec. 28	1.49

Wilmington 10 (*906, p. 43; 936, p. 48; 944, p. 47; *986, p. 52; 1016, p. 88). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	2.58	May 1	1.60	July 31	3.42	Oct. 30	6.58
Mar. 1	.90	28	2.34	Aug. 30	4.92	Nov. 28	3.22
30	1.31	June 28	1.42	Sept. 28	6.39	Dec. 28	1.23

Wilmington 29 (*906, p. 43; 936, p. 49; 944, p. 47; *986, p. 52; 1016, p. 88). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	10.12	Apr. 30	10.09	July 31	10.31	Oct. 30	10.83
Mar. 1	9.61	May 28	9.97	Aug. 30	10.67	Nov. 28	10.21
30	9.70	June 28	9.22	Sept. 28	10.98	Dec. 28	9.62

Wilmington 44 (*906, p. 44; 936, p. 49; 944, p. 47; *986, p. 52; 1016, p. 88). 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, 1945

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	3.84	a4.48	2.36	3.52	3.76	4.22	a3.80	4.49	5.49	6.11	5.42	2.97
2	2.77	....	2.26	3.59	3.83	4.28	3.89	4.58	5.50	6.05	5.45	3.15
3	2.92	....	2.14	3.57	3.91	4.31	3.95	4.68	5.56	6.05	5.45	3.27
4	3.17	....	1.61	3.59	3.78	4.33	3.74	4.79	5.59	6.07	5.47	3.39
5	3.40	4.43	1.78	3.55	3.16	4.38	4.01	4.89	5.64	6.08	5.37	3.49
6	3.55	4.45	1.50	3.24	3.18	4.33	4.17	4.98	5.68	6.11	5.21	3.57
7	3.72	4.46	1.85	3.41	3.57	4.30	4.39	4.82	5.73	6.10	5.08	.86
8	a3.88	4.45	2.11	3.57	3.53	4.34	4.47	4.95	5.78	5.97	5.02	1.25
9	3.92	4.41	2.31	3.68	3.66	4.40	4.46	4.96	5.82	5.87	a5.03	a1.53
10	3.97	a4.42	2.45	3.77	3.76	4.44	4.51	4.93	5.85	5.84	5.06	1.67
11	4.01	a4.45	2.58	3.82	2.74	4.42	4.47	4.92	5.87	5.80	5.09	1.95
12	4.05	a4.47	2.68	3.88	2.67	4.35	4.49	4.92	5.91	5.79	5.08	2.23
13	4.10	a4.49	2.76	3.93	2.92	4.38	4.57	4.89	5.96	5.77	4.99	2.43
14	4.13	4.50	2.72	3.98	2.92	4.45	4.63	4.96	5.98	5.77	4.94	2.70
15	4.14	4.51	2.78	4.04	3.12	4.52	4.68	5.02	5.99	5.76	4.67	2.85
16	4.16	4.50	2.83	4.11	3.34	4.51	4.67	5.10	6.01	5.74	4.25	2.96
17	4.18	4.43	2.92	4.13	3.46	4.03	4.67	5.17	6.05	5.78	4.20	3.14
18	4.20	4.35	3.00	4.13	3.34	3.66	4.68	5.23	6.08	5.81	....	3.31
19	4.22	4.34	3.11	4.14	3.01	3.71	4.72	5.29	6.05	5.84	....	3.46
20	a4.24	4.33	3.15	4.17	3.17	3.77	4.76	5.34	6.02	5.87	....	3.57
21	a4.24	4.34	3.12	4.20	3.40	3.16	4.79	5.39	5.99	5.90	....	3.63

a Estimated.

Wilmington 44--Continued.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
22	a4.25	4.34	2.46	4.21	3.54	a3.00	4.83	5.44	6.03	5.92	....	3.65
23	4.26	3.55	2.46	4.20	3.65	3.18	4.87	5.52	6.08	5.94	....	3.67
24	4.29	2.99	2.70	4.23	3.77	3.52	4.89	5.57	6.11	5.91	3.02	3.73
25	....	3.11	2.93	4.27	3.87	3.74	4.94	5.44	6.12	5.77	3.28	3.74
26	....	3.23	3.08	3.98	3.94	3.77	4.98	5.28	6.16	5.62	3.51	2.50
27	....	2.20	3.21	3.59	4.00	2.92	5.04	5.26	6.19	5.51	3.66	2.08
28	....	2.24	3.19	3.56	4.05	3.11	5.00	5.27	6.22	5.44	3.80	2.39
29	....		3.25	3.69	4.07	a3.38	5.00	5.34	6.23	5.41	3.85	2.65
30	4.47		3.37	3.79	4.11	a3.62	4.43	5.41	6.17	5.41	2.86	2.55
31	4.48		3.47		4.15		4.42	5.45		5.40		2.81

a Estimated.

Wilmington 56 (*944, p. 47; *986, p. 52; 1016, p. 89). D. P. Falkner. East side of Woburn Street, about 700 feet north of Lowell Street and 1.4 miles southeast of Wilmington Center, Wilmington. Land-surface datum is 89.75 feet above mean sea level, previously reported as about 95 feet above.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	4.54	Apr. 30	3.86	July 31	5.08	Oct. 30	5.44
Mar. 1	2.06	May 28	4.36	Aug. 30	5.85	Nov. 28	4.26
30	3.64	June 28	3.85	Sept. 28	6.69	Dec. 28	2.70

Wilmington 58 (*906, p. 44; 936, p. 49; 944, p. 48; *986, p. 52; 1016, p. 89). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	7.70	May 1	7.28	July 31	9.53	Oct. 30	11.32
Mar. 1	5.87	28	7.08	Aug. 30	10.50	Nov. 28	8.00
30	5.47	June 28	7.40	Sept. 28	11.34	Dec. 28	5.20

Winchester 4 (*886, p. 257; 906, p. 44; 936, p. 49; 944, p. 44; *986, p. 53; 1016, p. 89). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	11.71	May 1	9.13	July 31	8.77	Oct. 30	11.77
Mar. 2	8.03	28	8.09	Aug. 31	11.22	Nov. 29	10.41
30	7.74	June 29	8.19	Sept. 28	11.35	Dec. 28	8.28

Winchester 14 (*906, p. 44; 936, p. 50; 944, p. 49; *986, p. 53; 1016, p. 89). Karl W. E. 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	10.71	May 1	10.16	July 31	11.62	Oct. 30	13.29
Mar. 1	7.92	28	9.33	Aug. 30	11.30	Nov. 28	9.07
30	8.52	June 28	8.62	Sept. 28	12.65	Dec. 28	8.36

Winchester 18 (*944, p. 49; *986, p. 53; 1016, p. 89). Thomas N. Vinson. About 60 feet east of Ridge Street, 40 feet north of High Street, about 1.9 miles west of Winchester. Land-surface datum is 253.30 feet above mean sea level, previously reported as about 280 feet above.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	8.99	May 1	8.88	July 31	11.79	Oct. 30	(a)
Mar. 2	1.99	28	7.94	Aug. 31	12.75	Nov. 29	12.08
30	6.34	June 29	9.61	Sept. 28	(a)	Dec. 28	3.77

a Well dry; water level below 14.1 feet below land-surface datum.

Woburn 1 (*886, p. 258; 906, p. 45; 936, p. 50; 944, p. 50; *986, p. 53; 1016, p. 89). E. P. Fox. About 225 feet south of Green Street, 250 feet west of Highland Street, 0.5 mile south of Woburn (revised).

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	7.46	May 1	6.88	July 31	7.64	Oct. 30	8.07
Mar. 2	5.34	28	7.04	Aug. 31	7.55	Nov. 29	6.28
30	6.59	June 29	6.37	Sept. 28	8.92	Dec. 28	5.77

Woburn 3 (*886, p. 258; 906, p. 45; 936, p. 50; 944, p. 50; *986, p. 53; 1016, p. 90). 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 with reference to land-surface datum, 1945

Jan. 27	-0.19	May 1	-0.10	Aug. 8	-0.29	Oct. 30	-0.82
Mar. 1	+3.31	28	+1.10	31	-1.52	Nov. 28	-.23
30	+2.23	June 28	-.05	Sept. 28	-.80	Dec. 28	+5.59

Woburn 4 (*886, p. 258; 906, p. 46; 936, p. 51; 944, p. 50; *986, p. 53; 1016, p. 90). 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. Land-surface datum is 68.15 feet above mean sea level (revised).

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

Jan. 1	0.73	Mar. 26	0.97	June 18	0.96	Aug. 30	1.62
8	1.10	30	1.07	25	1.21	Sept. 4	1.75
15	1.08	Apr. 2	1.09	28	1.04	10	1.80
23	1.12	9	1.14	July 2	1.33	17	1.85
30	1.20	16	1.26	9	1.51	24	1.81
Feb. 5	1.26	23	1.27	16	1.29	28	1.87
13	1.18	30	.92	23	1.54	Oct. 1	1.70
20	1.16	May 7	.89	30	1.28	8	1.51
27	.07	14	.52	31	1.28	15	1.63
Mar. 1	.31	21	.80	Aug. 6	1.56	22	1.71
5	.10	28	1.12	13	1.66	29	1.53
12	.64	June 4	1.26	20	1.80	Nov. 28	1.25
19	.91	11	1.15	27	1.54	Dec. 28	.70

Woburn 5 (*886, p. 259; 906, p. 46; 936, p. 51; 944, p. 51; *986, p. 54; 1016, p. 90). 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. Land-surface datum is 59.55 feet above mean sea level (revised).

Water level, in feet with reference to land-surface datum, 1945

Jan. 1	+0.01	Mar. 26	+0.01	June 18	-1.06	Aug. 30	-0.28
8	.00	30	-.05	25	-.25	Sept. 4	-.54
15	+0.02	Apr. 2	-.07	28	-.04	10	-.54
23	+0.03	9	-.08	July 2	-.29	17	-.59
30	+0.15	16	-.14	9	-.41	24	-.57
Feb. 5	+0.12	23	-.16	16	-.18	28	-.56
13	+0.15	30	.00	23	-.38	Oct. 1	-.43
20	+0.07	May 7	-.02	30	-.02	8	-.25
27	+0.21	14	+0.03	31	-.02	15	-.37
Mar. 1	+0.16	21	+0.04	Aug. 6	+0.01	22	-.40
5	+0.17	28	-.13	13	-.60	29	-.30
12	+0.08	June 4	-.20	20	-.60	Nov. 28	-.11
19	+0.03	11	-.09	27	-.30	Dec. 28	+1.19

Woburn 17 (*906, p. 46; 936, p. 51; 944, p. 51; *986, p. 54; 1016, p. 90). 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, 1945

Jan. 27	6.25	May 1	6.36	July 31	6.93	Oct. 30	8.87
Mar. 1	4.46	28	5.80	Aug. 30	7.28	Nov. 28	5.24
30	4.87	June 28	4.94	Sept. 28	6.40	Dec. 28	4.80

Woburn 19 (*906, p. 47; 936, p. 52; 944, p. 51; 986, p. 54; 1016, p. 90). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	6.35	May 1	5.81	July 31	7.97	Oct. 30	10.70
Mar. 1	5.01	28	5.86	Aug. 30	8.67	Nov. 28	6.58
30	5.48	June 28	5.44	Sept. 28	10.07	Dec. 28	4.84

Woburn 21 (*906, p. 47; 936, p. 52; 944, p. 51; *986, p. 54; 1016, p. 90). 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, 1945

Jan. 1	6.81	Mar. 26	5.82	June 18	6.82	Aug. 31	8.08
8	6.56	30	5.95	25	6.75	Sept. 4	8.19
15	6.80	Apr. 2	6.04	29	6.69	10	8.32
23	6.97	6	6.21	July 2	6.73	17	8.50
30	7.12	16	6.43	9	7.51	24	8.62
Feb. 5	7.21	23	6.63	16	7.15	28	8.70
13	7.38	30	6.61	23	7.22	Oct. 1	8.53
20	7.45	May 7	6.53	30	7.42	8	8.65
27	6.73	14	6.20	31	7.40	15	8.85
Mar. 1	6.39	21	6.22	Aug. 6	7.63	22	8.83
5	5.87	28	6.45	13	7.73	29	8.86
12	5.76	June 4	6.67	20	7.89	Nov. 29	8.07
19	5.87	11	6.79	27	8.00	Dec. 28	6.04

Woburn 23 (*906, p. 47, 936, p. 52; 944, p. 52; *986, p. 54; 1016, p. 91). 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, 1945

Jan. 27	1.29	May 1	1.28	July 31	1.73	Oct. 30	1.88
Mar. 1	.53	28	1.37	Aug. 31	1.93	Nov. 29	1.52
30	1.17	June 29	1.25	Sept. 28	2.27	Dec. 28	.72

Woburn 36 (*906, p. 47; 936, p. 52; 944, p. 52; *986, p. 54; 1016, p. 91). 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, 1945

Jan. 27	3.30	May 1	2.69	July 31	2.71	Oct. 30	3.37
Mar. 2	3.11	28	2.57	Aug. 31	2.87	Nov. 29	3.32
30	2.84	June 29	2.57	Sept. 28	3.14	Dec. 28	3.09

Woburn 38 (*906, p. 48; 936, p. 53; 944, p. 52; *986, p. 55; 1016, p. 91). 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, 1945

Jan. 27	9.62	May 1	9.66	July 31	10.68	Oct. 30	13.07
Mar. 2	7.62	28	8.63	Aug. 31	11.54	Nov. 29	10.94
30	8.72	June 29	9.84	Sept. 28	12.40	Dec. 28	8.26

Woburn 49 (*906, p. 48; 936, p. 53; 944, p. 52; *986, p. 55; 1016, p. 91). 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, 1945

Jan. 27	+0.92	May 1	+0.97	July 31	+0.59	Oct. 30	-2.60
Mar. 2	+1.27	28	+1.10	Aug. 31	+0.05	Nov. 29	-1.09
30	+1.23	June 29	+0.92	Sept. 28	-1.36	Dec. 28	+1.35

Woburn 53 (*906, p. 48; 936, p. 53; 944, p. 53; *986, p. 55; 1016, p. 91). P. Flowers. About 240 feet north of Kilby Street, 550 feet west of Hart Street, about 0.6 mile north of Woburn. Measuring point beginning June 29, 1945, top of rock, 1.79 feet below land-surface datum, which is 105.96 feet above mean sea level.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	8.85	May 1	8.65	July 31	9.16	Oct. 30	9.34
Mar. 1	8.01	28	8.66	Aug. 31	9.47	Nov. 29	8.73
30	8.41	June 29	8.66	Sept. 28	9.79	Dec. 28	8.35

Worcester County

Leominster 11 (*886, p. 259; 906, p. 48; 936, p. 53; 944, p. 53; *986, p. 55; 1016, p. 91). 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, 1945

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	2.95	a3.8	1.16	2.66	2.38	3.89	3.80	3.46	4.87	6.40	6.64	4.13
2	1.62	3.82	1.10	2.79	2.57	4.02	3.94	3.57	4.93	6.34	6.68	4.12
3	2.05	3.85	.96	2.38	2.69	4.04	3.76	3.75	5.02	6.34	6.72	4.08
4	2.25	3.88	1.11	2.62	1.64	4.03	4.03	3.99	5.11	6.40	6.78	4.07
5	2.39	3.83	1.31	a1.4	1.97	4.07	4.19	4.17	5.22	6.41	6.81	4.06
6	2.72	3.89	.95	1.71	2.03	3.79	4.25	4.32	5.35	6.45	6.75	4.04
7	2.98	3.89	1.18	2.08	2.22	3.74	4.05	3.32	5.45	6.48	6.68	2.38
8	3.11	3.88	1.47	2.29	2.42	3.90	4.29	3.33	5.56	6.52	6.61	1.80
9	3.18	3.82	1.66	2.49	2.58	3.99	4.39	3.57	5.68	6.56	6.58	1.84
10	3.27	3.86	1.78	2.68	2.78	4.14	4.48	3.76	5.76	6.61	6.59	1.85
11	3.34	3.83	1.95	2.81	1.75	3.69	3.91	3.96	5.83	6.61	6.64	1.97
12	3.40	3.83	2.07	2.95	1.85	3.14	4.09	4.18	5.92	6.62	6.64	2.12
13	3.46	3.83	2.05	3.07	2.06	3.34	4.25	4.30	6.01	6.64	6.58	2.32
14	3.50	3.80	1.98	3.21	1.81	3.51	4.40	4.43	6.09	6.67	6.49	2.43
15	3.52	3.82	2.08	3.38	2.10	3.71	4.42	4.52	6.12	6.70	6.40	2.53
16	3.53	3.75	2.16	3.53	2.13	3.18	3.88	4.60	5.94	6.71	6.23	2.58
17	3.54	3.53	2.26	3.56	2.33	2.22	3.16	4.71	5.90	6.76	6.02	2.73
18	3.57	3.51	2.36	3.43	1.74	2.32	a3.6	4.82	5.93	6.80	5.89	2.86
19	3.58	3.53	2.44	3.61	1.73	2.72	a4.0	4.92	5.86	6.83	5.86	2.90
20	3.60	3.52	2.45	3.72	1.87	1.83	a3.9	5.02	5.68	6.86	5.74	2.96
21	3.61	3.54	a1.9	3.79	2.20	2.13	3.47	5.12	5.59	6.91	5.39	3.04
22	3.60	3.28	a1.5	3.62	2.39	2.07	3.64	5.23	5.69	6.94	5.05	3.09
23	3.56	1.52	a1.6	3.75	2.66	2.47	3.78	5.36	5.82	6.98	4.18	3.13
24	3.58	1.45	1.66	3.85	2.88	2.88	3.93	5.46	5.92	7.01	4.05	3.19
25	3.65	1.66	1.99	3.92	3.09	3.17	4.06	4.90	6.01	7.00	4.05	3.23
26	3.67	1.46	2.18	1.83	3.25	3.27	4.19	4.45	6.10	6.90	4.09	1.63
27	3.73	.84	2.32	1.85	3.40	2.64	4.34	4.44	6.20	6.78	4.12	1.85
28	3.78	1.20	2.16	2.19	3.46	3.02	4.48	4.53	6.26	6.71	4.13	1.89
29	3.74	.	2.33	2.46	3.44	3.31	3.64	4.66	6.31	6.65	4.11	2.01
30	3.80	...	2.50	2.29	3.58	3.55	2.99	4.79	6.39	6.62	4.10	2.09
31	3.80	...	2.63	.	3.73	.	3.24	4.81	.	6.61	.	1.80

a Estimated.

Winchendon 13 (*886, p. 260; 906, p. 50; 936, p. 55; 944, p. 54; *986, p. 56; 1016, p. 92). 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, 1945

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	6.55	6.24	3.79	3.24	3.72	4.51	5.09	5.06	7.83	8.37	8.43	5.93
2	4.87	6.30	3.72	3.36	3.87	4.64	5.22	5.18	7.89	8.35	8.44	6.08
3	4.34	6.37	3.57	3.18	3.93	4.71	5.27	5.32	8.00	8.40	8.45	6.11
4	4.33	6.45	3.03	3.44	3.50	4.68	5.41	5.54	8.09	8.46	8.48	6.16
5	4.42	6.41	3.08	2.54	3.20	4.77	5.55	5.75	8.16	8.46	8.51	6.24

Winchendon 13--Continued.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
6	4.59	6.51	2.79	2.94	3.41	4.71	5.69	5.93	8.24	8.45	8.55	6.27
7	4.71	6.55	2.71	3.19	3.66	a4.73	5.45	5.70	8.33	8.46	8.57	6.03
8	4.90	6.58	2.84	3.40	3.82	4.84	5.44	5.48	8.41	8.46	8.56	5.25
9	4.91	6.54	2.99	3.59	3.91	4.95	5.61	5.50	8.51	8.49	8.56	4.70
10	5.07	6.63	3.03	3.75	4.04	5.08	5.73	5.46	8.60	8.56	8.59	4.50
11	5.17	6.65	3.23	3.87	3.41	4.82	5.61	5.46	8.67	8.55	8.65	4.56
12	5.23	6.71	3.27	3.97	2.91	4.50	5.65	5.65	8.76	8.51	8.65	4.71
13	5.30	6.75	3.40	4.06	3.18	4.60	5.80	5.84	8.85	8.46	8.62	4.88
14	5.38	6.75	3.24	4.14	3.02	4.81	5.92	5.99	8.94	8.45	8.53	5.00
15	5.46	6.82	2.83	4.28	3.31	5.02	a6.01	6.10	8.92	8.42	8.44	5.16
16	5.50	6.80	2.55	4.40	2.62	5.14	5.14	6.25	8.76	8.37	8.37	5.24
17	5.54	6.84	2.65	4.43	2.95	5.02	4.95	6.38	8.37	8.36	8.28	5.37
18	5.63	6.87	2.60	4.13	2.59	4.72	5.05	6.53	8.07	8.39	8.16	5.48
19	5.67	6.92	2.66	4.10	2.56	4.88	5.03	6.70	7.83	8.43	8.09	5.52
20	5.72	6.95	2.76	4.23	2.88	4.58	5.09	6.85	7.72	8.45	7.95	5.59
21	5.77	6.97	2.62	4.34	3.14	3.83	5.06	6.98	7.64	8.51	7.69	5.69
22	5.78	6.80	2.61	4.29	3.26	3.25	5.22	7.13	7.66	8.56	7.07	5.77
23	5.76	6.05	2.91	4.34	3.44	3.66	5.14	7.30	7.74	8.60	6.25	5.81
24	5.79	5.61	3.11	4.45	3.63	4.08	5.17	7.45	7.79	8.65	5.74	5.90
25	5.90	5.43	3.09	4.54	3.81	4.40	5.29	7.50	7.84	8.68	5.57	5.96
26	5.96	5.32	3.10	2.63	3.96	4.63	5.43	7.42	7.90	8.65	5.63	5.79
27	6.02	4.49	3.11	2.76	4.11	4.01	5.62	7.40	8.02	8.60	5.71	5.52
28	6.11	4.00	2.79	3.08	4.15	4.25	5.79	7.44	8.10	8.58	5.77	5.44
29	6.12		2.92	3.36	4.18	4.57	5.61	7.52	8.16	8.54	5.80	5.36
30	6.18		3.06	3.58	4.27	4.83	4.81	7.63	8.29	8.49	5.85	5.33
31	6.23		3.17		4.38		4.85	7.75		8.44		5.27

a Estimated.

MICHIGAN

By J. G. Ferris, W. C. Waldbeiser, and Norman Billings

PROGRAM OF WORK

The investigation of the ground-water resources of Michigan was continued during 1945 in cooperation with the Geological Survey Division of the Michigan Department of Conservation. One phase of this work consists of the measurement of water levels in selected observation wells to determine the changes in storage in the underground reservoirs. About 2,100 individual measurements of water level were made in 1945. During the year water levels were measured semiweekly in 6 observation wells, weekly in 16 wells, and monthly in 69 wells. Continuous records of water level were obtained during the year by automatic water-stage recorders which operated for 12 months on 2 wells, for 8 months on 1 well, and for 6 months or less on 7 wells. A total of 39 observation wells were added to the program during the year.

The observation wells, for which water-level records are included in this report, are located in the Lower Peninsula. For convenience, this area is subdivided into the northern and southern part of the Lower Peninsula. A previous report^{1/} included an index map showing the location of the observation wells in Michigan.

FLUCTUATIONS OF WATER LEVEL

Northern Part of Lower Peninsula

Monthly measurements of water level were made in 45 observation wells distributed as follows: 16 in Crawford County; 2 in Kalkaska County; 2 in Otsego County; and 25 in Roscommon County. Water levels in the above wells on the average, showed a net rise of 0.94 foot during 1944. The individual averages for each county indicate a net rise in water level of 0.90 foot in Crawford County, 0.09 foot in Kalkaska County, 0.72 foot in Otsego County, and 1.06 feet in Roscommon County.

^{1/} Meinzer, O. E., Wenzel, L. K., and others, Water levels and artesian pressure in observation wells in the United States in 1940, Part 1, North-eastern States: U. S. Geol. Survey Water-Supply Paper 906, p. 52.

The trends of water level shown by the continuous record obtained from the automatic water-stage recorder in operation on a shallow well near Grayling are very similar to the trends shown by the average water level for the group of wells noted above. The water level in the Grayling well declined from 6.92 feet below land-surface datum on January 1 to 7.24 feet on February 21 as the result of a general deficiency of precipitation during this period. Moderately heavy rains on February 21 and 22 and relatively mild temperatures thereafter removed the snow cover and resulted in considerable recharge to the water table. This is shown by the rise in ground-water level from 7.24 feet below land-surface datum on February 21 to 5.07 feet below land-surface datum on March 17. With below-normal precipitation in March, the water level declined to 6.11 feet below land-surface datum by April 13. Further recession of the water table was halted by the above-normal precipitation during April and May and only minor rises and declines of water level occurred until May 25. A sharp rise in water level occurred from the May 25 level of 6.04 feet below land surface to 4.33 feet on June 3, as the result of heavy rains during this period.

Although precipitation was slightly above normal during June, July, and August, the evapo-transpiration demands by the soil and vegetal cover, during this period of peak growth, was of sufficient magnitude to produce a general recession of the water table to 7.32 feet below land surface by September 20. The trend of water level was upward from this date to reach a level of 5.33 feet below grade on November 14. This rise was the result of heavy precipitation in September coupled with slightly above-normal rainfall in October and early November plus the great reduction in moisture demand with the close of the growing season in early October. Deficient precipitation in the latter part of November and through December resulted in a decline of water level from the November 14 level to 6.38 feet below land surface on December 31.

Southern Part of Lower Peninsula

This area encompasses most of the larger urban and industrial developments in the State and accordingly, most of the observation wells are within the zones of influence of large industrial and public-supply wells. A total of 55 wells were measured in 10 counties in this southern belt. Of

this group, 38 wells were acquired during the year. A large part of the new wells were added as a part of the intensive surveys of the ground-water resources of the Lansing area in Ingham County and the Battle Creek area, in Calhoun County. A discussion of the water level and pumpage trends in each area is included with the water-level records under each county.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

The number assigned to each well, in the northern counties, is its number in the township in which it is situated. The number assigned to each well, in the southern counties, is its number in the county, which is preceded by the appropriate letter symbol for that county.

Calhoun County

Ch 1 (*886, p. 267; 906, p. 58; 936, pp. 59-60; 944, pp. 59-60; *986, pp. 60-61; 1016, p. 96). City of Battle Creek. Well 22 at Verona pumping station of city waterworks. Measurements by Kenneth E. Garvey, chief operator. Water-level measurements from Jan. 1, 1945, to Aug. 3, 1945, measured with a steel tape. Automatic water-stage recorder installed on Aug. 3, 1945 and measuring point raised to top of recorder shelf, which is 1.09 feet above previous measuring point and 2.24 feet above land-surface datum. Measuring point elevation erroneously given in previous reports as 1.00 foot, should have been 1.15 feet above land-surface datum.

Water level at 2:00 a.m., in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	a 5.55	Feb. 1	a 6.86	Mar. 4	a 5.60	Aug. 27	5.81
2	a 5.85	2	a 6.30	5	a 6.55	30	a 5.61
3	a 6.55	3	a 6.75	11	a 5.85	Sept. 4	a 6.41
4	a 6.05	4	a 6.95	18	a 6.10	11	a 6.15
5	a 6.25	5	a 6.90	25	a 5.85	18	a 6.54
6	a 6.60	6	a 6.90	Apr. 1	a 5.95	26	a 6.08
7	a 6.55	7	a 7.00	8	a 5.35	Oct. 3	a 6.23
8	a 6.45	8	a 6.85	15	a 6.20	10	a 6.25
9	a 6.35	9	a 6.85	22	a 5.70	17	a 5.84
10	a 6.95	10	a 6.80	29	a 5.85	Nov. 1	5.04
11	a 6.45	11	a 6.05	May 6	a 5.30	2	5.34
12	a 6.85	12	a 6.95	13	a 5.25	3	5.00
13	a 7.05	13	a 6.35	20	a 4.45	4	5.07
14	a 6.85	14	a 6.55	26	a 4.85	5	5.46
15	a 7.60	15	a 6.95	June 3	a 4.45	6	4.98
16	a 6.95	16	a 6.97	10	a 4.35	7	5.23
17	a 6.90	17	a 6.15	17	a 4.40	8	5.75
18	a 6.85	18	a 6.10	24	a 4.55	9	5.80
19	a 6.95	19	a 7.30	July 1	a 5.75	10	4.97
20	a 6.85	20	a 6.15	8	a 5.05	11	5.75
21	a 6.90	21	a 6.75	15	a 5.05	12	5.00
22	a 6.90	22	a 6.75	22	a 5.05	13	5.42
23	a 6.85	23	a 6.95	29	a 5.60	14	5.05
24	a 7.00	24	a 5.85	Aug. 4	5.78	15	5.40
25	a 7.05	25	a 5.65	5	6.34	24	6.17
26	a 6.72	26	a 5.95	6	5.77	25	6.03
27	a 6.85	27	a 7.25	9	5.85	26	5.09
28	a 6.95	28	a 7.05	10	5.61	27	4.89
29	a 7.05	Mar. 1	a 6.75	11	5.83	28	5.12
30	a 6.95	2	a 6.60	12	5.73	29	5.16
31	a 6.90	3	a 6.05	13	5.57	30	5.31

a Jetted-tape measurement.

Ch 1--Continued.

Water level at 2:00 a.m., in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Dec. 1	5.18	Dec. 10	5.18	Dec. 20	6.01	Dec. 26	5.05
2	5.32	11	5.39	21	6.00	27	5.26
3	5.09	15	5.22	22	6.16	28	5.32
4	5.23	16	5.43	23	6.01	29	5.92
6	5.33	17	5.22	24	5.23	30	5.46
8	5.37	18	5.43	25	5.16	31	5.53
9	5.40	19	5.44				

The average daily withdrawal of water from wells at the Verona pumping station in 1945 ranged from 3.83 million gallons in November to 5.63 million gallons in August and averaged 4.39 million gallons for the year. The average daily withdrawal was 4.77 million gallons in 1944; 3.93 million gallons in 1943; 2.79 million gallons in 1942; 3.75 million gallons in 1941; and 2.49 million gallons in 1940.

Ch 2 (*886, pp. 267-268; 906, p. 58; 936, pp. 60-61; 944, p. 60; *986, p. 61; 1016, p. 96). 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, 1945

Jan. 9	23.4	May 9	23.4	Aug. 5	24.2	Oct. 13	22.1
17	23.2	16	22.6	11	23.9	14	23.3
25	23.6	23	22.6	19	23.0	21	22.2
Feb. 7	23.6	June 6	22.6	26	22.1	28	22.1
20	23.8	13	23.5	27	23.7	Nov. 4	22.2
26	23.4	24	22.2	31	22.1	11	22.0
28	23.1	July 7	22.0	Sept. 1	22.1	18	23.0
Mar. 10	22.6	8	22.6	2	23.6	25	21.6
17	23.7	14	22.1	9	22.0	Dec. 2	22.1
24	23.2	15	23.1	16	23.3	9	22.1
Apr. 6	22.6	22	22.0	23	22.1	16	23.0
14	22.6	29	22.0	30	22.2	23	21.6
21	23.0	Aug. 4	22.5	Oct. 7	23.8	30	21.6
May 2	22.9						

The average daily withdrawal of ground water from wells at the Goguac pumping station in 1945 ranged from 1.21 million gallons in October to 1.42 million gallons in July and averaged 1.29 million gallons for the year. The average daily withdrawal was 1.37 million gallons in 1944; 1.30 million gallons in 1943; 1.34 million gallons in 1942; 1.10 million gallons in 1941; and 1.50 million gallons in 1940.

Ch 58. City of Battle Creek. Test well, 42 feet north of center line of Roosevelt Ave. and 5,300 feet west of Capitol Ave. N. E., Battle Creek. Diameter 2 inches, measured depth 140.4 feet below measuring point. Measuring point, top of 2-inch casing, 2.0 feet above land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level
Nov. 21	2.82	Dec. 7	2.90	Dec. 21	3.02
29	2.87	14	2.96	28	2.93

Ch 60. City of Battle Creek. Test well, 58 feet south of center line of Golden Ave. and 530 feet west of Union City Road, Battle Creek. Diameter 2 inches, measured depth 86.6 feet below measuring point. Measuring point, top of 2-inch casing, 0.5 foot above land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Nov. 14	1.89	Nov. 29	1.93	Dec. 14	2.10	Dec. 28	2.00
21	2.00	Dec. 7	2.00	21	2.01		

Ch 64. City of Battle Creek. Test well, about 350 feet east of Overton St. and 1,060 feet north of Golden Ave. Diameter 2 inches, measured depth 89.6 feet below measuring point. Measuring point, top of 2-inch casing, 2.2 feet above land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Nov. 14	10.02	Nov. 28	10.16	Dec. 7	10.20	Dec. 21	9.89
21	10.10	29	10.12	14	10.28	28	9.88

Ch 137. City of Battle Creek. 70 feet north of George B. Place and 530 feet west of Capitol Ave., S. W., at Goguac Lake. Unused well, diameter 26 inches, reported depth 89 feet below land surface. Measuring point, top of 26-inch casing, at land-surface datum. Water levels, in feet below land-surface datum, 1945: Dec. 7, 12.51; Dec. 14, 12.53; Dec. 21, 12.62; Dec. 28, 12.59.

Ch 167. W. E. Beadle. 63 feet north of Pennfield St. and 122 feet west of Kimbel St. Unused well, diameter $1\frac{1}{2}$ inches, reported depth 16 feet below land surface. Measuring point, top of $1\frac{1}{2}$ -inch casing, 0.90 foot above land-surface datum. Water levels, in feet below land-surface datum, 1945: Dec. 14, 13.05; Dec. 21, 13.07; Dec. 28, 13.00.

Ch 168. Guy Elliott. 396 feet west of Waubascaon Road and 2,600 feet south of Morley Road. Unused well, diameter 6 inches, measured depth 86.4 feet below measuring point. Measuring point, top of 6-inch casing, 10 feet below land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level
Nov. 21	26.51	Dec. 7	26.64	Dec. 21	26.80
29	26.60	14	26.69	28	26.77

Ch 169. Ernie Smith. 70 feet west of 26th St. and 100 feet south of Upton Ave. Unused well, diameter 4 inches, measured depth 64.4 feet below measuring point. Measuring point, top of 4-inch casing, 5 feet above land-surface datum. Water levels, in feet below land-surface datum, 1945: Dec. 7, 7.63; Dec. 14, 6.83; Dec. 21, 7.09; Dec. 28, 7.10.

Ch 170. Honer Brewing Co. 39 feet north of Hamblin St. and 290 feet west of McCambly St. Unused well, diameter 2 inches, measured depth 60.8 feet below measuring point. Measuring point, top of 2-inch casing, at land-surface datum. Water levels, in feet below land-surface datum, 1945: Dec. 7, 8.34; Dec. 14, 8.58; Dec. 21, 8.47; Dec. 28, 8.47.

Ch 172. Kellogg Cereal Food Co. 90 feet north of Porter St. and 110 feet east of Stiles St., Battle Creek. Unused well, diameter 8 inches, reported depth 100 feet below land-surface datum. Measuring point, top of recorder shelf, 20.6 feet below land-surface datum. Automatic water-stage recorder installed Nov. 20, 1945.

Water level at 2:00 a.m., in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Nov. 21	38.99	Dec. 2	39.90	Dec. 12	40.42	Dec. 22	41.08
22	39.08	3	37.78	13	40.65	23	40.99
23	38.33	4	39.64	14	40.68	24	40.52
24	38.74	5	40.01	15	40.80	25	37.86
25	38.96	6	40.05	16	40.79	26	37.47
26	37.39	7	40.22	17	38.37	27	37.64
27	39.11	8	40.23	18	40.40	28	39.26
28	39.41	9	40.26	19	40.68	29	39.45
29	39.75	10	37.97	20	40.82	30	39.60
30	39.81	11	40.06	21	41.03	31	39.40
Dec. 1	39.90						

Cass County

T. 8 S., R. 14 W.

Cs 1. Vernie Allen. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 16. Unused dug well, diameter 28 inches, measured depth 55 feet below land surface. Measuring point, top of brick well curb, 0.30 foot below land-surface datum.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 12	52.69	Oct. 14	52.78	Nov. 11	52.84	Dec. 9	53.05
16	52.66	21	52.77	18	52.97	16	53.06
23	52.69	28	52.85	25	52.98	23	53.19
30	52.71	Nov. 4	52.86	Dec. 2	52.96	30	53.12
Oct. 7	52.77						

Charlevoix County

T. 32 N., R. 4 W.

1 (*840, pp. 125, 126; 845, p. 153; 886, p. 268; 906, p. 58; 936, p. 61; 986, p. 61; 1016, p. 97). SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 1. No measurements made in 1945.

33 (*840, pp. 125, 126; 845, p. 153; 886, p. 268; 906, p. 58; 936, p. 61; 986, p. 61; 1016, p. 97). NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 10. No measurements made in 1945.

34 (*840, pp. 125, 126; 845, p. 153; 936, p. 61; 986, p. 61; 1016, p. 97). NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 4. No measurements made in 1945.

T. 33 N., R. 4 W.

31 (*840, pp. 125, 127-128; 845, p. 153; 886, p. 268; 936, p. 61; 986, p. 62; 1016, p. 97). NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 36. No measurements made in 1945.

T. 33 N., R. 5 W.

12 (*840, pp. 125, 128; 845, p. 153; 886, p. 268; 906, p. 58; 936, p. 61; 986, p. 62; 1016, p. 97). NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 4. No measurements made in 1945.

Cheboygan County

T. 33 N., R. 1 E.

5 (*886, p. 268; 906, p. 59; 936, p. 61; 944, p. 61; 986, p. 62; 1016, p. 97). SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 27. No measurements made in 1945.

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). NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 28. No measurements made in 1945.

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). NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 29. No measurements made in 1945.

17 (*840, pp. 129, 130; 845, p. 153; 886, p. 268; 906, p. 59; 936, p. 61; 986, p. 62; 1016, p. 97). NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 23. No measurements made in 1945.

T. 33 N., R. 1 W.

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). SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 3. No measurements made in 1945.

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). SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 10. No measurements made in 1945.

11 (*840, pp. 129-130; 845, p. 153; 886, p. 268; 906, p. 59; 936, p. 61; 986, p. 62; 1016, p. 97). NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 25. No measurements made in 1945.

T. 34 N., R. 1 W.

11 (*845, p. 153; *886, p. 268; 906, p. 59; 936, p. 61; 944, p. 61; 986, p. 62; 1016, p. 98). NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 1. No measurements made in 1945.

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). SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 26. No measurements made in 1945.

Clinton County

T. 5 N., R. 2 W.

Ct 159. Michigan Department of Health, Biological Laboratory. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 32. Unused drilled well, diameter 4 inches, reported depth 135 feet below land surface. Measuring point, top of coupling on 6-inch sleeve, 1.43 feet above land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level
Sept. 14, 1944	42.02	Mar. 5, 1945	45.14	July 31, 1945	48.84
Oct. 16	42.53	Apr. 2	44.19	Aug. 28	48.59
Nov. 10	42.14	27	45.27	Sept. 27	50.17
Dec. 9	42.23	May 16	46.43	Oct. 29	50.31
Jan. 12, 1945	44.39	June 8	46.51	Nov. 30	49.94
Feb. 21	44.75	26	47.32	Dec. 29	48.23

Ct 161. Michigan Department of Aeronautics, Lansing airport. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 31. Unused drilled well, diameter 3 inches, measured depth 89 feet below land surface. Measuring point, top of 3-inch casing, 4.0 feet below land-surface datum. Measurements discontinued after June 26.

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

Nov. 9, 1944	23.00	Mar. 5, 1945	24.23	May 16, 1945	24.42
Dec. 9	23.34	Apr. 2	23.18	June 8	24.07
Jan. 12, 1945	23.65	Apr. 27	24.56	26	24.15
Feb. 13	23.88				

Crawford County

T. 25 N., R. 3 W.

8 (*840, pp. 133, 136; *886, pp. 268, 269; 906, p. 59; 936, pp. 61-62; 944, p. 61; *986, p. 62; 1016, p. 98). SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 29.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	10.46	Apr. 14	10.00	July 14	9.58	Oct. 11	9.75
Feb. 15	10.65	May 15	10.12	Aug. 21	9.81	Nov. 16	9.56
Mar. 14	10.41	June 17	9.27	Sept. 17	9.93	Dec. 17	9.70

T. 26 N., R. 2 W.

9 (*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). SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 12.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	2.16	Apr. 14	1.97	July 13	2.06	Oct. 10	1.97
Feb. 15	2.13	May 15	2.00	Aug. 20	2.19	Nov. 15	1.93
Mar. 14	2.03	June 15	2.05	Sept. 18	2.08	Dec. 15	1.99

T. 26 N., R. 3 W.

26 (*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). NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 19.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	10.39	Apr. 14	9.75	July 14	9.46	Oct. 11	9.50
Feb. 15	10.54	May 15	10.01	Aug. 21	10.18	Nov. 16	9.22
Mar. 14	10.38	June 16	8.81	Sept. 17	10.22	Dec. 17	9.59

28 (*840, pp. 134, 137-138; 845, p. 154; 886, p. 269; 906, p. 59; 936, pp. 61-62; 944, pp. 61-62; 936, p. 63; 1016, p. 98). SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 12.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	8.47	Apr. 14	7.83	July 13	7.38	Oct. 10	7.81
Feb. 15	8.62	May 15	8.22	Aug. 20	7.91	Nov. 15	7.47
Mar. 14	8.72	June 15	6.89	Sept. 18	7.10	Dec. 15	7.35

T. 26 N., R. 4 W.

9 (*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). NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 6.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	2.93	Apr. 14	1.38	July 14	1.92	Oct. 10	1.10
Feb. 15	3.12	May 15	1.77	Aug. 20	2.70	Nov. 15	.54
Mar. 14	2.75	June 16	.69	Sept. 18	2.65	Dec. 15	1.30

10 (*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). NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 10.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	5.47	Apr. 14	4.12	July 14	4.60	Oct. 10	4.38
Feb. 15	5.62	May 15	4.50	Aug. 20	5.84	Nov. 15	3.90
Mar. 14	4.83	June 16	3.72	Sept. 18	5.84	Dec. 15	4.62

Grayling recorder well (*986, pp. 63-64; 1016, p. 99). NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 10. Equipped with water-stage recorder.

Water level at 2:00 a.m., in feet below land-surface datum, 1945

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	6.92	7.16	6.68	5.81	5.84	4.88	5.81	6.76	7.30	6.22	5.91	a5.81
2	6.92	7.16	6.67	5.84	5.88	....	5.85	6.78	7.09	6.14	5.68	a5.83
3	6.94	7.17	6.66	5.87	5.93	4.33	5.90	6.80	7.02	6.07	5.57	a5.85
4	6.95	7.16	6.65	5.90	5.95	4.40	5.94	6.84	7.01	6.05	5.58	5.87
5	6.97	7.15	6.63	5.90	5.98	4.58	5.98	6.87	7.01	6.05	5.59	5.89
6	6.98	7.17	6.59	5.94	6.01	4.72	5.91	6.80	7.03	6.05	5.61	5.91
7	6.98	7.17	6.51	5.97	6.04	4.82	5.91	6.92	7.05	6.01	5.63	5.93
8	7.00	7.17	6.49	5.99	5.88	4.90	5.93	6.94	7.08	5.96	5.46	5.95
9	7.01	7.17	6.48	6.02	5.88	4.96	5.97	6.96	7.11	5.89	5.40	5.97
10	7.02	7.17	6.48	6.04	5.88	5.02	6.01	6.99	7.14	5.88	5.38	5.99
11	7.00	7.20	6.50	6.06	5.90	5.06	6.02	7.02	7.17	5.89	5.39	6.01
12	7.03	7.21	6.50	6.09	5.31	5.10	6.04	7.04	7.20	5.90	5.42	6.03
13	7.04	7.21	6.43	6.11	5.89	5.15	6.07	7.07	7.22	5.91	5.39	6.05
14	7.04	7.21	6.26	5.67	5.90	5.18	6.09	7.10	7.25	5.92	5.34	6.07
15	7.05	7.22	5.87	5.67	5.92	5.22	6.10	7.12	7.27	5.94	5.36	6.09
16	7.06	7.20	5.20	5.70	5.92	5.26	6.11	7.14	7.28	5.96	5.39	6.11

a Estimated.

Grayling recorder well--Continued.

Water level at 2:00 a.m., in feet below land-surface datum, 1945

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
17	7.07	7.22	5.07	5.60	5.96	5.23	6.13	7.16	7.28	5.99	5.42	a6.13
18	7.08	7.23	5.08	5.59	5.97	5.26	6.16	7.18	7.29	6.01	5.46	a6.15
19	7.08	7.24	5.15	5.83	5.98	5.30	6.20	7.18	7.31	6.04	5.51	a6.17
20	7.09	7.24	5.20	5.68	5.99	5.33	6.24	7.19	7.32	6.07	5.55	a6.19
21	7.09	7.24	5.26	5.73	6.01	5.37	6.28	7.21	7.04	6.10	5.59	a6.21
22	7.09	7.20	5.34	5.77	6.02	5.42	6.33	7.18	6.99	6.13	5.61	6.24
23	7.08	6.98	5.39	5.82	6.03	5.46	6.37	7.15	6.98	6.09	5.61	a6.26
24	7.08	6.96	5.45	5.85	6.03	5.51	6.41	7.16	6.91	6.08	5.64	a6.27
25	7.10	6.93	5.52	5.76	6.04	5.56	6.45	7.17	6.65	6.08	5.66	a6.29
26	7.11	6.81	5.57	5.68	6.02	5.60	6.50	7.18	6.59	6.04	5.69	a6.31
27	7.11	6.76	5.60	5.69	5.86	5.64	6.56	7.20	6.59	5.98	a5.71	a6.32
28	7.13	a6.69	5.64	5.71	5.54	5.68	6.61	7.22	6.52	5.97	a5.74	a6.34
29	7.13		5.69	5.76	4.41	5.72	6.65	7.24	6.36	5.98	a5.76	6.36
30	7.14		5.74	5.80	4.60	5.76	6.69	7.26	6.23	5.99	a5.78	6.37
31	7.14		5.77		4.76		6.73	7.28		5.98		6.38

a Estimated.

12 (*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). NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 5.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	5.42	Apr. 14	4.10	July 14	4.29	Oct. 10	3.91
Feb. 15	5.66	May 15	4.34	Aug. 20	5.17	Nov. 15	3.49
Mar. 14	5.25	June 16	3.46	Sept. 18	5.15	Dec. 15	4.06

T. 27 N., R. 1 W.

8 (*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). SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 4.

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

Jan. 15	4.12	Apr. 14	3.72	July 13	3.69	Oct. 10	3.59
Feb. 15	4.20	May 15	3.78	Aug. 20	3.99	Nov. 15	3.31
Mar. 14	4.06	June 15	3.32	Sept. 18	3.95	Dec. 15	3.62

22 (*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). SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 20.

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

Jan. 15	4.87	Apr. 14	3.86	July 13	2.99	Oct. 10	3.28
Feb. 15	5.09	May 15	3.85	Aug. 20	3.62	Nov. 15	2.64
Mar. 14	5.02	June 15	2.56	Sept. 18	3.85	Dec. 15	2.88

27 (*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). NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 22.

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

Jan. 15	5.92	Apr. 14	4.90	July 13	4.33	Oct. 10	4.78
Feb. 15	6.00	May 15	4.98	Aug. 20	4.84	Nov. 15	4.23
Mar. 14	5.89	June 15	3.86	Sept. 18	5.03	Dec. 15	4.48

T. 27 N., R. 4 W.

42 (*840, pp. 135, 141; 845, p. 154; 886, p. 289; 906, p. 60; 936, p. 62; 944, p. 63; *986, p. 64; 1016, p. 99). NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 2.

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

Jan. 15	5.36	Apr. 14	4.82	July 13	5.25	Oct. 10	5.12
Feb. 15	5.47	May 15	5.10	Aug. 20	5.68	Nov. 15	4.71
Mar. 14	5.28	June 15	4.80	Sept. 18	5.65	Dec. 15	5.06

51 (*886, pp. 268, 269; 906, p. 60; 936, p. 62; 944, p. 63; *986, p. 64; 1016, p. 100). NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 14.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	12.91	Apr. 14	12.35	July 13	12.22	Oct. 10	12.28
Feb. 15	13.08	May 15	12.55	Aug. 20	12.71	Nov. 15	11.91
Mar. 14	13.08	June 15	11.78	Sept. 18	12.82	Dec. 15	12.20

T. 28 N., R. 1 W.

6 (*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). NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 8.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	7.93	Apr. 14	6.77	July 13	6.29	Oct. 10	5.80
Feb. 15	8.18	May 15	6.85	Aug. 20	6.92	Nov. 15	5.32
Mar. 14	8.25	June 15	5.76	Sept. 18	6.95	Dec. 15	5.59

18 (*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). NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 20.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 30	4.66	Aug. 20	5.93	Oct. 10	4.92	Dec. 15	4.80
July 13	4.94	Sept. 18	5.98	Nov. 15	4.54	-	-

T. 28 N., R. 2 W.

2 (*986, p. 65; 1016, p. 100). NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 30.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	3.82	Apr. 14	2.69	July 13	3.29	Oct. 10	2.57
Feb. 15	3.90	May 15	3.10	Aug. 20	4.00	Nov. 15	2.24
Mar. 14	3.50	June 15	2.51	Sept. 18	3.72	Dec. 15	2.86

T. 28 N., R. 4 W.

50 (*845, p. 155; 886, p. 269; 906, p. 60; 936, p. 62; *986, p. 65; 1016, p. 100). SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 14. No measurements made in 1945.

Eaton County

T. 4 N., R. 3 W.

Ea 214. John Schneeberger. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 10. 160 feet west of Delta Mills Road and 0.5 mile north of Saginaw St. Unused drilled well, diameter 3 inches, reported depth 100 feet below land surface. Measuring point, top of 3-inch casing at land-surface datum.

Water level, in feet below land-surface datum, 1944-45					
Date	Water level	Date	Water level	Date	Water level
Nov. 3, 1944	31.40	Apr. 2, 1945	32.24	July 31, 1945	32.65
Dec. 9	31.80	27	32.64	Aug. 28	32.51
Jan. 15, 1945	32.17	May 21	31.81	Oct. 29	31.87
Feb. 22	31.99	June 8	32.11	Nov. 30	31.92
Mar. 5	32.33	26	32.02	Dec. 27	32.02

Ea 215. Bernard B. Bosworth. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 9, on north side of Saginaw St. about 500 feet east of Broadbent Road. Unused dug well, diameter 4 feet, measured depth 1 $\frac{1}{2}$ feet below land surface. Measuring point, top edge of cast iron pump base, 0.19 foot above land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level
Nov. 8, 1944	15.17	Apr. 27, 1945	15.38	Aug. 29, 1945	13.34
Dec. 9	15.55	May 21	12.61	Sept. 27	12.74
Jan. 15, 1945	15.78	June 8	12.05	Oct. 29	11.09
Feb. 22	15.67	26	12.47	Nov. 30	11.10
Mar. 5	16.00	July 31	12.96	Dec. 27	11.26
Apr. 2	15.73				

Ea 216. Harley Cogswell. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 17, on south side of Saginaw St., about 1,600 feet west of Broadbent Road. Unused drilled well, diameter 1 $\frac{1}{2}$ inches, reported depth 100 feet below land-surface. Measuring point, top edge of pump base, 1.65 feet above land-surface datum. Measurements discontinued after Aug. 28, 1945.

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

Nov. 8, 1944	16.55	Mar. 5, 1945	16.81	June 9, 1945	14.08
Dec. 9	16.74	Apr. 2	16.05	26	14.47
Jan. 15, 1945	17.05	27	15.94	July 31	15.29
Feb. 22	15.86	May 21	13.45	Aug. 28	15.55

Ea 217. F. B. Marsh. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 27, 250 feet northwest of U. S. Highway 27 and 300 feet southeast of Waverly Road. Unused dug well, diameter 12 inches, measured depth 22 feet below land surface. Measuring point, top of invert on tile pipe, 0.40 foot above land-surface datum.

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

Nov. 9, 1944	16.98	Apr. 27, 1945	17.51	Aug. 28, 1945	17.30
Dec. 9	17.07	May 21	2.10	Sept. 27	7.82
Jan. 15, 1945	17.48	June 8	5.84	Oct. 29	11.03
Feb. 22	17.44	26	14.87	Nov. 30	6.44
Mar. 5	17.66	July 31	17.25	Dec. 27	10.48
Apr. 2	17.55				

Ea 218. Marion B. Mathews. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 27, 150 feet east of Delta Center Road and 300 feet north of Holmes Road. Unused drilled well, diameter 3 inches, reported depth 242 feet below land surface. Measuring point, top of casing, 1.97 feet above land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 22	15.32	Apr. 27	11.08	June 26	9.35	Sept. 27	10.16
Mar. 5	13.28	May 21	10.29	July 31	10.60	Oct. 29	8.61
Apr. 2	11.63	June 8	8.85	Aug. 28	10.98		

Grand Traverse County

T. 25 N., R. 9 W.

6 (*840, pp. 143, 144; 936, p. 62; 944, p. 63; 986, p. 65; 1016, p. 100). NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 23. No measurements made in 1945.

24 (*840, pp. 143, 144; 936, p. 62; 944, p. 63; 986, p. 65; 1016, p. 100). NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 26. No measurements made in 1945.

27 (*840, pp. 143, 144; 936, p. 62; 944, p. 63; 986, p. 65; 1016, p. 100). NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 34. No measurements made in 1945.

T. 25 N., R. 10 W.

25 (*840, pp. 143, 144-145; 936, p. 62; 944, p. 63; 986, p. 65; 1016, p. 100). SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 2. No measurements made in 1945.

26 (*840, pp. 143, 144-145; 936, p. 62; 944, p. 63; 986, p. 66; 1016, p. 101). NW $\frac{1}{4}$:NW $\frac{1}{4}$ sec. 8. No measurements made in 1945.

T. 25 N., R. 11 W.

19 (*840, pp. 143, 145; 986, p. 66; 1016, p. 101). SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 2. No measurements made in 1945.

T. 26 N., R. 9 W.

2 (*840, pp. 143, 145-146; 936, p. 62; 944, p. 63; 986, p. 66; 1016, p. 101). SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 13. No measurements made in 1945.

T. 26 N., R. 11 W.

2 (*840, pp. 143, 146; 936, p. 63; 944, p. 63; 986, p. 66; 1016, p. 101). NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 27. No measurements made in 1945.

4 (*840, pp. 143, 146; 936, p. 63; 986, p. 66; 1016, p. 101). SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 18. No measurements made in 1945.

7 (*840, pp. 143, 146; 936, p. 63; 986, p. 66; 1016, p. 101). NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 7. No measurements made in 1945.

14 (*840, pp. 143, 146; 936, p. 63; 944, p. 63; 986, p. 66; 1016, p. 101). SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 21. No measurements made in 1945.

T. 27 N., R. 9 W.

1 (*840, pp. 143, 147-148; 936, p. 63; 944, p. 63; 986, p. 66; 1016, p. 101). SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 36. No measurements made in 1945.

6 (*840, pp. 143, 147-148; 936, p. 63; 944, p. 63; 986, p. 66; 1016, p. 101). SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 25. No measurements made in 1945.

15 (*840, pp. 143, 147-148; 936, p. 63; 944, p. 63; 986, p. 66; 1016, p. 101). SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 28. No measurements made in 1945.

18 (*840, pp. 143, 147-148; 936, p. 63; 944, p. 63; 986, p. 66; 1016, p. 101). NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 4. No measurements made in 1945.

25 (*840, pp. 143, 147-148; 936, p. 63; 944, p. 64; 986, p. 66; 1016, p. 101). SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 34. No measurements made in 1945.

Ingham County

Fig 2 (*886, pp. 270, 271-272; 936, pp. 63, 64; 944, p. 64; *986, p. 67; 1016, p. 101). City of Lansing. At Cedar Street pumping station, near northeast corner of Cedar and Kalamazoo St., Lansing.

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

Date	Water level	Date	Water level	Date	Water level
Nov. 20, 1944	51.25	Apr. 2, 1945	50.10	June 26, 1945	49.15
Dec. 19	50.75	27	50.08	July 30	50.91
Jan. 12, 1945	50.65	May 16	49.85	Aug. 28	48.95
Feb. 21	50.41				

Ig 3 (*886, pp. 270, 271-272; 906, pp. 60, 61; 936, pp. 63, 64; 944, p. 64; *986, p. 67; 1016, p. 101). City of Lansing. Well 5 in Pennsylvania Ave. well field, at northwest corner of crossing of Pennsylvania Ave. and Grand Trunk Railroad, Lansing. Measuring point beginning Nov. 20, 1944, invert of 5-inch tee, 1.6 feet above previous measuring point and 2.9 feet above land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level
Nov. 20, 1944	35.28	Apr. 27, 1945	37.37	Sept. 27, 1945	34.33
Dec. 19	34.65	May 16	33.63	Oct. 30	31.88
Jan. 12, 1945	34.20	June 26	29.82	Nov. 30	30.40
Apr. 2	36.40	Aug. 28	36.04	Dec. 27	29.03

Ig 4 (*886, pp. 265, 270, 271-272; 906, pp. 60, 61; 936, p. 63, 64; 944, p. 64; *986, p. 67; 1016, p. 102). City of Lansing. Well 9 in Pennsylvania Ave. well field, about 500 feet east of Pennsylvania Ave. and just north of the Grand Trunk Railroad, Lansing. Measuring point beginning Nov. 20, 1944, invert of 5-inch tee, 0.80 foot above previous measuring point and 1.6 feet above land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level
Nov. 20, 1944	49.40	Apr. 27, 1945	50.11	Sept. 29, 1945	43.04
Dec. 22	47.87	May 16	47.47	Oct. 30	36.45
Jan. 12, 1945	47.11	June 26	42.20	Nov. 30	37.34
Apr. 2	49.25	Aug. 28	45.93	Dec. 27	35.36

Ig 5 (*886, pp. 270, 271-272; 906, pp. 60, 61; 944, p. 64; *986, p. 67; 1016, p. 102). City of Lansing. Well 7 in Riverside well field, just north of Cedar River, on approximate line of Mifflin Ave., Lansing. Measurements discontinued.

Ig 6 (*886, pp. 270, 271-272; 906, pp. 60-61; 936, pp. 63, 64; 944, p. 64; *986, p. 67; 1016, p. 102). City of Lansing. Logan well at Logan St. pumping station, Lapeer and Logan Sts. Lansing. Measuring point beginning Sept. 18, 1944, top of 8-inch nipple, 3.80 feet below land-surface datum. Automatic water-stage recorder in operation for period Nov. 5, 1944, to June 13, 1945, inclusive.

Water level at 2:00 a.m., in feet below land-surface datum, 1944

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 18	a 84.32	Nov. 17	85.21	Dec. 2	85.75	Dec. 17	85.59
Oct. 16	a 84.20	18	85.24	3	85.77	18	85.70
Nov. 2	84.86	19	85.20	4	85.47	19	85.86
5	85.19	20	84.90	5	85.23	20	86.43
6	84.58	21	84.72	6	85.12	21	86.64
7	84.69	22	84.86	7	85.20	22	87.02
8	85.02	23	84.87	8	85.04	23	86.89
9	85.04	24	85.31	9	85.21	24	87.07
10	85.19	25	85.53	10	85.45	25	85.94
11	85.62	26	85.52	11	85.07	26	85.43
12	85.65	27	84.95	12	84.88	27	86.15
13	84.95	28	85.27	13	85.03	28	86.67
14	85.19	29	85.61	14	85.28	29	87.43
15	85.36	30	85.56	15	85.41	30	87.54
16	85.09	Dec. 1	85.59	16	85.33	31	87.58

a Wetted tape measurement.

Ig 6--Continued.

Water level at 2:00 a.m., in feet below land-surface datum, 1945

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	87.04	88.14	89.00	89.58	88.90	91.89
2	87.05	88.18	88.99	88.35	89.36	91.95
3	87.61	88.16	88.90	88.63	89.68	91.97
4	87.87	88.03	89.16	89.11	89.94	91.45
5	87.96	87.11	88.27	89.28	90.11	91.66
6	88.04	87.44	88.35	89.71	90.10	92.07
7	87.87	87.90	89.01	89.81	89.21	92.75
8	87.22	87.99	89.22	90.05	89.48	93.16
9	87.48	88.05	89.32	89.10	89.91	93.42
10	87.73	87.97	89.15	88.97	90.13	93.38
11	87.81	88.13	89.35	89.24	90.39	92.35
12	87.47	87.74	88.58	89.34	90.44	92.98
13	87.85	87.75	88.81	.....	90.13	93.42
14	87.79	.....	89.01	89.58	89.20	93.67
15	87.20	.....	89.23	89.61	89.15	.....
16	87.38	.....	89.21	88.40	89.48	.....
17	87.79	88.95	89.33	88.60	89.63	.....
18	87.81	89.08	89.58	89.63	.....	.....
19	87.67	88.85	89.32	89.85	.....	.....
20	87.77	88.81	89.30	89.71	.....	.....
21	87.83	88.92	89.44	89.69	.....	.....
22	87.54	88.64	88.19	89.89	.....	.....
23	87.49	89.20	87.27	88.73	.....	.....
24	87.63	89.54	88.70	88.61	.....	.....
25	87.98	89.83	89.37	88.92	91.77	.....
26	87.91	88.91	88.94	89.02	91.99	.....
27	87.95	88.88	89.48	89.03	92.16	.....
28	87.95	89.35	89.85	89.25	91.26	a 91.89
29	87.90		89.81	89.27	91.73	.....
30	87.96		89.78	88.60	92.08	.....
31	88.02		89.63		91.85	.....

a Wetted tape measurement.

Water level at 2:00 a.m., in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
July 31	a 92.34	Sept. 27	a 87.86	Nov. 30	a 86.50
Aug. 28	a 85.60	Oct. 29	a 87.85	Dec. 27	a 84.31

a Wetted tape measurement.

Ig 7 (*886, pp. 270, 271-272; 906, pp. 60, 61; 936, pp. 63, 64; 944, p. 64; *986, p. 67; 1016, p. 102). City of Lansing. Seymour well, at Seymour Avenue pumping station, on north side of Josephine St., about 500 feet east of Seymour (Grand River) Ave., Lansing. Measuring point, beginning Nov. 5, 1944, top of 20-inch casing, 12.40 feet below land-surface datum. Automatic water-stage recorder in operation Nov. 5, 1944, to Aug. 29, 1945, inclusive.

Water level at 2:00 a.m., in feet below land-surface datum, 1944

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Nov. 5	74.46	Nov. 20	75.80	Dec. 4	74.68	Dec. 18	74.94
6	74.26	21	75.82	5	74.50	19	76.14
7	74.13	22	75.81	6	74.36	20	77.36
8	74.13	23	75.74	7	74.46	21	77.69
9	75.39	24	75.87	8	74.23	22	77.96
10	75.76	25	75.97	9	74.42	23	77.98
11	76.16	26	75.87	10	74.54	24	78.03
12	76.16	27	75.71	11	74.39	25	77.84
13	76.04	28	75.86	12	74.27	26	77.88
14	75.91	29	75.86	13	74.38	27	77.81
15	75.87	30	75.56	14	74.48	28	77.87
16	75.92	Dec. 1	75.03	15	74.51	29	78.19
17	76.08	2	74.97	16	74.40	30	78.11
18	76.06	3	74.85	17	74.61	31	78.03
19	75.99						

Ig 7--Continued.

Water level at 2:00 a.m., in feet below land-surface datum, 1945

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	77.89	78.13	79.64	79.79	80.07	81.46	81.76	80.26	.....	.....	.....	.....
2	78.04	78.06	79.47	79.63	80.34	81.32	81.77	80.27	.....	.....	.....	.....
3	78.16	78.06	79.22	79.63	80.58	81.38	81.64	81.20	.....	.....	.....	.....
4	78.27	77.98	79.54	79.50	80.80	81.45	81.64	81.78	.....	.....	.....	.....
5	78.18	77.52	79.30	79.56	80.98	81.46	81.60	81.96a	78.85	.....	.....	.....
6	78.27	77.42	79.11	79.80	81.05	81.50	81.66	81.40	.....	.....	.....	.....
7	78.13	77.66	79.41	79.82	80.70	81.95	81.87	81.52	.....	.....	.....	.....
8	77.93	77.59	79.49	80.01	80.86	82.22	81.80	81.84	.....	.....	.....	.....
9	78.16	77.17	79.31	80.14	81.17	82.47	81.74	80.87	.....	.....	.....	.....
10	78.19	76.98	79.23	80.04	81.17	82.51	81.31	80.10	.....	.....	.....	.....
11	78.25	77.36	79.39	80.06	81.26	82.24	81.31	80.58	.....	.....	.....	.....
12	77.99	77.77	79.24	80.00	80.68	82.40	85.69	80.62	.....	.....	.....	.....
13	78.22	.....	79.38	80.03	80.21	82.53	87.29	78.87	.....	.....	.....	.....
14	78.14	.....	79.29	80.15	80.05	82.56	82.65	77.24	.....	.....	.....	.....
15	78.08	.....	79.35	80.14	79.96	82.59	81.30	78.88	.....	.....	.....	.....
16	78.11	.....	79.26	79.88	79.94	82.51	79.42	.....	.....	.....	.....	.....
17	78.18	78.51	79.36	79.80	79.94	82.53	79.75a	76.80	.....	.....	.....	.....
18	78.13	78.53	79.53	80.33	79.90	82.25	78.57	76.65	.....	.....	.....	.....
19	78.02	78.63	79.32	80.35	79.97	82.29	79.92	76.59	.....	.....	.....	.....
20	78.01	78.52	79.26	80.15	79.85	82.49	79.78	76.25	.....	.....	.....	.....
21	78.01	79.09	79.31	80.05	76.23	80.73	80.29	76.05	.....	.....	.....	.....
22	77.86	79.16	77.20	80.17	78.53	80.29	.....	76.31	.....	.....	.....	.....
23	77.80	79.91	75.87	79.92	80.01	80.34	.....	76.31	.....	.....	.....	.....
24	77.79	80.32	77.85	77.74	80.41	80.16	.....	76.12	.....	.....	.....	.....
25	78.06	80.30	78.69	79.80	80.50	79.99	.....	75.96	.....	.....	.....	.....
26	77.97	79.59	78.87	79.80	81.02	80.00	.....	75.98	.....	.....	.....	.....
27	78.11	79.51	79.03	79.68	81.38	80.00	84.42	75.77	.....	.....	a62.18	.....
28	78.02	79.97	79.56	79.87	81.34	81.10	84.89	76.65	.....	.....	.....	.....
29	77.95	.....	79.92	79.84	81.46	81.56	82.00	77.28	.....	a73.48	.....	.....
30	78.00	.....	79.95	79.77	81.59	81.87	80.73	.....	.....	.....	a67.75	.....
31	78.08	.....	79.82	.....	81.56	80.34	.....	.....	.....	.....	.....	.....

a Wetted-tape measurement.

Ig 8 (*886, pp. 265, 270, 271-272; 906, pp. 60, 61; 936, pp. 63, 64; 944, p. 65; *986, p. 68; 1016, p. 102). City of Lansing, Townsend St. pumping station, on east side of Townsend St. at junction of Olds Ave. extended. Measuring point beginning Aug. 28, 1945, top of well casing lug, 7.40 feet below land-surface datum. Automatic water-stage recorder installed Oct. 26, 1945.

Water level at 2:00 a.m., in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Sept. 18, 1944	a 35.85	Nov. 6, 1945	31.06	Nov. 29, 1945	30.59
Oct. 26	a 35.25	7	31.46	30	30.57
Nov. 17	a 35.60	8	31.64	Dec. 1	30.73
Dec. 19	a 34.95	9	31.81	2	30.27
Jan. 12, 1945	a 35.24	10	32.18	3	29.56
Feb. 22	a 35.63	11	31.69	4	30.00
Apr. 3	a 35.30	12	30.78	5	30.51
27	a 35.13	13	30.63	6	30.43
May 21	a 35.38	14	31.27	7	30.36
June 26	a 34.94	15	31.73	8	30.44
Aug. 1	a 37.09	16	31.83	9	29.98
28	a 33.53	17	31.70	10	29.56
Sept. 29	a 32.25	18	31.40	11	30.15
Oct. 27	32.20	19	30.75	12	30.69
28	31.89	20	31.15	13	30.49
29	31.35	21	31.50	14	30.15
30	31.48	22	31.26	15	30.15
31	31.48	23	30.65	16	29.78
Nov. 1	31.86	24	30.42	17	29.61
2	31.69	25	30.31	18	30.23
3	31.93	26	30.42	19	30.25
4	31.63	27	30.55	20	30.40
5	30.74	28	30.46	21	30.64

a Wetted-tape measurement.

Ig 8--Continued.

Water level at 2:00 a.m., in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Dec. 22, 1945	30.71	Dec. 26, 1945	28.97	Dec. 29, 1945	29.97
23	30.51	27	29.65	30	29.52
24	29.87	28	30.13	31	29.02
25	29.44				

Ig 9. City of Lansing. At Cedar St. pumping station, 280 feet west of Cedar St. and 250 feet south of Jay St., Lansing. Unused drilled well, diameter 12 inches, measured depth 412.6 feet below measuring point. Measuring point, top of recorder shelf, 4.85 feet below land-surface datum. Automatic water-stage recorder installed Sept. 5, 1945.

Water level at 2:00 a.m., in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 6	50.90	Oct. 6	49.12	Nov. 4	49.42	Dec. 3	45.80
7	51.37	7	48.15	5	48.23	4	46.96
8	52.15	8	47.62	6	48.20	5	47.02
9	51.17	9	48.93	7	48.79	6	46.84
10	50.52	10	48.68	8	49.01	7	46.68
11	50.03	11	49.22	9	49.73	8	46.80
12	49.55	12	49.52	10	50.38	9	46.15
13	49.50	13	49.10	11	49.01	10	45.90
14	48.95	14	48.17	12	48.06	11	47.20
15	48.88	15	47.60	13	47.46	12	47.70
16	48.97	16	47.56	14	48.96	13	46.74
17	48.67	17	48.55	15	49.69	14	45.92
18	48.29	18	49.18	16	49.89	15	45.82
19	48.99	19	49.64	17	49.49	16	45.61
20	49.06	20	50.08	18	48.70	17	45.62
21	50.29	21	49.27	19	47.92	18	46.90
22	50.09	22	48.18	20	49.08	19	47.43
23	48.98	23	49.19	21	49.46	20	47.90
24	48.53	24	49.60	22	48.68	21	48.40
25	48.54	25	49.67	23	48.02	22	48.30
26	49.12	26	49.84	24	47.69	23	47.39
27	48.44	27	50.25	25	47.43	24	47.53
28	48.32	28	50.12	26	47.36	25	46.85
29	48.79	29	48.89	27	46.95	26	46.02
30	48.23	30	49.58	28	46.73	27	47.07
Oct. 1	47.45	31	49.61	29	46.70	28	47.05
2	48.71	Nov. 1	50.07	30	46.57	29	47.02
3	48.93	2	49.99	Dec. 1	46.45	30	46.19
4	49.64	3	50.29	2	46.11	31	45.95
5	49.76						

Ig 10. R. A. Allen. 86 feet south of West Washtenaw St. and 70 feet east of Hungerford St., in Lansing township. Unused drilled well, diameter 2 inches, measured depth 172.1 feet below top of casing. Measuring point, top of 2-inch casing, 3.5 feet below land-surface datum.

Water level, in feet below land-surface datum, 1945					
Nov. 12	77.00	Nov. 27	75.62	Dec. 10	78.87
19	76.72	Dec. 3	75.06	17	75.09
				22	75.55
				29	75.87

Ig 30. George R. Byrnes. 105 feet southeast of Delta Driver Drive, about 0.6 mile southwest of U. S. Highway 16. Unused drilled well, diameter 3 inches, measured depth 59 feet below top of pipe. Measuring point, top of 3-inch casing, 3.1 feet below land-surface datum.

Water level, in feet below land-surface datum, 1944-45					
Date	Water level	Date	Water level	Date	Water level
Nov. 22, 1944	32.38	Apr. 3, 1945	34.92	Aug. 28, 1945	39.78
Dec. 9	32.74	27	35.42	Sept. 27	40.76
Jan. 16, 1945	33.77	June 8	36.58	Oct. 29	41.85
Feb. 12	34.13	26	37.30	Nov. 30	42.49
Mar. 5	34.58	July 31	38.60	Dec. 29	43.46

Ig 35. Tank Bros. Dairy. 280 feet north of West Willow St. and 0.6 mile east of Waverly Road, in Lansing township. Unused drilled well, diameter 3 inches, measured depth 100.2 feet below land surface. Measuring point, top edge of well pit header, 3.71 feet below land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level
Nov. 12, 1944	53.94	June 8, 1945	56.79	Nov. 27, 1945	58.37
Jan. 16, 1945	55.40	26	56.33	Dec. 3	58.50
Feb. 13	55.52	July 31	57.37	10	59.16
Mar. 5	55.79	Aug. 20	57.80	17	57.91
Apr. 2	55.69	Sept. 27	58.56	22	59.23
27	56.98	Oct. 29	59.39	28	59.46
May 20	55.79	Nov. 19	58.31		

Ig 45. City of Lansing. Well NW 3, about 70 feet north of Muskegon Ave. and about 370 feet west of Glenrose Ave., Lansing. Drilled well, used intermittently, diameter 12 inches, reported depth 418 feet below land surface. Measuring point, top of concrete well curb, 0.61 foot above land-surface datum. Measurements discontinued June 29, 1945.

Water level at 2:00 a.m., in feet below land-surface datum, 1944-45

Sept. 19, 1944	a 38.51	Mar. 12, 1945	37.54	Mar. 21, 1945	37.56
Oct. 16	a 38.24	13	37.65	22	37.30
Nov. 17	a 38.12	14	37.63	23	37.26
Dec. 19	a 38.37	15	37.70	24	37.37
Jan. 12, 1945	a 37.69	16	37.68	25	37.38
Feb. 20	a 38.51	17	37.65	26	37.37
27	a 38.30	18	37.73	Apr. 27	a 37.64
Mar. 9	a 37.57	19	37.61	May 21	a 33.76
10	37.54	20	37.63	June 28	a 37.21
11	37.61				

a Wetted-tape measurement.

Ig 60. Consumers Gas Co. About 15 feet south of Grand River and about 480 feet west of North Chestnut St., Lansing. Unused drilled well, diameter 12 inches, measured depth 369.3 feet below land surface. Measuring point, top of 1½-inch coupling, 0.70 foot above land-surface datum.

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

Aug. 28	74.67	Oct. 29	73.38	Dec. 27	65.39
Sept. 27	73.42	Nov. 30	69.69		

Ig 75. Motor Wheel Corporation. On northwest corner of Saginaw and Summit Sts., Lansing. Unused drilled well, diameter 10 inches, reported depth 356 feet below land surface. Measuring point, invert of 4-inch tee, 2.0 feet below land-surface datum.

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

Sept. 20, 1944	82.78	Feb. 23, 1945	84.22	July 30, 1945	85.70
Oct. 16	82.38	Apr. 2	83.94	Aug. 28	83.35
Nov. 20	82.84	27	83.89	Oct. 30	82.20
Dec. 19	83.08	May 21	84.73	Dec. 3	68.50
Jan. 12, 1945	83.67	June 28	88.35		

Ig 76. Lansing Co. About 230 feet west of Cedar St. and 225 feet south of Saginaw St., Lansing. Unused drilled well, diameter 4 inches, measured depth 105.5 feet below land surface. Measuring point, top of 4-inch casing, 5.83 feet below land-surface datum.

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

Oct. 2, 1944	81.93	Apr. 3, 1945	81.03	July 30, 1945	78.93
Nov. 20	81.13	28	80.62	Oct. 29	78.57
Dec. 14	81.81	May 21	78.86	Nov. 30	70.98
Jan. 12, 1945	80.41	June 26	80.33	Dec. 28	65.50
Feb. 28	80.48				

Ig 91. City of East Lansing. Well West 1, on south side of State Highway M-78, about 200 feet northeast of Touraine Ave., East Lansing. Drilled well, used intermittently, diameter 14 inches, reported depth 407 feet below land surface. Measuring point, top of 1½-inch bushing, 1.0 foot above land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level
Dec. 22, 1944	63.78	June 26, 1945	68.82	Oct. 30, 1945	63.55
Jan. 12, 1945	66.13	July 31	71.10	Nov. 30	63.30
Apr. 27	68.70	Sept. 29	65.65	Dec. 27	62.11
May 16	66.80				

Ig 110. City of Lansing. Well C-1, about 150 feet west of Cedar St. and 50 feet south of Jay St., Lansing. Unused drilled well, diameter 20 inches, reported depth 377 feet below land surface. Measuring point, top edge of flange cover, 11.07 feet below land-surface datum.

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

Nov. 30, 1944	63.82	Apr. 27, 1945	64.32	Aug. 28, 1945	57.67
Dec. 19	64.36	May 16	65.55	Oct. 30	55.87
Jan. 12, 1945	64.81	June 26	64.49	Nov. 30	52.29
Feb. 21	64.38	July 30	64.73	Dec. 27	53.12
Apr. 2	63.07				

Ig 153. City of Lansing. Well PM-9, about 120 feet north of Main St. and 80 feet east of Bensch St., Lansing. Drilled well, used intermittently, diameter 14 inches, reported depth 416 feet. Measurements by air line with center line of altitude gage 1.9 feet above land-surface datum.

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

Nov. 20, 1944	95.00	July 30, 1945	98.00	Oct. 31, 1945	82.00
Dec. 19	96.00	Aug. 28	97.00	Nov. 30	77.00
Jan. 12, 1945	95.00	Sept. 29	87.00	Dec. 27	74.00
Feb. 21	a 79.00				

a Well in use.

Ig 157. City of Lansing. Well PM-12, 145 feet north of East Main St. and 36 feet west of South Fairview St., Lansing. Unused drilled well, diameter 14 inches, reported depth 422 feet below land surface. Measuring point, top of 14-inch casing, 3.91 feet below land-surface datum.

Water level at 2:00 a.m., in feet below land-surface datum, 1944-45

Nov. 20, 1944	a 99.50	Jan. 30, 1945	101.27	Feb. 24, 1945	101.54
Dec. 19	a 101.70	31	101.62	25	100.39
Jan. 7, 1945	99.42	Feb. 1	101.95	26	97.70
8	97.62	2	102.04	27	99.31
9	98.92	3	101.96	28	100.56
10	100.76	4	100.24	Mar. 1	100.06
11	100.97	5	99.23	2	100.11
12	100.80	6	101.22	3	100.01
13	101.21	7	101.67	4	99.76
14	99.96	8	101.70	5	97.81
15	98.61	9	101.87	10	101.39
16	100.79	10	101.91	11	100.01
17	101.43	11	100.76	12	97.67
18	101.65	12	98.33	13	99.63
19	101.66	13	99.91	14	100.94
20	101.88	14	100.61	15	101.32
21	100.09	15	101.31	16	101.64
22	98.24	16	101.16	17	101.85
23	100.71	17	101.91	18	100.11
24	101.03	18	100.01	19	98.03
25	101.74	19	98.88	20	100.72
26	102.01	20	99.84	21	100.95
27	102.20	21	99.82	22	101.70
28	100.11	22	100.32	23	101.77
29	100.50	23	100.24	24	101.99

a Wetted-tape measurement.

Ig 157--Continued.

Water level at 2:00 a.m., in feet below land-surface datum, 1944-45

Date	Water level	Date	Water level	Date	Water level
Mar. 25, 1945	100.53	Apr. 4, 1945	101.25	Apr. 28, 1945	a101.51
26	98.08	5	101.50	May 21	a 99.83
27	100.80	6	102.26	June 26	a 99.73
28	101.25	7	102.22	July 30	a 98.12
29	101.93	8	100.97	Aug. 28	a 86.56
30	102.18	9	98.28	Sept. 29	a 72.15
31	102.05	10	101.04	Oct. 30	a 58.82
Apr. 1	100.84	11	101.65	Nov. 30	a 49.28
2	98.20	12	101.78	Dec. 27	a 42.81
3	101.06				

a Wetted-tape measurement.

Ig 182. Atlas Drop Forge Co. Well 2, in southwest quadrant of intersection of Davis Ave. extended and Mt. Hope Ave., Lansing. Drilled well, used intermittently, diameter 8 inches, reported depth 425 feet below land surface. Measuring point, top of 8-inch casing, 1.0 foot above land-surface datum. Tape measurements made when well is not in use.

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

Sept. 21, 1944	33.65	Dec. 19, 1944	32.65	Apr. 2, 1945	34.24
Oct. 16	33.60	Jan. 12, 1945	32.20	28	33.81
Nov. 17	32.90	Feb. 22	32.55	May 21	32.35

Ig 183. Atlas Drop Forge Co. Well 1, on south side of Mt. Hope Ave. between Todd and Davis Ave., Lansing. Drilled well, used intermittently, diameter 8 inches, reported depth 225 feet below land surface. Measuring point, top of 8-inch casing, 0.2 foot above land-surface datum. Tape measurements made when well is not in use.

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

Sept. 21, 1944	33.20	Feb. 22, 1945	32.52	July 30, 1945	34.40
Oct. 16	32.85	Apr. 2	33.82	Aug. 28	33.97
Nov. 17	32.75	28	33.51	Oct. 30	33.86
Dec. 19	33.22	May 21	34.09	Dec. 3	33.15
Jan. 12, 1945	32.36	June 26	34.50	27	31.27

Ig 265. Frank Clever. 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. Unused drilled well, diameter 10 inches, measured depth 452.8 feet below land surface. Measuring point, top of recorder shelf, 2.35 feet above land-surface datum.

Water level at 2:00 a.m., in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Nov. 27	29.14	Dec. 6	28.76	Dec. 15	28.13	Dec. 24	26.90
28	29.11	7	28.62	16	27.73	25	26.43
29	29.21	8	28.65	17	27.48	26	26.12
30	29.39	9	28.26	18	27.57	27	26.23
Dec. 1	29.33	10	28.05	19	27.61	28	26.16
2	28.85	11	28.18	20	27.65	29	26.27
3	28.56	12	28.32	21	27.71	30	26.08
4	28.75	13	28.33	22	27.47	31	26.07
5	28.79	14	28.11	23	27.25		

Ig 266. Michigan State College, lamb farm. About 190 feet east of Harrison Road, 360 feet south of Mt. Hope Ave. and 1.7 miles south of East Lansing. Unused drilled well, diameter 3 inches, reported depth 120 feet below land surface. Measuring point, top edge of concrete pit wall, at land-surface datum.

Ig 266--Continued.

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

Date	Water level	Date	Water level	Date	Water level
Nov. 9, 1944	27.32	Apr. 2, 1945	28.00	Aug. 28, 1945	26.28
20	27.75	27	27.63	Sept. 29	25.14
Dec. 22	27.85	May 15	27.40	Oct. 31	23.77
Feb. 28, 1945	28.44	June 28	26.18	Nov. 30	23.80
Mar. 5	28.30	July 31	26.65	Dec. 27	23.22

Ig 270. Owner unknown. About 90 feet north of Irvington St. and 100 feet west of South Pennsylvania Ave. Unused drilled well, diameter 2 inches, measured depth 75 feet below land surface. Measuring point, top of 2- by 1 $\frac{1}{4}$ -inch reducer coupling, 0.97 foot above land-surface datum.

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

Nov. 19, 1944	24.04	Apr. 2, 1945	23.59	July 30, 1945	23.69
Dec. 9	24.21	27	23.63	Sept. 27	22.77
Feb. 2, 1945	24.23	May 16	22.15	Oct. 29	22.43
22	23.72	June 8	22.64	Nov. 30	22.38
Mar. 5	23.57	26	22.78	Dec. 27	22.48

Ig 271. Harry De Laere. About 25 feet north of Maybel St. and 315 feet east of Waverly Road, Lansing township. Unused drilled well, diameter 3 inches, measured depth 204.3 feet below land surface. Measuring point, top of 3-inch casing, 0.18 foot above land-surface datum.

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

Nov. 8, 1944	24.39	Apr. 27, 1945	22.76	Aug. 28, 1945	22.05
Dec. 9	22.77	May 21	21.39	Sept. 27	21.97
Jan. 10, 1945	23.01	June 8	21.22	Oct. 29	21.27
Feb. 22	23.12	26	21.25	Nov. 30	21.39
Mar. 5	23.22	July 31	21.89	Dec. 27	21.50
Apr. 2	21.97				

The average daily withdrawal of ground water from municipal supply wells, in Lansing, during 1945 ranged from 10.2 million gallons in December to 15.4 million gallons in July and averaged 13.4 million gallons. The average daily withdrawal from these wells in millions of gallons was 14.1 in 1944; 12.8 in 1943; 11.1 in 1942; 10.8 in 1941; and 9.4 in 1940.

The total precipitation at Lansing in 1945 was 38.95 inches, or 7.52 inches above normal and about 50 percent greater than the 1944 rainfall. In consequence, all wells in the Lansing area, which are not greatly affected by nearby pumping, showed rises in water level for the year, ranging from 1.3 to as much as 4.6 feet. Wells in the deeper parts of the cones of influence of the local industrial and municipal wells showed net rises in water level ranging from 5 to 59 feet in the north, south, and east parts of the city, and net declines ranging from 3 to 11 feet in the west part of the city. These large adjustments of the piezometric surface in the Parma-Saginaw sandstones are chiefly the result of a redistribution of the center of pumping for the municipal-supply wells.

Kalamazoo County

Ko 1 (*886, pp. 264, 273, 274; *906, pp. 61, 62; 936, pp. 64, 65; 944, p. 66; *986, p. 68; *1016, p. 102). Well B at Central (Burdick Street) pumping station of city waterworks, Kalamazoo.

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

Feb. 25	22.75	May 20	19.93	Sept. 29	22.80
Apr. 8	23.17	June 17	20.00		

Ko 2 (*886, pp. 264, 273, 274; *906, p. 62; 936, pp. 64, 65; 944, p. 66; *986, pp. 68, 69; 1016, p. 103). Well C at city waterworks, about 1,100 feet southeast of Central pumping station, Kalamazoo.

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

Feb. 25	22.38	May 20	20.19	Sept. 29	24.20
Apr. 8	23.03	June 17	19.88		

Ko 3 (*886, pp. 264, 273; 274; *906, p. 62; 936, p. 65; 944, p. 66; *986, p. 69; 1016, p. 103). At Balch St. pumping station of city water-works, between supply wells 1 and 2, Kalamazoo.

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

Date	Water level	Date	Water level	Date	Water level
Feb. 25	21.31	May 20	22.89	Sept. 29	27.52
Apr. 8	21.95	June 17	20.67		

The average daily pumpage from the municipal wells in Kalamazoo in 1945 was 8.70 million gallons, about 0.08 million gallons more than in 1944 and 1.98 million gallons more than in 1943. The average daily pumpage in 1945 ranged from 7.54 million gallons in December to 9.64 million gallons in August.

Ko 4. H. H. Chamberlain. NW $\frac{1}{4}$ SE $\frac{1}{4}$ 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. Unused driven well, diameter 1 $\frac{1}{2}$ inches, measured depth 23 feet below land surface. Measuring point, top of casing, 4.0 feet above land-surface datum.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 10	13.78	Oct. 22	13.96	Nov. 18	14.18	Dec. 17	14.40
23	13.80	29	14.00	26	14.20	24	14.41
Oct. 1	13.84	Nov. 4	14.05	Dec. 3	14.27	31	14.48
7	13.86	13	14.10	10	14.32		

Kalkaska County

T. 27 N., R. 5 W.

13 (*944, p. 67; *986, p. 69; 1016, p. 103). NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 27.

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

Jan. 15	13.66	Apr. 14	13.82	July 14	13.87	Oct. 10	14.30
Feb. 15	14.05	May 15	14.58	Aug. 20	14.27	Nov. 15	14.22
Mar. 14	14.55	June 23	13.72	Sept. 18	14.45	Dec. 15	14.14

100 (*886, p. 274; 906, p. 62; 936, p. 65; 944, p. 67; *986, p. 69; 1016, p. 103). NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 36.

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

Jan. 15	12.58	Apr. 14	12.02	July 14	12.02	Oct. 10	12.40
Feb. 15	12.73	May 15	12.34	Aug. 20	12.51	Nov. 15	12.12
Mar. 14	12.92	June 16	11.70	Sept. 18	12.70	Dec. 15	12.08

Missaukee County

T. 22 N., R. 5 W.

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). NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 2. No measurements made in 1945.

T. 23 N., R. 6 W.

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). SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 13. No measurements made in 1945.

T. 24 N., R. 6 W.

45 (*840, pp. 149, 154, 155; 845, p. 155; 886, pp. 274-275; 906, pp. 62-63; 936, p. 66; 944, p. 67; 986, p. 70; 1016, p. 104). SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 13. No measurements made in 1945.

Montmorency County

T. 31 N., R. 2 E.

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). NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 11. Water level, in feet below land-surface datum, 1945: Nov. 8, 9.49; Nov. 10, 9.38; Dec. 4, 9.44; Dec. 12, 9.59.

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). NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 14. No measurements made in 1945.

18 (*845, p. 156; 886, p. 275; 906, p. 63; 936, p. 66; 944, p. 67; 986, p. 70; 1016, p. 104). SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 15. No measurements made in 1945.

28 (*845, p. 156; 886, p. 275; 906, p. 63; 936, p. 66; 944, p. 67; 986, p. 70; 1016, p. 104). SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 34. No measurements made in 1945.

T. 31 N., R. 3 E.

22 (*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). NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 9. No measurements made in 1945.

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). SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 7. No measurements made in 1945.

T. 31 N., R. 4 E.

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). NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 8. Water levels, in feet below land-surface datum, 1945: Nov. 8, 1.19; Nov. 10, 1.23; Dec. 4, 1.63; Dec. 12, 1.75.

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). SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 20. No measurements made in 1945.

Oakland County

Oa 1 (*886, pp. 266, 277; 906, pp. 63-64; 936, pp. 66, 67; 944, p. 68; *986, p. 71; 1016, p. 104). City of Pontiac. Well 6 at Walnut St. pumping station, about 200 feet west of supply well 1.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	78.3	....	....	....	....	74.3	....	88.8	....	82.3	....	....
2	....	82.3	83.0	80.3	....	....	81.3	....	....	....	76.3	....
3	79.3	....	....	....	....	....	....	87.8	80.8	83.8	....	70.8
4	....	....	....	81.3	81.3	72.3	....	....	....	....	....	....
5	77.7	77.8	81.3	....	....	....	....	....	94.8	....	73.3	70.0
6	....	....	....	81.3	....	73.3	80.3	83.3	....	....	....	....
7	....	81.3	82.3	....	79.3	....	....	....	84.8	....	77.8	....
8	....	....	....	....	....	74.5	....	84.8	....	76.3	....	....
9	....	....	82.3	82.5	77.8	....	79.3	....	....	....	84.3	....

Oa 1--Continued.

Water level, in feet below land-surface datum, 1945												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
10	81.3	....	....	....	....	....	....	85.3	85.3	77.3	....	70.8
11	....	....	....	80.3	78.1	74.3	82.3	....	....	....	85.3	....
12	81.3	77.3	80.3	....	....	....	....	....	82.3	81.3	....	71.3
13	....	....	....	80.8	....	75.8	83.3	85.8	....	....	....	....
14	....	79.3	81.3	....	....	....	....	....	81.3	....	....	....
15	80.8	....	....	....	....	77.8	....	82.3	....	76.8	77.3	....
16	....	81.8	83.3	79.0	77.8	....	81.3	....	....	....	....	....
17	82.1	....	....	....	....	....	....	79.3	80.8	76.3	....	71.8
18	....	....	....	80.8	77.8	74.3	82.3	....	....	....	....	....
19	83.8	83.3	80.3	....	....	....	....	....	80.3	....	....	75.3
20	....	....	....	80.3	....	77.3	83.9	82.8	....	....	....	....
21	....	83.3	81.3	....	76.3	....	....	....	79.3	....	76.8	73.3
22	83.3	....	....	....	....	80.8	....	83.3	....	77.3	....	....
23	....	83.3	80.3	81.3	75.8	....	86.3	....	....	....	72.3	....
24	83.7	....	....	....	....	....	....	82.3	82.3	76.3	....	71.8
25	....	....	....	80.3	76.3	82.3	87.8	....	....	....	....	....
26	83.3	83.3	80.3	81.3	....	....	....	....	....	....	71.8	70.3
27	....	....	....	80.3	....	83.8	87.3	80.3	....	76.8	....	....
28	....	83.3	81.3	....	73.3	....	....	....	82.8	....	73.3	73.8
29	83.3	....	....	....	....	82.6	....	87.3	....	74.8	....	....
30	....	....	81.3	79.3	76.3	....	....	....	....	....	....	....
31	....	....	....	....	....	....	....	85.3	....	77.3	....	69.8

Oa 2 (*886, pp. 266, 276, 277; 906, p. 64; 936, pp. 66, 67-68; 944, p. 68; *986, p. 71; 1016, p. 105). City of Pontiac. Well 21 in Walnut St. well group, about 40 feet northwest of supply well 3.

Water level, in feet below land-surface datum, 1945												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	85.9	....	....	....	....	85.7	....	....	....	88.9	....	....
2	....	93.4	91.6	....	....	....	90.9	....	....	....	82.9	....
3	87.9	....	....	....	....	....	....	....	89.4	....	....	77.9
4	....	....	....	....	90.9	81.9	....	....	....	....	....	....
5	87.9	87.4	89.2	....	....	....	....	....	93.9	....	84.9	81.6
6	....	....	....	90.9	....	82.4	88.4	....	....	....	....	....
7	....	87.9	90.9	....	89.9	....	....	....	95.9	....	86.9	....
8	....	....	....	....	....	82.9	....	....	....	86.9	....	....
9	....	....	90.9	91.4	86.9	....	88.2	....	....	....	93.7	....
10	87.9	....	....	....	....	....	....	....	93.9	86.9	....	77.4
11	....	....	....	91.9	85.9	82.7	89.9	....	....	....	82.9	....
12	92.9	88.4	90.9	....	....	....	....	....	95.9	89.9	....	80.9
13	....	....	....	91.9	....	84.1	91.5	....	....	....	....	....
14	....	87.9	91.4	....	....	....	....	....	93.9	....	....	....
15	90.9	....	....	....	....	87.9	....	97.9	....	84.9	80.9	....
16	....	90.9	93.9	89.9	86.9	....	90.9	....	....	....	....	....
17	91.9	....	....	....	....	....	....	89.9	88.9	84.9	....	80.9
18	....	....	....	90.9	86.9	80.4	91.9	....	....	....	....	....
19	91.9	92.9	93.9	....	....	....	....	....	85.9	....	....	81.9
20	....	....	....	90.9	....	80.9	93.5	97.9	....	....	....	....
21	....	92.4	90.9	....	86.9	....	....	....	87.7	....	84.4	81.9
22	92.9	....	....	....	....	91.4	....	....	....	83.9	....	....
23	....	91.9	90.9	90.4	88.6	....	98.9	....	....	....	79.9	....
24	94.2	....	....	....	....	....	....	97.9	92.4	84.9	....	80.9
25	....	....	....	90.2	88.4	92.4	....	....	....	....	....	....
26	93.6	....	90.9	....	....	....	....	....	....	....	79.9	79.4
27	....	....	....	89.9	....	96.4	....	91.7	....	84.9	....	....
28	....	92.5	90.9	....	84.9	....	....	....	90.9	....	81.9	81.9
29	93.9	....	....	....	....	91.4	....	97.9	....	84.4	....	....
30	....	....	90.9	89.9	86.4	....	....	....	....	....	....	....
31	....	....	....	....	....	....	....	97.9	....	84.9	....	81.9

Oa 3 (*886, pp. 266, 276, 277; 906, p. 64; 936, pp. 66, 68; 944, pp. 68-69; *986, p. 71; 1016, p. 105). City of Pontiac. Just outside pump house of East Boulevard supply well, near intersection of East Boulevard and Mount Clemens St., Pontiac.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	38.6	....	....	....	....	27.6	....	39.1	....	30.6	....	....
2	....	35.6	35.6	36.6	....	....	30.6	....	....	....	30.6	....
3	37.1	....	....	....	....	....	....	40.1	33.6	33.1	....	30.6
4	....	....	....	35.6	36.6	26.6	....	....	....	....	....	....
5	40.6	33.6	35.1	....	....	....	....	....	33.6	....	33.1	30.6
6	....	....	....	36.6	....	28.6	33.1	37.1	....	....	....	....
7	....	33.9	31.6	....	35.4	....	....	....	34.6	....	35.6	....
8	....	....	32.6	....	....	28.6	....	35.6	....	33.1	....	....
9	....	....	32.6	32.6	35.6	....	33.9	....	....	....	32.6	....
10	39.4	....	....	....	....	....	....	36.6	33.6	32.6	....	30.6
11	....	....	....	33.1	35.6	26.6	35.4	....	....	....	31.6	....
12	36.6	38.6	34.8	....	....	....	....	....	36.1	33.6	....	32.6
13	....	....	....	33.9	....	28.6	36.2	36.1	....	....	....	....
14	....	38.6	37.1	....	....	....	....	....	33.6	....	....	....
15	36.9	....	....	....	....	31.1	....	35.6	....	32.6	32.6	....
16	....	38.6	37.6	32.6	34.6	....	33.2	....	....	....	....	....
17	37.6	....	....	....	....	....	....	35.6	33.6	35.1	....	30.6
18	....	....	....	34.6	35.1	30.6	35.6	....	....	....	....	....
19	37.1	36.6	35.1	....	....	....	....	....	34.6	....	....	30.6
20	....	....	....	34.6	....	30.1	37.2	34.6	....	....	....	....
21	....	37.6	36.6	....	31.1	....	....	....	34.6	....	33.6	30.6
22	34.6	....	....	....	....	30.1	....	36.6	....	32.6	....	....
23	....	37.6	36.2	33.1	31.6	....	33.6	....	....	....	32.1	....
24	34.6	....	....	....	....	....	....	37.1	32.4	32.6	....	31.6
25	....	....	....	34.6	31.6	30.4	35.6	....	....	....	....	....
26	35.6	35.1	33.6	....	....	....	....	....	....	....	31.6	30.6
27	....	....	....	32.6	....	30.6	33.6	33.6	....	32.6	....	....
28	....	35.6	36.6	....	28.6	....	....	....	34.6	....	31.6	26.6
29	35.1	....	....	....	....	32.6	....	33.6	....	31.6	....	....
30	....	....	36.6	32.6	28.6	....	....	....	....	....	....	....
31	....	....	....	....	....	....	....	35.6	....	34.6	....	25.6

Water-level measurements in wells 1, 2, and 3 were made by personnel of the Department of Water Supply of the city of Pontiac.

The average daily withdrawal of ground water from the municipal wells in Pontiac during 1945 ranged from 5.57 million gallons in December to 8.79 million gallons in July and averaged 7.52 million gallons for the year. The average daily pumpage in previous years was 8.3 million gallons in 1944; 7.64 million gallons in 1943; and 7.07 million gallons in 1942.

The precipitation at Pontiac in 1945 was 37.30 inches, or 8.05 inches above normal and about 60 percent greater than the rainfall in 1944. In consequence, the water levels in wells Oa 1, 2, and 3 rose from 7.0 to 10.8 feet during 1945. With only a 10 percent reduction in average pumping rate for the year, it would seem most probable that a large part of the rise may be attributed to increased precipitation in 1945.

Otsego County

T. 29 N., R. 3 W.

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). SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 32.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	2.95	Apr. 14	1.86	July 13	2.73	Oct. 10	2.21
Feb. 15	3.03	May 15	2.60	Aug. 20	3.29	Nov. 15	1.86
Mar. 14	2.82	June 15	2.13	Sept. 18	3.12	Dec. 15	2.27

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). SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 29.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	8.15	Apr. 14	7.11	July 13	7.76	Oct. 10	7.91
Feb. 15	8.23	May 15	7.59	Aug. 20	8.25	Nov. 15	7.18
Mar. 14	8.32	June 23	7.63	Sept. 18	8.44	Dec. 15	7.27

Ottawa County

Ot 2. City of Holland, Board of Public Works. In Holland, 28 feet south of East 18th St. and 507 feet west of Waverly Road. Unused drilled well, diameter 1 $\frac{1}{2}$ inches, reported depth 50 feet below land surface. Measuring point, top of pipe, 4.00 feet above land-surface datum. Water levels, in feet below land-surface datum, 1945: Dec. 21, 27.91; Dec. 28, 34.72.

Ot 5. City of Holland, Board of Public Works. In Holland, 28 feet south of East 8th St. and 730 feet west of Waverly Road. Unused drilled well, diameter 6 inches, reported depth 50 feet below land surface. Measuring point, top of 6-inch tee, 1.80 feet above land-surface datum. Automatic water-stage recorder in operation from Dec. 12, to Dec. 15, 1945.

Water level at 2:00 a.m., in feet below land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level
Dec. 12	35.05	Dec. 14	35.21	Dec. 21	a 35.37
13	35.17	15	35.45	28	a 34.93

a Wetted tape measurement.

Presque Isle County

T. 33 N., R. 2 E.

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). SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 29. No measurements made in 1945.

16 (*944, p. 69; 986, p. 72; 1016, p. 107). NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 17. No measurements made in 1945.

17 (*845, pp. 157-158; 886, p. 277; 906, p. 65; 936, p. 68; 986, p. 73; 1016, p. 107). NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 20. No measurements made in 1945.

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). NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 30. No measurements made in 1945.

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). SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 30. No measurements made in 1945.

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). NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 18. No measurements made in 1945.

23 (*845, pp. 157-158; 886, p. 277; 906, p. 65; 936, p. 68; 944, p. 70; 986, p. 73; 1016, p. 107). NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 6. No measurements made in 1945.

Roscommon County

T. 21 N., R. 3 W.

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). NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 2.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 16	15.88	Apr. 13	15.90	July 14	14.75	Oct. 11	15.31
Feb. 14	16.07	May 15	16.07	Aug. 21	15.00	Nov. 16	15.42
Mar. 15	16.20	June 16	15.12	Sept. 17	15.15	Dec. 17	15.32

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). NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 5.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 16	9.94	Apr. 13	9.82	July 14	9.48	Oct. 11	9.82
Feb. 14	9.98	May 15	9.78	Aug. 21	9.84	Nov. 16	9.60
Mar. 15	9.84	June 16	9.11	Sept. 17	9.90	Dec. 17	9.70

T. 21 N., R. 4 W.

8 (*840, pp. 169, 172-173; 845, p. 158; 886, p. 278; 906, p. 65; 936, p. 69; 944, p. 70; *986, p. 73; 1016, p. 107). NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 13.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 16	4.97	Apr. 13	3.65	July 14	3.19	Oct. 11	3.27
Feb. 14	5.02	May 15	3.00	Aug. 21	4.11	Nov. 16	2.75
Mar. 15	3.53	June 16	1.54	Sept. 17	4.30	Dec. 17	3.21

50 (*886, p. 278; 906, p. 65; 936, p. 69; 944, p. 70; *986, p. 73; 1016, p. 108). NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 4.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 16	6.17	Apr. 13	4.83	July 14	3.83	Oct. 11	4.80
Feb. 14	6.25	May 15	4.20	Aug. 21	5.38	Nov. 16	3.77
Mar. 15	5.05	June 16	2.24	Sept. 17	5.77	Dec. 17	4.24

T. 22 N., R. 1 W.

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). NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 11.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 16	5.15	Apr. 13	3.61	July 14	2.68	Oct. 11	3.63
Feb. 14	5.34	May 15	3.33	Aug. 21	3.52	Nov. 16	3.13
Mar. 15	4.24	June 16	2.09	Sept. 17	4.23	Dec. 17	3.50

T. 22 N., R. 2 W.

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). SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 6. No measurements made in 1945.

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). NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 14.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 16	5.78	Apr. 13	4.96	July 14	4.77	Oct. 11	5.20
Feb. 14	5.88	May 15	4.70	Aug. 21	5.49	Nov. 16	4.65
Mar. 15	5.04	June 16	4.01	Sept. 17	5.69	Dec. 17	4.89

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). NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 17.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 16	4.47	Apr. 13	3.19	July 14	2.71	Oct. 11	3.33
Feb. 14	4.57	May 15	2.90	Aug. 21	3.71	Nov. 16	2.59
Mar. 15	3.86	June 16	1.81	Sept. 17	3.90	Dec. 17	2.89

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). NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 18.

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

Jan. 16	5.92	Apr. 13	4.78	July 14	4.04	Oct. 11	4.85
Feb. 14	6.04	May 15	4.40	Aug. 21	5.14	Nov. 16	4.10
Mar. 15	5.35	June 16	3.12	Sept. 17	5.38	Dec. 17	4.30

T. 22 N., R. 3 W.

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). SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 22.

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

Jan. 16	7.62	Apr. 13	6.80	July 14	5.27	Oct. 11	6.33
Feb. 14	7.79	May 15	6.64	Aug. 21	6.12	Nov. 16	5.77
Mar. 15	7.47	June 16	4.80	Sept. 17	6.50	Dec. 17	5.73

T. 22 N., R. 3 W.

20 (*840, pp. 170, 175-177; 845, p. 159; 886, p. 278; 906, pp. 65-66; 936, p. 69; 944, p. 71; *986, p. 74; 1016, p. 109). SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 31.

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

Jan. 16	7.48	Apr. 13	6.90	July 14	6.88	Oct. 11	7.10
Feb. 14	7.42	May 15	6.62	Aug. 21	7.64	Nov. 16	6.62
Mar. 15	6.92	June 16	5.95	Sept. 17	7.60	Dec. 17	6.92

26 (*840, pp. 170, 175-177; 886, p. 278; 906, pp. 65-66; 936, p. 69; 944, p. 71; *986, pp. 74-75; 1016, p. 109). SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 34.

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

Apr. 13	6.83	June 16	5.30	Aug. 21	5.85	Nov. 16	6.03
May 15	6.80	July 14	5.10	Sept. 17	6.18	Dec. 17	5.99

T. 22 N., R. 4 W.

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). SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 15.

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

Jan. 16	4.46	Apr. 13	3.28	July 14	2.65	Oct. 11	2.69
Feb. 14	4.69	May 15	2.87	Aug. 21	3.40	Nov. 16	1.29
Mar. 15	3.62	June 16	1.67	Sept. 17	3.63	Dec. 17	2.66

T. 23 N., R. 1 W.

50 (*886, p. 278; 906, pp. 65-66; 936, p. 69; 944, p. 71; *986, p. 75; 1016, p. 109). SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 3.

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

Jan. 16	5.87	Apr. 13	4.99	July 14	3.75	Oct. 11	4.86
Feb. 14	6.09	May 15	4.73	Aug. 21	4.66	Nov. 16	4.22
Mar. 15	5.61	June 16	3.12	Sept. 17	5.11	Dec. 17	4.34

T. 23 N., R. 3 W.

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). SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 25.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 16	5.25	Apr. 13	4.73	July 14	4.84	Oct. 11	5.09
Feb. 14	5.27	May 15	4.63	Aug. 21	5.73	Nov. 16	4.68
Mar. 15	4.71	June 16	4.00	Sept. 17	5.80	Dec. 17	4.86

75 (*845, pp. 158, 159; 886, p. 278; 906, pp. 65-66; 936, p. 69; 944, p. 71; *986, p. 75; 1016, p. 109). SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 12.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 16	9.07	Apr. 13	8.63	July 14	8.08	Oct. 11	8.45
Feb. 14	9.20	May 15	8.63	Aug. 21	8.53	Nov. 16	8.05
Mar. 15	8.97	June 16	7.85	Sept. 17	8.70	Dec. 17	8.17

T. 24 N., R. 1 W.

30 (*840, pp. 170, 178; 845, p. 159; 886, pp. 278-279; 906, p. 66; 936, pp. 69-70; 944, p. 71; *986, p. 75; 1016, p. 109). NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 34.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 13	16.75	July 14	15.50	Sept. 17	16.37	Nov. 16	16.60
May 15	16.68	Aug. 21	16.07	Oct. 11	16.59	Dec. 17	16.51
June 16	15.36						

T. 24 N., R. 2 W.

Roscommon recorder well 1 (*817, pp. 83, 85; *840, pp. 123-124, 170, 179; 845, p. 160; *886, pp. 263, 279; 906, p. 67; 936, p. 70; 944, p. 72; *986, pp. 75-76; 1016, p. 110). SW $\frac{1}{4}$ sec. 17.

Water level at 2:00 a.m., in feet below land-surface datum, 1945

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	5.85	5.95	....	4.93	5.11	....	4.34	5.00	5.49	....	....	....
2	5.86	5.95	....	4.93	5.12	a4.24	4.37	5.02	5.48	....	....	a4.70
3	5.86	5.95	a5.98	....	5.12	4.22	4.38	5.04	5.51	....	....	....
4	5.86	5.95	....	....	5.13	4.11	4.41	5.06	5.51	....	....	....
5	5.86	5.96	....	a4.93	5.14	4.03	4.43	5.08	5.52	....	....	....
6	5.87	5.96	....	....	5.15	4.00	4.43	5.08	5.53	....	....	....
7	5.87	5.96	....	....	5.15	3.97	4.45	5.09	5.55	....	....	....
8	5.87	....	....	4.98	5.16	3.96	4.47	5.11	5.56	....	....	....
9	5.87	....	....	4.98	5.17	3.95	4.49	5.13	5.55	....	....	....
10	5.87	....	a5.87	....	5.17	3.94	4.50	5.15	5.57	....	....	....
11	5.87	5.97	5.87	....	5.18	3.94	4.53	5.17	5.58	....	....	....
12	5.88	5.97	5.86	....	5.18	3.94	4.55	5.19	5.59	a4.60	....	....
13	5.88	5.97	5.74	....	5.18	3.95	4.57	5.21	5.60	4.60	....	....
14	5.88	5.97	5.69	a5.03	5.18	3.95	4.59	5.23	5.61	4.60	....	....
15	5.88	5.98	5.59	....	5.18	3.96	4.62	5.24	5.60	4.59	....	....
16	5.88	5.98	5.40	....	5.18	3.97	4.64	5.26	5.60	4.58	a4.80	....
17	5.89	5.98	5.17	....	5.18	3.99	4.67	5.27	5.61	4.58	....	....
18	5.89	5.99	5.05	....	5.18	4.01	4.69	5.28	5.62	4.58	....	....
19	5.89	5.99	5.01	....	5.18	4.02	4.71	5.30	5.62	a4.58	....	....
20	5.90	5.99	4.99	....	5.18	4.04	4.74	5.32	5.62	....	....	....
21	5.91	5.99	4.98	a5.07	5.16	4.05	4.76	5.34	5.57	....	....	....
22	5.91	6.00	4.97	....	5.16	4.09	4.78	5.35	....	....	....	....
23	5.91	6.00	4.96	....	5.16	4.12	4.80	5.36	....	....	....	....
24	5.92	6.00	4.96	....	5.17	4.15	4.83	5.37	....	....	a4.72	....
25	5.92	5.98	4.96	....	5.17	4.18	4.85	5.38	....	....	....	....
26	5.92	5.98	4.95	5.08	5.17	4.21	4.88	5.41	....	....	....	....
27	5.93	5.98	4.95	5.08	....	4.24	4.90	5.43	....	....	....	....
28	5.93	....	4.94	a5.10	....	4.25	4.93	5.44	....	....	....	a4.92
29	5.94	....	4.94	5.10	....	4.28	4.96	5.46	....	....	....	....
30	5.94	....	4.94	5.10	....	4.30	4.98	5.48	....	....	....	....
31	5.94	....	4.94	....	....	....	5.00	5.49	....	....	....	....

a Wetted-tape measurement.

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). NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 3.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 16	4.62	Apr. 13	4.55	July 14	3.70	Oct. 11	4.16
Feb. 14	4.84	May 15	4.73	Aug. 21	3.92	Nov. 16	4.12
Mar. 15	5.02	June 16	3.98	Sept. 17	4.03	Dec. 17	3.91

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). NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 1.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 16	10.62	Apr. 13	9.66	July 14	8.66	Oct. 11	9.52
Feb. 14	10.78	May 15	9.47	Aug. 21	9.46	Nov. 16	9.00
Mar. 15	10.67	June 16	8.26	Sept. 17	9.76	Dec. 17	8.77

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). SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 7.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 16	7.85	Apr. 13	7.02	July 14	6.64	Oct. 11	7.44
Feb. 14	7.92	May 15	7.32	Aug. 21	7.42	Nov. 16	7.01
Mar. 15	7.78	June 30	6.30	Sept. 17	8.62	Dec. 17	6.96

150 (*840, pp. 171, 179; 845, p. 159; 886, pp. 278-279; 906, p. 66; 936, pp. 69-70; 944, p. 72; *936, p. 76; 1016, p. 110). NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 19.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 16	4.96	Apr. 13	3.72	July 14	3.55	Oct. 11	3.58
Feb. 14	5.17	May 15	3.82	Aug. 21	4.52	Nov. 16	2.96
Mar. 15	3.69	June 16	2.58	Sept. 17	4.68	Dec. 17	3.64

1000 (*886, pp. 278-279; 906, p. 66; 936, pp. 69-70; 944, p. 72; *986, p. 76; 1016, p. 110). NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 21.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	7.11	Apr. 13	5.83	July 14	4.26	Oct. 11	5.57
Feb. 14	7.33	May 15	5.35	Aug. 21	5.38	Nov. 16	4.46
Mar. 15	7.20	June 16	3.52	Sept. 17	5.99	Dec. 17	4.52

T. 24 N., R. 3 W.

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, p. 110). NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 24.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 16	10.60	Apr. 13	10.06	July 14	8.79	Oct. 11	9.83
Feb. 14	10.77	May 15	9.99	Aug. 21	9.45	Nov. 16	9.27
Mar. 15	10.70	June 16	8.50	Sept. 17	9.77	Dec. 17	9.14

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). SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 15.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 16	12.57	Apr. 13	11.37	July 14	10.24	Oct. 11	11.52
Feb. 14	12.70	May 15	11.12	Aug. 21	11.46	Nov. 16	10.72
Mar. 15	12.37	June 16	9.15	Sept. 17	11.91	Dec. 17	10.91

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). NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 3.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	12.82	Apr. 14	12.42	July 14	11.70	Oct. 11	11.70
Feb. 15	12.96	May 15	12.57	Aug. 21	12.00	Nov. 16	11.58
Mar. 14	12.97	June 16	11.39	Sept. 17	11.72	Dec. 17	11.64

St. Joseph County

Sp 1 (*886, p. 279; 906, p. 67; 936, pp. 70, 71; 944, p. 73; *986, p. 77; 1016, p. 111). City of Three Rivers. About 350 feet south of West Michigan St., on an island at the confluence of the St. Joseph and Rock Rivers. Measurements by A. C. Walls, pump station operator, city waterworks; O. O. Johnson, city manager, city of Three Rivers.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 10	0.47	May 28	0.14	Aug. 11	a0.20	Sept. 29	2.15
17	.70	June 2	.25	18	2.35	30	2.10
24	.50	9	a2.30	25	4.30	Nov. 5	al.30
31	.50	16	.65	Sept. 1	al.56	10	1.10
Apr. 7	.00	30	.80	6	2.00	20	2.10
14	a2.15	July 7	.80	8	2.70	30	2.22
21	.87	14	1.15	13	a 1.10	Dec. 1	.97
30	.75	23	1.20	15	2.60	8	2.30
May 5	.80	28	4.65	20	1.20	28	4.10
12	al.95	Aug. 4	al.10	22	2.60	31	.98
19	a2.30						

a Above land-surface datum.

Sp 2. J. C. Barnhart. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 6, T. 7 S., R. 11 W. Unused driven well, diameter 1 $\frac{1}{4}$ inches, measured depth 20.7 feet below land surface. Measuring point, base of pitcher pump, 2.0 feet above land-surface datum.

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

Sept. 13	13.58	Oct. 10	13.57	Nov. 8	13.78	Dec. 6	14.05
20	13.67	18	13.58	15	13.85	13	14.12
27	13.60	25	13.66	22	13.91	20	14.20
Oct. 4	13.55	Nov. 1	13.71	29	13.98	27	14.26

Washtenaw County

Wa 1 (*906, pp. 57, 67-68; 936, p. 71; 944, pp. 73-74; 986, pp. 77-78; 1016, p. 111). City of Ann Arbor. About 200 feet south of main building of Steere Farm pumping station of city waterworks.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	2.05	4.81	1.70	3.27	2.99	0.52	0.86	0.02	2.59	....	(a)	(a)
2	(a)	4.83	2.80	3.29	3.00	.50	.94	.04	1.70	....	....	....
3	(a)	4.85	4.48	3.28	2.98	.53	.90	.24	1.60	2.27	(a)	....
4	(a)	4.72	4.47	3.26	2.96	.48	.98	1.63	2.58	2.50	....	(a)
5	3.10	4.68	4.32	3.18	2.94	.49	....	1.03	2.64	....	....	....
6	2.10	4.69	4.30	3.16	2.98	.07	.90	1.29	2.84	....	(a)	(a)
7	2.11	4.71	4.33	3.12	2.89	.22	.92	....	2.76	....	(a)	....
8	2.05	4.72	4.36	3.14	3.00	.54	....	1.53	2.63	(a)	(a)	(a)
9	2.05	4.70	4.37	3.05	2.90	.56	.97	1.53	2.65	....	....	....
10	1.96	4.70	4.27	3.03	2.94	b .47	....	1.64	2.60	b .56	(a)	(a)
11	2.09	4.72	4.26	3.05	2.87	.56	....	(a)	3.02	....	....	....
12	2.03	4.72	4.47	.46	2.92	.64	1.36	1.01	3.09	(a)	....	(a)
13	2.10	4.75	4.49	3.20	2.90	.62	....	2.48	3.33	2.50	(a)	....
14	2.09	4.75	4.52	3.18	2.84	.57	....	2.47	2.86	....	....	(a)
15	2.06	4.83	4.54	3.07	2.40	.55	....	2.46	3.16	2.60	(a)	(a)
16	2.13	4.96	4.54	3.00	2.41	.62	1.36	1.53	2.75	....	....	(a)
17	2.13	4.85	4.52	3.05	(a)	.56	1.00	.96	2.89	1.38	(a)	(a)
18	2.05	3.42	4.50	3.03	(a)	.51	.93	2.78	2.76	....	....	(a)
19	2.12	4.77	4.56	.53	(a)	.53	1.09	2.76	2.80	1.36	(a)	(a)
20	2.04	4.82	4.54	3.05	(a)	.61	1.10	2.38	2.85	1.42	(a)	(a)
21	2.15	4.96	1.71	.54	(a)	.06	1.11	2.39	2.80	(a)	....	(a)
22	2.12	3.42	3.82	3.02	(a)	.57	....	3.34	2.83	(a)	....	....
23	(a)	2.74	3.81	3.00	(a)	.66	1.18	2.42	2.85	(a)	(a)	....
24	2.20	4.40	3.79	3.03	(a)	.64	1.19	1.42	2.82	....	....	....
25	2.09	4.42	3.80	2.98	.85	.69	b .08	2.39	(a)	(a)	....	....
26	2.20	4.41	3.82	3.00	.73	.67	....	2.35	(a)	....	(a)	(a)

a Flowing.

b Above land-surface datum.

Wa 1--Continued.

Water level, in feet below land-surface datum, 1945												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
27	2.03	4.40	3.75	3.19	0.71	0.69	0.74	1.05	(a)	(a)	....	(a)
28	2.03	4.40	3.72	3.10	.65	.75	....	1.03	b .26	....	(a)	....
29	2.05	....	1.70	3.03	.56	.75	....	1.38	b .24	(a)	....	....
30	2.13	....	3.47	2.97	.56	.76	1.40	.89	2.83	(a)	....	....
31	2.11	....	3.49	....	.54	....	1.20	1.56	....	(a)	....	(a)

a Flowing.

b Above land-surface datum.

Wexford County

T. 24 N., R. 9 W.

7 (*840, pp. 181-182; 936, p. 72; 944, p. 74; *986, p. 78; 1016, p. 112). NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 27. No measurements made in 1945.

38 (*840, pp. 181-182; 936, p. 72; 944, p. 74; *986, p. 78; 1016, p. 112). SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 19. No measurements made in 1945.

T. 24 N., R. 10 W.

2 (*840, pp. 181, 182; 936, p. 72; 944, p. 72; *986, p. 78; 1016, p. 112). SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 22. No measurements made in 1945.

3 (*840, pp. 181, 182; 936, p. 72; 944, p. 74; *986, p. 78; 1016, p. 112). SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 26. No measurements made in 1945.

4 (*840, pp. 181, 182; 936, p. 72; 944, p. 74; *986, p. 78; 1016, p. 112). SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 26. No measurements made in 1945.

42 (*840, pp. 181, 182; 936, p. 72; 944, p. 74; *986, p. 78; 1016, p. 112). NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 36. No measurements made in 1945.

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 1945. Twelve measurements were made in this well during the year.

The Manchester Water Works began periodic measurements of water level in September 1942 at two observation wells in Auburn, Rockingham County. Both wells are in hilly country and penetrate unconsolidated material. A water-stage recorder was in operation on one of these wells, Auburn 10, until June 13, after which measurements were made monthly. Water-level measurements were made monthly from January to June at well Auburn 8. A water-stage recorder was installed on this well on June 13.

FLUCTUATIONS OF WATER LEVEL

The fluctuations of water level in the well near Bristol appear to be due largely to changes in temperature and precipitation. The water table in this well was at the highest level of record for each month except April, June, August, and November. The water level for March was at the highest stage for the period of record, and was above normal in June and November. In April it was at the lowest April level since the beginning of record.

The abrupt rise in water level in the well near Bristol in March was largely the result of temperatures high enough to melt the snow cover. March and April were the warmest on record according to the U. S. Weather Bureau. The consequent extraordinary advance of vegetation, starting early, apparently accounts for the continued decline of the water level in the well near Bristol from the end of March until the end of September. The rising water level from the beginning of October until the end of November reflected above-normal precipitation in the late fall and the end

of the growing season. The below-normal temperatures in December, which prevented the snow from melting and percolating through to the water table, resulted in a drop in water level. The water level on January 3, 1946, was 7.93 feet below land-surface datum, a rise of 0.06 foot above the water level on January 2, 1945. At the end of 1945 it was the highest for that time of year during the period 1942-45.

The two wells in Auburn apparently reflect changes in precipitation and temperature. During 1945, there was no appreciable change in underground storage in the vicinity of well Auburn 8, but a slight net gain at well Auburn 10 was indicated by a net rise in the water level of 0.7 foot. Precipitation at nearby Manchester during 1945 was 51.20 inches, or 12.05 inches above normal.

The decline of water level in these two wells from the beginning of August until the end of September resulted from below-normal rainfall and the needs of plants during the growing season. The gradual rise in water level from the beginning of October until the end of December reflected above-normal precipitation, and the end of the growing season. Precipitation at nearby Manchester in November was 4.88 inches and in December was 5.90 inches, compared with the normals for those months of 3.33 inches and 3.25 inches, respectively.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Merrimack County

U. S. 91 (*986, p. 79; 1016, p.115). J. E. Norcross. Bristol 1. 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.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	7.99	Apr. 2	3.61	July 3	8.09	Oct. 2	8.82
Feb. 3	8.35	May 1	6.39	Aug. 1	8.36	31	8.65
Mar. 7	7.92	June 1	7.52	Sept. 4	8.71	Dec. 4	7.80

Rockingham County

Auburn 8 (*1016, p.115). Manchester Water Works. About 250 feet east of intersection of Hookset and Depot Roads, 0.9 mile north of Auburn. Measurements made by Manchester Water Works.

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

Date	Water level	Date	Water level	Date	Water level
Jan. 10	1.60	Mar. 2	2.42	May 1	1.64
Feb. 3	1.77	Apr. 9	1.23	June 6	1.72

Auburn 8--Continued.

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

Day	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	1.86	1.63	2.18	2.72	2.58	1.91
2	....	1.84	1.66	2.24	2.42	2.62	a 1.91
3	....	1.89	1.70	2.35	2.46	2.63	1.89
4	....	1.95	1.74	2.34	2.59	2.54	1.89
5	....	1.97	1.77	2.41	2.65	2.26	1.90
6	....	2.00	1.76	2.47	2.70	2.39	1.90
7	....	1.76	1.61	2.52	2.21	2.46	1.35
8	....	1.88	1.68	2.60	a 2.25	2.49	a 1.42
9	....	1.95	1.73	2.66	....	2.53	a 1.50
10	....	1.96	1.78	2.61	....	2.57	1.54
11	....	1.89	1.82	2.61	....	2.60	1.57
12	....	2.00	1.85	2.67	....	2.21	1.57
13	a 1.88	2.04	1.86	2.76	....	2.22	1.59
14	1.93	2.07	1.89	2.82	....	2.15	1.61
15	1.97	1.99	1.90	1.62	2.39	2.11	1.62
16	1.58	1.82	1.95	1.92	2.42	2.27	1.62
17	1.47	1.88	1.97	2.09	2.41	2.34	1.64
18	1.62	1.90	2.00	2.19	2.49	2.28	1.66
19	1.69	1.73	2.05	1.93	2.53	2.28	1.67
20	1.21	1.48	2.12	2.12	2.58	1.50	1.68
21	1.54	1.46	2.18	2.22	2.65	1.86	1.68
22	1.56	1.56	2.22	2.36	2.69	a 1.68	1.70
23	1.64	1.58	2.30	2.43	2.71	a 1.74	1.70
24	1.73	1.61	2.31	2.46	2.15	1.85	1.71
25	1.77	1.62	1.90	2.48	2.23	1.89	1.71
26	1.63	1.65	1.91	2.53	a 2.28	1.91	1.40
27	1.57	1.70	a 2.05	2.60	2.26	1.92	1.53
28	1.66	1.74	2.22	2.63	2.40	1.91	1.56
29	1.73	1.19	2.33	2.62	2.45	1.90	1.58
30	1.78	1.49	2.32	2.71	2.49	1.90	1.57
31	....	1.63	2.04	....	2.52	....	1.54

a Estimated.

Auburn 10 (*1016, p.115). Frank Forsaith. On west side of Burts Road, about 150 feet south of Kent Road, 1.8 miles east of Auburn. Measurements made by Manchester Water Works.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	2.34	3.06	1.72	2.10	2.03	2.79
2	1.49	3.07	1.72	2.17	2.13	2.89
3	1.69	3.08	1.68	2.03	2.21	2.93
4	....	3.08	1.45	2.17	1.66	2.95
5	....	3.09	1.57	1.27	1.62	2.89
6	....	3.11	1.39	1.62	1.80	2.59
7	....	3.12	1.38	1.80	1.80	2.68
8	....	3.13	1.45	1.92	1.96	2.82
9	....	3.09	1.57	2.02	2.01	2.91
10	....	3.11	1.60	2.12	2.13	3.00
11	....	3.11	1.71	2.19	1.00	2.73
12	....	3.11	1.71	2.26	1.47	a 2.8
13	....	3.11	1.75	2.33	1.68	2.97
14	....	3.10	1.55	a 2.39	1.59	....
15	2.61	3.11	1.34	2.52	1.80	....
16	2.62	3.09	1.26	2.59	1.30	....
17	a 2.62	2.91	1.34	2.61	1.52	....
18	....	2.90	1.36	2.34	a 1.29	....
19	....	2.91	1.43	2.45	1.39	....
20	....	2.92	1.49	2.55	1.65	....
21	....	2.95	1.24	2.62	1.83	....
22	2.87	2.85	1.20	2.51	1.94	....
23	....	1.94	1.38	2.64	2.09	....
24	....	1.73	1.54	2.70	2.22	....
25	....	1.84	1.69	2.75	2.33	....

a Estimated.

Auburn 10--Continued.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June
26	....	1.90	1.76	1.63	2.45	....
27	....	a 1.48	1.83	1.58	2.57	....
28	....	1.64	1.86	1.78	2.61	....
29	3.02	....	1.92	1.94	2.58	....
30	3.06	....	2.00	1.93	2.54	....
31	3.06	....	2.06	....	2.67	....

a Estimated.

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

Date	Water level	Date	Water level	Date	Water level
Aug. 2	a 1.81	Oct. 8	a 3.80	Dec. 9	a 2.15
Sept. 11	a 3.80	Nov. 6	a 2.67		

a Tape measurement.

NEW JERSEY

By J. M. Birdsall

PROGRAM OF WORK

The investigation of the ground-water resources of New Jersey in cooperation with the New Jersey State Water Policy Commission was continued during 1945. As a result of a consolidation of various State agencies, the title of the cooperating agency was changed on July 1, 1945, to the Department of Conservation, Division of Water Policy and Supply.

During 1945 about 4,100 measurements were made, and at the end of the year approximately 207 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 49 wells during the year. The State and Federal Governments owned and operated 41 of these recorders, and the rest were owned by municipalities, private water-supply companies, or industries.

PRECIPITATION

The average precipitation for the State during the year was 52.38 inches which was 6.80 inches above normal. This was slightly less than that in 1938, but, with that exception, was the greatest since 1903. As in previous years, precipitation varied widely in different localities from 68.17 inches at Little Falls, which was 20.37 inches above normal, to 40.87 inches at Cape May, which was 0.99 inch above normal.

During May, June, July, August, September, and December precipitation was above normal, July having unusually heavy rainfall, it being the wettest since 1897. During this month a number of very intensive rainfalls occurred, one of which was at Phillipsburg on the 9th, where 8.54 inches of rain fell in 3 hours causing a retaining wall to collapse, which, in turn, crushed dwellings and resulted in the death of four persons.

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 fairly reliable index of the amount of water stored in the ground especially during the growing season. Its water level responds quickly to precipitation and, due to the location, it is not affected by pumping. From the hydrograph of this well for the year, it would appear that ground-water storage was more uniform than usual throughout 1945. Because of the extremely heavy precipitation during July, the customary seasonal lowering of the water level due to transpiration was not in evidence. At the end of the year the water level was 0.23 foot above that recorded on December 31, 1944.

New highs were reached in 12 wells in Salem County in 1945 and 1 reached a record low. The majority of the record highs were observed during months when the precipitation was below normal. This was probably the result of lag or of climatic conditions favorable to recharge, or the distribution of pumpage. In Middlesex County three observation wells reached record highs. One of these, a drilled well equipped with a water-stage recorder, taps the Old Bridge sand member of the Raritan formation. The other two were dug wells. All three highs may be attributed to climatic conditions.

The water level in a well tapping the so-called Atlantic City 800-foot sand in the Atlantic City area was approximately 8 feet lower during the first 4 months in 1945 than in the previous year, but about the same as in 1943. This difference gradually decreased until the end of August when it was only about 4 feet lower in 1945 than in 1944. As the pumpage slackened at the end of the summer season, the water level rose until the end of the year when it was approximately 3.4 feet above that at the end of 1944. The water level in the Longport well, which taps the same artesian aquifer, although starting off about 2.5 feet lower in 1945 than in 1944, remained lower until about the middle of May. Thereafter, until the end of the year, the trend was the same as in 1944 and the hydrographs for the 2 years were remarkably similar. The 1945 year-end level was approximately the same as the 1944 year-end level.

WELL-NUMBERING SYSTEM

The well-numbering system used in New Jersey is described in the text of 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). Atlantic City Water Department 600 foot-well. Extremes of observed water level, in feet below mean sea level: Highest, 3.05 Mar. 28, 1926; lowest, 25.47 Sept. 28 and 29, 1929.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	31.6	31.3	31.0	30.7	30.6	30.7	31.3	32.4	33.5	34.4	34.2	32.9
2	....	31.3	31.0	30.7	30.6	30.7	31.3	32.5	33.5	34.4	34.2	32.9
3	....	31.3	31.0	30.7	30.6	30.7	31.4	32.5	33.5	34.4	34.2	32.9
4	31.6	31.3	31.0	30.7	30.6	30.7	31.4	32.5	33.6	34.5	34.2	32.9
5	31.6	31.3	31.0	30.7	30.6	30.7	31.5	32.5	33.6	34.5	34.1	32.9
6	31.7	31.3	31.0	30.7	30.5	30.7	31.5	32.6	33.7	34.5	34.1	32.6
7	31.7	31.3	30.9	30.7	30.5	30.7	31.5	32.6	33.7	34.5	34.1	32.6
8	31.6	31.3	30.9	30.7	30.5	30.8	31.6	32.6	33.8	34.5	34.1	32.6
9	31.6	31.3	30.9	30.7	30.5	30.8	31.6	32.7	33.8	34.5	34.1	32.6
10	31.6	....	30.9	30.7	30.5	30.8	31.7	32.7	33.8	34.5	34.1	32.6
11	31.6	....	30.9	30.7	30.5	30.8	31.7	32.7	33.9	34.5	34.1	32.6
12	31.6	....	30.9	30.7	30.5	30.8	31.8	32.8	33.9	34.5	34.0	32.6
13	31.6	....	30.9	30.7	30.5	30.8	31.8	32.8	33.9	34.5	34.0	32.6
14	31.5	....	30.9	30.7	30.5	30.8	31.9	32.8	34.0	34.5	33.7	32.6
15	31.5	....	30.9	30.7	30.5	30.8	31.9	32.9	34.0	34.5	33.7	32.6
16	31.3	....	30.9	30.7	30.5	30.8	32.0	32.9	34.1	34.5	33.7	32.6
17	31.3	....	30.9	30.7	30.5	30.9	32.0	32.9	34.1	34.5	33.7	....
18	31.3	....	30.9	30.7	30.5	30.9	32.1	32.9	34.1	34.5	33.7	....
19	31.3	....	30.9	30.7	30.5	30.9	32.1	33.0	34.1	34.5	33.7	....
20	31.3	....	30.8	30.7	30.5	31.0	32.1	33.0	34.1	34.5	33.6	....
21	31.3	....	30.8	30.7	30.6	31.0	32.2	33.0	34.2	34.5	33.6	....
22	31.3	....	30.8	30.7	30.6	....	32.2	33.0	34.2	34.4	33.3	....
23	31.3	....	30.8	30.7	30.6	....	32.2	33.1	34.2	34.4	33.3	....
24	31.3	....	30.7	30.7	30.6	....	32.3	33.1	34.2	34.3	33.3	....
25	31.3	....	30.7	30.7	30.6	31.1	32.3	33.1	34.3	34.3	33.3	....
26	31.3	....	30.7	30.7	30.6	31.2	32.3	33.1	34.3	34.3	33.3	....
27	31.3	....	30.7	30.6	30.6	31.2	32.3	33.2	34.3	34.3	33.3	....
28	31.3	....	30.7	30.6	30.6	31.2	32.3	33.2	34.3	34.3	33.2	31.8
29	31.3	....	30.7	30.6	30.6	31.2	32.3	33.2	34.4	34.3	33.0	31.4
30	31.3	....	30.7	30.6	30.6	31.3	32.4	33.3	34.4	34.2	32.9	31.3
31	31.3	....	30.7	....	30.6	....	32.4	33.4	....	34.2	....	31.1

Water level at end of day, in feet below mean sea level, 1945

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	19.8	19.5	19.2	18.9	18.8	18.9	19.5	20.6	21.7	22.6	22.4	21.1
2	19.8	19.5	19.2	18.9	18.8	18.9	19.5	20.7	21.7	22.6	22.4	21.1
3	....	19.5	19.2	18.9	18.8	18.9	19.6	20.7	21.7	22.6	22.4	21.1
4	19.8	19.5	19.2	18.9	18.8	18.9	19.6	20.7	21.8	22.7	22.4	21.1
5	19.8	19.5	19.2	18.9	18.8	18.9	19.7	20.7	21.8	22.7	22.3	21.1
6	19.9	19.5	19.2	18.9	18.7	18.9	19.7	20.8	21.9	22.7	22.3	20.8
7	19.9	19.5	19.1	18.9	18.7	18.9	19.7	20.8	21.9	22.7	22.3	20.8
8	19.8	19.5	19.1	18.9	18.7	19.0	19.8	20.8	22.0	22.7	22.3	20.8
9	19.8	19.5	19.1	18.9	18.7	19.0	19.8	20.9	22.0	22.7	22.3	20.8
10	19.8	....	19.1	18.9	18.7	19.0	19.9	20.9	22.0	22.7	22.3	20.8
11	19.8	....	19.1	18.9	18.7	19.0	19.9	20.9	22.1	22.7	22.3	20.8
12	19.8	....	19.1	18.9	18.7	19.0	20.0	21.0	22.1	22.7	22.2	20.8
13	19.8	....	19.1	18.9	18.7	19.0	20.0	21.0	22.1	22.7	22.2	20.8

36.13.2.9.1--Continued.

Water level at end of day, in feet below mean sea level, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
14	31.5	....	30.9	30.7	30.5	30.8	31.9	32.8	34.0	34.5	33.7	32.6
15	31.5	....	30.9	30.7	30.5	30.8	31.9	32.9	34.0	34.5	33.7	32.6
16	31.3	....	30.9	30.7	30.5	30.9	32.0	32.9	34.1	34.5	33.7	32.6
17	31.3	....	30.9	30.7	30.5	30.9	32.0	32.9	34.1	34.5	33.7	....
18	31.3	....	30.9	30.7	30.5	30.9	32.1	32.9	34.1	34.5	33.7	....
19	31.3	....	30.9	30.7	30.5	30.9	32.1	33.0	34.1	34.5	33.7	....
20	31.3	....	30.8	30.7	30.5	31.0	32.1	33.0	34.1	34.5	33.6	....
21	31.3	....	30.8	30.7	30.6	31.0	32.2	33.0	34.2	34.5	33.6	....
22	31.3	....	30.8	30.7	30.6	....	32.2	33.0	34.2	34.4	33.3	....
23	31.3	....	30.8	30.7	30.6	....	32.2	33.1	34.2	34.4	33.3	....
24	31.3	....	30.7	30.7	30.6	....	32.3	33.1	34.2	34.3	33.3	....
25	31.3	....	30.7	30.7	30.6	31.1	32.3	33.1	34.3	34.3	33.3	....
26	31.3	....	30.7	30.7	30.6	31.2	32.3	33.1	34.3	34.3	33.3	....
27	31.3	....	30.7	30.6	30.6	31.2	32.3	33.2	34.3	34.3	33.3	....
28	31.3	....	30.7	30.6	30.6	31.2	32.3	33.2	34.3	34.3	33.2	31.8
29	31.3	....	30.7	30.6	30.6	31.2	32.3	33.2	34.4	34.3	33.0	31.4
30	31.3	....	30.7	30.6	30.6	31.3	32.4	33.3	34.4	34.2	32.9	31.3
31	31.3	....	30.7	....	30.6	....	32.4	33.4	....	34.2	....	31.1

36.14.5.8.7 (*906, p. 77; 936, p. 78; 944, p. 78; 986, p. 86; 1016, p. 120). Pennsylvania-Reading Seashore Lines. Citizens Ice Co. well. 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.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	59.9	59.6	60.7	60.6	63.8	67.1	69.0	....	68.9	63.6	....
2	....	59.8	59.6	60.3	....	62.5	....	69.1	69.9	69.0	....	58.2
3	....	....	59.7	60.5	....	62.3	....	69.1	69.1	68.6	62.8	58.6
4	59.3	59.1	59.4	....	....	61.7	....	69.2	68.7	68.3	62.2	58.8
5	59.4	58.8	....	61.2	60.7	....	....	69.0	68.6	68.0	61.5	58.8
6	59.0	58.6	....	61.6	60.6	....	....	69.0	68.6	67.8	61.7	....
7	....	58.6	....	61.7	60.8	62.8	....	69.1	68.8	67.3	61.7	....
8	....	58.7	....	....	61.0	62.9	68.3	....	....	67.1	62.1	58.1
9	....	58.8	....	....	61.4	63.2	67.6	....	68.9	67.6	62.1	58.1
10	58.6	....	60.2	....	....	63.3	68.0	69.4	68.6	67.4	61.9	57.6
11	59.5	58.0	59.5	....	61.6	63.3	68.1	70.0	68.7	67.1	61.4	58.1
12	....	58.9	60.0	....	....	63.9	68.6	69.6	69.6	66.8	60.5	58.5
13	....	....	60.1	....	60.9	64.5	68.7	69.6	....	66.6	60.4	58.1
14	....	....	....	60.3	61.1	64.7	68.9	69.9	70.0	66.5	60.3	57.8
15	....	....	60.3	59.4	....	....	68.8	....	70.0	66.5	60.4	57.7
16	....	....	60.6	....	....	65.2	69.0	....	70.2	66.9	61.2	....
17	....	....	60.5	....	....	65.3	....	....	69.8	66.3	61.2	57.5
18	....	58.5	60.6	....	....	65.3	....	....	69.6	....	60.8	57.7
19	....	59.3	60.6	60.2	....	65.7	....	70.4	66.8	66.4	60.4	57.7
20	....	59.1	60.6	60.0	62.2	65.8	....	....	....	....	61.0	56.4
21	58.7	....	....	59.4	62.3	65.8	....	....	70.2	....	60.5	56.9
22	57.9	....	....	59.4	62.5	65.8	....	....	70.3	67.1	59.5	....
23	58.2	....	60.1	59.1	62.8	....	....	70.6	68.9	66.4	59.7	56.8
24	58.8	60.2	60.4	59.0	....	65.9	....	70.4	69.1	65.3	60.1	56.7
25	58.7	60.1	60.4	....	63.2	65.6	....	....	69.5	65.3	60.1	56.4
26	58.9	59.6	59.6	....	63.2	65.7	....	70.6	....	64.6	59.7	56.9
27	59.5	59.5	60.3	59.3	63.0	65.3	69.4	70.5	70.0	....	59.9	56.8
28	58.7	....	60.4	59.4	63.1	65.5	69.1	70.9	70.1	....	59.9	....
29	58.7	....	60.7	59.6	63.9	66.0	68.6	71.1	70.1	....	....	....
30	59.1	....	60.8	58.8	64.0	66.8	68.9	....	70.1	64.6	....	56.4
31	59.7	....	60.6	....	64.0	....	68.9	71.0	....	63.8	....	56.5

36.14.5.8.7--Continued.

Lowest daily water level, in feet below mean sea level, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	52.9	52.6	53.7	53.6	56.8	60.1	62.0	....	61.9	56.6	....
2	....	52.8	52.6	53.3	....	55.5	....	62.1	62.9	62.0	....	51.2
3	....	....	52.7	53.5	....	55.3	....	62.1	62.1	61.6	55.8	51.6
4	52.3	52.1	52.4	....	....	54.7	....	62.2	61.7	61.3	55.2	51.8
5	52.4	51.8	....	54.2	53.7	....	....	62.0	61.6	61.0	54.5	51.8
6	52.0	51.6	....	54.6	53.6	....	....	62.0	61.6	60.8	54.7	....
7	....	51.6	....	54.7	54.8	55.8	....	62.1	61.8	60.8	54.7	....
8	....	51.7	....	....	54.0	55.9	61.3	....	....	60.1	55.1	51.1
9	....	51.8	....	....	54.4	56.2	60.6	....	61.9	60.6	55.1	51.1
10	51.6	....	53.2	....	....	56.3	61.0	62.4	61.6	60.4	54.9	50.6
11	52.5	51.0	52.5	....	54.6	56.3	61.1	63.0	61.7	60.1	54.4	51.1
12	....	51.9	53.0	....	....	56.9	61.6	62.6	62.6	59.8	53.5	51.5
13	....	....	53.1	....	53.9	57.5	61.7	62.6	....	59.6	53.4	51.1
14	....	....	....	53.3	54.1	57.7	61.9	62.9	63.0	59.5	53.3	50.8
15	....	....	53.3	52.4	....	....	61.8	....	63.5	59.5	53.4	50.7
16	....	....	53.6	....	....	58.2	62.0	....	63.2	59.9	54.2	....
17	....	....	53.5	....	....	58.3	....	....	62.8	59.8	54.2	50.5
18	....	51.5	53.6	....	....	58.3	....	....	62.6	....	53.8	50.7
19	....	52.3	53.6	53.2	....	58.7	....	63.4	63.4	59.8	53.4	50.7
20	....	52.1	53.6	53.0	55.2	58.8	....	....	....	....	54.0	49.4
21	51.7	....	....	52.4	55.3	58.8	....	....	63.2	....	53.5	49.9
22	50.9	....	....	52.4	55.5	58.8	....	....	63.3	60.1	52.5	....
23	51.2	....	53.1	52.1	55.8	....	....	63.6	61.9	59.4	52.7	49.8
24	51.8	53.2	53.4	52.0	....	58.9	....	63.4	62.1	58.3	53.1	49.7
25	51.7	53.1	53.4	....	56.2	58.6	....	....	62.5	58.3	53.1	49.4
26	51.9	52.6	52.6	....	56.2	58.7	....	63.6	....	57.6	52.7	49.9
27	52.5	52.5	53.3	52.3	56.0	58.3	62.4	63.5	63.0	....	52.9	49.8
28	51.7	....	53.4	52.4	56.1	58.5	62.1	63.9	63.1	....	52.9	....
29	51.7	....	53.7	51.6	56.9	59.0	61.6	64.1	63.1	....	....	....
30	52.1	....	53.8	51.8	57.0	59.8	61.9	....	63.1	57.6	....	48.4
31	52.7	....	53.6	....	57.0	....	61.9	64.0	....	56.8	....	48.3

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).
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, -54.5 Sept. 4, 1929.

Average daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	38.3	....	43.0	49.8	52.3	56.6	50.4	45.9	40.9
2	....	....	....	38.2	39.1	42.9	50.4	52.2	56.9	50.4	45.7	40.9
3	....	....	....	38.1	38.8	42.9	50.4	52.5	56.4	50.5	45.7	41.6
4	....	....	....	37.7	....	42.8	50.6	52.6	56.1	50.1	45.4	41.7
5	39.8	....	....	38.4	39.0	42.6	51.0	52.8	56.4	49.7	44.9	41.0
6	39.8	....	....	38.8	....	42.7	50.9	52.9	56.5	49.3	45.3	40.6
7	39.1	....	....	....	....	42.9	50.9	52.5	56.7	48.7	45.5	41.1
8	39.0	....	....	38.7	....	43.1	51.6	52.4	56.8	48.5	45.2	41.9
9	39.2	....	38.0	38.7	39.7	43.4	51.9	52.6	56.7	48.6	45.1	41.9
10	39.4	....	....	38.7	....	43.6	52.1	52.8	56.5	48.1	44.9	41.5
11	39.5	....	....	....	....	43.5	52.1	53.3	56.4	47.9	44.4	41.8
12	39.6	....	....	....	....	43.9	52.2	53.8	55.8	47.9	44.2	42.3
13	....	....	37.8	....	....	44.6	52.4	54.1	55.5	47.8	44.0	42.3
14	....	....	37.8	39.0	....	45.2	52.8	54.4	55.2	47.4	43.5	41.8
15	....	....	37.6	....	40.1	45.7	52.8	54.5	55.3	47.3	43.4	41.5
16	....	....	37.7	....	40.3	46.0	52.4	54.3	54.9	47.4	44.0	41.6
17	....	....	....	....	40.3	46.5	51.9	54.2	53.6	47.0	43.7	42.2
18	....	38.8	37.7	....	40.2	47.1	51.7	54.2	52.6	47.0	43.4	42.0
19	....	....	38.0	....	40.1	47.2	51.6	54.6	52.9	46.9	43.0	40.7
20	....	38.9	37.7	....	40.0	46.9	51.6	55.0	52.6	46.8	43.5	40.7
21	39.1	38.8	37.3	....	40.3	46.8	51.6	55.2	52.3	46.8	43.2	41.4
22	39.0	38.4	36.9	....	40.5	....	51.8	55.5	52.5	46.6	42.5	41.4
23	....	38.8	37.4	....	40.9	....	51.9	55.2	52.4	46.3	42.7	41.5
24	....	39.2	37.6	....	41.0	47.4	52.0	54.7	52.1	45.9	42.7	41.4

36.23.1.9.6--Continued.

Average daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
25	....	39.0	37.7	....	41.4	48.2	52.2	54.7	52.0	45.9	42.7	40.8
26	....	38.5	37.7	38.7	41.8	47.9	52.5	55.0	51.9	46.1	42.5	40.8
27	....	....	38.0	38.9	41.9	47.5	52.4	55.1	51.5	46.8	42.4	41.8
28	39.0	....	37.9	....	41.9	....	52.2	55.2	51.3	46.7	41.6	41.4
29	39.0	....	37.8	....	41.8	....	52.6	55.6	....	46.4	40.8	40.4
30	....	....	38.0	39.1	42.0	48.9	52.7	55.8	50.8	46.5	41.0	40.6
31	....	....	37.9	....	42.5	....	52.6	56.2	....	46.2	....	40.5

Average daily water level, in feet below mean sea level, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	32.9	....	37.6	44.4	46.9	51.2	45.0	40.5	35.5
2	....	....	....	32.8	33.7	37.5	45.0	46.8	51.5	45.0	40.3	35.5
3	....	....	....	32.7	33.4	37.5	45.0	47.1	51.0	45.1	40.3	36.2
4	....	....	....	32.3	....	37.4	45.2	47.2	50.7	44.7	40.0	36.3
5	34.4	....	....	33.0	33.6	37.2	45.6	47.4	51.0	44.3	39.5	35.6
6	34.4	....	....	33.4	....	37.3	45.5	47.5	51.1	43.9	39.9	35.2
7	33.7	....	....	....	....	37.5	45.5	47.1	51.3	43.3	40.1	35.7
8	33.6	....	....	33.3	....	37.7	46.2	47.0	51.4	43.1	39.8	36.5
9	33.8	....	32.6	33.3	34.3	38.0	46.5	47.2	51.3	43.2	39.7	36.5
10	34.0	....	....	33.3	....	38.2	46.7	47.4	51.1	42.7	39.5	36.1
11	34.1	....	....	....	....	38.1	46.7	47.9	51.0	42.5	39.0	36.4
12	34.2	....	....	....	....	38.5	46.8	48.4	50.4	42.5	38.8	36.9
13	....	....	32.4	....	....	39.2	47.0	48.7	50.1	42.4	38.6	36.9
14	....	....	32.4	33.6	....	39.8	47.4	49.0	49.8	42.0	38.1	36.4
15	....	....	32.2	....	34.7	40.3	47.4	49.1	49.9	41.9	38.0	36.1
16	....	....	32.3	....	34.9	40.6	47.0	48.9	49.5	42.0	38.6	36.2
17	....	....	....	....	34.9	41.1	46.5	48.8	48.2	41.6	38.3	36.8
18	....	33.4	32.3	....	34.8	41.7	46.3	48.8	47.2	41.6	38.0	36.6
19	....	....	32.6	....	34.7	41.8	46.2	49.2	47.5	41.5	37.6	35.3
20	....	33.5	32.3	....	34.6	41.5	46.2	49.6	47.2	41.4	38.1	35.3
21	33.7	33.4	31.9	....	34.9	41.4	46.2	49.8	46.9	41.4	37.8	36.0
22	33.6	33.0	31.5	....	35.1	....	46.4	50.1	47.1	41.2	37.1	36.0
23	....	33.4	32.0	....	35.5	....	46.5	49.8	47.0	40.9	37.3	36.1
24	....	33.8	32.2	....	35.6	42.0	46.6	49.3	46.7	40.5	37.3	36.0
25	....	33.6	32.3	....	36.0	42.2	46.8	49.3	46.6	40.5	37.3	35.4
26	....	33.1	32.3	33.3	36.4	42.5	47.1	49.6	46.5	40.7	37.1	35.4
27	....	....	32.6	33.5	36.5	42.1	47.0	49.7	46.1	41.4	37.0	36.4
28	33.6	....	32.5	....	36.5	....	46.8	49.8	45.9	41.3	36.2	36.0
29	33.6	....	32.4	....	36.4	....	47.2	50.2	....	41.0	35.4	35.0
30	....	....	32.6	33.7	36.6	43.5	47.3	50.4	45.4	41.1	35.6	35.2
31	....	....	32.5	....	37.1	....	47.2	50.8	....	40.8	....	35.1

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). 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, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Nov.	Dec.
1	57.1	57.4	57.6	....	52.5	....	53.2	....	57.2
2	56.9	57.4	57.4	....	52.7	....	53.2	....	56.5
3	58.0	57.9	56.9	....	52.8	....	50.5	....	57.0
4	58.3	57.8	56.7	....	52.6	....	49.2	....	55.8
5	58.3	58.0	55.8	....	53.3	....	47.2	....	55.8
6	58.3	58.0	55.5	....	52.7	....	46.4	....	....
7	58.3	58.6	54.7	....	52.7	....	47.0	....	....
8	57.5	58.5	54.6	49.5	51.7	....	47.4	55.7	53.8

26.3.1.7.3--Continued.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

[illegible]

Lowest daily water level, in feet above mean sea level, 1945
(From recorder charts)

[illegible]

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). City of Camden Morris Station test well 3. Extremes of observed water level, in feet below mean sea level: Highest, 0.3 Mar. 19, 1936; lowest, 35.84 June 14, 1926.

Lowest daily water level in feet, below land-surface datum, 1945
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 21	11.0	Oct. 14	11.3	Nov. 6	11.3	Nov. 29	11.4
22	11.2	15	11.3	7	11.9	30	11.3
23	11.2	16	11.3	8	11.9	Dec. 1	11.4
24	10.2	17	11.7	9	11.5	2	11.3
25	10.7	18	11.7	10	11.5	3	10.8
26	11.1	19	11.5	11	11.3	4	11.3
27	11.2	20	11.4	12	11.2	5	11.4
28	11.3	21	11.3	13	11.5	6	11.4
29	11.2	22	11.1	14	12.0	7	11.1
30	11.1	23	11.2	15	12.1	14	10.8
Oct. 1	10.9	24	11.2	16	12.0	15	10.9
2	11.4	25	11.2	17	11.7	16	10.8
3	12.2	26	11.1	18	11.2	17	10.5
4	12.2	27	11.1	19	11.3	18	11.1
5	12.0	28	11.0	20	11.7	19	11.2
6	11.6	29	11.3	21	11.8	20	11.3
7	11.5	30	11.5	22	11.8	21	11.0
8	11.1	31	11.4	23	11.3	22	11.2
9	11.5	Nov. 1	11.5	24	11.5	23	11.4
10	11.6	2	11.4	25	11.4	29	11.3
11	11.7	3	11.4	26	11.7	30	11.0
12	11.4	4	11.3	27	12.0	31	10.9
13	11.3	5	11.2	28	11.6		

Lowest daily water level, in feet below mean sea level, 1945
(From recorder charts)

Sept. 21	5.2	Oct. 14	5.5	Nov. 6	5.5	Nov. 29	5.6
22	5.4	15	5.5	7	6.1	30	5.5
23	5.4	16	5.5	8	6.1	Dec. 1	5.6
24	4.4	17	5.9	9	5.7	2	5.5
25	4.9	18	5.9	10	5.7	3	5.0
26	5.3	19	5.7	11	5.5	4	5.5
27	5.4	20	5.6	12	5.4	5	5.6
28	5.3	21	5.5	13	5.7	6	5.6
29	5.4	22	5.3	14	6.2	7	5.3
30	5.3	23	5.4	15	6.3	14	5.0
Oct. 1	5.1	24	5.4	16	6.2	15	5.1
2	5.6	25	5.4	17	5.9	16	5.0
3	6.4	26	5.3	18	5.4	17	4.7
4	6.4	27	5.3	19	5.5	18	5.3
5	6.2	28	5.2	20	5.9	19	5.4
6	5.8	29	5.5	21	6.0	20	5.5
7	5.7	30	5.7	22	6.0	21	5.2
8	5.3	31	5.6	23	5.5	22	5.4
9	5.7	Nov. 1	5.7	24	5.7	23	5.6
10	5.8	2	5.6	25	5.6	29	5.5
11	5.9	3	5.6	26	5.9	30	5.2
12	5.6	4	5.5	27	6.2	31	5.1
13	5.5	5	5.4	28	5.8		

31.2.4.5.1 (*845, p. 201; *886, p. 344; 906, p. 86; 936, p. 81; 944, p. 81; *886, p. 91; 1016, p. 124). 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, -23.1 June 27, 1945.

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

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	21.8	22.2	21.8	21.4	21.0	21.4	25.3	....	26.3	21.9	....	20.5
2	21.2	22.0	21.1	21.6	21.4	21.4	26.5	....	21.4	21.3	....	20.0
3	21.5	22.1	21.3	21.7	20.9	20.9	22.9	....	21.1	22.7	....	20.7
4	21.2	22.0	21.0	21.3	20.7	21.3	24.4	....	22.6	21.7	....	19.8
5	21.3	21.2	21.9	21.6	20.9	20.5	22.5	....	23.6	21.3	....	....
6	21.1	22.4	21.3	21.5	19.3	22.6	22.1	....	23.9	20.5	....	....
7	20.5	22.4	20.9	21.6	21.0	22.6	24.4	....	25.2	20.2	....	....
8	20.6	21.9	21.5	20.7	20.3	23.2	22.0	....	25.0	21.5	....	....
9	....	21.9	21.5	22.1	21.0	22.2	24.4	....	23.0	22.5	....	....
10	....	21.7	21.0	22.1	20.9	21.5	23.5	....	24.5	21.9	....	....
11	....	22.1	21.0	21.3	21.3	21.4	....	....	24.8	20.6	....	....
12	....	22.0	21.0	21.1	21.1	21.9	....	....	24.8	20.8	....	....
13	21.9	22.2	21.0	24.0	20.9	22.5	....	23.9	23.1	22.9	....	....
14	22.7	21.6	22.2	23.5	21.5	25.9	....	24.3	22.7	....	....	....
15	20.6	21.6	22.1	20.5	21.4	26.2	....	20.9	22.9	....	....	....
16	21.2	21.6	23.8	20.7	24.9	25.5	....	21.3	20.9	....	....	20.4
17	21.4	21.3	23.3	21.2	22.2	24.3	....	22.4	20.7	....	....	21.5
18	21.3	21.4	21.4	21.4	22.2	25.9	....	23.7	20.8	....	....	21.3
19	21.4	22.1	21.9	21.3	21.1	24.9	....	20.8	20.5	....	....	21.8
20	21.4	21.9	22.1	21.0	20.9	23.8	....	25.6	21.4	....	....	21.7
21	21.7	21.6	21.7	21.2	21.7	25.4	....	25.2	23.4	....	....	21.2
22	20.9	21.4	21.4	20.1	21.9	25.9	....	26.2	22.0	23.0	....	21.3
23	21.3	21.3	21.4	21.3	21.8	24.5	....	24.0	20.6	20.4	....	....
24	21.5	21.6	21.4	20.5	22.4	24.8	....	21.8	21.6	21.1	....	....
25	22.0	21.0	20.5	20.7	25.2	26.3	....	21.0	21.8	20.9	....	....
26	23.8	21.2	22.7	21.4	22.5	24.9	....	20.4	21.8	....	....	....
27	24.0	21.6	21.2	21.1	20.6	26.7	....	25.8	21.9	....	....	....
28	22.1	21.5	21.6	20.6	23.2	26.2	....	22.0	24.1	....	21.6	....
29	21.8	....	22.0	19.9	22.6	26.6	....	23.7	24.2	....	21.0	....
30	22.1	....	22.0	21.1	22.8	25.8	....	26.1	20.6	....	20.8	....
31	22.2	....	21.5	....	22.7	....	....	26.5	....	....	....	....

Lowest daily water level, in feet below mean sea level, 1945

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	18.2	18.6	18.2	17.8	17.4	17.8	21.7	....	22.7	18.3	....	16.9
2	17.6	18.4	17.5	18.0	17.8	17.8	22.9	....	17.8	17.7	....	16.4
3	17.9	18.5	17.7	18.1	17.3	17.3	19.3	....	17.5	19.1	....	17.1
4	17.6	18.4	17.4	17.7	17.1	17.7	20.8	....	19.0	18.1	....	16.2
5	17.7	17.6	18.3	18.0	17.3	16.9	18.9	....	20.0	17.7	....	....
6	17.5	18.8	17.7	17.9	16.2	19.6	18.5	....	20.3	16.9	....	....
7	16.9	18.8	17.3	18.0	17.4	19.0	20.8	....	21.6	16.6	....	....
8	17.0	18.3	17.9	17.1	16.7	19.6	18.4	....	21.4	17.9	....	....
9	....	18.3	17.9	18.5	17.4	18.6	20.8	....	19.4	18.9	....	....
10	....	18.1	17.4	18.5	17.3	17.9	19.9	....	20.9	18.3	....	....
11	....	18.5	17.4	17.7	17.7	17.8	....	....	21.2	17.0	....	....
12	....	18.4	17.4	17.5	17.5	18.3	....	....	21.2	17.2	....	....
13	18.3	18.6	17.4	20.4	17.2	18.9	....	20.3	19.5	19.3	....	....
14	19.1	19.0	18.6	19.9	17.9	22.3	....	20.7	19.1	....	....	....
15	17.0	18.0	18.5	16.9	17.8	22.6	....	17.3	19.3	....	....	....
16	17.6	18.0	20.2	17.1	21.3	21.9	....	17.7	17.3	....	....	16.8
17	17.8	17.7	19.7	17.6	18.6	20.7	....	18.8	17.1	....	....	17.9
18	17.7	17.8	17.8	17.8	18.6	22.3	....	20.1	17.2	....	....	17.7
19	17.8	18.5	18.3	17.7	17.5	21.3	....	17.2	16.9	....	....	18.2
20	17.8	18.3	18.5	17.4	17.3	20.2	....	22.0	17.8	....	....	18.1
21	18.1	18.0	18.1	17.6	18.1	21.8	....	21.6	19.8	....	....	17.6
22	17.3	17.8	17.8	16.5	18.3	22.3	....	22.6	18.4	19.4	....	17.7
23	17.7	17.7	17.8	17.7	18.2	20.9	....	20.4	17.0	16.8	....	....
24	17.9	18.0	17.8	16.9	18.8	21.2	....	18.2	18.0	17.5	....	....
25	18.4	17.4	16.9	17.1	21.6	22.7	....	17.4	18.2	17.3	....	....
26	20.2	17.6	19.1	17.8	18.9	21.3	....	16.8	18.2	....	....	....
27	20.4	18.0	17.6	17.5	17.0	23.1	....	22.2	18.3	....	....	....

31.2.4.5.1--Continued.

Lowest daily water level, in feet below mean sea level, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
28	18.5	17.9	18.0	17.0	19.6	22.6	....	18.4	20.5	....	18.0	....
29	18.2		18.4	16.3	19.0	23.0	....	20.1	20.6	....	17.4	....
30	18.5		18.4	17.5	19.2	22.2	....	22.5	17.0	....	17.2	....
31	18.6		17.9		19.1		....	22.9		....		....

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). 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, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	12.6	12.8	12.5	12.2	11.9	12.0	12.4	12.8	13.4	13.4	13.4	12.6
2	12.9	12.8	12.4	12.2	11.9	12.0	12.4	12.8	13.4	13.4	13.3	12.6
3	12.9	12.7	12.3	12.2	11.9	12.0	12.5	12.8	13.4	13.6	13.3	12.6
4	12.8	12.7	12.4	12.2	11.7	12.0	12.5	12.8	13.4	13.6	13.3	12.7
5	12.7	12.6	12.4	12.2	11.8	12.0	12.5	12.9	13.5	13.5	13.2	12.6
6	12.7	12.6	12.2	12.4	11.8	12.0	12.5	12.9	13.5	13.5	....	12.2
7	12.6	12.6	12.3	12.4	11.9	12.1	12.6	12.9	13.5	13.4	....	12.4
8	12.4	12.5	12.3	12.3	11.9	12.1	12.6	12.9	13.5	13.4	....	12.7
9	12.6	12.4	12.3	12.3	12.0	12.1	12.7	12.9	13.5	13.4	13.3	12.7
10	12.6	12.4	12.3	12.3	12.0	12.1	12.6	13.0	13.4	13.4	13.4	12.6
11	12.7	12.5	12.3	12.3	12.1	12.0	12.7	13.0	13.4	13.3	13.3	12.8
12	12.7	12.5	12.3	12.3	12.1	12.1	12.7	13.1	13.4	13.3	13.3	13.0
13	12.7	12.6	12.3	12.3	12.0	12.1	12.7	13.1	13.4	13.3	13.2	13.0
14	12.5	12.4	12.4	12.2	12.0	12.1	12.7	13.1	13.4	13.3	13.2	12.9
15	12.5	12.4	12.3	12.2	12.0	12.2	12.7	13.1	13.4	13.3	13.2	12.9
16	12.4	12.4	12.3	12.2	12.0	12.2	12.7	13.1	13.5	13.3	13.3	12.9
17	12.5	12.4	12.2	12.1	11.9	12.2	12.7	13.1	13.5	13.3	13.3	13.1
18	12.5	12.4	12.3	12.0	11.9	12.2	12.7	13.1	13.1	13.4	13.3	13.1
19	12.5	12.5	12.2	12.1	11.9	12.2	12.8	13.2	13.3	13.4	13.3	13.1
20	12.5	12.5	12.1	12.1	11.9	12.3	12.8	13.2	13.4	13.4	13.3	12.8
21	12.5	12.4	12.0	12.1	11.9	12.3	12.8	13.2	13.4	13.5	13.3	12.9
22	12.5	12.3	11.9	12.2	11.9	12.3	12.7	13.3	13.5	13.5	13.1	12.9
23	12.5	12.4	11.9	12.1	12.0	12.3	12.7	13.3	13.5	13.4	13.1	13.0
24	12.6	12.4	12.0	12.1	12.0	12.3	12.7	13.2	13.5	13.3	13.1	12.9
25	....	12.6	12.1	12.0	12.0	12.3	12.8	....	13.5	13.2	13.1	12.8
26	....	12.6	12.1	12.0	12.0	12.3	12.8	....	13.5	13.2	13.1	12.8
27	....	12.4	12.1	12.0	12.0	12.2	12.8	13.2	13.5	13.3	13.1	13.0
28	....	12.5	12.2	12.0	12.0	12.2	12.8	13.3	13.5	13.4	12.9	12.9
29	....		12.1	12.0	11.9	12.3	12.8	13.3	13.5	13.4	12.6	12.8
30	....		12.2	11.9	11.9	12.3	12.8	13.4	13.5	13.4	12.6	12.6
31	12.8		12.2		12.0		12.9	13.4		13.4		12.6

Essex County

Cane 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). 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, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	41.4	....	....	....	33.4	35.2	50.4	....	....	36.7	39.3	36.8
2	41.6	....	....	....	34.2	36.4	49.5	....	....	36.5	....	35.9

25.15.7.5.4--Continued.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
3	41.7	42.7	....	....	34.3	36.3	43.9	....	....	36.2	....	36.8
4	41.7	42.7	....	....	....	36.5	41.5	....	....	36.2	....	35.9
5	41.8	42.5	....	....	....	37.6	41.1	....	....	36.0	....	33.4
6	41.8	42.5	....	....	....	39.0	41.3	....	....	35.1	....	....
7	41.7	42.6	....	32.1	....	37.7	41.3	....	....	35.0	....	....
8	41.5	42.6	....	32.9	....	....	41.3	....	....	35.7	40.6	32.6
9	41.9	....	....	32.4	....	....	41.0	23.0	....	35.7	41.3	32.5
10	42.0	....	....	34.9	....	....	41.2	23.6	....	37.3	38.3	34.4
11	....	....	....	35.3	....	....	41.4	30.0	....	37.4	35.2	33.8
12	....	....	....	33.4	29.5	....	40.6	34.6	....	36.9	31.3	33.1
13	....	....	....	31.6	29.4	....	40.9	35.3	....	38.2	30.2	33.1
14	....	....	....	30.7	29.0	....	42.3	36.3	....	37.8	36.4	33.1
15	....	....	....	33.3	....	....	42.1	36.7	....	38.2	39.3	33.1
16	....	....	....	34.6	....	....	39.1	36.8	39.0	38.5	37.1	33.1
17	....	....	....	35.1	....	....	38.7	37.0	40.5	37.3	36.9	33.2
18	....	....	....	34.9	....	....	37.6	37.0	38.5	39.8	37.1	33.3
19	....	....	....	34.5	....	....	36.1	37.1	35.6	41.3	35.1	33.9
20	42.0	....	....	....	....	....	36.6	37.1	37.9	....	36.4	33.9
21	42.0	....	....	....	....	....	36.9	37.7	....	....	37.0	....
22	42.0	....	....	30.5	....	....	36.8	39.3	....	42.5	36.7	33.1
23	42.0	....	....	30.3	....	....	....	38.6	38.8	42.2	35.6	33.0
24	45.0	....	....	30.0	....	41.6	....	....	40.9	39.9	34.9	34.7
25	46.5	....	....	30.0	....	41.7	....	....	47.9	39.0	37.6	34.4
26	....	....	....	30.9	38.4	41.7	....	36.7	47.9	39.1	38.7	26.4
27	44.9	....	....	31.9	38.4	40.9	....	38.5	45.7	41.5	37.6	29.3
28	43.8	....	....	27.7	36.3	41.9	....	37.7	....	38.4	36.6	....
29	44.8	....	....	27.7	37.5	....	....	39.8	....	42.5	....	25.7
30	46.5	....	....	32.3	37.5	47.8	....	40.9	37.1	43.1	....	25.2
31	47.7	....	....	....	36.3	....	....	41.2	....	43.1	....	25.1

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). 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, 1945

Date	Water level	Date	Water level	Date	Water level
Jan. 2	18.85	Apr. 7	13.71	Nov. 7	8.02
Feb. 9	18.60	Aug. 8	12.71		

Middlesex and Monmouth Counties

Runyon area

Average of the water levels in water table wells near Runyon, N. J., in feet above an assumed datum, 1945

Date	Wells less than 25 feet in depth		Wells 25 feet or more in depth	
	Number of wells	Water level	Number of wells	Water level
June 20	18	11.81	4	8.31

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). Browntown test well. Clyde Bowne. Extremes of observed water level, in feet above mean sea level: Highest, 28.14 Apr. 9 and 10, 1939; lowest, 21.83 Nov. 18, 1932.

29.1.4.6.8--Continued.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	6.10	6.29	5.82	5.72	5.78	5.68	5.90	5.14	5.91	5.49	....	....
2	6.10	6.30	5.82	5.72	5.78	5.68	....	5.15	5.93	5.58	....	....
3	6.10	6.32	5.77	5.72	5.78	5.68	5.91	5.15	....	5.58	....	....
4	6.10	6.34	5.77	5.72	5.80	5.69	5.91	5.18	....	5.59	....	....
5	6.10	6.35	5.77	5.72	5.79	5.69	5.92	5.21	....	5.61	....	....
6	6.10	6.37	5.73	5.72	5.79	5.69	5.92	5.22	....	5.64	....	5.20
7	6.10	6.37	5.72	....	5.79	5.69	5.93	5.22	....	5.64	....	5.18
8	6.10	6.40	5.72	5.72	5.79	5.70	5.93	5.23	....	5.63	....	5.19
9	6.10	6.41	5.72	5.72	5.79	5.70	5.95	5.25	....	5.64	....	5.19
10	6.10	6.42	5.72	5.72	5.78	5.71	5.95	5.27	6.14	5.65	....	5.19
11	6.10	6.43	5.72	5.72	5.76	....	5.96	5.29	6.15	5.66	....	5.19
12	6.10	6.43	5.72	5.72	5.73	5.72	5.96	5.32	6.17	5.67	....	5.20
13	6.10	6.44	5.72	....	5.68	5.72	5.97	5.36	6.18	5.68	....	....
14	6.10	6.44	5.72	....	5.68	5.73	5.98	5.38	6.19	....	....	....
15	6.10	6.44	5.72	5.74	5.68	5.73	....	5.40	6.16	....	....	....
16	6.10	6.44	5.72	5.74	5.68	5.74	6.01	5.43	6.15	....	....	....
17	6.11	....	5.72	5.75	5.68	5.74	6.01	5.47	....	5.76	....	....
18	6.12	....	5.72	5.75	....	5.75	6.02	5.51	5.84	....	....	....
19	6.13	6.43	5.72	5.75	....	....	5.56	5.55	5.53	....	....	....
20	6.15	6.43	5.72	5.75	....	....	5.27	5.66	5.44	....	....	5.26
21	6.15	6.41	5.72	5.76	....	....	5.20	5.66	5.41	....	6.15	....
22	6.15	6.22	5.72	5.76	....	....	....	5.66	5.41	....	6.11	....
23	6.16	....	5.72	5.76	5.67	....	5.13	5.70	5.42	5.86	6.11	....
24	6.16	6.13	5.71	5.76	5.67	....	5.11	5.73	....	....	....	....
25	6.16	6.12	5.71	5.76	5.67	5.84	5.11	5.75	....	....	6.05	....
26	6.20	5.96	5.71	5.76	5.67	5.85	5.11	5.76	5.42	....	5.86	....
27	6.23	5.84	5.71	5.77	5.67	5.86	5.11	5.79	5.42	....	....	5.23
28	6.24	5.83	5.71	5.78	....	5.87	5.12	5.80	5.43	....	....	5.23
29	6.26	....	5.71	5.78	5.68	5.87	5.12	5.82	5.43	....	....	5.00
30	6.27	....	5.71	5.78	5.68	5.89	5.13	5.87	5.44	....	....	4.84
31	6.28	....	5.72	....	5.68	....	5.14	5.89	....	....	....	4.65

Water level at end of day, in feet above mean sea level, 1945

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	25.51	25.32	25.79	25.89	25.83	25.93	25.71	26.47	25.70	26.12	....	....
2	25.51	25.31	25.79	25.89	25.83	25.93	....	26.46	25.68	26.03	....	....
3	25.51	25.29	25.84	25.89	25.83	25.93	25.70	26.46	....	26.03	....	....
4	25.51	25.27	25.84	25.89	25.81	25.92	25.70	26.43	....	26.02	....	....
5	25.51	25.26	25.84	25.89	25.82	25.92	25.69	26.40	....	26.00	....	....
6	25.51	25.24	25.88	25.89	25.82	25.92	25.69	26.39	....	25.97	....	26.41
7	25.51	25.22	25.89	....	25.82	25.92	25.68	26.39	....	25.97	....	26.43
8	25.51	25.21	25.89	25.89	25.82	25.91	25.68	26.38	....	25.98	....	26.42
9	25.51	25.20	25.89	25.89	25.82	25.91	25.66	26.36	....	25.97	....	26.42
10	25.51	25.19	25.89	25.89	25.83	25.90	25.66	26.34	25.47	25.96	....	26.42
11	25.51	25.18	25.89	25.89	25.85	....	25.65	26.32	25.46	25.95	....	26.42
12	25.51	25.18	25.89	25.89	25.89	25.89	25.65	26.29	25.44	25.94	....	26.41
13	25.51	25.17	25.89	....	25.93	25.89	25.64	26.25	25.43	25.93	....	....
14	25.51	25.17	25.89	....	25.93	25.88	25.63	26.23	25.42	....	....	....
15	25.51	25.17	25.89	25.87	25.93	25.88	....	26.21	25.45	....	....	....
16	25.51	25.17	25.89	25.87	25.93	25.87	25.60	26.18	25.46	....	....	....
17	25.50	....	25.89	25.86	25.93	25.87	25.60	26.14	....	25.85	....	....
18	25.49	....	25.89	25.86	....	25.86	25.59	26.10	25.77	....	....	....
19	25.48	25.18	25.89	25.86	....	....	26.05	26.06	26.08	....	....	....
20	25.46	25.18	25.89	25.86	....	....	26.34	25.95	26.17	....	....	26.35
21	25.46	25.20	25.89	25.85	....	....	26.41	25.95	26.20	....	25.46	....
22	25.46	25.39	25.89	25.85	....	....	....	25.95	26.20	....	25.50	....
23	25.45	....	25.89	25.85	25.94	....	26.48	25.91	26.19	25.75	25.50	....
24	25.45	25.48	25.90	25.85	25.94	....	26.50	25.88	....	....	....	....
25	25.44	25.49	25.90	25.85	25.94	25.77	26.50	25.86	....	....	25.56	....
26	25.41	25.65	25.90	25.85	25.94	25.76	26.50	25.85	26.19	....	25.75	....
27	25.38	25.77	25.90	25.84	25.94	25.75	26.50	25.82	26.19	....	....	26.58
28	25.37	25.78	25.90	25.83	....	25.74	26.49	25.81	26.18	....	....	26.58
29	25.35	....	25.90	25.83	25.93	25.74	26.49	25.79	26.18	....	....	26.61
30	25.34	....	25.90	25.83	25.93	25.72	26.48	25.74	26.17	....	....	26.77
31	25.33	....	25.89	....	25.93	....	26.47	25.72	....	....	....	26.96

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). 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, 1945

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	12.65	13.06	12.90	12.58	12.86	12.53	13.06	11.05	12.22	12.04	12.76	12.58
2	12.72	13.00	12.87	12.58	12.87	12.55	13.07	11.07	12.26	12.08	12.76	12.49
3	12.71	13.12	12.84	12.61	12.60	12.55	13.09	11.12	12.29	12.20	12.77	12.33
4	12.71	13.12	12.82	12.58	12.77	12.57	13.09	11.20	12.30	12.22	12.78	12.26
5	12.74	13.15	12.79	12.62	12.78	12.58	13.09	11.26	12.36	12.24	12.79	12.20
6	12.74	13.15	12.74	12.68	12.77	12.62	13.10	11.27	12.38	12.24	12.81	12.09
7	12.68	13.16	12.72	12.69	12.76	12.63	13.11	11.32	12.40	12.24	12.83	12.01
8	12.70	13.12	12.70	12.69	12.75	12.64	13.12	11.34	12.44	12.26	12.85	12.01
9	12.72	13.13	12.67	12.69	12.74	12.65	13.13	11.38	12.47	12.31	12.88	11.99
10	12.74	13.11	12.64	12.67	12.66	12.65	13.14	11.41	12.48	12.33	12.90	11.98
11	12.77	13.11	12.62	12.66	12.66	12.67	13.17	11.46	12.50	12.33	12.92	12.06
12	12.76	13.11	12.59	12.65	12.60	12.70	13.18	11.51	12.53	12.34	12.92	12.09
13	12.75	13.05	12.58	12.62	12.55	12.71	13.20	11.56	12.54	12.37	12.93	12.12
14	12.69	13.05	12.54	12.64	12.51	12.74	13.21	11.59	.....	12.40	12.94	12.15
15	12.66	13.05	12.52	12.65	12.48	12.77	13.22	11.64	.....	12.43	12.96	12.18
16	12.61	13.05	12.50	12.63	12.47	12.80	13.24	11.69	.....	12.46	12.98	12.18
17	12.62	13.05	12.48	12.64	12.43	12.83	13.26	11.73	.....	12.49	12.98	12.14
18	12.65	13.05	12.49	12.69	12.41	12.85	13.02	11.77	.....	12.50	12.99	12.14
19	12.67	13.06	12.50	12.74	12.39	12.88	12.72	11.81	.....	12.50	12.94	.....
20	12.71	13.08	12.50	12.76	12.36	12.89	11.81	11.85	.....	12.51	13.01	.....
21	12.74	13.09	12.48	12.78	12.34	12.91	11.55	11.89	.....	12.51	13.00	.....
22	12.74	13.03	12.45	12.82	12.33	12.92	11.43	11.94	.....	12.51	12.97	.....
23	12.78	13.00	12.46	12.83	12.34	12.94	11.28	11.96	.....	12.50	13.00	.....
24	12.82	12.99	12.49	12.84	12.34	12.96	11.28	11.94	.....	12.52	13.02	.....
25	12.90	12.99	12.50	12.82	12.36	12.97	11.26	11.94	.....	12.52	13.05	.....
26	12.93	12.92	12.50	12.81	12.38	12.97	11.19	11.99	12.03	12.55	13.06	.....
27	12.92	12.92	12.51	12.83	12.39	13.00	11.13	12.03	12.02	12.60	13.07	.....
28	12.95	12.91	12.52	12.87	12.38	13.01	11.07	12.06	12.01	12.64	12.98	.....
29	12.99		12.52	12.86	12.39	13.02	11.05	12.13	12.04	12.66	12.81	.....
30	13.01		12.55	12.85	12.44	13.04	11.04	12.17	12.05	12.69	12.71	.....
31	13.02		12.54		12.49		11.03	12.20		12.74	.....	.....

Water level at end of day, in feet above mean sea level, 1945

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	6.05	5.64	5.80	6.12	5.84	6.17	5.64	7.65	6.48	6.66	5.94	6.12
2	5.98	5.61	5.83	6.12	5.83	6.15	5.63	7.63	6.44	6.62	5.94	6.21
3	5.99	5.58	5.86	6.09	5.90	6.15	5.61	7.58	6.41	6.50	5.93	6.37
4	5.99	5.58	5.88	6.12	5.93	6.13	5.61	7.50	6.40	6.48	5.92	6.44
5	5.96	5.55	5.91	6.08	5.92	6.12	5.61	7.44	6.34	6.46	5.91	6.50
6	5.96	5.55	5.96	6.02	5.93	6.08	5.60	7.43	6.32	6.46	5.89	6.61
7	6.02	5.54	5.98	6.01	5.94	6.07	5.59	7.38	6.30	6.46	5.87	6.69
8	6.00	5.58	6.00	6.01	5.95	6.06	5.58	7.36	6.26	6.44	5.85	6.69
9	5.98	5.57	6.03	6.01	5.96	6.05	5.57	7.32	6.23	6.39	5.82	6.71
10	5.96	5.59	6.06	6.03	6.04	6.05	5.56	7.29	6.22	6.37	5.80	6.72
11	5.93	5.59	6.08	6.04	6.04	6.05	5.53	7.24	6.20	6.37	5.78	6.64
12	5.94	5.59	6.11	6.05	6.10	6.00	5.52	7.19	6.17	6.36	5.78	6.61
13	5.95	5.65	6.12	6.08	6.15	5.99	5.50	7.14	6.16	6.33	5.77	6.58
14	6.01	5.65	6.16	6.06	6.19	5.96	5.49	7.11	.....	6.30	5.76	6.55
15	6.04	5.65	6.18	6.05	6.22	5.93	5.48	7.06	.....	6.27	5.74	6.52
16	6.09	5.65	6.20	6.07	6.23	5.90	5.46	7.01	.....	6.24	5.72	6.52
17	6.08	5.65	6.22	6.06	6.27	5.87	5.44	6.97	.....	6.21	5.72	6.56
18	6.05	5.65	6.21	6.01	6.29	5.85	5.68	6.93	.....	6.20	5.71	6.56
19	6.03	5.64	6.20	5.96	6.31	5.82	5.98	6.89	.....	6.20	5.76	.....
20	5.99	5.62	6.20	5.94	6.34	5.81	6.89	6.85	.....	6.19	5.69	.....
21	5.96	5.61	6.22	5.92	6.36	5.79	7.15	6.81	.....	6.19	5.70	.....
22	5.96	5.67	6.25	5.88	6.37	5.78	7.27	6.76	.....	6.19	5.73	.....
23	5.92	5.70	6.24	5.87	6.36	5.76	7.42	6.74	.....	6.20	5.70	.....
24	5.88	5.71	6.21	5.86	6.36	5.74	7.42	6.76	.....	6.18	5.68	.....
25	5.80	5.71	6.20	5.88	6.34	5.73	7.46	6.76	.....	6.18	5.65	.....
26	5.77	5.78	6.20	5.89	6.32	5.73	7.51	6.71	6.67	6.15	5.64	.....
27	5.78	5.78	6.19	5.87	6.31	5.70	7.57	6.67	6.68	6.10	5.63	.....

28.5.4.8.1--Continued.

Water level at end of day, in feet above mean sea level, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
28	5.75	5.79	6.18	5.83	6.32	5.69	7.63	6.64	6.69	6.06	5.72	....
29	5.71		6.18	5.84	6.31	5.68	7.65	6.57	6.66	6.04	5.89	....
30	5.69		6.15	5.85	6.26	5.66	7.66	6.53	6.65	6.01	5.99	....
31	5.68		6.16		6.21		7.67	6.50		5.96		....

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). Duhermal observation well 2. Extremes of observed water level, in feet above mean sea level: Highest, 15.65 Apr. 11, 1939; lowest, 8.84 Dec. 10, 1941. No measurements made in 1945.

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). Duhermal observation well 4. Extremes of observed water level, in feet with reference to mean sea level: Highest, +11.75 Apr. 20, 1939; lowest, -0.85 Oct. 22, 23, 1943.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	18.81	21.65	23.09	21.79	.....	21.17	21.71	17.00	19.57	18.38	20.61	19.59
2	18.73	21.87	23.04	21.81	.....	21.39	21.50	17.12	19.52	18.76	20.80	19.29
3	18.64	22.07	23.01	21.98	20.86	21.44	21.37	17.28	19.69	18.79	20.85	19.28
4	18.56	22.12	.....	21.91	21.03	21.54	21.18	17.34	19.62	18.92	20.87	19.31
5	18.51	22.31	.....	22.07	20.92	21.61	21.08	17.09	19.73	19.05	20.92	19.26
6	18.57	22.56	.....	22.14	20.80	21.71	21.02	17.53	19.85	18.95	20.99	19.19
7	18.56	22.73	.....	22.18	20.86	21.72	21.00	17.45	19.84	18.77	21.05	19.05
8	18.62	22.84	22.58	22.19	20.92	21.86	20.83	17.57	19.77	18.76	21.26	18.55
9	18.69	22.99	22.53	22.24	21.05	21.81	20.57	17.67	19.71	18.70	21.41	18.37
10	18.68	23.08	22.52	22.26	21.03	21.62	20.86	17.85	19.88	18.95	21.30	18.45
11	18.39	23.14	22.48	22.22	21.00	21.83	21.08	17.87	19.76	17.99	21.22	18.34
12	18.28	23.28	22.46	22.28	20.87	21.84	21.02	17.96	19.41	17.76	21.31	18.56
13	18.27	22.79	22.44	22.37	20.83	21.91	21.03	16.93	19.31	17.65	21.43	18.46
14	18.26	23.38	22.43	22.34	20.86	21.92	21.09	17.87	19.17	17.48	21.47	18.68
15	18.24	23.47	22.41	22.32	20.95	21.95	21.00	17.74	18.96	19.54	21.46	18.48
16	18.28	23.63	.....	22.27	21.01	22.00	20.81	17.99	18.81	19.55	21.43	18.47
17	18.35	23.72	22.38	22.32	21.06	22.05	20.63	18.40	.....	19.96	21.29	.....
18	18.32	23.78	22.34	22.25	21.11	22.11	19.87	18.65	.....	19.65	21.31	.....
19	18.32	23.87	22.30	22.20	21.13	22.05	.....	18.66	18.71	20.18	21.29	.....
20	19.14	23.64	22.26	22.21	21.05	22.02	17.94	18.90	18.41	20.19	21.17	18.87
21	19.32	23.84	22.22	22.30	20.91	22.00	17.51	18.96	18.41	20.51	21.18	19.08
22	18.95	23.89	22.11	22.27	21.02	21.86	17.22	19.12	18.09	20.73	20.96	19.03
23	.....	23.77	22.02	22.29	21.16	21.77	17.14	19.15	18.03	20.85	21.02	19.07
24	19.05	23.61	21.92	22.34	21.26	21.65	17.92	19.25	18.44	20.73	20.95	.....
25	19.13	23.49	21.79	.....	21.36	21.59	16.92	19.17	18.38	20.85	20.75	.....
26	19.21	23.36	21.69	.....	21.45	21.57	17.31	18.78	18.52	20.74	20.76	.....
27	19.32	23.24	21.26	.....	21.50	21.70	17.17	18.97	18.68	20.57	20.79	17.67
28	19.29	23.14	21.64	.....	21.50	21.78	17.01	19.07	18.64	20.43	20.66	17.62
29	19.42		21.78	.....	21.54	21.83	16.89	19.27	18.59	20.53	20.22	17.51
30	19.46		21.90	.....	21.24	21.93	17.00	19.41	18.41	20.59	19.88	17.56
31	21.27		21.86		20.87		16.94	19.48		20.62		17.48

Water level at end of day, in feet above mean sea level, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	4.30	1.46	0.02	1.32	....	1.94	1.40	6.11	3.54	4.73	2.50	3.52
2	4.38	1.24	.07	1.30	....	1.72	1.61	5.99	3.59	4.35	2.31	3.82
3	4.47	1.04	.10	1.13	2.25	1.67	1.74	5.83	3.42	4.32	2.26	3.83
4	4.55	.99	....	1.20	2.08	1.57	1.93	5.77	3.49	4.19	2.24	3.80
5	4.60	.80	....	1.04	2.19	1.50	2.03	6.02	3.38	4.06	2.19	3.85
6	4.54	.55	....	.97	2.31	1.40	2.09	5.58	3.26	4.16	2.12	3.92
7	4.55	.38	....	.93	2.25	1.39	2.11	5.66	3.27	4.34	2.06	4.06
8	4.49	.27	.53	.92	2.19	1.25	2.28	5.54	3.34	4.35	1.85	4.56
9	4.42	.12	.58	.87	2.06	1.30	2.54	5.44	3.40	4.41	1.70	4.74
10	4.43	.03	.59	.85	2.08	1.49	2.25	5.26	3.23	4.16	1.81	4.66
11	4.72	a .03	.63	.87	2.11	1.28	2.03	5.24	3.35	5.12	1.89	4.77

a Below mean sea level.

28.4.9.3.5--Continued.

Water level at end of day, in feet above mean sea level, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
12	4.83	a0.17	0.65	0.83	2.24	1.27	2.09	5.15	3.70	5.35	1.80	4.55
13	4.84	a .32	.67	.74	2.28	1.20	2.08	6.18	3.80	5.46	1.68	4.65
14	4.85	a .27	.68	.77	2.25	1.19	2.02	5.24	3.94	5.63	1.64	4.43
15	4.87	a .36	.70	.79	2.16	1.16	2.11	5.37	4.15	3.57	1.65	4.63
16	4.83	a .52	...	.84	2.10	1.11	2.30	5.12	4.30	3.56	1.68	4.46
17	4.76	a .61	.73	.79	2.05	1.06	2.48	4.71	...	3.15	1.82	...
18	4.79	a .67	.77	.86	2.00	1.00	3.24	4.46	...	4.46	1.80	...
19	4.79	a .76	.81	.91	1.98	1.06	...	4.55	4.40	2.93	1.82	...
20	3.97	a .53	.85	.90	2.06	1.09	5.17	4.21	4.70	2.92	1.94	4.24
21	3.79	a .73	.89	.81	2.20	1.11	5.60	4.15	4.70	2.60	1.93	4.03
22	4.16	a .78	1.00	.84	2.09	1.25	5.89	3.99	5.02	2.38	2.15	4.08
23	...	a .66	1.02	.82	1.95	1.34	5.97	3.96	5.08	2.26	2.09	4.04
24	4.06	a .50	1.19	.77	1.85	1.46	5.19	3.86	4.67	2.39	2.16	...
25	3.98	a .38	1.32	...	1.75	1.52	6.19	3.94	4.73	2.26	2.36	...
26	3.90	a .25	1.42	...	1.66	1.54	5.80	4.33	4.59	2.37	2.35	...
27	3.79	a .13	1.85	...	1.61	1.41	5.94	4.14	4.53	2.54	2.32	5.44
28	3.82	a .03	1.47	...	1.61	1.33	6.10	4.04	4.47	2.68	2.45	5.49
29	3.69	...	1.33	...	1.57	1.28	6.22	3.84	4.52	2.58	2.89	5.60
30	3.65	...	1.21	...	1.87	1.18	6.11	3.70	4.70	2.52	3.23	5.55
31	1.84	...	1.25	...	2.24	...	6.17	3.63	...	2.49	...	5.63

a Below mean sea level.

28.5.7.1.5 (*886, p. 359; 906, p. 93; 936, p. 86; 944, p. 86; 986, p. 97; 1016, p. 132). Duermal observation well 5. Extremes of observed water level, in feet above mean sea level: Highest, 14.94 Apr. 7 and 8, 1939; lowest, 6.17 Oct. 14, 1943.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	9.85	11.08	9.86	9.71	9.97	10.08	11.00	7.47	9.54	8.92	9.53	8.31
2	9.69	11.09	9.83	9.62	9.94	10.10	10.98	7.59	9.61	8.99	9.58	8.22
3	9.74	11.14	9.80	9.78	9.80	10.17	10.79	7.71	9.69	9.11	9.62	8.19
4	9.73	11.17	9.79	9.70	9.78	10.21	10.67	7.82	9.76	9.14	9.62	8.26
5	9.78	11.26	9.68	9.87	9.72	10.24	10.58	7.83	9.83	9.18	9.69	8.27
6	9.83	11.32	9.66	9.92	9.71	10.28	10.53	7.86	9.90	9.12	9.78	8.15
7	9.83	11.25	9.62	9.97	9.68	10.33	10.56	7.96	9.96	8.99	9.83	8.16
8	9.83	.....	9.60	10.08	9.70	10.41	10.59	8.04	10.01	9.08	9.91	8.17
9	9.87	.....	9.60	10.14	9.72	10.49	10.57	8.08	10.07	9.18	9.98	8.08
10	9.98	.....	9.62	10.19	9.62	10.44	10.72	8.17	10.03	9.17	9.98	8.29
11	10.08	.....	9.65	10.19	9.54	10.56	10.86	8.25	9.95	9.15	9.94	8.28
12	10.10	.....	9.63	10.24	9.47	10.65	10.94	8.33	9.94	9.04	9.95	8.39
13	10.17	.....	9.68	10.18	9.48	10.70	11.03	8.35	10.01	8.98	10.01	8.49
14	10.22	11.05	9.72	10.27	9.43	10.68	11.08	8.41	9.92	9.04	10.04	8.58
15	10.25	11.00	9.74	10.32	9.41	10.72	10.92	8.38	9.78	9.28	10.05	8.57
16	10.30	10.98	9.78	10.29	9.39	10.80	10.81	8.46	9.73	9.25	10.06	8.64
17	10.28	10.84	9.81	10.30	9.39	10.90	10.69	8.63	9.69	9.29	10.06	8.75
18	10.30	10.88	9.86	10.31	9.39	10.99	8.58	8.74	9.15	9.42	9.99	8.78
19	10.35	10.90	9.85	10.28	9.54	10.99	7.54	8.80	8.35	9.44	9.98	8.88
20	10.40	10.87	9.88	10.28	9.56	10.85	7.43	8.86	8.33	9.49	10.01	8.98
21	10.43	10.91	9.88	10.35	9.58	10.79	7.49	8.94	8.44	9.42	9.96	...
22	10.43	10.68	9.79	10.37	9.62	10.74	7.47	9.03	8.52	9.47	9.84	...
23	10.48	10.53	9.60	10.37	9.68	10.75	6.82	9.08	8.48	9.53	9.76	...
24	10.58	10.40	9.57	10.42	9.75	10.79	6.98	...	8.56	9.52	9.75	8.96
25	10.63	10.30	9.58	10.24	9.82	10.70	7.00	9.10	8.61	9.53	9.76	8.72
26	10.68	10.09	9.56	10.11	9.90	10.77	7.13	...	8.70	9.51	9.77	8.16
27	10.75	9.95	9.48	10.11	9.94	10.83	7.15	9.13	8.75	9.49	9.76	8.23
28	10.76	9.84	9.56	10.12	9.92	10.89	7.19	9.21	8.80	9.47	9.55	8.22
29	10.85	...	9.58	9.97	9.99	10.98	7.08	9.31	8.90	9.46	8.63	7.79
30	10.85	...	9.64	9.96	10.04	11.05	7.28	9.39	8.93	9.46	8.41	7.78
31	10.98	...	9.72	...	9.97	...	7.37	9.48	...	9.49	...	7.64

28.5.7.1.5--Continued.

Water level at end of day, in feet above mean sea level, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	11.23	10.00	11.22	11.37	11.11	11.00	10.08	13.61	11.54	12.16	11.55	12.77
2	11.39	9.99	11.25	11.46	11.14	10.98	10.10	13.49	11.47	12.09	11.50	12.86
3	11.34	9.94	11.28	11.30	11.28	10.91	10.29	13.37	11.39	11.97	11.46	12.89
4	11.35	9.91	11.29	11.38	11.30	10.87	10.41	13.26	11.32	11.94	11.46	12.82
5	11.30	9.82	11.40	11.21	11.36	10.84	10.50	13.25	11.25	11.90	11.39	12.81
6	11.25	9.76	11.42	11.16	11.37	10.80	10.55	13.22	11.18	11.96	11.30	12.93
7	11.25	9.83	11.46	11.11	11.40	10.75	10.52	13.12	11.12	12.09	11.25	12.92
8	11.22	....	11.48	11.00	11.38	10.67	10.49	13.04	11.07	12.00	11.17	12.91
9	11.21	....	11.48	10.94	11.36	10.59	10.51	13.00	11.01	11.90	11.10	13.00
10	11.10	....	11.46	10.89	11.46	10.64	10.36	12.91	11.05	11.91	11.10	12.89
11	11.00	....	11.43	10.89	11.54	10.52	10.22	12.83	11.13	11.93	11.14	12.80
12	10.98	....	11.45	10.84	11.61	10.43	10.14	12.75	11.14	12.04	11.13	12.69
13	10.91	....	11.40	10.90	11.60	10.38	10.05	12.73	11.07	12.10	11.07	12.59
14	10.86	10.03	11.36	10.81	11.65	10.40	10.00	12.67	11.16	12.04	11.04	12.50
15	10.83	10.08	11.34	10.76	11.67	10.36	10.16	12.70	11.30	11.80	11.03	12.51
16	10.78	10.10	11.30	10.79	11.69	10.28	10.27	12.62	11.35	11.83	11.02	12.44
17	10.80	10.24	11.27	10.78	11.69	10.18	10.39	12.45	11.39	11.79	11.02	12.33
18	10.78	10.20	11.22	10.77	11.69	10.09	12.50	12.34	11.93	11.66	11.09	12.30
19	10.73	10.18	11.23	10.80	11.54	10.09	13.54	12.28	12.73	11.64	11.10	12.28
20	10.68	10.21	11.20	10.80	11.52	10.23	13.65	12.22	12.75	11.59	11.07	12.18
21	10.65	10.17	11.20	10.73	11.50	10.29	13.59	12.14	12.64	11.66	11.12	....
22	10.65	10.40	11.29	10.71	11.46	10.34	13.61	12.05	12.56	11.61	11.24	....
23	10.60	10.55	11.48	10.71	11.40	10.33	14.26	12.00	12.60	11.55	11.32	....
24	10.50	10.68	11.51	10.66	11.33	10.29	14.10	....	12.52	11.56	11.33	12.12
25	10.45	10.78	11.50	10.84	11.26	10.38	14.08	11.98	12.47	11.55	11.32	12.36
26	10.40	10.99	11.52	10.97	11.18	10.31	13.95	....	12.38	11.57	11.31	12.92
27	10.33	11.13	11.60	10.97	11.14	10.25	13.93	11.96	12.33	11.59	11.32	12.85
28	10.32	11.24	11.52	10.96	11.16	10.19	13.89	11.87	12.28	11.61	11.53	12.86
29	10.23	....	11.50	11.11	11.09	10.10	14.00	11.77	12.18	11.62	12.45	13.29
30	10.23	....	11.44	11.12	11.04	10.03	13.80	11.69	12.15	11.62	12.67	13.30
31	10.10	....	11.36	....	11.11	....	13.71	11.60	....	11.59	....	13.44

28.4.9.5.1 (*886, p. 360; 906, p. 94; 936, p. 87; 944, p. 87; 986, p. 98; 1016, p. 133). 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 and 14, 1943. No measurements made in 1945.

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). 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 and Oct. 1, 1943.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	3.75	2.54	3.18	3.26	3.87	4.57	3.03	....	3.37	3.53	2.79
2	....	3.79	2.56	3.10	3.34	3.93	3.49	3.08	....	3.54	3.63	2.80
3	....	3.84	2.61	3.28	3.21	3.98	4.01	3.14	....	3.67	3.68	2.84
4	....	3.84	2.69	3.26	3.10	4.06	4.03	3.19	....	3.85	3.67	2.92
5	3.03	3.84	2.76	3.30	3.14	4.09	4.15	3.14	3.97	3.67	3.72	2.97
6	3.13	3.89	2.74	3.38	3.18	4.11	4.24	3.11	4.15	3.20	3.84	2.97
7	3.06	3.88	2.79	3.40	3.25	4.14	4.36	3.03	4.19	2.98	3.82	2.91
8	3.12	3.71	2.81	3.35	3.29	4.17	4.36	3.04	4.19	2.34	3.87	3.00
9	3.27	3.80	2.89	3.36	3.34	4.19	3.77	3.12	4.14	2.60	3.93	2.99
10	3.39	3.80	2.93	3.40	3.12	4.06	4.31	3.21	4.26	2.76	3.97	3.00
11	3.44	3.73	2.99	3.38	3.10	4.16	4.46	3.27	3.96	2.75	3.81	3.15
12	3.40	3.60	3.00	3.43	3.09	4.23	4.48	3.00	3.83	2.76	3.84	3.20
13	3.41	3.53	3.03	3.46	3.10	4.25	4.63	2.92	3.91	.81	3.86	3.15
14	3.42	3.69	....	3.48	3.19	4.26	4.67	3.28	3.80	.26	3.84	3.17
15	3.47	3.47	....	3.49	3.22	4.30	4.06	3.32	3.64	1.05	3.92	3.21
16	....	3.44	3.16	3.48	3.30	4.34	4.24	3.47	3.56	2.45	3.91	3.26
17	3.54	3.39	3.18	3.42	3.29	4.39	4.20	3.69	3.57	2.80	3.90	3.29
18	3.57	3.39	3.20	3.41	3.26	4.92	2.39	3.75	....	2.87	3.92	3.34
19	3.57	3.40	3.17	3.50	3.27	4.31	2.20	3.61	2.77	2.89	3.80	3.20
20	3.57	3.34	3.14	3.51	3.27	4.31	2.30	3.73	2.96	2.85	3.86	3.30

28.4.9.8.2--Continued.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
21	3.57	3.32	3.08	3.51	3.37	4.29	2.68	3.74	3.12	2.93	3.74	3.39
22	3.52	2.99	2.93	3.56	3.46	4.22	2.68	3.76	3.15	2.97	3.42	3.38
23	3.55	2.62	2.82	3.57	3.62	4.29	2.44	3.78	3.08	2.87	3.50	3.16
24	3.62	2.68	2.86	3.57	3.69	4.25	2.09	3.71	3.28	2.82	3.59	2.96
25	3.69	2.70	2.92	1.99	3.76	4.30	2.40	3.59	3.33	2.74	3.58	2.66
26	3.70	2.49	2.93	3.03	3.81	4.34	2.60	3.31	3.39	2.91	3.71	2.02
27	3.72	2.41	2.39	3.17	3.81	4.43	2.73	3.37	3.43	3.17	3.74	2.59
28	3.73	2.45	3.02	3.24	3.77	4.49	2.75	3.49	3.48	3.22	3.48	2.76
29	3.74		3.11	3.26	3.80	4.54	2.66	....	3.52	3.33	2.32	2.40
30	3.77		3.20	3.06	3.86	4.64	2.88	....	3.47	3.42	2.53	1.96
31	3.76		3.19		3.37		2.92	....		3.44		1.92

Water level at end of day, in feet above mean sea level, 1945

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	16.19	17.40	16.76	16.68	16.07	15.37	16.91	.....	16.57	16.41	17.15
2	.....	16.15	17.38	16.84	16.60	16.01	16.45	16.86	.....	16.40	16.31	17.14
3	.....	16.10	17.43	16.66	16.73	15.96	15.93	16.80	.....	16.27	16.26	17.10
4	.....	16.10	17.35	16.68	16.84	15.88	15.91	16.75	.....	16.29	16.27	17.02
5	16.91	16.10	17.18	16.64	16.80	15.85	15.79	16.80	16.97	16.27	16.22	16.97
6	16.81	16.05	17.20	16.58	16.76	15.83	15.70	16.83	15.79	16.74	16.10	17.07
7	16.88	16.06	17.15	16.54	16.69	15.80	15.58	16.91	15.75	16.96	16.12	17.03
8	16.82	16.23	17.13	16.59	16.65	15.77	15.58	16.90	15.75	17.60	16.07	16.94
9	16.67	16.14	17.05	16.58	16.60	15.75	16.17	16.82	15.80	17.34	16.01	16.95
10	16.55	16.14	17.01	16.54	16.82	15.88	15.63	16.73	15.68	17.18	15.97	16.94
11	16.50	16.21	16.95	16.56	16.84	15.78	15.48	16.67	15.98	17.19	16.13	16.79
12	16.54	16.34	16.94	16.51	16.85	15.71	15.46	16.94	16.11	17.18	16.10	16.74
13	16.53	16.41	16.91	16.48	16.84	15.69	15.31	17.02	16.03	19.13	16.08	16.79
14	16.52	16.25	.....	16.46	16.75	15.68	15.27	16.66	16.14	19.68	16.10	16.77
15	16.47	16.47	.....	16.45	16.72	15.64	15.88	16.62	16.30	18.89	16.02	16.73
16	.....	16.50	16.78	16.46	16.64	15.60	15.70	16.47	16.38	17.49	16.03	16.68
17	16.40	16.55	16.76	16.52	16.65	15.55	15.74	16.25	16.37	17.14	16.04	16.65
18	16.37	16.55	16.74	16.53	16.68	15.02	17.55	16.19	.....	17.07	16.02	16.60
19	16.37	16.54	16.77	16.44	16.67	15.63	17.74	16.33	17.17	17.05	16.14	16.74
20	16.37	16.60	16.80	16.43	16.67	15.63	17.64	16.21	16.98	17.09	16.08	16.64
21	16.37	16.62	16.86	16.43	16.57	15.65	17.26	16.20	16.82	17.01	16.20	16.55
22	16.42	16.95	17.01	16.38	16.48	15.72	17.26	16.18	16.79	16.97	16.52	16.56
23	16.39	17.32	17.12	16.37	16.32	15.65	17.50	16.16	16.86	17.07	16.44	16.78
24	16.32	17.26	17.08	16.37	16.25	15.69	17.85	16.23	16.66	17.12	16.35	16.98
25	16.25	17.24	17.02	17.95	16.18	15.64	17.54	16.35	16.61	17.20	16.36	17.28
26	16.24	17.45	17.01	16.91	16.13	15.60	17.34	16.63	16.55	17.03	16.23	17.92
27	16.22	17.53	17.55	16.77	16.13	15.51	17.21	16.57	16.51	16.77	16.20	17.35
28	16.21	17.49	16.92	16.70	16.17	15.45	17.19	16.45	16.46	16.72	16.46	17.18
29	16.20		16.83	16.68	16.14	15.47	17.28	.....	16.42	16.61	17.62	17.54
30	16.17		16.74	16.88	16.08	15.30	17.06	.....	16.47	16.52	17.41	17.98
31	16.18		16.75		16.57		17.02	.....		16.50		18.02

28.4.9.3.1 (*886, p. 361; 906, p. 95; 936, p. 88; 944, p. 88; 906, p. 100; 1016, p. 134). Duurnal 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, 1945

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	34.3	34.8	35.1	34.4	....	34.8	35.1	28.3	34.3	34.7	35.5	36.2
2	34.3	35.0	35.1	34.6	34.6	34.8	34.8	28.0	34.4	34.8	35.5	36.2
3	34.3	35.0	35.0	34.6	34.1	34.8	34.7	27.9	34.4	34.8	35.5	36.3
4	34.3	35.0	35.0	34.7	34.1	34.8	34.4	27.9	34.4	34.8	35.6	36.3
5	34.3	35.1	35.0	34.7	34.1	34.8	34.3	32.0	34.5	34.9	35.6	35.9
6	34.3	35.1	35.0	34.7	34.1	34.9	34.3	32.3	34.6	34.8	35.6	35.6
7	34.3	35.2	35.0	34.7	34.1	35.0	34.3	32.5	34.6	34.8	35.7	35.4
8	34.3	35.2	35.0	34.7	34.1	35.1	34.2	32.6	34.6	34.9	36.4	34.8
9	34.3	35.1	35.0	34.8	34.4	35.2	34.3	32.7	34.6	34.9	36.5	35.1
10	34.4	35.1	35.0	34.8	34.5	35.2	34.3	32.9	34.7	34.9	36.6	35.1

28.4.9.3.1--Continued.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
11	34.4	35.1	35.0	34.7	34.5	35.0	34.7	35.0	34.6	34.9	36.7	34.9
12	34.3	35.1	34.9	34.7	34.5	34.9	34.9	33.1	34.5	34.9	36.7	35.0
13	34.3	35.0	34.9	34.7	34.2	34.9	35.0	33.1	34.6	35.0	36.7	35.2
14	34.4	35.1	34.9	34.7	34.5	34.9	35.0	29.6	34.5	35.0	36.6	34.9
15	34.4	35.2	34.9	34.7	34.5	34.9	34.9	28.9	34.6	35.1	36.6	34.9
16	34.4	35.2	34.9	34.7	34.5	34.9	34.9	28.4	34.6	35.2	36.5	34.9
17	34.4	35.2	34.9	34.7	34.5	34.9	34.9	32.8	34.4	35.2	36.6	34.9
18	34.4	35.3	34.9	....	34.5	34.9	34.0	33.2	34.4	35.2	36.6	35.1
19	34.4	35.4	34.8	34.7	34.5	34.9	33.8	33.3	34.1	35.4	36.7	35.0
20	34.5	35.3	34.8	34.7	34.5	34.8	33.8	33.4	34.1	35.4	36.7	34.7
21	34.6	35.4	....	34.8	34.5	35.0	33.9	33.5	34.1	35.4	36.8	34.9
22	34.5	35.3	....	34.8	34.5	34.8	33.8	34.1	34.1	35.4	36.7	34.9
23	34.5	35.2	....	34.8	34.6	34.9	33.7	34.1	34.1	35.4	36.9	34.9
24	34.6	35.1	....	....	34.6	34.9	33.6	34.1	34.2	35.3	36.9	34.7
25	34.6	35.2	....	....	34.7	34.9	33.6	34.0	34.4	35.4	36.9	34.5
26	34.7	35.1	....	....	34.7	35.0	34.0	34.0	34.5	35.4	36.9	34.5
27	34.7	35.1	....	....	34.7	35.0	33.7	34.0	34.6	35.4	36.9	34.5
28	34.7	35.0	34.4	....	34.7	35.0	33.6	34.1	34.6	35.4	36.2	29.8
29	34.7	....	34.6	....	34.7	35.0	29.5	34.2	34.6	35.4	36.2	29.8
30	34.8	....	34.6	....	34.7	35.0	28.9	34.2	34.6	35.4	36.2	29.8
31	34.9	....	34.7	....	34.7	....	28.6	34.3	....	35.5	....	29.7

Water level at end of day, in feet with reference to mean sea level, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	+1.1	+0.6	+0.3	+1.0	....	+0.6	+0.3	+7.1	+1.1	+0.7	-0.1	-0.8
2	+1.1	+0.4	+0.3	+0.8	+0.8	+0.6	+0.6	+7.4	+1.0	+0.6	-0.1	-0.8
3	+1.1	+0.4	+0.4	+0.8	+1.3	+0.6	+0.7	+7.5	+1.0	+0.6	-0.1	-0.9
4	+1.1	+0.4	+0.4	+0.7	+1.3	+0.6	+1.0	+7.5	+1.0	+0.6	-0.2	-0.9
5	+1.1	+0.3	+0.4	+0.7	+1.3	+0.6	+1.1	+3.4	+0.9	+0.5	-0.2	-0.5
6	+1.1	+0.3	+0.4	+0.7	+1.3	+0.5	+1.1	+3.1	+0.8	+0.6	-0.2	-0.2
7	+1.1	+0.2	+0.4	+0.7	+1.3	+0.4	+1.1	+2.9	+0.8	+0.6	-0.3	0.0
8	+1.1	+0.2	+0.4	+0.7	+1.3	+0.3	+1.2	+2.8	+0.8	+0.5	-1.0	+0.6
9	+1.1	+0.3	+0.4	+0.6	+1.0	+0.2	+1.1	+2.7	+0.8	+0.5	-1.1	+0.3
10	+1.0	+0.3	+0.4	+0.6	+0.9	+0.2	+1.1	+2.5	+0.7	+0.5	-1.2	+0.3
11	+1.0	+0.3	+0.4	+0.7	+0.9	+0.4	+0.7	+2.4	+0.8	+0.5	-1.3	+0.5
12	+1.1	+0.3	+0.5	+0.7	+0.9	+0.5	+0.5	+2.3	+0.9	+0.5	-1.3	+0.4
13	+1.1	+0.4	+0.5	+0.7	+1.2	+0.5	+0.4	+2.3	+0.8	+0.4	-1.3	+0.2
14	+1.0	+0.3	+0.5	+0.7	+0.9	+0.5	+0.4	+5.8	+0.9	+0.4	-1.2	+0.5
15	+1.0	+0.2	+0.5	+0.7	+0.9	+0.5	+0.5	+6.5	+0.8	+0.3	-1.2	+0.5
16	+1.0	+0.2	+0.5	+0.7	+0.9	+0.5	+0.5	+7.0	+0.8	+0.2	-1.1	+0.5
17	+1.0	+0.2	+0.5	+0.7	+0.9	+0.5	+0.5	+2.6	+1.0	+0.2	-1.2	+0.5
18	+1.0	+0.1	+0.5	...	+0.9	+0.5	+1.4	+2.2	+1.0	+0.2	-1.2	+0.3
19	+1.0	+0.0	+0.6	+0.7	+0.9	+0.5	+1.6	+2.1	+1.3	0.0	-1.3	+0.4
20	+0.9	+0.1	+0.6	+0.7	+0.9	+0.6	+1.6	+2.0	+1.3	0.0	-1.3	+0.7
21	+0.8	0.0	...	+0.6	+0.9	+0.4	+1.5	+1.9	+1.3	0.0	-1.4	+0.5
22	+0.9	+0.1	...	+0.6	+0.9	+0.6	+1.6	+1.3	+1.3	0.0	-1.3	+0.5
23	+0.9	+0.2	...	+0.6	+0.8	+0.5	+1.7	+1.3	+1.3	0.0	-1.5	+0.5
24	+0.8	+0.3	...	...	+0.8	+0.5	+1.8	+1.3	+1.2	+0.1	-1.5	+0.7
25	+0.8	+0.2	...	...	+0.7	+0.5	+1.8	+1.4	+1.0	0.0	-1.5	+0.9
26	+0.7	+0.3	...	...	+0.7	+0.4	+1.4	+1.4	+0.9	0.0	-1.5	+0.9
27	+0.7	+0.3	...	...	+0.7	+0.4	+1.7	+1.4	+0.8	0.0	-1.5	+0.9
28	+0.7	+0.4	+1.0	...	+0.7	+0.4	+1.8	+1.3	+0.8	0.0	-0.8	+5.6
29	+0.7	...	+0.8	...	+0.7	+0.4	+5.9	+1.2	+0.8	0.0	-0.8	+5.6
30	+0.6	...	+0.8	...	+0.7	+0.4	+6.5	+1.2	+0.8	0.0	-0.8	+5.6
31	+0.5	...	+0.7	...	+0.7	...	+6.8	+1.1	...	-0.1	...	+5.7

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). 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, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	13.18	12.91	12.61	12.84	12.23	12.80	13.11	13.40	12.81	.....	13.35
2	.....	13.19	12.86	12.56	12.84	12.22	12.82	13.11	13.42	12.77	.....	13.27
3	13.10	13.22	12.82	12.60	12.79	12.24	12.85	13.10	13.46	12.79	.....	13.20
4	13.07	13.22	12.82	12.58	12.76	12.28	12.87	13.07	13.47	12.80	.....	13.17
5	13.06	13.25	12.80	12.61	12.78	12.31	12.88	13.06	13.49	12.78	.....	13.13
6	13.06	13.26	12.75	12.65	12.77	12.33	12.91	13.08	13.51	12.76	.....	13.09
7	13.02	13.28	.....	12.65	12.73	12.34	12.94	13.05	13.52	12.74	13.28	13.07
8	13.01	13.26	.....	12.63	12.69	12.36	12.96	13.01	13.54	12.74	13.30	13.07
9	12.98	13.29	12.75	12.64	12.68	12.38	12.98	13.02	13.56	12.75	13.32	13.04
10	12.98	13.29	12.73	12.65	12.59	12.39	12.99	13.04	13.57	12.79	13.35	13.01
11	12.98	13.29	12.73	12.65	12.59	12.40	12.96	13.06	13.57	12.80	13.36	13.01
12	12.99	13.26	12.70	12.65	12.56	12.44	12.94	13.08	13.59	12.79	13.37	13.00
13	12.98	13.22	12.69	12.64	12.50	12.46	12.92	13.10	13.62	12.80	13.38	12.96
14	12.98	13.29	12.68	12.66	12.47	12.48	12.90	13.10	13.61	12.83	13.39	12.94
15	13.01	13.30	12.66	12.70	12.42	12.49	12.88	13.12	13.54	12.85	13.43	12.92
16	13.02	13.24	12.64	12.70	12.40	12.51	12.86	13.14	13.56	12.85	13.44	12.92
17	12.98	13.20	12.64	12.66	12.36	12.53	12.83	13.16	13.56	12.88	13.45	12.91
18	12.97	13.24	12.64	12.72	12.32	12.55	12.86	13.18	13.50	12.90	13.48	12.90
19	12.98	13.30	12.62	12.74	12.32	12.57	12.88	13.20	13.39	12.92	13.46	12.86
20	12.97	13.30	12.60	12.73	12.31	12.58	12.94	13.22	13.20	12.93	13.51	12.88
21	12.96	13.31	12.59	12.75	12.29	12.60	13.01	13.22	13.08	12.96	13.52	12.89
22	13.01	13.16	12.59	12.78	12.26	12.62	13.06	13.24	13.02	12.97	13.52	12.87
23	12.99	13.06	12.59	12.77	12.26	12.63	13.08	13.27	12.99	12.98	13.54	12.88
24	13.03	13.06	12.62	12.78	12.25	12.66	13.09	13.26	12.96	13.00	13.56	12.88
25	13.08	13.07	12.63	12.76	12.22	12.68	13.11	13.27	12.92	.....	13.59	12.83
26	13.09	13.03	12.61	12.78	12.23	12.70	13.12	13.29	12.90	.....	13.61	12.82
27	13.11	12.97	12.60	12.80	12.22	12.72	13.12	13.32	12.88	.....	13.62	12.87
28	13.12	12.94	12.60	12.82	12.20	12.74	13.13	13.34	12.86	.....	13.58	12.87
29	13.13	.....	12.58	12.83	12.20	12.76	13.12	13.36	12.83	.....	13.47	12.82
30	13.15	.....	12.58	12.83	12.20	12.78	13.10	13.38	12.83	.....	13.46	12.80
31	13.16	.....	12.58	.....	12.23	.....	13.10	13.40	.....	.....	.....	12.74

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). 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, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	0.25	1.21	0.50	0.96	0.67	1.89	2.46	1.03	2.50	1.52	1.13	0.52
2	.49	1.25	.52	.89	.79	1.84	1.74	1.18	2.48	1.59	1.15	.58
3	.68	1.29	.44	1.00	.38	1.72	.96	1.25	2.56	1.65	1.18	.58
4	.62	1.29	...	1.03	.41	1.68	1.20	1.42	2.64	1.63	1.17	.62
5	.71	1.30	...	1.06	.50	1.60	1.22	1.60	2.72	1.52	1.20	.55
6	...	1.30	...	1.13	.55	1.62	1.26	1.22	2.78	1.11	1.24	.41
7	...	1.29	...	1.15	.79	1.79	1.56	1.15	2.83	.97	1.25	.67
8	...	1.09	...	1.17	.79	1.89	1.80	1.24	2.82	1.12	1.25	.67
9	...	.92	.62	1.20	.92	2.03	1.97	1.43	2.89	1.10	1.25	.72
10	...	.69	.68	1.22	.25	1.99	1.98	1.62	2.91	1.18	1.28	.74
11	...	.52	.75	1.23	.54	2.08	2.15	1.78	2.82	1.24	1.21	.81
12	...	.45	.77	1.25	.73	2.16	2.30	1.92	.72	1.28	1.16	.87
13	.98	.53	.83	1.26	.77	1.42	2.44	1.96	1.00	1.36	1.15	...
14	.96	.61	.87	1.23	.92	1.49	2.50	2.00	1.09	1.38	.73	...
15	.98	.37	.89	1.21	1.03	1.74	1.22	2.09	.76	1.40	.79	.95
16	.96	.29	.85	1.25	1.11	1.95	1.09	2.20	.98	1.42	.89	1.01
17	1.00	.40	...	1.20	1.18	2.20	.54	2.29	.88	1.46	.92	1.06
18	1.01	...	...	.97	1.15	2.39	.27	2.38	.20	1.50	.99	1.09
19	1.02	...	...	1.08	1.11	2.37	.28	2.47	.43	1.50	.55	1.06
20	1.05	...	...	1.14	1.22	2.05	.52	2.57	.62	...	.69	1.10
21	1.06	...	...	1.13	1.34	2.16	.69	2.65	.85	...	.62	1.13

29.11.1.2.3--Continued.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
22	1.01	...	...	1.21	1.46	1.62	0.84	2.74	0.99	...	0.53	...
23	1.00	...	...	1.24	1.52	1.88	.26	2.75	1.05	...	.65	1.15
24	1.03	.38	...	1.23	1.59	1.40	.54	2.50	1.13	...	.72	1.17
25	....	.46	...	.76	1.67	1.36	.72	2.19	1.24	...	.83	.02
26	....	.18	...	.60	1.74	1.41	.86	1.65	1.34	...	.90	.31
27	....	.27	...	.75	1.62	1.70	.85	1.81	1.32	...	.92	.53
28	1.22	.39	...	.85	1.63	1.91	.89	1.99	1.36	.98	.16	.58
29	1.16	...	...	.94	1.75	2.04	.66	2.18	1.52	1.02	.29	.23
30	1.14	...	...	1.01	1.85	2.28	.87	2.31	1.52	1.06	.43	.21
31	1.15	...	.91	...	1.94	...	.96	2.42	...	1.08	...	.27

Water level at end of day, in feet above mean sea level, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	74.47	73.51	74.22	73.76	74.05	72.83	72.26	73.69	72.22	73.20	73.59	74.20
2	74.23	73.47	74.20	73.83	73.93	72.88	72.98	73.54	72.24	73.13	73.57	74.14
3	74.14	73.43	74.28	73.72	74.34	73.00	73.76	73.47	72.16	73.07	73.54	74.14
4	74.10	73.43	....	73.69	73.61	74.31	73.52	73.30	72.08	73.09	73.55	74.10
5	74.01	73.42	....	73.66	74.22	73.12	73.50	73.12	72.00	73.20	73.52	74.17
6	....	73.42	....	73.59	74.17	73.10	73.46	73.50	71.94	73.61	73.48	74.31
7	....	73.43	....	73.57	73.93	72.93	73.16	73.59	71.89	73.75	73.47	74.15
8	....	73.63	....	73.55	73.93	72.83	72.92	73.48	71.90	73.60	73.47	74.05
9	....	73.90	74.10	73.52	73.80	72.69	72.75	73.29	71.83	73.62	73.47	74.00
10	....	74.03	74.04	73.50	74.47	72.73	72.74	73.10	71.81	73.54	73.44	73.98
11	....	74.20	73.97	73.49	74.13	72.64	72.57	72.94	71.90	73.48	73.51	73.91
12	....	74.27	73.95	73.47	73.99	72.56	72.42	72.80	74.00	73.44	73.56	73.85
13	73.74	74.19	73.89	73.46	73.95	73.30	72.28	72.76	73.72	73.36	73.57	....
14	73.76	74.11	73.85	73.49	73.80	73.23	72.22	72.72	73.63	73.34	73.99	....
15	73.74	74.35	73.83	73.51	73.69	72.98	73.50	72.63	73.96	73.32	73.93	73.77
16	73.76	74.43	73.87	73.47	73.61	72.77	73.63	72.52	73.74	73.30	73.83	73.71
17	73.72	74.32	....	73.52	73.54	72.52	74.18	72.43	73.84	73.26	73.80	73.66
18	73.71	....	....	73.75	73.57	72.35	74.45	72.34	74.52	73.22	73.73	73.63
19	73.70	....	....	73.64	73.61	72.35	74.44	72.25	74.29	73.22	74.17	73.66
20	73.67	....	....	73.58	73.50	72.66	74.20	72.15	74.10	....	74.03	73.62
21	73.66	....	....	73.59	73.38	72.56	74.03	72.07	73.87	....	74.10	73.59
22	73.71	....	....	73.51	73.26	73.10	73.88	71.98	73.73	....	74.19	....
23	73.72	....	....	73.48	73.20	72.84	74.46	71.97	73.67	....	74.07	73.57
24	73.69	74.34	....	73.47	73.13	73.32	74.18	72.22	73.59	....	74.00	73.55
25	....	74.26	....	74.06	73.05	73.36	74.00	72.53	73.48	....	73.89	74.70
26	....	74.54	....	74.12	72.98	73.31	73.86	73.07	73.38	....	73.82	74.41
27	....	74.45	....	73.97	73.10	73.02	73.87	72.91	73.40	....	73.80	74.19
28	73.50	74.34	....	73.87	73.09	72.81	73.83	72.73	73.36	73.74	74.56	74.14
29	73.56	....	....	73.78	72.97	72.68	74.06	72.54	73.20	73.70	74.43	74.49
30	73.58	....	....	73.71	72.87	72.44	73.85	72.41	73.20	73.66	74.29	74.51
31	73.57	....	73.81	....	72.78	....	73.76	72.30	....	73.64	....	74.45

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). 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.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Mar.	Apr.	May	June	July	Aug.	Sept.	Nov.	Dec.
1	...	...	6.5	...	6.7	6.3	...	6.1	...	2.9
2	...	...	6.4	...	6.6	6.4	...	6.3	...	3.4
3	...	...	6.1	...	5.9	5.7	...	6.4	...	4.6
4	5.8	...	6.1	...	6.1	6.2	...	5.8	...	4.9
5	6.3	...	5.6	5.1	6.2	6.4	...	6.3	...	4.5
6	6.1	...	6.8	5.5	6.5	6.3	...	6.6	...	3.3
7	5.8	...	...	5.9	6.6	6.4	...	6.5	...	4.1
8	5.5	...	...	6.1	6.8	6.5	...	6.6	6.1	4.9
9	6.1	...	...	6.5	6.7	6.6	...	6.4	6.1	4.9
10	6.4	5.8	...	6.4	6.7	6.5	...	6.0	6.0	4.7

28.5.4.7.2--Continued.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Mar.	Apr.	May	June	July	Aug.	Sept.	Nov.	Dec.
11	6.4	5.8	...	5.7	6.5	6.5	...	5.6	5.4	5.8
12	6.6	6.2	...	6.0	6.5	6.5	...	5.3	5.8	6.1
13	6.7	6.2	...	6.2	6.5	6.4	...	5.5	5.9	6.1
14	5.7	6.2	...	6.2	6.4	6.4	...	5.4	5.9	5.8
15	6.3	6.3	...	6.2	6.2	6.3	...	5.2	6.1	...
16	...	6.3	...	6.1	6.2	6.0	...	5.8	6.4	...
17	...	6.2	...	6.0	6.1	5.8	...	5.8	6.5	...
18	...	6.4	...	5.7	6.0	5.5	...	4.1	6.4	...
19	...	6.4	...	5.6	6.1	3.1	...	4.2	6.5	...
20	...	6.0	...	5.3	6.1	2.4	...	4.4	6.2	...
21	...	5.9	...	5.8	6.2	3.8	...	...	6.3	...
22	...	4.6	...	5.9	6.2	5.1	...	...	...	...
23	...	5.2	...	6.5	6.3	5.1	...	...	...	...
24	...	5.7	...	6.3	6.3	4.3	...	...	...	...
25	...	6.1	...	6.4	6.2	4.1	6.0	...	...	...
26	...	6.0	...	6.5	6.2	...	6.0	...	...	...
27	...	6.4	...	6.6	5.7	...	6.0	...	...	...
28	...	6.4	...	6.4	6.0	...	6.2	...	...	...
29	...	6.4	...	6.2	6.2	...	6.4	...	...	...
30	...	6.5	...	6.6	6.3	...	6.3	...	...	...
31	...	6.3	...	6.6	...	...	6.2	...	...	...

Lowest daily water level, in feet with reference to mean sea level, 1945
(From recorder charts)

Day	Jan.	Mar.	Apr.	May	June	July	Aug.	Sept.	Nov.	Dec.
1	...	...	-1.2	...	-1.4	-1.0	...	-0.8	...	+2.4
2	...	...	-1.1	...	-1.3	-1.1	...	-1.0	...	+1.9
3	...	...	-.8	...	-.6	-.4	...	-1.1	...	+7
4	-.5	...	-.8	...	-.8	-.9	...	-.5	...	+4
5	-1.0	...	-.3	+2	-.9	-1.1	...	-1.0	...	+8
6	-.8	...	-1.5	-.2	-1.2	-1.0	...	-1.3	...	+2.0
7	-.5	...	...	-.6	-1.3	-1.1	...	-1.2	...	+1.2
8	-.2	...	...	-.8	-1.5	-1.2	...	-1.3	-.8	+4
9	-.8	...	...	-1.2	-1.4	-1.3	...	-1.1	-.8	+4
10	-1.1	-.5	...	-1.1	-1.4	-1.2	...	-.7	-.7	+6
11	-1.1	-.5	...	-.4	-1.2	-1.2	...	-.3	-.1	-.5
12	-1.3	-.9	...	-.7	-1.2	-1.2	...	0	-.5	-.8
13	-1.4	-.9	...	-.9	-1.2	-1.1	...	-.2	-.6	-.8
14	-.4	-.9	...	-.9	-1.1	-1.1	...	-.1	-.6	-.5
15	-1.0	-1.0	...	-.9	-.9	-1.0	...	+1	-.8	...
16	...	-1.0	...	-.8	-.9	-.7	...	-.5	-1.1	...
17	...	-.9	...	-.7	-.8	-.5	...	-.5	-1.2	...
18	...	-1.1	...	-.4	-.7	-.2	...	+1.2	-1.1	...
19	...	-1.1	...	-.3	-.8	+2.2	...	+1.1	-1.2	...
20	...	-.7	...	0	-.8	+2.9	...	+9	-.9	...
21	...	-.6	...	-.5	-.9	+1.5	...	...	-1.0	...
22	...	+7	...	-.6	-.9	+2	...	...	...	...
23	...	+1	...	-1.2	-1.0	+2	...	...	...	...
24	...	-.4	...	-1.0	-1.0	+1.0	...	...	...	...
25	...	-.8	...	-1.1	-.9	+1.2	-.7	...	...	...
26	...	-.7	...	-1.2	-.9	...	-.7	...	...	...
27	...	-1.1	...	-1.3	-.4	...	-.7	...	...	...
28	...	-1.1	...	-1.1	-.7	...	-.9	...	...	...
29	...	-1.1	...	-.9	-.9	...	-1.1	...	...	...
30	...	-1.2	...	-1.3	-1.0	...	-1.0	...	...	...
31	...	-1.0	...	-1.3	...	...	-.9	...	...	...

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). 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, and Mar. 26, 1944; lowest, -46.6 Oct. 25, 1935.

28.5.4.3.9--Continued.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Mar.	Apr.	May	June	July	Aug.	Nov.	Dec.
1	...	....	40.3	39.6	35.9	41.5	....	....	....
2	...	....	39.7	39.0	36.5	41.5	....	....	....
3	...	....	53.8	39.0	36.6	41.6	....	....	....
4	7.6	....	37.6	38.8	36.6	41.5	....	....	....
5	8.1	....	37.8	38.9	36.5	40.9	....	....	....
6	8.1	....	38.1	38.4	37.0	40.9	....	....	....
7	8.1	....	38.2	37.9	37.3	40.8	....	....	....
8	7.5	....	38.4	37.6	37.6	40.6	....	....	....
9	7.6	....	38.7	37.3	37.7	43.0	....	....	....
10	8.1	39.2	38.7	37.2	37.7	43.1	....	....	....
11	8.1	39.1	38.3	37.1	37.6	42.6	....	....	....
12	8.1	38.2	38.4	37.1	38.4	42.3	....	....	....
13	7.7	39.1	38.4	36.9	38.8	....	....	....	....
14	8.1	39.1	38.8	36.6	39.3	....	....	....	....
15	8.1	39.3	38.8	36.7	39.6	....	....	....	....
16	...	39.4	50.3	37.5	39.8	....	....	12.8	....
17	...	40.3	38.1	37.7	39.8	41.0	....	11.2	....
18	...	40.3	38.1	37.9	39.2	40.9	....	10.8	....
19	...	40.0	38.1	38.2	39.2	40.6	....	10.8	....
20	...	39.7	38.1	....	39.8	39.6	....	10.0	....
21	...	40.0	38.1	....	40.0	39.3	....	9.8	....
22	...	40.0	38.0	....	39.9	39.3	....	9.6	....
23	...	40.0	37.9	....	39.9	38.7	....	9.2	....
24	...	40.1	38.1	37.7	39.7	38.2	40.0	9.0	....
25	...	40.1	38.6	37.7	39.1	38.2	39.7	8.8	....
26	...	39.6	40.7	37.8	39.5	38.3	39.4	8.8	....
27	...	42.7	40.5	37.8	39.8	38.7	38.9	8.7	10.6
28	...	43.1	40.1	37.2	40.0	38.8	38.6	8.6	10.9
29	...	42.4	39.8	37.4	40.4	38.7	38.7	8.2	11.1
30	...	41.5	39.9	16.2	41.0	38.6	....	...	11.2
31	...	41.0	....	15.6	....	....	....	....	10.8

Lowest daily water level, in feet with reference to mean sea level, 1945
(From recorder charts)

Day	Jan.	Mar.	Apr.	May	June	July	Aug.	Nov.	Dec.
1	....	....	-22.1	-21.4	-17.7	-23.3	....	....	....
2	....	....	-21.5	-20.8	-18.3	-23.3	....	....	....
3	....	....	-35.6	-20.8	-18.4	-23.4	....	....	....
4	+10.6	....	-13.4	-20.6	-18.4	-23.3	....	....	....
5	+10.1	....	-13.6	-20.7	-18.3	-22.7	....	....	....
6	+10.1	....	-13.9	-20.2	-18.8	-22.7	....	....	....
7	+10.1	....	-20.0	-19.7	-19.1	-22.6	....	....	....
8	+10.7	....	-20.2	-13.4	-19.4	-22.4	....	....	....
9	+10.6	....	-20.5	-19.1	-19.5	-24.8	....	....	....
10	+10.1	-21.0	-20.5	-19.0	-19.5	-24.9	....	....	....
11	+10.1	-20.9	-20.1	-18.9	-19.4	-24.4	....	....	....
12	+10.1	-21.0	-20.2	-18.9	-20.2	-24.1	....	....	....
13	+10.5	-20.9	-20.2	-18.7	-20.6	....	....	....	....
14	+10.1	-20.9	-20.6	-18.4	-21.1	....	....	....	....
15	+10.1	-21.1	-20.6	-18.5	-21.4	....	....	....	....
16	....	-21.2	-32.1	-19.3	-21.6	....	....	+5.4	....
17	....	-22.1	-19.9	-19.5	-21.6	-22.8	....	+7.0	....
18	....	-22.1	-19.9	-19.7	-21.0	-22.7	....	+7.4	....
19	....	-21.8	-19.9	-20.0	-21.0	-22.4	....	+7.4	....
20	....	-21.5	-19.9	....	-21.6	-21.4	....	+8.2	....
21	....	-21.8	-19.9	....	-21.8	-21.1	....	+8.4	....
22	....	-21.8	-19.8	....	-21.7	-21.1	....	+8.7	....
23	....	-21.8	-19.7	....	-21.7	-20.5	....	+9.0	....
24	....	-21.9	-19.9	-19.5	-21.5	-20.0	-21.8	+9.2	....
25	....	-21.9	-20.4	-19.5	-20.9	-20.0	-21.5	+9.4	....
26	....	-21.4	-22.5	-19.6	-21.3	-20.1	-21.2	+9.4	....
27	....	-24.5	-22.3	-19.6	-21.6	-20.5	-20.7	+9.5	+7.6
28	....	-24.9	-21.9	-19.0	-21.8	-20.6	-20.4	+9.6	+7.3
29	....	-24.2	-21.6	-19.2	-22.2	-20.5	-20.5	+10.0	+7.1
30	....	-23.3	-21.7	+2.0	-22.8	-20.4	....	....	+7.0
31	....	-22.8	....	+2.6	....	....	....	....	+7.4

29.1.4.1.1 (*840, p. 248; 845, p. 229; *886, p. 369; 906, p. 103; 936, p. 92; 944, p. 92; 986, p. 106; 1016, p. 140). 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.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	10.0	....	29.0	27.2	26.9	22.6	29.1	27.8	....	....	....	10.4
2	10.6	....	....	26.3	26.4	22.9	....	....	....	....	....	10.4
3	....	....	....	26.1	....	....	....	....	....	....	....	10.4
4	....	24.8	27.5	26.0	....	....	....	....	....	....	....	10.4
5	....	26.5	26.6	25.2	....	....	....	....	....	....	....	....
6	....	26.6	26.2	....	24.9	23.5	....	....	....	....	....	....
7	10.5	25.4	25.9	....	23.8	23.8	....	....	....	....	....	10.5
8	10.0	....	25.7	....	....	24.2	....	....	....	....	....	10.6
9	10.5	....	25.7	24.1	....	24.2	....	....	....	22.5	....	10.7
10	11.0	....	25.9	24.6	....	23.9	31.3	....	....	22.5	....	10.9
11	11.3	25.9	25.9	24.8	....	....	30.0	....	31.9	17.4	....	11.3
12	....	25.7	25.9	25.0	....	....	29.4	....	26.2	15.9	....	11.5
13	....	27.9	25.7	25.1	23.2	25.0	29.4	....	25.6	14.5	....	11.5
14	10.8	....	25.8	25.4	22.8	25.4	29.1	....	25.3	13.7	18.2	11.6
15	12.1	....	26.0	25.2	23.1	26.0	....	....	25.0	18.0	18.7	11.7
16	12.5	....	26.3	24.7	24.0	26.4	....	....	24.7	18.0	14.0	11.7
17	12.5	....	....	24.5	24.1	26.5	....	....	....	16.6	12.7	11.7
18	....	....	....	24.5	24.6	26.5	....	....	....	14.4	13.1	11.8
19	....	....	....	24.4	....	26.1	....	....	24.5	13.2	....	11.8
20	....	31.8	26.4	....	....	26.9	....	....	24.7	12.7	....	11.7
21	11.8	31.2	....	....	....	27.0	....	....	24.7	12.3	....	11.9
22	11.0	30.4	26.8	24.5	....	26.8	....	....	24.8	....	11.4	11.9
23	11.0	28.9	....	24.4	....	26.5	....	....	....	....	11.0	12.4
24	11.5	28.9	....	24.4	....	....	....	....	....	....	10.8	12.7
25	11.0	29.0	27.1	....	....	....	....	....	....	....	10.7	12.7
26	10.5	29.5	26.5	....	....	26.5	....	....	24.0	....	10.6	12.1
27	10.6	29.5	31.3	....	....	26.7	....	....	23.8	....	10.5	12.5
28	10.7	29.1	31.4	....	....	26.9	....	26.4	23.6	....	....	12.8
29	11.0	....	29.7	....	24.0	27.4	....	27.0	23.7	....	....	13.1
30	13.4	....	28.7	26.7	18.5	28.3	....	28.0	23.7	....	10.3	13.2
31	15.4	....	....	....	19.1	....	27.8	....	....	....	....	12.5

Lowest daily water level, in feet with reference to mean sea level, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	+8.0	....	-11.0	-9.2	-8.9	-4.6	-11.1	-9.8	....	....	....	+7.6
2	+7.4	....	....	-8.3	-8.4	-4.9	....	....	....	....	....	+7.6
3	....	....	....	-8.1	....	....	....	....	....	....	....	+7.6
4	....	-6.8	-9.5	-8.0	....	....	....	....	....	....	....	+7.6
5	....	-8.5	-8.6	-7.2	....	....	....	....	....	....	....	....
6	....	-8.6	-8.2	....	-6.9	-5.5	....	....	....	....	....	....
7	+7.5	-7.4	-7.9	....	-5.8	-5.8	....	....	....	....	....	+7.5
8	+8.0	....	-7.7	....	....	-6.2	....	....	....	....	....	+7.4
9	+7.5	....	-7.7	-6.1	....	-6.2	....	....	....	-4.5	....	+7.3
10	+7.0	....	-7.9	-6.6	....	-5.9	-13.3	....	....	-4.5	....	+7.1
11	+6.7	-7.9	-7.9	-6.8	....	....	-12.0	....	-13.9	+6	....	+6.7
12	....	-7.7	-7.9	-7.0	....	....	-11.4	....	-8.2	+2.1	....	+6.5
13	....	-9.9	-7.7	-7.1	-5.2	-7.0	-11.4	....	-7.6	+3.5	....	+6.5
14	+7.2	....	-7.8	-7.4	-4.8	-7.4	-11.1	....	-7.3	+4.3	-0.2	+6.4
15	+5.9	....	-8.0	-7.2	-5.1	-8.0	....	....	-7.0	0.0	-7	+6.3
16	+5.5	....	-8.3	-6.7	-6.0	-8.4	....	....	-6.7	0.0	+4.0	+6.3
17	+5.5	....	....	-6.5	-6.1	-8.5	....	....	....	+1.4	+5.3	+6.3
18	....	....	....	-6.5	-6.6	-8.5	....	....	....	+3.6	+4.9	+6.2
19	....	....	....	-6.4	....	-8.1	....	....	-6.5	+4.8	....	+6.2
20	....	-13.8	-8.4	....	....	-8.9	....	....	-6.7	+5.3	....	+6.3
21	+6.2	-13.2	....	....	....	-9.0	....	....	-6.7	+5.7	....	+6.1
22	+7.0	-12.4	-8.8	-6.5	....	-8.8	....	....	-6.8	....	+6.6	+6.1
23	+7.0	-10.2	....	-6.4	....	-8.5	....	....	....	....	+7.0	+5.6
24	+6.5	-10.9	....	-6.4	....	....	....	....	....	....	+7.2	+5.3
25	+7.0	-11.0	-9.1	....	....	....	....	....	....	....	+7.3	+5.3
26	+7.5	-11.5	-8.5	....	....	-8.5	....	....	-6.0	....	+7.4	+5.9

29.1.4.1.1--Continued.

Lowest daily water level, in feet with reference to mean sea level, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
27	+7.4	-11.5	-13.3	....	....	-8.7	....	....	-5.8	....	+7.5	+5.5
28	+7.3	-11.1	-13.4	....	....	-8.9	....	-8.4	-5.6	....	....	+5.2
29	+7.0	....	-11.7	....	-6.0	-9.4	....	-9.0	-5.7	....	....	+4.9
30	+4.6	....	-10.7	-8.7	....	-5	-10.3	....	-10.0	-5.7	....	+4.8
31	+2.6	....	....	....	-1.1	....	-9.8	....	....	....	....	+5.5

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). Perth Amboy Water Department. Runyon 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, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	2.55	....	1.95	....	2.00	1.80	1.20	....	....	1.85	0.60
2	....	2.60	....	1.95	....	1.95	1.90	1.15	....	....	1.75	.85
3	....	2.35	....	1.80	....	1.70	1.75	1.25	....	1.70	1.75	1.15
4	....	1.80	1.85	1.40	....	1.70	1.75	1.35	1.60	1.35	1.70	....
5	....	1.90	....	2.05	1.30	2.25	1.60	1.45	1.80	1.10	1.65	....
6	....	1.75	....	2.10	1.50	2.40	1.20	1.45	1.90	1.00	....	.75
7	1.55	1.70	....	2.10	1.65	2.45	.50	1.30	1.90	.80	....	1.10
8	1.55	1.75	....	2.05	1.75	2.50	.55	1.25	1.95	1.60	1.80	1.30
9	1.90	1.65	....	2.10	1.80	2.50	1.95	1.30	1.90	1.75	1.85	1.30
10	1.95	1.65	....	2.05	1.80	2.45	1.80	1.40	1.70	1.75	1.85	1.30
11	1.95	....	1.85	2.05	1.50	....	1.65	1.50	1.60	1.50	1.65	....
12	2.00	....	1.90	2.00	1.65	2.35	1.65	1.55	1.50	1.40	1.70	....
13	2.05	....	1.90	1.95	1.65	2.20	1.70	1.55	1.60	1.65	1.75	1.85
14	1.20	....	1.90	1.95	1.65	2.40	1.65	1.40	1.50	1.60	1.80	1.80
15	1.25	....	1.80	1.80	1.60	2.40	1.65	1.45	1.70	....	1.90	1.75
16	....	....	1.80	1.75	1.55	2.35	1.80	1.35	1.75	....	2.10	1.80
17	....	....	1.75	1.70	1.50	2.35	1.80	1.45	....	1.90	2.00	1.90
18	....	....	1.85	1.75	1.40	2.35	1.75	1.45	....	1.90	2.00	....
19	....	2.00	1.80	1.95	1.40	2.35	.20	1.55	.85	1.90	1.85	....
20	....	2.00	1.70	1.95	....	2.20	.45	1.55	1.05	1.90	1.85	....
21	1.95	1.90	1.50	1.85	....	2.45	.90	1.80	1.40	1.85	....	1.80
22	1.95	1.65	1.20	2.15	....	2.45	.95	1.75	1.55	1.85	....	....
23	2.05	....	1.40	2.05	1.90	2.50	.90	1.75	1.60	1.65	....	....
24	2.20	....	1.75	2.00	2.10	2.45	.65	1.55	1.55	1.45	....	....
25	2.25	....	1.80	1.75	2.25	2.35	.65	1.45	....	1.35	....	....
26	2.30	....	1.80	1.65	2.15	2.45	.90	1.50	1.60	1.50	....	....
27	2.45	....	1.95	1.75	2.20	1.60	1.05	1.60	....	1.90	....	....
28	2.40	....	1.95	....	2.25	1.70	.90	....	....	1.95	....	1.45
29	2.10	....	1.95	....	1.60	1.75	1.05	....	....	1.90	.15	1.05
30	2.35	....	2.00	....	1.80	1.80	1.05	....	....	....	.50	1.05
31	2.45	....	1.90	....	1.95	....	1.15	....	....	1.90	....	1.05

Lowest daily water level, in feet above mean sea level, 1945

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	1.03	....	1.63	....	1.58	1.78	2.38	....	....	1.73	2.98
2	....	.98	....	1.63	....	1.63	1.68	2.43	....	....	1.83	2.73
3	....	1.23	....	1.78	....	1.88	1.83	2.33	....	1.88	1.83	2.43
4	....	1.78	1.73	2.18	....	1.88	1.83	2.33	1.98	2.23	1.88	....
5	....	1.78	....	1.53	2.28	1.33	1.98	2.13	1.78	2.48	1.93	....
6	....	1.83	....	1.48	2.08	1.18	2.38	2.13	1.68	2.58	....	2.83
7	2.03	1.88	....	1.48	1.93	1.13	3.08	2.28	1.68	2.78	....	2.48
8	2.03	1.83	....	1.53	1.83	1.08	3.03	2.33	1.63	1.98	1.78	2.28
9	1.68	1.93	....	1.48	1.78	1.08	1.63	2.28	1.68	1.83	1.73	2.28
10	1.63	1.93	....	1.53	1.78	1.13	1.78	2.18	1.88	1.83	1.73	2.28
11	1.63	....	1.73	1.53	2.08	....	1.93	2.08	1.98	2.08	1.93	....
12	1.58	....	1.68	1.58	1.93	1.23	1.93	2.03	2.08	2.18	1.88	....
13	1.53	....	1.68	1.63	1.93	1.18	1.88	2.03	1.98	1.93	1.83	1.73
14	2.38	....	1.68	1.63	1.93	1.18	1.93	2.18	2.08	1.98	1.78	1.78
15	2.33	....	1.78	1.78	1.98	1.18	1.93	2.13	1.88	....	1.68	1.83

28.5.4.7.3--Continued.

Lowest daily water level, in feet above mean sea level, 1945

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
16	....	....	1.78	1.83	2.03	1.23	1.78	2.23	1.83	....	1.48	1.78
17	....	....	1.83	1.88	2.08	1.23	1.78	2.13	....	1.68	1.58	1.68
18	....	....	1.73	1.83	2.18	1.23	1.83	2.13	....	1.68	1.58	....
19	....	1.58	1.78	1.63	2.18	1.23	3.38	2.03	2.73	1.68	1.73	....
20	....	1.58	1.88	1.63	....	1.18	3.13	2.03	2.53	1.68	1.73	....
21	1.63	1.68	2.08	1.73	....	1.13	2.68	1.78	2.18	1.73	....	1.78
22	1.63	1.93	2.38	1.43	....	1.13	2.63	1.83	2.03	1.73	....	....
23	1.53	....	2.18	1.53	1.68	1.08	2.68	1.83	1.98	1.93	....	....
24	1.38	....	1.83	1.58	1.48	1.13	2.93	2.03	2.03	2.13	....	....
25	1.33	....	1.78	1.83	1.33	1.23	2.93	2.13	....	2.23	....	....
26	1.28	....	1.78	1.93	1.43	1.13	2.68	2.08	1.98	2.08	....	....
27	1.13	....	1.63	1.83	1.38	1.98	2.53	1.98	....	1.68	....	....
28	1.18	....	1.63	....	1.33	1.88	2.68	....	....	1.63	....	2.13
29	1.48	....	1.63	....	1.98	1.83	2.53	....	....	1.68	3.43	2.53
30	1.23	....	1.58	....	1.78	1.78	2.53	....	....	....	3.08	2.53
31	1.13	....	1.68	....	1.63	....	2.43	....	....	1.68	....	2.53

28.5.4.6.3.A (*936, p. 94; 944, p. 93; 986, p. 109; 1016, p. 142). Perth Amboy Water Department test well A-2. Extremes of observed water level, in feet above mean sea level: Highest, 13.65 May 27, 1940; lowest, 3.86 Oct. 23, 1941. Water level, in feet, 1945: Below land-surface datum, June 20, 6.96; above mean sea level, June 20, 9.71.

28.5.4.6.6 (*936, p. 95; 944, p. 93; 986, p. 109; 1016, p. 142). Perth Amboy Water Department test well A-3. Extremes of observed water level, in feet above mean sea level: Highest, 15.89 May 10, 1933; lowest, 5.80 Oct. 19, 1935. Water level, in feet, 1945: Below land-surface datum, June 20, 4.14; above mean sea level, June 20, 13.08.

28.5.4.6.6.A (*936, p. 96; 944, p. 93; 986, p. 109; 1016, p. 142). Perth Amboy Water Department test well A-40. Extremes of observed water level, in feet above mean sea level: Highest, flowing Apr. 24, 1940; lowest, 8.89 Oct. 29, 1939. Water level, in feet, 1945: Below land-surface datum, June 20, 3.18; above mean sea level, June 20, 14.41.

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). Perth Amboy Water Department test well B-2. Extremes of observed water level, in feet above mean sea level: Highest, 14.49 July 29, 1938; lowest, 1.08 Dec. 29, 1939. Water level, in feet, 1945: Below land-surface datum, June 20, 7.42; above mean sea level, June 20, 6.62.

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). Perth Amboy Water Department test well B-3. Extremes of observed water level, in feet above mean sea level: Highest, 10.59 May 5, 1939; lowest, 2.11 Oct. 19, 1935. Water level, in feet, 1945: Below land-surface datum, June 20, 6.94; above mean sea level, June 20, 7.50.

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). Perth Amboy Water Department test well B-4. Extremes of observed water level, in feet above mean sea level: Highest, 11.54 May 22, 1937; lowest, 5.08 Oct. 24, 1941. Water level, in feet, 1945: Below land-surface datum, June 20, 4.47; above mean sea level, June 20, 9.42.

28.5.4.5.9 (*936, p. 97; 944, p. 94; 986, p. 109; 1016, p. 143). Perth Amboy Water Department test well B-5. Extremes of observed water level, in feet above mean sea level: Highest, 9.50 Apr. 29, 1937; lowest, 6.20 Oct. 27, 1941. Water level, in feet, 1945: Below land-surface datum, June 20, 0.40; above mean sea level, June 20, 9.08.

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). Perth Amboy Water Department test well C-1. Extremes of observed water level, in feet above mean sea level: Highest, 7.30 Mar. 29, 1938; lowest, 2.43 Jan. 27, 1940. Water level, in feet, 1945: Below land-surface datum, June 20, 7.93; above mean sea level, June 20, 4.25.

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). Perth Amboy Water Department test well D-1. Extremes of observed water level, in feet above mean sea level: Highest, 12.29 July 29, 1938; lowest, 5.19 Nov. 13, 1941. Water level, in feet, 1945: Below land-surface datum, June 20, 8.73; above mean sea level, June 20, 7.95.

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). Perth Amboy Water Department test well D-2. Extremes of observed water level, in feet above mean sea level: Highest, 14.39 July 29, 1938; lowest, 7.91 Nov. 13, 1941. Water level, in feet, 1945: Below land-surface datum, June 20, 4.35; above mean sea level, June 20, 11.59.

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). H. C. Perrine farm well F-2. Extremes of observed water level, in feet above mean sea level: Highest, 22.9 Mar. 27, 1936; lowest, 14.59 Sept. 24, 1932, and Oct. 27, 1941.

Water level, in feet, 1945

Date	Below land-surface datum	Above mean sea level
June 21	2.82	20.94
27	2.82	20.94

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). Clyde Bowne farm well F-3. Extremes of observed water level, in feet above mean sea level: Highest, 31.91 June 17, 1939; lowest, 24.07 Nov. 24, 1942. Water level, in feet, 1945: Below land-surface datum, June 27, 42.41; above mean sea level, June 27, 27.23.

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). A. R. Brown farm well F-4. Extremes of observed water level, in feet above mean sea level: Highest, 29.47 July 12, 1939; lowest, 22.89 Mar. 11, 1932. Water level, in feet, 1945: Below land-surface datum, June 27, 42.52; above mean sea level, June 27, 25.67.

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). A. Hanley farm well F-5. Extremes of observed water level, in feet above mean sea level: Highest, 105.73 Jan. 24, 1934; lowest, 97.69 Sept. 24, 1932. Water level, in feet, 1945: Below land-surface datum, June 27, 1.79; above mean sea level, June 27, 104.72.

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). Owner unknown. Farm well F-9. Extremes of observed water level, in feet above mean sea level: Highest, 106.79 Apr. 15, 1932; lowest, 98.43 Oct. 27, 1941. Water level, in feet, 1945: Below land-surface datum, June 27, 7.07; above mean sea level, June 27, 100.89.

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). Maude Lamberton. Farm well F-10. Extremes of observed water level, in feet above mean sea level: Highest, 126.71 Mar. 27, 1936; lowest, 119.12 Oct. 27, 1941. Water level, in feet, 1945: Below land-surface datum, June 27, 4.92; above mean sea level, June 27, 122.46.

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). Charles Schnuck. Farm well F-11. Extremes of observed water level, in feet above mean sea level: Highest, 33.94 Apr. 18, 1941; lowest, 22.75 Mar. 11, 1932. No measurements made in 1945.

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). George Burlew. Farm well F-12. Extremes of observed water level, in feet above mean sea level: Highest, 34.98 May 4, 1939; lowest, well dry on several days in 1932. Water level, in feet, 1945: Below land-surface datum, June 27, 22.87; above mean sea level, June 27, 29.59.

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). George Burlaw. Farm well F-13. Extremes of observed water level, in feet above mean sea level: Highest, 46.54 Sept. 17, 1934; lowest, 41.54 June 19, 1925. No measurements made in 1945.

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). William Jurman. Farm well F-14. Extremes of observed water level, in feet above mean sea level: Highest, 38.94 July 27, 1938; lowest, dry Oct. 21, 1925, and Nov. 13, 1931. Water level, in feet, 1945: Below land-surface datum, June 27, 6.55; above mean sea level, June 27, 35.19.

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). Amos Burlaw. Farm well F-16. Extremes of observed water level, in feet above mean sea level: Highest, 89.34 Mar. 17, 1939; lowest, 82.92 Aug. 10, 1936. Water level, in feet, 1945: Below land-surface datum, June 27, 3.28; above mean sea level, June 27, 87.76.

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). A. Fredda. Farm well F-20. Extremes of observed water level, in feet above mean sea level: Highest, 36.62 Apr. 11, 1939; lowest, 28.54 Sept. 24, 1932. Water level, in feet, 1945: Below land-surface datum, June 27, 9.15; above mean sea level, June 27, 35.97.

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). Mrs. A. Green. Farm well F-21. Extremes of observed water level, in feet above mean sea level: Highest, 68.01 June 27, 1945; lowest, 59.78 July 19, 1935. Water level, in feet, 1945: Below land-surface datum, June 27, 0.39; above mean sea level, June 27, 68.01.

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). Reuben Miller. Farm well F-22. Extremes of observed water level, in feet above mean sea level: Highest, 88.76 Sept. 17, 1934; lowest, 76.19 Oct. 20, 1932. Water level, in feet, 1945: Below land-surface datum, June 27, 4.86; above mean sea level, June 27, 85.35.

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). Ambrose Green. Farm well F-26. Extremes of observed water level, in feet above mean sea level: Highest, 88.10 Apr. 11, 1939; lowest, 82.51 Sept. 18, 1925. Water level, in feet, 1945: Below land-surface datum, June 27, 14.38; above mean sea level, June 27, 86.38.

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). Mrs. J. Green. Farm well F-27. Extremes of observed water level, in feet above mean sea level: Highest, 88.38 Aug. 5, 1939; lowest, 82.33 Aug. 11, 1925. Water level, in feet, 1945: Below land-surface datum, June 27, 15.73; above mean sea level, June 27, 86.10.

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). Perth Amboy Water Department test well G-1. Extremes of observed water level, in feet above mean sea level: Highest, 23.79 May 10, 1933; lowest, 17.43 Oct. 27, 1941. Water level, in feet, 1945: Below land-surface datum, June 21, 4.67; above mean sea level, June 21, 20.67.

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). Perth Amboy Water Department test well G-2. Extremes of observed water level, in feet above mean sea level: Highest, 25.45 Nov. 17, 1934; lowest, 20.84 Oct. 27, 1941. Water level, in feet, 1945: Below land-surface datum, June 21, 3.70; above mean sea level, June 21, 23.75.

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). Perth Amboy Water Department test well G-3. Extremes of observed water level, in feet above mean sea level: Highest, 28.43 June 12, 1937; lowest, 24.51 Jan. 7, 1942. Water level, in feet, 1945: Below land-surface datum, June 21, 2.57; above mean sea level, June 21, 26.81.

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). Perth Amboy Water Department test well G-4. Extremes of observed water level, in feet above mean sea level: Highest, 31.91 May 23, 1938; lowest, 27.0 Jan. 7, 1942. Water level, in feet, 1945: Below land-surface datum, June 21, 20.48; above mean sea level, June 21, 30.23.

29.1.1.7.9.A (*936, p. 103; 944, p. 96; 986, p. 111; 1016, p. 145). Perth Amboy Water Department test well G-20. Extremes of observed water level, in feet above mean sea level: Highest, 25.94 Dec. 20, 1938, and Feb. 14, 1939; lowest, 20.58 Oct. 27, 1941. Water level, in feet, 1945: Below land-surface datum, June 21, 3.86; above mean sea level, June 21, 23.68.

29.1.4.2.4 (*936, p. 104; 944, p. 96; 986, p. 112; 1016, p. 145). Owner unknown. Test well H-1. Extremes of observed water level, in feet above mean sea level: Highest, 23.45 Apr. 19, 1941; lowest, 17.75 Aug. 6, 1935. Water level, in feet, 1945: Below land-surface datum, June 21, 10.86; above mean sea level, June 21, 21.39.

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). Owner unknown. Test well J-1. Extremes of observed water level, in feet above mean sea level: Highest, 15.61 Oct. 16, 1933; lowest, 9.10 Oct. 24, 1941. Water level, in feet, 1945: Below land-surface datum, June 21, 8.12; above mean sea level, June 21, 12.48.

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). Owner unknown. Test well J-2. Extremes of observed water level, in feet above mean sea level: Highest, 16.25 Jan. 27, 1937; lowest, 11.49 Jan. 11, 1935. Water level, in feet, 1945: Below land-surface datum, June 21, 4.33; above mean sea level, June 21, 14.59.

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). Owner unknown. Test well J-3. Extremes of observed water level, in feet above mean sea level: Highest, 17.69 July 29, 1938; lowest, 13.23 Sept. 24, 1932. Water level, in feet, 1945: Below land-surface datum, June 21, 4.96; above mean sea level, June 21, 15.93.

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). Owner unknown. Test well J-4. Extremes of observed water level, in feet above mean sea level: Highest, 18.35 Sept. 18, 1934; lowest, 13.76 Oct. 24, 1941. Water level, in feet, 1945: Below land-surface datum, June 21, 4.14; above mean sea level, June 21, 16.35.

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). Owner unknown. Test well J-5. Extremes of observed water level, in feet above mean sea level: Highest, 23.99 June 21, 1945; lowest, 13.82 July 16, 1943. Water level, in feet, 1945: Below land-surface datum, June 21, 3.46; above mean sea level, June 21, 23.99.

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). Perth Amboy Water Department test well L-1. Extremes of observed water level, in feet above mean sea level: Highest, 7.56 Apr. 16, 1935; lowest, 2.03 July 17, 1943. Water level, in feet, 1945: Below land-surface datum, June 21, 6.15; above mean sea level, June 21, 5.74.

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). Perth Amboy Water Department test well L-2. Extremes of observed water level, in feet above mean sea level: Highest, 9.06 July 29, 1938; lowest, 4.82 Oct. 24, 1941. Water level, in feet, 1945: Below land-surface datum, June 21, 4.48; above mean sea level, June 21, 7.58.

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). Perth Amboy Water Department test well L-3. Measuring point, since June 8, 1942, 3.75 feet above land-surface datum. Extremes of observed water level, in feet above mean sea level: Highest, 11.51 July 29, 1938; lowest, 3.84 Sept. 30, 1937. Water level, in feet, 1945: Below land-surface datum, June 21, 4.90; above mean sea level, June 21, 9.71.

28.5.4.4.9.A (*936, p. 106; 944, p. 97; 986, p. 113; 1016, p. 146). Perth Amboy Water Department test well N-1. Extremes of observed water level, in feet above mean sea level: Highest, flowing June 23, 1940, and Jan. 18, 1941; lowest, 2.87 Jan. 27, 1940. Water level, in feet, 1945: Above land-surface datum, June 21, 0.33; above mean sea level, June 21, 4.20.

28.5.4.4.9.B (*936, p. 107; 944, p. 97; 986, p. 113; 1016, p. 146). Perth Amboy Water Department test well N-2. Extremes of observed water level, in feet above mean sea level: Highest, 6.48 June 12, 1937; lowest, 3.65 Nov. 13, 1941. Water level, in feet, 1945: Below land-surface datum, June 21, 12.89; above mean sea level, June 21, 5.72.

28.5.4.8.1.A (*936, p. 107; 944, p. 97; 986, p. 113; 1016, p. 146). Perth Amboy Water Department test well N-3. Extremes of observed water level, in feet above mean sea level: Highest, 11.18 May 10, 1933; lowest, 4.66 Nov. 13, 1941. Water level, in feet, 1945: Below land-surface datum, June 21, 6.28; above mean sea level, June 21, 6.28.

29.1.1.7.5.A (*936, p. 107; 944, p. 97; 986, p. 113; 1016, p. 146). Owner unknown. Test well P-1. Extremes of observed water level, in feet above mean sea level: Highest, 25.15 Mar. 27, 1936; lowest, 19.90 July 17, 1943. Water level, in feet, 1945: Below land-surface datum, June 21, 5.98; above mean sea level, June 21, 21.77.

29.1.1.7.5.B (*936, p. 108; 944, p. 97; 986, p. 113; 1016, p. 146). Owner unknown. Test well P-2. Extremes of observed water level, in feet above mean sea level: Highest, 28.72 Apr. 27, 1939; lowest, 21.59 July 17, 1943. Water level, in feet, 1945: Below land-surface datum, June 21, 4.89; above mean sea level, June 21, 27.13.

29.1.4.1.8 (*936, p. 108; 944, p. 97; 986, p. 113; 1016, p. 146). Perth Amboy Water Department test well R-1. Extremes of observed water level, in feet above mean sea level: Highest, 12.16 Apr. 24, 1940; lowest, 7.22 Oct. 13, 1936. Water level, in feet, 1945: Below land-surface datum, June 20, 4.98; above mean sea level, June 20, 10.74.

29.1.4.4.2.A (*936, p. 109; 944, p. 97; 986, p. 113; 1016, p. 146). Perth Amboy Water Department test well R-2. Extremes of observed water level, in feet above mean sea level: Highest, 12.16 Aug. 15, 1938; lowest, 6.39 Dec. 29, 1939. Water level, in feet, 1945: Below land-surface datum, June 20, 5.90; above mean sea level, June 20, 10.18.

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). Perth Amboy Water Department test well S-1. Extremes of observed water level, in feet above mean sea level: Highest, 11.46 Apr. 15, 1935; lowest, 2.80 Oct. 23, 1941. Water level, in feet, 1945: Below land-surface datum, June 20, 8.79; above mean sea level, June 20, 6.70.

28.5.1.8.4 (*886, p. 370; 906, p. 104; 936, p. 110; 944, p. 98; 986, p. 113; 1016, p. 146). Borough of Sayreville test well 4. Extremes of observed water level, in feet above mean sea level: Highest, 11.55 Mar. 27, 1944; lowest, 32.9 Oct. 25, 1935.

Lowest daily water level, in feet with reference
to land-surface datum, 1945

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	+4.47	-4.33	-10.08	-7.68	-6.83	-5.63	-9.58	-8.73	-8.68	.....	.....	+2.62
2	+3.82	-6.03	-9.33	-6.45	-6.45	.....	-10.03	-8.45	.....	.....	.....	+2.52
3	+3.22	-5.98	-9.23	-6.48	-6.63	.....	-9.73	-9.33	.....	-4.93	.....	+2.62

28.5.1.8.4--Continued.

Lowest daily water level, in feet with reference
to land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
4	+2.17	.....	-8.23	-7.13	-6.33	.....	.....	-9.78	.....	.....	.....	+2.57
5	+2.12	.....	-7.38	-6.53	-6.08	.....	-8.58	-9.73	-8.38	.....	.....	+2.52
6	+1.87	.....	-7.08	-5.63	-5.28	.....	-8.68	-9.38	-8.18	.....	.....	+2.52
7	+2.32	.....	-6.53	-7.23	-4.63	.....	-4.48	-8.58	-10.03	-8.13	.....	+2.67
8	+2.97	-6.58	-6.73	-5.48	-4.33	-4.88	-8.33	.....	-7.93	.....	.....	-.68
9	.....	-6.93	-6.68	-4.83	-4.18	-5.23	-12.23	-9.23	-7.48	.....	-1.33	+2.47
10	.....	-7.38	-7.03	.....	-4.08	-4.98	-12.23	-9.43	-7.38	.....	-2.08	+2.17
11	+1.32	-7.58	-6.63	.....	-3.98	-4.88	-10.33	-10.08	-7.78	+3.18	-1.53	+1.72
12	+7.77	-6.93	-7.43	-5.73	-4.08	.....	-10.33	-10.23	-7.28	+1.73	-2.03	+1.47
13	+9.92	-7.63	-7.03	-5.98	-3.58	.....	-10.18	-14.33	-7.03	+6.3	-1.93	+1.27
14	+1.52	-7.83	-7.18	-6.83	-3.48	-7.03	-9.73	-13.63	-6.63	+1.2	-.63	+1.17
15	+2.22	-9.58	-7.48	-5.98	-3.68	-7.68	-8.98	-12.03	-6.43	-5.93	-1.38	+1.17
16	.....	-10.23	-7.63	-5.48	-4.83	-7.98	-8.78	.....	-5.88	-5.78	-.53	+1.17
17	.....	-11.38	-9.43	-4.98	-5.13	-7.48	-8.68	.....	-5.58	-3.03	+3.7	+1.02
18	.....	-9.88	-11.93	-8.48	-5.48	-5.48	-6.78	-8.38	.....	-5.83	-.63	+5.7
19	.....	-.23	-13.38	-8.23	-5.48	-6.08	.....	-7.93	.....	-6.18	-.47	+5.7
20	.....	+12	-13.93	-7.88	-5.33	-5.68	.....	-8.23	.....	-6.13	+6.7	+1.27
21	.....	+9.7	-12.78	-8.13	-5.38	-4.88	-7.83	-8.63	.....	-6.53	+1.12	+1.47
22	.....	+1.77	-11.73	-8.23	-5.48	-4.58	-7.58	-8.58	-10.28	-6.08	+1.52	+1.87
23	.....	-10.43	-8.18	-5.28	-4.98	-7.38	-7.68	-9.63	-6.18	+1.82	+2.07	+7.2
24	.....	-10.43	-8.33	-5.33	-4.93	-6.98	-7.03	-9.23	-5.93	+1.82	+1.97	+3.2
25	.....	+1.27	-10.23	-8.18	-7.48	-5.38	-6.53	-7.23	-9.13	-5.68	+1.82	+2.07
26	.....	+2.32	-10.13	-7.53	-9.98	-5.28	-6.88	-7.63	-8.28	-5.63	+1.82	+2.27
27	.....	+2.12	-10.68	.....	-8.88	.....	.....	-8.13	-7.78	-5.43	+2.02	+2.32
28	.....	+2.02	-10.48	.....	-8.23	.....	-7.73	-8.28	-7.68	-5.38	.....	+2.42
29	.....	+1.77	.....	-10.73	-7.53	.....	-8.28	-7.83	-7.88	-5.48	.....	+2.97
30	.....	-.88	.....	-9.58	-7.73	.....	-9.08	-7.98	-8.23	-5.28	.....	+2.77
31	.....	-3.13	.....	-8.58	.....	-5.63	.....	-8.63	-8.63	.....	.....	+2.22

Lowest daily water level, in feet with reference
to mean sea level, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	+10.20	+1.40	-4.35	-1.95	-1.10	+1.0	-3.85	-3.00	-2.95	.....	.....	+8.35
2	+9.55	-.30	-4.20	-.70	-.70	.....	-4.30	-2.70	.....	.....	.....	+8.25
3	+8.75	-.25	-3.50	-.75	-.90	.....	-4.00	-3.60	.....	+8.80	.....	+8.35
4	+7.90	.....	-2.50	-1.40	-.60	.....	.....	-4.05	.....	.....	.....	+8.30
5	+7.85	.....	-1.65	-.80	-.35	.....	.....	-2.85	-4.00	-2.65	.....	+8.25
6	+7.60	.....	-1.35	+1.0	+4.5	.....	.....	-2.95	-3.65	-2.45	.....	+8.25
7	+8.05	.....	-.80	-.15	+1.10	+1.25	.....	-2.85	-4.30	-2.40	.....	+8.40
8	+8.70	-.85	-1.00	+2.25	+1.40	+8.5	.....	-2.60	.....	-2.20	.....	+5.05
9	.....	-1.20	-.95	+9.0	+1.55	+5.0	.....	-6.50	-3.50	-1.75	.....	+4.40
10	.....	-1.65	-1.30	.....	+1.65	+7.5	.....	-6.50	-3.70	-1.65	.....	+3.65
11	.....	+7.05	-1.65	-1.10	.....	+1.75	+8.5	-4.60	-4.35	-2.05	+2.55	+4.20
12	.....	+6.50	-1.20	-1.70	0.0	+1.65	.....	-4.60	-4.50	-1.55	+4.00	+3.70
13	.....	+6.65	-1.90	-1.30	-.25	+2.15	.....	-4.45	-8.60	-1.30	+5.10	+3.80
14	.....	+7.25	-2.10	-1.45	-1.10	+2.25	-1.30	-4.00	-7.90	-.90	+5.85	+5.10
15	.....	+7.95	-3.85	-1.75	-.25	+2.05	-1.95	-3.25	-6.30	-.70	-.20	+4.35
16	.....	.....	-4.50	-1.90	+2.25	+9.0	-2.25	-3.05	.....	-.15	-.05	+5.20
17	.....	.....	-5.65	-3.70	+7.5	+6.0	-1.75	-2.95	.....	+1.15	+2.70	+6.10
18	.....	+4.85	-6.20	-2.75	+2.5	+2.5	-1.05	-2.65	.....	-.10	+5.10	+6.30
19	.....	+5.50	-7.65	-2.50	+2.25	-.35	.....	-2.20	.....	-.45	+6.20	+6.30
20	.....	+5.85	-8.20	-2.15	+4.0	+0.5	.....	-2.50	.....	-.40	+6.40	+7.00
21	.....	+6.70	-7.05	-2.40	+3.55	+8.5	-2.10	-2.90	.....	-.80	+6.85	+7.20
22	.....	+7.50	-6.00	-2.60	+2.25	+1.15	-1.85	-2.85	-4.55	-.35	+7.25	+7.60
23	.....	.....	-4.70	-2.45	+4.5	+7.5	-1.65	-1.95	-3.90	-.45	+7.55	+7.80
24	.....	.....	-4.70	-2.60	+4.0	+8.0	-1.25	-1.30	-3.50	-.20	+7.55	+7.70
25	.....	+7.00	-4.50	-2.45	-1.75	+3.5	-.80	-1.50	-3.40	+0.05	+7.55	+7.80
26	.....	+8.05	-4.40	-1.80	-4.25	+4.5	-1.15	-1.90	-2.55	+1.0	+7.55	+8.00
27	.....	+7.85	-4.95	.....	-3.15	.....	.....	-2.40	-2.05	+3.0	+7.75	+8.05
28	.....	+7.75	-4.75	.....	-2.50	.....	-2.00	-2.55	-1.95	+3.55	.....	+8.15
29	.....	+7.50	.....	-5.00	-1.80	.....	-2.55	-2.10	-2.15	+2.25	.....	+8.70
30	.....	+4.85	.....	-3.65	-2.00	.....	-3.35	-2.25	-2.50	+4.5	.....	+8.50
31	.....	+2.60	.....	-2.85	.....	+1.10	.....	-2.90	-2.90	.....	.....	+5.95

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). 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, while being pumped.

Water level, in feet, 1945

Date	Below land-surface datum	Below mean sea level
Jan. 6	57.22	29.65
6	57.28	29.01
Apr. 23	49.83	21.54
June 13	50.96	22.69

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). 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.

Water level, in feet, 1945

Date	Below land-surface datum	Below mean sea level
Jan. 6	38.12	21.58
Apr. 23	34.25	17.71
June 13	34.55	18.01

Monmouth County

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). Edward Huffrey. Farm well F-30. Extremes of observed water level, in feet above mean sea level: Highest, 75.85 Dec. 14, 1940; lowest, 59.93 June 28, 1929. Water level, in feet, 1945: Below land-surface datum, June 27, 12.65; above mean sea level, June 27, 63.96.

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). W. Gibson. Farm well F-31. Extremes of observed water level, in feet above mean sea level: Highest, 85.48 Apr. 16, 1935; lowest, 80.02 Oct. 21, 1925. Water level, in feet, 1945: Below land-surface datum, June 27, 6.44; above mean sea level, June 27, 82.51.

29.11.1.2.9 (*817, p. 135; 840, p. 247; 845, p. 208; 886, p. 375; 906, p. 106; 936, p. 112; 944, p. 99; 986, p. 116; *1016, p. 148). 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, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	14.92	15.22	15.14	14.81	15.10	14.97	15.42	13.87	14.74	14.85	15.46	15.33
2	14.92	15.23	15.08	14.75	15.13	14.96	15.43	13.87	14.80	14.92	15.47	15.21
3	14.86	15.25	15.07	14.82	15.06	15.02	15.36	13.87	14.84	14.96	15.52	15.09
4	14.84	15.23	15.06	14.79	15.04	15.03	15.35	13.90	14.86	14.97	15.53	15.04
5	14.85	15.29	15.04	14.84	15.04	15.04	15.34	13.92	14.91	15.01	15.54	14.96
6	14.86	15.29	14.99	14.86	15.03	15.05	15.36	13.88	14.93	15.01	15.57	14.94
7	14.85	15.31	15.02	14.85	15.03	15.06	15.39	13.94	14.95	15.03	15.59	14.93
8	14.87	15.26	14.97	14.84	15.04	15.09	15.42	13.96	14.98	15.03	15.61	14.89
9	14.93	15.27	14.95	14.86	15.05	15.12	15.44	14.03	15.03	15.07	15.62	14.86
10	14.94	15.24	14.94	14.87	14.98	15.14	15.44	14.04	15.05	15.08	15.64	14.86
11	14.98	15.24	14.94	14.87	15.01	15.14	15.49	14.11	14.98	15.11	15.64	14.91
12	14.95	15.23	14.92	14.87	14.95	15.16	15.51	14.14	14.94	15.12	15.66	14.89
13	14.97	15.19	14.92	14.86	14.94	15.19	15.53	14.16	14.95	15.14	15.67	14.86
14	15.00	15.24	14.91	14.90	14.94	15.21	15.54	14.19	14.95	15.16	15.67	14.87

29.11.1.2.9--Continued.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
15	15.02	15.24	14.87	14.94	14.94	15.21	15.54	14.23	14.98	15.18	15.72	14.86
16	15.02	15.24	14.85	14.93	14.94	15.22	15.54	14.26	15.03	15.22	15.73	14.90
17	15.04	15.24	14.84	14.91	14.93	15.24	15.50	14.30	15.02	15.23	15.74	14.90
18	15.05	15.26	14.86	14.95	14.92	15.25	15.35	14.34	14.93	15.24	15.76	14.87
19	15.04	15.29	14.84	14.98	14.94	15.27	15.05	14.36	14.77	15.25	15.74	14.85
20	15.06	15.29	14.83	14.96	14.94	15.30	14.74	14.42	14.66	15.29	15.77	14.87
21	15.06	15.30	14.82	15.00	14.93	15.30	14.54	14.43	14.64	15.32	15.76	14.90
22	15.03	15.27	14.82	15.02	14.93	15.31	14.45	14.46	14.63	15.33	15.77	14.88
23	15.05	15.28	14.79	15.02	14.94	15.32	14.37	14.52	14.63	15.34	15.77	14.90
24	15.12	15.25	14.79	15.04	14.94	15.32	14.27	14.53	14.64	15.35	15.80	14.90
25	15.13	15.24	14.77	15.03	14.94	15.32	14.15	14.52	14.66	15.35	15.83	14.83
26	15.13	15.14	14.75	15.03	14.95	15.32	14.04	14.55	14.73	15.36	15.84	14.78
27	15.15	15.16	14.76	15.04	14.96	15.36	13.96	14.60	14.74	15.39	15.84	14.74
28	15.14	15.13	14.75	15.04	14.93	15.36	13.90	14.63	14.76	15.41	15.79	14.71
29	15.16		14.75	15.06	14.92	15.40	13.87	14.66	14.84	15.43	15.64	14.64
30	15.17		14.76	15.09	14.94	15.42	13.86	14.70	14.86	15.44	15.47	14.56
31	15.19		14.78		14.97		13.87	14.73		15.44		14.52

Water level at end of day, in feet above mean sea level, 1945

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	98.42	98.12	98.20	98.53	98.24	98.37	97.92	99.47	98.60	98.49	97.88	98.01
2	98.42	98.11	98.26	98.59	98.21	98.38	97.91	99.47	98.54	98.42	97.87	98.13
3	98.48	98.09	98.27	98.52	98.28	98.32	97.98	99.47	98.50	98.38	97.82	98.25
4	98.50	98.11	98.28	98.55	98.30	98.31	97.99	99.44	98.48	98.37	97.81	98.30
5	98.49	98.05	98.30	98.50	98.30	98.30	98.00	99.42	98.43	98.33	97.80	98.38
6	98.48	98.05	98.35	98.48	98.31	98.29	97.98	99.46	98.41	98.33	97.77	98.40
7	98.49	98.03	98.32	98.49	98.31	98.28	97.95	99.40	98.39	98.31	97.75	98.41
8	98.47	98.08	98.37	98.50	98.30	98.25	97.92	99.38	98.36	98.31	97.73	98.45
9	98.41	98.07	98.39	98.48	98.29	98.22	97.90	99.31	98.31	98.27	97.72	98.48
10	98.40	98.10	98.40	98.47	98.36	98.20	97.90	99.30	98.29	98.26	97.70	98.48
11	98.36	98.10	98.40	98.47	98.33	98.20	97.85	99.23	98.36	98.23	97.70	98.43
12	98.39	98.11	98.42	98.47	98.39	98.18	97.83	99.20	98.40	98.22	97.68	98.45
13	98.37	98.15	98.42	98.48	98.40	98.15	97.81	99.18	98.39	98.20	97.67	98.48
14	98.34	98.10	98.43	98.44	98.40	98.13	97.80	99.15	98.39	98.18	97.67	98.47
15	98.32	98.10	98.47	98.40	98.40	98.13	97.80	99.11	98.36	98.16	97.62	98.48
16	98.32	98.10	98.49	98.41	98.40	98.12	97.80	99.08	98.31	98.12	97.61	98.44
17	98.30	98.10	98.50	98.43	98.41	98.10	97.84	99.04	98.32	98.11	97.60	98.44
18	98.29	98.08	98.48	98.39	98.42	98.09	97.99	99.00	98.41	98.10	97.58	98.47
19	98.30	98.05	98.50	98.36	98.40	98.07	98.29	98.98	98.57	98.09	97.60	98.49
20	98.28	98.05	98.51	98.38	98.40	98.04	98.60	98.92	98.68	98.05	97.57	98.47
21	98.28	98.04	98.52	98.34	98.41	98.04	98.80	98.91	98.70	98.02	97.58	98.44
22	98.31	98.07	98.52	98.32	98.41	98.03	98.89	98.88	98.71	98.01	97.57	98.46
23	98.29	98.06	98.55	98.32	98.40	98.02	98.97	98.82	98.71	98.00	97.57	98.44
24	98.22	98.09	98.55	98.30	98.40	98.02	99.07	98.81	98.70	97.99	97.54	98.44
25	98.21	98.10	98.57	98.31	98.40	98.02	99.19	98.82	98.68	97.99	97.51	98.51
26	98.21	98.20	98.59	98.31	98.39	98.02	99.30	98.79	98.61	97.98	97.50	98.56
27	98.19	98.18	98.58	98.30	98.38	97.98	99.38	98.74	98.60	97.95	97.50	98.60
28	98.20	98.21	98.59	98.30	98.41	97.98	99.44	98.71	98.53	97.93	97.55	98.63
29	98.18		98.59	98.28	98.42	97.94	99.47	98.68	98.50	97.91	97.70	98.70
30	98.17		98.58	98.25	98.40	97.92	99.48	98.64	98.48	97.90	97.87	98.78
31	98.15		98.56		98.37		99.47	98.61		97.90		98.82

Salem County

Penns Grove area

30.23.1.8.5 (*936, p. 112; 944, p. 100; 986, p. 118; 1016, p. 149).
 New Jersey State Water Policy Commission. 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	4.22	Apr. 6	4.35	June 29	4.08	Sept. 22	3.98
24	4.08	19	4.15	July 16	4.06	Oct. 5	4.30
Feb. 7	4.27	May 9	4.16	27	3.63	20	4.35
24	3.74	21	4.03	Aug. 11	3.70	Nov. 2	4.29
Mar. 8	3.82	31	4.22	27	3.82	16	4.13
23	4.00	June 15	4.39	Sept. 10	4.32	Dec. 3	3.68

30.23.4.1.9 (*936, p. 113; 944, p. 100; 986, p. 118; 1016, p. 150).
New Jersey State Water Policy Commission 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	4.02	Apr. 6	4.06	June 29	4.13	Sept. 22	3.90
24	3.96	19	4.05	July 16	4.12	Oct. 5	4.12
Feb. 7	4.09	May 9	3.89	27	3.41	20	4.23
24	3.54	21	3.83	Aug. 11	3.35	Nov. 2	4.14
Mar. 8	3.64	31	4.01	27	3.71	16	4.17
23	3.90	June 15	4.23	Sept. 10	4.14	Dec. 3	3.61

30.22.6.6.7 (*936, p. 113; 944, p. 101; 986, p. 118; 1016, p. 150).
New Jersey State Water Policy Commission 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	3.55	Apr. 6	3.60	June 29	3.89	Sept. 22	3.50
24	3.34	19	3.44	July 16	3.62	Oct. 5	3.86
Feb. 7	3.75	May 9	3.30	27	2.99	20	4.07
24	2.75	21	3.18	Aug. 11	2.82	Nov. 2	3.85
Mar. 8	2.69	31	3.57	27	3.24	16	3.70
23	2.95	June 15	3.99	Sept. 10	4.13	Dec. 3	2.95

30.22.6.9.3 (*936, p. 113; 944, p. 101; 986, p. 118; 1016, p. 150).
New Jersey State Water Policy Commission Penns Grove observation well 10.
Extremes of observed water level, in feet below land-surface datum:
Highest, 1.63 Mar. 13, 1941; lowest, 6.89 Oct. 24, 1943.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	2.80	Apr. 6	3.09	June 29	3.50	Sept. 22	2.60
24	2.48	19	2.73	July 16	2.96	Oct. 5	3.11
Feb. 7	3.08	May 9	2.64	27	1.91	20	3.30
24	1.75	21	2.56	Aug. 11	2.36	Nov. 2	3.10
Mar. 8	2.03	31	3.01	27	2.50	16	2.74
23	2.25	June 15	3.53	Sept. 10	3.63	Dec. 3	2.08

30.23.4.7.8 (*936, p. 114; 944, p. 101; 986, p. 119; 1016, p. 151).
New Jersey State Water Policy Commission 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	8.50	Apr. 6	6.93	June 29	6.99	Sept. 22	6.13
24	8.55	19	6.97	July 16	7.02	Oct. 5	6.16
Feb. 7	8.28	May 9	6.99	27	7.00	20	6.25
24	8.20	21	6.97	Aug. 11	6.42	Nov. 2	6.40
Mar. 8	7.96	31	6.94	27	6.04	16	6.56
23	7.16	June 15	6.96	Sept. 10	6.09	Dec. 3	6.65

30.22.8.3.5 (*936, p. 114; 944, p. 101; 986, p. 119; 1016, p. 151).
New Jersey State Water Policy Commission 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.

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30.22.8.3.5--Continued.

Water level, in feet with reference to land-surface datum, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	0.00	Apr. 19	-0.25	July 16	-0.44	Oct. 5	-0.20
24	+0.03	May 9	+0.08	27	+0.07	20	-0.42
Feb. 24	+0.10	21	+0.14	Aug. 11	+0.55	Nov. 2	-0.40
Mar. 8	+0.44	31	-0.19	27	+0.16	16	-0.50
23	+0.33	June 15	-0.40	Sept. 10	-0.25	Dec. 3	+0.52
Apr. 6	-0.24	29	-0.42	22	-0.01		

30.22.9.2.1 (*936, p. 114; 944, p. 102; 986, p. 119; 1016, p. 151).
 New Jersey State Water Policy Commission 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, 1945

Jan. 11	2.42	Apr. 6	2.59	June 29	3.07	Sept. 22	1.75
24	1.74	19	2.29	July 16	2.78	Oct. 5	2.42
Feb. 7	2.71	May 9	1.59	27	1.22	20	2.80
24	.97	21	1.84	Aug. 11	1.35	Nov. 2	2.62
Mar. 8	1.11	31	2.62	27	1.44	16	2.16
23	1.17	June 15	3.27	Sept. 10	3.00	Dec. 3	1.20

30.22.9.6.2 (*936, p. 115; 944, p. 102; 986, p. 119; 1016, p. 151).
 New Jersey State Water Policy Commission 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, 1945

Date	Below land-surface datum	Above mean sea level
Jan. 11	4.49	20.89
24	4.08	21.30
Feb. 7	4.95	20.43
24	2.79	22.59
Mar. 8	3.02	22.36
23	3.36	22.02
Apr. 6	4.80	20.58
19	4.68	20.70
May 9	4.10	21.28
21	4.28	21.10
31	4.80	20.58
June 15	5.45	19.93
29	5.01	20.37
July 16	5.33	20.05
27	3.53	21.85
Aug. 11	3.39	21.99
27	3.70	21.68
Sept. 10	5.19	20.19
22	4.17	21.21
Oct. 5	4.82	20.56
20	5.03	20.35
Nov. 2	4.89	20.49
16	4.81	20.57
Dec. 3	3.38	22.00

30.22.9.5.8 (*936, p. 115; 944, p. 102; 986, p. 120; 1016, p. 152).
 New Jersey State Water Policy Commission Penns Grove observation well 15.
 Extremes of observed water level, in feet above mean sea level: Highest,
 9.43 Mar. 29, 1941; lowest, 3.15 Nov. 6, 1942.

Water level, in feet, 1945

Jan. 11	19.64	4.14
24	19.29	4.49
Feb. 7	19.39	4.39
24	19.15	4.63
Mar. 8	18.30	5.48
23	17.59	6.19

30.22.9.5.8--Continued.

Water level, in feet, 1945		
Date	Below land- surface datum	Above mean sea level
Apr. 6	17.64	6.14
19	17.87	5.81
May 9	17.99	5.79
21	17.88	5.90
31	17.84	5.94
June 15	18.26	5.52
29	18.78	5.00
July 16	19.09	4.69
27	19.17	4.61
Aug. 11	18.10	5.68
27	17.54	6.24
Sept. 10	17.68	6.10
22	17.94	5.84
Oct. 5	18.08	5.70
20	18.14	5.64
Nov. 2	18.08	5.70
16	18.11	5.67
Dec. 3	17.65	6.13

30.22.9.5.5 (*936, p. 115; 944, p. 102; 986, p. 120; 1016, p. 152).
New Jersey State Water Policy Commission Penns Grove observation well 21.
Extremes of observed water level, in feet above mean sea level: Highest,
14.87 Mar. 13, 1941; lowest, 8.24 Oct. 24, 1943.

Water level, in feet, 1945		
Jan. 11	8.98	11.01
24	8.60	11.39
Feb. 7	9.07	10.92
24	8.10	11.89
Mar. 8	6.82	13.17
23	7.11	12.88
Apr. 6	7.72	12.27
19	8.20	11.79
May 9	7.87	12.12
21	7.54	12.45
31	7.94	12.05
June 15	8.58	11.41

30.22.9.4.9 (*936, p. 116; 944, p. 102; 986, p. 121; 1016, p. 153).
Penns Grove Water Co. Penns Grove observation well 22. Extremes of ob-
served water level, in feet above mean sea level: Highest, 14.42 Aug. 18,
1939; lowest, dry on various dates in 1942, 1943, 1944, and 1945.

Water level, in feet, 1945		
Jan. 11	13.82	0.56
24	13.37	1.01
Feb. 7	14.05	.33
24	12.68	1.70
Mar. 8	12.50	1.88
23	12.96	1.42
Apr. 6	13.30	1.08
19	13.60	.78
May 9	13.27	1.11
21	13.15	1.23
31	13.48	.90
June 15	13.80	.58
29	14.15	.23
Aug. 11	13.78	.60
27	13.75	.63
Sept. 10	13.82	.56
22	13.81	.57
Oct. 5	14.20	.18
20	14.10	.28
Nov. 2	14.20	.18
16	13.90	.48
Dec. 3	13.62	.76

30.22.9.7.3 (*936, p. 117; 944, p. 103; 986, p. 121; 1016, p. 153).
 New Jersey State Water Policy Commission. Penns Grove observation well.
 24. Extremes of observed water level, in feet with reference to mean sea level: Highest, +2.15 Dec. 25, 1945; lowest, -5.62 Nov. 30 and Dec. 3, 1942.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	22.83	22.23	21.36	20.30	20.29	20.23	20.81	21.06	20.05	19.25	18.66	17.93
2	22.82	22.23	21.29	20.24	20.31	20.20	20.83	21.03	20.01	19.22	18.63	17.85
3	22.77	22.24	21.24	20.25	20.25	20.22	20.86	20.98	19.99	19.27	18.61	17.73
4	22.72	22.21	21.20	20.23	20.25	20.25	20.87	20.96	19.95	19.24	18.57	17.65
5	22.70	22.25	21.12	20.26	20.27	20.27	20.88	20.89	19.92	19.20	18.56	.....
6	22.68	22.24	21.03	20.29	20.29	20.27	20.89	20.82	19.88	19.16	18.57	.....
7	22.60	22.26	21.03	20.26	20.29	20.28	20.91	20.79	19.84	19.14	18.54	.....
8	22.60	22.20	20.98	20.21	20.31	20.28	20.92	20.76	19.80	19.13	18.52	.....
9	22.59	22.21	20.93	20.21	20.34	20.29	20.92	20.71	19.77	19.14	18.51	17.13
10	22.59	22.15	20.87	20.21	20.26	20.31	20.93	20.67	19.73	19.13	18.54	17.06
11	22.59	22.11	20.82	20.20	20.32	20.31	20.97	20.63	19.70	19.12	.....	17.03
12	22.57	22.05	20.76	20.20	20.27	20.34	20.99	20.58	19.70	19.11	.....	16.95
13	22.56	21.96	20.74	20.19	20.24	20.35	21.00	20.56	19.68	.....	.....	16.84
14	22.51	21.76	20.70	20.20	20.26	20.36	21.01	20.51	19.64	.....	18.34	16.76
15	22.52	21.88	20.65	20.24	20.25	20.37	21.01	20.48	19.63	.....	18.42	16.68
16	22.51	21.85	20.62	20.24	20.26	20.39	21.05	20.47	19.63	.....	18.36	16.63
17	22.50	21.82	20.56	20.19	20.26	20.46	21.06	20.44	19.60	.....	18.31	16.59
18	22.45	21.79	20.56	20.26	20.25	20.49	21.08	20.42	19.55	.....	18.31	16.50
19	22.41	21.79	20.52	20.31	20.30	20.52	21.09	20.39	19.53	.....	18.24	.....
20	22.48	21.77	20.47	20.28	20.28	20.55	21.08	20.36	19.49	.....	18.32	16.35
21	22.32	21.76	20.41	20.30	20.25	20.58	21.08	20.33	19.46	.....	18.21	16.34
22	22.29	21.72	20.41	20.33	20.23	20.59	21.11	20.31	19.46	.....	18.23	.....
23	.....	21.70	20.41	20.31	20.25	20.61	21.13	20.30	19.44	.....	18.19	16.24
24	22.27	21.63	20.41	20.31	20.25	.....	21.15	20.27	19.42	18.85	18.17	16.20
25	22.28	21.56	20.38	20.27	20.25	.....	21.16	20.23	19.39	18.82	18.19	15.99
26	.....	21.48	20.36	20.29	20.25	.....	21.17	20.21	19.38	18.80	18.22	.....
27	22.27	21.46	20.34	20.34	20.25	.....	21.20	20.19	19.36	18.81	18.14	.....
28	22.25	21.40	20.33	20.32	20.21	20.78	21.15	20.16	19.33	18.75	18.05	.....
29	22.24	.....	20.30	20.29	20.20	.....	21.15	20.14	19.31	18.73	18.04	.....
30	22.24	.....	20.30	20.29	20.20	20.80	21.14	20.12	19.31	18.70	17.99	.....
31	22.24	.....	20.28	.....	20.22	.....	21.09	20.10	.....	18.65	.....	.....

Water level at end of day, in feet with reference to mean sea level, 1945
 (From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	-4.69	-4.09	-3.22	-2.16	-2.15	-2.09	-2.67	-2.92	-1.91	-1.11	-0.52	+0.21
2	-4.68	-4.09	-3.15	-2.10	-2.17	-2.06	-2.69	-2.89	-1.87	-1.08	-0.49	+0.29
3	-4.63	-4.10	-3.10	-2.11	-2.11	-2.08	-2.72	-2.84	-1.85	-1.13	-0.47	+0.41
4	-4.58	-4.07	-3.06	-2.09	-2.11	-2.11	-2.73	-2.82	-1.81	-1.10	-0.43	+0.49
5	-4.56	-4.11	-2.98	-2.12	-2.13	-2.13	-2.74	-2.75	-1.78	-1.06	-0.42	.....
6	-4.54	-4.10	-2.89	-2.15	-2.15	-2.13	-2.75	-2.68	-1.74	-1.02	-0.43	.....
7	-4.46	-4.12	-2.89	-2.12	-2.15	-2.14	-2.77	-2.65	-1.70	-1.00	-0.40	.....
8	-4.46	-4.06	-2.84	-2.07	-2.17	-2.14	-2.78	-2.62	-1.66	-0.99	-0.38	.....
9	-4.45	-4.07	-2.72	-2.07	-2.20	-2.15	-2.78	-2.57	-1.63	-1.00	-0.37	+1.01
10	-4.45	-4.01	-2.73	-2.07	-2.12	-2.17	-2.79	-2.53	-1.59	-0.99	-0.40	+1.08
11	-4.45	-3.97	-2.68	-2.06	-2.18	-2.17	-2.83	-2.49	-1.56	-0.98	.....	+1.11
12	-4.43	-3.91	-2.62	-2.06	-2.13	-2.20	-2.85	-2.44	-1.56	-0.97	.....	+1.19
13	-4.42	-3.82	-2.60	-2.05	-2.10	-2.21	-2.86	-2.42	-1.54	.....	.....	+1.30
14	-4.37	-3.82	-2.56	-2.06	-2.12	-2.22	-2.87	-2.37	-1.50	.....	-0.20	+1.38
15	-4.38	-3.74	-2.51	-2.10	-2.11	-2.23	-2.87	-2.34	-1.49	.....	-0.29	+1.46
16	-4.37	-3.71	-2.48	-2.10	-2.12	-2.25	-2.91	-2.33	-1.49	.....	-0.22	+1.51
17	-4.36	-3.68	-2.42	-2.05	-2.12	-2.32	-2.92	-2.30	-1.46	.....	-0.17	+1.55
18	-4.31	-3.65	-2.42	-2.12	-2.11	-2.35	-2.94	-2.28	-1.41	.....	-0.17	+1.64
19	-4.27	-3.65	-2.38	-2.17	-2.16	-2.38	-2.95	-2.25	-1.39	.....	-0.10	.....
20	-4.34	-3.63	-2.33	-2.14	-2.14	-2.41	-2.94	-2.22	-1.35	.....	-0.18	+1.79
21	-4.18	-3.62	-2.27	-2.16	-2.11	-2.44	-2.94	-2.19	-1.32	.....	-0.07	+1.80
22	-4.15	-3.58	-2.27	-2.19	-2.09	-2.45	-2.97	-2.17	-1.32	.....	-0.09	.....
23	.....	-3.56	-2.27	-2.17	-2.11	-2.47	-2.99	-2.16	-1.30	.....	-0.05	+1.90
24	-4.13	-3.49	-2.27	-2.17	-2.11	.....	-3.01	-2.13	-1.28	-0.71	-0.03	+1.94
25	-4.14	-3.42	-2.24	-2.13	-2.11	.....	-3.02	-2.09	-1.25	-0.68	-0.05	+2.15

30.22.9.7.3--Continued.

Water level at end of day, in feet with reference to mean sea level, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	.....	-3.34	-2.22	-2.15	-2.11	.....	-3.03	-2.07	-1.24	-0.66	-0.08	.....
27	-4.13	-3.32	-2.20	-2.20	-2.11	.....	-3.06	-2.05	-1.22	-.67	-.00	.....
28	-4.11	-3.26	-2.19	-2.18	-2.07	-2.64	-3.01	-2.02	-1.19	-.61	+0.09	.....
29	-4.10		-2.16	-2.15	-2.06	.....	-3.01	-2.00	-1.17	-.59	+0.10	.....
30	-4.10		-2.16	-2.15	-2.06	-2.66	-3.00	-1.98	-1.17	-.56	+0.15	.....
31	-4.10		-2.14		-2.08		-2.95	-1.96		-.51		.....

30.32.2.2.3 (*936, p. 118; 944, p. 103; 986, p. 122; 1016, p. 155).
New Jersey State Water Policy Commission. Penns Grove observation well 31.
Extremes of observed water level, in feet with reference to mean sea level:
Highest, +1.80 Mar. 8, 1945; lowest, -4.23 Nov. 22, 1941, and Oct. 24, 1943.

Water level, in feet, 1945

Date	Below land- surface datum	Above mean sea level
Jan. 11	5.03	0.17
24	4.64	.56
Feb. 7	4.99	.21
24	3.68	1.52
Mar. 8	3.40	1.80
23	3.58	1.82
Apr. 6	4.13	1.07
19	4.15	1.05
May 9	3.79	1.41
21	3.79	1.41
31	4.33	.87
June 15	4.36	.24
29	5.00	.20
July 16	5.10	.10
27	4.32	.88
Aug. 11	3.80	1.40
27	3.93	1.27
Sept. 10	4.73	.47
22	4.29	.91
Oct. 5	4.49	.71
20	4.98	.22
Nov. 2	4.67	.53
16	4.55	.65
Dec. 3	3.46	1.74

30.22.8.9.5 (*936, p. 119; 944, p. 104; 986, p. 123; 1016, p. 155).
New Jersey State Water Policy Commission. Penns Grove observation well 32.
Extremes of observed water level, in feet with reference to mean sea level:
Highest, +1.71 Mar. 25, 1944; lowest, -1.06 Nov. 22, 1941.

Water level, in feet, 1945

Jan. 11	3.28	0.60
24	3.13	.75
Feb. 7	3.42	.46
24	2.48	1.40
Mar. 8	2.39	1.49
23	2.65	1.23
Apr. 6	3.10	.78
19	2.38	1.50
May 9	3.04	.84
21	2.96	.92
31	3.24	.64
June 15	3.45	.43
29	3.26	.62
July 16	3.52	.36
27	2.85	1.03
Aug. 11	2.50	1.38
27	2.57	1.31
Sept. 10	3.08	.80
22	2.84	1.04

30.22.8.9.5--Continued.

Date	Water level, in feet, 1945	
	Below land-surface datum	Above mean sea level
Oct. 5	3.02	0.86
20	3.16	.72
Nov. 2	3.20	.68
16	3.09	.79
Dec. 3	2.34	1.54

30.22.9.8.6 (*936, p. 119; 944, p. 104; 986, p. 123; 1016, p. 156).
 New Jersey State Water Policy Commission. 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.

Date	Water level, in feet, 1945	
	Below land-surface datum	Above mean sea level
Jan. 11	17.21	3.40
24	16.87	3.74
Feb. 7	17.00	3.61
24	16.52	4.09
Mar. 8	16.14	4.47
23	15.98	4.63
Apr. 6	16.23	4.38
19	16.35	4.26
May 9	16.47	4.14
21	16.42	4.19
31	16.60	4.01
June 15	16.93	3.68
29	17.05	3.56
July 16	17.22	3.39
27	16.90	3.71
Aug. 11	16.12	4.49
27	16.00	4.61
Sept. 10	16.25	4.36
22	16.32	4.29
Oct. 5	16.33	4.28
20	16.32	4.29
Nov. 2	16.16	4.45
16	16.19	4.42
Dec. 3	15.32	5.29

30.32.9.8.4 (*936, p. 119; 944, p. 104; 986, p. 124; 1016, p. 156).
 New Jersey State Water Policy Commission. Penns Grove observation well
 36. Extremes of observed water level, in feet below mean sea level:
 Highest, 0.76 Dec. 17, 1940, and Dec. 3, 1945; lowest, 9.39 Dec. 4, 1942.

Date	Water level, in feet, 1945	
	Below land-surface datum	Below mean sea level
Jan. 11	33.78	7.37
24	33.40	6.99
Feb. 7	33.27	6.86
24	32.98	6.57
Mar. 8	32.50	6.09
23	31.83	5.42
Apr. 6	31.55	5.14
19	31.53	5.12
May 9	31.66	5.25
21	31.61	5.20
31	31.68	5.27
June 15	31.50	5.09
29	31.80	5.39
July 16	32.07	5.66
27	32.18	5.77
Aug. 11	32.08	5.67
27	31.08	4.67
Sept. 10	29.92	3.51
22	30.27	3.86
Oct. 5	28.79	2.38
20	28.35	1.94

30.32.9.8.4--Continued.

		Water level, in feet, 1945	
Date		Below land-surface datum	Below mean sea level
Nov. 2		28.00	1.59
16		27.66	1.25
Dec. 3		27.17	.76

30.32.2.3.3 (*936, p. 120; 944, p. 104; 986, p. 124; 1016, p. 157).
 New Jersey State Water Policy Commission. Penns Grove observation well
 41. Extremes of observed water level, in feet above mean sea level:
 Highest, 11.08 Apr. 25, 1944; lowest, 4.66 Oct. 15, 1943.

Water level at the end of day, in feet with reference
 to land-surface datum, 1945
 (From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	-0.73	-1.38	-0.46	-0.05	-0.48	-0.89	+0.24	-0.20	....	....	....
2	....	-.79	-1.33	-.51	-.09	-.54	-.80	+.27	-.15	....	-.47	....
3	....	-.87	-1.35	-.50	+.20	-.63	-.71	+.29	-.27	....	-.52	+.34
4	....	-.91	-1.19	-.44	+.26	-.72	-.80	+.33	-.36	....	....	+.30
5	....	-.90	-1.14	-.37	+.20	-.78	-.85	+.24	-.43	-.40	....	+.37
6	....	-.81	-1.33	-.31	+.11	-.85	-.79	+.39	-.49	-.25	....	+.65
7	....	-.77	-1.36	-.28	+.02	-.91	-.86	....	-.53	....	....	+.63
8	....	-.52	-1.29	-.25	+.15	-1.00	-1.00	....	-.58	....	....	+.49
9	-.25	-.48	-1.20	-.20	+.11	-1.04	-1.10	....	-.62	....	....	+.47
10	-.15	-.38	-1.17	-.18	+.39	-.56	-.94	....	-.67	....	....	+.46
11	-.03	-.36	-1.08	-.18	+.37	-.49	-.91	+.29	-.63	....	....	+.41
12	-.01	-.31	-1.06	-.18	+.33	-.56	-1.01	+.08	-.65	....	....	+.35
13	-.11	-.37	-.99	-.18	+.25	-.65	-1.13	.00	-.73	....	....	+.35
14	-.15	-.44	-.94	-.18	+.20	-.79	-1.17	-.05	-.77	....	-.56	+.35
15	-.14	-.56	-.98	-.17	+.09	-.87	-.98	+.13	-.74	....	-.57	....
16	-.49	-.57	-.98	-.17	-.02	-.99	-.96	+.15	-.79	....	-.60	....
17	-.49	-.59	-.91	-.22	-.06	-1.09	-.90	+.08	-.52	....	-.61	....
18	-.49	-.59	-.83	-.37	+.32	-1.16	-.41	+.05	....	....	-.63	....
19	-.49	-.57	-.82	-.22	+.22	-.87	-.20	-.12	+.14	....	-.57	....
20	-.48	-.57	-.81	-.24	+.08	-.73	-.16	-.20	+.14	-.73	-.47	....
21	-.45	-.66	-1.01	-.25	-.01	-.75	-.20	-.27	+.04	-.77	....	....
22	-.46	-1.16	-1.18	-.32	-.06	-.53	-.24	-.37	-.08	-.71	....	....
23	-.45	-1.26	-1.17	-.38	-.14	-.58	-.32	-.36	-.11	-.52	....	....
24	-.47	-1.26	-1.01	-.43	-.25	-.71	-.38	-.03	-.13	-.43	....	....
25	-.31	-1.09	-.91	-.11	-.34	-.81	-.45	+.14	....	-.35	....	....
26	-.38	-1.38	-.87	+.10	-.38	-.90	-.40	+.31	....	....	....	....
27	-.51	-1.43	-.79	+.14	-.29	-1.05	-.24	+.19	....	....	....	....
28	-.56	-1.42	-.73	+.07	-.19	-1.00	-.15	+.11	....	....	....	....
29	-.54	....	-.68	.00	-.11	-.74	+.05	-.01	....	....	....	....
30	-.55	....	-.61	-.05	-.28	-.77	+.05	-.11	....	....	....	....
31	-.61	....	-.59	....	-.40	....	+.05	-.14	....	....	....	....

Water level at the end of day, in feet above mean sea level, 1945
 (From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	9.54	8.89	9.81	10.22	9.79	9.38	10.51	10.04	....	....	....
2	....	9.48	8.94	9.76	10.18	9.73	9.47	10.54	10.12	....	9.80	....
3	....	9.40	8.92	9.77	10.47	9.64	9.56	10.56	10.00	....	9.75	10.61
4	....	9.36	9.08	9.83	10.53	9.55	9.47	10.60	9.91	....	....	10.57
5	....	9.37	9.13	9.90	10.47	9.49	9.42	10.51	9.84	9.87	....	10.64
6	....	9.46	8.94	9.96	10.38	9.42	9.48	10.66	9.78	10.02	....	10.92
7	....	9.50	8.91	9.99	10.29	9.36	9.41	....	9.74	....	....	10.90
8	....	9.75	8.28	10.02	10.42	9.27	9.27	....	9.69	....	....	10.76
9	10.02	9.79	9.07	10.07	10.38	9.23	9.17	....	9.65	....	....	10.74
10	10.12	9.89	9.10	10.09	10.66	9.71	9.33	....	9.60	....	....	10.73
11	10.24	9.91	9.19	10.09	10.64	9.78	9.36	10.56	9.64	....	....	10.68
12	10.26	9.96	9.21	10.09	10.60	9.71	9.26	10.35	9.62	....	....	10.62
13	10.16	9.90	9.28	10.09	10.52	9.62	9.14	10.27	9.54	....	....	10.62
14	10.12	9.93	9.33	10.09	10.47	9.48	9.10	10.22	9.50	....	9.71	10.62
15	10.13	9.71	9.29	10.10	10.36	9.40	9.29	10.40	9.53	....	9.70	....
16	9.78	9.70	9.29	10.10	10.25	9.28	9.31	10.42	9.48	....	9.67	....
17	9.78	9.68	9.36	10.05	10.21	9.18	9.37	10.35	9.75	....	9.66	....

30.32.2.3.3--Continued.

Water level at the end of day, in feet above mean sea level, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
18	9.78	9.68	9.44	9.90	10.59	9.11	9.86	10.26	10.32	....	9.64	.....
19	9.78	9.70	9.45	10.05	10.49	9.40	10.07	10.15	10.41	....	9.80	.....
20	9.79	9.70	9.46	10.03	10.35	9.54	10.11	10.07	10.41	9.54	9.80	.....
21	9.82	9.61	9.26	10.02	10.26	9.52	10.07	10.00	10.31	9.50	....	.....
22	9.81	9.11	9.09	9.95	10.21	9.74	10.03	9.90	10.19	9.56	....	.....
23	9.82	9.01	9.10	9.89	10.13	9.69	9.95	9.91	10.16	9.75	....	.....
24	9.80	9.01	9.26	9.84	10.02	9.56	9.89	10.24	10.14	9.84	....	.....
25	9.96	9.18	9.36	10.16	9.93	9.46	9.82	10.41	....	9.92	....	.....
26	9.89	8.89	9.40	10.37	9.89	9.37	9.87	10.58	....	....	....	.....
27	9.76	8.84	9.48	10.41	9.98	9.22	10.03	10.46	....	....	....	.....
28	9.71	8.85	9.54	10.34	10.08	9.27	10.12	10.38	....	....	....	.....
29	9.73		9.59	10.27	10.16	9.53	10.32	10.26	....	....	....	.....
30	9.72		9.66	10.22	9.99	9.50	10.32	10.16	....	....	....	.....
31	9.66		9.68		9.87		10.32	10.13	....	....	....	.....

30.32.2.3.9 (*936, p. 120; 944, p. 105; 986, p. 125; 1016, p. 158).
 New Jersey State Water Policy Commission. Penns Grove observation well 51.
 Extremes of observed water level, in feet above mean sea level: Highest,
 10.99 Mar. 13, 1941, and Feb. 24, 1945; lowest, 3.94 Oct. 24, 1943.

Water level, in feet, 1945

Date	Below land- surface datum	Above mean sea level
Jan. 11	2.70	10.01
24	2.20	10.51
Feb. 7	3.00	9.71
24	1.72	10.99
Mar. 8	1.83	10.88
23	1.90	10.81
Apr. 6	2.80	9.91
19	2.47	10.24
May 9	2.23	10.48
21	2.34	10.37
31	2.82	9.89
June 15	3.47	9.24
29	3.72	8.99
July 16	3.65	9.06
27	2.84	9.87
Aug. 11	2.24	10.47
27	2.03	10.68
Sept. 10	3.61	9.10
22	2.49	10.22
Oct. 5	2.81	9.90
20	3.21	9.50
Nov. 2	2.84	9.87
16	2.43	10.28
Dec. 3	1.95	10.76

30.32.2.5.1 (*936, p. 121; 944, p. 105; 986, p. 126; 1016, p. 158).
 New Jersey State Water Policy Commission. Penns Grove observation well
 52. Extremes of observed water level, in feet below mean sea level:
 Highest, 0.24 Apr. 6, 1945; lowest, 13.65 Feb. 12, 1942.

Water level, in feet, 1945

Date	Below land- surface datum	Below mean sea level
Jan. 11	12.44	5.28
24	11.59	4.43
Feb. 7	11.17	4.01
24	10.02	2.86
Mar. 8	9.23	2.07
23	8.05	.89
Apr. 6	7.40	.24
19	7.60	.44
May 9	7.95	.79

30.32.2.5.1. -Continued.

Water level, in feet, 1945		
Date	Below land-surface datum	Below mean sea level
May 21	8.97	1.81
31	10.19	3.03
June 15	11.20	4.04
29	11.70	4.54
July 16	12.28	5.12
27	12.12	4.96
Aug. 11	11.75	4.59
27	12.07	4.91
Sept. 10	12.30	5.14
22	12.45	5.29
Oct. 5	12.50	5.34
20	12.46	5.30
Nov. 2	11.13	3.97
16	10.73	3.57
Dec. 3	9.70	2.54

30.32.2.6.5 (*936, p. 121; 944, p. 105; 986, p. 126; 1016, p. 159).
 New Jersey State Water Policy Commission. 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, 1945		
Date	Below land-surface datum	Above mean sea level
Jan. 11	2.24	10.55
24	2.14	10.65
Feb. 7	2.59	10.20
24	1.87	10.92
Mar. 8	2.38	10.41
23	1.42	11.37
Apr. 6	1.96	10.83
19	2.15	10.64
May 4	1.70	11.09
21	1.63	11.16
31	2.10	10.69
June 15	2.67	10.12
29	2.88	9.91
July 16	2.85	9.94
27	2.32	10.47
Aug. 11	1.57	11.22
27	1.76	11.03
Sept. 10	2.77	10.02
22	2.20	10.59
Oct. 5	2.32	10.47
20	2.62	10.17
Nov. 2	2.45	10.34
16	2.57	10.22
Dec. 3	1.47	11.32

30.32.3.5.5 (*936, p. 121; 944, p. 106; 986, p. 127; 1016, p. 159).
 New Jersey State Water Policy Commission. Penns Grove observation well
 55. Extremes of observed water level, in feet above mean sea level:
 Highest, 7.22 Dec. 2, 1940, and Dec. 1, 1944; lowest, 1.93 Oct. 20 and 24, 1943.

Water level, in feet, 1945		
Date	Below land-surface datum	Above mean sea level
Jan. 11	1.74	6.48
24	1.39	6.83
Feb. 7	2.11	6.11
24	1.06	7.16
Mar. 8	1.27	6.95
23	1.26	6.96
Apr. 6	2.07	6.15
19	1.71	6.51
May 9	1.60	6.62

30.32.3.5.5--Continued.

Water level, in feet, 1945		
Date	Below land-surface datum	Above mean sea level
May 21	1.75	6.47
31	2.15	6.07
June 15	2.66	5.56
29	2.10	6.12
July 16	1.94	6.28
27	1.50	6.72
Aug. 11	1.60	6.62
27	1.32	6.90
Sept. 10	2.56	5.66
22	1.99	6.23
Oct. 5	2.31	5.91
20	2.43	5.79
Nov. 2	2.16	6.06
16	1.93	6.29
Dec. 3	1.38	6.84

30.32.2.5.8 (*936, p. 122; 944, p. 106; 986, p. 127; 1016, p. 160).
 New Jersey State Water Policy Commission. Penns Grove observation well
 62. Extremes of observed water level, in feet below land-surface datum:
 Highest, 10.00 Apr. 19, 1945; lowest, 20.90 Feb. 13, 1942.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	17.59	Apr. 6	10.24	June 29	13.90	Sept. 22	15.23
24	16.66	19	10.00	July 16	14.64	Oct. 5	15.32
Feb. 7	15.80	May 9	10.17	27	14.87	20	15.37
24	14.70	21	10.99	Aug. 11	14.72	Nov. 2	14.68
Mar. 8	13.55	31	12.14	27	14.83	16	14.28
23	11.81	June 15	13.24	Sept. 10	14.89	Dec. 3	13.64

30.32.2.9.1 (*936, p. 122; 944, p. 106; 986, p. 128; 1016, p. 160).
 New Jersey State Water Policy Commission. 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, 1945		
Date	Below land-surface datum	Above mean sea level
Jan. 11	3.95	13.86
24	3.35	14.46
Feb. 7	4.38	13.43
24	2.68	15.13
Mar. 8	2.66	15.15
23	2.85	14.96
Apr. 6	4.05	13.76
19	3.90	13.91
May 9	3.38	14.43
21	3.54	14.27
31	4.33	13.48
June 15	5.21	12.60
29	5.20	12.61
July 16	5.31	12.50
27	4.47	13.34
Aug. 11	3.45	14.36
27	3.56	14.25
Sept. 10	5.10	12.71
22	4.53	13.28
Oct. 5	4.70	13.11
22	5.07	12.74
Nov. 2	4.80	13.01
16	4.78	13.03
Dec. 3	3.17	14.64

30.32.2.9.5 (*936, p. 122; 944, p. 106; 986, p. 128; 1016, p. 161).
 New Jersey State Water Policy Commission. Penns Grove observation well
 64. Extremes of observed water level, in feet above mean sea level:
 Highest, 2.06 Feb. 24, 1945; lowest, 1.42 Sept. 25, 1943.

Water level, in feet, 1945		
Date	Below land- surface datum	Above mean sea level
Jan. 11	4.03	0.99
24	3.99	1.03
Feb. 7	4.04	.98
24	2.96	2.06
Mar. 8	3.60	1.42
23	3.42	1.60
Apr. 6	4.05	.97
19	3.84	1.18
May 9	3.95	1.07
21	3.92	1.10
31	4.10	.92
June 15	4.37	.65
29	3.65	1.37
July 16	3.84	1.18
27	3.63	1.39
Aug. 11	3.70	1.32
27	3.45	1.57
Sept. 10	4.08	.94
22	3.90	1.12
Oct. 5	4.04	.98
20	3.99	1.03
Nov. 2	3.96	1.06
16	3.96	1.06
Dec. 3	3.14	1.88

30.32.6.1.6 (*936, p. 123; 944, p. 106; 986, p. 129; 1016, p. 161).
 New Jersey State Water Policy Commission. 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, 1945		
Date	Below land- surface datum	Above mean sea level
Jan. 11	2.37	8.48
24	2.92	7.93
Feb. 7	3.73	7.12
24	2.17	8.68
Mar. 8	2.14	8.71
23	2.28	8.57
Apr. 6	3.26	7.59
19	3.14	7.71
May 9	2.88	7.97
21	3.07	7.78
31	3.77	7.08
June 15	4.57	6.28
29	4.57	6.28
July 16	4.82	6.03
27	4.33	6.52
Aug. 11	3.70	7.15
27	3.93	6.92
Sept. 10	4.95	5.90
22	4.66	6.19
Oct. 5	4.68	6.17
20	4.90	5.95
Nov. 2	4.60	6.25
16	4.75	6.10
Dec. 3	3.29	7.56

30.32.1.9.5 (*936, p. 123; 944, p. 107; 986, p. 129; 1016, p. 162).
 New Jersey State Water Policy Commission. Penns Grove observation well
 71. Extremes of observed water level, in feet below land-surface datum:
 Highest, 5.08 May 21, 1945; lowest, 10.87 Dec. 6, 1941.

30.32.1.9.5--Continued.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	6.95	Apr. 6	5.86	June 29	7.22	Sept. 22	6.22
24	6.42	19	5.97	July 16	6.50	Oct. 5	6.15
Feb. 7	6.74	May 9	5.46	27	5.78	20	6.50
24	6.25	21	5.08	Aug. 11	5.40	Nov. 2	6.63
Mar. 8	5.45	31	5.51	27	5.73	16	6.77
23	5.50	June 15	6.07	Sept. 10	6.28	Dec. 3	5.79

30.32.5.1.3 (*936, p. 123; 944, p. 107; 986, p. 129; 1016, p. 162).
New Jersey State Water Policy Commission. 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, 1945

Jan. 11	4.99	Apr. 6	4.38	June 29	5.27	Sept. 22	4.83
24	4.43	19	4.32	July 16	5.27	Oct. 5	4.89
Feb. 7	5.15	May 9	3.90	27	4.52	20	5.26
24	3.44	21	3.38	Aug. 11	4.83	Nov. 2	5.10
Mar. 8	3.12	31	4.61	27	3.93	16	5.20
23	3.58	June 15	5.42	Sept. 10	5.14	Dec. 3	3.60

30.32.4.6.4 (*936, p. 124; 944, p. 107; 986, p. 130; 1016, p. 162)
New Jersey State Water Policy Commission. 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, 1945

Jan. 11	1.72	Apr. 6	1.75	June 29	2.02	Sept. 22	1.81
24	1.45	19	1.52	July 16	2.32	Oct. 5	1.83
Feb. 7	1.82	May 9	1.48	27	1.74	20	2.07
24	1.20	21	1.54	Aug. 11	1.47	Nov. 2	1.85
Mar. 8	1.27	31	2.01	27	1.45	16	1.68
23	1.28	June 15	2.53	Sept. 10	2.32	Dec. 3	1.30

30.32.5.4.6 (*936, p. 124; 944, p. 107; 986, p. 130; 1016, p. 162)
New Jersey State Water Policy Commission. 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, 1945

Jan. 11	5.43	Apr. 6	5.39	June 29	5.94	Sept. 22	5.90
24	5.29	19	5.48	July 16	6.10	Oct. 5	5.95
Feb. 7	5.57	May 9	5.53	27	6.03	20	6.03
24	5.52	21	5.48	Aug. 11	5.68	Nov. 2	6.10
Mar. 8	4.99	31	5.54	27	5.67	16	6.19
23	5.01	June 15	5.75	Sept. 10	5.77	Dec. 3	5.85

30.32.4.2.7 (*936, p. 124; 944, p. 107; 986, p. 130; 1016, p. 162)
New Jersey State Water Policy Commission. Penns Grove observation well
81. Extremes of observed water level, in feet below land-surface datum:
Highest, 4.20 Mar. 25, 1944; lowest, 12.36 Dec. 6, 1941.

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

Jan. 11	6.91	Apr. 6	7.03	June 29	8.55	Sept. 22	7.23
24	6.05	19	7.31	July 16	9.10	Oct. 5	7.00
Feb. 7	7.64	May 9	6.47	27	6.56	20	7.75
24	4.80	21	6.02	Aug. 11	4.91	Nov. 2	7.68
Mar. 8	4.58	31	7.27	27	6.24	16	8.06
23	5.56	June 15	8.58	Sept. 10	7.90		

30.32.5.7.7 (*936, p. 125; 944, p. 108; 986, p. 130; 1016, p. 163).
New Jersey State Water Policy Commission. Penns Grove observation well
84. Extremes of observed water level, in feet below land-surface datum:
Highest, 0.03 Mar. 14, 1943; lowest, 6.70 Oct. 24, 1943.

30.32.5.7.7--Continued.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	1.34	Apr. 6	1.38	June 29	2.20	Sept. 22	1.50
24	.44	19	.99	July 16	3.20	Oct. 5	1.59
Feb. 7	1.89	May 9	.63	27	1.79	20	2.00
24	.15	21	.97	Aug. 11	.88	Nov. 2	1.36
Mar. 8	.17	31	1.95	27	.90	16	1.18
23	.10	June 15	2.82	Sept. 10	2.52	Dec. 3	.30

30.31.9.6.6 (*936, p. 125; 944, p. 108; 986, p. 130; 1016, p. 163).
New Jersey State Water Policy Commission. 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, 1945

Jan. 11	3.94	Apr. 6	4.32	June 29	4.48	Sept. 22	4.06
24	3.60	19	4.10	July 16	5.12	Oct. 5	4.30
Feb. 7	4.60	May 9	3.91	27	3.85	20	4.67
24	2.87	21	3.80	Aug. 11	3.27	Nov. 2	4.47
Mar. 8	3.06	31	4.53	27	3.77	16	4.32
23	3.25	June 15	5.12	Sept. 10	4.83	Dec. 3	3.36

30.32.7.6.9 (*936, p. 125; 944, p. 108; 986, p. 131; 1016, p. 163).
New Jersey State Water Policy Commission. 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, 1945

Jan. 11	8.40	Apr. 6	5.68	June 29	8.36	Sept. 22	6.44
24	7.57	19	6.46	July 16	8.93	Oct. 5	6.54
Feb. 7	8.28	May 9	6.08	27	8.34	20	7.15
24	6.08	21	5.62	Aug. 11	4.90	Nov. 2	7.10
Mar. 8	3.35	31	6.80	27	5.43	16	7.80
23	3.20	June 15	7.93	Sept. 10	6.86	Dec. 3	6.08

30.22.9.4.3 (*936, p. 126; 944, p. 108; 986, p. 131; 1016, p. 163).
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, 1945

Date	Below land-surface datum	Above mean sea level
Jan. 11	8.17	12.97
24	7.60	13.54
Feb. 7	8.39	12.75
24	7.40	13.74
Mar. 8	5.91	15.23
23	6.10	15.04
Apr. 6	7.23	13.91
17	7.41	13.73
May 9	6.82	14.32
21	6.50	14.64
31	7.41	13.73
June 15	8.20	12.94
29	8.65	12.49
July 16	8.77	12.37
27	7.64	13.50
Aug. 11	6.07	15.07
27	6.35	14.79

30.22.9.5.4 (*936, p. 126; 944, p. 108; 986, p. 131; 1016, p. 164).
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.

30.22.9.5.4--Continued.

Date	Water level, in feet, 1945	
	Below land- surface datum	Above mean sea level
Jan. 11	12.10	7.81
24	11.63	8.28
Feb. 7	11.94	7.97
24	11.30	8.61
Mar. 8	10.14	9.77
23	10.07	9.84
Apr. 6	10.59	9.32
19	10.92	8.99
May 9	10.70	9.21
21	10.43	9.48
31	10.79	9.12
June 15	11.37	8.54
29	11.83	8.08
July 16	12.20	7.71
27	12.00	7.91
Aug. 11	10.23	9.68
27	10.46	9.45
Sept. 10	10.89	9.02
22	11.10	8.81
Oct. 5	11.28	8.63
20	11.52	8.39
Nov. 2	11.56	8.35
16	11.78	8.13
Dec. 3	10.85	9.06

30.32.2.6.4 (*936, p. 127; 944, p. 109; 986, p. 132; 1016, p. 164).
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, 1945		
Jan. 11	1.77	13.28
24	1.17	13.88
Feb. 7	1.93	13.12
24	.44	14.61
Mar. 8	.33	14.72
23	.37	14.68
Apr. 6	1.54	13.51
19	1.42	13.63
May 9	.89	14.16
21	1.06	13.99
31	1.52	13.53
June 15	2.05	13.00
29	1.92	13.13
July 16	2.00	13.05
27	1.25	13.80
Aug. 11	.78	14.27
27	.80	14.25
Sept. 10	1.89	13.16
22	1.32	13.73
Oct. 5	1.47	13.58
20	1.75	13.30
Nov. 2	1.58	13.47
16	1.47	13.58
Dec. 3	.48	14.57

30.32.9.9.8 (*936, p. 127; 944, p. 109; 986, p. 132; 1016, p. 165).
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, 1945	
	Below land-surface datum	Above mean sea level
Jan. 11	1.83	8.01
24	1.58	8.26
Feb. 7	2.04	7.80
24	1.10	8.74
Mar. 8	1.03	8.81
23	1.16	8.68
Apr. 6	1.69	8.15
19	1.65	8.19
May 9	1.60	8.24
21	1.65	8.19
31	1.93	7.91
June 15	2.42	7.42
29	2.35	7.49
July 16	2.34	7.50
27	1.69	8.15
Aug. 11	1.28	8.56
27	1.35	8.49
Sept. 10	2.14	7.70
22	1.73	8.11
Oct. 5	2.01	7.83
20	2.08	7.76
Nov. 2	1.90	7.94
16	1.79	8.05
Dec. 3	1.12	8.72

30.23.7.1.4 (*936, p. 128; 944, p. 109; 986, p. 133; 1016, p. 165).
 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, 1945		
Jan. 11	1.40	23.15
24	1.14	23.41
Feb. 7	1.05	23.50
24	.50	24.05
Mar. 8	.64	23.91
23	.80	23.75
Apr. 6	1.62	22.93
19	1.33	23.22
May 9	.78	23.77
21	1.33	23.22
31	1.72	22.83
June 15	2.26	22.29
29	1.90	22.65
July 16	1.87	22.68
27	.86	23.69
Aug. 11	.89	23.66
27	1.03	23.52
Sept. 10	2.07	22.48
22	1.19	23.36
Oct. 5	1.64	22.91
20	1.82	22.73
Nov. 2	1.64	22.91
16	1.44	23.11
Dec. 3	.80	23.75

30.32.3.6.5 (*936, p. 128; 944, p. 109; 986, p. 133; 1016, p. 166).
 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.

30.32.3.6.5--Continued.

Water level, in feet, 1945		
Date	Below land- surface datum	Above mean sea level
Jan. 11	3.71	5.42
24	3.60	5.53
Feb. 7	4.03	5.10
24	1.82	7.31
Mar. 8	2.72	6.41
23	2.83	6.30
Apr. 6	3.73	5.40
19	3.80	5.33
May 9	3.70	5.43
21	3.67	5.46
31	3.93	5.20
June 15	4.26	4.87
29	4.36	4.77
July 16	4.28	4.85
27	3.90	5.23
Aug. 11	3.33	5.80
27	3.50	5.63
Sept. 10	3.99	5.14
22	3.85	5.28
Oct. 5	4.00	5.13
20	4.11	5.02
Nov. 2	4.00	5.13
16	4.17	4.96
Dec. 3	3.47	5.66

NEW YORK

UPSTATE NEW YORK

By R. H. Brown and G. R. Ayer

PROGRAM OF WORK

In the appropriate sections of previous annual reports on water levels and artesian pressure in observation wells in the United States there have been published, under the heading "Central New York" records from four water-level observation wells. Periodic observation of water levels in these wells, equipped with weekly type automatic water-stage recorders, was maintained in cooperation with the New York State Department of Conservation. In April 1945, however, the Federal Geological Survey, 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, initiated a program for investigating the ground-water resources and geology on a State-wide basis. Accordingly the heading "Central New York" is being replaced in this report with the more general heading "Upstate New York." This new heading is intended to embrace water-level observation records for wells in all parts of the State, exclusive of Long Island. Under "Upstate New York" in this report, therefore, will be found records from the four wells referred to above and records from four additional wells in other parts of the State. As time goes on and as the State-wide investigations develop, it is anticipated that numerous other selected observation wells will be added to the program to give more complete coverage in the Upstate area.

FLUCTUATIONS OF WATER LEVEL

In Water-Supply Paper 886 (p. 468) Harrington briefly discusses the effect of the local topography and geology on ground-water conditions in the areas in which wells Cn 1, C 100, C 101, and D 157 (formerly designated as Sage Brook well 2, East Homer Creek well 1, Shackham Brook well 1, and Cold Spring Brook well 1, respectively) are situated. Water levels in these wells were relatively high at the beginning of 1945, dropping off

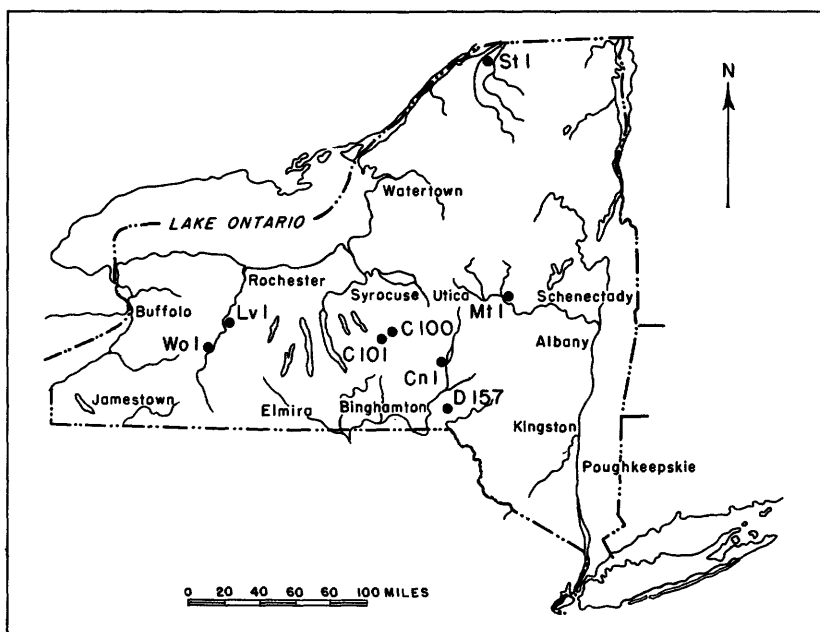


Figure 6.--Map showing location of observation wells in upstate New York.

slightly to near normal values in February and March. Further declines early in April established new lows for the month at these wells, but heavy rains toward the end of the month caused appreciable rises, so that levels through May and most of June averaged considerably above normal. Levels gradually declined to normal early in July until heavy rains at the end of the month again caused rises in most wells, establishing new highs for July. Similar high levels occurred during the latter part of September and through much of October. In November and December levels were about normal, declining slightly at the end of the year to register small net losses for the year.

Water-level records for wells near Brasher Center (St 1), St. Johnsville (Mt 1), Geneseo (Lv 1), and Castile (Wo 1) 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 the wells are located. All are shallow dug wells ending in water-table aquifers. The water-bearing materials consist of more or less sandy till which mantles relatively shallow-lying bedrock. However, the observation wells are widely separated and lie in different geologic and precipitation provinces, whose peculiar features govern in large part the range and trend of water levels.

The Brasher well (St 1) is in the extreme northern section of the State in the central part of the broad St. Lawrence lowland, in the St. Lawrence River Basin, where glacial outwash deposits and postglacial lake-laid deposits mantle the underlying low rocky ridges of limestone or sandstone, creating a fairly smooth, gently rolling topography. These materials are basically sandy in character, but have been given a loamy modification at the surface by the development of the forest cover. To the south the lowland becomes increasingly undulating or rolling, until it merges with the lower foothills of the Adirondack Mountains. Drainage across the lowland is generally north or northeast into the St. Lawrence River.

The area is in a region that has been subject to seismic activity since the retreat of the continental ice cap. Apparently the earth's crust in this region is still undergoing readjustment, resulting from the removal of the tremendous weight of the ice sheet which had depressed the land surface, and is attempting to establish a new equilibrium. On September 5, 1944, at 12:38 a.m., Eastern War Time, one of the latest in this long series of adjustments occurred. A severe shock followed by lesser shocks and tremors during the succeeding days, centering at a point 7-3/4 miles north of the Brasher well (or 1 1/4 miles northeast of the village of Massena Center) caused considerable property damage in an oval-shaped area measuring approximately 25 miles northeast-southwest by 20 miles northwest-southeast and materially affected local ground-water levels. The first hydrograph given in figure 7 indicates the apparent effect of the series of shocks on ground-water levels in the vicinity of the Brasher well, about

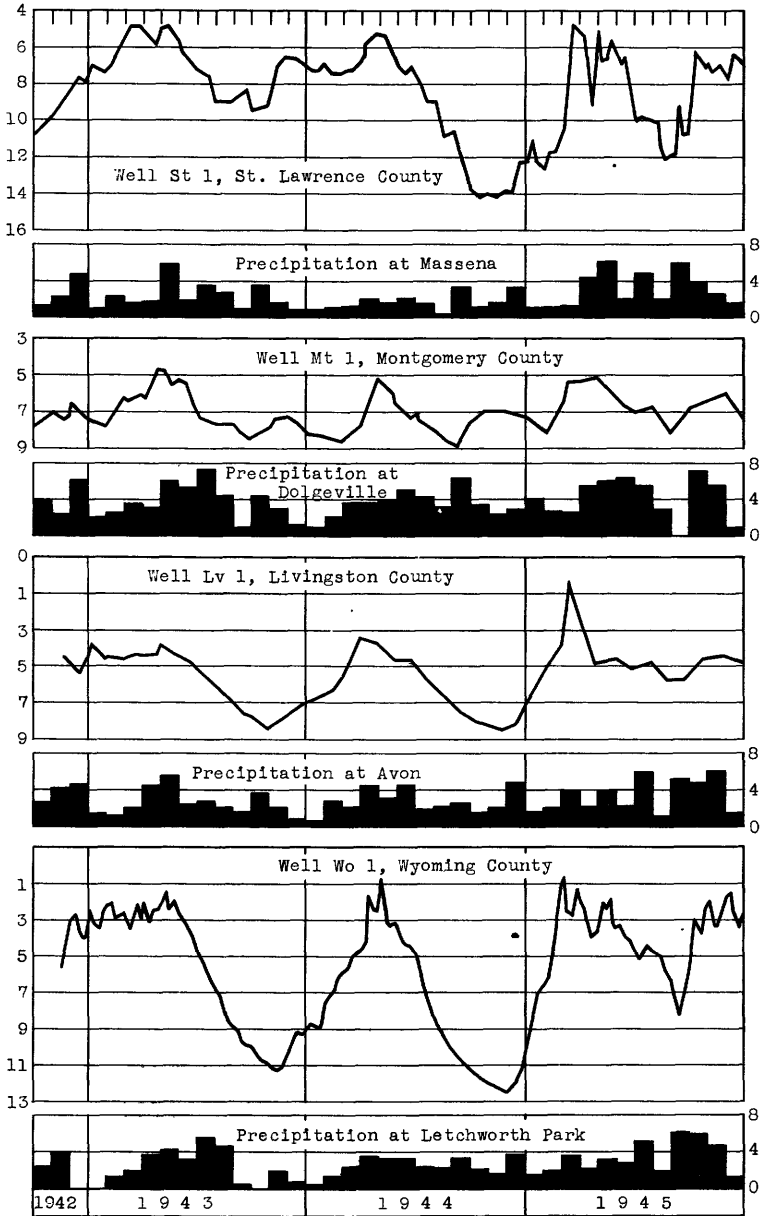


Figure 7.--Graphs showing precipitation and water-level fluctuations in upstate New York.

a mile inside the southern limit of the heavily damaged area. Note that, although precipitation for September was relatively heavy, the hydrograph shows a steady decline in water level through that month and into the middle of October. This is in sharp contrast to the hydrograph for the St. Johnsville well (Mt 1) which, during the same period and under the influence of a similar precipitation pattern, rose steadily. It would appear that in the vicinity of the Brasher well the recovery of water levels to near normal values did not take place until late in December 1944, or a little over 3 months after the occurrence of the seismic shocks.

The peculiar behavior of the water level at the Brasher well undoubtedly resulted from the series of shocks which disturbed, at least temporarily, the structure of the unconsolidated water-bearing materials, as well as that of the underlying rocks. In all probability the granular particles of which the glacial deposits are composed were somewhat rearranged causing a compaction of the glacial mantle and a resultant lowering of permeability. Beneath the glacial material shifting of the blocks of sedimentary rock probably closed some of the existing water-bearing cracks and joints and opened others. Whether the water level at a given location subsequently rose or declined would depend upon the relative magnitude of the several types of readjustments occurring as a result of the seismic disturbances at that location. Many well owners have reported that the seismic disturbances had considerable influence on ground-water levels. Most of the reports indicate water levels dropped shortly after the tremors but at a few wells water levels apparently rose several feet.

The St. Johnsville well (Mt 1) is on the north slope of the Mohawk Valley near the center of the Mohawk River watershed in an area about 400 feet above the river level, where a layer of glacial till mantles the underlying sedimentary rock. Geology of this rock is confused not only by the glacial mantle, but by minor faulting. Megathlin^{1/} has identified it as Trenton limestone of the Ordovician period. The major faults as well as the surface drainage in the area trend from northeast to southwest. Drainage is principally west into Crum Creek and thence south into the Mohawk River. In the vicinity of the well there is a pronounced leveling of the valley slope suggestive of a terrace or former valley floor. North of this "terrace" the land rises steadily again in a series of slopes to a general elevation of about 1,100 feet, in a distance of $2\frac{1}{2}$ miles. About 13 miles further north or slightly northeast the land, still generally rising, merges with the southern fringe of the Adirondack Mountains.

The Geneseo well (Lv 1) is on the east slope of the Genesee Valley about 230 feet above, and less than a mile east of, a mature section of the Genesee River. In this part of the valley the river meanders freely across a flood plain about $1\frac{1}{2}$ miles wide. The thickness of the glacial drift and river deposited alluvium must be considerable, based on evidence of depths to bedrock of as great as 450 feet about 10 miles south (upstream), near Dansville, on the Canaseraga Creek. East of the well the land rises steadily to a ridgeline about 1,100 feet above mean sea level. Streams in the vicinity of the well generally flow a little north of west into the Genesee River which flows northward through Rochester and empties into Lake Ontario. The well penetrates glacial till which, on this upper slope of the valley, is underlain by shales of Devonian age that dip slightly to the south-southwest.

^{1/} Megathlin, G. R., Faulting in the Mohawk Valley, N. Y.: N. Y. State Mus. Bull. No. 315, September 1938.

The Castile well (Wo 1) is on the west slope of the Genesee Valley about 370 feet above, and less than a mile west of, the postglacial channel of the Genesee River. The site is near the northern fringe of the Alleghany Plateau at about the geographical center of the Genesee watershed. The plateau here is well dissected, almost all portions having moderate slopes except where altered by glaciation. Relief approximates 1,000 feet, and $2\frac{1}{2}$ miles northwest of the well the land rises to an average elevation of about 1,500 feet above mean sea level. The Genesee River was forced out of its preglacial channel about 5 miles south (upstream) of the well and returns again to its original channel approximately 10 miles north (downstream). Drainage is to the southeast into the Genesee River and thence northward through Rochester into Lake Ontario. Glacial till delivers potable ground water to the dug wells in the vicinity and mantles the underlying sedimentary rock of Devonian age. These rocks have been classified by Luther^{2/} as Gardeau flags and shales, which dip about 30 feet per mile to the south-southwest.

The hydrographs plotted in figure 7 for the Brasher, St. Johnsville, Genesee, and Castile wells (St 1, Mt 1, Lv 1, and Wo 1) permit ready comparison of the type and magnitude of water-table fluctuations in three separate sections of the State. Accompanying each hydrograph is a plot of monthly precipitation at the U. S. Weather Bureau station nearest to the well. Hydrographs for the Genesee and Castile wells (Lv 1 and Wo 1) are quite similar since the wells are in the same river valley. The similarity would be even more pronounced if the Genesee well (Lv 1) were measured weekly, as is done at the Castile well (Wo 1), instead of monthly. Note that for all 3 years of record the annual range in water level at the Castile well (Wo 1) has been 10 feet or more in contrast to approximately 4 feet at the St. Johnsville well (Mt 1).

The year 1945 appears to have been an excellent period for recharging depleted underground reservoirs. Although water levels in the Brasher, Genesee, and Castile wells (St 1, Lv 1, and Wo 1) were at record lows in January, by the end of the year they ranged from about 2 feet to over 8

^{2/} Clarke, John M. and Luther, D. Dana, Geologic map and descriptions of the Portage and Nunda Quadrangles: N. Y. State Mus. Bull. No. 118, January 1908.

feet above levels at the end of 1944. Over the relatively short period of record examination of figure 7 indicates that new monthly highs were established during 1945 as follows: March and October at each of the four wells; July, August, September, and November at wells Lv 1, Mt 1, and Wo 1; February at wells Lv 1 and Wo 1; December at wells St 1 and Wo 1; January at well Mt 1.

Thus, April, May, and June were the only months in which new highs did not occur in any of the four wells. The high registered at well Lv 1 in March is the highest water level noted for the entire period of record.

With the exception of well St 1, where the lingering effects of the September 1944 earthquake apparently contributed to record monthly lows in January, February, March, June, and July, few other lows occurred. At well Mt 1 none were noted; at well Lv 1 record monthly lows were registered only in January and April, and at well Wo 1, in January and May.

WELL-NUMBERING SYSTEM

Following a practice established on Long Island by the New York State Water Power and Control Commission and the Geological Survey, wells in Upstate New York are being numbered consecutively, beginning with "1", in each county. To distinguish numbers in any one county from those in another a letter or combination of two letters, taken from the name of the county, is prefixed to all the well numbers in that county. Thus, the letters "Cn" represent Chenango County and are prefixed to all well numbers in Chenango County. Similarly the letter "C", representing Cortland County, is prefixed to all well numbers in that county.

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 date of record 1945
		Water level	Date	Water level	Date	
Cn 1	Oct. 27, 1934	6.13	Oct. 10, 1936	0.00	(a)	b 0.67
C100	Oct. 22, 1938	6.15	Oct. 26, 1939	.00	(a)	c 1.40
C101	Aug. 26, 1933	(d)	Aug. 17-Oct. 12, 1936; Sept. 7-Nov. 1, 1939	.00	(a)	b .67
D157	Oct. 24, 1934	9.24	Oct. 27, 1935	.00	(a)	b 2.06
Lv 1	Nov. 17, 1942	8.51	Nov. 25, 1944	.3	Mar. 15, 1945	4.75
Mt 1	Oct. 3, 1942	8.77	Sept. 11, 1944	4.76	Apr. 24, 1943	7.30
St 1	Oct. 4, 1942	14.15	Oct. 14, 1944	4.57	Mar. 17, 1945	6.76
Wo 1	Nov. 18, 1942	12.40	Dec. 3, 1944	.58	Mar. 3, 1945	2.65

a This level observed many times during period of record.

b Water level at noon on Dec. 31, 1945, from recorder chart.

c Estimated.

d Dry.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Chenango County

Cnl (Formerly Sage Brook well 2) (*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). Latitude 42° 31' 55", longitude 75° 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, 1945								
Date	Water level		Date	Water level		Date	Water level	
Jan. 1	0.13		Apr. 9	0.81		July 9	1.20	
8	.76		16	.84		16	.86	
15	.77		22	.85		23	.00	
22	.75		30	.77		30	.72	
29	.77		May 7	.79		Aug. 6	.70	
Feb. 5	.78		14	.48		13	.99	
12	.73		21	.75		20	1.27	
19	.74		28	.78		27	1.00	
26	.55		June 4	.70		Sept. 3	.85	
Mar. 5	.40		11	.66		10	.81	
12	.70		18	.42		17	.78	
19	.70		25	.73		24	.65	
26	.77		July 2	.86		Oct. 1	.42	
Apr. 2	.73							

Cortland County

C100 (Formerly East Homer Creek well 1) (*845, p. 303; 886, p. 470; *906, p. 109; *936, p. 131; 944, p. 111; *986, p. 136; 1016, p. 168). Latitude 42° 43' 05", longitude 76° 06' 50". About 70 feet to the right (west) of creek and about 2.5 miles above (north of) gaging station in East Homer.

Water level, in feet below land-surface datum, 1945							
Jan. 7	1.15	Apr. 22	2.29	July 15	3.39	Oct. 13	0.95
14	1.46	29	.70	23	1.91	20	1.34
21	1.74	May 6	.55	Aug. 5	3.10	27	1.12
28	1.83	13	.29	12	3.18	Nov. 3	.91
Feb. 11	1.97	20	.31	19	3.33	10	1.03
Mar. 4	.98	27	1.62	26	3.61	18	1.15
11	1.10	June 3	1.49	Sept. 2	3.85	24	1.02
18	.46	10	2.69	8	3.98	Dec. 1	1.02
25	.69	17	1.33	15	1.71	8	.80
Apr. 1	1.80	24	2.61	22	1.77	16	a 1.05
8	1.59	July 1	2.40	29	2.04	24	a 1.35
15	2.55	8	3.02	Oct. 6	.94	31	a 1.40

a Estimate based on recorder chart and records for nearby wells.

C101 (Formerly Shackham Brook well 1) (*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). Latitude 42° 46' 00", longitude 76° 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, 1945															
Jan.	7	a	0.18	Mar.	11		.13	May	13		.15	July	15		1.54
	14		.24		18		.05		20		.13		22		1.80
	21	a	.31		25		.06		27		.14		29		1.93
	28	a	.40		Apr.	1	.12		June	3	.29		Aug.	5	2.07
Feb.	4	a	.40			8	.19			10	.36		12		2.22
	11	a	.30			15	.31			17	.48		19		2.39
	18	a	.30			22	.72			24	.57		26		2.57
	25		.24			29	.36		July	1	.71		Sept.	2	2.74
Mar.	4	a	.14		May	6	.33			8	1.22			8	2.94

a Estimate based on recorder chart and records for nearby wells.

C101--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 15	3.08	Oct. 13	0.23	Nov. 10	0.26	Dec. 8	0.23
22	1.57	20	.27	17	.31	16 a	.40
29	1.40	27	.27	25	.13	24	.55
Oct. 6	.21	Nov. 3	.19	Dec. 1	.16	30	.67

a Estimate based on recorder chart and records for nearby wells.

Delaware County

D157 (Formerly Cold Spring Brook well 1) (*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). Latitude 42° 09' 35", longitude 75° 23' 35". About 150 feet to the 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	1.84	Apr. 15	4.11	July 15	5.03	Oct. 14	2.30
14	3.30	22	4.53	22	5.32	21	3.76
21	3.92	29	1.61	29	3.70	28	1.70
28	3.97	May 6	2.71	Aug. 5	4.11	Nov. 4	1.21
Feb. 7	4.20	13	1.10	12	4.44	11	3.05
18	1.90	20	1.82	19	5.22	18	1.50
25 a	1.74	27	4.23	26	5.71	25	2.20
Mar. 4	.93	June 3	4.23	Sept. 2	5.43	Dec. 1	3.10
11	1.50	10	2.68	9	6.08	8	2.26
18	1.00	17	1.26	16	2.18	16	4.28
25	1.68	24	4.15	23	2.60	23	4.80
Apr. 1	3.15	July 1	4.45	30	3.23	30	2.39
8	1.73	8	4.58	Oct. 7	2.05	31	2.06

a Estimate based on recorder chart and records for nearby wells.

Livingston County

Lv 1. Latitude 42° 48' 00", longitude 77° 48' 46". Abandoned supply well inside woodshed of William Redmond about 100 feet north of North Street and 0.15 mile east of Main Street, village of Geneseo. Dug well, stone lined, diameter 36 inches, depth 29.9 feet below measuring point. Measuring point, top of floor board at blue keel arrow, 1.5 feet above land-surface datum. Approximate elevation of land surface 790 feet above mean sea level.

Water level, in feet below land-surface datum, 1942-45							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Nov. 17, 1942	4.51	Aug. 25, 1943	6.87	Oct. 10, 1944	8.00		
Dec. 14	5.42	Sept. 20	7.77	Nov. 1	8.35		
26	4.68	29	7.79	15	8.45		
Jan. 3, 1943	3.81	Oct. 25	8.42	25	8.51		
25	4.53	Nov. 29	7.65	Dec. 16	8.12		
Feb. 6	4.40	Dec. 24	7.07	26	7.52		
26	4.55	Jan. 26, 1944	6.69	Jan. 25, 1945	5.78		
28	4.55	Feb. 18	6.20	Feb. 26	3.95		
Mar. 25	4.34	25	5.84	Mar. 15	.3		
31	4.44	Mar. 27	3.37	Apr. 25	4.80		
Apr. 26	4.25	Apr. 27	3.72	May 28	4.51		
May 2	3.85	May 29	4.76	June 25	5.09		
25	4.29	June 26	4.69	July 25	4.77		
June 20	4.84	July 25	5.83	Aug. 25	5.75		
25	5.01	Aug. 1	6.13	Sept. 25	5.75		
July 18	5.68	25	6.92	Oct. 25	4.58		
26	5.96	Sept. 15	7.6	Nov. 26	4.45		
Aug. 15	6.57	25	7.75	Dec. 24	4.75		

Montgomery County

Mt 1. Latitude 43° 01' 43", longitude 74° 42' 38". Abandoned well on farm of Floyd B. Groff about 50 feet southwest of southwest corner of Groff residence, about 0.35 mile east of a gravel road running north from U. S. Route 5 at a point 1.8 miles west of the center of St. Johnsville. Dug well, stone lined, diameter 24 inches, depth 12.3 feet below measuring point. Measuring point, painted arrow at northeast corner of square opening in limestone slab covering well, at land-surface datum. Approximate elevation of land surface 720 feet above mean sea level.

Water level, in feet below land-surface datum, 1942-45

Date	Water level	Date	Water level	Date	Water level
Oct. 3, 1942	7.73	Oct. 30, 1943	7.84	Oct. 25, 1944	6.99
31	7.10	Nov. 5	7.50	28	7.03
Nov. 18	7.54	27	7.24	Nov. 25	6.97
24	7.33	Dec. 18	7.65	Dec. 4	7.00
28	6.66	25	7.90	23	7.12
Dec. 26	7.43	Jan. 5, 1944	8.23	Jan. 2, 1945	7.29
Jan. 30, 1943	7.85	29	8.27	27	7.96
Feb. 27	6.17	Feb. 8	8.42	Feb. 7	8.18
Mar. 1	6.59	26	8.60	Mar. 3	6.46
27	6.08	29	8.53	9	5.34
Apr. 4	6.28	Apr. 1	7.70	31	5.30
24	4.76	29	5.12	Apr. 28	5.13
May 5	4.88	May 24	6.04	May 26	6.05
19	5.53	27	6.54	June 14	6.69
29	5.30	June 20	7.29	30	7.01
June 11	5.49	July 1	7.20	July 28	6.76
26	6.88	3	7.42	Aug. 10	7.16
July 5	7.40	29	7.96	Sept. 1	8.14
31	7.68	Aug. 9	8.16	29	6.92
Aug. 28	7.64	26	8.60	Nov. 3	6.46
Sept. 15	8.22	Sept. 11	8.77	Dec. 1	6.01
25	8.50	30	7.63	29	7.30

St. Lawrence County

St 1. Latitude 44° 51' 52", longitude 74° 46' 53". Abandoned stock well on farm of Benjamin Compeau about 155 feet west of Compeau residence and 95 feet south of center line of dirt road, near the west bank of the St. Regis River at Brasher Center. Dug well, stone lined, diameter 34 inches, depth 21.0 feet below measuring point. Measuring point, yellow keel arrow on top edge of stone in concrete well curb on southwest side of well, at land surface and 257.13 feet above U. S. Coast and Geodetic Survey mean sea level datum.

Water level, in feet below land-surface datum, 1942-45

Oct. 4, 1942	10.59	June 26, 1943	7.14	Apr. 8, 1944	6.30
31	9.90	July 21	7.62	10	5.83
Nov. 3	9.81	31	9.00	22	5.40
28	8.42	Aug. 28	9.00	29	5.15
Dec. 12	7.60	Sept. 25	8.25	May 13	5.25
26	7.90	Oct. 3	9.45	27	6.53
31	7.90	30	9.15	June 10	7.20
Jan. 4, 1943	7.06	Nov. 10	7.15	15	7.36
30	7.40	27	6.50	24	7.00
Feb. 13	7.04	Dec. 18	6.66	July 8	7.97
27	5.91	25	6.80	22	8.92
Mar. 14	4.87	Jan. 15, 1944	7.20	Aug. 5	8.88
27	4.85	26	7.23	7	9.02
Apr. 3	5.10	29	6.85	19	10.84
24	5.91	Feb. 12	7.45	30	10.66
May 1	5.08	26	7.45	Sept. 2	10.51
13	4.84	Mar. 3	7.30	16	12.58
29	5.60	11	7.26	30	13.65
June 5	6.22	25	7.00	Oct. 14	14.15

St 1--Continued.

Water level, in feet below land-surface datum, 1942-45					
Date	Water level	Date	Water level	Date	Water level
Oct. 28, 1944	14.00	May 5, 1945	6.74	Sept. 16, 1945	9.15
Nov. 11	14.03	18	6.55	22	10.78
25	13.95	26	5.50	Oct. 1	10.55
Dec. 7	13.87	June 8	6.70	6	9.55
9	13.86	11	6.94	14	6.20
23	12.25	16	6.50	20	6.50
Jan. 6, 1945	12.15	23	7.66	27	7.05
11	11.05	July 7	10.00	Nov. 1	6.85
20	12.25	14	9.87	3	6.90
Feb. 3	12.75	22	9.90	10	7.20
10	11.54	28	9.96	19	7.08
11	11.74	Aug. 4	10.00	24	6.90
17	11.66	12	10.02	Dec. 2	7.55
Mar. 3	10.28	14	11.13	10	7.68
17	4.57	18	11.50	15	6.55
Apr. 7	5.30	25	12.08	18	6.37
14	5.50	27	12.06	24	6.58
23	9.14	Sept. 1	11.90	30	6.76
May 4	5.07	10	11.75		

Wyoming County

Wo 1. Latitude 42° 37' 39", longitude 78° 00' 03". N. Y. State Park Commission. Abandoned supply well on former farm property, 0.8 mile east of De Golyer Road and 0.15 mile south of Buffalo Street extended, approximately 2.5 miles east of the village of Castile. Dug well, stone lined, diameter 24 inches at top and 36 inches at bottom, depth 13.6 feet below measuring point. Measuring point, orange paint mark on top of stone in second course on north side of well, 0.5 foot below land-surface datum. Approximate elevation of land surface 1,030 feet above mean sea level.

Water level, in feet below land-surface datum, 1942-45					
Nov. 18, 1942	5.59	June 13, 1943	3.19	Jan. 2, 1944	8.92
Dec. 1	2.93	20	3.73	9	8.78
6	2.72	27	4.39	16	8.82
13	3.07	July 4	5.04	23	8.97
20	3.90	11	5.57	30	8.26
27	4.03	15	5.69	Feb. 6	7.48
Jan. 3, 1943	2.44	18	5.96	13	7.13
10	3.15	25	6.52	19	6.90
17	3.49	Aug. 1	6.96	26	5.98
25	2.56	8	7.30	Mar. 4	5.81
Feb. 1	2.14	15	7.90	11	5.67
8	2.08	22	8.55	18	4.94
15	2.81	29	8.85	26	4.86
22	2.75	Sept. 5	8.97	Apr. 2	4.72
28	2.58	12	9.47	9	4.24
Mar. 1	2.72	19	9.72	16	1.69
8	3.44	26	10.01	23	2.47
14	2.91	Oct. 3	10.27	30	2.70
21	2.02	10	10.52	May 7	.69
28	3.00	17	10.75	14	2.73
31	1.94	24	10.93	21	3.37
Apr. 4	2.51	31	11.09	28	3.13
11	3.08	Nov. 7	11.20	June 4	3.68
18	2.34	14	11.21	11	4.19
25	2.39	21	11.06	18	4.34
May 2	1.64	28	10.35	25	4.34
9	1.25	Dec. 5	9.64	July 2	4.87
16	2.44	12	9.18	9	5.73
23	1.81	19	9.17	16	6.51
30	2.50	21	9.22	23	7.26
June 6	2.86	26	9.28	30	7.88

Wo 1--Continued.

Water level, in feet below land-surface datum, 1942-45					
Date	Water level	Date	Water level	Date	Water level
July 31, 1944	8.05	Jan. 21, 1945	7.20	July 15, 1945	4.69
Aug. 6	8.48	27	6.65	22	4.23
13	8.97	Feb. 3	6.35	29	4.50
20	9.40	10	6.00	Aug. 5	4.78
27	9.77	17	4.28	12	4.93
Sept. 3	10.16	24	1.61	19	5.24
10	10.4	Mar. 3	.58	26	5.90
14	10.6	10	2.46	Sept. 2	6.53
17	10.67	18	2.85	9	7.46
24	10.95	25	1.21	16	8.19
Oct. 1	11.11	Apr. 1	1.92	23	6.99
9	11.41	8	2.40	30	5.47
15	11.56	15	3.43	Oct. 7	2.95
22	11.70	22	3.90	15	3.49
29	11.90	29	3.67	21	3.81
Nov. 5	11.99	May 6	1.92	28	2.27
12	12.13	13	2.32	Nov. 4	1.92
19	12.22	20	1.86	12	3.29
26	12.32	27	3.46	18	3.23
Dec. 3	12.40	June 3	3.30	25	2.64
10	12.10	10	3.50	Dec. 1	1.80
16	11.84	17	3.99	9	1.41
23	11.49	24	4.22	16	2.62
30	11.08	July 1	4.64	23	3.40
Jan. 6, 1945	9.41	8	5.10	29	2.65
15	8.03				

LONG ISLAND

By M. L. Brashears, Jr. and N. J. Lusczynski

PROGRAM OF WORK

The investigation of ground-water conditions on Long Island was continued during 1945 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. A part of the ground-water studies consisted of periodic measurements of water levels in a large number of observation wells scattered throughout the four counties on Long Island, in the area lying west of Riverhead. During the year, water-level measurements were continued in about 200 wells, about 18 of which were equipped with automatic water-stage recorders. Water-level records for most of the observation wells established in 1945 will be published with the 1946 records. Most of these new 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 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^{1/2/} and by Jacob,^{3/} and the effect of ground-water withdrawal on water levels in deep wells has been reported by Leggette.^{4/} The position of the water table in 1943 for most of Long Island has been defined by Jacob.^{5/}

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:

Source formations of deeper observation wells on Long Island, N.Y.		
Jameco gravel (J)	Magothy sands (M)	Lloyd sand (L)
K19	N9	K1057
K533	N157	N7
Q350	N844	Q273
Q1237	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. At places, the bottom of the depression in the water table lies as much as 30 feet below mean sea level, with the water level in pumping wells being at even greater depth. In the other parts of the island the perennial recharge exceeds ground-water withdrawals with the

1/ Leggette, R. M., Section entitled "ground water recharge on Long Island" in U. S. Geol. Survey Water-Supply Paper 867, pp. 529-552, 1940.

2/ Leggette, R. M., Long Island section in U. S. Geol. Survey Water-Supply Paper 886, pp. 473-482, 1941.

3/ Jacob, C. E., "Correlation of ground-water levels and precipitation on Long Island": New York State Water Power and Control Commission Bull. GW-14, 1945.

4/ Leggette, R. M., "The mutual interference of artesian wells on Long Island, New York": Am. Geophys. Union Trans., pp. 490-494, 1937.

5/ Jacob, C. E., "The water table in the western and central parts of Long Island, New York": New York State Water Power and Control Commission Bull. GW-12, 1945.

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 the ground-water level are chiefly the result of differences in amount and distribution of precipitation.

Tables presented below include a summary of data pertaining to ground-water levels for Long Island, the net change in water levels during 1945, and monthly, weekly, or daily water-level records. All readings are referred only to mean sea level (Sandy Hook datum); the land-surface datum which was also used for the 1943 and 1944 records having been discontinued in 1945.

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 1945 (feet)
		Water level (feet)	Date	Water level (feet)	Date	
K19	Sept. 10, 1940	a-26.80	Sept. 26, 1941	a-24.00	May 9, 1944	a-24.63
K30	June 14, 1935	a-29.75	Nov. 8, 1941	a-24.34	June 14, 1935	a-27.61
K65	Nov. 8, 1937	-28.54	Aug. 25, 1939	-24.01	Apr. 9, 1938	-25.27
K67	Nov. 8, 1937	-20.75	Oct. 11, 1941	-18.49	Mar. 26, 1938	-19.64
K92	Dec. 11, 1937	-29.69	Dec. 11, 1937	-21.26	Mar. 3, 1944	-21.91
K97	Apr. 5, 1944	-26.58	Oct. 27, 1944	-24.77	Apr. 5, 1944	-26.09
K196	Sept. 12, 1942	-4.76	Mar. 5, 1944	-2.88	Sept. 28, 1944	-3.01
K523	Mar. 6, 1944	-1.91	Feb. 6, 1945	-.65	Aug. 7, 1945	-1.05
K533	Sept. 8, 1932	a-23.89	Sept. 16, 1942	a-12.73	Dec. 20, 1932	-17.47
K539	Oct. 28, 1939	-8.28	Feb. 21, 1942	-2.30	Aug. 8, 1945	-2.73
K1057	Mar. 29, 1939	-.79	Sept. 1, 1944	+10.90	Jan. 1, 1945	+8.98
K1198	Nov. 2, 1940	-8.45	May 14, 1942	-4.47	Aug. 8, 1945	-4.74
K1199	Nov. 16, 1940	-17.17	Jan. 1, 1944	-15.14	June 4, 1945	-15.55
K1235	Jan. 25, 1941	-10.65	June 27, 1942	-8.19	June 5, 1945	-8.28
K1236	Jan. 25, 1941	-19.42	Oct. 4, 1941	-17.41	May 3, 1941	-17.72
K1237	Jan. 18, 1941	-34.68	July 31, 1944	-31.56	Apr. 12, 1941	-34.54
			Nov. 6, 1945			
K1263	Apr. 21, 1933	-11.97	July 21, 1936	-7.58	Nov. 2, 1933	-9.85
K1264	Apr. 21, 1933	-15.17	July 25, 1942	-9.42	June 28, 1933	-14.78
K1265	Apr. 21, 1933	-11.55	Aug. 22, 1942	-6.34	Apr. 21, 1933	-9.65
K1266	Apr. 21, 1933	-7.49	June 27, 1942	-2.02	Apr. 21, 1933	-5.20
K1296	Sept. 6, 1941	-8.27	Mar. 7, 1942	-.10	Dec. 5, 1944	-.66
K1347	Oct. 15, 1942	-24.16	Sept. 10, 1945	-19.92	Apr. 24, 1943	-21.80
N7	July 24, 1936	a +5.59	Sept. 11, 1944	a +12.75	Mar. 9, 1941	a +9.89
N9	July 3, 1936	+20.99	Sept. 11, 1936	+23.57	Sept. 23, 1938	+21.67
N53	Jan. 21, 1934	+12.05	Feb. 17, 1940	+16.49	Apr. 15, 1939	+14.05
N157	Sept. 22, 1932	+75.71	May 5, 1933	a+88.84	Oct. 31, 1939	+85.95
N844	Oct. 3, 1939	a+78.87	Apr. 16, 1942	a+85.48	Aug. 5, 1939	b+81.16
N1102	Apr. 21, 1939	+53.81	July 31, 1942	+58.64	July 28, 1939	+56.65
N1103	Apr. 21, 1939	+54.06	Nov. 1, 1943	+60.46	June 30, 1939	+58.97
N1104	Apr. 21, 1939	+55.27	May 1, 1942	+61.15	June 2, 1939	+58.71

* 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 1945 (feet)
		Water level (feet)	Date	Water level (feet)	Date	
N1105	Apr. 21, 1939	+52.88	Mar. 30, 1942	+58.85	June 2, 1939	+54.81
N1107	Apr. 21, 1939	+41.64	Feb. 27, 1942	+48.21	Apr. 28, 1939	+43.83
N1108	Apr. 21, 1939	+36.94	Jan. 30, 1942	+43.62	Apr. 28, 1939	+38.82
N1109	Apr. 21, 1939	+25.28	Jan. 30, 1942	+50.04	Apr. 21, 1939	+26.57
N1110	Apr. 21, 1939	+18.68	Dec. 1, 1941	+21.05	Apr. 21, 1939	+20.14
N1111	Apr. 21, 1939	+11.95	Nov. 3, 1939	+14.67	Dec. 1, 1944	+12.93
N1112	Jan. 6, 1939	+6.84	Dec. 13, 1941	+10.17	Apr. 8, 1939	+9.48
N1126	Mar. 12, 1938	+55.27	Jan. 31, 1942	+62.21	Apr. 29, 1939	+57.73
N1132	Apr. 2, 1938	+6.06	Feb. 24, 1940	+9.77	Sept. 23, 1938	+8.65
N1140	Jan. 7, 1939	+53.32	Feb. 7, 1942	+66.09	Apr. 29, 1939	+30.55
N1147	Jan. 6, 1939	+16.62	Dec. 13, 1941	+19.72	Apr. 8, 1939	+17.37
N1160	Jan. 7, 1939	+63.37	Jan. 31, 1942	+70.90	Apr. 15, 1939	+65.88
N1167	Mar. 12, 1938	+9.63	Dec. 13, 1941	+12.92	Apr. 15, 1938	+11.08
N1185	Apr. 2, 1938	+10.36	Feb. 7, 1945	+15.59	Apr. 8, 1939	+13.41
N1198	Jan. 6, 1939	+63.46	Feb. 7, 1942	+70.49	May 6, 1939	+65.41
N1204	Jan. 6, 1939	+5.58	Feb. 17, 1940	+12.26	Apr. 8, 1939	+11.53
N1212	Jan. 1, 1943	+83.72	Jan. 20, 1943	+66.85	Nov. 22, 1945	+86.86
					Dec. 31, 1945	
N1215	May 27, 1943	+71.57	Oct. 15, 1943	+77.47	Feb. 17, 1944	+73.37
N1216	Jan. 7, 1939	+62.31	Feb. 14, 1942	+69.16	May 20, 1939	+65.00
N1222	Jan. 6, 1939	+1.27	Jan. 31, 1942	+9.67	Apr. 8, 1939	+9.14
N1232	May 27, 1943	+75.30	Dec. 16, 1943	+77.55	Sept. 28, 1944	+76.25
N1233	May 27, 1943	+68.07	Dec. 16, 1943	+71.14	June 1, 1944	+69.10
N1234	Jan. 7, 1939	+59.01	Feb. 14, 1942	+66.64	May 6, 1939	+61.33
N1240	Jan. 6, 1939	-1.08	Jan. 24, 1942	+11.29	Apr. 3, 1939	+10.55
N1244	May 31, 1940	+71.31	Oct. 30, 1942	+76.50	May 31, 1940	+74.03
N1245	Feb. 2, 1940	+75.96	Oct. 30, 1942	+82.38	Feb. 2, 1940	+78.77
N1246	May 31, 1940	+77.14	Aug. 31, 1942	+82.12	May 31, 1940	+79.51
N1247	Apr. 21, 1939	+70.52	July 31, 1942	+76.98	July 28, 1939	+72.46
N1249	Apr. 21, 1939	+50.34	Jan. 30, 1942	+68.18	Apr. 21, 1939	+52.11
N1250	Apr. 21, 1939	+43.20	Jan. 30, 1942	+49.64	Apr. 21, 1939	+44.76
N1251	Apr. 21, 1939	+35.57	Jan. 30, 1942	+40.54	Apr. 29, 1944	+37.11
N1252	Apr. 21, 1939	+22.48	Jan. 30, 1942	+26.23	Apr. 29, 1944	+24.57
N1253	Jan. 6, 1939	+11.31	Jan. 31, 1942	+16.89	Apr. 8, 1939	+15.54
N1255	May 12, 1913	+58.57	Nov. 11, 1913	+65.89	Apr. 15, 1939	+60.90
N1256	May 12, 1913	+70.30	Feb. 27, 1933	+80.97	May 20, 1939	+77.56
N1257	Aug. 17, 1932	+5.83	Dec. 13, 1941	+10.17	Apr. 8, 1939	+7.77
N1258	Oct. 8, 1931	+33.68	Dec. 28, 1931	+39.58	Apr. 8, 1939	+36.22
N1259	Feb. 5, 1909	+47.83	Jan. 24, 1933	+56.43	Apr. 29, 1939	+51.74
N1260	June 6, 1903	+16.52	Dec. 20, 1916	+23.68	Apr. 8, 1939	+20.90
N1262	Oct. 5, 1931	+32.66	Oct. 5, 1942	+36.20	Apr. 8, 1939	+34.76
N1263	Nov. 3, 1911	+46.22	Oct. 31, 1932	+54.98	Apr. 22, 1939	+49.73
N1264	Mar. 7, 1932	+2.70	Feb. 17, 1940	+9.41	Apr. 8, 1939	+8.97
N1265	Mar. 9, 1939	+2.43	Dec. 1, 1941	+4.34	Dec. 31, 1942	+3.36
N1269	Mar. 9, 1939	+3.41	Mar. 1, 1945	+9.57	Mar. 14, 1939	+8.67
N1271	Mar. 9, 1939	+1.19	Sept. 5, 1944	+3.66	Dec. 31, 1942	+3.55
N1273	Nov. 1, 1939	+4.34	Jan. 2, 1940	+7.38	Mar. 31, 1943	+7.30
N1275	Nov. 1, 1939	+1.89	Oct. 31, 1941	+4.07	Dec. 31, 1942	+2.46
N1278	Nov. 3, 1939	+4.87	Jan. 30, 1942	+7.33	Dec. 7, 1945	+7.33
N1280	Jan. 2, 1940	+2.22	Jan. 30, 1942	+10.12	Dec. 7, 1945	+10.12
N1282	Nov. 1, 1939	+3.34	Apr. 1, 1940	+2.58	Jan. 2, 1942	+2.13
N1285	Nov. 1, 1939	+2.12	Jan. 31, 1940	+4.16	Dec. 7, 1945	+4.16
N1288	Nov. 1, 1939	+2.21	Jan. 2, 1940	+4.35	Dec. 6, 1944	+2.93
N1461	Apr. 27, 1943	+74.34	Oct. 10, 1943	+77.10	Mar. 21, 1945	+76.17
					Mar. 22, 1945	
N1462	May 6, 1943	+61.41	Dec. 24, 1943	+63.80	Mar. 1, 1945	+62.33
N1463	May 6, 1943	+36.82	Oct. 15, 1943	+40.75	May 7, 1944	+38.62
N1464	May 13, 1943	+13.13	Nov. 21, 1944	+17.59	Apr. 29, 1944	+16.51
N1613	July 3, 1936	+21.73	Dec. 6, 1941	+24.58	Apr. 15, 1939	+23.06
N1614	Apr. 2, 1913	+61.90	Feb. 27, 1933	+71.03	May 1, 1914	+67.89
N1615	Mar. 17, 1913	+41.49	Oct. 27, 1932	+47.17	Mar. 28, 1939	+43.34

* 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 1945 (feet)
		Water level (feet)	Date	Water level (feet)	Date	
N1616	Mar. 17, 1913	+74.05	Feb. 27, 1933	+85.42	June 1, 1939	+81.61
N1682	Nov. 30, 1940	+41.29	Feb. 28, 1942	+44.38	June 2, 1944	+43.57
N1683	Dec. 3, 1940	+53.46	Jan. 31, 1942	+57.06	Feb. 26, 1945	+55.84
N1684	Nov. 30, 1940	+55.33	Feb. 7, 1942	+59.27	May 4, 1945	+58.01
N1823	June 10, 1942	a+58.45	July 27, 1942	a+62.93	May 7, 1944	a+59.58
N1829	June 10, 1942	a+66.22	Oct. 15, 1943	a+69.39	Sept. 15, 1944	a+68.12
N1830	June 3, 1942	a+49.05	June 7, 1942	+51.70	July 31, 1945	+50.93
Q273	Mar. 15, 1935	a+11.12	Mar. 21, 1942	a+8.47	Apr. 20, 1939	a+6.19
Q287	Apr. 13, 1939	a+3.35	Feb. 13, 1940	+10.79	Jan. 1, 1945	+8.82
Q350	Mar. 17, 1937	-1.18	Mar. 29, 1944	+3.51	Apr. 29, 1939	+1.08
Q470	Sept. 21, 1933	a-12.75	July 15, 1937	a+6.78	Jan. 8, 1938	a+5.40
Q471	Mar. 31, 1939	+13.69	Mar. 31, 1939	+17.07	June 4, 1945	+16.93
Q543	May 17, 1932	a-28.36	Feb. 13, 1940	+11.44	Jan. 1, 1945	a+9.00
Q1089	Oct. 10, 1911	-4.42	Oct. 17, 1932	+4.04	Sept. 23, 1938	+2.53
Q1090	Oct. 10, 1911	+1.19	Oct. 17, 1932	+8.29	May 12, 1913	+3.57
Q1222	Apr. 1, 1940	-9.19	Feb. 28, 1942	+4.35	Dec. 1, 1945	+4.35
Q1223	Jan. 28, 1933	+5.78	Dec. 12, 1936	+10.23	Apr. 4, 1939	+7.12
Q1224	Apr. 20, 1933	+6.88	July 18, 1942	+12.41	May 29, 1939	+8.60
Q1225	Apr. 20, 1933	+26.72	Feb. 7, 1942	+52.19	Apr. 4, 1939	+27.65
Q1237	Feb. 10, 1939	a-6.38	Mar. 1, 1942	a+5.03	May 4, 1939	a+1.70
Q1248	Oct. 12, 1940	+34.48	Feb. 14, 1942	+37.10	May 30, 1944	+36.00
Q1249	Oct. 19, 1940	+30.46	Feb. 7, 1942	+32.66	May 30, 1944	+31.58
Q1250	Oct. 19, 1940	+19.36	Feb. 7, 1942	+21.72	Aug. 7, 1945	+20.41
Q1251	Oct. 19, 1940	+9.85	Feb. 14, 1942	+13.02	Oct. 19, 1940	+10.38
Q1252	Oct. 26, 1940	+11.69	Feb. 28, 1942	+13.70	Feb. 15, 1941	+12.67
Q1253	Nov. 2, 1940	+2.32	Aug. 8, 1942	+4.58	Apr. 26, 1941	+3.35
Q1254	Oct. 26, 1940	-2.24	June 20, 1942	+2.29	Apr. 12, 1941	-1.58
Q1255	Oct. 12, 1911	-5.95	Apr. 11, 1942	+12.03	May 12, 1914	-4.42
Q1256	Oct. 26, 1940	-6.98	Mar. 14, 1942	-2.44	Aug. 8, 1945	-3.33
Q1281	Oct. 11, 1911	-3.62	Mar. 7, 1942	+8.89	June 4, 1913	-1.63
Q1282	Jan. 31, 1933	+1.17	Jan. 31, 1933	+2.49	May 10, 1941	+1.09
Q1283	Oct. 12, 1911	+2.12	Mar. 3, 1933	+13.53	Nov. 10, 1911	+4.02
Q1284	Oct. 12, 1911	+5.01	Jan. 28, 1933	+11.55	June 2, 1913	+6.46
Q1285	Apr. 20, 1933	+5.74	Feb. 21, 1942	+8.05	May 31, 1941	+6.44
Q1286	Apr. 20, 1933	+9.06	Aug. 1, 1942	+11.29	Apr. 26, 1941	+10.51
Q1287	Apr. 20, 1933	+10.85	Oct. 9, 1945	+15.80	Oct. 5, 1934	+12.27
Q1288	Apr. 20, 1933	+16.22	Jan. 31, 1942	+22.06	Oct. 5, 1934	+16.77
Q1289	Apr. 20, 1933	+30.10	Feb. 7, 1942	+34.56	Nov. 8, 1934	+31.47
Q1290	Apr. 20, 1933	+15.25	Jan. 31, 1942	+19.48	Oct. 5, 1934	+16.80
Q1292	May 10, 1941	+26.41	Feb. 28, 1942	+29.43	Aug. 5, 1945	+27.90
S58	Aug. 14, 1944	+22.39	Aug. 30, 1944	a+24.36	Dec. 7, 1944	a+23.80
S202	May 25, 1936	a+36.93	Feb. 1, 1939	a+47.17	Apr. 10, 1937	+39.28
S203	Feb. 14, 1937	a+70.94	Feb. 17, 1937	a+77.13	Oct. 31, 1939	+72.94
S1803	Oct. 18, 1912	+14.93	Oct. 25, 1941	+18.19	Apr. 22, 1913	+16.77
S1905	Oct. 16, 1912	+37.90	Oct. 27, 1932	+47.01	Apr. 8, 1939	+41.96
S1806	Oct. 18, 1912	+50.61	Jan. 5, 1933	+61.69	Apr. 22, 1939	+54.61
S1807	Oct. 19, 1912	+20.59	Sept. 12, 1932	+23.48	Oct. 14, 1938	+21.84
S1808	Oct. 21, 1912	+9.45	Sept. 12, 1932	+12.94	Sept. 23, 1938	+11.72
S1809	Oct. 21, 1912	+25.00	Nov. 2, 1932	+52.55	Apr. 15, 1939	+27.22
S1910	Oct. 21, 1912	+45.24	Feb. 23, 1933	+56.19	Apr. 29, 1939	+49.00
S1811	Feb. 28, 1937	+51.41	Aug. 28, 1941	+55.56	Apr. 20, 1940	+52.81
S1812	Apr. 17, 1937	+45.12	Mar. 7, 1942	+51.09	May 27, 1939	+45.30
S1813	Nov. 4, 1939	+37.05	Jan. 31, 1942	+39.64	June 15, 1940	+37.24
S1814	Nov. 4, 1939	+35.01	Feb. 14, 1942	+38.28	June 29, 1940	+35.46
S1815	Dec. 2, 1939	+43.80	Mar. 14, 1942	+47.81	June 29, 1940	+43.97
S1316	Dec. 2, 1939	+55.01	Feb. 14, 1942	+59.93	June 1, 1940	+55.28
S1317	Dec. 2, 1939	+50.24	Jan. 17, 1942	+53.95	June 1, 1940	+51.16
S2314	Mar. 27, 1943	+53.76	Jan. 1, 1944	+60.49	May 30, 1944	+59.06
S2454	Sept. 21, 1940	+6.70	Oct. 4, 1941	+8.47	Nov. 28, 1944	+8.04
S2455	June 23, 1933	a+19.98	Nov. 6, 1937	a+24.85	Sept. 23, 1938	+21.71
S3112	Aug. 30, 1941	+51.65	Feb. 7, 1942	+56.41	May 30, 1944	+52.23
S3496	Nov. 2, 1942	+46.85	Mar. 31, 1944	+48.83	Aug. 2, 1943	+47.50

*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 1945 (feet)
		Water level (feet)	Date	Water level (feet)	Date	
S3497	Nov. 2, 1942	+46.36	Feb. 2, 1945	+48.56	Aug. 2, 1943	+46.78
S3498	Sept. 11, 1942	+43.72	Nov. 30, 1944	+45.44	June 28, 1943	+43.78
S3512	Apr. 24, 1942	+66.51	Jan. 31, 1944	+68.76	June 26, 1944	+66.74
S3513	Apr. 24, 1942	+60.59	Dec. 28, 1945	+63.32	May 27, 1943	+60.62
			Dec. 31, 1945			
S3514	May 15, 1942	+66.09	Dec. 26, 1942	+68.18	Sept. 27, 1944	+67.04
					Mar. 27, 1945	
S3515	Mar. 5, 1907	+31.19	Nov. 28, 1945	+34.64	May 8, 1907	+31.95
S3516	Mar. 5, 1907	+35.76	Dec. 2, 1909	+39.72	July 24, 1907	+36.52
S3517	Apr. 2, 1907	+11.60	Dec. 4, 1909	+13.86	Mar. 2, 1903	+12.04
S3518	Mar. 22, 1907	+30.24	Nov. 28, 1945	+33.04	May 8, 1907	+30.98
S3519	Mar. 22, 1907	+23.69	Dec. 3, 1909	+26.69	Aug. 21, 1942	+25.52
S3521	Feb. 28, 1907	+36.13	Nov. 30, 1944	+38.44	Aug. 2, 1907	+36.14
S3522	Feb. 6, 1907	+19.11	Nov. 1, 1944	+19.99	Apr. 4, 1942	+19.18
S3523	Jan. 2, 1907	+25.73	Dec. 30, 1943	+27.96	June 8, 1907	+26.74
S3524	Mar. 8, 1907	+21.47	Dec. 30, 1943	+23.28	Apr. 6, 1908	+21.88
S3525	July 15, 1907	+25.72	Nov. 30, 1942	+28.24	June 8, 1907	+26.42
S3526	Jan. 30, 1943	+26.11	Mar. 31, 1944	+28.07	Aug. 2, 1943	+26.72
S3527	Mar. 7, 1907	+31.29	Mar. 1, 1944	+35.69	June 4, 1908	+31.50
S3529	Mar. 8, 1907	+24.07	Nov. 29, 1944	+28.07	Apr. 27, 1907	+25.18
S3530	Mar. 8, 1907	+31.68	Nov. 29, 1944	+34.78	Aug. 5, 1908	+32.09
S3531	Aug. 9, 1907	+9.14	Dec. 11, 1909	+10.37	May 7, 1908	+9.56
S3532	Apr. 21, 1907	+45.76	Dec. 27, 1944	+51.74	June 8, 1908	+45.30
S3533	Apr. 4, 1907	+44.88	Dec. 27, 1945	+49.48	June 8, 1908	+44.38
S3534	June 9, 1907	+26.73	Dec. 31, 1942	+31.75	June 9, 1907	+27.78
S3535	Aug. 13, 1907	+18.13	Dec. 31, 1942	+21.75	Aug. 13, 1903	+13.34
S3536	Apr. 10, 1907	+22.83	Nov. 29, 1944	+28.62	June 5, 1908	+24.02
S3538	Jan. 11, 1908	+14.79	Nov. 30, 1942	+17.56	Aug. 19, 1903	+15.55
S3545	Mar. 12, 1907	+34.44	Dec. 30, 1943	+38.00	June 7, 1907	+34.56
S3727	July 13, 1943	+29.89	Nov. 30, 1945	+32.34	June 1, 1944	+29.39
S3728	May 28, 1943	+19.51	Dec. 30, 1943	+21.76	June 9, 1944	+19.59
S3729	Sept. 10, 1943	+27.45	Dec. 27, 1945	+29.22	June 27, 1945	+27.45
S3730	Sept. 21, 1943	+33.70	Dec. 27, 1944	+35.42	June 28, 1944	+33.77
S3731	May 28, 1943	+22.52	Dec. 30, 1943	+24.68	June 9, 1944	+22.54
S3732	Oct. 5, 1943	+52.25	Nov. 29, 1944	+57.38	Feb. 28, 1945	+53.21
S3733	Aug. 2, 1943	+15.87	Dec. 30, 1943	+18.39	June 1, 1944	+16.77
S3735	Oct. 1, 1943	+64.28	Mar. 31, 1944	+65.93	Oct. 1, 1943	+64.41
S3736	July 19, 1943	+42.75	Dec. 28, 1944	+44.75	Aug. 2, 1943	+42.81
S3737	Aug. 17, 1943	+55.38	Feb. 28, 1945	+57.13	Sept. 24, 1943	+55.41
S3738	Aug. 19, 1943	+55.16	Feb. 1, 1945	+57.12	Aug. 19, 1943	+55.26
S3739	July 20, 1943	+26.42	Nov. 30, 1945	+28.89	June 1, 1944	+23.42
S3760	Nov. 6, 1943	+24.75	Jan. 30, 1945	+25.61	Nov. 6, 1943	+24.82
S3868	June 26, 1944	+37.18	Mar. 1, 1945	+38.03	Oct. 31, 1945	+37.93
S3869	June 22, 1944	+53.34	Dec. 27, 1944	+55.26	June 22, 1944	+53.92
S3870	June 16, 1944	+53.42	Nov. 29, 1944	+54.52	June 16, 1944	+53.53
S3871	June 15, 1944	+46.25	Feb. 1, 1945	+47.30	Sept. 6, 1945	+46.38
S3955	May 31, 1944	+52.58	Mar. 28, 1945	+53.86	Oct. 5, 1945	+53.36
S3956	May 31, 1944	+31.42	May 31, 1944	+32.22	Sept. 6, 1945	+31.87

a Based on instrumental records.

b Water-stage recorder removed.

The net changes in water level during 1945 in observation wells for which records are available are given below. The net change is the difference in the water level obtained by measurements nearest to December 31, 1944, and December 31, 1945. For Kings and Queens Counties, the net change for the wells read manually represents a 12-month period beginning with

about the first week in December 1944. For Nassau and Suffolk Counties, approximately half of the net changes shown are for an 11-month period starting with about the end of December 1944, and the other half for a 12-month period also starting with about the end of December 1944. The actual period for all wells can be ascertained from the water-level records listed below and in Water-Supply Paper 1016.

Net change in water level in wells on Long Island, N. Y., 1945

Well No.	Net change (feet)	Well No.	Net change (feet)	Well No.	Net change (feet)	Well No.	Net change (feet)
K19 (J)	+0.17	N1240	+6.86	Q1089	-0.16	S3496	+0.23
K50	+1.13	N1244(M)	+2.23	Q1090	-.45	S3497	+.27
K65	-.21	N1245(M)	+1.12	Q1222(L)	+2.54	S3498	.00
K67	+1.13	N1246	+2.25	Q1223	-.81	S3512	-.24
K92	+2.26	N1247	-.30	Q1224	+6.65	S3513	-.33
K97	-.53	N1249	-1.65	Q1225	-.36	S3514	-.38
K196	+5.56	N1250	-1.76	Q1237(J)	+2.26	S3515	-.67
K523	.00	N1251	-1.39	Q1248	-.36	S3516	-.83
K533(J)	+2.74	N1252	-.48	Q1249	-.25	S3517	-1.04
K539	-.23	N1253	+1.53	Q1250	-.67	S3518	-.76
K1198	-.09	N1255	-.47	Q1251	-.71	S3519	-.26
K1199	+2.29	N1256	-.09	Q1252	+0.08	S3521	-.60
K1235	+1.12	N1257	-.66	Q1253	+1.15	S3522	-.53
K1236	+4.39	N1258	-1.18	Q1254	-.32	S3523	+4.46
K1237	+0.07	N1259	-.45	Q1255	-1.14	S3524	-.35
K1263	+4.49	N1260	+7.75	Q1281	-.44	S3525	+0.04
K1264	+4.34	N1262	-.11	Q1282	-.13	S3526	+1.19
K1265	-.53	N1263	-.79	Q1283	-.48	S3527	+0.07
K1266	-.12	N1264	+4.05	Q1284	+2.21	S3529	-.31
K1296	-.56	N1265	-.60	Q1285	-.14	S3530	-.10
K1347	-.39	N1269	-.23	Q1286	+7.70	S3531	-.14
N7 (L)	+6.66	N1271	-1.27	Q1287	-1.32	S3532	+0.04
N9 (M)	-.26	N1273	-1.18	Q1288	-1.27	S3533	-.19
N53	-.40	N1275	-1.85	Q1289	-.28	S3534	+1.12
N157(M)	+2.02	N1278	-1.85	Q1290	-.39	S3535	+0.06
N844(M)	+2.23	N1280	-2.00	Q1292	+3.39	S3536	+4.41
N1102	+1.40	N1282	-.57	S58(M)	-.06	S3538	-.10
N1103	+1.88	N1285	-.88	S202(L)	-1.14	S3545	-.83
N1105	-.21	N1288	-1.86	S203(M)	+0.05	S3727	-1.04
N1107	-.65	N1461	+1.15	S1803	+0.07	S3728	-.73
N1108	-1.11	N1462	-.39	S1805	-.63	S3729	-.34
N1109	-.98	N1463	+0.09	S1806	-1.18	S3730	+0.07
N1110	-.31	N1464	+1.57	S1807	-.22	S3731	-.66
N1111	-1.11	N1613(M)	-.64	S1808	+2.27	S3732	+1.65
N1112	-.03	N1614	-.88	S1809	-.83	S3733	-1.04
N1126	-.95	N1615	-1.19	S1810	-.64	S3735	+1.12
N1132	+1.16	N1616	+3.32	S1811	+3.30	S3736	+0.06
N1140	-.59	N1682	-1.19	S1812	-.82	S3737	-.18
N1147	-.29	N1683	-.83	S1813	-.42	S3738	-.01
N1160	-.62	N1684	-.99	S1814	-.66	S3739	-1.17
N1167	-.30	N1828	-1.09	S1815	-.52	S3760	-.06
N1185	+1.32	N1829	+0.03	S1816	-1.23	S3868	+5.50
N1198	-.45	N1830	-.25	S1817	-.73	S3869	+0.08
N1204	+3.66	Q273(L)	+1.44	S2314(M)	-.72	S3870	+1.10
N1212	+1.16	Q350(J)	-.35	S2454	+2.20	S3871	+4.45
N1216	-.40	Q470(L)	+4.71	S2455	-.65	S3955	+2.24
N1222	+4.77	Q471	+1.38	S3112	-1.88	S3956	+1.16
N1234	-.54						

Aquifers: J-Jameco L-Lloyd M-Magothy
All others are water-table wells.

There is no direct immediate relation (that can be expressed by a simple formula) between precipitation and fluctuation of ground-water levels on Long Island. Many other factors have to be considered. One of the most important is the lag in time between precipitation and recharge to the ground-water aquifer. The lag between precipitation and recharge and also the amount of recharge are influenced by the topography, the local geology, and by the ratio of surface runoff, evaporation and transpiration, to precipitation. In addition, unusual climatic phenomena, such as hurricane storms and prolonged drought, produce unusual variables. The undulating surface of the water table is modified by the rate, duration, amount, and location of pumpage and by the rate and amount of outflow of ground water to streams and to the tidal waters that surround Long Island.

Precipitation data during any one year will be far from sufficient for the explanation of the secular trend of ground-water levels. The water-level conditions of 1945 illustrate this point excellently.

On basis of available records furnished by the U.S. Weather Bureau, precipitation was approximately normal on Long Island in 1945. At the Battery in New York City, 45.74 inches (2.75 inches above average) of rainfall was measured. At Setauket, on the north shore of Suffolk County, 43.71 inches (0.53 inch below normal) was reported. The monthly distribution was uneven. January through April and August to September were months of below normal rainfall, whereas during the remainder of the year, recorded precipitation was above normal. Thus, on basis of the precipitation records for 1945 it might be assumed that ground-water levels at the end of the year would have been about the same as at the end of 1944. However, this was not the case as the net change table reveals that, in general, water levels dropped during 1945 in Queens, Nassau, and Suffolk Counties. Only in a few scattered localities was an appreciable rise recorded during the year. These include a narrow strip along the south shore from Merrick, in Nassau County, to Bayshore, in Suffolk County, where the water table lies at shallow depths. The heavy rains which occurred in November and December caused these increases in stages. Net rises of water levels during 1945 were also noted along the centerline of the island, such as at the Nassau-Suffolk county line and in the vicinity of Lake Ronkonkoma, Selden, and Yaphank, in Suffolk County.

Very little direct relation between precipitation and the trend of water levels can be expected during the individual months or seasons. In spite of the appreciable deficiency in precipitation during five successive months ending in April 1945, the water levels recovered quite appreciably during the spring. In March and April 1945 the water table was generally below its position in the spring of 1944 and above that for 1943. Water levels then receded up to November or December, during which months the effect of recharge resulting from heavy rains began to appear at many wells. The full effect of these rains does not appear until spring of 1946.

Pumpage

As mentioned above, in Kings County is found a hydrologic province wherein pumpage is the chief factor governing the rise and fall of water levels. Prior to 1942, water levels in Kings County had progressively declined for a number of years as the result of excessive pumping. In 1942, however, the trend of water levels was reversed and a general rise occurred, particularly in the center of the overpumped area. The upward trend of the water table continued in 1945, indicating a net decline in over-all pumpage and the establishment of a more favorable relationship between ground-water recharge and withdrawal in Kings County. However, water levels are still far below sea level over a large area and salt water continues to flow inland from the bodies of sea water surrounding Kings County.

Although many of the wells in Kings County are affected to a considerable degree by pumping from nearby wells, the records given in the summary and net change tables show, in a general way, the extent of the recovery of water levels in the past 4 years. Observations were begun in some of the wells as early as 1932. Additional wells have been installed periodically since then, with about half of the wells having been installed since 1939. The first table shows that the lowest observed water level since the beginning of record in many of the observation wells occurred in the latter part of 1941 or the early part of 1942, indicating a continued decline even for the wells installed as early as 1932 and 1933. Further, it will be noted that the highest observed water level in wells installed prior to 1939 occurred relatively soon after measurements were begun, whereas the highest water level for a majority of the wells installed since 1939

was recorded in 1944 or 1945. It will appear, therefore, that, in general, the water table has recovered to levels slightly above the 1939 stage. The second of the preceding tables indicates that practically no net rise occurred in 1945.

Further evidence regarding the general recovery is indicated by the record for well K30, a diagnostic well near the bottom of the water table depression and on which a water-stage recorder has been operated since 1935. The lowest water level for this well, 29.75 feet below mean sea level, was recorded in November 1941. During March 1945, the water level in well K30 rose to the highest stage recorded since June 1937, having recovered more than $2\frac{1}{2}$ feet to 27.17 feet below mean sea level. Thereafter the water level in well K30 declined until November. At the end of the year, the stage was about 0.1 foot higher than that for the previous year but its rate of rise near the end of the year, if continued, forecasted stages in 1946 which would exceed the peak for 1945.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Kings County

K19 (#906, p. 116; 936, p. 140; 944, p. 124; 986, p. 146; 1016, p. 179). Kew Pacific Garage. Dean Street and Fifth Avenue, Brooklyn.

Mean daily water level, in feet below mean sea level, 1945

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	24.56	24.40	24.36	24.48	.....	25.00	25.22	25.42	25.33	25.32	25.02
2	.....	24.57	24.38	24.29	24.54	24.66	24.99	25.24	25.30	25.37	25.29	24.95
3	.....	24.58	24.34	24.39	24.53	24.62	25.04	25.26	25.34	25.48	25.31	24.82
4	.....	24.53	24.33	24.42	24.51	24.54	24.97	25.27	25.36	25.49	25.27	24.90
5	.....	24.47	24.27	24.39	29.57	24.61	24.91	25.21	25.42	25.45	25.17	24.93
6	24.73	24.57	24.31	24.49	.....	.....	25.00	25.14	25.47	25.44	25.22	24.87
7	24.62	24.55	24.38	24.47	24.47	.....	25.06	25.15	25.53	25.34	25.20	24.90
8	24.62	24.52	24.39	24.37	24.49	.....	24.98	25.17	25.52	25.29	25.20	24.91
9	24.70	24.55	24.40	24.28	24.86	24.71	24.96	25.21	25.44	25.34	25.20	.....
10	24.75	24.51	24.39	24.37	24.51	24.63	25.03	25.28	25.43	25.36	25.23	.....
11	24.76	24.44	24.33	24.40	24.55	24.53	25.07	25.29	25.51	25.34	25.16	24.80
12	24.75	24.42	24.27	24.42	24.59	24.70	25.06	25.25	25.55	25.32	25.04	24.82
13	24.71	24.47	24.33	24.43	24.49	24.76	25.03	25.22	25.56	25.31	25.10	24.80
14	24.63	24.47	24.38	24.44	24.46	24.83	25.08	25.29	25.55	25.27	25.09	24.79
15	24.62	24.47	24.40	24.43	24.54	24.86	.....	25.28	25.44	25.20	25.14	24.79
16	24.64	24.49	24.41	24.37	24.59	24.88	25.02	25.22	25.47	25.29	25.18	24.75
17	24.69	24.45	24.39	24.44	24.59	24.80	25.06	25.21	25.39	25.34	25.12	24.70
18	24.71	24.40	24.32	24.51	24.55	24.77	25.09	25.30	.....	25.35	25.05	24.75
19	24.68	24.37	24.24	24.55	24.57	24.86	25.10	25.28	.....	26.35	24.97	24.69
20	24.63	24.42	24.32	24.54	.....	24.88	25.14	25.19	.....	25.38	.....	24.73
21	24.57	24.43	24.36	24.52	.....	24.92	25.16	25.32	.....	25.29	.....	24.74
22	24.52	24.36	24.38	24.44	.....	24.92	25.09	25.35	.....	25.23	.....	24.74
23	24.59	24.42	24.40	24.35	24.62	24.95	25.03	25.39	.....	26.31	.....	24.65
24	24.63	24.44	24.42	24.40	24.63	24.90	25.13	.....	.....	25.33	.....	24.60
25	24.66	24.34	24.37	24.44	24.65	24.88	25.18	.....	25.45	25.33	.....	24.50
26	24.67	24.23	24.27	24.48	24.66	24.97	25.22	.....	25.45	25.35	.....	24.48
27	24.63	24.32	24.33	24.53	24.53	24.99	25.27	25.29	25.57	25.39	25.01	24.59
28	24.55	24.37	24.42	24.57	24.41	25.03	25.22	25.34	.....	.....	24.97	24.63
29	24.48	.....	24.40	24.50	.....	25.04	25.14	25.38	.....	25.21	24.97	.....
30	24.57	.....	24.41	24.42	.....	25.07	25.13	25.41	.....	25.29	25.01	.....
31	24.56	.....	24.38	.....	.....	.....	25.21	25.45	.....	25.27	.....	.....

a Estimated.

K30 (*817, p. 201; *840, p. 258; 845, p. 307; 886, p. 483; 906, p. 116; 936, p. 141; 944, p. 125; 986, p. 147; 1016, p. 180). C. J. Tagliabue Manufacturing Co. Park and Nostrand Avenues, Brooklyn.

Water level at noon, in feet below mean sea level, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	27.68	27.48	27.27	27.22	27.31	27.38	27.53	27.70	27.79	27.78	27.96	27.93
2	27.70	27.48	27.28	27.19	27.35	27.39	27.50	27.71	27.78	27.75	27.96	27.89
3	27.68	27.50	27.26	27.17	27.36	27.39	27.51	27.72	27.78	27.82	27.96	27.82
4	27.67	27.50	27.27	27.22	27.35	27.42	27.54	27.75	27.73	27.84	27.97	27.82
5	27.66	27.45	27.25	27.19	27.37	27.44	27.54	27.75	27.73	27.84	27.94	27.84
6	27.68	27.46	27.21	27.26	27.36	27.45	27.54	27.69	27.75	27.85	27.97	27.85
7	27.65	27.45	27.22	27.27	27.34	27.46	27.56	27.71	27.77	27.80	27.97	27.85
8	27.64	27.43	27.24	27.25	27.32	.....	27.55	27.75	27.78	27.78	27.99	27.90
9	27.63	27.43	27.25	27.22	27.33	27.46	27.52	27.76	.....	27.82	28.00	27.82
10	27.65	27.44	27.25	27.22	27.33	27.43	27.50	27.77	.....	27.85	28.02	27.77
11	27.66	27.42	27.24	27.23	27.32	27.39	27.54	27.78	27.70	27.86	27.96	27.80
12	27.67	27.40	27.20	27.25	27.35	27.41	27.56	27.77	27.73	27.86	27.91	27.80
13	27.66	27.38	27.19	27.27	27.34	27.44	27.58	27.73	27.77	27.89	27.90	27.81
14	27.65	27.37	27.19	27.28	27.33	27.46	27.57	27.72	27.78	27.85	27.91	27.81
15	27.63	27.38	27.20	27.29	27.33	27.47	27.58	27.71	27.79	27.83	27.96	27.82
16	27.60	27.36	27.20	27.28	27.35	27.48	27.57	27.72	27.80	27.83	27.98	27.79
17	27.61	27.37	27.21	27.25	27.36	27.45	27.59	27.71	27.77	27.88	27.97	27.75
18	27.62	27.36	27.22	27.26	27.36	27.40	27.60	27.72	27.75	27.91	27.94	27.76
19	27.62	27.35	27.19	27.31	27.38	27.41	27.61	27.73	27.77	27.92	27.98	27.71
20	27.62	27.33	27.17	27.32	27.38	27.45	27.62	27.68	27.80	27.94	27.92	27.78
21	27.60	27.32	27.17	27.31	27.34	27.45	27.64	27.68	27.82	29.91	27.93	27.79
22	27.57	27.30	27.18	27.32	27.31	27.46	27.64	27.69	27.84	27.85	27.90	27.79
23	27.54	27.31	27.20	27.30	27.34	27.47	27.60	27.73	27.80	27.88	27.87	27.77
24	27.53	27.33	27.23	27.28	27.37	27.48	27.62	27.75	27.75	27.92	27.88	27.74
25	27.56	27.33	27.25	27.29	27.38	27.44	27.64	27.76	27.75	27.93	27.89	27.70
26	27.56	27.29	27.21	27.31	27.39	27.44	.....	27.74	27.78	27.93	27.87	27.68
27	27.56	27.26	27.18	27.33	27.38	27.48	.....	27.72	27.82	27.96	27.87	27.69
28	27.54	27.28	27.20	27.35	27.34	27.50	.....	27.73	27.84	27.93	27.86	27.68
29	27.49	.....	27.21	27.35	27.32	27.51	.....	27.75	27.84	27.88	27.87	27.64
30	27.49	.....	27.21	27.32	27.33	27.53	27.68	27.77	27.84	27.92	27.90	27.65
31	27.49	.....	27.21	.....	27.35	.....	27.69	27.78	.....	27.92	.....	27.61

a Estimated.

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). A. Ludwig Co. well 2. 123 Middleton Street, Brooklyn.

Water level, in feet below mean sea level, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	25.06	Apr. 4,	24.87	July 3	25.01	Sept. 28	25.27
Feb. 6	24.85	27	24.78	Aug. 8	25.10	Nov. 6	25.40
Mar. 3	24.74	June 4	24.81	Sept. 12	25.19	Dec. 4	25.27

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). Young Men's Christian Association. 179 Marcy Avenue, Brooklyn.

Water level, in feet below mean sea level, 1945

Jan. 2	19.38	Apr. 27	19.30	Aug. 8	19.73	Nov. 6	19.64
Mar. 3	19.35	June 4	19.17	Sept. 12	19.84	Dec. 4	19.64
Apr. 4	19.40	July 3	19.53	28	19.70		

K92 (*840, p. 260; 845, p. 309; 886, p. 484; 906, p. 117; 936, p. 143; 944, p. 126; 986, p. 149; 1016, p. 181). St. Johns University, 75 Lewis Avenue, Brooklyn.

Water level, in feet below mean sea level, 1945

Jan. 2	22.09	Apr. 4	21.54	July 3	22.04	Sept. 28	22.38
Feb. 6	21.62	27	21.65	Aug. 8	22.28	Nov. 6	22.12
Mar. 3	21.26	June 4	21.84	Sept. 12	22.38	Dec. 4	21.91

K97 (*1016, p. 182). Colony Foods. Grand & Lexington Avenues, Brooklyn.

Water level, in feet below mean sea level, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	26.18	Apr. 4	25.80	July 3	25.96	Sept. 28	26.26
Feb. 6	25.95	27	25.78	Aug. 8	26.00	Nov. 11	26.27
Mar. 3	25.85	June 4	25.75	Sept. 12	26.30	Dec. 4	26.09

K196 (*986, p. 149; 1016, p. 182). Knickerbocker Ice Co. well 1. Twelfth Avenue and 37th Street, Brooklyn.

Water level, in feet below mean sea level, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	3.50	Apr. 4	3.71	July 3	3.59	Sept. 28	2.88
Feb. 6	3.56	27	3.70	Aug. 7	3.10	Nov. 6	2.91
Mar. 5	4.76	June 5	3.62	Sept. 12	2.95	Dec. 4	3.01

K523. New York Water Service Corporation, 267 Newkirk Avenue, Brooklyn. Unused public-supply well, diameter 18 inches, depth 568 feet below measuring point. Measuring point, hole in pump base, 47.15 feet above mean sea level. Measuring point beginning Sept. 28, 1945, top of casing, 41.77 feet above mean sea level; beginning Nov. 5, 1945, top of cement floor, 46.85 feet above mean sea level.

Water level, in feet below mean sea level, 1944-45							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 6, 1944	1.48	Oct. 28, 1944	1.05	June 5, 1945	1.05		
30	1.41	Dec. 6	1.05	July 3	.94		
Apr. 25	1.50	Jan. 3, 1945	.94	Aug. 7	.65		
June 3	1.04	Feb. 6	1.91	Sept. 12	.73		
July 4	1.10	Mar. 5	1.20	28	.78		
Aug. 1	1.25	Apr. 4	1.14	Nov. 5	.96		
Sept. 1	1.34	27	1.23	Dec. 4	1.05		
Oct. 4	.95						

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). New York Water Service Corporation test well. On southwest side of East 98th Street, near Rutland Road, Brooklyn.

Water level at noon, in feet below mean sea level, 1945 (From recorder charts after July 3)											
Day	Jan.	Feb.	Mar.	Apr.	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	18.77	18.37	18.19	18.10	17.62
2	18.35	18.29	18.09	18.08	17.62
3	20.07	.....	.....	19.23	.....	18.83	18.37	.....	18.17	18.08	17.59
4	18.37	18.22	18.18	18.12	17.62
5	17.30	.....	19.19	.....	18.33	18.26	18.13	18.07	17.61
6	20.00	.....	.....	.....	.....	18.32	18.31	18.12	18.10	17.57
7	18.32	18.35	18.12	18.06	17.61
8	18.31	18.30	18.08	18.06	17.66
9	18.35	18.28	18.10	18.08	17.62
10	18.56	18.30	18.10	18.10	17.59
11	18.81	18.35	18.28	18.09	17.58
12	18.83	18.35	18.31	18.09	18.04
13	18.84	18.36	18.33	18.09	18.03
14	18.83	18.37	18.31	18.10	18.01
15	18.79	18.35	18.30	18.06	18.09
16	18.78	18.35	18.35	18.09	18.09
17	18.78	18.32	18.30	18.09	18.07
18	18.77	18.32	18.22	18.10	18.08
19	18.78	18.32	18.19	18.12	18.03
20	18.83	18.33	18.18	18.14	18.05
21	18.81	18.34	18.20	18.15	18.05
22	18.81	18.34	18.24	18.09	18.04
23	18.79	18.33	18.23	18.11	17.99
24	18.81	18.30	18.20	18.10	17.66

K533--Continued.

Water level at noon, in feet below mean sea level, 1945
(From recorder charts after July 3)

Day	Jan.	Feb.	Mar.	Apr.	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
25	18.81	18.25	18.18	18.11	17.67	17.49
26	18.82	18.21	18.21	18.11	17.66	17.46
27	19.19	.....	.....	18.22	18.21	18.13	17.65	17.50
28	18.25	18.20	18.14	17.61	17.50
29	18.26	18.22	18.08	17.60	17.49
30	18.80	18.34	18.21	18.10	17.61	17.48
31	18.79	18.34	.....	18.08	.....	17.47

K539 (*906, p. 120; 936, p. 146; 944, p. 128; 986, p. 151; 1016, p. 182). New York City Department of Water Supply, Gas and Electricity. Atlantic Avenue and Logan Street, Brooklyn.

Water level, in feet below mean sea level, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	2.43	Apr. 3	2.57	July 4	2.43	Sept. 28	2.45
Feb. 6	2.54	June 27	2.61	Aug. 8	2.30	Nov. 6	2.66
Mar. 3	2.48	June 5	2.57	Sept. 13	2.44	Dec. 4	2.73

K1057 (*840, p. 260; *845, p. 309; *886, p. 487; 906, p. 120; *936, p. 147; *944, p. 129; 1016, p. 183). U. S. Navy, Floyd Bennett Airport, Barren Island. Water levels are affected by tidal fluctuations.

Water level, in feet above mean sea level, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	10.90	Apr. 4	9.77	June 30	8.75	Oct. 1	7.27
Feb. 5	9.70	June 28	9.95	Aug. 6	7.77	Nov. 29	8.56
Mar. 3	9.92	June 5	9.50	Aug. 27	8.36	Nov. 26	8.98

K1198 (*906, p. 122; 936, p. 148; 944, p. 130; 986, p. 152; 1016, p. 183). New York City Department of Water Supply, Gas and Electricity. Cleveland and Fulton Streets, Brooklyn.

Water level, in feet below mean sea level, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	4.54	Apr. 27	4.57	Aug. 8	4.47	Nov. 6	4.70
Mar. 3	4.50	June 5	4.62	Sept. 13	4.54	Dec. 4	4.74
Apr. 5	4.63	July 3	4.56	Aug. 28	4.53	.....	.....

K1199(*906, p. 123; 936, p. 149; 944, p. 131; 986, p. 152; 1016, p. 183). New York City Department of Water Supply, Gas and Electricity. Jefferson and Howard Avenues, Brooklyn.

Water level, in feet below mean sea level, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	15.70	Apr. 27	15.28	Aug. 8	15.53	Nov. 6	15.63
Mar. 3	15.46	June 4	15.14	Sept. 12	15.61	Dec. 4	15.55
Apr. 4	15.35	July 3	15.22	Aug. 28	15.62	.....	.....

K1235 (*936, p. 149; *944, p. 131; 986, p. 153; 1016, p. 183). New York City Department of Water Supply, Gas and Electricity. Fulton Street and Pennsylvania Avenue, Brooklyn.

Water level, in feet below mean sea level, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	8.27	Apr. 27	8.24	Aug. 7	8.30	Oct. 6	8.31
Mar. 5	8.25	June 5	8.19	Sept. 13	8.35	Dec. 4	8.28
Apr. 3	8.22	July 3	8.25	Aug. 28	8.39	.....	.....

K1236 (*936, p. 149; 944, p. 131; 986, p. 153; 1016, p. 184). New York City Department of Water Supply, Gas and Electricity. Lexington and Patchen Avenues, Brooklyn.

Water level, in feet below mean sea level, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	17.92	Apr. 27	17.75	Aug. 8	18.09	Nov. 6	18.07
Mar. 3	17.65	June 4	17.52	Sept. 12	18.15	Dec. 4	17.72
Apr. 4	17.64	July 3	17.92	Aug. 28	18.26	.....	.....

K1237 (*936, p. 150; 944, p. 131; 986, p. 153; 1016, p. 184). New York City Department of Water Supply, Gas and Electricity. Delmonico Place and Hopkins Street, Brooklyn.

Water level, in feet below mean sea level, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	33.68	Apr. 27	33.56	Aug. 8	34.02	Nov. 6	34.68
Mar. 3	33.30	June 4	33.83	Sept. 12	34.11	Dec. 4	34.54
Apr. 4	33.57	July 3	34.19	28	34.43		

K1263 (*936, p. 150; 944, p. 132; 986, p. 153; 1016, p. 184). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	10.20	Apr. 4	10.44	July 3	10.18	Sept. 28	9.50
Feb. 6	10.21	27	10.46	Aug. 7	9.69	Nov. 6	9.72
Mar. 5	10.24	June 5	10.43	Sept. 12	9.52	Dec. 4	9.85

K1264 (*936, p. 151; 944, p. 132; 986, p. 153; 1016, p. 185). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	14.95	Apr. 27	14.81	Aug. 7	14.58	Nov. 6	14.74
Mar. 5	14.86	June 5	14.67	Sept. 12	14.46	Dec. 4	14.78
Apr. 4	14.77	July 3	14.77	28	14.54		

K1265 (*936, p. 151; 944, p. 132; 986, p. 154; 1016, p. 185). New York City Department of Water Supply, Gas and Electricity. Riverdale Avenue and Thatford Street, Brooklyn.

Water level, in feet below mean sea level, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	9.76	June 5	9.52	Sept. 13	9.94	Nov. 6	9.75
Apr. 3	9.77	July 3	9.98	28	9.94	Dec. 4	9.65
27	9.81	Aug. 7	10.16				

K1266 (*936, p. 152; 944, p. 133; 986, p. 154; 1016, p. 185). New York City Department of Water Supply, Gas and Electricity. Vermont Street and Livonia Avenue, Brooklyn.

Water level, in feet below mean sea level, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	4.98	Apr. 27	5.17	Aug. 8	5.97	Nov. 6	5.24
Mar. 5	5.11	June 5	4.91	Sept. 13	5.12	Dec. 4	5.20
Apr. 3	5.04	July 4	5.07	28	5.03		

K1296 (*936, p. 152; 944, p. 133; 986, p. 154; 1016, p. 185). New York City Department of Water Supply, Gas and Electricity. Blake Avenue and Crystal Street, Brooklyn.

Water level, in feet below mean sea level, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	0.39	Apr. 3	0.71	July 4	0.44	Sept. 28	0.59
Feb. 6	.79	27	.80	Aug. 8	.29	Nov. 6	.93
Mar. 3	.55	June 5	.62	Sept. 13	.74	Dec. 4	.66

K1347 (*986, p. 154; 1016, p. 186). R. K. O. Albee Theater. DeKalb Avenue and Fulton Street, Brooklyn.

K1347--Continued.

Water level, in feet below mean sea level, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	21.31	Apr. 7	20.37	July 7	22.41	Oct. 8	23.01
13	21.20	14	20.27	16	23.03	15	22.92
20	21.05	21	20.19	23	23.03	22	22.50
27	20.87	28	20.29	30	22.87	29	22.53
Feb. 3	20.83	May 5	20.40	Aug. 6	23.40	Nov. 5	22.43
10	20.73	12	20.47	13	23.91	12	22.40
17	20.65	19	20.31	20	23.77	19	22.37
24	20.60	26	20.31	27	23.42	26	22.30
Mar. 3	20.53	June 2	20.49	Sept. 4	23.99	Dec. 3	22.16
10	20.46	9	20.67	10	24.16	10	22.04
17	20.41	16	21.97	17	23.54	17	22.02
24	20.37	23	21.92	24	23.09	24	21.92
31	20.28	30	22.10	Oct. 1	23.37	31	21.80

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). 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, 1945

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	9.58	9.07	8.89	9.55	10.05	9.56	7.45	6.71	6.58	7.71	9.10	....
2	9.39	8.97	8.91	9.60	10.02	9.57	7.30	6.76	6.67	8.10	9.15	....
3	9.30	8.82	9.16	9.74	9.98	9.67	7.12	6.84	6.47	8.01	9.28	....
4	9.30	8.69	9.06	9.56	10.20	9.58	6.88	6.79	6.44	7.38	9.25	....
5	9.32	8.85	9.06	9.93	10.20	9.52	6.76	6.67	6.50	8.02	9.26	....
6	9.24	8.74	9.53	9.57	10.16	9.44	6.77	6.80	6.52	8.19	9.17	....
7	9.37	8.76	9.54	9.47	10.09	9.39	6.63	6.92	6.57	8.43	9.15	....
8	9.48	8.83	9.45	9.52	10.11	9.40	6.57	6.85	6.62	8.51	9.21	....
9	9.52	8.88	9.46	9.58	9.96	9.37	6.49	6.78	6.51	8.60	9.23	....
10	9.42	8.89	9.46	9.59	9.98	9.34	6.55	6.77	6.66	8.44	9.15	10.20
11	9.41	8.92	9.37	9.62	10.10	9.38	6.38	6.77	6.77	8.44	9.08	10.10
12	9.41	8.84	9.30	9.69	9.95	9.38	6.17	6.71	6.71	8.56	9.20	9.92
13	9.42	8.83	9.43	9.74	10.05	9.32	6.07	6.64	6.64	8.60	9.39	9.83
14	9.42	8.96	9.56	9.83	9.95	9.26	6.02	6.67	6.54	8.53	9.55	10.00
15	9.42	8.84	9.56	9.74	9.96	9.21	....	6.79	6.79	8.55	9.55	9.89
16	9.58	9.02	9.40	9.74	9.95	9.09	....	6.69	6.72	8.72	9.42	9.92
17	9.58	8.91	9.37	9.85	9.91	8.92	6.01	6.71	6.68	8.66	9.43	9.75
18	9.52	8.88	9.29	9.91	10.04	8.77	6.14	6.68	6.85	8.66	9.54	9.65
19	9.51	8.71	9.29	9.78	10.01	8.55	6.18	6.55	7.21	8.69	9.49	9.91
20	9.50	8.70	9.44	9.76	9.82	8.40	6.25	6.52	7.23	8.76	9.70	9.91
21	9.37	8.73	9.50	9.86	9.82	8.22	6.39	6.54	7.34	8.73	9.50	9.86
22	9.37	8.83	9.59	9.82	9.91	8.21	6.44	6.60	7.28	8.84	9.76	9.72
23	9.43	8.84	9.61	9.74	9.85	8.21	6.51	6.46	7.30	8.94	9.75	9.73
24	9.43	8.80	9.52	9.85	9.75	8.15	6.52	6.42	7.41	8.98	9.74	9.65
25	9.39	8.69	9.38	9.97	9.63	8.11	6.50	6.60	7.52	9.04	9.74	9.71
26	9.30	8.71	9.35	10.12	9.58	8.06	6.70	6.69	7.61	9.18	9.57	10.14
27	9.22	9.07	9.51	10.14	9.49	7.90	6.69	6.61	7.57	9.08	9.54	9.96
28	9.09	8.85	9.49	10.06	9.51	7.85	6.70	6.60	7.64	8.94	9.68	9.75
29	9.13		9.53	9.99	9.70	7.79	6.79	6.61	7.76	8.95	....	9.97
30	9.10		9.56	10.00	9.72	7.62	6.64	6.59	7.60	9.00	....	9.89
31	9.09		9.61		9.65		6.64	6.50		9.16	....	....

N9 (*840, p. 264; 845, p. 312; 886, p. 489; *906, p. 124; 936, p. 153; *944, p. 154; 986, p. 156; 1016, p. 187). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	21.66	Apr. 28	21.63	Aug. 27	21.91	Oct. 29	21.59
Mar. 3	22.94	June 2	21.71	Oct. 1	21.67	Nov. 26	21.57
31	21.74	30	21.55				

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). Village of Rockville Center. In basement of municipal power station, Morris and Maple Avenues, Rockville Center.

Water level, in feet above mean sea level, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 7	13.97	Apr. 30	14.12	July 31	14.51	Nov. 26	13.75
Mar. 2	14.33	May 29	14.51	Sept. 5	14.22	Dec. 1	14.05
31	14.37	June 26	14.22	27	13.89		

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). J. N. Hill. About 0.4 mile south of Cedar Swamp Road and 450 feet west of Wheatley Road, Wheatley Hills. Measuring point lowered to 218.41 feet above mean sea level on Aug. 4, 1945.

Water level, in feet above mean sea level, 1945

Jan. 29	84.44	May 4	84.59	Aug. 4	85.40	Nov. 2	85.34
Feb. 26	84.35	June 1	84.77	Sept. 11	85.60	27	85.42
Mar. 26	84.42	29	85.04	Oct. 2	85.87	Dec. 26	85.95

N844 (*906, p. 126; 936, p. 155; *944, p. 136; 986, p. 158; 1016, p. 190). Long Island Railroad. Jerusalem Avenue about 110 feet north of railroad tracks, Hicksville.

Mean daily water level, in feet above mean sea level, 1945

(Readings for Jan. 1 to Feb. 25, inclusive, from recorder charts)

Jan. 1	81.00	Jan. 18	80.94	Feb. 4	81.01	Feb. 20	81.08
2	80.91	19	80.96	5	81.04	21	81.10
3	80.89	20	80.96	6	81.00	22	81.16
4	80.92	21	80.97	7	81.01	23	81.16
5	80.92	22	81.0	8	81.03	24	81.18
6	80.91	23	81.03	9	81.02	25	81.21
7	80.95	24	81.03	10	80.99	Mar. 26	81.69
8	80.96	25	81.0	11	81.00	May 4	81.93
9	80.95	26	80.99	12	80.98	June 1	81.82
10	80.92	27	80.99	13	81.00	29	81.70
11	80.90	28	80.99	14	81.00	Aug. 4	81.64
12	80.93	29	81.02	15	81.00	Sept. 12	81.50
13	80.96	30	81.00	16	81.03	Oct. 2	81.50
14	80.97	31	81.01	17	81.02	Nov. 2	81.33
15	80.94	Feb. 1	81.03	18	81.05	27	81.16
16	80.98	2	81.02	19	81.05	Dec. 26	81.16
17	80.95	3	81.01				

N1102 (*886, p. 491; 906, p. 128; 936, p. 156; 944, p. 137; 986, p. 159; 1016, p. 191). Nassau County Department of Public Works. Willets and Valley Roads, Lake Success.

Water level, in feet above mean sea level, 1945

Jan. 29	55.86	May 4	56.34	Aug. 4	56.50	Oct. 26	56.50
Feb. 26	55.88	June 1	56.35	Sept. 5	56.32	Nov. 27	56.33
Mar. 26	56.21	29	56.29	27	56.27	Dec. 26	56.65

N1103 (*886, p. 493; 906, p. 128; 936, p. 156; 944, p. 137; 986, p. 160; 1016, p. 191). 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, 1945

Jan. 29	56.82	May 4	57.17	Sept. 5	58.34	Nov. 27	58.92
Feb. 26	57.37	June 1	56.74	27	58.27	Dec. 26	58.97
Mar. 26	57.18	29	56.31	Oct. 26	58.99		

N1104 (*886, p. 493; 906, p. 128; 936, p. 156; 944, p. 137; 986, p. 160; 1016, p. 191). Nassau County Department of Public Works. Rhodes Street and 80th Avenue, New Hyde Park. Well damaged and measurements temporarily discontinued after Aug. 4.

Water level, in feet above mean sea level, 1945					
Date	Water level	Date	Water level	Date	Water level
Feb. 26	57.87	May 4	58.47	June 29	58.65
Mar. 26	58.18	June 1	58.61	Aug. 4	58.71

N1105 (*886, p. 493; 906, p. 128; 936, p. 156; 944, p. 137; 986, p. 160; 1016, p. 191). Nassau County Department of Public Works. Emerson and Whittier Avenues, New Hyde Park.

Water level, in feet above mean sea level, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 29	55.25	May 4	55.64	Aug. 4	55.56
Feb. 26	55.31	June 1	55.48	Sept. 5	55.40
Mar. 26	55.52	29	55.37	27	55.27
				Oct. 26	55.17
				Nov. 27	54.92
				Dec. 26	54.31

N1107 (*886, p. 493; 906, p. 128; 936, p. 157; 944, p. 138; 986, p. 160; 1016, p. 192). Nassau County Department of Public Works. Bertha Street and Kingston Avenue, South Floral Park.

Water level, in feet above mean sea level, 1945					
Date	Water level	Date	Water level	Date	Water level
Mar. 2	44.83	May 29	44.52	Sept. 11	44.53
31	44.37	June 26	44.34	27	44.84
Apr. 30	44.57	July 31	44.71	Oct. 26	44.12
				Dec. 1	43.93

N1108 (*886, p. 492; 906, p. 128; 936, p. 157; 944, p. 138; 986, p. 161; 1016, p. 192). Nassau County Department of Public Works. Jacob Street and Rosalind Avenue, Elmont.

Water level, in feet above mean sea level, 1945					
Date	Water level	Date	Water level	Date	Water level
Feb. 7	39.70	Apr. 30	39.76	July 31	39.82
Mar. 2	40.13	May 29	39.67	Sept. 5	39.65
31	40.08	June 26	39.46	27	39.51
				Dec. 1	38.82

N1109 (*886, p. 492; 906, p. 128; 936, p. 157; 944, p. 138; 986, p. 161; 1016, p. 192). Nassau County Department of Public Works. Dutch Broadway and Henry Street, Elmont.

Water level, in feet above mean sea level, 1945					
Date	Water level	Date	Water level	Date	Water level
Mar. 2	23.10	May 29	27.54	Sept. 5	27.44
31	27.84	June 26	27.34	27	27.17
Apr. 30	27.42	July 31	27.80	Oct. 26	26.87
				Dec. 1	26.97

N1110 (*886, p. 492; 906, p. 129; 936, p. 157; 944, p. 138; 986, p. 161; 1016, p. 193). 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, 1945					
Date	Water level	Date	Water level	Date	Water level
Mar. 2	20.43	May 29	20.28	Sept. 11	19.98
31	20.29	June 26	20.01	27	19.86
Apr. 30	20.02	July 31	20.43	Oct. 26	19.77
				Dec. 1	20.14

N1111 (*886, p. 492; 906, p. 129; 936, p. 157; 944, p. 138; 986, p. 161; 1016, p. 193). Nassau County Department of Public Works. Fletcher and Teneyck Avenues, Valley Stream.

Water level, in feet above mean sea level, 1945					
Date	Water level	Date	Water level	Date	Water level
Feb. 7	13.62	Apr. 30	12.43	July 31	14.20
Mar. 2	13.86	May 29	13.99	Sept. 5	13.84
31	12.69	June 26	14.01	Oct. 1	12.67
				Dec. 1	12.93

N1112 (*886, p. 492; 906, p. 129; 936, p. 157; 944, p. 138; 986, p. 161; 1016, p. 193). Nassau County Department of Public Works. Sunrise Highway and 2d Street, Valley Stream.

Water level, in feet above mean sea level, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 7	8.68	Apr. 30	9.18	July 31	9.68	Oct. 26	9.01
Mar. 2	9.54	May 29	9.38	Sept. 5	9.16	Dec. 1	9.48
31	9.37	June 26	9.20	27	9.03		

N1126 (*845, p. 322; 886, p. 494; 906, p. 129; 936, p. 158; 944, p. 139; 986, p. 162; 1016, p. 193). Nassau County Department of Public Works. At northwest corner of Stewart Avenue and Sackville Road, Garden City.

Water level, in feet above mean sea level, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	58.83	May 4	58.66	Aug. 4	58.69	Nov. 2	58.11
Feb. 26	58.88	June 1	58.59	Sept. 12	58.69	27	57.76
Mar. 26	58.98	29	58.52	Oct. 2	58.51	Dec. 26	57.73

N1132 (*845, p. 320; 886, p. 494; 906, p. 130; 936, p. 158; 944, p. 139; 986, p. 163; 1016, p. 194). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 7	7.99	Apr. 30	8.30	July 31	8.70	Oct. 26	7.99
Mar. 2	8.47	May 29	8.64	Sept. 5	8.25	Dec. 1	8.65
31	8.58	June 26	8.34	27	8.02		

N1140 (*886, p. 495; 906, p. 130; 936, p. 158; 944, p. 139; 986, p. 163; 1016, p. 194). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	61.82	May 4	61.91	Aug. 3	61.34	Nov. 2	61.07
Feb. 26	61.90	June 1	61.73	Sept. 12	61.39	27	60.77
Mar. 26	62.09	29	61.59	Oct. 2	61.32	Dec. 26	60.55

N1147 (*886, p. 495; 906, p. 130; 936, p. 159; 944, p. 140; 986, p. 163; 1016, p. 194). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 7	17.79	Apr. 30	17.98	July 31	18.06	Oct. 26	17.40
Mar. 2	18.15	May 29	18.41	Sept. 5	17.77	Dec. 1	17.87
31	18.19	June 26	17.91	27	17.52		

N1160 (*886, p. 495; 906, p. 130; 936, p. 159; 944, p. 140; 986, p. 163; 1016, p. 194). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	66.29	May 4	66.27	Aug. 4	66.35	Nov. 2	65.36
Feb. 26	66.49	June 1	66.45	Sept. 12	66.06	27	65.19
Mar. 26	66.63	29	66.10	Oct. 2	65.82	Dec. 26	65.68

N1167 (*845, p. 321; 886, p. 496; 906, p. 131; 936, p. 159; 944, p. 140; 986, p. 163; 1016, p. 195). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 7	10.95	Apr. 30	11.37	July 31	11.22	Oct. 26	10.65
Mar. 2	11.28	May 29	11.53	Sept. 5	10.97	Dec. 1	11.08
31	11.51	June 26	11.25	27	10.73		

N1185 (*845, p. 321; 886, p. 496; 906, p. 132; 936, p. 161; 944, p. 142; 986, p. 166; 1016, p. 195). Nassau County Department of Public Works. Northwest corner of West Grand Avenue and Lindgren Street, Merrick.

Water level, in feet above mean sea level, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 7	10.36	Apr. 30	12.94	July 31	12.94	Oct. 26	12.30
Mar. 2	12.00	May 29	13.19	Sept. 5	12.43	Dec. 1	13.41
31	12.53	June 26	12.95	27	12.14		

N1198 (*886, p. 496; 906, p. 133; 936, p. 161; 944, p. 142; 986, p. 166; 1016, p. 195). 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, 1945							
Jan. 29	66.38	May 4	66.61	Aug. 4	66.35	Nov. 2	65.52
Feb. 26	67.24	June 1	66.45	Sept. 5	66.13	27	65.29
Mar. 26	67.00	29	66.33	Oct. 2	65.95	Dec. 26	65.41

N1204 (*886, p. 497; 906, p. 133; 936, p. 162; 944, p. 143; 986, p. 166; 1016, p. 195). Nassau County Department of Public Works. At northwest corner of Harris Court and John Street, Bellemore.

Water level, in feet above mean sea level, 1945							
Feb. 7	7.01	Apr. 30	11.17	July 31	11.11	Oct. 26	11.00
Mar. 2	7.66	May 29	11.23	Sept. 5	11.00	Dec. 1	11.53
31	10.76	June 26	11.10	27	10.86		

N1212 (*986, p. 166; 1016, p. 196). 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, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	86.06	85.55	85.37	85.63	86.02	86.17	86.30	.....	86.58	86.63	86.54	86.41
2	85.32	85.53	85.57	85.86	85.93	86.27	86.34	.....	86.58	86.62	86.64	86.40
3	85.45	85.41	85.76	85.75	85.98	86.26	86.26	.....	86.30	86.39	86.76	86.56
4	85.61	86.38	85.34	85.66	86.16	86.16	86.25	.....	86.43	86.36	86.61	86.52
5	85.58	85.56	85.45	86.00	86.03	86.15	86.33	.....	86.47	86.57	86.56	86.48
6	85.44	85.37	85.89	85.58	86.04	86.18	86.45	86.48	86.49	86.63	86.40	86.68
7	85.79	85.41	85.47	85.74	85.98	86.20	86.31	.....	86.54	86.77	86.45	86.75
8	85.68	85.74	85.44	85.93	86.13	86.21	86.32	.....	86.59	86.63	86.53	86.36
9	85.65	85.52	85.52	85.92	85.88	86.23	86.34	.....	86.53	86.56	86.53	86.60
10	85.40	85.42	.....	85.89	86.15	86.24	86.51	.....	86.60	86.42	86.38	86.67
11	85.41	85.43	.....	85.94	85.92	86.33	86.27	.....	86.67	86.51	86.44	86.37
12	85.68	85.39	.....	85.95	86.02	86.26	86.23	.....	86.48	.....	86.58	86.37
13	85.62	85.51	.....	85.97	86.12	86.23	86.29	86.37	86.39	.....	86.71	86.41
14	85.64	85.42	.....	85.97	85.96	86.21	86.37	86.47	86.49	.....	86.77	86.70
15	85.44	85.36	85.70	85.82	86.07	86.23	.....	86.61	86.58	86.58	86.49	86.50
16	85.86	85.55	85.78	85.79	86.03	86.30	86.25	86.40	86.36	86.78	86.45	86.53
17	85.44	85.38	85.75	86.08	86.09	86.29	86.22	86.45	86.36	86.55	86.60	86.35
18	85.39	85.35	85.57	85.94	86.24	86.30	86.28	86.41	86.61	86.56	86.65	86.31
19	85.52	85.23	85.85	85.77	86.05	86.26	86.33	86.37	86.61	86.60	86.60	86.53
20	85.50	85.39	85.91	85.95	85.98	86.31	86.40	86.43	86.55	86.57	86.52	86.42
21	85.51	85.34	.....	86.05	86.10	86.27	86.46	86.54	86.54	86.50	86.42	86.39
22	85.69	85.79	85.80	85.84	86.20	86.30	86.44	86.54	86.39	86.61	86.86	86.39
23	85.76	85.51	85.76	85.93	86.09	86.39	86.39	86.38	86.42	86.59	86.64	86.40
24	85.78	85.29	85.61	86.00	86.04	86.31	86.37	86.46	86.53	86.53	86.58	86.34
25	85.39	85.27	85.56	86.13	86.05	86.32	86.44	86.60	86.56	86.60	86.54	86.51
26	85.51	85.55	85.71	85.96	86.09	86.35	86.45	86.57	86.54	86.76	86.32	86.73
27	85.48	85.65	85.91	86.02	86.08	86.24	86.37	86.40	86.47	86.48	86.42	86.36
28	85.41	85.51	85.68	85.94	86.25	86.26	86.43	86.48	86.53	86.46	86.65	86.32
29	85.75	.....	85.82	85.97	86.28	86.32	86.43	86.48	86.64	86.58	86.79	86.77
30	85.42	.....	85.76	85.99	86.24	86.28	86.22	86.47	86.33	86.53	86.62	86.51
31	85.48	.....	85.99	86.19	.....	.....	86.45	.....	86.45	86.76	.....	86.86

a Estimated.

N1216 (*886, p. 497; 906, p. 133; 936, p. 162; 944, p. 143; 986, p. 168; 1016, p. 198). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	65.45	May 2	65.83	Aug. 3	66.40	Oct. 26	65.17
Feb. 1	65.32	June 1	65.94	Sept. 5	66.02	Dec. 1	64.68
Mar. 1	65.76	28	66.05	27	65.65	28	65.00
28	65.96						

N1222 (*886, p. 497; 906, p. 134; 936, p. 162; 944, p. 143; 986, p. 169; 1016, p. 199). Nassau County Department of Public Works. At southwest corner of Cecelia Place and John Street, Seaford.

Water level, in feet above mean sea level, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 7	4.21	Apr. 30	8.84	July 31	8.78	Oct. 26	8.81
Mar. 2	4.89	May 29	9.04	Sept. 5	9.66	Dec. 1	9.14
31	8.33	June 26	8.80	27	8.58		

N1232 (*986, p. 169; 1016, p. 199). Nassau County Department of Public Works. Plainview Road and Plain Hay Path, Plainview. Water level, in feet above mean sea level, 1945: Jan. 11, 76.25. Measurements discontinued on Jan. 11, 1945.

N1233 (*986, p. 170; 1016, p. 199). Nassau County Department of Public Works. Plainview Road and Motor Parkway, Bethpage. Water level, in feet above mean sea level, 1945: Jan. 11, 69.10. Measurements discontinued on Jan. 11, 1945.

N1234 (*886, p. 498; 906, p. 134; 936, p. 162; 944, p. 143; 986, p. 170; 1016, p. 200). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	62.18	Mar. 28	62.65	June 28	62.97	Oct. 2	62.32
Feb. 1	61.91	May 2	62.76	Aug. 3	62.82	31	61.77
Mar. 1	62.11	June 1	62.98	Sept. 5	62.48	Nov. 28	61.33

N1240 (*886, p. 498; 906, p. 134; 936, p. 163; 944, p. 144; 986, p. 170; 1016, p. 201). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 2	4.14	May 29	10.52	Sept. 5	10.10	Oct. 26	10.19
31	9.67	June 26	10.29	27	10.03	Nov. 30	10.55
Apr. 30	10.25	July 31	10.19				

N1244 (*906, p. 135; 936, p. 163; 944, p. 144; 986, p. 171; 1016, p. 201). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	73.67	May 2	73.58	Aug. 3	73.87	Nov. 1	74.01
Mar. 1	73.63	June 1	73.72	Sept. 5	73.94	28	74.03
28	73.54	28	73.78	Oct. 2	74.11		

N1245 (*906, p. 135; 936, p. 183; 944, p. 144; 986, p. 171; 1016, p. 202). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	78.95	May 2	78.46	Aug. 3	78.87	Nov. 1	78.87
Mar. 1	78.53	June 1	78.57	Sept. 5	78.74	28	78.77
28	78.42	28	78.62	Oct. 2	78.99		

N1246 (*906, p. 135; 936, p. 163; 944, p. 144; 986, p. 171; 1016, p. 202). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	79.37	May 2	79.50	Aug. 3	79.82	Nov. 1	79.60
Mar. 1	79.20	June 1	79.61	Sept. 5	79.75	28	79.51
28	79.30	28	79.67	Oct. 2	79.83		

N1247 (*886, p. 498; 906, p. 135; 944, p. 145; 986, p. 172; 1016, p. 202). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	72.53	June 1	73.18	Sept. 5	73.08	Nov. 1	72.73
Mar. 28	72.86	28	73.27	Oct. 2	73.12	28	72.46
May 2	73.03	Aug. 3	73.29				

N1249 (*906, p. 136; 936, p. 164; 944, p. 145; 986, p. 172; 1016, p. 202). Nassau County Department of Public Works. At northeast corner of Secatogue Avenue and Wall Street, Farmingdale.

Water level, in feet above mean sea level, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	53.57	Apr. 30	54.14	Aug. 3	53.63	Nov. 1	52.06
Mar. 1	53.99	June 1	54.34	Sept. 5	53.15	28	52.11
28	54.36	26	54.06	Oct. 2	52.58		

N1250 (*886, p. 499; 906, p. 136; 936, p. 164; 944, p. 145; 986, p. 172; 1016, p. 202). Nassau County Department of Public Works. 37 feet northwest of Old Carmans Road and about 2,200 feet northwest of Great Neck Road, Farmingdale.

Water level, in feet above mean sea level, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	46.20	May 30	46.98	Sept. 5	45.60	Nov. 1	44.68
Mar. 28	46.89	June 26	46.43	Oct. 3	45.10	28	44.76
Apr. 30	46.69	July 31	46.09				

N1251 (*886, p. 499; 906, p. 136; 936, p. 164; 944, p. 145; 986, p. 172; 1016, p. 203). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	38.32	Apr. 30	38.83	July 31	38.06	Nov. 1	36.76
Mar. 2	38.95	May 30	38.98	Sept. 5	37.68	28	37.11
28	38.88	June 26	38.55	Oct. 3	37.17		

N1252 (*906, p. 136; 936, p. 164; 944, p. 145; 986, p. 173; 1016, p. 203). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	24.77	Apr. 30	25.31	July 31	24.91	Nov. 1	24.10
Mar. 2	25.14	May 30	25.54	Sept. 5	24.61	28	24.57
28	25.31	June 26	25.21	Oct. 3	24.29		

N1253 (*386, p. 499; 906, p. 137; 936, p. 164; 986, p. 173; 1016, p. 203). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	13.87	Apr. 30	15.38	July 31	15.25	Oct. 26	14.93
Mar. 2	14.18	May 29	15.71	Sept. 5	15.03	Nov. 30	15.54
28	14.95	June 26	15.36	27	14.89		

N1255 (*840, p. 277; 845, p. 319; 886, p. 500; *906, p. 137; 936, p. 165; 986, p. 174; 1016, p. 204). Nassau County Department of Public Works. On east side of Clifton Road near St. James Street, Garden City.

Water level, in feet above mean sea level, 1945							
Jan. 29	61.35	May 4	61.52	Aug. 4	61.67	Nov. 2	60.54
Feb. 26	61.77	June 1	61.51	Sept. 12	61.15	27	60.34
Mar. 26	62.04	29	61.24	Oct. 2	60.97	Dec. 26	60.90

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). Nassau County Department of Public Works. At junction of Hillside Avenue and Bacon Road, Westbury.

Water level, in feet above mean sea level, 1945							
Jan. 29	78.05	May 4	78.24	Aug. 4	77.72	Nov. 2	78.81
Feb. 26	77.91	June 1	77.85	Sept. 11	78.28	27	77.50
Mar. 26	78.42	29	77.51	Oct. 2	78.17	Dec. 26	77.56

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). New York City Department of Water Supply, Gas and Electricity. Carman and Scranton Avenues, East Rockaway.

Water level, in feet above mean sea level, 1945							
Feb. 7	7.61	Apr. 30	7.82	July 31	8.27	Oct. 26	7.25
Mar. 2	8.35	May 29	8.30	Sept. 5	7.62	Dec. 1	7.77
31	8.27	June 26	7.78	27	7.20		

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). New York City Department of Water Supply, Gas and Electricity. West side of Carman Road about 300 feet north of Southern State Parkway, Farmingdale.

Water level, in feet above mean sea level, 1945							
Jan. 31	37.23	Apr. 30	37.68	July 31	37.06	Nov. 1	35.83
Mar. 2	37.90	May 30	37.84	Sept. 5	36.65	28	36.22
28	37.78	June 26	37.43	27	36.22		

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). 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, 1945							
Feb. 2	52.32	Apr. 30	52.73	July 31	52.53	Oct. 26	51.73
Mar. 2	52.79	May 29	52.92	Aug. 31	52.40	Nov. 30	51.32
31	52.97	June 26	52.76	Sept. 27	52.09	Dec. 28	51.74

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). Nassau County Department of Public Works. On west side of Main Street, 100 feet south of Pittsburgh Avenue, Massapequa.

Water level, in feet above mean sea level, 1945							
Feb. 2	19.87	Apr. 30	21.03	July 31	20.58	Oct. 26	20.09
Mar. 2	20.37	May 29	21.51	Sept. 5	20.37	Dec. 1	20.90
31	20.80	June 26	20.97	27	20.12		

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). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 7	34.51	Apr. 30	34.88	July 31	34.75	Oct. 26	34.43
Mar. 2	35.20	May 29	34.91	Sept. 5	34.48	Dec. 1	34.76
31	34.98	June 26	34.68	27	34.30		

N1263 (*840, p. 283; 845, p. 323; 886, p. 502; *906, p. 139; 936, p. 167; 944, p. 147; 986, p. 176; 1016, p. 206). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 2	51.50	May 29	51.08	Sept. 11	50.52	Oct. 26	49.89
31	51.43	June 26	50.89	27	50.27	Dec. 1	49.73
Apr. 30	51.04	July 31	50.85				

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). New York City Department of Water Supply, Gas and Electricity. On west side of Newbridge Road about 300 feet south of Sunrise Highway, Belmore.

Water level, in feet above mean sea level, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 7	4.10	Apr. 30	8.31	July 31	8.20	Oct. 26	8.03
Mar. 2	5.08	May 29	8.21	Sept. 5	7.78	Dec. 1	8.97
31	7.66	June 26	8.06	27	7.65		

N1265 (*906, p. 140; *936, p. 167; 944, p. 148; 986, p. 177; 1016, p. 206). Nassau County Department of Public Works. At southwest corner of Albany Avenue and Merrick Road, Freeport. Water levels, in feet above mean sea level, 1945: Mar. 1, 3.77; May 30, 3.48; Sept. 24, 3.36.

N1269 (*906, p. 140; 936, p. 168; 944, p. 148; 986, p. 177; 1016, p. 206). Nassau County Department of Public Works. At southwest corner of Babylon Turnpike and Popular Street, Merrick. Water levels, in feet above mean sea level, 1945: Mar. 1, 3.41; May 30, 7.52; Sept. 11, 6.98; Dec. 7, 8.67.

N1273 (*906, p. 141; 936, p. 168; 944, p. 148; 986, p. 177; 1016, p. 207). Nassau County Department of Public Works. At northwest corner of Cypress Street and Walters Avenue, Wantagh. Water levels, in feet above mean sea level, 1945: Mar. 1, 5.89; May 30, 6.78; Sept. 11, 6.29; Dec. 7, 7.30.

N1275 (*906, p. 141; 936, p. 168; 944, p. 148; 986, p. 177; 1016, p. 207). Nassau County Department of Public Works. At northeast corner of Byron and Willow Streets, Wantagh. Water levels, in feet above mean sea level, 1945: Mar. 1, 3.43; May 30, 2.96; Sept. 11, 2.46.

N1278 (*906, p. 142; 936, p. 168; 944, p. 148; 986, p. 177; 1016, p. 207). Nassau County Department of Public Works. At southeast corner of Nassau Street and Bay Drive, Massapequa. Water levels, in feet above mean sea level, 1945: Mar. 1, 6.64; May 30, 6.56; Sept. 11, 5.83; Dec. 7, 7.33.

N1280 (*906, p. 142; 936, p. 169; 944, p. 149; 986, p. 177; 1016, p. 207). Nassau County Department of Public Works. At northwest corner of Harmony Drive and Park Boulevard, Massapequa. Water levels, in feet above mean sea level, 1945: Mar. 1, 6.03; May 30, 9.64; Sept. 11, 8.85; Dec. 7, 10.12.

N1282 (*906, p. 143; 936, p. 169; *944, p. 149; 986, p. 177; 1016, p. 207). Nassau County Department of Public Works. On west side of Wantagh State Parkway, about 0.9 mile south of Merrick Road, Wantagh. Water levels, in feet above mean sea level, 1945: Mar. 1, 1.39; May 30, 1.65; Sept. 11, 2.13.

N1285 (*906, p. 143; 936, p. 169; *944, p. 149; 986, p. 178; 1016, p. 207). Nassau County Department of Public Works. At northwest corner of Spruce and Melvin Streets, Wantagh. Water levels, in feet above mean sea level, 1945: Mar. 1, 3.06; May 30, 2.89; Sept. 24, 2.76; Dec. 7, 4.16.

N1288 (*906, p. 143; 936, p. 169; 944, p. 149; 986, p. 178; 1016, p. 207). Nassau County Department of Public Works. On west side of Bay View Avenue at St. Regis Street, Wantagh. Water levels, in feet above mean sea level, 1945: Mar. 1, 3.67; May 30, 3.41; Sept. 11, 2.93.

N1461 (*986, p. 178; 1016, p. 207). 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, 1945

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	76.13	76.16	76.96	77.04	76.93	76.54	75.95	75.61	75.69	75.86	76.08	76.10
2	76.00	76.16	77.00	77.04	76.90	76.54	76.94	75.59	75.71	75.91	76.09	76.08
3	75.98	76.14	77.04	77.06	76.89	76.54	75.93	75.57	75.68	75.90	76.10	76.09
4	76.03	76.13	76.99	77.01	.....	76.53	75.91	75.55	75.69	75.89	76.10	76.10
5	76.06	76.17	76.99	77.06	.....	76.52	75.90	75.53	75.71	75.91	76.09	76.07
6	76.04	76.13	77.04	76.96	.....	76.53	75.89	75.53	75.71	75.91	76.07	76.10
7	76.09	76.13	77.02	76.95	.....	76.53	75.86	75.53	75.72	75.95	76.06	76.12
8	76.11	76.20	76.99	76.96	.....	a76.51	75.86	75.50	75.72	75.98	76.06	76.07
9	76.12	76.17	77.00	76.97	.....	76.49	75.85	75.49	75.72	76.00	76.06	76.05
10	76.07	76.15	77.02	76.97	76.92	76.48	75.85	75.47	75.72	75.98	76.05	76.07
11	76.07	76.16	77.01	76.97	76.92	76.46	75.83	75.46	75.73	76.00	76.04	76.05
12	.....	76.16	77.01	76.99	76.91	73.44	75.81	75.45	75.71	76.01	76.06	76.02
13	.....	a76.19	77.04	77.00	76.94	76.40	75.81	75.45	75.68	76.03	76.09	76.02
14	.....	a76.25	77.03	76.98	76.91	76.37	75.30	75.44	75.68	76.03	76.11	76.06
15	.....	76.32	77.05	76.93	76.89	76.33	75.79	75.45	75.72	76.03	76.10	76.04
16	.....	76.34	77.07	76.92	76.85	76.29	75.77	75.44	75.72	76.05	76.05	76.04
17	.....	76.34	77.06	76.97	76.82	76.27	75.75	75.45	75.72	76.04	76.05	75.98
18	76.07	76.39	77.03	76.96	76.82	76.26	75.74	75.49	75.75	76.04	76.07	75.95
19	76.08	76.42	77.05	76.92	76.78	76.22	75.73	75.52	75.80	76.05	76.05	76.02
20	76.09	76.47	77.09	76.92	76.74	76.19	75.73	75.56	75.81	76.06	76.06	76.02
21	76.09	76.48	77.10	76.96	76.73	76.16	75.74	75.59	75.82	76.05	76.01	75.98
22	76.13	76.55	77.10	76.93	76.72	76.13	75.76	75.61	75.81	76.06	76.06	75.95
23	76.16	76.54	77.09	76.91	76.69	76.13	75.76	75.56	75.32	76.06	76.06	75.95
24	76.17	76.59	77.06	76.93	76.66	76.11	75.74	75.53	75.84	76.06	76.06	75.92
25	76.11	76.70	77.03	76.97	76.64	76.09	75.73	75.61	75.86	76.07	76.07	75.92
26	76.11	76.80	77.04	76.96	76.63	76.06	75.73	75.67	75.87	76.07	76.04	76.02
27	76.12	a76.85	77.05	76.97	76.62	76.03	75.69	75.68	75.85	76.07	76.03	76.06
28	76.10	a76.90	77.05	76.94	76.61	76.02	75.67	75.69	75.85	76.05	76.05	76.03
29	76.17	.....	77.05	76.93	76.60	75.99	75.66	75.70	75.86	76.05	76.11	76.08
30	76.13	.....	77.06	76.93	76.59	75.96	75.63	75.70	75.84	76.06	76.11	76.13
31	76.15	.....	77.07	.....	76.57	.....	75.61	75.69	.....	76.08	.....	76.17

a Estimated.

N1462 (*986, p. 179; 1016, p. 209). 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, 1945

(From recorder charts)

Day	Jan.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	62.77	63.80	63.47	63.25	63.21	63.07	63.16	62.98	62.72	62.39	62.11
2	62.73	63.75	63.47	63.24	63.20	63.07	63.16	62.98	62.74	62.39	62.10
3	62.74	63.72	63.47	63.23	63.21	63.07	63.17	62.96	62.71	62.38	62.10
4	62.76	63.65	63.43	63.27	63.20	63.06	63.15	62.95	62.68	62.37	62.10
5	62.78	63.62	63.48	63.29	63.19	63.05	63.13	62.95	62.68	62.35	62.10
6	62.77	63.67	63.42	63.30	63.19	63.06	63.14	62.94	62.68	62.33	62.12
7	62.79	63.63	63.39	63.30	63.18	63.05	63.15	62.93	62.67	62.32	62.13
8	62.80	63.63	63.39	63.31	63.18	63.05	63.13	62.93	62.67	62.31	62.10
9	62.80	63.64	63.39	63.27	63.17	63.04	63.11	62.93	62.66	62.30	62.10
10	62.80	63.65	63.38	63.28	63.16	63.04	63.11	62.92	62.64	62.28	62.13
11	62.78	63.62	63.38	63.29	63.16	63.03	63.10	62.92	62.63	62.27	62.12
12	62.81	63.61	63.37	63.27	63.15	63.01	63.09	62.90	62.62	62.26	62.10
13	62.81	63.62	63.37	63.29	63.14	63.00	63.08	62.89	62.62	.....	62.10

N1462--Continued.

Water level at noon, in feet above mean sea level, 1945

(From recorder charts)

Day	Jan.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
14	62.81	63.60	63.37	63.26	63.13	62.99	63.08	62.88	62.60	.....	62.14
15	62.81	63.59	63.35	63.26	63.13	63.00	63.10	62.88	62.59	.....	62.13
16	62.84	63.59	63.34	63.25	63.12	62.98	63.08	62.86	62.58	.....	62.14
17	62.81	63.59	63.36	63.24	63.12	62.98	63.08	62.85	62.57	.....	62.11
18	62.79	63.57	63.35	63.27	63.12	63.00	63.07	62.85	62.56	.....	62.10
19	.....	63.56	63.32	63.25	63.11	63.04	63.06	62.85	62.54	62.17	62.15
20	.....	63.58	63.32	63.22	63.11	63.08	63.05	62.84	62.53	62.17	62.14
21	.....	63.58	63.32	63.23	63.10	63.10	63.05	62.83	62.52	62.15	62.12
22	.....	63.58	63.31	63.24	63.10	63.11	63.05	62.81	62.51	62.16	62.11
23	.....	63.57	63.29	63.23	63.11	63.12	63.03	62.81	62.50	62.16	62.11
24	.....	63.55	63.29	63.22	63.10	63.12	63.02	62.79	62.49	62.15	62.10
25	.....	63.52	63.30	63.22	63.10	63.12	63.04	62.79	62.47	62.15	62.11
26	.....	63.50	63.29	63.21	63.10	63.12	63.04	62.78	62.47	62.13	62.19
27	.....	63.51	63.30	63.21	63.10	63.13	63.02	62.76	62.45	62.12	62.22
28	.....	63.49	63.28	63.22	63.09	63.15	63.01	62.75	62.43	62.12	62.23
29	.....	63.49	63.26	63.25	63.09	63.17	63.00	62.75	62.42	62.14	62.29
30	.....	63.49	63.26	63.24	63.08	63.15	62.99	62.73	62.41	62.13	62.30
31	.....	63.50		63.23		63.15	62.98		62.41		62.33

N1463 (*986, p. 180; 1016, p. 210). Nassau County Department of Public Works. Southern State Parkway and Seamens Neck Road, Jerusalem.

Water level at noon, in feet above mean sea level, 1945

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	38.56	38.30	39.27	39.25	38.95	39.02	38.60	38.45	38.26	37.75	37.41	37.61
2	38.54	38.29	39.29	39.24	38.93	39.01	38.59	38.42	38.25	37.75	37.40	37.66
3	38.58	38.27	39.33	39.22	38.92	39.02	38.59	38.42	38.21	37.73	37.39	37.71
4	38.61	38.24	39.31	39.20	39.04	38.99	38.57	38.40	38.19	37.71	37.38	37.73
5	38.62	38.24	39.32	39.19	39.11	38.97	38.55	38.37	38.18	37.70	37.36	37.76
6	38.63	38.23	39.38	39.15	39.14	38.95	38.53	38.36	38.17	37.71	37.35	37.81
7	38.64	38.21	39.38	39.13	39.15	38.94	38.51	38.39	38.15	37.70	37.34	37.85
8	38.65	38.21	39.41	39.13	39.17	38.92	38.50	38.49	38.13	37.67	37.33	37.87
9	38.65	38.28	39.45	39.11	39.17	38.90	38.49	38.55	38.11	37.66	37.32	37.91
10	38.64	38.26	39.47	39.10	39.19	38.90	38.48	38.58	38.09	37.66	37.30	37.97
11	38.60	38.29	39.48	39.08	39.21	38.88	38.45	38.58	38.08	37.65	37.28	38.00
12	38.62	38.41	39.49	39.05	39.22	38.86	38.43	38.59	38.07	37.64	37.27	38.02
13	38.62	38.49	39.50	39.04	39.24	38.84	38.41	38.58	38.05	37.63	37.27	38.06
14	38.62	38.50	39.50	39.02	39.23	38.86	38.38	38.58	38.05	37.62	37.26	38.09
15	38.60	38.47	39.51	38.99	39.24	38.83	38.35	38.58	38.02	37.60	37.26	38.11
16	38.61	38.51	39.52	38.98	39.24	38.81	38.33	38.56	38.00	37.58	37.25	38.13
17	38.57	38.68	39.52	38.96	39.24	38.81	38.32	38.54	37.98	37.58	37.24	38.16
18	38.53	38.67	39.49	38.94	39.25	38.80	38.38	38.52	37.94	37.57	37.23	38.17
19	38.52	38.65	39.49	38.92	39.25	38.77	38.37	38.48	37.93	37.55	37.21	38.18
20	38.50	38.65	39.49	38.91	39.23	38.78	38.35	38.45	37.92	37.54	37.22	38.18
21	38.49	38.64	39.49	38.90	39.22	38.75	38.84	38.44	37.90	37.52	37.20	.....
22	38.49	38.76	39.48	38.88	39.22	38.73	38.33	38.41	37.88	37.50	37.33	.....
23	38.49	39.01	39.46	38.85	39.20	38.72	38.31	38.38	37.86	37.49	37.39	.....
24	38.49	39.03	39.41	38.84	39.17	38.72	38.30	38.36	37.84	37.49	37.45	38.23
25	38.42	39.03	39.37	38.86	39.15	38.71	38.30	38.36	37.84	37.48	37.47	38.23
26	38.40	39.05	39.35	38.98	39.14	38.70	38.50	38.35	37.83	37.48	37.47	38.33
27	38.38	39.18	39.35	38.99	39.12	38.67	38.48	38.32	37.81	37.46	37.48	38.35
28	38.37	39.22	39.32	38.99	39.12	38.66	38.48	38.32	37.82	37.45	37.48	38.37
29	38.37		39.30	38.96	39.12	38.64	38.47	38.31	37.79	37.43	37.55	38.41
30	38.35		39.28	38.95	39.11	38.61	38.44	38.29	37.77	37.41	37.56	38.48
31	38.34		39.28		39.05		38.43	38.27		37.41		38.62

a Estimated.

N1464 (*986, p. 181; 1016, p. 211). Nassau County Department of Public Works. Grant and Franklin Avenues, Seaford.

Water level at noon, in feet above mean sea level, 1945

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	14.97	14.75	15.17	15.79	16.03	16.10	15.75	15.68	15.60	15.37	15.37	16.04
2	14.96	14.73	15.24	15.81	16.05	16.08	15.73	15.68	15.59	15.41	15.37	16.12
3	14.98	14.71	15.31	15.81	16.07	16.08	15.72	15.67	15.56	15.36	15.38	16.22
4	15.01	14.68	15.33	15.78	16.10	16.07	15.70	15.64	15.55	15.34	15.35	16.28
5	15.03	14.66	15.35	15.82	16.15	16.06	15.69	15.60	15.54	15.34	15.34	16.32
6	15.05	14.63	15.39	15.77	16.22	16.06	15.69	15.60	15.53	15.34	15.30	16.36
7	15.08	14.61	15.40	15.77	16.28	16.08	15.67	15.64	15.52	15.42	15.30	16.38
8	15.11	14.60	15.41	15.79	16.35	16.08	15.66	15.71	15.51	15.44	15.30	16.38
9	15.13	14.62	15.44	15.80	16.37	16.07	15.65	15.79	15.50	15.44	15.29	16.39
10	15.12	14.62	15.42	15.79	16.40	16.04	15.64	15.84	15.49	15.42	15.28	16.41
11	15.12	14.64	15.52	15.79	16.40	16.02	15.62	15.87	15.49	15.41	15.28	16.40
12	15.13	14.68	15.56	15.78	16.40	16.00	15.59	15.88	15.48	15.42	15.29	16.40
13	15.14	14.72	15.60	15.79	16.42	15.97	15.57	15.88	15.46	15.41	15.31	16.40
14	15.13	14.74	15.62	15.79	16.40	15.95	15.56	15.88	15.45	15.38	15.33	16.42
15	15.11	14.71	15.65	15.77	16.39	15.94	15.55	15.88	15.45	15.36	15.32	16.40
16	15.12	14.73	15.68	15.75	16.36	15.93	15.54	15.85	15.43	15.36	15.31	16.39
17	15.08	14.76	15.69	15.78	16.34	15.92	15.54	15.83	15.42	15.34	15.33	16.32
18	15.04	14.78	15.68	15.77	16.35	15.90	15.58	15.30	15.43	15.33	15.35	16.29
19	15.02	14.76	15.69	15.75	16.32	15.88	15.61	15.77	15.45	15.32	15.34	16.34
20	14.99	14.76	15.71	15.75	16.28	15.87	15.62	15.75	15.43	15.32	15.36	16.27
21	14.97	14.74	15.72	15.76	16.27	15.86	15.62	15.74	15.43	15.31	15.36	16.23
22	14.96	14.77	15.74	15.73	16.27	15.85	15.60	15.73	15.41	15.31	15.42	16.19
23	14.95	14.85	15.74	15.70	16.24	15.85	15.58	15.69	15.40	15.30	15.52	16.17
24	14.94	14.91	15.74	15.71	16.21	15.84	15.56	15.68	15.39	15.30	15.63	16.13
25	14.89	14.94	15.74	15.72	16.19	15.83	15.55	15.70	15.39	15.31	15.73	16.12
26	14.87	14.98	15.74	15.80	16.18	15.82	15.55	15.72	15.38	15.36	15.79	16.21
27	14.84	15.07	15.76	15.85	16.15	15.81	15.67	15.68	15.37	15.36	15.83	16.24
28	14.82	15.12	15.76	15.89	16.14	15.79	15.70	15.66	15.37	15.36	15.87	16.26
29	14.81		15.77	15.95	16.16	15.78	15.72	15.64	15.39	15.37	15.92	16.33
30	14.78		15.79	15.99	16.14	15.76	15.69	15.63	15.36	15.37	15.97	16.38
31	14.76		15.81		16.12		15.68	15.61		15.39		16.51

a Estimated.

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). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	23.38	Apr. 28	23.41	July 30	23.79	Oct. 29	23.10
Mar. 3	22.77	June 2	23.54	Aug. 27	23.61	Nov. 26	23.06
31	23.66	30	23.26	Oct. 1	23.28		

N1614 (*906, p. 144; 936, p. 170; 944, p. 150; 986, p. 183; 1016, p. 212). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	68.89	May 4	69.27	Aug. 4	69.04	Nov. 2	68.37
Feb. 26	68.88	June 1	69.15	Sept. 12	68.95	27	67.98
Mar. 26	69.44	29	68.98	Oct. 2	68.76	Dec. 26	67.89

N1615 (*906, p. 145; 936, p. 170; 944, p. 150; 986, p. 183; 1016, p. 213). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 7	44.18	Apr. 30	44.43	July 31	44.09	Oct. 26	43.42
Mar. 2	44.73	May 29	44.69	Sept. 5	43.87	Dec. 1	43.34
31	44.85	June 26	44.34	27	43.60		

N1616 (*906, p. 146; 936, p. 170; 944, p. 150; 986, p. 183; 1016, p. 213). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	81.64	May 4	82.46	Aug. 4	82.36	Nov. 2	82.00
Feb. 26	81.92	June 1	82.45	Sept. 12	82.23	27	81.83
Mar. 26	82.25	29	82.32	Oct. 12	82.21	Dec. 26	81.61

N1682 (*906, p. 151; 936, p. 171; 944, p. 151; 986, p. 184; 1016, p. 213). Nassau County Department of Public Works. On southwest corner of Crocus and Elm Avenues, Bellerose.

Water level, in feet above mean sea level, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 2	43.94	May 29	44.00	Sept. 5	44.11	Oct. 26	43.73
31	44.15	June 26	43.88	27	43.91	Dec. 1	43.57
Apr. 30	44.06	July 31	43.93				

N1683 (*906, p. 151; 936, p. 171; 944, p. 151; 986, p. 184; 1016, p. 213). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	56.78	May 4	56.83	Aug. 4	56.77	Nov. 2	56.24
Feb. 26	57.06	June 1	56.67	Sept. 12	56.63	27	56.41
Mar. 26	57.00	29	56.47	Oct. 2	56.16	Dec. 26	55.84

N1634 (*906, p. 151; 936, p. 172; 944, p. 151; 986, p. 184; 1016, p. 214). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	59.27	May 4	59.97	Aug. 4	59.19	Nov. 2	58.25
Feb. 26	59.40	June 1	58.91	Sept. 12	58.98	27	57.85
Mar. 26	59.37	29	58.83	Oct. 2	58.82	Dec. 26	58.01

N1328 (*886, p. 499; 906, p. 136; 936, p. 164; *944, p. 152; 986, p. 184; 1016, p. 214. Nassau County Department of Public Works. Melville Road near Suffolk County line, Farmingdale.

Water level at noon, in feet above mean sea level, 1945 (From recorder charts)												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	60.72	60.47	60.76	61.20	60.96	61.33	60.86	60.50	60.17	59.65	59.16	58.93
2a	60.70	60.46	60.78	61.20	60.98	61.33	60.85	60.49	60.16	59.65	59.15	58.93
3a	60.67	60.44	60.87	61.17	61.01	61.31	60.84	60.49	60.12	59.63	59.14	58.95
4	60.64	60.40	60.90	61.14	61.10	61.28	60.82	60.48	60.11	59.60a	59.13	58.98
5	60.63	60.40	60.95	61.16	61.10	.....	60.81	60.46	60.09	59.59	59.12	59.00
6	60.62	60.37	61.02	61.12	61.12	.....	60.80	60.46	60.07	59.60	59.10	59.04
7	60.62	60.36	61.05	61.08	61.13	.....	60.77	60.49	60.06	59.58	59.08	59.09
8	60.65	60.34	61.07	61.08	61.16	.....	60.76	60.47	60.05	59.55	59.06	59.11
9	60.67	60.33	61.07	61.06	61.17	61.17	60.74	60.45	60.03	59.54	59.05	59.13
10	60.65	60.33	61.12	61.06	61.22	61.17	60.73	60.44	60.01	59.52	59.03	59.17
11	60.64	60.33	61.15	61.05	61.28	61.11	60.71	60.44	60.00	59.50	59.02	59.19
12	60.66	60.36	61.17	61.02	61.28	61.09	60.68	60.43	59.93	59.49	59.00	59.22
13	60.69	60.36	61.22	61.01	61.33	.....	60.66	60.42	59.95	59.48	58.99	59.25
14	60.71	60.36	61.24	61.00	61.35	.....	60.65	60.40	59.93	59.46	58.98	59.29

a Estimated.

N1328--Continued.

Water level at noon, in feet above mean sea level, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
15	60.71	60.30	61.28	60.99	61.37	.....	a60.64	60.40	59.92	59.44	58.96	59.32
16	60.74	.....	61.31	60.99	61.39	61.07	60.62	60.39	59.89	59.43	58.94	59.36
17	60.72	.....	61.33	60.97	61.40	61.06	60.60	60.38	59.87	59.41	58.93	59.38
18	60.67	.....	61.33	60.95	61.43	61.05	60.61	60.38	59.86	59.39	58.91	59.40
19	60.67	.....	61.33	60.94	61.43	61.03	60.58	60.35	59.86	59.37	58.89	59.43
20	60.66	.....	61.37	60.92	61.41	61.03	60.57	60.33	59.85	59.36	58.91	59.45
21	60.66	60.36	61.38	60.91	61.42	61.01	60.56	60.32	59.83	59.34	58.88	59.46
22	60.66	60.45	61.39	60.89	61.43	60.99	60.56	60.31	59.81	59.32	59.05	59.47
23	60.65	60.64	61.39	60.88	61.42	60.98	60.55	60.29	59.79	59.29	58.90	59.48
24	60.64	60.64	61.36	60.87	61.41	60.96	60.53	60.28	59.77	59.28	58.89	59.47
25	60.59	60.63	61.32	60.86	61.41	60.95	60.52	60.28	59.76	59.27	58.88	59.48
26	60.53	60.63	61.32	60.92	61.40	60.94	60.64	60.27	59.74	59.26	58.86	59.55
27	60.56	60.73	61.31	60.91	61.39	60.92	60.53	60.25	59.72	59.24	58.86	59.53
28	60.53	60.73	61.26	60.90	61.39	60.91	60.52	60.22	59.71	59.22	58.86	59.51
29	60.53	.....	61.26	60.90	61.39	60.90	60.52	60.21	59.70	59.20	58.97	59.53
30	60.50	.....	61.24	60.92	61.38	60.88	60.50	60.20	59.67	59.19	58.94	59.55
31	60.49	.....	61.24	.....	61.36	.....	60.50	60.18	.....	59.18	.....	59.58

a Estimated.

N1829 (*845, p. 321; 886, p. 496; 906, p. 131; 936, p. 160; *944, p. 153; 986, p. 186; 1016, p. 215). Nassau County Department of Public Works. Stewart Avenue, about 700 feet west of New Bridge Avenue, Salisbury.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	68.14	67.86	68.73	68.34	68.02	67.97	67.38	68.02	67.87	67.67	67.37	67.49
2	68.17	67.83	68.70	68.33	68.00	67.97	67.88	68.01	67.87	67.68	67.35	67.49
3	68.16	67.82	68.70	68.32	67.99	68.01	68.01	68.01	67.83	67.65	67.34	67.50
4	68.15	67.80	68.64	68.30	68.08	.....	67.94	67.99	67.83	67.63	67.33	67.50
5	68.14	67.81	68.62	68.32	68.03	.....	67.92	67.98	67.82	67.63	67.31	67.50
6	68.13	67.78	68.67	68.26	68.05	.....	67.91	67.97	67.81	67.63	67.30	67.52
7	68.13	67.78	68.67	68.25	68.05	.....	67.87	68.10	67.81	67.66	67.29	67.59
8	68.14	67.84	68.68	68.24	68.07	.....	67.87	68.06	67.81	.....	67.28	67.58
9	68.14	67.90	68.70	68.23	68.04	67.93	67.36	68.06	67.80	67.61	67.27	67.59
10	68.10	67.90	68.70	68.22	68.04	67.92	67.86	68.07	67.80	67.59	67.25	67.60
11	68.09	67.93	68.65	68.21	68.09	67.92	67.85	68.07	67.78	67.58	67.24	67.60
12	.....	68.15	68.63	68.18	68.06	67.92	67.84	68.06	67.77	67.58	67.23	67.59
13	.....	68.32	68.62	68.17	68.09	67.91	67.83	68.05	67.76	67.57	67.22	67.59
14	.....	a68.18	68.61	68.16	68.07	67.96	67.82	68.04	67.76	67.56	67.22	67.61
15	.....	68.05	68.59	68.14	68.07	67.94	.....	68.04	67.87	67.55	67.20	67.60
16	.....	68.15	68.59	68.12	68.06	67.94	67.92	68.02	67.80	67.53	67.18	67.60
17	.....	68.35	68.57	68.13	68.05	67.93	67.87	68.01	67.78	67.51	67.18	67.59
18	68.03	68.28	68.53	68.11	68.10	67.93	68.00	67.99	67.77	67.50	67.17	67.58
19	67.89	68.25	68.53	68.10	68.08	67.92	67.99	67.97	67.85	67.49	67.17	67.61
20	67.88	68.23	68.53	68.10	68.04	67.96	67.99	67.97	67.79	67.48	67.24	67.59
21	67.88	.....	68.52	68.09	68.04	67.93	67.99	67.95	67.77	67.47	67.20	67.58
22	.....	.....	68.51	68.08	68.04	67.98	67.98	67.95	67.74	67.46	67.35	67.56
23	.....	.....	68.49	68.06	68.03	67.95	67.98	67.93	67.73	67.45	67.41	67.56
24	.....	.....	68.46	68.05	68.01	67.94	67.96	67.93	67.73	67.44	67.44	67.54
25	.....	.....	68.44	68.05	68.00	67.94	67.95	67.98	67.73	67.44	67.44	67.55
26	.....	.....	68.44	68.14	68.00	67.94	68.14	67.96	67.72	67.44	67.41	68.11
27	.....	.....	68.43	68.08	67.99	67.92	68.11	67.92	67.70	67.42	67.38	67.95
28	.....	.....	68.40	68.06	68.00	67.91	68.08	67.91	67.70	67.40	67.38	67.91
29	.....	.....	68.38	68.03	68.02	67.91	68.07	67.90	67.69	67.39	67.50	67.92
30	.....	.....	68.37	68.02	68.01	67.89	68.03	67.89	67.67	67.37	67.48	67.98
31	.....	.....	68.37	.....	67.99	.....	68.02	67.88	.....	67.37	.....	68.12

a Estimated.

N1830 (*944, p. 153; 986, p. 187; 1016, p. 216). Nassau County Department of Public Works. West side of Tyson Avenue just north of Creedmore Spur of Long Island Railroad, Floral Park.

N1830--Continued.

Water level, in feet above mean sea level, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 7	51.17	Apr. 30	51.49	July 31	51.70	Oct. 26	51.20
Mar. 2	51.67	May 29	51.55	Sept. 4	51.67	Dec. 1	50.93
31	51.57	June 26	51.41	27	51.48		

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). 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, 1945

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	4.99	....	4.75	5.63	5.81	5.26	4.91	4.78	4.78	4.69	5.61	6.00
2	4.86	....	4.89	5.62	5.67	5.27	4.90	4.82	4.86	4.90	5.63	5.86
3	4.60	....	5.17	5.71	5.56	6.35	4.90	4.88	4.72	4.91	5.68	5.90
4	4.62	....	5.13	5.60	5.71	5.29	4.89	4.92	....	4.75	5.64	5.96
5	4.68	....	5.11	5.74	5.67	5.23	4.89	4.72	4.74	4.79	5.58	5.91
6	4.62	....	5.39	5.59	5.60	5.19	4.90	4.80	4.76	4.88	5.49	6.03
7	4.70	....	5.44	5.49	5.51	5.19	4.89	4.93	4.80	5.01	5.43	6.14
8	4.81	....	5.27	5.53	5.52	5.21	....	4.85	4.83	4.92	5.48	6.00
9	4.79	....	5.18	....	5.41	5.24	4.80	4.75	4.81	4.96	5.51	5.91
10	4.61	4.55	5.14	....	5.41	5.23	4.81	4.74	4.83	4.82	5.48	5.97
11	4.52	....	5.04	....	5.51	5.23	4.81	4.75	4.89	4.81	5.46	5.91
12	4.60	....	4.94	....	5.41	5.30	4.80	4.74	4.88	4.92	5.57	5.79
13	4.73	....	4.96	....	5.47	5.26	4.80	4.72	4.74	4.94	5.69	5.79
14	4.73	....	4.90	5.91	5.42	5.27	4.80	4.76	4.72	4.86	5.88	5.97
15	4.66	....	4.90	5.84	5.37	5.23	4.81	4.87	4.83	4.83	6.00	5.99
16	4.78	....	4.93	5.76	5.35	5.25	4.82	4.90	4.72	4.92	5.93	6.02
17	4.75	4.51	4.91	5.86	5.34	5.23	4.82	4.77	4.63	4.99	5.99	5.97
18	4.63	4.48	4.82	5.94	5.42	5.20	4.83	4.75	4.71	5.09	6.12	5.95
19	4.65	3.57	4.79	5.85	5.44	5.13	4.83	4.70	4.88	5.17	6.12	6.15
20	4.67	3.36	4.93	5.84	5.31	5.15	4.84	4.70	4.86	5.26	6.27	6.24
21	4.65	4.44	5.01	5.93	5.31	5.15	4.85	4.77	4.85	5.26	6.14	6.16
22	4.72	4.65	5.02	5.88	5.37	5.19	4.86	4.82	4.76	5.31	6.26	6.08
23	4.87	4.71	5.03	5.30	5.35	5.17	4.87	4.75	4.69	5.37	6.13	6.09
24	4.87	4.53	5.07	5.78	5.26	5.15	....	4.73	4.72	5.42	5.99	6.03
25	4.68	4.39	5.07	5.81	5.22	5.10	....	4.93	4.78	5.45	5.89	6.04
26	4.60	4.45	5.16	5.82	5.22	5.09	....	4.91	4.79	5.55	5.71	6.29
27	4.57	4.69	5.35	5.78	5.21	5.03	....	4.82	4.74	5.51	5.62	6.15
28	....	4.62	5.42	5.64	5.26	5.03	....	4.80	4.75	5.42	5.70	5.94
29	....	....	5.47	5.67	5.41	5.04	....	4.79	4.78	5.43	6.01	6.09
30	....	....	5.49	5.75	5.43	5.02	4.78	4.79	4.64	5.48	6.13	6.09
31	....	....	5.67	....	5.35	....	4.73	4.76	....	5.61	....	6.19

Q287 (*886, p. 504; 906, p. 153; 936, p. 174; 944, p. 155; 986, p. 189; 1016, p. 218). Broad Channel Corporation. Southwest 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	10.79	Apr. 3	9.38	June 30	8.45	Oct. 1	5.92
Feb. 5	8.76	28	9.30	Aug. 6	5.37	29	8.37
Mar. 3	8.29	June 6	7.36	27	7.31	Nov. 26	8.82

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). 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 with reference to mean sea level, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	+1.42	Apr. 3	+0.99	July 3	-0.34	Oct. 9	+0.95
27	+1.04	27	+0.81	Aug. 7	+0.49	Nov. 2	+0.94
Mar. 3	+1.06	June 6	+0.80	Sept. 13	+0.41	Dec. 5	+1.08

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). 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, 1945 (From recorder charts)												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	0.68	....	0.41	4.43	....	4.68	3.41	3.23	3.57	3.96	4.99	a5.85
2	.74	....	.44	4.56	....	4.74	3.29	3.26	3.56	3.99	5.03	a5.86
3	.73	.20	.47	4.77	....	4.80	3.18	3.29	3.56	4.00	5.10	5.87
4	.73	.18	....	4.93	....	4.86	3.04	3.31	3.55	3.96	5.15	5.90
5	.75	.18	....	5.08	5.62	4.91	2.92	3.30	3.57	3.95	5.21	5.91
6	.75	.18	....	5.15	5.60	....	2.85	3.30	3.57	3.96	5.23	5.93
7	.74	.18	....	5.16	5.55	....	2.81	3.38	3.57	4.02	5.24	5.97
8	.81	.18	....	5.18	5.50	....	2.78	3.43	3.55	4.08	5.24	5.98
9	.87	.19	....	5.21	5.46	4.86	2.75	3.44	3.55	4.14	5.25	5.94
10	.89	.19	1.17	5.30	5.38	4.84	2.75	3.42	3.55	4.12	5.23	5.95
11	.89	....	....	5.35	5.38	4.83	2.72	3.41	3.54	4.11	5.21	5.96
12	.87	....	....	5.40	5.27	4.83	2.63	3.39	3.56	4.10	5.21	5.90
13	.85	....	....	5.43	5.22	4.81	2.52	3.38	3.54	4.12	5.25	5.80
14	.89	....	....	5.46	5.20	4.77	2.43	3.39	3.53	4.13	5.33	5.64
15	.94	....	....	....	5.18	4.68	....	3.43	3.54	4.16	5.41	5.53
16	.99	....	....	....	5.14	4.59	....	3.45	3.58	4.18	5.41	5.39
17	1.08	.37	1.97	....	5.10	4.50	2.32	3.48	3.58	4.21	5.40	5.27
18	a1.05	.37	2.34	....	5.05	4.38	2.37	3.51	3.67	4.22	5.41	5.17
19	a1.01	.36	2.61	....	5.01	....	2.45	3.63	3.79	4.25	5.44	5.09
20	.98	.36	2.93	....	4.97	....	2.53	3.54	3.85	4.32	5.53	5.00
21	....	.36	3.18	5.66	4.94	....	2.62	3.56	3.90	4.40	5.53	4.81
22	....	.35	3.40	....	4.93	....	2.71	3.59	3.91	4.50	5.55	4.69
23	....	.37	3.54	....	4.93	....	2.80	3.59	3.91	4.61	5.62	4.59
24	....	.37	3.62	....	....	3.78	2.92	3.57	3.93	4.71	5.66	4.50
25	....	.35	....	....	....	3.77	3.00	3.57	4.04	4.78	5.69	4.50
26	....	.35	....	....	4.65	3.77	3.08	3.58	4.05	4.84	5.70	4.77
27	.73	.36	....	....	4.60	3.76	3.15	3.59	4.04	4.87	5.70	5.03
28	....	.38	....	5.75	4.59	3.70	3.17	3.62	4.03	4.86	5.70	5.18
29	....	....	....	....	4.59	3.63	3.19	3.62	4.01	4.86	5.80	5.32
30	....	....	....	....	4.63	3.52	3.20	3.61	3.97	4.89	5.84	5.39
31	a.45	4.41	....	....	4.66	....	3.21	3.59	....	4.94	....	5.40
a. Estimated.												

a Estimated.

Q471 (*906, p. 155; 936, p. 176; 944, p. 157; 986, p. 192; 1016, p. 220). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	14.95	Apr. 5	16.71	June 30	16.93	Oct. 12	17.04
Feb. 3	14.80	28	16.90	July 30	17.02	29	16.97
Mar. 3	15.14	June 4	17.07	Aug. 27	16.97	Nov. 26	16.93

Q543 (*840, p. 271; *845, p. 316; *886, p. 506; 906, p. 156; 936, p. 176; 944, p. 157; 986, p. 192; 1016, p. 220). New York City Department of Water Supply well Rockaway Park 3, Rockaway Beach Boulevard and Beach 110th Street, Rockaway Park. Water level affected by tide.

Mean daily water level, in feet above mean sea level, 1945
(From recorder charts, after Mar. 3)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	11.44	.....	.....	9.5	10.1	...	8.6	7.5	7.3	7.5	7.7	9.3
2	9.7	10.1	...	8.6	7.6	7.2	7.6	7.9	9.1
3	9.35	9.7	10.2	...	8.4	7.7	7.0	6.9	8.0	8.8
4	10.0	10.4	...	8.2	7.5	...	7.1	8.0	8.8
5	10.01	.....	9.3	10.2	...	8.2	7.2	6.9	7.4	8.1	8.8
6	8.8	10.1	...	8.1	7.6	6.3	7.6	7.9	9.3
7	8.9	9.9	9.3	8.1	7.9	6.9	8.0	7.7	9.1
8	9.2	9.9	9.3	8.2	7.8	7.0	8.0	7.9	8.4
9	9.4	9.7	9.3	8.2	7.6	7.1	7.8	7.8	8.6
10	9.4	9.9	9.3	8.2	7.6	7.3	7.7	7.7	8.8
11	9.3	9.4	9.3	8.0	7.4	7.5	7.8	7.9	8.3
12	9.5	.....	9.2	7.8	7.3	7.3	7.9	8.0	7.8
13	9.7	.....	9.1	7.9	7.2	7.0	7.7	8.2	8.0
14	9.6	.....	9.1	7.8	7.3	7.1	7.8	8.2	8.6
15	9.6	.....	9.1	.....	7.5	7.1	7.7	8.1	9.1
16	9.8	.....	9.2	.....	7.4	6.7	7.5	7.5	8.2
17	9.9	.....	9.2	7.4	7.4	7.1	7.8	7.8	8.0
18	9.7	.....	9.2	7.3	7.4	7.6	7.7	7.9	7.9
19	9.4	.....	9.0	7.2	7.3	7.3	7.6	8.3	8.8
20	9.5	.....	9.0	7.2	7.2	7.2	7.5	7.8	8.9
21	9.7	.....	...	7.4	7.3	7.4	7.4	8.0	8.0
22	9.3	.....	...	7.6	7.3	7.1	7.7	...	8.0
23	9.6	.....	...	7.7	7.2	7.2	7.8	...	7.7
24	9.7	.....	9.0	7.8	7.3	7.2	8.0	...	8.9
25	9.6	10.3	.....	8.9	7.7	7.3	7.3	7.9	...	9.0
26	9.6	10.2	.....	9.2	7.6	7.1	7.2	7.5	...	9.3
27	9.4	10.2	.....	9.1	7.6	7.2	7.4	6.9	8.4	8.2
28	9.6	9.7	.....	8.9	7.7	7.4	7.4	7.0	9.0	8.4
29	9.6	10.0	.....	8.8	7.4	7.2	7.3	7.5	9.6	9.1
30	9.5	10.1	.....	8.8	7.3	7.2	7.4	7.6	9.2	8.9
31	9.8	.....	.....	...	7.4	7.2	...	7.7	...	9.0

Q1029 (*840, p. 274; 845, p. 319; *886, p. 506; *936, p. 177; 944, p. 158; 986, p. 194; 1016, p. 220). New York City Department of Water Supply, Gas and Electricity. On north side of North Conduit Avenue, about 300 feet east of Far Rockaway Branch of Long Island Railroad, Aqueduct.

Water level, in feet above mean sea level, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	2.22	Apr. 3	1.98	July 3	2.03	Oct. 9	2.10
Feb. 6	1.69	27	2.18	Aug. 7	2.40	Nov. 2	1.99
Mar. 3	2.18	June 6	2.18	Sept. 13	1.84	Dec. 5	2.53

Q1090 (*840, p. 275; 845, p. 318; 886, p. 507; 906, p. 157; 936, p. 173; 944, p. 159; 986, p. 195; 1016, p. 220). New York City Department of Water Supply, Gas and Electricity. On east side of Hawktree Creek Road, about 350 feet south of 133d Avenue, Aqueduct.

Water level, in feet above mean sea level, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	4.25	Apr. 28	3.96	Aug. 7	4.26	Nov. 2	3.64
Mar. 5	4.16	June 6	4.25	Sept. 13	3.96	Dec. 5	3.57
Apr. 3	4.20	July 3	3.99	Oct. 9	3.75		

Q1222 (*906, p. 158; 936, p. 178; 944, p. 159; 986, p. 195; 1016, p. 221). 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 level, in feet above mean sea level, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	1.62	Apr. 27	3.64	Aug. 4	2.39	Nov. 5	3.21
Mar. 3	1.63	June 1	2.83	Sept. 4	2.24	Dec. 1	4.35
Apr. 5	2.94	30	2.88	Oct. 8	2.34		

Q1223 (*906, p. 159; *936, p. 178; 944, p. 159; 986, p. 195; 1016, p. 221). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	8.05	Apr. 28	7.60	Aug. 7	7.73	Nov. 2	6.86
Mar. 5	7.96	June 6	7.50	Sept. 13	7.31	Dec. 5	7.12
Apr. 3	7.96	July 3	7.22	Oct. 9	7.07		

Q1224 (*906, p. 159; *936, p. 179; 944, p. 159; 986, p. 195; 1016, p. 221). 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. Measuring point lowered to 47.48 feet above mean sea level on Nov. 3, 1944.

Water level, in feet above mean sea level, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	8.30	Apr. 3	8.25	July 4	8.25	Oct. 9	8.28
Feb. 6	8.24	27	8.14	Aug. 8	8.31	Nov. 2	8.48
Mar. 5	8.62	June 6	8.43	Sept. 13	8.56	Dec. 4	8.60

Q1225 (*906, p. 160; *936, p. 179; 944, p. 160; 986, p. 195; 1016, p. 222). New York City Department of Water Supply, Gas and Electricity. Southeast corner of 109th Avenue and 200th Street.

Water level, in feet above mean sea level, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	28.36	Apr. 27	28.48	Aug. 7	28.56	Nov. 5	27.94
Mar. 2	28.44	June 4	28.52	Sept. 13	28.36	Dec. 4	27.65
Apr. 3	28.54	July 3	28.33	Oct. 9	28.03		

Q1237 (*906, p. 160; 936, p. 179; 944, p. 160; 986, p. 196; 1016, p. 222). New York City Department of Water Supply. Belt Parkway, about 1,450 feet west of 150th Street, Baisley Park.

Water level at noon, in feet with reference to mean sea level, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	+1.90	....	+1.15	+0.70	+1.75	+1.45	-1.45	+0.45	-1.20	+0.45	+0.90	+1.40
2	+1.60	....	+.90	+.85	+1.90	+1.60	-1.45	+.40	-1.10	+.65	+1.00	+1.60
3	+1.25	....	+.85	+.90	+2.00	+1.70	-.85	+.25	-.85	+.30	+1.05	+1.35
4	+.85	+.15	+.75	+.95	+2.30	+1.95	-.70	.0	....	+.35	+1.05	+1.15
5	+.45	+.30	+.65	+1.25	+2.40	+1.90	-.35	-.15	-1.05	+.50	+1.05	+1.25
6	+.30	+.50	+.80	+1.05	+2.15	+1.80	+.05	+.05	....	+.60	+1.10	+1.50
7	....	+.35	+.85	+.95	+2.05	+1.65	-.35	+.25	....	+.75	+1.05	+1.65
8	....	+.30	+1.00	+.70	+2.10	+1.55	-.35	+.15	....	+.80	+1.05	+1.55
9	....	+.10	+1.15	+.60	+2.00	+1.45	-.45	+.10	-.95	+1.05	+1.10	+1.45
10	....	+.15	+1.15	+.60	+1.95	+1.55	-.50	+.05	-.95	+1.30	+.90	+1.50
11	....	+.40	+1.15	+.65	+2.10	+1.65	-.45	-.10	-.75	+1.20	+.70	....
12	....	+.40	+1.15	+.90	+1.85	+1.50	-.35	-.20	-.50	+1.05	+.75	....
13	+.46	+.50	+1.15	+1.05	+1.95	+1.25	-.45	-.05	-.60	+.95	+.80	....
14	....	+.60	+1.15	+.70	+1.95	+1.50	-.75	-.75	-.50	+.85	+.85	....
15	....	+.40	+1.20	+.80	+2.00	+1.30	....	-.70	-.35	+.80	+1.00	....
16	....	+.00	+1.15	+.95	+1.85	+.50	....	-.60	-.40	+.85	+1.00	....
17	....	+.05	+1.10	+1.10	+1.80	+.30	+.30	-.90	-.10	+.80	+.85	-.30
18	....	+.25	+1.05	+1.10	+2.05	+.10	+.55	-.75	+.40	+.60	+.90	-.30
19	....	+.20	+1.00	+1.00	+2.35	-.35	+.35	-1.20	+.65	+.45	+1.00	.0
20	....	+.20	+1.10	+1.05	+2.45	-.05	+.25	-.80	+.25	+.35	+1.05	+.35

Q1237--Continued.

Water level at noon, in feet with reference to mean sea level, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
21	+1.00	+0.30	+1.15	+1.20	+2.50	-0.25	+0.10	-1.15	+0.20	+0.30	+0.70	+0.40
22	+1.10	+0.20	+1.25	+1.00	+2.25	-.35	+1.15	-1.60	.....	+0.60	+0.85	+0.30
23	+1.20	-.05	+1.15	+0.90	+1.95	-.35	+0.50	-1.50	.....	+0.50	+0.95	+0.20
24	+1.25	-.25	+1.00	+1.05	+1.85	-.20	+0.50	-.65	.....	+0.55	+0.80	+0.20
25	.....	-.05	+0.35	+1.30	+1.65	-.30	+0.25	-.15	.....	+0.80	+0.70	+0.30
26	.....	+1.10	+0.90	+1.45	+1.60	-.35	+0.40	+0.05	-.90	+1.10	+0.65	+0.70
27	.....	+0.70	+0.85	+1.50	+1.50	+1.15	+0.70	+0.25	-1.10	+1.00	+0.65	+0.85
28	.....	+0.95	+0.90	+1.25	+1.65	-.25	+0.80	-1.10	-.50	+0.80	+0.90	+0.85
29	.....	.....	+0.85	+0.95	+1.70	-.25	+0.95	-.20	-.05	+0.85	+1.30	+1.05
30	.....	.....	+0.80	+1.30	+1.65	-.90	+1.10	-.70	+0.10	+0.90	+1.35	+1.30
31	.....	.....	+0.80	.....	+1.55	.....	+0.65	-.90	.....	+0.95	.....	+1.70

Q1248 (*906, p. 161; *936, p. 180; 944, p. 161; 986, p. 197; 1016, p. 223). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 7	36.59	Apr. 28	36.72	Aug. 6	36.05	Oct. 29	36.16
Mar. 2	36.69	June 2	36.62	Sept. 4	36.03	Dec. 1	36.00
Apr. 3	36.77	26	36.12	Oct. 1	35.95		

Q1249 (*906, p. 161; *936, p. 180; 944, p. 161; 986, p. 197; 1016, p. 223). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	32.13	Apr. 27	32.42	Aug. 7	32.29	Nov. 5	31.83
Mar. 2	32.33	June 4	32.31	Sept. 13	32.17	Dec. 4	31.58
Apr. 3	32.39	July 3	32.09	Oct. 9	32.00		

Q1250 (*906, p. 161; *936, p. 181; 944, p. 161; 986, p. 197; 1016, p. 224). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	21.16	Apr. 3	21.36	July 3	21.15	Oct. 9	20.98
Feb. 5	20.89	27	21.11	Aug. 7	21.72	Nov. 5	20.50
Mar. 2	21.13	June 4	21.04	Sept. 13	21.38	Dec. 4	20.41

Q1251 (*906, p. 161; *936, p. 181; 944, p. 161; 986, p. 198; 1016, p. 224). New York City Department of Water Supply, Gas and Electricity. At northwest corner of 107th Avenue and 172d Street, Jamaica.

Water level, in feet above mean sea level, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	11.42	Apr. 3	11.76	July 3	11.15	Oct. 9	11.18
Feb. 5	11.39	27	11.43	Aug. 7	12.05	Nov. 5	10.67
Mar. 2	11.81	June 4	11.37	Sept. 13	11.59	Dec. 4	10.38

Q1252 (*906, p. 161; *936, p. 181; 944, p. 162; 986, p. 198; 1016, p. 224). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	12.75	Apr. 3	13.12	July 4	12.88	Oct. 9	12.99
Feb. 5	12.90	27	13.04	Aug. 8	13.42	Nov. 2	12.78
Mar. 3	13.11	June 6	13.04	Sept. 13	13.04	Dec. 4	12.67

Q1253 (*906, p. 161; *936, p. 182; 944, p. 162; 986, p. 198; 1016, p. 224). New York City Department of Water Supply, Gas and Electricity. At northeast corner of 101st Avenue and 121st Street, Richmond Hill.

Q1253--Continued.

Water level, in feet above mean sea level, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	3.42	Apr. 3	3.69	July 4	3.32	Oct. 9	3.46
Feb. 6	3.69	27	3.68	Aug. 8	3.49	Nov. 2	3.46
Mar. 5	3.71	June 6	3.52	Sept. 13	3.62	Dec. 4	3.35

Q1254 (#906, p. 162; #936, p. 182; #944, p. 162; 986, p. 198; 1016, p. 225). 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, 1945							
Jan. 3	0.99	Apr. 27	1.11	Aug. 8	1.23	Nov. 2	1.46
Mar. 5	.99	June 6	1.18	Sept. 13	1.26	Dec. 4	1.58
Apr. 3	1.04	July 4	1.28	Oct. 9	1.35		

Q1255 (#936, p. 182; 944, p. 162; 986, p. 199; 1016, p. 225). 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, 1945											
Jan.	3	2.95	Apr.	27	3.57	Aug.	8	3.33	Nov.	2	4.63
Mar.	3	3.37	June	5	3.28	Sept.	13	4.07	Dec.	4	4.42
Apr.	3	3.31	July	4	3.49	Oct.	9	4.52			

Q1256 (#906, p. 162; #936, p. 184; 944, p. 163; 986, p. 199). New York City Department of Water Supply, Gas and Electricity. At southeast corner of 95th Avenue and 82d Street, Woodhaven. Measurements resumed Mar. 15, 1945.

Water level, in feet below mean sea level, 1945							
Mar. 15	2.47	June 5	2.56	Sept. 13	2.85	Nov. 2	3.18
Apr. 3	2.48	July 4	2.54	26	2.93	Dec. 4	3.33
27	2.68	Aug. 8	2.44				

Q1281 (#936, p. 184; 944, p. 163; 986, p. 199; 1016, p. 225). 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, 1945											
Jan.	3	1.02	Apr.	3	1.25	July	4	1.50	Oct.	9	1.45
Feb.	5	1.12		27	1.29	Aug.	8	1.16	Nov.	2	1.60
Mar.	5	1.23	June	5	.61	Sept.	13	1.49	Dec.	4	1.63

Q1282 (#936, p. 185; 944, p. 163; 986, p. 199; 1016, p. 225). 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, 1945							
Jan. 3	1.39	Apr. 27	1.52	Aug. 8	1.40	Nov. 2	1.18
Mar. 5	1.45	June 6	1.44	Sept. 13	1.38	Dec. 4	1.09
Apr. 3	1.49	July 4	1.27	Oct. 9	1.35		

Q1283 (#936, p. 186; 944, p. 163; 986, p. 199; 1016, p. 226). 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, 1945							
May 18	4.72	July 3	4.29	Sept. 13	4.38	Nov. 2	4.07
June 6	4.53	Aug. 7	4.75	Oct. 9	4.26	Dec. 5	4.02

Q1284 (#936, p. 187; 944, p. 164; 986, p. 200; 1016, p. 226). New York City Department of Water Supply, Gas and Electricity. At northwest corner of Rockaway Boulevard and Lincoln Street, South Ozone Park.

Q1284--Continued.

Water level, in feet above mean sea level, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	6.81	Apr. 28	7.08	Aug. 7	8.11	Nov. 2	6.35
Mar. 5	7.07	June 6	6.82	Sept. 13	7.16	Dec. 5	6.46
Apr. 3	7.19	July 3	7.88	Oct. 9	7.80		

Q1285 (*936, p. 187; 944, p. 164; 986, p. 200; 1016, p. 226). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	6.98	Apr. 3	7.10	July 3	6.84	Oct. 9	6.91
Feb. 6	6.95	28	7.07	Aug. 7	7.24	Nov. 2	6.67
Mar. 5	6.98	June 6	7.04	Sept. 13	7.08	Dec. 5	6.44

Q1286 (*936, p. 188; 944, p. 164; 986, p. 200; 1016, p. 226). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	10.26	Apr. 27	10.58	Aug. 8	10.77	Nov. 2	10.59
Mar. 3	10.76	June 5	10.42	Sept. 13	11.15	Dec. 4	10.51
Apr. 5	10.72	July 4	10.44	Oct. 9	10.56		

Q1287 (*936, p. 188; 944, p. 164; 986, p. 200; 1016, p. 227). New York City Department of Water Supply, Gas and Electricity. At north corner of Merrick Boulevard and 116th Avenue, St. Albans.

Water level, in feet above mean sea level, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	13.18	Apr. 27	12.60	Aug. 7	12.59	Nov. 5	11.18
Mar. 2	13.18	June 4	12.77	Sept. 13	11.03	Dec. 5	12.27
Apr. 3	12.71	July 3	12.52	Oct. 9	10.85		

Q1288 (*936, p. 189; 944, p. 165; 986, p. 201; 1016, p. 227). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	18.28	Apr. 27	17.81	Aug. 7	18.52	Nov. 5	16.58
Mar. 2	18.02	June 4	17.88	Sept. 13	17.59	Dec. 5	16.77
Apr. 3	18.14	July 3	17.70	Oct. 9	17.01		

Q1289 (*936, p. 189; 944, p. 165; 986, p. 201; 1016, p. 227). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	32.02	Apr. 27	32.26	Aug. 7	32.22	Nov. 2	31.75
Mar. 2	32.20	June 4	32.17	Sept. 13	32.08	Dec. 4	31.47
Apr. 3	32.30	July 3	32.01	Oct. 9	31.90		

Q1290 (*936, p. 190; 944, p. 165; 986, p. 201; 1016, p. 227). New York City Department of Water Supply, Gas and Electricity. At southwest corner of Merrick Road and Springfield Boulevard, Springfield.

Water level, in feet above mean sea level, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	17.22	Apr. 27	16.90	Aug. 7	17.17	Nov. 2	16.49
Mar. 2	17.01	June 4	16.97	Sept. 13	16.65	Dec. 5	16.80
Apr. 3	16.92	July 3	16.87	Oct. 9	16.74		

Q1292 (*936, p. 190; 944, p. 166; 986, p. 201; 1016, p. 228). 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.

Q1292--Continued.

Water level, in feet above mean sea level, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	27.91	Apr. 5	28.20	June 30	28.10	Oct. 2	28.40
Feb. 3	27.95	27	28.22	Aug. 5	28.43	29	28.23
Mar. 2	28.12	June 2	28.17	Sept. 4	28.38	Dec. 1	27.90

Suffolk County

S58 (*1016, p. 228). New York City Board of Water Supply California Stovepipe well 6. Southwest corner of Grand Boulevard and 44th Street, Islip. Records for 1944 are above mean sea level instead of below, as published in Water Supply Paper 986.

Water level at noon, in feet above mean sea level, 1945

(From recorder charts)												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	23.77	23.37	23.86	23.67	23.80	23.98	23.40	23.04	22.80	22.59	22.58	23.11
2	23.73	23.36	23.95	23.66	23.83	23.95	23.37	23.03	22.80	22.59	22.58	23.17
3	23.74	23.33	24.03	23.64	23.86	23.95	23.35	23.03	22.78	22.58	22.57	23.26
4	23.76	23.31	24.04	23.62	23.90	23.93	23.33	23.01	22.77	22.57	22.56	23.34
5	23.77	23.30	24.07	23.61	23.94	23.91	23.31	22.99	22.76	22.56	22.55	23.40
6	23.77	23.28	24.10	23.58	23.98	23.88	23.30	22.98	22.75	22.57	22.54	23.46
7	23.79	23.26	24.10	23.57	24.02	23.86	23.31	23.01	22.74	22.58	22.54	23.50
8	23.80	23.28	24.10	23.57	24.09	23.83	23.29	23.04	22.73	22.58	22.53	23.54
9	23.80	23.28	24.11	23.56	24.12	23.81	23.28	23.06	22.72	22.57	22.53	23.59
10	23.77	23.27	24.13	23.54	24.16	23.80	23.27	23.04	22.71	22.57	22.52	23.65
11	23.74	23.28	24.13	23.53	.....	23.77	23.24	23.02	22.70	22.57	22.52	23.70
12	23.74	23.31	24.14	23.52	.....	23.74	23.22	22.99	22.69	22.57	22.51	23.75
13	23.72	23.33	24.14	23.50	24.18	23.72	23.20	22.98	22.67	22.57	22.52	23.78
14	23.71	23.32	24.12	23.49	24.14	23.70	23.19	22.97	22.67	22.56	22.52	23.80
15	23.69	23.30	24.10	23.48	24.11	23.68	23.17	22.96	22.66	22.57	22.56	23.79
16	23.69	23.31	24.07	23.46	24.06	23.66	23.16	22.95	22.65	22.57	22.59	23.77
17	23.66	23.36	24.03	23.45	24.04	23.64	23.15	22.94	22.64	22.56	22.60	23.71
18	23.64	23.36a	23.97	23.44	24.07	23.63	23.16	22.93	22.64	22.56	22.60	23.66
19	23.63	23.35	23.95	23.43	24.07	23.61	23.16	22.91	22.64	22.55	22.60	23.65
20	23.60	23.34	23.93	23.42	24.07	23.60	23.15	22.90	22.63	22.55	22.63	23.60
21	23.58	23.32	23.91	23.41	24.08	23.58	23.14	22.89	22.62	22.55	22.65	23.56
22	23.57	23.36	23.89	23.39	24.11	23.57	23.13	22.87	22.61	22.54	22.69	23.53
23	23.56	23.48	23.86	23.38	24.11	23.55	23.12	22.86	22.61	22.54	22.76	23.50
24	23.54a	23.53	23.83	23.37	24.12	23.53	23.11	22.85	22.61	22.57	22.83	23.46
25	23.51a	23.57	23.80	23.37	24.12	23.51	23.09	22.89	22.60	22.60	22.89	23.44
26	23.49	23.63	23.78	23.50	24.12	23.50	23.09	22.90	22.59	22.62	22.92	23.53
27	23.47	23.71	23.76	23.60	24.10	23.48	23.08	22.87	22.57	22.63	22.95	23.59
28	23.44	23.78	23.74	23.66	24.11	23.46	23.07	22.85	22.59	22.63	22.98	23.63
29	23.43		23.72	23.70	24.10	23.44	23.07	22.84	22.59	22.62	23.01	23.69
30	23.41		23.70	23.75	24.07	23.42	23.06	22.83	22.58	22.61	23.05	23.73
31	23.39	23.69		24.02		23.05	22.81		22.60		23.80	

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). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	40.52	May 4	38.75	Aug. 3	38.73	Nov. 1	38.53
Feb. 26	37.20	June 1	38.78	Sept. 11	38.58	27	38.74
Mar. 26	38.00	29	38.77	Oct. 2	38.80	Dec. 26	39.28

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). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	72.96	May 2	72.80	Aug. 2	73.14	Oct. 31	73.09
Feb. 26	72.94	31	72.92	Sept. 7	73.15	Nov. 27	72.87
Mar. 27	72.85	June 29	72.99	Oct. 2	73.28	Dec. 26	72.94

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). 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, 1945

Feb. 2	16.20	Apr. 30	16.50	July 31	15.68	Nov. 1	15.52
Mar. 2	16.87	May 30	16.46	Sept. 7	15.67	28	16.09
28	16.58	June 28	16.03	Oct. 3	15.44	Dec. 28	16.77

S1805 (*840, p. 287; 845, p. 324; 886, p. 511; 906, p. 168; *936, p. 193; 944, p. 168; 986, p. 202; 1016, p. 229). 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, 1945

Feb. 2	42.47	May 2	43.16	Aug. 1	42.42	Nov. 1	40.66
Mar. 2	42.76	30	43.67	Sept. 7	41.90	27	40.84
28	43.35	June 28	43.10	Oct. 3	41.28	Dec. 28	41.96

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). New York City Department of Water Supply, Gas and Electricity. On northeast corner of Wellwood and Long Island Avenue, Pinelawn.

Water level, in feet above mean sea level, 1945

Feb. 1	56.10	May 3	56.56	Aug. 1	56.59	Oct. 31	54.67
Mar. 1	56.11	30	57.05	Sept. 7	55.94	Nov. 27	54.61
27	56.85	June 28	56.88	Oct. 2	55.41		

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). 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, 1945

Feb. 2	21.74	May 3	22.01	July 31	21.45	Oct. 26	21.13
Mar. 2	22.24	29	22.07	Sept. 8	21.30	Nov. 28	21.29
28	22.06	June 28	21.73	Oct. 3	21.16	Dec. 28	21.84

S1808 (*777, p. 124; *817, p. 202; *840, p. 290; 845, p. 325; 886, p. 511; 906, p. 166; 936, p. 194; 944, p. 168; 986, p. 203; 1016, p. 230). 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, 1945

Feb. 2	10.75	May 30	10.96	Sept. 7	10.08	Nov. 28	10.91
Mar. 28	11.11	June 28	10.48	Oct. 3	10.08	Dec. 28	11.72
May 3	11.12	July 31	10.46	Nov. 1	10.25		

S1809 (*777, p. 124; *817, p. 202; *840, p. 291; 845, p. 326; 886, p. 512; 906, p. 167; 936, p. 194; 944, p. 169; 986, p. 203; 1016, p. 231). 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.

S1809--Continued.

Water level, in feet above mean sea level, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 2	28.08	May 3	28.76	July 31	28.09	Oct. 26	26.42
Mar. 2	28.30	29	29.37	Sept. 8	27.54	Nov. 28	26.17
28	28.96	June 28	28.88	Oct. 3	26.81	Dec. 28	27.22

S1810 (*777, p. 124; *817, p. 202; *840, p. 291; 845, p. 326; 886, p. 512; 906, p. 187; 936, p. 194; 944, p. 169; 986, p. 204; 1016, p. 231). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	50.09	May 30	51.05	Sept. 7	50.48	Oct. 31	49.47
27	50.55	June 28	51.33	Oct. 2	50.00	Nov. 27	49.00
May 3	50.82	Aug. 1	50.96				

S1811 (*840, p. 292; 845, p. 326; *886, p. 512; *906, p. 167; *936, p. 194; 944, p. 169; 986, p. 204; 1016, p. 231). Geological Survey, U. S. Dept. of Interior. On north shore of Lake Ronkonkoma. Measurements show the level of Lake Ronkonkoma, a water-table lake.

Water level, in feet above mean sea level, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 1	52.90	May 2	52.68	Oct. 5	52.53	Nov. 27	52.52
28	52.77	31	52.58	31	52.54	Dec. 26	52.52

S1812 (*840, p. 292; 845, p. 327; 886, p. 512; *906, p. 168; 936, p. 195; 944, p. 170; 986, p. 204; 1016, p. 231). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	45.97	May 2	46.57	Aug. 2	46.79	Oct. 31	45.67
Mar. 1	46.09	31	46.79	Sept. 7	46.40	Nov. 27	45.32
28	46.29	June 27	47.00	Oct. 5	46.03	Dec. 26	45.30

S1813 (*906, p. 168; 936, p. 195; 944, p. 170; 986, p. 204; 1016, p. 232). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	37.58	May 3	38.07	Aug. 1	38.08	Oct. 31	37.33
Mar. 1	37.83	30	38.38	Sept. 7	37.79	Nov. 27	37.14
27	38.00	June 28	38.29	Oct. 5	37.53	Dec. 26	37.24

S1814 (*906, p. 169; 936, p. 196; 944, p. 170; 986, p. 204; 1016, p. 232). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	36.18	May 3	36.64	Aug. 1	36.77	Oct. 31	35.71
Mar. 1	36.34	30	36.89	Sept. 7	36.42	Nov. 27	35.43
27	36.59	June 28	37.05	Oct. 5	36.07	Dec. 26	35.46

S1815 (*906, p. 169; 936, p. 196; 944, p. 171; 986, p. 205; 1016, p. 232). Geological Survey, U. S. Dept. of Interior. On northwest corner of Suffolk and Eastern Avenues, Brentwood.

Water level, in feet above mean sea level, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	44.47	May 3	45.16	Aug. 1	45.47	Oct. 31	44.57
Mar. 1	44.87	30	45.30	Sept. 7	45.20	Nov. 27	44.19
27	44.97	June 28	45.49	Oct. 5	44.89	Dec. 26	43.97

S1816 (*906, p. 170; 936, p. 196; 944, p. 171; 986, p. 205; 1016, p. 232). Geological Survey, U. S. Dept. of Interior. On northeast corner of Brentwood and Commack Roads, Deer Park.

S1816--Continued.

Water level, in feet above mean sea level, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	56.85	May 5	57.37	Aug. 1	57.44	Oct. 31	55.74
Mar. 1	56.95	30	57.85	Sept. 7	56.81	Nov. 27	55.28
27	57.34	June 28	58.23	Oct. 2	56.32		

S1817 (*906, p. 170; 936, p. 196; 944, p. 171; 986, p. 205; 1016, p. 233). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	51.69	May 3	52.40	Aug. 1	51.39	Oct. 31	50.44
Mar. 1	52.65	30	52.34	Sept. 7	50.88	Nov. 27	51.16
27	52.35	June 28	51.85	Oct. 2	50.50		

S2314 (*986, p. 205; 1016, p. 233). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	59.83	May 3	60.15	Aug. 1	60.03	Oct. 31	59.33
Mar. 1	59.98	31	60.40	Sept. 7	59.73	Nov. 27	59.06
27	60.24	June 28	60.26	Oct. 2	59.68		

S2454 (*906, p. 171; 936, p. 197; 944, p. 171; 986, p. 206; 1016, p. 233). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 28	7.55	June 28	7.30	Oct. 3	7.16	Nov. 28	7.60
Apr. 30	7.73	July 31	7.34	Nov. 1	7.24	Dec. 28	8.04
May 30	7.54	Sept. 7	7.12				

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). Geological Survey, U. S. Dept. of Interior. About 4,000 feet southeast of intersection of Udalls Road and Hunter Avenue, about 2 miles west of Bay Shore.

Water level, in feet above mean sea level, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	22.13	Apr. 30	22.75	July 31	21.61	Oct. 26	20.33
Mar. 2	22.76	May 29	23.11	Aug. 31	21.18	Nov. 28	20.57
28	22.87	June 26	22.48	Sept. 27	20.69	Dec. 28	21.71

S3112 (*936, p. 199; 944, p. 172; 986, p. 207; 1016, p. 234). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	54.29	May 3	54.81	Aug. 1	54.35	Oct. 31	52.60
Mar. 1	54.19	30	55.40	Sept. 7	53.61	Nov. 27	52.23
27	55.01	June 28	55.08	Oct. 2	53.13		

S3496 (*944, p. 173; 986, p. 207; *1016, p. 234). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 2	46.96	May 3	47.40	Aug. 1	48.20	Oct. 30	47.83
28	47.04	30	47.62	Sept. 6	48.30	Nov. 30	47.50
Mar. 27	47.19	June 27	47.85	Oct. 5	48.06		

S3497 (*944, p. 173; 986, p. 208; 1016, p. 234). Geological Survey, U. S. Dept. of Interior. On northeast corner of Waverly and Long Island Avenues, Holtsville.

S3497--Continued.

Water level, in feet above mean sea level, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 2	46.36	Apr. 30	46.85	Aug. 1	47.63	Oct. 30	47.10
28	46.61	May 30	47.02	Sept. 6	47.60	Nov. 30	46.78
Mar. 27	46.72	June 27	47.24	Oct. 5	47.34		

S3498 (*944, p. 173; 986, p. 208; 1016, p. 235). 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, 1945							
Feb. 1	43.98	Apr. 30	44.57	Aug. 2	44.87	Oct. 30	44.04
28	44.17	May 30	44.55	Sept. 6	44.56	Nov. 30	43.78
Mar. 27	44.27	June 27	44.82	Oct. 5	44.30		

S3512 (*944, p. 173; 986, p. 208; 1016, p. 235). 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, 1945							
Feb. 1	67.03	Apr. 30	68.09	Aug. 1	68.53	Oct. 31	67.56
Mar. 1	67.36	May 31	68.23	Sept. 7	68.28	Nov. 27	67.18
28	67.62	June 27	68.32	Oct. 5	67.79	Dec. 26	66.74

S3513 (*944, p. 173; 986, p. 208; 1016, p. 235). 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, 1945

(From recorder charts).

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	61.01	60.88	60.94	61.20	61.41	61.58	61.87	61.99	61.81	61.50	61.17	60.84
2	60.92	60.88	60.96	61.23	61.40	61.59	61.88	62.01	61.80	61.55	61.16	60.82
3	60.91	60.86	61.00	61.23	61.41	61.60	61.88	62.02	61.76	61.48	61.16	60.82
4	60.93	60.85	60.96	61.22	61.43	61.61	61.89	62.00	61.76	61.46	61.14	60.81
5	60.93	60.89	60.97	61.26	61.43	61.61	61.90	61.99	61.75	61.46	61.12	60.80
6	60.90	60.85	61.04	61.21	61.43	61.62	61.92	62.02	61.74	61.45	61.10	60.80
7	60.94	60.86	61.01	61.22	61.43	61.63	61.92	62.01	61.74	61.46	61.09	60.79
8	60.94	60.89	61.01	61.26	61.44	61.64	61.92	61.99	61.73	61.44	61.08	60.76
9	60.94	60.89	61.01	61.27	61.42	61.64	61.93	61.98	61.72	61.42	61.07	60.75
10	60.90	60.87	61.04	61.27	61.45	61.65	61.95	61.98	61.72	61.40	61.05	60.75
11	60.90	60.88	61.03	61.28	61.43	61.67	61.94	61.97	61.72	61.40	61.05	60.73
12	60.93	60.86	61.04	61.29	61.44	61.68	61.94	61.96	61.70	61.40	61.04	60.71
13	60.93	60.87	61.05	61.30	61.46	61.68	61.95	61.95	61.68	61.38	61.04	60.70
14	60.93	60.87	61.05	61.31	61.46	61.69	61.96	61.96	61.67	61.36	61.04	60.71
15	60.90	60.86	61.07	61.30	61.47	61.70	61.97	61.99	61.67	61.35	61.01	60.70
16	60.95	60.89	61.08	61.30	61.47	61.71	61.96	61.95	61.64	61.36	61.00	60.69
17	60.90	60.86	61.10	61.33	61.48	61.72	61.96	61.95	61.63	61.33	61.09	60.67
18	60.90	60.85	61.09	61.33	61.50	61.73	61.97	61.93	61.65	61.32	61.08	60.66
19	60.90	60.84	61.11	61.32	61.49	61.74	61.98	61.91	61.64	61.32	61.08	60.69
20	60.89	60.85	61.13	61.34	61.49	61.75	61.98	61.91	61.62	61.29	61.06	60.66
21	60.89	60.85	61.14	61.35	61.50	61.76	61.99	61.92	61.61	61.27	61.04	60.65
22	60.91	60.92	61.15	61.34	61.52	61.78	62.00	61.91	61.58	61.27	61.06	60.63
23	60.95	60.89	61.16	61.35	61.52	61.79	62.00	61.87	61.57	61.26	61.03	60.62
24	60.95	60.86	61.16	61.36	61.52	61.80	62.00	61.88	61.57	61.25	.....	60.61
25	60.90	60.86	61.15	61.38	61.52	61.81	62.00	61.90	61.57	61.24	60.91	60.61
26	60.90	60.91	61.17	61.38	61.52	61.82	62.01	61.99	61.56	61.24	60.88	60.65
27	60.90	60.95	61.19	61.39	61.52	61.82	62.00	61.85	61.54	61.21	60.87	60.60
28	60.88	60.93	61.18	.....	61.55	61.83	62.01	61.84	61.54	61.20	60.88	60.59
29	60.92	.....	61.20	.....	61.56	61.84	62.01	61.83	61.53	61.20	60.88	60.64
30	60.88	.....	61.20	61.40	61.57	61.86	61.98	61.82	61.50	61.18	60.86	60.59
31	60.89	.....	61.23	.....	61.57	.....	61.98	61.80	.....	61.19	.....	60.62

a Estimated.

S3514 (*944, p. 174; 986, p. 208; 1016, p. 236). Herman Jurgens.
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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	67.38	May 2	67.97	Aug. 2	67.94	Oct. 31	67.39
Mar. 1	67.74	31	67.99	Sept. 7	67.69	Nov. 27	67.14
27	68.18	June 29	67.92	Oct. 2	67.67	Dec. 26	67.04

S3515 (*944, p. 174; 986, p. 209; 1016, p. 237). 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, 1945

Feb. 2	32.53	May 3	32.91	July 31	32.62	Oct. 26	31.32
Mar. 1	32.73	29	33.49	Sept. 8	32.04	Nov. 28	31.19
28	33.25	June 28	33.15	Oct. 3	31.64	Dec. 28	31.95

S3516 (*944, p. 174; 986, p. 209; 1016, p. 237). 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, 1945

Feb. 2	37.47	May 29	38.43	Sept. 8	37.26	Nov. 28	36.02
Mar. 28	38.13	June 28	38.32	Oct. 3	36.80	Dec. 28	36.52
May 3	37.88	July 31	37.85	26	36.40		

S3517 (*944, p. 175; 986, p. 209; 1016, p. 237). New York City
Board of Water Supply test well 60. On southwest corner of Lakeland
Avenue and Tariff Street, Sayville.

Water level, in feet above mean sea level, 1945

Feb. 28	13.24	May 30	13.16	Sept. 6	12.31	Oct. 30	11.92
Mar. 27	13.15	June 27	12.95	Oct. 5	12.07	Nov. 30	12.04
May 3	12.89	Aug. 1	12.63				

S3518 (*944, p. 175; 986, p. 209; 1016, p. 237). 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, 1945

Feb. 2	31.63	May 3	31.85	July 31	31.54	Oct. 26	30.34
Mar. 2	31.67	29	32.50	Aug. 31	31.13	Nov. 28	30.24
27	32.16	June 28	32.09	Oct. 3	30.65	Dec. 28	30.98

S3519 (*944, p. 176; 986, p. 210; 1016, p. 238). 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, 1945

Feb. 2	25.50	May 3	25.89	July 31	25.34	Oct. 26	24.50
Mar. 2	25.15	29	26.11	Sept. 8	25.00	Nov. 28	24.79
27	25.95	June 28	25.69	Oct. 3	24.66	Dec. 28	25.52

S3521 (*944, p. 176; 986, p. 210; 1016, p. 238). 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, 1945

Feb. 1	36.83	May 2	37.10	Aug. 2	37.17	Oct. 30	36.35
27	36.89	30	37.26	Sept. 6	36.87	Nov. 30	36.14
Mar. 27	36.97	June 27	37.45	Oct. 5	36.59		

S3522 (*944, p. 177; 986, p. 210; 1016, p. 238). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 2	19.61	Apr. 30	19.61	Aug. 1	19.39	Oct. 30	19.20
28	19.67	May 30	19.78	Sept. 6	19.32	Nov. 30	19.18
Mar. 27	19.73	June 27	19.63	Oct. 5	19.24		

S3523 (*944, p. 177; 986, p. 210; 1016, p. 238). New York City Board of Water Supply test well 202. On south side of Barton Avenue, about 1.1 miles east of Medford Avenue, and about 2 miles northeast of Patchogue. Measurements discontinued Sept. 6, 1945.

Water level, in feet above mean sea level, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 2	26.61	Mar. 27	26.57	May 30	26.65	Aug. 1	26.61
28	26.61	Apr. 30	26.69	June 27	26.78	Sept. 6	26.74

S3524 (*944, p. 177; 986, p. 211; 1016, p. 239). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 28	22.41	May 30	22.36	Sept. 6	21.92	Nov. 30	21.49
Mar. 29	22.35	June 27	22.36	Oct. 4	21.79	Dec. 27	21.88
May 2	22.19	Aug. 1	22.13	30	21.68		

S3525 (*944, p. 178; 986, p. 211; 1016, p. 239). New York City Board of Water Supply test well 216. On north side of Long Island Avenue, 0.6 mile east of Yaphank Avenue, Yaphank. Measurements discontinued on Jan. 30, 1945. Water level, in feet above mean sea level, 1945: Jan. 30, 26.42.

S3526 (*1016, p. 239). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 28	27.13	May 31	26.98	Sept. 6	27.63	Nov. 30	27.14
Mar. 29	26.30	June 27	27.30	Oct. 4	27.34	Dec. 27	26.72
May 2	26.50	Aug. 2	27.54	30	27.14		

S3527 (*944, p. 178; 986, p. 211; 1016, p. 239). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	31.44	May 2	32.10	Aug. 1	31.92	Oct. 30	32.14
Feb. 28	31.68	30	32.33	Sept. 6	32.69	Nov. 30	31.76
Mar. 30	31.90	June 27	32.63	Oct. 4	32.42	Dec. 27	31.50

S3529 (*944, p. 179; 986, p. 211; 1016, p. 240). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	25.41	May 2	26.07	Aug. 1	25.92	Oct. 30	24.90
Feb. 28	25.60	30	26.53	Sept. 6	25.50	Nov. 30	24.69
Mar. 30	26.01	June 27	26.27	Oct. 4	25.17	Dec. 27	25.18

S3530 (*944, p. 179; 986, p. 212; 1016, p. 240). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	32.30	May 30	32.89	Sept. 6	32.67	Nov. 30	31.87
Mar. 29	32.62	June 27	33.08	Oct. 4	32.41	Dec. 27	32.09
May 2	32.55	Aug. 1	32.92	30	32.19		

S3531 (*944, p. 180; 986, p. 212; 1016, p. 240). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 29	9.72	June 27	9.95	Oct. 4	9.69	Nov. 29	9.56
May 2	9.79	Aug. 2	9.98	30	9.64	Dec. 27	9.56
30	10.00	Sept. 6	9.80				

S3532 (*944, p. 180; 986, p. 212; 1016, p. 241). 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 Road and Middle County Road (State Highway 25) Ridge.

Water level, in feet above mean sea level, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	45.88	May 2	46.82	Aug. 2	47.59	Oct. 30	46.57
Feb. 27	46.10	31	47.06	Sept. 6	47.25	Nov. 29	46.12
Mar. 29	46.44	June 27	47.47	Oct. 4	46.92	Dec. 27	45.80

S3533 (*944, p. 181; 986, p. 212; 1016, p. 241). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	45.25	May 5	45.91	Aug. 2	46.16	Oct. 30	45.43
Feb. 27	45.61	31	46.14	Sept. 6	45.84	Nov. 29	44.94
Mar. 29	45.79	June 27	46.35	Oct. 4	45.53	Dec. 27	44.88

S3534 (*944, p. 181; 986, p. 212; 1016, p. 241). 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. Measuring point raised 0.50 foot on Oct. 4, 1945.

Water level, in feet above mean sea level, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 29	26.97	June 27	28.28	Oct. 4	27.84	Nov. 30	27.32
May 2	27.44	Aug. 2	28.47	30	27.81	Dec. 27	27.78
31	27.76	Sept. 11	28.09				

S3535 (*944, p. 181; 986, p. 213; *1016, p. 241). New York City Board of Water Supply test well 284. On south side of Chichester Avenue, about 1,000 feet southeast of Brookfield Avenue, Center Moriches.

Water level, in feet above mean sea level, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	18.46	May 2	19.25	Aug. 2	19.75	Oct. 30	18.89
Feb. 27	18.80	31	19.44	Sept. 6	19.45	Nov. 29	18.56
Mar. 29	18.93	June 27	19.75	Oct. 4	19.16	Dec. 27	18.34

S3536 (*944, p. 182; 986, p. 213; 1016, p. 242). New York City Board of Water Supply test well 289. On southwest side of Manor Branch of Long Island Railroad, about 2.7 miles northwest of Eastport railroad station, and about 2.3 miles northeast of Center Moriches.

Water level, in feet above mean sea level, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	23.51	May 2	24.25	Aug. 2	25.10	Oct. 30	24.62
Feb. 27	23.76	31	24.48	Sept. 6	25.06	Nov. 29	24.31
Mar. 29	23.99	June 27	24.73	Oct. 4	24.85	Dec. 27	24.02

S3538 (*944, p. 183; 986, p. 213; 1016, p. 242). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	15.79	May 2	16.23	Aug. 2	16.42	Oct. 30	15.80
Feb. 27	15.86	31	16.34	Sept. 6	16.22	Nov. 29	15.56
Mar. 29	16.17	June 27	16.50	Oct. 4	16.00	Dec. 27	15.55

S3545 (*944, p. 185; 986, p. 214; *1016, p. 242). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	35.49	May 3	35.89	Aug. 1	36.12	Oct. 30	34.96
Feb. 28	35.65	30	36.08	Sept. 6	35.73	Nov. 30	34.56
Mar. 27	35.73	June 27	36.38	Oct. 5	35.33		

S3727 (*1016, p. 242). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	31.11	May 3	31.49	Aug. 1	31.46	Oct. 30	30.22
Feb. 28	31.18	30	31.76	Sept. 6	31.00	Nov. 30	29.89
Mar. 27	31.40	June 27	31.85	Oct. 5	30.57		

S3728 (*1016, p. 243). New York City 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	20.56	Apr. 30	21.11	Aug. 2	21.34	Oct. 30	20.16
Feb. 28	20.87	May 30	21.26	Sept. 6	20.92	Nov. 30	19.74
Mar. 28	20.95	June 27	21.70	Oct. 4	20.52	Dec. 27	19.59

S3729 (*1016, p. 243). New York City Board of Water Supply test well 204. Barton and Dunston Avenue, North Hagerman.

Water level, in feet above mean sea level, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	28.12	Apr. 30	28.64	Aug. 2	29.05	Oct. 30	28.03
Feb. 28	28.28	May 30	28.82	Sept. 6	28.70	Nov. 30	27.66
Mar. 28	28.39	June 27	29.22	Oct. 4	28.35	Dec. 27	27.45

S3730 (*1016, p. 243). New York City Board of Water Supply test well 207. Dunton Avenue and South Haven Road, South Plainfield.

Water level, in feet above mean sea level, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	33.90	Apr. 30	34.53	Aug. 1	35.28	Oct. 30	34.45
Feb. 28	34.15	May 30	34.72	Sept. 6	35.00	Nov. 30	34.08
Mar. 28	34.29	June 27	35.08	Oct. 4	34.73	Dec. 27	33.77

S3731 (*1016, p. 244). 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, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 30	23.50	Apr. 30	24.02	Aug. 2	24.31
Feb. 28	23.70	May 30	24.18	Sept. 6	23.89
Mar. 28	23.78	June 27	24.64	Oct. 4	23.51
				Dec. 27	22.54

S3732 (*1016, p. 244). New York City Board of Water Supply test well 259. Mt. Sinai Road, 2.6 miles north of Route 25, Coram.

Water level, in feet above mean sea level, 1945					
Date	Water level	Date	Water level	Date	Water level
Feb. 28	57.38	May 31	55.94	Sept. 6	55.90
Mar. 27	54.61	June 27	54.76	Oct. 4	54.32
May 2	55.52	Aug. 1	53.98	Nov. 29	53.91

S3733 (*1016, p. 244). New York City Board of Water Supply test well 467. West side of Lincoln Avenue, 1.3 miles south of Church Street, Sayville. Measurements discontinued Oct. 30, 1945.

Water level, in feet above mean sea level, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 31	17.80	May 31	17.75	Aug. 1	17.59
Feb. 28	17.95	June 30	18.02	Sept. 6	17.23
Mar. 27	18.02	June 27	17.91	Oct. 30	16.77

S3735 (*1016, p. 245). 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, 1945					
Date	Water level	Date	Water level	Date	Water level
Mar. 1	65.10	May 31	65.15	Sept. 7	65.56
28	64.99	June 27	65.22	Oct. 5	65.28
May 2	65.06	Aug. 1	65.49	31	65.07
				Nov. 27	64.76
				Dec. 26	64.41

S3736 (*1016, p. 245). 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, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 31	42.79	May 3	43.34	Aug. 1	43.97
Feb. 28	42.98	June 30	43.45	Sept. 6	43.74
Mar. 27	43.13	June 27	43.72	Oct. 5	43.48
				Oct. 30	43.19
				Nov. 30	42.81

S3737 (*1016, p. 245). 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, 1945					
Date	Water level	Date	Water level	Date	Water level
Feb. 1	55.46	Apr. 30	55.68	Aug. 1	56.22
28	55.38	May 31	55.81	Sept. 6	56.25
Mar. 28	55.51	June 27	55.98	Oct. 4	56.08
				Dec. 26	55.41

S3738 (*1016, p. 246). Geological Survey, U. S. Dept. of Interior. On west side of Oxhead Road, about 0.9 mile north of Middle Country Road (State Highway 25), and 1.3 miles northwest of New Village.

Water level, in feet above mean sea level, 1945					
Date	Water level	Date	Water level	Date	Water level
Feb. 1	55.16	May 2	55.70	Aug. 1	56.42
Mar. 1	55.32	31	55.88	Sept. 7	56.54
Mar. 28	55.48	June 27	56.09	Oct. 5	56.11
				Dec. 26	55.26

S3739 (*1016, p. 246). Geological Survey, U. S. Dept. of Interior. On west side of Lincoln Avenue, about 0.4 mile south of Church Street and 1.5 miles north of Sayville.

Water level, in feet above mean sea level, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	27.78	May 3	27.96	Aug. 1	27.96	Oct. 30	26.72
Feb. 28	27.80	30	28.29	Sept. 6	27.50	Nov. 30	26.42
Mar. 27	28.06	June 27	28.37	Oct. 5	27.05		

S3760 (*1016, p. 247). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	24.75	May 2	25.05	Aug. 2	25.26	Oct. 30	25.06
Feb. 27	24.94	31	25.11	Sept. 6	25.25	Nov. 29	24.96
Mar. 29	25.06	June 27	25.18	Oct. 4	25.16	Dec. 27	24.82

S3868 (*1016, p. 248). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	37.37	May 2	37.36	Aug. 1	37.86	Oct. 31	38.03
Mar. 1	37.18	31	37.55	Sept. 7	37.94	Nov. 27	37.73
28	37.35	June 27	37.67	Oct. 5	37.94	Dec. 26	37.93

S3869 (*1016, p. 248). Geological Survey, U. S. Dept. of Interior. East side of Mt. Sinai Road about 1.3 miles north of Middle Country Road (State Highway 25), North Coram.

Water level, in feet above mean sea level, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	53.98	May 2	54.66	Aug. 1	55.06	Oct. 30	54.24
Feb. 28	54.18	30	54.84	Sept. 6	54.78	Nov. 29	53.92
Mar. 27	54.43	June 27	55.09	Oct. 4	54.53		

S3870 (*1016, p. 248). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	53.52	Apr. 30	53.90	Aug. 1	54.29	Oct. 30	53.77
28	53.66	May 30	54.03	Sept. 6	54.11	Nov. 29	53.58
Mar. 27	53.72	June 27	54.24	Oct. 5	53.96		

S3871 (*1016, 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	46.25	Apr. 30	46.43	Aug. 1	47.11	Oct. 30	47.07
28	46.35	May 30	46.59	Sept. 6	47.30	Nov. 30	46.88
Mar. 27	46.34	June 27	46.79	Oct. 5	47.24		

S3955 (*1016, 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	52.91	May 2	52.72	Aug. 1	53.47	Oct. 31	53.76
Mar. 1	52.61	31	52.91	Sept. 7	53.80	Nov. 27	53.57
28	52.58	June 27	53.13	Oct. 5	53.86	Dec. 26	53.36

S3956 (*1016, p. 249). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	31.54	May 2	31.67	Aug. 1	32.05	Oct. 30	32.03
Feb. 28	31.50	31	31.78	Sept. 6	32.22	Nov. 29	31.87
Mar. 27	31.60	June 27	31.91	Oct. 4	32.14		

OHIO

By D. W. Van Tuyl

PROGRAM OF WORK

Ground-water investigations in Ohio were continued in 1945 in cooperation with the Ohio Engineering Experiment Station, the Boards of Commissioners of Butler and Hamilton Counties, and the Federal Works Agency. A cooperative program with the city of Canton was begun in 1945, and a report is now being prepared describing the results of this investigation. In October 1945 a cooperative program was entered into with the Ohio Water Resources Board covering a comprehensive program of investigation of the ground-water resources of the entire State, including the installation of 100 automatic recording gages throughout the State.

A total of 121 observation wells and 7 gravel pits were measured in Ohio in 1945. Automatic water-stage recorders were in operation on 38 wells, 19 in Butler and Hamilton Counties, and 19 in other parts of the State. Weekly measurements were made in 85 wells and monthly measurements were made in 4 wells. Approximately 6,500 individual measurements of water level were made in observation wells during the year, most of which were in Butler and Hamilton Counties.

FLUCTUATIONS OF WATER LEVEL

The summary of Climatological Data for Ohio, prepared by the U. S. Weather Bureau, shows that the weather in Ohio during 1945 was unusually favorable for replenishment of ground-water supplies. The annual precipitation averaged 44.89 inches, 6.96 inches above the average for 63 years of record. January was unusually cold with snowfall the greatest in any January since 1926. This heavy snow cover held over into early February and, upon melting, contributed materially to replenishment of both surface- and ground-water supplies throughout the State. Rainfall in March averaged 7.20 inches, 3.72 inches above normal, over the State. In fact, rainfall was greater than normal in 8 months of the year. Many streams reached flood stages from heavy rains in March resulting in appreciable ground-water recharge in areas underlain by permeable water-bearing materials.

In general, substantial rises occurred in observation wells during the first half of 1945 in areas where pumping was not excessive, and declines occurred during the last half of the year. Water levels in most observation wells throughout the State were higher at the end of the year than at the beginning, mainly as the result of favorable precipitation and recharge in the early months of the year.

PUMPAGE

The use of ground water in Ohio by industries, municipalities, and rural districts totals about 505 million gallons a day. According to recent surveys by the Ohio Water Resources Board and the U. S. Geological Survey, about 135 million gallons a day is used to supply municipal systems and about 350 million gallons is pumped from wells owned by industries and commercial establishments. The remainder is used for farm and domestic purposes. Public-water supplies are derived from ground-water sources by 25 of the 49 Ohio cities with populations over 10,000.

The areas of heaviest ground-water withdrawals in Ohio are in the Mill Creek Valley north of Cincinnati, in Hamilton, Middletown, Dayton, Canton, Columbus, Chillicothe, and Akron. The heaviest pumpage is at Dayton, where industrial use is about 40 million gallons a day and municipal use about 33 million gallons a day. Canton is the second heaviest user; industrial use is about 24 million gallons a day and municipal use about 14 million gallons a day.

Total pumpage in the heavily pumped areas and the principal products manufactured in each are as follows:

<u>Area</u>	<u>Millions of gallons a day</u>	<u>Products</u>
Lower Mill Creek Valley	14	Soap, alcohol, paper
Hamilton	20	Steel products, paper
Middletown	33	Steel products, paper
Dayton	73	Steel and varied products
Canton	38	Steel products
Columbus	25	Varied products
Chillicothe	20	Paper
Akron	36	Rubber

BUTLER AND HAMILTON COUNTIES

The locations of all the observation wells measured in Butler and Hamilton Counties in 1945 are shown in figures 8 and 9.

The following sections of this report summarize the trends of water level in 1945 in various areas in Butler and Hamilton Counties.

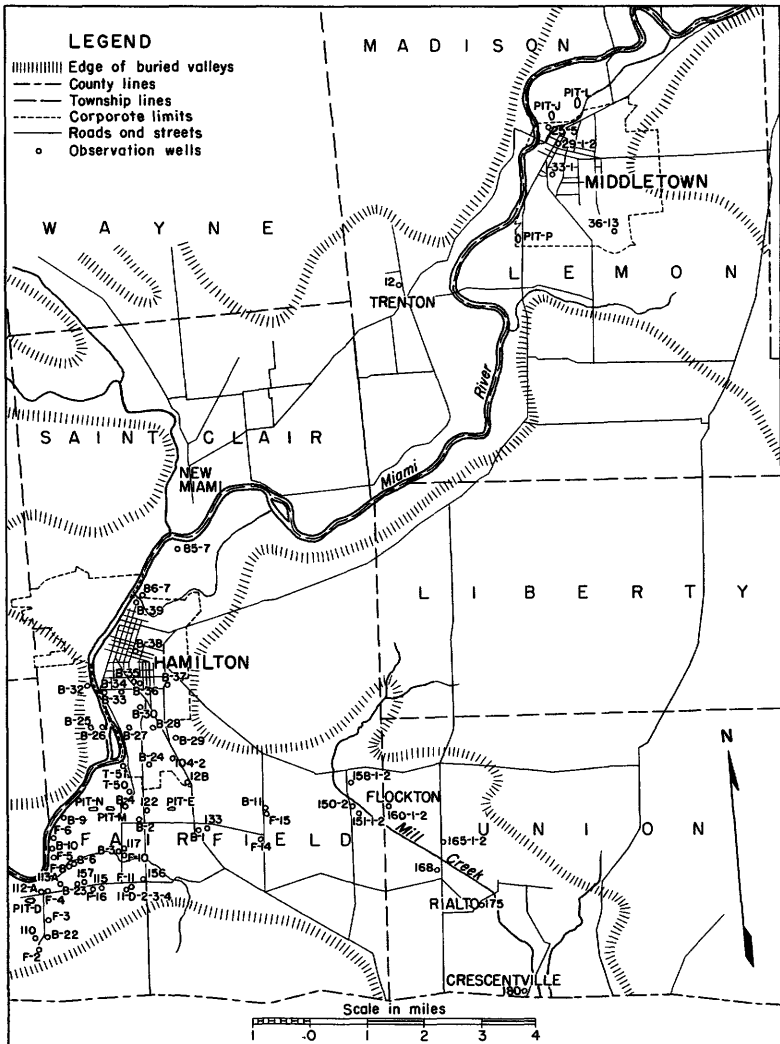


Figure 8.--Map showing locations of observation wells in Butler County, Ohio.

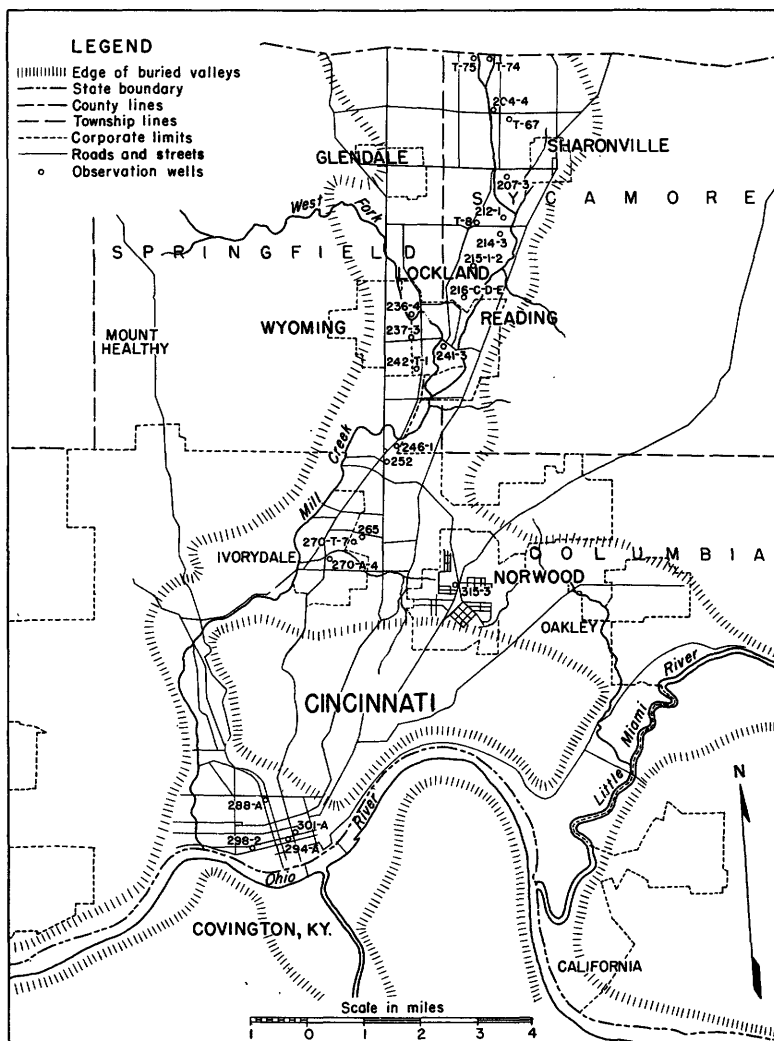


Figure 9.--Map showing locations of observation wells in Hamilton County, Ohio.

Middletown area

Water-level measurements obtained in three shallow observation wells and two gravel pits in the Middletown area show that recharge averaging about 13 feet was received in the shallow beds during February and March. Hydrographs for wells 25-5 and 29-1, shown in figure 10, show water-level records obtained in the northwest part of Middletown where a large amount of water is pumped from the shallow water-bearing beds. Following general declines beginning in May, water levels at the end of the year were considerably above those of 1944 and any year since 1938. The water level in one well, 29-2, tapping the deeper formation in Middletown, rose about 15 feet in the spring of 1945 and the water level throughout the year remained generally higher than in any year since the beginning of record in 1942.

The following table shows the water levels in observation wells in the Middletown area at the beginning and end of 1945 and the net changes occurring during the year.

Water level, in feet below land-surface datum, 1945					
Well or gravel pit	Date	Water level	Date	Water level	Net change
Pit J	Jan. 2	25.01	Dec. 27	22.54	+2.47
Pit P	2	17.40	27	14.60	+2.80
25-5	1	37.50	31	31.89	+5.61
29-1	2	41.42	27	34.85	+6.57
33-1	2	(a)	27	36.59	.....
29-2	2	49.47	18	43.03	+6.44

a Dry.

Figure 12 shows a hydrograph of water levels in well 36-13, in the southeastern part of Middletown, since August 1938. A net rise of about 20 feet occurred in this well in 1945 due, in great part, to the decreased rate of industrial pumping in the area, and, in some measure, to artificial recharge practiced by the American Rolling Mill Company. The average pumpage for the year was less than the pumpage in any previous year since the beginning of record.

Hamilton area

Rises in water levels in 15 observation wells in Hamilton averaged 8 feet in the spring of 1945, occurring in the months of February to May. This is about 3.5 feet more than the average rise in the spring of 1944. General declines occurred in these wells during the remainder of the year, but water levels were higher in all wells at the end of 1945 than at the beginning, as shown in the following table.

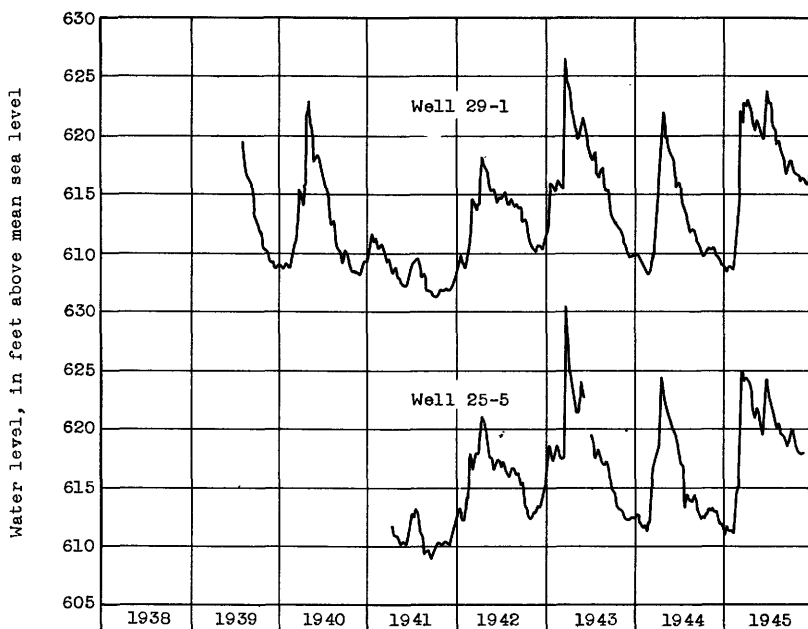


Figure 10.--Graphs showing water levels in wells 29-1 (Young Men's Christian Association), and 25-5 (Middletown municipal water plant), Butler County, Ohio.

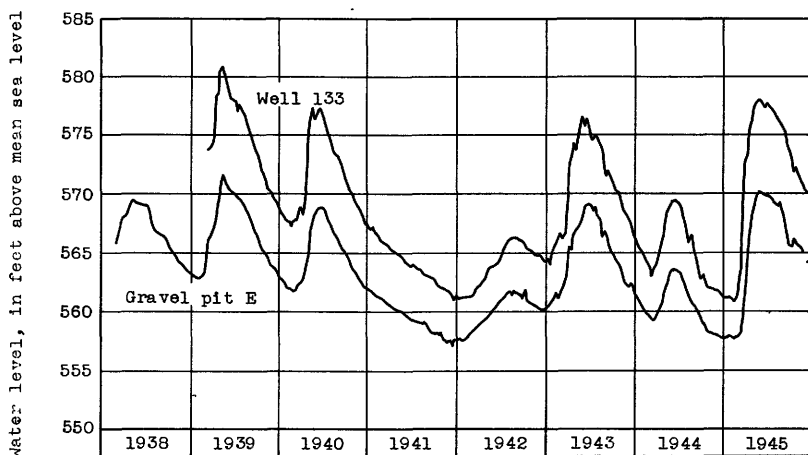


Figure 11.--Graphs showing water levels in observation well 133 and gravel pit E, Fairfield Township, Butler County, Ohio.

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

Well	Date	Water level	Date	Water level	Net change
B-24	Jan. 3	43.17	Dec. 31	37.68	+5.49
B-25	3	20.25	27	17.78	+2.47
B-26	3	18.69	27	16.43	+2.26
B-27	3	35.24	31	32.62	+2.62
B-28	3	44.29	31	39.27	+5.02
B-30-D	3	36.70	31	32.10	+4.60
B-32	3	31.85	27	30.52	+1.33
B-33-D	3	26.59	27	24.73	+1.86
B-34-D	3	32.97	27	30.14	+2.83
B-35	3	39.29	27	34.97	+4.32
B-36	3	39.09	27	35.36	+3.73
B-37	3	50.90	24	46.27	+2.63
B-38	3	41.93	27	38.22	+3.71
B-39	1	34.04	31	30.23	+3.81
85-7	1	28.89	29	24.70	+4.19
Average for year:					+3.52

Miami Valley south of Hamilton

This area includes the well field of the Mill Creek Valley water-supply project, developed by the Federal Works Agency in 1943. Heavy pumping from this well field was discontinued in August 1945, but had averaged about 6.7 million gallons a day from January 1 to August 17. Records of water level in the area were obtained from automatic water-stage recorders on 4 observation wells and by weekly tape measurements in 18 wells and gravel pits. Hydrographs for observation well 133 and gravel pit E are shown in figure 11.

Due to the reduction in pumpage in the area in the last half of 1945 and to the substantial rises in water levels from recharge in the spring, water levels in observation wells ranged from 2 to 12 feet higher at the end of 1945 than at the end of 1944. The following table summarizes the net changes in 22 observation wells in the area in 1945:

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

Well or gravel pit	Date	Water level	Date	Water level	Net change
B-1	Jan. 3	43.24	Dec. 31	35.19	+8.05
B-2	3	39.85	31	33.56	+6.29
B-3	3	25.75	27	19.76	+5.99
B-4	3	29.97	27	27.47	+2.50
B-6	1	24.79	27	19.71	+5.08
B-9	3	15.19	27	10.94	+4.25
B-10	1	15.05	31	9.83	+5.22
B-11	2	45.94	28	33.94	+12.00
B-22	1	20.20	31	16.45	+3.75
B-23	1	27.31	31	21.08	+6.23
11-D-4	1	36.49	31	28.78	+7.71
T-50	2	17.51	27	14.59	+2.22
110	1	20.98	31	17.13	+3.85
112-A	1	26.18	31	21.84	+4.34
113-A	1	a 25.69	31	a 21.88	+3.81

a Below measuring point.

Water level, in feet below land-surface datum, 1945					
Well or gravel pit	Date	Water level	Date	Water level	Net change
115	Jan. 1	30.22	Dec. 27	24.53	+5.69
117	3	31.61	27	25.68	+5.93
122	3	45.02	31	41.13	+3.89
133	1	44.10	28	35.33	+8.77
156	3	37.18	31	29.68	+7.50
Pit E	3	41.80	31	35.30	+6.50
Pit N	3	6.21	27	4.20	+2.01
Average for year					+5.53

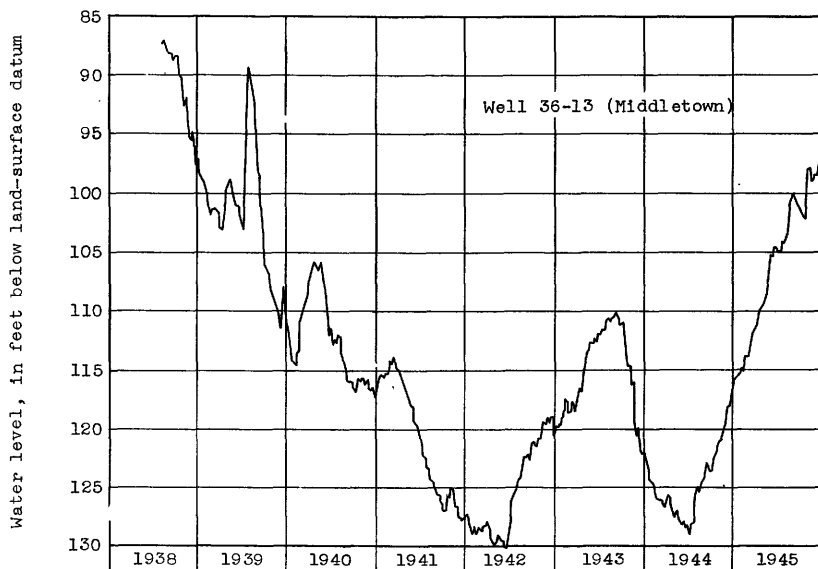


Figure 12.--Hydrograph showing fluctuations of water level in well 36-13, Middletown, Butler County, Ohio.

Upper Mill Creek Valley

The area from Flockton, in Butler County, to Kemper Road, in Hamilton, is not affected by heavy pumping, and the records obtained from observation wells show natural fluctuations of water level.

Measurements of water level obtained in observation wells in this area in 1945 show that large rises occurred from about February 15 to April 30. The substantial ground-water recharge represented by these rises was received at a time when Mill Creek was in flood and large areas in the valley were inundated. The area in which these rises occurred may be seen by

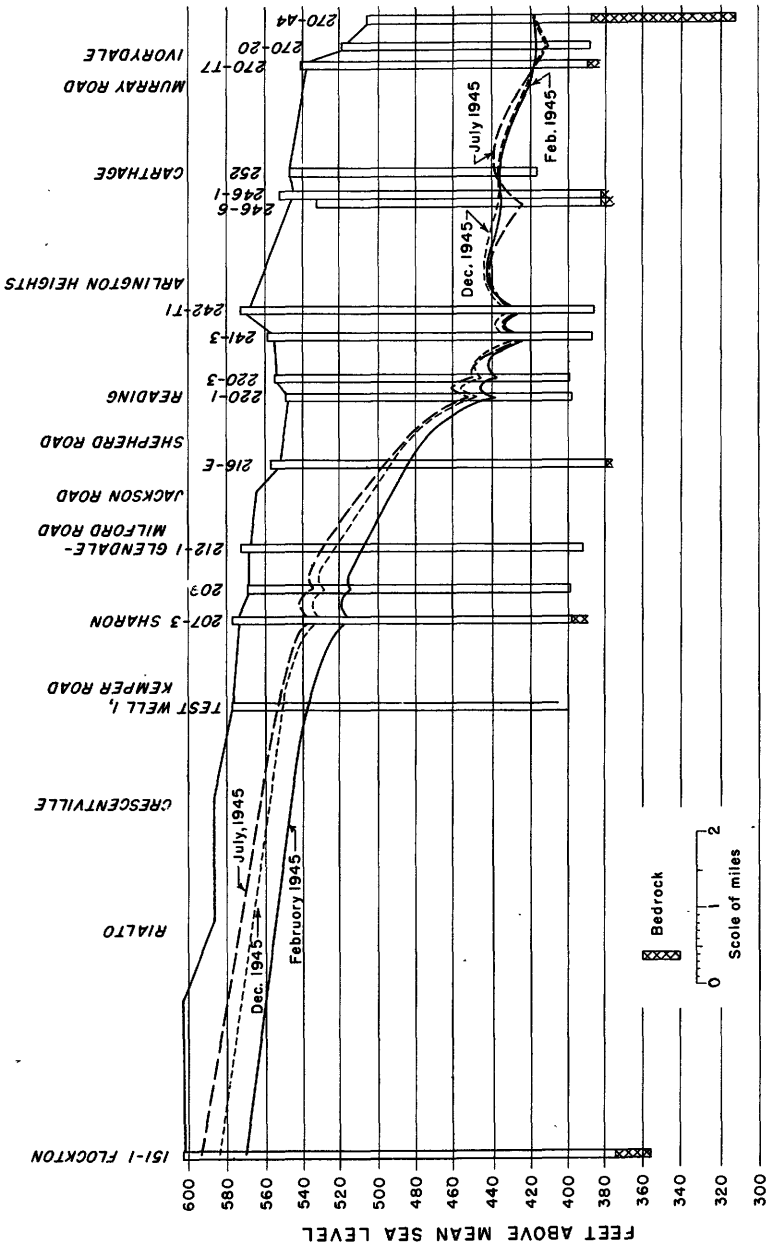


Figure 13.--Profiles of piezometric surface in Mill Creek Valley from Flockton to Ivorydale, Butler and Hamilton Counties, Ohio, 1945.

comparison of the piezometric profiles for February and July 1945, shown in figure 13. Inspection of the profile for December shows that these risés were well sustained through the end of the year.

The water-level records given in this report show that the rises in the spring months averaged about 18 feet in the area. The extent to which these rises were sustained through the end of the year is shown by the following table which compares the water-level measurements made in each of the observation wells in the area at the beginning and end of 1945 and the net changes in the year. This table shows net rises varying from 10.87 to 14.38 feet and averaging 12.29 feet.

Water level, in feet below land-surface datum, 1945					
Well	Date	Water level	Date	Water level	Net change
151-1	Jan. 2	31.51	Dec. 28	18.15	+13.36
158-1	2	48.72	28	35.03	+13.69
160-1	2	36.69	28	25.03	+11.66
162-1	2	49.86	27	38.89	+10.97
165-1	2	47.02	27	36.15	+10.87
168-1	2	32.87	27	21.77	+11.10
First test	2	a 42.50	31	28.12	+14.38

a Estimated.

At the end of 1945 water levels were from 2 to 10 feet higher than on any previous December 31 since records were first obtained. Because the natural piezometric surface slopes downward to the south in the Mill Creek Valley, the higher water levels in the northern part of the area will eventually benefit the heavily pumped industrial area in the lower end of the valley.

Lower Mill Creek Valley

The concentration of industries in the valley of Mill Creek in Hamilton County has produced large demands on ground-water supplies. Steady declines in water level in the deep beds occurred from 1938, when measurements were first started, through 1943. Water levels in most of the observation wells in the area have risen slightly since 1943 because of reductions in pumping.

Records of pumpage are furnished monthly by the larger industrial users of ground water and the municipally owned water-supply systems, accounting for approximately 70 percent of the total amount pumped in the area. The estimate of the remainder is based on surveys made by Klaer and Thompson in 1940 and by the Ohio Water Resources Board in 1945. Total

pumpage from the lower Mill Creek Valley in each year since 1939 is estimated as follows:

<u>Year</u>	<u>Average daily pumpage, in millions of gallons</u>
1939	12.5
1940	13.3
1941	13.9
1942	17.5
1943	16.9
1944	14.0
1945	12.7

The marked reductions in pumpage in 1944 and 1945 were due primarily to the purchase by two large industries of water from the city of Cincinnati during the winter months. The combination of reduced pumpage and favorable spring recharge in the upper Mill Creek Valley in 1945 resulted in net rises in all but 2 of 15 observation wells in the heavily pumped industrial area.

The following table shows the water levels at the beginning and end of 1945 and the net changes in 15 observation wells in the lower Mill Creek Valley in Hamilton County, from Glendale to Ivorydale, north of Cincinnati.

<u>Water level, in feet below land-surface datum, 1945</u>					
<u>Well</u>	<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>	<u>Net change</u>
207-3	Jan. 1	54.91	Dec. 31	42.95	+11.96
212-1	1	58.08	31	45.29	+12.79
T-8	3	19.64	31	18.61	+1.03
214-3	3	30.80	31	27.78	+3.02
215-2	3	30.40	31	29.98	+4.42
216-E	1	67.23	31	58.07	+9.16
236-4	3	124.45	31	122.27	+2.18
237-3	1	144.75	31	143.41	+1.34
241-3	1	131.00	31	126.95	+4.05
242-T-1	3	141.11	24	139.80	+1.31
246-1	1	111.12	31	108.40	+2.72
252	3	111.44	31	110.34	+1.10
265	3	130.72	31	131.57	-.85
270-A4	1	90.10	31	88.71	+1.39
270-T-7	3	121.52	31	122.66	-1.14
Average for year:					+3.37

These records show recoveries ranging up to 12.8 feet during 1945, the largest recoveries occurring in the northern part of the area above Lockland where recharge facilities are good. Although the downward trend of water levels in most of the observation wells in the southern part of the area was reversed in 1944 and 1945, the elevation of the piezometric surface is still very low. Ground-water levels in several pumping wells in the vicinity of Ivorydale and Carthage are within 10 to 20 feet of the bedrock and are 85 to 130 feet below the land surface. As shown in the profile of the Mill Creek Valley, figure 14, the ground-water gradient

drops rapidly from the area just north of Sharon Avenue to the Reading area, a decline of about 100 feet in less than 4 miles. From Reading to Ivorydale the decline, as shown by the profile of the piezometric surface on Dec. 31, 1945, is only about 30 feet in a distance of about $4\frac{1}{2}$ miles.

The following table, taken from the data furnished by the Procter and Gamble Company, shows average depths to water level (static) at Ivorydale at various times since 1895.

<u>Year</u>	<u>Depth to water (feet)</u>
About 1895	37
May 1920	65
1923	75
1924	82
1927	83
1934	80 (?)
Nov. 1936	a 88
1937	a 93
1938	a 95

a Measurement in 1 well only.

The table shows that a steady decline in ground-water levels of about 58 feet occurred in the Ivorydale area from 1895 through 1938. Hydrographs of the water levels in six observation wells in the lower Mill Creek Valley are shown in figures 15, 16, and 17. These show more or less continuous declines in water level from the beginning of record to 1944, and an upward trend in 1944 and 1945.

These recoveries in water level will continue if favorable recharge occurs in the next few years and if pumping is continued at present rates. The effect of the decrease in pumpage at the Wright Aeronautical Company plant, in Lockland, in the lower Mill Creek Valley, is noticeable in the records of water level from 1943 to 1945 in wells 216-D, 216-C, and 216-E in this section of the valley.

Cincinnati

Most of the ground water for industrial uses in Cincinnati is obtained from glacial and alluvial deposits of sand and gravel underlying the city at depths of 50 to 180 feet. The principal users include hotels, theaters, department stores, and many industries which pump water for cooling and air conditioning. The city of Cincinnati obtains its municipal water supply from the Ohio River.

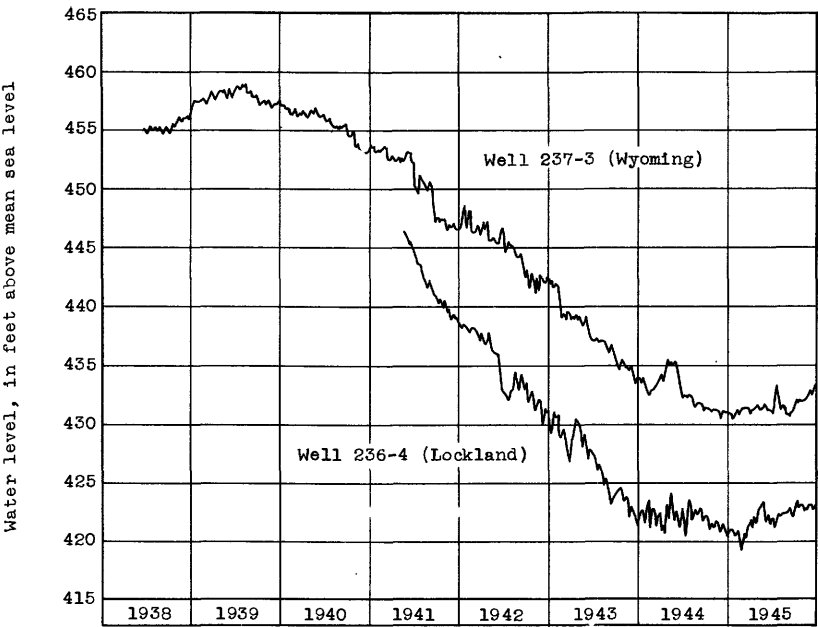


Figure 15.--Graphs showing water levels in well 237-3, at Wyoming, and well 236-4, at Lockland, Hamilton County, Ohio.

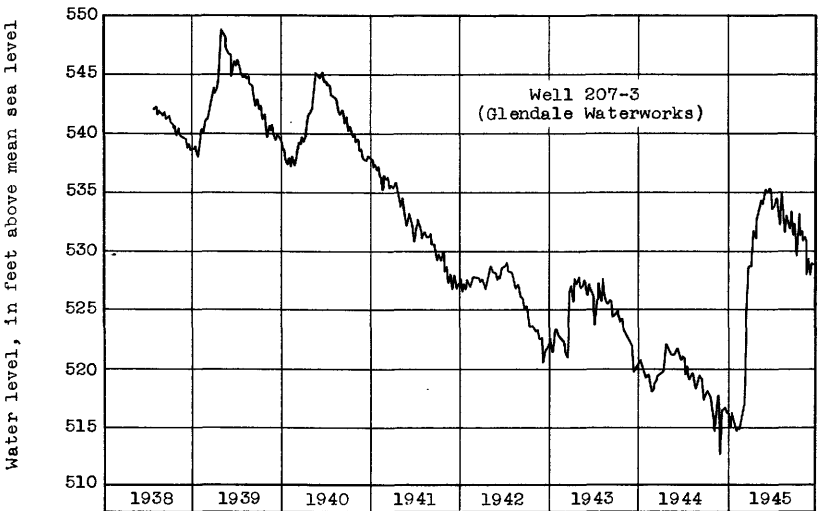


Figure 16.--Graph showing water levels in well 207-3 (Glendale waterworks), Sycamore Township, Hamilton County, Ohio.

Water-level measurements were made about monthly during 1944 and 1945 in three wells in the business section of Cincinnati. Wells 294-A and 301-A are 165 feet and 138 feet deep, respectively, and show total ranges in fluctuation of about 46 feet and 38 feet, respectively. Well 298-2, 161 feet deep, measured from March 25, 1944, to September 28, 1945, shows a total range in fluctuation of about 16 feet during this period, and a

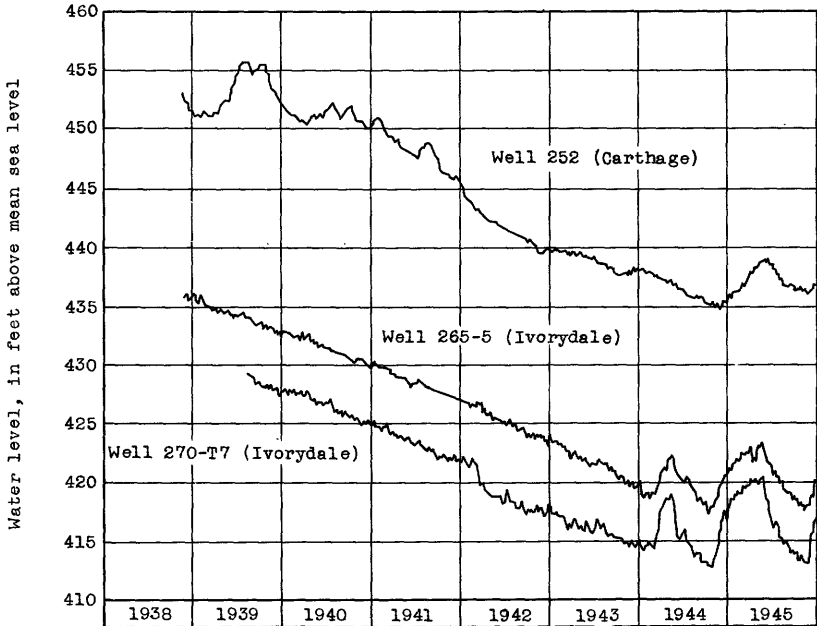


Figure 17.--Graphs showing water levels in observation wells 252 (Carthage), 265-5 (Ivorydale), and 270-T7 (Ivorydale), Hamilton County, Ohio.

peak stage in April 1945 of about 63 feet below land surface. Peak stages in wells 294-A and 301-A occurred in March 1945 at about 89 feet and 96 feet below the land surface, respectively. The lowest observed water level in these two wells since the beginning of record was about 135 feet below land surface in August 1944. The following table summarizes the changes in water level in three wells in Cincinnati during 1945.

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

Well	Date	Water level	Date	Water level	Net change
294-A	Jan. 6	113.00	Jan. 10	106.18	+6.82
298-2	6	77.98	Sept. 28	71.91	+6.07
301-A	6	111.32	Dec. 29	103.32	+8.00

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The following is a list of references to publications describing the geology and ground-water resources of Butler and Hamilton Counties.

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FRANKLIN COUNTY

Columbus

A record of ground-water levels in the limestone underlying Columbus has been obtained since April 27, 1942, from an observation well 269 feet deep at the Moores & Ross Dairy at Spring and Ninth Streets. No records have been obtained in the glacial deposits of sand and gravel which overlie the limestone. Industrial ground water is pumped from both sources in Columbus and was estimated in a survey by the Ohio Water Resources Board to average about 32 million gallons a day. The city of Columbus obtains its water supply from the Scioto River.

A hydrograph of water levels in the Moores & Ross Dairy well, Columbus 1, is shown in figure 18. The record shows large declines during the summer months, when the demand for water for cooling and air-conditioning purposes is greatest. Recovery normally occurs from October to April of each year.

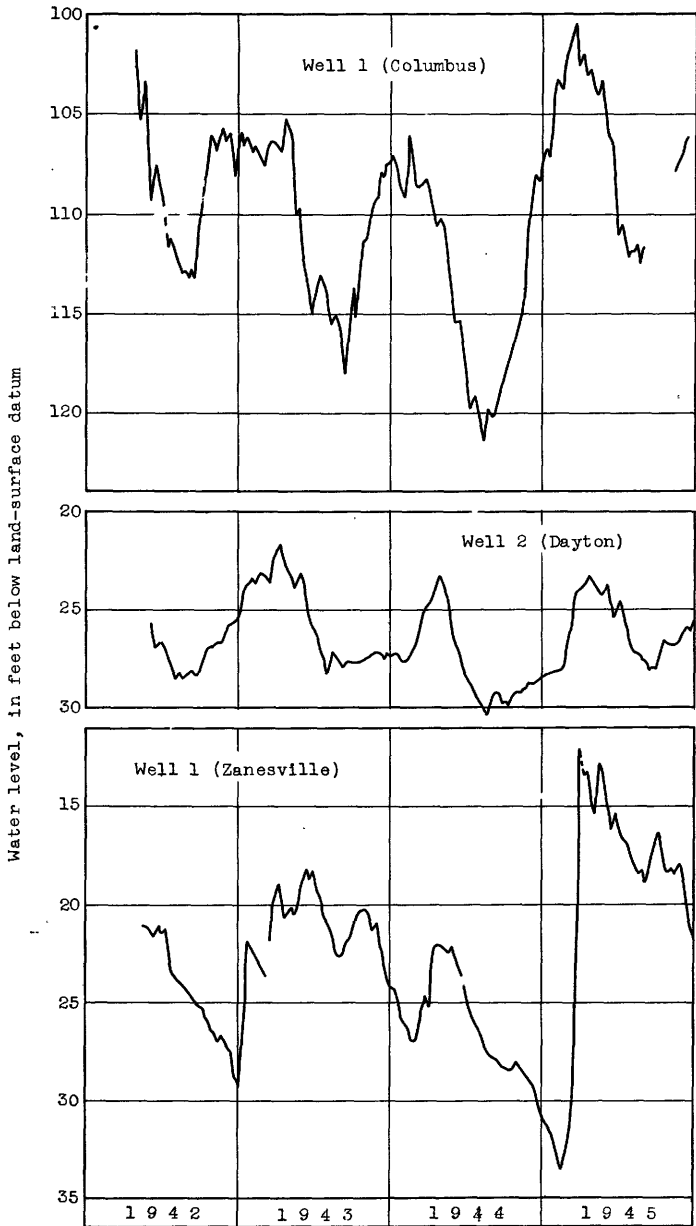


Figure 18.--Graphs showing water levels in observation wells at Columbus, Dayton, and Zanesville, Ohio.

The lowest observed water level in this well in each calendar year of record and the water level at the end of each year is shown by the following table:

Year	Date	Lowest recorded water level	Date	Water level at end of year
1942	Sept. 20	113.44	Dec. 31	105.62
1943	21	118.45	31	107.25
1944	Aug. 16	121.53	31	106.70
1945	22	112.68	18	104.53

Although the recorder did not operate from August 27 to November 13, 1945, the record indicates that the water level did not reach as low an elevation in 1945 as in 1944. A downward trend occurred from 1942 through 1944. However, substantial recovery occurred in 1945, as shown by the water levels given in the above table.

GREENE COUNTY

Xenia

The city of Xenia obtains its municipal water-supply from a battery of drilled wells located along Massie creek near its confluence with Little Miami River, about $3\frac{1}{2}$ miles north of Xenia. These wells penetrate formations of sand and gravel and are 24 to 30 inches in diameter and about 100 feet deep. The ground water contains a large amount of iron which is removed by aeration and filtration. An average of about 0.8 million gallons a day is pumped from this well field, with peak loads of as much as 1.5 million gallons a day.

An automatic water-stage recorder has been operated on an unused well 30 inches in diameter and 77 feet deep since August 21, 1944. This observation well is in the city well field about 75 feet from Massie Creek. The record of water levels shows that fluctuations are caused by daily operation of the pumps in nearby wells and by natural depletion and recharge in the water-bearing formations. The daily fluctuations range from 1.5 to 2.0 feet, and the total range during 1945 was 11.1 feet. The lowest water level recorded since the gage was installed was 10.9 feet below land surface on October 24, 1944, and on February 12, 1945. It probably reached a lower level sometime between December 19, 1944, and February 12, 1945, while the recorder was out of operation. The water-level record thus far obtained indicates that there is no continuous downward trend in the area of the well field, and that pumping from the city wells has not been in excess of the amount of recharge received in the area.

MONTGOMERY COUNTY

Dayton

The city of Dayton is situated at the junction of the Miami and Mad Rivers. The Mad River flows southwest over a buried valley which continues southward under the Miami River. Ground-water supplies are obtained mainly from the glacial and alluvial deposits of sand and gravel in this buried valley. The municipal supply is taken from wells northeast of the city at Rohrer's Island in the Mad River. Surface runoff is diverted from the river into ditches and lagoons in the island, where it filters into the natural sand and gravel reservoir under the area. Pumpage by the city from this well field averages about 33 million gallons a day.

Industries in Dayton and vicinity also take large quantities of ground water from the gravel deposits in the valley. A survey of the Ohio Water Resources Board in 1944 indicates that the industrial pumpage is about 40 million gallons a day. The total ground-water pumpage in the Dayton area is therefore about 73 million gallons a day which is the heaviest concentration of ground-water pumpage in Ohio.

A record of ground-water levels in the business section of Dayton has been obtained since May 1942 in a well at the Dayton Power and Light Company (Dayton 2). This record is shown in figure 18, and indicates that some recovery occurs in the last 2 or 3 months of each year and that recharge is normally received in the first 3 or 4 months of each year. The highest water levels usually occur in March or April, and the lowest in August or September. There is no indication of a continuous downward trend in this area, despite the heavy pumping.

An automatic water-stage recorder has been operated on an observation well at Rohrer's Island (Dayton 1) since March 1942. The record shows fluctuations caused principally by changes in operation of the pumps and variations in the amount of recharge water admitted to the lagoons.

A third water-stage recorder was installed in Dayton on November 8, 1945; on a State Highway Department test well near the National Cash Register Company plant on the east bank of the Miami River. Tape measurements were made each weekday from May 9 to November 7. The record shows weekly fluctuations caused by nearby industrial pumping, with rises of about 1 foot and sometimes 2 feet occurring over week ends when pumping is decreased.

During 1945 water-level measurements were begun in seven other Highway Department wells located in a line along the east bank of the Miami River. These are individual tape measurements made each weekday by H. K. Stein, of the city of Dayton Engineering Department. Fluctuations of water level in these wells are similar, and, in general, are caused by major changes in the stage of the Miami River. The total range of fluctuation during the period of record has averaged about 9.5 feet. Continuance of water-level measurement programs in these observation wells will provide additional evidence of ground-water trends in the industrial area of Dayton.

MUSKINGUM COUNTY

Zanesville

A hydrograph of water levels in an observation well in the Zanesville municipal well field is shown in figure 18. This record shows that recharge amounting to about 20 feet was received in the alluvium of the Muskingum River, north of Zanesville, in the spring of 1945. Most of the recharge was derived from flood waters that spread over the area following a period of heavy precipitation in March. Ground-water levels after this period of recharge were higher than any recorded since May 1942 when observations were started, with the result that water levels were 9 feet higher at the end of 1945 than at the beginning. During 1945 both the highest and lowest ground-water levels of record were reached. The lowest occurred on February 16 and the highest on March 28. The total range in fluctuation in 1945 was 21.65 feet.

RICHLAND COUNTY

Mansfield

The water-level record obtained from an observation well at the abandoned pumping station on North Main Street continued to show daily fluctuations caused by industrial pumping during 1945. The general trend was downward during each week with recoveries over week ends. There was no appreciable recharge during the spring and early summer months and the ground-water level fluctuated between 49 and 54 feet below land surface until July 1. Beginning at 3 p.m. on June 30 a rise occurred, which, by July 5, had amounted to 13.5 feet. Since no heavy rainfall occurred during the last few days of June, this rise is attributed to a substantial reduction in pumpage over an extended week end which included the July 4 holiday.

The water-stage recorder was out of operation from July 8 to August 11, and by August 11 the water level was again down to 51.5 feet below land surface and 12.5 feet below the peak of July 5. Several other large rises occurred during week ends from August to October 1945, but the general trend of water levels was downward from about the first of September to the end of the year.

The water level in the Mansfield observation well was estimated to be approximately the same at the end of 1945 as at the beginning, about 50 feet below land surface.

ROSS COUNTY

Chillicothe

Extensive deposits of glacial outwash gravel fill the buried valley underlying the present Scioto valley in the vicinity of Chillicothe, to depths of slightly more than 100 feet in some places. These materials were deposited during the Illinoian and Wisconsin ice stages of Pleistocene age, under conditions of free drainage in the Scioto River. The buried valley averages about 2 miles in width and is confined between the rock hills which extend about north and south through Chillicothe. The Scioto River now winds through this broad flood plain, and is a source of appreciable ground-water recharge when its flood waters inundate the valley lowlands.

The municipal water supply for Chillicothe is obtained from two large diameter drilled wells, 105 feet deep, in the northwestern section of the city. Pumpage from these wells averages about 1 million gallons a day. The largest amount of ground water pumped in Chillicothe is taken from several drilled wells and three water collectors by the Mead Corporation, a large paper company in the southern part of the city. In addition, the Chillicothe Paper Company, several laundries, a brewery, and other commercial establishments use ground water. Total pumpage from the gravel deposits in Chillicothe during 1945 is estimated at 20 million gallons a day.

Five records of ground-water levels were obtained during 1945 in Chillicothe. Automatic water-stage recorders were maintained on two wells by the Geological Survey. The other records were furnished by the Chillicothe Water Department, the Mead Corporation, and the Chillicothe Paper Company. The following table lists the type and length of these records.

<u>Well</u>	<u>Where measured</u>	<u>Type</u>	<u>Record began</u>
1	36-inch well	Continuous recorder	Mar. 15, 1944
2	26-inch well	Electric-tape gage	Jan. 1, 1945
3	30-inch well	Continuous recorder	Dec. 8, 1944
4	Gravel pit	Staff gage	June 6, 1939
5	6-inch well	Steel tape	May 9, 1941

Figure 19, which includes five hydrographs of water levels in the Chillicothe area, shows that the fluctuations have considerable range.

Fluctuations of water levels in the Chillicothe area are caused by changes in pumping rates and by natural recharge and depletion. In general, water levels in the vicinity of the paper companies are drawn down during each week when pumps are operating and rise over week ends when pumps are shut off. In Chillicothe 3, Mead well, this range averages about 0.7 foot. Seasonal fluctuations of ground-water levels are caused by recharge and the natural depletion of the water-bearing materials. Recharge is normally received from February through April or May, the largest rises being associated with high stages in the Scioto River and Paint Creek. Precipitation during the summer and early winter months does not usually cause rises in ground-water levels, and the trend is downward during this period.

Daily measurements of water level are made with an electric-tape gage in one of the water department production wells, Chillicothe 2. The record obtained during 1945 shows recharge of about 14 feet between February 15 and March 12, and a general downward trend to the end of the year. The water level in this well was about 5 feet higher at the end of 1945 than at the end of 1944, and 3.5 feet higher than at the end of 1943.

The longest record of ground-water levels in the Chillicothe area was furnished by the Chillicothe Paper Company, and is shown in figure 19 (Chillicothe 4). This record, beginning in 1939, consists of daily gage readings of ground-water levels in a gravel pit near the southern limit of Chillicothe and shows the deficient recharge in 1941 and the substantial recharge in 1943 and 1945. The hydrograph shows that water levels have reached generally lower elevations after 1941 than prior to 1941. On two or three occasions since 1941 the Chillicothe Paper Company has dredged the gravel pit and lowered the intakes of their pumps.

Although the five records of ground-water levels in the Chillicothe area show that pumping is not exceeding the natural recharge and that no persistent downward trend is occurring, it is known that industries experience difficulty in obtaining sufficient water from their wells in dry years when ground-water levels are low.

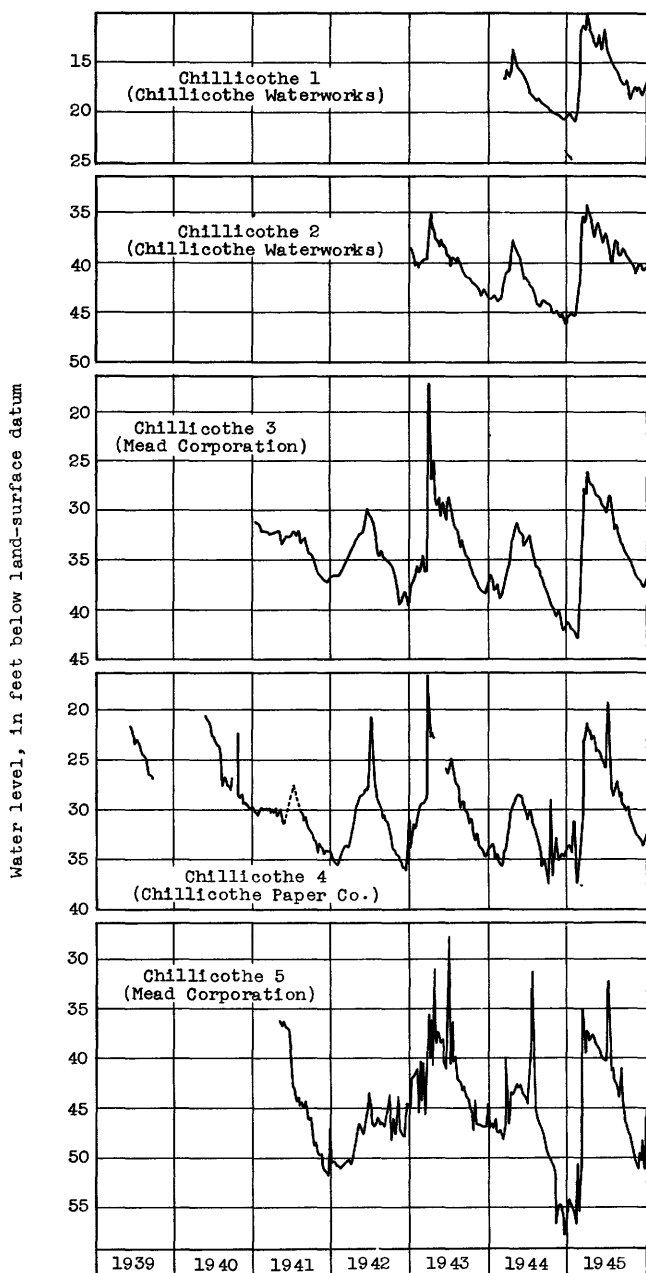


Figure 19.--Graphs showing water levels in four wells and one gravel pit, at Chillicothe, Ross County, Ohio.

STARK COUNTY

Canton

Large ground-water supplies are obtained by the city of Canton and its industries from glacial outwash and valley train gravels deposited in a system of buried valleys underlying the Middle and East Branches of Nimishillen Creek and continuing through the city proper in a westerly direction to the Tuscarawas River. These materials were deposited by the Illinoian and Wisconsin glaciers of Pleistocene age in the "Teays" and "Deep Stage" ^{1/} valleys and throughout most of the area surrounding Canton.

They vary from relatively impermeable till in the areas of ground moraine to cleanly washed gravels in the outwash plains and valley trains. The thickness of these deposits ranges from less than 50 feet in the uplands to more than 200 feet in the buried valleys.

Ground-water recharge in the Canton area is normally received during the late winter and spring months. Where the gravels are traversed by through-flowing streams, recharge is received from flood waters as well as from local precipitation and a considerable amount of recharge is probably received from stream infiltration in the heavily pumped parts of the area. Rainfall at Canton has averaged 38.52 inches a year over a period of 63 years, and the mean annual temperature has been 50° F. Temperature of ground water pumped in Canton is about 52° F.

Pumpage from the Canton area, based on a survey by the Ohio Water Resources Board, was estimated to be about 38 million gallons a day during 1944, of which 31 million gallons a day was derived from gravel deposits. About 14 million gallons a day was pumped by the Canton Water Department from 3 well fields which overlie the buried valleys. The average pumpage by the Canton Water Department in 1945 was only slightly more than in 1944, and it is estimated that total withdrawal of ground water from the gravel deposits in Canton was approximately the same in 1945 as in 1944.

Water-level measurements in observation well 13, in the Northeast well field, figure 20, show that pumpage in that area since 1941, which has averaged 7.6 million gallons a day, has been well within the amount of recharge received in the period 1941 to 1945.

^{1/} Stout, W., and Lamb, G. F., Physiographic features of southeastern Ohio: Ohio Jour. of Sci., vol. 38, pp. 49-83, 1938.

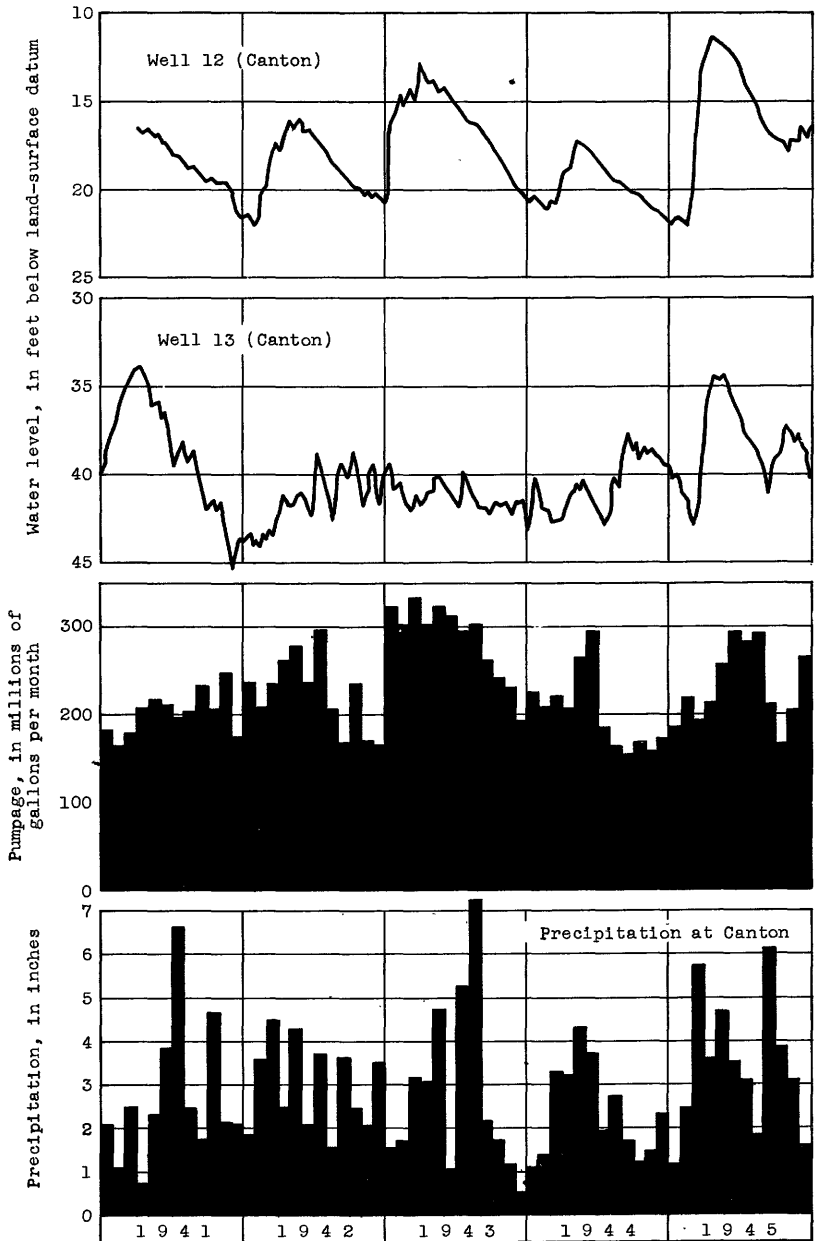


Figure 20.--Graphs showing monthly pumpage at the Canton Water Dept. North-east well field and water levels in Canton well 13, Stark County, Ohio.

Measurements of ground-water levels obtained since 1939 in two observation wells in Canton proper show that pumping exceeded recharge in the city proper from 1939 to 1944 and that water levels declined about 30 feet in that period. (See fig.21.)

Water-level measurements in observation wells in the Grovemiller well field (Grovemiller 1, 2, and 3) indicate that the pumping in that area has not exceeded the available recharge.

During 1945 an intensive investigation of the Sippo area was begun in cooperation with the city of Canton and the Ohio Water Resources Board which included studies of the source and amount of recharge in an area containing about 9 square miles, in Perry Township, about $5\frac{1}{2}$ miles west of the center of Canton. A pumping test was begun on September 19, 1945, to aid in determining the extent to which recharge could be salvaged by pumping from wells in the Sippo area. Water-level measurements were made before pumping began and during pumping in about 40 observation wells in the area surrounding the pumping well. Pumping at a rate of about 1,000 gallons a minute was continuing at the end of 1945.

A detailed report of the results of this investigation will be published in 1946 by the Ohio Water Resources Board. The report will also contain the results of a geologic investigation, and maps showing the types of glacial deposits, the approximate contours of the bedrock, and the thickness of drift in the Canton quadrangle.

Massillon

An automatic water-stage recorder has been maintained since June 1942 on an unused well at the Republic Steel Corporation in the southern part of Massillon. The well is 48 feet deep, ending in gravel, and is about 0.1 mile west of the Tuscarawas River. The water level in this area apparently is unaffected by pumping in any single well, but is affected by the total pumping in the area.

The water-level record during 1945 shows a downward trend from January 1 to about February 15, and a general upward trend during the remainder of the year. This rise is due to decreased pumping from the gravel deposits in the area. The following table shows the water level on December 31 of each year since 1942.

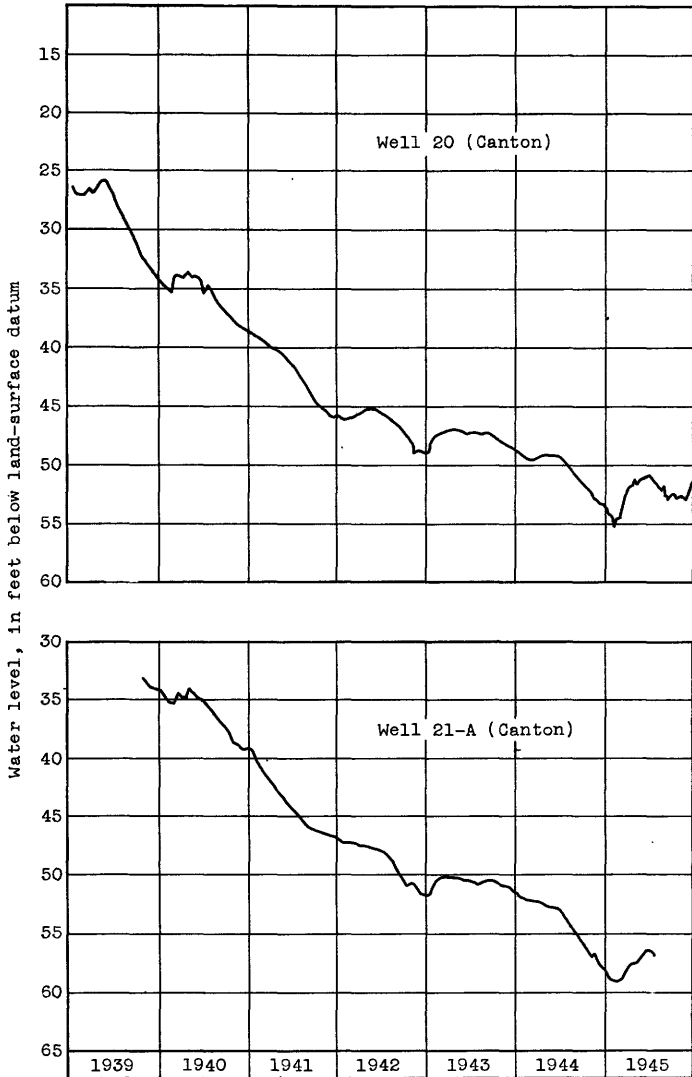


Figure 21.--Graphs showing fluctuations of water levels in Canton well 20 (Republic Steel Corporation) and Canton well 21-A (Ohio Power Company), Stark County, Ohio.

<u>Year</u>	<u>Water level, in feet below land-surface datum</u>
1942	48.55
1943	46.91
1944	51.70
1945	47.53

WASHINGTON COUNTY

Marietta

An automatic water-stage recorder has been maintained on a well at the Marietta Osteopathic Clinic since May 1942. This well is 42 feet deep and ends in gravel. Daily fluctuations of the ground-water level during the summer months, caused by nearby pumping, amount to a maximum of about 0.4 foot. The principal fluctuations are caused by recharge derived from precipitation and flood waters of the Muskingum River and natural depletion. The average precipitation at Marietta for 125 years of record is 42.11 inches, and the total in 1945 was 53.22 inches. Most of this excess fell during the months of February to June, 7.00 inches falling during March alone. This was accompanied by high stages in the Muskingum River, and the water-stage recorder was removed from March 8 to 13 to avoid damage to the instrument. The longest period of recharge in the vicinity of the well in 1945 was from February 14 to March 25. The net rise in this period was 11.6 feet. From March 25 to September 11 the water level declined 11.9 feet, and on September 11 reached its lowest stage of the year, 30.4 feet below land surface. Two subsequent rises of about 1.4 feet each brought the water level at the end of the year to about 29 feet below land surface.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Butler County

12-1 (*886, p. 565; *906, p. 177; *936, p. 207; *944, p. 203; *986, p. 226; 1016, p. 270). Village of Trenton. Municipal water-supply well.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 27	31.85	May 19	32.20	Sept. 18	34.53	Nov. 20	35.16
Apr. 17	31.83	July 17	32.46	Oct. 23	34.82	Dec. 18	35.35
May 15	32.50	21	33.57				

12-2 (*944, p. 203; *986, p. 226; 1016, p. 270). Village of Trenton. Municipal water-supply well. No measurements made in 1945.

25-5 (*936, p. 207; *944, p. 203; *986, p. 226; 1016, p. 270). City of Middletown. Municipal water plant.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	37.50	38.49	34.70	25.56	27.66	28.86	25.80	29.14	30.12	30.76	31.56	32.01
2	37.80	38.50	34.49	25.31	27.78	29.07	25.91	29.15	30.17	30.58	31.60	31.96
3	38.10	38.54	34.36	24.71	27.96	29.09	26.04	29.01	30.05	30.51	31.62	31.98
4	38.27	38.05	34.06	24.30	28.14	29.11	26.04	29.05	29.97	30.58	31.62	32.03
5	38.40	37.91	33.26	24.18	28.31	29.26	26.06	29.06	30.05	30.22	31.60	32.05
6	38.47	38.26	33.00	24.01	28.36	29.44	26.31	28.70	30.10	29.91	31.64	32.15
7	38.46	38.31	29.75	24.07	28.21	29.61	26.66	28.90	30.25	29.79	31.69	32.24
8	38.00	38.41	23.05	24.13	28.22	29.76	26.71	29.22	30.52	29.73	31.75	32.33
9	38.16	38.65	21.02	24.49	28.40	29.89	26.39	29.53	30.55	29.69	31.82	32.33
10	38.29	38.66	21.70	24.76	28.64	29.79	26.57	29.75	30.63	29.75	31.88	32.37
11	38.31	38.49	22.36	25.08	28.72	29.93	26.74	29.90	30.80	29.80	31.90	32.47
12	38.40	38.65	23.09	25.31	28.77	29.93	26.95	29.95	30.96	29.87	31.96	32.49
13	38.45	38.80	23.46	25.60	28.73	29.78	27.14	30.03	31.02	29.96	32.00	32.53
14	38.44	38.75	24.15	25.66	28.99	29.60	27.23	30.07	31.09	30.05	32.05	32.67
15	38.30	38.68	24.57	25.10	29.12	29.45	26.66	29.30	31.16	30.08	32.10	32.75
16	38.09	38.51	25.06	25.00	29.14	29.44	26.28	28.85	31.24	30.14	32.15	32.80
17	38.24	38.25	25.46	25.10	29.14	29.01	27.40	29.33	31.31	30.25	32.16	32.94
18	38.26	37.85	25.75	25.13	28.97	28.59	27.54	29.48	31.34	30.36	32.16	33.04
19	38.29	37.11	25.99	25.21	28.56	25.65	27.80	29.59	31.30	30.56	32.15	33.15
20	38.30	36.78	26.00	25.73	27.91	23.02	27.99	29.59	31.43	30.69	32.15	33.29
21	38.30	36.61	25.08	25.86	27.64	22.28	28.13	29.51	31.52	30.80	32.04	33.38
22	38.44	36.46	22.87	26.01	27.72	22.55	28.27	29.45	31.50	30.97	32.04	33.45
23	38.62	36.34	22.89	26.23	27.81	22.91	28.36	29.49	31.45	31.04	31.91	33.50
24	38.67	36.00	23.05	26.49	28.02	23.25	28.46	30.00	31.44	31.10	31.85	33.52
25	38.40	35.64	23.46	26.71	28.06	23.69	23.61	30.28	31.44	31.15	31.99	33.49
26	38.29	35.29	23.87	27.00	28.15	24.02	28.14	30.31	31.44	31.16	31.78	33.30
27	38.21	35.20	24.25	27.05	28.15	24.38	27.69	30.00	31.36	31.28	31.83	33.22
28	38.30	34.96	24.63	26.95	28.25	24.88	27.67	29.57	31.26	31.36	31.83	32.89
29	38.21		25.00	27.23	28.45	25.34	27.67	29.73	31.19	31.40	31.90	32.45
30	38.25		25.15	27.54	28.61	25.69	28.60	29.91	31.04	31.44	32.00	32.14
31	38.40		25.54		28.68		29.01	30.07		31.50		31.89

Pit J (*845, p. 373; *886, p. 560-561; *906, p. 180; *936, pp. 207-208; *944, p. 204; *986, p. 227; 1016, p. 270). Moorman Sand & Gravel Co. gravel pit. In Middletown.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	25.01	Feb. 12	25.38	Mar. 27	19.35	May 8	18.55
9	25.01	20	24.18	Apr. 3	21.10	15	19.14
16	25.20	27	22.78	10	20.80	22	18.00
23	25.20	Mar. 6	20.35	17	22.03	29	18.02
31	25.43	13	17.54	24	22.55	June 5	18.95
Feb. 6	25.50	20	20.78	May 1	17.53	12	19.60

Pit J--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 19	20.82	Aug. 7	19.09	Sept. 25	21.12	Nov. 13	21.65
26	19.20	14	19.87	Oct. 9	20.90	20	21.88
July 3	21.96	21	19.78	16	20.15	27	21.95
10	17.18	Sept. 4	20.65	23	23.04	28	21.46
17	17.92	11	21.00	30	21.10	Dec. 4	22.54
24	18.52	18	21.34	Nov. 6	21.45	11	21.90
31	19.16						

Pit L (*886, pp. 560-561; *906, p. 180; *936, p. 208; *944, p. 204; *986, p. 227; 1016, p. 271). Smith Farm gravel pit. No measurements made in 1945.

29-1 (*886, pp. 565-566; *906, p. 178; *936, p. 208; *944, p. 204; *986, p. 227; 1016, p. 271). Young Men's Christian Association. In Middletown.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	41.42	Apr. 3	27.99	July 3	27.77	Oct. 9	32.64
9	41.80	10	27.59	10	28.13	16	32.84
16	42.05	17	27.93	17	28.73	23	33.38
23	41.85	24	28.41	24	29.39	30	33.76
30	41.85	May 1	29.09	31	29.91	Nov. 6	33.95
Feb. 6	41.74	8	29.38	Aug. 7	30.23	13	34.21
13	42.03	15	30.23	14	31.28	20	34.48
20	41.39	22	29.22	21	31.15	26	34.20
27	39.54	29	29.56	Sept. 4	32.05	Dec. 4	34.28
Mar. 6	36.73	June 5	30.24	11	32.78	11	34.48
13	28.41	12	30.82	18	33.58	18	34.86
20	29.59	19	28.61	25	33.86	27	34.85
27	27.80	26	26.62	Oct. 2	33.35		

29-2 (*944, p. 205; *986, p. 228; 1016, p. 271). Young Men's Christian Association. In Middletown.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	49.47	Mar. 27	37.38	June 19	36.76	Sept. 25	42.84
9	49.50	Apr. 3	37.42	July 3	35.89	Oct. 2	43.00
16	49.90	10	35.98	10	36.89	9	41.65
23	49.84	17	35.19	17	35.79	23	42.14
30	49.76	24	35.80	24	37.14	30	42.21
Feb. 6	50.02	May 1	36.17	31	36.92	Nov. 6	41.97
13	49.52	8	35.80	Aug. 7	38.97	13	42.55
20	48.89	15	36.62	14	40.00	26	42.74
27	47.68	22	36.42	21	40.67	Dec. 4	43.10
Mar. 6	45.85	29	36.29	Sept. 4	39.75	10	42.00
13	41.22	June 5	37.54	11	40.83	18	43.03
20	39.52	12	38.13				

33-1 (*886, p. 569; *906, p. 178; *936, p. 208; *944, p. 205; *986, p. 228; 1016, p. 272). Wardlow-Thomas Paper Co. In Middletown.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	(a)	Apr. 3	33.73	July 3	29.99	Oct. 9	37.01
9	(a)	10	32.61	10	29.36	16	36.92
16	(a)	17	31.88	17	29.75	23	36.80
23	(a)	24	31.66	24	30.01	30	36.73
30	44.70	May 1	31.19	31	31.69	Nov. 6	36.72
Feb. 6	44.80	8	31.58	Aug. 7	32.54	13	36.70
13	44.76	15	31.72	14	33.30	20	36.89
20	44.40	22	31.83	21	33.39	26	36.93
27	42.45	29	31.59	Sept. 4	34.44	Dec. 4	36.83
Mar. 6	41.50	June 5	31.80	11	35.32	11	36.81
13	38.59	12	32.10	18	35.88	18	36.77
20	36.85	19	32.40	25	36.51	27	36.59
27	34.85	26	30.67	Oct. 2	37.05		

a Dry.

36-13 (*845, p. 375; *886, p. 568-569; *906, pp. 209-210; *944, p. 205; *986, p. 228; 1016, p. 272). American Rolling Mill Co. In Middletown.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	115.55	115.09	113.55	111.57	109.14	106.04
2	115.64	114.94	113.39	111.15	109.00	106.03
3	115.71	115.07	113.67	110.84	109.13	105.73
4	115.80	114.87	113.54	110.94	109.41	104.99
5	115.71	114.70	113.04	111.04	109.48	104.94
6	115.70	114.26	113.04	111.06	109.31	104.89
7	115.54	114.22	112.94	111.17	109.15	104.91
8	115.31	114.24	113.05	110.90	109.34	104.91
9	115.49	114.26	113.08	110.80	109.39	104.91
10	115.57	114.74	113.14	110.32	109.07	105.00
11	115.62	114.65	113.06	110.33	109.13	105.09
12	115.45	114.47	112.81	110.33	109.17	105.24
13	115.51	114.89	113.09	110.40	109.08	105.31
14	115.10	114.96	113.10	110.41	108.36	105.21
15	114.91	114.95	113.09	110.29	108.41	105.29
16	115.14	114.48	112.97	109.89	108.39	104.93
17	115.20	113.80	112.52	110.03	108.45	104.82
18	115.14	113.62	112.31	110.04	108.56	104.40
19	115.29	113.35	111.99	110.04	107.85	104.31
20	115.29	113.10	112.04	109.91	107.19	104.68
21	115.15	113.01	112.21	109.94	107.35	104.80
22	114.92	113.10	112.21	109.86	107.54	104.94
23	115.16	113.62	112.17	109.50	107.58	104.98
24	115.24	113.74	112.18	109.49	107.41	104.77
25	115.23	113.70	111.93	109.51	107.25	104.35
26	115.32	113.38	111.90	109.67	107.16	104.20
27	115.31	113.46	111.89	109.66	106.72	104.19
28	115.09	113.56	111.57	109.61	106.25	104.54
29	114.89		111.68	109.49	105.25	104.78
30	115.04		111.70	109.23	106.16	104.85
31	115.08		111.61		106.14	

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	104.76	104.06	.....	101.31	97.90	98.84
2	105.19	104.10	.....	101.55	98.20	98.65
3	105.23	104.16	.....	101.62	98.35	98.33
4	104.77	104.16	100.07	101.65	97.92	98.55
5	104.87	103.94	100.25	101.68	97.49	98.60
6	105.04	103.60	100.40	101.70	97.85	98.67
7	105.04	103.68	100.53	101.62	98.19	98.73
8	104.95	103.78	100.63	101.56	98.31	98.50
9	104.71	103.80	100.60	101.64	98.18	98.25
10	104.94	103.80	100.18	101.74	98.23	97.88
11	105.00	103.80	100.04	101.80	98.20	97.80
12	105.04	103.60	99.96	102.45	98.57	97.72
13	105.06	103.45	99.87	102.92	98.85	97.60
14	105.04	103.48	99.85	102.55	98.93	97.57
15	104.93	103.27	99.88	101.88	98.99	97.57
16	104.83	102.41	100.24	101.88	98.98	97.35
17	104.84	101.70	100.11	101.93	98.75	97.26
18	104.86	101.30	100.26	101.95	98.75	97.30
19	104.92	100.95	100.34	101.96	98.65	97.27
20	104.94	100.80	100.56	102.00	98.68	97.33
21	104.94	100.84	100.69	101.96	98.77	97.40
22	104.70	100.88	100.80	101.50	98.84	97.36
23	104.19	100.98	100.78	101.12	98.95	97.33
24	103.95	100.99	100.83	100.75	98.96	97.10
25	103.77	101.11	100.99	100.35	98.95	96.65
26	103.74	101.06	101.07	100.05	98.46	96.69
27	103.66	100.40	101.19	99.88	98.41	96.26
28	103.51	100.27	101.90	99.25	98.58	96.95
29	103.89	.....	102.09	98.60	98.69	97.05
30	104.06	.....	101.69	98.25	98.80	97.00
31	104.06	.....		97.85		97.10

Pit P (*906, p. 180; *936, p. 210; *944, p. 206; *986, p. 229; 1016, p. 273). South Middletown Sand & Gravel Co. gravel pit. In Middletown.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	17.40	Mar. 27	7.72	June 19	6.90	Sept. 18	14.75
9	17.40	Apr. 3	7.40	26	8.17	25	14.77
16	17.40	10	8.39	July 3	10.10	Oct. 2	13.70
23	17.40	17	9.51	10	11.39	9	13.45
30	17.80	24	10.30	17	11.62	16	14.04
Feb. 6	17.70	May 1	11.95	24	12.48	23	14.30
13	17.70	8	11.85	31	12.95	30	14.35
20	15.28	15	12.40	Aug. 7	12.78	Nov. 6	14.55
27	12.87	22	10.02	14	13.48	20	14.37
Mar. 6	8.72	29	11.40	21	13.15	Dec. 4	14.18
13	7.38	June 5	12.35	Sept. 4	14.15	11	14.08
20	8.13	12	12.58	11	14.44		

85-7 (*886, p. 567; *906, pp. 210-211; *944, pp. 206-207; *986, p. 230; 1016, p. 273). City of Hamilton. On U. S. Highway 127, in Fairfield Township.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	28.89	.....	26.70	20.11	21.81	23.42	22.01	.....	25.34	.....	24.05	24.43
2	28.75	.....	26.99	19.55	20.35	23.50	22.10	.....	.....	23.45	24.42	24.47
3	28.92	.....	26.90	19.24	20.49	23.00	20.24	.....	.....	23.38	23.30	25.27
4	29.95	.....	25.20	19.10	21.91	22.98	20.20	.....	24.65	23.97	23.77	25.32
5	.....	.....	24.95	19.27	22.50	23.11	21.43	.....	24.73	24.18	23.74	25.05
6	.....	28.93	24.42	19.39	22.50	23.16	21.99	24.25	24.77	25.01	23.76	25.44
7	.....	30.05	18.47	19.68	22.55	23.41	22.21	24.02	25.29	25.06	23.75	23.45
8	.....	30.10	17.00	19.55	22.63	23.38	22.29	24.18	25.27	25.19	24.00	25.40
9	28.93	30.27	17.20	19.99	22.43	23.75	22.37	24.19	24.87	24.93	24.22	26.00
10	.....	30.66	18.34	20.07	21.09	23.83	22.45	24.23	24.67	24.83	24.03	26.00
11	.....	30.27	18.88	20.82	22.64	23.86	22.50	24.26	25.47	24.65	23.93	25.94
12	.....	30.55	19.31	20.84	23.24	23.96	22.65	25.34	.....	24.41	23.97	26.09
13	.....	30.22	19.82	20.80	23.15	24.00	22.77	24.40	.....	24.10	23.95	26.07
14	.....	30.19	20.33	21.00	23.19	23.46	22.69	25.70	.....	24.50	.....	26.12
15	.....	30.19	20.46	20.95	23.26	23.33	22.39	24.55	.....	24.55	24.86	26.17
16	28.82	29.33	21.12	20.79	.....	23.46	22.47	23.94	.....	23.96	25.00	26.18
17	28.83	28.91	21.47	20.69	.....	22.70	22.44	23.90	.....	23.94	25.03	26.19
18	29.84	28.90	21.77	20.71	21.89	21.67	22.44	23.76	25.02	24.95	24.75	26.17
19	29.84	29.30	21.21	20.96	21.57	20.43	22.56	23.55	26.21	25.32	25.02	26.24
20	29.45	28.53	20.55	21.16	21.14	19.18	22.75	23.77	26.42	25.58	25.34	26.30
21	28.34	28.45	19.26	21.07	21.29	19.14	22.99	24.03	.....	24.98	25.43	26.42
22	29.84	28.42	18.41	21.00	21.64	19.29	23.25	24.07	26.35	24.88	25.02	26.46
23	29.95	27.71	18.41	21.13	21.84	19.25	23.34	24.09	26.11	24.54	24.99	26.41
24	30.05	27.76	19.05	21.23	22.23	19.50	22.95	23.98	25.77	24.21	24.45	26.26
25	30.06	27.75	19.23	21.39	22.33	19.77	23.10	24.08	25.98	24.14	24.87	25.95
26	30.24	27.90	19.65	21.39	22.46	19.89	23.19	24.09	26.05	23.98	24.43	25.50
27	30.26	27.09	19.96	21.47	21.97	20.50	23.25	24.09	26.14	.....	24.87	24.70
28	30.27	27.04	20.07	21.50	22.28	20.81	23.30	24.22	.....	.....	24.27	25.12
29	30.23	.....	20.61	21.33	22.55	21.21	.....	24.43	.....	24.42	24.45	24.70
30	30.49	.....	20.68	21.83	22.96	22.01	.....	24.50	.....	24.47	.....	.....
31	30.40	.....	20.65	.....	23.20	.....	.....	25.21	.....	24.51	.....	.....

86-7 (*886, p. 567; *906, pp. 181-182; *936, p. 211; *944, p. 207; *986, p. 230; 1016, p. 274). City of Hamilton. On U. S. Highway 127, in Fairfield Township.

86-7--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	16.54	Apr. 3	7.81	July 3	8.35	Oct. 9	11.57
9	16.66	10	7.52	10	8.63	16	11.74
16	16.80	17	7.54	17	8.65	23	11.95
23	16.83	24	7.48	24	8.99	30	12.01
30	16.92	May 1	7.68	31	9.37	Nov. 6	12.09
Feb. 6	16.02	8	8.00	Aug. 7	9.60	13	12.24
13	16.91	15	8.37	14	9.91	20	12.22
20	16.36	22	8.14	27	10.16	27	12.12
27	15.14	29	8.37	Sept. 1	10.84	Dec. 4	12.26
Mar. 6	12.75	June 5	8.82	11	11.17	11	12.60
13	9.59	12	9.08	18	11.50	18	12.78
20	8.94	19	8.33	25	11.80	28	12.54
27	8.20	26	8.08	Oct. 2	11.62		

104-1 (*845, p. 574; *886, p. 566; *906, p. 183; *936, pp. 211-212; *944, p. 207; *986, p. 231; 1016, p. 274). McGreevy Dairy Co. In Hamilton.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 13	33.15	May 8	31.69	June 26	32.08	Aug. 21	33.60
20	32.75	15	31.67	July 3	32.27	Sept. 4	34.23
27	31.04	22	31.50	10	32.53	11	34.57
Apr. 3	30.47	29	31.29	17	31.65	18	34.90
10	31.71	June 5	31.67	24	32.34	25	35.17
17	31.95	12	31.91	Aug. 7	32.94	Oct. 2	35.15
24	31.73	19	31.99	14	33.20	9	35.45
May 1	31.55						

104-2 (*944, p. 208; *986, p. 231; 1016, p. 275). McGreevy Dairy Co. In Hamilton.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	41.35	Apr. 17	37.22	July 10	34.35	Oct. 9	35.47
9	41.90	24	36.60	17	34.17	16	35.66
16	41.62	May 1	36.12	24	34.26	23	35.85
23	41.77	8	35.50	31	34.13	30	36.06
30	41.94	15	35.21	Aug. 7	34.22	Nov. 6	36.17
Feb. 6	42.10	22	34.95	14	34.35	13	36.38
13	42.25	29	34.90	21	34.49	20	36.57
20	42.40	June 5	34.86	Sept. 4	34.72	27	36.75
27	42.54	12	34.65	11	34.75	Dec. 4	36.94
Mar. 6	42.60	19	34.26	18	34.96	11	37.11
13	42.61	26	34.31	25	35.07	18	37.31
20	42.00	July 3	34.36	Oct. 2	35.22	28	37.50
27	40.23						

B-1 (*944, p. 215; *986, p. 241; 1016, p. 283). Ohio State Highway Department. Along State Highway 4, in Fairfield Township.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	43.24	Apr. 9	36.62	July 9	32.48	Oct. 8	33.42
8	43.29	16	35.50	16	32.45	15	33.73
16	43.27	23	34.72	23	32.49	22	33.88
22	43.57	30	33.91	30	32.52	29	33.92
29	43.64	May 7	33.15	Aug. 6	32.54	Nov. 5	33.99
Feb. 5	43.69	14	32.77	13	32.57	12	34.35
12	43.92	21	32.59	20	32.65	20	34.40
19	44.00	28	32.49	27	32.75	26	34.64
26	44.09	June 4	32.49	Sept. 3	32.83	Dec. 3	34.68
Mar. 5	44.13	11	32.48	10	33.02	10	34.74
12	45.14	18	32.46	17	32.94	17	34.81
19	42.15	25	32.48	24	33.17	24	35.00
26	39.92	July 2	32.47	Oct. 1	33.32	31	35.19
Apr. 2	38.02						

B-2 (#944, p. 215; #986, p. 241; 1016, p. 283). Ohio State Highway Department. Along U. S. Highway 127, in Fairfield Township.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	39.85	Apr. 9	30.55	July 9	29.18	Oct. 8	32.19
8	39.91	16	30.03	16	29.42	15	32.47
16	39.87	23	29.57	23	29.57	22	32.68
22	40.05	30	29.22	30	29.86	29	32.92
29	40.00	May 7	28.47	Aug. 6	29.88	Nov. 5	33.06
Feb. 5	40.16	14	28.88	13	30.00	12	33.27
12	40.12	21	28.77	20	30.55	19	33.39
19	39.85	28	28.65	27	30.82	26	33.43
26	39.48	June 4	29.05	Sept. 3	31.14	Dec. 3	34.53
Mar. 5	38.69	11	29.22	10	31.40	10	33.57
12	34.55	18	29.17	17	31.72	17	33.66
19	33.86	25	28.82	24	31.98	24	33.73
26	32.23	July 2	28.98	Oct. 1	32.13	31	33.56
Apr. 2	31.28						

B-3 (#944, p. 215; #986, p. 241; 1016, p. 283). E. H. Zinsmeister. Along River Road, in Fairfield Township.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	25.75	Apr. 3	16.27	July 3	15.83	Oct. 1	19.14
9	25.83	10	15.72	10	16.06	9	24.02
16	25.77	17	16.52	17	16.38	16	19.18
23	25.95	24	15.34	24	16.60	23	20.35
29	25.95	May 1	16.98	31	15.90	30	19.49
Feb. 6	25.87	8	15.62	Aug. 7	17.13	Nov. 6	19.63
13	25.72	15	18.08	14	17.17	13	19.68
20	25.32	22	17.76	21	16.74	20	19.82
27	24.65	29	19.85	28	15.99	27	19.69
Mar. 6	23.14	June 5	16.29	Sept. 4	18.29	Dec. 3	19.61
13	17.83	12	16.42	11	18.53	11	19.65
20	17.95	19	16.36	18	18.79	18	19.69
27	16.50	26	15.58	25	19.02	27	19.76

B-4 (#944, p. 215; #986, p. 241; 1016, p. 283). A. H. Kollstadt. Along River Road, in Fairfield Township.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	29.97	Apr. 3	22.39	July 3	24.31	Oct. 1	27.16
9	29.98	10	21.73	10	24.98	9	26.63
16	30.00	17	22.65	17	25.40	16	27.15
23	30.12	24	23.99	24	25.67	23	27.63
29	30.17	May 1	24.32	31	26.19	30	27.62
Feb. 6	30.26	8	22.84	Aug. 7	26.02	Nov. 6	27.67
13	29.98	15	24.65	14	26.06	13	27.70
20	28.90	22	24.17	21	26.55	20	27.82
27	27.95	29	24.65	28	26.80	27	27.29
Mar. 6	25.97	June 5	25.38	Sept. 4	27.22	Dec. 3	27.32
13	19.89	12	25.68	11	27.40	11	27.35
20	22.85	19	24.53	18	27.63	18	27.40
27	21.33	26	22.92	25	27.66	27	27.47

B-6 (#944, p. 216; #986, p. 242; 1016, p. 284). Andrew Groh. In Fairfield Township.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	24.79	Feb. 27	23.21	Apr. 24	17.22	June 19	17.01
9	24.29	Mar. 6	20.71	May 1	17.49	26	15.76
15	24.63	13	14.72	8	18.04	July 3	16.89
23	24.75	20	16.58	15	18.56	10	17.52
29	24.94	27	15.71	22	17.79	17	17.85
Feb. 6	24.81	Apr. 3	16.01	29	15.58	24	18.05
13	24.83	10	16.31	June 5	17.79	31	17.58
20	24.02	17	16.67	12	17.97	Aug. 7	18.44

B-6--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 14	18.48	Sept. 18	19.72	Oct. 30	19.28	Dec. 3	19.17
21	18.89	25	19.77	Nov. 6	19.48	11	19.20
28	18.98	Oct. 1	19.28	13	19.65	18	19.65
Sept. 3	19.26	16	19.18	20	19.58	27	19.71
11	19.54	23	19.45	27	19.12		

B-9 (*944, p. 216; *986, p. 243; 1016, p. 284). Henrietta Joyce.
In Fairfield Township.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	15.19	Apr. 3	4.48	July 3	7.51	Oct. 1	9.77
9	15.25	10	4.74	10	7.68	9	9.85
16	15.53	17	5.01	17	7.85	16	9.97
23	15.48	24	5.30	24	8.02	23	9.74
29	15.62	May 1	5.57	31	8.24	30	10.22
Feb. 6	15.73	8	5.88	Aug. 7	8.43	Nov. 6	10.34
13	15.84	15	6.17	14	8.48	13	10.39
20	15.89	22	6.39	21	8.42	20	10.54
27	15.16	29	6.61	28	8.98	26	10.52
Mar. 6	13.59	June 5	6.79	Sept. 4	9.18	Dec. 4	10.70
13	3.03	12	7.11	11	9.52	11	10.72
20	3.76	19	7.28	18	9.49	18	10.90
27	4.05	26	7.33	25	9.65	27	10.94

B-10 (*944, p. 217; *986, p. 243; 1016, p. 284). Elizabeth Groh.
In Fairfield Township.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	15.05	15.53	.....	8.23	9.69	10.65	10.08	11.71	11.58	10.76	11.60	10.97
2	15.04	15.55	.....	7.60	9.81	10.74	9.71	11.54	11.63	10.77	11.62	11.00
3	15.05	15.56	.....	6.54	9.92	10.77	9.74	11.00	11.67	10.77	11.53	11.05
4	15.05	15.57	.....	6.31	10.02	10.82	9.86	11.05	11.72	10.34	11.50	11.10
5	15.06	15.58	10.66	6.13	10.11	10.90	10.04	11.13	11.77	10.23	11.50	11.12
6	15.08	15.51	10.65	6.40	10.19	10.97	10.23	11.16	11.83	10.31	11.52	11.15
7	15.09	15.52	.20	7.00	10.26	11.04	10.41	11.22	11.88	10.43	11.54	11.20
8	15.09	15.54	.67	7.53	10.31	11.11	10.55	11.31	11.91	10.58	11.57	11.25
9	15.11	15.55	1.71	7.99	10.37	11.16	10.69	11.40	11.93	10.70	11.60	11.28
10	15.11	15.56	2.97	8.36	10.43	11.17	10.84	11.50	11.95	10.81	11.63	11.34
11	15.13	15.57	4.09	8.66	10.47	11.06	10.94	11.61	11.98	10.92	11.65	11.38
12	15.14	15.59	5.11	8.91	10.53	10.94	10.96	11.65	12.00	11.02	11.66	11.42
13	15.15	15.59	5.85	9.13	10.59	10.95	11.00	11.67	12.03	11.12	11.65	11.45
14	15.16	15.59	6.46	9.21	10.65	10.02	11.02	11.74	12.04	11.20	11.65	11.50
15	15.20	15.48	7.02	9.21	10.67	10.09	10.97	11.75	12.05	11.28	11.64	11.55
16	15.23	15.24	7.44	8.75	10.68	10.13	10.89	11.75	12.05	11.35	11.64	11.58
17	15.26	14.25	7.83	8.60	9.88	9.88	10.78	11.75	12.09	11.40	11.64	11.60
18	15.29	14.32	8.09	8.20	9.14	8.43	10.65	11.40	12.11	11.46	11.64	11.64
19	15.32	14.15	8.25	8.36	8.60	6.55	10.79	11.20	12.14	11.50	11.61	11.67
20	15.35	14.19	7.20	8.66	8.44	5.85	10.88	11.20	12.18	11.55	11.26	11.70
21	15.38	14.22	4.96	8.93	8.56	5.85	10.99	11.10	12.20	11.59	11.07	11.74
22	15.40	14.23	4.60	9.17	8.76	6.27	11.05	11.15	12.20	11.63	10.96	11.77
23	15.41	13.86	5.52	9.33	9.04	6.97	11.19	11.19	12.22	11.65	10.79	11.80
24	15.42	13.75	6.44	9.33	9.29	7.91	11.29	11.25	12.28	11.65	10.71	11.85
25	15.43	13.77	7.10	9.21	9.52	8.44	11.40	11.30	12.27	11.65	10.73	11.85
26	15.44	13.77	7.60	9.30	9.74	8.87	11.47	11.36	12.17	11.62	10.78	10.58
27	15.46	.....	8.01	9.39	9.98	9.18	11.51	11.38	11.92	11.55	10.83	10.27
28	15.47	.....	8.35	9.38	10.15	9.52	11.59	11.41	11.86	11.51	10.87	10.08
29	15.49	.....	8.54	9.39	10.30	9.79	11.63	11.45	11.74	11.55	10.91	10.02
30	15.50	.....	8.64	9.55	10.43	10.04	11.67	11.50	11.97	11.57	10.94	10.02
31	15.51	.....	8.64	.....	10.55	.....	11.70	11.54	.....	11.59	.....	9.83

B-11 (*944, p. 217; *986, p. 244; 1016, p. 285). Fred Bandtel. In Fairfield Township.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	45.94	Mar. 27	29.99	June 26	24.66	Oct. 2	30.90
9	46.05	Apr. 3	34.21	July 3	25.07	9	31.32
17	46.21	10	33.26	10	25.38	16	31.67
23	45.96	17	32.62	17	25.61	23	32.25
30	46.29	24	31.67	24	25.91	30	32.49
Feb. 6	46.29	May 1	25.28	31	25.68	Nov. 6	33.00
13	46.30	8	25.20	Aug. 7	26.02	13	33.25
20	46.11	15	24.96	14	26.41	20	33.61
27	44.69	22	24.78	21	27.34	27	33.54
Mar. 6	40.84	29	24.72	Sept. 4	28.95	Dec. 4	33.79
8	38.06	June 5	25.20	11	29.26	11	33.18
13	35.46	12	25.55	18	29.78	18	33.15
20	32.70	19	24.92	25	30.40	28	33.94

B-22 (*986, p. 244; 1016, p. 285). Joseph N. Conrad. In Fairfield Township.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	20.20	20.28	17.19	11.69	13.20	15.82	16.04	18.30	17.18	17.37	17.24	16.90
2	20.19	20.29	16.87	11.71	13.27	16.04	16.15	18.34	17.19	17.26	17.25	16.90
3	20.16	20.30	16.61	11.71	13.36	16.18	16.24	18.35	17.23	17.18	17.26	16.90
4	20.15	20.31	16.27	.....	13.48	16.33	16.26	18.35	17.24	17.10	17.26	16.93
5	20.15	20.32	.....	11.50	13.59	16.51	16.28	18.19	17.25	16.99	17.25	16.94
6	20.15	20.32	15.29	11.41	13.69	16.64	16.41	18.00	17.27	16.88	17.26	16.95
7	20.15	20.34	12.05	11.31	13.79	16.79	16.50	17.79	17.28	16.78	17.26	16.97
8	20.16	20.34	10.60	11.28	13.91	16.94	16.42	17.64	17.30	16.71	17.27	16.99
9	20.16	20.34	10.18	11.40	14.00	17.08	16.36	17.87	17.30	16.65	17.30	17.02
10	20.16	20.34	10.08	.....	14.11	17.14	16.44	18.04	17.30	16.65	17.30	17.05
11	20.16	20.29	10.22	11.69	14.19	17.26	16.66	18.14	17.31	16.66	17.30	17.08
12	20.16	20.20	10.49	11.84	14.25	17.36	16.84	18.21	17.32	16.68	17.35	17.10
13	20.16	20.10	10.73	12.01	14.35	17.45	16.99	18.28	17.32	16.71	17.35	17.10
14	20.14	20.00	10.95	12.17	14.42	17.47	17.05	18.39	17.33	16.75	17.36	17.14
15	20.11	19.90	11.18	12.26	14.51	17.47	17.05	18.39	17.35	16.81	17.37	17.16
16	20.10	19.81	11.44	12.35	14.56	17.45	17.11	18.23	.....	16.85	17.37	17.20
17	20.11	19.74	11.69	12.40	14.58	17.41	17.20	18.13	17.42	16.89	17.35	17.26
18	20.13	19.61	11.89	12.43	14.57	17.30	17.26	18.05	17.43	16.91	17.37	17.28
19	20.14	19.48	12.05	12.43	14.50	17.15	17.34	17.95	17.44	16.95	17.37	17.31
20	20.15	19.31	12.01	12.44	14.32	16.85	17.36	17.81	17.47	17.00	17.37	17.34
21	20.16	19.18	11.61	12.53	14.11	16.44	17.43	17.69	17.48	17.02	17.33	17.37
22	20.17	19.06	11.19	12.60	13.94	16.03	17.46	17.56	17.50	17.06	17.25	17.40
23	20.17	18.85	10.78	12.66	13.88	15.68	17.57	17.47	17.51	17.11	17.20	17.44
24	20.18	18.64	10.50	12.74	13.84	15.43	17.67	17.39	17.55	17.13	17.12	17.44
25	20.19	18.40	10.45	12.79	13.85	15.26	17.76	17.31	17.57	17.15	17.05	17.42
26	20.21	18.18	10.67	12.89	14.09	15.34	17.85	17.26	17.57	17.16	16.99	17.30
27	20.22	17.92	10.85	12.95	14.48	15.45	17.93	17.24	17.55	17.16	16.95	17.20
28	20.23	17.56	11.05	12.99	14.82	15.58	18.01	17.20	17.51	17.16	16.90	17.05
29	20.25	.....	11.22	13.06	15.11	15.74	18.06	17.19	17.47	17.22	16.90	16.84
30	20.26	.....	11.39	13.15	15.37	15.89	18.15	17.19	17.44	17.22	16.90	16.64
31	20.27	.....	11.56	.....	15.60	.....	18.23	17.18	.....	17.23	.....	16.45

B-23 (*986, p. 245; 1016, p. 286). Carl E. Schiering. In Fairfield Township.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	27.31	27.94	25.91	19.50	19.66	19.49	13.91	20.29	21.13	21.87	.....	.....
2	27.22	27.71	25.59	19.15	19.66	19.45	19.01	20.30	21.17	21.85	.....	.....
3	27.17	27.59	25.29	19.24	19.70	19.48	19.03	20.31	21.19	21.85	.....	a23.61
4	27.15	27.41	24.93	19.93	19.76	19.52	19.04	20.36	21.22	21.82	.....	.....
5	27.12	27.44	24.49	19.18	19.82	19.54	19.09	20.36	21.25	21.75	21.86	.....

a Tape measurement.

B-23--Continued.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
6	27.13	.....	24.14	19.19	19.84	19.56	19.14	20.36	21.29	21.70	21.88	.....
7	27.14	.....	22.45	19.16	19.89	19.57	19.19	20.40	21.32	21.66	21.89	.....
8	27.15	.....	20.90	19.09	20.04	19.60	19.24	20.44	21.35	21.65	21.89	.....
9	27.19	.....	20.25	19.14	20.10	19.61	19.31	20.46	21.35	.....	21.94	.....
10	27.22	.....	19.98	19.16	20.19	19.64	19.38	20.50	21.37	.....	21.95a	21.89
11	27.23	.....	19.92	19.21	20.24	19.65	19.46	20.56	21.40	.....	21.95	.....
12	27.25	27.85	21.96	19.29	20.20	19.66	19.49	20.60	21.43	.....	21.95	.....
13	27.25	27.98	22.00	19.36	20.36	19.68	19.52	20.65	21.45	.....	21.95	.....
14	27.24	28.01	22.04	19.43	20.43	19.66	19.55	20.69	21.49	.....	21.96	.....
15	27.25	27.99	22.21	19.44	20.51	19.65	19.56	20.75	21.52	21.54	21.98	.....
16	27.26	27.33	22.39	19.40	20.54	19.65	19.58	20.78	21.53	.....	21.98	.....
17	27.26	27.83	22.50	19.44	20.54	19.61	19.58	20.80	21.58	.....	21.96a	22.04
18	27.26	27.33	22.52	19.44	20.54	19.50	19.60	20.80	21.61	.....	22.00	.....
19	27.26	27.59	22.40	19.44	20.54	19.35	19.64	20.83	21.63	.....	21.98	.....
20	27.28	27.61	20.41	19.41	20.46	19.15	19.69	20.84	21.65	.....	21.89	.....
21	27.29	27.65	20.14	19.46	20.39	18.97	19.73	20.85	21.70	.....	21.86	.....
22	27.30	27.64	19.83	19.43	20.43	18.85	19.75	20.89	21.72	21.73	21.84	.....
23	27.31	27.55	19.54	19.47	20.46	18.74	19.84	20.90	21.74	21.78	21.80	.....
24	27.33	27.19	19.36	19.49	20.50	18.67	19.89	20.93	21.76	21.78	21.80a	22.09
25	27.34	27.19	19.31	19.50	20.53	18.68	19.96	20.95	21.77	21.78	.....	.....
26	27.35	27.10	19.29	19.58	20.56	18.74	20.01	20.98	21.73	21.30	21.85	.....
27	27.46	26.74	19.36	19.61	20.26	18.78	20.05	21.02	21.78	21.80	.....	.....
28	27.69	26.29	19.44	19.60	19.91	18.84	20.10	21.03	21.78	21.80	.....	.....
29	27.60	.....	19.52	19.61	19.56	18.90	20.15	21.06	21.78	21.83	.....	.....
30	27.75	.....	19.56	19.65	19.63	18.97	.....	21.08	21.76	21.84	.....	.....
31	28.01	.....	19.56	.....	19.55	.....	.....	21.10	.....	21.83	.....	a21.08

a Tape measurement.

B-24 (#986, p. 245; 1016, p. 286). City of Hamilton. At Minor Park, in Hamilton.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	43.17	Apr. 9	35.83	July 9	33.05	Oct. 8	35.92
8	43.22	16	34.87	16	34.78	15	36.42
16	43.20	23	34.44	23	33.83	22	36.55
22	43.28	30	34.07	30	34.08	29	36.85
29	43.50	May 7	33.72	Aug. 6	34.20	Nov. 5	37.00
Feb. 5	43.47	14	33.55	13	34.23	12	37.06
12	43.48	21	33.36	20	34.68	19	37.31
19	43.41	28	33.23	27	34.91	26	37.42
26	43.19	June 4	33.37	Sept. 4	35.21	Dec. 3	37.49
Mar. 5	42.43	11	33.48	10	35.34	10	37.52
12	39.77	18	33.48	17	35.74	17	37.56
19	38.55	25	33.25	24	35.96	24	37.75
26	37.25	July 2	33.37	Oct. 1	36.14	31	37.68
Apr. 2	36.19						

B-25 (#986, p. 246; 1016, p. 287). Elizabeth J. Sipp. In St. Clair Township.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	20.25	Apr. 2	12.42	July 3	15.63	Oct. 2	17.06
8	20.23	10	13.53	9	16.76	9	16.82
16	20.04	16	15.01	16	17.09	15	16.72
22	20.38	23	15.09	23	17.18	22	18.89
30	20.40	30	15.68	30	18.29	29	18.92
Feb. 5	20.57	May 7	16.86	Aug. 6	17.39	Nov. 5	18.97
12	19.93	14	16.72	14	17.44	12	19.00
19	16.25	21	13.68	20	17.89	19	18.10
26	14.65	28	15.99	27	18.03	26	17.92
Mar. 5	12.46	June 4	17.31	Sept. 4	19.19	Dec. 3	17.65
12	11.59	11	16.64	10	19.39	11	17.69
19	14.96	18	13.88	17	19.52	18	17.73
26	12.43	25	12.77	24	18.40	27	17.78

B-26 (*986, p. 246; 1016, p. 287). Miami Conservancy District. In St. Clair Township.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	18.69	Apr. 2	11.39	July 3	14.15	Oct. 2	14.19
8	18.69	10	12.45	9	15.43	9	14.95
16	17.90	16	13.12	16	15.25	15	14.84
22	18.85	23	14.27	23	15.30	22	17.32
30	18.89	30	14.49	30	16.76	29	17.23
Feb. 5	19.07	May 7	15.56	Aug. 6	16.15	Nov. 5	17.22
12	17.78	14	15.63	14	16.20	12	17.27
19	14.84	21	12.28	20	16.02	19	15.81
26	11.88	28	14.94	27	16.52	26	15.89
Mar. 5	11.31	June 4	15.97	Sept. 4	17.65	Dec. 3	16.27
12	11.57	11	15.02	10	17.83	11	16.30
19	12.17	18	9.76	17	17.95	18	16.35
26	12.04	25	12.45	24	17.99	27	16.45

B-27 (*986, p. 247; 1016, p. 287). Andrews Asphalt Paving Co. In Hamilton.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	35.24	Apr. 2	27.55	July 2	28.97	Oct. 2	32.05
8	35.25	9	27.47	9	29.18	8	32.02
16	35.30	16	27.74	16	29.48	15	31.09
22	35.30	23	27.97	23	29.72	22	32.21
30	35.39	30	28.25	30	30.02	29	32.33
Feb. 5	35.38	May 7	28.56	Aug. 6	30.25	Nov. 5	32.42
12	35.32	14	28.89	13	30.29	12	32.48
19	35.31	21	29.12	20	30.74	26	32.59
26	34.95	28	29.21	27	30.95	Dec. 3	32.57
Mar. 5	31.25	June 4	29.44	Sept. 4	29.24	11	32.63
12	26.55	11	29.67	10	31.45	17	32.68
19	26.95	18	29.85	17	31.65	24	32.74
26	27.06	25	29.85	24	31.85	31	32.62

B-28 (*986, p. 247; 1016, p. 288). Baltimore & Ohio Railroad Co. In Hamilton.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	44.29	Apr. 2	37.57	July 9	35.54	Oct. 8	38.06
8	44.27	9	36.93	16	35.73	15	38.22
16	44.33	23	36.19	23	35.83	22	38.39
22	44.40	30	35.87	30	36.06	29	38.59
30	44.41	May 7	35.59	Aug. 6	36.20	Nov. 5	38.73
Feb. 5	44.52	14	35.42	13	36.22	12	38.75
12	44.52	21	35.32	20	36.58	19	38.97
19	44.46	28	35.29	27	36.84	26	39.04
26	44.18	June 4	35.32	Sept. 4	37.13	Dec. 3	39.10
Mar. 5	43.36	11	35.59	10	37.35	11	39.13
12	39.82	18	35.52	17	37.64	17	39.17
19	39.05	25	35.31	24	37.90	24	39.26
26	38.40	July 2	35.43	Oct. 2	38.08	31	39.27

B-29 (*986, p. 247; 1016, p. 288). Pennsylvania Railroad Co. In Fairfield Township. Measurements discontinued after June 12, 1944.

B-30-D (*986, p. 247; 1016, p. 288). City of Hamilton. On Pleasant Ave., in Hamilton.

B-30-D--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	36.70	Apr. 2	30.85	July 2	28.73	Oct. 2	30.68
8	36.72	8	30.15	9	28.72	8	30.78
16	36.72	16	29.84	16	28.75	15	30.71
22	36.80	23	29.58	23	28.83	22	31.04
30	36.82	30	29.32	30	28.90	29	31.18
Feb. 5	36.91	May 7	28.15	Aug. 6	29.04	Nov. 5	31.34
12	36.95	14	29.06	13	29.07	12	31.39
19	36.92	21	29.03	20	29.39	26	31.68
26	36.71	28	28.92	27	29.59	Dec. 3	31.77
Mar. 5	36.01	June 4	28.89	Sept. 4	29.80	11	31.80
12	34.29	11	28.76	10	29.89	17	31.83
19	32.73	18	29.05	17	30.20	24	31.98
26	31.69	25	28.88	24	30.44	31	32.10

B-30-M (*986, p. 248; 1016, p. 288). City of Hamilton. On Pleasant Ave., in Hamilton.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	36.85	Apr. 2	30.37	July 2	29.00	Oct. 2	31.70
8	36.88	9	30.25	9	29.13	8	31.69
16	36.88	16	29.89	16	29.33	15	30.96
22	36.89	23	29.64	23	29.45	22	31.88
30	36.90	30	29.43	30	29.65	29	32.07
Feb. 5	36.99	May 7	29.33	Aug. 6	29.86	Nov. 5	32.23
12	36.02	14	29.29	13	29.89	12	32.28
19	36.94	21	29.28	20	30.33	26	32.47
26	36.61	28	29.14	27	30.33	Dec. 3	32.47
Mar. 5	35.79	June 4	29.13	Sept. 4	30.77	11	32.51
12	33.95	11	29.26	10	30.80	17	32.54
19	32.50	18	29.33	17	31.25	27	32.60
26	31.58	25	29.13	24	31.59		

B-30-S (*986, p. 248; 1016, p. 288). City of Hamilton. On Pleasant Ave., in Hamilton.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	36.89	Apr. 2	30.88	July 2	29.59	Oct. 2	32.22
8	36.84	10	30.50	9	29.69	8	32.19
16	36.86	16	30.28	16	29.88	15	32.30
22	36.95	23	30.17	23	30.05	22	32.36
30	36.98	30	30.05	30	30.23	29	32.48
Feb. 6	37.04	May 7	30.00	Aug. 6	30.45	Nov. 5	32.67
12	37.07	14	30.02	13	30.48	12	32.72
19	36.98	21	30.04	20	30.93	26	32.87
26	36.61	28	30.00	27	31.13	Dec. 3	32.87
Mar. 5	35.71	June 4	29.91	Sept. 4	31.39	11	32.87
12	33.48	11	29.99	10	31.42	17	32.92
19	32.13	18	30.05	17	31.85	24	32.99
26	31.33	25	29.82	24	32.08		

B-32 (*986, p. 248; 1016, p. 289). City of Hamilton. On Hamilton-Cleves Road, in Hamilton.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	31.35	Apr. 2	23.12	July 3	28.52	Oct. 2	29.07
8	31.83	10	27.66	9	29.98	9	28.92
16	31.86	16	26.62	16	29.07	15	28.83
22	31.85	23	28.39	23	29.07	22	31.17
30	31.86	30	28.95	30	30.81	29	31.20
Feb. 5	32.13	May 7	29.93	Aug. 6	30.59	Nov. 5	31.23
12	31.23	14	30.15	14	30.66	12	31.28
19	29.42	21	26.24	20	30.15	19	28.89
26	25.83	28	29.55	27	30.65	26	28.69
Mar. 5	25.11	June 4	30.37	Sept. 4	31.59	Dec. 3	30.32
12	26.49	11	29.42	10	31.62	11	30.43
19	27.89	18	20.99	17	31.80	18	30.46
26	27.14	25	27.53	24	32.79	27	30.52

B-33-D (*986, p. 249; 1016, p. 289). City of Hamilton. On southeast corner of South Ave. and Front St., in Hamilton.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	26.59	Apr. 6	19.28	July 3	22.29	Oct. 2	23.34
8	26.60	10	21.15	9	23.76	9	23.89
16	26.62	18	21.25	16	23.80	15	23.34
22	26.70	23	22.62	23	24.54	22	25.44
30	26.72	30	22.77	30	24.89	29	25.50
Feb. 5	26.85	May 7	23.79	Aug. 6	24.35	Nov. 5	24.97
12	25.90	14	24.24	14	24.37	12	25.00
19	22.81	21	21.03	20	24.23	20	23.92
26	21.87	28	23.25	27	25.25	26	23.83
Mar. 5	19.58	June 4	24.19	Sept. 4	25.49	Dec. 3	24.50
12	20.04	11	25.80	10	25.53	11	24.64
19	22.13	18	17.73	17	25.35	18	24.69
26	20.42	25	20.66	24	25.64	27	24.73

B-33-S (*986, p. 249; 1016, p. 289). City of Hamilton. On southeast corner of South Ave. and Front St., in Hamilton.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	27.28	Apr. 2	19.49	July 3	23.76	Oct. 2	24.08
8	27.30	10	22.01	9	24.54	9	24.58
16	27.30	16	21.82	16	24.25	15	22.96
22	27.35	23	23.42	23	25.32	22	26.09
30	27.38	30	23.59	30	25.59	29	26.12
Feb. 5	27.53	May 7	24.54	Aug. 6	25.17	Nov. 5	25.65
12	26.57	14	24.90	14	25.20	12	25.69
19	23.62	21	20.97	20	24.93	19	24.30
26	21.88	28	24.06	27	26.05	26	24.65
Mar. 5	20.48	June 4	24.82	Sept. 4	26.29	Dec. 3	25.25
12	20.93	11	24.35	10	26.32	11	25.29
19	22.82	18	17.72	17	26.57	18	25.33
26	21.47	25	21.59	24	26.62	31	25.39

B-34-D (*986, p. 249; 1016, p. 290). City of Hamilton. On southwest corner of South Ave. and Second St., in Hamilton.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	32.97	Apr. 2	25.73	July 3	27.44	Oct. 2	29.25
8	32.99	10	26.28	9	28.48	9	28.24
16	32.91	16	26.85	16	28.78	15	28.36
22	33.05	23	27.42	23	29.24	22	30.65
30	33.07	30	27.69	30	28.68	29	30.69
Feb. 5	33.21	May 8	28.49	Aug. 6	29.23	Nov. 5	30.45
12	32.65	14	28.91	14	29.26	12	30.49
19	30.05	21	25.88	20	29.55	19	29.97
26	28.75	28	28.00	27	30.19	26	29.58
Mar. 5	26.97	June 4	28.89	Sept. 4	30.63	Dec. 3	30.05
12	27.83	11	28.90	10	30.69	11	30.08
19	27.67	18	25.35	17	30.97	17	30.10
26	25.83	25	25.63	24	31.02	27	30.14

B-34-S (*986, p. 250; 1016, p. 290). City of Hamilton. On southwest corner of South Ave. and Second St., in Hamilton.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	31.48	Mar. 5	25.95	May 7	26.16	July 9	26.22
8	31.50	12	23.75	14	26.49	16	26.03
16	31.50	19	26.22	21	25.65	23	26.77
22	32.12	26	24.27	28	25.89	30	27.22
30	32.17	Arr. 2	25.44	June 4	26.47	Aug. 6	27.20
Feb. 5	32.16	10	24.91	11	26.81	14	27.23
12	29.81	16	25.60	18	26.13	20	27.69
19	31.27	23	25.54	25	24.42	27	27.90
26	29.92	30	25.69	July 3	25.67	Sept. 4	28.25

B-34-S--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 10	28.30	Oct. 9	28.06	Nov. 5	28.96	Dec. 3	28.75
17	28.70	15	28.16	12	28.99	11	25.82
24	28.75	22	28.77	20	29.14	17	25.85
Oct. 2	28.49	29	28.86	26	28.66	27	25.95

B-35 (*986, p. 250; 1016, p. 290). Baltimore & Ohio Railroad Co.
In Hamilton.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	39.29	Apr. 2	33.03	July 3	31.43	Oct. 2	34.14
8	39.32	10	32.32	9	31.64	9	33.99
16	39.33	16	32.23	16	31.90	15	34.19
22	39.43	23	31.97	23	32.10	22	34.37
30	39.46	30	31.91	30	32.25	29	34.42
Feb. 5	39.52	May 7	31.76	Aug. 6	32.40	Nov. 5	34.67
12	39.55	14	31.78	13	32.44	12	34.70
19	39.22	21	31.52	20	32.83	19	34.88
26	38.67	28	31.46	27	33.03	26	34.92
Mar. 5	37.64	June 4	31.63	Sept. 4	33.33	Dec. 3	34.84
12	35.29	11	31.84	10	33.41	11	34.87
19	34.68	18	31.78	17	33.80	17	34.90
26	33.48	25	31.18	24	33.86	27	34.97

B-36 (*986, p. 250; 1016, p. 290). Baltimore & Ohio Railroad Co.
In Hamilton.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	39.09	Apr. 2	33.01	July 3	31.85	Oct. 2	34.85
8	39.10	10	32.48	9	32.06	9	34.58
16	39.12	16	32.39	16	32.32	15	34.95
22	39.13	23	32.22	23	32.94	22	34.94
30	39.15	30	32.12	30	32.79	29	34.98
Feb. 5	39.22	May 7	32.14	Aug. 6	32.98	Nov. 5	35.24
12	39.28	14	32.28	13	33.02	12	35.26
19	39.09	21	32.17	20	33.48	19	35.51
26	38.53	28	31.98	27	33.68	26	35.56
Mar. 5	37.24	June 4	32.21	Sept. 4	33.97	Dec. 3	35.25
12	34.55	11	32.48	10	34.03	11	35.28
19	34.18	18	33.41	17	34.49	17	34.90
26	33.31	25	31.65	24	34.53	27	35.36

B-37 (*986, p. 251; 1016, p. 291). Esther Spinelli and Mary Jelle.
On northeast corner of Mosler Ave. and Crawford Run, in Hamilton.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	50.90	Apr. 2	44.35	July 2	42.45	Oct. 2	45.15
8	50.92	9	43.72	9	42.47	8	45.17
16	50.93	16	43.27	16	42.66	15	45.55
22	51.15	23	41.92	23	42.69	22	45.20
30	51.17	30	42.62	30	43.95	29	45.24
Feb. 5	51.08	May 7	42.37	Aug. 6	43.14	Nov. 5	45.78
12	50.87	14	40.28	13	43.19	12	45.83
19	50.98	21	42.25	20	43.53	19	46.06
26	50.69	28	42.62	27	43.71	26	46.10
Mar. 5	49.92	June 4	41.24	Sept. 4	44.08	Dec. 3	46.12
12	47.70	11	42.42	10	44.13	11	46.15
19	46.37	18	42.56	17	44.62	17	46.19
26	45.22	25	42.42	24	44.68	24	46.27

B-38 (*986, p. 251; 1016, p. 291). City of Hamilton. In rear of electric substation on Fifth St. and Maple Ave., in Hamilton.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	41.93	Apr. 2	34.53	July 3	34.24	Oct. 2	37.48
8	41.95	10	33.87	9	34.21	9	37.39
16	41.98	16	33.95	16	34.25	15	37.36
22	41.99	23	33.77	23	34.33	22	36.22
30	42.02	30	34.01	30	35.27	29	36.25
Feb. 5	42.01	May 7	35.33	Aug. 6	34.86	Nov. 5	37.56
12	42.02	14	34.47	14	34.92	12	37.60
19	40.46	21	34.33	20	36.03	19	37.79
26	40.21	28	34.27	27	35.88	26	37.81
Mar. 5	38.89	June 4	34.55	Sept. 4	36.59	Dec. 3	37.88
12	35.99	11	34.48	10	36.62	11	37.92
19	35.78	18	34.98	17	37.12	18	38.00
26	34.59	25	34.33	24	37.18	27	38.22

B-39 (*986, p. 251; 1016, p. 291). 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, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	34.04	34.31	32.50	26.11	25.83	26.55	.....	27.78	28.72	29.50	29.86	30.05
2	34.02	34.33	32.35	25.90	25.76	26.56	.....	27.74	29.13	29.43	29.92	30.02
3	34.02	34.34	32.20	25.93	25.81	.....	26.26	27.39	28.80	29.44	29.91	30.04
4	34.02	34.34	32.00	25.65	25.89	.....	26.27	27.87	29.16	29.63	29.86	30.04
5	34.03	34.36	31.78	25.67	25.94	26.76	26.32	27.46	28.99	29.26	29.89	30.04
6	34.05	34.38	31.55	25.64	25.96	26.86	26.47	27.80	29.29	29.22	29.95	30.21
7	34.06	34.40	29.77	25.57	26.05	26.89	26.52	27.95	29.96	29.63	29.96	30.36
8	34.08	34.41	29.98	25.47	26.10	27.43	26.44	27.71	29.41	29.30	30.04	30.49
9	34.10	34.42	28.46	25.52	26.14	27.39	26.53	28.05	29.00	29.65	30.01	30.50
10	34.02	34.43	28.16	25.58	26.18	26.96	26.65	27.77	29.44	29.35	30.02	30.42
11	34.15	34.43	27.99	25.61	26.23	27.04	26.73	28.18	29.16	29.45	29.93	30.44
12	34.16	34.41	27.87	25.65	26.21	27.11	26.75	27.85	29.49	29.67	29.96	30.38
13	34.19	34.38	27.75	25.67	26.25	27.03	26.82	28.20	29.20	29.44	29.99	30.36
14	34.19	34.35	27.67	25.71	26.36	27.05	26.75	27.97	29.62	29.42	30.05	30.40
15	34.20	34.30	27.62	25.69	26.42	27.04	26.71	28.32	29.39	29.85	30.06	30.44
16	34.23	34.22	27.61	25.59	26.39	26.97	27.22	28.00	29.38	29.56	30.07	30.45
17	34.25	34.12	27.54	25.62	26.35	26.82	27.07	28.36	29.69	29.88	30.02	30.54
18	34.25	33.99	27.54	25.55	26.30	26.60	26.78	28.12	29.45	29.60	30.04	30.56
19	34.25	33.86	27.53	25.57	26.21	26.35	27.09	28.50	29.81	29.65	29.80	30.55
20	34.22	33.77	27.19	25.51	26.05	26.08	27.24	28.15	29.54	29.70	30.03	30.60
21	34.22	33.69	26.83	25.61	26.07	25.98	26.90	28.45	29.91	29.65	29.91	30.65
22	34.21	33.61	26.58	25.60	26.11	25.96	27.24	28.22	29.64	.....	29.86	30.67
23	34.20	33.45	26.49	25.55	26.17	25.94	27.31	28.54	30.01	29.75	29.86	30.69
24	34.21	33.31	26.35	25.54	26.20	25.87	27.09	28.27	29.75	.....	29.84	30.62
25	34.22	33.18	26.23	25.58	26.19	25.96	27.41	28.68	30.06	.....	29.83	30.55
26	34.23	33.05	26.28	25.68	26.24	26.06	27.51	28.46	29.77	.....	29.92	30.43
27	34.25	32.89	26.35	25.78	26.27	.....	27.22	28.82	30.04	.....	29.86	30.75
28	34.25	32.69	26.26	25.72	26.34	.....	27.62	28.56	29.75	.....	29.97	30.54
29	34.22	.....	26.23	25.68	26.57	.....	27.30	28.98	29.71	.....	29.98	30.41
30	34.30	.....	26.23	25.76	26.44	.....	27.79	28.71	29.94	29.80	30.03	30.33
31	34.29	.....	26.24	.....	26.50	.....	27.47	29.06	.....	29.85	.....	30.23

11-D-2 (*986, p. 252; 1016, p. 292). Federal Works Agency. In Fair-field Township. Measuring point after Mar. 26 is 0.5 foot above land-surface datum.

11-D-2--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	40.59	Apr. 2	29.23	July 2	28.18	Oct. 1	31.76
8	41.52	9	28.43	9	28.35	8	31.74
15	41.58	16	27.88	16	28.66	15	32.05
22	40.75	23	27.59	23	28.85	22	31.94
29	40.06	30	27.35	30	29.16	29	32.18
Feb. 5	39.16	May 7	27.36	Aug. 6	29.37	Nov. 2	32.12
12	39.05	14	27.67	13	29.78	12	32.34
19	39.05	21	28.00	20	30.09	26	32.45
26	38.35	28	28.20	27	30.42	Dec. 4	32.34
Mar. 5	38.15	June 4	28.31	Sept. 3	30.72	10	32.32
12	33.96	11	28.44	10	30.94	17	32.18
19	32.70	18	28.76	17	31.19	24	32.22
26	31.95	25	28.11	24	31.43	31	32.42

11-D-3 (*986, p. 252; 1016, p. 292). Federal Works Agency. In Fairfield Township.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	36.27	Apr. 2	26.70	July 2	25.15	Oct. 1	28.79
8	37.65	9	25.72	9	25.30	8	28.67
15	38.13	16	25.09	16	25.59	15	28.82
22	37.45	23	24.69	23	25.78	22	28.87
29	36.60	30	24.42	30	26.06	29	29.03
Feb. 5	36.01	May 7	24.39	Aug. 6	26.32	Nov. 2	29.13
12	35.90	14	24.63	13	26.61	12	29.25
19	35.74	21	24.97	20	26.98	26	29.36
26	35.33	28	25.27	27	27.34	Dec. 4	29.29
Mar. 5	35.50	June 4	25.28	Sept. 3	27.63	10	29.27
12	31.70	11	25.48	10	27.84	17	29.71
19	30.90	18	25.53	17	28.09	24	29.77
26	28.71	25	25.27	24	28.32	31	29.37

11-D-4 (*1016, p. 292). Federal Works Agency.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	36.50	36.99	36.64	28.27	25.49	25.63	25.79	25.98	26.55	27.25	27.84	28.36
2	36.53	36.98	36.63	28.05	25.46	25.63	25.79	26.00	26.57	27.27	27.85	28.37
3	36.55	36.96	36.61	27.88	25.43	25.64	25.79	26.00	26.62	27.28	27.87	28.40
4	36.58	36.96	36.60	27.69	25.41	25.65	25.79	26.01	26.64	27.30	27.89	28.41
5	36.60	36.95	36.59	27.52	25.39	25.65	25.78	26.04	26.66	27.33	27.93	28.45
6	36.62	36.95	36.57	27.26	25.38	25.65	25.78	26.05	26.68	27.34	27.95	28.44
7	36.65	36.94	36.54	27.22	25.36	25.66	25.77	26.07	26.70	27.36	27.96	28.45
8	36.67	36.92	36.45	27.07	25.35	25.63	25.77	26.09	26.72	27.37	27.98	28.47
9	36.70	36.91	36.19	26.94	25.36	25.66	25.77	26.10	26.74	27.39	28.00	28.47
10	36.70	36.90	35.57	26.82	25.36	25.67	25.77	26.12	26.76	27.40	28.02	28.50
11	36.75	36.89	33.51	26.69	25.36	25.67	25.78	26.14	26.78	27.42	28.04	28.50
12	36.76	36.89	32.88	26.59	25.37	25.67	25.78	26.16	26.80	27.44	28.05	.....
13	36.79	36.86	32.25	26.48	25.37	25.68	25.80	26.16	26.83	27.45	28.07	.....
14	36.80	26.85	31.91	26.38	25.42	25.69	25.81	26.18	26.85	27.47	28.08	.....
15	36.86	36.85	31.56	26.30	25.43	25.71	25.81	26.20	26.87	27.55	28.10	.....
16	36.89	36.84	31.37	26.22	25.46	25.72	25.82	26.24	26.89	27.56	28.11	.....
17	36.90	36.81	31.16	26.16	25.47	25.72	25.83	26.25	26.90	27.58	28.14	23.69
18	36.92	36.80	31.04	26.09	25.48	25.74	25.83	26.27	26.92	27.60	28.15	.....
19	36.94	36.80	30.96	26.04	25.51	25.74	25.84	26.28	26.94	27.62	28.16	.....
20	36.95	36.74	30.91	25.99	25.51	25.75	25.85	26.30	26.96	27.64	28.18	.....
21	36.96	36.71	30.83	25.93	25.53	25.75	25.86	26.33	26.98	27.65	28.20	.....
22	36.97	36.70	30.60	25.89	25.54	25.75	25.87	26.35	27.00	27.65	28.21	.....
23	36.97	36.69	30.38	25.81	25.55	25.75	25.88	26.37	27.02	27.67	28.23	.....
24	36.99	36.67	30.14	25.77	25.56	25.75	25.89	26.39	27.05	27.70	28.25	23.69
25	37.00	26.66	29.91	25.72	25.58	25.76	25.90	26.41	27.08	27.71	28.25	28.74
26	37.00	26.67	29.65	25.68	25.59	25.76	25.91	26.43	27.10	27.74	28.30	28.75
27	37.01	26.66	29.44	25.64	25.60	25.77	25.93	26.45	27.15	27.75	28.30	28.76

11-D-4--Continued.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
28	37.01	36.66	29.22	25.60	25.60	25.78	25.94	26.47	27.18	27.76	28.32	28.78
29	37.01		29.02	25.56	25.62	25.79	25.95	26.49	27.21	27.78	28.34	28.80
30	37.00		28.76	25.51	25.62	25.79	25.95	26.51	27.23	27.80	28.35	28.80
31	36.99		28.51		25.63		25.96	26.53		27.82		28.81

Pit D (*845, p. 372; *886, pp. 560-561; *906, p. 183; *936, p. 212; *944, p. 208; *986, p. 231; 1016, p. 276). Paul Benninghofen gravel pit. At Symmes (Symmes Lake), in Fairfield Township.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 19	16.50	May 14	13.60	Aug. 6	14.50	Oct. 22	15.40
26	15.20	21	11.80	13	15.00	29	15.40
Mar. 5	12.00	28	12.90	20	14.80	Nov. 2	15.40
12	8.90	June 4	13.90	27	15.00	12	15.40
19	11.30	11	14.40	Sept. 3	15.30	20	15.60
26	9.50	18	13.10	10	15.50	26	15.50
Apr. 2	10.50	25	10.60	17	15.70	Dec. 3	15.40
9	10.30	July 2	12.50	24	15.90	10	15.50
16	11.60	9	13.40	Oct. 1	14.90	17	15.80
23	12.00	16	13.80	8	14.40	24	15.80
30	12.50	23	14.20	15	14.20	31	15.80
May 7	13.20	30	15.60				

110 (*845, p. 373; *886, pp. 563-564; *906, p. 183; *944, p. 208; *986, p. 232; 1016, p. 276). Joe Conrad. At Symmes, in Fairfield Township.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	20.98	Apr. 9	12.34	July 9	17.65	Oct. 8	17.67
8	20.98	16	13.58	16	18.31	15	18.04
15	20.91	23	13.90	23	18.69	22	18.38
22	21.05	30	14.44	30	19.37	29	18.47
29	21.12	May 7	15.20	Aug. 6	18.16	Nov. 2	18.48
Feb. 5	21.22	14	15.86	13	19.54	12	18.62
12	20.89	21	14.91	20	19.02	19	18.56
19	19.79	28	15.89	27	18.62	26	18.99
26	18.24	June 4	17.52	Sept. 3	18.60	Dec. 3	18.03
Mar. 5	15.48	11	18.49	10	18.72	10	18.28
12	10.92	18	18.04	17	18.79	17	18.34
19	13.14	25	15.55	24	18.93	24	18.40
26	11.25	July 2	17.12	Oct. 1	18.44	31	17.13
Apr. 2	12.72						

112A (*986, p. 232; 1016, p. 276). Louis Mergy. At Symmes, in Fairfield Township.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	26.18	Apr. 2	17.75	July 2	20.12	Oct. 8	21.78
8	26.22	9	18.35	9	20.92	15	22.30
15	26.33	16	18.96	16	21.12	22	22.58
22	26.35	23	19.61	23	21.62	29	27.23
29	26.52	30	19.94	30	26.74	Nov. 2	22.55
Feb. 5	26.88	May 7	20.55	Aug. 6	21.85	12	22.75
12	25.91	14	20.91	13	21.45	26	22.31
19	29.25	21	19.27	20	26.47	Dec. 3	22.45
26	23.66	28	19.57	27	22.43	10	22.65
Mar. 5	20.05	June 4	21.18	Sept. 3	22.60	17	22.93
12	17.58	11	21.39	10	22.61	24	23.20
19	19.12	18	19.49	17	22.89	31	21.84
26	17.74	25	19.13	Oct. 1	23.02		

117 (*845, p. 376; *886, pp. 563-564; *906, p. 183; *936, p. 212; *944, pp. 208-209; *986, p. 233; 1016, p. 275). Anna Magle. At Symmes, in Fairfield Township.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	31.61	Apr. 3	22.18	July 3	21.72	Oct. 1	25.02
9	31.74	10	21.64	10	21.95	9	24.92
16	31.64	17	21.40	17	22.23	16	24.07
23	31.98	24	21.22	24	22.44	23	25.23
29	31.89	May 1	22.94	31	22.81	30	24.39
Feb. 6	31.81	8	21.33	Aug. 7	22.99	Nov. 6	25.53
13	31.79	15	23.32	14	23.05	13	25.58
20	31.28	22	23.71	21	23.19	20	25.70
27	30.01	29	22.20	23	23.87	27	25.17
Mar. 6	29.14	June 5	22.13	Sept. 4	24.14	Dec. 4	25.53
13	23.87	12	20.29	11	24.40	11	25.56
20	22.71	19	22.17	18	24.63	18	25.62
27	22.47	26	21.57	25	23.38	27	25.68

Pit M (*944, p. 209; *986, p. 233; 1016, p. 275). Edward Hieb. Abandoned gravel pit. In Fairfield Township.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 6	2.10	May 29	0.70	Aug. 7	2.20	Oct. 16	3.10
20 a	.70	June 6	1.50	14	2.80	23	3.50
27 a	2.00	12	2.20	21	2.60	30	3.40
Apr. 3 a	1.50	19	1.00	28	3.00	Nov. 6	3.50
10 a	1.20	26 a	1.30	Sept. 4	3.20	13	3.70
17 a	.10	July 3 a	.80	11	3.60	27	3.60
24 a	.10	10	.00	18	2.90	Dec. 4	3.90
May 1	.30	17	1.70	25	3.90	11	4.20
8	1.00	24	2.10	Oct. 1	3.10	18	5.40
15	1.60	31	2.30	9	2.60	27	5.40
22	.60						

a Above land-surface datum.

Pit N (*944, p. 209; *986, p. 233; 1016, p. 275). Edward Heib. Abandoned gravel pit. In Fairfield Township.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	6.21	Apr. 3	0.50	July 3	1.70	Oct. 1	4.50
9	7.01	10	.00	10	2.40	9	3.50
16	6.21	17	1.20	17	2.70	16	4.00
23	6.11	24	1.30	24	2.20	23	4.50
29	6.13	May 1	1.50	31	3.30	30	4.60
Feb. 6	6.11	8	2.30	Aug. 7	3.60	Nov. 6	4.60
13	6.20	15	2.90	14	4.00	13	4.70
20	6.11	22	1.50	21	3.80	26	3.90
27	6.20	29	2.00	28	4.20	Dec. 4	3.90
Mar. 6	3.60	June 5	2.90	Sept. 4	3.30	11	4.10
13 a	3.50	12	3.10	11	4.70	18	4.20
20	.60	19	2.00	18	4.80	27	4.20
27 a	1.00	26	.30	25	5.00		

a Above land-surface datum.

T-50 (*886, pp. 563-564; *906, p. 184; *936, p. 213; *944, p. 210; *986, p. 234; 1016, p. 277). Mary Gerber. On River Road, in Fairfield Township.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	17.51	Mar. 6	15.29	May 8	11.85	July 10	12.11
9	17.55	13	10.43	15	12.14	17	12.44
16	17.83	20	11.57	22	11.84	24	12.65
23	17.60	27	13.47	29	11.88	31	12.97
29	17.63	Apr. 3	11.47	June 5	12.28	Aug. 7	12.99
Feb. 6	17.67	10	10.73	12	12.52	14	13.02
13	17.57	17	11.19	19	11.13	21	13.42
20	17.12	24	11.32	26	11.12	28	13.55
27	16.45	May 1	11.55	July 3	11.74	Sept. 4	13.79

T-50--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 11	13.97	Oct. 9	13.93	Nov. 6	14.54	Dec. 11	14.49
18	14.06	16	14.15	13	14.59	18	14.54
25	14.32	23	14.33	20	14.22	27	14.59
Oct. 1	14.22	30	14.45	Dec. 4	14.47		

T-51 (*886, p. 564; *906, p. 184; *936, p. 213; *944, p. 210; *986, p. 234; 1016, p. 277). Miami Conservancy District. On River Road, in Hamilton.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	18.18	Apr. 3	11.11	July 3	14.17	Oct. 1	15.15
9	18.24	10	13.19	10	15.26	9	15.61
16	18.54	16	13.27	17	15.14	16	16.55
23	18.29	23	14.38	24	15.95	23	16.79
29	18.63	30	14.56	31	16.22	30	16.58
Feb. 6	18.82	May 8	15.10	Aug. 7	14.85	Nov. 6	16.47
13	17.75	15	15.64	14	15.00	13	16.50
20	15.65	22	12.67	21	15.75	20	16.18
27	14.61	29	14.89	28	16.60	Dec. 4	17.07
Mar. 6	11.85	June 5	13.83	Sept. 4	17.96	11	17.10
13	12.00	12	15.24	11	17.06	18	17.14
20	13.89	19	12.37	17	17.21	27	17.20
27	11.78	26	12.93	24	17.22		

122 (*886, pp. 563-564; *944, p. 210; *986, p. 234; 1016, p. 277). Carl Federle. In Hamilton.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	45.02	Apr. 9	37.17	July 9	38.10	Oct. 8	40.39
8	45.05	16	37.25	16	39.23	15	40.45
16	45.06	23	37.06	23	38.45	22	40.57
22	45.08	30	37.49	30	39.04	29	40.77
29	44.12	May 7	37.42	Aug. 6	38.89	Nov. 5	40.76
Feb. 5	45.12	14	37.62	13	38.92	12	40.98
12	44.98	21	37.88	20	37.04	19	41.07
19	44.69	28	37.53	27	39.53	26	41.09
26	44.13	June 4	37.99	Sept. 3	40.05	Dec. 4	41.05
Mar. 5	43.56	11	38.19	10	40.18	10	41.07
12	39.77	18	38.34	17	40.47	17	41.11
19	38.45	25	38.26	24	40.25	24	41.20
26	36.67	July 2	38.17	Oct. 1	40.26	31	41.13
Apr. 2	37.78						

Pit E (*845, p. 372; *886, pp. 560-561; *906, pp. 184-185; *936, p. 213; *944, p. 210; *986, p. 235; 1016, p. 277). South Hamilton Sand & Gravel Co. In Fairfield Township.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	41.80	Apr. 2	34.70	July 2	29.80	Sept. 24	33.90
8	41.80	9	33.50	9	29.90	Oct. 1	34.00
16	41.80	16	32.30	16	29.90	8	33.30
22	41.90	23	31.60	23	30.10	15	33.40
29	41.90	30	30.90	30	30.30	22	33.60
Feb. 5	41.90	May 7	30.30	Aug. 6	30.50	29	33.90
13	42.00	14	29.90	13	30.40	Nov. 5	34.00
19	41.90	21	29.70	20	31.10	12	34.10
26	41.80	28	29.50	27	31.30	26	34.60
Mar. 5	41.50	June 4	29.60	Sept. 3	31.70	Dec. 17	35.40
12	40.10	11	29.70	10	31.90	24	35.40
19	38.10	18	29.70	17	33.50	31	35.50
26	36.40	25	29.80				

128 (*886, pp. 562-563; *906, p. 185; *936, p. 213; *944, p. 211; *986, p. 235; 1016, p. 278). George Shearer. At Schenck, in Fairfield Township.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 27	37.77	May 22	31.79	July 17	32.16	Sept. 18	35.72
Apr. 3	36.48	29	31.45	24	32.27	25	35.16
10	35.20	June 5	31.70	31	32.43	Oct. 2	35.38
17	34.32	12	31.78	Aug. 7	32.63	9	35.68
24	33.42	19	31.86	14	32.89	16	35.82
May 1	32.58	26	31.68	21	33.20	23	35.62
8	32.11	July 3	31.83	Sept. 4	34.00	30	36.65
15	31.85	10	31.99	11	34.37		

133 (*886, pp. 562-563; *906, p. 185; *936, p. 214; *944, p. 211; *986, p. 235; 1016, p. 278). J. E. Ryan. At Schenck, in Fairfield Township.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	44.09	Apr. 17	29.77	July 10	28.17	Oct. 9	33.33
Feb. 6	44.42	24	28.76	17	28.40	16	32.96
13	44.53	May 1	27.91	24	28.51	23	33.44
20	44.30	8	27.75	31	28.75	30	33.50
27	44.20	15	27.50	Aug. 7	28.91	Nov. 6	34.02
Mar. 6	42.40	22	27.58	14	29.12	13	34.29
8	41.44	29	27.38	21	29.64	20	34.53
13	38.97	June 5	27.77	Sept. 4	30.44	27	34.68
20	36.05	12	27.87	11	31.05	Dec. 4	34.91
27	33.46	19	27.90	18	31.50	11	35.29
Apr. 3	31.85	26	27.74	25	31.97	18	35.30
10	30.28	July 3	27.92	Oct. 2	32.34	28	35.33

150-2 (*845, p. 376; *886, pp. 562-563; *906, p. 186; *936, p. 214; *944, p. 211; *986, p. 235; 1016, p. 278). Harry A. Morris. At Flockton, in Fairfield Township.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	19.01	Apr. 3	1.85	July 3	7.00	Oct. 2	21.24
9	19.15	10	2.86	10	9.03	9	20.80
17	19.31	17	1.93	17	10.82	16	20.95
23	20.47	24	1.40	24	13.17	23	21.08
30	19.63	May 1	3.10	31	13.11	30	21.03
Feb. 6	19.35	8	3.10	Aug. 7	14.12	Nov. 6	20.95
13	19.63	15	3.46	14	15.60	13	20.71
20	19.42	22	3.36	21	17.43	20	19.33
27	4.00	29	4.58	Sept. 4	20.18	27	17.15
Mar. 6	.74	June 5	5.37	11	20.96	Dec. 4	17.01
13	2.28	12	5.97	18	21.18	11	17.00
20	1.02	19	2.90	25	21.03	28	11.15
27	2.33	26	5.16				

151-1 (*906, pp. 186-187; *936, pp. 214-215; *944, p. 212; *986, p. 236; 1016, p. 278). Harry A. Morris. At Flockton, in Fairfield Township.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	31.48	31.90	28.59	12.51	8.86	8.18	8.08	3.79	.....	14.99	16.91	17.94
2	31.51	31.90	28.02	12.32	8.69	8.23	3.17	8.79	.....	15.16	17.00	17.90
3	31.52	31.91	27.39	12.39	3.46	8.44	8.24	8.90	.....	15.24	17.11	17.92
4	31.54	31.90	26.91	12.17	8.53	8.53	8.26	9.01	12.92	15.21	17.15	17.94
5	31.54	31.94	26.26	12.18	8.60	8.60	8.28	9.04	13.03	15.15	17.20	17.95
6	31.54	31.97	25.49	12.13	8.59	3.66	8.33	9.05	13.15	15.14	17.24	17.93
7	31.52	31.95	23.33	11.98	8.57	8.65	2.41	9.24	13.24	15.24	17.25	18.02
8	31.55	31.97	21.22	11.79	8.69	8.60	8.50	9.43	13.33	15.37	17.27	18.04
9	31.59	31.98	19.39	11.65	3.33	3.57	8.58	9.49	13.44	15.46	17.43	18.08
10	31.61	32.01	19.02	11.52	8.67	3.62	8.76	9.55	13.44	15.53	17.52	18.17

151-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
11	31.65	32.02	18.53	11.47	8.71	8.73	3.84	9.65	13.41	15.51	17.48	18.22
12	31.61	32.01	17.96	11.48	8.51	8.76	8.84	9.77	13.35	15.67	17.50	18.24
13	31.62	31.95	17.63	11.45	8.48	8.78	8.88	9.86	13.35	15.76	17.60	18.19
14	31.61	31.90	17.28	11.48	8.47	8.83	8.87	9.90	13.43	15.85	17.66	18.24
15	31.64	31.85	16.96	11.37	8.52	8.83	9.03	10.10	13.65	15.92	17.73	18.30
16	31.68	31.80	16.66	10.90	8.51	8.81	9.07	10.18	13.72	15.94	17.72	18.38
17	31.70	31.74	16.54	10.87	8.37	8.67	9.08	10.33	13.75	16.00	17.72	18.41
18	31.70	31.70	16.53	10.81	8.42	8.18	9.09	10.53	13.88	16.07	17.82	18.42
19	31.69	31.66	16.26	10.80	8.43	7.82	9.12	10.72	13.95	16.17	17.84	18.44
20	31.70	31.59	15.86	10.65	8.25	7.81	9.15	10.84	14.10	16.23	17.85	18.50
21	31.71	31.49	14.76	10.58	8.02	7.71	9.16	11.00	14.25	16.24	17.78	18.55
22	31.71	31.33	14.09	10.65	8.19	7.76	9.15	11.21	14.32	16.35	17.79	18.62
23	31.73	31.13	13.47	10.38	7.28	7.74	9.28	11.33	14.41	16.47	17.81	18.64
24	31.75	30.80	13.05	10.03	8.28	7.68	9.39	11.42	14.49	16.56	17.82	18.60
25	31.76	30.44	12.85	9.94	8.17	7.63	9.45	11.65	14.62	16.53	17.85	18.45
26	31.79	30.09	12.55	9.66	8.13	7.74	9.46	11.81	14.72	16.70	17.87	18.42
27	31.80	29.72	12.45	9.67	8.16	7.77	9.13	11.90	14.77	16.74	17.76	18.42
28	31.80	29.17	12.34	9.43	8.15	7.79	8.98	12.08	14.87	16.80	17.79	18.27
29	31.81		12.50	9.04	8.17	7.88	8.86	.....	15.07	16.84	17.86	18.11
30	31.86		12.54	8.96	8.22	7.98	8.90	.....	15.06	16.86	17.91	17.92
31	31.89		12.48		8.25		8.89	.....		16.91		17.85

151-2 (*906, p. 187; *936, p. 215; *944, p. 211; 986, p. 236; 1016, p. 279). Harry A. Morris. At Flockton, in Fairfield Township.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	30.15	30.54	26.11	11.62	8.13	7.64	7.47	7.93	.....	13.65	15.54	16.55
2	30.15	30.56	25.72	11.39	7.98	7.73	7.57	7.93	.....	13.80	15.75	16.51
3	30.19	30.58	25.36	11.42	7.83	7.91	7.62	8.05	.....	13.86	15.73	16.55
4	30.21	30.60	25.04	11.16	7.91	8.00	7.62	8.15	11.57	13.85	15.76	16.57
5	30.22	30.62	24.58	11.10	7.98	8.06	7.70	8.18	11.68	13.82	15.80	16.57
6	30.23	30.67	24.10	11.08	7.98	8.09	7.84	8.18	11.79	13.83	15.86	16.55
7	30.24	30.68	22.63	10.89	7.96	8.10	7.87	8.35	11.89	13.91	15.89	16.62
8	30.25	30.70	20.55	10.72	8.13	8.07	7.90	8.53	11.96	14.03	15.90	16.65
9	30.26	30.71	19.45	10.61	8.22	8.04	7.89	8.58	12.07	14.11	16.08	16.67
10	30.28	30.71	18.67	10.56	8.11	8.10	8.10	8.63	12.10	14.17	16.12	16.76
11	30.29	30.68	18.19	10.48	8.13	8.20	8.17	8.71	12.11	14.22	16.10	16.83
12	30.32	30.67	17.72	10.47	7.94	8.23	8.18	8.82	12.14	14.31	16.12	16.84
13	30.32	30.62	17.43	10.44	7.96	8.24	8.23	8.89	12.12	14.39	16.16	16.81
14	30.30	30.59	17.11	10.49	7.95	8.32	8.22	8.97	12.21	14.48	16.23	16.86
15	30.31	30.55	16.86	10.43	8.00	8.29	8.38	9.12	12.41	14.55	16.30	16.93
16	30.31	30.53	16.61	10.10	7.97	8.26	8.44	9.17	12.48	14.58	16.30	17.00
17	30.31	30.48	16.43	10.06	7.79	7.85	8.46	9.31	12.50	14.64	16.35	17.03
18	30.32	30.44	16.37	9.97	7.77	7.32	8.47	9.46	12.64	14.71	16.41	17.02
19	30.34	30.41	16.14	9.92	7.77	7.07	8.51	9.60	12.69	14.81	16.43	17.03
20	30.50	30.35	15.71	9.73	7.59	6.94	8.54	9.71	12.82	14.86	16.43	17.05
21	30.37	30.30	14.75	9.70	7.41	6.91	8.55	9.83	12.93	14.88	16.35	17.12
22	30.38	30.20	13.84	9.73	7.60	6.96	8.55	10.02	13.01	14.99	16.39	17.18
23	30.40	29.20	13.03	9.52	7.66	6.97	8.65	10.12	13.10	15.09	16.41	17.20
24	30.42	28.81	12.53	9.29	7.69	6.94	8.74	10.19	13.17	15.12	16.41	17.15
25	30.43	28.54	12.25	9.07	7.57	6.93	8.82	10.41	13.30	15.13	16.46	17.04
26	30.45	28.31	11.93	8.66	7.58	7.06	8.78	10.53	13.37	15.29	16.47	16.86
27	30.46	27.60	11.81	8.63	7.62	7.10	8.35	10.62	13.42	15.34	16.37	16.85
28	30.47	26.69	11.73	8.54	7.63	7.17	8.18	10.73	13.52	15.39	16.42	16.73
29	30.48		11.70	8.19	7.64	7.32	8.00	.....	13.68	15.45	16.47	16.52
30	3.50		11.70	8.17	7.71	7.43	8.03	.....	13.68	15.46	16.52	16.36
31	30.52		11.61		7.72		8.02	.....		15.54		16.29

156 (*944, p. 212; *986, p. 237; 1016, p. 280). Ray Milder's Inn. Symmes, in Fairfield Township.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	37.18	Apr. 9	24.73	July 9	25.24	Oct. 8	29.16
8	37.25	16	24.05	16	26.67	15	27.96
16	37.21	23	23.53	23	25.94	22	29.55
22	37.35	30	22.99	30	26.22	29	29.55
29	37.37	May 7	22.89	Aug. 6	26.29	Nov. 2	29.59
Feb. 5	37.32	14	23.23	13	26.32	12	29.85
12	37.24	21	23.59	20	27.12	19	29.98
19	36.95	28	24.02	27	27.05	26	29.98
26	36.46	June 4	24.39	Sept. 3	26.89	Dec. 3	29.96
Mar. 5	35.52	11	25.01	10	28.18	10	30.49
12	31.55	18	25.15	17	28.49	17	30.52
19	29.79	25	24.57	24	28.77	24	30.74
26	27.69	July 2	24.81	Oct. 1	29.04	31	29.68
Apr. 2	25.89						

158-1 (*944, p. 212; *986, p. 238; 1016, p. 280). Ralph Miller. On Seward Road, in Fairfield Township.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	48.72	Apr. 24	27.53	July 10	26.68	Oct. 2	32.21
9	49.35	May 1	26.82	17	27.06	9	32.57
23	49.01	8	26.77	24	27.21	16	32.96
Feb. 13	49.20	15	26.66	31	26.54	23	33.52
20	49.00	22	26.19	Aug. 7	26.88	30	33.75
Mar. 8	40.85	29	26.22	14	27.40	Nov. 6	34.20
13	37.63	June 5	26.73	21	28.23	13	34.57
20	35.78	12	26.90	Sept. 4	30.92	20	34.80
27	30.63	19	25.65	11	30.61	27	34.86
Apr. 10	29.00	26	25.75	18	31.10	Dec. 4	35.04
17	28.54	July 3	26.23	25	31.73	28	35.03

158-2 (*944, p. 213; *986, p. 238; 1016, p. 280). Ralph Miller. On Seward Road, in Fairfield Township.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	8.30	Apr. 3	1.40	June 26	3.02	Sept. 25	6.06
9	8.82	10	2.30	July 3	4.02	Oct. 2	5.31
17	8.90	17	1.37	10	4.43	9	5.31
22	9.12	24	1.12	17	4.50	16	5.70
30	9.40	May 1	2.37	24	4.81	23	5.71
Feb. 6	9.46	8	2.41	31	3.99	30	6.01
13	8.08	15	2.14	Aug. 7	4.28	Nov. 6	5.38
20	7.67	22	2.14	14	4.77	13	5.08
27	2.85	29	3.21	21	5.15	20	3.90
Mar. 8	1.65	June 5	4.06	Sept. 4	5.79	27	2.73
13	2.18	12	4.21	11	5.85	Dec. 4	2.93
20	1.18	19	1.66	18	5.99	28	3.09
27	2.07						

160-1 (*906, p. 188; *936, p. 215; *944, p. 213; *986, p. 238; 1016, p. 281). Orin James. 0.9 mile east of Flockton, in Union Township.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	36.69	Mar. 13	25.87	May 22	16.50	July 31	18.83
9	36.70	20	24.57	29	16.36	Aug. 7	16.68
17	36.75	27	20.99	June 5	17.65	14	17.26
23	37.60	Apr. 3	20.08	12	16.97	21	18.86
30	37.70	10	19.30	19	16.26	Sept. 4	20.77
Feb. 6	37.83	17	19.10	26	16.43	11	20.56
13	38.80	24	18.00	July 3	16.23	18	21.11
20	36.74	May 1	17.20	10	16.63	25	22.22
27	34.65	8	17.13	17	17.68	Oct. 2	22.70
Mar. 8	29.48	15	16.90	24	17.30	9	22.70

160-1--Continued.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Oct. 16	22.99	Nov. 6	23.91	Nov. 27	23.65
23	22.73	13	23.51	Dec. 4	24.01
30	22.78			Dec. 11	24.27
				28	25.05

160-2 (*845, p. 376; *886, pp. 562-563; *906, p. 188; *936, p. 216; *944, p. 213; *986, p. 239; 1016, p. 281). Orin James. 0.9 mile east of Flockton, in Union Township.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Feb. 27	23.97	May 15	3.94	July 31	10.63
Mar. 8	11.42	22	3.79	Aug. 7	11.10
13	10.32	29	5.30	14	11.59
20	3.70	June 5	6.55	21	12.20
27	4.08	12	7.57	Sept. 4	13.47
Apr. 3	3.72	19	4.60	11	14.13
10	4.00	26	5.37	18	14.75
17	2.90	July 3	6.82	25	15.37
24	2.83	10	8.05	Oct. 2	15.97
May 1	3.87	17	9.13	9	16.57
8	4.06	24	10.02		
				Oct. 15	17.10
				23	17.63
				30	18.17
				Nov. 6	18.60
				13	19.01
				20	19.30
				27	19.52
				Dec. 4	19.70
				11	19.81
				28	18.67

165-1 (*944, p. 213; *986, p. 239; 1016, p. 281). E. C. Sheperd. 0.7 mile north of Port Union, in Union Township.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 2	47.02	Apr. 10	33.69	July 10	33.86
9	46.90	17	33.42	17	34.17
16	46.90	24	33.11	24	34.61
23	46.73	May 1	32.68	31	32.49
Feb. 6	47.00	8	34.15	Aug. 7	32.83
13	46.66	15	33.41	14	33.70
20	45.75	22	32.29	21	34.76
27	38.19	29	32.82	Sept. 4	35.63
Mar. 8	34.90	June 5	32.33	11	35.91
13	34.80	12	33.76	18	36.22
20	33.85	19	31.90	25	36.53
27	33.03	26	31.28	Oct. 2	36.48
Apr. 3	33.42	July 3	33.10		
				Oct. 9	36.35
				16	36.25
				23	36.86
				30	37.09
				Nov. 6	37.39
				13	37.50
				20	37.24
				26	36.53
				Dec. 4	36.73
				11	37.04
				18	37.37
				27	36.15

165-2 (*845, p. 375; *886, pp. 561-562; *906, p. 188; *936, p. 216; *944, pp. 213-214; *986, p. 239; 1016, p. 281). E. C. Sheperd. 0.7 mile north of Port Union, in Union Township.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 2	21.33	Apr. 3	5.81	July 3	8.83
9	21.40	10	5.63	10	9.49
16	21.47	17	5.62	17	10.13
23	21.63	24	4.79	24	10.71
30	22.00	May 1	5.17	31	10.83
Feb. 6	22.08	8	6.25	Aug. 7	11.00
13	22.20	15	6.85	14	11.30
20	22.27	22	5.24	21	11.85
27	21.31	29	6.73	Sept. 4	12.57
Mar. 8	12.83	June 5	7.67	11	13.05
13	12.83	12	8.21	18	13.10
20	6.87	19	7.64	25	13.67
27	6.98	26	8.04	Oct. 2	13.28
				Oct. 9	13.36
				16	13.54
				23	13.72
				30	13.78
				Nov. 6	13.64
				13	13.72
				20	13.72
				26	13.82
				Dec. 4	13.69
				11	13.65
				18	13.58
				27	13.35

168 (*906, pp. 188-189; *936, p. 216; *944, p. 214; *986, p. 240; 1016, p. 282). M. Haugbers. In Port Union, Union Township.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	32.87	Apr. 3	20.30	July 3	21.46	Oct. 9	22.44
9	32.11	10	21.00	10	22.17	16	23.78
16	32.15	17	20.18	17	23.25	23	23.99
23	31.85	24	19.31	24	22.91	30	24.14
30	32.04	May 1	20.41	31	20.28	Nov. 6	24.07
Feb. 6	32.12	8	20.99	Aug. 7	21.62	13	23.72
13	32.02	15	21.02	14	21.92	20	24.45
20	29.84	22	21.50	Sept. 4	23.12	26	22.97
27	22.12	29	21.40	11	24.42	Dec. 4	23.10
Mar. 8	19.86	June 5	23.21	18	23.62	11	23.33
13	21.15	12	22.06	25	23.91	18	24.62
20	17.23	19	20.07	Oct. 2	23.54	27	21.77
27	20.47	26	20.74				

175 (*845, p. 375; *886, pp. 561-562; *906, p. 189; *936, p. 216; *944, p. 214; *986, p. 240; 1016, p. 282). J. W. Margonett. At Rialto, in Union Township.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	12.45	Apr. 17	5.15	July 10	9.53	Oct. 9	9.94
9	12.25	24	3.98	17	9.98	16	10.18
16	11.95	May 1	5.86	24	10.44	23	10.03
23	11.75	8	6.34	31	7.15	30	10.33
30	11.63	15	6.72	Aug. 7	7.49	Nov. 6	10.12
Feb. 5	11.55	22	6.19	14	9.65	13	9.77
13	11.16	29	6.96	21	10.28	20	8.34
20	10.44	June 5	8.23	Sept. 4	10.98	26	6.67
27	4.96	12	8.95	11	11.06	Dec. 4	7.67
Mar. 8	4.96	19	5.60	18	10.87	11	8.49
27	5.80	26	6.76	25	10.99	18	9.06
Apr. 3	5.15	July 3	8.28	Oct. 2	9.83	27	5.78
10	5.92						

180 (*845, p. 373; *886, pp. 561-562; *906, p. 189; *936, p. 217; *944, p. 214; *986, p. 240; 1016, p. 282). Fox Paper Co. At Crescentville, in Union Township.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	20.30	Mar. 27	6.02	June 26	5.99	Oct. 2	8.72
9	19.94	Apr. 3	6.57	July 3	7.16	9	8.50
16	19.79	10	6.65	10	9.39	16	8.85
23	19.81	17	6.77	17	10.78	23	9.79
30	19.68	24	6.02	24	11.29	30	10.72
Feb. 6	19.18	May 1	5.69	31	7.30	Nov. 6	10.93
13	16.47	8	6.37	Aug. 7	7.24	13	9.84
20	14.33	15	6.67	14	8.37	19	8.84
27	10.78	22	5.69	18	10.14	27	8.03
Mar. 8	5.68	29	6.56	21	10.93	Dec. 4	8.27
10	5.61	June 5	7.60	Sept. 11	11.76	11	8.73
13	6.05	12	7.65	18	10.32	18	8.98
20	5.81	19	5.62	25	11.78	27	8.03

Clark County

Springfield 1. (*1016, p. 293). Borden Co. At Fountain and Main Sts., Springfield. Recorder removed and measurements discontinued after Sept. 30, 1945.

Springfield 1--Continued.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	25.26	25.35	25.03	24.38	25.00	24.77	24.97	.....	25.24
2	25.29	25.32	24.98	24.84	25.00	24.75	.....	.....	25.28
3	25.19	25.30	24.73	24.85	24.96	24.85	.....	.....	25.28
4	25.21	25.27	24.75	24.80	24.99	24.86	.....	.....	25.26
5	25.21	25.30	24.70	24.75	25.01	24.89	.....	.....	25.25
6	25.16	25.30	24.63	24.77	25.04	24.88	.....	.....	25.25
7	25.23	25.25	24.27	24.77	25.04	24.88	.....	.....	25.25
8	25.28	25.24	24.36	24.80	25.05	24.86	24.85	.....	25.25
9	25.36	25.24	24.44	24.80	25.09	24.85	24.83	.....	25.29
10	25.35	25.25	24.56	24.85	25.06	24.98	24.86	.....	25.29
11	25.35	25.25	24.60	24.85	25.05	25.01	24.84	.....	25.27
12	25.22	25.40	24.66	24.85	25.03	25.03	24.32	.....	25.27
13	25.26	25.35	24.70	24.86	25.12	25.03	24.79	.....	25.27
14	25.32	25.37	24.69	24.90	25.14	24.95	24.79	.....	25.24
15	25.37	25.36	24.69	24.90	25.11	24.93	24.68	.....	25.26
16	25.42	25.35	24.73	24.83	25.12	24.90	.....	.....	25.31
17	25.42	25.32	24.85	24.82	24.96	24.92	.....	.....	25.32
18	25.39	25.32	24.86	24.35	24.74	24.83	.....	.....	25.25
19	25.32	25.36	.....	24.88	24.78	24.80	.....	24.94	25.22
20	25.32	25.27	.....	24.85	24.78	24.82	.....	25.05	25.22
21	25.35	25.22	.....	24.87	24.65	24.87	.....	25.10	25.22
22	25.22	25.06	.....	24.94	24.73	24.90	.....	25.17	25.22
23	25.22	25.20	.....	24.90	24.76	24.90	.....	25.17	25.28
24	25.24	25.21	.....	24.85	24.76	24.90	.....	25.13	25.28
25	25.24	25.21	.....	24.86	24.75	24.80	.....	25.10	25.27
26	25.25	25.15	24.73	24.98	24.73	24.83	.....	25.19	25.20
27	25.25	24.89	24.78	25.00	24.75	24.84	.....	25.18	25.20
28	25.29	25.01	24.81	25.00	24.72	24.84	.....	25.20	25.21
29	25.33	.....	24.81	24.97	24.74	24.94	.....	25.23	25.21
30	25.33	.....	24.84	24.98	24.75	24.97	.....	25.25	25.18
31	25.35	.....	24.80	.....	24.77	.....	.....	25.25	.....

Franklin County

Columbus 1 (*944, p. 189; *986, p. 253; 1016, p. 294). Moores & Ross Dairy Co. in Columbus.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Nov.	Dec.
1	105.64	103.29	.....	101.97	102.39	.....	110.82	112.13	.....	106.73
2	105.93	103.09	.....	100.58	103.73	.....	110.29	112.03	.....	105.98
3	106.09	102.93	101.64	101.39	.....	.....	110.29	111.59	.....	105.58
4	106.17	102.60	101.64	101.70	.....	105.23	110.03	111.58	.....	105.88
5	106.63	102.74	101.27	102.15	.....	105.45	109.75	111.28	.....	106.18
6	106.44	102.60	100.83	102.14	.....	105.79	110.46	110.68	.....	106.48
7	106.22	102.95	100.69	101.99	.....	105.85	110.42	111.51	.....	106.26
8	106.29	103.33	100.78	.....	.....	105.98	.....	111.94	.....	105.98
9	106.30	102.99	.....	.....	.....	106.14	110.33	111.93	.....	105.80
10	106.22	102.99	.....	101.49	.....	105.33	110.83	112.01	.....	105.27
11	106.18	.....	.....	101.73	.....	105.36	111.06	112.01	.....	105.30
12	106.13	102.73	.....	101.86	.....	105.43	110.96	111.43	.....	105.27
13	106.33	103.00	100.27	.....	.....	105.56	111.19	111.43	107.53	105.43
14	105.98	103.24	100.22	.....	.....	106.12	111.12	111.43	107.73	105.83
15	106.43	103.46	100.03	101.52	.....	.....	110.85	.....	107.85	106.11
16	106.84	103.48	100.40	101.03	.....	.....	110.70	.....	107.73	106.07
17	107.14	103.09	100.55	102.02	.....	.....	110.80	.....	107.13	104.96
18	107.17	102.80	100.58	102.58	.....	106.05	111.45	.....	107.16	104.33
19	106.74	103.27	100.12	102.85	103.93	107.31	111.45	.....	107.53	.....
20	106.38	103.20	100.02	102.88	103.84	107.79	111.69	.....	107.48	.....
21	105.35	102.88	.....	102.65	103.11	107.98	112.18	111.85	107.11	.....
22	104.57	102.99	100.22	101.59	.....	103.17	111.50	112.68	106.83	.....
23	104.59	102.98	.....	102.29	.....	108.43	111.68	112.68	106.14	.....

Columbus 1--Continued.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Nov.	Dec.
24	104.87	103.58	.....	102.61	.....	108.39	111.78	112.31	106.15	.....
25	104.38	101.78	.....	102.75	.....	107.91	111.86	112.31	105.62	.....
26	104.11	101.37	.....	.....	.....	.....	111.73	111.45	105.83	.....
27	103.84	101.63	101.17	.....	.....	.....	.....	111.68	106.07	.....
28	103.56	101.98	101.80	102.51	.....	.....	.....	.....	106.08	.....
29	103.64	.....	102.28	102.26	.....	110.98	.....	.....	106.58	.....
30	103.60	.....	102.53	103.04	.....	111.05	111.48	.....	106.98	.....
31	103.47	.....	102.24	.....	.....	.....	111.78	.....	.....	.....

Greene County

Xenia Water Works observation well (*1016, p. 295). In Xenia water-works well field, about 75 feet north of Massie Creek and about 200 feet west of U. S. Highway 68 and about 2.8 miles north of the corporate limits of Xenia.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Apr.	May	June	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	6.86	7.00	....	9.19	8.77	9.50	8.45
2	....	6.28	7.00	....	8.92	8.86	9.12	8.36
3	....	6.38	7.00	....	9.20	8.76	8.90	8.40
4	....	6.38	7.10	....	9.20	9.30	9.62	8.76
5	....	....	....	....	9.21	9.30	10.30	8.72
6	5.85	4.59	....	....	9.43	9.38	10.50	8.72
7	5.99	4.73	....	....	9.23	9.29	9.19	8.70
8	6.11	4.49	....	....	9.26	8.77	8.58	8.81
9	6.21	4.70	....	....	9.02	8.82	8.46	8.67
10	6.40	4.59	....	....	9.04	8.79	8.59	8.60
11	6.49	4.61	....	8.70	8.92	9.00	8.70	8.60
12	6.49	4.60	....	8.71	8.88	9.01	8.59	8.40
13	6.29	....	....	8.90	8.99	8.99	8.41	8.60
14	6.09	4.52	....	8.93	9.10	8.89	8.48	8.55
15	6.12	4.50	....	8.58	9.29	9.01	8.74	8.58
16	5.60	4.28	....	8.71	9.60	9.40	9.00	8.70
17	5.40	3.20	....	8.89	9.18	9.51	8.48	9.00
18	5.71	1.20	....	8.81	9.02	9.50	8.54	9.05
19	5.92	2.50	....	8.96	9.04	9.40	8.51	9.02
20	5.88	2.90	....	9.28	9.10	9.30	8.40	9.00
21	5.92	2.00	....	9.53	8.98	9.19	8.29	9.02
22	6.98	....	....	9.30	9.15	9.91	8.11	9.08
23	7.19	....	....	8.61	9.01	8.52	9.09	9.01
24	6.53	....	....	8.71	9.03	8.75	8.65	9.01
25	6.03	....	....	8.89	8.77	8.79	8.34	8.84
26	5.52	....	....	8.82	8.77	9.20	8.51	8.10
27	5.47	....	....	8.94	9.30	9.67	8.50	8.02
28	5.68	6.80	....	9.03	9.19	9.40	8.40	8.02
29	5.70	6.70	....	9.08	9.27	9.55	8.41	8.00
30	6.08	6.85	....	9.09	8.64	9.59	8.48	7.62
31	.....	7.03	.....	9.20	.....	9.50	.....	7.35

Hamilton County

T-74 (*906, p. 190; *936, p. 217; *944, pp. 217-218; *986, p. 255; 1016, p. 296). Frederick Hauck. On Crescentville Road, in Sycamore Township.

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

Date	Water level	Date	Water level	Date	Water level
Jan. 3	15.42	Feb. 12	14.50	Mar. 12	4.77
10	15.35	19	13.28	20	1.85
17	14.89	26	8.94	27	5.23
24	15.38	Mar. 7	2.93	Apr. 3	5.22
29	15.04	8	3.36	9	6.13
Feb. 5	15.40	10	4.05	17	5.88
				25	3.00
				May 1	5.42
				8	6.45
				15	6.84
				22	5.66
				29	6.53

T-74--Continued.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
June 5	7.02	Aug. 7	6.75	Oct. 2	7.86
12	7.06	14	7.13	9	7.96
19	3.95	18	7.60	16	7.98
26	6.10	25	8.00	23	8.39
July 2	6.84	Sept. 4	9.28	30	8.46
10	7.14	11	8.63	Nov. 6	8.24
17	7.43	25	9.81	13	8.09
31	7.05				
				Nov. 19	7.73
				27	7.28
				Dec. 3	7.53
				11	7.76
				17	7.81
				27	6.44
				31	6.50

T-75 (*906, p. 190; *936, p. 217; *944, p. 218; *986, p. 255; 1016, p. 296). Frederick Hauck. On Crescentville Road, in Sycamore Township.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 3	12.79	Mar. 27	7.58	June 26	6.96
10	12.96	Apr. 3	6.04	July 3	7.52
17	12.58	9	7.09	10	7.75
24	12.70	17	6.40	17	7.94
29	12.74	25	3.15	31	6.24
Feb. 5	12.82	May 1	6.65	Aug. 7	7.25
12	11.64	8	7.13	14	7.64
19	10.02	15	7.59	18	7.86
26	3.43	22	6.52	21	8.03
Mar. 7	3.27	29	7.26	Sept. 4	8.68
8	4.33	June 5	7.61	11	8.52
10	5.52	12	7.58	25	8.25
12	6.16	19	4.68	Oct. 2	7.70
20	1.05				
				Oct. 9	7.86
				16	7.87
				23	8.03
				30	8.09
				Nov. 6	8.21
				13	8.07
				19	7.40
				27	7.12
				Dec. 4	7.47
				11	7.72
				18	7.91
				27	6.21
				31	6.81

204-4 (*886, p. 587; *906, p. 190; *936, p. 217; *944, p. 218; *986, p. 255; 1016, p. 296). Albert Sorter Estate. In Sycamore Township.

Lowest daily water level, in feet below land-surface datum, 1945 (From recorder charts through Feb. 22; tape measurements thereafter)					
Date	Water level	Date	Water level	Date	Water level
Jan. 1	15.37	Jan. 22	14.72	Feb. 16	14.24
2	15.23	23	14.73	17	14.09
3	15.09	24	14.75	18	13.94
4	14.99	25	14.76	19	13.82
5	14.95	26	14.78	20	13.70
6	14.95	27	14.80	21	13.61
7	14.96	28	14.81	22	13.40
8	14.96	29	14.98	Mar. 12	6.63
9	14.95	30	14.88	27	6.77
10	14.91	Feb. 5	15.00	Apr. 3	6.43
18	14.69	12	14.66	9	7.38
19	14.69	13	14.64	17	6.93
20	14.69	14	14.47	May 1	6.77
21	14.71	15	14.35		
				May 8	7.53
				15	7.65
				22	6.60
				29	7.33
				June 5	7.43
				12	7.45
				26	7.09
				July 2	7.82
				10	8.07
				17	8.47
				31	6.50
				Aug. 7	7.81
				Oct. 30	9.85

T-67 (*906, p. 191; *936, p. 218; *944, p. 219; *986, p. 256; 1016, p. 297). Emmit Ferris. In Sycamore Township.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 3	8.20	Mar. 12	2.51	June 11	3.24
10	8.52	20	1.21	18	1.53
18	8.52	26	2.60	25	3.25
24	8.61	Apr. 2	1.83	July 2	3.52
29	8.65	9	3.37	9	4.00
Feb. 5	8.76	16	2.44	17	4.45
12	7.95	23	3.42	23	4.34
19	8.00	30	2.73	30	2.41
26	1.46	May 7	3.39	Aug. 7	3.97
Mar. 5	1.88	15	3.45	14	4.37
7	1.46	21	2.96	18	4.64
8	1.65	28	3.57	20	4.80
10	2.12	June 4	3.83		
				Sept. 10	5.27
				17	6.05
				24	6.28
				Oct. 2	4.49
				8	5.28
				15	5.72
				23	6.02
				29	6.25
				Nov. 5	6.17
				12	6.12
				19	5.57
				26	4.89

207-3 (*845, p. 381; *886, p. 586; *906, p. 192; *936, p. 218; *944, p. 219; *986, p. 256; 1016, p. 297). Village of Glendale. At Municipal Water Plant, in Sycamore Township.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	54.91	57.82	56.25	41.74	38.14	36.94	38.75	36.36	37.85	39.88	40.81	43.16
2	55.17	56.63	54.87	41.05	37.45	36.97	38.97	37.14	37.93	39.28	41.74	42.82
3	56.12	57.57	55.20	41.86	38.73	38.07	36.50	37.34	38.35	39.47	41.32	42.45
4	55.57	56.56	55.20	40.85	38.83	37.30	35.78	37.15	37.98	39.87	41.27	42.65
5	55.54	57.52	54.74	41.95	37.58	37.01	36.04	36.57	33.45	39.54	41.10	42.85
6	55.55	57.53	54.35	40.96	37.95	36.66	36.28	37.13	38.62	39.25	39.82	42.55
7	54.84	57.57	53.07	40.75	38.14	36.74	36.06	36.78	38.75	42.63	40.01	42.25
8	56.35	56.96	52.17	43.47	38.04	36.85	36.71	37.12	38.64	39.05	39.97	43.35
9	57.25	56.35	50.94	40.45	37.46	36.82	36.37	37.30	40.36	39.43	40.09	44.35
10	56.94	56.76	50.01	40.45	37.16	37.29	36.73	37.01	39.26	39.04	40.81	43.35
11	56.70	58.66	51.67	40.44	38.05	36.96	36.72	39.04	37.95	39.15	40.68	42.75
12	55.81	57.26	48.66	39.31	37.13	36.96	36.34	38.70	38.75	39.35	40.45	42.65
13	55.15	56.60	47.86	40.40	37.73	37.06	36.36	37.35	38.14	39.15	41.70	43.05
14	56.26	56.60	47.86	40.35	37.14	37.16	36.35	37.08	38.62	40.08	41.85	42.35
15	55.66	56.07	47.06	40.14	37.43	36.98	38.35	37.42	38.84	39.85	41.76	43.05
16	55.45	55.76	47.06	39.67	37.35	37.05	37.82	38.43	38.58	40.21	41.41	43.05
17	55.63	56.97	46.05	39.77	37.56	39.06	36.31	40.30	39.30	39.31	41.48	42.85
18	56.17	56.36	46.31	40.06	37.12	36.94	36.66	40.50	39.54	40.35	40.95	43.25
19	55.76	56.64	46.26	39.83	37.08	37.23	36.40	37.64	39.42	39.55	41.51	42.55
20	56.15	56.21	45.90	39.35	38.35	36.21	36.56	38.07	40.67	40.67	42.17	42.95
21	55.74	56.46	44.99	39.62	36.96	36.43	36.97	37.75	39.70	41.05	41.26	43.35
22	55.70	56.37	44.57	41.24	37.45	36.63	36.86	37.85	39.38	40.01	41.96	43.15
23	56.13	56.24	44.05	39.80	37.23	36.56	37.45	41.57	41.07	40.05	41.47	43.55
24	56.45	56.55	44.15	39.18	36.66	36.16	37.27	37.45	39.13	40.49	42.27	42.85
25	56.55	57.35	44.46	38.94	37.00	36.33	37.07	37.45	38.67	40.15	44.32	43.05
26	56.39	57.24	43.56	38.55	36.80	36.14	37.08	38.35	38.57	40.36	42.55	43.05
27	56.36	56.97	42.96	38.64	36.97	35.75	36.83	37.82	39.72	40.00	41.28	43.45
28	56.83	55.35	42.32	38.34	37.03	36.20	36.97	39.24	39.16	40.02	42.25	43.05
29	56.36		42.26	38.05	37.11	36.55	40.13	37.45	39.97	40.27	42.15	43.25
30	57.06		42.27	37.48	36.93	36.70	36.92	39.11	39.06	40.67	42.38	42.85
31	56.23		41.88		37.14		37.24	38.82		40.65		42.95

T-47 (*886, p. 585; *906, p. 193; *936, p. 219; *944, p. 220; *986, p. 257; 1016, p. 298). Drackett Chemical Co. In Sycamore Township. Measurements discontinued.

212-1 (*845, pp. 382-383; *886, pp. 193-194; *936, pp. 219-220; *944, p. 220; *986, p. 257; 1016, p. 298). Johns-Manville Corporation. In Sycamore Township.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	58.08	58.91	53.39	43.46	39.82	38.55	37.86	38.28	.....	41.14	43.11	44.68
2	58.17	58.75	58.13	43.21	39.64	38.55	37.86	38.39	.....	41.19	43.15	44.55
3	58.15	58.71	58.09	43.34	39.52	38.92	37.80	38.41	.....	41.19	43.33	44.70
4	58.30	58.61	57.99	43.02	39.72	39.05	37.78	38.43	.....	41.19	43.16	44.32
5	58.19	58.85	57.50	43.24	39.62	39.01	37.74	38.26	40.00	40.19	43.15	44.51
6	58.10	58.79	56.88	43.20	39.50	39.09	37.72	38.20	39.98	41.19	43.33	44.31
7	57.97	58.81	55.96	43.02	39.39	39.05	37.80	38.30	40.09	41.19	43.79	44.56
8	58.24	58.86	53.22	42.83	39.51	38.96	37.79	38.38	40.05	41.77	43.39	44.70
9	58.45	58.81	51.64	42.72	39.50	39.01	37.71	38.46	40.12	.....	43.80	44.73
10	58.39	58.89	50.51	42.54	39.42	38.90	37.80	38.41	39.97	40.82	43.81	45.27
11	58.39	59.04	49.62	42.51	39.63	39.00	37.96	38.47	39.93	41.83	43.71	45.24
12	58.25	58.98	48.96	42.36	39.50	39.00	37.91	38.50	40.27	41.81	43.68	45.24
13	58.24	58.88	48.26	42.22	39.35	39.17	.....	38.51	40.08	42.13	43.48	45.18
14	58.17	59.06	47.99	42.25	39.35	39.15	37.89	38.45	40.23	42.06	43.60	45.21
15	58.22	58.92	47.61	42.12	39.35	39.21	.....	38.64	40.32	42.10	43.85	45.40
16	58.51	59.12	47.37	41.85	39.21	39.24	38.25	38.84	40.39	.....	44.08	45.36
17	58.46	59.05	47.30	41.96	39.09	39.20	38.27	38.98	40.40	.....	43.85	45.49
18	58.43	59.10	47.30	42.01	39.16	38.81	38.28	39.08	40.40	.....	44.00	45.45
19	58.29	59.21	46.98	42.08	39.23	38.56	38.29	38.96	40.55	.....	44.10	45.32

212-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
20	58.49	58.91	46.55	41.89	38.93	38.33	38.36	38.85	40.67	.....	44.08	45.49
21	58.41	58.75	45.51	41.82	38.74	38.17	38.35	38.90	40.81	.....	43.91	45.62
22	58.85	59.03	45.01	41.84	38.76	38.18	38.35	39.12	40.83	42.54	43.98	45.71
23	58.91	59.07	44.66	41.60	39.06	38.10	38.46	39.25	40.87	42.62	44.18	45.81
24	58.49	59.09	44.39	41.25	38.90	38.09	38.46	39.11	40.85	42.77	44.05	45.51
25	58.48	58.89	44.27	40.90	38.76	37.86	38.47	39.08	40.89	42.80	44.31	45.14
26	58.61	58.61	44.11	40.58	38.83	37.76	39.05	39.47	40.90	43.03	44.35	45.34
27	58.56	58.44	43.98	40.62	38.64	37.83	38.59	39.37	40.92	43.09	44.05	45.58
28	58.53	58.49	43.83	40.34	38.59	37.85	38.45	.....	40.93	43.06	44.41	45.33
29	58.65		43.73	40.03	38.63	37.86	38.56	.....	40.95	43.07	44.35	45.19
30	58.70		43.66	40.01	38.68	37.86	38.58	.....	40.95	43.02	44.66	45.07
31	58.69		43.48		38.62		38.41	.....		43.00		45.29

T-8 (*886, pp. 583-585; *906, p. 194; *936, p. 220; *944, p. 220; *986, p. 258; 1016, p. 299). St. Rita School for Deaf Children. Near crossing of Glendale-Milford Road and Pennsylvania Railroad.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	19.64	Mar. 19	9.83	June 25	13.86	Oct. 1	17.34
10	19.67	20	8.23	July 2	14.10	8	17.50
24	19.55	26	8.31	9	14.37	15	17.65
29	19.54	Apr. 2	9.07	16	14.68	22	17.80
Feb. 5	19.58	16	10.38	23	14.96	29	17.90
12	18.33	23	10.90	30	15.28	Nov. 5	17.99
19	18.37	30	11.05	Aug. 6	15.59	12	18.10
26	18.64	May 7	11.33	13	15.86	19	18.17
Mar. 5	18.45	14	11.75	20	16.11	26	18.25
6	16.15	21	12.20	Sept. 5	16.67	Dec. 3	18.34
7	7.28	28	12.66	10	16.83	10	18.41
8	8.25	June 4	13.11	17	17.03	17	18.50
10	9.01	11	13.49	24	17.22	31	18.61
12	9.31	18	13.59				

214-3 (*886, pp. 583-585; *906, p. 195; *936, p. 220; *944, p. 220; *986, p. 258; 1016, p. 299). Tennessee Corporation. Near crossing of Glendale-Milford Road and Big Four Route tracks, in Sycamore Township.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	30.20	Apr. 9	14.63	July 9	19.93	Oct. 8	24.92
10	31.10	16	15.70	16	20.40	22	25.65
18	31.10	23	16.46	23	19.84	29	25.96
24	31.12	30	16.44	30	21.05	Nov. 5	26.24
Feb. 26	30.70	May 7	16.93	Aug. 6	21.22	12	26.52
Mar. 5	28.99	14	17.52	13	21.60	19	26.81
8	6.22	21	17.99	20	22.04	29	27.05
10	7.59	28	18.40	Sept. 5	23.12	Dec. 3	27.23
12	8.80	June 4	18.90	10	23.52	10	27.45
19	11.92	18	19.47	17	23.88	17	27.69
20	11.56	25	19.17	24	24.27	24	27.92
26	11.21	July 2	19.55	Oct. 1	24.62	31	27.78
Apr. 2	13.22						

215-2 (*845, p. 383; *886, pp. 582-583; *906, p. 196; *936, p. 221; *944, p. 221; *986, p. 258; 1016, p. 299). Pennsylvania Railroad Co. On Harry F. Pittman farm, in Sycamore Township.

215-2--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	30.40	Mar. 19	27.61	June 11	26.90	Sept. 10	28.07
10	30.41	26	26.82	18	26.60	24	28.65
24	30.41	Apr. 2	26.38	25	26.62	Oct. 8	28.92
29	30.52	9	26.30	July 2	26.86	15	29.07
Feb. 5	30.60	16	26.32	9	27.01	29	29.69
12	30.35	23	26.38	16	27.03	Nov. 12	29.88
19	29.94	30	26.20	30	27.13	26	29.90
Mar. 5	30.06	May 7	25.95	Aug. 6	27.16	Dec. 3	29.88
7	30.06	21	26.20	13	27.25	17	29.95
10	28.88	28	26.41	20	27.40	31	29.98
12	28.20	June 4	26.66	Sept. 5	27.98		

216-C (*936, p. 223; *944, p. 222; *986, p. 259; 1016, p. 300).
Wright Aeronautical Corporation. In Lockland.

Water level, in feet below land-surface datum, 1945											
Jan.	3	85.14	Mar.	19	82.75	June	18	75.83	Sept.	24	74.58
	10	85.18		26	81.85		25	75.11	Oct.	1	76.15
	17	85.55	Apr.	2	80.82	July	2	75.16		8	76.53
	24	85.12		9	80.64		9	74.58		15	76.85
	29	85.35		16	79.60		16	75.96		23	76.17
Feb.	5	85.36		23	79.02		23	74.33		29	76.01
	12	85.42		30	78.80		30	74.61	Nov.	5	75.66
	19	85.93	May	7	77.48	Aug.	6	74.10		12	75.78
	26	85.13		14	77.15		13	75.74		19	75.70
Mar.	5	85.20		21	76.79		20	75.72		26	76.30
	7	85.53		28	76.43	Sept.	5	74.52	Dec.	10	76.49
	10	84.56	June	4	76.39		10	74.23		17	76.85
	12	83.94		11	75.95		17	74.82		31	76.50

216-D (*936, p. 223; *944, p. 222; *986, p. 259; 1016, p. 300).
Wright Aeronautical Corporation. In Lockland.

Water level, in feet below land-surface datum, 1945											
Jan.	3	91.51	Mar.	19	90.13	June	18	84.68	Sept.	24	83.05
	10	91.47		26	89.50		25	84.13	Oct.	1	83.42
	17	91.80		2	88.76		July 2	84.12		8	83.85
	24	91.28		9	88.84		9	83.60		15	84.31
	29	91.53		16	87.90		16	83.75		29	84.29
Feb.	5	91.47		23	87.59		23	83.10	Nov.	5	83.91
	12	91.64		30	87.29		30	83.36		12	84.07
	19	92.10		7	86.44		Aug. 6	82.95		19	83.87
	26	91.43		14	86.05		13	83.23		26	84.34
Mar.	5	91.54		21	85.76		20	83.21	Dec.	10	84.34
	7	91.57		28	85.43		Sept. 5	83.23		17	84.76
	10	91.38		June 4	85.30		10	82.85		31	84.23
	12	90.92		11	84.80		17	83.16			

216-E (*936, p. 224; *944, p. 222; *986, p. 259; 1016, p. 300).
Wright Aeronautical Corporation. In Lockland.

Lowest daily water level, in feet below land-surface datum, 1945 (From recorder charts)												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	67.23	67.71	68.37	62.39	59.27	56.86	55.84	55.36	.....	59.89	59.12	57.83
2	67.99	67.56	67.59	62.06	58.99	56.71	55.88	55.20	.....	59.47	58.70	57.72
3	67.20	67.46	67.66	62.21	58.54	56.94	55.91	55.21	.....	60.35	57.17	57.60
4	67.30	67.31	67.70	61.96	58.44	57.02	55.80	55.29	.....	60.39	57.17	57.70
5	67.19	67.48	67.53	62.24	58.49	57.06	55.66	55.26	55.48	59.61	57.00	57.60
6	66.99	67.44	67.36	62.28	58.45	57.05	55.67	55.00	55.55	59.65	57.14	57.50
7	66.74	67.39	67.51	62.07	58.35	56.99	55.77	55.08	55.51	59.21	57.11	57.65
8	66.97	67.36	67.39	61.79	58.54	56.84	55.66	55.24	55.45	59.51	57.08	57.75
9	67.34	67.36	66.98	61.53	58.66	56.70	55.50	55.28	55.49	59.76	57.55	57.77
10	67.34	67.61	66.42	61.49	58.39	56.60	55.53	55.17	55.42	59.85	57.65	58.00

216-E--Continued.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
11	67.47	67.68	66.24	61.27	58.44	56.72	55.70	55.04	55.40	59.86	57.40	58.50
12	67.05	67.60	65.74	61.09	58.06	56.76	55.64	55.78	55.55	59.93	57.18	58.30
13	67.08	67.55	65.61	60.91	57.94	56.74	55.53	55.96	55.57	59.70	57.13	58.00
14	66.94	67.71	65.24	60.87	57.92	56.80	55.41	56.00	55.50	58.50	57.35	57.83
15	67.22	67.91	65.36	60.81	58.45	57.53	55.42	56.11	55.78	58.16	57.57	58.00
16	67.99	67.89	64.71	60.88	57.89	56.79	55.72	55.55	55.88	59.94	57.50	58.40
17	67.63	67.74	.....	60.54	57.70	56.75	55.72	55.19	55.77	59.61	57.20	58.50
18	67.46	67.93	.....	60.71	57.99	56.59	55.61	55.17	55.65	59.67	57.45	58.24
19	67.16	68.03	64.16	60.75	58.06	56.55	55.56	55.70	55.71	59.75	57.37	57.98
20	67.39	67.66	64.11	60.39	57.86	56.46	55.49	56.05	55.60	59.37	57.45	58.10
21	67.30	67.40	63.91	60.30	57.46	56.33	55.40	56.13	55.80	58.77	57.25	58.30
22	67.10	67.60	.....	60.34	57.64	56.35	55.27	56.30	55.85	59.20	57.24	58.35
23	67.21	68.04	.....	59.99	57.74	56.28	55.21	56.33	55.78	59.15	57.40	58.41
24	67.30	68.10	.....	59.61	57.70	56.14	55.27	56.33	55.75	59.25	57.43	58.18
25	67.32	67.96	.....	59.46	57.51	55.94	55.27	56.45	55.83	59.31	57.58	57.60
26	67.41	67.50	63.04	59.79	57.26	55.90	55.31	56.55	55.95	59.00	57.65	58.15
27	67.41	67.74	63.11	59.81	57.28	55.84	55.34	56.55	55.88	57.50	57.50	58.30
28	67.27	67.79	62.99	.....	57.10	55.72	55.25	.....	56.65	57.29	57.45	59.44
29	67.44	.....	62.85	.....	57.11	55.79	55.41	.....	58.20	57.24	57.60	58.05
30	67.58	.....	62.75	.....	57.75	56.51	55.50	.....	58.20	57.21	57.75	57.77
31	68.27	.....	62.80	.....	57.01	.....	56.17	.....	.....	.....	.....	58.07

236-4 (*936, p. 226; *944, pp. 223-224; *986, p. 260; 1016, p. 301).
E. I. du Pont de Nemours Co., Grasselli Chemicals Division. In Lockland.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	124.45	Apr. 9	124.23	July 9	124.23	Oct. 8	121.95
10	124.41	16	123.36	16	123.30	15	122.41
24	124.34	23	123.71	23	122.93	22	122.26
29	124.71	30	123.85	30	123.14	29	122.37
Feb. 5	124.90	May 7	123.28	Aug. 6	122.94	Nov. 5	122.43
12	124.79	14	122.61	13	123.09	12	122.83
19	124.60	21	122.15	20	123.14	19	122.50
26	126.30	28	121.98	Sept. 5	123.09	26	122.66
Mar. 5	124.74	June 4	123.72	10	122.48	Dec. 3	122.40
12	125.03	11	122.98	17	122.93	10	122.32
19	124.38	18	123.80	24	122.59	17	122.65
26	124.21	25	123.50	Oct. 1	122.32	31	122.27
Apr. 2	123.62	July 2	123.38				

237-3 (*845, p. 377-378; *886, p. 578; *906, pp. 200-201; *936, pp. 226-227; *944, pp. 224-225; *986, p. 260; 1016, p. 201). Village of Wyoming. At municipal water plant, in Wyoming.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	144.75	145.66	145.00	144.49	144.11	144.46
2	145.05	145.22	144.59	144.35	144.29	144.40
3	145.06	145.56	144.77	144.80	144.36	144.78
4	145.25	144.21	144.31	144.74	144.50	144.16
5	145.16	144.85	144.32	145.28	144.68	144.72
6	144.73	144.87	144.30	145.33	144.19	144.76
7	144.21	144.64	144.88	145.12	144.10	144.81
8	144.64	144.79	144.87	144.94	144.28	144.29
9	145.10	144.76	145.00	144.38	144.67	144.63
10	145.24	144.99	144.91	144.61	144.82	144.18
11	145.34	144.54	144.90	144.60	144.77	144.48
12	145.01	144.84	144.74	144.71	144.42	144.15
13	144.95	144.71	144.93	144.74	144.11	144.66
14	144.51	145.10	144.81	144.82	144.21	144.79
15	144.96	144.75	144.74	144.26	144.30	144.96

237-3--Continued.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
16	145.49	145.32	144.49	144.20	144.25	145.04
17	145.54	145.30	144.91	144.64	144.11	.....
18	145.57	144.61	144.96	144.91	144.70	144.95
19	145.25	145.28	144.79	144.88	144.81	145.01
20	145.36	144.96	144.50	144.93	144.18	144.99
21	144.73	144.77	144.64	145.06	144.16	145.17
22	144.92	144.59	144.73	144.50	144.71	145.14
23	145.12	145.22	144.61	144.25	144.83	145.14
24	145.35	145.31	144.86	144.16	144.81	144.94
25	145.37	144.50	144.21	144.12	144.68	144.64
26	145.46	144.44	144.42	144.64	144.56	144.80
27	145.54	144.81	144.74	144.87	144.04	144.72
28	145.00	144.65	144.80	144.66	144.39	144.80
29	145.39		144.89	143.83	144.39	144.97
30	144.34		144.96	144.24	144.52	145.10
31	145.64		144.16		144.09	

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	145.09	144.98	144.60	144.53	144.05	144.10
2	145.56	144.91	144.68	144.13	143.74	143.50
3	145.33	145.08	144.96	144.68	144.08	143.79
4	145.33	145.21	145.15	144.77	143.78	143.82
5	145.11	145.21	145.15	144.26	143.80	143.50
6	145.19	145.03	145.27	144.37	144.00	143.35
7	145.26	145.18	145.33	144.19	144.00	143.41
8	145.14	145.39	145.30	144.10	144.10	143.27
9	144.93	145.46	144.69	144.21	144.10	143.48
10	145.11	145.18	144.87	143.62	144.25	143.56
11	145.33	144.47	145.10	143.56	143.65	143.78
12	.....	144.28	145.30	143.10	143.84	143.82
13	.....	144.73	145.30	143.30	143.80	143.65
14	.....	144.55	145.33	143.75	144.05	144.23
15	.....	144.80	145.52	143.74	144.25	143.93
16	141.35	144.67	145.00	143.91	144.07	143.58
17	141.35	144.72	145.10	144.07	143.85	143.76
18	141.21	144.84	145.20	144.22	143.65	143.70
19	141.29	144.96	145.10	144.42	144.00	143.62
20	142.39	144.43	144.48	144.49	144.20	143.79
21	142.41	144.53	145.18	143.83	143.85	143.78
22	142.89	144.77	144.62	144.19	143.64	143.56
23	143.47	144.86	144.42	144.18	143.40	143.55
24	143.85	144.76	144.62	144.27	143.57	143.13
25	144.11	145.06	144.98	144.27	144.05	142.48
26	144.21	145.22	145.22	144.15	144.17	142.83
27	144.33	144.83	145.09	144.21	143.57	143.11
28	144.33	145.00	144.47	144.05	143.40	142.92
29	144.73	145.06	145.05	144.30	143.55	142.72
30	144.94	144.52	144.49	144.36	143.95	142.96
31	144.98	145.10		144.05		143.41

241-3 (*845, p. 378; *886, pp. 579-580; *906, pp. 201-202; *936, pp. 228-229; *944, pp. 225-226; *986, p. 262; 1016, p. 302). Gardner-Richardson Co. On South Cooper Ave., in Lockland.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	131.00	132.43	131.47	130.79	130.77	131.58
2	131.16	132.30	131.13	130.61	130.56	131.94
3	130.84	132.29	131.43	130.81	130.59	132.14
4	130.81	132.15	131.46	130.71	130.46	132.09
5	131.05	132.29	131.19	131.03	130.66	132.36
6	131.14	132.21	131.67	131.07	130.64	132.49

241-3--Continued.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
7	130.96	132.19	132.10	130.89	130.31	132.53
8	130.89	132.24	131.86	130.70	130.66	132.53
9	131.19	132.22	131.54	130.56	130.76	132.66
10	131.23	132.49	131.33	130.63	130.50	132.59
11	131.34	132.54	131.34	130.52	130.53	131.83
12	130.89	132.14	131.36	130.51	130.20	131.50
13	131.01	131.80	131.26	130.44	130.19	131.09
14	131.25	131.79	131.05	130.54	130.23	130.96
15	131.92	131.60	130.96	130.51	130.21	130.86
16	132.51	131.73	131.00	130.39	130.20	130.99
17	132.69	131.54	131.26	130.80	130.21	130.96
18	132.61	131.68	131.27	131.01	130.49	130.98
19	132.39	131.86	130.94	131.05	130.54	130.60
20	132.58	131.42	131.09	130.75	130.30	130.45
21	132.25	131.21	131.57	130.89	129.95	130.51
22	131.69	131.45	131.72	130.94	130.22	130.61
23	131.89	131.81	131.19	130.58	130.29	130.59
24	132.04	131.79	131.17	130.66	130.22	130.33
25	132.08	131.57	131.10	130.70	129.99	129.96
26	132.22	131.48	130.88	131.09	129.90	130.05
27	132.23	131.51	130.95	131.13	129.91	129.98
28	132.11	131.44	130.94	131.03	129.81	129.97
29	131.98		130.85	130.91	130.87	129.92
30	132.18		130.83	130.89	131.26	129.95
31	132.36		130.69		131.49	

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	129.64	129.44	.....	127.86	128.71	127.92
2	129.65	129.27	.....	128.16	128.84	127.57
3	129.68	129.26	.....	128.31	129.16	127.80
4	129.54	129.31	.....	128.20	129.16	127.65
5	129.43	129.24	.....	127.95	128.82	127.55
6	129.57	128.95	.....	127.81	129.05	127.45
7	129.59	129.01	.....	127.84	129.06	127.65
8	129.55	129.49	.....	127.86	128.50	127.75
9	129.40	129.65	.....	127.94	128.58	127.77
10	129.51	129.73	127.92	127.90	128.60	127.90
11	129.58	129.75	128.10	128.05	128.25	128.00
12	129.47	129.74	128.25	128.48	127.86	128.15
13	129.33	129.37	128.23	128.70	127.83	128.15
14	129.21	129.17	128.24	127.65	127.96	128.17
15	129.40	129.02	128.48	128.79	128.17	128.60
16	129.43	128.91	128.52	128.65	127.95	128.68
17	129.39	128.78	128.30	128.70	127.65	128.76
18	129.56	128.78	127.97	128.77	127.85	128.81
19	129.85	128.86	127.96	128.72	127.74	128.34
20	129.98	128.75	127.91	128.80	127.76	128.45
21	130.04	128.77	127.99	128.70	127.50	128.67
22	130.04	128.80	127.98	128.30	127.51	128.95
23	129.87	128.80	127.87	127.58	127.57	128.90
24	130.28	128.71	127.83	128.60	127.60	128.80
25	130.36	128.77	127.87	128.54	127.63	127.26
26	129.96	128.83	127.97	128.87	127.67	127.48
27	129.75	128.74	128.13	128.95	127.66	127.50
28	129.48	.....	128.17	128.91	127.51	127.27
29	129.75	.....	128.40	128.64	127.58	127.90
30	129.88	.....	128.37	128.65	127.66	127.70
31	129.58	.....		128.71		126.95

242-T-1 (*944, p. 226; *986, p. 263; 1016, p. 304). Philip Carey
Manufacturing Co. On South Wayne Ave., in Lockland.

242-T-1--Continued.

Water level, in feet below land-surface datum, 1945											
Date	Water level	Date	Water level	Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	141.11	Apr. 16	141.22	July 9	140.19	Oct. 8	139.74				
10	141.25	23	141.36	16	140.30	15	139.67				
24	141.41	30	141.52	23	139.68	22	138.79				
29	141.45	May 7	141.15	30	139.87	29	138.98				
Feb. 5	141.52	14	140.97	Aug. 6	139.27	Nov. 5	138.83				
12	141.44	21	141.22	13	139.65	12	139.00				
19	141.81	28	141.18	20	139.73	19	138.77				
Mar. 5	141.36	June 4	141.23	Sept. 5	139.60	26	139.41				
12	141.14	11	141.00	10	139.63	Dec. 3	139.65				
19	141.53	18	140.90	17	140.05	10	139.86				
26	141.27	25	140.54	24	140.05	17	140.30				
Apr. 2	141.10	July 2	140.68	Oct. 1	139.90	24	139.80				
9	141.42										

246-1 (*1016, p. 304). National Distiller Corporation. At company's plant at Wayne Ave. and 78th St., in Carthage.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	111.12	110.70	109.71	108.21	105.71	105.10
2	111.31	110.68	109.59	106.49	105.42	104.81
3	111.42	110.31	109.49	106.79	105.48	104.79
4	111.65	107.59	106.81	106.68	105.49	105.27
5	111.58	110.45	108.98	106.89	105.49	105.84
6	111.32	110.50	109.20	106.90	105.92	106.62
7	108.68	110.29	109.25	106.71	105.17	107.13
8	111.19	110.09	109.19	105.05	105.38	107.12
9	111.32	110.25	109.10	106.51	105.45	107.29
10	111.40	110.25	108.98	106.55	105.39	105.40
11	111.46	107.60	106.50	106.42	105.38	108.39
12	111.20	110.18	108.78	106.35	106.08	109.35
13	111.10	110.00	108.60	106.20	103.61	109.90
14	108.40	110.35	108.60	106.19	105.06	110.46
15	111.06	109.95	108.52	106.09	105.20	110.51
16	111.35	110.25	108.50	105.89	104.99	110.76
17	111.35	109.92	108.49	106.10	105.02	113.40
18	111.18	107.40	106.08	104.61	105.21	113.63
19	111.02	110.11	106.80	106.10	105.20	114.00
20	110.99	110.00	108.51	105.88	104.99	114.00
21	108.32	109.78	105.71	105.99	104.81	114.19
22	110.70	109.82	105.71	104.52	105.11	114.42
23	110.81	110.11	106.51	105.62	105.18	114.47
24	110.76	110.21	108.68	105.79	105.12	114.45
25	110.78	107.31	105.51	105.81	105.00	114.65
26	110.92	109.55	108.41	106.08	104.87	114.78
27	110.82	109.60	107.14	106.05	103.50	114.75
28	108.00	109.52	105.41	105.81	105.12	114.42
29	110.69		106.91	105.60	104.95	114.59
30	110.89		106.75	105.62	105.20	114.69
31	110.90		106.59		105.29	

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	114.65	115.22	113.66	116.24	112.09	112.03
2	113.18	115.42	112.67	116.34	112.22	110.20
3	113.32	115.60	112.08	116.08	112.95	111.13
4	112.41	115.60	112.20	115.74	112.60	111.03
5	112.45	113.91	112.37	115.42	112.80	110.78
6	112.81	114.72	112.48	115.08	112.79	110.60
7	112.80	115.15	112.58	114.28	113.50	110.54
8	111.35	115.32	112.51	114.65	114.05	110.40
9	112.59	115.37	111.20	114.45	114.35	109.98

246-1--Continued.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
10	114.70	115.41	111.94	114.30	114.40	110.47
11	112.86	115.42	112.05	113.88	113.00	110.40
12	112.92	114.19	112.12	113.40	113.75	110.18
13	115.28	115.22	114.54	113.35	114.50	109.80
14	114.01	115.22	115.02	111.10	114.55	110.00
15	112.72	113.70	115.40	112.70	114.87	109.63
16	113.19	113.28	115.49	112.60	114.93	109.50
17	113.29	115.05	113.56	112.82	114.88	109.80
18	113.40	114.50	114.10	111.39	114.25	.....
19	113.80	113.33	113.27	111.67	114.70	.....
20	114.10	113.41	113.61	111.70	114.71	.....
21	114.00	114.20	114.00	111.40	114.52	.....
22	112.75	114.68	114.50	111.50	113.02	.....
23	114.21	114.92	114.53	111.71	113.92	.....
24	114.39	114.99	115.47	111.51	114.95	107.30
25	114.70	114.18	115.54	111.41	112.30	108.50
26	114.89	113.58	116.16	111.85	112.22	108.71
27	115.10	114.54	116.77	111.41	113.00	108.87
28	115.11	114.77	117.08	109.90	113.23	108.60
29	114.00	114.93	117.33	111.22	113.22	108.30
30	115.08	114.92	116.77	111.85	113.19	108.10
31	115.28	114.69		111.61		108.40

252 (*845, p. 383; *886, p. 575; *906, pp. 204-205; *936, p. 229;
*944, p. 227; *986, p. 263; 1016, p. 305). Flintkote Co. At 75th St.
and Longview Ave., in Carthage.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 3	111.44	Apr. 2	109.26	July 2	109.05
10	111.27	9	109.34	9	109.14
17	111.33	16	109.00	16	109.50
24	111.06	23	108.90	23	109.55
29	111.07	30	108.86	30	109.95
Feb. 5	110.97	May 7	108.62	Aug. 6	110.03
12	110.84	14	108.50	13	110.31
19	110.94	21	108.42	20	110.47
26	110.44	28	108.26	Sept. 5	110.58
Mar. 5	110.39	June 4	108.35	10	110.43
7	110.52	11	108.29	17	110.55
12	110.11	18	108.61	24	110.61
19	109.83	25	108.69	Oct. 1	110.73
26	109.63				
				Oct. 8	110.72
				15	110.71
				22	110.69
				29	110.68
				Nov. 5	110.65
				12	110.81
				19	110.78
				27	111.13
				Dec. 3	110.96
				10	110.82
				17	110.81
				24	110.43
				31	110.34

265 (*886, pp. 575-576; *906, p. 205; *936, p. 229; *944, p. 227;
*986, p. 263; 1016, p. 305). Cities Service Oil Co. In Cincinnati.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 3	130.72	Apr. 2	128.65	July 2	131.10
10	130.46	9	130.17	9	130.70
17	130.55	16	129.63	16	131.01
24	130.15	23	129.95	23	131.09
29	130.20	30	128.83	30	131.88
Feb. 5	130.05	May 7	128.55	Aug. 6	131.83
12	129.90	14	128.75	13	132.25
19	130.10	21	128.44	20	132.40
26	129.23	28	128.62	Sept. 5	132.75
Mar. 5	129.30	June 4	129.46	10	132.73
12	129.29	11	129.72	17	133.09
19	129.15	18	130.20	24	133.21
26	129.13	25	130.42	Oct. 1	133.16
				Oct. 8	133.27
				15	133.71
				22	133.52
				29	133.88
				Nov. 5	133.78
				12	134.12
				19	133.71
				26	133.73
				Dec. 3	132.96
				10	132.60
				17	133.07
				24	131.62
				31	131.57

270-A-4 (*886, p. 574; *906, p. 206; *936, p. 230; *944, p. 227; *986, p. 264; 1016, p. 306). Procter & Gamble Co. In Cincinnati.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	90.10	89.64	89.15	88.69	88.29	88.84	89.13	89.08	89.28	89.22	89.50	89.00
2	90.17	89.53	88.90	88.70	88.16	89.01	88.95	89.06	89.38	89.38	89.54	88.90
3	89.94	89.46	89.06	88.81	88.06	89.16	88.86	89.15	89.42	89.23	89.69	88.89
4	89.95	89.36	89.06	88.72	88.16	89.26	88.66	89.20	89.24	89.07	89.67	88.85
5	89.92	89.50	88.93	88.74	88.19	89.26	88.49	89.19	89.22	88.81	89.65	88.78
6	89.79	89.39	89.10	88.74	88.19	89.26	88.41	89.12	89.23	88.70	89.70	88.72
7	89.68	89.34	89.19	88.66	88.14	89.24	88.41	89.19	89.23	88.73	89.66	88.82
8	89.79	89.33	89.15	88.54	88.27	89.17	88.31	89.27	89.20	89.03	89.63	88.85
9	90.01	89.31	89.04	88.48	88.34	89.13	88.18	89.29	89.23	89.13	89.90	88.80
10	89.94	89.43	88.95	88.54	88.20	89.19	88.16	89.23	89.00	89.17	89.90	88.95
11	89.95	89.43	88.96	88.46	88.20	89.29	88.19	89.18	89.15	89.23	89.70	88.98
12	89.66	89.35	88.91	88.44	87.98	89.30	88.14	89.18	89.27	89.30	88.64	88.95
13	89.73	89.41	88.91	88.45	88.00	89.31	88.34	88.17	89.27	89.40	89.71	88.75
14	89.64	89.45	88.80	88.46	87.99	89.44	88.46	89.13	89.33	89.36	89.84	88.76
15	89.81	89.34	88.77	88.45	87.99	89.40	88.77	89.06	89.48	89.44	89.93	88.84
16	89.90	89.50	88.82	88.25	87.96	89.39	88.87	88.83	89.48	89.38	89.83	88.86
17	89.90	89.32	88.99	88.49	88.06	89.37	88.87	88.78	89.40	89.40	89.72	88.86
18	89.77	89.44	88.99	88.54	88.16	89.28	88.88	88.95	89.40	89.40	89.87	88.80
19	89.60	89.44	88.76	.....	88.16	89.33	88.89	89.03	89.41	39.47	89.65	88.75
20	89.71	89.22	88.65	.....	87.98	89.33	88.90	88.96	89.45	89.51	89.58	88.79
21	89.66	89.09	88.81	.....	88.04	89.04	88.89	89.02	89.51	89.44	89.25	88.85
22	89.53	89.26	88.83	.....	88.55	89.09	88.85	89.13	89.50	89.55	89.20	88.82
23	89.60	89.42	88.71	88.16	88.64	89.09	88.89	89.14	89.46	89.38	89.16	88.82
24	89.61	89.42	88.78	88.11	88.71	89.04	88.95	89.13	89.33	89.53	89.16	88.65
25	89.58	89.29	88.74	88.19	88.62	89.00	88.97	89.25	89.44	89.46	89.13	88.50
26	89.59	89.03	88.71	88.51	88.76	89.09	89.01	89.29	89.50	89.64	89.14	88.82
27	89.59	89.11	88.75	88.51	88.80	89.06	89.03	89.24	89.43	89.66	88.95	88.84
28	89.49	89.15	88.75	88.39	88.89	89.04	88.99	89.24	89.42	89.61	88.95	88.75
29	89.80		88.71	88.30	88.91	89.14	89.11	89.30	89.60	89.58	88.97	88.55
30	89.59		88.72	88.30	88.96	89.18	89.09	89.33	89.58	89.50	89.00	88.55
31	89.65		88.69		88.87		89.11	89.32		89.50		88.71

270-T-7 (*886, p. 574; *906, pp. 205-206; *936, p. 230; *944, p. 228; *986, p. 264; 1016, p. 306). Procter & Gamble Co. At Ivorydale, a suburb of Cincinnati.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	121.52	Apr. 2	119.66	July 2	123.83	Oct. 8	125.85
10	121.34	9	119.90	9	123.10	15	126.43
17	121.49	16	119.67	16	123.41	22	126.38
24	120.92	23	119.65	23	123.95	29	126.95
29	121.03	30	119.93	30	124.60	Nov. 5	126.81
Feb. 5	120.70	May 7	119.72	Aug. 6	124.72	12	126.81
12	120.92	14	119.57	13	125.15	19	126.85
19	120.91	21	119.47	20	125.09	26	125.85
26	120.20	28	120.47	Sept. 5	125.39	Dec. 3	124.70
Mar. 5	120.35	June 4	121.23	10	125.47	10	124.18
12	120.25	11	121.82	17	125.90	17	123.77
19	120.18	18	122.64	24	125.76	24	123.04
26	120.06	25	123.29	Oct. 1	126.00	31	122.66

288-A (*1016, p. 306). Burger Brewing Co. In coal room of company's plant, 6 feet east of the east building line of Providence St., and 150 feet south of south building line of Wade St., in Cincinnati. Well in use; measurements discontinued.

294-A (*1016, p. 306). Rollman Co. Test well, in sidewalk south side of Opera Place between Race and Vine Sts., in Cincinnati.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	113.00	Mar. 15	93.52	Apr. 13	109.12	June 16	124.15
13	110.87	22	91.24	27	100.28	July 21	126.17
Feb. 21	109.45	29	100.41	May 9	101.25	Aug. 18	123.57
Mar. 3	106.42	Apr. 5	96.27	23	96.75	Sept. 28	131.58
11	89.20						

298-2 (*1016, p. 307). Hudepohl Brewing Co. In company's storage yard, 19.5 feet west of the west building line of Stone St. and 136 feet south of the south building line of Sixth St., in Cincinnati.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	77.98	Mar. 15	69.15	Apr. 13	62.92	June 16	66.68
13	77.45	22	65.40	27	63.03	July 21	66.94
Feb. 21	75.52	29	67.90	May 9	63.32	Aug. 18	69.24
Mar. 3	75.76	Apr. 5	62.91	23	63.70	Sept. 28	71.91
11	72.29						

301-A (*1016, p. 307). Palace Theater. In sub-basement of theater building, 93 feet east of the east building line of Vine St. and 108 feet north of the north building line of Sixth St., in Cincinnati.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	111.32	Mar. 15	96.05	Apr. 27	101.00	July 21	123.86
13	110.73	22	95.68	May 9	101.34	Aug. 18	117.44
Feb. 21	109.54	29	101.30	23	100.43	Sept. 28	129.25
Mar. 3	106.82	Apr. 5	95.88	June 16	128.47	Dec. 29	103.32
11	92.93	13	108.85				

315-3 (*845, p. 379; *886, p. 573; *906, p. 207; *936, p. 231; *944, p. 228; *986, p. 264; 1016, p. 307). Globe-Wernicke Co. At Norwood and Carthage Ave., in Norwood.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 5	187.20	May 21	186.89	July 16	187.30	Oct. 22	187.40
Apr. 23	187.16	June 25	187.08	Sept. 17	187.82	Dec. 31	187.59

Montgomery County

Dayton 1 (*944, p. 190; *986, p. 265; 1016, p. 307). City of Dayton water department. In Rohrer's Island well field.

Lowest daily water level, in feet below land-surface datum, 1945 (From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	6.50	14.35	10.59	14.32	8.88	5.95	2.89	5.05	5.31	7.20	5.43
2	16.37	6.32	9.32	11.24	14.00	9.21	5.12	6.28	4.52	4.39	7.20	5.43
3	17.34	6.85	.....	11.64	.....	9.97	5.60	7.89	4.19	.....	5.85	4.70
4	18.18	6.93	.....	11.80	.....	9.90	5.40	.....	4.48	.....	5.18	3.86
5	18.25	6.94	.....	11.80	.....	10.04	5.60	.....	4.98	.....	6.03	4.37
6	17.83	6.90	11.80	11.30	.....	10.43	6.03	.....	4.95	.....	6.53	6.14
7	17.90	6.90	.....	11.05	9.73	10.74	6.00	3.50	4.89	.....	3.85	6.52
8	17.91	6.35	.....	11.70	9.84	11.48	6.13	3.80	4.97	.....	7.43	6.56
9	18.12	7.09	.....	11.62	9.67	11.52	6.43	4.41	4.23	5.94	7.47	6.32
10	18.65	7.01	.....	11.43	10.19	12.15	6.41	4.42	3.23	6.14	7.12	6.20
11	19.13	6.57	.....	11.95	11.46	13.95	6.42	4.21	3.73	6.25	6.66	6.14
12	19.25	6.96	.....	12.48	11.82	14.74	4.63	3.05	3.65	6.44	7.37	6.09
13	18.69	8.00	7.86	12.35	11.81	14.45	3.85	3.18	3.48	6.62	7.43	6.27
14	18.84	10.20	6.02	12.55	11.78	14.26	3.78	3.49	3.08	6.27	6.90	6.93
15	18.84	11.41	6.19	12.55	11.91	14.65	7.20	3.25	2.96	5.25	6.69	7.67
16	18.75	13.30	7.32	13.45	11.74	14.79	11.00	2.74	2.85	3.16	6.02	7.72
17	18.91	14.52	6.64	14.19	13.75	14.71	12.89	3.28	4.02	3.17	6.02	7.65
18	18.96	15.67	6.71	14.69	14.04	13.74	12.83	4.48	4.55	2.70	5.27	7.46

Dayton 1--Continued.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
19	12.28	16.01	8.02	14.87	13.30	13.25	9.00	4.91	4.51	3.45	4.30	8.17
20	9.84	10.46	9.37	14.71	13.18	13.51	8.34	5.62	3.75	3.50	4.47	8.33
21	8.96	9.10	9.28	14.28	13.18	14.12	8.13	5.22	3.52	3.40	4.25	8.37
22	8.15	12.40	8.81	13.63	4.89	14.62	6.02	5.00	3.40	2.70	6.63	8.38
23	9.54	13.60	.....	13.56	4.23	14.81	4.13	5.06	2.91	4.45	....	7.27
24	7.07	14.30	.....	13.86	3.99	10.90	4.32	4.75	3.65	6.33	7.55	7.13
25	6.76	11.20	.....	14.16	5.07	9.84	4.32	3.76	7.30	7.15	8.00	6.97
26	6.35	11.35	.....	13.94	6.11	6.75	3.82	3.06	9.53	6.90	9.20	4.00
27	6.49	12.61	9.84	13.81	6.54	5.31	4.18	3.65	10.00	6.60	9.60	2.65
28	6.55	13.96	10.10	14.43	7.43	5.42	3.80	4.17	5.08	6.30	9.30	5.35
29	6.80		10.32	15.21	7.47	6.06	3.07	4.17	4.77	6.25	5.10	8.35
30	6.94		10.48	15.22	7.54	6.06	3.33	4.55	5.06	7.13	5.08	9.05
31	6.90		10.75		7.95		3.05	5.53		7.16		7.95

Dayton 2 (*944, p. 191; *986, p. 265; 1016, p. 308). Dayton Power & Light Co. At steam distribution plant, 118 Fourth St., in fan room.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	28.09	28.21	26.37	23.74	23.55	24.26	24.56	27.16	27.56	27.51	26.83	26.23
2	28.11	28.24	26.29	23.44	23.65	24.46	24.50	27.20	27.55	27.55	26.90	26.11
3	28.16	28.24	26.11	23.38	23.73	24.46	24.56	27.20	27.33	27.24	26.92	25.97
4	28.19	28.17	26.01	23.31	23.79	24.49	24.49	27.24	27.29	27.08	26.85	26.00
5	28.18	28.10	25.74	23.24	23.85	24.55	24.46	27.16	27.43	26.92	26.63	26.02
6	28.14	28.15	25.55	23.16	23.81	24.60	24.63	27.04	27.58	26.77	26.67	25.99
7	28.10	28.19	25.40	22.89	23.77	24.63	24.74	27.20	27.70	26.65	26.69	25.95
8	28.01	28.23	25.11	22.81	23.81	24.65	24.73	27.28	27.81	26.50	26.82	25.95
9	28.10	28.26	24.75	22.70	23.93	24.69	24.79	27.29	27.80	26.50	26.90	25.90
10	28.13	28.21	24.40	22.83	23.97	24.65	25.01	27.32	27.77	26.50	26.85	25.80
11	28.16	28.21	24.16	22.97	24.04	24.66	25.17	27.35	27.87	26.51	26.80	25.85
12	28.18	23.07	23.88	23.09	24.06	24.86	25.30	27.31	27.93	26.54	26.71	25.85
13	28.20	28.11	23.80	23.20	24.04	25.09	25.53	27.29	27.96	26.55	26.77	25.85
14	28.14	28.13	23.84	23.24	24.06	25.21	25.64	27.39	28.02	26.53	26.83	25.92
15	28.11	28.12	23.89	23.23	24.23	25.46	25.64	27.34	28.03	26.43	26.86	25.91
16	28.18	28.08	23.98	23.07	24.32	25.44	25.59	27.23	27.99	26.49	26.87	25.90
17	28.23	27.98	24.06	23.20	24.31	25.44	25.66	27.24	27.73	26.55	26.88	25.89
18	28.26	27.81	24.04	23.21	24.26	25.11	25.79	27.24	27.71	26.59	26.85	25.93
19	28.29	27.57	23.98	23.23	24.10	24.87	25.90	27.19	27.74	26.62	26.73	25.97
20	28.31	27.44	23.99	23.26	23.86	24.55	26.00	27.04	27.83	26.66	26.75	26.04
21	22.29	27.36	23.92	23.29	23.49	24.30	26.12	27.16	27.87	26.63	26.70	26.10
22	28.18	27.32	23.78	23.26	23.54	24.04	26.11	27.26	27.89	26.59	26.68	26.10
23	28.21	27.26	23.56	23.16	23.56	23.86	26.21	27.29	27.86	26.67	26.50	26.05
24	28.27	27.14	23.39	23.26	23.59	23.75	26.35	27.34	27.78	26.73	26.40	25.95
25	28.29	26.96	23.28	23.41	23.64	23.69	26.55	27.51	27.90	26.76	26.35	25.84
26	28.29	26.70	23.20	23.54	23.72	23.84	26.69	27.46	27.97	26.80	26.19	25.70
27	28.24	26.59	23.27	23.61	23.70	24.01	26.78	27.31	28.02	26.80	26.20	25.65
28	28.18	26.48	23.37	23.60	23.76	24.19	26.90	27.39	28.08	26.73	26.20	25.54
29	28.15		23.46	23.57	23.90	24.36	26.89	27.40	28.06	26.68	26.20	25.41
30	28.18		23.74	23.50	23.98	24.56	26.94	27.45	27.89	26.74	26.27	25.25
31	28.20		23.74		23.98		27.06	27.51		26.80		25.00

Dayton 3. 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. Diameter 6 inches, depth 50.5 feet. Measuring point, top of casing, 0.3 foot above land-surface datum May 9 to Nov. 7, 1945. Measuring point beginning Nov. 8, base of recorder shelter, 1.2 feet above land-surface datum and 745.30 feet above sea level. Automatic water-stage recorder installed Nov. 8.

Dayton 3--Continued.

Water level, in feet below land-surface datum, 1945
(Beginning Nov. 8, lowest daily water level from recorder charts)

Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	40.30	.....	41.09	.....	40.12	41.70	42.55
2	.....	40.38	38.93	41.61	.....	40.33	41.95	42.20
3	.....	.....	39.40	41.61	.....	40.10	.....	42.07
4	.....	39.77	.....	.....	39.46	39.55	.....	42.60
5	.....	40.34	38.94	.....	40.30	39.70	41.39	42.82
6	.....	40.80	39.88	38.65	40.75	.....	42.47	42.94
7	.....	40.98	39.93	38.34	41.25	.....	42.70	43.05
8	.....	40.96	.....	38.15	41.55	38.75	42.65	42.87
9	41.33	.....	39.16	37.67	.....	39.44	42.88	42.60
10	41.43	.....	40.03	37.00	40.41	39.64	42.69	42.49
11	.....	39.94	40.45	.....	40.85	39.74	42.07	42.96
12	41.07	40.35	40.64	.....	40.75	39.88	42.00	43.15
13	.....	40.63	40.84	38.24	40.63	.....	42.40	43.19
14	40.50	40.60	.....	38.40	40.49	.....	42.28	43.19
15	41.09	40.55	.....	.....	.....	39.43	42.16	43.01
16	41.27	.....	39.41	36.77	.....	40.06	42.40	42.60
17	41.15	.....	40.00	36.11	39.91	40.43	42.34	43.49
18	40.50	37.12	40.34	35.96	40.42	40.61	41.95	42.88
19	.....	36.12	40.64	.....	40.73	40.74	41.75	43.02
20	.....	35.98	.....	38.07	40.85	.....	42.32	43.15
21	38.83	36.53	40.56	38.98	41.19	.....	42.37	43.24
22	39.51	37.17	.....	39.65	.....	39.65	42.20	42.99
23	39.80	.....	39.70	40.24	.....	40.35	41.67	42.48
24	39.98	.....	40.42	40.64	40.66	40.69	.....	41.45
25	40.51	38.03	40.68	.....	41.19	40.76	.....	40.75
26	.....	38.50	41.13	.....	41.48	40.80	.....	40.87
27	.....	39.25	41.65	39.07	41.47	.....	41.90	40.66
28	39.88	39.70	.....	40.02	41.56	.....	42.24	40.86
29	40.52	39.78	.....	40.60	.....	40.40	42.54	40.69
30	.....	.....	40.44	40.98	.....	.....	42.70	38.95
31	39.75	.....	40.90	41.36	.....	41.09	.....	38.17

Dayton 4. State Highway Department test well. 25 feet west of Miami Boulevard East, along Miami River, about 3,000 feet north of Stewart St. Diameter 2 inches, depth 40 feet. Measuring point, top of pipe, 0.5 foot above land-surface datum and 743.00 feet above sea level.

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

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	27.32	27.43	.....	27.97	.....	27.46	29.70	.....
2	.....	27.44	27.46	25.48	26.25	.....	27.55	29.72	.....
3	.....	27.52	.....	25.83	26.77	.....	26.30	.....	29.95
4	.....	27.56	27.62	.....	.....	28.97	26.55	.....	30.02
5	.....	.....	27.64	26.32	.....	29.17	27.07	29.78	30.09
6	24.40	.....	27.69	26.52	27.74	29.23	.....	29.86	30.16
7	.....	27.70	27.70	26.53	27.85	29.34	.....	29.96	30.22
8	.....	27.76	27.71	.....	27.95	29.32	28.14	30.02	.....
9	25.98	27.85	.....	26.73	28.02	.....	28.37	30.05	.....
10	24.50	27.88	.....	26.87	28.14	29.31	28.66	.....	30.35
11	26.31	.....	27.29	26.98	.....	29.29	28.72	.....	30.42
12	26.81	27.96	27.47	27.05	.....	29.41	28.86	30.10	30.48
13	26.94	.....	26.88	27.20	28.21	29.48	.....	30.09	30.54
14	.....	28.02	26.17	.....	28.40	29.48	.....	30.12	30.58
15	.....	27.99	26.22	.....	.....	.....	29.13	30.18	.....
16	.....	26.81	.....	26.34	28.18	.....	29.21	.....	.....
17	25.92	25.92	.....	26.52	27.47	29.70	29.28	30.21	30.40
18	26.27	24.00	21.50	26.82	27.30	29.84	29.34	.....	30.44
19	26.33	.....	20.54	27.04	.....	29.91	29.40	30.00	30.47
20	26.54	.....	20.86	.....	27.51	29.89	.....	29.45	30.46
21	.....	25.09	21.56	27.29	27.74	29.84	.....	29.27	30.46
22	29.47	25.58	22.48	.....	27.98	.....	29.47	.....	.....
23	27.05	26.01	.....	27.49	28.17	.....	29.33	28.80	.....
24	27.12	26.32	.....	27.58	28.34	29.80	29.55	29.01	30.53
25	27.19	26.57	24.97	27.70	.....	29.75	29.12	.....	.....

Dayton 4--Continued.

Water level, in feet below land-surface datum, 1945									
Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	27.29	.....	25.30	27.76	.....	29.44	28.99	29.46	28.52
27	27.32	.....	25.60	27.89	28.54	29.22	.....	29.60	27.22
28	.....	27.03	25.86	.....	28.60	29.23	.....	29.71	27.58
29	.....	27.16	26.09	.....	28.70	.....	29.28	29.79	27.60
30	27.17	.....	.....	27.94	28.74	.....	29.36	29.80	.....
31	.....	27.38	.....	28.02	28.89	.....	29.55	.....	25.87

Dayton 5. State Highway Department test well. At northeast corner of Washington St. and Miami Boulevard East, along Miami River. Diameter 2 inches, depth 40 feet. Measuring point, top of pipe, 1.6 feet above land-surface datum and 746.20 feet above sea level.

Water level, in feet below land-surface datum, 1945										
Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	27.84	28.12	.....	29.44	.....	28.08	31.15	.....
2	.....	25.29	27.93	28.19	26.43	27.49	.....	28.20	31.20	.....
3	.....	24.44	28.05	.....	26.77	28.00	.....	27.13	.....	31.19
4	.....	24.38	28.07	28.38	.....	.....	30.99	27.41	.....	31.23
5	.....	24.47	.....	28.43	27.34	.....	31.04	27.90	31.28	31.27
6	.....	24.84	.....	28.49	27.50	29.07	31.07	.....	31.30	31.30
7	.....	.....	27.50	28.56	27.53	29.25	31.11	.....	31.33	31.34
8	.....	.....	28.36	28.62	.....	29.56	31.16	28.97	31.37	.....
9	.....	26.43	28.45	.....	27.77	29.92	.....	29.30	31.39	.....
10	.....	26.61	28.48	.....	27.90	30.09	31.18	29.58	.....	31.44
11	.....	26.81	.....	28.27	27.99	.....	31.21	30.01	.....	31.50
12	.....	27.03	28.55	28.45	28.08	.....	31.23	30.24	31.50	31.53
13	.....	27.14	.....	27.89	28.20	30.26	31.28	.....	31.52	31.57
14	.....	.....	28.65	27.13	.....	30.31	31.33	.....	31.54	31.61
15	.....	.....	28.66	27.21	.....	.....	.....	30.59	31.56	.....
16	.....	.....	27.30	.....	27.43	30.26	.....	30.66	.....	31.69
17	.....	26.84	26.43	.....	27.65	28.69	31.44	30.75	31.57	31.70
18	.....	26.33	26.64	22.79	27.94	28.44	31.48	30.82	.....	31.71
19	.....	26.41	.....	21.82	28.15	.....	31.51	30.88	31.59	31.75
20	.....	27.21	.....	22.01	.....	28.80	31.55	.....	30.92	31.75
21	.....	.....	25.86	22.64	28.41	29.27	31.58	.....	30.05	31.78
22	24.04	.....	26.30	23.48	.....	29.75	.....	31.04	.....	.....
23	24.75	27.51	26.70	.....	28.66	30.00	.....	31.08	28.66	.....
24	.....	27.59	26.95	.....	28.75	30.16	31.66	31.10	28.87	31.98
25	.....	27.64	27.20	25.85	28.85	.....	31.42	31.10	.....	.....
26	26.61	27.71	.....	26.15	28.95	.....	31.62	31.01	30.88	28.59
27	26.78	27.76	.....	26.45	29.10	30.45	31.44	.....	30.94	27.33
28	27.04	.....	27.70	26.70	.....	30.53	31.48	.....	30.98	27.43
29	27.20	.....	27.82	26.93	.....	30.60	.....	31.04	31.04	27.75
30	27.32	27.69	.....	.....	29.29	30.66	.....	31.08	31.07	.....
31	.....	.....	28.04	.....	29.38	30.74	.....	31.10	.....	26.09

Dayton 6. State Highway Department test well. On east levee of Miami River just south of Baltimore & Ohio Railroad bridge. Diameter 2 inches, depth 40 feet. Measuring point, top of pipe, 0.3 foot above land-surface datum and 748.06 feet above sea level.

Water level, in feet below land-surface datum, 1945										
Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	31.90	31.98	.....	33.26	.....	32.70	34.92	.....
2	29.20	32.02	32.10	30.04	31.45	.....	33.00	34.98	.....
3	27.97	32.17	.....	30.57	31.93	.....	31.68	.....	34.91
4	27.85	.....	32.22	.....	.....	34.12	31.89	.....	35.03
5	28.18	.....	32.38	30.90	.....	34.30	32.39	34.75	35.11
6	28.82	.....	32.50	31.18	32.45	34.40	.....	34.88	35.17
7	32.30	32.60	31.29	32.78	34.49	.....	35.01	35.25
8	32.53	32.70	.....	33.03	34.57	33.10	35.09	.....
9	30.18	32.63	.....	31.35	33.22	.....	33.42	35.18	.....
10	30.61	32.67	.....	31.59	33.34	34.47	33.65	.....	35.32
11	30.08	.....	32.34	31.78	.....	34.59	33.81	.....	35.44
12	31.02	32.80	32.57	31.89	.....	34.68	33.98	35.05	35.53

Dayton 6--Continued.

Water level, in feet below land-surface datum, 1945										
Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
13	.....	31.14	.....	32.30	32.04	33.45	34.75	.....	35.16	35.60
14	.....	.....	32.68	31.46	.....	33.69	34.83	.....	35.19	35.69
15	32.05	.....	32.81	31.47	.....	.....	.....	34.28	35.26	.....
16	32.18	28.86	31.59	.....	31.20	33.24	.....	34.42	.....	.....
17	.....	30.32	30.45	.....	31.50	32.67	34.90	34.56	35.32	35.65
18	.....	30.86	28.10	25.78	31.79	32.55	35.03	34.65	.....	35.69
19	31.89	30.86	.....	24.65	32.00	.....	35.12	34.73	35.10	35.72
20	28.74	31.17	.....	24.75	.....	32.55	35.17	.....	34.74	35.75
21	27.06	.....	29.62	25.37	32.27	32.78	35.22	.....	34.59	35.83
22	27.40	.....	30.22	26.47	.....	32.98	.....	34.73	.....	.....
23	28.46	31.35	30.69	.....	32.40	33.38	.....	34.82	34.69	.....
24	.....	31.63	30.99	.....	32.58	33.37	35.14	34.78	34.30	35.83
25	.....	31.65	31.22	29.30	32.74	.....	35.16	34.63	.....	.....
26	30.42	31.69	.....	29.81	32.89	.....	34.89	34.59	34.53	33.73
27	30.77	31.76	.....	30.16	33.00	33.62	34.67	.....	34.65	32.37
28	31.54	.....	31.53	30.46	.....	33.78	34.61	.....	34.78	32.37
29	31.22	.....	31.73	30.70	.....	33.93	.....	34.64	34.86	32.60
30	31.44	31.69	.....	.....	33.03	34.04	.....	34.77	34.89	.....
31	.....	.....	31.92	.....	33.19	34.12	.....	34.86	.....	29.17

Dayton 7. State Highway Department test well. At intersection of West Fourth St. and South Roberts Boulevard. Diameter 2 inches, depth 40 feet. Measuring point, top of pipe, 0.3 foot above land-surface datum and 737.17 feet above sea level.

Water level, in feet below land-surface datum, 1945										
Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	17.52	20.25	20.53	.....	21.53	.....	20.80	23.12	.....
2	.....	.....	20.37	20.48	18.55	20.08	.....	20.94	23.16	.....
3	.....	16.59	20.53	.....	18.91	20.30	.....	20.06	.....	23.25
4	.....	16.68	.....	20.70	.....	.....	22.49	20.02	.....	23.30
5	.....	16.54	.....	20.79	19.31	.....	22.55	20.38	23.06	23.37
6	.....	16.72	.....	20.90	19.53	20.84	22.64	.....	23.15	23.43
7	.....	.....	20.78	20.98	19.64	21.06	22.70	.....	23.24	23.51
8	.....	.....	20.91	21.09	.....	21.24	22.77	21.23	23.30	.....
9	16.44	18.30	20.99	.....	19.81	21.38	.....	21.49	23.36	.....
10	.....	18.67	21.05	.....	19.99	21.50	22.73	21.71	.....	23.65
11	.....	18.93	.....	20.86	20.15	.....	22.77	21.90	23.39	23.72
12	19.05	19.21	21.17	20.98	20.27	21.77	22.85	22.08	23.40	23.80
13	19.42	19.32	.....	20.73	20.41	21.84	22.92	.....	23.42	23.87
14	19.77	.....	21.15	20.15	.....	.....	23.00	.....	23.47	23.95
15	20.02	.....	21.21	20.00	.....	.....	.....	22.48	.....	.....
16	20.20	.....	20.32	.....	19.83	21.51	.....	22.59	.....	24.08
17	.....	18.49	19.34	.....	19.93	20.98	23.17	22.72	23.64	24.10
18	.....	18.80	17.38	15.27	20.15	20.82	23.24	22.80	.....	24.13
19	20.13	19.11	.....	13.79	20.34	.....	23.30	22.88	23.45	24.15
20	18.26	19.32	.....	13.44	.....	20.85	23.35	.....	22.99	24.20
21	15.99	.....	17.70	13.82	20.63	21.02	23.35	.....	22.81	.....
22	15.61	.....	18.27	14.64	.....	21.20	.....	23.01	.....	.....
23	17.29	19.74	18.78	.....	20.80	21.37	.....	22.98	22.54	.....
24	.....	19.87	19.11	.....	20.93	21.53	23.34	22.97	22.56	24.26
25	.....	20.00	19.39	17.44	21.08	.....	23.25	22.81	.....	.....
26	18.39	20.07	.....	17.97	21.20	.....	22.94	22.77	22.80	25.23
27	18.77	20.11	.....	18.38	21.32	21.90	22.68	.....	22.89	21.85
28	19.14	.....	19.89	18.70	.....	22.00	22.64	.....	22.90	21.12
29	19.45	.....	20.05	18.98	.....	22.12	.....	22.90	23.08	20.98
30	19.55	20.08	.....	.....	21.36	22.22	.....	22.98	23.13	.....
31	.....	.....	20.27	.....	21.53	22.31	.....	23.05	.....	19.40

Dayton 8. State Highway Department test well. At intersection of West Second St. and North Roberts Boulevard. Diameter 2 inches, depth 38.5 feet. Measuring point, top of pipe, 1.5 feet above land-surface datum and 739.55 feet above sea level.

Water level, in feet below land-surface datum, 1945											
Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	22.24	.....	20.70	20.91	.....	22.43	.....	21.85	23.30	.....
2	20.11	19.01	20.88	21.03	19.64	22.02	.....	21.72	23.35	.....
3	18.55	20.96	.....	19.76	21.60	.....	21.47	.....	23.20
4	18.43	20.98	21.22	.....	.....	23.14	21.03	.....	23.28
5	21.04	17.47	.....	21.38	20.00	.....	23.22	20.84	23.30	23.34
6	20.54	17.47	.....	21.47	20.26	21.58	23.22	.....	23.37	23.40
7	19.48	.....	21.23	21.54	20.42	21.78	23.39	.....	23.41	23.46
8	17.63	.....	21.35	21.62	.....	21.90	23.36	21.37	23.47	.....
9	17.28	19.00	21.45	.....	20.57	22.05	.....	21.68	23.53	.....
10	21.52	.....	20.75	22.22	23.41	21.92	.....	23.56
11	19.36	.....	21.47	20.91	.....	23.48	22.13	.....	23.65
12	18.99	19.63	21.62	21.55	21.04	.....	23.58	22.31	23.54	23.73
13	19.52	19.73	.....	21.55	21.16	22.47	23.57	.....	23.56	23.79
14	19.97	.....	21.56	21.36	.....	22.58	23.62	.....	23.89	23.89
15	20.29	.....	21.64	21.08	.....	.....	.....	22.60	23.64	.....
16	20.53	.....	21.56	.....	21.11	22.59	.....	22.80	.....	.....
17	20.38	21.10	.....	21.00	22.43	23.65	22.91	23.67	23.88
18	19.86	20.10	18.67	21.00	22.25	23.72	23.00	.....	23.98
19	20.76	19.68	.....	16.48	21.14	.....	23.77	23.09	23.50	24.01
20	20.52	19.92	.....	15.44	.....	21.82	23.80	.....	22.64	24.03
21	19.02	.....	18.15	15.32	21.39	21.90	23.85	.....	23.32	24.07
22	23.70	17.52	.....	18.57	15.66	.....	22.01	.....	23.17	.....	.....
23	23.70	17.26	20.20	19.02	.....	21.58	22.13	.....	23.21	22.85	.....
24	20.35	19.37	.....	21.74	22.25	23.76	23.22	22.79	24.13
25	20.49	20.70	17.82	21.88	.....	23.79	23.19	.....	.....
26	18.63	20.57	.....	18.50	22.02	.....	23.64	23.14	22.81	23.79
27	19.08	20.63	.....	18.95	22.15	22.52	23.50	.....	22.90	23.27
28	19.52	.....	20.30	19.35	.....	22.66	23.37	.....	22.99	23.39
29	19.82	.....	20.53	19.70	.....	22.78	.....	23.08	23.07	21.85
30	20.09	20.57	.....	.....	22.29	22.90	.....	23.16	23.13	.....
31	20.76	.....	22.38	23.00	.....	23.22	.....	20.94

Dayton 9. State Highway Department test well. At intersection of Monument Ave. and Roberts Boulevard. Diameter 2 inches, depth 39 feet. Measuring point, top of pipe, 0.3 foot above land-surface datum and 745.23 feet above sea level.

Water level, in feet below land-surface datum, 1945											
Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
1	.....	.....	24.31	24.73	.....	25.83	.....	24.33	26.07	.....
2	.....	21.54	24.47	24.82	23.27	24.32	.....	24.48	26.07	.....
3	.....	20.44	24.57	.....	23.64	24.55	.....	23.17	.....	25.81	
4	.....	20.36	24.60	25.00	.....	.....	26.41	23.24	.....	25.85	
5	22.60	20.70	.....	24.98	24.20	.....	26.45	23.70	25.96	25.89	
6	21.07	19.62	.....	25.02	24.41	24.45	26.47	.....	26.03	25.94	
7	18.94	.....	24.77	25.07	24.47	25.59	26.52	.....	26.09	25.98	
8	18.97	.....	24.83	25.12	.....	25.71	26.56	24.80	26.16	.....
9	20.01	22.58	24.89	.....	24.63	25.80	.....	25.00	26.17	.....
10	.....	22.97	24.92	.....	24.77	25.87	26.53	25.18	.....	26.11	
11	.....	23.36	.....	24.89	24.87	.....	26.52	25.33	.....	26.15	
12	22.57	23.72	24.96	25.01	24.95	.....	26.57	25.45	26.13	26.21	
13	22.97	23.80	.....	24.85	25.07	26.07	26.60	.....	26.12	26.26	
14	23.31	.....	24.99	23.95	.....	26.10	26.62	.....	26.11	26.29	
15	23.61	.....	25.03	23.75	.....	.....	.....	25.64	26.12	.....
16	23.82	.....	24.15	.....	24.31	25.93	.....	25.80	.....	.....
17	.....	23.11	23.03	.....	24.38	25.32	26.66	25.87	26.67	26.36	
18	.....	22.85	20.88	18.76	24.64	25.07	26.67	25.91	.....	26.37	
19	23.80	23.06	.....	17.66	24.87	.....	26.65	25.95	26.45	26.39	
20	20.49	23.41	.....	17.88	.....	25.15	26.67	.....	25.44	26.41	
21	19.20	.....	21.80	18.58	25.18	25.33	26.62	.....	25.29	26.43	
22	19.61	.....	22.38	19.58	.....	25.51	.....	26.05	.....	.....
23	20.46	24.03	22.92	.....	25.41	25.67	.....	25.98	24.96	.....

Dayton 9--Continued.

Water level, in feet below land-surface datum, 1945										
Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
24	.....	24.14	23.30	.....	25.48	25.78	26.59	25.95	25.05	26.48
25	.....	24.22	23.63	22.52	25.60	.....	26.53	25.78	.....	.....
26	20.67	24.29	.....	23.01	25.70	.....	26.27	25.72	25.44	24.94
27	22.94	24.35	.....	23.43	25.76	26.03	26.03	.....	25.56	23.39
28	23.37	.....	24.23	23.78	.....	26.09	26.04	.....	25.64	23.16
29	23.57	.....	24.40	24.06	.....	26.16	.....	25.90	25.68	23.33
30	23.69	24.15	.....	.....	25.79	26.23	.....	25.97	25.68	.....
31	.....	.....	24.64	.....	25.84	26.30	.....	26.00	.....	21.70

Dayton 10. State Highway Department test well. At Longworth St. pump station, about 200 feet east of test well Dayton 4. Diameter 2 inches, depth 50 feet. Measuring point, top of pipe, 0.3 foot above land-surface datum and 740.43 feet above sea level.

Water level, in feet below land-surface datum, 1945										
Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
1	.....	26.36	26.29	.....	27.04	.....	27.90	28.48	.....
2	.....	26.41	26.34	24.90	26.75	.....	27.90	28.61	.....
3	.....	26.46	.....	25.02	26.61	.....	27.64	.....	23.92	
4	.....	26.48	26.48	.....	.....	27.94	27.47	.....	28.95	
5	.....	.....	26.54	25.20	.....	28.02	27.47	28.68	28.98	
6	.....	.....	26.60	25.34	26.85	28.07	.....	28.76	29.01	
7	.....	26.60	26.64	25.45	26.93	28.14	.....	28.78	29.05	
8	.....	26.71	26.67	.....	27.00	28.20	27.67	28.82	.....
9	.....	26.78	.....	25.58	27.05	.....	27.78	28.90	.....
10	.....	26.80	.....	25.70	27.10	28.26	27.87	.....	29.12	
11	.....	.....	26.67	25.82	.....	28.27	27.92	.....	29.18	
12	.....	26.89	26.68	25.39	.....	28.32	28.00	28.91	29.20	
13	26.43	.....	26.63	25.99	27.18	28.36	.....	28.89	29.22	
14	.....	26.93	26.46	.....	27.24	28.41	.....	28.99	29.27	
15	.....	26.99	26.28	.....	.....	.....	28.12	29.02	.....
16	.....	26.85	.....	25.95	27.28	.....	28.15	.....	.....
17	26.40	26.63	.....	25.90	27.18	28.50	28.22	29.04	29.25	
18	26.08	26.02	24.49	25.97	27.10	28.56	28.27	.....	29.26	
19	26.01	.....	23.18	26.07	.....	28.61	28.30	28.99	29.26	
20	25.93	.....	22.63	.....	26.99	28.64	.....	28.92	29.26	
21	.....	25.13	22.62	26.22	27.05	28.69	.....	28.82	29.27	
22	.....	25.28	22.83	.....	27.16	.....	28.38	.....	.....
23	26.15	25.45	.....	26.35	27.25	.....	28.39	28.71	.....
24	26.52	25.60	.....	26.44	27.31	28.72	28.37	28.69	29.33	
25	26.27	25.72	23.90	26.52	.....	28.74	28.35	.....	.....
26	26.32	.....	24.21	26.62	.....	28.68	28.37	28.71	28.97	
27	26.37	.....	24.43	26.73	27.57	28.63	.....	28.73	28.62	
28	.....	26.00	24.65	.....	27.63	28.62	.....	28.78	28.38	
29	.....	26.10	24.85	.....	27.69	.....	28.59	28.84	28.27	
30	26.18	.....	.....	26.92	27.76	.....	28.42	28.87	.....
31	.....	26.24	.....	26.98	27.83	.....	28.48	.....	27.76	

Vandalia 1 (*1016, p. 308). Vandalia waterworks observation well. 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, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	19.30	19.97	15.95	12.45	16.10	.....	13.79	.....	.....	.....	.....	.....
2	.....	19.91	15.56	12.03	16.26	.....	14.04	.....	28.02	27.10	.....	.....
3	.....	19.86	15.54	11.65	16.42	.....	14.17	.....	28.59	27.00	.....	.....
4	.....	19.32	15.00	10.76	16.60	20.75	14.33	.....	29.02	26.68	.....	.....
5	.....	19.81	14.04	10.42	16.78	21.63	16.93	.....	29.23	25.80	26.05	.....
6	.....	19.80	13.69	10.34	16.87	21.28	14.93	.....	29.29	24.94	26.25	25.39
7	.....	19.86	12.15	10.59	16.94	16.61	15.29	.....	28.64	24.57	26.32	25.42
8	19.90	19.89	8.63	10.94	17.03	16.80	15.36	.....	28.04	25.03	26.32	.....
9	19.90	19.95	9.17	11.44	17.11	16.95	15.57	.....	28.24	.....	26.51	.....
10	19.74	19.96	9.71	11.89	17.24	16.98	.....	.....	28.20	.....	26.40	.....
11	19.64	19.95	10.15	12.34	17.26	16.92	.....	29.75	23.14	.....	25.90	.....

Vandalia 1--Continued.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
12	19.54	19.96	10.66	12.78	17.30	17.05	.....	29.30	28.16	.....	26.36	.....
13	19.71	20.07	11.24	13.22	17.34	17.05	.....	30.13	28.35	.....	26.90	.....
14	19.75	20.07	11.75	13.54	17.47	16.84	.....	30.30	28.50	.....	26.73	.....
15	19.91	19.90	12.10	13.69	17.56	16.57	.....	29.18	28.12	25.70	.....	.....
16	20.00	19.75	12.61	13.02	17.56	16.31	18.38	.....	28.23	25.90	.....	.....
17	19.98	19.50	13.02	.....	17.34	16.08	.....	.....	28.50	26.00	.....	.....
18	20.05	19.17	13.18	.....	17.06	14.80	.....	.....	28.60	26.13	.....	.....
19	20.10	18.71	13.35	.....	15.63	9.80	.....	.....	28.60	26.25	.....	.....
20	20.15	18.51	13.30	14.28	.....	6.88	.....	27.40	28.74	26.13	25.58	.....
21	20.15	18.32	11.40	14.52	12.45	7.83	.....	27.45	28.53	25.98	25.58	.....
22	20.13	18.14	9.60	14.72	.....	8.68	.....	27.00	.....	26.38	.....	.....
23	20.20	17.86	9.30	14.95	12.65	8.85	18.30	26.80	.....	26.42	.....	.....
24	20.26	17.50	9.67	15.19	12.95	9.88	21.95	27.05	.....	26.43	.....	.....
25	20.33	17.09	9.87	15.40	17.45	10.70	.....	26.84	.....	26.44	.....	.....
26	20.33	16.58	10.47	15.60	17.86	11.36	.....	26.63	.....	26.30	24.51	.....
27	20.16	16.41	11.14	15.72	.....	11.96	.....	27.43	.....	.....	.....	.....
28	20.13	16.19	11.63	15.79	12.44	12.53	.....	28.52	.....	.....	.....	.....
29	20.13	.....	12.01	15.81	.....	13.12	.....	29.92	.....	26.10	.....	.....
30	20.05	.....	12.30	15.93	.....	13.50	28.81	28.83	.....	26.53	.....	.....
31	19.98	.....	12.52	.....	.....	.....	.....	.....	.....	.....	.....	.....

Muskingum County

Zanesville 1 (*944, p. 192; *986, p. 266; 1016, p. 309). 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, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	31.09	32.74	32.27	13.49	15.54	14.66	17.18	18.68	19.06	16.42	18.41	19.07
2	31.09	32.80	32.04	13.75	15.60	14.98	17.11	18.29	19.10	16.47	18.44	19.08
3	31.07	32.87	31.83	13.85	15.74	15.26	16.86	18.16	19.10	16.37	18.50	19.11
4	31.09	32.96	31.65	13.76	15.93	15.45	16.77	18.13	19.03	16.25	18.42	19.32
5	31.13	33.06	31.36	.....	15.96	15.62	16.51	18.13	19.00	16.30	18.17	19.60
6	31.16	33.12	30.75	13.34	15.97	15.76	16.65	17.88	19.03	16.33	18.17	19.65
7	31.17	33.17	.....	13.39	15.60	15.78	16.76	17.91	19.24	16.42	18.32	19.86
8	31.20	33.22	.....	13.30	15.83	15.98	16.85	18.01	19.24	16.66	18.46	19.92
9	31.20	33.30	25.35	13.67	15.83	16.16	16.90	18.02	19.23	16.99	18.74	19.94
10	31.26	33.39	24.64	14.04	15.76	16.22	17.12	17.99	19.02	17.08	18.77	19.95
11	31.38	33.40	24.04	14.40	15.76	16.27	17.25	18.05	18.89	17.24	18.71	20.07
12	31.44	33.45	23.00	14.84	15.73	16.34	17.45	18.08	18.90	17.41	18.66	20.27
13	31.49	33.49	21.72	15.32	15.81	16.32	17.93	18.08	18.83	17.51	18.66	20.45
14	31.51	33.52	20.76	15.48	15.68	16.33	18.05	18.15	18.72	17.52	18.64	20.57
15	31.51	33.65	19.98	15.52	15.93	16.28	17.95	18.28	18.61	17.67	18.64	20.76
16	31.60	33.65	19.27	15.41	16.01	16.34	17.25	18.11	18.45	17.84	18.60	20.93
17	31.64	33.60	18.55	15.43	16.06	16.31	17.00	18.13	18.30	17.98	18.47	21.05
18	31.75	33.56	18.46	15.37	14.75	15.95	16.92	18.20	18.20	18.09	18.43	21.34
19	31.76	33.50	18.25	14.91	13.91	15.55	16.90	18.32	18.24	18.25	18.37	21.64
20	31.85	33.40	18.25	14.65	13.08	15.20	17.03	18.36	18.06	18.38	18.24	21.87
21	31.88	33.30	17.84	14.93	12.30	15.21	17.10	18.43	18.07	18.35	18.13	21.88
22	31.85	33.22	.....	14.93	13.05	15.34	17.21	18.80	17.94	18.30	17.90	22.05
23	31.95	33.21	.....	15.03	13.28	15.41	17.28	18.81	17.70	18.30	17.81	22.17
24	32.01	33.20	.....	15.21	13.40	15.51	17.33	18.66	17.40	18.32	17.80	22.17
25	32.12	33.11	.....	15.26	13.42	15.68	17.54	18.54	16.95	18.25	17.95	22.18
26	32.15	32.90	.....	15.41	13.35	16.03	17.58	18.35	16.81	18.25	18.17	22.20
27	32.25	32.74	.....	15.45	13.27	16.25	17.62	18.25	16.60	18.34	18.41	22.10
28	32.37	32.44	12.00	15.41	13.29	16.33	17.71	18.40	16.55	18.26	18.62	22.42
29	32.47	.....	12.20	15.41	13.39	16.90	17.59	18.66	16.52	18.32	18.76	22.00
30	32.56	.....	12.34	15.45	13.98	17.19	17.66	18.74	16.50	18.35	18.91	22.15
31	32.65	.....	13.22	.....	14.28	.....	18.57	19.00	.....	18.45	.....	21.95

Richland County

Mansfield 1 (*944, p. 193; *986, p. 267; 1016, p. 310). City of Mansfield. At North Main St. pumping station.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	52.10	.....	53.41	51.55	51.49	49.42	.....	48.22	47.59	51.57	52.00
2	.....	52.05	53.42	51.50	51.77	51.39	42.90	.....	47.77	48.96	51.82	51.93
3	.....	.....	52.90	53.30	51.91	51.03	44.18	.....	40.45	49.79	51.64	51.40
4	.....	.....	52.05	53.17	52.50	50.15	41.95	.....	45.78	49.92	51.03	52.12
5	.....	.....	52.55	53.80	52.22	51.59	38.70	.....	46.85	50.54	50.40	52.53
6	49.64	.....	52.66	54.09	52.05	51.77	39.07	.....	47.52	50.30	51.40	52.73
7	49.69	.....	53.42	53.60	49.99	51.90	39.07	.....	47.82	49.11	51.85	53.07
8	50.09	.....	53.22	52.73	50.45	51.78	.....	.....	47.60	48.44	52.05	53.18
9	50.74	.....	53.30	51.73	51.44	51.71	.....	.....	43.00	50.55	52.50	52.78
10	51.04	.....	.....	.....	51.78	51.32	.....	.....	46.20	50.95	52.19	51.72
11	50.94	.....	.....	.....	52.56	50.65	.....	51.68	47.61	51.33	51.55	.....
12	51.02	52.50	52.47	51.97	52.45	51.70	.....	51.43	48.02	51.30	50.00	.....
13	51.02	52.86	53.02	52.47	52.08	51.72	.....	50.35	48.54	48.27	51.35	.....
14	.....	53.14	53.12	52.24	50.89	51.08	.....	51.22	48.59	45.75	51.74	.....
15	.....	53.07	53.38	51.93	51.99	51.28	.....	50.80	48.46	46.75	52.16	.....
16	.....	52.95	53.36	50.11	51.01	51.94	.....	42.79	48.12	49.70	52.39	.....
17	.....	.....	53.17	51.47	51.79	51.61	.....	45.59	46.26	50.55	51.95	.....
18	.....	.....	52.82	52.14	52.56	51.14	.....	46.93	48.31	50.82	.....	.....
19	.....	52.76	51.27	52.40	52.39	51.52	.....	46.76	48.58	51.05	.....	.....
20	51.41	.....	52.43	52.08	50.88	51.86	.....	46.01	48.29	50.95	.....	.....
21	51.14	.....	52.81	51.47	49.84	51.29	.....	47.10	49.04	.....	.....	.....
22	51.04	.....	53.23	51.10	50.94	51.69	.....	47.55	48.83	.....	.....	.....
23	51.84	.....	53.03	51.72	51.50	51.51	.....	48.11	48.02	.....	.....	.....
24	51.79	.....	53.00	51.95	51.83	50.98	.....	48.20	47.26	.....	51.60	.....
25	51.94	52.45	52.75	52.08	51.92	49.15	.....	47.91	48.48	.....	51.45	.....
26	52.06	52.75	52.39	52.33	51.87	50.05	.....	47.70	49.25	.....	49.95	.....
27	51.97	52.76	52.88	.....	51.55	50.72	.....	46.92	49.72	51.45	50.74	.....
28	51.69	.....	53.28	51.94	51.34	51.02	.....	47.58	49.79	50.85	51.10	.....
29	51.56	.....	53.43	51.50	51.95	51.38	.....	47.97	49.80	49.54	51.55	.....
30	51.86	.....	53.80	50.52	51.75	51.21	.....	48.54	49.19	50.44	51.42	.....
31	51.72	.....	53.52	.....	51.52	.....	.....	48.47	.....	50.11	.....	.....

Ross County

Chillicothe 1 (*1016, p. 310). Chillicothe Water Department. In City Park, Chillicothe, about 150 feet southwest of Baltimore & Ohio Railroad tracks and about 1,800 feet west of centerline of Bridge St. highway bridge.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	20.48	20.64	12.46	.....	12.63	12.88	13.10	15.25	16.43	17.15	.....	17.47
2	20.23	20.67	13.26	.....	12.75	13.03	13.10	15.21	16.50	17.15	.....	17.48
3	20.01	20.70	13.26	10.30	12.87	13.18	13.10	15.18	16.55	16.94	.....	17.54
4	19.86	20.73	12.21	.....	12.98	13.32	13.15	15.26	.....	16.88	.....	17.57
5	19.91	20.76	10.53	9.86	13.07	13.43	13.30	15.31	.....	16.88	17.52	.....
6	19.97	20.77	9.55	.....	13.14	13.51	13.50	15.38	16.70	16.81	17.57	.....
7	20.02	20.79	7.37	.....	13.16	13.59	13.64	15.46	16.76	16.90	17.62	.....
8	20.10	20.79	3.66	.....	13.20	13.67	13.80	15.55	16.84	16.96	17.65	.....
9	20.15	20.80	3.65	10.73	13.21	13.76	13.95	15.60	16.86	.....	17.74	.....
10	20.19	20.80	5.78	11.10	13.22	13.82	14.08	15.65	16.89	.....	17.75	.....
11	20.23	20.76	7.25	11.42	13.27	13.81	14.18	15.71	16.91	.....	17.75	17.97
12	20.27	20.65	8.31	11.70	13.33	13.82	14.27	15.76	16.95	.....	17.75	18.00
13	20.28	20.53	9.14	11.95	13.38	13.86	14.36	15.80	16.98	.....	.....	18.04
14	20.29	20.40	9.86	12.04	13.43	13.84	14.42	15.85	17.03	.....	17.81	18.10
15	20.30	20.17	10.46	12.02	13.52	13.33	14.44	15.85	17.05	.....	17.83	18.14
16	20.30	20.01	10.99	11.93	13.58	13.00	14.39	15.92	17.07	.....	17.83	18.18
17	20.31	19.54	11.36	11.64	13.58	12.98	14.04	15.93	17.10	.....	17.85	18.20
18	20.34	19.17	11.61	11.25	12.80	12.51	14.18	15.63	17.14	18.55	17.85	18.23

a Estimated.

Chillicothe 1--Continued.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
19	20.36	19.35	11.69	11.28	10.64	11.58	14.32	15.27	17.15	18.62	17.82	.....
20	20.38	19.49	a8.00	11.63	8.44	9.90	14.45	15.30	17.18	18.65	17.68	.....
21	20.40	19.54	a4.40	11.91	8.20	9.11	14.57	15.48	.....	18.67	17.50	.....
22	20.42	19.54	a4.52	12.12	9.32	9.88	14.68	15.65	.....	18.71	.....	.....
23	20.46	18.48	a5.50	12.28	10.05	10.50	14.80	15.72	.....	18.73	.....	.....
24	20.49	16.60	a6.47	12.38	10.69	11.07	14.90	.....	17.03	18.73	.....	.....
25	20.51	15.60	a7.41	11.77	11.16	11.59	14.98	.....	17.02	18.72	.....	.....
26	20.53	15.86	a8.03	11.54	11.55	11.94	15.06	.....	17.02	.....	.....	.....
27	20.55	15.43	a8.73	11.74	11.85	12.28	15.05	16.09	17.02	.....	17.40	.....
28	20.57	13.49	a9.37	12.04	12.12	12.52	15.10	16.19	17.03	.....	17.47	.....
29	20.59		a10.00	12.30	12.35	12.75	15.14	16.25	17.10	.....	17.52	.....
30	20.60		.....	12.48	12.54	12.97	15.18	16.32	17.14	.....	17.52	.....
31	a20.62		.....		12.72		.....	16.38		.....		17.06

a Estimated.

Chillicothe 2 (*1016, p. 311). Chillicothe Water Department. In Chillicothe, 40 feet south of the centerline of Chestnut St. and 100 feet east of the centerline of Park St.

Water level, in feet below land-surface datum, 1945
(From electric tape gage)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	45.29	45.13	38.46	34.12	36.50	36.44	37.55	37.89	38.58	38.56	40.00	39.68
2	45.14	45.14	37.58	34.04	37.34	36.08	.....	37.90	38.59	38.55	39.80	40.24
3	45.18	45.13	38.49	34.50	35.61	36.34	37.70	37.50	38.60	38.56	40.10	40.20
4	45.30	45.13	38.36	34.61	36.70	36.82	37.74	38.93	38.86	38.55	40.00	40.02
5	44.90	45.22	37.49	34.50	36.61	36.97	37.70	37.82	38.88	38.56	40.10	40.20
6	45.10	45.22	36.44	34.65	37.19	37.30	36.70	37.48	38.90	38.59	40.47	40.15
7	45.30	45.39	36.15	34.61	35.61	37.27	36.50	37.38	39.06	38.56	40.10	39.95
8	45.40	45.22	33.50	35.10	36.90	37.37	37.65	37.41	39.22	38.55	40.31	40.11
9	45.50	45.28	32.45	34.48	36.99	37.10	38.03	37.44	39.39	38.58	40.29	40.06
10	44.88	45.29	31.44	34.64	36.95	37.63	38.40	37.45	39.26	38.39	39.98	39.66
11	45.40	45.30	31.36	33.75	36.94	37.67	38.40	37.80	39.19	39.34	40.11	39.70
12	45.40	45.32	31.24	33.75	37.39	37.71	38.40	37.50	39.20	39.28	40.13	39.75
13	44.86	45.29	34.60	33.73	37.24	37.70	38.58	37.54	39.02	39.34	40.31	39.70
14	45.40	45.30	.....	35.48	37.24	37.81	38.70	37.54	38.99	39.30	40.33	39.66
15	44.96	45.22	34.95	35.48	37.25	37.85	37.70	37.80	38.80	39.50	40.65	39.70
16	44.94	44.60	35.28	35.45	37.31	37.70	37.50	37.80	38.50	39.42	40.67	39.68
17	44.98	44.12	34.98	35.55	37.27	37.78	37.70	38.00	38.52	39.67	40.69	40.91
18	44.96	43.60	35.69	35.77	36.61	37.69	38.94	37.93	38.50	39.61	40.31	41.07
19	44.94	43.13	36.02	35.97	36.94	37.70	39.09	37.90	38.53	39.76	39.66	40.66
20	45.40	43.12	36.07	35.07	36.14	37.24	39.11	37.98	38.54	39.75	39.68	40.71
21	44.95	43.04	35.19	35.75	36.11	36.55	38.90	37.98	38.54	39.91	39.92	40.52
22	44.96	42.06	34.80	36.11	36.14	36.60	39.36	37.00	38.55	39.61	39.90	40.55
23	45.05	41.64	33.26	36.11	35.14	36.30	39.50	37.00	38.54	39.60	39.68	40.61
24	45.20	40.67	32.70	36.08	35.50	36.28	39.90	37.08	38.85	39.87	39.65	40.59
25	45.06	39.90	33.20	36.03	35.52	36.30	39.00	37.06	39.07	39.59	39.67	40.24
26	45.13	42.12	32.81	36.32	35.39	35.59	37.50	37.50	39.05	39.60	40.36	.....
27	45.05	41.92	33.02	36.47	36.04	37.07	38.08	38.72	39.05	40.04	40.31	.....
28	45.12	38.96	33.34	36.45	36.09	36.98	37.98	38.30	39.13	39.59	40.31	.....
29	45.15		33.53	36.36	36.24	37.08	37.88	38.40	39.14	39.60	40.29	.....
30	45.15		33.73	36.12	36.15	37.22	37.95	38.40	39.05	39.90	40.23	.....
31	45.15		34.11		36.30		37.48	39.30		39.90		.....

Chillicothe 3. Mead Corporation. In Chillicothe, about 1,700 feet east of Hickory St. and 200 feet south of Baltimore & Ohio Railroad tracks. Abandoned well, diameter 30 inches, depth 91 feet. Measuring point, top of casing, 1.5 feet above land-surface datum and 616.50 feet above sea level. Automatic water-stage recorder installed Dec. 8, 1944.

Chillicothe 3--Continued.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	41.01	41.64	36.25	26.20	26.80	28.75	30.08	31.81	32.92	34.05	35.25	36.84
2	40.50	41.80	35.48	26.00	27.09	28.91	29.85	30.90	32.97	33.69	35.40	36.90
3	40.00	41.88	35.48	25.85	27.36	28.99	29.02	30.93	32.85	33.79	35.55	36.84
4	40.25	41.89	35.36	26.05	27.64	28.75	28.19	31.01	32.10	33.85	35.61	36.35
5	40.47	41.70	34.79	26.30	27.79	28.50	27.46	31.05	31.82	33.93	35.60	36.51
6	40.71	41.30	33.88	26.45	.....	28.76	26.86	30.79	32.09	34.00	35.62	36.67
7	40.82	41.45	32.75	26.61	.....	28.96	26.40	30.47	32.39	34.03	35.77	36.78
8	40.77	40.64	20.17	26.69	.....	29.17	25.91	30.74	32.57	34.00	35.88	.....
9	40.47	41.69	21.29	26.39	27.66	29.33	25.65	30.94	32.68	34.05	36.00	.....
10	40.68	41.97	22.82	26.50	27.93	29.38	26.42	31.10	32.68	34.20	36.11	.....
11	40.89	42.00	23.64	26.61	28.16	29.11	27.14	31.25	32.79	34.30	36.16	.....
12	41.06	41.89	24.25	26.85	28.34	28.86	27.68	31.31	32.92	34.43	36.05	.....
13	41.24	41.85	25.31	27.11	28.40	29.10	28.15	31.30	33.10	34.54	35.60	.....
14	41.31	42.20	26.10	27.32	28.20	29.29	28.50	31.42	33.26	34.58	35.77	37.27
15	41.21	42.45	26.71	27.38	28.02	29.44	28.76	31.51	33.38	34.45	35.95	37.40
16	40.88	42.64	27.19	27.06	28.29	29.54	28.84	31.45	33.43	34.12	36.05	37.45
17	41.07	42.76	27.64	26.78	28.48	29.57	29.10	31.26	33.25	34.30	36.18	37.30
18	41.30	42.80	27.85	26.92	28.49	29.26	29.36	31.48	32.95	34.47	36.25	36.90
19	41.51	42.66	27.90	27.05	28.44	28.92	29.59	31.58	33.15	34.63	36.24	37.06
20	41.69	42.03	27.97	27.19	28.30	29.14	29.79	31.58	33.33	34.75	36.25	37.25
21	41.76	41.80	27.77	27.36	27.94	29.31	29.91	31.73	33.50	34.80	36.34	37.40
22	41.70	41.86	23.61	27.44	27.60	29.49	29.96	31.90	33.65	34.77	36.45	37.54
23	41.25	41.86	21.70	27.11	27.66	29.64	29.73	32.05	33.72	34.83	36.61	37.60
24	41.39	41.74	22.50	26.91	28.09	29.70	29.59	32.22	33.71	34.95	36.67	37.50
25	41.53	41.40	22.99	27.19	28.37	29.44	29.86	32.34	33.75	35.07	36.70	36.85
26	41.66	40.91	23.27	27.30	28.55	29.23	30.10	32.40	33.87	35.23	36.59	36.00
27	41.79	40.10	24.11	27.35	28.61	29.47	30.28	32.38	33.97	35.33	36.23	35.82
28	41.84	39.26	24.33	27.39	28.34	29.69	30.45	32.45	34.08	35.37	36.40	36.03
29	41.71		25.38	27.31	28.13	29.36	30.55	32.58	34.18	35.23	36.57	36.12
30	41.34		25.75	26.89	28.39	30.01	30.55	32.70	34.21	34.90	36.73	36.37
31	41.49		26.07		28.61		30.66	32.82		35.10		36.50

Chillicothe 4. Chillicothe Paper Co. At Chillicothe corporation line, about 750 feet southeast of Eastern Ave., between tracks of Norfolk & Western and Baltimore & Ohio Railroads. Measuring point at land-surface datum, and 606.6 feet above sea level. Measurements by Chillicothe Paper Co.

Water level, in feet below land-surface datum, 1939
(From staff gage)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 6	19.9	July 2	22.1	July 27	23.7	Aug. 23	25.4
7	21.0	3	19.9	28	23.8	24	25.7
8	21.4	4	19.0	29	23.9	25	25.6
9	21.7	5	18.5	30	23.9	26	25.5
10	21.9	6	21.3	31	20.6	27	25.2
11	21.9	7	22.0	Aug. 1	23.3	28	22.0
12	19.2	8	22.4	2	23.8	29	24.7
14	18.4	9	22.5	3	24.4	30	25.8
15	21.1	10	19.1	4	24.6	31	26.1
16	22.0	11	22.1	5	24.8	Sept. 1	26.3
17	22.2	12	22.4	6	24.6	2	26.5
18	22.3	13	22.7	7	20.7	3	26.6
19	19.5	14	23.0	8	23.8	5	23.4
20	21.3	15	23.1	9	24.3	6	25.3
21	22.2	16	23.1	10	24.5	7	25.9
22	22.4	17	20.1	11	24.7	8	26.2
23	22.6	18	22.7	14	21.1	9	26.5
24	22.7	19	23.2	15	24.3	10	26.3
25	22.7	20	23.3	16	24.6	11	23.1
26	17.7	21	23.5	17	24.8	12	26.0
27	22.2	22	23.6	18	24.9	13	26.3
28	22.8	23	23.6	19	25.3	14	26.5
29	23.0	24	21.2	20	25.4	15	26.6
30	23.3	25	23.1	21	21.7	16	26.7
July 1	23.4	26	23.6	22	24.9	18	24.4

Chillicothe 4--Continued.

Water level, in feet below land-surface datum, 1940

(From staff gage)

Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	21.0	19.3	25.8	27.6	....	28.7	....
2	....	20.9	....	26.0	....	....	28.9	25.7
3	....	17.7	....	....	22.4	....	....	28.5
4	....	20.0	....	....	26.3	....	25.0	29.0
5	....	20.4	17.8	26.3	27.0	....	24.4	29.2
6	....	19.7	....	26.4	27.4	....	27.5	29.6
7	....	19.9	....	26.5	27.6	....	28.0	29.7
8	....	20.0	....	26.7	....	....	28.4	29.0
9	....	....	22.7	26.8	23.1	....	28.6	25.7
10	....	18.1	....	27.0	27.1	....	28.6	25.2
11	....	20.5	....	26.4	27.6	....	25.1	28.8
12	....	21.0	23.1	22.7	27.9	....	24.0	29.2
13	....	21.2	23.3	26.3	....	....	27.1	29.6
14	....	21.4	23.4	27.0	....	....	27.8	....
15	....	21.5	20.2	27.2	....	....	28.5	....
16	....	21.5	22.8	27.4	26.6	....	....	25.8
17	....	18.6	23.3	27.5	27.3	22.3	....	29.3
18	....	21.0	23.3	26.7	27.8	22.3	25.4	29.8
19	....	21.4	....	22.7	....	22.3	28.1	29.9
20	....	21.6	23.7	21.1	....	22.3	28.7	30.0
21	....	21.9	....	21.2	....	22.9	29.1	....
22	....	22.0	21.0	21.1	....	....	29.1	....
23	20.3	22.1	23.0	21.0	23.4	27.8	29.4	26.1
24	20.4	22.0	23.6	20.9	26.6	....	....	29.3
25	20.5	22.1	....	20.7	....	....	25.7	....
26	20.7	22.3	....	21.2	....	28.6	23.7	25.2
27	18.3	22.3	....	25.4	....	....	29.0	29.1
28	20.2	22.5	21.4	26.5	....	....	29.2	29.6
29	20.6	22.5	....	27.0	....	....	29.3	....
30	20.9	22.4	25.6	27.3	....	28.4	....	26.0
31	20.9	....	....	27.5	....	28.6	....	29.2

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

(From staff gage)

Day	Jan.	Feb.	Mar.	Apr.	May	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	29.70	30.50	29.90	30.10	30.10	....	....	26.60	32.10	33.30	29.00
2	29.80	29.80	29.90	30.10	30.20	....	....	25.70	32.30	33.10	30.10
3	29.90	26.40	26.10	30.20	....	....	....	29.80	32.40	28.60	33.30
4	....	29.30	29.00	30.20	29.90	....	....	....	32.40	33.00	33.30
5	29.90	29.70	29.60	30.30	25.70	....	....	30.70	32.70	33.20	33.30
6	25.90	29.90	29.80	....	....	....	....	....	32.60	33.10	33.80
7	27.10	29.90	29.90	30.30	29.90	....	....	....	32.40	32.70	33.80
8	29.00	....	30.00	30.30	....	....	29.80	31.20	32.70	33.00	33.90
9	29.80	29.80	29.30	29.90	....	....	....	31.30	32.70	33.10	34.10
10	29.90	26.60	25.10	30.10	....	....	....	31.40	32.80	33.20	34.20
11	30.00	28.70	28.40	30.30	30.50	....	....	31.60	32.90	33.40	34.20
12	29.70	29.00	29.00	30.30	30.60	22.50	....	31.60	33.00	33.30	34.30
13	26.60	29.40	29.20	29.90	30.60	....	....	....	28.50	33.40	34.50
14	29.50	29.50	29.60	26.90	30.70	....	....	....	32.20	33.50	33.70
15	29.80	29.60	29.80	29.30	30.80	....	....	31.80	32.70	33.60	33.80
16	30.00	29.30	29.90	29.50	....	....	....	....	32.90	....	27.90
17	30.10	26.40	26.60	29.80	31.40	....	....	30.60	33.00	33.60	31.80
18	30.20	29.00	29.10	....	26.40	....	....	30.50	33.00	33.60	33.30
19	29.30	29.40	29.50	....	30.00	....	....	30.40	33.00	33.70	33.80
20	27.00	29.60	29.60	29.70	30.50	....	30.70	30.20	33.20	33.70	34.00
21	29.40	29.70	30.10	26.60	30.70	....	30.70	31.10	33.20	33.70	34.00
22	....	29.90	30.10	....	30.80	....	30.70	28.90	33.30	33.70	29.80
23	30.00	29.50	29.50	29.60	....	....	....	31.10	33.30	33.70	33.40
24	30.20	26.60	26.60	29.80	....	....	....	31.60	33.40	33.70	34.20
25	30.30	29.10	29.20	....	....	....	30.90	31.90	....	28.70	....
26	30.00	29.50	29.60	28.80	....	....	30.90	31.90	33.50	27.70	29.10
27	26.60	29.70	29.70	....	31.00	....	31.00	32.10	33.60	31.50	33.50
28	29.40	29.80	29.90	30.00	31.00	....	31.10	....	33.40	33.10	33.90
29	29.70	....	29.90	30.60	31.00	....	31.10	32.10	34.30	34.60	34.20
30	29.30	....	....	30.10	....	....	29.60	....	34.10	....	34.40
31	29.90	....	30.00	....	....	....	29.60	....	33.60	....	34.50

Chillicothe 4--Continued.

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

(From staff gage)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	34.60	35.10	33.60	32.70	29.60	28.60	.....	.....	29.60	31.90	34.40	34.60
2	34.70	30.70	29.30	32.80	.....	27.70	.....	28.80	30.30	32.00	30.60	34.90
3	34.70	34.70	33.40	32.30	29.60	28.20	.....	26.20	30.40	32.40	33.70	35.20
4	33.90	35.10	33.70	32.30	25.50	28.30	.....	28.40	30.60	31.70	33.90	35.40
5	30.10	35.20	33.30	32.30	26.60	28.50	21.60	28.80	30.30	36.40	34.60	35.50
6	33.90	35.40	33.30	28.50	28.80	.....	.....	29.10	.....	31.70	34.60	35.60
7	33.90	35.40	33.90	32.20	29.00	28.60	.....	29.30	25.40	32.30	.....	32.30
8	34.50	35.40	29.00	32.60	29.00	26.60	21.20	.....	25.80	32.50	34.60	34.60
9	33.80	35.40	30.60	32.70	.....	27.70	.....	29.30	29.10	32.70	31.30	35.00
10	35.00	35.40	32.10	32.60	28.60	27.90	.....	26.60	29.80	32.80	34.20	35.30
11	35.00	35.50	33.10	32.50	25.20	28.00	21.00	28.90	30.30	33.00	34.60	.....
12	35.10	35.30	33.50	32.20	28.20	27.95	21.20	29.40	30.60	33.10	34.60	35.60
13	35.20	35.20	33.60	27.90	28.60	.....	22.60	29.70	30.60	33.10	34.60	31.00
14	35.20	35.00	33.70	31.10	28.70	27.30	25.60	29.80	27.60	33.20	.....	30.60
15	35.30	35.00	33.70	31.20	29.00	24.80	26.60	.....	30.20	33.40	34.60	35.00
16	35.20	30.50	33.70	31.20	.....	27.80	27.00	29.80	30.80	33.60	31.60	35.40
17	35.20	33.20	33.70	31.00	.....	27.50	27.30	27.00	30.90	34.00	33.70	35.60
18	35.20	34.60	33.70	.....	25.90	27.60	27.60	29.30	31.20	34.00	34.60	36.00
19	35.40	34.60	33.70	30.80	28.10	27.75	27.60	29.75	.....	30.40	35.10	.....
20	35.30	34.40	33.20	26.90	28.40	27.80	25.00	29.90	31.20	33.40	35.30	36.20
21	35.30	34.30	.....	30.10	28.60	24.10	26.15	30.00	27.40	33.50	.....	30.60
22	35.40	33.80	.....	30.40	28.60	24.90	27.60	.....	31.10	33.90	35.30	29.50
23	35.10	30.00	33.70	30.40	28.60	27.10	27.75	29.90	31.00	33.95	30.60	29.10
24	34.30	33.70	33.70	30.30	28.00	27.60	28.00	27.10	.....	.....	34.60	28.90
25	30.60	34.10	33.60	30.20	25.60	27.70	28.20	29.50	.....	34.00	35.20	.....
26	34.70	34.20	33.60	.....	28.00	27.90	27.70	29.90	.....	30.60	35.40	.....
27	35.10	34.30	33.50	25.50	28.30	.....	26.60	30.05	30.60	32.60	35.60	29.10
28	35.40	34.30	.....	29.10	23.50	27.90	28.00	30.10	27.60	34.00	35.60	29.00
29	35.50	33.60	33.10	29.50	28.60	24.30	28.30	.....	.....	34.20	34.60	33.30
30	35.50	.....	29.00	29.60	.....	.....	28.70	26.30	.....	34.30	31.60	34.00
31	35.50	.....	32.60	.....	28.60	.....	28.80	26.30	.....	.....	.....	28.90

Water level, in feet below land-surface datum, 1943

(From staff gage)

Day	Jan.	Feb.	Mar.	Apr.	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	27.90	26.90	25.20	21.30	.....	26.00	27.30	28.50	30.50	.....	33.80
2	.....	30.20	28.40	21.70	.....	26.00	25.40	28.80	30.60	32.20	33.90
3	26.30	30.60	28.80	22.10	.....	25.80	26.60	29.10	31.20	.....	.....
4	27.10	30.70	29.10	22.60	.....	.....	27.10	29.20	27.30	32.90	34.00
5	31.50	30.80	29.30	21.60	.....	.....	27.20	.....	30.10	33.20	34.20
6	32.00	.....	29.40	21.80	.....	21.10	27.40	.....	30.60	33.20	30.20
7	32.20	30.30	29.30	22.10	.....	23.60	27.50	24.80	30.90	.....	33.50
8	32.40	28.60	25.70	22.10	.....	24.30	27.40	28.00	30.90	29.40	33.90
9	.....	29.70	28.80	22.10	.....	24.60	26.60	28.60	.....	31.60	34.00
10	32.30	29.80	29.10	.....	.....	24.30	26.50	29.00	27.70	31.80	34.60
11	28.20	30.00	29.20	21.60	.....	24.80	26.90	29.20	28.70	32.00	34.60
12	30.90	30.20	29.20	.....	.....	22.00	27.10	29.80	30.20	32.10	.....
13	31.70	29.90	.....	21.00	.....	24.60	27.40	25.80	30.80	.....	.....
14	31.90	29.20	29.20	21.60	22.60	25.10	27.60	28.60	30.90	.....	33.60
15	.....	25.90	25.30	22.00	24.90	25.50	.....	29.00	31.20	29.10	34.30
16	32.00	29.00	28.20	22.30	25.20	25.70	24.60	26.20	31.20	32.70	34.60
17	31.40	29.30	28.60	22.60	25.40	25.90	26.90	29.60	.....	32.90	34.60
18	28.60	29.50	28.80	21.70	25.70	26.00	27.40	29.50	28.10	33.20	33.80
19	31.10	29.70	28.90	19.30	25.80	22.40	27.70	30.20	30.10	33.70	.....
20	31.40	29.80	23.60	22.20	25.90	25.40	27.90	29.60	31.30	33.80	30.50
21	31.50	29.80	13.60	22.80	22.30	25.90	28.00	29.10	31.60	.....	33.70
22	31.50	25.70	13.60	.....	25.20	26.30	28.70	29.60	31.70	30.00	34.60
23	31.40	29.00	16.60	.....	25.60	26.60	24.50	29.70	31.70	33.10	34.80
24	31.10	29.30	.....	.....	26.00	26.70	27.70	29.80	28.00	33.50	.....
25	27.30	29.40	16.60	.....	26.20	.....	28.10	30.20	28.80	31.60	.....
26	30.40	29.40	16.60	.....	26.30	23.90	28.30	26.60	31.40	33.80	.....
27	31.70	.....	.....	.....	26.20	26.20	28.40	26.60	32.20	33.90	.....
28	30.90	29.10	16.60	.....	22.40	26.80	28.70	29.60	32.50	.....	33.10
29	30.90	.....	16.60	.....	25.70	27.00	29.80	30.10	32.40	29.30	33.60
30	.....	.....	21.60	.....	25.90	27.20	24.70	30.40	.....	32.90	33.70
31	30.60	.....	21.60	.....	.....	27.40	28.10	.....	.....	.....	33.90

Chillicothe 4--Continued.

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

(From staff gage)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	32.10	35.30	32.60	25.90	28.50	30.80	30.80	33.80	.....	.....	.....
2	.....	33.40	34.30	.....	28.20	28.70	.....	31.30	34.00	31.80	33.10	30.70
3	29.20	34.20	.....	27.00	28.40	28.70	.....	31.60	.....	35.20	.....	.....
4	32.60	34.50	35.40	31.90	28.80	.....	.....	31.80	30.30	36.00	.....	.....
5	33.20	34.60	.....	31.90	28.30	25.50	.....	31.90	33.50	36.40	.....	.....
6	33.50	29.80	30.30	31.90	28.90	28.20	.....	.....	33.90	36.70	32.10	33.40
7	33.80	30.00	33.10	31.20	28.80	28.80	.....	28.30	34.10	36.70	.....	34.00
8	.....	33.60	35.50	32.10	24.20	29.00	.....	31.30	34.20	.....	32.70	34.20
9	.....	34.30	34.60	.....	27.30	29.10	.....	31.80	35.60	32.50	.....	34.40
10	28.80	34.70	34.40	28.60	28.20	29.30	.....	32.90	.....	36.10	.....	.....
11	32.50	34.80	32.70	30.50	28.20	.....	27.00	32.30	30.30	36.60	.....	31.80
12	32.60	32.70	.....	30.90	28.40	26.10	28.70	32.40	33.60	36.90	.....	34.80
13	33.30	29.80	29.20	31.00	28.40	28.60	29.60	.....	34.30	37.20	.....	33.90
14	33.40	30.00	33.60	31.08	.....	29.00	29.80	28.30	34.50	37.40	30.60	34.10
15	33.40	33.00	33.50	30.80	24.90	29.30	30.40	31.80	34.60	.....	.....	34.30
16	.....	35.00	34.00	.....	27.80	29.50	.....	32.40	35.00	30.10	33.90	34.50
17	30.90	35.40	35.40	27.00	27.90	29.90	26.70	28.70	31.10	28.90	33.30	.....
18	32.60	35.40	33.30	29.70	28.20	.....	29.60	32.30	.....	.....	.....	32.10
19	33.20	34.30	.....	30.80	28.40	26.20	30.10	32.90	34.60	28.80	31.10	34.00
20	33.50	.....	31.00	29.90	28.40	29.10	30.40	.....	35.00	28.70	33.60	34.30
21	33.90	31.00	32.20	30.10	26.20	29.60	30.60	29.20	35.30	.....	34.10	34.60
22	.....	33.60	31.90	29.90	24.20	29.90	31.40	32.20	35.50	.....	34.10	34.70
23	29.90	34.30	31.80	29.40	27.60	29.90	.....	32.80	35.60	.....	.....	34.80
24	29.60	34.40	32.60	26.20	28.20	30.20	27.30	33.00	.....	24.70	.....	.....
25	32.70	35.50	31.90	29.10	28.30	.....	30.40	33.30	30.60	36.10	.....	.....
26	33.40	35.10	.....	29.40	28.60	26.80	30.70	33.40	34.30	36.70	.....	.....
27	34.80	33.10	.....	29.50	28.40	29.80	30.90	.....	34.50	.....	35.00	.....
28	34.00	31.30	32.00	29.60	.....	30.30	31.10	29.90	35.90	.....	.....	.....
29	33.80	34.90	32.10	29.60	24.20	30.60	31.80	32.80	35.90	.....	34.60	.....
30	29.60	.....	32.40	29.40	27.60	30.70	.....	33.40	36.10	30.20	.....	.....
31	29.80	.....	32.60	.....	28.10	.....	27.80	33.70	.....	35.30	.....	.....

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

(From staff gage)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	30.10	.....	32.20	21.00	19.10	24.10	.....	26.30	28.60	26.60	31.20	32.80
2	30.10	.....	31.90	19.40	21.50	24.30	.....	26.50	.....	29.60	31.40	.....
3	32.80	.....	31.90	20.70	22.10	21.60	25.00	26.60	24.60	29.60	31.50	28.70
4	33.20	.....	30.80	21.10	22.40	23.60	.....	26.70	24.60	29.70	.....	32.00
5	33.30	31.80	27.80	21.40	22.60	23.60	19.20	.....	27.40	29.60	28.30	32.60
6	33.60	30.80	30.20	21.60	.....	24.20	18.80	23.60	27.90	29.60	31.00	32.70
7	33.60	.....	23.00	21.90	19.50	24.50	18.60	25.00	28.20	.....	31.60	32.90
8	30.90	.....	14.60	21.60	22.00	24.60	18.20	26.50	28.30	26.40	31.80	33.00
9	33.10	30.80	16.30	18.70	22.50	24.80	18.60	26.70	.....	29.30	31.90	.....
10	33.40	.....	17.60	21.00	22.90	.....	21.70	26.80	25.40	29.90	32.10	29.60
11	33.40	30.60	18.60	21.50	23.30	21.80	22.70	.....	28.00	30.00	.....	32.40
12	33.60	32.40	16.80	21.90	23.50	24.60	23.30	.....	28.90	30.10	28.60	32.90
13	33.80	36.20	20.00	22.20	23.00	24.50	23.70	24.00	29.10	30.20	31.30	32.10
14	31.80	37.60	21.10	22.10	20.90	24.80	24.00	26.30	29.30	.....	31.80	33.20
15	31.40	.....	22.00	22.20	23.00	24.90	23.80	26.80	.....	27.20	32.00	33.30
16	33.80	37.30	22.50	19.90	23.20	25.10	21.70	26.90	26.10	29.80	31.10	.....
17	33.80	37.50	23.00	21.60	23.90	24.80	24.10	27.00	28.50	30.20	.....	30.10
18	34.20	37.30	22.90	22.20	.....	21.90	24.70	27.10	28.50	30.20	32.30	32.60
19	34.40	33.50	20.40	22.40	.....	24.20	25.10	.....	29.00	30.60	28.80	33.00
20	34.40	31.80	22.90	22.50	.....	24.60	25.30	24.20	29.20	30.70	31.70	32.60
21	.....	36.20	19.10	.....	20.80	24.80	25.50	26.70	29.30	.....	32.20	33.40
22	32.90	36.90	18.00	.....	22.80	25.00	25.50	27.30	29.40	27.60	32.50	33.50
23	.....	37.10	17.10	19.80	23.30	25.10	22.80	27.50	.....	30.10	32.60	28.70
24	.....	37.10	.....	22.00	23.50	24.80	25.00	27.70	25.90	30.60	32.70	31.70
25	.....	.....	.....	22.40	23.70	22.20	25.60	27.90	28.80	30.80	.....	32.30
26	.....	32.80	15.80	22.70	23.80	24.60	25.80	25.10	29.30	31.00	29.30	32.70
27	.....	30.90	18.40	22.70	.....	25.00	26.00	.....	29.50	31.10	31.80	.....
28	.....	33.50	19.40	22.40	21.00	25.30	26.10	27.50	29.60	.....	32.30	.....
29	.....	.....	20.10	.....	23.20	25.50	.....	28.10	29.90	27.90	32.60	.....
30	.....	.....	20.60	.....	23.70	25.70	23.50	28.30	.....	30.60	32.70	.....
31	.....	.....	21.00	.....	24.00	.....	25.70	28.40	.....	30.80	.....	.....

Chillicothe 5. 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 (Chillicothe 3). Test well, diameter 6 inches, depth 85.7 feet. Measuring point, edge of manhole into caisson, at floor level, 4.07 feet above land-surface datum and 618.13 feet above sea level.. Measurements by Mead Corporation.

Water level, in feet below land-surface datum, 1941-45					
Date	Water level	Date	Water level	Date	Water level
May 9, 1941	36.16	July 3, 1942	45.97	Aug. 27, 1943	42.66
16	36.71	11	46.80	Sept. 3	43.06
23	36.46	17	46.96	10	42.86
30	36.86	24	46.64	17	43.66
June 6	36.86	Aug. 1	46.06	24	44.02
13	37.06	7	46.31	Oct. 1	44.06
20	37.34	14	46.66	8	44.86
27	41.89	21	46.66	15	45.06
July 3	42.78	28	46.06	22	47.46
11	43.02	Sept. 3	46.81	29	46.06
19	43.63	11	45.56	Nov. 5	46.46
25	44.29	18	45.86	12	46.66
Aug. 1	44.01	25	43.41	19	46.86
8	44.56	Oct. 2	47.86	26	46.86
15	44.31	9	48.06	Dec. 3	46.86
22	44.56	16	45.96	10	46.76
29	44.86	24	47.56	16	46.86
Sept. 5	44.16	30	45.86	23	46.56
12	45.15	Nov. 6	43.66	30	44.76
20	46.19	13	44.02	Jan. 7, 1944	47.06
26	45.96	20	47.56	14	46.86
Oct. 3	46.36	27	47.76	21	46.46
10	47.62	Dec. 4	47.96	29	47.06
17	48.67	11	47.46	Feb. 4	46.06
24	48.31	18	44.56	12	47.16
31	49.21	23	44.76	19	47.46
Nov. 7	49.63	Jan. 1, 1943	44.66	26	47.36
14	49.63	8	42.06	Mar. 4	48.16
21	49.43	15	42.06	11	48.26
28	51.33	22	41.76	18	47.06
Dec. 5	51.40	Feb. 5	40.96	25	40.06
12	51.65	12	45.26	31	46.66
18	51.52	19	40.26	Apr. 8	45.86
26	47.06	26	44.26	15	43.26
Jan. 2, 1942	50.23	Mar. 5	40.36	22	43.46
9	50.15	12	45.46	29	43.06
16	50.50	19	40.56	May 6	42.86
23	50.76	26	36.46	13	42.56
30	50.80	Apr. 2	40.06	20	42.86
Feb. 6	50.93	9	36.06	27	42.66
13	50.99	16	40.66	June 3	42.96
20	50.91	23	31.06	10	43.66
27	50.78	30	38.26	17	44.06
Mar. 6	50.57	May 7	37.26	24	44.46
13	50.34	14	37.66	July 1	45.06
20	50.18	21	38.46	15	40.66
27	50.05	28	38.46	22	31.26
Apr. 3	50.59	June 4	38.06	29	44.86
10	50.59	11	40.26	Aug. 5	45.86
17	49.23	18	40.86	Sept. 9	47.80
24	48.23	25	41.06	23	49.06
May 1	47.34	July 2	27.86	Nov. 4	51.31
8	46.61	9	40.46	11	56.56
15	47.16	16	36.36	17	54.93
22	47.71	23	40.26	24	54.59
29	47.38	30	39.90	Dec. 1	55.34
June 5	46.57	Aug. 6	42.06	7	55.73
18	43.47	13	42.06	10	58.14
27	44.51	20	42.26	22	55.52

Chillicothe 5--Continued.

Water level, in feet below land-surface datum, 1941-45					
Date	Water level	Date	Water level	Date	Water level
Dec. 29, 1944	54.68	May 4, 1945	38.18	Sept. 7, 1945	41.77
Jan. 5, 1945	54.01	11	38.68	14	44.43
12	54.93	18	38.68	21	45.35
19	54.93	25	38.93	28	46.60
26	55.35	June 1	39.18	Oct. 5	46.60
Feb. 2	55.85	8	39.35	12	47.51
9	56.63	15	40.09	19	47.51
16	50.51	29	40.18	26	48.43
23	55.26	July 7	32.26	Nov. 2	49.36
Mar. 2	52.18	13	37.77	9	50.26
9	34.97	20	41.10	16	50.59
16	39.60	27	40.93	23	51.09
23	58.09	Aug. 3	42.01	30	49.26
30	37.34	10	42.18	Dec. 7	50.10
Apr. 6	37.26	17	42.35	14	48.00
13	38.26	24	43.51	21	51.02
20	37.68	31	44.01	28	44.17
27	37.68				

Stark County

12 (*936, p. 236; *944, p. 195; *986, p. 268; 1016, p. 312).
Goughmour well. Adessi Bros. In Canton quadrangle.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	21.77	21.63	16.50	11.38	12.51	12.00	13.50	14.89	16.29	17.29	17.12	16.62
2	.....	21.65	16.42	11.87	12.52	12.05	13.56	14.93	16.36	17.31	17.14	.....
3	.....	21.67	16.35	11.80	12.55	12.14	13.61	14.98	16.40	17.29	17.15	16.62
4	.....	21.69	15.87	11.42	12.59	12.20	13.65	15.02	16.43	17.21	17.11	16.63
5	.....	21.70	15.50	11.41	12.63	12.27	13.69	15.06	16.47	17.16	.....	16.72
6	.....	21.72	15.38	11.44	12.67	12.33	13.75	15.08	16.53	17.15	17.11	.....
7	.....	21.75	14.96	11.46	12.69	12.38	13.81	15.13	16.57	17.19	17.13	.....
8	21.61	21.75	14.10	11.51	12.77	12.42	13.85	15.19	16.62	17.22	17.15	.....
9	21.60	21.77	13.66	11.58	12.79	12.47	13.89	15.22	16.66	17.26	17.16	.....
10	21.59	21.79	13.53	11.64	12.81	12.53	13.96	15.26	16.70	17.28	17.22	16.73
11	21.57	21.80	13.55	11.69	12.83	12.60	14.00	15.30	.....	17.29	17.25	16.78
12	21.54	21.81	13.58	11.77	12.82	12.65	14.03	15.35	.....	17.31	17.26	16.96
13	21.53	21.82	13.62	11.82	12.87	12.69	14.08	15.50	.....	17.34	17.27	.....
14	21.53	21.83	13.69	11.91	12.89	12.72	14.11	15.54	.....	17.37	17.26	.....
15	21.53	21.83	13.74	11.94	12.95	12.76	14.16	15.59	.....	17.39	17.27	.....
16	21.52	21.81	13.81	12.00	13.00	12.80	14.21	15.62	.....	17.41	17.28	.....
17	21.52	21.65	13.92	12.02	12.97	12.85	14.25	15.65	16.97	17.47	17.29	.....
18	21.51	21.06	13.93	12.08	12.54	12.92	14.29	15.70	17.00	17.46	17.29	16.96
19	21.51	20.35	13.94	12.10	11.65	12.96	14.33	15.75	17.01	17.50	17.16	.....
20	21.50	19.86	13.86	12.14	11.42	13.00	14.37	15.79	17.02	17.52	17.05	.....
21	21.50	19.50	12.97	12.20	11.39	13.06	14.40	15.82	17.06	17.53	.....	.....
22	21.50	19.20	12.09	12.21	11.49	13.10	14.44	15.87	17.08	17.58	.....	.....
23	21.50	18.53	11.45	12.21	11.52	13.12	14.49	15.91	17.11	17.61	.....	.....
24	21.51	17.82	11.38	12.24	11.57	13.16	14.53	15.95	17.12	17.61	.....	17.12
25	21.51	17.50	11.39	12.29	11.61	13.20	14.58	16.00	17.16	17.29	.....	.....
26	21.52	17.31	11.46	12.33	11.67	13.25	14.63	16.03	17.19	17.13	16.62	.....
27	21.54	17.16	11.56	12.37	11.73	13.29	14.67	16.07	17.21	17.09	16.62	.....
28	21.55	16.70	11.66	12.39	11.78	13.34	14.72	16.11	17.24	.....	16.60	.....
29	21.60		11.76	12.43	11.85	13.40	14.78	16.17	17.26	17.07	16.60	.....
30	21.61		11.79	12.47	11.88	13.45	14.82	16.21	17.26	17.08	16.61	.....
31	21.62		11.84		11.97		14.85	16.25		17.10		15.68

13 (*936, p. 237; *944, p. 196; *986, p. 269; 1016, p. 313). City of Canton. In Canton water department's Northeast well field.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	39.89	40.81	42.18	36.74	34.61	35.96	37.55	37.93	40.85	38.46	36.75	38.18
2	39.96	41.31	42.56	36.10	34.62	35.80	37.59	38.08	40.89	38.34	36.72	37.55
3	40.06	41.46	42.56	36.14	33.93	35.68	36.88	38.43	40.23	38.76	36.80	37.41
4	40.01	41.04	41.95	35.50	34.44	35.69	36.85	38.51	40.19	39.09	37.49	37.96
5	39.96	40.94	41.22	34.99	34.49	35.61	36.51	38.53	40.50	38.88	37.72	38.08
6	39.96	41.26	41.15	35.13	33.64	35.90	37.12	37.87	40.71	38.48	37.85	38.17
7	39.91	41.75	40.72	35.11	33.85	35.96	37.28	38.08	40.98	38.33	37.48	38.50
8	39.95	41.29	40.39	34.17	34.48	36.00	37.68	38.01	41.12	38.93	38.05	38.51
9	39.72	41.27	40.08	33.90	34.49	35.77	37.29	38.08	41.12	38.93	37.96	37.97
10	39.74	41.72	39.89	33.70	33.92	35.79	37.66	38.36	40.31	38.65	37.36	38.04
11	40.05	41.44	39.61	33.64	34.49	35.94	37.71	38.36	40.30	39.02	37.13	38.15
12	40.35	41.30	39.46	34.40	34.49	36.12	37.36	38.11	39.80	38.65	37.05	38.03
13	40.17	41.73	38.89	34.45	33.92	36.23	37.85	38.80	40.21	38.76	37.07	38.44
14	40.01	42.11	38.59	34.56	33.96	36.31	37.96	39.15	40.22	38.43	37.10	38.71
15	40.15	42.35	38.39	34.57	34.51	36.34	37.95	39.19	39.63	38.36	37.15	38.95
16	40.65	42.60	38.37	33.86	34.51	35.81	37.16	....	39.31	37.93	37.55	38.59
17	40.82	42.75	38.26	33.98	34.51	35.89	37.29	38.12	39.13	37.93	37.70	39.70
18	40.34	42.59	38.16	34.31	34.69	35.40	37.09	38.66	38.93	37.93	37.31	39.83
19	40.21	42.56	37.96	34.38	34.69	35.80	37.15	38.95	38.76	37.88	37.10	39.95
20	40.50	42.93	37.45	34.44	34.09	36.04	37.34	39.01	39.20	37.87	37.73	40.18
21	40.86	42.69	37.19	34.48	33.99	36.20	37.61	39.21	39.07	37.74	37.82	40.35
22	41.07	42.87	37.07	34.50	34.54	36.31	37.86	39.38	39.03	37.66	37.60	40.47
23	40.92	42.94	36.88	34.36	34.75	36.55	37.75	39.59	38.93	37.50	37.48	40.50
24	40.49	42.94	36.58	34.21	34.75	36.55	37.54	39.64	38.80	37.52	37.70	39.74
25	40.76	42.45	36.29	34.59	34.19	36.55	37.80	39.81	37.73	37.40	37.75	39.30
26	41.12	42.80	36.20	34.60	34.71	36.67	37.99	39.84	39.06	37.12	38.47	39.00
27	40.77	42.80	36.48	34.24	34.85	36.92	38.16	40.14	38.99	37.12	37.95	39.04
28	40.56	42.00	36.58	34.57	35.40	37.11	38.25	40.27	38.71	37.12	37.95	39.50
29	41.12	....	36.70	34.36	35.60	37.26	38.27	40.48	38.60	36.45	37.71	39.67
30	41.38	....	36.71	34.22	35.73	37.37	38.00	40.64	38.56	36.61	38.13	39.74
31	40.99	....	36.74	....	35.90	....	38.08	40.75	....	35.74	....	39.30

14A (*1016, p. 314). Canton Water Department. In West Park, Canton, along the east bank of the West Branch of Nimishillen Creek, about 1,000 feet south of Ninth St.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	32.36	32.93	32.79	30.76	31.55	30.04	30.56	30.56	30.27	29.86	29.36	29.21
2	32.39	32.95	32.84	30.75	31.56	29.96	30.56	30.56	30.27	29.82	29.33	29.21
3	32.41	32.98	32.85	30.75	31.57	29.99	30.56	30.56	30.27	29.82	29.30	29.18
4	32.45	33.00	32.66	30.95	31.58	29.84	30.56	30.55	30.24	29.82	29.29	....
5	32.49	33.02	32.66	31.09	31.58	29.80	30.57	30.55	30.20	29.81	29.25	....
6	32.51	....	32.69	31.16	31.58	29.77	30.57	30.54	30.20	29.81	29.22	....
7	32.51	....	32.54	31.25	31.58	29.73	30.57	30.48	30.22	29.81	29.22	....
8	32.51	....	32.09	31.28	31.59	29.70	30.57	30.50	30.23	29.81	29.22	....
9	32.55	....	32.20	31.31	31.59	29.68	30.57	30.53	30.23	29.70	29.20	....
10	32.58	....	32.27	31.34	31.59	29.63	30.55	30.51	30.06	29.74	29.20	29.20
11	32.60	....	32.30	31.36	31.59	29.55	30.55	30.52	30.01	29.75	29.20	29.33
12	32.64	33.00	32.32	31.39	31.59	29.75	30.55	30.52	29.99	29.78	29.15	29.23
13	32.66	33.01	32.35	31.39	31.56	29.90	30.55	30.51	30.03	29.82	29.10	28.90
14	32.68	33.04	32.39	31.44	31.51	30.00	30.55	30.50	30.05	29.82	29.10	28.66
15	32.70	33.06	32.40	31.44	31.49	30.09	30.48	30.49	30.05	29.82	29.08	28.56
16	32.71	33.04	32.40	31.43	31.52	30.16	30.38	30.37	30.05	29.80	29.08	28.49
17	32.74	32.99	32.41	31.44	31.52	30.18	30.40	30.34	30.03	29.80	29.07	28.49
18	32.76	33.00	32.40	31.44	31.38	30.21	30.44	30.32	30.02	29.79	29.02	28.52
19	32.79	33.05	32.35	31.46	30.92	30.25	30.47	30.29	30.02	29.74	28.98	....
20	32.80	33.06	32.31	31.50	30.98	30.28	30.50	30.25	30.01	29.72	28.98	....
21	32.80	33.11	31.94	31.51	31.02	30.33	30.51	30.22	29.98	29.72	29.00	....
22	32.83	33.11	31.59	31.51	31.06	30.37	30.51	30.22	29.98	29.67	29.01	....
23	32.85	32.79	31.60	31.50	31.07	30.40	30.51	30.24	29.98	29.65	29.04	....
24	32.86	32.64	31.71	31.50	31.09	30.40	30.49	30.27	29.96	29.63	29.09	28.81
25	32.87	32.67	31.76	31.51	31.09	30.41	30.52	30.26	29.91	29.50	29.11	28.84

14A--Continued.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	32.87	32.72	31.79	31.51	30.78	30.44	30.54	30.24	29.91	29.46	29.14	28.84
27	32.88	32.72	31.50	31.52	30.55	30.46	30.56	30.21	29.91	29.45	29.14	28.90
28	32.89	32.73	31.23	31.52	30.40	30.48	30.56	30.21	29.99	29.45	29.16	28.95
29	32.89		31.08	31.52	30.28	30.52	30.56	30.23	28.97	29.43	29.20	28.98
30	32.89		30.96	31.53	30.20	30.56	30.57	30.25	28.97	29.40	29.21	28.98
31	32.90		30.81		30.12		30.57	30.27		29.37		28.98

Grovemiller 1 (*1016, p. 314). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	95.35	Apr. 2	97.25	July 2	95.55	Oct. 1	96.58
8	95.53	9	96.02	9	95.73	8	96.76
15	95.57	16	95.77	16	96.04	15	96.85
22	95.50	23	95.38	23	96.04	22	96.94
29	95.79	30	95.23	30	96.15	29	97.02
Feb. 5	95.80	May 7	95.05	Aug. 6	96.22	Nov. 5	96.15
12	95.85	14	95.00	13	96.42	12	95.56
19	95.48	21	94.85	20	95.47	19	95.40
26	95.32	28	93.76	27	95.02	26	95.45
Mar. 5	96.20	June 4	95.75	Sept. 3	95.87	Dec. 3	95.34
12	96.80	11	95.93	10	96.10	18	95.02
19	96.10	18	95.00	17	96.40	31	95.12
26	97.10	25	94.60	24	96.51		

Grovemiller 2 (*1016, p. 315). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	93.80	Apr. 2	96.35	July 2	94.65	Oct. 1	95.70
8	94.11	9	96.92	9	94.86	8	95.86
15	93.90	16	94.32	16	95.13	15	95.93
22	94.10	23	93.98	23	95.14	22	96.05
29	94.26	30	93.76	30	95.29	29	96.12
Feb. 5	94.38	May 7	93.60	Aug. 6	95.33	Nov. 5	95.46
12	94.44	14	93.56	13	95.56	12	94.14
19	94.87	21	93.40	20	94.79	19	94.00
26	94.65	28	93.25	27	94.34	26	94.01
Mar. 5	95.40	June 4	94.87	Sept. 3	95.00	Dec. 3	93.90
12	94.81	11	94.93	10	95.22	18	93.76
19	97.00	18	93.54	17	95.50	31	93.72
26	96.24	25	93.13	24	95.63		

Grovemiller 3 (*1016, p. 315). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	110.98	Apr. 2	112.70	July 2	111.13	Oct. 1	112.25
8	111.40	9	112.25	9	111.33	8	112.37
15	111.00	16	111.72	16	111.58	15	112.48
22	111.26	23	111.48	23	111.60	22	112.57
29	111.60	30	111.43	30	111.65	29	109.08
Feb. 5	111.58	May 7	111.22	Aug. 6	111.70	Nov. 5	109.08
12	111.61	14	111.26	13	112.03	12	111.45
19	108.70	21	111.10	20	108.60	19	111.55
26	108.43	28	110.95	27	108.12	26	110.92
Mar. 5	111.52	June 4	111.32	Sept. 3	111.46	Dec. 3	111.28
12	111.81	11	111.72	10	111.67	18	111.18
19	112.30	18	111.12	17	111.93	31	111.02
26	112.45	25	110.54	24	112.00		

332 WATER LEVELS AND ARTESIAN PRESSURE, 1945, NORTHEASTERN STATES

20 (*886, p. 590; *906, p. 210; *936, p. 237; *944, p. 196; *986, p. 271; 1016, p. 315). Republic Steel Corporation. At Lippert St. and Warner Road, N.E., in Canton.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	53.66	Mar. 30	52.02	June 22	50.68	Sept. 15	52.43
11	53.81	Apr. 6	51.85	30	50.60	21	52.79
19	53.98	13	51.60	6	50.68	28	52.29
26	54.02	20	51.58	13	50.81	Oct. 5	52.22
Feb. 2	55.02	27	51.56	20	51.00	12	52.27
9	54.35	May 4	51.54	27	51.14	20	52.43
16	54.35	11	51.02	Aug. 4	51.43	27	52.48
23	54.39	18	51.43	10	51.60	Nov. 2	52.41
Mar. 1	54.02	26	50.97	18	51.81	10	52.39
8	53.43	June 1	50.95	24	52.06	16	52.39
16	53.00	8	50.83	31	51.43	Dec. 27	50.95
24	52.51	15	50.75	Sept. 7	52.43		

Boron well (city of Canton test well 50) (*1016, p. 315). SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 3, T. 10 N., R. 9 W., in Perry Township, 970 feet north of the center line of Twelfth St. extended and 2,280 feet west of the east section line of section 3.

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

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	5.47	5.75	4.62	....	2.49	....	3.03	....	4.40	7.69	8.99	9.78
2	5.46	5.75	4.59	2.00	2.50	2.58	3.04	4.20	4.42	7.70	9.01	9.80
3	5.47	5.76	4.54	2.00	2.50	2.60	3.07	4.17	4.44	7.77	9.05	9.82
4	5.47	5.77	4.43	1.94	2.55	2.64	3.08	4.13	4.45	7.83	9.08	9.85
5	5.47	5.78	4.32	1.95	2.59	2.66	3.10	4.11	4.48	7.87	9.12	9.87
6	5.47	5.78	4.27	1.96	2.60	2.67	3.13	4.08	4.59	7.94	9.15	9.89
7	5.49	5.78	4.11	1.96	2.63	2.68	3.15	4.07	4.56	7.99	9.18	9.92
8	5.51	5.79	....	1.96	2.66	2.70	3.17	4.07	4.55	8.05	9.22	9.93
9	5.53	5.80	....	2.00	2.68	2.72	3.17	4.07	4.55	8.11	9.25	9.95
10	5.54	5.81	....	2.03	2.70	2.74	3.23	4.08	4.53	8.15	9.27	9.98
11	5.54	5.81	....	2.06	2.70	2.77	3.26	4.09	4.52	8.20	....	10.01
12	5.54	5.83	3.44	2.08	2.70	2.78	3.28	4.11	4.54	8.25	....	10.04
13	5.54	5.82	3.42	2.12	2.73	2.78	3.30	4.12	4.54	8.28	....	....
14	5.58	5.79	3.41	2.17	2.78	2.78	3.31	4.14	4.54	8.35	9.41	10.05
15	5.58	5.70	3.41	2.19	2.82	2.78	3.31	4.16	4.54	8.40	9.43	10.08
16	5.60	5.59	3.42	2.20	2.83	2.80	3.34	4.16	4.55	8.46	9.43	10.09
17	5.61	5.56	3.46	2.21	2.82	2.81	3.35	4.16	4.59	8.52	9.47	10.12
18	5.61	5.58	3.47	2.23	2.64	2.83	5.11	4.13	4.59	8.55	9.49	10.14
19	5.61	5.24	3.47	2.25	2.49	2.83	3.52	4.19	6.31	8.60	9.53	10.15
20	5.63	5.23	3.36	2.27	2.44	2.85	3.42	4.20	6.53	8.65	9.55	10.19
21	5.63	5.22	3.10	2.30	2.37	2.86	3.43	4.22	6.72	8.71	9.56	10.21
22	5.65	5.19	2.73	2.33	....	2.88	3.44	4.24	6.88	8.76	9.58	....
23	5.66	4.93	2.46	2.34	....	2.88	3.46	4.25	7.01	8.77	9.60	....
24	5.69	4.85	2.32	2.35	....	2.90	3.83	4.26	7.12	8.77	9.61	....
25	5.69	4.82	2.25	2.37	....	2.92	4.01	4.27	7.23	8.77	9.63	....
26	5.70	4.78	2.17	2.41	....	2.93	4.03	4.29	7.30	8.79	9.63	....
27	5.70	4.73	....	2.43	....	2.93	4.03	4.30	7.36	8.81	9.66	....
28	5.71	4.67	....	2.44	2.42	2.96	3.68	4.32	7.45	8.85	9.73	....
29	5.72	....	....	2.46	....	2.98	3.68	4.34	7.54	8.88	9.74	....
30	5.73	....	....	2.47	....	3.00	....	5.59	7.61	8.91	9.77	....
31	5.74	....	....	....	....	....	5.35	4.43	....	8.95	....	....

21A (*986, p. 273; 1016, p. 316). Ohio Power Co. On Second St. at Savannah St., S. E., in Canton.

21A--Continued.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July
1	58.20	58.91	59.05	58.03	57.52	.....	56.59
2	58.22	58.92	59.07	57.99	57.51	.....	56.59
3	58.25	58.95	59.09	57.92	57.51	.....	56.60
4	58.27	58.96	59.09	57.88	57.52	.....	56.61
5	58.29	58.97	59.07	57.83	57.54	.....	56.61
6	58.33	58.98	59.02	57.80	57.55	.....	56.60
7	58.37	58.99	59.02	57.76	57.56	.....	56.61
8	58.38	59.01	59.02	57.73	57.57	.....	56.61
9	58.40	59.03	58.97	57.70	57.58	.....	56.61
10	58.42	59.06	58.91	57.66	57.58	.....	56.59
11	58.45	59.07	58.85	57.64	57.60	.....	56.62
12	58.48	59.09	58.80	57.63	57.60	.....	56.63
13	58.51	59.10	58.73	57.63	57.59	56.44	56.64
14	58.56	59.12	58.70	57.63	57.57	56.43	56.65
15	58.57	59.13	58.68	57.62	57.51	56.43	56.65
16	58.59	59.14	58.66	57.60	57.52	56.44	56.65
17	58.61	59.14	58.66	57.58	57.53	56.44	56.66
18	58.64	59.13	58.65	57.57	57.54	56.41	56.68
19	58.67	59.11	58.63	57.58	57.52	56.43	.....
20	58.71	59.10	58.61	57.58	57.46	56.44	.....
21	58.74	59.13	58.60	57.58	57.39	56.47	.....
22	58.75	59.15	58.58	57.58	.....	56.49	.....
23	58.76	59.16	58.55	57.56	.....	56.50	.....
24	58.78	59.15	58.50	57.55	.....	56.50	.....
25	58.80	59.10	58.43	57.54	.....	56.48	.....
26	58.82	59.05	58.35	57.54	.....	56.51	.....
27	58.84	59.02	58.27	57.55	.....	56.53	.....
28	58.86	59.04	58.21	57.55	.....	56.55	.....
29	58.86	.....	58.16	57.54	.....	56.58	.....
30	58.88	.....	58.12	57.53	.....	56.59	.....
31	58.89	.....	58.07	.....	.....	.....	.....

Massillon 1 (*944, p. 197; *986, p. 274; 1016, p. 317). Republic Steel Corporation. On Oberlin Ave., in Massillon.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	51.69	52.72	52.76	50.11	49.85	48.96	49.06	48.94	48.33	48.54	47.72	47.37
2	51.72	52.72	52.72	50.04	49.90	49.01	48.99	48.95	48.33	48.58	47.67	47.30
3	51.74	52.74	52.70	49.98	49.90	48.99	49.02	48.99	48.31	48.58	47.67	47.30
4	51.75	52.71	52.67	49.94	49.92	48.91	48.97	49.01	48.29	48.58	47.63	47.28
5	51.77	52.66	52.58	49.86	49.95	48.97	48.82	49.01	48.29	48.58	47.53	47.31
6	51.79	52.74	52.45	49.85	49.95	49.01	48.81	48.94	48.31	48.56	47.50	47.35
7	51.80	52.76	52.40	49.82	49.87	49.04	.....	48.92	48.33	48.48	47.50	47.39
8	51.82	52.81	52.27	49.80	49.90	49.06	.....	.....	48.34	48.44	47.48	.....
9	51.86	52.87	52.12	49.75	49.91	49.09	.....	49.00	48.31	48.44	47.50	.....
10	51.89	53.26	51.97	49.73	49.92	49.00	48.96	49.03	48.30	48.44	47.50	47.40
11	51.94	53.26	51.85	49.74	49.93	49.00	49.03	49.05	48.40	48.43	47.41	47.45
12	52.00	53.27	51.74	49.75	49.92	49.05	49.07	49.05	48.43	48.43	47.30	47.45
13	52.04	53.30	51.65	49.77	49.92	49.07	49.11	49.02	48.41	.....	47.31	47.52
14	52.04	53.34	51.60	49.80	49.83	49.07	49.14	49.02	48.36	.....	47.34	47.53
15	52.05	53.36	51.57	49.81	49.87	49.08	49.12	43.99	48.35	48.37	47.37	47.50
16	52.11	53.37	51.55	49.71	49.81	49.08	48.99	48.92	48.45	48.35	47.37	47.50
17	52.16	.....	51.55	49.72	49.90	49.10	48.93	48.70	48.49	48.33	47.34	47.60
18	52.21	.....	51.55	49.75	49.87	48.97	48.90	48.67	48.55	48.30	47.26	47.60
19	52.24	53.16	51.48	49.78	49.63	48.89	48.90	48.62	48.60	48.29	47.20	47.65
20	52.29	53.19	51.44	49.80	49.42	48.89	48.91	48.56	48.58	48.28	47.23	47.71
21	52.30	53.22	51.40	49.83	49.22	48.94	48.91	48.51	48.54	48.25	47.24	47.75
22	52.31	53.22	51.33	49.84	49.09	48.95	48.90	48.47	48.65	48.17	47.25	47.81
23	52.35	53.19	51.16	49.77	49.05	48.96	48.86	48.44	48.68	48.02	47.26	47.88
24	52.39	53.11	50.96	49.74	49.03	48.96	48.84	48.42	.....	48.00	47.26	47.76
25	52.54	53.04	50.77	49.80	49.01	48.85	48.85	48.37	.....	47.93	47.20	47.65
26	52.56	52.94	50.61	49.83	48.99	48.92	48.88	48.35	.....	47.88	47.15	47.60
27	52.59	52.85	50.45	49.87	48.98	48.95	48.90	48.33	.....	47.87	47.21	47.62

Massillon 1--Continued.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
28	52.60	52.85	50.31	49.89	48.89	48.99	48.92	48.31	48.70	47.85	47.25	47.62
29	52.56		50.19	49.90	48.90	49.02	48.92	48.34	48.68	47.81	47.31	47.62
30	52.61		50.17	49.87	49.92	49.05	48.90	48.36	48.54	.....	47.35	47.62
31	52.65		50.13		48.95		48.92	48.38		47.72		47.53

Summit County

Goodyear 4 (*1016, p. 317). Goodyear Rubber Co. Along the north side of Springfield Road, 1,480 feet east of the centerline of Seiberling Ave., in Akron.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	47.02	37.61	32.69	27.28	25.59	27.15	.....	.....	.....	52.40	54.01	47.75
2	46.60	37.41	32.51	27.11	25.70	27.58	.....	.....	.....	52.54	54.08	47.05
3	46.16	37.24	32.36	26.95	25.84	28.05	.....	a37.00	.....	52.68	54.15	46.33
4	45.75	37.02	32.28	26.82	25.95	28.48	.....	.....	.....	52.83	54.17	45.66
5	45.30	36.76	32.12	26.66	26.03	28.80	.....	.....	.....	53.00	54.17	45.00
6	44.99	36.61	31.90	26.59	26.02	29.05	a25.46	.....	.....	53.13	54.11	44.35
7	44.56	36.41	31.77	26.49	25.92	29.27	.....	.....	a46.75	53.26	54.06	43.75
8	44.16	36.18	31.65	26.34	26.16	29.47	.....	.....	.....	53.36	54.05	43.35
9	43.82	36.01	31.48	26.18	26.16	29.65	.....	.....	.....	53.44	54.10	42.80
10	43.50	35.82	31.29	26.05	26.00	29.66	.....	a39.50	.....	53.52	54.16	42.27
11	43.16	35.67	31.16	26.11	25.76	29.58	.....	.....	.....	53.58	54.18	41.78
12	42.80	35.50	30.96	26.31	25.50	29.75	.....	.....	.....	53.68	54.18	41.33
13	42.52	35.32	30.84	26.49	25.26	30.00	a28.40	.....	.....	53.75	54.08	40.85
14	42.20	35.14	30.69	26.64	25.10	30.31	.....	.....	a48.88	53.78	54.05	40.31
15	41.89	35.00	30.54	26.64	25.26	30.70	.....	.....	.....	53.78	.....	39.91
16	41.60	34.81	30.37	26.44	25.41	31.12	.....	.....	.....	53.80	54.11	39.49
17	41.34	34.68	30.24	26.40	25.46	31.34	.....	a41.18	.....	53.84	54.16	39.10
18	41.06	34.50	30.14	26.55	24.95	31.34	.....	.....	.....	53.88	54.60	38.70
19	40.75	34.35	29.98	26.55	24.60	31.18	.....	.....	.....	53.93	54.13	38.27
20	40.49	34.18	29.64	26.42	24.41	31.09	a31.23	.....	.....	53.97	53.97	37.89
21	40.23	34.00	29.28	26.25	24.17	31.09	.....	.....	50.50	54.03	53.74	37.52
22	39.94	33.75	28.99	26.09	24.21	31.09	.....	.....	50.68	54.08	53.40	37.32
23	39.65	33.60	28.75	25.87	24.21	.....	.....	.....	50.88	54.10	53.00	37.00
24	39.39	33.49	28.54	25.93	24.13	.....	.....	a42.45	51.08	54.12	52.50	36.66
25	39.20	33.34	28.39	26.18	24.21	.....	.....	.....	51.28	54.12	51.88	.....
26	38.95	33.13	28.19	26.16	24.46	.....	.....	.....	51.46	54.17	51.20	.....
27	38.78	32.96	28.02	26.14	24.71	.....	a33.20	.....	51.65	54.20	50.60	.....
28	38.47	32.86	27.86	25.95	25.11	.....	.....	.....	51.88	54.20	49.86	35.22
29	38.23		27.71	25.73	25.63	.....	.....	.....	52.09	54.20	49.15	35.08
30	38.03		27.56	25.54	26.21	.....	.....	.....	52.27	54.11	48.46	34.74
31	37.82		27.39		26.68	.....	.....	a44.93		54.03		34.45

a Tape measurement.

Goodyear 7 (*1016, p. 318). Goodyear Rubber Co. 140 feet south of the south bank of Little Cuyahoga River and 110 feet west of the centerline of Seiberling Ave., in Akron.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	42.05	Mar. 30	52.06	June 22	43.33	Oct. 5	50.75
12	42.03	Apr. 6	50.75	July 6	36.50	12	51.83
19	43.00	13	52.34	13	52.50	19	52.50
26	49.50	20	49.08	20	49.92	26	52.50
Feb. 2	49.25	27	48.34	27	55.00	Nov. 2	52.83
9	49.17	May 4	49.66	Aug. 3	56.00	9	52.50
16	48.20	11	45.50	24	52.50	30	44.92
23	51.75	18	46.50	31	53.00	Dec. 7	43.00
Mar. 2	52.17	25	52.75	Sept. 7	51.00	14	42.00
9	43.17	June 1	45.50	14	52.00	21	40.67
16	49.84	8	43.92	21	51.50	28	40.30
23	51.41	15	53.16	28	52.50		

Washington County

Marietta 1 (*944, p. 198; *986, p. 275; 1016, p. 318). Marietta Osteopathic Clinic. At Fourth and Putnam Sts., in Marietta.

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

(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	29.73	29.88	25.69	22.19	25.64	26.60	28.24	29.42	29.92	29.26	29.42	28.30
2	29.51	29.90	24.78	22.51	25.74	26.80	28.20	29.50	29.94	29.29	29.48	28.20
3	29.15	29.95	24.42	22.63	25.85	26.80	28.11	29.56	29.94	29.21	29.48	28.50
4	28.89	29.94	23.96	22.66	25.97	26.70	28.29	29.60	29.95	29.05	29.42	28.24
5	28.84	29.99	23.51	22.64	26.06	26.82	28.38	29.57	29.95	28.97	29.36	28.26
6	28.89	30.01	23.66	22.16	26.07	26.90	28.48	29.62	29.96	28.78	29.36	28.25
7	28.94	.....	24.86	21.69	26.12	26.97	28.60	29.66	30.23	28.88	29.35	28.20
8	29.02	.....	.....	21.64	26.29	27.06	28.73	29.40	30.29	28.80	29.37	28.23
9	29.11	.....	.....	22.34	26.27	27.15	28.81	29.66	30.30	28.83	29.44	28.21
10	29.16	.....	.....	22.80	26.27	27.50	28.86	29.71	30.32	28.85	29.45	28.54
11	29.21	.....	.....	23.23	26.26	27.47	28.54	29.75	30.34	28.88	29.40	28.32
12	29.22	.....	.....	23.64	26.14	27.39	28.71	29.83	30.22	28.94	29.35	28.35
13	29.26	30.11	.....	24.01	26.03	27.48	28.90	29.83	30.10	28.97	29.32	.....
14	29.29	30.10	19.77	24.22	26.38	27.50	28.96	29.86	30.09	28.99	29.29	.....
15	29.31	29.96	20.48	24.26	26.20	27.54	28.67	29.91	30.23	29.02	29.21	.....
16	29.76	29.84	20.84	24.52	26.56	27.61	28.65	29.85	30.12	29.05	29.14	.....
17	29.43	29.69	21.51	24.52	26.33	27.75	28.56	29.90	30.11	29.08	.....	.....
18	29.42	29.51	21.77	.....	25.75	27.46	28.69	29.96	30.10	29.12	.....	.....
19	29.44	29.56	22.04	.....	25.30	27.34	28.94	30.00	30.08	29.15	.....	28.70
20	29.49	29.19	22.04	.....	25.38	27.38	29.01	30.02	30.05	.....	.....	28.73
21	29.49	29.06	21.54	.....	25.47	27.52	29.07	30.05	29.97	.....	28.60	28.75
22	29.50	29.06	20.65	.....	25.34	27.60	29.11	30.08	29.88	.....	28.57	28.80
23	29.87	28.97	19.44	.....	25.38	27.66	29.17	29.95	30.14	29.31	28.34	.....
24	30.04	28.69	18.63	25.10	25.46	27.71	29.17	30.07	29.98	29.32	28.25	29.28
25	29.69	28.12	18.33	25.14	25.59	27.77	29.25	30.08	29.88	29.30	28.15	29.23
26	29.70	27.92	18.76	25.21	25.67	27.85	29.30	30.01	29.72	29.27	28.15	28.90
27	29.72	27.40	19.39	25.19	26.03	27.90	.....	29.82	29.63	29.26	28.19	28.72
28	29.72	26.56	20.16	25.16	26.16	27.96	29.39	29.84	29.55	29.29	28.22	28.61
29	30.16	.....	20.65	25.34	25.96	28.03	29.44	29.86	29.36	29.30	28.66	28.50
30	29.91	.....	20.90	25.50	26.04	28.16	29.47	29.87	29.42	29.31	28.34	28.47
31	29.87	.....	21.71	.....	26.19	.....	29.46	29.88	.....	29.40	.....	28.85

PENNSYLVANIA

By J. B. Graham

PROGRAM OF WORK

The program of water-level measurements in observation wells in Pennsylvania, begun in 1931, was continued in 1945 in cooperation with the Topographic and Geologic Survey of the Pennsylvania Department of Internal Affairs. Ground-water conditions in the Philadelphia area were studied in detail with special emphasis on the navy yard area.

About 6,200 measurements of water level, distributed among 52 wells, were made in the State during 1945. Measurements were made weekly in 43 of the wells; daily in 19 and irregularly in 2. Eighteen automatic water-stage recorders were in use in 1945, 14 of them in the Philadelphia Navy Yard.

FLUCTUATIONS OF WATER LEVEL

Precipitation is the most significant factor determining the fluctuations of water levels in Pennsylvania. As shown by figure 22, the rise in average water levels in Pennsylvania is closely associated with monthly precipitation conditions. Average precipitation in Pennsylvania for 1945 was 7.12 inches above the 58-year average of 42.27 inches. The weekly arithmetical averages of water level in observation wells were higher than previously recorded for 34 of the 52 weeks for 1945, and were higher than the weekly averages of the 13-year period of record for 48 of the 52 weeks of 1945. In the following table the 13-year weekly average (1932-44) of water levels in observation wells in Pennsylvania is shown with the averages of the water levels in observation wells for each week in 1945.

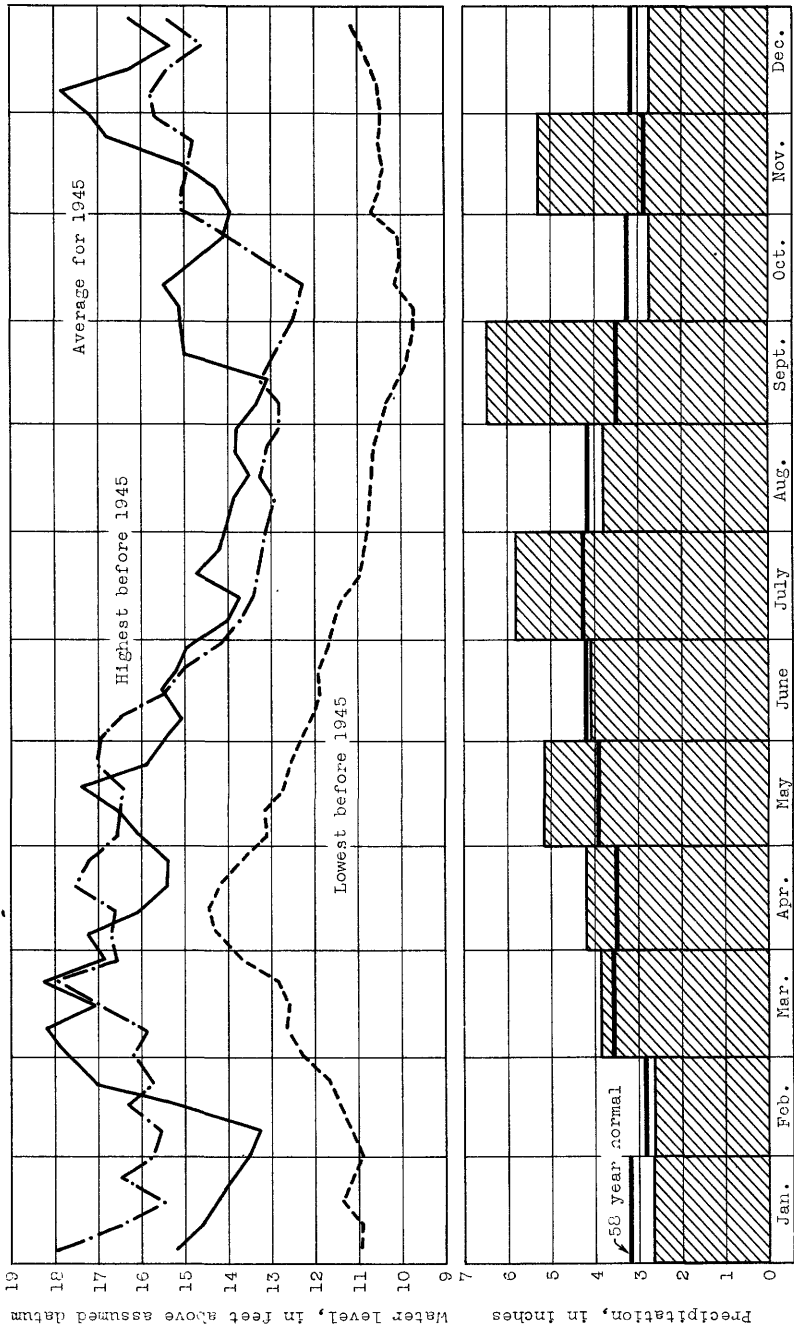


Figure 22.--Graphs showing average ground-water levels and precipitation in Pennsylvania in 1945, in comparison with previous years of record.

Averages of water levels in observation wells in Pennsylvania, by weeks,
in feet above assumed datum planes

Date	13-year Average	1945 Average	Date	13-year Average	1945 Average
Jan. 4	13.57	15.16	July 5	12.81	14.00
11	13.59	14.67	12	12.58	13.78
18	13.42	14.30	19	12.25	14.70
25	13.47	13.91	26	12.21	14.15
Feb. 1	13.54	13.48	Aug. 2	12.03	14.01
8	13.48	13.32	9	11.87	13.92
15	13.64	15.09	16	11.88	13.53
22	13.65	17.03	23	11.73	13.77
Mar. 1	13.97	17.72	30	11.68	13.79
8	14.15	18.13	Sept. 6	11.58	13.38
15	14.68	16.97	13	11.45	13.11
22	15.22	18.15	20	11.41	14.93
29	15.35	16.85	27	11.24	14.99
Apr. 5	15.42	17.26	Oct. 4	11.15	15.09
12	15.50	16.06	11	11.12	15.46
19	15.39	15.37	18	11.12	14.73
26	15.12	15.33	25	11.40	14.11
May 3	14.75	15.99	Nov. 1	11.87	13.95
10	14.40	16.43	8	12.05	14.25
17	14.13	17.31	15	12.33	15.07
24	14.18	15.93	22	12.46	16.54
31	13.92	15.52	29	12.52	17.11
June 7	13.62	15.06	Dec. 6	12.57	17.86
14	13.22	15.50	13	12.82	16.31
21	13.21	15.20	20	13.01	15.32
28	12.93	14.96	27	13.28	16.32

Philadelphia area

Water levels in the Philadelphia area during 1945 declined during the summer months as a result of heavy seasonal summer use by industries, but by the end of the year were generally comparable in elevation to measurements recorded at the end of 1944.

Pumpage of ground water in the Philadelphia Navy Yard area decreased with the end of the war, but this decrease was balanced by new industrial wells in other areas. It is estimated that approximately 30 million gallons a day is pumped during the summer months from Coastal Plains sediments in the Philadelphia area.

Susquehanna River Basin

Since the latter part of 1930, the Geological Survey has been supplying data to the Pennsylvania Water and Power Company from an increasing number of ground-water wells, now about 20, in the Susquehanna River Basin. Because of this company's interest in hydrologic research and in recognition of the potential value of these data in flow forecasting, it has developed a method of reducing the individual readings to a common basis to permit a more reliable determination of the true fluctuations in ground-water supply. This average, developed by C. F. Merriam, is now known as

the Susquehanna ground-water index. For details regarding its derivation, see Transactions of the American Geophysical Union, 1942, pp. 598-603.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Bedford County

116 (*936, p. 241; 944, p. 233; *986, p. 279; 1016, p. 323). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	53.63	Apr. 6	50.29	July 6	51.58	Oct. 5	51.19
12	53.68	13	50.96	13	51.77	12	49.27
19	53.75	20	51.00	20	51.98	19	51.40
26	53.79	27	51.05	27	52.10	26	51.64
Feb. 2	53.91	May 4	50.99	Aug. 3	52.21	Nov. 2	52.90
9	53.90	11	51.18	10	52.30	9	51.91
16	53.59	18	50.95	17	52.46	16	52.04
23	51.22	25	50.92	24	52.61	23	50.90
Mar. 2	48.58	June 1	51.13	31	52.54	30	49.37
9	46.89	8	51.34	Sept. 7	52.66	Dec. 7	50.03
16	50.39	15	51.46	14	52.70	14	50.39
23	50.46	22	51.37	21	49.30	21	50.84
30	50.81	29	51.29	28	50.91	28	51.30

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). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	12.13	Apr. 7	16.18	July 7	16.66	Oct. 6	15.96
13	15.92	14	16.44	14	16.64	13	15.94
20	17.42	21	16.43	21	13.88	20	16.31
27	18.01	28	16.29	28	14.80	27	16.74
Feb. 3	18.30	May 5	15.80	Aug. 4	15.67	Nov. 3	17.04
10	18.44	12	14.99	11	16.11	10	17.34
17	17.79	19	15.32	18	16.34	17	17.20
24	7.83	26	16.02	25	16.94	24	16.28
Mar. 3	9.41	June 2	16.43	Sept. 1	16.26	Dec. 1	15.47
10	13.24	9	16.77	8	16.69	8	13.77
17	15.37	16	16.78	15	16.80	15	15.19
24	16.01	23	16.47	22	11.78	23	16.09
31	16.39	30	16.50	29	14.74	29	10.39

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. No measurements made in 1945.

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). 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.

82--Continued.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 7	39.60	Apr. 8	29.98	July 7	42.57
14	37.40	15	34.71	15	43.82
19	40.76	22	38.08	22	44.69
21	38.90	29	39.75	29	45.21
28	41.67	May 4	35.08	Aug. 5	44.14
Feb. 4	42.40	6	30.96	12	45.12
11	44.70	13	27.05	19	45.97
18	38.45	20	29.62	23	46.32
25	29.75	27	34.45	26	46.69
Mar. 4	28.40	June 3	37.66	Sept. 2	47.39
11	28.75	10	38.98	9	47.96
18	28.90	16	40.30	16	48.51
25	26.19	17	40.44	23	48.70
28	27.43	24	40.41	26	48.82
Apr. 1	29.90	July 1	41.57		
				Sept. 30	48.58
				Oct. 7	48.67
				14	44.21
				21	45.03
				28	46.51
				31	47.00
				Nov. 4	46.74
				11	42.61
				18	33.99
				25	29.76
				Dec. 2	29.50
				9	28.93
				16	32.98
				30	36.03

Butler County

120 (*936, p. 242; 944, p. 234; *986, p. 280; 1016, p. 324). At West Sunbury. Extremes of observed water level, in feet below land-surface datum: Highest, Mar. 14, 1942, 6.84; lowest, Oct. 7, 14, 1944, 11.06.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 6	8.80	Apr. 7	7.90	July 7	9.37
13	9.33	14	8.83	14	9.49
20	9.39	21	8.87	21	9.56
27	9.38	28	8.30	28	9.61
Feb. 3	9.51	May 5	8.82	Aug. 4	9.72
10	9.56	12	7.97	11	9.73
17	7.56	19	7.76	18	9.79
24	7.39	26	8.80	25	9.93
Mar. 3	7.08	June 2	9.04	Sept. 1	10.06
10	8.07	9	9.15	8	10.20
17	8.59	16	8.90	15	10.22
24	7.60	23	8.78	22	9.70
31	8.75	30	9.10		
				Sept. 29	7.86
				Oct. 6	7.95
				27	8.40
				Nov. 3	7.55
				10	8.20
				17	7.35
				24	8.08
				Dec. 1	8.37
				8	8.49
				15	8.64
				22	8.80
				29	8.57

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). At Central City. Extremes of observed water level, in feet below land-surface datum: Highest, Mar. 21, 1936, when well was flooded; lowest, Sept. 9, 1944, 7.12.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 6	4.15	Feb. 17	5.97	Mar. 31	3.95
13	4.41	24	4.22	Apr. 7	4.61
20	5.51	Mar. 3	3.71	14	5.20
27	5.56	10	3.80	21	4.96
Feb. 3	5.60	17	4.45	28	4.50
10	5.55	24	3.33	May 5	4.75
				June 2	5.50
				8	5.47

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). At Clarion. Extremes of observed water level, in feet below land-surface datum: Highest, Apr. 9, 1938, 11.36; lowest, Sept. 23, 1944, 20.76.

103--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	13.22	Apr. 7	12.04	July 7	16.82	Sept. 29	15.20
13	15.23	14	14.35	14	18.04	Oct. 6	13.00
20	15.91	21	15.02	21	16.66	20	16.94
27	16.44	28	12.55	28	17.94	27	16.29
Feb. 3	17.78	May 5	14.79	Aug. 4	18.32	Nov. 3	16.45
10	17.79	12	13.05	11	18.80	9	15.71
17	12.70	19	12.36	18	19.17	10	15.75
24	11.80	26	14.95	25	19.69	17	13.99
Mar. 3	11.58	June 2	17.18	Sept. 1	19.94	24	12.70
10	12.06	9	18.08	8	19.75	Dec. 1	13.19
17	13.47	16	16.37	15	19.90	15	16.00
24	11.65	23	14.67	22	17.55	29	17.27
31	13.39	30	16.50				

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). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	12.74	Apr. 7	12.80	July 7	13.72	Oct. 6	12.58
13	13.15	14	12.96	14	13.51	13	12.76
20	13.29	21	13.10	21	12.50	20	12.66
27	13.40	28	13.91	28	12.82	27	12.74
Feb. 3	13.69	May 5	12.18	Aug. 4	12.64	Nov. 3	13.08
10	13.92	12	12.88	11	13.24	10	12.88
17	13.97	19	11.95	18	13.62	17	12.48
24	11.70	26	12.65	25	12.42	24	12.71
Mar. 3	11.85	June 2	12.62	Sept. 1	12.72	Dec. 1	12.88
10	12.10	9	12.79	8	13.36	8	12.30
17	12.54	16	12.65	15	12.57	15	12.50
24	12.08	23	13.50	22	12.63	22	13.58
31	12.64	30	13.72	29	12.40	29	12.71

Elk County

118 (*936, p. 244; 944, p. 236; *986, p. 282; 1016, p. 326). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	11.78	Apr. 6	9.60	July 6	10.09	Oct. 5	9.81
12	11.36	13	9.88	13	10.34	12	9.85
19	11.41	20	9.89	20	9.66	19	9.50
26	11.58	27	9.82	27	10.06	26	10.02
Feb. 3	11.72	May 4	9.72	Aug. 3	9.90	Nov. 2	9.80
9	11.66	11	9.60	10	9.40	9	10.06
16	11.66	18	9.32	17	10.12	16	9.67
23	11.26	25	9.64	24	10.26	23	9.56
Mar. 2	10.50	June 1	9.66	31	10.46	30	9.64
9	10.47	8	9.68	Sept. 7	10.64	Dec. 7	9.58
16	10.18	15	9.77	14	10.89	14	9.65
23	9.70	22	9.79	21	10.59	21	9.85
30	9.50	29	10.02	28	10.60	28	9.89

Erie County

1 (*817, p. 276; 845, p. 420; 886, p. 630; 906, p. 220; 936, p. 244; 944, p. 236; 986, p. 282; 1016, p. 326). Near Carters Corner. Extremes of observed water level, in feet below land-surface datum: Highest, Apr. 4, 1940, 8.92; lowest, Sept. 8-Dec. 1, 1934, when well was dry.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 17	11.42	June 15	14.36	Aug. 11	18.06	Nov. 18	13.25
Apr. 17	13.34	23	14.16	18	17.48	25	12.63
30	15.63	July 2	15.18	23	17.48	Dec. 1	11.58
May 5	15.21	6	16.74	25	17.68	9	12.93
12	15.32	7	17.05	Oct. 5	10.29	14	13.25
19	14.78	14	17.96	28	11.06	16	13.77
26	14.77	28	18.10	Nov. 4	12.24	23	15.40
June 2	14.92	Aug. 4	18.34	11	12.98	30	15.74
9	15.18						

Huntingdon County

47 (*817, p. 279; 845, p. 421; 886, p. 631; 906, p. 221; 936, p. 245; 944, p. 236; 986, p. 282; 1016, p. 326). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	22.44	Apr. 7	7.22	July 7	17.90	Oct. 7	15.53
13	19.80	14	8.27	14	15.21	13	18.02
20	24.90	21	14.47	21	18.53	20	19.80
27	24.02	28	15.04	28	19.84	27	20.71
Feb. 3	24.02	May 5	17.92	Aug. 4	17.50	Nov. 4	20.72
10	22.61	9	19.14	11	18.14	10	21.27
17	12.97	19	7.42	18	19.75	17	21.33
24	16.99	26	16.58	25	8.01	25	9.80
Mar. 4	16.35	June 2	14.02	Sept. 1	11.58	Dec. 2	8.22
10	13.11	9	17.97	9	13.58	8	6.95
17	17.35	16	3.71	15	14.43	15	14.91
24	8.38	23	11.25	22	8.09	22	17.90
31	15.86	30	12.73	30	8.98	29	14.36

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). Near Petersburg. Extremes of observed water level, in feet below land-surface datum: Highest, Jan. 3, 1942, 0.05; lowest, Sept. 28, 1940, 6.96.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	2.50	Feb. 24	1.93	June 8	1.40	July 14	3.10
13	3.91	Mar. 6	.89	16	3.95	21	3.60
27	3.94	10	1.93	23	2.50	Aug. 4	3.90
Feb. 3	3.50	Apr. 7	1.50	July 7	3.97	11	4.10
17	1.00	28	.20				

Indiana County

200 (*1016, p. 327). At Indiana. Extremes of observed water level, in feet below land-surface datum: Highest, Mar. 21, 1945, 77.70; lowest, Sept. 16, 1945, 84.83.

Daily noon water level, in feet below land-surface datum, 1945											
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. Dec.
1	79.90	81.10	78.88	78.60	78.66	.....	81.60	82.89	83.75	82.91	83.10 81.80
2	80.49	81.18	78.52	78.36	78.70	80.22	81.80	82.86	83.95	82.82	82.99 81.72
3	80.25	81.12	78.22	78.78	78.63	80.10	82.05	82.86	84.04	82.95	83.02 81.57
4	80.18	81.20	78.51	78.59	78.70	80.01	82.11	82.91	84.04	82.80	83.15 81.70
5	80.23	80.92	78.36	78.60	78.92	80.00	82.21	82.89	84.12	82.60	83.00 81.61

200--Continued.

Daily noon water level, in feet below land-surface datum, 1945												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
6	80.20	81.12	77.93	78.80	79.15	80.01	82.43	82.58	84.20	82.45	83.16	81.40
7	80.00	81.09	78.12	78.70	79.30	79.96	82.51	82.61	84.26	82.50	83.00	81.35
8	80.19	81.03	78.14	78.55	79.50	79.85	82.51	82.72	84.30	82.46	82.96	81.59
9	80.40	80.75	78.10	78.57	79.76	79.88	82.45	82.70	84.38	82.67	82.99	81.35
10	80.50	80.77	77.97	78.70	79.30	.....	82.48	82.60	84.38	82.69	83.20	81.28
11	80.77	80.72	78.26	78.71	79.58	.....	82.77	82.55	84.38	82.58	82.85	81.60
12	80.23	80.51	78.08	78.72	79.41	.....	82.70	82.52	84.57	82.45	82.62	81.60
13	80.43	79.94	78.28	78.78	79.38	.....	82.71	82.54	84.61	82.72	82.23	81.40
14	80.37	80.18	78.20	78.90	79.58	.....	82.68	82.48	84.61	82.72	82.13	81.30
15	80.42	79.81	78.29	78.98	79.55	.....	82.64	82.54	84.75	82.81	82.20	81.45
16	80.48	79.78	78.30	78.89	79.72	.....	82.86	82.61	84.83	82.69	82.10	81.60
17	80.72	79.32	78.32	78.80	79.75	.....	82.83	82.59	84.76	82.90	81.80	81.75
18	80.63	79.43	78.62	78.81	79.52	.....	82.73	82.76	84.50	82.98	81.99	81.80
19	80.43	79.60	78.36	79.00	79.61	.....	82.73	82.88	84.50	82.99	81.54	81.37
20	80.54	79.30	78.02	78.80	79.52	.....	82.72	82.89	84.29	83.15	81.88	81.95
21	80.56	79.30	77.70	78.61	79.40	.....	81.68	82.89	84.37	83.18	81.60	82.30
22	80.32	78.91	77.83	78.94	79.38	.....	81.63	82.98	84.36	83.10	81.51	82.30
23	80.50	79.10	77.80	78.72	79.71	79.96	82.70	83.09	84.25	83.25	81.48	82.71
24	80.58	79.30	78.00	78.60	79.78	79.98	82.30	83.08	84.10	83.30	81.50	82.59
25	80.83	79.28	78.11	78.55	79.79	79.95	82.80	83.08	83.95	83.21	81.64	82.35
26	80.93	78.72	78.06	78.26	79.72	80.13	82.82	83.35	83.78	83.05	81.90	82.60
27	80.91	78.72	78.13	78.32	.....	80.40	82.90	83.45	83.40	83.19	81.72	83.18
28	81.00	78.50	78.28	78.55	.....	30.55	82.82	83.50	83.19	83.12	81.67	83.12
29	80.81		78.28	78.52	.....	30.88	82.95	83.67	83.10	83.10	81.55	82.95
30	80.86		78.38	78.60	.....	80.42	83.05	83.77	83.19	83.07	81.70	82.70
31	80.95		78.00	.....	.....		82.98	83.82		82.86		82.78

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). At Waverly. Extremes of observed water level, in feet below land-surface datum: Highest, Mar. 17, 18, 19, 1936, Mar. 30, 1940, when well was flooded; lowest, Sept. 30, 1939, 8.43.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 23	4.14	Apr. 12	2.00	June 20	2.45	Aug. 29	3.82
30	4.50	18	2.60	27	2.72	Sept. 5	3.41
Feb. 6	5.33	25	2.30	July 4	2.63	12	3.71
13	4.60	May 2	2.70	11	2.69	19	3.01
20	3.70	9	1.90	18	1.74	26	3.03
27	3.50	16	2.20	25	2.63	Oct. 6	3.01
Mar. 6	1.40	23	1.90	Aug. 1	2.82	13	2.98
14	1.90	30	2.10	8	3.00	20	3.01
21	1.30	June 6	2.64	15	3.43	27	3.03
28	1.60	13	2.81	22	3.71	Nov. 3	3.00
Apr. 4	1.50						

102 (*817, p. 284; 845, p. 423; 886, p. 632; 906, p. 222; 936, p. 246; 944, p. 237; *986, p. 283; 1016, p. 327). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	4.80	Mar. 2	3.05	Apr. 27	5.72	June 22	2.18
12	5.90	9	3.17	May 4	3.38	23	4.05
19	6.80	16	3.80	11	3.72	30	5.51
25	6.90	23	3.20	18	4.47	July 7	6.60
Feb. 2	7.32	30	4.72	25	5.34	13	7.00
9	7.62	Apr. 6	1.50	June 1	5.10	20	4.75
15	7.15	13	4.98	8	3.86	Aug. 3	1.10
23	4.30	20	5.75	15	5.60	10	4.70

102--Continued.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Aug. 17	6.10	Sept. 21	3.92	Oct. 27	5.16
25	5.95	28	4.55	Nov. 2	5.50
30	5.09	Oct. 5	4.50	10	4.35
Sept. 3	2.00	13	3.70	16	2.95
7	4.35	19	4.82	23	2.70
14	6.20				
				Nov. 30	3.80
				Dec. 7	3.38
				14	4.30
				21	5.80
				28	5.05

Lancaster County

119 (*936, p. 246; 944, p. 238; *986, p. 284; 1016, p. 328). At West Quarryville. Extremes of observed water level, in feet below land-surface datum: Highest, Mar. 21, 1943, 6.64; lowest, Jan. 31, 1942, 25.10.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 7	18.27	Apr. 8	15.27	July 8	16.32
14	19.95	15	16.05	15	17.19
21	20.11	22	16.28	22	9.50
28	19.23	29	16.58	29	9.22
Feb. 4	20.33	May 6	16.86	Aug. 5	11.88
11	19.51	13	17.11	12	8.63
18	15.65	20	17.44	19	11.10
25	12.07	28	17.78	26	12.08
Mar. 5	11.01	June 3	17.90	Sept. 2	11.58
11	10.29	10	18.28	9	13.35
18	12.36	17	18.56	16	14.51
25	14.29	24	18.66	23	12.26
Apr. 1	15.09	July 1	16.67	30	13.75
				Oct. 7	14.59
				14	15.16
				21	15.62
				28	16.19
				Nov. 4	16.57
				11	17.18
				18	17.40
				25	17.55
				Dec. 2	12.69
				11	11.54
				16	12.77
				26	10.66
				31	8.53

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). 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, 1945					
Date	Water level	Date	Water level	Date	Water level
Jan. 7	23.30	Apr. 8	22.75	July 8	24.90
14	24.60	15	23.90	16	22.83
21	24.30	22	24.20	18	23.05
28	25.06	29	24.55	22	22.90
Feb. 6	25.15	May 2	23.96	29	23.95
11	25.15	7	24.05	Aug. 5	24.20
18	24.75	13	23.80	12	24.53
20	24.64	20	22.80	19	25.00
25	23.30	27	24.00	22	24.72
Mar. 4	22.80	June 3	24.35	26	24.15
11	23.45	10	24.45	Sept. 2	24.85
18	24.15	18	24.70	9	25.85
25	22.90	23	24.39	16	25.25
Apr. 1	23.66	24	24.55	23	23.30
2	23.85	July 1	24.85	28	22.21
				Sept. 30	23.15
				Oct. 14	23.40
				19	24.10
				23	24.45
				30	24.38
				Nov. 4	24.30
				13	25.75
				18	22.85
				28	23.25
				Dec. 2	22.70
				3	22.82
				9	22.60
				18	24.10
				23	24.20
				29	23.35

Northumberland County

57 (*817, p. 291; 845, p. 425; 886, p. 633; 906, p. 223; 936, p. 247; 944, p. 239; *986, p. 285; 1016, p. 328). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	18.97	Aug. 18	17.68	Oct. 26	17.27	Nov. 23	16.84
Feb. 6	19.04	Sept. 11	17.79	Nov. 2	17.25	30	16.49
Mar. 16	16.46	28	17.44	9	17.26	Dec. 7	16.40
Apr. 16	15.90	Oct. 5	17.25	15	17.07	14	16.44
May 25	15.14	12	16.99	16	17.11	21	16.71
June 27	16.21	19	17.10	20	17.07	28	16.84

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). At Newport. Extremes of observed water level, in feet below land-surface datum: Highest, June 7, 1940, 7.92; lowest, Dec. 12, 1941, 17.34.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 12	15.44	May 29	11.46	Aug. 19	14.28	Oct. 27	15.07
21	15.39	June 10	12.55	26	14.37	Nov. 2	15.23
28	15.64	19	13.16	Sept. 1	14.60	10	15.44
Feb. 4	15.64	24	13.32	7	14.77	18	15.54
8	15.77	28	13.56	8	14.79	22	15.20
18	15.30	July 8	14.09	16	15.01	27	15.13
23	15.25	15	13.73	23	14.59	Dec. 2	14.14
Mar. 2	15.02	19	13.89	Oct. 1	14.36	9	12.39
10	14.28	30	14.23	7	14.37	16	12.86
Apr. 16	13.12	Aug. 3	14.11	13	14.57	24	13.47
26	13.01	9	13.99	21	14.85	30	13.20

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). 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	3.04	Apr. 21	2.96	July 14	3.01	Oct. 13	2.77
12	3.31	28	3.01	21	2.97	20	2.75
13	3.39	May 5	2.89	Aug. 4	2.88	27	2.83
20	3.47	12	2.94	11	2.94	Nov. 3	2.77
Feb. 7	3.53	19	2.87	16	2.96	10	2.80
8	3.48	26	2.78	18	2.99	13	2.75
17	2.73	29	2.94	25	2.83	17	2.69
24	2.72	June 2	2.92	Sept. 1	2.91	24	2.75
Mar. 3	2.80	9	3.04	7	2.95	27	2.73
17	2.82	16	3.16	8	2.94	Dec. 1	2.64
24	2.85	23	3.09	15	2.98	15	2.69
Apr. 7	2.94	30	3.10	22	2.74	22	2.73
14	3.06	July 7	3.14	29	2.82	29	2.68
19	3.08	8	3.15	Oct. 6	2.79		

Philadelphia County

P1 (*986, p. 285; 1016, p. 329). Girard Estate. Philadelphia, at Passyunk power station.

In south

P1--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	32.38	July 14	33.84	Sept. 7	32.95	Nov. 2	31.92
Feb. 13	32.18	20	32.98	14	32.86	9	31.92
Mar. 22	31.68	27	33.79	21	33.00	16	31.93
Apr. 21	31.80	Aug. 3	33.10	28	33.63	23	31.72
May 26	32.17	10	33.16	Oct. 5	32.77	30	32.00
June 23	32.74	17	33.27	12	32.54	Dec. 7	32.08
30	32.75	25	32.96	19	32.33	14	32.89
July 7	33.14	31	32.97	26	31.98	21	33.56

P2 (*936, p. 285; 1016, p. 329). Atlantic Refining Co. In south Philadelphia. Measurements discontinued after Sept. 19, 1945.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	39.09	July 9	38.82	Aug. 3	38.72	Aug. 17	38.42
Feb. 13	39.00	27	38.84	10	38.56	Sept. 19	37.90
Mar. 22	38.67						

P3 (*986, p. 286; 1016, p. 329). City of Philadelphia. In south Philadelphia, in League Island park.

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

Day	Jan.	Feb.	Mar.	Apr.	June	Aug.	Sept.	Oct.	Nov.	Dec.
1	26.20	29.50	29.50	28.50	.....	.....	.....	28.30	29.01	27.23
2	27.60	29.50	29.20	28.50	.....	.....	.....	28.68	29.11	25.92
3	27.80	29.55	28.70	29.10	33.20	32.70	.....	29.09	28.18	26.86
4	27.70	29.35	28.72	29.42	33.35	31.75	.....	29.36	27.51	27.10
5	27.70	28.70	29.05	29.12	33.45	31.60	.....	29.20	27.60	27.34
6	27.80	29.42	28.75	29.50	30.00	31.58	.....	26.72	28.97	27.09
7	27.40	29.42	.....	29.40	29.75	32.72	29.63	25.60	29.21	26.98
8	27.35	29.20	.....	28.85	29.65	31.60	.....	26.95	29.16	26.43
9	27.45	29.30	.....	29.00	32.35	30.75	.....	28.22	29.25	26.21
10	27.80	29.30	.....	29.20	31.55	.....	29.20	29.00	28.75	26.90
11	27.80	.....	.....	29.15	32.72	.....	29.21	29.00	27.12	27.45
12	27.70	.....	.....	29.08	32.85	.....	29.50	28.47	25.71	28.60
13	27.60	.....	.....	29.05	32.90	.....	29.65	27.75	27.40	28.84
14	26.10	.....	.....	28.95	32.85	.....	29.60	25.72	28.40	28.52
15	26.90	.....	.....	29.08	33.05	.....	.....	26.90	28.90	28.69
16	27.10	.....	.....	28.35	33.10	.....	.....	28.00	29.12	27.67
17	.....	.....	.....	28.75	32.37	.....	.....	28.90	27.30	28.03
18	.....	28.30	.....	28.50	33.00	.....	.....	29.10	28.41	29.31
19	.....	29.20	.....	28.12	33.33	.....	.....	29.19	28.53	29.08
20	.....	29.20	.....	27.88	33.20	.....	.....	28.10	28.76	29.14
21	27.50	29.90	.....	27.72	33.25	.....	.....	26.90	29.01	29.33
22	27.50	29.65	.....	27.98	33.32	.....	28.26	27.76	27.35	29.43
23	28.20	29.95	.....	28.10	33.15	.....	28.70	28.80	27.36	27.36
24	27.45	.....	.....	28.68	32.03	.....	28.70	28.60	26.40	28.80
25	27.95	30.05	.....	28.65	32.50	.....	29.08	29.10	26.63	27.49
26	28.20	29.80	.....	28.72	33.10	.....	29.26	28.97	27.70	27.90
27	29.50	29.55	.....	29.02	33.35	.....	29.48	27.40	28.30	28.31
28	29.40	29.80	29.22	29.10	33.30	31.60	29.39	25.71	27.36	.....
29	29.30	.....	29.20	29.00	33.12	32.30	29.03	27.93	26.89	.....
30	29.30	.....	29.20	.....	33.35	32.48	26.01	28.92	27.00	.....
31	29.50	.....	29.05	.....	.....	31.65	.....	28.90	.....	.....

P4 (*986, p. 286; 1016, p. 330). City of Philadelphia. In south Philadelphia, at Southwest Airport.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	11.16	Sept. 21	10.90	Oct. 24	11.47	Nov. 23	11.09
Feb. 13	11.09	28	11.40	26	11.47	30	9.73
Mar. 22	10.67	Oct. 5	11.51	Nov. 2	11.43	Dec. 7	8.05
Apr. 21	11.31	12	11.56	9	11.69	14	8.09
May 26	11.29	19	11.57	16	11.44	21	7.34
July 7	11.32						

P5 (*1016, p. 330). United States Navy. In south Philadelphia, at Philadelphia Naval Hospital.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	26.95	Aug. 10	29.57	Sept. 28	27.57	Nov. 9	30.70
Feb. 13	27.40	17	28.34	Oct. 5	27.44	14	26.97
Mar. 22	27.14	25	28.29	12	27.07	16	27.53
Apr. 21	26.83	31	29.02	19	27.38	23	26.69
May 26	27.70	Sept. 7	27.76	26	27.39	Dec. 7	26.23
July 6	30.05	14	27.80	Nov. 2	27.25	14	26.31
27	29.47	21	27.48				

P6 (*1016, p. 330). United States Navy. In south Philadelphia, at Philadelphia Naval Hospital.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	25.56	Aug. 3	26.99	Sept. 21	25.91	Nov. 16	26.61
Feb. 13	25.89	10	27.46	Oct. 12	26.42	23	25.39
Mar. 22	25.64	17	26.52	19	25.86	30	25.96
Apr. 21	25.41	25	26.42	26	25.84	Dec. 7	24.94
May 26	26.04	31	26.71	Nov. 2	25.78	14	25.37
July 20	27.65	Sept. 7	26.09	9	29.19	21	25.77
27	27.42	14	26.07				

P7 (*1016, p. 330). Morgenthaler Bros. Ice Co. In south Philadelphia. Measurements discontinued after Oct. 26, 1945.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	45.20	June 9	44.25	July 27	63.84	Sept. 14	63.32
27	45.13	16	58.29	Aug. 3	62.47	21	61.98
Feb. 10	43.76	23	59.07	10	61.18	28	60.36
Mar. 22	46.03	30	60.21	17	59.10	Oct. 5	62.20
Apr. 21	49.07	July 6	59.25	25	60.02	12	60.51
May 5	50.05	14	61.26	31	64.12	19	57.57
26	58.00	15	38.80	Sept. 7	61.71	26	58.79
June 2	57.40	16	35.73				

P8 (*1016, p. 331). McCahan Sugar Co. In south Philadelphia.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	56.05	May 5	57.25	Aug. 31	54.84	Nov. 2	53.68
13	55.99	12	55.45	Sept. 7	55.25	6	51.19
27	56.57	26	53.45	14	56.94	9	52.74
Feb. 3	55.22	June 2	51.36	21	54.27	16	52.02
10	53.22	9	38.00	28	53.86	23	50.12
17	54.12	16	52.05	Oct. 5	54.29	30	54.10
Mar. 3	56.58	23	54.91	12	53.14	Dec. 7	52.80
Apr. 7	56.68	Aug. 10	56.33	19	51.96	14	52.60
21	53.59	17	46.27	26	52.51	21	52.64
29	55.92	25	57.17				

N01. United States Navy. In south Philadelphia, on League Island, at navy yard. Drilled observation well, diameter 8 inches, depth 104 feet. Measuring point, top of casing, at land-surface datum. Altitude 9.41 feet above mean sea level. Automatic water-stage recorder installed Mar. 30, 1945.

Water level, in feet below land-surface datum, 1945 (From recorder charts)											
Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
1	34.02	33.70	34.41	35.05	34.96	34.60	33.41	33.92	32.45	
2	33.24	34.32	34.56	34.90	34.78	32.60	33.48	33.93	31.90	
3	33.76	34.08	34.43	35.25	34.80	32.39	33.90	33.39	32.19	
4	34.17	33.40	34.29	35.45	35.00	33.85	34.35	33.20	32.28	
5	33.77	33.56	34.50	35.36	34.70	34.30	34.12	32.90	32.57	
6	34.36	33.18	34.73	35.08	34.40	34.45	32.90	33.95	32.15	
7	34.46	33.34	34.65	35.10	34.60	34.42	31.37	34.21	31.98	

N01--Continued.

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

Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
8	34.14	33.36	34.52	34.50	34.80	34.47	32.11	34.15	32.16
9	33.95	33.80	34.50	34.18	35.00	33.70	33.05	34.14	31.77
10	34.10	34.04	33.90	34.43	35.24	33.90	33.80	34.01	32.05
11	34.06	33.75	33.90	34.85	35.08	34.05	33.90	33.30	32.51
12	33.93	34.15	34.15	35.28	34.79	34.22	33.32	31.89	33.60
13	33.88	32.30	34.45	35.35	34.68	34.53	33.30	32.60	33.85
14	33.64	32.96	34.85	35.29	34.85	34.52	31.87	33.35	33.42
15	33.85	33.36	34.85	34.20	33.70	34.10	32.23	33.68	33.67
16	33.45	33.50	34.80	34.45	32.45	33.00	33.11	34.11	33.13
17	33.44	34.00	34.30	35.24	32.30	33.65	33.75	33.20	33.45
18	33.22	34.02	34.73	35.40	34.13	34.07	33.95	33.42	34.35
19	34.16	34.90	35.60	33.80	33.89	34.05	33.59	34.07
20	33.46	34.90	35.45	34.10	.....	33.46	33.63	33.98
21	32.58	33.72	35.00	35.23	34.50	34.00	32.55	34.09	34.22
22	32.92	34.12	34.93	33.70	34.56	33.85	32.95	32.91	34.47
23	32.94	34.41	34.87	34.60	34.81	34.03	33.70	32.84	33.33
24	33.37	34.61	34.45	34.90	34.90	33.71	33.65	32.28	34.00
25	33.32	34.70	34.35	34.38	34.40	34.04	33.92	32.22	33.31
26	33.30	34.60	34.72	34.85	33.20	34.10	33.82	33.03	33.07
27	33.47	34.17	35.00	35.03	33.80	34.40	33.32	33.58	33.60
28	33.75	34.00	35.07	35.03	34.92	34.22	32.15	32.61	34.18
29	33.77	34.17	35.02	34.88	35.15	34.09	33.21	32.01	.....
30	33.99	33.82	34.14	35.13	34.90	34.90	32.37	33.91	32.09	.....
31	33.84	.....	34.20	.....	35.20	34.98	.....	33.82	.....	.....

N02 (*1016, p. 334). United States Navy. In south Philadelphia at navy yard. Equipped with automatic water-stage recorder.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	30.86	33.31	33.10	33.58	33.42	33.96	34.25	34.27	33.98	33.30	33.40	32.20
2	31.99	33.35	33.20	33.22	33.85	33.97	34.35	34.28	32.67	33.03	33.32	31.81
3	32.33	33.53	32.74	33.54	33.60	33.90	34.65	34.25	32.71	33.60	32.98	31.96
4	32.11	33.55	32.95	33.72	.....	33.95	34.30	34.50	33.60	33.90	32.77	32.07
5	32.14	32.93	33.21	33.38	33.30	34.05	34.65	34.02	33.90	33.62	32.90	32.19
6	32.35	33.35	32.59	34.05	32.92	34.22	34.43	34.00	34.00	32.50	33.53	31.77
7	31.95	33.28	32.71	34.07	33.14	34.16	34.50	34.17	34.00	31.55	33.67	31.60
8	31.30	32.91	33.13	33.60	32.11	34.04	34.00	34.42	33.95	32.26	33.53	31.76
9	31.83	33.01	33.05	33.61	33.58	34.07	33.90	34.59	33.35	32.30	33.65	31.65
10	32.33	33.03	32.91	33.70	33.40	33.45	33.95	34.70	33.57	33.39	33.65	31.76
11	32.43	33.03	32.27	33.64	33.48	33.62	34.38	34.53	33.55	33.41	32.90	32.30
12	32.30	33.25	32.73	33.48	33.74	33.77	34.63	34.30	33.31	33.05	32.05	33.11
13	32.09	33.07	32.75	33.33	32.32	34.00	34.72	34.39	34.03	32.30	32.64	33.27
14	31.23	33.13	33.07	33.25	33.04	34.30	34.65	34.39	34.03	32.10	32.36	32.90
15	31.93	33.19	32.46	33.47	33.15	34.30	33.85	33.25	33.60	32.60	33.16	33.15
16	31.73	32.98	32.35	33.18	33.23	34.25	34.00	32.61	32.90	32.86	33.62	32.30
17	32.12	33.15	32.96	32.30	33.58	33.70	34.72	33.13	33.70	33.31	32.40	33.23
18	32.35	32.31	32.66	32.50	33.49	34.20	34.90	33.30	33.58	33.50	33.10	33.30
19	32.20	33.31	32.61	32.56	33.76	34.22	35.00	33.40	33.56	33.56	33.03	32.22
20	32.23	33.29	32.73	32.54	33.34	34.20	34.80	33.70	33.63	33.04	33.25	33.46
21	32.21	33.40	32.63	32.30	33.54	34.28	34.42	34.03	33.65	32.70	33.50	33.67
22	31.83	32.95	32.67	32.65	33.63	34.23	33.42	34.26	33.52	32.96	32.31	33.60
23	32.08	33.15	32.39	32.73	33.96	34.28	34.10	34.51	33.68	33.25	32.46	32.81
24	31.78	33.62	33.15	32.91	34.13	33.30	34.25	34.55	33.61	33.33	32.09	33.61
25	32.45	33.73	32.77	32.78	34.16	34.00	34.25	33.97	33.03	32.41	32.16	32.92
26	32.65	33.47	33.27	32.85	34.12	34.10	34.30	33.10	32.77	33.25	32.22	32.70
27	33.13	32.93	33.23	33.13	33.87	34.40	34.64	34.00	33.31	32.90	33.00	33.20
28	33.18	33.41	33.30	33.32	33.62	34.40	34.48	34.38	33.31	32.30	32.21	33.60
29	32.38	.....	33.27	33.31	33.70	34.37	34.23	34.56	33.48	33.11	31.70	.....
30	33.18	.....	33.25	33.42	33.70	34.50	34.55	34.32	32.62	33.42	31.91	.....
31	33.27	.....	33.30	.....	33.30	.....	34.69	34.41	.....	33.23	.....	.....

N03. United States Navy. In south Philadelphia, on League Island, at navy yard. Drilled observation well, diameter 8 inches, depth 63 feet. Measuring point, top of casing, at land-surface datum. Altitude 11.83 feet above mean sea level. Automatic water-stage recorder installed May 20, 1945.

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

Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	30.27	30.55	29.28	30.07	30.03	30.02	29.80
2	.....	30.16	30.30	30.27	30.00	29.20	30.00	29.91
3	.....	30.04	30.62	30.33	30.20	29.61	29.90	29.60
4	.....	30.25	30.82	30.12	29.50	30.26	30.08	29.61
5	.....	30.38	30.55	30.68	30.01	29.61	30.00	29.68
6	.....	30.48	30.32	30.39	30.26	29.91	30.27	29.21
7	.....	30.48	30.65	30.34	29.69	29.65	30.05	29.09
8	.....	30.32	30.65	30.22	30.08	29.60	30.00	29.60
9	.....	30.37	30.52	30.50	30.17	29.70	30.30	29.51
10	.....	30.23	30.30	30.37	30.02	30.08	30.51	29.29
11	.....	30.07	30.55	30.40	29.50	30.01	30.50	29.70
12	.....	30.17	30.75	30.46	29.90	29.80	30.10	30.10
13	.....	30.25	30.70	30.42	30.35	30.10	29.80	30.12
14	.....	30.37	30.60	30.32	30.26	30.12	29.70	29.71
15	.....	30.35	30.40	30.10	30.19	30.05	30.01	29.88
16	.....	30.36	30.60	30.20	30.43	29.67	30.31	29.89
17	.....	30.33	30.75	29.95	30.47	29.70	30.22	30.28
18	.....	30.28	30.77	30.07	30.00	30.13	30.00	30.44
19	.....	30.42	30.80	30.20	29.65	30.13	30.00	29.80
20	30.39	30.37	.....	30.12	30.02	30.22	30.00	29.80
21	30.12	30.42	30.20	30.08	30.10	30.20	30.40	30.11
22	30.03	30.39	30.00	30.04	30.40	29.60	29.66	30.31
23	30.32	30.00	30.23	30.30	30.37	29.98	29.82	30.46
24	30.49	30.42	30.41	30.28	30.15	29.87	29.95	30.46
25	30.50	30.16	30.40	30.02	29.90	29.30	29.90	30.15
26	30.46	30.18	30.33	30.00	30.11	29.80	30.23	29.44
27	30.42	30.44	30.45	30.23	29.93	30.40	30.23	29.96
28	30.16	30.40	30.36	30.21	30.18	30.45	29.61	30.29
29	29.97	30.34	30.20	28.54	30.20	30.30	29.30	.....
30	30.02	30.50	30.56	29.90	30.45	30.20	28.96	.....
31	30.12	.....	30.61	29.46	.....	29.90	.....	.....

N04. United States Navy. In south Philadelphia, on League Island, at navy yard. Drilled observation well, diameter 3 inches, depth 54 feet. Measuring point, top of casing, at land-surface datum. Altitude 11.275 feet above mean sea level. Automatic water-stage recorder installed Sept. 7, 1945.

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

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	32.14	31.95	31.63
2	31.55	31.91	31.80
3	31.90	31.85	31.47
4	32.39	31.88	31.42
5	32.10	31.92	31.51
6	31.80	32.23	31.08
7	32.20	31.42	32.22	30.90
8	32.20	31.37	32.11	31.40
9	32.25	31.55	32.28	31.30
10	32.12	31.88	32.60	31.03
11	32.56	31.91	31.91	32.48	31.45
12	31.90	31.69	32.14	31.90
13	32.10	31.92	31.67	31.97
14	32.39	31.92	.....	31.60
15	32.30	31.31	.....	31.80
16	32.40	31.60	32.26	31.85
17	32.50	31.80	32.10	32.17
18	32.38	31.99	31.90	32.36
19	32.22	32.05	31.89	31.75
20	32.10	32.08	31.92	31.85

N04--Continued.

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

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
21	32.10	32.05	32.30	32.19
22	32.39	31.80	31.62	32.36
23	32.46	31.76	31.66	32.40
24	32.60	32.30	31.91	31.75	32.39
25	32.04	31.85	31.66	32.15
26	32.36	.....	32.12	31.72	32.07	31.40
27	32.22	32.21	32.19	31.95
28	32.28	32.19	31.70	32.25
29	32.29	32.11	31.11	.....
30	32.42	32.07	31.12	.....
31	32.24		31.86		.....

N05. United States Navy. In south Philadelphia, on League Island, at navy yard. Drilled observation well, diameter 3 inches, depth 75 feet. Measuring point, top of casing, at land-surface datum. Altitude 11.871 feet above mean sea level. Automatic water-stage recorder installed Oct. 16, 1945.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 28	31.62	Nov. 1	31.42	Nov. 20	31.32	Dec. 11	30.90
Oct. 5	31.56	2	31.36	21	31.58	12	31.31
8	30.81	3	31.35	22	31.02	13	31.40
12	31.15	4	31.40	23	31.11	14	31.03
16	31.03	5	31.41	24	31.20	15	31.20
17	31.22	6	31.61	25	31.17	16	31.28
19	31.52	7	31.50	26	31.50	17	31.56
20	31.54	8	31.43	27	31.55	18	31.58
21	31.58	9	31.75	30	30.40	19	31.20
22	31.25	10	31.97	Dec. 1	31.08	20	31.18
23	31.26	11	31.96	2	31.22	21	31.45
24	31.34	12	31.57	3	30.92	22	31.59
25	31.16	13	31.26	4	30.86	23	31.58
26	31.18	14	31.15	5	30.97	24	31.60
27	31.73	15	31.43	7	30.44	25	31.30
28	31.80	16	31.62	8	30.70	26	30.89
29	31.66	17	31.52	9	30.95	27	31.39
30	31.55	18	31.35	10	30.65	28	31.55
31	31.36	19	31.25				

N06. United States Navy. In south Philadelphia, on League Island, at navy yard. Drilled observation well, diameter 3 inches, depth 63 feet. Measuring point, top of casing, at land-surface datum. Altitude 10.627 feet above mean sea level. Automatic water-stage recorder installed Oct. 16, 1945.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 28	29.47	Oct. 28	29.66	Nov. 23	29.26	Dec. 14	28.92
Oct. 5	29.49	29	29.50	30	29.35	15	29.16
8	28.70	30	29.44	Dec. 1	29.08	16	29.20
12	29.10	31	29.18	2	29.20	17	29.52
16	28.98	Nov. 1	29.41	3	28.93	18	29.70
17	29.08	2	29.26	4	28.90	19	28.96
18	29.39	6	29.72	5	28.99	20	29.20
19	29.41	7	29.74	6	28.54	21	29.41
20	29.44	8	29.39	7	28.40	22	29.62
21	29.44	9	29.64	8	28.80	23	29.72
22	29.12	10	29.88	9	28.88	24	29.73
23	29.14	11	29.88	10	28.60	25	29.42
24	29.31	12	29.44	11	28.85	26	28.80
25	29.27	13	29.09	12	29.34	27	29.36
26	29.45	16	29.67	13	29.44	28	29.60
27	29.65						

NO7. United States Navy. In south Philadelphia, on League Island, at navy yard. Drilled observation well, diameter 3 inches, depth 72 feet. Measuring point, top of casing, at land-surface datum. Altitude 11.065 feet above mean sea level. Automatic water-stage recorder installed Oct. 13, 1945.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 28	4.01	Oct. 29	4.45	Nov. 18	4.75	Dec. 8	3.26
Oct. 5	4.22	30	4.45	19	4.77	9	3.28
8	4.25	31	4.46	20	4.71	10	3.40
9	4.29	Nov. 1	4.48	21	4.69	11	3.45
12	4.40	2	4.60	22	4.61	12	3.52
13	4.50	3	4.60	23	4.44	14	3.55
14	4.52	4	4.59	24	4.45	15	3.50
15	4.55	5	4.60	25	4.42	16	3.57
16	4.57	6	4.70	26	4.47	17	3.74
17	4.57	7	4.71	27	4.50	13	3.78
18	4.60	8	4.70	28	4.50	19	3.78
19	4.61	9	4.75	29	3.42	20	3.90
20	4.62	10	4.75	30	3.10	21	4.01
21	4.62	11	4.74	Dec. 1	3.10	22	4.06
22	4.66	12	4.73	2	3.15	23	4.10
23	4.68	13	4.72	3	3.32	24	4.21
24	4.64	14	4.71	4	3.38	25	4.22
25	4.59	15	4.70	5	3.41	26	3.33
26	4.41	16	4.69	6	3.25	27	3.57
27	4.40	17	4.76	7	3.16	28	3.66
28	4.42						

N1 (#986, p. 286; #016, p. 331). United States Navy. In south Philadelphia, at navy yard. Measured by air-line pressure gage. Well pumping when measured.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	111	113	115	...	114.5	125.5	121	124.5	123.0	123.5	125.5	.....
2	111	113	115	...	120.5	126.5	124.5	124.0	117.0	125.0	125.5	.....
3	111	113	115	...	120	126	124	124.0	116.0	125.0	123.5	.....
4	111	...	...	...	112.5	126	126.5	124.0	124.5	125.0	120.5	.....
5	111	113	115	...	111	125	126	121.0	125.5	125.0	124	.....
6	111	113	114	...	108	126	127	124.0	126.0	116.5	126	.....
7	...	113	114	...	111.5	126	124.5	124.0	126.0	115.5	126	.....
8	113	113	113	...	109.5	125	121.5	124.5	126.0	121.5	126	.....
9	111	113	113	...	112	125	124	125.0	121.5	124	126	.....
10	111	113	113	...	121	121	123	125.0	125.0	125	122	.....
11	113	...	...	...	121	125	125	124.5	126.0	125	118	127.0
12	113	113	113	...	122.5	125	125	122.0	126.0	124	116.5	132.0
13	115	113	113	...	116	126	125.5	123.5	126.0	118.5	125	135.0
14	...	113	113	...	120	126	126	124.5	125.0	114.5	125.5	136.0
15	111	114	111	...	120.5	127	120.5	118.5	120.0	124	126.5	133.0
16	111	113	111	113	122	127	122.5	113.0	115.0	125.5	126	.....
17	111	113	113	113	123.5	...	125.0	121.5	123.0	126	.....	131.0
18	111	...	...	113	123	125	125.0	123.0	123.5	125.5	125	132.0
19	111	113	113	113	124	126.5	124.5	117.5	124.0	126	119.5	132.0
20	111	113	113	113	119	126	123.0	122.5	124.5	121.5	120	132.0
21	...	113	114	113	123	126	123.5	124.5	124.0	119.5	120	131.5
22	104	114	115	113	123	124	.....	125.0	122.0	124	114.5	.....
23	111	115	115	113	124	124	125.5	125.5	122.5	125.5	116	.....
24	111	115	115	113	123.5	117	124.0	125.5	124.5	126	112	.....
25	111	...	...	113	125	122.5	125.0	122.5	124.5	126.5	114	.....
26	111	113	115	113	125	124	125.0	120.5	125.5	126.5	120	.....
27	115	113	118	113	124	124	125.0	124.5	126.0	119.5	...	.....
28	...	113	115	113	125	124	125.0	125.5	126.0	117	...	128.5
29	113	117	113	125	124	123.0	123.0	126.0	121.5	126	...	.....
30	115	117	114.5	125	124	124.0	124.0	126.0	115.5	126.5
31	113	117	117	126	124	124.0	124.0	126.0	126	126

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N2 (*986, p. 28C; *1016, p. 331). United States Navy. In south Philadelphia, at navy yard. Measured by air-line pressure gage. Well pumping when measured.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	104	104	103	...	122	127	125	128.5	126.5	126.0	129.0	126.0
2	104	104	103	98	124	127.5	127.5	129.0	119.0	127.0	129.0	120.5
3	104	104	103	99	124	125	127.5	129.0	118.0	127.5	127.0	125.5
4	104	...	...	98	124	127.5	127.5	129.0	127.5	127.5	123.0	129.0
5	104	104	103	100	122	126	128	125.0	129.5	127.0	127.0	...
6	104	104	104	98	...	127.5	128	128.0	129.5	118.0	129.0	...
7	...	104	103	98	110	127	127.5	128.5	129.5	116.0	129.5	128.5
8	109	104	100	...	110	126	...	129.0	130.0	124.0	129.5	...
9	106	104	102	98	129	126	126.0	130.0	124.0	126.0	129.5	...
10	106	104	102	99	129	122	127.0	130.0	129.5	126.5	127.0	...
11	103	...	...	99	129	126	...	129.0	129.5	126.5	120.0	...
12	104	104	99	98	128	126	130	124.5	129.0	126.0	118.0	...
13	104	104	102	98	128.5	127	129.5	127.5	129.5	119.0	123.0	...
14	...	104	100	98	128.5	127	129	128.0	128.5	115.0	129.0	...
15	104	106	97	...	129.5	127.5	123	120.5	124.5	125.0	129.5	...
16	104	104	97	98	130	127	126.0	114.5	119.0	126.5	129.5	...
17	104	104	99	98	130	124	128.0	124.5	123.5	128.0	120.5	...
18	104	...	...	98	130	126.5	128.5	127.0	129.0	128.5	126.0	...
19	104	103	102	...	130	127	128.8	120.0	129.0	129.0	129.5	...
20	104	104	97	...	129.5	126.5	129.5	126.0	129.5	123.0	129.5	...
21	...	105	99	...	...	127	129.0	128.0	129.5	121.5	129.5	...
22	103	104	99	...	...	127	122.8	128.5	127.0	126.0	123.0	...
23	104	104	99	...	...	127.5	129.5	128.5	126.0	122.0	124.5	...
24	104	104	98	...	...	122	130.0	129.0	130.0	127.5	120.5	...
25	104	...	...	...	...	126	129.5	126.0	129.5	129.0	122.0	...
26	104	104	99	...	...	127	129.5	123.5	130.0	128.5	123.0	...
27	106	103	99	...	...	127	129.5	128.0	129.0	120.5	127.0	...
28	...	104	99	...	...	127	127.5	128.0	129.0	128.5	118.0	...
29	104	99	...	...	...	127.5	127.5	129.0	129.0	123.5	127.0	...
30	104	99	...	...	...	127	127	129.5	129.5	116.0	129.0	...
31	104	99	...	...	...	126.5	129.5	129.5	129.5	128.5	...	122.0

N3 (*986, p. 286; *1016, p. 332). United States Navy. In south Philadelphia, at navy yard. Measured by air-line pressure gage. Well pumping when measured.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	81	88	88	...	87	88	..	88	77.5	78.0	81.0	73.0
2	83	88	88	86	88.5	88	88	88	...	79.0	78.0	69.5
3	82	89	38	86	88	..	89	88	...	30.0	76.0	72.0
4	82	..	..	86	87	..	89	89.5	79.5	80.0	71.5	73.5
5	82	86	88	86	88	87	89	79.5	80.5	79.0	76.0	73.0
6	82	87	89	87	..	88	89	79.5	80.5	...	78.5	73.5
7	..	88	88	87	86	89	89	80.0	...	...	79.0	73.0
8	82	88	88	..	81	89	..	30.5	30.5	75.5	79.0	71.5
9	82	87	88.5	87.5	68	89	86	81.0	72.5	77.0	79.0	72.0
10	82	89	88	88	86	..	84	...	80.0	79.0	78.0	...
11	81	..	..	88	85	85	86	...	79.5	78.5	...	72.5
12	81	38	88	88	87	77	89	...	...	78.0	...	76.0
13	83	88	88	83	..	88	88.5	82.0	80.5	...	76.0	76.0
14	..	88	88	88	59	89	89	80.0	80.0	...	76.5	75.5
15	81.5	88	85	..	80	89	..	82.0	78.5	76.5	78.0	75.0
16	82	88	86	85	58	88	84.5	...	...	78.5	77.0	71.0
17	81	89	88	87	86	..	39	76.0	79.0	79.0	...	74.5
18	83	..	..	88	87	88	89	80.0	80.0	79.5	75.5	77.5
19	82	87	88	86	88	89	89	82.0	81.5	79.0	75.0	77.5
20	82	88	88	86	..	88.5	89	79.0	81.5	...	75.5	77.5
21	..	88	89	86	86	89	39	80.0	80.0	...	75.5	77.5
22	81	89	87	..	87	89	..	81.0	72.5	76.0	...	77.0
23	82	89	88	84	88	89	89	81.5	75.0	78.0	74.0	77.0
24	82	89	89	87	88	..	89	81.5	79.0	78.0	...	77.0
25	82	..	..	87	89	88	89	81.0	79.0	78.5	...	74.5

N3--Continued.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	82	89	89	87	89	88.5	89	...	30.0	79.0	75.5	76.0
27	81	89	89	87.5	...	89	89	30.0	30.5	...	74.0	76.5
28	..	89	88	88	88	89	89	80.5	20.5	...	73.5	77.0
29	89	88	..	88	89	..	..	31.0	77.0	77.0	73.0	76.0
30	89	88	87	88	89	88	88	81.0	....	78.5	73.0	73.0
31	88	89	88	88	89	89	81.5	...	81.5	...	74.0	...

N4 (*986, p. 286; *1016, p. 333). United States Navy. In south Philadelphia, at navy yard. Measured by air-line pressure gage. Well pumping when measured.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	70	79	80	..	78	79	..	79	....	64.0	64.0	60.5
2	74	79	80	78	79	79	79	79	....	65.0	64.0	....
3	72	78	80	78	78.5	..	30	79	....	65.5	....	59.5
4	72	..	..	78	77	78	80	30	64.0	65.5	....	60.0
5	72	76	80	78	78	75	80	..	66.0	65.0	60.5	61.0
6	73	78	80	78	..	79	81	..	67.0	....	63.5	60.5
7	..	78	79	78	75	79	81	67.25	....	....	64.5	59.5
8	72	78	78	..	60	80	..	67.50	69.0	57.0	64.0	59.5
9	71	78	78	78	73	80	77	68.25	75.5	65.5	64.5	....
10	72	78	78	79	73	..	75	68.9	73.5	66.0	61.5	....
11	73	..	..	79	73	77	78.5	63.5	66.0	67.0	....	....
12	73	79	78	79	73	70	81	56.5	66.5	63.5	....	....
13	73	79	78	79	..	79	80	62.5	66.5	....	62.0	....
14	..	78	78	79	70	80	80	63.5	66.5	....	62.5	62.0
15	72.5	79	76	..	..	80	..	77.5	65.0	55.5	64.5	61.5
16	72	79	76	75.5	..	79.5	73.5	....	....	61.0	64.0	57.5
17	71	79	78	78	77	..	80	....	65.0	64.0	....	59.0
18	73	..	..	78	78	79	81	66.5	66.0	64.5	64.0	64.5
19	72	78	78	75	79	30	81	....	66.0	64.5	65.0	64.5
20	72	79	78	75	..	80	83	65.0	66.0	57.0	65.0	64.5
21	..	79	78	75	77	80	82	66.5	65.0	55.0	65.0	65.0
22	71	80	77	..	79	80	..	67.0	68.0	61.5	....	64.0
23	72	80	78	75	79	80	82	67.0	68.0	64.0	59.5	....
24	72	80	78	78	79	..	81	67.0	....	62.5	....	....
25	72	..	..	78.5	79	79	81	....	66.0	64.0	55.5	....
26	72	80	78	78	80	80	81	58.5	66.0	64.0	....	64.5
27	81	80	78	78.5	..	80	80.5	66.0	65.5	....	62.0	63.0
28	..	80	78	78.5	77	80	81	67.5	66.0	....	61.0	65.0
29	80	..	79	..	79	80	..	68.0	67.0	62.0	61.0	65.0
30	79	79	78	79	80	80	79	67.5	....	63.5	60.0	....
31	79	78	78	79	79	79	79	....	...	64.0	....	....

N5 (*986, p. 287; *1016, p. 333). United States Navy. In south Philadelphia, at navy yard. Measured by air-line pressure gage.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	38.40	45.50	46.80	43.70	44.00	44.30	....	45.20	44.4	42.5	44.4	41.0
2	40.65	45.40	44.70	....	45.00	45.50	....	45.20	41.8	43.8	44.2	38.2
3	40.40	45.00	44.20	44.40	44.40	45.40	....	....	42.0	44.6	42.6	40.4
4	40.45	44.30	43.90	44.10	43.50	44.50	....	45.00	42.6	44.5	41.0	41.0
5	40.60	43.30	44.20	44.40	44.55	44.45	....	....	44.4	44.2	41.6	41.1
6	40.60	44.40	43.90	44.95	44.65	44.85	....	....	44.8	42.0	43.9	40.6
7	40.35	44.50	43.10	44.40	....	45.05	45.65	....	44.8	42.5	44.3	41.0
8	40.10	44.25	44.10	43.80	41.70	45.00	43.30	....	49.8	42.3	44.3	42.2
9	40.20	44.30	43.90	44.20	42.20	46.00	43.30	....	42.4	42.7	44.5	40.5
10	40.70	44.50	44.00	44.45	43.60	42.25	44.50	....	44.0	44.1	43.8	39.0
11	40.60	44.35	....	44.50	43.20	44.05	45.30	45.7	44.5	44.3	40.2	40.2
12	40.50	44.40	....	44.50	44.45	44.30	45.85	44.9	44.7	43.4	39.0	41.0
13	40.60	44.40	42.90	44.50	....	44.85	45.85	45.1	45.0	42.5	41.6	42.5
14	39.00	44.30	44.20	44.30	41.75	45.40	46.25	45.4	45.0	42.6	43.7	42.8

N5--Continued.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
15	39.90	44.10	.....	44.55	42.00	45.40	42.55	42.8	44.5	42.4	44.4	42.5
16	40.10	44.10	.....	43.20	.....	45.70	43.65	42.3	42.2	42.9	43.5	40.0
17	40.60	44.30	44.60	43.90	.....	44.75	45.40	42.4	44.0	46.2	41.0	40.5
18	40.80	42.00	41.50	43.80	44.40	45.45	45.50	44.0	44.0	45.0	43.0	43.5
19	40.55	.....	.....	43.35	44.85	45.80	45.95	42	44.4	.....	43.5	43.5
20	40.50	.....	43.90	42.95	41.00	45.45	45.70	42.5	44.7	.....	44.0	43.5
21	40.35	.....	44.00	42.85	43.50	45.60	45.55	.....	44.0	.....	44.0	43.7
22	41.10	.....	44.00	.....	44.30	45.60	43.25	45.2	43.0	.....	41.0	44.0
23	42.80	.....	44.30	42.70	44.60	45.90	45.00	45.5	43.8	.....	41.0	39.5
24	40.70	.....	44.30	43.90	44.70	43.85	45.45	45.2	43.8	.....	38.0	43.0
25	41.00	.....	43.20	43.95	44.75	44.60	45.35	44.0	44.3	.....	39.0	40.6
26	41.50	.....	44.20	44.10	44.45	45.50	45.45	42.0	44.6	.....	41.0	42.0
27	45.10	.....	44.50	44.55	43.10	45.80	45.70	43.8	44.8	.....	42.0	42.5
28	44.60	.....	44.70	44.65	43.60	45.90	45.60	45.0	45.0	.....	41.2	43.4
29	45.20	.....	44.65	44.20	44.70	45.85	45.20	45.7	44.2	.....	40.6	43.0
30	45.10	.....	44.75	44.50	44.70	.....	45.00	45.5	42.0	.....	40.8	38.7
31	45.10	.....	44.60	.....	44.70	.....	45.50	45.5	.....	44.0	.....	38.9

N6 (#986, p. 287; #1016, p. 334). United States Navy. In south Philadelphia, at navy yard. Equipped with automatic water-stage recorder.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	37.4	37.62	36.00	35.96	37.40	37.70	37.60	37.36	35.65	36.62	34.72
2	37.20	36.75	35.50	37.40	38.62	38.42	38.10	32.58	36.25	36.60	32.38
3	37.20	36.48	36.58	.....	38.30	38.85	38.25	32.63	36.70	35.16	34.20
4	37.00	36.10	36.76	.....	37.60	38.88	38.25	35.55	36.80	34.00	34.60
5	35.70	36.62	36.50	36.78	37.37	38.85	35.90	36.89	36.79	34.80	34.70
6	36.70	36.29	37.07	36.40	37.57	38.25	36.10	37.12	32.60	36.45	34.42
7	36.80	35.34	37.02	37.30	37.21	38.60	38.05	37.16	30.65	36.75	34.40
8	36.60	36.42	36.40	37.05	37.20	36.65	38.30	37.27	33.50	36.71	34.18
9	36.60	36.38	36.48	37.84	37.50	37.10	38.40	34.07	34.93	36.88	32.92
10	36.60	36.35	36.73	38.37	35.98	37.40	39.45	36.43	36.58	36.20	34.10
11	36.60	32.80	36.69	37.80	37.40	38.20	38.63	36.82	36.57	33.55	34.80
12	36.70	35.43	36.66	38.99	37.55	38.90	37.39	37.09	35.99	30.92	36.15
13	36.70	35.45	36.62	31.80	38.30	38.90	37.70	37.31	34.80	34.60	.....
14	36.60	36.58	36.52	35.00	38.62	38.90	37.88	37.32	31.06	35.85	.....
15	36.60	34.29	36.65	34.70	38.50	36.05	34.60	36.65	33.45	36.65	.....
16	36.50	34.40	35.30	34.70	38.89	36.90	31.98	32.30	35.35	36.78	.....
17	36.60	36.40	36.21	36.40	37.55	38.40	34.00	35.83	36.60	33.75	.....
18	35.10	34.00	35.94	36.90	38.35	38.50	37.29	36.43	36.70	35.91	.....
19	37.10	34.90	.....	37.20	38.66	39.00	34.89	36.65	36.70	36.00	.....
20	37.10	36.28	.....	34.00	38.55	38.75	36.58	36.85	34.95	36.45	.....
21	38.18	36.31	35.08	36.08	38.72	39.00	37.60	36.60	33.34	36.60	.....
22	38.18	36.26	35.42	36.92	38.72	36.50	37.88	34.95	34.40	33.30	.....
23	38.40	36.51	35.35	37.30	38.55	37.90	38.23	35.65	36.27	34.90	.....
24	38.70	36.65	36.23	37.42	36.10	38.35	37.90	36.75	35.80	32.30	.....
25	38.15	35.54	36.25	37.50	38.05	38.35	36.00	36.61	36.55	33.30	.....
26	38.00	36.61	36.30	37.28	38.50	38.40	34.57	36.88	36.58	35.00	.....
27	36.74	.....	35.90	38.77	38.40	36.80	37.09	33.70	35.91	.....
28	38.20	36.80	.....	36.30	38.80	38.70	38.10	36.98	31.22	34.92	.....
29	37.4	.....	36.79	36.75	37.10	38.74	38.15	38.70	36.55	35.00	34.38	.....
30	37.2	.....	36.82	36.70	37.10	39.12	38.00	38.20	31.60	36.48	34.53	.....
31	37.3	.....	36.70	.....	37.15	.....	38.30	37.80	.....	36.47	.....	.....

N8. United States Navy. In south Philadelphia, on League Island, at navy yard. Used drilled well, diameter 12 inches, depth 215 feet. Measuring point, breather hole in base of pump, at land-surface datum. Altitude 11.81 feet above mean sea level. Measured by air-line pressure gage. Well pumping when measured.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	..	84	82	..	80	80	..	85	82.5	82.4	82.0	79.0
2	..	84	80	80	81	80	81	85	....	83.6	82.5	76.0
3	..	84	80	81	80	..	82	85	....	84.4	78.5	78.0
4	80	80	79	82	86.0	82.5	84.3	76.0	79.0
5	..	80	80	80	80	80	82	85	84.5	83.8	79.5	80.0
6	..	80	80	79	..	79	82	83.5	85.0	76.5	82.0	79.5
7	..	80	80	80	80	79	81	85	83.0	76	83.0	79.5
8	..	80	79	..	80	80	..	85	85.0	79.5	82.5	78.0
9	..	80	77	80	80	79	80	85.5	78.5	82.0	83.5	76.0
10	..	80	80	80	80	..	80	86.0	84.0	83.5	81.0	78.0
11	80	80	79	80	86.0	83.0	84.0	76.0	79.0
12	..	80	79	81	80	79	81	82.0	85.0	82.5	....	82.0
13	..	80	79	79	..	79	80	85.0	85.5	76.5	....	82.5
14	..	80	79	80	80	80	82	85.5	85.0	76	....	83.0
15	..	79	77	..	80	82	..	76	83.0	78.0	82.5	81.5
16	..	80	77	79	80	81	79	76	76	81.0	82.5	....
17	..	80	80	80	80	..	83	80.0	83.0	82.0	76.0	....
18	80	80	81	84	....	84.5	83.0	81.0	85.0
19	..	79	77	80	80	81	82	....	85.0	82.0	82.0	85.5
20	..	80	77	80	..	82	84	82.8	85.0	77.0	82.0	85.5
21	..	80	77	80	80	82	84	84.6	85.0	76	82.0	86.0
22	..	80	80	..	80	81	..	85.2	79.0	80.0	76.0	85.5
23	...	80	80	77	80	82	84	85.8	80.5	81.5	78.5	74.5
24	...	80	80	80	80	..	83	85.4	84.0	81.5	76.0	84.5
25	79	80	80	83	79.6	84.0	82.0	76.0	82.5
26	..	80	80	81	80	80	83	77.6	84.5	82.5	80.0	84.0
27	91	80	77	81	...	81	83	84.4	85.0	76.0	80.5	84.5
28	..	80	80	80	79	83	87	85.2	85.0	76.0	79.0	85.0
29	90	..	81	..	81	82	82	85.6	82.0	81.0	79.0	85.0
30	84	..	80	80	80	81	85.5	85.4	76	82.0	79.5	....
31	84	..	81	..	80	..	86.5	86.0	..	82.0	....	....

N9. United States Navy. In south Philadelphia, on League Island, at navy yard. Used drilled well, diameter 16 inches, depth 146 feet. Measuring point, top edge of hole drilled in base of pump, at land-surface datum. Altitude 11.70 feet above mean sea level. Well was not pumped during 1945. Water levels, in feet below land-surface datum, 1945: Sept. 15, 39.25; Dec. 1, 34.40; Dec. 3, 33.98.

M1 (#1016, p. 335). United States Navy. In south Philadelphia, at Naval Ammunition Depot, Fort Mifflin. Equipped with automatic water-stage recorder.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	22.72	22.42	22.90	.....	.....	18.20	17.35	17.90	17.48	18.31	16.78
2	22.80	.....	22.65	.....	.....	18.13	17.40	17.80	17.30	17.92	16.48
3	22.55	.....	22.80	.....	17.75	18.40	17.30	17.90	18.29	18.02	16.27
4	22.35	.....	22.72	.....	17.93	18.40	17.53	17.62	18.32	18.20	16.35
5	22.10	.....	22.50	.....	18.03	18.18	17.56	17.68	18.05	18.12	16.34
6	22.20	21.80	23.30	.....	18.22	18.10	17.13	17.90	17.83	18.30	15.85
7	22.12	22.00	23.20	.....	18.22	18.18	17.22	17.85	17.37	18.36	15.92
8	21.80	22.20	22.95	.....	18.00	18.20	17.50	17.90	17.31	18.37	16.22
9	21.77	22.20	22.90	.....	18.00	18.00	17.60	17.82	17.78	18.36	15.35
10	21.95	22.25	22.90	.....	17.86	17.75	17.56	17.69	18.00	18.75	15.03
11	22.40	22.90	.....	17.76	18.08	17.80	17.52	17.90	18.56	15.53
12	22.25	22.90	.....	17.94	18.15	17.79	17.97	17.82	18.25	15.83
13	22.15	22.90	18.13	17.87	18.02	17.73	17.60	18.30	17.97	15.70
14	22.85	18.04	17.85	18.02	17.65	17.45	18.06	18.02	15.17
15	22.95	17.77	18.06	17.75	17.60	18.18	18.16	18.53	15.36
16	22.85	17.79	18.01	17.96	17.60	18.40	17.98	17.86	15.45

Ml--Continued.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
17	.....	21.80	22.50	17.81	18.18	18.00	17.34	18.15	18.27	17.81	15.70	
18	.....	22.30	22.65	17.59	18.07	17.92	17.50	17.40	18.29	17.20	15.62	
19	.....	22.25	23.00	18.14	18.25	17.93	17.75	17.55	18.19	17.04	15.10	
20	.....	22.12	22.65	18.10	18.21	17.78	17.67	17.86	18.31	17.46	15.32	
21	21.58	.....	22.03	22.50	17.68	18.23	17.65	17.70	17.83	18.17	17.60	15.50
22	21.35	.....	22.00	.....	17.72	18.10	17.55	18.15	18.02	17.90	16.61	15.30
23	21.40	.....	22.28	.....	18.05	18.25	17.40	18.35	18.02	17.96	16.98	16.07
24	21.50	.....	22.50	.....	18.18	18.15	17.55	17.65	17.79	17.90	17.06	15.82
25	22.38	.....	22.80	.....	18.07	17.93	17.50	17.60	17.90	17.96	17.02	15.45
26	22.00	.....	22.55	.....	18.00	17.90	17.45	17.60	18.01	17.99	17.22	14.83
27	22.30	21.40	22.50	.....	17.90	17.98	17.50	17.75	18.17	18.66	17.26	15.60
28	22.10	21.70	22.72	.....	17.68	17.96	17.42	17.80	17.93	18.60	16.79	15.73
29	21.90	.....	22.60	.....	.....	17.95	17.40	18.05	17.82	18.31	16.21	.....
30	22.20	.....	22.75	.....	.....	18.02	17.62	18.05	18.20	18.31	16.48	.....
31	22.40	.....	22.30	.....	.....	.....	17.55	18.10	.....	18.10	.....	.....

Schuylkill County

72 (*817, p. 204; 845, p. 427; 886, p. 634; 906, p. 244; 936, p. 248; 944, p. 240; *986, p. 287; 1016, p. 335). Near Pine Grove. Extremes of observed water level, in feet below land-surface datum: Highest, Aug. 31, 1940, 4.14; lowest, Nov. 5, 1944, 31.78.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	14.81	Mar. 21	16.70	May 31	14.30	Nov. 2	19.60
14	16.58	26	14.66	June 8	17.30	9	20.00
21	18.10	Apr. 1	16.36	13	18.62	16	21.50
28	19.39	8	14.10	22	20.33	23	13.30
Feb. 4	20.23	15	16.42	28	21.15	30	13.20
11	13.90	27	15.75	Sept. 26	16.64	Dec. 7	13.76
18	13.46	May 4	15.70	Oct. 5	13.75	14	16.80
25	13.57	10	14.35	12	17.74	22	16.80
Mar. 5	14.10	17	12.30	19	18.72	28	14.73
11	14.72	23	15.61	26	18.76		

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). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	14.18	Apr. 15	13.99	July 22	15.79	Oct. 14	14.77
14	14.13	22	13.78	29	15.80	21	15.15
22	14.20	29	13.69	Aug. 5	15.93	31	15.40
29	14.18	May 8	13.25	12	15.95	Nov. 5	15.15
Feb. 5	14.14	17	12.20	22	16.24	13	13.83
13	13.58	20	13.05	24	15.42	14	14.73
19	13.46	27	13.70	27	15.92	21	14.15
27	12.42	June 3	14.00	Sept. 3	15.89	27	14.13
Mar. 4	12.45	10	14.48	9	15.27	Dec. 4	13.80
11	12.75	17	14.27	16	15.54	9	13.75
18	13.55	24	14.65	23	12.47	19	14.30
29	13.62	July 1	15.10	30	14.75	26	13.93
Apr. 1	13.75	8	15.40	Oct. 2	14.65	31	14.40
11	13.75	15	15.51	7	14.63		

115 (*840, p. 360; 845, p. 428; 886, p. 635; 906, p. 244; 936, p. 249; 944, p. 240; *986, p. 287; 1016, p. 336). Near Trent. Extremes of observed water level, in feet below land-surface datum: Highest, Dec. 19, 1942, 33.47; lowest, Apr. 17, 1937, 41.70.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	34.63	Apr. 7	34.02	July 7	34.34	Oct. 6	35.07
13	34.59	14	33.90	14	34.49	13	34.99
20	34.54	21	33.95	21	34.63	20	34.96
27	34.52	28	33.94	28	34.71	27	34.98
Feb. 3	34.52	May 5	33.86	Aug. 4	34.83	Nov. 3	34.88
10	34.46	12	33.82	11	34.88	10	34.98
17	34.34	19	33.39	18	35.09	17	34.79
24	34.31	26	33.96	25	35.05	24	34.52
Mar. 3	33.94	June 2	33.30	Sept. 1	35.26	Dec. 1	34.52
10	34.21	9	33.93	8	35.32	8	34.46
17	34.17	16	33.93	15	35.29	15	34.41
24	34.06	23	34.01	22	35.20	22	34.38
31	34.01	30	34.18	29	35.17	29	34.34

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). Near Millview. Extremes of observed water level, in feet below land-surface datum: Highest, Mar. 3, 1945, 18.22; lowest, Aug. 31 to Oct. 9, 1935; June 13 to Oct. 31, 1936; June 12 to June 26, July 31, Sept. 18 to Oct. 16, 1937; Aug. 6 to Sept. 10, 1938; July 23, Sept. 2 to Oct. 28, 1939; Oct. 25 to Nov. 1, 1941; Sept. 25 to Oct. 16, 1943; Aug. 10 to Oct. 13, 1944, when well was dry.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	21.97	Apr. 7	24.58	July 7	24.47	Oct. 6	24.23
12	23.13	14	24.91	14	24.82	13	24.35
20	23.55	21	25.14	21	24.28	20	24.92
27	24.18	28	24.52	28	24.05	27	24.88
Feb. 3	24.79	May 5	21.72	Aug. 4	24.36	Nov. 3	24.92
10	25.11	12	21.79	11	24.39	10	24.83
17	25.20	19	22.20	18	23.25	17	24.70
24	20.75	26	22.65	25	25.18	24	25.96
Mar. 3	18.22	June 2	21.38	Sept. 1	25.28	Dec. 1	25.82
10	19.54	9	22.25	8	25.53	8	25.91
17	20.28	16	23.33	15	25.40	15	24.13
24	22.68	23	23.11	22	24.65	22	24.31
31	23.13	29	24.03	29	24.44	29	24.34

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). 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, 1945
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	6.83	7.10	3.93	5.05	6.53	5.54	5.76	6.93	8.45	....	5.68	4.41
2	5.95	7.18	4.03	5.11	6.51	5.64	5.85	6.71	8.52	....	5.72	4.41
3	5.77	7.24	3.50	5.04	6.49	5.64	5.99	6.53	8.66	....	5.31	4.58
4	5.68	7.33	2.92	5.05	6.47	5.64	6.15	6.38	8.62	....	4.41	4.67
5	5.63	7.34	3.32	4.58	6.41	5.58	6.30	6.33	8.68	....	4.30	4.65
6	5.61	7.35	3.35	4.20	6.34	5.48	6.48	6.29	8.73	....	4.30	4.70
7	5.62	7.44	3.34	4.28	6.27	5.38	6.64	6.25	8.78	....	4.39	4.34
8	5.65	7.47	3.70	4.38	6.18	5.32	6.79	6.22	8.83	....	4.46	4.09
9	5.70	7.48	4.02	4.51	6.10	5.29	6.89	6.19	8.87	....	4.52	3.80
10	5.76	7.50	4.21	4.65	6.03	5.28	7.03	6.19	8.91	....	4.62	3.82

100--Continued.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
11	5.83	7.52	4.20	4.78	5.72	5.28	7.19	6.19	8.64	....	4.65	8.98
12	5.91	7.52	4.24	4.99	5.39	5.29	7.38	6.19	8.99	....	4.32	4.10
13	5.98	7.52	4.35	5.02	5.25	5.30	7.56	6.24	9.03	....	4.22	....
14	6.00	7.52	4.25	5.13	5.20	5.32	7.73	6.31	9.07	....	3.86	....
15	6.07	7.53	3.82	5.21	5.04	5.37	7.87	6.39	9.10	....	3.80	....
16	6.13	7.44	3.64	5.36	5.00	5.37	7.97	6.50	....	....	3.98	4.90
17	6.19	7.33	3.59	5.49	4.97	5.33	8.07	6.63	....	....	4.11	4.98
18	6.25	7.13	3.86	5.63	4.85	5.25	8.18	6.77	....	....	4.17	....
19	6.36	7.08	4.11	5.79	4.66	5.20	8.20	6.91	....	4.85	4.20	....
20	6.45	6.92	4.30	5.98	4.64	5.16	8.32	7.05	7.82	4.92	3.60	....
21	6.47	6.84	4.29	6.15	4.67	5.15	8.31	7.20	7.52	5.03	3.72	....
22	6.54	6.69	3.33	6.20	4.74	5.11	8.36	7.36	7.25	5.18	3.40	....
23	6.60	5.66	3.79	6.31	4.81	5.09	8.37	7.53	....	5.30	3.46	6.22
24	6.65	5.16	4.20	6.43	4.91	5.07	8.39	7.70	....	5.40	3.75	....
25	6.68	5.03	4.40	6.54	5.02	5.10	8.42	7.85	....	5.49	4.02	....
26	6.75	4.84	4.54	6.58	5.13	5.20	8.44	7.94	....	5.52	4.18	....
27	6.85	3.60	4.63	6.54	5.16	5.33	8.47	8.03	....	5.55	4.45	....
28	6.91	3.77	4.74	6.55	5.20	5.45	8.50	8.12	....	5.60	4.57	....
29	6.96	....	4.83	6.57	5.28	5.55	7.79	8.21	....	5.61	4.33	....
30	7.02	....	4.92	6.55	5.35	5.68	7.47	8.29	....	5.63	4.40	6.84
31	7.05	....	5.00	....	5.44	....	7.18	8.37	....	5.63	....	6.93

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). 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, 1945

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	11.22	Apr. 7	10.95	July 7	15.27	Oct. 6	10.80
13	12.50	14	12.47	14	15.87	13	10.90
20	13.66	21	13.58	21	15.65	20	12.56
27	14.02	28	12.07	29	15.55	27	12.97
Feb. 3	14.55	May 5	10.74	Aug. 4	15.13	Nov. 3	14.18
10	14.73	12	9.31	11	15.87	9	14.46
17	14.32	19	9.35	18	17.48	17	14.22
24	10.20	26	11.11	25	19.17	24	10.62
Mar. 3	9.53	June 1	13.92	Sept. 1	20.15	Dec. 1	9.41
10	9.46	9	10.60	8	21.20	8	10.65
17	10.35	16	12.57	15	21.48	15	12.43
24	9.30	23	13.70	22	14.94	22	13.58
31	10.76	30	14.38	29	13.40	29	13.40

Washington County

112 (*817, p. 299; 845, p. 432; 886, p. 637; 906, p. 226; 936, p. 251; 944, p. 242; *886, p. 289; 1016, p. 338). At Amity. Extremes of observed water level, in feet below land-surface datum: Highest, Mar. 19, 1938, 9.46; lowest, Oct. 1, 1938, 34.84.

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

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	19.59	Mar. 3	12.50	Apr. 28	19.50	June 23	19.30
13	17.52	10	11.50	May 5	19.50	30	18.50
20	16.50	17	16.50	12	19.66	July 7	24.50
27	17.50	24	11.90	19	12.50	14	27.50
Feb. 3	20.50	30	15.50	26	15.50	21	28.50
10	21.50	Apr. 7	14.90	June 2	18.00	28	31.50
17	18.20	14	18.90	9	19.50	Aug. 4	30.80
24	13.50	21	17.00	16	18.50	11	31.50

112--Continued.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 18	31.50	Sept. 29	30.50	Nov. 3	29.50	Dec. 1	18.50
25	32.50	Oct. 6	23.50	11	26.50	8	16.00
Sept. 1	31.50	13	24.00	17	23.50	15	14.50
8	32.30	20	22.50	20	17.59	22	16.20
15	32.50	27	30.50	24	20.50	29	13.90
22	33.00						

Wayne County

83 (*817, p. 300; 936, p. 251; *986, p. 290; 1016, p. 338). Near Hawley. Extremes of observed water level, in feet below land-surface datum: Highest, May 23, 1942, 2.08; lowest, Oct. 25, Nov. 15 to Dec. 20, 1941, when well was dry.

Water level, in feet below land-surface datum, 1945											
Jan.	6	11.34	Apr.	7	8.62	July	7	8.34	Oct.	6	10.02
	13	11.15		14	8.77		14	9.76		13	9.45
	20	11.13		21	8.86		22	6.14		20	9.48
	27	11.11		28	8.94		28	5.51		27	9.93
Feb.	3	11.04	May	5	8.98	Aug.	4	6.94	Nov.	3	10.11
	10	11.00		12	9.04		11	6.61		10	10.01
	17	11.03		19	9.07		18	7.42		18	9.37
	24	11.06		27	9.14		25	8.14		24	8.76
Mar.	3	9.17	June	2	9.26	Sept.	1	8.64	Dec.	1	8.78
	10	3.97		9	9.29		6	9.48		8	8.67
	17	2.52		16	9.35		15	9.37		15	9.07
	24	3.85		23	8.94		22	9.42		22	9.45
	31	9.84		30	6.74		29	9.52		29	9.62

RHODE ISLAND

By W. B. Allen

PROGRAM OF WORK

The program of water-level measurements in observation wells in Rhode Island was started in the autumn of 1944 as an integral part of the State-wide systematic investigation of ground-water conditions in cooperation with the Rhode Island Industrial Commission. These investigations include a study of ground-water conditions and ground-water supplies throughout the State, giving particular attention at present to the areas in which large quantities of water are pumped from wells for industrial use. Detailed quantitative studies will be made in these heavily pumped areas in order to determine the probable safe yields of the water-bearing formation.

Field investigations in Providence were completed in 1944, and reports covering well and test-hole records and available information on ground-water conditions were published the following year.^{1/2/}

Other studies include seismic work at Portsmouth and unpublished reports on water-supply problems in several areas.

This report lists 2,005 individual measurements made during 1945, measurements made in 1 well during 1938, 1 well in 1939, 4 wells in 1943, and 11 wells in 1944. At the end of 1945, water levels were being measured daily in 5 wells and weekly in 7 others. Continuous records from a water-stage recorder were obtained at one well during the latter part of the year.

PRECIPITATION

The precipitation in Providence during 1945 was 46.43 inches, or 7.97 inches above the normal for the 41-year period 1905-45. The precipitation was distributed irregularly with abundant snowfall in January, February, and December and moderate droughts in July and September. Precipitation

^{1/} Roberts, C. M., and Brashears, M. L. Jr., Progress report on the ground-water resources of Providence, Rhode Island: R. I. Industrial Commission, Geol. Bull. 1, 1945.

^{2/} Roberts, C. M., and Halberg, H. N., Records of wells and test holes in Providence, Rhode Island: R. I. Industrial Commission, Geol. Bull. 2, 1945.

during November, 8.50 inches, was the greatest for the period of record and exceeded the normal for this month by 5.44 inches.

FLUCTUATIONS OF WATER LEVEL

Ground-water levels in Providence and Cranston are affected both by precipitation and pumping. Most of the fluctuations in these industrialized areas, however, are related to variations in withdrawal. The measurements included in this report indicate that water levels declined seasonally during the summer of 1945 and rose during the winter months. The period of record, however, is too short to justify conclusions as to long-term trends. Water levels in observation wells in Kent County reached their highest levels for their period of record in December. Inasmuch as the aquifer in the vicinity of these wells receives water by seepage from the adjacent river, variations in river stage are reflected in ground-water levels.

Information on the water-level fluctuations in wells for which records are available is summarized below.

Summary of ground-water level data in Rhode Island,
in feet below land-surface datum

Well No.	First measured	Lowest observed water level		Highest observed water level		Water level on last day of record, 1945
		Water level	Date	Water level	Date	
Barrington 1	Jan. 10, 1945	46.92	Dec. 15, 1945	43.61	Mar. 3, 1945	44.93
Cranston 3	Aug. 22, 1938	33.3	Aug. 26, 1945	24.5	Aug. 26, 1938	29.3
Cranston 4	June 22, 1939	34.1	Nov. 2, 1945	22.3	June 22, 1939	31.8
East Green- wich 3	July 17, 1944	23.5	Aug. 15 to Sept. 11, 1944	7.3	Feb. 27, 1945	11.5
Providence 5	Dec. 16, 1944	9.46	Nov. 3, 1945	8.20	Mar. 10, 1945	8.03
Providence 48	Dec. 16, 1944	9.75	Oct. 31, 1945	.....	.....	8.78
Providence 66	Dec. 23, 1944	16.32	Nov. 9, 1945	15.23	Dec. 23, 1944	15.67
Providence 94	Dec. 23, 1944	28.34	Sept. 1, 1945	11.93	Dec. 14, 1945	14.80
Providence 113	Dec. 16, 1944	49.12	Nov. 9, 1945	48.10	May 11, 1945	48.52
Providence 1110	Nov. 5, 1945	6.67	Nov. 5, 1945	5.94	Dec. 7, 1945	6.08
Warwick 33	July 17, 1944	23.5	Aug. 16 to Sept. 12, 1944	5.0	Dec. 27, 1945	5.7
Warwick 9	July 1, 1943	39.8	Sept. 10, 1944	12.5	Dec. 19, 1945	24.5
Warwick 40	July 1, 1943	22.6	Sept. 6, 1944	6.3	Dec. 29, 1945	7.2

WELL-NUMBERING SYSTEM

The identifying symbols for wells in Rhode Island consist of the name of the town or city followed by a number, wells in each town or city being numbered independently. There is no geographical significance to the numbers.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Bristol County

Barrington 1. 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. Unused drilled well, diameter 10 inches, depth 232.2 feet below land surface. Measuring point, east edge of top of steel casing, 2 inches above concrete floor, at land-surface datum, and 50.90 feet above mean sea level.

Water level, in feet below land-surface datum, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	44.63	Apr. 7	43.74	July 7	44.70	Oct. 6	45.20
13	44.63	14	44.05	14	44.40	13	45.20
20	44.64	21	44.16	21	44.90	20	45.30
27	44.74	28	44.25	28	45.00	27	44.60
Feb. 3	44.78	May 5	44.16	Aug. 4	45.20	Nov. 3	45.70
10	44.64	12	44.17	11	45.30	10	46.91
17	44.83	19	44.15	18	45.50	17	46.90
24	44.62	26	44.14	25	45.30	24	46.91
Mar. 3	43.61	June 2	44.24	Sept. 1	44.70	Dec. 1	46.91
10	43.75	9	44.37	8	44.70	8	46.91
17	43.73	16	44.47	15	44.80	15	46.92
24	43.73	23	44.58	22	44.80	23	44.96
31	43.62	30	44.27	29	45.10	29	44.93

Kent County

East Greenwich 3. 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. Drilled pumped gravel-packed well, diameter 18 inches, depth 107 feet below land surface. Measuring point, top edge of casing, 2.0 feet above land-surface datum, and about 34 feet above mean sea level. Measurements made by East Greenwich Water Co. in 2-inch observation well about 3 feet from centerline of casing.

Water level, in feet below land-surface datum, 1944						
Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	20.0	23.5	17.5	16.5	9.5
2	20.0	23.5	17.5	16.5	9.5
3	20.0	23.5	18.0	16.5	9.5
4	20.0	23.5	18.0	16.5	9.5
5	20.0	23.5	18.0	16.5	9.5
6	20.0	23.5	18.0	16.5	9.5
7	20.0	23.5	18.0	16.5	9.5
8	20.2	23.5	18.0	18.0	9.5
9	20.2	23.5	18.0	18.0	9.5
10	20.5	23.5	18.0	18.0	9.5
11	20.5	23.5	18.0	14.5	9.5
12	20.8	23.0	18.0	14.5	9.5
13	21.2	23.0	18.0	14.5	9.5
14	22.0	23.0	18.0	14.5	10.0
15	23.5	16.5	18.0	14.5	10.0
16	23.5	16.5	18.0	14.5	10.0

East Greenwich 3--Continued.

Water level, in feet below land-surface datum, 1944							
Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	
17	19.0	23.5	16.0	18.0	12.0	10.0	
18	19.0	23.5	15.0	18.0	12.0	10.0	
19	19.0	23.5	15.0	18.0	12.0	10.0	
20	19.0	23.5	14.5	18.0	12.0	10.0	
21	19.5	23.5	14.5	18.0	12.0	10.0	
22	19.5	23.5	14.5	18.0	11.5	10.0	
23	19.5	23.5	14.5	16.5	11.5	10.0	
24	19.5	23.5	14.5	16.5	11.5	10.0	
25	19.5	23.5	14.5	16.5	11.5	10.0	
26	20.0	23.5	15.0	16.5	11.5	10.0	
27	20.0	23.5	15.0	16.5	11.5	10.0	
28	20.0	23.5	15.0	16.5	11.5	10.0	
29	20.0	23.5	17.5	16.5	11.5	10.0	
30	20.0	23.5	17.5	16.5	11.5	10.0	
31	20.0	23.5		16.5		10.0	

Water level, in feet below land-surface datum, 1945												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	9.0	9.5	7.5	8.0	9.0	10.5	11.7	12.4	14.2	15.5	17.3	13.0
2	9.0	9.5	7.5	8.2	10.0	10.4	11.5	12.5	14.3	15.5	17.3	13.0
3	9.0	9.5	8.0	8.2	9.5	10.3	11.6	12.7	14.0	15.5	17.2	12.7
4	9.0	9.5	8.0	8.3	9.7	10.5	11.4	12.8	14.4	15.6	17.2	12.8
5	9.0	9.5	8.0	8.3	10.0	10.8	11.5	12.7	14.5	15.7	17.2	13.0
6	9.0	9.5	8.0	8.3	9.5	10.8	11.7	12.7	14.5	16.0	17.1	11.5
7	9.0	9.5	8.0	8.5	10.3	10.8	11.7	12.7	14.5	16.0	17.2	11.5
8	9.0	9.5	8.2	8.5	10.3	10.9	11.5	12.8	14.5	16.2	17.3	11.5
9	9.0	9.5	8.3	8.7	10.3	10.9	11.7	12.8	14.5	16.2	17.4	11.4
10	9.0	9.5	8.5	8.8	10.0	10.8	11.7	12.8	14.5	16.3	17.4	11.6
11	9.0	9.5	8.5	8.7	10.0	10.9	11.5	12.9	14.6	16.3	17.4	11.7
12	9.0	9.5	8.5	8.8	10.0	11.0	11.8	12.8	14.6	16.3	17.5	11.8
13	9.0	9.5	8.5	8.8	10.1	11.0	11.8	13.2	14.7	16.3	17.5	12.0
14	9.0	9.5	8.5	8.8	10.3	11.5	11.9	13.2	14.7	16.3	17.3	12.0
15	9.5	9.5	8.7	8.8	10.3	12.0	11.8	13.3	14.7	16.5	17.3	12.2
16	9.5	9.5	8.7	8.8	10.3	11.3	12.0	13.3	12.0	16.6	17.3	12.3
17	9.5	9.5	8.5	8.8	10.4	11.0	12.0	13.5	14.7	16.6	17.3	12.5
18	9.5	9.5	8.5	8.8	10.4	11.5	12.0	13.9	14.7	16.5	17.2	12.5
19	9.5	9.5	8.5	8.0	10.4	11.5	12.1	13.8	14.7	16.7	17.0	12.4
20	9.5	9.5	8.5	8.9	18.4	10.5	12.0	13.9	14.6	17.0	16.1	12.6
21	9.5	9.5	8.5	8.8	10.5	10.4	12.1	14.0	14.8	17.0	16.0	12.6
22	9.5	9.5	7.7	8.8	10.5	10.5	12.0	14.1	14.7	17.1	16.0	12.5
23	9.5	8.0	7.7	8.9	10.6	10.5	12.0	14.1	14.2	17.2	16.0	12.4
24	9.5	8.0	7.7	9.0	10.5	10.5	12.2	14.0	14.8	17.2	15.5	12.5
25	9.5	8.0	7.7	9.0	10.5	11.0	12.3	14.0	14.8	17.3	15.5	12.6
26	9.5	8.0	7.8	8.5	10.5	11.3	12.3	14.0	14.8	17.3	15.4	11.4
27	9.5	7.3	7.8	8.3	10.6	11.5	12.3	14.1	14.8	17.3	15.3	10.0
28	9.5	7.3	8.0	8.3	10.7	11.5	12.2	14.1	15.0	17.3	15.3	10.0
29	9.5		8.7	8.4	10.5	11.3	12.0	14.3	15.3	17.3	13.0	10.7
30	9.5		8.0	9.0	10.5	11.5	12.2	14.3	15.3	17.3	13.0	11.0
31	9.5		8.0		10.5		12.3	14.3		17.3		11.5

Warwick 33. 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. Drilled pumped gravel-packed well, diameter 18 inches, depth 118 feet below land surface. Measuring point, top edge of casing, about 2 feet below land-surface datum, and about 32 feet above mean sea level. Measurements made by East Greenwich Water Co. in 2-inch observation well, 4 feet from centerline of casing.

Water level, in feet below land-surface datum, 1944							
Day	July	Aug.	Sept.	Oct.	Nov.	Dec.	
1	20.5	23.5	19.0	14.5	10.0	
2	20.5	23.5	19.0	14.5	10.0	
3	20.7	23.5	19.5	14.5	10.0	
4	20.7	23.5	19.5	14.5	10.0	
5	20.8	23.5	19.5	14.5	10.0	

Warwick 33--Continued.

Water level, in feet below land-surface datum, 1944						
Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
6	....	20.8	23.5	19.5	14.5	10.0
7	....	20.8	23.5	19.5	14.5	10.0
8	....	20.8	23.5	19.5	14.5	10.0
9	....	20.8	23.5	19.5	14.5	10.0
10	....	21.0	23.5	19.5	14.5	10.0
11	....	21.0	23.5	19.5	14.0	10.0
12	....	21.0	23.5	19.5	14.0	10.0
13	....	21.5	23.0	19.5	14.0	10.0
14	....	21.5	23.0	19.5	14.0	10.5
15	....	22.0	14.0	16.0	14.0	10.5
16	....	23.5	16.0	16.0	14.0	10.5
17	19.5	23.5	16.5	16.0	12.5	10.5
18	20.0	23.5	16.5	16.0	12.5	10.5
19	20.5	23.5	17.0	16.0	12.5	10.5
20	20.5	23.5	17.0	16.0	12.5	10.5
21	20.5	23.5	17.0	16.0	12.5	10.5
22	20.5	23.5	17.0	16.0	12.0	10.5
23	20.5	23.5	17.0	14.5	12.0	10.5
24	20.5	23.5	17.0	14.5	12.0	10.5
25	20.5	23.5	17.5	14.5	12.0	10.5
26	20.5	23.5	18.0	14.5	12.0	10.5
27	20.5	23.5	18.0	14.5	12.0	10.5
28	20.5	23.5	18.0	14.5	11.0	10.5
29	20.5	23.5	19.0	14.5	11.0	10.5
30	20.5	23.5	19.0	14.5	10.0	10.5
31	20.5	23.5		14.5		10.5

Water level, in feet below land-surface datum, 1945												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	9.5	10.0	8.5	8.7	9.3	9.7	10.3	11.5	13.3	14.1	15.2	9.5
2	9.5	10.0	8.5	8.8	9.7	9.7	10.3	11.6	13.3	14.2	15.3	9.3
3	9.5	10.0	8.5	8.8	9.5	9.5	10.3	11.7	13.2	14.3	15.2	9.3
4	9.5	10.0	8.5	8.7	9.6	9.6	10.3	11.7	13.3	14.3	15.0	9.3
5	9.5	10.0	8.5	8.7	9.7	9.7	10.2	11.5	13.3	14.3	15.0	9.3
6	9.5	10.0	8.5	8.7	9.5	9.6	10.3	11.7	13.3	14.5	15.0	8.0
7	9.5	7.5	8.5	9.0	9.6	9.6	10.2	12.0	13.3	14.5	15.0	8.1
8	9.5	7.5	8.5	9.0	9.6	9.7	10.2	12.0	13.3	14.5	15.1	8.1
9	9.5	7.5	8.5	9.0	9.6	9.7	10.3	12.1	13.3	14.6	15.2	8.0
10	9.5	7.5	8.5	9.2	9.5	9.6	10.3	12.1	13.4	14.7	15.1	8.1
11	9.5	11.0	8.5	9.2	9.4	9.7	10.3	12.0	15.4	14.7	15.0	8.2
12	9.5	11.0	8.5	9.3	9.5	9.7	10.5	12.1	13.5	14.7	15.1	8.3
13	9.5	11.0	8.5	9.3	9.5	9.6	10.5	12.5	13.5	14.7	15.1	8.3
14	9.5	11.0	8.5	9.3	9.5	10.0	10.5	12.5	13.5	14.7	14.8	8.3
15	10.0	11.0	8.5	9.3	9.6	11.5	10.0	12.7	13.5	14.8	14.8	8.3
16	10.0	11.0	8.5	9.3	9.7	10.5	10.5	12.7	13.5	14.8	14.8	8.4
17	10.0	11.0	8.5	9.3	9.7	10.0	10.4	12.8	13.5	14.8	14.7	8.5
18	10.0	11.0	8.5	9.3	9.7	10.3	10.6	13.0	13.6	14.8	14.7	9.0
19	10.0	11.0	8.5	9.3	9.7	10.2	10.7	13.0	13.5	15.0	14.5	9.0
20	10.0	11.0	8.5	9.4	9.6	10.0	10.7	13.0	13.4	15.1	13.0	9.2
21	10.0	11.0	8.5	9.3	9.7	10.1	10.6	13.2	13.5	15.1	13.0	9.2
22	10.0	11.0	8.5	9.3	9.7	10.0	10.7	13.3	13.5	15.2	12.5	9.1
23	10.0	9.0	8.5	9.3	9.7	10.1	10.6	13.3	13.3	15.2	12.5	9.1
24	10.0	9.0	8.5	9.3	9.7	10.0	10.8	13.2	13.6	15.2	12.0	9.0
25	10.0	9.0	8.5	9.3	9.7	10.2	11.0	13.2	13.6	15.2	12.0	9.0
26	10.0	7.0	8.5	9.3	9.7	10.3	11.2	13.2	13.7	15.2	12.0	8.5
27	10.0	8.5	8.5	9.3	9.7	10.2	11.3	13.1	13.7	15.2	12.0	5.0
28	10.0	8.5	8.7	9.3	9.8	10.1	11.0	13.0	13.8	15.2	11.9	5.5
29	10.0		9.3	9.3	9.8	10.2	11.0	13.3	14.0	15.2	9.5	5.4
30	10.0		8.7	9.5	9.8	10.3	11.3	13.3	14.0	15.1	9.5	5.5
31	10.0		8.7		9.8		11.5	13.3		15.2		5.7

Warwick 39. 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. Drilled pumped gravel-packed well, diameter 18 inches, depth 61 feet below land surface. Measuring point, top edge of casing, about at land-surface datum and 35.9 feet above mean sea level. Measurements made by Public Works office at Davisville in 2½-inch observation well, 3 feet from centerline of casing.

Water level, in feet below land-surface datum, 1943

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	26.0	....	31.6	33.8	31.2	31.5
2	....	29.5	31.3	33.6	30.5	31.5
3	....	29.5	31.3	33.4	30.4	31.9
4	26.0	29.5	31.3	32.7	30.5	32.2
5	....	29.8	30.3	32.8	30.8	32.2
6	....	30.0	30.6	33.6	30.8	32.3
7	....	30.0	31.3	33.6	30.7	32.7
8	16.5	....	31.7	33.4	30.5	32.7
9	....	29.8	31.3	33.6	30.2	32.8
10	....	30.0	31.9	33.9	30.5	33.8
11	17.0	30.5	29.6	33.5	30.2	33.5
12	27.0	30.5	31.0	33.9	29.4	33.7
13	....	30.8	31.5	33.5	29.2	33.6
14	....	29.8	31.5	33.3	28.8	33.7
15	....	....	31.7	34.2	29.5	34.2
16	....	29.5	31.9	33.9	28.4	33.8
17	26.5	30.5	32.2	33.7	28.7	35.0
18	....	30.8	32.3	32.8	29.0	34.4
19	....	31.0	32.2	32.1	28.7	34.6
20	26.0	31.3	31.3	31.6	29.0	34.7
21	....	31.3	32.4	31.6	29.0	34.8
22	....	31.3	32.6	31.7	29.2	34.7
23	27.0	31.0	33.3	31.3	29.7	35.4
24	....	31.3	33.3	31.3	30.7	34.8
25	27.0	31.3	33.4	31.2	30.8	34.7
26	....	31.3	33.4	31.3	30.8	34.5
27	26.5	31.5	32.3	31.5	31.2	34.3
28	....	31.5	33.0	31.0	31.2	33.7
29	28.5	31.5	33.5	31.0	31.9	33.5
30	28.5	31.5	33.5	30.8	31.7	33.8
31	....	31.5	....	30.7	....	34.0

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	34.5	33.3	32.3	28.0	26.7	29.5	30.5	36.6	39.2	34.2	33.5	25.7
2	34.3	32.5	32.2	28.0	27.2	28.8	30.7	37.1	39.3	34.3	33.7	25.7
3	34.5	33.3	32.3	28.2	27.0	29.0	31.0	36.3	39.0	34.7	33.8	25.7
4	34.4	33.5	35.5	27.5	26.9	29.3	31.2	36.7	39.0	34.3	34.2	26.7
5	34.5	33.5	35.3	27.3	26.5	29.5	31.3	36.3	38.8	34.8	33.6	26.2
6	36.2	33.3	35.2	27.2	27.2	30.5	32.8	36.4	39.2	35.0	33.3	25.7
7	36.0	33.3	33.3	28.0	26.7	30.8	33.0	36.5	39.5	34.7	33.7	26.0
8	33.0	34.4	33.1	28.1	26.5	30.3	32.4	36.3	39.3	34.5	33.8	26.2
9	32.7	34.3	33.0	27.8	26.2	30.5	32.3	36.4	39.5	34.5	34.7	25.8
10	32.8	34.9	33.2	27.7	26.3	30.8	33.0	36.6	39.8	34.7	33.8	25.7
11	31.7	34.3	31.7	27.3	26.4	31.1	33.7	37.0	39.0	35.2	33.6	25.3
12	31.3	34.5	31.7	27.5	26.7	31.0	33.9	37.0	38.8	36.3	32.8	25.3
13	31.8	34.3	30.0	27.5	26.9	30.1	34.6	37.3	39.2	36.3	32.0	25.5
14	32.1	34.2	29.8	27.4	26.7	30.3	34.6	37.2	39.2	36.3	31.8	24.7
15	31.3	33.4	29.5	28.7	26.8	30.4	34.3	37.8	36.8	36.2	32.0	25.0
16	31.8	32.9	29.8	28.5	27.1	30.3	34.4	36.3	35.4	35.5	30.7	24.8
17	31.7	33.4	29.8	28.7	27.3	31.2	34.5	37.5	34.2	36.2	30.3	25.0
18	32.3	33.4	29.8	27.7	27.2	31.1	34.3	37.9	33.0	35.8	30.5	25.3
19	32.2	33.4	31.0	27.3	27.5	31.3	34.3	38.1	33.3	36.5	30.7	25.3
20	34.5	33.3	30.8	27.7	28.5	30.7	35.0	37.9	33.2	36.3	29.5	25.2
21	34.7	33.0	28.4	27.7	27.2	30.5	35.0	37.5	33.2	36.5	29.3	24.8
22	32.5	32.1	28.3	28.3	27.5	31.3	35.2	37.9	33.3	36.3	30.2	24.9
23	32.3	33.3	30.3	28.5	27.7	31.3	35.5	36.3	34.2	34.9	29.5	24.9
24	32.5	32.2	29.7	27.7	27.5	31.3	34.8	38.0	33.7	33.5	29.0	24.8
25	32.3	32.3	29.8	27.1	27.5	29.8	36.2	38.0	33.5	33.3	28.7	24.5
26	32.5	32.5	29.2	26.8	27.3	30.0	36.7	38.3	33.8	33.7	29.2	24.0

Warwick 39--Continued.

Water level, in feet below land-surface datum, 1944											
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. Dec.
27	33.7	32.5	29.3	27.2	27.4	30.2	36.9	38.7	34.3	33.6	27.8 24.3
28	33.8	33.0	28.3	27.0	27.3	30.2	36.8	38.0	34.6	33.8	27.7 24.3
29	34.1	32.0	29.0	26.2	27.7	31.1	37.3	38.3	34.3	33.3	27.9 24.2
30	34.0		28.0	26.3	27.3	31.3	37.6	38.1	34.5	33.5	27.5 24.5
31	33.0		28.5		27.3		36.4	39.0		33.3	24.3

Water level, in feet below land-surface datum, 1945											
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. Dec.
1	24.2	24.6	24.2	24.5	25.2	25.3	27.1	31.0	34.2	38.2	36.1 16.6
2	24.0	25.0	23.9	24.3	25.3	25.3	27.0	31.2	34.5	37.8	27.6 16.3
3	23.5	25.2	23.3	24.2	25.4	25.5	26.7	31.4	34.8	38.1	36.3 16.7
4	23.3	25.3	23.8	24.3	25.2	25.4	27.1	31.8	34.3	37.5	35.8 16.7
5	23.4	25.2	23.8	24.7	24.8	25.4	27.3	32.2	34.3	37.7	34.8 15.8
6	24.4	25.3	23.2	24.8	24.8	25.3	27.4	32.3	34.3	37.6	34.5 24.8
7	24.2	25.3	23.0	24.6	24.5	25.5	27.5	31.7	34.8	37.4	34.3 15.5
8	24.5	25.4	23.0	24.8	24.7	25.8	27.6	31.4	35.2	37.4	27.3 14.3
9	24.3	25.4	23.0	24.7	24.6	25.9	27.8	31.5	35.3	37.8	24.1 14.2
10	24.5	25.4	23.2	24.6	24.5	25.8	27.8	31.6	35.2	37.5	35.9 13.8
11	24.5	25.3	23.3	24.7	24.4	25.7	28.3	31.8	35.3	37.4	24.0 13.9
12	24.6	25.3	23.3	24.8	24.8	25.7	28.2	32.3	35.3	37.3	22.3 13.6
13	24.5	25.4	23.5	24.8	24.5	25.7	28.4	32.5	35.5	37.5	22.1 13.7
14	24.5	25.3	23.5	25.0	24.5	26.2	28.7	32.7	35.3	38.2	21.9 13.3
15	24.0	25.4	23.8	25.3	24.5	26.3	28.8	32.8	35.3	38.2	21.8 13.4
16	24.3	25.4	23.8	25.2	24.6	27.0	28.7	32.5	34.5	38.8	20.3 13.6
17	24.3	25.5	23.3	25.3	24.6	27.3	28.8	32.6	34.3	36.6	31.7 13.4
18	24.3	25.3	24.2	25.3	24.5	27.3	29.3	32.8	36.2	37.1	20.3 13.5
19	24.3	25.5	24.2	25.4	24.5	27.3	29.2	33.2	36.3	37.5	21.3 12.5
20	24.5	25.4	24.1	25.5	24.7	27.3	29.2	33.3	36.4	37.7	19.7 23.8
21	24.5	25.3	24.0	25.5	24.6	27.0	29.6	33.4	36.5	37.5	21.0 23.9
22	24.5	25.3	23.5	25.4	24.5	27.0	29.7	33.5	36.8	37.7	19.0 24.0
23	24.3	24.5	23.7	25.5	24.5	27.3	29.8	33.6	37.4	37.5	30.4 24.0
24	24.5	24.4	23.8	25.5	24.6	27.2	29.8	33.8	37.6	37.5	30.2 24.3
25	24.4	24.4	24.0	25.6	24.8	27.3	29.8	33.9	37.6	37.3	18.3 24.3
26	24.5	24.5	23.8	25.5	24.9	27.1	29.9	34.1	37.8	36.8	29.8 24.4
27	24.5	24.4	24.0	25.0	25.7	26.7	30.4	33.9	37.3	37.3	18.3 23.5
28	24.8	23.3	24.0	25.0	24.7	26.3	30.5	33.9	37.2	37.3	18.2 23.3
29	24.9		24.3	25.3	24.8	26.7	31.2	33.5	37.4	36.2	17.4 23.5
30	24.7		23.4	25.1	24.9	26.5	31.2	33.9	37.6	36.3	16.6 24.6
31	24.8		23.5		25.2		30.8	33.8		36.2	24.5

Warwick 40. 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. Drilled pumped gravel-packed well, diameter 18 inches, depth 80 feet below land surface. Measuring point, top edge of casing, at land-surface datum, and 31.4 feet above mean sea level. Measurements made by Public Works office at Davisville in 2½-inch observation well, 3 feet from centerline of casing.

Water level, in feet below land-surface datum, 1943						
Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	11.0	....	15.5	17.3	15.5	16.5
2	....	13.5	15.8	17.4	15.6	16.7
3	....	13.5	15.8	17.3	15.3	16.8
4	12.0	13.5	15.8	16.4	16.3	17.1
5	....	13.5	15.5	16.8	15.8	17.2
6	....	13.5	15.4	17.3	16.2	17.3
7	....	13.5	15.5	17.3	15.8	17.8
8	12.5	....	15.7	17.4	15.8	17.7
9	....	13.5	16.1	17.3	15.7	17.7
10	13.0	13.8	16.0	17.5	15.7	18.0
11	13.0	13.8	16.3	17.3	15.5	18.3
12	12.5	14.0	16.0	17.3	13.8	18.3
13	....	14.3	16.2	17.8	14.1	18.5
14	....	14.3	16.3	17.7	14.2	17.8
15	....	....	16.2	17.7	14.5	18.2

Warwick 40--Continued.

Water level, in feet below land-surface datum, 1943						
Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
16	....	12.5	16.1	17.7	15.2	18.5
17	12.5	13.8	16.4	17.8	15.2	18.4
18	....	13.8	16.5	16.6	15.3	19.1
19	....	14.0	16.2	16.2	15.3	19.3
20	13.0	14.3	16.3	15.7	15.5	19.5
21	....	14.3	16.8	16.3	15.7	18.4
22	....	14.3	16.7	16.1	15.5	18.5
23	13.0	14.0	16.8	16.2	16.3	19.3
24	....	14.3	16.9	16.3	16.6	19.3
25	13.0	15.0	17.2	16.1	15.3	19.3
26	....	15.0	17.1	16.2	16.4	19.5
27	13.5	15.5	16.3	16.1	16.3	19.0
28	....	15.2	16.9	15.6	16.2	18.3
29	13.5	15.0	17.1	15.5	16.4	18.4
30	13.5	15.3	17.3	15.2	16.5	18.6
31	....	15.5		15.3		18.6

Water level, in feet below land-surface datum, 1944												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	18.7	17.8	16.7	12.5	11.8	13.5	14.8	20.4	22.3	17.9	16.3	9.3
2	18.5	17.7	17.1	12.2	11.4	13.0	14.8	20.3	22.3	18.0	16.7	9.8
3	18.5	18.2	17.0	12.5	11.3	13.8	15.3	19.9	22.3	18.3	17.5	9.5
4	18.8	18.5	18.6	12.2	11.3	14.1	15.6	20.0	22.3	18.1	17.3	10.2
5	18.7	18.3	18.4	12.2	11.3	14.8	15.5	20.2	22.4	18.5	17.2	10.3
6	20.2	18.1	18.1	12.2	11.3	14.3	16.5	20.0	22.6	18.7	17.2	10.7
7	20.0	18.3	17.5	12.0	11.3	14.5	16.5	20.2	22.4	19.2	17.5	10.8
8	17.2	18.5	17.4	12.4	11.2	14.9	16.6	20.1	22.3	19.3	17.5	10.3
9	19.2	18.3	17.2	12.4	11.1	15.0	16.8	20.4	22.3	19.4	18.3	10.1
10	19.4	19.2	17.0	12.6	11.2	15.2	16.8	20.3	22.5	19.5	18.2	9.8
11	16.9	19.2	16.5	12.3	11.4	15.3	17.3	20.5	22.2	19.7	16.8	9.6
12	16.8	19.3	16.8	12.2	11.5	15.1	17.3	20.4	22.3	19.7	15.0	9.5
13	17.1	19.2	15.5	12.3	11.2	15.3	17.8	20.5	22.2	19.8	15.0	9.5
14	17.3	19.3	15.3	12.5	11.2	14.2	17.8	20.4	21.5	19.4	15.3	9.5
15	16.9	18.6	15.3	12.6	11.3	14.3	17.9	20.5	18.6	19.4	15.3	9.6
16	16.8	18.6	14.8	12.4	11.3	14.4	18.2	20.7	16.7	19.5	15.3	9.7
17	17.0	17.4	14.7	12.6	11.3	15.3	18.0	20.8	15.9	19.4	15.2	9.5
18	17.4	17.0	14.7	11.7	11.8	15.2	18.2	21.8	15.2	19.4	13.0	9.8
19	17.3	16.7	15.0	11.8	12.0	15.0	18.3	21.9	15.8	19.5	13.2	9.5
20	17.8	16.8	15.2	12.2	12.3	15.2	18.2	21.8	16.5	19.6	13.0	9.7
21	18.0	16.8	14.4	12.3	12.2	15.0	18.4	21.8	16.3	19.7	12.7	9.7
22	18.1	16.7	14.3	12.6	12.3	15.0	19.3	21.7	16.5	19.7	12.8	9.8
23	18.2	16.5	14.5	12.5	12.3	15.2	19.1	21.9	16.8	17.9	12.5	9.8
24	18.5	16.9	13.8	12.4	12.4	15.3	18.7	21.9	16.8	17.1	12.4	9.8
25	18.1	16.8	14.1	10.8	11.8	15.1	19.5	22.0	16.5	16.8	12.0	9.7
26	18.3	16.9	13.3	10.8	11.8	15.0	19.7	21.8	17.1	16.5	12.7	9.5
27	18.6	16.9	13.5	11.2	12.2	14.2	19.9	21.8	17.3	16.7	12.4	9.3
28	18.5	17.0	12.9	12.0	12.3	14.3	19.6	22.0	17.8	16.3	12.1	9.3
29	18.6	16.8	12.8	11.7	12.5	14.3	20.2	22.0	17.7	16.7	12.3	9.4
30	18.6		12.8	11.6	12.3	14.5	20.3	21.8	18.2	16.7	12.2	9.2
31	18.0		12.5		12.3		20.1	22.4		16.3		9.2

Water level, in feet below land-surface datum, 1945												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	9.2	10.2	9.1	9.5	9.8	10.4	10.5	15.7	17.9	20.5	20.3	12.2
2	9.2	10.5	8.9	9.5	10.0	10.4	10.7	15.8	18.0	20.3	19.8	11.9
3	8.2	10.2	8.8	9.4	10.2	10.3	11.2	16.0	18.2	20.3	17.2	12.2
4	8.3	10.2	8.6	9.6	9.8	10.3	11.4	16.3	18.0	20.3	17.0	12.0
5	8.3	10.2	8.8	9.5	9.4	10.3	11.8	16.5	18.1	20.6	18.6	11.8
6	8.4	10.3	8.5	9.5	9.4	10.3	12.0	16.7	18.2	20.6	18.3	9.3
7	8.4	10.2	8.5	9.7	9.5	10.5	12.2	15.8	18.6	20.4	18.6	11.5
8	8.5	10.3	8.5	9.8	9.6	10.7	11.8	15.5	18.8	20.6	18.6	9.7
9	8.5	10.2	8.5	9.6	9.7	10.8	11.8	15.5	18.9	21.8	18.7	9.5
10	8.5	10.3	8.4	9.5	9.7	10.8	12.5	15.8	19.3	21.2	18.3	9.3
11	9.2	10.3	8.4	9.5	9.5	10.8	12.7	16.2	19.4	21.1	18.3	9.5
12	10.0	10.5	8.4	9.7	9.4	10.5	13.2	16.3	19.6	21.0	18.0	9.5
13	9.7	10.5	8.4	9.8	9.5	10.6	13.5	16.4	19.5	21.0	18.2	9.6

Warwick 40--Continued.

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

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
14	9.5	10.4	8.5	9.9	9.4	11.0	13.6	16.6	19.4	21.5	18.1	9.6
15	10.8	10.3	8.8	9.8	9.5	11.3	13.3	16.7	19.6	18.5	17.2	9.4
16	9.0	10.5	8.8	10.0	9.7	11.6	13.5	16.8	19.6	....	16.1	9.4
17	9.5	10.5	9.1	10.0	9.7	11.4	13.7	16.8	19.8	20.1	16.3	9.4
18	9.5	10.5	8.7	9.9	9.5	11.5	13.8	17.1	19.5	21.0	15.9	9.5
19	9.5	10.5	8.8	10.0	9.4	11.5	13.8	17.3	19.5	21.3	16.3	7.5
20	9.5	10.3	9.1	10.0	9.4	11.5	13.9	17.4	19.8	21.2	15.2	7.5
21	9.5	10.3	9.0	10.1	9.4	11.5	13.0	17.6	19.8	20.8	15.3	7.6
22	9.6	10.3	8.8	9.8	9.4	11.6	13.7	17.7	20.2	21.2	14.4	7.6
23	9.5	9.1	8.8	9.9	9.5	11.8	13.7	17.8	20.2	21.1	14.5	7.5
24	9.5	9.2	8.8	9.9	9.8	11.6	14.7	17.9	20.2	21.2	14.2	7.3
25	9.5	9.0	8.8	10.1	9.9	11.7	14.7	17.8	20.0	21.1	14.0	7.3
26	9.5	9.2	9.0	10.0	9.9	12.0	15.0	17.4	20.2	20.9	14.2	6.9
27	9.5	9.2	9.0	9.8	10.3	11.2	15.3	17.1	20.3	20.7	13.8	6.8
28	10.0	9.0	9.1	9.8	10.0	11.0	15.2	17.1	20.4	20.8	13.8	6.5
29	10.2		9.3	9.8	10.0	11.1	15.4	17.3	20.6	19.9	13.6	6.3
30	10.0		9.3	9.8	10.0	10.5	15.6	17.8	20.6	20.1	12.5	7.2
31	10.2		9.3		10.3		15.5	17.9		20.1		7.2

Providence County

Cranston 3. 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. Pumped gravel-packed well, diameter 24 inches, depth 56 feet below land surface. Measuring point, top edge of casing, 7.7 feet below land-surface datum, and 57.59 feet above mean sea level.

Water level, in feet below land-surface datum, 1938, 1943-45

Date	Water level	Date	Water level	Date	Water level
Aug. 22, 1938	25.3	Jan. 29, 1945	27.7	Sept. 26, 1945	31.2
26	24.5	Feb. 25	27.3	27	31.0
June 15, 1943	28.6	July 4	28.9	29	31.0
July 12	29.7	10	30.5	Oct. 5	31.2
Oct. 4	30.0	16	29.0	12	31.0
Jan. 24, 1944	30.5	25	32.0	19	30.8
Mar. 15	31.3	30	31.0	22	30.7
Apr. 17	31.0	Aug. 5	29.7	23	30.8
May 8	30.9	12	33.1	29	31.1
21	29.4	19	30.3	Nov. 2	31.0
June 3	31.1	26	33.3	13	30.3
17	32.0	Sept. 2	29.8	27	30.5
28	32.6	9	29.8	Dec. 3	29.3
July 5	32.0	16	30.2	13	29.3
Dec. 18	28.7	21	31.2	21	29.3
Jan. 1, 1945	28.0	24	31.2		

Cranston 4. 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. Pumped gravel-packed well, diameter 24 inches, depth 68.5 feet below land surface. Measuring point, top edge of casing, 4.9 feet below land-surface datum, and 60.67 feet above mean sea level.

Water level, in feet below land-surface datum, 1939, 1943-45

Date	Water level	Date	Water level	Date	Water level
June 22, 1939	22.3	May 8, 1944	31.2	Feb. 25, 1945	29.2
June 28, 1943	32.7	21	30.4	July 4	31.2
July 20	33.2	June 3	30.9	10	31.6
Sept. 20	32.6	17	31.2	16	31.3
Jan. 24, 1944	32.4	28	31.2	30	32.3
Mar. 15	32.7	July 5	31.3	Aug. 5	32.3
Apr. 2	31.9	Jan. 1, 1945	28.9	12	29.3
17	31.8	28	29.2	19	32.5

Cranston 4--Continued.

Water level, in feet below land-surface datum, 1939, 1943-45					
Date	Water level	Date	Water level	Date	Water level
Aug. 26, 1945	28.9	Oct. 5, 1945	32.9	Nov. 2, 1945	34.1
Sept. 2	33.2	12	33.0	13	33.6
9	32.6	19	32.9	27	33.1
16	32.4	22	33.1	Dec. 3	32.7
21	32.9	23	33.1	13	31.6
24	32.7	29	33.7	21	31.8
29	32.7				

Providence 5. American Silk Spinning Co. 339 feet south of Admiral Street, 111 feet southeast of Whipple Street, and 1.1 miles northwest of Providence. Unused drilled industrial well, diameter 6 inches, depth 472 feet below land surface. Measuring point, south edge of top of $1\frac{1}{2}$ -inch pipe set in flange on top of 6-inch pipe, at land-surface datum, and 28.28 feet above mean sea level.

Water level, in feet below land-surface datum, 1944-45					
Dec. 16, 1944	9.02	Apr. 27, 1945	8.54	Sept. 8, 1945	9.17
23	9.12	May 5	8.65	14	9.25
30	9.05	11	8.60	21	9.24
Jan. 6, 1945	8.78	19	8.65	27	9.26
13	8.73	26	8.62	Oct. 5	9.34
20	8.75	June 2	8.75	12	9.30
27	8.67	9	8.82	19	9.35
Feb. 3	8.82	16	8.84	26	9.38
10	8.80	23	8.84	Nov. 3	9.46
17	8.71	30	8.79	10	9.44
24	8.54	July 7	8.84	16	9.30
Mar. 3	8.25	14	8.94	23	9.02
10	8.20	21	8.83	30	8.95
17	8.34	28	8.95	Dec. 7	8.70
24	8.27	Aug. 4	9.02	14	8.34
31	8.40	11	9.03	21	8.41
Apr. 7	8.45	18	8.98	24	8.41
14	8.50	25	9.10	31	8.03
21	8.43	Sept. 1	9.09		

Providence 48. 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. Unused drilled industrial well, diameter 8 inches, depth 121 feet below land surface. Measuring point, top edge of 1-inch hole in center of wooden well cover, at land-surface datum, and 45.79 feet above mean sea level. Automatic water-stage recorder installed June 2, 1945.

Lowest daily water level, in feet below land-surface datum, 1944-45

Dec. 16, 1944	7.79	Feb. 17, 1945	8.26	Apr. 14, 1945	6.31
23	7.74	24	8.35	21	6.37
30	7.29	Mar. 3	5.54	28	6.38
Jan. 6, 1945	7.35	10	7.14	May 5	7.11
13	7.76	17	6.66	11	7.22
20	7.77	24	7.23	12	7.22
27	7.90	31	6.49	19	5.95
Feb. 3	8.40	Apr. 7	7.36	26	7.01
10	8.20				

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

(From recorder charts)							
Day	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	7.52	9.09	7.87	8.51	9.75	....
2	8.39	7.36	9.11	7.36	8.60	9.57	....
3	8.38	7.13	9.09	7.27	8.77	8.38	....
4	8.86	7.01	7.88	7.93	9.02	7.90	....
5	8.04	7.16	7.77	7.96	9.19	9.62	....

Providence, 48--Continued.

Lowest daily water level, in feet below land-surface datum, 1945
(From recorder charts)

Day	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
6	8.03	7.35	8.95	7.91	9.30	9.70	....
7	8.02	7.42	8.97	8.29	7.89	9.66	8.37
8	8.59	7.18	8.95	7.86	9.00	9.65	8.65
9	7.85	8.79	8.85	7.50	9.16	9.68	7.67
10	7.68	8.85	8.87	7.91	9.44	8.38	9.03
11	8.80	8.86	8.36	7.92	9.11	7.55	8.94
12	8.85	8.90	7.65	7.94	8.83	9.72	8.98
13	8.85	8.86	8.96	7.88	8.61	9.24	9.16
14	8.86	7.71	8.90	8.19	7.78	9.30	9.03
15	8.88	7.64	7.72	7.85	9.22	9.30	8.65
16	8.28	8.78	8.58	8.07	8.85	9.48	8.03
17	7.31	8.87	7.83	....	9.19	9.27	9.05
18	8.71	8.85	7.36	....	9.69	8.23	9.09
19	8.77	8.90	7.79	....	9.70	9.51	9.01
20	8.68	8.75	7.97	....	8.67	9.47	8.99
21	8.60	7.87	8.00	6.89	8.23	9.11	9.00
22	7.89	7.67	....	7.60	9.51	8.08	8.61
23	7.70	8.83	....	7.46	9.54	9.31	a 7.40
24	7.57	8.74	....	7.76	9.66	8.71	7.09
25	8.67	8.82	....	8.06	9.49	7.59	6.90
26	8.70	8.99	7.31	9.04	9.73	8.82	8.77
27	8.66	9.04	9.08	a 9.65	8.35	8.79	8.25
28	8.59	7.92	9.02	8.64	7.89	9.35	3.80
29	8.70	7.77	7.91	8.16	9.49	9.21	7.70
30	7.56	8.82	7.94	7.78	9.59	9.14	6.98
31		9.11	7.95		9.75		8.78

a Estimated.

Providence 66. McKesson & Robbins, Inc. In boiler room, about 250 feet south of Hartford Avenue, 250 feet east of Heath Street, and 2.2 miles west of Providence. Unused drilled industrial well, diameter 8 inches, depth 502 feet below land surface. Measuring point, west edge of top of casing, flush with floor, at land-surface datum, and 44.62 feet above mean sea level. Measurements discontinued Dec. 7, 1945.

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

Date	Water level	Date	Water level	Date	Water level
Dec. 23, 1944	15.23	Apr. 28, 1945	15.80	Aug. 24, 1945	16.13
30	16.28	May 5	15.75	Sept. 1	16.10
Jan. 6, 1945	15.49	12	15.70	8	16.15
13	16.16	19	15.72	14	16.20
20	16.20	26	15.77	21	16.18
27	16.27	June 2	15.78	27	16.23
Feb. 3	16.28	9	15.87	Oct. 5	16.26
10	16.27	16	15.87	11	16.19
17	16.18	23	15.86	19	16.17
24	15.87	30	15.74	26	16.13
Mar. 3	15.54	July 7	15.81	Nov. 2	16.10
10	15.59	14	15.78	9	16.32
17	15.71	21	15.83	16	16.21
24	15.70	27	15.95	23	16.08
31	15.66	Aug. 3	15.97	30	16.05
Apr. 7	15.62	10	16.00	Dec. 7	15.67
21	15.89	17	16.08		

Providence 94. Providence Gas Co. Sassafras Point plant. About 2,050 feet east of Allens Avenue, 1,100 feet north of Terminal Road, and 2.1 miles south of Providence. Unused drilled industrial well, diameter 16 inches, depth 120 feet below land surface. Measuring point, south edge of hole in steel plate, at land-surface datum, and 12.32 feet above mean sea level.

Providence 94--Continued.

Water level, in feet below land-surface datum, 1944-45					
Date	Water level	Date	Water level	Date	Water level
Dec. 23, 1944	27.49	May 5, 1945	24.72	Sept. 8, 1945	27.35
30	26.47	11	24.87	14	28.02
Jan. 6, 1945	24.54	19	25.47	21	27.89
13	26.19	26	20.06	27	27.76
20	26.74	June 2	17.56	Oct. 5	27.46
27	26.66	9	18.16	12	26.09
Feb. 3	27.42	16	17.59	19	26.41
10	28.20	23	19.21	26	25.14
17	24.18	30	24.62	Nov. 2	25.57
24	27.26	July 7	26.70	9	25.16
Mar. 3	24.18	14	24.22	16	26.47
10	26.23	21	27.18	23	21.77
17	24.16	28	27.80	30	21.97
24	24.15	Aug. 4	23.02	Dec. 7	14.22
31	24.36	11	27.74	14	11.93
Apr. 7	23.79	18	28.33	21	15.76
14	26.52	25	26.94	24	14.84
21	21.02	Sept. 1	28.34	31	14.80
28	26.34				

Providence 113. 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. Unused drilled well, diameter 12 inches, measured depth 207.8 feet below land surface. Measuring point, east edge of top of steel casing, 7.77 feet below land-surface datum, which is 72.12 feet above mean sea level.

Water level, in feet below land-surface datum, 1944-45					
Date	Water level	Date	Water level	Date	Water level
Dec. 16, 1944	49.06	Apr. 28, 1945	48.14	Sept. 8, 1945	48.84
23	49.05	May 5	48.11	15	48.96
30	49.02	11	48.10	21	48.99
Jan. 6, 1945	48.94	19	48.18	27	49.04
13	48.83	26	48.27	Oct. 5	49.04
20	48.77	June 2	48.17	12	48.99
27	48.72	9	48.22	19	49.03
Feb. 3	48.73	16	48.21	26	49.01
10	48.58	23	48.23	Nov. 2	49.09
17	48.59	30	48.20	9	49.12
24	48.54	July 7	48.38	16	49.08
Mar. 3	48.36	14	48.42	23	49.00
10	48.36	21	48.45	30	48.95
17	48.33	28	48.51	Dec. 7	48.87
24	48.27	Aug. 4	48.59	14	48.85
31	48.20	11	48.66	21	48.82
Apr. 7	48.32	18	48.66	24	48.83
14	48.17	25	48.68	31	48.52
21	48.12	Sept. 1	48.83		

Providence 1110. 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. Unused driven industrial well, diameter 2½ inches, depth 21 feet below land surface. Measuring point, south edge of top of casing, at land-surface datum, and 31.00 feet above mean sea level.

Water level, in feet below land-surface datum, 1945					
Date	Water level	Date	Water level	Date	Water level
Nov. 5	6.67	Nov. 30	6.36	Dec. 14	6.22
26	6.42	Dec. 7	5.94	21	6.38
27	6.51			Dec. 24	6.31
				31	6.08

VERMONT

By H. L. Free, Jr.

PROGRAM OF WORK

Periodic measurements of water level were continued in Vermont in 1945 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. Thirteen measurements were made during the year.

FLUCTUATIONS OF WATER LEVEL

The water level in the well at Wrightsville appears to fluctuate with the precipitation and the temperature. In 1944 the net drop in water level was about 1.1 feet with 35.39 inches of precipitation as measured at nearby Northfield. In 1945 there was a net rise in water level of about 1.7 feet with 45.81 inches of precipitation. Normal precipitation at Northfield is 33.84 inches.

The water level was below normal at the end of January, and about normal at the end of February and March. At the end of April it was at an all-time high for the period of record, September 1942 to December 1945. The water level was either at or near to the highest level for each month from May to December and at the end of the year the water level was at its highest December level.

The sharp rise beginning in February and continuing through April was due partly to melting snow resulting from a period of above-normal temperature lasting from the latter part of February until the latter part of April, and precipitation in April of about 16 percent above normal. March and April were the warmest on record according to the U. S. Weather Bureau. The drop in water level beginning in May and continuing through August reflected the needs of plants. The sharp rise between August 30 and October 10, bringing the water level to its highest stage for this time of year, was the result of high precipitation and the approach of the end of the growing season. There was 7.69 inches of rainfall during September

at Northfield, or about 250 percent of normal, and about 3.7 inches from the end of September to October 10. The water levels dropped during the remainder of the year, with precipitation at nearby Northfield somewhat above normal during November and slightly below normal during December. As a result of the high water level in the early part of October, there was a net increase in underground storage during the year.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Washington County

U.S. 90 (#986, p. 291; 1016, p. 339). Burton Peterson. Montpelier 1. 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, 1945							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	9.32	May 2	4.72	July 28	7.30	Oct. 30	6.40
Feb. 2	9.37	June 2	6.24	Aug. 30	8.80	Nov. 30	6.71
Mar. 1	8.30	July 3	7.09	Oct. 10	5.39	Dec. 31	7.58
24	6.25						

